MITSUBISHI ELECTRIC

GRAPHIC OPERATION TERMINAL MELHMI

GOT3000

GOT3000 Series
User's Manual (Utility & Maintenance Functions)

-GT37 wide model
-GT37 model

Safety precautions

Always read the precautions before using this product.

Also read this manual and the relevant manuals mentioned in this manual carefully, and use the product properly while paying full attention to safety.

Note that the precautions in this manual apply only to this product.

The safety precautions are divided into the following levels: ⚠ WARNING and ⚠ CAUTION.

⚠ **WARNING**	**Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.**
⚠ **CAUTION**	**Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.**

Note that failure to observe ⚠ CAUTION may lead to a serious accident depending on the circumstances.

Make sure to observe both warnings and cautions to ensure personal safety.

Ensure that this manual is easily accessible to all users of this product.

[Design precautions]

⚠WARNING

- To check the operating status of each station if a network communication error occurs, refer to the manual for the interface module used.
  Not doing so may cause an accident due to false output or malfunction.
- If you change the data during operation, provide an interlock using the program of the PLC to ensure that the entire system always works safely.
  Establish a mechanism to handle data communication between the personal computer and PLC CPU if a data communication error occurs in the system.
- To maintain the security (availability, integrity, and confidentiality) of the GOT and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
  Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
  *1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.
- Check our website for vulnerability periodically, and update the software if any vulnerabilities are found.

[Design precautions]

⚠WARNING

- Some failures of the GOT, communication unit or cable may keep the outputs on or off.
  Some failures of the touch panel may cause a malfunction of input objects such as a touch switch.
  Create an external monitoring circuit to check for output signals which may lead to a serious accident.
  Not doing so may cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that warns you of serious accidents.
  For the device that displays or outputs serious warnings, provide an independent redundant hardware or mechanical interlock.
  Not doing so may cause an accident due to false output or malfunction.
- When the GOT backlight has a failure, the POWER LED blinks (lime green/unlit) and the display section dims. In such a case, the input by the touch switch(es) is disabled.
- When multiple points of the display section are touched simultaneously, an accident may occur due to false output or malfunction.
  [GT37-W]
  The display section of the GOT is capacitive.
  Touching three points or more simultaneously on the display section may cause an accident due to false output or malfunction.
  Do not do so.
  [GT37-X]
  The display section of the GOT is an analog-resistive type touch panel.
  Touching two points or more simultaneously on the display section may cause an accident due to false output or malfunction.
  If you do so, a touch switch near the touched points may operate.
  Do not touch two points or more simultaneously on the display section.
- If you have changed a program or parameter of the controller (such as a PLC) that is monitored by the GOT, reset the GOT or turn off the GOT and immediately turn it on again.
  Not doing so may cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative.
  A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
  Not doing so may cause an accident due to false output or malfunction.

[Design precautions]

⚠CAUTION

- When the GOT connects to an Ethernet network, the IP address setting is restricted according to the system configuration.
  When a GOT1000 series model is on an Ethernet network, do not set the IP address 192.168.0.18 for the GOT and the controller on this network.
  Doing so may cause IP address duplication at the GOT startup, adversely affecting the communication of the device with the IP address 192.168.0.18.
  The operation at IP address duplication depends on the devices and the system.
- When using the Ethernet interfaces, set an IP address for each interface to access a different network.
- Turn on the controllers and the network devices to be ready for communication before they communicate with the GOT.
  Not doing so may cause a communication error on the GOT.
- When the GOT is exposed to a vibration or shock, or the GOT screen displays a specific image pattern, the screen may flicker or the colors may change.
- Do not run control line cables and communication cables together with or near main circuit cables, power line cables, or other cables.
  Run these cables separately from such wiring and keep them a minimum of 100 mm apart.
  Not doing so may cause a malfunction due to noise.

[Installation precautions]

⚠WARNING

- Before installing or removing the GOT on or from the control panel, shut off all phases of the external power supply used by the system.
  Not doing so may result in an electric shock, product damage or malfunction.
- Before installing/removing the communication unit or the option unit on/from the GOT, shut off all phases of the external power supply used by the system.
  Not doing so may result in an electric shock, product damage or malfunction.

[Installation precautions]

⚠CAUTION

- Use the GOT in the environment that satisfies the general specifications described in the User's Manual (Hardware) of the GOT used.
  Not doing so can cause an electric shock, fire, malfunction, or product damage or deterioration.
- When installing the GOT on the control panel, use a Phillips-head screwdriver No. 2 to tighten mounting screws within the specified torque range as shown below.
  Specified torque range (0.36 N·m to 0.48 N·m)
  Undertightening may cause the unit to fall off, short circuit, or malfunction.
  Overtightening may cause the unit to fall off, short circuit, or malfunction due to damage to the screws or the unit.
- To install a communication unit or an option unit on the GOT, the extension interface converter unit must be installed onto the extension interface of the GOT.
  When installing the extension interface converter unit and a communication unit or an option unit, tighten the mounting screws within the specified torque range (0.36 N·m to 0.48 N·m) with a crosshead screwdriver No. 2.
- When closing the USB environmental protection cover, fix the cover to the GOT by pushing the [Ç] mark on the latch firmly to comply with the protective structure.
- Remove the protective film of the GOT.
  Continued use of the GOT with the protective film attached may prevent the film from being removed.
  In addition, for the models equipped with the human sensor function, using the GOT with the protective film may cause the human sensor not to function properly.
- Do not use or store the product in an environment subject to direct sunlight, rain, high temperatures, dust, high humidity, or frequent vibration.
- Do not operate the product with its display section frozen.
  The water droplets on the display section may freeze at a low temperature.
  Touch switches and other input objects may malfunction if the display section is frozen.

[Wiring precautions]

⚠WARNING

- Before wiring, make sure to shut off all phases of the external power supply used by the system.
  Not doing so may result in an electric shock, product damage or malfunction.

[Wiring precautions]

⚠CAUTION

- Make sure to ground the FG terminal and LG terminal of the GOT power supply section using a grounding wire dedicated to the GOT. (Ground resistance: 100Ω or less, ground cable diameter: 1.6 mm or more)
  Not doing so may result in an electric shock or malfunction.
- When wiring the GOT power section, tighten the terminal screws using a Phillips-head screwdriver No. 2 within the specified torque range below.
  Specified torque range: (0.5 N·m to 0.8 N·m)
- Use an applicable solderless terminal for terminal processing of a wire to the GOT power supply section and tighten them with the specified torque.
  Using a solderless spade terminal can cause it to fall off and lead to a malfunction if the terminal screws become loose.
- Correctly wire the GOT power supply section after confirming the rated voltage and terminal layout of the product.
  Not doing so can cause a fire or malfunction.
- Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws within the specified torque range (0.5 N·m to 0.8 N·m).
  Undertightening may cause a short circuit or malfunction.
  Overtightening may cause a short circuit or malfunction due to damage to the screws or unit.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the unit.
  Not doing so can cause a fire, failure or malfunction.

[Input operation precautions]

⚠WARNING

- Thoroughly read the manual to fully understand the operating procedures before performing input operations on a user-created screen (such as turning a bit device on or off, changing the current value of a word device, changing the set or current value of a timer or counter, or changing the current value of a buffer memory or parameter).
  During the input operation, never change the data of the devices which are used to perform significant operation for the system.
  Doing so may cause an accident due to an incorrect output or malfunction.

[Startup/maintenance precautions]

⚠ WARNING

- Do not touch the terminals while power is on.
  Close the terminal block cover before supplying power.
  Not doing so may cause an electric shock or malfunction.
- Before cleaning or terminal screw retightening, make sure to shut off the external power supply in all phases.
  Not doing so may cause damage to the personal computer interface or malfunction.
  Undertightening may cause a short circuit or malfunction.
  Overtightening may damage the screws or personal computer interface, causing a short circuit or malfunction.
- Correctly connect the battery connector.
  Do not perform the following actions on the battery:
  • Charging, disassembling, heating, throwing into fire, short-circuiting, soldering, etc.
  Improper handling of the battery may cause heat generation, explosion, or ignition, resulting in injury or fire hazards.
- Before cleaning or terminal screw retightening, make sure to shut off all phrases of the external power supply.
  Not doing so may cause the unit to fail or malfunction.
  Undertightening may cause a short circuit or malfunction.
  Overtightening may cause a short circuit or malfunction due to damage to the screws or unit.

[Startup/maintenance precautions]

⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly.
  Doing so may cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped.
  Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables, or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull from the cable portion.
  Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the unit or subject it to strong shock.
  A unit damage may result.
- Do not drop or give an impact to the battery mounted to the unit.
  Doing so may damage the battery, causing the battery fluid to leak inside the battery.
  If the battery is dropped or given an impact, dispose of it without using it.
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc.
  Not doing so may cause the unit to fail or malfunction.
- Use the battery manufactured by Mitsubishi Electric Corporation.
  Use of other batteries may cause a risk of fire or explosion.
- Dispose of the used battery promptly.
  Keep it away from children.
  Do not disassemble and dispose of it in fire.
- Before replacing the battery or setting the terminating resistor using a selector switch, make sure to shut off all phases of the external power supply.
  Not doing so can cause the unit to fail or malfunction due to static electricity.
- When setting the terminating resistor using the selector switch, do not use a pointed metal object.
- When the extension unit is not used, do not leave it uncovered.
  Otherwise, the unit may fail or malfunction due to static electricity.
- Turn off the power when cleaning the GOT.
  Also, before cleaning, ensure that the GOT is properly installed on the control panel.

[Touch panel precautions]

⚠WARNING

- For the analog-resistive film type touch panels, normally the adjustment is not required. However, the difference between a touched position and the object position may occur as the period of use elapses. When any difference between a touched position and the object position occurs, execute the touch panel calibration.
  When any difference between a touched position and the object position occurs, other object may be activated. This may cause an unexpected operation due to incorrect output or malfunction.
- For the capacitive touch panel, pay attention to the following points.
  • If the FG terminal of the GOT is not grounded, operability deterioration or malfunction may result.
  • If water, oil, or any other conductive material adheres to the GOT display, the GOT may malfunction. In such a case, wipe it off before use.

[Precautions for use of the data storage]

⚠WARNING

- If the SD card in drive A of the GOT is removed while the GOT is accessing it, the GOT may stop processing for about 20 seconds.
  During this stop, you cannot operate the GOT, and the functions running in the background, including the screen refresh, alarm, logging, and script, also stop.
  This stop may affect the system operation, causing an accident.
  Before removing the SD card, check that the SD card access LED is off.

[Precautions for use of the data storage]

⚠CAUTION

- If you remove the data storage from the GOT while the GOT is accessing it, the data storage or files may get damaged.
  Before removing the data storage, check the SD card access LED, relevant system signal, or others to make sure that the data storage is not being accessed.
  If the data storage is damaged, the GOT may not function properly.
- Turning off the GOT while it accesses the SD card results in damage to the SD card and files.
- After inserting an SD card into the GOT, make sure to close the SD card cover.
  Not doing so may prevent the data from being read or written.
- To remove the data storage from the GOT, follow the procedure for removal on the utility screen of the GOT. After the successful completion dialog appears, remove the data storage while holding it carefully.
  Not doing so may cause the data storage to drop, resulting in damage or failure.

[Precautions for use]

⚠CAUTION

- Do not press the GOT display section with a pointed object such as a pen or screwdriver.
  Doing so may result in damage or failure.
- When inserting a USB device into a USB interface of the GOT, make sure to insert the device into the interface firmly.
  Not doing so may cause a malfunction due to poor contact.
- The digital video output interface of the GOT is intended solely for output.
  Do not connect this interface to the output terminal of another device.
  Doing so may result in failure.
- Do not touch the edges of the analog resistive touch panel (display section) repeatedly.
  Doing so may result in failure.
- When the extension unit is not used, do not leave it uncovered.
  Otherwise, the unit may fail or malfunction due to static electricity.
- Do not turn off the GOT while data is being written to the storage memory (ROM) or SD card.
  Doing so may corrupt the data, rendering the GOT inoperative.

[Remote control precautions]

⚠WARNING

- Remote control is available through a network by using GOT functions, including the VNC server function and the GOT Mobile function.
  If these functions are used to perform remote control of control equipment, the field operator may not notice the remote control, possibly leading to an accident.
  In addition, a communication delay or interruption may occur depending on the network environment, and remote control of control equipment cannot be performed normally in some cases.
  Before using the above functions to perform remote control, fully grasp the circumstances of the field site and ensure safety.
- When operating the server (GOT) of the GOT Mobile function to disconnect a client, notify the operator of the client about the disconnection beforehand.
  Not doing so may cause an accident.

[Disposal precautions]

⚠CAUTION

- Dispose of the product as industrial waste.
  When disposing of batteries, separate them from other wastes according to the local regulations.
  (For details on the battery directive in the EU member states, refer to the User's Manual (Hardware) of the GOT used.)

[Transportation precautions]

⚠CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations.
  (For details on the regulated models, refer to the User's Manual (Hardware) of the GOT used.)
- Since the unit is a precision device, avoid any impact that exceeds the general specifications described in the User's Manual (Hardware) of the GOT used during transportation.
  Not doing so may cause the unit to fail.
  Check if the unit operates correctly after transportation.
- Prevent the entry of halogens (including fluorine, chlorine, bromine, and iodine) contained in fumigants used for fumigating wood packaging materials, or a product failure may occur.
  Make sure that fumigant residues will not enter the product, or use an alternative (heat treatment or others) to fumigation.
  Before packing the product, disinfect wood packaging materials and eliminate insects from the materials.

Product application

(1) Mitsubishi graphic operation terminal ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident;
and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI ELECTRIC SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI ELECTRIC USER'S, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT. ("Prohibited Application")
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above restrictions, Mitsubishi Electric may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi Electric and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi Electric representative in your region.

(3) Mitsubishi Electric shall have no responsibility or liability for any problems involving graphic operation terminal trouble and system trouble caused by DoS attacks, unauthorized access, computer viruses, and other cyberattacks.

Introduction

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).
Before using the product, read this manual carefully and make sure you understand the functions and performance of the GOT for correct use.

CONTENTS

Safety precautions 1
Product application 12
Introduction 13
Relevant manuals 22
Abbreviations, generic terms, and model icons 23

PART 1 How to read this manual

CHAPTER 1 Useful information 27

1.1 Finding the reference manual 27

PART 2 Procedure for starting the GOT

CHAPTER 2 Procedure before operation 33

2.1 Procedure for starting the GOT 34
2.2 Procedure before operating GT SoftGOT3000 35

CHAPTER 3 Initial startup operations and settings 36

3.1 Calibration 36
3.2 System language setting 37
3.3 Time setting 38

CHAPTER 4 Installing the BootOS and package data using a data storage 40

4.1 Installing Data 41
4.2 Installation method 44
4.3 Version check during installation 54

PART 3 Basic operations of the utility menu

CHAPTER 5 Displaying the utility main menu 57

5.1 Screen display procedure 57
5.2 [Utility main menu] screen 60

CHAPTER 6 Basic operations of setting screens 62

6.1 Basic configuration of setting screens 62
6.2 Changing the setting values 63
6.3 Operations for changing setting values 64

PART 4 GOT basic settings

CHAPTER 7 [Display] 67

7.1 How to display the screen 67
7.2 [Display] screen 68

CHAPTER 8 [Language] 71
8.1 How to display the screen 71
8.2 [Language] screen 72
CHAPTER 9 [Unique info] 73
9.1 How to display the screen 73
9.2 [Unique info] screen 74
CHAPTER 10 [IP Address] 75
10.1 Screen display procedure 76
10.2 [IP address] screen 76
CHAPTER 11 [IP filter Setting] 80
11.1 How to display the screen 80
11.2 [IP filter setting] screen 81
CHAPTER 12 [Operation] 83
12.1 Screen display procedure 83
12.2 [Operation] screen 84
CHAPTER 13 [Utility call key] 85
13.1 Screen display procedure 85
13.2 [Utility Call Key] screen 86
CHAPTER 14 [USB device/host] 87
14.1 How to display the screen 87
14.2 [USB device/host setting] screen 88
CHAPTER 15 [Time] 90
15.1 Screen display procedure 90
15.2 Overview of the clock synchronization method 91
15.3 [Time] screen 92
CHAPTER 16 [Controller] 96
16.1 How to display the screen 96
16.2 [Communication setting] screen 96
CHAPTER 17 [Ethernet] 105
17.1 Screen display procedure 105
17.2 [Ethernet] screen 106
CHAPTER 18 [Transparent mode] 107
18.1 Screen display procedure 107
18.2 [Transparent mode] screen 108
CHAPTER 19 [GOT internal device monitor] 109
19.1 How to display the screen 109
19.2 [GOT internal device monitor] screen 110

CHAPTER 20 [Security] 111
20.1 Screen display procedure. 111
20.2 [Security level authentication] screen. 112

CHAPTER 21 [Operator authentication management] 113
21.1 Specifications for operator authentication 113
21.2 How to display the screen 122
21.3 [Operator authentication management] screen 123

CHAPTER 22 [Opr authn. Password change] 137
22.1 Screen display procedure. 137
22.2 Operations to change operator authentication passwords. 138

CHAPTER 23 [Brightness adjustment] 140
23.1 How to display the screen 140
23.2 [Brightness adjustment] screen. 141

PART 5 Add-on settings

CHAPTER 24 [SoftGOT-GOT link function] 143
24.1 How to display the screen 143
24.2 [SoftGOT-GOT link function] screen 144

CHAPTER 25 [VNC server function] 145
25.1 Screen display procedure. 145
25.2 [VNC server function] screen 146

CHAPTER 26 [Seq. program monitor] 147
26.1 How to display the screen 147
26.2 [Seq. program monitor] screen 148

CHAPTER 27 [Backup restoration] 149
27.1 How to display the screen 149
27.2 [Backup restoration] screen. 150

CHAPTER 28 [License management] 153
28.1 How to display the screen 153
28.2 [License management] screen 154

CHAPTER 29 [System launcher] 155
29.1 How to display the screen 155
29.2 [System launcher] screen. 156

CHAPTER 30 [iQSS utility] 157
30.1 How to display the screen 157
30.2 [iQSS utility] screen 158

CHAPTER 31 [ANDON connection] 159
31.1 Screen display procedure. 159

31.2 [ANDON connection] screen 160

CHAPTER 32 [File transfer] 161

32.1 How to display the screen 161
32.2 [Destination FTP server setting] screen 162

CHAPTER 33 [Mail] 163

33.1 How to display the screen 163
33.2 [Mail] screen. 164

CHAPTER 34 [Web browser function] 165

34.1 How to display the screen 165
34.2 [Web browser function] screen 165

CHAPTER 35 [VPN connection function] 166

35.1 Screen display procedure. 166
35.2 [VPN connection function] screen. 167

CHAPTER 36 [Contactless tag function] 168

36.1 How to display the screen 168
36.2 [Contactless tag function] screen 169

PART 6 Maintenance

CHAPTER 37 [Batch self check] 171

37.1 How to display the screen 171
37.2 [Batch self check] screen 172
37.3 [View self check results menu] screen 173

CHAPTER 38 [USB device management] 178

38.1 Screen display procedure. 178
38.2 [USB device management] screen. 179

CHAPTER 39 [Screen cleaning] 180

39.1 Screen display procedure. 180
39.2 Exiting [Screen cleaning] 180

CHAPTER 40 [Touch panel calibration] 181

40.1 Screen display procedure. 181
40.2 Touch panel calibration 182

CHAPTER 41 [System alarm] 184

41.1 Screen display procedure. 184
41.2 [System alarm] screen 185

CHAPTER 42 [Drawing check] 186

42.1 How to display the screen 186
42.2 [Drawing check] screen 186
42.3 Drawing check operation 187

CHAPTER 43 [Font check] 189
43.1 Screen display procedure. 189
43.2 [Font check] screen. 190

CHAPTER 44 [Touch panel check] 191
44.1 Screen display procedure. 191
44.2 [Touch panel check] screen 191
44.3 Touch panel check operation 192

CHAPTER 45 [I/O check] 194
45.1 How to display the screen 194
45.2 [I/O check] screen. 195
45.3 I/O check operation 196

CHAPTER 46 [Ethernet status check] 199
46.1 Screen display procedure. 199
46.2 [Ethernet status check] screen 200

CHAPTER 47 [GOT information] 201
47.1 Screen display procedure. 201
47.2 [GOT information] screen 202

CHAPTER 48 [GOT Mobile Information] 203
48.1 Screen display procedure. 203
48.2 [GOT Mobile Information] screen. 204

PART 7 Monitor

CHAPTER 49 [System launcher] 207
49.1 System launcher specifications. 208
49.2 How to display the screen 212
49.3 [System configuration] screen. 215
49.4 [Online module change] screen 219

CHAPTER 50 [Sequence program monitor (ladder display)] 220
50.1 Sequence program monitor (ladder display) specifications 225
50.2 How to display the screen 240
50.3 Setting Display Format 256
50.4 [PLC Read] screen. 257
50.5 [Ladder monitor] screen 263
50.6 [Ladder editor] screen. 268
50.7 Find/Replace Operation 286
50.8 Test operation 292
50.9 Error messages and corrective action 294

CHAPTER 51 [Intelligent module monitor] 300
51.1 Intelligent module monitor specifications 302
51.2 How to display the screen 306
51.3 Operation of each intelligent module monitor screen 308

51.4 [PLC diagnostics] screen 308
51.5 [Unit Detail Info] screen 314
51.6 Intelligent module monitor screen 315
51.7 I/O module monitor screen 321
51.8 Error messages and corrective action 323

CHAPTER 52 [R Motion Monitor] 324

52.1 R motion monitor specifications 326
52.2 How to display the screen 328
52.3 [R Motion Monitor] screen 333
52.4 Error messages and corrective action 348

CHAPTER 53 [Network status display] 349

53.1 Network status display specifications 349
53.2 How to display the screen 350
53.3 Network status display monitor 351

CHAPTER 54 [iQSS utility] 367

54.1 iQSS utility specifications 368
54.2 Preparing profile data 371
54.3 How to display the screen 371
54.4 [iQSS utility] screen 375
54.5 [Device list information] screen 377
54.6 [Monitoring information] screen 379
54.7 [Parameter information] screen 383
54.8 Error messages and corrective action 385

CHAPTER 55 [CC-Link IE diagnostics] 386

55.1 CC-Link IE specifications 387
55.2 How to display the screen 395
55.3 Network configuration diagram screen 398
55.4 Error messages and corrective action 423

PART 8 Data management

CHAPTER 56 [File manager] 426

56.1 How to display the screen 426
56.2 [File manager] screen 427
56.3 Operations on the file manager screen 431

CHAPTER 57 [Image file management] 433

57.1 How to display the screen 433
57.2 [Image file management] screen 434
57.3 Operation of image file management 437

CHAPTER 58 [Recipe information] 438

58.1 Screen display procedure 438
58.2 [Recipe information] screen 439
58.3 Recipe information operation 441

CHAPTER 59 [Logging information] 443

59.1 How to display the screen 443
59.2 [Logging information] screen. 444
59.3 Logging information operation 447

CHAPTER 60 [Operation log information] 449

60.1 How to display the screen 449
60.2 [Operation log information] screen 450
60.3 Operation of operation log information. 453

CHAPTER 61 [Alarm information] 462

61.1 How to display the screen 462
61.2 [Alarm information] screen. 463
61.3 Alarm information operation 466

CHAPTER 62 [Package management] 468

62.1 Screen display procedure. 468
62.2 [Package management] screen 469

CHAPTER 63 [Backup/restoration function] 475

63.1 Backup/restoration features. 476
63.2 Requirements for backup/restoration 478
63.3 Controllers that can be backed up/restored 479
63.4 System configurations for backup/restoration. 487
63.5 Data to be backed up/restored. 498
63.6 Data created during backup/restoration and the save destination 509
63.7 Security and password 513
63.8 Trigger backup. 518
63.9 Network batch backup/restoration 529
63.10 How to display the screen 535
63.11 Backup/restoration function: Main menu 541
63.12 [Backup function: Select CPU No.] screen 543
63.13 [Backup function: Progress] screen 544
63.14 [Restoration function: Data list] screen 545
63.15 [Restoration function: Progress] screen. 546
63.16 [Backup/restoration function: Edit device list] screen 547
63.17 [Restoration function: Device selection] screen 548
63.18 [Restoration func.: Individual (Q17nNC)] screen 549
63.19 Backup Data Conversion Tool 550
63.20 Precautions 555
63.21 Errors and corrective actions. 564

CHAPTER 64 [NVRAM management] 566

64.1 Screen display procedure. 566
64.2 [NVRAM management] screen 567
64.3 Non-volatile RAM management operation 568

CHAPTER 65 [Memory card format] 572

65.1 Screen display procedure. 572
65.2 [Memory card format] screen 573

CHAPTER 66 [Memory check] 574
66.1 Screen display procedure. 574
66.2 [Memory check] screen. 575

CHAPTER 67 [GOT data pkg. acquisition] 576
67.1 How to display the screen 577
67.2 [GOT data pkg. acquisition] screen 578

CHAPTER 68 [GOT Full Initialization] 579
68.1 How to display the screen 579
68.2 [GOT Full Initialization] screen 579

CHAPTER 69 [Certificate management] 580
69.1 How to display the screen 580
69.2 [Certificate management] screen. 581

PART 9 System alarms

CHAPTER 70 System alarm display 585
70.1 How to check system alarms 585

CHAPTER 71 Display contents of the system alarm 586
71.1 Identification code. 589
71.2 Manufacturer code 589
71.3 Classification code 589
71.4 Error code 590
Revisions. 600
WARRANTY 601
Trademarks 602
Copyrights 602

Relevant manuals

Point

e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.

e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to the engineering tool.

Screen design software-related manuals

Manual name	Manual number	Format
GT Works3 Installation Instructions	—	PDF e-Manual
GT Designer3 (GOT3000) Screen Design Manual	SH-082590ENG	PDF e-Manual

Connection manuals

Manual name	Manual number	Format
GOT3000 Series User's Manual (Connection)	SH-082593ENG	PDF e-Manual

GT SoftGOT3000 manual

Manual name	Manual number	Format
GT SoftGOT3000 User's Manual	SH-082594ENG	PDF e-Manual

GOT3000 series user manuals

Manual name	Manual number	Format
GOT3000 Series User's Manual (Hardware)	SH-082591ENG	PDF e-Manual Bound document
GOT3000 Series User's Manual (Utility & Maintenance Functions)	SH-082592ENG	PDF e-Manual

Abbreviations, generic terms, and model icons

The following shows the abbreviations, generic terms, and model icons used in this manual.

GOT3000 series

Abbreviations and generic terms			Model	Meaning of icon	
				Available	Unavailable
GT37	GT37-W		GT3715-FHCBD	GT37	GT37
			GT3712-WXCBD		
	GT37-X	GT3715-X	GT3715-XRBA GT3715-XRBD		
		GT3712-X	GT3712-XRBA GT3712-XRBD		
		GT3710-X	GT3710-XRBA GT3710-XRBD		
		GT3708-X	GT3708-XRBA GT3708-XRBD		
GT SoftGOT3000			GT SoftGOT3000	SoftGOT3000	SoftGOT3000

GOT2000 series and GOT1000 series

Abbreviations and generic terms	Model	Meaning of icon	
		Available	Unavailable
GOT2000 series	GOT2000 series	—	—
GOT1000 series	GOT1000 series	—	—

GOT units and option units

Abbreviations and generic terms		Description
Extension interface converter unit		This unit connects the extension unit of the GOT2000 series and GOT1000 series to the GOT3000 series.
Extension unit	Communication unit	A unit, such as the serial communication unit or CC-Link IE TSN communication unit, installed on the GOT to enable communication with other devices
	Option unit	A unit, such as an external I/O unit, installed on the GOT to provide specific functions
Option		Options, such as SD cards, batteries, and protective sheets, installed on the GOT for use

Software

■Software related to GOT

Abbreviations and generic terms	Description
GT Works3	Software that comprehensively supports screen design for the GOT
GT Works3 Version1	
GT Designer3	Screen design software for the GOT3000 series, GOT2000 series, and GOT1000 series
GT Designer3 (GOT3000)	Screen design software for the GOT3000 series
Speech synthesis license	License to use the speech synthesis function
VNC server function license	License to use the VNC server function with the GOT3000
VPN function license	License to use the VPN function with the GOT3000
License for the remote personal computer operation function (Ethernet)	License to use the remote personal computer operation function (Ethernet) on the GOT3000
Multimedia function license	License to perform the following with the GOT3000 • Use a network camera. • Record or play images taken by a network camera or web camera.
License for GT SoftGOT3000	License to use GT SoftGOT3000
GOT Mobile function license for GOT3000	License to use the GOT Mobile function with the GOT3000
GOT Mobile function license for GT SoftGOT3000	License to use the GOT Mobile function with GT SoftGOT3000
GENESIS64 Advanced	GENESIS64 server application (GEN64-APP)
GENESIS64 Basic SCADA	GENESIS64 server application (GEN64-BASIC)
GENESIS64	Generic term of GENESIS64 Advanced and GENESIS64 Basic SCADA
GT Simulator3	Screen simulator GT Simulator3 for the GOT3000 series
GT SoftGOT3000	Software that performs the same functions as the GOT3000 on a personal computer or panel computer
GT OPC UA Client	OPC UA server connection setting software

■Software related to iQ Works

Abbreviations and generic terms	Description
iQ Works	iQ Platform compatible engineering environment MELSOFT iQ Works
MELSOFT Navigator	Integrated development environment software included in the iQ Platform-compatible engineering environment, MELSOFT iQ Works
MELSOFT iQ AppPortal	Integrated application management software

■Other software

Abbreviations and generic terms		Description
GX Works3		Programmable controller engineering software
GX Works2		
Controller simulator	GX Simulator3	Simulation function of GX Works3
	GX Simulator2	Simulation function of GX Works2
	GX Simulator	Ladder logic test tool function software package
GX Developer		Programmable controller programming software
GX LogViewer		Dedicated logging data viewer
MI Configurator		Configuration and monitor tool for Mitsubishi Electric industrial computers
PX Developer		FBD software package for process control
MT Works2		Motion controller engineering software
MT Developer		Integrated start-up support software for motion controller Q series
CW Configurator		Setting/monitoring tools for the C Controller module and MELSECWinCPU
MR Configurator2		Servo configuration software
MR Configurator		Servo configuration software
FR Configurator2		Inverter setup software
FR Configurator		Inverter setup software
NC Configurator2		CNC parameter setting support software
NC Configurator		CNC parameter setting support tool
FX Configurator-FP		Parameter setting, monitoring, and testing software
FX Configurator-EN-L		FX3U-ENET-L type Ethernet module setting software
RT ToolBox3		Robot program creation software
RT ToolBox2		Robot program creation software
MX Component		Communication library
MX Sheet		Communication support software package
CPU Module Logging Configuration Tool		CPU Module Logging Configuration Tool

PART 1 How to read this manual

1 Useful information

1 Useful information

☞ Page 27 Finding the reference manual

1.1 Finding the reference manual

This section describes the main GOT manuals and their contents.
The following abbreviations are used for the manual names.

Manual name	Abbreviation	Main contents
GT Designer3 (GOT3000) Screen Design Manual	GTD	• Screen operation with GT Designer3 • Settings of the functions that run on the GOT • Functions enabled by connecting the GOT and controllers
GOT3000 Series User's Manual (Hardware)	HW	• GOT hardware specifications • How to connect cables to and install units on the GOT
GOT3000 Series User's Manual (Utility & Maintenance Functions)	UT	• How to operate the utility • How to use dedicated screens such as the sequence program monitor • System alarms and corrective actions
GOT3000 Series User's Manual (Connection)	Connection	• Devices connectable with the GOT • System configuration • Communication settings • FA transparent function (reading and writing programs between a personal computer and a controller via the GOT)
GT SoftGOT3000 User's Manual	SGT	• How to operate GT SoftGOT3000

The following contents and their reference manuals are shown below.

☞ Page 28 Operations related to package data, BootOS, and CoreOS (data transfer)
☞ Page 28 How to protect the GOT and data
☞ Page 28 Operating the GOT using gestures
☞ Page 28 How to use GOT peripherals
☞ Page 29 Settings that can be changed in the utility or in GT Designer3
☞ Page 31 Devices, labels, and tags that can be monitored with the GOT
☞ Page 31 Drive configuration and capacity of the GOT
☞ Page 31 Differences between GT SoftGOT3000 functions and other functions

1.1.1 Operations related to package data, BootOS, and CoreOS (data transfer)

○: Available
—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
Reading/writing the package data	○	—	—	—	—
Writing the BootOS and the CoreOS (version upgrade)	○	—	—	—	—
How to use the package data of the GOT with another GOT (uploading and downloading)	—	—	○ ☞ Page 40 Installing the BootOS and package data using a data storage	—	—

1.1.2 How to protect the GOT and data

○: Available
—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
Security functions of the GOT and GT Designer3	○	—	—	—	—

1.1.3 Operating the GOT using gestures

○: Available
—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
Operating the GOT screen using gestures	○	—	—	—	—
Operating objects using gestures	○	—	—	—	—

1.1.4 How to use GOT peripherals

○: Available
—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
How to use a barcode reader	○	—	—	○	—
How to use an RFID controller	○	—	—	○	—
How to operate a personal computer from the GOT	○	—	—	○	—
How to use a VNC server	○	—	—	○	—
How to display or record images from a camera, video device, or other equipment on the GOT	○	—	—	○	—
How to display the GOT screen on an external display	○	—	—	○	—
How to play a sound file through speakers	○	—	—	○	—
How to use an external I/O device or an operation panel	○	—	—	○	—
How to monitor a controller on a tablet via the GOT	○	—	—	○	—
How to use the GOT as an OPC UA server	○	—	—	—	—
How to monitor controller devices via the GOT	○	—	—	—	—
How to access GOT files from a peripheral	○	—	—	—	—
How to access files on an external server from the GOT	○	—	—	—	—

1.1.5 Settings that can be changed in the utility or in GT Designer3

The following shows whether utility menus can be set in GT Designer3.

When the package data is written to the GOT, the utility settings of the GOT can be updated to those of GT Designer3.

○: Available

—: Not available

Information on...		Reference				
		GTD	HW	UT	Connection	SGT
[GOT basic set] tab	[Display]	○	—	○ ☞ Page 67 [Display]	—	—
	[Language]	○	—	○ ☞ Page 71 [Language]	—	—
	[Unique info]	○	—	○ ☞ Page 73 [Unique info]	—	—
	[IP address]	○	—	○ ☞ Page 75 [IP Address]	—	—
	[IP filter setting]	○	—	○ ☞ Page 80 [IP filter Setting]	—	—
	[Operation]	○	—	○ ☞ Page 83 [Operation]	—	—
	[Utility call key]	○	—	○ ☞ Page 85 [Utility call key]	—	—
	[USB device/host]	○	—	○ ☞ Page 87 [USB device/host]	—	—
	[Time]	○	—	○ ☞ Page 90 [Time]	—	—
	[Controller]	○	—	○ ☞ Page 96 [Controller]	—	—
	[Ethernet]	○	—	○ ☞ Page 105 [Ethernet]	—	—
	[Transparent mode]	○	—	○ ☞ Page 107 [Transparent mode]	—	—
	[GOT internal device monitor]	○	—	○ ☞ Page 109 [GOT internal device monitor]	—	—
	[Security][*1]	○	—	○ ☞ Page 111 [Security]	—	—
	[Operator authentication management]	—	—	○ ☞ Page 113 [Operator authentication management]	—	—
	[Opr authn. Password change]	—	—	○ ☞ Page 137 [Opr authn. Password change]	—	—
	[Brightness adjustment]	○	—	○ ☞ Page 140 [Brightness adjustment]	—	—

Information on...		Reference				
		GTD	HW	UT	Connection	SGT
[Add-on setting] tab	[SoftGOT-GOT link function]	○	—	○ ☞ Page 143 [SoftGOT-GOT link function]	—	—
	[VNC server function]	○	—	○ ☞ Page 145 [VNC server function]	—	—
	[Seq. program monitor]	○	—	○ ☞ Page 147 [Seq. program monitor]	—	—
	[Backup/restoration]	○	—	○ ☞ Page 149 [Backup restoration]	—	—
	[License management]	—	—	○ ☞ Page 153 [License management]	—	—
	[System launcher]	○	—	○ ☞ Page 155 [System launcher]	—	—
	[iQSS utility]	○	—	○ ☞ Page 157 [iQSS utility]	—	—
	[File transfer]	○	—	○ ☞ Page 161 [File transfer]	—	—
	[Mail]	○	—	○ ☞ Page 163 [Mail]	—	—
	[Web browser function]	○	—	○ ☞ Page 165 [Web browser function]	—	—
	[ANDON connection]	—	—	○ ☞ Page 159 [ANDON connection]	—	—
	[VPN connection function]	○	—	○ ☞ Page 166 [VPN connection function]	—	—
	[Contactless tag function]	○	—	○ ☞ Page 168 [Contactless tag function]	—	—
[Maintenance] tab		—	—	○ ☞ Maintenance	—	—
[Monitor]		—	—	○ ☞ Monitor	—	—
[Data mng.] tab		—	—	○ ☞ Data management	—	—

*1 Appears only when the security mode is set to mode 1.

1.1.6 Devices, labels, and tags that can be monitored with the GOT

○: Available

—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
GOT internal device list	○	—	—	—	—
Mitsubishi Electric products device list	○	—	—	○	—
Non-Mitsubishi Electric products device list	○	—	—	○	—
Types of devices that can be monitored with the GOT	○	—	—	—	—
Types of labels and tags that can be monitored with the GOT	○	—	—	—	—

1.1.7 Drive configuration and capacity of the GOT

○: Available

—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
Drive configuration and capacity of the GOT	○	—	—	—	—
Virtual drive of GT SoftGOT3000	○	—	—	—	○

1.1.8 Differences between GT SoftGOT3000 functions and other functions

○: Available

—: Not available

Information on...	Reference				
	GTD	HW	UT	Connection	SGT
List of differences between GT SoftGOT3000 functions and other functions	—	—	—	—	○

PART 2 Procedure for starting the GOT

2 Procedure before operation

3 Initial startup operations and settings

4 Installing the BootOS and package data using a data storage

2 Procedure before operation

GT37 SoftGOT3000

This section explains the general procedure before operation.
The procedure before operation differs between GT SoftGOT3000 and the other GOTs.
The procedure also differs depending on the security mode set for the project.
For the procedure before operating a GOT other than GT SoftGOT3000 and the differences depending on the security mode, refer to the following.
☞ Page 34 Procedure for starting the GOT
For the procedure before operating GT SoftGOT3000 and the differences depending on the security mode, refer to the following.
☞ Page 35 Procedure before operating GT SoftGOT3000

What is the security mode?

The GOT's security function has two security modes.

Security mode	Description
Mode 1	The security functions compatible with the GOT2000 series can be used.
Mode 2 (default)	More robust security functions than mode 1 can be used.

Security mode settings can be configured only with GT Designer3.
For details, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

2.1 Procedure for starting the GOT

GT37 SoftGOT3000

This section explains the procedure before operating the GOT and the manuals describing the details.
The procedure before operation differs depending on the security mode.
The necessity of each step is shown below.
○: Required, △: Optional, —: Not required

Step		Security mode		Reference
		Mode 1	Mode 2	
1	Install GT Designer3 on the personal computer.	○	○	GT Works3 Version1 Installation Instructions
2	Create a project with GT Designer3.	○	○	GT Designer3 (GOT3000) Screen Design Manual
	Set the Ethernet interface of the GOT when connecting the GOT and the controller via Ethernet.	△	△	GT Designer3 (GOT3000) Screen Design Manual
	Configure the settings for connecting the controller to the GOT.	○	○	GOT3000 Series User's Manual (Connection)
3	Install the battery (sold separately) in the GOT.	△*1	○	GOT3000 Series User's Manual (Hardware)
4	Install the extension unit and options on the GOT.	△	△	GOT3000 Series User's Manual (Hardware)
5	Install the GOT on the control panel.	○	○	GOT3000 Series User's Manual (Hardware)
6	Provide wiring to the power supply section of the GOT.	○	○	GOT3000 Series User's Manual (Hardware)
7	Turn on the GOT. The GOT includes a preinstalled demo screen project at the time of factory shipment. After the GOT is started and the initial settings are configured, the demo screen is displayed.	○	○	—
8	Write the project created with GT Designer3 to the GOT.*2	○	○	GT Designer3 (GOT3000) Screen Design Manual
	When the file protection function is enabled, enter a password.	△	△	GT Designer3 (GOT3000) Screen Design Manual
	If the security mode set for the project is mode 2, register the information of the operator with administrator privileges in the GOT.	—	○	GT Designer3 (GOT3000) Screen Design Manual
9	Turn off the GOT and connect the GOT and the controller.	○	○	GOT3000 Series User's Manual (Connection)
10	Turn on the GOT and the controller to start monitoring. You can check whether the GOT is monitoring normally.	○	○	☞ Page 34 How to check whether the GOT is operating correctly

*1 Install a battery to retain the clock data even when the GOT is powered off.
*2 When a project is written to the GOT, the demo screen project is overwritten.

How to check whether the GOT is operating correctly

The following methods can be used to check for any issues with the operation of the project written to the GOT or the communication status with the controller.

Check	Method
Check whether the GOT recognizes the controller.	This can be checked on the [Communication setting] screen of the utility. ☞ Page 96 [Controller]
Check if an error (system alarm) has occurred in the GOT, controller, or network.	When an error occurs in the GOT, controller, or network, the GOT outputs a system alarm (error code and error message). The system alarm can be checked on the [System alarm] of the utility. ☞ Page 184 [System alarm]
Check that the settings enable the GOT to communicate with the controller correctly and that the connection cable is connected properly.	This can be checked on the [I/O check] of the utility. ☞ Page 194 [I/O check]

2.2 Procedure before operating GT SoftGOT3000

GT37 SoftGOT3000

This section explains the procedure before operating GT SoftGOT3000 and the manuals describing the details.
The procedure before operation differs depending on the security mode.
The necessity of each step is shown below.
○: Required, △: Optional, —: Not required

Step		Security mode		Reference
		Mode 1	Mode 2	
1	Install GT SoftGOT3000 on the personal computer.	○	○	GT Works3 Version1 Installation Instructions
	When creating a project, install GT Designer3 on the personal computer.	○	○	GT Works3 Version1 Installation Instructions
2	Start GT SoftGOT3000 and register the GT SoftGOT3000 license.	○	○	GT SoftGOT3000 User's Manual
	When starting GT SoftGOT3000 for the first time, set a password for the GT SoftGOT3000 application log file.	○	○	GT SoftGOT3000 User's Manual
3	Create a project with GT Designer3.	○	○	GT Designer3 (GOT3000) Screen Design Manual
	Configure the settings for connecting the controller to GT SoftGOT3000.	○	○	GOT3000 Series User's Manual (Connection)
4	Connect the personal computer with GT SoftGOT3000 installed to the controller.	○	○	GOT3000 Series User's Manual (Connection)
5	Open the project in GT SoftGOT3000.	○	○	GT SoftGOT3000 User's Manual
	When the file protection function is enabled, enter a password.	△	△	GT Designer3 (GOT3000) Screen Design Manual GT SoftGOT3000 User's Manual
	When the security mode set in the project is mode 2, register the information on the operator with the administrator privileges to GT SoftGOT3000.	—	○	GT Designer3 (GOT3000) Screen Design Manual GT SoftGOT3000 User's Manual
6	Perform monitoring with GT SoftGOT3000 using the project.	○	○	GT SoftGOT3000 User's Manual
	Check whether GT SoftGOT3000 is monitoring normally as follows: • When an error occurs, the details of the error can be checked on the [System alarm] screen of the utility.	○	○	☞ Page 184 [System alarm]

3 Initial startup operations and settings

GT37 SoftGOT3000

Calibrate the GOT and set the system language and time during initial startup after purchasing the GOT.
For details on each setting, refer to the following.

☞ Page 36 Calibration
☞ Page 37 System language setting
☞ Page 38 Time setting

Precautions

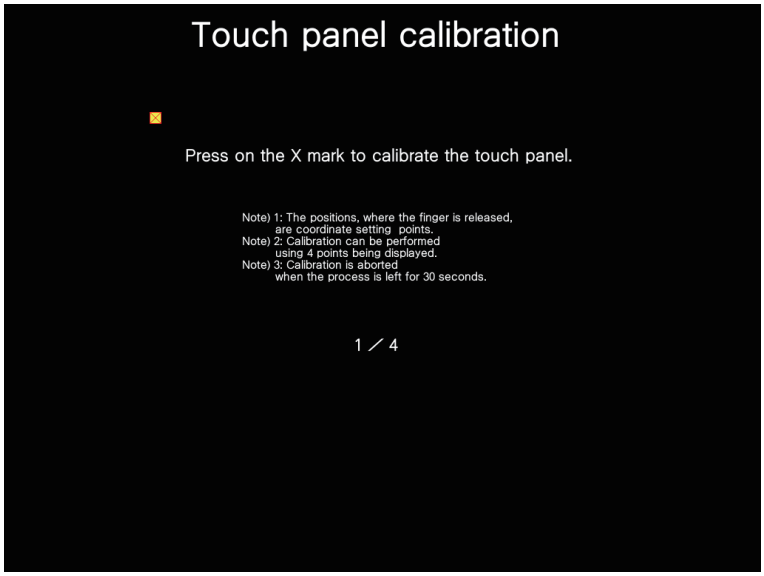
If [Delete the package data on write] is set in GT Designer3, the following settings will be reset when BootOS or CoreOS is installed:

- Calibration (The setting is reset only when CoreOS is installed)
- Time setting

If the setting is reset, the setting screen will appear when the GOT is restarted. Reconfigure setting.

3.1 Calibration

Touch the touch panel calibration buttons displayed on the screen in order to correct touch position reading errors.
GT37-W does not support calibration.



For details on touch panel calibration, refer to the following.

☞ Page 182 Touch panel calibration

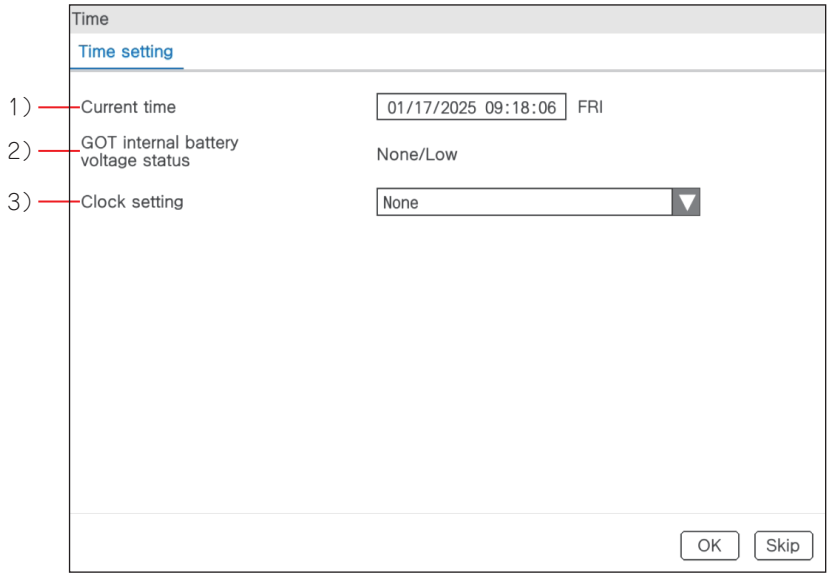
3.2 System language setting

Set the language of the text displayed on the utility main menu and each screen.
Touch the button of the language to display the text in the selected language.
The selectable languages differ depending on the fonts installed in the GOT. For information on the relation between the selectable languages and the fonts, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual
The text font for the system languages is UD Gothic.
If UD Gothic is not installed, the text will be displayed in Mincho font.

Ex.
If both Japanese UD Gothic font and Chinese Mincho font are installed, the text will be displayed with a mix of both fonts.
For information on how to install the fonts required for the utility, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

3.3 Time setting

The GOT time settings can be changed.



Item		Description	Setting range
1)	[Current time]*1*2	Displays the clock data of the GOT and allows for configuration of the setting. When a time is set outside the setting range or the current time is after [2099/12/31 23:59:59], [2000/01/01 00:00:00] is displayed.	[1/1/2000 12:00:00 AM] to [12/31/2099 11:59:59 PM]
2)	[GOT internal battery]	Displays the voltage of the battery built in the GOT. If the battery voltage is low, replace the battery immediately. For information on how to replace the battery, refer to the following manual. 📖GOT3000 Series User's Manual (Hardware)	• [Normal]: Normal • [None/Low]: The battery is not installed or the battery voltage is low.
3)	[Clock setting]	Set whether to use clock synchronization and time notification. For details on clock synchronization, refer to the following. ☞ Page 91 Overview of the clock synchronization method	• [None] • [Adjust] • [Broadcast] • [Adjust/Broadcast] • [Adjust(SNTP Effective)]*3 • [Adjust/Broadcast(SNTP Effective)]*3 <Default: [None]>

*1 The time displayed in [Time Setting] is the time from the local time settings.
For information on the local time setting, refer to the following.
☞ Page 95 [Local time] tab

*2 If you change the time of the GOT that uses the time setting or time notification in [Current time], the new time is written to the PLC.
Thus, you can change the time of the PLC from the GOT even when the time setting function is being used.
For details on the time setting and time notification, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

*3 Only appears when [Get time information from SNTP server] is selected in [Time Setting] in GT Designer3.
For details, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

Precautions

■[Skip] button

Touching the [Skip] button that appears at initial startup sets the time configured when the system package and project data were downloaded to the GOT.

However, the time set when the [Skip] button is tapped does not include the time difference from UTC or the local time.

To set the local time, use GT Designer3.

For details, refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

In addition, if the time is not set, the [Time] screen will appear every time the GOT is started.

■Connecting the battery

To set the time, purchase the battery (sold separately) and connect it.

For information on how to connect the battery, refer to the following manual.

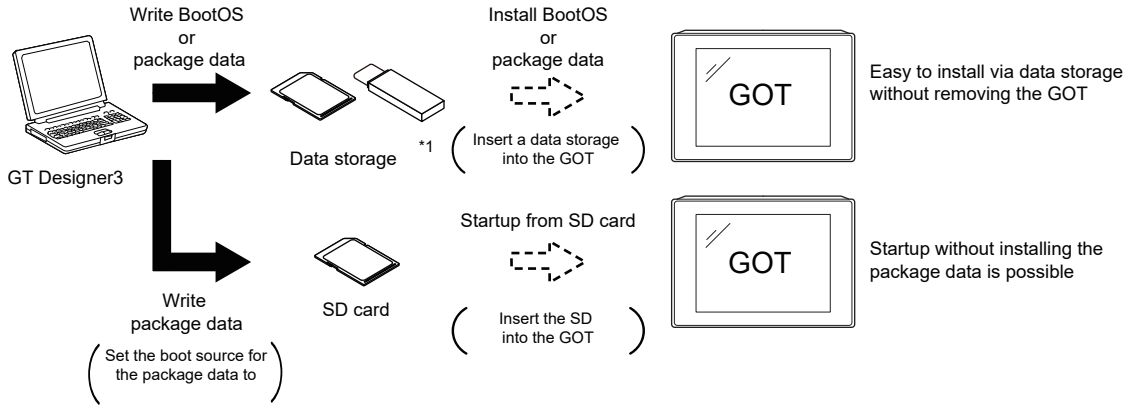
📖GOT3000 Series User's Manual (Hardware)

4 Installing the BootOS and package data using a data storage

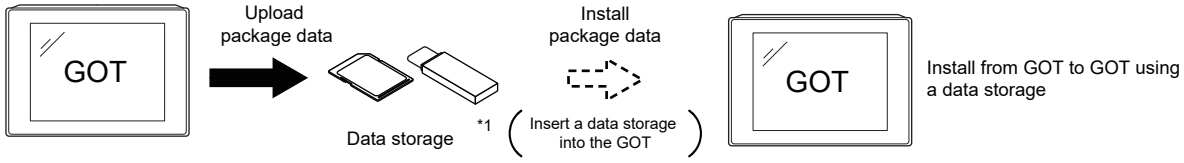
☞ Page 41 Installing Data
☞ Page 44 Installation method
☞ Page 54 Version check during installation

The BootOS and the package data can be installed on the GOT using a data storage that contains them.

GT Designer3 → Data storage → GOT



GOT → Data storage → GOT



*1 When installing the package data from the [Package management] screen using a data storage, the basic system application must be installed on the GOT in advance.

Point

The GOT has BootOS and system applications (basic functions) preinstalled from the factory.
If the software version does not need to be updated, BootOS does not need to be installed.
System applications are included in package data.
System applications will also update when package data is written to the GOT from GT Designer3.

Terms used in this chapter

The terms used in this chapter are shown below.

Term	Description
Installation	Transferring data from a data storage or personal computer for use on the GOT.
Upload	Transferring data from the GOT to a data storage or personal computer.
Download	Transferring data from a data storage or personal computer to the GOT.

4.1 Installing Data

The following information describes the BootOS and system applications to be installed on the GOT.

BootOS

Operating system required for control of the GOT and communication between the personal computer and the GOT.
BootOS and system applications can be installed from GT Designer3 or a data storage.
When [Delete the package data on write] is set in GT Designer3, all the data on the GOT will be deleted when BootOS is installed.

Basic system application

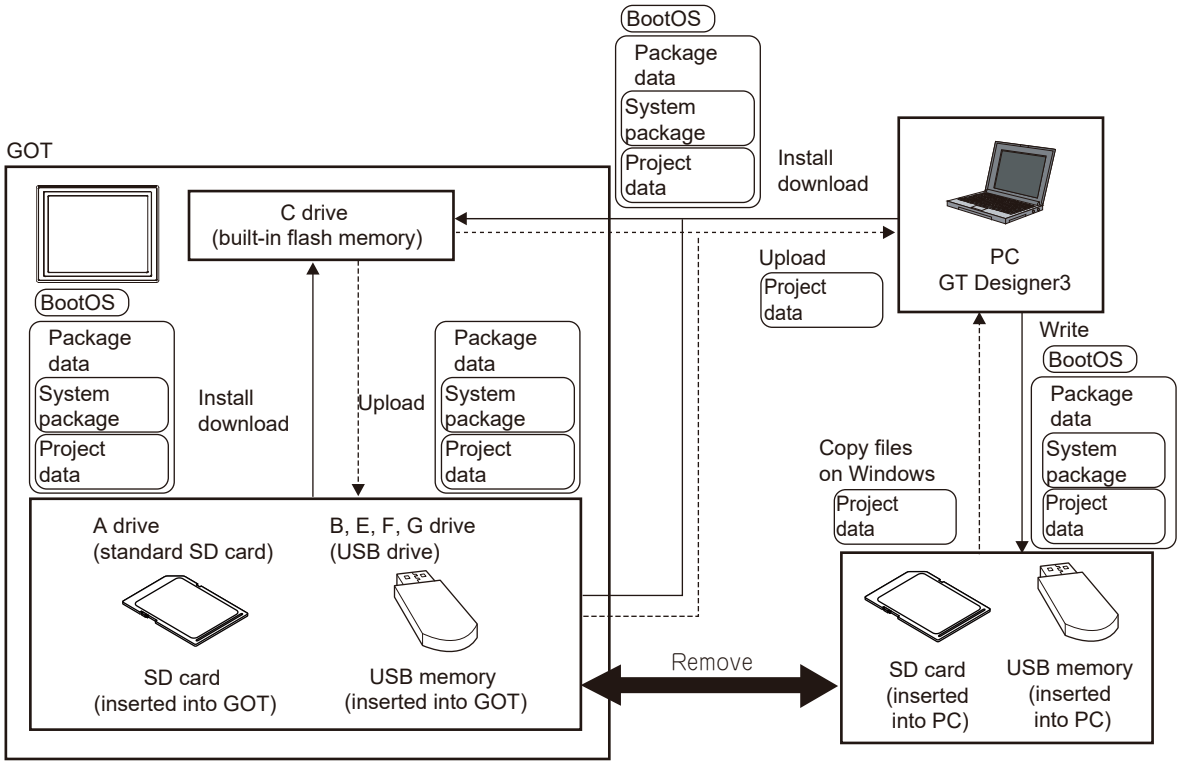
Applications required for GOT operations including the monitoring function, installation and deletion of the system applications (add-on functions) or project data, touch key control, and displaying guidance and screens such as user-created screens and utility screens.
BootOS and system applications can be installed from GT Designer3 or a data storage.

4.1.1 Data Type and Storage Location

System

The data storage location and transferring (write/read) route for each data type are shown below.

Also, the data storage locations are shown below.

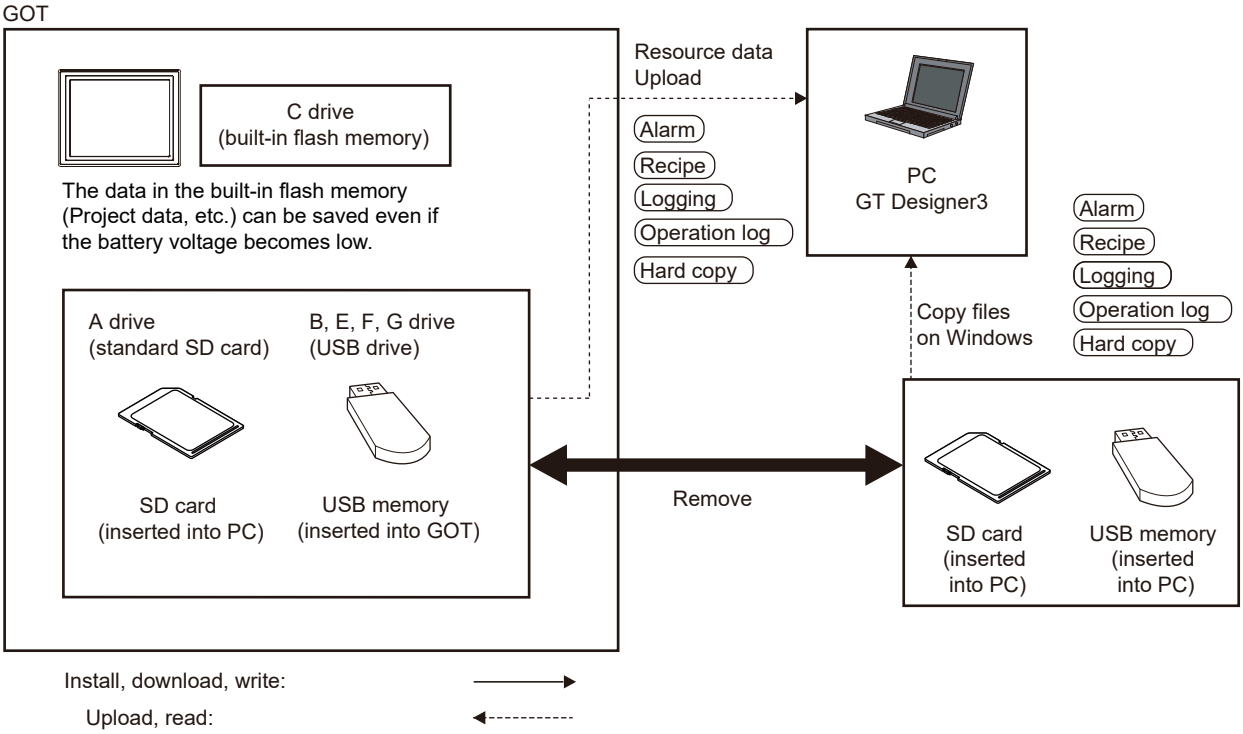


Item		Data type	Storage location
BootOS		BootOS	• Built-in flash memory (drive C)
Package data	System package*1	Basic system application	• Standard SD card (drive A) • Built-in flash memory (drive C)*2
		Communication driver	
		System application (add-on function)	
	Project data*1	Project data (Including recipe setting, alarm conditions, time action, and GOT setup.)	• Standard SD card (drive A)*2 • Built-in flash memory (drive C)*2

*1 The USB memory can be used from the utility.
☞ Page 50 Installing from the [Package management] screen

*2 When using the project data stored on the standard SD card (drive A) with the GOT, keep the SD card inserted in the GOT.
When using the project data stored on the USB memory with the GOT, write the data to a standard SD card (drive A) or download it to the built-in flash memory (drive C).

At maintenance



Item	Data type	Storage location
Alarm	Alarm log file	• Standard SD card (drive A) • USB drive (drive B)*1 • USB drive (drive E)*1 • USB drive (drive F)*1 • USB drive (drive G)*1
Recipe	Recipe file	
Logging	Logging file	
Operation log	Operation log file	
Hard copy	BMP file, JPEG file	

*1 The USB memory can be used from the utility.
☞ Page 50 Installing from the [Package management] screen

Capacity confirmation of the project data downloading location

When downloading the project data, confirm the capacity of the user area on the drive to which the data is transferred, the data size, the transfer size and buffering area size of the system application (add-on function) in advance to judge whether to carry out the download.

The capacities can be confirmed by GT Designer3.

For details, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

4.2 Installation method

There are two types of installation methods for BootOS and package data when using a data storage.

☞ Page 44 Installing when starting the GOT
☞ Page 44 Installing from the [Package management] screen of the utility

Ensure the data to be installed is stored on the data storage before installation.

For information on how to store data on a data storage, refer to the following.

☞ Page 45 Preparing a data storage

Installing when starting the GOT

BootOS and the package data stored on the data storage will be installed on the GOT when the GOT is powered on.

☞ Page 47 Installing when starting the GOT

This installation method is available in the following situations:

- When the GOT utility cannot be displayed
- When the system applications is not installed

Installing from the [Package management] screen of the utility

In the [Package management] screen of the utility, select the package data stored on the data storage and install it on the GOT.

☞ Page 50 Installing from the [Package management] screen

Precautions

■Installing BootOS with [Delete the package data on write] set

When [Delete the package data on write] is set in GT Designer3, all the data on the GOT will be deleted when BootOS is installed.

Therefore, install the package data after BootOS is installed.

■Downloading the project data using a data storage

When downloading the project data using a data storage, install BootOS and the system application first, then download the project data.

Ensure that the version of the system application on the GOT matches the version of the system application used to create the project data.

■When the system application and project data are on the data storage

For installation using the S.MODE switch, project data will be downloaded after the system application has been installed.

For installation using the utility, install the system application and download the project data from their respective operation screens.

■Interrupted installation

Conducting the following actions during the installation of BootOS and package data will cause the installation to fail and the GOT to become inoperable:

- Powering off the GOT
- Pressing the reset button on the GOT
- Opening the cover of the SD card interface
- Removing the data storage

If installation of the BootOS fails, follow the information on the displayed dialog and restart the GOT. After restarting the GOT, the GOT is initialized to be the factory shipment status.

If installation of the basic system applications fails, install the BootOS.

4.2.1 Preparing a data storage

To install the BootOS and the package data using a data storage, the package data must be installed on the data storage. There are following two methods for writing BootOS and the package data to a data storage.

Writing from GT Designer3

The BootOS and package data can be written from the [Communicate with Memory Card] dialog in GT Designer3 to the data storage inserted into the personal computer.
For details, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

Point

The BootOS cannot be stored on the same data storage as the package data.
Prepare a data storage with BootOS installed or a data storage with package data installed, depending on the installation target.

Uploading from another GOT

The package data can be uploaded using the following utility screens:

- [Package management] screen
- [GOT data pkg. acquisition] screen

For details on each screen, refer to the following.
☞ Page 468 [Package management]
☞ Page 579 [GOT Full Initialization]

Point

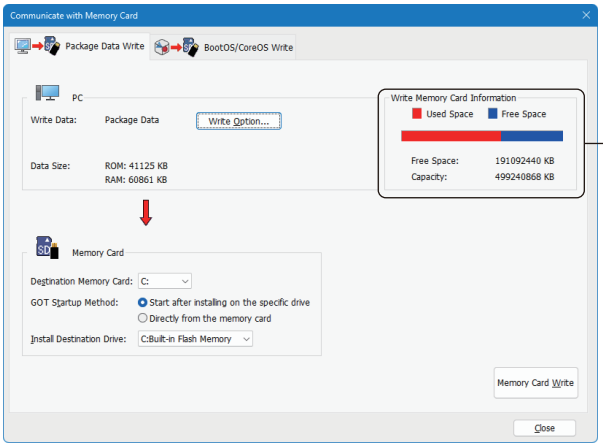
When writing BootOS, package data, or other items into the data storage, be sure to use another GOT utility or GT Designer3.

If the data is uploaded from the utility of the GOT used for the install, or copied to a data storage from sources other than GT Designer3, the installation will not be executed properly.

Note the available capacity of the data storage.

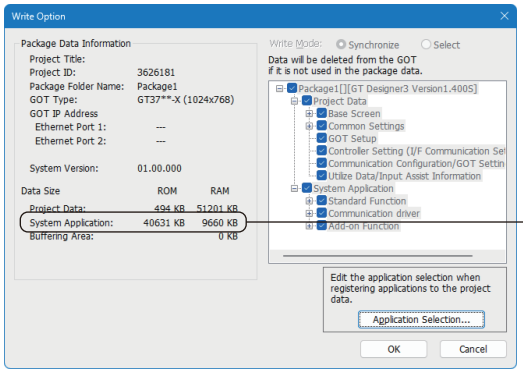
The available capacity of BootOS and system applications can be checked using [Write to Memory Card] or [Write Option] in GT Designer3.

[Communicate with Memory Card] dialog



Available data storage capacity

[Write Option] dialog



Available system application capacity

4.2.2 Installing when starting the GOT

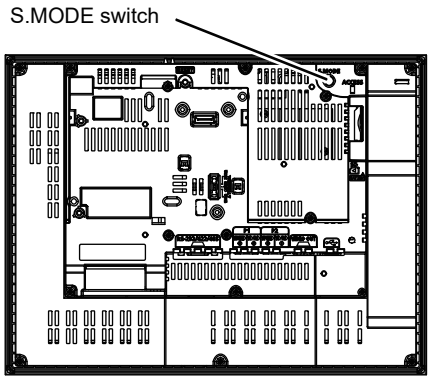
Use the S.MODE switch to install the BootOS and package data stored on the data storage onto the GOT.
Installation is not possible using the S.MODE switch when the boot source for the system application is set to drive A.

Point

A message may appear depending on the installations status of the basic application installed on the GOT.
If a screen requesting operation is displayed, operate the GOT according to the instructions on the screen.

S.MODE switch

The S.MODE switch is on the back of the GOT.



GT37

If [Use the touch panel as S.MODE switch] is set in [GOT Setup] of GT Designer3, the touch panel can be used as the S.MODE switch. (Only available for GT37-X)
For details, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

Installation method

The following shows the installation procedure using an SD card or USB memory.

■Installing using an SD card

Operating procedure

1. Power off the GOT and insert either of the following SD cards into the GOT SD card interface:

- An SD card containing BootOS
- An SD card containing package data

2. Close the cover of the SD card interface of the GOT.

3. Power on the GOT while pressing the S.MODE switch.

4. When the security mode is set to mode 2 and the project data to be installed is encrypted, the [Project data password Input] screen will appear.

5. Enter the password set for the project data to be installed.

6. When the security mode is set to mode 2, [Operator authentication] appears.

Enter the password set in the [Operator authentication] screen.

7. When the security mode is set to mode 1 and the data transfer security function is set in GT Designer3, the [System management authentication] screen will appear.

Enter the password set in the [Data Transfer Security] tab in GT Designer3.

8. The BootOS or package data will be installed on the built-in flash memory.

The SD card access LED is lit during the installation.

Do not pull out the SD card or power off the GOT while the SD card access LED is lit.

9. The GOT restarts automatically after the installation is completed.

If the system application is already installed, touch the [OK] button to restart the GOT.

10. After confirming normal restart, confirm that the SD card access LED is not lit, and remove the SD card from the SD card interface of the GOT.

■Installing using a USB memory

Operating procedure

1. Power off the GOT and insert either of the following USB memory devices into the GOT USB interface:

- A USB memory containing BootOS
- A USB memory containing package data

2. Power on the GOT while pressing the S.MODE switch.

3. When the security mode is set to mode 2 and the project data to be installed is encrypted, the [Project data password Input] screen will appear.

4. Enter the password set for the project data to be installed.

5. When the security mode is set to mode 2, [Operator authentication] appears.

Enter the password set in the [Operator authentication] screen.

6. When the security mode is set to mode 1 and the data transfer security function is set in GT Designer3, the [System management authentication] screen will appear.

Enter the password set in the [Data Transfer Security] tab in GT Designer3.

7. The BootOS or package data will be installed on the built-in flash memory.

The USB memory access LED is lit during the installation execution.

Do not pull out the USB memory or power off the GOT while the USB memory access LED is lit.

8. The GOT restarts automatically after the installation is completed.

If the system application is already installed, touch the [OK] button to restart the GOT.

9. After confirming normal restart, confirm that the USB memory access LED is not lit, and remove the USB memory from the USB interface of the GOT.

For information on how to remove the USB memory, refer to the following.

☞ Page 181 [Touch panel calibration]

4.2.3 Installing from the [Package management] screen

Use the [Package management] screen to install the package data stored on the data storage to the GOT.
For details on the [Package management] screen, refer to the following.
☞ Page 574 [Memory check]

Point

If the basic system application is not installed in the GOT, the package data cannot be installed using the [Package management] screen.
Install the basic system application by any of the following methods instead.
- Use GT Designer3
- Use a data storage when the GOT is powered on

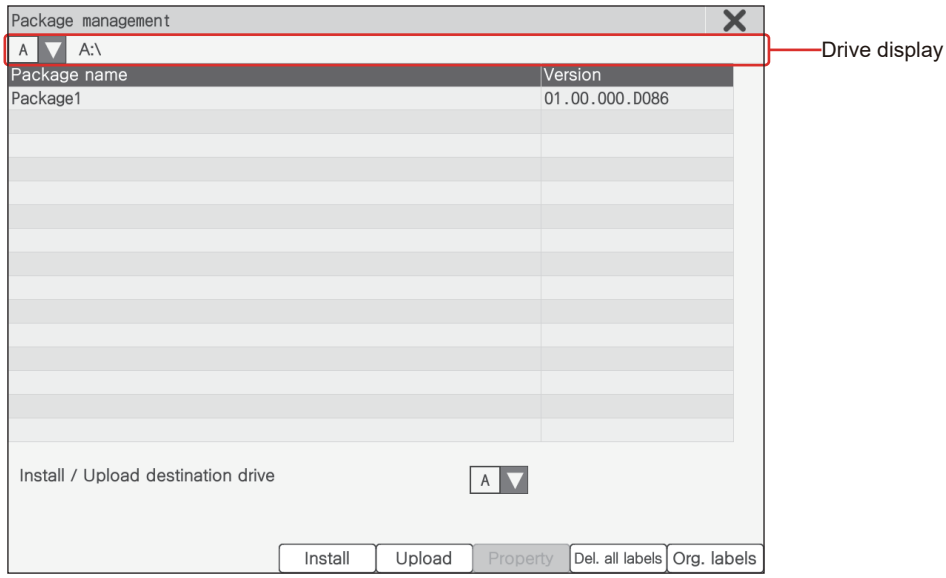
Installation method

The following shows the installation procedure using an SD card or USB memory.

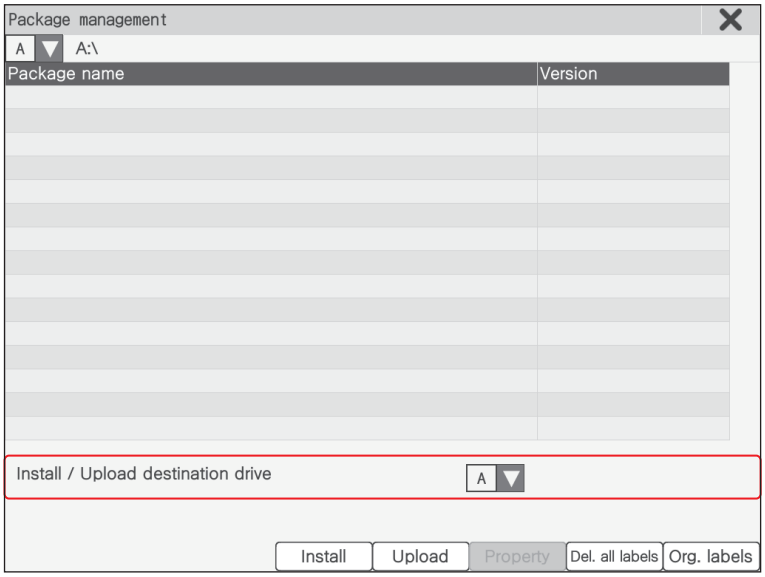
■Installing using an SD card

Operating procedure

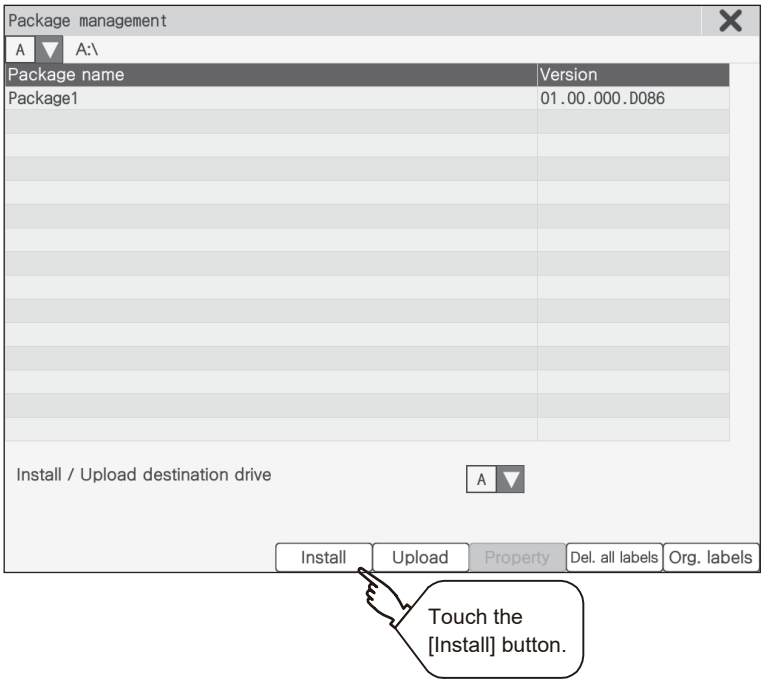
1. Insert an SD card containing the package data into the GOT SD card interface.
2. Close the cover of the SD card interface of the GOT.
3. Display the [Package Management] screen on the GOT and select drive A from the drive list.



4. Select the installation destination drive in [Install / Upload destination drive].



5. Touch the [Install] button to install the package data from the SD card onto the GOT.



6. When the security mode is set to mode 2 and the project data to be installed is encrypted, the [Project data password Input] screen will appear.

7. Enter the password set for the project data to be installed.

8. When the security mode is set to mode 2, [Operator authentication] appears.

Enter the password set in the [Operator authentication] screen.

9. When the security mode is set to mode 1 and the data transfer security function is set in GT Designer3, the [System management authentication] screen will appear.

Enter the password set in the [Data Transfer Security] tab in GT Designer3.

10. The SD card access LED is lit during the installation.

Do not open the SD card interface cover or power off the GOT while the SD card access LED is lit.

11. The GOT restarts automatically after the installation is completed.

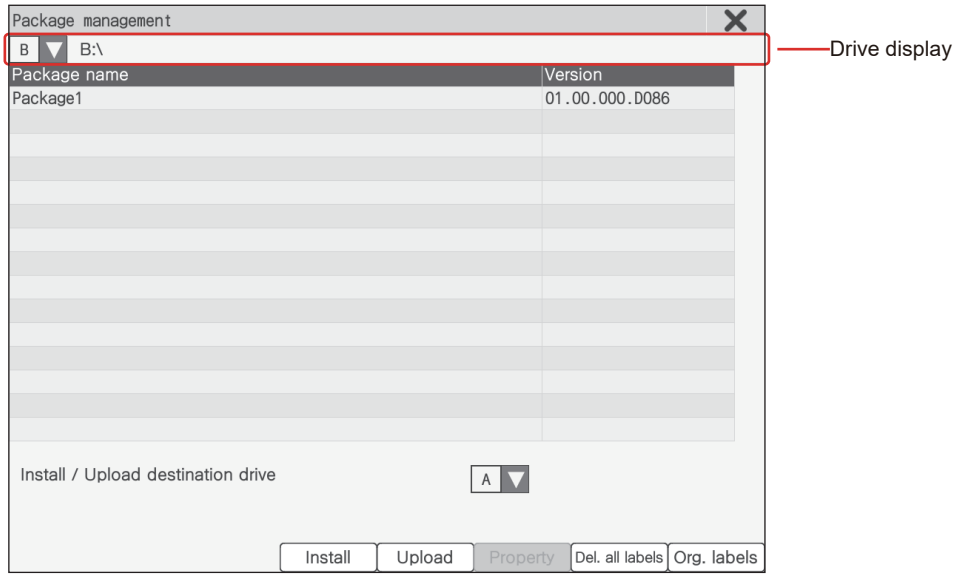
12. After confirming normal restart, confirm that the SD card access LED is not lit, and remove the SD card from the SD card interface of the GOT.

■Installing using a USB memory

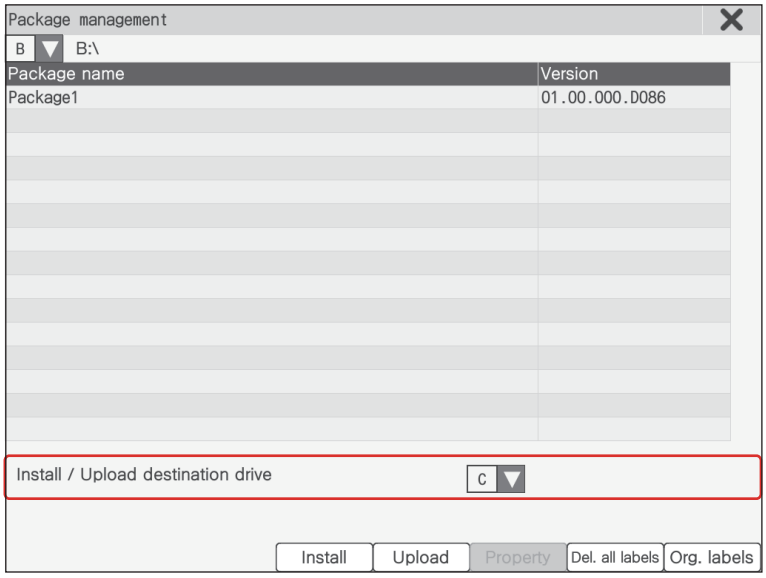
Operating procedure

1. Insert a USB memory containing the package data into the USB interface.

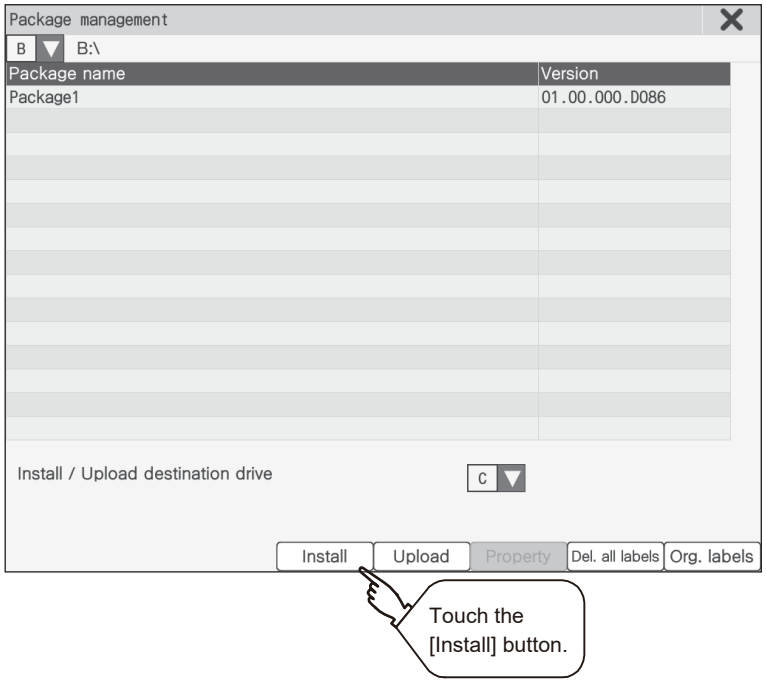
2. Display the [Package Management] screen on the GOT and select the installation source drive from the drive list.



3. Select the installation destination drive in [Install / Upload destination drive].



4. Touch the [Install] button to install the package data from the USB memory onto the GOT.



5. When the security mode is set to mode 2 and the project data to be installed is encrypted, the [Project data password Input] screen will appear.

6. Enter the password set for the project data to be installed.

7. When the security mode is set to mode 2, [Operator authentication] appears.

Enter the password set in the [Operator authentication] screen.

8. When the security mode is set to mode 1 and the data transfer security function is set in GT Designer3, the [System management authentication] screen will appear.

Enter the password set in the [Data Transfer Security] tab in GT Designer3.

9. The USB memory access LED is lit during install execution.

Do not pull out the USB memory or power OFF the GOT while the USB memory access LED is lit.

10. The GOT restarts automatically after the installation is completed.

11. After confirming normal restart, confirm that the USB memory access LED is not lit.

Display the USB device status screen and remove the USB memory from the USB interface of GOT.

☞ Page 181 [Touch panel calibration]

4.3 Version check during installation

The GOT compares and checks the versions of the following data when they are installed or downloaded:

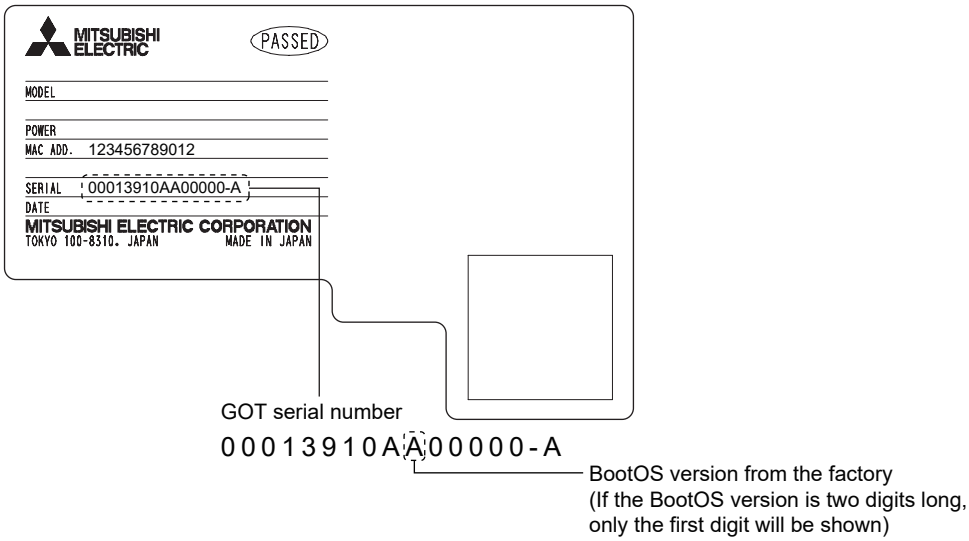
- BootOS
- System application
- Project data

For information on the comparison and check operation, refer to the following.

☞ Page 55 When install BootOS
☞ Page 55 System application installation
☞ Page 55 When project data is downloaded

Point

Confirm the version of BootOS installed in the GOT at product shipment by rating plate of GOT rear face.



When install BootOS

When installing BootOS, GOT compares the version of the BootOS to be installed with the version of BootOS which is already installed.
A message appears depending on the version of the installed BootOS and that of the BootOS being installed.

Point

If the BootOS is installed from GT Designer3, a message will appear on the screen of the personal computer. Follow the instructions of the message.

■When BootOS and the system application are stored in the data storage

If the major version of the BootOS being installed is old, the BootOS installation is skipped and the installation of the system application and subsequent processing are performed.

■When the BootOS version is the same as or newer than the one installed

A dialog will appear with version information and options to select whether to install or not.

System application installation

When installing the system application, match the major version number of the basic system application, communication driver, and system application (add-on function).

- Basic system application
- Communication driver
- System application (add-on function)

If the versions do not match, the system application cannot be installed.

<When the installation process is interrupted>

Basic system application	:	1. ○ . ○
Communication driver	:	2. ○ . ○
System application (add-on function)	:	2. ○ . ○

Match the numbers.

<When the installation process is executed normally>

Basic system application	:	2. ○ . ○
Communication driver	:	2. ○ . ○
System application (add-on function)	:	2. ○ . ○

The versions of the basic system applications, communication driver, and system application (add-on function) can be checked in the [Write Option] dialog of GT Designer3.
For details, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

When project data is downloaded

When project data is downloaded, the version of the project data and that of the installed system application will be compared.
If the versions differ, a dialog appears confirming whether you want to install the system application as well.
When downloading project data from a data storage, it is recommend that project data and the system application of the same version are stored on the data storage in advance.

PART 3 Basic operations of the utility menu

5 Displaying the utility main menu

6 Basic operations of setting screens

5 Displaying the utility main menu

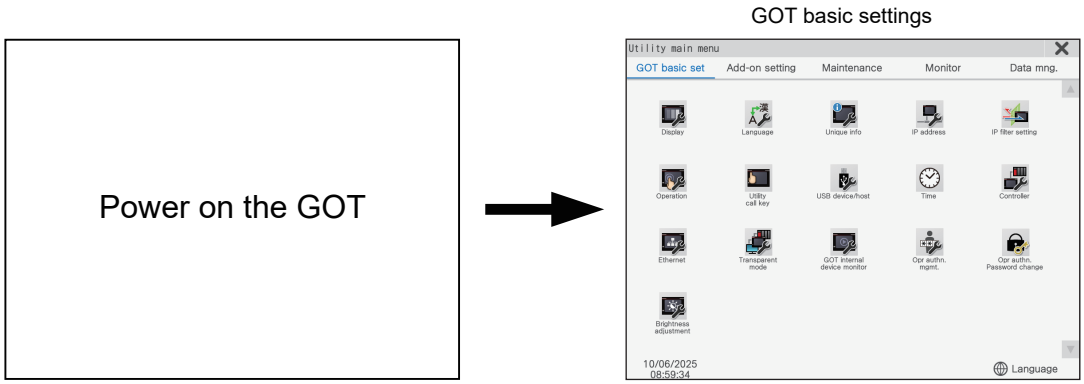
☞ Page 57 Screen display procedure
☞ Page 60 [Utility main menu] screen

5.1 Screen display procedure

The main menu can be displayed using the following three methods.
To display the utility main menu, package data (basic system application) must be installed on the GOT.

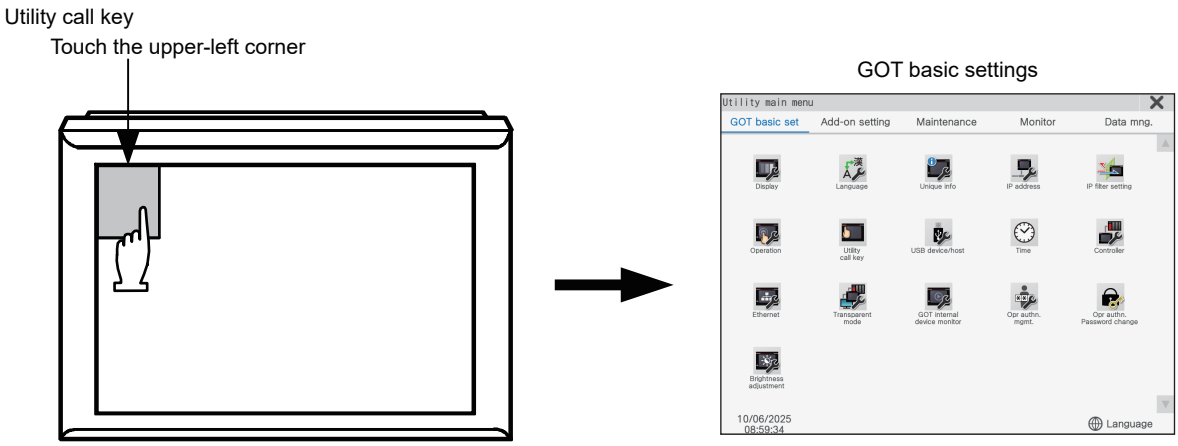
When project data is not downloaded

The main menu is automatically displayed after the title screen when the GOT is powered on.



When touching the menu call key

Touch the utility call key while a user-created screen is displayed to display the main menu.
The menu call key is located in the upper left corner of the GOT at factory settings.



The menu call key can be configured using the GOT utility or GT Designer3.
For information on how to configure the utility call key, refer to the following.

☞ Page 86 [Utility Call Key] screen
📖 GT Designer3 (GOT3000) Screen Design Manual

Point

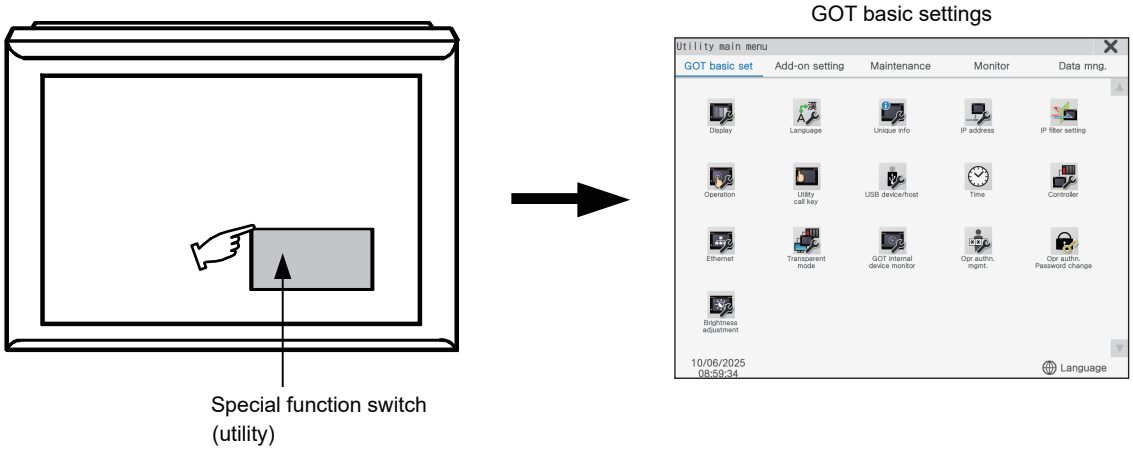
• Utility call key hold-down time
When [Hold-down Time] in the utility call key setting screen is set to more than zero seconds, touch the touch panel for longer than the hold-down time then release your finger.
For information on the utility call key settings, refer to the following.

☞ Page 85 [Utility call key]

When touching the special function switch (utility)

Touch the special function switch (utility) while a user-created screen is displayed to display the main menu.

The special function switch (utility) can be set as a touch switch that is displayed on a user-created screen by GT Designer3.



For details on the special function switch settings, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

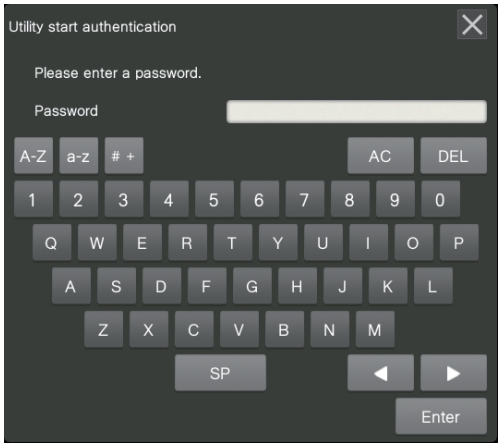
Locking the utility display by password

This function can be used when the security mode is set to mode 1.

If a password has been set for the GOT with the functional operation security in GT Designer3, the [Utility start authentication] screen will appear when you try to display the utility main menu.

For details on setting the password, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual



An error message will appear if the password is incorrect.

Touch the [OK] button to return to the monitor screen.

■Entering a password

Operating procedure

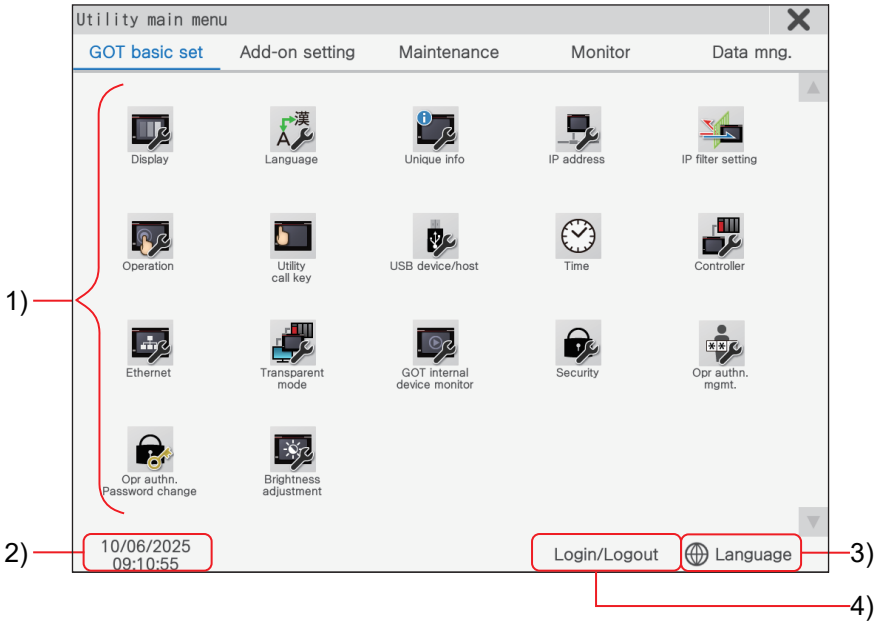
1. Use the [0] to [9] and [A] to [F] keys to enter a password.
2. Touch the [Enter] key to set the password once it has been entered.
3. To correct a character, touch the [DEL] key to delete it and then re-enter the new character.

■Cancel entering a password

Touch the [×] button to return to the monitor screen.

5.2 [Utility main menu] screen

To display each setting screen of the utility, the main menu has to be displayed first.



Item		Description
1)	Main menu	Displays the menu items with configurable settings in the utility. Touching a menu item in the main menu will display the setting screen or subsequent selection screen for the item.
2)	Date and time button	Displays date and time. For the GOT, touch the button to display the [Time] screen. For details on the [Time] screen, refer to the following. ☞ Page 92 [Time] screen
3)	[Language] button	This button switches the language used for the utility or system alarms. Touch the [Language] button to display the [Language] screen. For details on the [Language] screen, refer to the following. ☞ Page 72 [Language] screen
4)	[Login/Logout] button	Appears when the security mode is set to mode 1 and the password for the level authentication function or operator authentication function is set in GT Designer3. Touch the button to display the password entry screen. Enter the password according to the instructions on the screen to login. In addition, the name of the displayed button differs depending on the authentication method. • Level authentication: [Password authentication] button • Operator authentication: [Login/Logout] button

Point

The following screen will be displayed when starting the GOT without selecting a language, or if the selected language and the installed fonts do not match.

When a language is selected from the list, the GOT restarts in the selected language.

• Selectable languages

Only selectable languages are displayed in the list.

The selectable languages differ depending on the fonts installed in the GOT.

For information on the relation between the selectable languages and the fonts, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

• System language switching using a device

The system language can be switched using the system language switching device set in GT Designer3.

For information on the setting method of the system language switching device, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Display conditions for each screen (when the security mode is mode 2)

Some screens can be displayed in the utility depending on the operations rights, while others cannot.

For details on group specifications and displayable/non-displayable screens, refer to the following.

☞ Page 115 Group specifications (security mode: mode 2)

6 Basic operations of setting screens

☞ Page 62 Basic configuration of setting screens
☞ Page 63 Changing the setting values

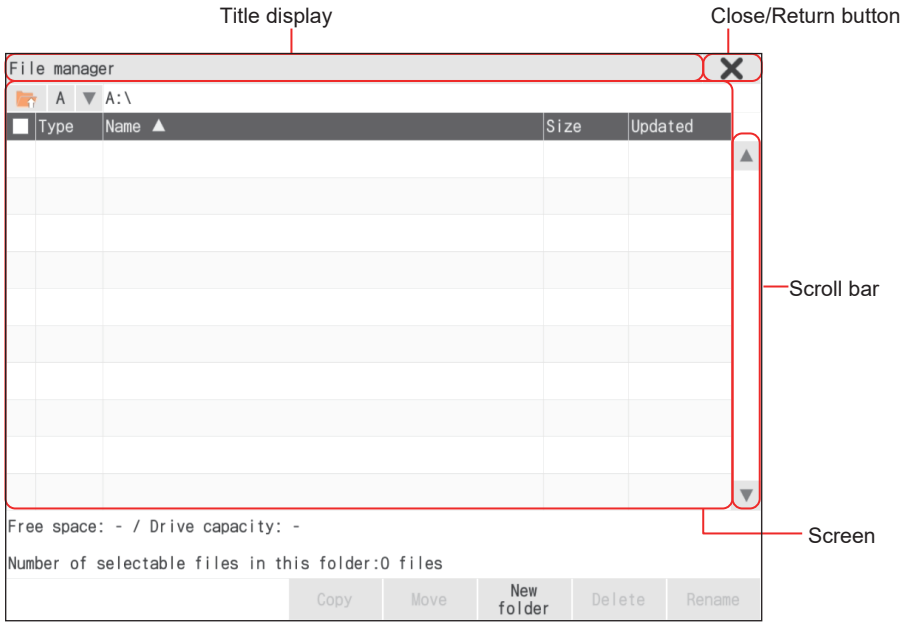
This chapter explains the basic configuration of each setting screen displayed from the items on the utility menu.

6.1 Basic configuration of setting screens

The basic configuration of setting screens is as follows.

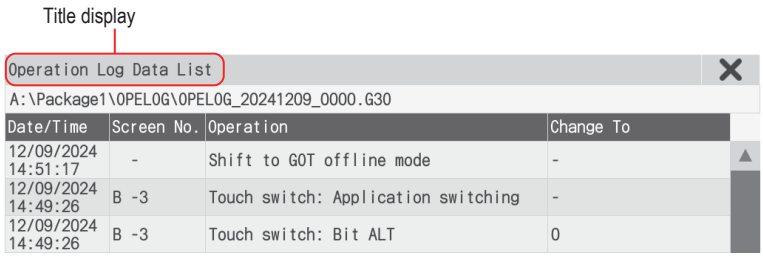
Ex.

Basic configuration of the [File Manager] screen



Title display

The title of the screen is shown in the title bar.



Close/return button

If a screen within the hierarchy is displayed, touch the [×] (Close/return) button in the upper right corner of the screen to return to the previous screen.

Touch this button to return to the monitor screen if this screen is displayed directly from the monitor screen.

Scroll bar

If the contents of a screen do not fit on one screen, the scroll bar appears on the right of the screen.

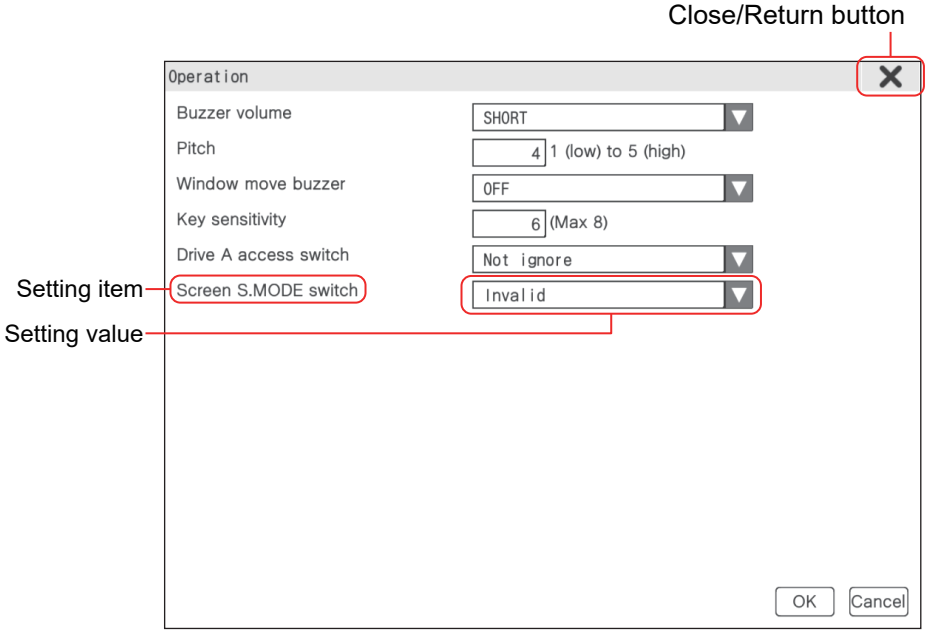
Touch the scroll bar or slide the handle to scroll the screen.

6.2 Changing the setting values

This section explains how to change the setting values in the setting screens and apply the new values.

Ex.

Changing the setting values in the [Operation] screen



Operating procedure

1. Touch the setting value of each setting item.

The setting method differs depending on the setting item.

☞ Page 64 Operations for changing setting values

2. Touch the [OK] button to apply the change and return to the previous screen.

Depending on the setting item, the GOT restarts.

To cancel the change, touch the [Cancel] button or the Close/return button.

6.3 Operations for changing setting values

The operations for changing the setting value differs depending on the setting item.
The following shows the main operations to change the setting values.

☞ Page 64 Numerical input
☞ Page 64 Selecting setting values
☞ Page 65 Adjusting setting values
☞ Page 65 Setting an IP address

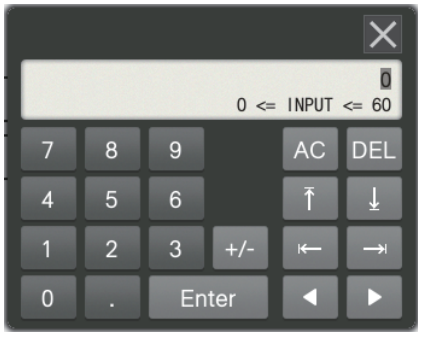
6.3.1 Numerical input

Operating procedure

1. Touch the numerical value you want to change.

2. A keyboard and a cursor for numerical input will appear.

The position of the keyboard changes depending on the position of the touched numerical value.
(The keyboard will appear in a position suitable for entering numeric values.)



3. Enter numeric values using the keyboard.

[0] to [9] keys: Enter numeric values.
[+/-] keys: Change the entered value to a positive or negative value.
[ENTER] key: Confirms the entered values and closes the keyboard.
[DEL] key: Deletes entered values one value at a time.
[AC] key: Deletes all entered values.
[×] (close/return) button: Cancels any entered values and closes the keyboard.

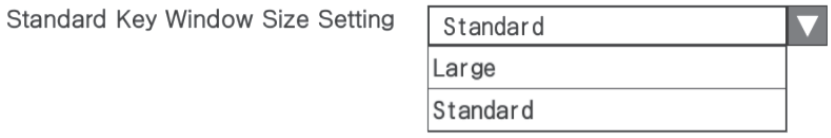
4. Touch the [Enter] key to finish entering values and close the keyboard.

The keyboard will not close if the [Enter] key is touched when the entered value is out of range.
Check the input range and re-enter the correct values.

6.3.2 Selecting setting values

Operating procedure

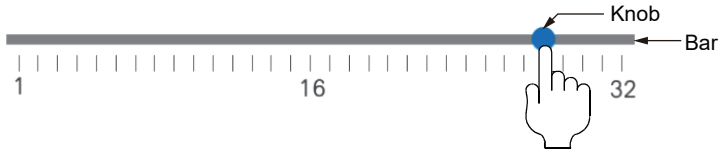
1. Touch the setting item to display the list.



2. Select an item from the list.

6.3.3 Adjusting setting values

The setting range is indicated by a bar. The handle on the scroll bar indicates the current value.
Slide the handle or touch the bar to set a value.

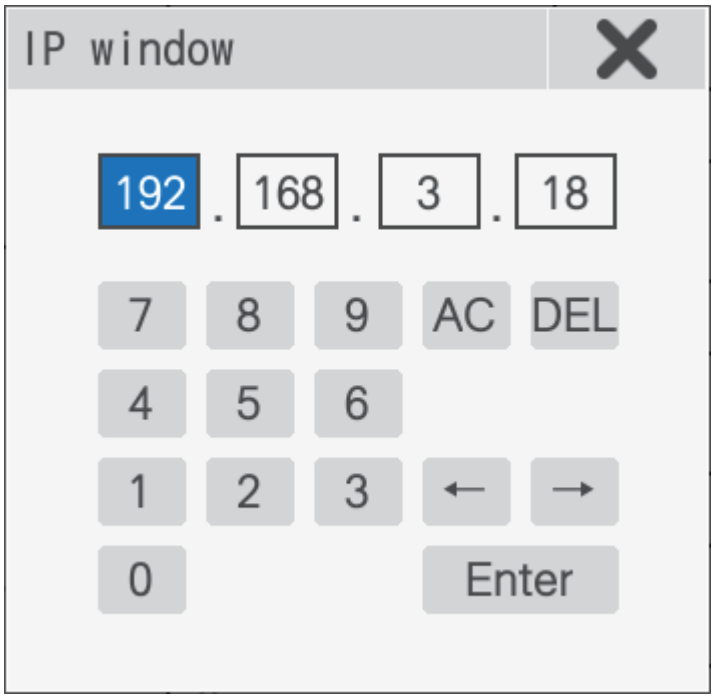


6.3.4 Setting an IP address

The IP address input key window will appear when entering an IP address.

Operating procedure

1. Touch the setting item to display the IP address input key window.



2. Enter numeric values using the keyboard.

[0] to [9] keys: Enter numeric values.
[←] [→] keys: Move the value selector left and right.
[Enter] key: Confirms the entered values and closes the keyboard.
[DEL] key: Deletes entered values one value at a time.
[AC] key: Deletes all entered values.
[×] (close/return) button: Cancels any entered values and closes the keyboard.

3. Touch the [Enter] key to finish entering values and close the keyboard.

PART 4 GOT basic settings

7 [Display]

8 [Language]

9 [Unique info]

10 [IP Address]

11 [IP filter Setting]

12 [Operation]

13 [Utility call key]

14 [USB device/host]

15 [Time]

16 [Controller]

17 [Ethernet]

18 [Transparent mode]

19 [GOT internal device monitor]

20 [Security]

21 [Operator authentication management]

22 [Opr authn. Password change]

23 [Brightness adjustment]

7 [Display]

GT37 SoftGOT3000

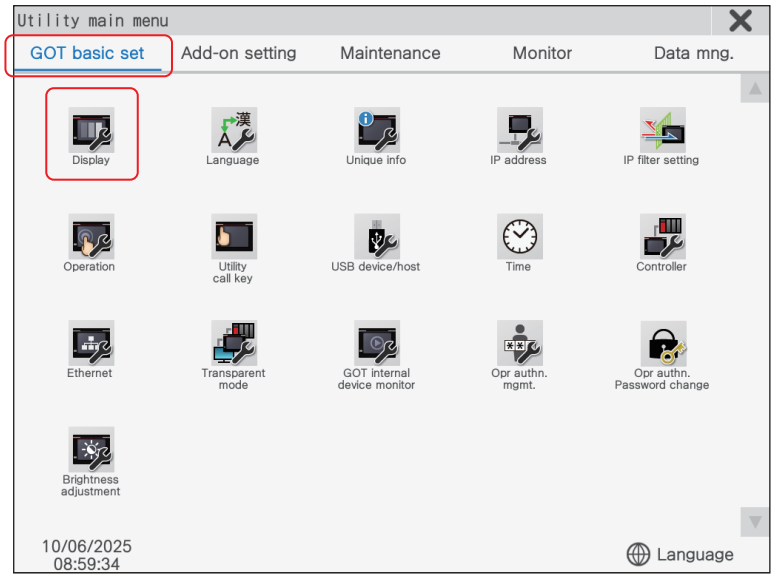
The display settings on the GOT screen can be changed.

For information on the configurable settings, refer to the following.

☞ Page 68 [Display] screen

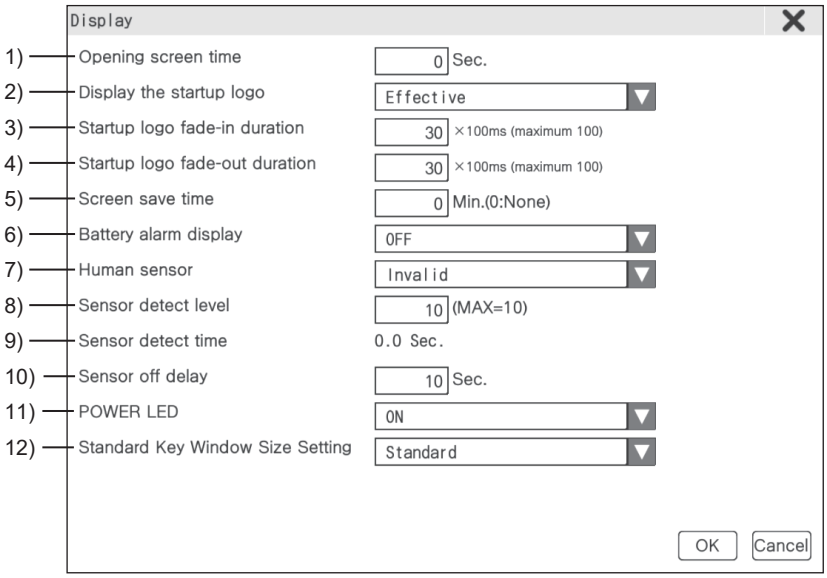
7.1 How to display the screen

Select [Display] in the [GOT basic set] tab.



PART 4

7.2 [Display] screen



Item		Description	Setting range
1)	[Opening screen time]	Set the title display time at GOT startup. If [Display the startup logo] is set to [Effective], the startup logo is always displayed during the GOT startup process even when [Opening screen time] is set to [0] Sec.	[0] to [60] Sec. <Default: [0] Sec.>
2)	[Display the startup logo]	Set whether to display the startup logo during the startup screen.	• [Effective] • [Invalid] <Default: [Effective]>
3)	[Startup logo fade-in duration][*1]	Set this item when [Display the startup logo] is set to [Effective]. Set the time for the startup logo to fade in in 100 ms increments. When the setting value is [10], [Startup logo fade-in duration] is one second (1000 ms). Set [0] if the fade-in effect is not required.	[0] × 100 ms to [100] × 100 ms <Default: [30] × 100 ms>
4)	[Startup logo fade-out duration][*1]	Set this item when [Display the startup logo] is set to [Effective]. Set the time for the startup logo to fade out after the title display time has elapsed in 100 ms increments. When the setting value is [10], [Startup logo fade-out duration] is one second (1000 ms). Set [0] if the fade-out effect is not required.	[0] × 100 ms to [100] × 100 ms <Default: [30] × 100 ms>
5)	[Screen save time][*2]	Not available for GT SoftGOT3000. Set the time from when the user stops touch panel operation until when the screen save function starts.	[0] to [60] Min. <Default: [0] Min.>
6)	[Battery alarm display]	Not available for GT SoftGOT3000. Set whether to display the system alarm when the GOT built-in battery voltage drops.	• [ON] • [OFF] <Default: [OFF]>
7)	[Human sensor]	Available for GT3712-X and GT3715-X with the human sensor. Set whether to enable or disable the human sensor that unlocks the screen saver when human movement is detected.	• [Effective] • [Invalid] <Default: [Invalid]>
8)	[Sensor detect level]	Available for GT3712-X and GT3715-X. Set the level for [Sensor detect level]. As the sensor detect level increases, the detection sensitivity of the human sensor becomes higher.	[0] to [10] <Default: [10]>
9)	[Sensor detect time]	Available for GT3712-X and GT3715-X. Displays the time from when the human sensor detects human movement until when the sensor responds. The setting value is determined by the setting of [Sensor detect level]. For the relation between [Sensor detect level] and [Sensor detect time], refer to the following. ☞ Page 69 Relation between [Sensor detect level] and [Sensor detect time] The display of [Sensor detect time] is updated when the setting of [Sensor detect level] is changed and the [OK] button is pressed.	[0.0] to [4.0] Sec. <Default: [0.0] seconds>

Item		Description	Setting range
10)	[Sensor off delay]	Available for GT3712-X and GT3715-X. Set the time from when a human movement is detected until the Human Sensor Detection signal (System signal 2-1.b5) turns off.	[0] to [3600] Sec. <Default: [10] seconds>
11)	[POWER LED]	Not available for GT SoftGOT3000. Set the POWER LED on or off. When [OFF] is selected, the POWER LED can be kept off even while the GOT is running. However, the LED turns on temporarily immediately after the GOT is started.	• [ON] • [OFF] <Default: [ON]>
12)	[Standard Key Window Size Setting]	Set the size of the standard key window. Although the default setting for GT3708-X is [Standard], [Large] is recommended to ensure operability.	• [Standard] • [Large]
			GT37-W <Default: [Large]>
			GT37-X <Default: [Standard]>

*1 The fade-in and fade-out durations of the startup logo are not included in the title display time.
Therefore, when [Startup logo fade-in duration] and [Startup logo fade-out duration] are set, the GOT startup time will be longer.

*2 When the following system signals are set, this setting takes precedence over the setting of [Screen save time] of the utility.
- Automatic Screen Saver Disable signal (System signal 1-1. b0)
- Forced Screen Saver Enable signal (System signal 1-1. b1)
- Forced Screen Saver Touch-Cancel signal (System signal 1-1. b2)

For the system signals, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

Precautions

- When setting [Human sensor] to [Invalid]

Even if [Human sensor] is set to [Invalid], the Human Sensor Detection signal (System signal 2-1.b5) turns on when a human movement is detected.

If you control the human sensor by associating the Forced Screen Saver Enable signal (System signal 1-1.b1) and Human Sensor Detection signal by a sequence program, etc., unintended operation may result.

When setting [Human sensor] to [Invalid], review the related sequence program and other settings.

Relation between [Sensor detect level] and [Sensor detect time]

The following shows the setting values of [Sensor detect time] and the corresponding times of [Sensor detect level].

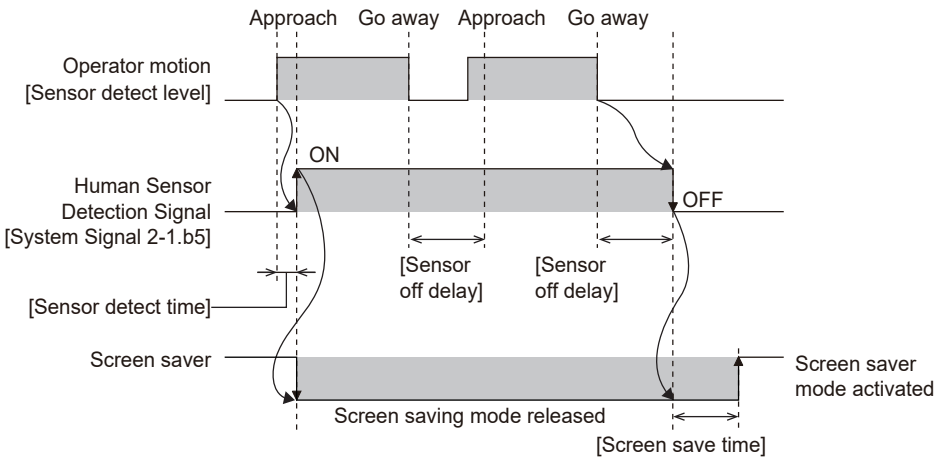
The larger the setting value of [Sensor detect level], the shorter [Sensor detect time].

Item	Description										
[Sensor detect level]	10	9	8	7	6	5	4	3	2	1	0
[Sensor detect time] [Sec.]	0.0	0.1	0.2	0.4	0.8	1.0	1.5	2.0	2.5	3.0	4.0

Unlocking the screen saver by the human sensor

The human sensor unlocks the screen saver without the need of touching the GOT.

The screen saver is unlocked when the operator approaches the GOT.



If there is no operator action during the time set to [Sensor off delay] after the operator leaves, the Human Sensor Detection signal (System signal 2-1. b5) turns off.

After the signal turns off, when the time set to [Screen save time] elapses, the GOT enters the screen save state.

For the Human Sensor Detection signal (System signal 2-1.b5), refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

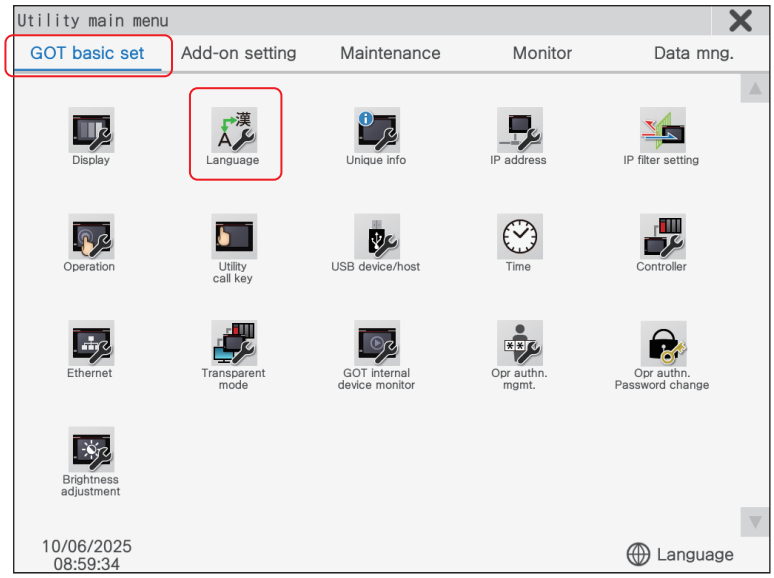
8 [Language]

GT37 SoftGOT3000

Set the language of the text displayed on the utility main menu and each screen.
For the configurable settings, refer to the following.
☞ Page 72 [Language] screen

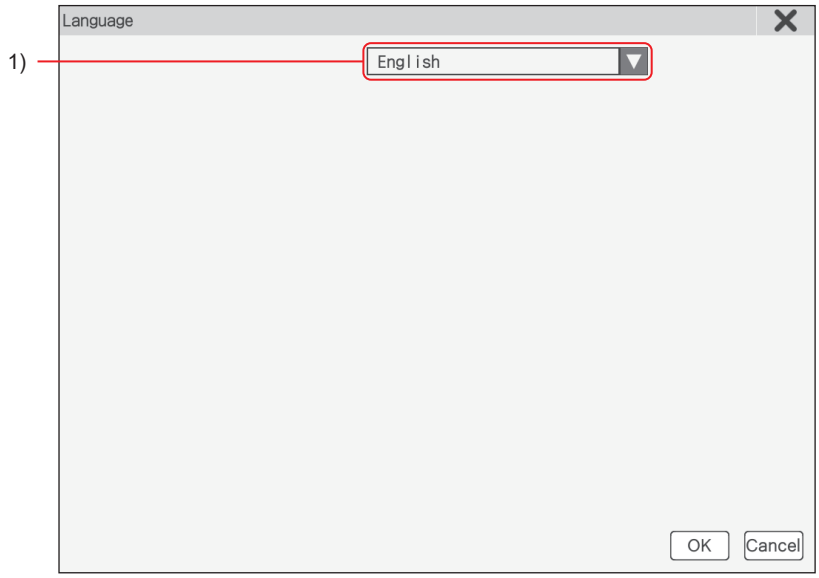
8.1 How to display the screen

Select [Language] in the [GOT basic set] tab.



PART 4

8.2 [Language] screen



Item		Description	Setting range*2
1)	System language*1	Set the language of the text displayed on the utility main menu and each screen.	• Japanese • English • Chinese (Simplified) • Chinese (Traditional) • Korean <Default: Japanese>

*1 The system language can be switched using the system language switching device set in GT Designer3.
For information on how to set the system language switching device, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

*2 Only selectable languages are displayed.
The selectable languages differ depending on the fonts installed in the GOT.
For details on fonts, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

9 [Unique info]

GT37 SoftGOT3000

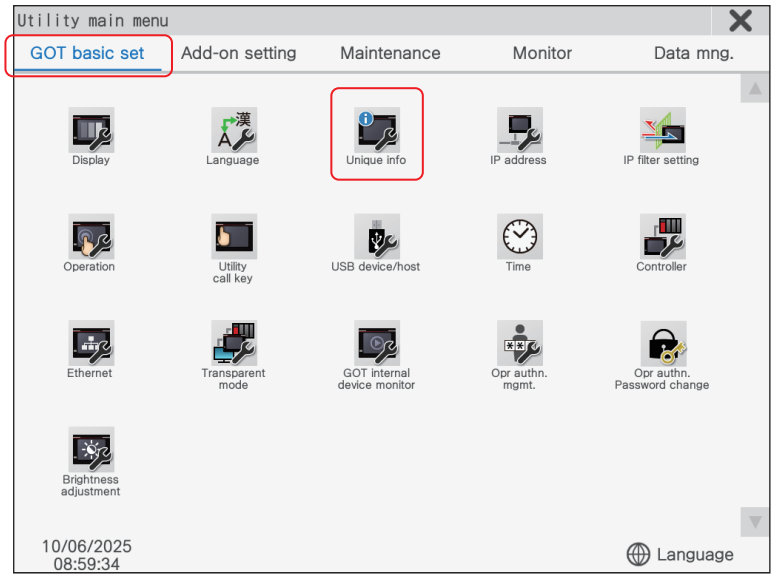
You can set unique identification information for the GOT.

For information on the configurable settings, refer to the following.

☞ Page 74 [Unique info] screen

9.1 How to display the screen

Select [Unique info] in the [GOT basic set] tab.



PART 4

9.2 [Unique info] screen

Item		Description	Setting range
1)	[GOT ID]	Set an ID to identify the GOT. To not assign a GOT ID, set [0].	[0] to [32767] <Default: [0]>

10 [IP Address]

GT37 SoftGOT3000

Used to set the IP address and IP address related settings.
When setting IP addresses, set each interface to a different network.
For information on the configurable settings, refer to the following.
☞ Page 76 [IP address] screen

Precautions

■When the GOT is added to a network containing a device with the same IP address:

The GOT goes offline, and a dialog appears.
Change the IP address of the GOT or the device.

Description	Setting procedure
When changing the IP address of the device	Specify a new IP address for the device, and touch the [Reboot GOT] button to restart the GOT.
When changing the IP address of the GOT	Touch the [Clear IP Address] button to disable the IP address of the GOT. Then, touch the [Reboot GOT] button to restart the GOT, and specify a new IP address for the GOT.

■Ethernet settings using GOT special registers (GS)

If the Ethernet setting is changed with applicable GOT special registers (GS), the GOT may not operate with the new Ethernet setting displayed in the utility.
Therefore, restart the GOT to reflect the new setting.

■Conditions for when ports are forcibly open upon GOT startup

The peripheral software communication port, and encrypted peripheral software communication port are open when the GOT starts up under the following conditions regardless of the status of [Port setting].

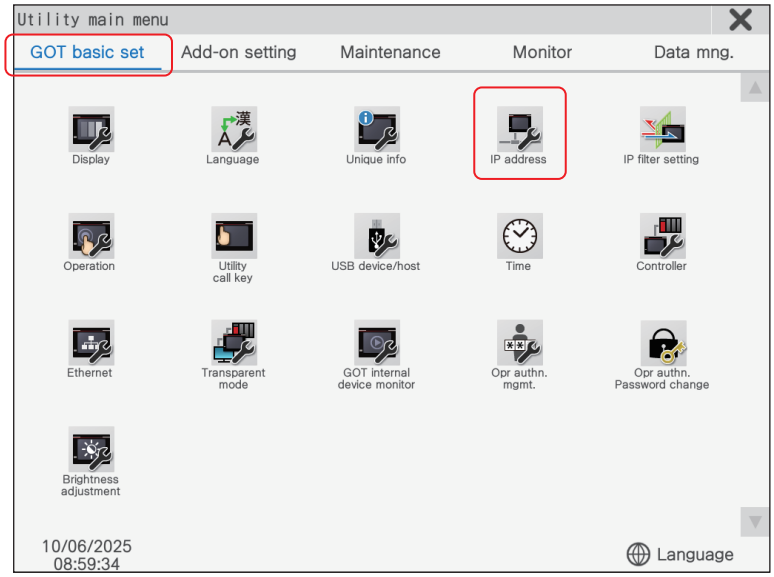
- Startup with the S.MODE switch pressed down
- Startup when there is a system package configuration file error
- When the target startup package and GOT type do not match

■Using a switching hub compatible with the Spanning Tree Protocol

For the switching hub port connected with the GOT, configure the setting (PortFast or others) that makes the GOT be ready for communications (forwarding state). Thus, the Spanning Tree Protocol does not cause a delay upon connection.
If this setting is not configured, Ethernet duplication will not be detected correctly.
Additionally, the GOT may not connect to the Ethernet network correctly.
For the setting that makes the GOT be ready for communications (forwarding state), refer to the user's manual for the switching hub used.

10.1 Screen display procedure

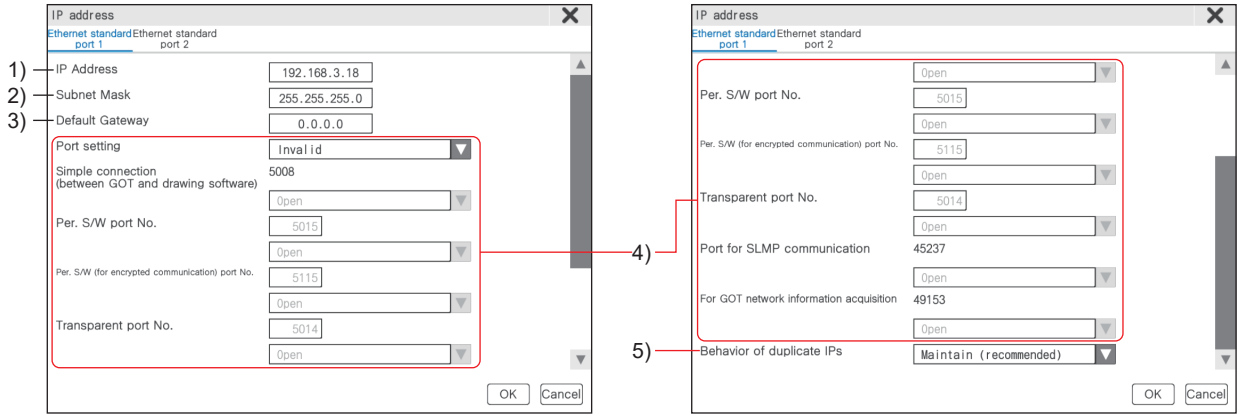
Select [IP address] in the [GOT basic set] tab.



10.2 [IP address] screen

☞ Page 76 [Ethernet Standard Port 1] tab
☞ Page 78 [Ethernet Standard Port 2] tab

10.2.1 [Ethernet Standard Port 1] tab



Item		Description	Setting range
1)	[IP Address]	Set an IP address for Ethernet standard port 1. IP addresses cannot be duplicated between Ethernet standard port 1 and Ethernet standard port 2. If the IP address is duplicated, the [OK] button is disabled and the settings will not be saved until the IP address settings are changed.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [192].[168].[3].[18]>
2)	[Subnet Mask]	Set a subnet mask for Ethernet standard port 1.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [255].[255].[255].[0]>
3)	[Default Gateway]	Set the default gateway. The default gateway is shared by Ethernet standard port 1 and Ethernet standard port 2.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [0].[0].[0].[0]>

Item			Description	Setting range
4)	[Port setting]	—	Enable or disable the default open port use/nonuse setting function, which allows you to set whether to open or close ports that are set to open by default. For details on the default open port use/nonuse setting function, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual The following items can be set when [Port setting] is [Effective]. • Port numbers for each port • Open or close for each port	• [Effective] • [Invalid] <Default: [Invalid]>
			Do not duplicate port numbers. Communication will not be possible if a port number is duplicated.	
		[Simple connection (between GOT and drawing software)]	Display the simple connection port number. Also set "Open" and "Close" for the simple connection port.	[5008] (Fixed)
				• [Open] • [Close] <Default: [Open]>
		[Per. S/W wireless port No.]	Set the port number used for communication with GT Designer3 or Data Transfer Tool. Also set "Open" or "Close" for the port number of the peripheral software.	• [1024] to [4839] • [4841] to [5007] • [5009] to [5010] • [5014] to [11443] • [11445] to [45236] • [45240] to [49152] • [49171] to [65534] <Default: [5015]>
				• [Open] • [Close] <Default: [Open]>
		[Per. S/W (for encrypted communication) port No.]	Set the port number used for encrypted communication with GT Designer3 or Data Transfer Tool. Also set "Open" or "Close" for the encrypted communication port of the peripheral software.	• [1024] to [4839] • [4841] to [5007] • [5009] to [5010] • [5014] to [11443] • [11445] to [45236] • [45240] to [49152] • [49171] to [65534] <Default: [5115]>
				• [Open] • [Close] <Default: [Open]>
		[Transparent port No.]	Set the port number for the GOT to use the FA transparent function. Also set "Open" or "Close" for the FA transparent function port.	• [1024] to [4839] • [4841] to [5007] • [5009] to [5010] • [5014] to [11443] • [11445] to [45236] • [45240] to [49152] • [49171] to [65534] <Default: [5014]>
				• [Open] • [Close] <Default: [Open]>
		[Port for SLMP communication]	Display the Node Search port number for SLMP communication. Also set "Open" or "Close" for the SLMP communication port.	[45237](Fixed)
				• [Open] • [Close] <Default: [Open]>
		[For GOT network information acquisition]	Display the GOT network information acquisition port number. Also set "Open" or "Close" for the GOT network information acquisition port.	[49153] (Fixed)
				• [Open] • [Close] <Default: [Open]>
5)	[Behavior of duplicate IPs]		Set whether to maintain the GOT's connection to the network when a device with the same IP address as the setting value of [IP address] joins the network.	• [Maintain (recommended)] • [Do not maintain] <Default: [Maintain (recommended)]>

Precautions

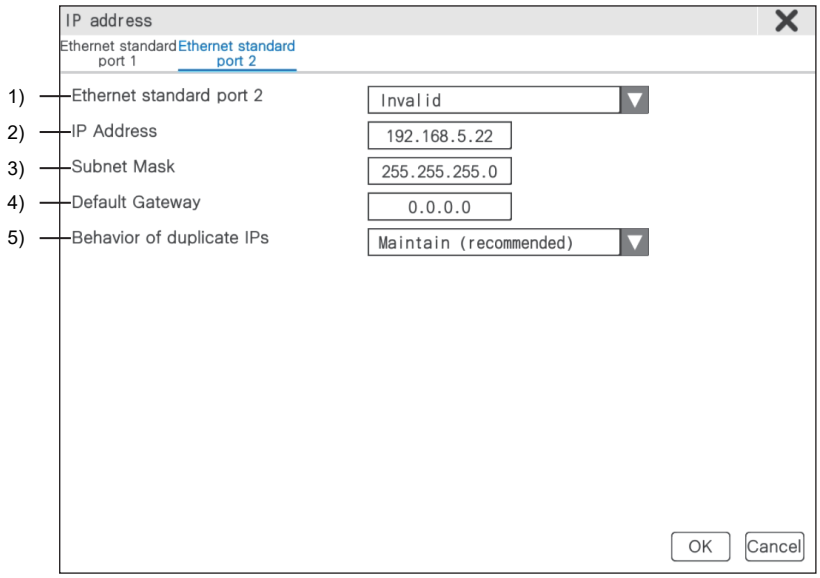
■Selection for [Behavior of duplicate IPs]

When [Do not maintain] is selected for [Behavior of duplicate IPs], if a device with the same IP address as the GOT joins the network, the GOT whose IP address duplication is detected is disconnected from the network.
Thus, incorrect setting of IP addresses or any malicious action may stop the GOT from communicating, affecting the system control.
Make sure to consider the necessity to change the selection for [Behavior of duplicate IPs] before doing so.

■Taking security measures except the open port use/nonuse setting function

The default open port use/nonuse setting function is one method of preventing unauthorized access from external devices such as destruction of programs or data. The function does not prevent unauthorized access completely.
To maintain the security (availability, integrity, and confidentiality) of GOT3000 and the system against unauthorized access from external devices, DoS attacks, computer viruses, and other cyberattacks, take appropriate measures in addition to this function, such as firewalls, virtual private networks (VPNs), and antivirus solutions.
Mitsubishi Electric shall have no responsibility or liability for GOT3000 troubles and system troubles caused by unauthorized access from external devices, DoS attacks, computer virus, and other cyberattacks.

10.2.2 [Ethernet Standard Port 2] tab



Item		Description	Setting range
1)	[Ethernet standard port 2]	Set whether to use Ethernet standard port 2.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[IP Address]	Set an IP address for Ethernet standard port 2. IP addresses cannot be duplicated between Ethernet standard port 1 and Ethernet standard port 2. If the IP address is duplicated, the [OK] button is disabled and the settings will not be saved until the IP address settings are changed.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [192].[168].[5].[22]>
3)	[Subnet Mask]	Set a subnet mask for Ethernet standard port 2.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [255].[255].[255].[0]>
4)	[Default Gateway]	Set the default gateway for Ethernet standard port 2. The default gateway is shared by Ethernet standard port 1 and Ethernet standard port 2.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [0].[0].[0].[0]>
5)	[Behavior of duplicate IPs]	Set whether to maintain the GOT's connection to the network when a device with the same IP address as the setting value of [IP address] joins the network.	• [Maintain (recommended)] • [Do not maintain] <Default: [Maintain (recommended)]>

Precautions

■Selection for [Behavior of duplicate IPs]

When [Do not maintain] is selected for [Behavior of duplicate IPs], if a device with the same IP address as the GOT joins the network, the GOT whose IP address duplication is detected is disconnected from the network.
Thus, incorrect setting of IP addresses or any malicious action may stop the GOT from communicating, affecting the system control.
Make sure to consider the necessity to change the selection for [Behavior of duplicate IPs] before doing so.

11 [IP filter Setting]

GT37 SoftGOT3000

IP addresses that are allowed to access or blocked from accessing the GOT can be set.
When connecting the GOT to Ethernet, it is recommended to use an IP filter.
For information on the configurable settings, refer to the following.
☞ Page 81 [IP filter setting] screen
For details on the IP filter settings, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

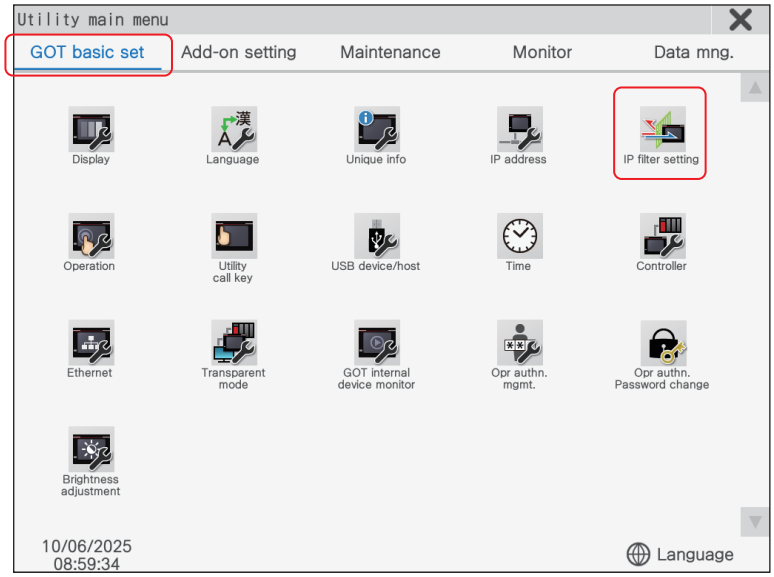
Precautions

■Taking security measures except the IP filter

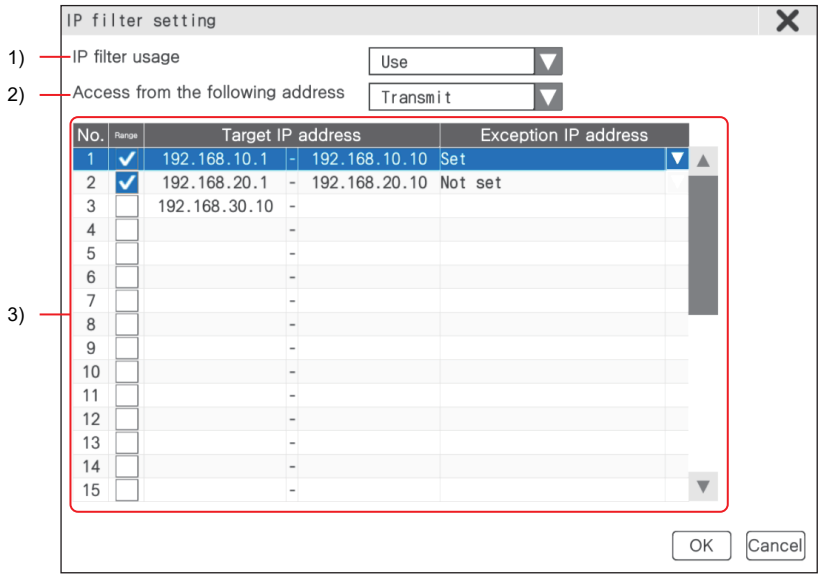
The IP filter function is one method of preventing unauthorized access from external devices such as destruction of programs or data. The function does not prevent unauthorized access completely.
To maintain the security (availability, integrity, and confidentiality) of GOT3000 and the system against unauthorized access from external devices, DoS attacks, computer viruses, and other cyberattacks, take appropriate measures in addition to this function, such as firewalls, virtual private networks (VPNs), and antivirus solutions.
Mitsubishi Electric shall have no responsibility or liability for GOT3000 troubles and system troubles caused by unauthorized access from external devices, DoS attacks, computer virus, and other cyberattacks.

11.1 How to display the screen

Select [IP filter setting] in the [GOT basic set] tab.

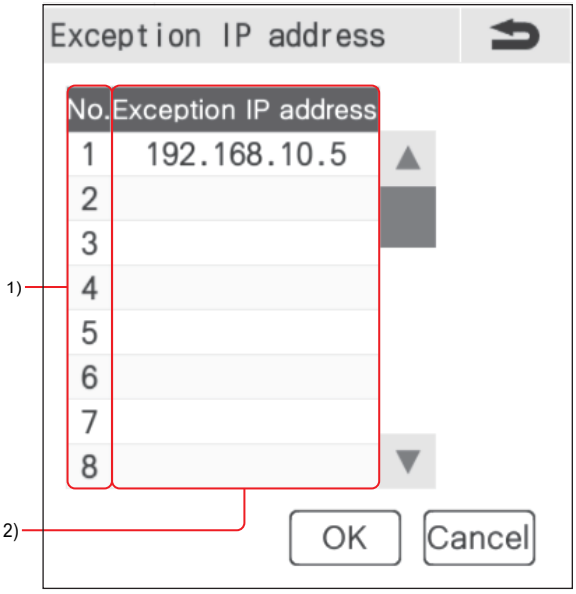


11.2 [IP filter setting] screen



Item			Description	Setting range
1)	[IP filter usage]		Set whether to use the IP filter function.	• [Use] • [Do not use] <Default: [Do not use]>
2)	[Access from IP address below]		Specify whether to permit (transmit) or prohibit (block) Ethernet communication with external devices that have an IP address. The specified IP addresses are handled differently according to the settings. • If [Transmit] is selected Access from the IP addresses that are set for [Target IP address] is blocked. Access from the IP addresses that are set for [Exception IP address] is disallowed. • If [Block] is selected Access from the IP addresses that are set for [Target IP address] is blocked. Access from the IP addresses that are set for [Exception IP address] is allowed.	• [Transmit] • [Block] <Default: [Transmit]>
3)	IP address specification	—	Set the IP addresses that are allowed to access or blocked from accessing the GOT. Leave the boxes blank if no IP addresses are to be filtered. Up to 32 IP addresses can be set.	—
		Specifying individual IP addresses	Set the IP addresses that are allowed to access or blocked from accessing the GOT.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: Blank>
		Specifying a range	Select [Range]. Displays the fields for setting the start and end IP addresses. Set a start and end IP address to allow or block access from IP addresses within a set range.	• Selected: Specify a range • Deselected: Do not specify a range <Default: Deselected>
				[0].[0].[0].[0] to [255].[255].[255].[255] <Default: Blank>
			Configure the settings in [Exception IP address] to exclude the IP addresses from the range set for [Target IP address]. When the settings are configured for [Exception IP address], [Set] will appear. For details on [Exception IP address], refer to the following. ☞ Page 82 [Exception IP address] screen	—

[Exception IP address] screen



Item		Description	Setting range
1)	[No.]	Displays the excluded IP address number. Up to 32 IP addresses can be specified to be filtered in the exception IP address list.	—
2)	[Exception IP address]	Set which IP addresses to exclude.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: Blank>

Point

When the IP address ranges overlap in the filtering list, the GOT prioritizes the range that has been set earlier. If an excluded IP address overlaps with an IP address in the already-specified IP address range, the excluded IP address becomes invalid.

Example) When [Access from the following address] in the [IP filter setting] screen is set to [Block]

First setting: 192.168.3.10 to 192.168.3.100 / Excluded: 192.168.3.90

Second setting: 192.168.3.80 to 192.168.3.240 / Excluded: 192.168.3.85

IP address 192.168.3.85 is blocked.

12 [Operation]

GT37 SoftGOT3000

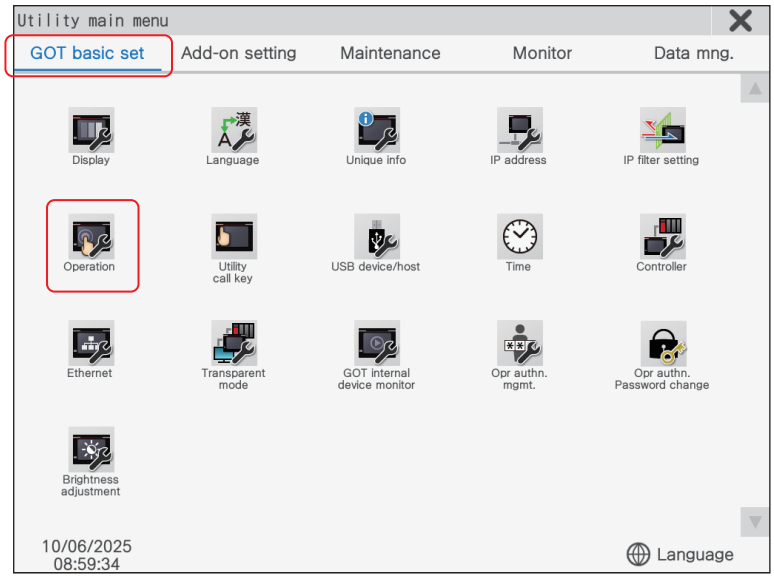
The GOT operation settings can be changed.

For information on the configurable settings, refer to the following.

☞ Page 84 [Operation] screen

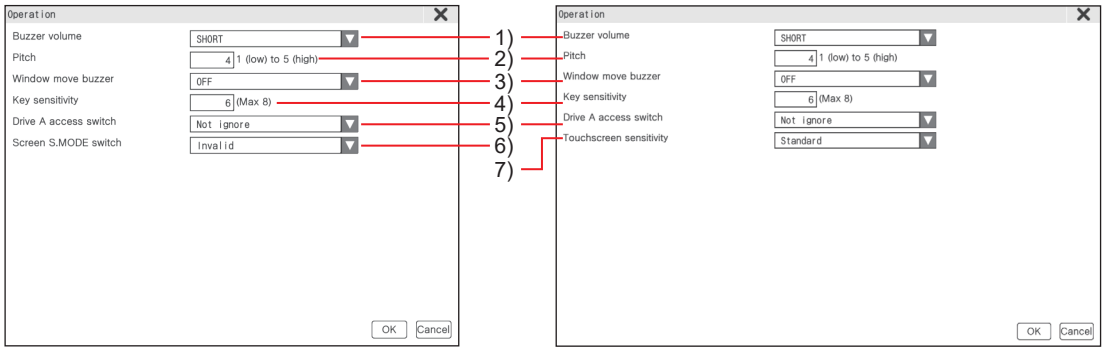
12.1 Screen display procedure

Select [Operation] in the [GOT basic set] tab.



PART 4

12.2 [Operation] screen



GT37-X GT37-W

Item		Description	Setting range
1)	[Buzzer]	Set the buzzer to be heard when an object or button is pressed.	• [OFF] • [SHORT] • [LONG] <Default: [SHORT]>
2)	[Pitch]	Set the pitch of the buzzer. The larger the setting value, the higher the pitch.	[1] to [5] <Default: [4]>
3)	[Window Shifting Buzzer]	Set whether to sound the buzzer when a window is moved.	• [ON] • [OFF] <Default: [OFF]>
4)	[Key Sensitivity]	Not available for GT SoftGOT3000. Set the sensitivity of the touch panel when the GOT screen is pressed. The larger the set value in [Key sensitivity] is, the shorter the time taken from pressing the touch panel until the GOT responds becomes. If the GOT screen responds twice when pressed once, decrease the setting value.	[1] to [8] <Default: [6]>
5)	[Drive A access switch]	Not available for GT SoftGOT3000. Set whether to allow access to the SD card while the SD card interface cover is open.	• [Not ignore]: Deny • [Ignore]: Allow <Default: [Not ignore]>
6)	[Screen S.MODE switch]	Only available to GT37-X. The GOT touch panel operates as an equivalent to the S.MODE switch. This enables the S.MODE switch without opening the control panel. For information on the S.MODE switch, refer to the following. ☞ Page 84 Functions of the S.MODE switch	• [Effective] • [Invalid] <Default: [Invalid]>
7)	[Touchscreen sensitivity]	Only available to GT37-W. Set the sensitivity of the touch panel. [High sensitivity] makes the touch panel highly responsive, allowing it to respond even when you are wearing gloves. [Low sensitivity] reduces malfunctions even when the touch panel is exposed to noise.	• [High sensitivity] • [Standard] • [Low sensitivity] <Default: [Standard]>

Functions of the S.MODE switch

The S.MODE switch is used for the following applications.

When the touch panel is used as an S.MODE switch, applications it supports differ from those supported by the S.MODE switch on the GOT rear face.

Application	Availability	
	S.MODE switch on the touch panel	S.MODE switch on the back of the GOT
By powering on the GOT while pressing the S.MODE switch, the GOT enters system installation mode. When BootOS or the package data is stored on the data storage, installation starts.	Available. Note that BootOS installation is not supported.	Available.
After powering on the GOT, pressing the S.MODE switch immediately after [Booting] appears in the upper left displays the utility on the screen.	Available.	Available.

13 [Utility call key]

GT37 SoftGOT3000

You can set the position and press time for the key to call [Utility main menu] from the monitor screen of the GOT.
For information on the configurable settings, refer to the following.
☞ Page 86 [Utility Call Key] screen

Point

The following methods are available to display [Utility main menu] without using the utility call key.

• Placing a special function switch on a user-created screen

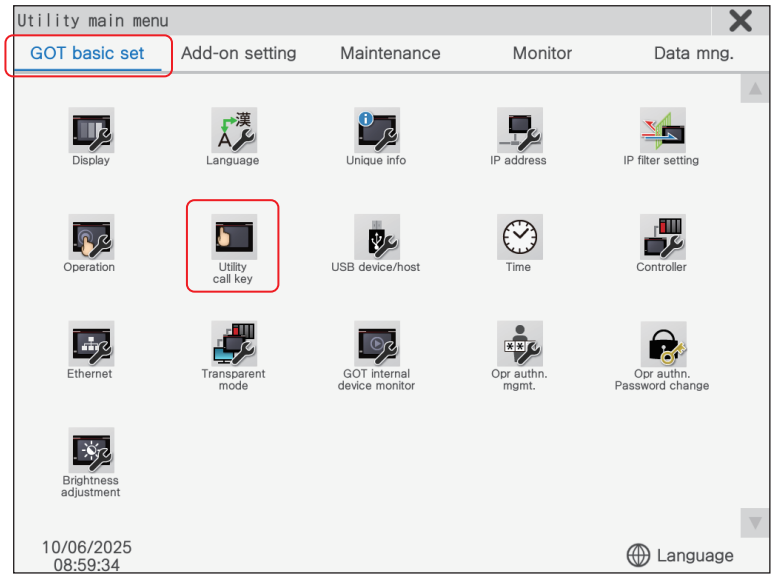
Place a special function switch to display [Utility main menu], and press the switch.
For the special function switch, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

• Operating the forced start-up of the utility with the GOT

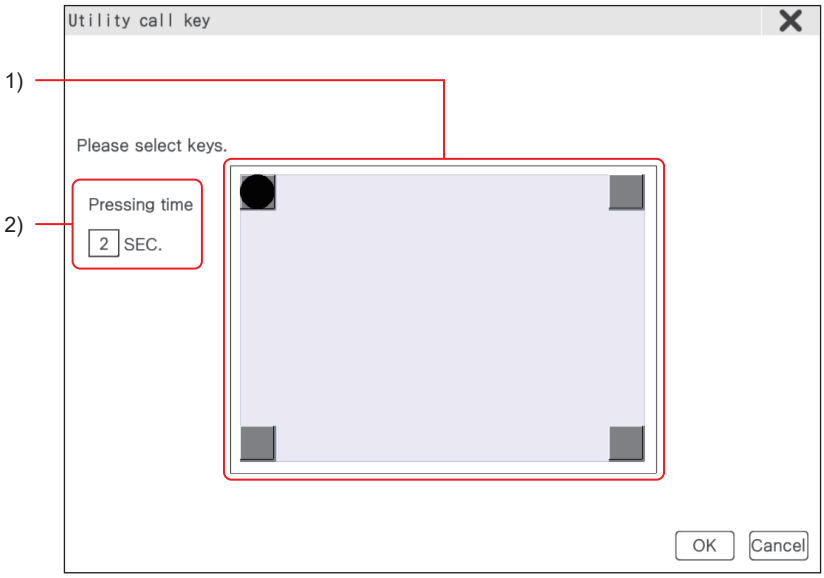
After powering on the GOT, pressing the S.MODE switch immediately after [Booting] appears in the upper left displays [Utility main menu] on the screen.
When restricting the display of the utility, set a password in GT Designer3.
📖GT Designer3 (GOT3000) Screen Design Manual

13.1 Screen display procedure

Select [Utility call key] in the [GOT basic set] tab.



13.2 [Utility Call Key] screen



Item		Description	Setting range*1
1)	Utility call key position	Set the position of the key to call [Utility main menu] from the monitor screen of the GOT. Press one of the squares in the four corners to select the position of the utility call key. The squares in the four corners indicate the areas where the utility call key can be placed. The black circle indicates the position of the utility call key. To not set the utility call key position, press the black circle to remove it. Multiple key positions cannot be specified. If the key position is not specified, [Utility main menu] cannot be called with the utility call key.	• Top left • Bottom left • Top right • Bottom right <Default: Top left>
2)	[Hold-down Time]	Set this once the position of the utility call key has been specified. Set the press time from when the utility call key is pressed until [Utility main menu] is displayed. Setting [Pressing time] to a value other than [0] seconds can prevent unintended switching.	[0] to [5] Sec. <Default: [2] Sec.>

*1 If the utility call key and the alarm popup display overlap, the operation of the utility call key is prioritized.
To switch the display position of the alarm popup display, set either of the following to the utility call key.
• Utility call key position: Upper-right or lower-right
• [Pressing time]: [1] Sec. or longer
For the alarm popup display, refer to following manual.
GT Designer3 (GOT3000) Screen Design Manual

14 [USB device/host]

GT37 SoftGOT3000

The settings for the following USB devices that are connected to the GOT USB interface (host) can be configured.

- USB mouse
- USB keyboard
- USB barcode reader

The device/host function of the USB interface on the front of the GOT can be enabled or disabled.

Precautions

■Restrictions on the USB device/host

The USB port on the front cannot be used as both the device and host at the same time.

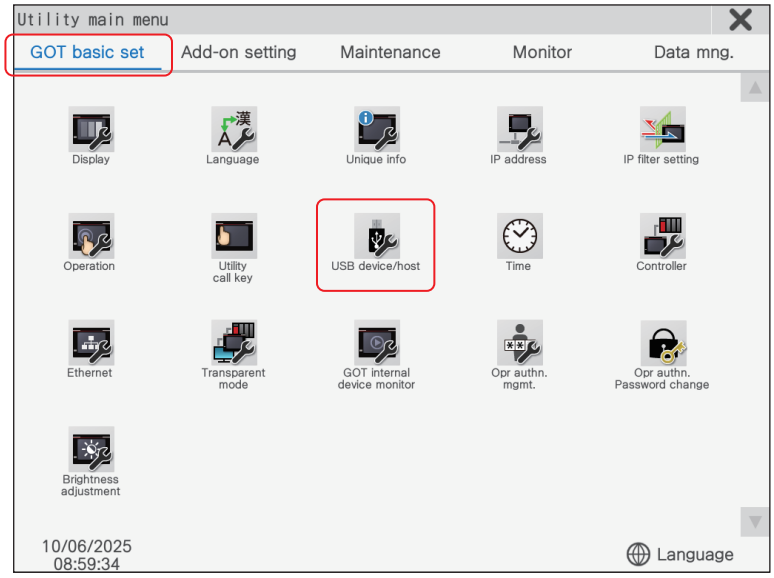
When the USB port on the front is used, it is switched to operate as either the host or device upon connection with any USB device except a hub.

When a hub is used, the USB port operates as the host upon connection.

Docking stations are not applicable for connection.

14.1 How to display the screen

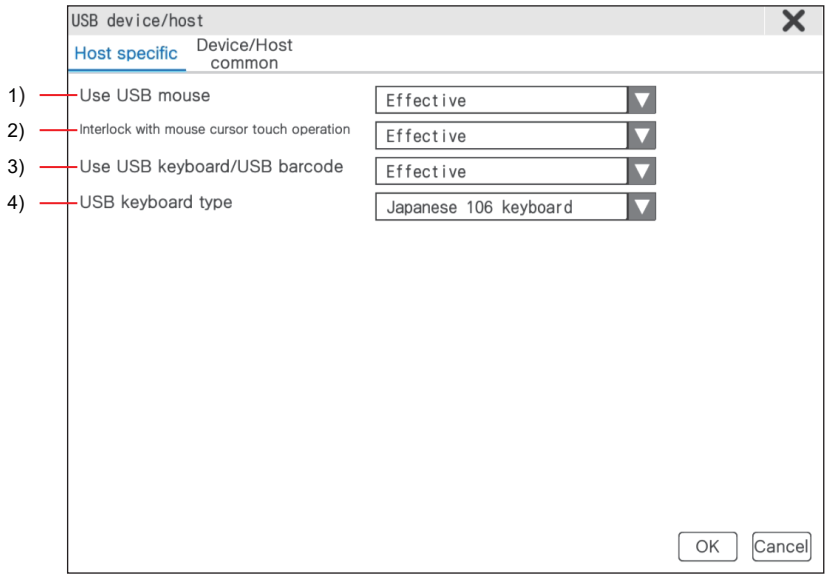
Select [USB device/host] in the [GOT basic set] tab.



14.2 [USB device/host setting] screen

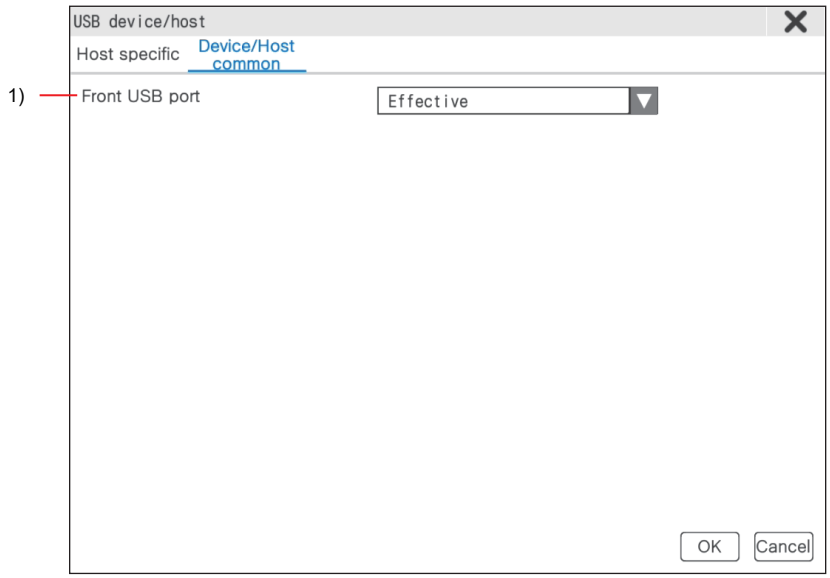
☞ Page 88 [Host specific] tab
☞ Page 89 [Device/Host common] tab

14.2.1 [Host specific] tab



Item		Description	Setting range
1)	[Use USB mouse]	Set whether to use a USB mouse.	• [Effective] • [Invalid] <Default: [Effective]>
2)	[Interlock with mouse cursor touch operation]	Select whether to use the function to move the mouse cursor to the touched position.	• [Effective] • [Invalid] <Default: [Effective]>
3)	[Use USB keyboard/USB barcode]	Set whether to use a USB keyboard or a or USB barcode reader.	• [Effective] • [Invalid] <Default: [Effective]>
4)	[USB keyboard type]	Set the USB keyboard type. Set this as the same type of USB keyboard that you are using. Otherwise, some characters cannot be entered correctly.	• [Japanese 106 keyboard] • [English 101 keyboard] <Default: [Japanese 106 keyboard]>

14.2.2 [Device/Host common] tab



Item		Description	Setting range
1)	[Front USB port]	Set whether to enable or disable the front USB interface (device/host).	• [Effective] • [Invalid] <Default: [Effective]>

15 [Time]

GT37 SoftGOT3000

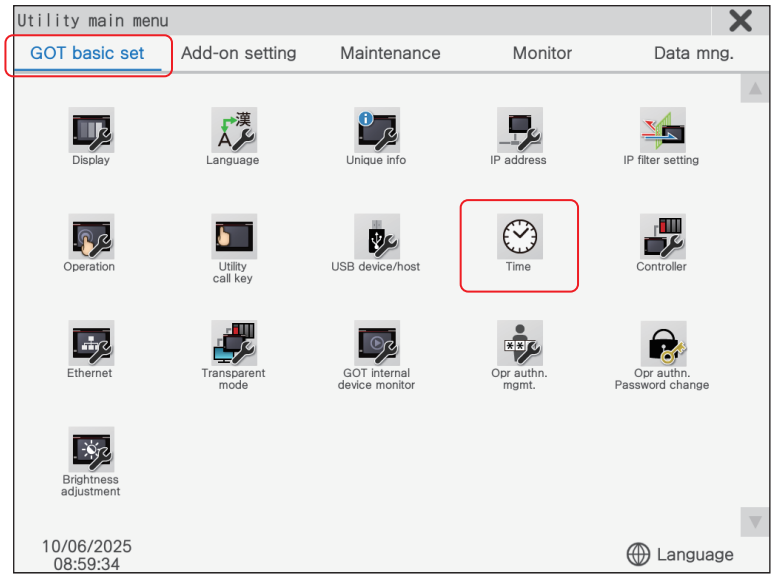
The GOT time settings can be changed.

For information on the configurable settings, refer to the following.

☞ Page 92 [Time] screen

15.1 Screen display procedure

Select [Time] in the [GOT basic set] tab.

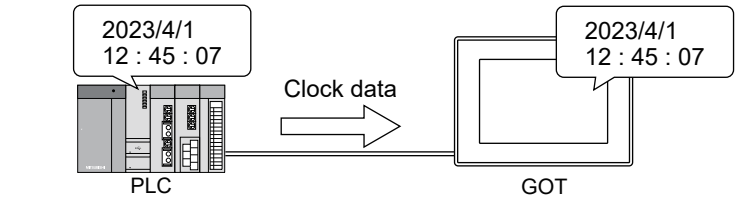
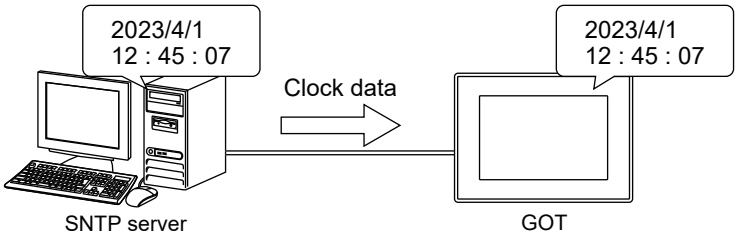
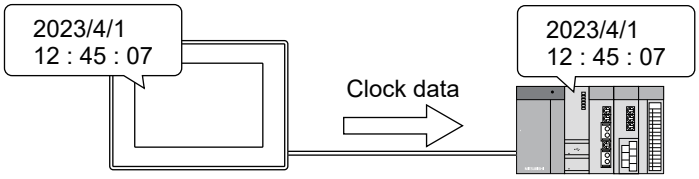
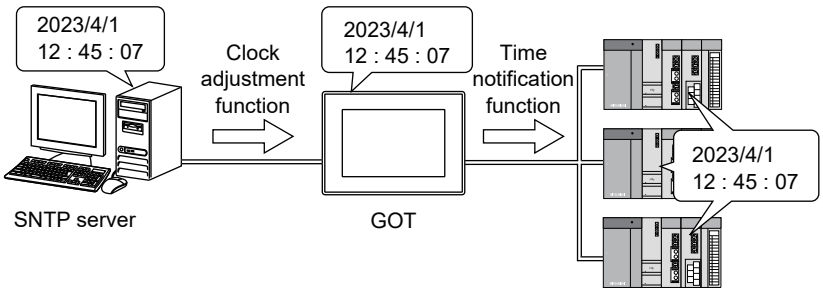


15.2 Overview of the clock synchronization method

This section describes the overview of the clock synchronization method on the GOT.

For details on the clock synchronization method on the GOT, refer to the following manual.

GT Designer3 (GOT3000) Screen Design Manual

Clock synchronization method	Description
Time setting function	Acquires the clock data of the controller or the SNTP server to change the GOT clock data.   At startup, the GOT adjusts its clock data to the clock data of the controller or SNTP server. Since the GOT does not need to hold the clock data while the power is off, a built-in battery is not required. If the GOT needs to hold the clock data at startup, install a battery in the GOT. To set the time of the GOT using the controller, the settings of the GOT must be adjusted to the time zone schedule of the controller. To set the clock data of the controller, refer to the manual of the controller being used.
Time notification function	Notifies the clock data of the GOT to the controller to change the clock data of the controller.  At the timing of the trigger, the clock data of the controller is set to that of the GOT. Since the GOT must hold the clock data while the power is off, a built-in battery is required.*1 Set the clock data of the GOT in the utility.
Time setting function and time notification function	The time setting function acquires the clock data of the target controller or the SNTP server, and the time setting function changes the clock data of the other controllers. 

*1 The battery is sold separately.
To use the time notification function, purchase the battery, establish connection, and configure the setting.
For information on how to connect the battery, refer to the following manual.
GOT3000 Series User's Manual (Hardware)

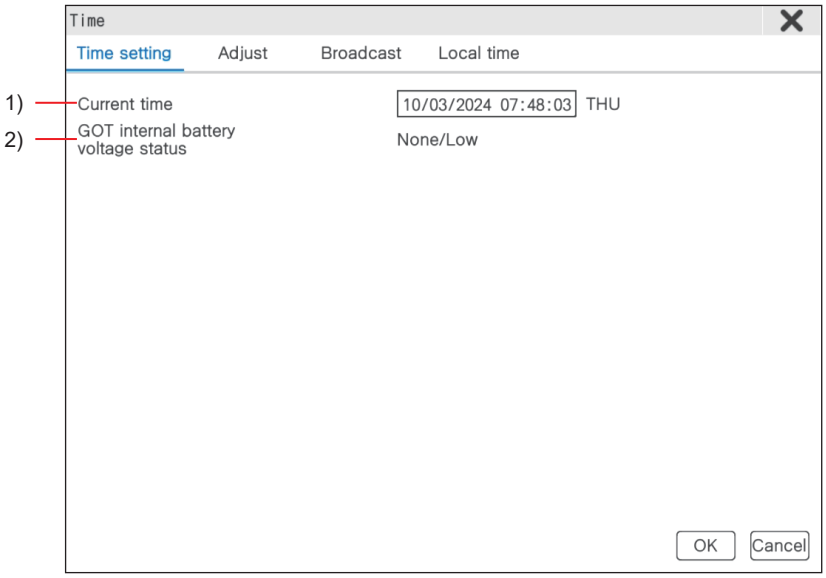
Precautions

When connected to an external device (PLC or microcomputer) that does not have the clock function, the GOT cannot adjust the clock data when the time setting or time notification function settings are configured.
For a list of PLCs that have the clock function, refer to the following manual.
📖GOT3000 Series User's Manual (Connection)

15.3 [Time] screen

☞ Page 92 [Time setting] tab
☞ Page 93 [Adjust] tab
☞ Page 94 [Broadcast] tab
☞ Page 95 [Local time] tab

15.3.1 [Time setting] tab

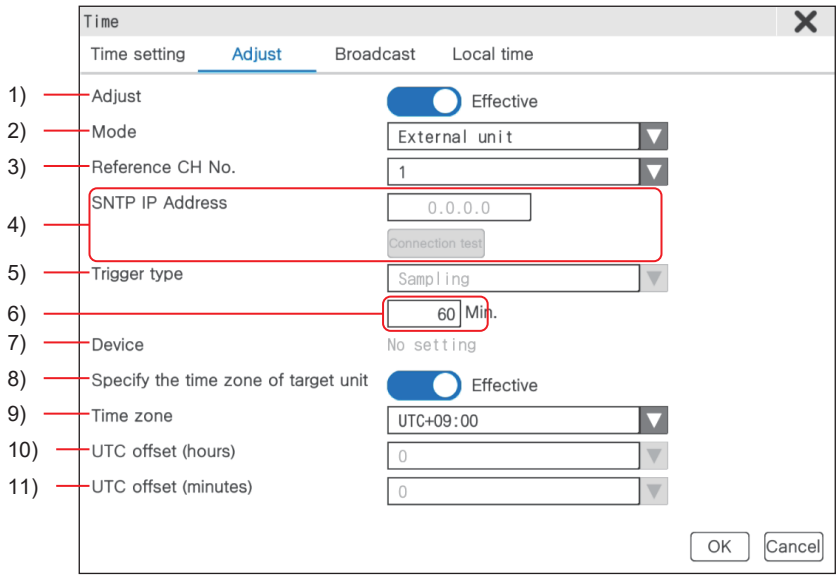


Item		Description	Setting range
1)	[Current time]*1*2	Displays and sets the clock data of the GOT. When a time is set outside the setting range or the current time is after [2099/12/31 23:59:59], [2000/01/01 00:00:00] is displayed.	[2000/01/01 00:00:00] to [2099/12/31 23:59:59]
2)	[GOT internal battery]	Displays the voltage of the battery built in the GOT. When the battery voltage is low, replace the battery immediately. For information on how to replace the battery, refer to the following manual. 📖GOT3000 Series User's Manual (Hardware)	• [Normal]: Normal • [None/Low]: The battery is not installed or the battery voltage is low.

*1 The displayed time of [Current time] reflects the local time setting.
For the local time setting, refer to the following.
☞ Page 95 [Local time] tab

*2 If you change the time of the GOT that uses the time setting function or time notification function with [Current time], the new time is written to the PLC.
Thus, you can change the time of the PLC from the GOT even when the time setting function is being used.
For details on the time setting and time notification functions, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

15.3.2 [Adjust] tab

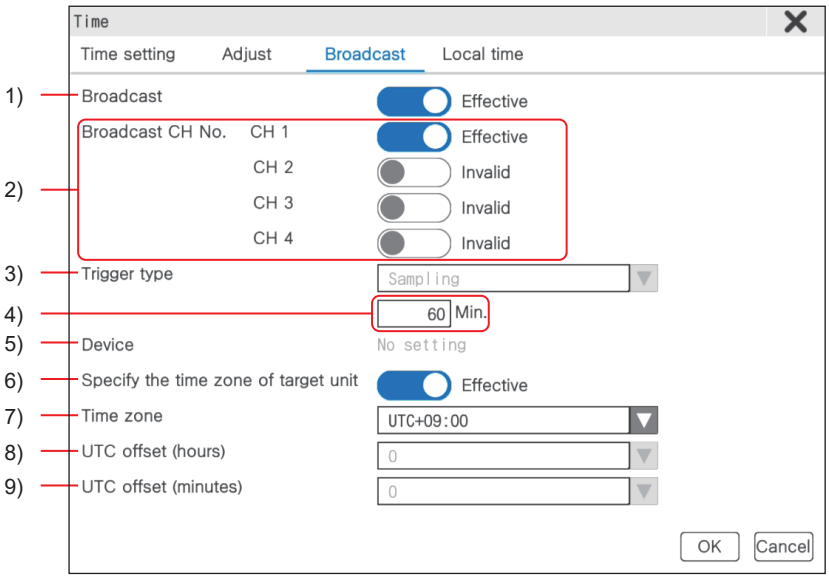


Item		Description	Setting range
1)	[Adjust]	Set whether to use clock adjustment.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[Mode]	Set the clock data acquisition source device.	• [External unit] • [SNTP server][*1] <Default: [External unit]>
3)	[Reference CH No.]	When selecting [External unit] for [Mode], set the channel number to connect the clock data acquisition source device.	[1] to [4] <Default: [1]>
4)	[SNTP IP Address]	When selecting [SNTP serve] for [Mode], set the IP address of the SNTP server of the clock data acquisition source device. Press the [Connection test] button to check the connection with the SNTP server.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [0].[0].[0].[0]>
5)	[Trigger type][*2]	Set the time to acquire clock data.	• [Rise] • [Fall] • [Sampling] <Default: [Sampling]>
6)	Interval	When setting [Sampling] for [Trigger type], set the interval of time setting in 1-minute increments.	[1] to [1440] Min. <Default: [60] Min.>
7)	[Device]	Displays the trigger device when [Trigger type] is set to [Rise] or [Fall].	• [No setting] • Trigger device <Default: [No setting]>
8)	[Specify the time zone of target unit]	Set whether to specify the time zone of the clock data acquisition source device. When this item is set to [Invalid], the time of [Time zone] in the [Local time] tab is set.	• [Effective] • [Invalid] <Default: [Invalid]>
9)	[Time zone]	Set the time zone of the controller on the GOT when [Specify the time zone of target unit] is set to [Effective].	• [UTC-12:00] to [UTC+13:00] • [Custom] <Default: [UTC+09:00]>
10)	[UTC offset (hours)]	Set the time difference from UTC in 1-hour increments when [Time zone] is set to [Custom].	[-12] to [13] hour <Default: [0] hour>
11)	[UTC offset (minutes)]	Set the time difference from UTC in 15-minute increments when [Time zone] is set to [Custom].	• [0] minute • [15] minute • [30] minute • [45] minute <Default: [0] Min.>

*1 When setting [SNTP server], set [Time zone] in the [Local time] tab.
☞ Page 95 [Local time] tab

*2 If [Adjust the clock] is deselected or [Trigger Type] is set to [Sampling] in the [GOT Setup] window ([Time Setting]) in GT Designer3, only [Sampling] is selectable for [Trigger type] in the utility.

15.3.3 [Broadcast] tab

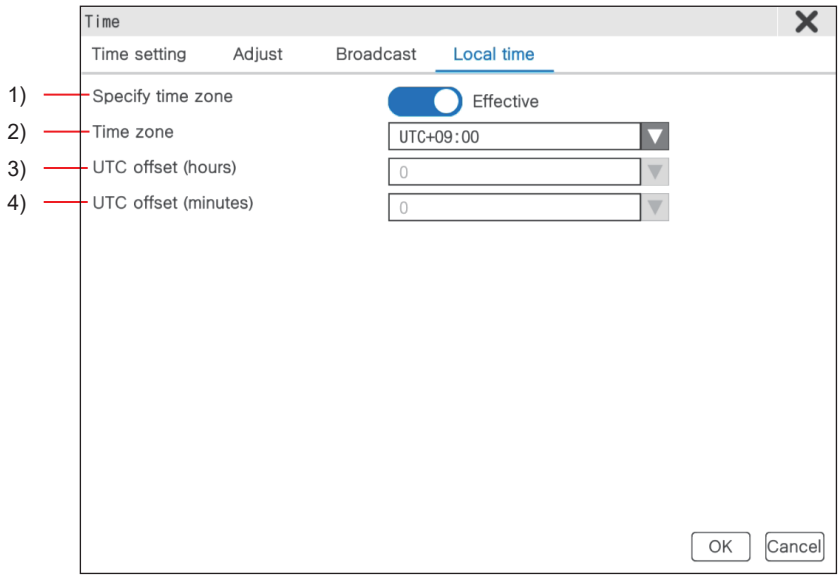


Item		Description	Setting range
1)	[Broadcast]	Set whether to use time notification.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[Broadcast CH No.]	Set the channel number to connect the clock data notification destination device.	• [CH 1] to [CH 4] <Default: [CH 1]>
3)	[Trigger type]*1	Set the timing to notify the clock data.	• [Rise] • [Fall] • [Sampling] <Default: [Sampling]>
4)	Interval	When setting [Sampling] for [Trigger type], set the interval of time notification in 1-minute increments.	[1] to [1440] Min. <Default: [60] Min.>
5)	[Device]	Displays the trigger device when [Trigger type] is set to [Rise] or [Fall].	• [No setting] • Trigger device <Default: [No setting]>
6)	[Specify the time zone of target unit]*2	Set whether to specify the time zone of the clock data notification destination device. When this item is set to [Invalid], the time of [Time zone] in the [Local time] tab is set.	• [Effective] • [Invalid] <Default: [Invalid]>
7)	[Time zone]	Set the time zone of the controller on the GOT when [Specify the time zone of target unit] is set to [Effective].	• [UTC-12:00] to [UTC+13:00] • [Custom] <Default: [UTC+09:00]>
8)	[UTC offset (hours)]	Set the time difference from UTC in 1-hour increments when [Time zone] is set to [Custom].	[-12] to [13] hour <Default: [0] hour>
9)	[UTC offset (minutes)]	Set the time difference from UTC in 15-minute increments when [Time zone] is set to [Custom].	• [0] minute • [15] minute • [30] minute • [45] minute <Default: [0] Min.>

*1 If [Broadcast the clock data] is deselected or [Trigger Type] is set to [Sampling] in the [GOT Setup] window ([Time Setting]) in GT Designer3, only [Sampling] is selectable for [Trigger type] in the utility.

*2 When selecting [Specify the time zone of target unit], set [Time zone] so that the setting is the same as the time zones of all the controllers that are to be notified of the time.
If the time zones of those controllers are different from the time zone of the GOT, the time may be different from the time set on the GOT.

15.3.4 [Local time] tab



Item		Description	Setting range
1)	[Specify time zone]	Set whether to specify the time zone of the GOT.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[Time zone]	Set the time zone for the clock data on the GOT when [Specify time zone] is set to [Effective].	• [UTC-12:00] to [UTC+13:00] • [Custom] <Default: [UTC+09:00]>
3)	[UTC offset (hours)]	Set the time difference from UTC in 1-hour increments when [Time zone] is set to [Custom].	[-12] to [13] hour <Default: [0] hour>
4)	[UTC offset (minutes)]	Set the time difference from UTC in 15-minute increments when [Time zone] is set to [Custom].	• [0] minute • [15] minute • [30] minute • [45] minute <Default: [0] Min.>

16 [Controller]

GT37 SoftGOT3000

Configure controller settings.

For information on the configurable settings, refer to the following.

☞ Page 96 [Communication setting] screen

Precautions

- Before operation

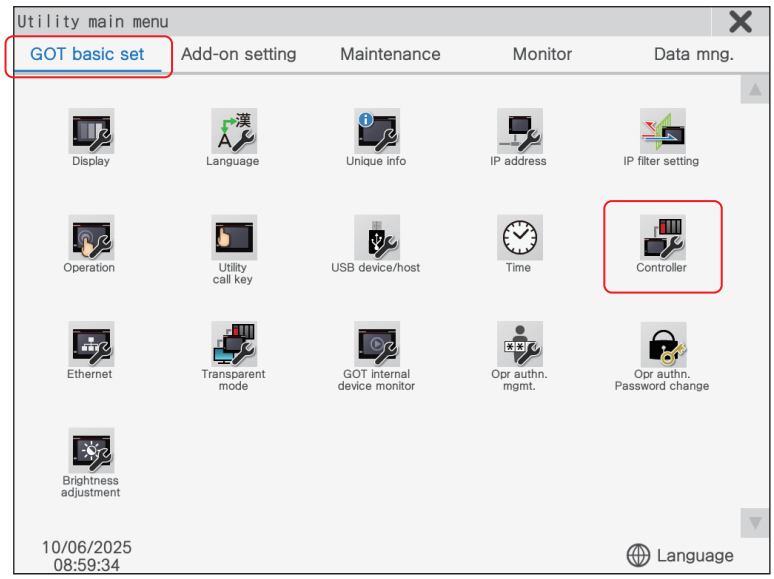
The GOT restarts when the settings are configured.

If a project has been downloaded, the GOT starts monitoring the controller after it has restarted.

Ensure safety and configure the settings.

16.1 How to display the screen

Select [Controller] in the [GOT basic set] tab.



16.2 [Communication setting] screen

☞ Page 97 [Communication setting] tab
☞ Page 103 [Ethernet I/F assignment] tab
☞ Page 104 [Channel-driver assign] tab

Precautions

- When the communication driver does not match with the unit that is mounted on the GOT

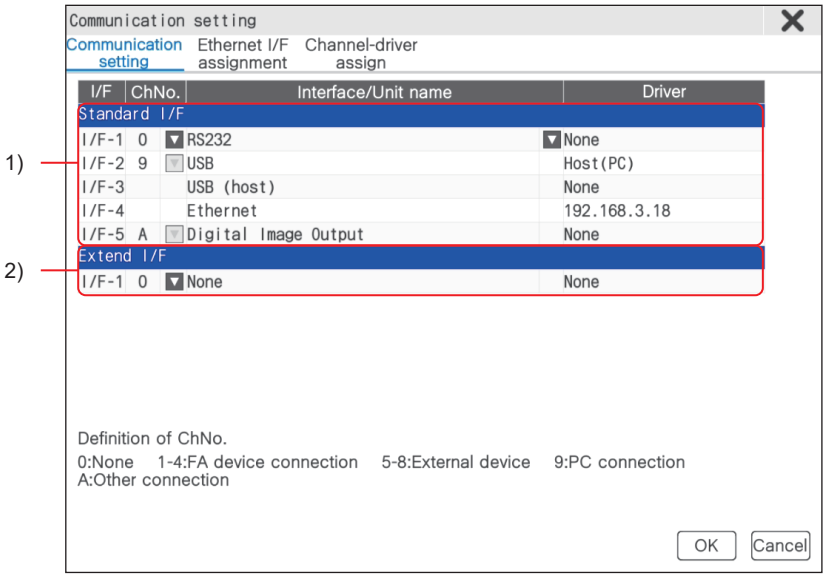
If the [Controller setting] screen is displayed when the communication driver does not match with the unit mounted on the GOT, the GOT displays an error.

If an error is displayed, check the combination of the communication driver and communication unit.

For the combinations, refer to the following manual.

📖GOT3000 Series User's Manual (Connection)

16.2.1 [Communication setting] tab



Item			Description	Setting range
1)	[Standard I/F]	[CH No.][*1]	Set the channel number used for the standard interface. The following shows the definition of each channel number. • [0]: Set this number when not using a communication interface. • [1] to [4]: Set one of these numbers when connecting an FA device to be monitored with the GOT. • [5] to [8]: Set one of these numbers when connecting an external device (barcode reader or RFID reader). • [9]: Set this number for connection with a personal computer (Engineering tool). • [A]: Set this character for connection with a peripheral for output, imaging, or non-communicative I/O.	• [I/F-1]: [0] to [8] • [I/F-2]: [9] (fixed) • [I/F-3]: Hidden • [I/F-4]: Hidden • [I/F-5]: [A] (fixed)
		[Interface/Unit name]	The standard communication interfaces of the GOT are displayed. Only [I/F-1] allows setting of [Interface/Unit name]. If the channel number of I/F-1 is 0 on GT Designer3, the settings configured in [Interface/Unit name] will not be reflected.	• [I/F-1]: [RS-232], [RS-422/485] <Default: [RS-232]> • [I/F-2]: [USB] • [I/F-3]: [USB (Host)] • [I/F-4]: [Ethernet] • [I/F-5]: [Digital Image Output]
		[Driver]	For [I/F-1] to [I/F-3] and [I/F-5], the name of the communication driver set to the interface is displayed. Pressing the driver of [I/F-1] displays the [Communication detail setting] screen. For the [Communication detail setting] screen, refer to the following. ☞ Page 99 [Communication detail setting] screen Pressing [Driver] of [I/F-3] displays the [USB device management] screen. For details on the [USB device management] screen, refer to the following. ☞ Page 179 [USB device management] screen	• Communication driver name[*2] • [None][*3]
			For [I/F-4], the IP address set to the GOT is displayed. When an IP address is assigned to Ethernet port 1 and Ethernet port 2, the IP address of Ethernet port 1 is displayed. Pressing the driver of [I/F-4] displays the [Communication detail setting] screen of the communication driver assigned to the latest channel number in the [Ethernet I/F assignment] tab. For the [Communication detail setting] screen, refer to the following. ☞ Page 99 [Communication detail setting] screen	—

Item			Description	Setting range
2)	[Extend I/F]	[CH No.][*1]	Set the channel number used for the extension interface. [A] is displayed in the drop-down list only when a unit corresponding to the channel number (character [A]) is mounted.	• [0] to [8] • [A]
		[Interface/Unit name]	The name of the unit installed in the extension interface is displayed. If no expansion interface unit is installed, [None] is displayed. For details on the extension interface unit, refer to the following manual. 📖GOT3000 Series User's Manual (Hardware)	• Mounted unit name • [None]
		[Driver]	Displays the communication driver name that is set to the extension interface. Pressing the extension interface driver name displays the [Communication detail setting] screen of the communication driver. This item is not displayed when [None] is selected. For details on the [Communication detail setting] screen, refer to the following. ☞ Page 99 [Communication detail setting] screen	• Communication driver name[*2] • [None][*3]

*1 Channel numbers [1] to [8] cannot be assigned more than once.
Do not assign the same channel number to multiple units.
When connecting to an FA device, be sure to assign channel number [1].

*2 The communication driver installed on the GOT is displayed.
For information on how to install the communication driver, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual
For details on the displayed communication driver, refer to the following manual.
📖GOT3000 Series User's Manual (Connection)

*3 [None] is displayed in the following cases.
• Channel number [0] is assigned to the interface.
• No communication driver is assigned to the interface.
If [None] is displayed, the [Communication detail setting] screen of the communication driver is not displayed even if the setting is pressed.

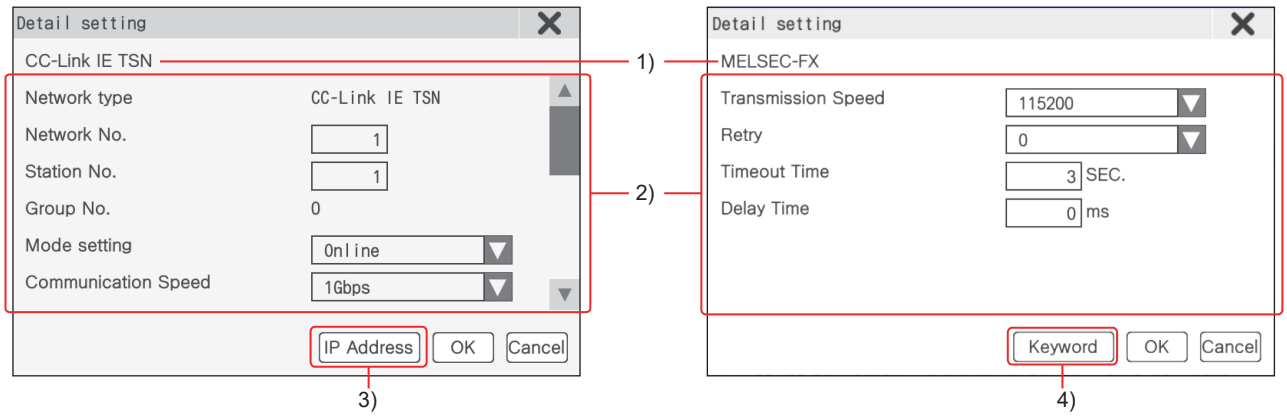
[Communication detail setting] screen

The contents displayed on the [Communication detail setting] screen depend on the communication driver type.

This section describes the contents of the [Communication detail setting] screen when [CC-Link IE TSN] is selected for the communication driver.

For the communication parameter settings, refer to the following manual.

📖GOT3000 Series User's Manual (Connection)
📖GT Designer3 (GOT3000) Screen Design Manual

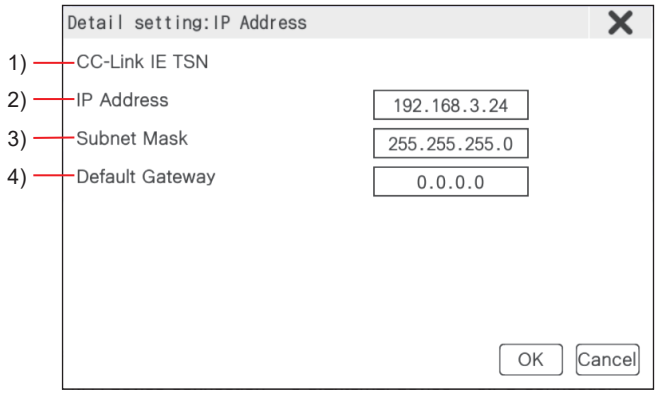


For [CC-Link IE TSN] For [MELSEC-FX]

Item		Description	Setting range
1)	Communication driver name	Displays the communication driver name that is set.	• Communication driver name • [None]
2)	Communication parameters setting	Configure the settings to the communication parameter setting items defined for each communication driver.	*1
3)	[IP Address] button	This item is displayed only when the communication driver name is [CC-Link IE TSN]. Touch the [IP Address] button to display the [Detail setting:IP Address] screen. For details on the [Detail setting:IP Address] screen, refer to the following. ☞ Page 100 [Detail setting:IP Address] screen	—
4)	[Keyword] button	This item is displayed only when the communication driver name is [MELSEC-FX]. Touch the [Keyword] button to display the [Keyword] screen. On the [Keyword] screen, you can register, delete, clear, or protect keywords. For details on the [Keyword] screen, refer to the following. ☞ Page 101 [Keyword] screen	—

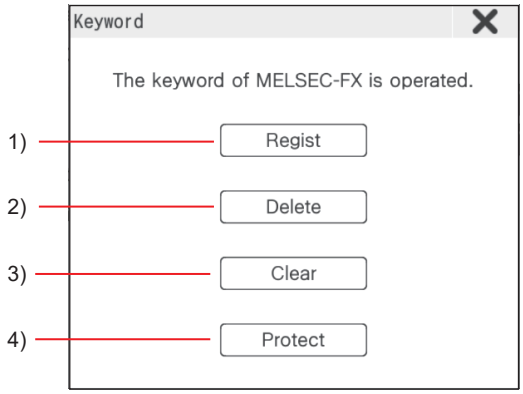
*1 For the communication parameter settings for each communication driver, refer to the following manual.
📖GOT3000 Series User's Manual (Connection)

■[Detail setting:IP Address] screen



Item		Description	Setting range
1)	Driver name display	Displays the driver name of the channel selected in the [Communication setting] tab.	[CC-Link IE TSN] (fixed)
2)	[IP Address]	Set the IP address.	[0].[0].[0].[1] to [223].[255].[255].[254] <Default: [192].[168].[3].[24]>
3)	[Subnet Mask]	Set the subnet mask.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [255].[255].[255].[0]>
4)	[Default Gateway]	Set the default gateway.	[0].[0].[0].[0] to [223].[255].[255].[254] <Default: [0].[0].[0].[0]>

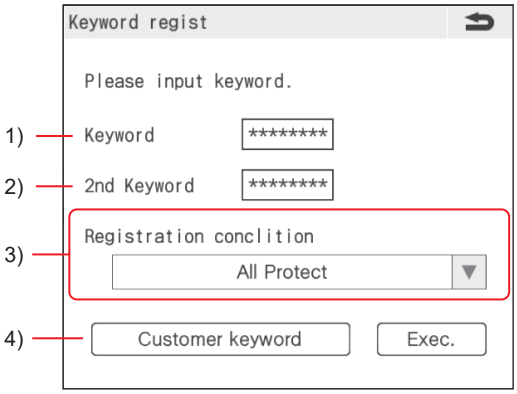
■[Keyword] screen



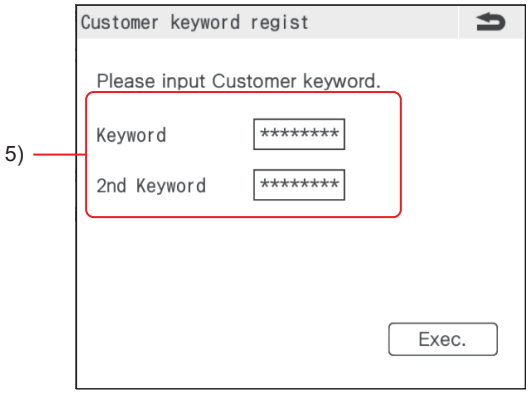
Item		Description
1)	[Regist] button	Touch this button to display the [Keyword regist] screen. On the [Keyword regist] screen, a keyword can be registered to protect the programs written to the PLC.
2)	[Delete] button	Touch this button to display the [Keyword delete] screen. On the [Keyword delete] screen, registered keywords, 2nd keywords, and customer keywords can be deleted.*1
3)	[Clear] button	Touch this button to display the [Keyword clear] screen. On the [Keyword clear] screen, protection by a keyword can be cleared to access a PLC that has a registered keyword.
4)	[Protect] button	Reprotects keywords that had their protection removed. The [Protect] button is enabled when a 2nd keyword is registered.

*1 There is no customer keyword field for the [Keyword delete] screen.
Enter a [Keyword] and [2nd keyword] then touch the [Exec.] button to automatically delete customer keywords.

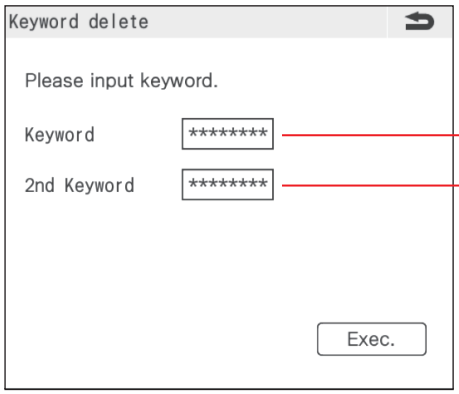
- [Keyword regist] screen
- [Customer keyword] regist] screen
- [Keyword delete] screen
- [Keyword clear] screen



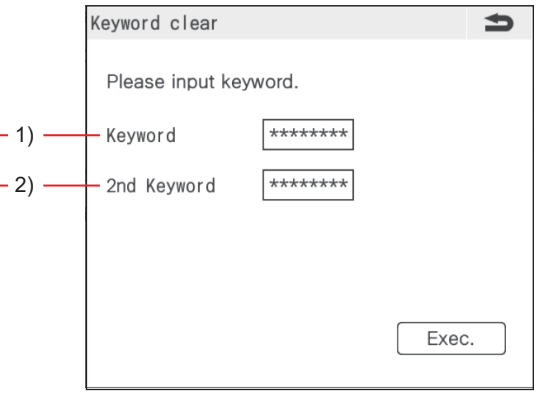
[Keyword regist] screen



[Customer keyword regist] screen



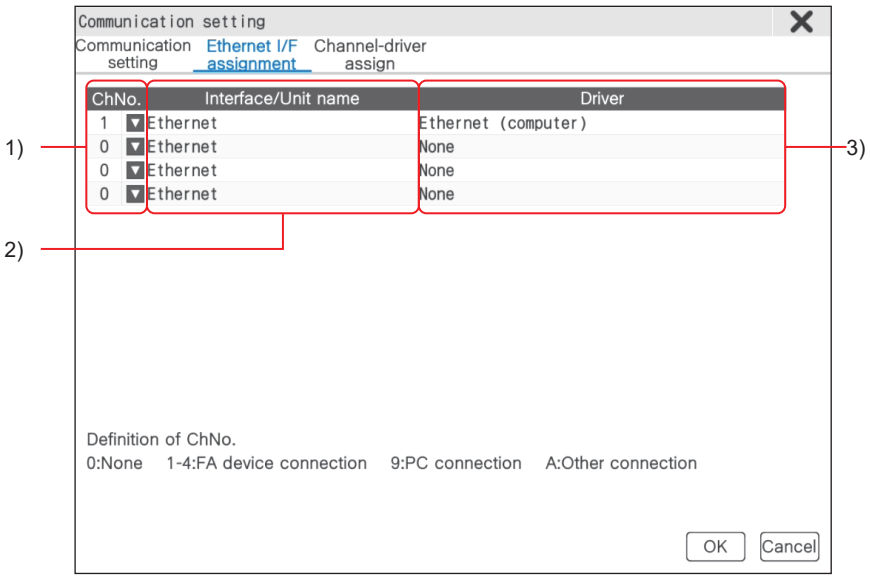
[Keyword delete] screen



[Keyword clear] screen

Item		Description	Setting range
1)	[Keyword]	Enter a keyword to register, delete, or clear. Even if a second keyword is not set, the same restrictions as the registered conditions can be set by using a specific character for the first character of the keyword. • Prohibit all operations: Set a keyword starting with either "A", "D to F", or "0 to 9". • Erroneous read/write protection: Set a keyword starting with "B". • Erroneous write protection: Set a keyword starting with "C".	8 alphanumeric characters using [0] to [9] and [A] to [F]
2)	[2nd keyword]	Enter a second keyword to register, delete, or clear. A second keyword cannot be registered if the PLC does not support it.	8 alphanumeric characters using [0] to [9] and [A] to [F]
3)	[Registration condition]	When entering a second keyword, restrictions can be set for accessing PLC programs from peripherals. [Registration condition] is enabled when a second keyword is registered.	• [All Protect] • [Read/Write Protect] • [Write Protect]
4)	[Customer keyword] button	Touch this button to display the [Customer keyword regist] screen. A customer keyword cannot be registered if the PLC does not support them. The [Customer keyword] button is enabled when a second keyword is registered.	—
5)	[Customer keyword]	Register the customer keyword across two levels consisting of eight characters each.	16 alphanumeric characters using [0] to [9] and [A] to [F]

16.2.2 [Ethernet I/F assignment] tab



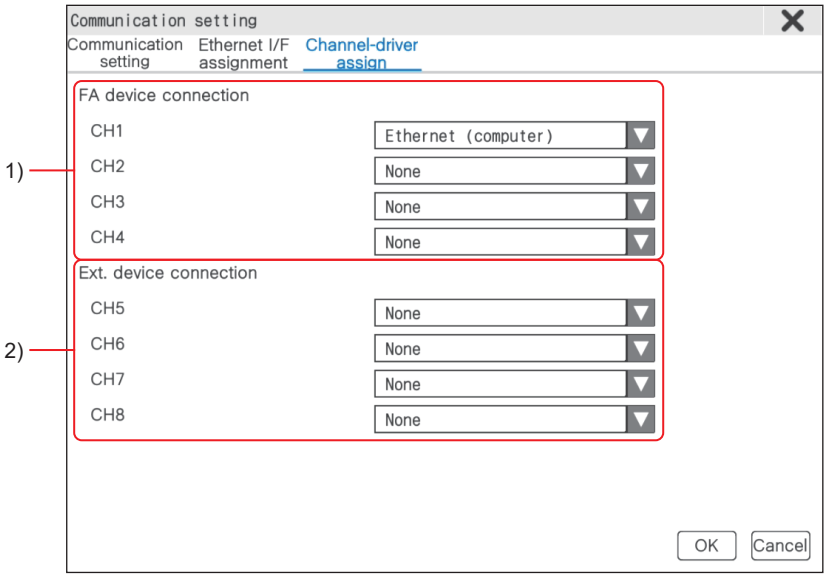
Item		Description	Setting range
1)	[CH No.][*1]	Set the channel number used for the Ethernet interface. The following shows the definition of each channel number. • [0]: Set this number when not using a communication interface. • [1] to [4]: Set one of these numbers when connecting an FA device to be monitored with the GOT. • [9]: Set this number for connection the Ethernet download. • [A]: Set this when establishing a gateway connection.	• [0] to [4] • [9] • [A]
2)	[Interface/Unit name]	Displays the interface name that is set to the Ethernet interface.	• [Ethernet] (fixed)
3)	[Driver]	Displays the name of the communication driver set to the Ethernet interface. Pressing the driver of each channel number displays the [Communication detail setting] screen. However, when either of the following items is selected, the [Communication detail setting] window is not displayed. • [None] • [Ethernet download] For the [Communication detail setting] screen, refer to the following. ☞ Page 99 [Communication detail setting] screen	• Communication driver name[*2] • [None][*3]

*1 Channel numbers [1] to [4] cannot be assigned more than once.
Do not assign the same channel number to multiple units.
When connecting to an FA device, be sure to assign channel number [1].

*2 The communication driver installed on the GOT is displayed.
For information on how to install the communication driver, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual
For details on the displayed communication driver, refer to the following manual.
📖GOT3000 Series User's Manual (Connection)

*3 [None] is displayed in the following cases.
• Channel number [0] is assigned to the interface.
• No communication driver is assigned to the interface.
If [None] is displayed, the [Communication detail setting] screen of the communication driver is not displayed even if the setting is pressed.

16.2.3 [Channel-driver assign] tab



Item		Description	Setting range
1)	[FA device connection]	Set the communication driver to be assigned to [CH1] to [CH4].	• Communication driver name*1 • [None]
2)	[External device]	Set the communication driver to be assigned to [CH5] to [CH8].	• Communication driver name*1 • [None]

*1 The communication driver installed on the GOT is displayed.
For information on how to install the communication driver, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual
For details on the displayed communication driver, refer to the following manual.
GOT3000 Series User's Manual (Connection)

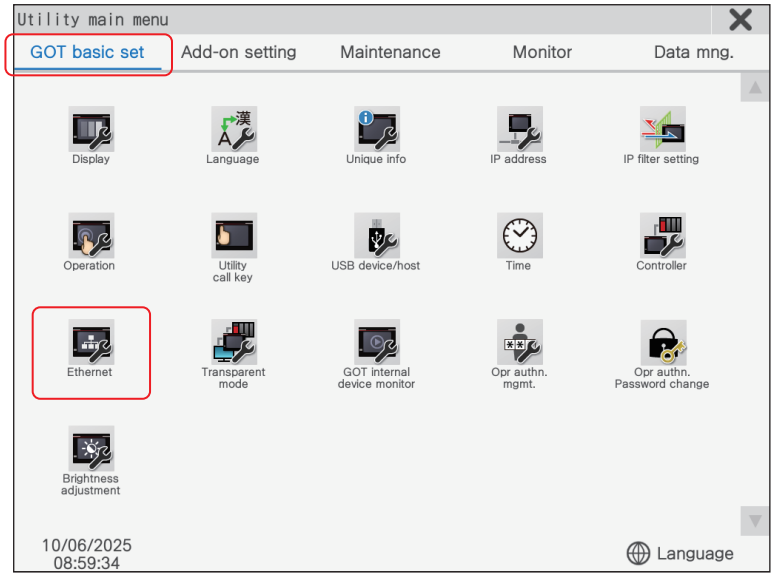
17 [Ethernet]

GT37 SoftGOT3000

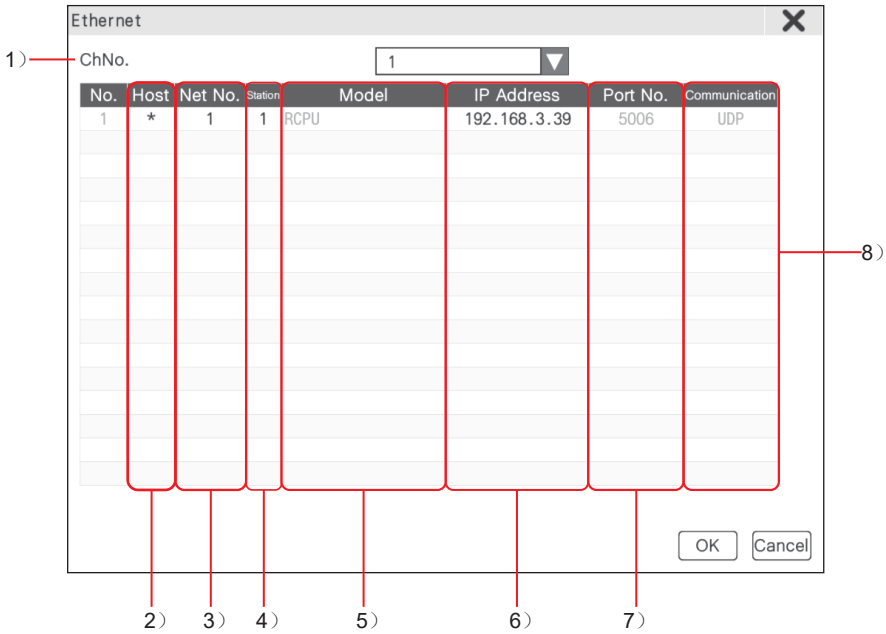
You can check or change the settings of the connected Ethernet equipment registered in the project.
For information on the configurable settings, refer to the following.
☞ Page 106 [Ethernet] screen
The settings of the connected Ethernet equipment are configured in the [Controller Setting] window of GT Designer3.
For details, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

17.1 Screen display procedure

Select [Ethernet] in the [GOT basic set] tab.



17.2 [Ethernet] screen



Item		Description	Setting range
1)	[ChNo.]	Select a channel to view its Ethernet settings. Channel numbers without Ethernet settings are not displayed in the setting range. When a setting is changed, [*] is displayed on the right of the channel number.	[1] to [4]
2)	[Host]	Set the host station. [*] is displayed when the Ethernet settings are configured.	[*]
3)	[Net No.]	Set the network number of the connected Ethernet module.	*1
4)	[Station No.]	Set the station number of the connected Ethernet module.	*1
5)	[Controller Type]	Displays the type of the connected Ethernet module.	—
6)	[IP Address]	Set the IP the address of the connected Ethernet module.	*1
7)	[Port No.]	Displays the port number of the connected Ethernet module.	—
8)	[Communication]	Displays the format (protocol) of communication with the connected Ethernet module.	—

*1 The setting range differs depending on the Ethernet unit that is connected.
For details on the setting range, refer to the following manual.
📖GOT3000 Series User's Manual (Connection)

Precautions

If an Ethernet setting is changed with the relevant GOT special register (GS), the display of the utility and the operation of the GOT may differ.

Restart the GOT to reflect the new setting.

For details, refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

18 [Transparent mode]

GT37 SoftGOT3000

When the multi-channel function is used, you can set the channel number of the controller on which the FA transparent function will run.

For information on the configurable settings, refer to the following.

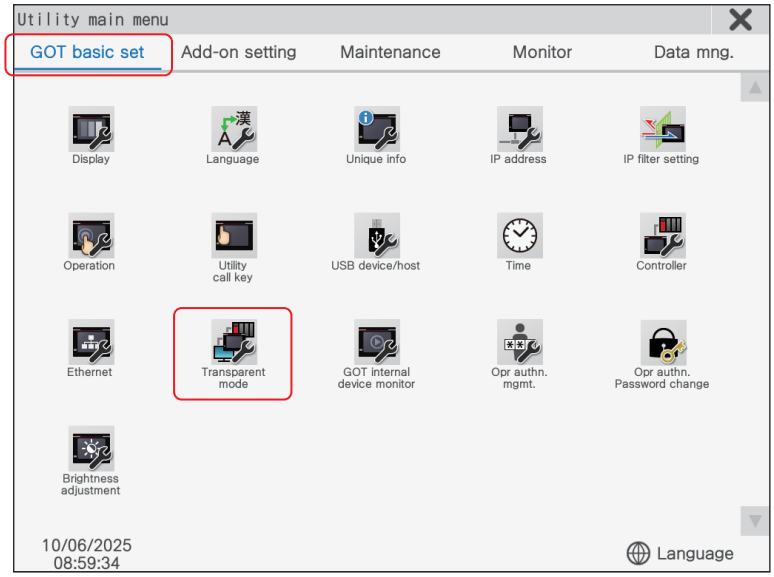
☞ Page 108 [Transparent mode] screen

For details on the multi-channel function and FA transparent function, refer to the following manual.

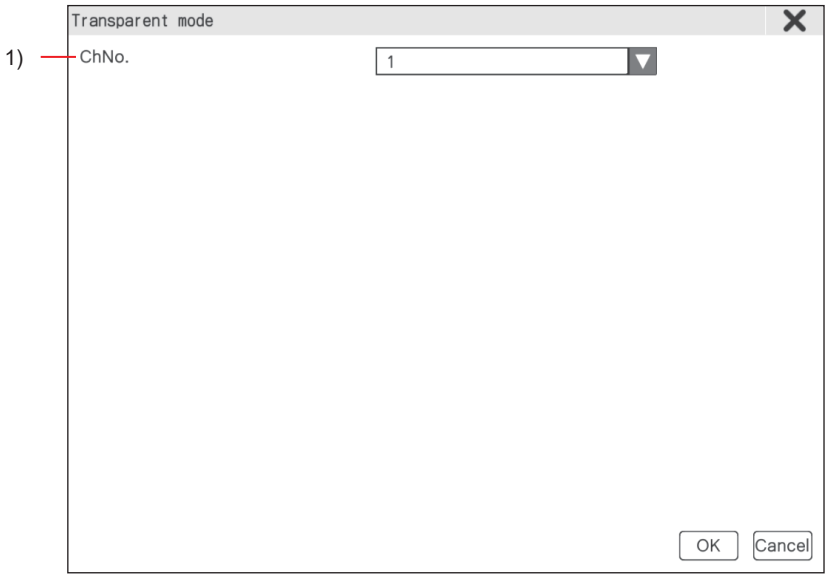
📖GOT3000 Series User's Manual (Connection)

18.1 Screen display procedure

Select [Transparent mode] in the [GOT basic set] tab.



18.2 [Transparent mode] screen



Item		Description	Setting range*1
1)	[ChNo.]	Set the channel number of the controller on which the FA transparent function will run.	[1] to [4] <Default: The value set in GT Designer3>

*1 Only [ChNo.] set on the [Communication setting] screen is displayed as the setting range.
For details, refer to the following.
☞ Page 96 [Communication setting] screen

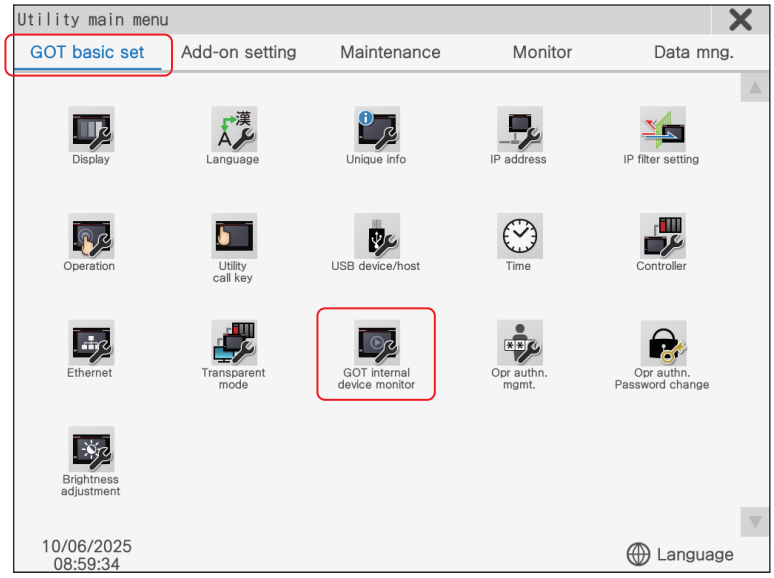
19 [GOT internal device monitor]

GT37 SoftGOT3000

When performing GOT diagnostics, you can set the monitoring of GOT internal devices.

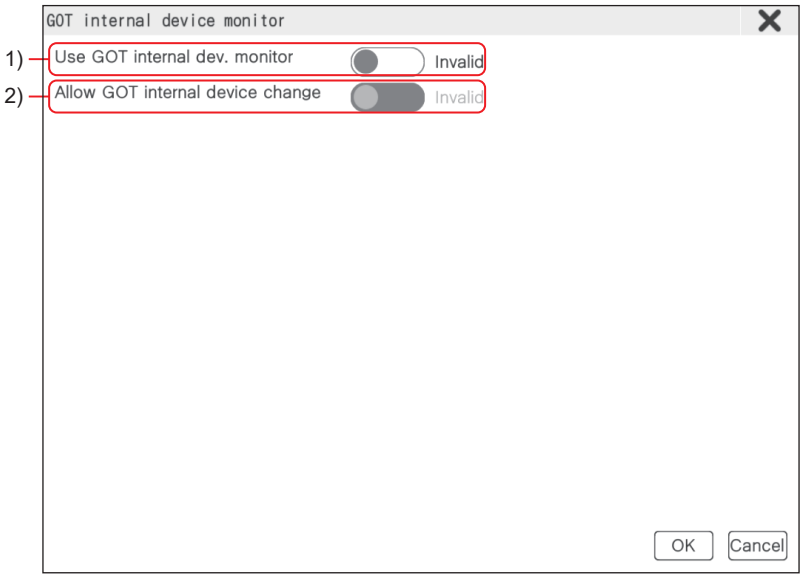
19.1 How to display the screen

Select [GOT internal device monitor] in the [GOT basic set] tab.



PART 4

19.2 [GOT internal device monitor] screen



Item		Description	Setting range
1)	[Use GOT internal dev. monitor]	Set whether to monitor GOT internal devices with GOT diagnostics.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[Allow GOT internal device change]	Set whether to allow changes to GOT internal devices when they are being monitored during GOT diagnostics.	• [Effective] • [Invalid] <Default: [Invalid]>

20 [Security]

GT37 SoftGOT3000

This function can be used with GOT2000 when the security mode is set to mode 1.
Enter the password set in GT Designer3 to change the security level of the GOT.
Changing the security mode to mode 2 further strengthens the security function.
For details, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

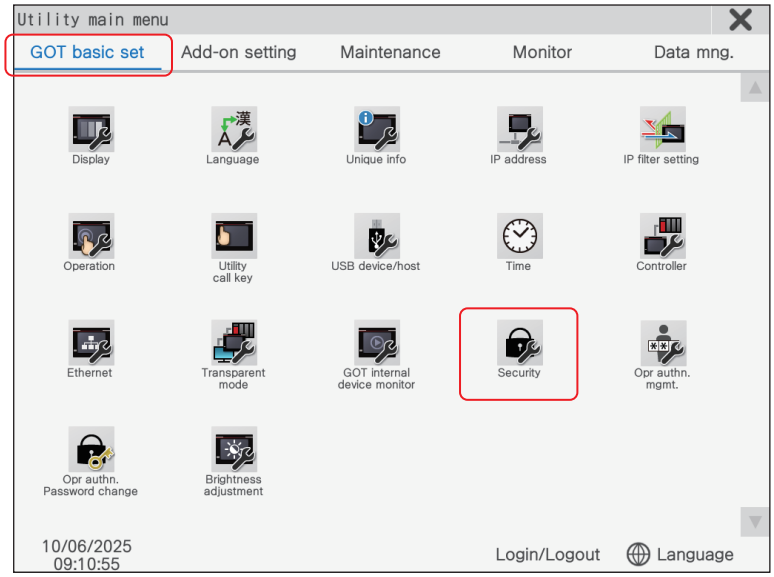
Point

- Restrictions on screen display

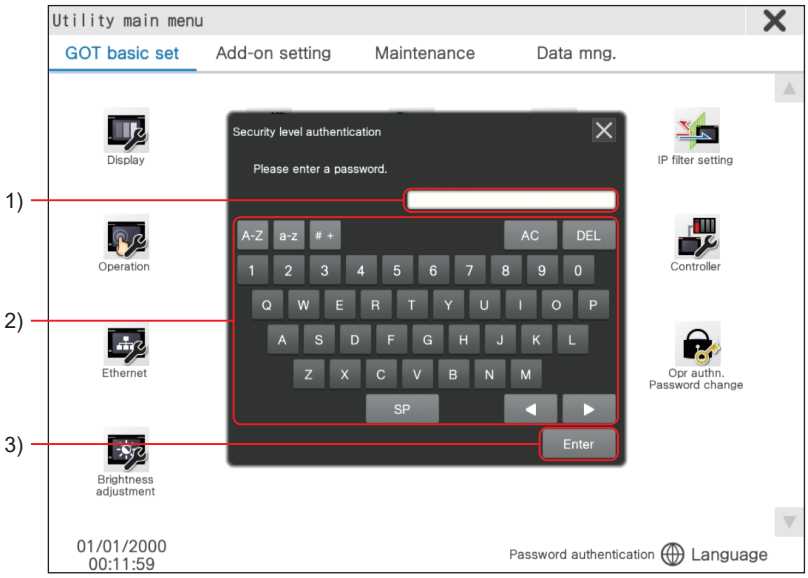
The security level change screen cannot be displayed when no project exists in the GOT.
Change the security level after downloading project data to the GOT.

20.1 Screen display procedure

Select [Security] in the [GOT basic set] tab.



20.2 [Security level authentication] screen



Item		Description	Setting range
1)	Input field	Enter the password for the changed security level. The password is shown as asterisks.	—
2)	Text input buttons	Used to enter text at the cursor position. To change the character type, touch any of the following buttons. • [A-Z] button: Uppercase letters • [a-z] button: Lowercase letters • [# +] button: Symbols	• [A] to [Z] • [a] to [z] • [0] to [9] • Symbols*1
3)	[Enter] button	Confirms the entry.	—

*1 The following symbols can be used.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [¥] ^ _ { | } ~
A one-byte space cannot be used at the start or end of a character string.
The space can be used between characters. Two or more one-byte spaces cannot be used consecutively.

Precautions

When temporarily raising the security level for maintenance and inspection or other operations, make sure to change the level back to the regular user setting after the operation.
Otherwise, there is a risk of allowing unauthorized users to perform unapproved operations.

21 [Operator authentication management]

GT37 SoftGOT3000

The function enables displaying a list of the operator information and adding, changing, or deleting the operator information to be used.

For information on the configurable settings, refer to the following.

☞ Page 123 [Operator authentication management] screen

For details on the operator authentication functions, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

21.1 Specifications for operator authentication

☞ Page 113 Group specifications (security mode: mode 1)
☞ Page 115 Group specifications (security mode: mode 2)

21.1.1 Group specifications (security mode: mode 1)

Each operator must belong to one group, and operation rights are granted to the group to which the operator belongs.

Groups cannot be registered or edited in security mode 1.

Group type	Description
Administrators group	Operators who belong to this group are administrators. ☞ Page 113 Administrator Only operators with the name [Administrator] can belong to this group.
Sub admins group	Operators who belong to this group are sub-administrators. ☞ Page 114 Sub-administrator
Users group	Operators who belong to this group can operate the user-created screens.

Administrator

Administrator refers to the account preset in the GOT for management use only.

Administrators cannot be deleted.

The following items for the operator management information cannot be changed.

Item	Settings
[Operator Name]	[Administrator]
[Operator ID]	[-]
[Group]	[Administrators]

Administrators can only edit operator management information and operator authentication settings.

An administrator account cannot be used as an operator account to perform operations on the GOT.

For details on the operations that can be performed by administrators, refer to the following.

☞ Page 114 Operations that can be performed by administrators and sub-administrators

Sub-administrator

Sub-administrator refers to an operator with administrator privileges.

To register an operator as a sub-administrator, set the following items in the [Operator authentication management] screen of the utility.

Setting	Description	Reference
[Operator information] tab	Set [Group] to [Sub adminis] to change an operator to a sub-administrator.	☞ Page 123 [Operator information] tab
[Authentication setting] tab	Select [Use sub administrator].	☞ Page 129 [Authentication setting] tab

Sub-administrators can perform the following operations:

- Edit operators that have a security level equal to or lower than themselves (sub administrators cannot delete themselves)
- Edit some of the operator authentication settings

For details on the operations that can be performed by sub-administrators, refer to the following.

☞ Page 114 Operations that can be performed by administrators and sub-administrators

Even if you are already logged in as a sub-administrator, you must be authenticated by an administrator to perform operations that require administrator privileges.

Operations that can be performed by administrators and sub-administrators

The following table shows the operations that can be performed by administrators and sub-administrators on the [Operator authentication management] screen of the utility.

Operations that can be performed by sub-administrators depend on the security level and operator authentication settings.

○: Operable

—: Not operable

[Operator authentication management] screen			Administrator	Sub-administrator		
				[Enable op auth settings change] is selected.		[Enable op auth settings change] is deselected.
				Level 15	Level 14 or lower	
[Operator information] tab	Register, edit, or delete operator management information.		○	○*1	○*1	○*1
	Edit operator management information of the administrator.		○	○	—	—
[Authentication setting] tab	Settings other than the administrator setting		○	○*2	○*2	—
	Admin setting	[Use sub administrator]	○	—	—	—
		[Show non-editable operators]	○	○	—	—
		[Enable op auth settings change]	○	—	—	—
		[Level that can be changed]	○	○	—	—

*1 A sub-administrator can edit the operator management information of operators with a security level equal to or lower than themselves.

*2 This operation is not allowed if the sub-administrator has a lower level than the level specified in [Level that can be changed].

21.1.2 Group specifications (security mode: mode 2)

Groups are used to grant rights to operators in the group.
Each operator must belong to at least one group.
Up to 16 groups can be registered to one GOT.
Register or edit groups from the [Group information] tab on the [Operator authentication management] screen.
☞ Page 123 [Operator information] tab
The following group types are available.

Group type	Description
Administrators group	This group possesses all operation rights. The group is provided by default and cannot be edited. At least one operator must belong to the Administrators group.
Users group	This group can operate user-created screens. The group is provided by default and cannot be edited.
User-defined group	This group can be created by users. The group name and operation rights can be edited. Up to 14 groups can be registered.

Operation rights

The following shows the operation rights that can be granted to groups.
Operation rights can be configured from the [Edit group information] screen.
For details, refer to the following.
☞ Page 128 [Edit group information] screen
○: Granted
—: Not granted
Editable: Operation rights can be edited.

Operation rights	Rights by group			Model
	Administrators group	Users group	User-defined group	
☞ Page 116 User screen operation	○	○	○	GT37 SoftGOT3000
☞ Page 116 [Current drive reading]	○	—	Editable	
☞ Page 116 [Current drive writing]	○	—	Editable	
☞ Page 116 [Non-current drive reading/writing]	○	—	Editable	
☞ Page 117 [GOT settings in the utility]	○	—	Editable	
☞ Page 117 [Startup package data reading/writing / F/W update]	○	—	Editable	GT37 SoftGOT3000
☞ Page 117 [Open a project data / Start monitoring]	○	—	Editable	GT37 SoftGOT3000
☞ Page 117 [Reading/writing a device from an external device]	○	—	Editable	GT37 SoftGOT3000
☞ Page 117 [Edit operator information]	○	—	Editable*1	
☞ Page 117 [Sub-administrator authority]	—	—	Editable*1	
☞ Page 118 [GOT Full Initialization / Security Mode change]	○	—	Editable	GT37 SoftGOT3000

Operation rights	Rights by group			Model
	Administrators group	Users group	User-defined group	
☞ Page 118 [Security mode change]	○	—	Editable	GT37 SoftGOT3000

*1 Only [Edit operator information] or [Sub-administrator authority] can be granted.

■User screen operation

This is a right granted to all groups.

All operators can perform the operations shown below.

Operation	Remarks
Displaying an object	Only the objects with the security levels (display) equal to or lower than the level of the operator are displayed.
Operating an object	Only the objects with the security levels (operation) equal to or lower than the level of the operator can be operated.
Switching between user-created screens	The screen can only be switched to a user-created screen with a security level equal to or lower than the level of the operator. The target screens are as follows: • Base screen • Window screen • Mobile screen Switching to the utility is not possible with this operation right.

■[Current drive reading]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Copying files and folders	Files and folders on the current drive can be copied using the utility. For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions To copy files and folders to a drive other than the current drive, the [Non-current drive reading/writing] right is required.
Reading files and folders	Files and folders on the current drive can be read using GT Designer3 or Data Transfer Tool.

■[Current drive writing]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Editing files and folders	Files and folders on the current drive can be converted, moved, renamed, or deleted, or a new folder can be created using the utility. For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions Operators who only possess this right can specify a drive other than the current drive as the destination for file conversion or movement.
Writing files and folders	Files and folders can be written using GT Designer3 or Data Transfer Tool to the current drive.

■[Non-current drive reading/writing]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Editing files and folders	Files and folders not on the current drive can be converted, copied, moved, renamed, or deleted, or a new folder can be created using the utility. For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions Operators who only possess this right can specify the current drive as the destination for file conversion, copy, or movement.
Reading/writing files and folders	Files and folders can be read from/written to a drive other than the current drive using GT Designer3 or Data Transfer Tool.

■[GOT settings in the utility]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Displaying each setting screen from the utility	For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions

■[Startup package data reading/writing / F/W update]

Operators with this right can perform the operations shown below.

Some operations require access rights to the destination drive.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Displaying each setting screen from the utility	For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions
Reading/writing package data	The package data can be read or written using GT Designer3 or Data Transfer Tool. Access privilege is not required for the destination drive.
Installing the BootOS	The BootOS can be installed from GT Designer3. Access privilege is not required for the destination drive.
Installing the BootOS or CoreOS via data storage	The BootOS or CoreOS copied to a data storage can be installed on the GOT. Access privilege is not required for the destination drive.

■[Open a project data / Start monitoring]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Displaying each setting screen from the utility	For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions
Opening a project with GT SoftGOT3000	A project to be monitored can be changed. (Operation rights to start monitoring are not required.)
Starting monitoring with GT SoftGOT3000 using the SoftGOT-GOT link function	Monitoring is started for a project read from the GOT using the SoftGOT-GOT link function.

■[Reading/writing a device from an external device]

Operators with this right can perform the operations shown below.

Operation	Remarks
Access from an OPC UA client	The OPC UA server (GOT) can be accessed from an OPC UA client.
Internal device interface function	GOT internal devices in GT SoftGOT3000 can be monitored from a user-created application.

■[Edit operator information]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Displaying each setting screen from the utility	For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions

■[Sub-administrator authority]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Displaying each setting screen from the utility	For utility menu items that can be displayed by operators with this right, refer to the following. ☞ Page 118 Operation rights and utility display restrictions

Settings related to operators with [Sub-administrator authority] can be configured in the [Authentication setting] tab on the [Operator authentication management] screen. This applies to operators with a security level that allows changes to the operator authentication setting.

The settings can be configured only by the operators with the [Edit Operator Management Information] rights.

☞ Page 129 [Authentication setting] tab

■[GOT Full Initialization / Security Mode change]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Full GOT reset	The [Full GOT reset] screen of the utility can be displayed.
Security mode change	Package data can be written to the GOT and the security mode can be changed.

■[Security mode change]

Operators with this right can perform the operations shown below.

Operation	Remarks
Switching to the utility	User-created screens can be switched to the utility.
Security mode change	The security mode can be changed.

Operation rights and utility display restrictions

The display of some utility menu items is restricted by operator's operation rights.

The following shows the operation rights required to display each menu item.

If an operator has any of the required operation rights, the corresponding menu item will be displayed.

In this section, operation rights are represented by the numbers shown below.

No.	Operation rights
1	User screen operation
2	[Current drive reading]
3	[Current drive writing]
4	[Non-current drive reading/writing]
5	[GOT settings in the utility]
6	[Startup package data reading/writing / F/W update]
7	[Open a project data / Start monitoring]
8	[Reading/writing a device from an external device]
9	[Edit operator information]
10	[Sub-administrator authority]
11	[GOT Full Initialization / Security Mode change]

☞ Page 119 [GOT basic set]
☞ Page 120 [Add-on settings]
☞ Page 120 [Maintenance]
☞ Page 121 [Monitor]
☞ Page 121 [Data mng.]

■[GOT basic set]

○: Menu items are displayed (screen transitions can be performed by touch).

—: Menu items are not displayed.

Menu item		Operation rights										
		1*1	2*2	3*3	4*4	5*5	6*6	7*7	8*8	9*9	10*10	11*11
[Display]		—	—	—	—	○	○	○	—	—	—	—
[Language]		—	—	—	—	○	○	○	—	—	—	—
[Unique info]		—	—	—	—	○	○	—	—	—	—	—
[IP address]		—	—	—	—	○	○	—	—	—	—	—
[IP filter setting]		—	—	—	—	○	○	—	—	—	—	—
[Operation]		—	—	—	—	○	○	○	—	—	—	—
[Utility call key]		—	—	—	—	○	○	○	—	—	—	—
[USB device/host]		—	—	—	—	○	○	—	—	—	—	—
[Time]		—	—	—	—	○	○	—	—	—	—	—
[Controller]		—	—	—	—	○	○	—	—	—	—	—
[Ethernet]		—	—	—	—	○	○	—	—	—	—	—
[Transparent mode]		—	—	—	—	○	○	—	—	—	—	—
[GOT internal device monitor]		—	—	—	—	○	○	—	—	—	—	—
[Operator authentication management]	[Operator information] tab	—	—	—	—	—	—	—	—	○	○*12	—
	[Group information] tab	—	—	—	—	—	—	—	—	○	—	—
	[Authentication setting] tab	—	—	—	—	—	—	—	—	○	○*13	—
[Opr authn. Password change]		—	○	○	○	○	○	○	—	○	○	○
[Brightness adjustment]		—	—	—	—	○	○	—	—	—	—	—

*1 User screen operation
*2 [Current drive reading]
*3 [Current drive writing]
*4 [Non-current drive reading/writing]
*5 [GOT settings in the utility]
*6 [Startup package data reading/writing / F/W update]
*7 [Open a project data / Start monitoring]
*8 [Reading/writing a device from an external device]
*9 [Edit operator information]
*10 [Sub-administrator authority]
*11 [GOT Full Initialization / Security Mode change]
*12 Operator information of operators with levels equal to or lower than the level of the operator who is logged-in can be edited.
Operators with [Sub-administrator authority] cannot import data.
*13 The settings other than [Sub-administrator authority settings] are editable.
The settings on this tab can be edited only by operators with levels that allow changes to the operator authentication settings.

■[Add-on settings]

○: Menu items are displayed (screen transitions can be performed by touch).

—: Menu items are not displayed.

Menu item	Operation rights										
	1*1	2*2	3*3	4*4	5*5	6*6	7*7	8*8	9*9	10*10	11*11
[SoftGOT-GOT link function]	—	—	—	—	○	○	—	—	—	—	—
[VNC server function]	—	—	—	—	○	○	—	—	—	—	—
[Seq. program monitor]	—	—	—	—	○	○	—	—	—	—	—
[Backup/restoration]	—	—	—	—	○	○	○	—	—	—	—
[License management]	—	—*12	—	—*12	○	○	—	—	—	—	—
[System launcher]	—	—	—	—	○	○	○	—	—	—	—
[iQSS utility]	—	—	—	—	○	○	—	—	—	—	—
[Web browser function]	—	—	—	—	○	○	—	—	—	—	—
[ANDON connection]	—	—	—	—	○	○	○	—	—	—	—
[VPN connection function]	—	—	—	—	○	○	—	—	—	—	—
[Contactless tag function]	—	—	—	—	○	○	—	—	—	—	—

*1 User screen operation
*2 [Current drive reading]
*3 [Current drive writing]
*4 [Non-current drive reading/writing]
*5 [GOT settings in the utility]
*6 [Startup package data reading/writing / F/W update]
*7 [Open a project data / Start monitoring]
*8 [Reading/writing a device from an external device]
*9 [Edit operator information]
*10 [Sub-administrator authority]
*11 [GOT Full Initialization / Security Mode change]
*12 To register or deregister a license, the [Current drive reading] and [Non-current drive reading/writing] rights are required.

■[Maintenance]

○: Menu items are displayed (screen transitions can be performed by touch).

—: Menu items are not displayed.

Menu item	Operation rights										
	1*1	2*2	3*3	4*4	5*5	6*6	7*7	8*8	9*9	10*10	11*11
[Batch self check]	—	—	○	○	—	—	—	—	—	—	—
[USB device management]	—	○	○	○	○	○	—	—	—	—	—
[Screen cleaning]	There are no display restrictions applied by the operation rights.										
[Touch panel calibration]	There are no display restrictions applied by the operation rights.										
[System alarm]	There are no display restrictions applied by the operation rights.										
[Drawing check]	There are no display restrictions applied by the operation rights.										
[Font check]	There are no display restrictions applied by the operation rights.										
[Touch panel check]	There are no display restrictions applied by the operation rights.										
[I/O check]	There are no display restrictions applied by the operation rights.										
[Ethernet status check]	There are no display restrictions applied by the operation rights.										
[GOT information]	There are no display restrictions applied by the operation rights.										
[GOT Mobile Information]	There are no display restrictions applied by the operation rights.										

*1 User screen operation
*2 [Current drive reading]
*3 [Current drive writing]
*4 [Non-current drive reading/writing]
*5 [GOT settings in the utility]
*6 [Startup package data reading/writing / F/W update]
*7 [Open a project data / Start monitoring]
*8 [Reading/writing a device from an external device]
*9 [Edit operator information]
*10 [Sub-administrator authority]
*11 [GOT Full Initialization / Security Mode change]

■[Monitor]

There are no display restrictions applied by the operation rights.

■[Data mng.]

○: Menu items are displayed (screen transitions can be performed by touch).

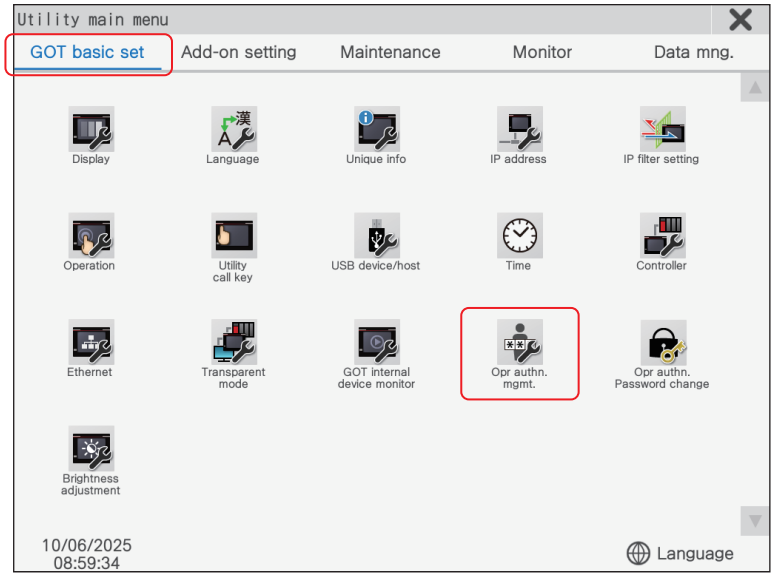
—: Menu items are not displayed.

Menu item	Operation rights										
	1*1	2*2	3*3	4*4	5*5	6*6	7*7	8*8	9*9	10*10	11*11
[Alarm information]	—	○	○	○	—	—	—	—	—	—	—
[Image file management]	—	○	○	○	—	—	—	—	—	—	—
[Recipe information]	—	○	○	○	—	—	—	—	—	—	—
[Logging information]	—	○	○	○	—	—	—	—	—	—	—
[Operation log information]	—	○	○	○	—	—	—	—	—	—	—
[File manager]	—	○	○	○	—	—	—	—	—	—	—
[Package management]	—	—	—	—	○	○	○	—	—	—	—
[Backup restoration]	—	○	○	○	—	—	—	—	—	—	—
[NVRAM management]	—	○	○	—	—	—	—	—	—	—	—
[Memory card format]	—	—	○	○	—	—	—	—	—	—	—
[Memory check]	—	—	○	○	—	—	—	—	—	—	—
[GOT data pkg. acquisition]	—	—	—	—	—	○	—	—	—	—	—
[Full GOT reset]	—	—	—	—	—	—	—	—	—	—	○
[Certificate management]	—	—	—	—	○	○	○	—	—	—	—

*1 User screen operation
*2 [Current drive reading]
*3 [Current drive writing]
*4 [Non-current drive reading/writing]
*5 [GOT settings in the utility]
*6 [Startup package data reading/writing / F/W update]
*7 [Open a project data / Start monitoring]
*8 [Reading/writing a device from an external device]
*9 [Edit operator information]
*10 [Sub-administrator authority]
*11 [GOT Full Initialization / Security Mode change]

21.2 How to display the screen

Select [Operator authentication management] in the [GOT basic set] tab.
If authentication is requested, refer to the following.
☞ Page 122 Password input screen and information to enter



21.2.1 Password input screen and information to enter

Perform one of the following operations depending on the screen displayed, when authentication is requested in [Operator authentication management].

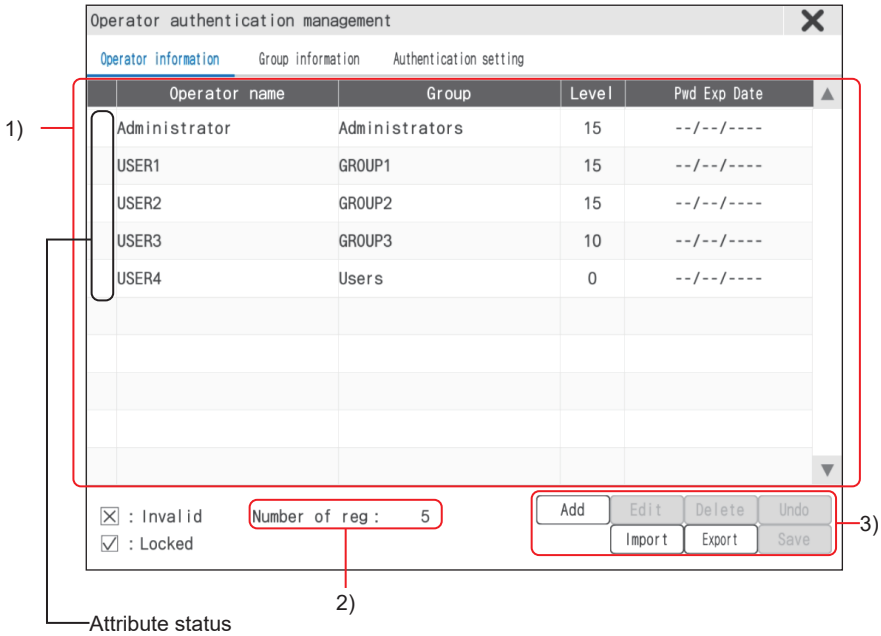
Security mode	Dialog	Operation
Mode 1	Admin password authentication screen	Enter the administrator password.
	Administrator authentication screen	Enter one of the following operator names and passwords: • Administrator • Sub-administrator*1
Mode 2	Administrator authentication screen	Enter the operator name and password of an operator who has operation rights for [Edit operator information].

*1 Sub-administrators cannot be authenticated in the following situations:
When the password has expired
When [Changing password at next login] is selected in the [Edit operator information] screen

21.3 [Operator authentication management] screen

☞ Page 123 [Operator information] tab
☞ Page 127 [Group information] tab
☞ Page 129 [Authentication setting] tab

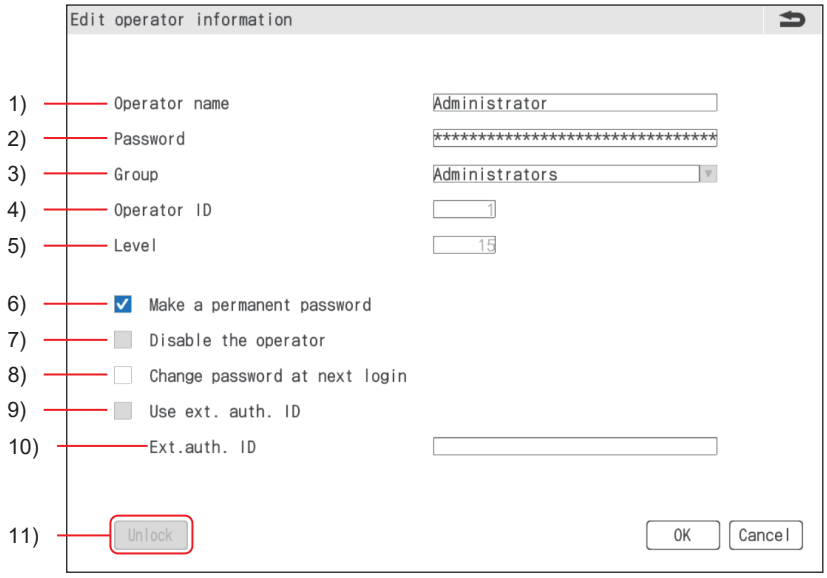
21.3.1 [Operator information] tab



Item			Description
1)	Operator information list	Attribute status	Displays the status of operators.
			"X" is displayed when an operator is disabled. For information on how to disable an operator, refer to [Disable the operator] on the following page: ☞ Page 125 [Edit operator information] screen
			When an operator is locked, a check mark will be displayed. For information on the locked status, refer to [Lock operator individually after login failures] on the following page: ☞ Page 129 [Authentication setting] tab
			"X" is displayed when an operator is disabled or locked.
		[Operator Name]	Displays operator names.
		[Group]	Displays associated groups.
		[Level]	Displays the security levels for operators.
		[Pwd Exp Date]	Displays the operator password expiration date.
2)	[Number of User Registrations]		Displays the number of operators registered on the GOT.

Item			Description
3)	Operation buttons	[Add] button	Add operator information to the GOT. The amount of operator information that can be stored on the GOT differs depending on the security mode. • Mode 1: Up to 1000 operators excluding administrators • Mode 2: Up to 1000 operators including administrators Touch the [Add] button to move to the [Edit operator information] screen. For details on the [Edit operator information] screen, refer to the following. ☞ Page 125 [Edit operator information] screen
		[Edit] button	Edit the operator information stored on the GOT. Touch the [Edit] button to move to the [Edit operator information] screen. For details on the [Edit operator information] screen, refer to the following. ☞ Page 125 [Edit operator information] screen
		[Delete] button	Delete the operator information stored on the GOT.
		[Undo] button	Touch this button to undo changes to edited operator information. If authentication is requested, refer to the following. ☞ Page 122 Password input screen and information to enter The state to which the data reverts to differs depending on whether the edited data is saved. • Unsaved: The operator information directly before the data was saved • Saved: The operator information at [Operator authentication management] screen startup
		[Import] button	Touch this button to import operator management information files on the data storage to the GOT. If authentication is requested, refer to the following. ☞ Page 122 Password input screen and information to enter G3U is the only file format that can be used to import operator management information files. If the file format of the operator information edit file is CSV, change the format to G3U using GOT Operator Management Information Conversion Tool Ver.3. For details on the GOT Operator Management Information Conversion Tool Ver.3, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual
		[Export] button	Touch this button to export the operator management information file stored on the GOT to the set (specified) drive. The file formats available for export vary depending on the security mode. Mode 1: When exporting a file, either G3U or CSV can be selected for the file format. The name of the exported file will be "AUTHINF.G3U" or "AUTHINF.CSV". To edit the exported operator management information file, select CSV as the file format. Mode 2: The only file format available for export is G3U. The name of the exported file will be "AUTHINF.G3U".
		[Save] button	Touch this button to save the settings.

[Edit operator information] screen



Item		Description	Setting range
1)	[Operator Name]	Set the operator name.	1 to 16 characters*1
2)	[Password]	Set the password used for login. The setting range and usable characters are consistent with the settings of [Password requirement settings] in the [Authentication setting] tab.	0 to 64 characters
3)	[Group]	Set the group that the operator belongs to. The settings differ depending on the security mode.	—
		When the security mode is mode 1 and the operator name is [Administrator], the operator can only belong to the [Administrators] group. If the operator's name is not [Administrator], set the operator to either the [Users] or [Sub adminis] group.	• [Administrators] • [Users] • [Sub adminis] <Default: [Users]>
		When the security mode is mode 2, the setting range differs depending on the operation rights of the operator.	When an operator has the operation rights for [Edit operator information] • [Administrators] • [Users] • Registered user-defined group*2 <Default: [Users]>
			When an operator has the operation rights for [Sub-administrator authority] • Groups set on the [Editable group settings] screen <Default: The name of the group with the smallest group number among the editable groups>
4)	[Operator ID]	Set the operator ID. The operator ID cannot be the same as another operator ID.	When the security mode is mode 1 • [1] to [32766] <Default: the smallest numeric value for an unallocated operator ID>
			When the security mode is mode 2 • [1] to [32767] <Default: the smallest numeric value for an unallocated operator ID>
5)	[Level]	Set the security level for an operator. When the security level of the operator who is logged in is changed, the new security level will not become effective until the operator has logged out and then logged in again.	[0] to [15]*3 <Default: [0]>
6)	[Make a permanent password]	Set whether the password expires. When the security mode is mode 1, the [Administrator] settings cannot be deselected.	• Selected: Does not expire • Deselected: Expires <Default: Deselected>

Item		Description	Setting range
7)	[Disable the operator]	Set whether to disable an operator. When the security mode is mode 1 and also the sub-administrator settings are either of the following, the administrator can be disabled: • [Enable op auth settings change] is selected in the [Authentication setting] tab. • [Level that can be changed] in the [Authentication setting] tab is set to [15]. When an administrator is disabled, the administrator cannot be used for authentication on the [Admin password authentication] screen.	• Selected: Operator disabled • Deselected: Operator enabled <Default: Deselected>
8)	[Change password at next login]	Set whether to force password change at the next login. When the security mode is mode 1, the [Administrator] settings cannot be selected.	• Selected: Force • Deselected: Do not force <Default: Deselected>
9)	[Use ext. auth. ID]	Set whether to use external authentication. When the security mode is mode 1, the [Administrator] settings cannot be selected.	• Selected: Use • Deselected: Do not use <Default: Deselected>
10)	[Ext. auth. ID]*4	Settable when [Use ext. auth. ID] is selected. Set the external authentication ID. This item must be set when [Use ext. auth. ID] is selected. There cannot be two identical external authentication IDs.	4 to 32 alphanumeric characters using [0] to [9] and [A] to [F]
11)	[Unlock] button	Unlocks the operator account.	—

*1 The alphabet (lower/upper case letters), numbers, and the following symbols can be used.
! “ # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [¥] ^ _ { | } ~
A one-byte space cannot be used at the start or end of a character string.
The space can be used between characters. Two or more one-byte spaces cannot be used consecutively.

*2 User-defined groups can be added or edited from the [Edit group information] screen.
For details, refer to the following.
☞ Page 128 [Edit group information] screen

*3 When the security mode is mode 1, the setting range for the operator level differs depending on the group that the operator belongs to.
For the administrator: [0] to [15]
For the sub-administrator: [0] to the operator level of the sub-administrator

*4 You can enter an external authentication ID with an external device (barcode reader or RFID controller) when setting [External authentication (serial)] or [External authentication (USB)] for the authentication method in the [Authentication setting] tab.

21.3.2 [Group information] tab

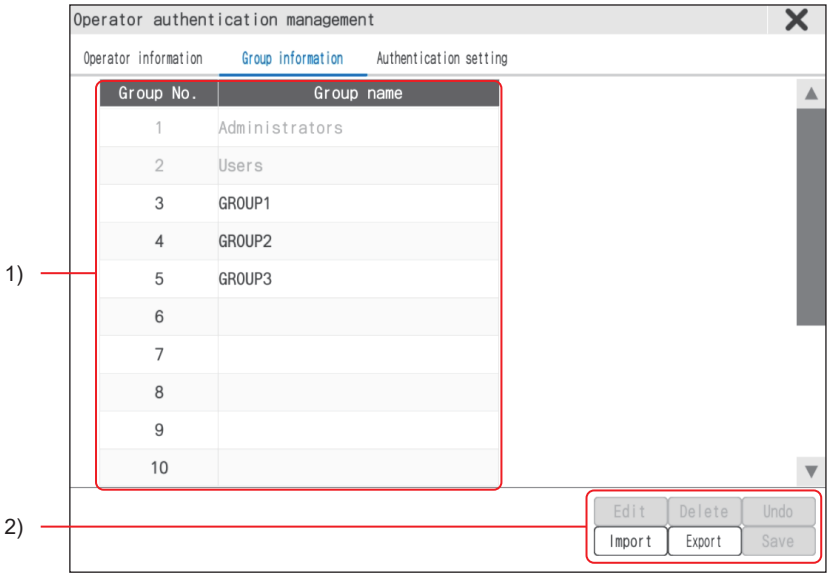
Appears when the security mode is set to mode 2.

The group names of operator management information registered on the GOT are displayed as a list.

You can edit a group name and configure operation rights from the [Edit group information] screen.

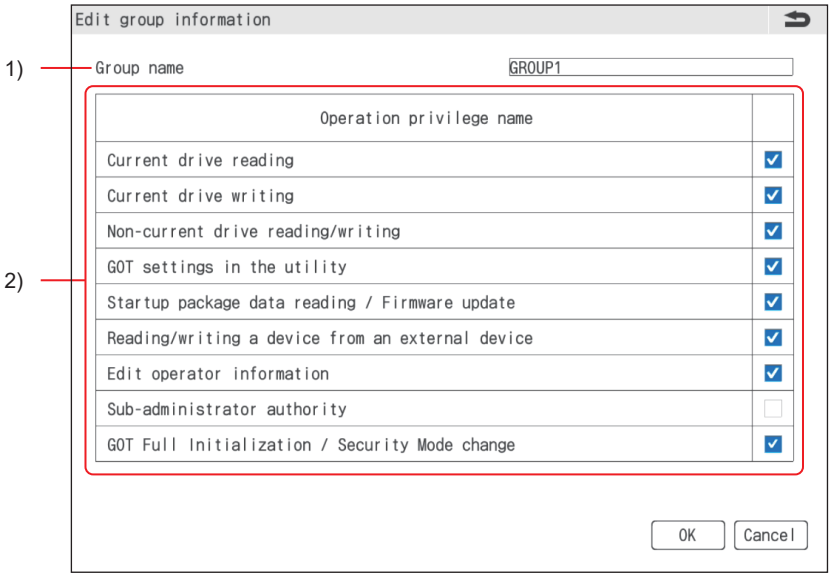
☞ Page 128 [Edit group information] screen

However, if [Group name] is [Administrators] or [Users], the group cannot be edited or deleted.



Item			Description
1)	Group information list	[Group No.]	Displays the group number.
		[Group Name]	Displays the group names registered on the GOT.
2)	Operation buttons	[Edit] button	Use this button to edit group names and operation rights. Touch the [Edit] button to move to the [Edit group information] screen. For details on the [Edit group information] screen, refer to the following. ☞ Page 128 [Edit group information] screen
		[Delete] button	Use this button to delete the selected user-defined group.
		[Undo] button	Touch this button to undo changes to edited group information. If authentication is requested, refer to the following. ☞ Page 122 Password input screen and information to enter The state to which the data reverts to differs depending on whether the edited data is saved. • Unsaved: The operator information directly before the data was saved • Saved: The operator information at [Operator authentication management] screen startup
		[Import] button	Touch this button to import operator management information files on the data storage to the GOT. If authentication is requested, refer to the following. ☞ Page 122 Password input screen and information to enter G3U is the only file format that can be used to import operator management information files. If the file format of the operator information edit file is CSV, change the format to G3U using GOT Operator Management Information Conversion Tool Ver.3. For details on the GOT Operator Management Information Conversion Tool Ver.3, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual
		[Export] button	Touch this button to export the operator management information file stored on the GOT to the set (specified) drive. When exporting a file, either G3U or CSV can be selected for the file format. To edit the exported operator management information file, export the file in CSV format. The name of the exported file will be "AUTHINF.G3U" or "AUTHINF.CSV".
		[Save] button	Touch this button to save the settings.

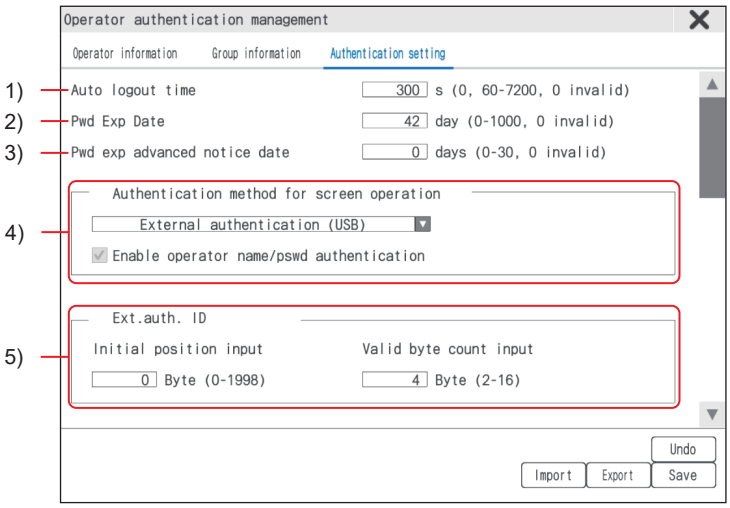
[Edit group information] screen



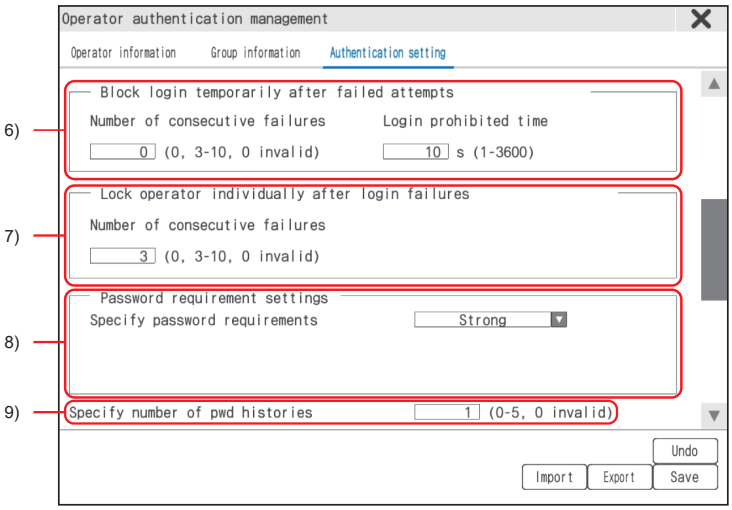
Item		Description	Setting range
1)	[Group Name]	Set a group name.	1 to 20 characters*1
2)	[Operation authority name]	Select whether to grant operation rights to the selected group in the [Group information] tab. Operation rights for the Administrators group and Users group cannot be changed. For details on each operation right, refer to the following. ☞ Page 115 Operation rights	• Selected: Grant operation rights • Deselected: Do not grant operation rights

*1 The alphabet (lower/upper case letters), numbers, and the following symbols can be used.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [¥] ^ _ { | } ~
A one-byte space cannot be used at the start or end of a character string.
The space can be used between characters. Two or more one-byte spaces cannot be used consecutively.

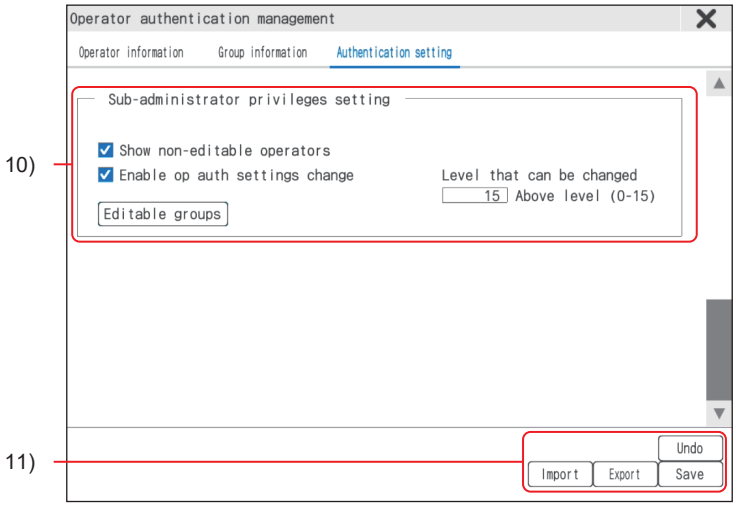
21.3.3 [Authentication setting] tab



[Authentication setting] tab (1/3)



[Authentication setting] tab (2/3)



[Authentication setting] tab (3/3)

PART 4

Item			Description	Setting range
1)	[Auto logout time]		Set the time period from the last operation on the GOT until automatic logout. To disable the automatic logout function, set [0] seconds. If the [Operator authentication management] screen is displayed, the operator will not be automatically logged out.	• [0] seconds: Disabled • [60] seconds to [7200] seconds <Default: [300] seconds>
2)	[Pwd Exp Date]		Set an expiration date for the password. Once the password has expired, the operator will be prompted to change their password at the next login. When the password expiration date is set to [0] days, password expiration date is disabled.	[0] to [1000] days <Default: [42] days>
3)	[Pwd exp advanced notice date]		Set the number of days for advanced notification of the password expiration date. When password authentication is successful, if the number of days until the expiration date is equal to or less than the setting value for [Adv. notification], a dialog notifies the user that the password is about to expire. When [Pwd exp advanced notice date] is set to [0], advanced notification is disabled.	[0] to [30] days <Default: [0] days>
4)	[Authentication method for screen operation]	Authentication method	Set the authentication method for screen operation. For an outline of each authentication method, refer to the following. ☞ Page 134 Authentication method for screen operation	• [Operator name + password] • [External authentication (USB)][*1] • [External authentication (serial)] <Default: [Operator name + password]>
		[Enable operator name/ pswd authentication]	When the authentication method is [External authentication (serial)] or [External authentication (USB)], set whether to enable or disable authentication using [Operator name + password]. When enabled, the [Password>>] button will be displayed on the login screen upon login via external authentication. Touching the button displays the [Login] screen that enables operator and password authentication.	When the security mode is mode 1 • Selected: Enabled • Deselected: Disabled <Default: Deselected>
				When the security mode is mode 2 • Selected: Enabled (fixed) <Default: Selected>
5)	[Ext.auth. ID]	—	This item can be set when the authentication method is [External authentication (serial)] or [External authentication (USB)].	—
		[Initial position input]	This setting is disabled when the authentication method is [Operator name + password]. Set the initial position (number of bytes) of the data read from the external device. The data is used as external authentication ID.	[0] bytes to [1998] bytes <Default: [0] bytes>
		[Valid byte count input]	Set the range of bytes that will be considered for external authentication from the initial position of the external authentication ID when reading data from an external device.	[2] bytes to [16] bytes <Default: [4] bytes>
6)	[Block login temporarily after failed attempts]	—	An operator will be blocked after attempting to log in more than the number of times set for [Number of consecutive failures] within five minutes using one login method. The blocked operator will not be able to log in within the amount of time set in [Login prohibited time]. To unblock the operator before the prohibited login period elapses, refer to the following. ☞ Page 134 How to unlock the GOT after unauthorized login	—
		[Number of consecutive failures]	Set the number of unsuccessful login attempts before an operator is blocked. Set [0] times to allow an unlimited number of login attempts.	• [0] times • [3] times to [10] times <Default: [0] times>
		[Login prohibited time]	Set the time it takes until the operator is unblocked.	[1] seconds to [3600] seconds <Default: [10] seconds>
7)	[Lock operator individually after login failures]	—	Set the conditions to lock an operator after unsuccessful login attempts. An operator will be locked if they attempt to login more than the number of times set for [Number of consecutive failures] within five minutes. Locked operators cannot login until they are unblocked by one of the following operators using the utility: • Administrator (when the security mode is mode 1) • Sub-administrator (when the security mode is mode 1) • Operators who have been granted [Edit operator information] or [Sub-administrator authority] rights (when the security mode is mode 2)	—
		[Number of consecutive failures]	Set the number of unsuccessful login attempts before an operator is locked. Set [0] to allow an unlimited number of login attempts.	• [0] times • [3] times to [10] times <Default: [3] times>

Item			Description	Setting range
8)	[Password requirement settings]	—	The operator can use this to check the password requirements when setting or changing a password. The processing that checks whether the operator password satisfies the requirements, has priority over the processing that checks whether the operator has been disabled and the processing that checks whether the operator is locked.	—
		[Specify password requirements]	Set the password strength. The characters that can be used for a password differ depending on the specified password strength. For details, refer to the following. ☞ Page 135 Number of characters, character types, and usable characters for password strength	When the security mode is mode 1 • [Customize] • [None] <Default: [Customize]>
				When the security mode is mode 2 • [Customize] • [None] • [Strong] • [Medium] <Default: [Strong]>
		[Specify min number of characters]	This can be set when [Specify password requirements] is [Customize]. Set the minimum number of characters for a password. Passwords that do not contain the minimum number of characters cannot be registered.	[1] to [64] characters <Default: [8] characters>
		[Specify by character type]	This can be set when [Specify password requirements] is [Customize]. Set the types of characters that must be included in the password.	• [No check]: Does not check the character types of a password. • [[A-Z, a-z]/[0-9, Other]]: Checks if characters other than letters are included. • [[A-Z, a-z]/0-9/Other]: Checks if letters, numbers, and other types of characters are included. • [A-Z/a-z/0-9/Other]: Checks if lowercase letters, uppercase letters, numbers, and other types of characters are included. <Default: [No check]>
9)	[Specify number of pwd histories]*2		Set the number of times the passwords registered by operators in the past can be recorded in the history. Recording password history will prevent operators from reusing previous passwords. However, this function is not applicable to operators who have the following rights: • [Edit operator information] • [Sub-administrator authority] When [Specify number of pwd histories] is set to [0], all password history on the GOT is deleted.	[0] to [5] times <Default: [1] times>

Item			Description	Setting range
10)	[Sub-administrator privileges setting]	—	Set the operator management information that can be edited by the following operators: • When the security mode is mode 1: Sub-administrator • When the security mode is mode 2: Operator with [Sub-administrator authority] operation rights For the display condition on each setting item, refer to the following. ☞ Page 135 Display conditions for the sub-administrator authority setting	—
		[Use sub administrator]	This can be set when the security mode is mode 1. Set whether to use sub-administrator settings.	• Selected: Use • Deselected: Do not use <Default: Deselected>
		[Show non-editable operators]	Operators without editing rights can be displayed in the operator information list in the [Operator information] tab.	• Selected: Display operators without editing rights • Deselected: Do not display operators without editing rights <Default: Deselected>
		[Enable op auth settings change]	Grants editing rights in the [Authentication setting] tab to operators with a level higher than the setting value set in [Level that can be changed]. The editable setting items vary depending on the security mode and level.	• Selected: Grant editing rights in the [Authentication setting] tab • Deselected: Do not grant editing rights in the [Authentication setting] tab <Default: Deselected>
			When the security mode is mode 1, the editable setting items differ depending on the level of the operator. For details, refer to the following. ☞ Page 114 Operations that can be performed by administrators and sub-administrators	
			When the security mode is mode 2, settings other than [Sub-administrator authority] can be edited.	
		[Level that can be changed]	This setting can be set when [Enable op auth settings change] is selected. Set the security level of the sub-administrator who can edit the [Authentication setting] tab.	[0] to [15] <Default: [15]>
		[Editable groups] button	This setting is available when the security mode is mode 2. Touch this button to display the [Editable group settings] screen. In [Editable group settings], set a group for the operators and whether the operators of the group are allowed to edit. For details on the [Editable group settings] screen, refer to the following. ☞ Page 136 [Editable group settings] screen	—

Item			Description	Setting range
11)	Operation buttons	[Undo] button	Touch this button to undo changes to edited operator information. If authentication is required, refer to the following. ☞ Page 122 Password input screen and information to enter The state to which the data reverts to differs depending on whether the edited data is saved. • Unsaved: The operator information directly before the data was saved • Saved: The operator information at [Operator authentication management] screen startup	—
		[Import] button	Touch this button to import operator management information files on the data storage to the GOT. If authentication is required, refer to the following. ☞ Page 122 Password input screen and information to enter G3U is the only file format that can be used to import operator management information files. If the file format of the operator information edit file is CSV, change the format to G3U using GOT Operator Management Information Conversion Tool Ver.3. For details on the GOT Operator Management Information Conversion Tool Ver.3, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual	—
		[Export] button	Touch this button to export the operator management information file stored on the GOT to the set (specified) drive. When exporting a file, either G3U or CSV can be selected for the file format. To edit the exported operator management information file, export the file in CSV format. The name of the exported file will be "AUTHINF.G3U" or "AUTHINF.CSV".	—
		[Save] button	Touch this button to save the settings.	—

*1 This item is not displayed for GT SoftGOT3000.

*2 If the value in this setting is changed to a value that is smaller than the previous value, the oldest passwords (determined by the difference between the previous and new values) will be deleted from the password history.
For example, if [Specify number of pwd histories] is reduced from [5] times to [3] times, the oldest two of the previous five passwords will be deleted.

Precautions

■Resetting the password expiration date

When a CSV file containing the password is converted to a G3U file and imported to the GOT, the password expiration date will be reset if it is set to a value other than 0 days.

If the password expiration date is set to 30 days and the password is changed by the operator after 25 days, the number of days remaining until the expiration date will be as shown below.

Operation	Password expiration date after a G3U file is imported
The password is edited in a CSV file	Editing the password in the CSV file resets the number of days remaining until the expiration date to 30.
The password is not edited in a CSV file	The number of days remaining until the expiration date is five days.

Authentication method for screen operation

The following shows authentication methods for screen operation.

Item	Description
[Operator name + password]	Performs authentication by verifying the operator name and password entered in the login screen with the information registered in the operator management information.
[External authentication (USB)]	Performs authentication by verifying the information read by an RFID controller or a barcode reader connected to channel No. 8 with the information registered in the operator management information.
[External authentication (serial)]	Performs authentication by verifying the information read by an RFID controller or a barcode reader connected via USB (host) with the information registered in the operator management information.

Point

When authentication is performed via operations other than screen operation, the authentication method is fixed to [Operator name + password].

The operations other than screen operation refers to the following:

- Accessing from the client to the server (GOT) by the GOT Mobile function (including authentication via mobile screen operation with the GOT Mobile connected)
- Accessing from GT Designer3 to GOT3000 (when the security mode is mode 2)
- Accessing from the OPC UA client to the OPC UA server (GOT) (when the security mode is mode 2)

How to unlock the GOT after unauthorized login

The methods for unlocking the GOT after unauthorized login differ depending on the security mode.

■When the security mode is mode 1

All locked login routes can be unlocked via the [Operator authentication management] screen.

■When the security mode is mode 2

The following shows methods for unlocking each login route.

Route	Unblock method
Login from GOT3000	Login or password entry on the GOT 3000 screen. A dialog requesting authentication will be displayed. The GOT can be unlocked by any operator who has [Edit operator information] or [Sub-administrator authority] rights and successfully logs in.
Login from GT Designer3	The GOT can be unlocked via the [Operator authentication management] screen.
Login from a mobile terminal when establishing GOT Mobile connection	
Login via the mobile screen after establishing GOT Mobile connection	

Number of characters, character types, and usable characters for password strength

Item	[Strong][*1]	[Medium][*1]	[Customize]	[None]
Number of characters	8 to 64 characters		According to the settings of [Specify min number of characters]	0 to 64 characters
Character type	Three or more character types from the usable characters	Two or more character types from the usable characters	According to the settings of [Specify by character type]	Deselected
Usable characters	The following four types of characters can be used: • Numbers • Uppercase letters • Lowercase letters • Symbols[*2]			

*1 This can be set when the security mode is mode 2.

*2 The following symbols and one-byte spaces can be used:
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [¥] ^ _ { | } ~
A one-byte space cannot be used at the start or end of a character string.
The space can be used between characters. Two or more one-byte spaces cannot be used consecutively.

Precautions

■Password requirements check

When a password is registered or changed, it will be checked to see if it satisfies the password requirements.

When password requirements are changed, the password requirement check is not performed for the operators' passwords that have been registered in the GOT before the settings were changed.

Display conditions for the sub-administrator authority setting

The display conditions for the sub-administrator authority setting differ depending on the security mode.

■When the security mode is mode 1

○: Displayed

△: Inactive

—: Not displayed

Display condition				Sub-administrator authority setting			
Group of operators authenticated at [Operator authentication management] screen transition	Operator level	[Use sub administrator]	[Show non-editable operators]	[Use sub administrator]	[Show non-editable operators]	[Enable op auth settings change]	[Level that can be changed]
Administrator	—	Selected	Selected	○	○	○	○
	—	Deselected	—	○	—	—	—
	—	Selected	Deselected	○	○	○	—
Sub Adminis (sub-administrator)	[15]	Selected	Selected	△	○	△	○
	[14]	—	—	—	—	—	—

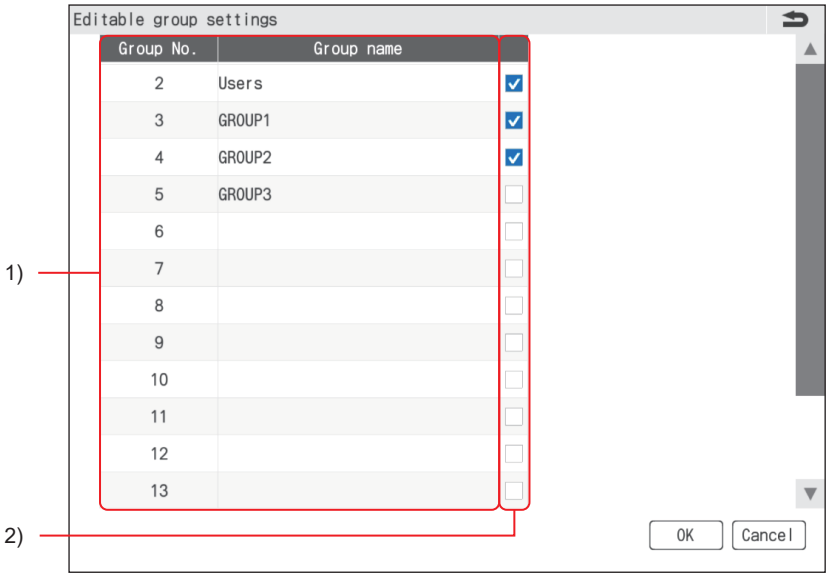
■When the security mode is mode 2

○: Displayed

—: Not displayed

Display condition		Sub-administrator authority setting			
Operation rights held by the logged-in operator	[Show non-editable operators]	[Show non-editable operators]	[Enable op auth settings change]	[Level that can be changed]	[Editable groups] button
[Edit operator information]	Selected	○	○	○	○
	Deselected	○	○	—	○
[Sub-administrator authority]	—	—	—	—	—

[Editable group settings] screen



Item			Description	Setting range
1)	Editable groups List	[Group No.]	Displays the group number. Group numbers [2] to [16] are displayed.	—
		[Group Name]	If group names are registered, the group names will be displayed.	—
2)	Editable group check		In [Editable group settings], set a group for the operators and whether the operators of the group are allowed to edit.	• Selected: Can edit • Deselected: Cannot edit

22 [Opr authn. Password change]

GT37 SoftGOT3000

The password of operators who are logged in can be changed with this function.
For information on how to change passwords, refer to the following.
☞ Page 138 Operations to change operator authentication passwords

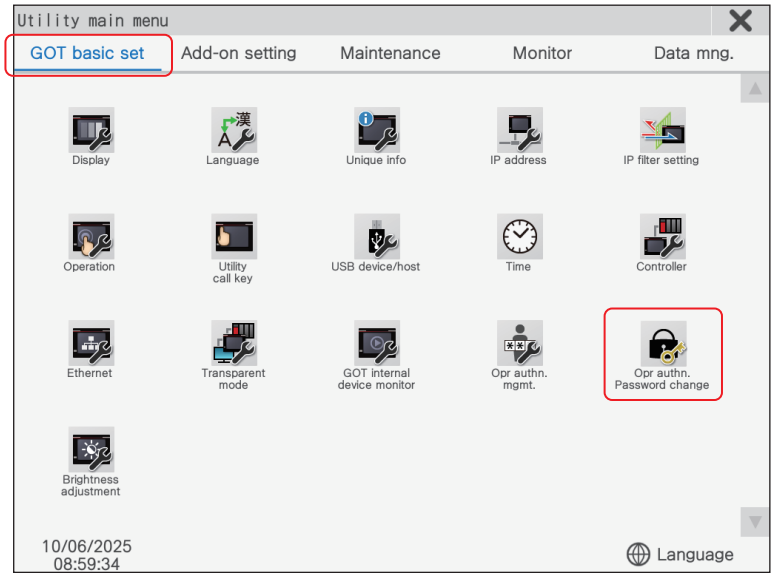
Duplicate password registration prevention function

The duplicate password registration prevention function prevents previously registered passwords from being re-registered.
When a new password is entered, it is compared to the current password to check whether it contains the same character string.
This function is also enabled when the setting value of [Specify number of pwd histories] ([Operator authentication management] screen) is set to [0] and the password history function is disabled.
However, this function is not applicable under the following situations:

- When the administrator password or sub-administrator password is changed and the security mode is mode 1
- When password is changed by an operator with [Edit operator information] or [Sub-administrator authority] rights and the security mode is mode 2

22.1 Screen display procedure

Select [Opr authn. Password change] in the [GOT basic set] tab.



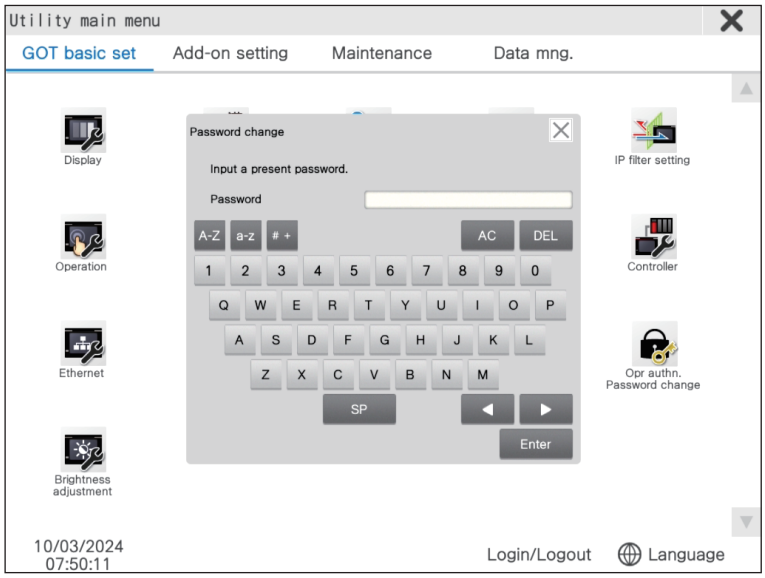
PART 4

22.2 Operations to change operator authentication passwords

Operating procedure

1. Touch [Opr authn. Password change].

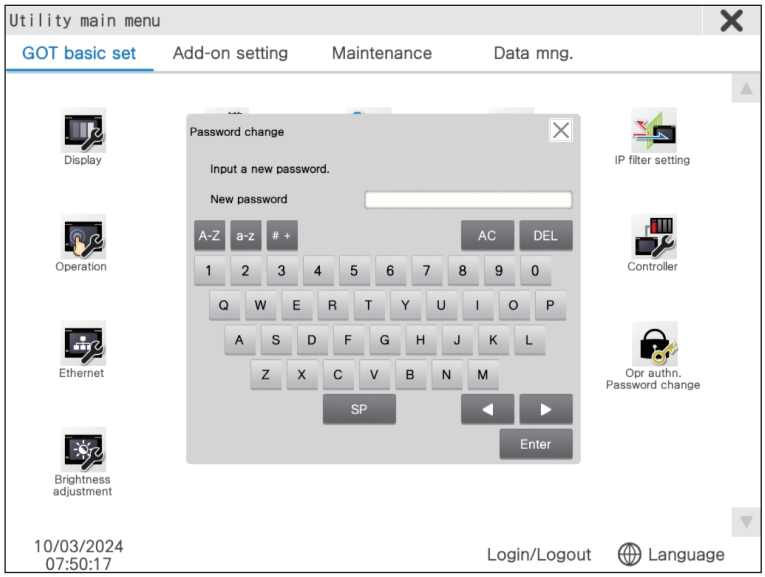
The [Opr authn. Password change] screen appears.



2. Enter the current password.

3. Then touch the [Enter] button.

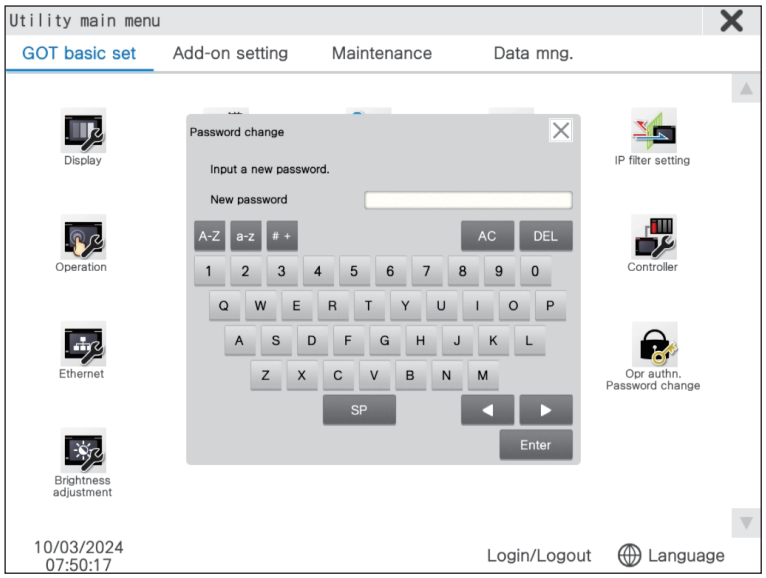
Authentication will be performed and the new password will be required to be input if the operator is authenticated.



4. Enter the new password.

5. Then touch the [Enter] button.

The new password will be required to be input again.



6. Enter the new password again.

7. Then touch the [Enter] button.

Once the passwords entered in step 4 and step 6 match, the password will be changed.

23 [Brightness adjustment]

GT37 SoftGOT3000

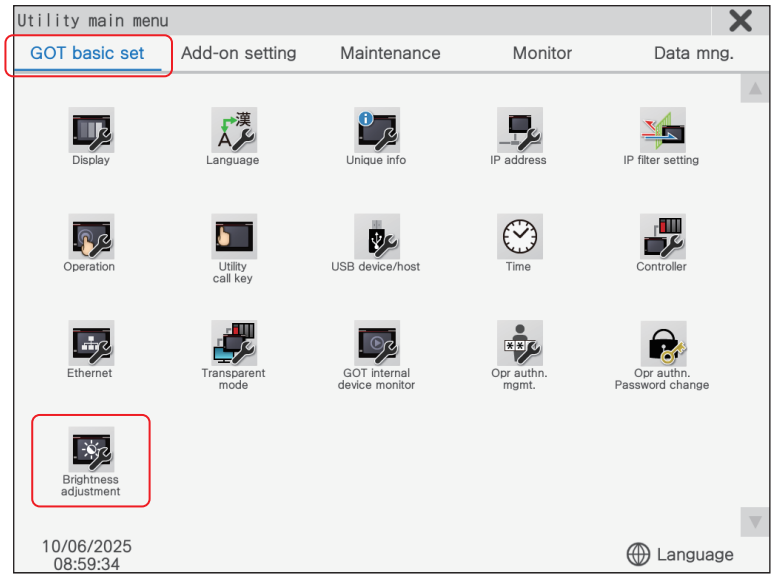
The screen brightness can be adjusted.

For information on the configurable settings, refer to the following.

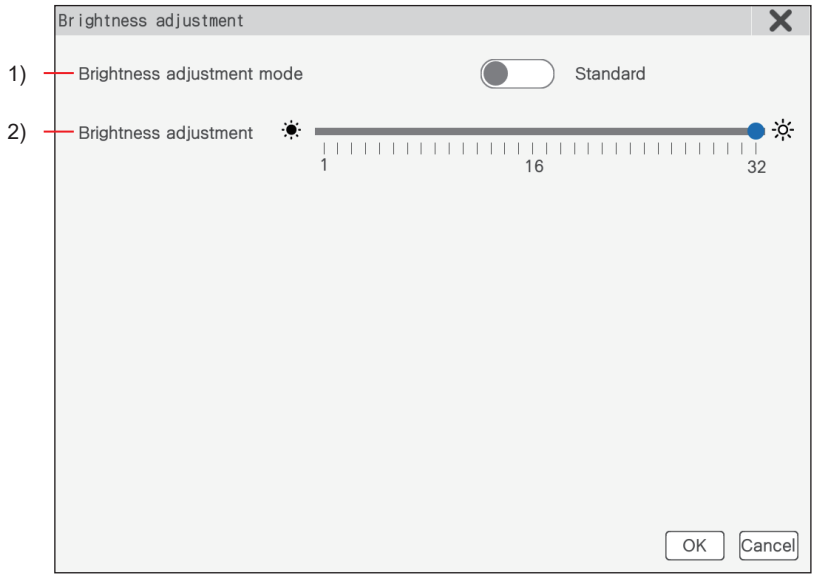
☞ Page 141 [Brightness adjustment] screen

23.1 How to display the screen

Select [Brightness adjustment] in the [GOT basic set] tab.



23.2 [Brightness adjustment] screen



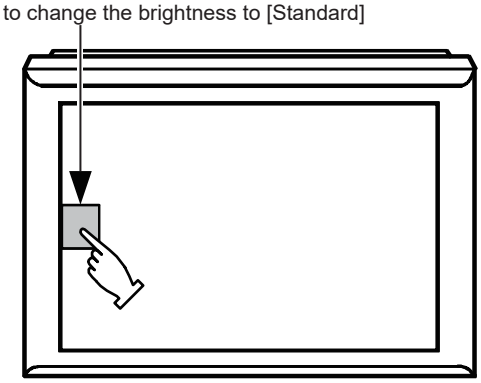
Item		Description	Setting range
1)	[Brightness adjustment mode]	Set the backlight brightness adjustment mode. When the setting is changed from [Standard] to [Low], the setting value for [Brightness adjustment] becomes [32]. When the setting is changed from [Low] to [Standard], the setting value for [Brightness adjustment] becomes [1]. For precautions when setting [Brightness adjustment mode] to [Low], refer to the following. ☞ Page 141 Precautions for setting [Brightness adjustment mode] to [Low]	• [Standard] • [Low] <Default: [Standard]>
2)	[Brightness adjustment]	Adjusts the backlight brightness. The smaller the value, the brighter the screen becomes.	[1] to [32] <Default: [32]>

How to temporarily change the brightness to [Standard]

With the utility main menu displayed, touch the far-left side of the screen for two seconds to change the brightness adjustment mode to [Standard].

The brightness adjustment mode will return to the set brightness value if you transition from the utility main menu to a user-created screen or monitor function screen.

Key to change the brightness to [Standard]



Precautions for setting [Brightness adjustment mode] to [Low]

Item	Description
Backlight failure detection	Backlight failures cannot be detected. To detect backlight failures, set [Brightness adjustment mode] to [Standard].
Screen display	The screen may flicker, or the display may turn off. If not using the GOT in dark places, set [Brightness adjustment mode] to [Standard].

PART 5 Add-on settings

24 [SoftGOT-GOT link function]

25 [VNC server function]

26 [Seq. program monitor]

27 [Backup restoration]

28 [License management]

29 [System launcher]

30 [iQSS utility]

31 [ANDON connection]

32 [File transfer]

33 [Mail]

34 [Web browser function]

35 [VPN connection function]

36 [Contactless tag function]

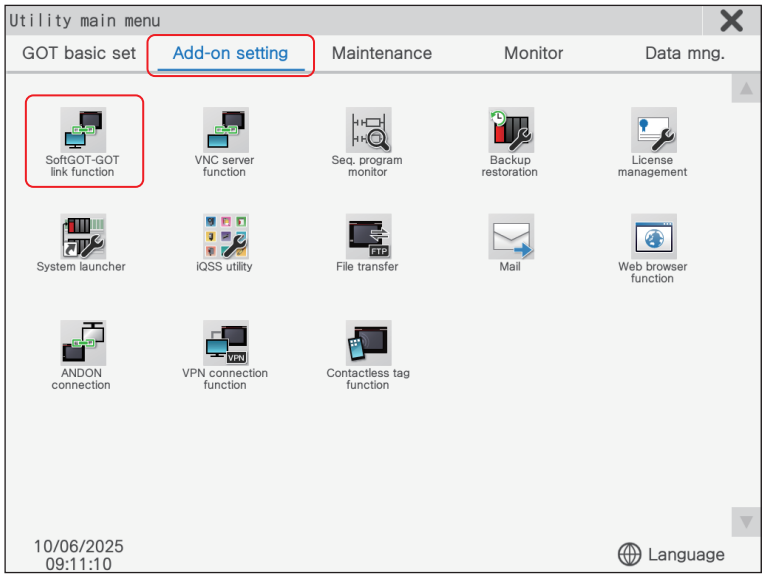
24 [SoftGOT-GOT link function]

GT37 SoftGOT3000

The authorization of the SoftGOT-GOT link function can be set, and the exclusive authorization can be obtained or released.
Only the GOT can obtain the exclusive authorization.
While the GOT has exclusive authorization, GT SoftGOT3000 cannot obtain operation rights.
For the details of the SoftGOT-GOT link function, refer to the following.
📖GT SoftGOT3000 User's Manual

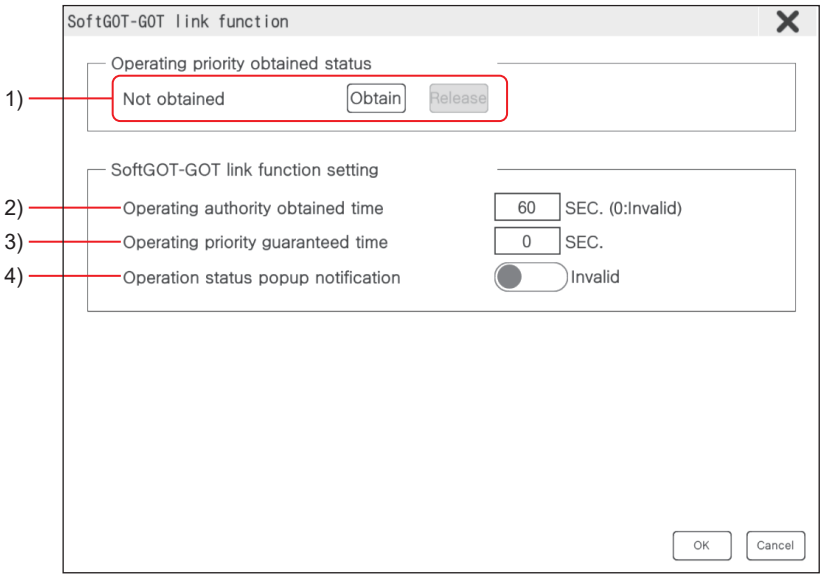
24.1 How to display the screen

Select [SoftGOT-GOT link function] in the [Add-on setting] tab.



PART 5

24.2 [SoftGOT-GOT link function] screen



Item			Description	Setting range
1)	[Operating priority obtained status]		Displays whether operating priority is obtained. [Obtain] or [Release] for operating priority can be set with the GOT.	• [Not obtained] • [Obtaining] <Default: [Not obtained]>
2)	[SoftGOT-GOT link function setting]	[Operating authority obtained time]	The time from the last operation of GT SoftGOT3000 after obtaining the operation rights until the GOT automatically obtains the operation rights can be set.	[0] to [3600] Sec. <Default: [60] Sec.>
3)		[Operating priority guaranteed time]	The period of time that operation rights are kept when GT SoftGOT3000 or the GOT obtains operation rights can be set. (The unauthorized equipment cannot obtain operation rights until the set time elapses.)	[0] to [3600] Sec. <Default: [0] Sec.>
4)		[Operation status popup notification]	Whether to display a pop-up with information about the device that has obtained operation rights can be set when GT SoftGOT3000 or the GOT does not currently have operation rights.	• [Effective] • [Invalid] <Default: [Invalid]>

25 [VNC server function]

GT37 SoftGOT3000

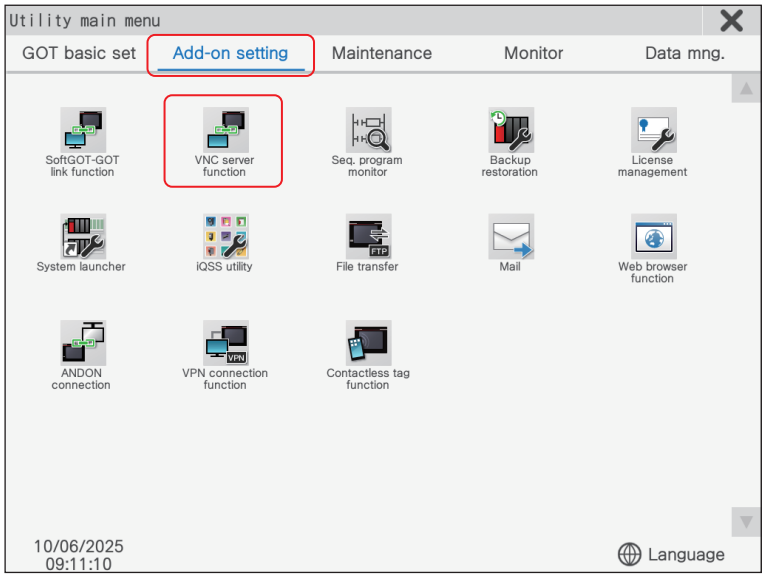
The settings related to the authorization guarantee time of the VNC server function can be configured.
For information on the configurable settings, refer to the following.
☞ Page 146 [VNC server function] screen
For information on the VNC server function, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

Precautions

[Operating priority guaranteed time] cannot be set when authorization control is disabled.
Configure the authorization control settings in GT Designer3.
For information on how to configure the authorization control settings, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

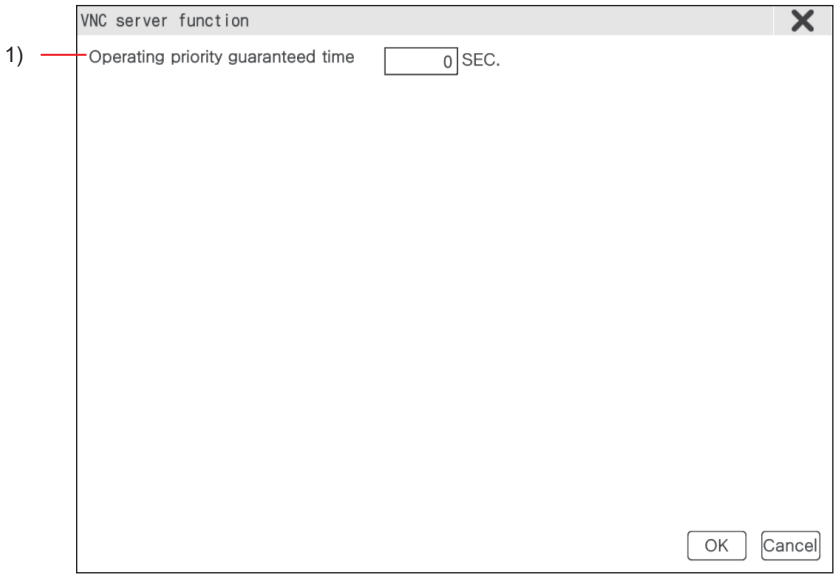
25.1 Screen display procedure

Select [VNC server function] in the [Add-on setting] tab.



PART 5

25.2 [VNC server function] screen



Item		Description	Setting range
1)	[Operating priority guaranteed time]	Set the time from the last operation of the device with operating priority until transfer of the operating priority to a device without it.*1 Until the set time has elapsed, the device without operation priority cannot be operated.	[0] sec to [3600] sec <Default: [0] sec>

*1 The last operation can be manipulation of an object, touch operation on a screen where no object is placed, a tap on the operation panel or click with the USB mouse, or keyboard operation.
However the operation is not regarded as the last operation in the following cases:
• Returning from screen saver,
• Touch operation while the Key-in Disable signal (System signal 1-1.b9) is on.

Point

When a long duration is set for [Operating priority guaranteed time], the Authorization Guarantee Time Cancel signal (GS1792.b8) can be used in conjunction with the Exclusive Authorization Control signal (GS1796.b0) to forcibly cancel the operating priority.
When this signal is turned on, the setting of [Operating priority guaranteed time] is disabled.

26 [Seq. program monitor]

GT37 SoftGOT3000

Settings such as storage locations and read methods for data to be used for the sequence program monitor function can be set.

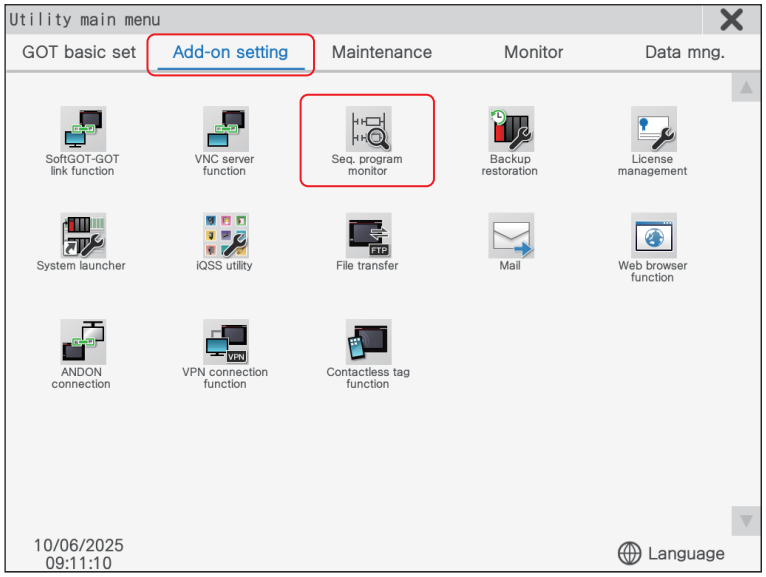
Saving sequence programs to the GOT eliminates the need for sequence programs to be read each time from the PLC CPU. Therefore, the time until executing the sequence program monitor function can be reduced.

For details on the sequence program monitor function, refer to the following.

☞ Page 220 [Sequence program monitor (ladder display)]

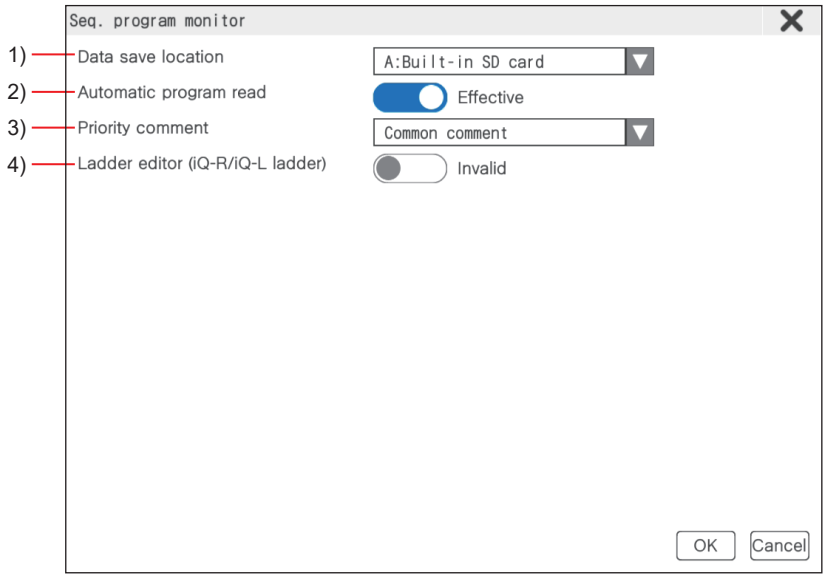
26.1 How to display the screen

Select [Seq. program monitor] in the [Add-on setting] tab.



PART 5

26.2 [Seq. program monitor] screen



Item		Description	Setting range
1)	[Data save location]	Select the storage location for the sequence program monitor function.	• [A:Built-in SD card] • [B:USB drive] <Default: [A:Built-in SD card]>
2)	[Automatic program read]	Select whether to automatically read sequence programs when the sequence program monitor function starts from a touch switch or alarm display.	• [Effective] • [Invalid] <Default: [Effective]>
3)	[Priority comment]	If both a common comment and each program comment are set for a device in the sequence program, select either of the comments to be displayed in the sequence program monitor.	• [Common comment] • [Each program comment] <Default: [Common comment]>
4)	[Ladder editor (iQ-R/iQ-L ladder)]	Select whether to enable or disable the ladder editor of sequence programs (MELSEC iQ-R series/MELSEC iQ-L series).	• [Effective] • [Invalid] <Default: [Invalid]>

27 [Backup restoration]

GT37 SoftGOT3000

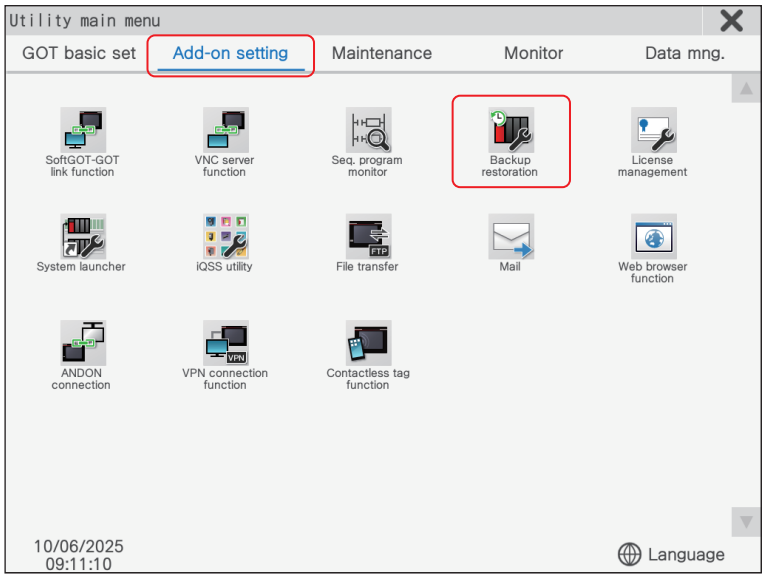
The storage location for backup data can be set.

For how to use the backup/restoration, refer to the following.

☞ Page 475 [Backup/restoration function]

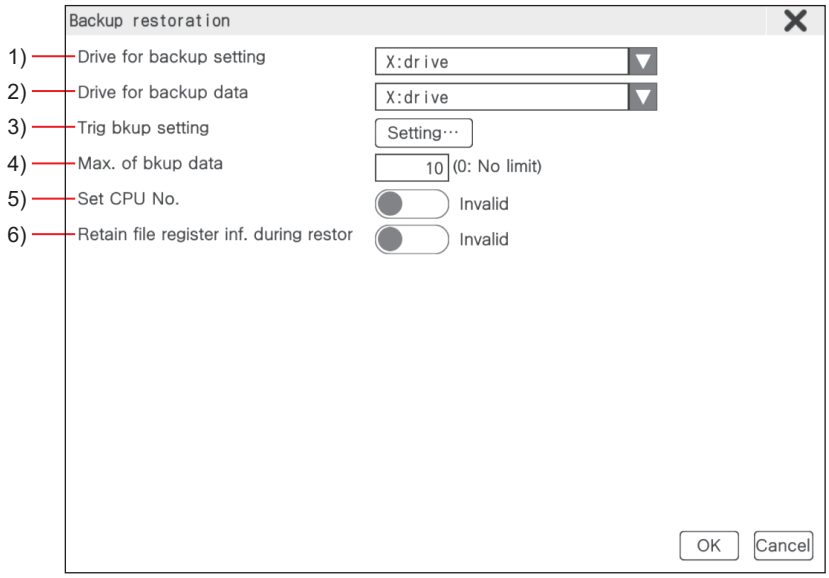
27.1 How to display the screen

Select [Backup restoration] in the [Add-on setting] tab.



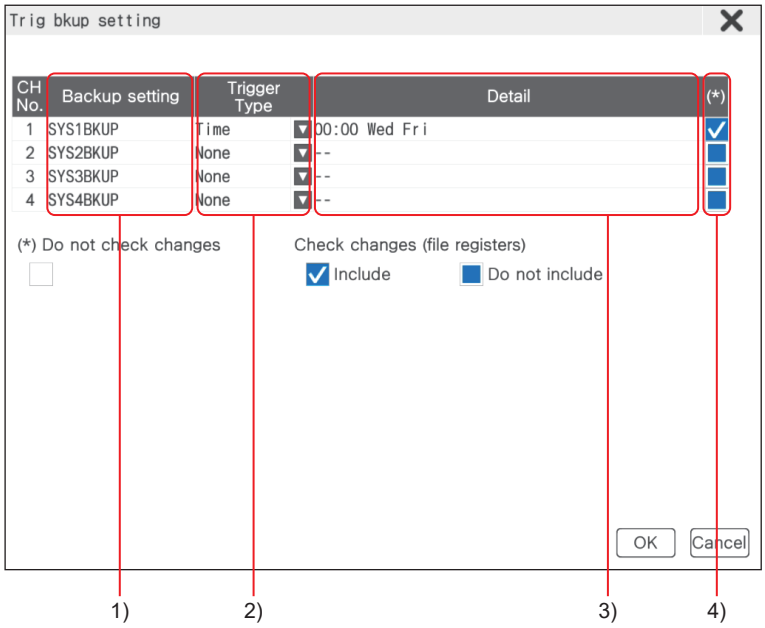
PART 5

27.2 [Backup restoration] screen



Item		Description	Setting range
1)	[Drive for backup setting]	The drive for storing backup settings can be selected.	• [A:Built-in SD card] • [B:USB drive] • [E:USB drive] • [F:USB drive] • [G:USB drive] • [X:drive] <Default: [X:drive]>
2)	[Drive for backup data]	The drive for storing backup data can be set.	• [A:Built-in SD card] • [B:USB drive] • [E:USB drive] • [F:USB drive] • [G:USB drive] • [X:drive] <Default: [X:drive]>
3)	[Trig bkup setting]	Touch the [Setting] button to display the to display the [Trigger backup setting] screen. On the [Trigger backup setting] screen, set the trigger to perform automatic backup. ☞ Page 151 [Trigger backup setting] screen	—
		To display the [Trig bkup setting] screen, write the system applications (add-on functions) for the [backup/restoration function] to the GOT. If the system applications (add-on functions) for the [backup/restoration function] are not written to the GOT, the [Trig bkup setting] screen will not be displayed even if the [Setting] button is touched.	
4)	[Max. of bkup data]	Set the maximum number of backups to be stored. (When 0 is set, an unlimited amount of backups are stored.)	[0] to [50] backups <Default: [10] backups>
5)	[Set CPU No.]	Set whether to specify a CPU No. at backup.	• [Effective] • [Invalid] <Default: [Invalid]>
6)	[Retain file register inf. during restor]	Set whether to retain the file register information when restoring backup data.	• [Effective] • [Invalid] <Default: [Invalid]>

27.2.1 [Trigger backup setting] screen



Item		Description	Setting range
1)	[Backup setting]	Displays the name of the backup setting for each CH No.	—
2)	[Trigger Type]	Set the trigger type to execute automatic backup. • [Rise]: The GOT backs up data when the user-set trigger device turns on. Set the trigger device in GT Designer3 beforehand. • [Time] The GOT backs up data on the user-specified day and time. Set the day and time using the following screen. ☞ Page 152 [Trigger time setting] screen	• [None] • [Rise] • [Time] <Default: [None]>
3)	[Detail]	When [Trigger type] is [Rise], the set device or label name is displayed. These fields switch to the trigger device set in GT Designer3 each time they are touched. Up to 10 trigger devices can be set.	—
		When [Trigger type] is [Time], the execution time and day for the set backup are displayed. Touch this button to display the [Trigger time setting] screen. ☞ Page 152 [Trigger time setting] screen	
4)	Check the file register changes	Set whether to check for changes in the backup data when performing a backup. Touch to change the setting. ☐: Backup is performed regardless of whether the backup data has changed. ☑: When a backup is executed, the GOT checks if the contents of the backup data and file register have changed since the previous backup. If changes are detected, only the modified data is backed up. ■: When a backup is executed, the GOT checks if the contents of the backup data have changed since the previous backup. If changes are detected, only the modified data is backed up. In such situations, changes to the file register not checked.	—

Precautions

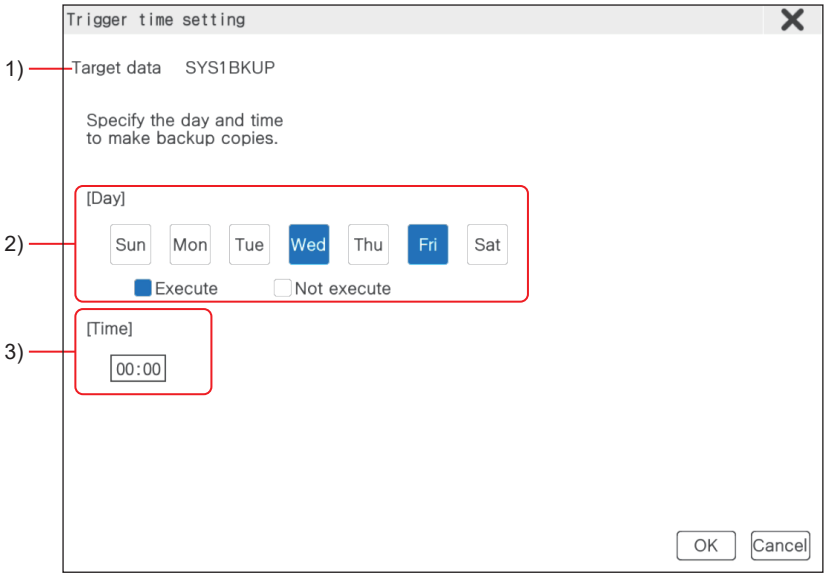
When the security mode is mode 2, a backup data password must be set to configure the trigger backup settings.

Authentication with the backup data password is required at the first backup.

For details, refer to the following.

☞ Page 513 Security and password

[Trigger time setting] screen



Item		Description	Setting range
1)	[Target data]	Displays the name of the backup settings for which the day and time are set.	—
2)	[Day]	Set the days of the week on which backups are executed or not executed. Days that are highlighted in blue are selected.	—
3)	[Time]	Set the time to execute backup.	—

28 [License management]

GT37 SoftGOT3000

The license for the following add-on functions can be registered or canceled in [License management].

- VNC server function
- GOT Mobile function
- VPN connection function
- PC remote operation function (Ethernet)
- Multimedia function

For information on the configurable settings, refer to the following.

☞ Page 154 [License management] screen

For details on the license registration process and each function, refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

Precautions

If an older version of BootOS is written to the GOT, it may not be possible to register the add-on function license.

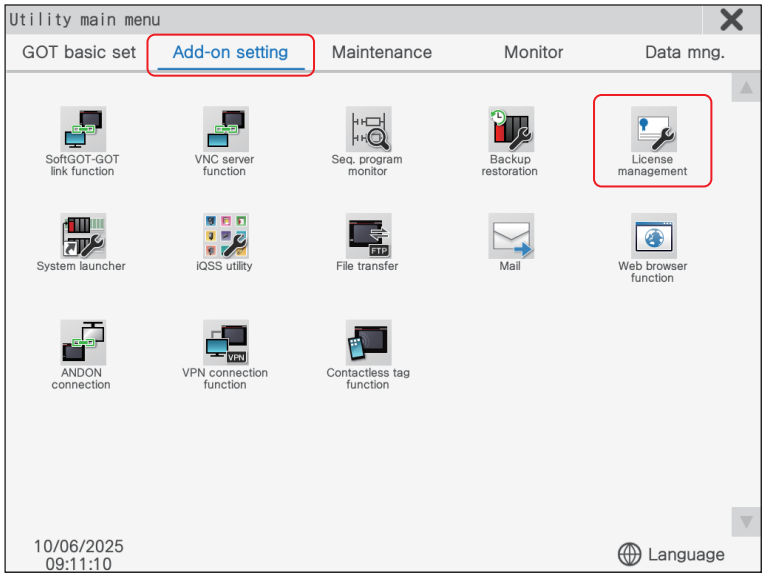
Update BootOS if the license cannot be registered.

For details, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

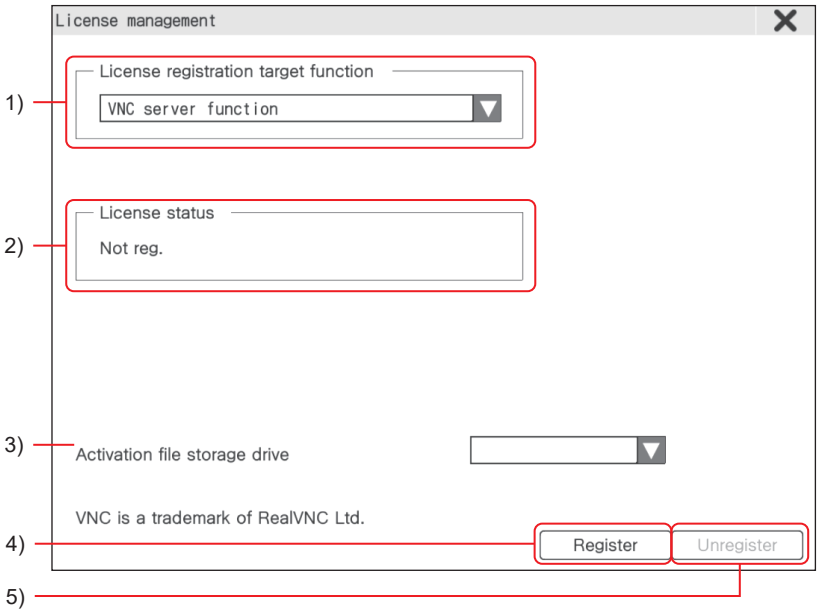
28.1 How to display the screen

Select [License management] in the [Add-on setting] tab.



PART 5

28.2 [License management] screen



Item		Description	Setting range
1)	[License registration target function]	Set the function to which the license is registered.	• [VNC server function] • [GOT Mobile function] • [VPN connection function] • [PC remote operation function (Ethernet)] • [Multimedia function] <Default: [VNC server function]>
2)	[License status]	Displays the license registration status of the function set for [License registration target function].	• [Registered] • [Not reg.]
3)	[Activation file storage drive]	Set the drive to store the activation file. Only drives accessible by the GOT are displayed. For information on activation file preparation and the license registration process, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual	• [A:Built-in SD card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive]
4)	[Register] button	Touch the [License registration] button to register the license of the function set for [License registration target function].	—
5)	[Unregister] button	Touch the [License cancellation] button to deregister the license of the function set for [License registration target function].	—

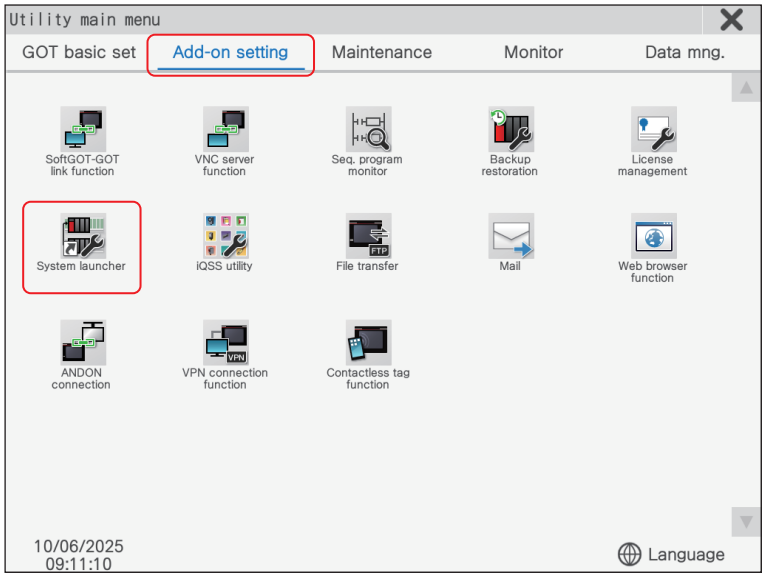
29 [System launcher]

GT37 SoftGOT3000

The system launcher function allows units mounted on the GOT to be replaced while the GOT is online.
This setting allows you to enable or disable online unit replacement by the system launcher function.
For details on the system launcher function, refer to the following.
☞ Page 207 [System launcher]

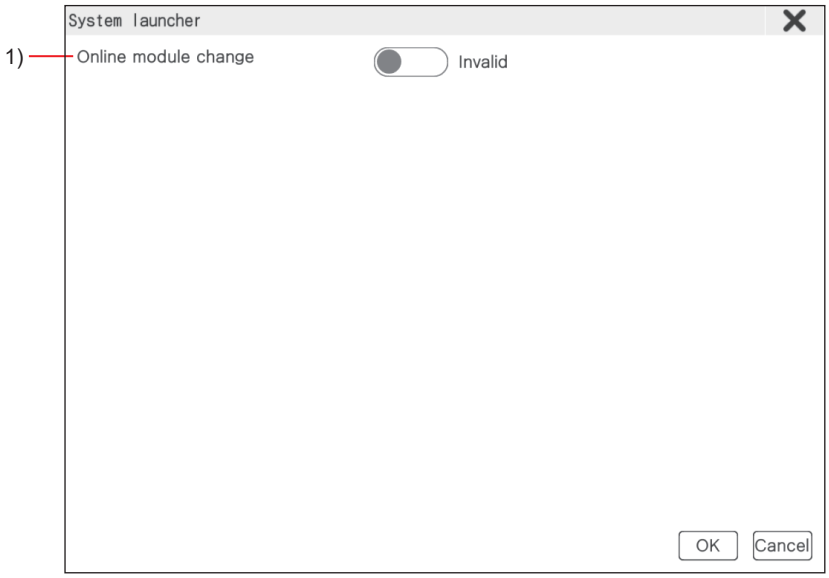
29.1 How to display the screen

Select [System launcher] in the [Add-on setting] tab.



PART 5

29.2 [System launcher] screen



Item		Description	Setting range
1)	[Online module change]	You can enable or disable online unit replacement with the system launcher function.	• [Effective] • [Invalid] <Default: [Invalid]>

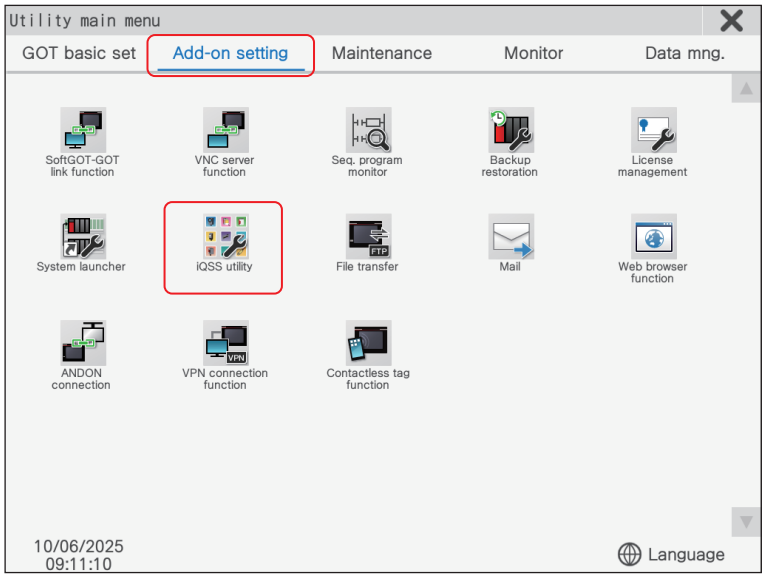
30 [iQSS utility]

GT37 SoftGOT3000

The iQSS utility function allows you to display the profile data of iQSS-compatible devices connected to the GOT.
To display profile data, connect a data storage containing profile data to the GOT.
This setting allows you to set the GOT drive to which the data storage containing the profile data is connected.
For details on the iQSS utility function, refer to the following.
☞ Page 367 [iQSS utility]

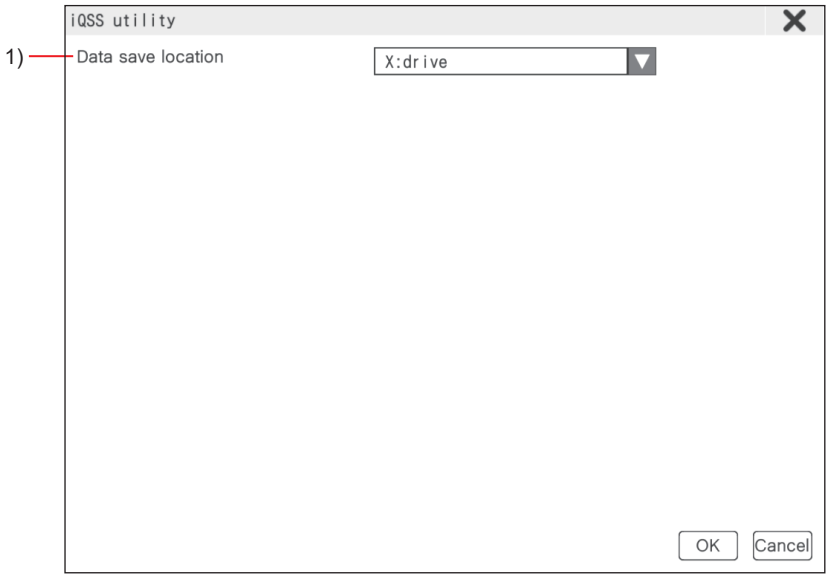
30.1 How to display the screen

Select [iQSS utility] in the [Add-on setting] tab.



PART 5

30.2 [iQSS utility] screen



Item		Description	Setting range
1)	[Data save location]	A GOT drive to which a data storage is inserted.	• [A:Built-in SD card] • [B:USB drive] • [E:USB drive] • [F:USB drive] • [G:USB drive] • [X:drive] <Default: [X:drive]>

31 [ANDON connection]

GT37 SoftGOT3000

The IP addresses used for the ANDON connection of the GOT Mobile function can be set.
For information on the configurable settings, refer to the following.
☞ Page 160 [ANDON connection] screen
For information on the ANDON connection function, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

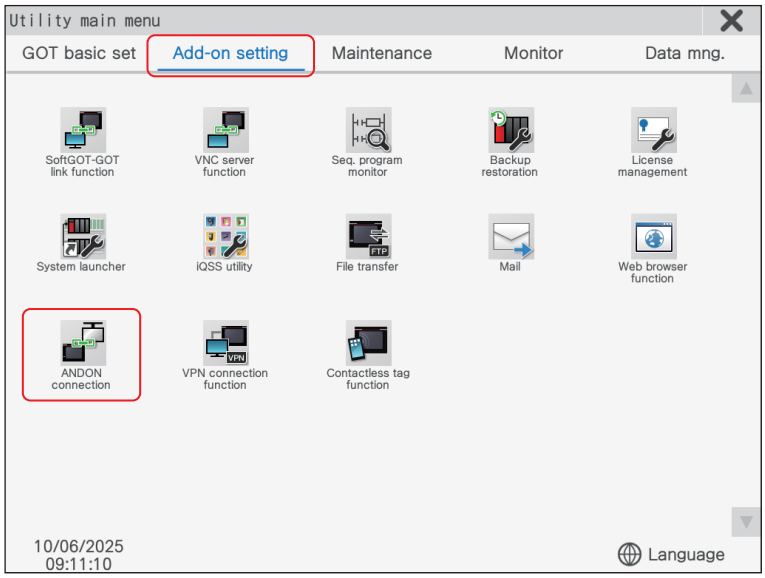
Precautions

- [IP filter] settings ([GOT basic set] tab)

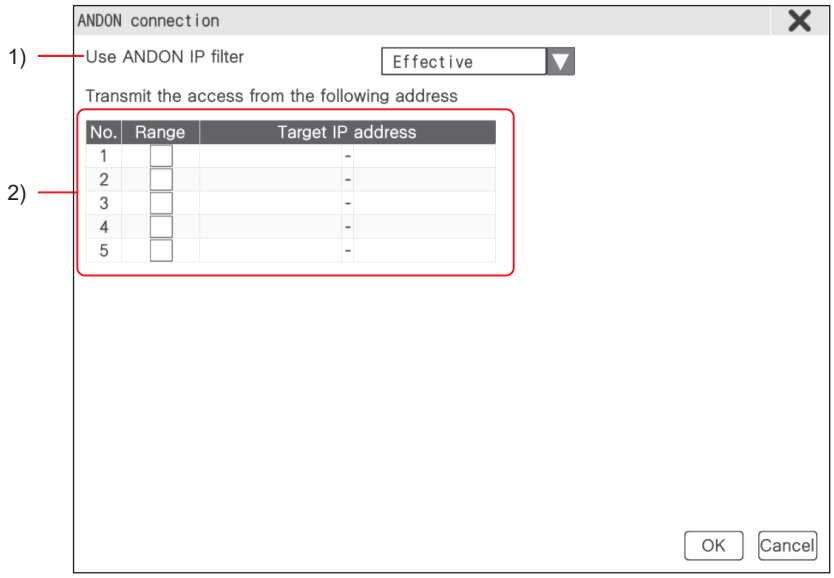
Allow access to the IP addresses used for the ANDON connection also in [IP filter setting] under the [GOT basic set] tab.
If access from specific IP addresses is prohibited, the ANDON connection cannot be used.
For information on [IP filter setting], refer to the following.
☞ Page 80 [IP filter Setting]

31.1 Screen display procedure

Select [ANDON connection] in the [Add-on setting] tab.



31.2 [ANDON connection] screen



Item			Description	Setting range
1)	[Use ANDON IP filter]		Set whether to use the ANDON IP filter function. The ANDON IP filter function can restrict the IP addresses accessible to the GOT by registering the IP addresses used for the ANDON connection. To prevent unauthorized access from unintended IP addresses, set [Effective] when using the ANDON function.	• [Effective] • [Invalid] <Default: [Effective]>
2)	IP address specification	—	Set IP addresses that allow access to the GOT. Leave the boxes blank if you do not set any IP addresses to be filtered. Up to 5 IP addresses can be set.	—
		Specifying individual IP addresses	Set IP addresses that allow access to the GOT.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: Blank>
		Specifying a range	Select [Range]. The fields for setting the start and end IP addresses of the range to be specified are displayed. By setting the start IP address and end IP address, the IP addresses within the specified range will allow access to the GOT.	• Selected: Specify a range. • Deselected: Do not specify a range. <Default: Deselected>
				[0].[0].[0].[0] to [255].[255].[255].[255] <Default: Blank>

32 [File transfer]

GT37 SoftGOT3000

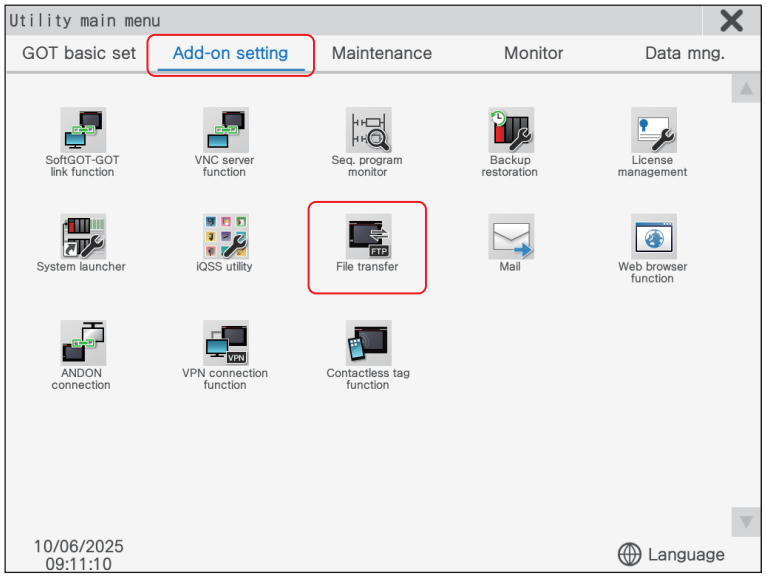
The file transfer function allows you to read from or write to an external FTP server via the GOT (FTP server).
This setting allows you to display a list of external FTP servers and edit their settings.

Precautions

The settings cannot be configured in [File transfer] if the file transfer function is disabled.
Configure the settings for the file transfer function in GT Designer3.
For details on the file transfer function, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

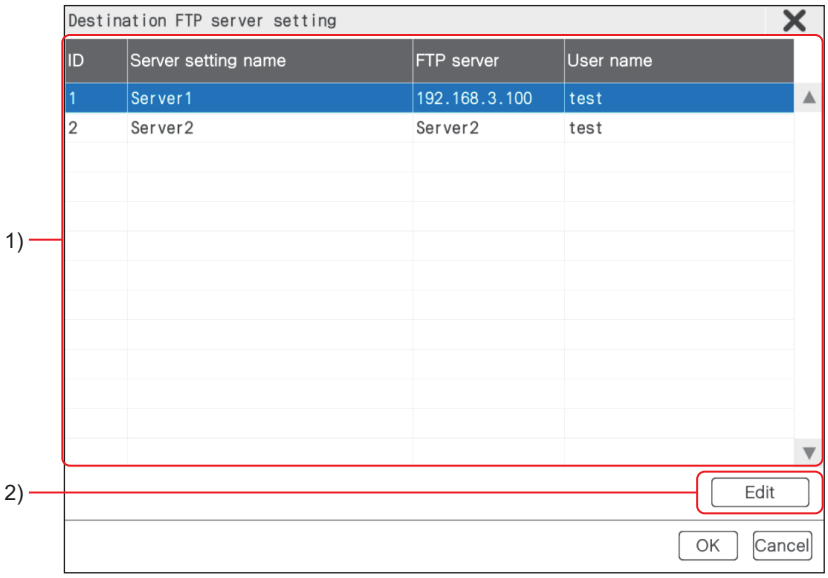
32.1 How to display the screen

Select [File transfer] in the [Add-on setting] tab.



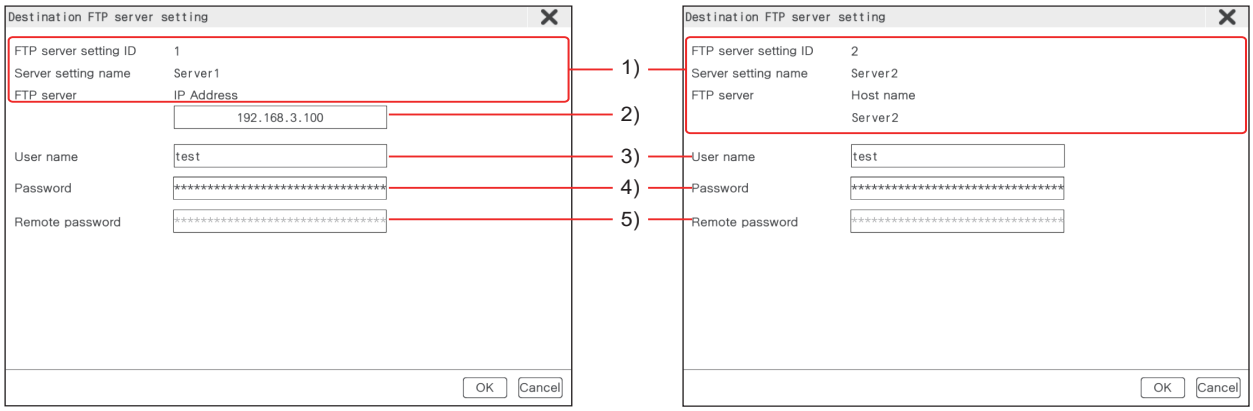
PART 5

32.2 [Destination FTP server setting] screen



Item			Description
1)	FTP server setting list	[ID]	Displays the ID number of the registered FTP server setting.
		[Server setting name]	Displays the name of the registered FTP server setting.
		[FTP server]	Displays the address of the registered FTP server setting.
		[User name]	Displays the user name set for the registered FTP setting.
2)	[Edit] button		Touch the [Edit] button to display the editing screen of the [Destination FTP server setting] screen. The settings of the selected FTP settings can be changed in the Edit screen. For details on the Edit screen, refer to the following. ☞ Page 162 [Destination FTP server setting] screen (Edit screen)

32.2.1 [Destination FTP server setting] screen (Edit screen)



When method for specifying the destination FTP server is [IP Address]

When method for specifying the destination FTP server is [Host Name]

Item		Description	Setting range
1)	FTP server settings	Displays the selected FTP server setting in the [Destination FTP server setting] screen.	—
2)	IP address	Appears when the method for specifying the destination FTP server is [IP Address]. Set an IP address for the destination FTP server.	[0].[0].[0].[0] to [255].[255].[255].[255]
3)	[User name]	Set the user name used to login to the destination FTP server.	1 to 32 characters
4)	[Password]	Set the password used to login to the destination FTP server.	0 to 32 characters
5)	[Remote password]	This can be set if the destination FTP server is a Mitsubishi Electric PLC and the [Remote password] setting is enabled in GT Designer3. Set a remote password.	4 to 32 characters

33 [Mail]

GT37 SoftGOT3000

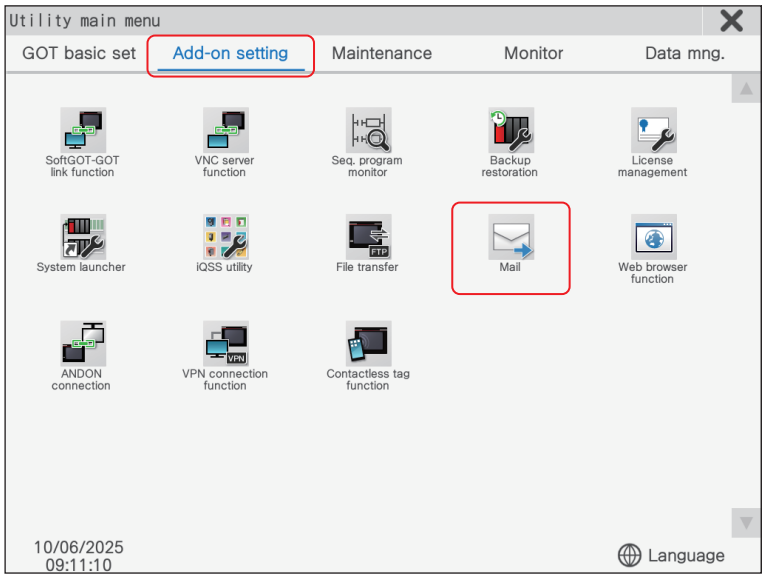
The mail sender address (From) and mail recipient address (TO, CC, and BCC) can be set.

Precautions

The [Mail] settings cannot be configured when the email sending function is disabled.
Configure the email sending function in GT Designer3.
For details on the email sending function, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual

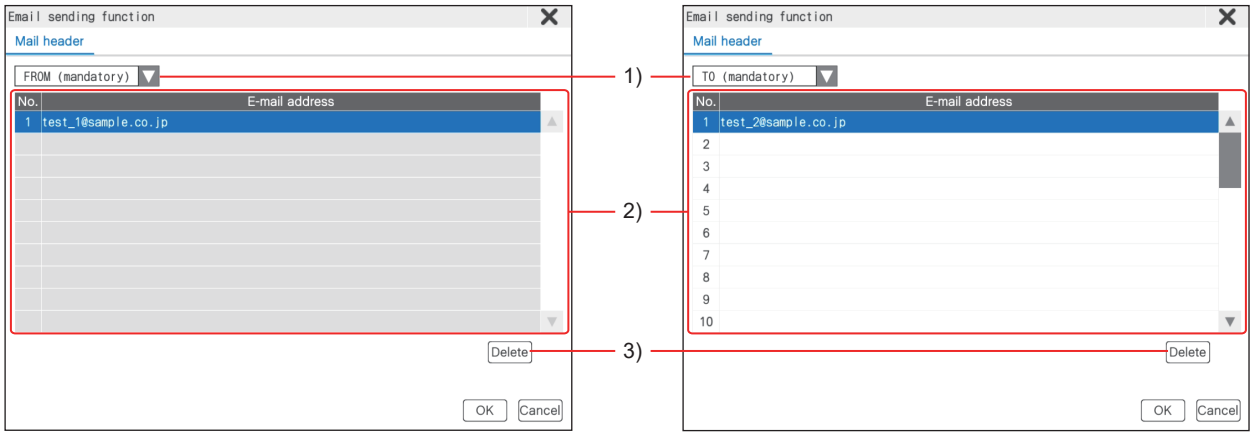
33.1 How to display the screen

Select [Mail] in the [Add-on setting] tab.



PART 5

33.2 [Mail] screen



When [FROM (mandatory)] is selected for mail header type

When either [TO (mandatory)], [CC], or [BCC] is selected for mail header type

Item		Description	Setting range
1)	Mail header type selection	The email sender or recipient address can be selected.	• [FROM (mandatory)] • [TO (mandatory)] • [CC] • [BCC] <Default: [FROM (mandatory)]>
2)	Mail header settings	When [FROM (mandatory)] is selected for the mail header type, set the sender address used for sending emails. Only one sender address can be set.	—
		When [TO (mandatory)], [CC] or [BCC] is selected for the mail header type, set the recipient address. Up to 32 recipient addresses can be set.	
3)	[Delete] button	Touch to delete the selected address.	—

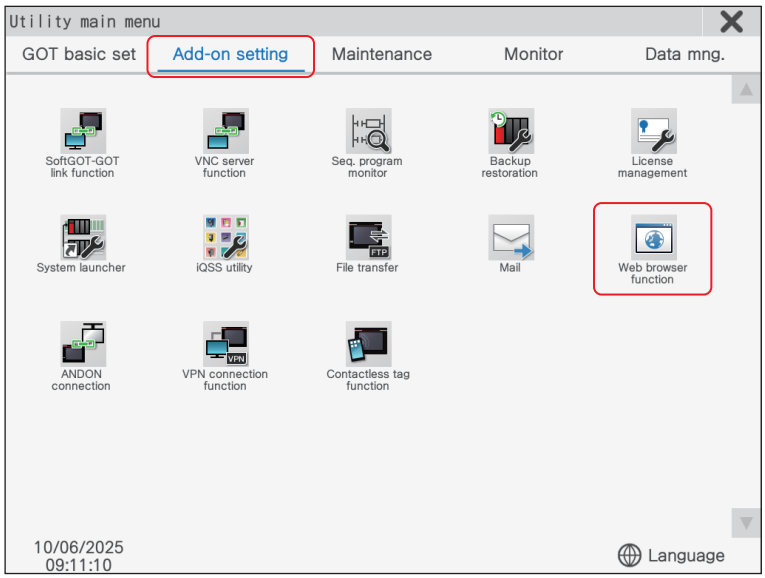
34 [Web browser function]

GT37 SoftGOT3000

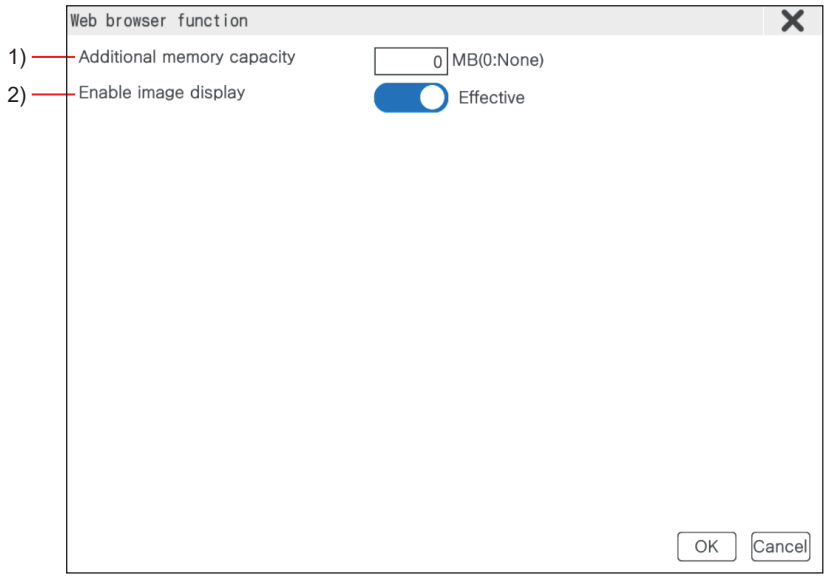
A web browser can be displayed on the GOT.
The web browser can display HTML content and connect to local networks and web servers.

34.1 How to display the screen

Select [Web browser function] in the [Add-on setting] tab.



34.2 [Web browser function] screen



Item		Description	Setting range
1)	[Additional memory capacity]	Specify the additional memory capacity to be reserved beyond the default capacity.	[0] MB to [100] MB <Default: [0] MB>
2)	[Enable image display]	Set whether to display images in the web browser.	• [Effective] • [Invalid] <Default: [Effective]>

35 [VPN connection function]

GT37 SoftGOT3000

The settings related to the VPN connection function can be configured.

For information on the configurable settings, refer to the following.

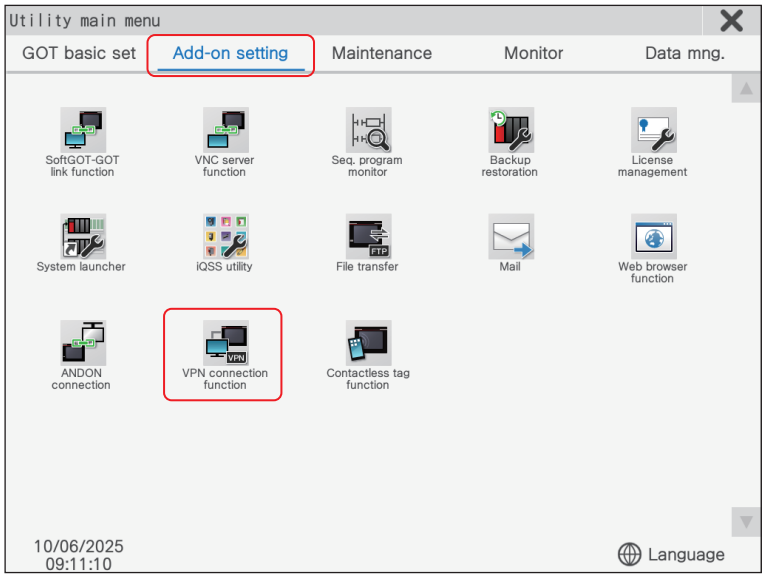
☞ Page 167 [VPN connection function] screen

For information on the VPN connection function, refer to the following manual.

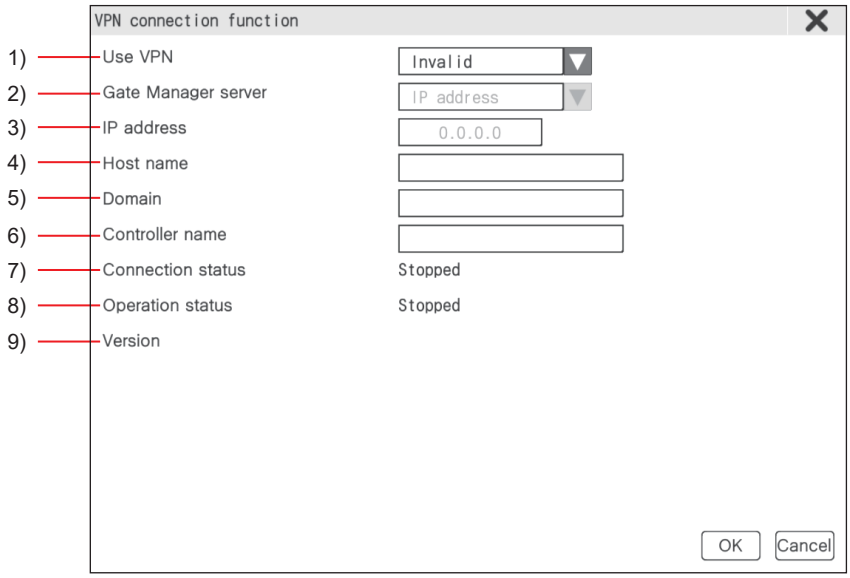
📖GT Designer3 (GOT3000) Screen Design Manual

35.1 Screen display procedure

Select [VPN connection function] in the [Add-on setting] tab.



35.2 [VPN connection function] screen



Item		Description	Setting range
1)	[Use VPN]	Set whether to use the VPN connection function.	• [Effective] • [Invalid] <Default: [Invalid]>
2)	[Gate Manager server]	Set how to specify the GateManager server.	• [IP address] • [Host name] <Default: [IP address]>
3)	[IP address]	Set this item when selecting [IP address] for [Gate Manager server]. Set the IP address for [Gate Manager server].	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [0].[0].[0].[0]>
4)	[Host name]	Set this item when selecting [Host name] for [Gate Manager server]. Set the host name for the GateManager server. Up to 127 characters can be set.	• [A] to [Z] • [a] to [z] • [0] to [9] • [-] (Hyphen) • [.] (Period) <Default: Blank>
5)	[Domain]	Set the domain of the GateManager server. Up to 127 characters can be set.	• [A] to [Z] • [a] to [z] • [0] to [9] • [-] (Hyphen) • [.] (Period) <Default: Blank>
6)	[Controller name]	Set the name of the controller used to display the SiteManager (GOT) name on the GateManager server. Up to 127 characters can be set.	• [A] to [Z] • [a] to [z] • [0] to [9] • One-byte symbol*1 <Default: Blank>
7)	[Connection state]	Displays the connection status between the GOT and GateManager.	• [Connected] • [Stopped]
8)	[Operation state]	Displays the operation status of the GOT's VPN connection function.	• [Active] • [Stopped]
9)	[Version]	Displays the version of SiteManager Embedded. If the VPN connection is not established, the version information cannot be obtained and this item is not displayed.	—

*1 The following symbols and one-byte spaces can be used:
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [¥] ^ _ { | }~
A one-byte space cannot be used at the start or end of a character string.
A one-byte space can be used between characters. Two or more one-byte spaces cannot be used consecutively.

36 [Contactless tag function]

GT37 SoftGOT3000

The settings related to the contactless tag function can be configured.

For information on the configurable settings, refer to the following.

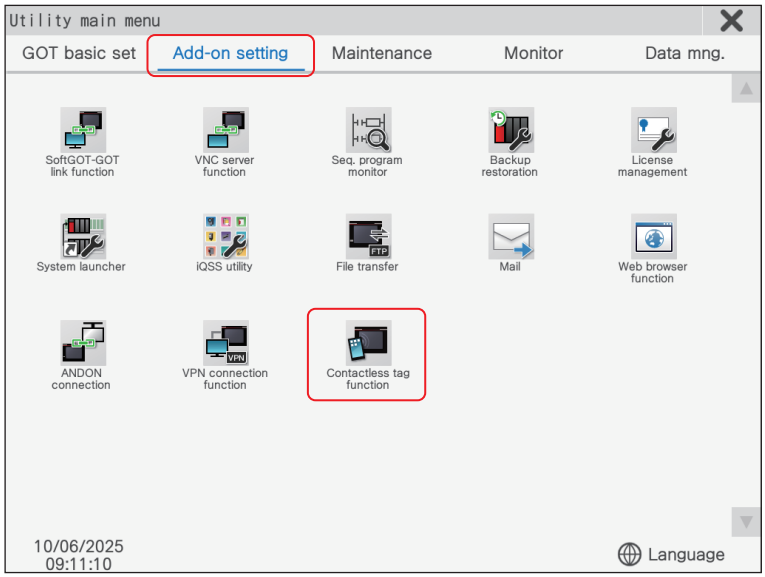
☞ Page 169 [Contactless tag function] screen

For information on the contactless tag function, refer to the following manual.

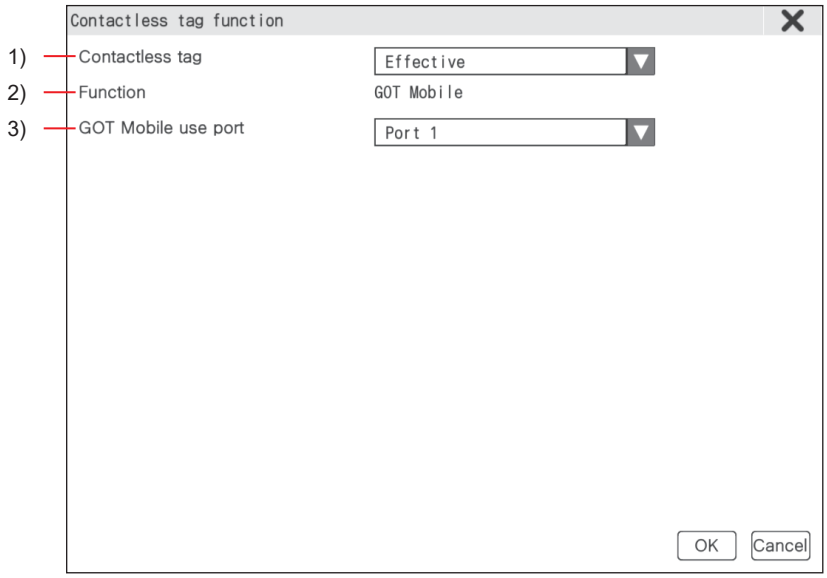
📖GT Designer3 (GOT3000) Screen Design Manual

36.1 How to display the screen

Select [Contactless tag function] in the [Add-on setting] tab.



36.2 [Contactless tag function] screen



Item		Description	Setting range
1)	[Contactless tag]	Set whether to use the contactless tag function.	• [Enable] • [Disable] <Default: [Disable]>
2)	[Function]	This item appears when [Contactless tag] is set to [Enable]. Select a function that uses contactless tags.	• [GOT Mobile] • [Phone number] • [URL] • [SMS] • [e-mail] • [Text] <Default: One of the items above is permanently displayed>
3)	[GOT Mobile Used Port]	Appears when [Function] is [GOT Mobile]. Select the GOT's Ethernet port used for connection between the server (GOT) and the client of the GOT Mobile function.	• [Port 1] • [Port 2] <Default: [Port 1]>

PART 6 Maintenance

37 [Batch self check]

38 [USB device management]

39 [Screen cleaning]

40 [Touch panel calibration]

41 [System alarm]

42 [Drawing check]

43 [Font check]

44 [Touch panel check]

45 [I/O check]

46 [Ethernet status check]

47 [GOT information]

48 [GOT Mobile Information]

37 [Batch self check]

GT37 SoftGOT3000

The diagnostic data (system status log) that records the system status can be exported on the [Batch self check] screen.
To export the system status log, install a data storage on the GOT in advance.
For information on the configurable settings, refer to the following.
☞ Page 172 [Batch self check] screen
If the system status log is requested when you contact the manufacturer, output the log from the [Batch self check] screen.
Note that the system status log is data for the manufacturer's investigation and cannot viewed by the customer.

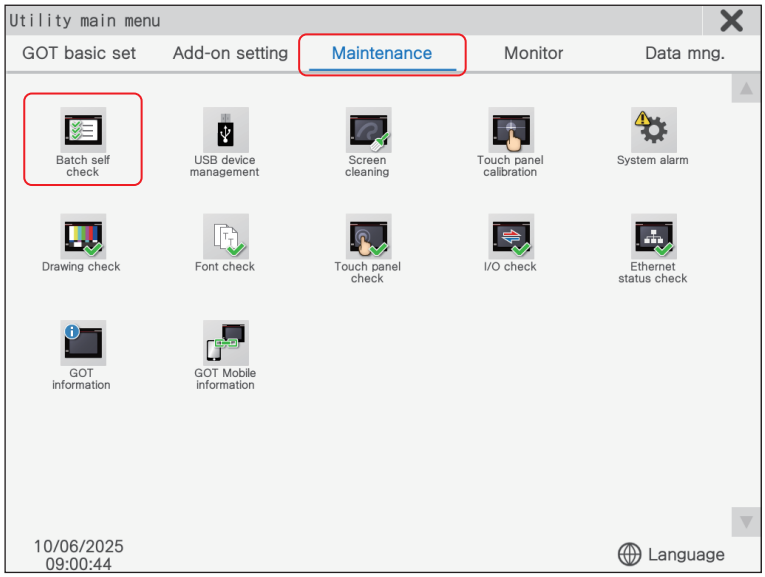
Precautions

- Handling of the system status log

The system status log contains the customer's system configuration, GOT settings, and operating status.
When sending the system status log to a third party, handle the log carefully to prevent any information leakage.

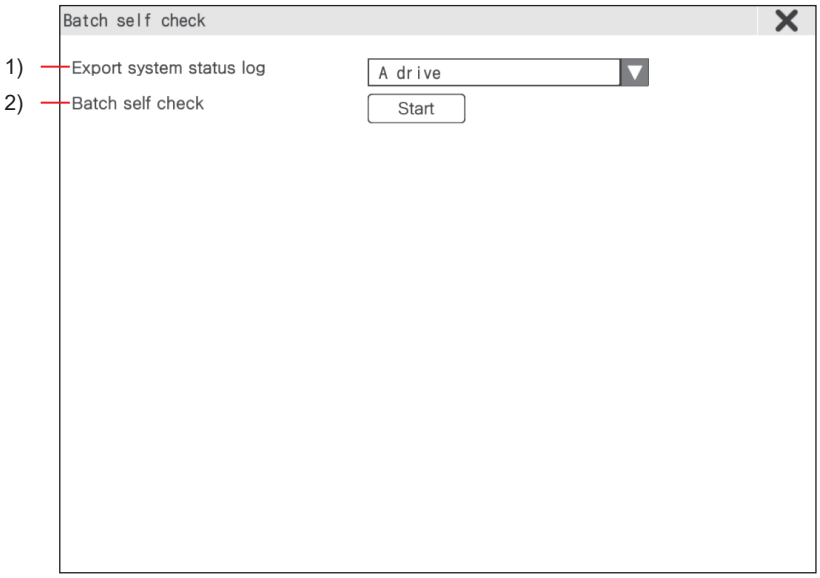
37.1 How to display the screen

Select [Batch self check] in the [Maintenance] tab.



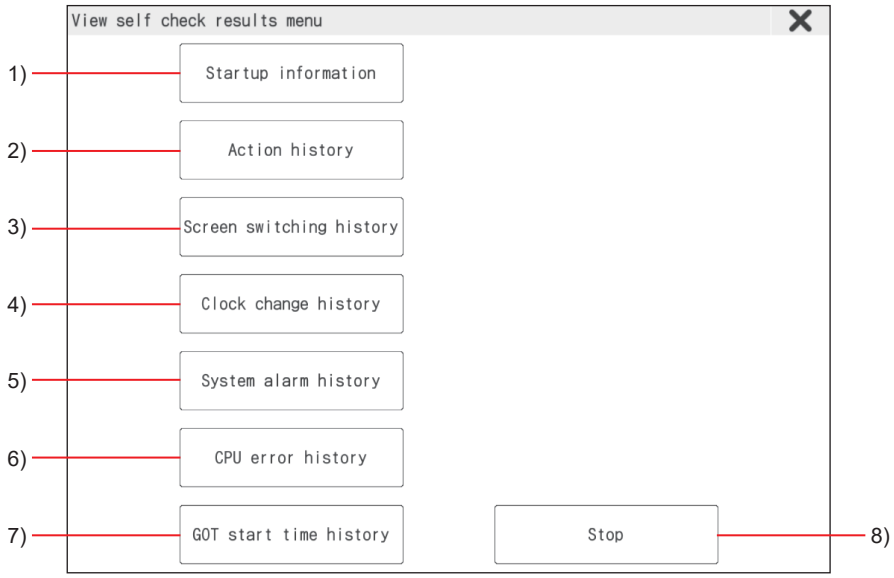
PART 6

37.2 [Batch self check] screen



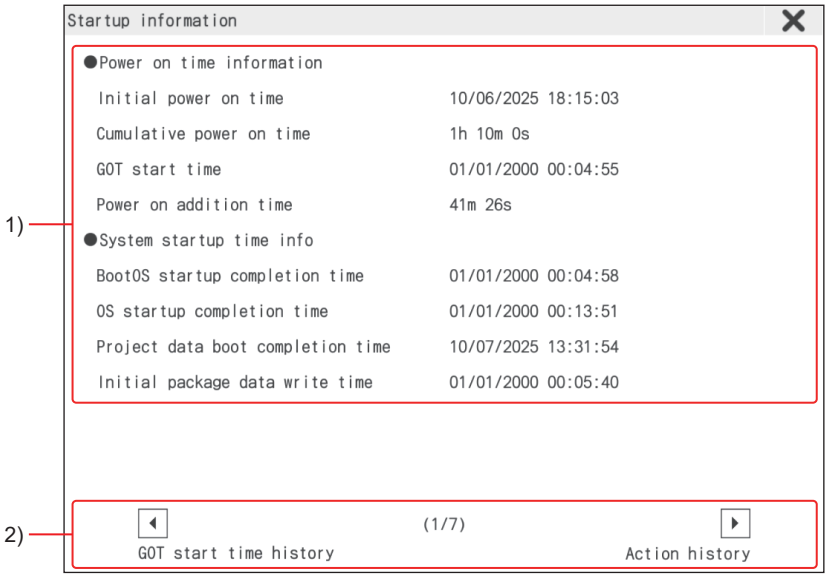
Item		Description	Setting range
1)	[Export system status log]	Set the export destination for the system status log.	• [A drive] • [B drive] • [E drive] • [F drive] • [G drive] • [Do not export] <Default: [A drive]>
2)	[Batch self check]	Touch the [Start] button to execute batch self-check. When batch self-check is completed, the system status log is exported to the drive set for [Export system status log], and the [View self check results menu] screen is displayed. ☞ Page 173 [View self check results menu] screen	—

37.3 [View self check results menu] screen



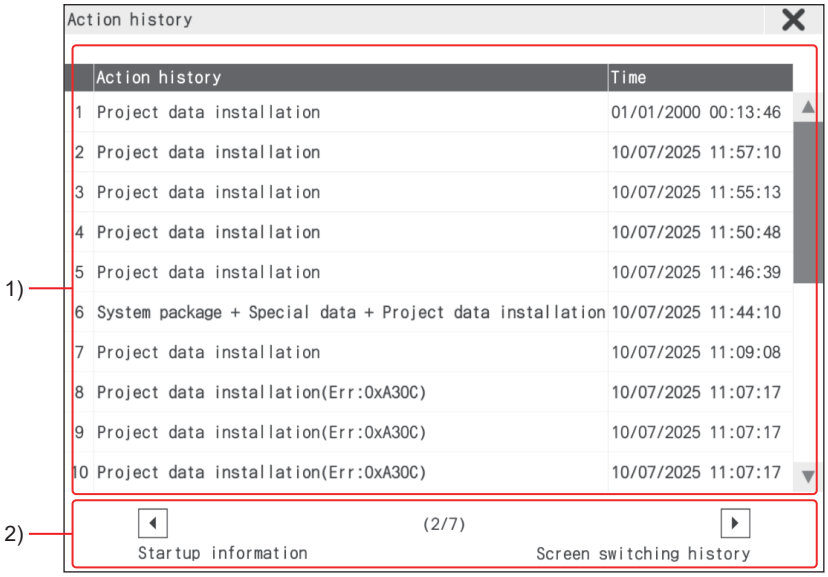
Item		Description
1)	[Start up information] button	Touch to display the [Start up information] screen. The [Start up information] screen displays GOT power-on information and system-related information from the system log data. ☞ Page 174 [Startup information] screen
2)	[Action history] button	Touch to display the [Action history] screen. The [Action history] screen displays GOT action history from the system log data in a list. ☞ Page 174 [Action history] screen
3)	[Screen switching history] button	Touch to display the [Screen switching history] screen. The [Screen switching history] screen displays screen switching history from the system log data in a list. ☞ Page 175 [Screen switching history] screen
4)	[Clock change history] button	Touch to display the [Clock change history] screen. The [Clock change history] screen displays clock change history from the system log data in a list. ☞ Page 175 [Clock change history] screen
5)	[System alarm history] button	Touch to display the [System alarm history] screen. The [System alarm history] screen displays system alarm history from the system log data in a list. ☞ Page 176 [System alarm history] screen
6)	[CPU error history] button	Touch to display the [CPU error history] screen. The [CPU error history] screen displays CPU error history from the system log data in a list. ☞ Page 176 [CPU error history] screen
7)	[GOT start time history] button	Touch to display the [GOT start time history] screen. The [GOT start time history] screen displays the history of GOT power-on times from the system log data in a list. ☞ Page 177 [GOT start time history] screen
8)	[Stop] button	Touch this button to close the [View self check results menu] screen and display the [Batch self check] screen.

37.3.1 [Startup information] screen



Item		Description
1)	Start up information	Displays GOT power-on information and system-related information from the system log data.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.2 [Action history] screen

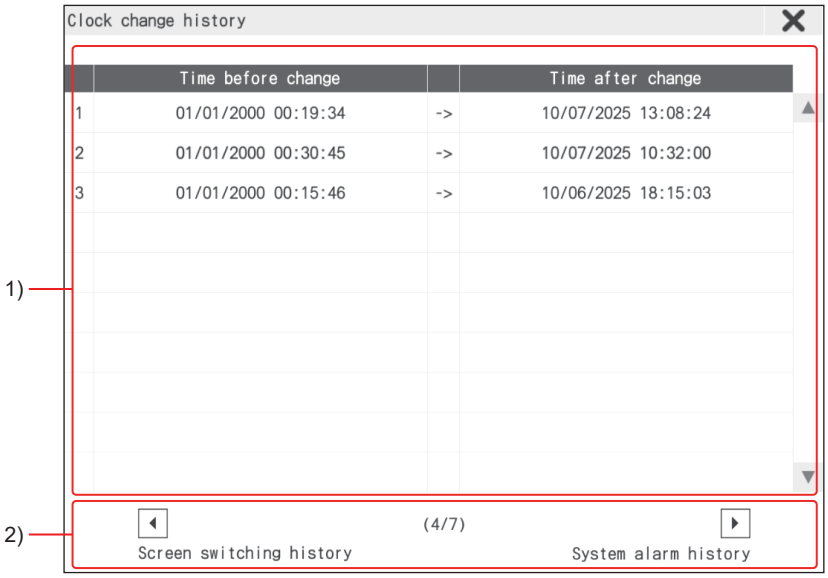


Item		Description
1)	Action history	Displays GOT action history from the system log data in a list.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.3 [Screen switching history] screen

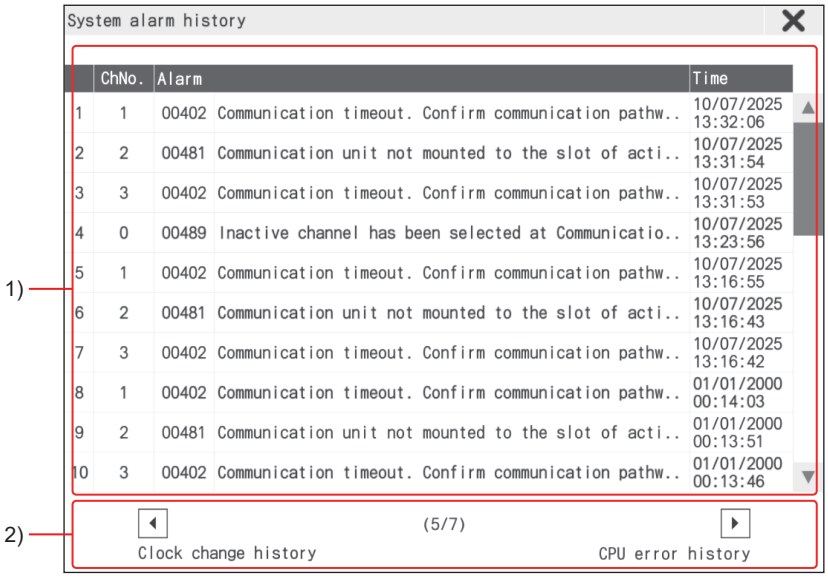
Item		Description
1)	Screen switching history	Displays the screen switching history from the system log data in a list. Up to 29 screen switches can be displayed.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.4 [Clock change history] screen



Item		Description
1)	Clock change history	Displays the clock change history from the system log data in a list.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.5 [System alarm history] screen

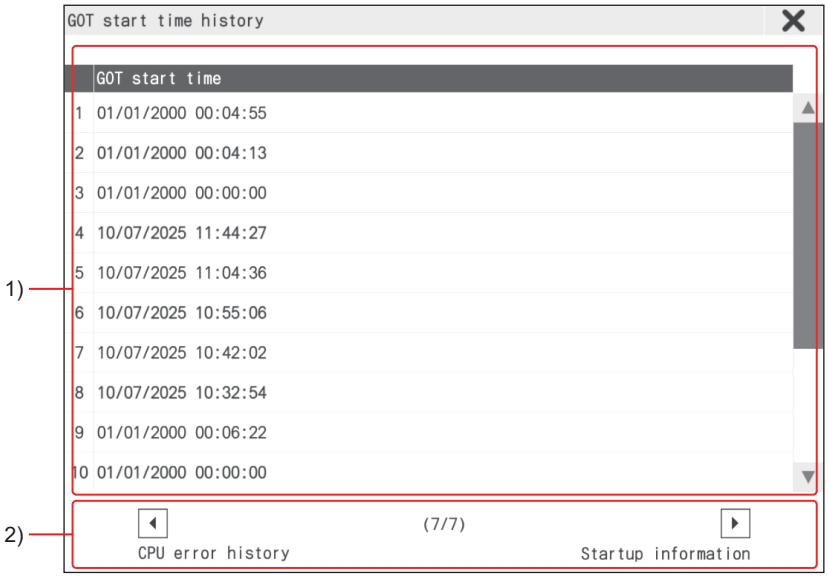


Item		Description
1)	System alarm history	Displays the system alarm history from the system log data in a list.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.6 [CPU error history] screen

Item		Description
1)	CPU error history	Displays the CPU error history from the system log data in a list.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

37.3.7 [GOT start time history] screen



Item		Description
1)	GOT start time history	Displays the history of GOT power-on times from the system log data in a list.
2)	Screen switching button	Touch to switch to the screen displayed on the button.

PART 6

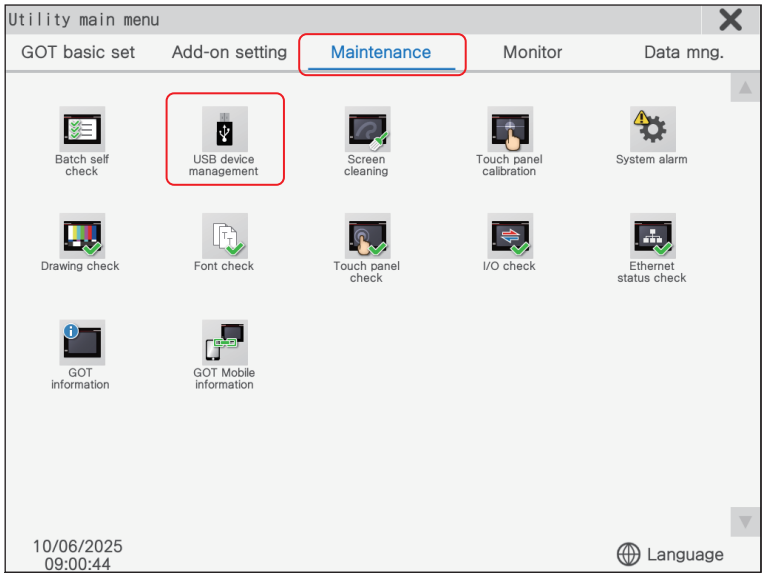
38 [USB device management]

GT37 SoftGOT3000

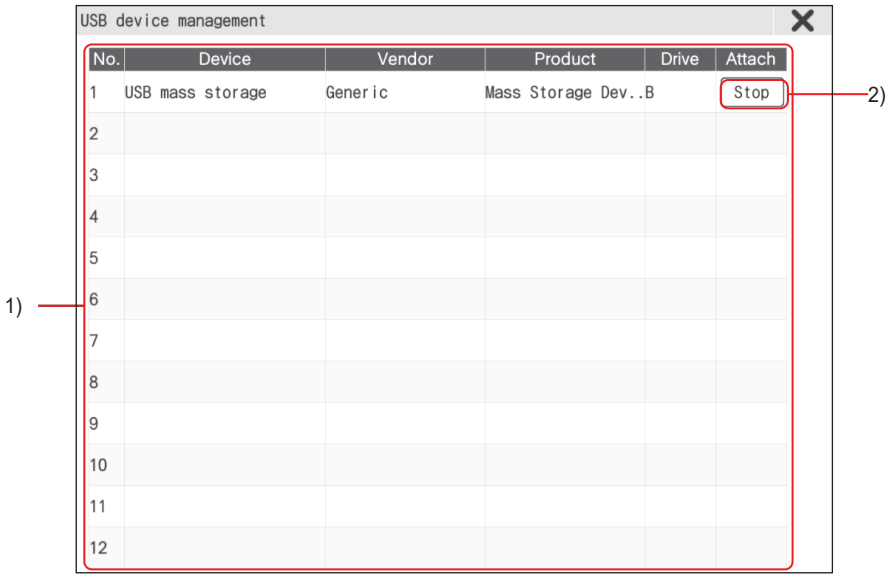
This function lists the statuses of the USB devices connected to the GOT.
This screen is also used when removing USB devices from the GOT.
Connection or removal of a USB device is updated in real time.
Up to twelve USB devices can be connected.

38.1 Screen display procedure

Select [USB device management] in the [Maintenance] tab.



38.2 [USB device management] screen



Item			Description	Setting range
1)	USB device display	[No.]	Displays the connected USB device number.	—
		[Device]	Displays the type of the connected USB device. Different device type is displayed depending on [No.].	When [No.] is [1] to [4] • [USB mass storage]
				When [No.] is [5] to [8] • [USB mouse] • [USB keyboard] • [USB barcode reader]
				When [No.] is [9] to [12] • [USB audio] • [USB camera]
		[Vendor]	Displays the vendor name of the connected USB device.	—
		[product]	Displays the product name of the connected USB device.	—
		[Drive]	Displays the name of the drive to which the USB mass storage device is connected, when [USB mass storage] is set for [Device].	• [B] • [E] • [F] • [G]
		[Attach]	When the USB mass storage device is connected to the GOT, the [Stop] button is displayed.	—
2)	[Stop] button		Available to touch when [USB mass storage] is set for [Device]. Select a USB device and touch the [Stop] button to stop the device.	—

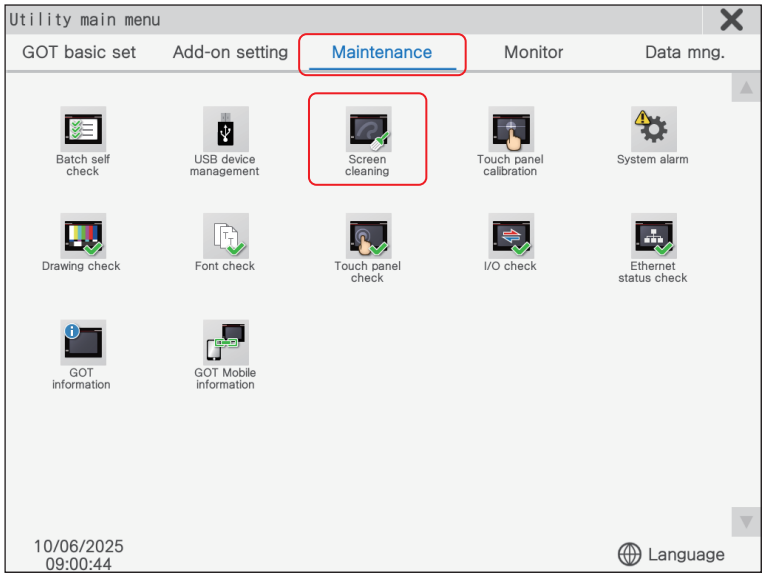
39 [Screen cleaning]

GT37 SoftGOT3000

[Screen cleaning] displays a screen that disables touch operations.
Displaying this screen prevents unintended operations during wiping.
For information on how to clean the GOT, refer to the following manual.
GOT3000 Series User's Manual (Hardware)

39.1 Screen display procedure

Select [Screen cleaning] in the [Maintenance] tab.



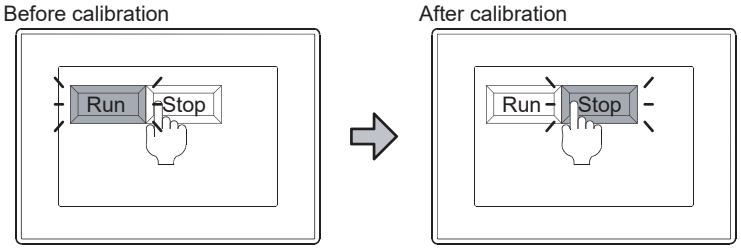
39.2 Exiting [Screen cleaning]

To return to [Utility main menu], touch the number buttons in order.

40 [Touch panel calibration]

GT37 SoftGOT3000

The touch panel can be calibrated.
The area touched on the screen and the position of the object may deviate over time.
Use this function to calibrate position accuracy if there is deviation between the area touched on the screen and the position of the object.

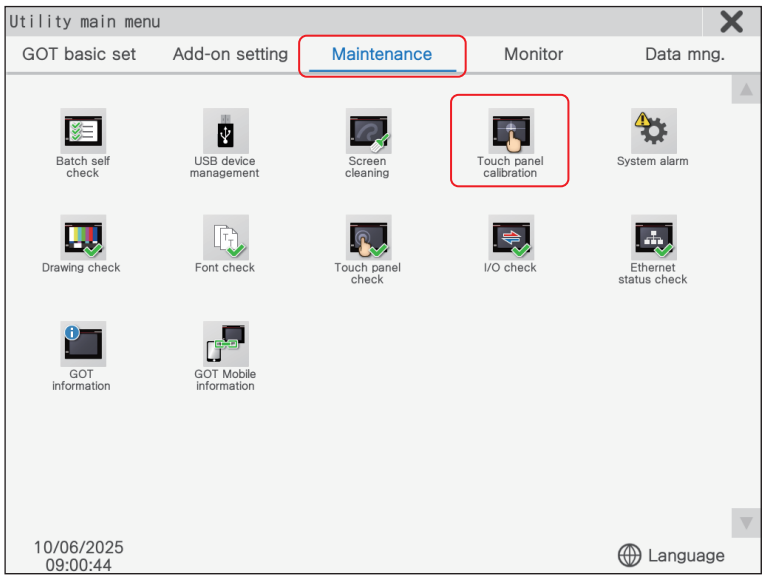


The [Run] will operate though you intended to touch the [Stop] button.

The [Stop] button can be touched without fail.

40.1 Screen display procedure

Select [Touch panel calibration] in the [Maintenance] tab.



PART 6

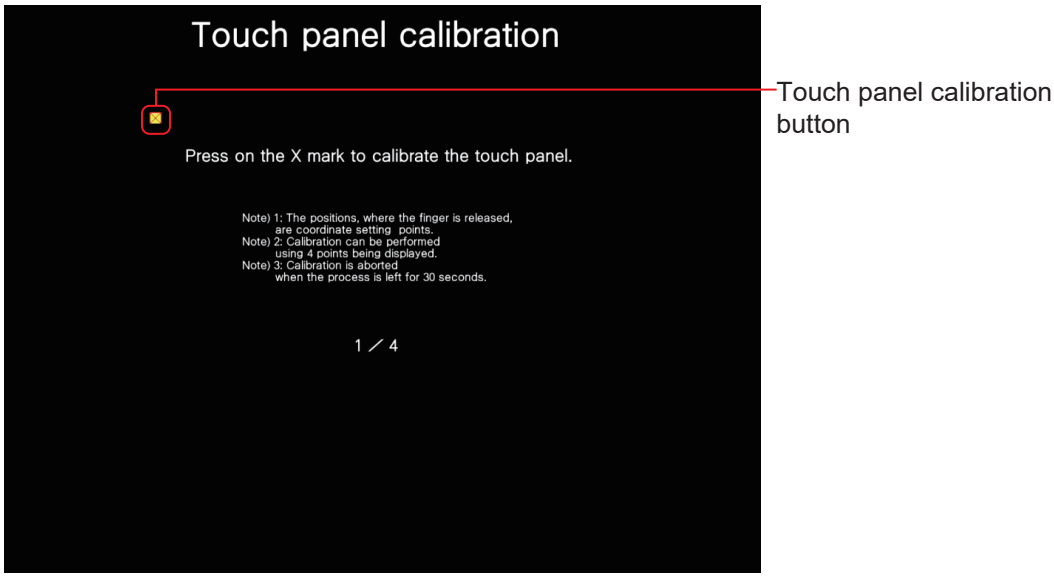
40.2 Touch panel calibration

Touch the touch panel calibration buttons displayed on the screen in order to calibrate position accuracy.

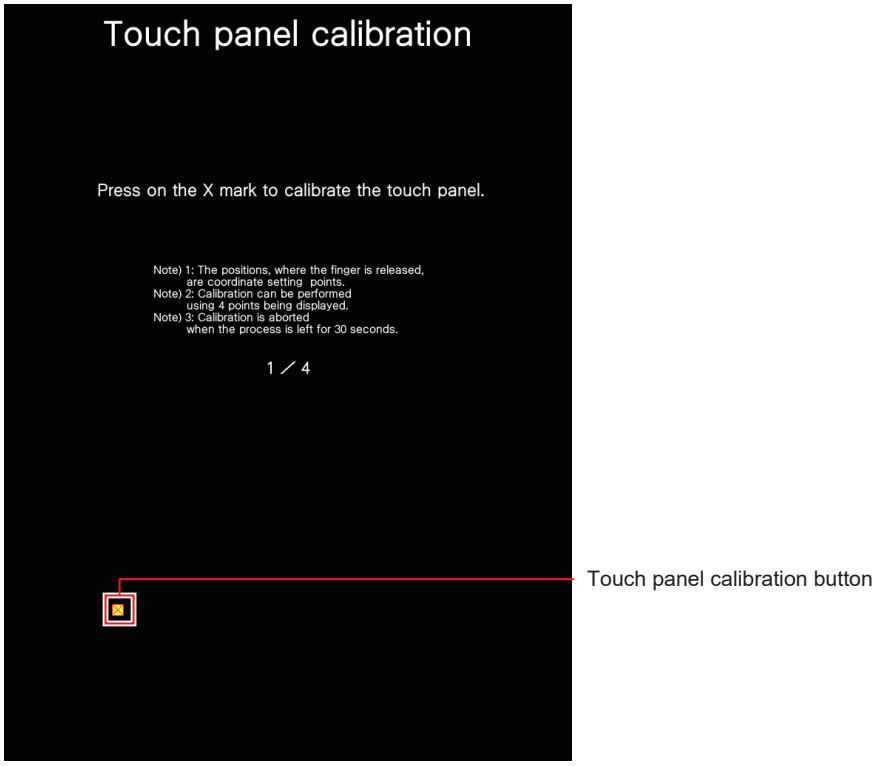
1. Touch the touch panel calibration buttons displayed on the screen in order.

The order of the buttons differs depending on the installation method of the GOT.

- Horizontal installation: Upper left → upper right → lower left → lower right

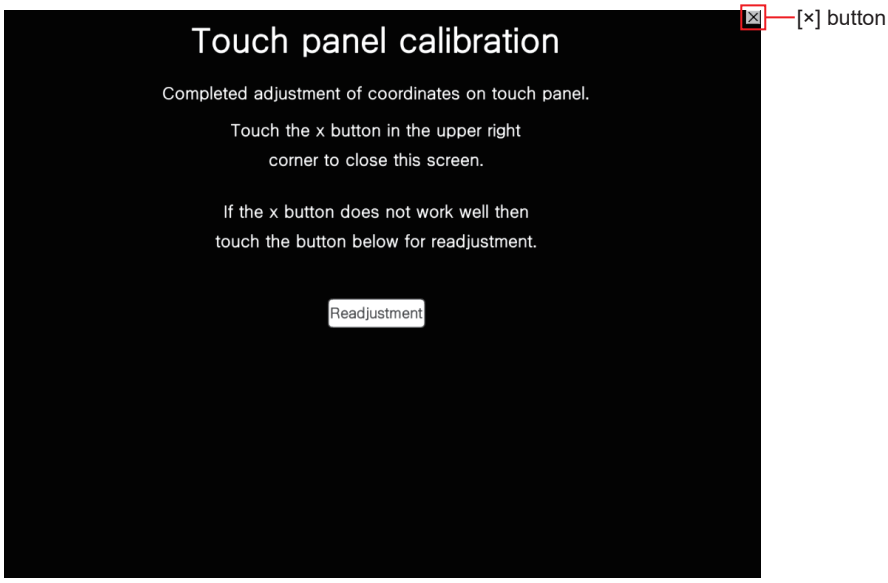


- Vertical installation: Lower left → upper left → lower right → upper right



2. Touch the [×] button in the upper right of the screen to return to the [Utility main menu].

If the touch screen is not accurate, touch the [Readjustment] button to start the setting again from Step 1.



Precautions

■About timeout time

When 30 seconds have elapsed after the [Touch panel calibration] screen is operated, the screen times out and returns to the [Utility main menu].

41 [System alarm]

GT37 SoftGOT3000

The system alarm function displays the error code and error message when a GOT, GOT Mobile, network, or controller error occurs.

Error name	Error type	Reset method
GOT error	• GOT functions • Hardware • Communication • GOT Mobile	After eliminating the cause of the system alarm, touch the [Reset] button on the [System alarm] screen to reset the system alarm.
CPU error	• Connected PLC • Connected servo amplifier • Connected non-Mitsubishi Electric product	The system alarm is automatically reset after all the error causes in the CPU (controller) have been eliminated.
Network error	• Network module	The system alarm is automatically reset after all the error causes in the network module have been eliminated.

For information on the system alarm, refer to the following.

☞ Page 585 System alarm display
☞ Page 586 Display contents of the system alarm

Precautions

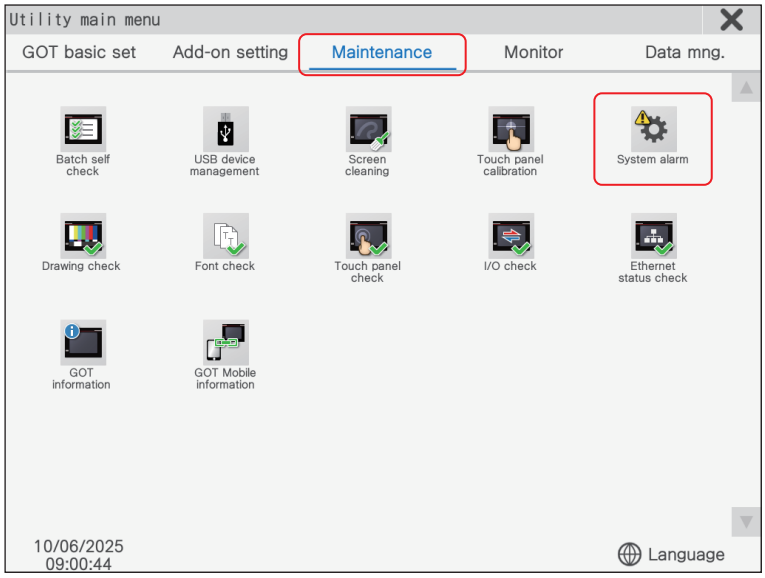
■Processing with reset operation

The following data in the system information are also reset.

- GOT error code (write device)
- GOT error detection signal (System Signal 2-1.b13)

41.1 Screen display procedure

Select [System alarm] in the [Maintenance] tab.



41.2 [System alarm] screen

Item		Description
1)	Message list	Displays the error codes and error messages of the errors. For information on the error codes and error messages, refer to the following. ☞ Page 586 Display contents of the system alarm
2)	[Reset] button	Touch this button to reset the displayed system alarms for the GOT errors.

PART 6

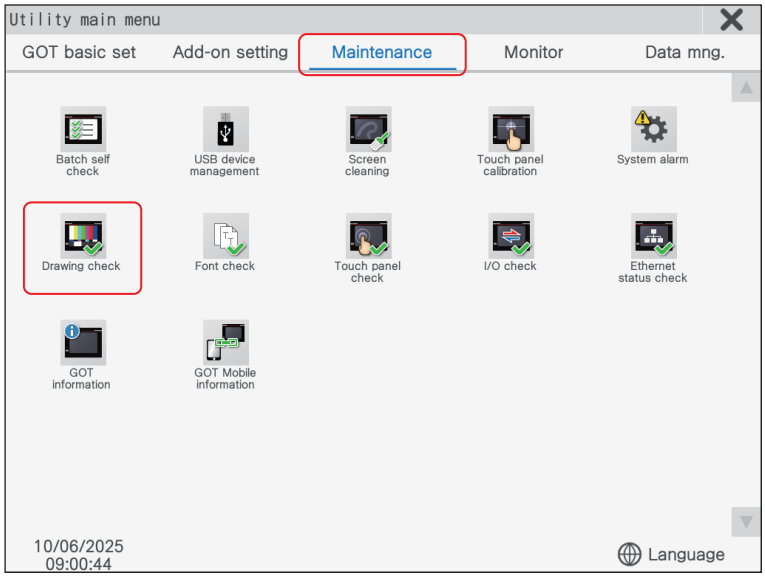
42 [Drawing check]

GT37 SoftGOT3000

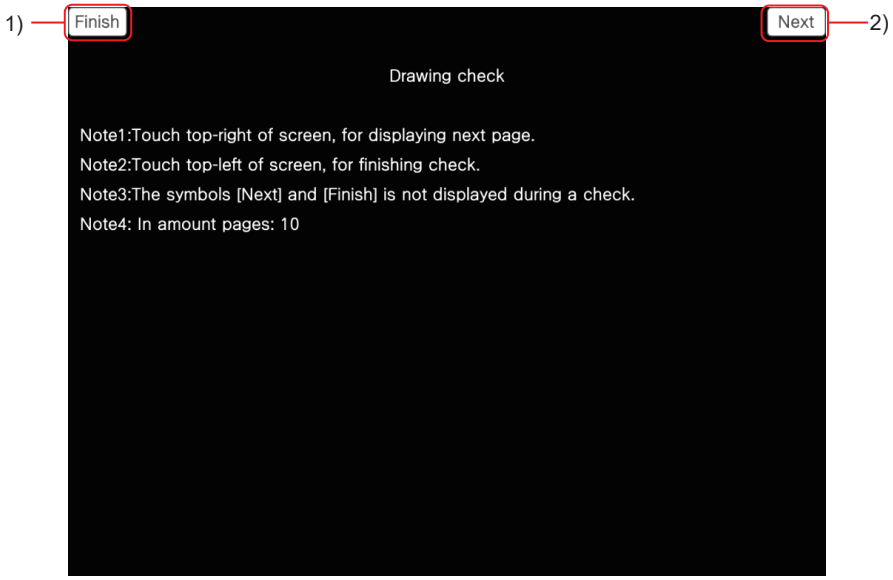
Drawing check is a function that checks for missing bits and ensures that colors and basic figures are drawn correctly.

42.1 How to display the screen

Select [Drawing check] in the [Maintenance] tab.



42.2 [Drawing check] screen



Item		Description
1)	[Finish] button	Touch this button to return to [Utility main menu].
2)	[Next] button	Touch this button to start the drawing check. For information on the drawing check screen, refer to the following. ☞ Page 187 Drawing check operation

42.3 Drawing check operation

Touch [Drawing check] to display the screen for which drawing check is to be performed.

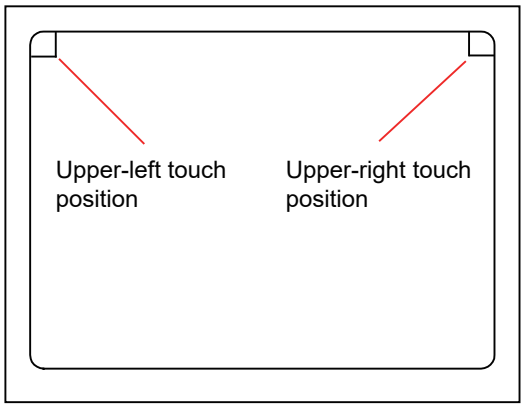
☞ Page 187 Missing bit/color check

☞ Page 188 Basic figure check

To proceed to the next check in each step during drawing check, touch the upper right of the screen.

Touch the upper left of the screen to return to [Utility main menu].

When the screen for performing the basic figure check is displayed, touching the upper right of the screen also returns to [Utility main menu].

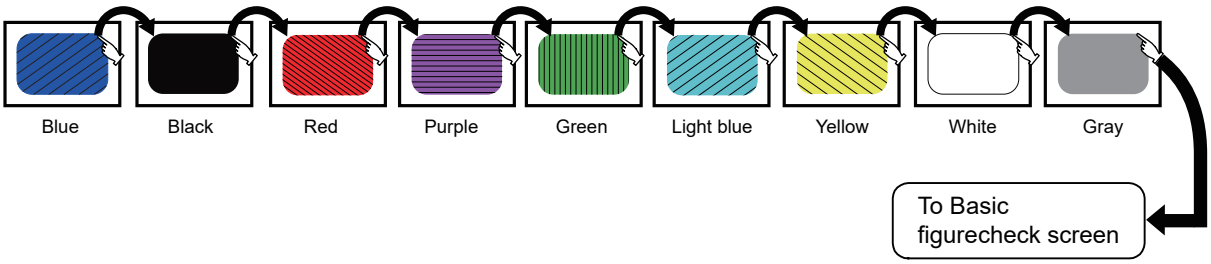


42.3.1 Missing bit/color check

Check for missing bits and colors visually.

Each time the upper right of the screen is touched, the entire screen color changes in the following order: blue, black, red, purple, green, light blue, yellow, white, and gray.

When the entire screen color is gray, touch the upper right of the screen to display the screen to perform the basic figure check.



The following cases indicate that a bit is missing:

- There are areas not drawn in the fill color.
- The screens are displayed in a different order.
- Some basic figures are partly drawn according to the following layout.

☞ Page 188 Basic figure check

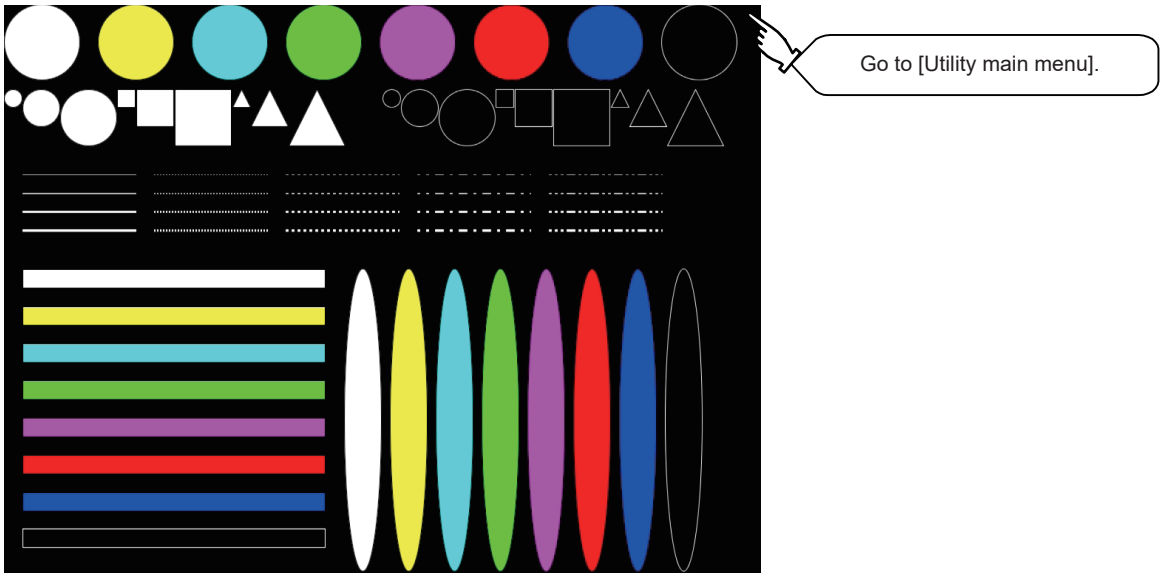
When missing bits occurs, contact your local Mitsubishi (Electric System) Service.

42.3.2 Basic figure check

Visually check the basic figures for deformation and display omissions.

When performing the basic figure check, compare the figures with the figures shown below and ensure that there are no abnormalities.

Four types of basic figures are drawn: Filled circles, lines, rectangles, and ellipses.



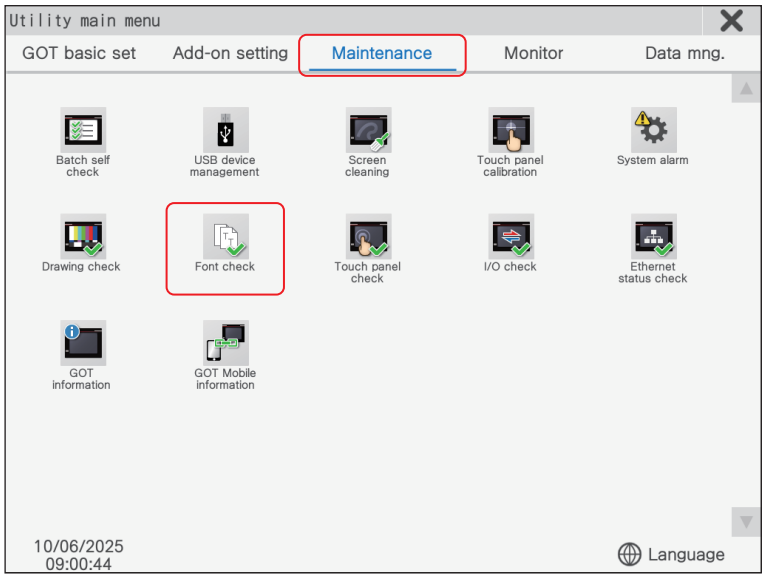
43 [Font check]

GT37 SoftGOT3000

Font check is a function that checks if fonts are properly installed on the GOT.
This function displays the character data of the fonts installed on the GOT in order from the upper left of the screen, thereby allowing you to visually check the font designs.

43.1 Screen display procedure

Select [Font check] in the [Maintenance] tab.



PART 6

43.2 [Font check] screen

If the characters below are displayed correctly, the fonts are properly installed.

The character code is Unicode.

Text	Character code (Unicode format)
Alphabetic characters etc.	0x0000 to 0x04F9 (From basic Latin to Kirill)
Hangul characters	0xAC00 to 0xD7A3 (Hangul/Hangul auxiliary)
Kanji	0x4E00 to 0x9FFF (CJK integrated Kanji), 0x3400 to 0x4DB5 (CJK integrated Kanji extension A)

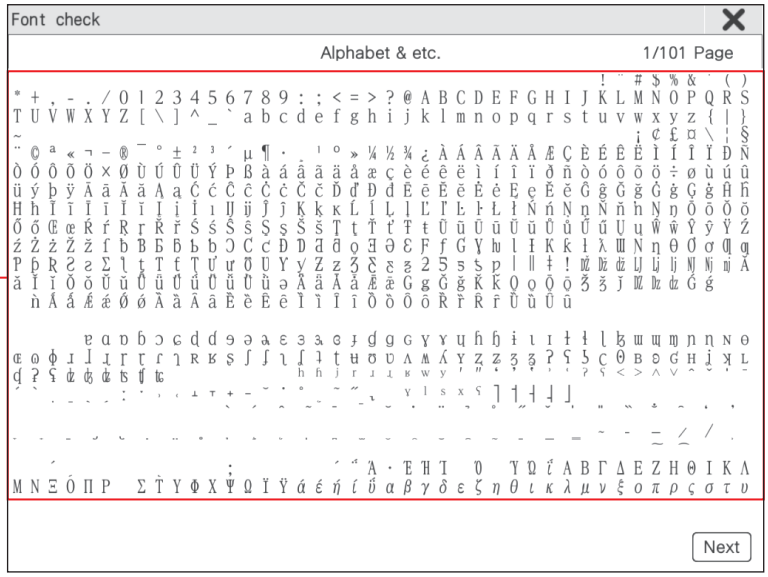
If characters are not displayed correctly, the fonts may not be installed.

Install the system application again.

For instructions on how to install the basic system application, refer to the following.

☞ Page 40 Installing the BootOS and package data using a data storage

1)



Item		Description
1)	Font design display area	The character data in the built-in font (in the built-in flash memory) is displayed in order from the upper left of the screen. Some characters are not displayed on the screen.

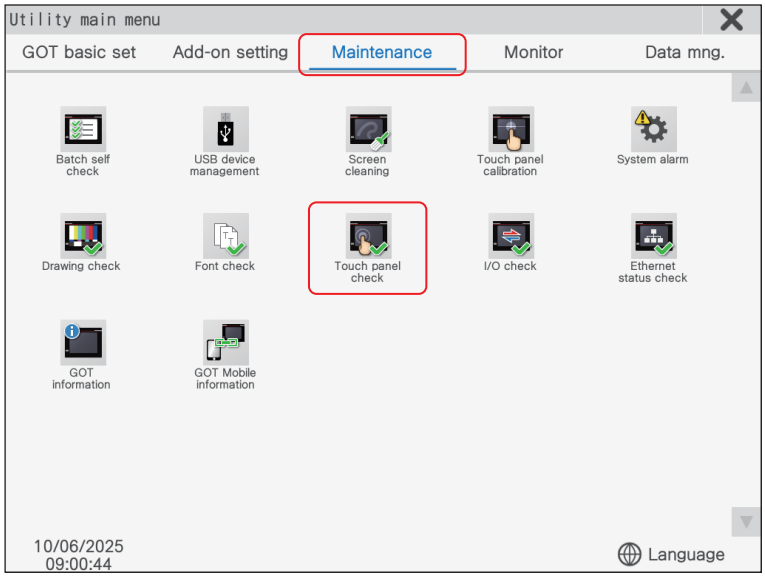
44 [Touch panel check]

GT37 SoftGOT3000

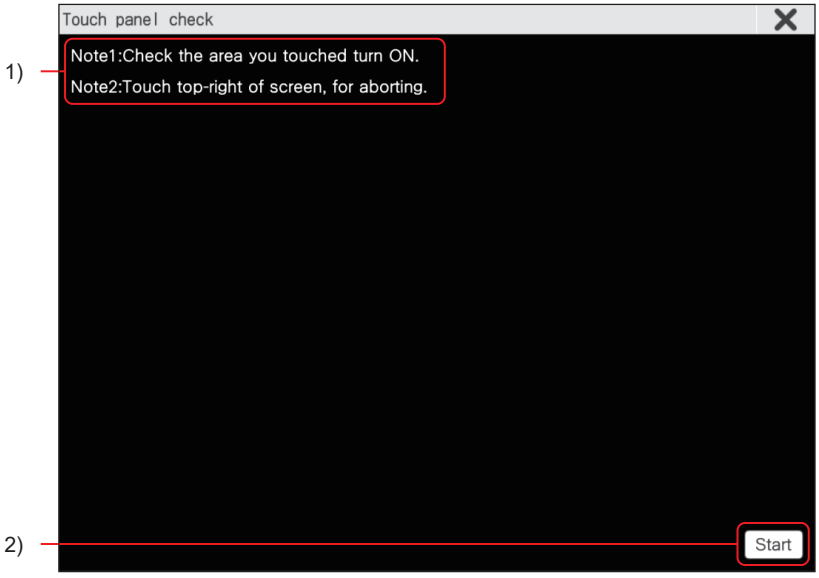
The touch panel check function checks for dead zones on the touch keys.

44.1 Screen display procedure

Select [Touch panel check] in the [Maintenance] tab.



44.2 [Touch panel check] screen

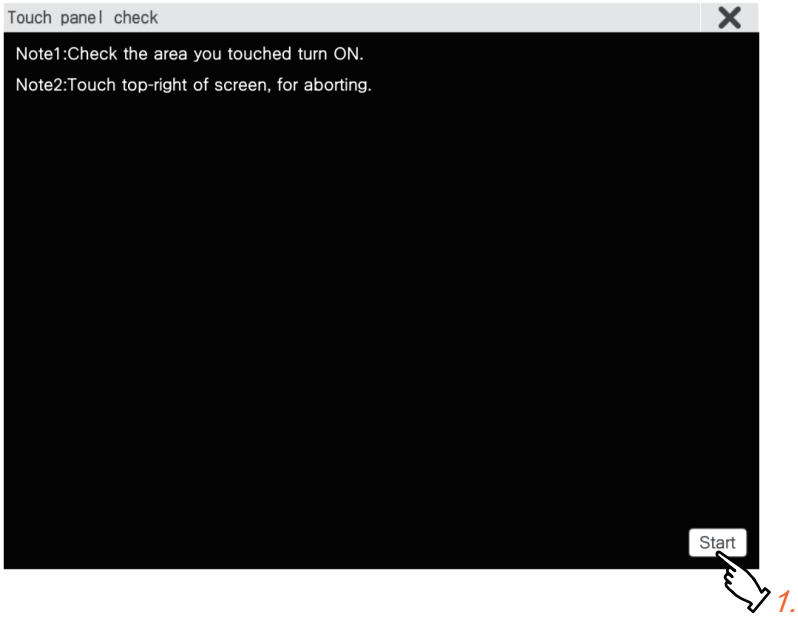


Item		Description
1)	Message area	Displays the operating procedure for touch panel check.
2)	[Start] button	Touch this button to display the black-filled screen for performing touch panel check.

44.3 Touch panel check operation

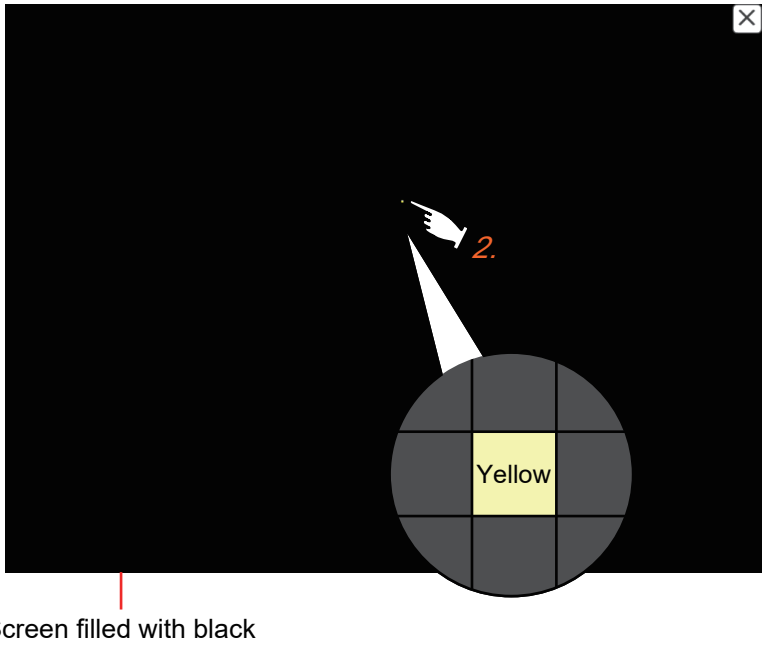
1. Touch the [Start] button on the [Touch panel check] screen.

A black-filled screen is displayed across the entire screen area.



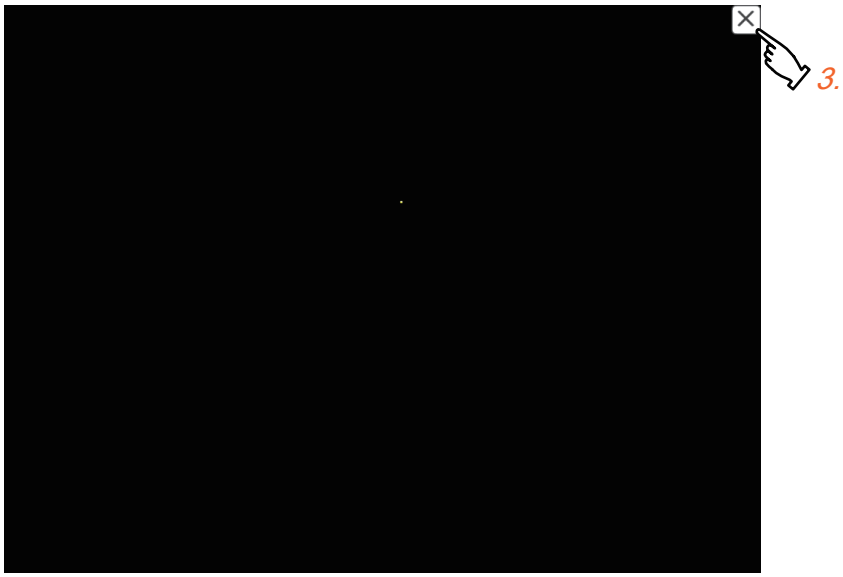
2. Touch part of the screen.

The touched part becomes a yellow-filled display.



3. Touch the [×] button.

The screen will return to [Utility main menu].



Precautions

■About the screen when performing touch panel check

If the touched part does not become a yellow-filled display, the display area or the touch panel may be faulty.

Contact your local Mitsubishi (Electric System) Service.

■About checking of the area where the [×] button is displayed on the touch panel

Only the [×] button cannot become a yellow-filled display.

Determine that the area around the [×] button is operating normally by checking whether pressing the [×] button can return to [Utility main menu].

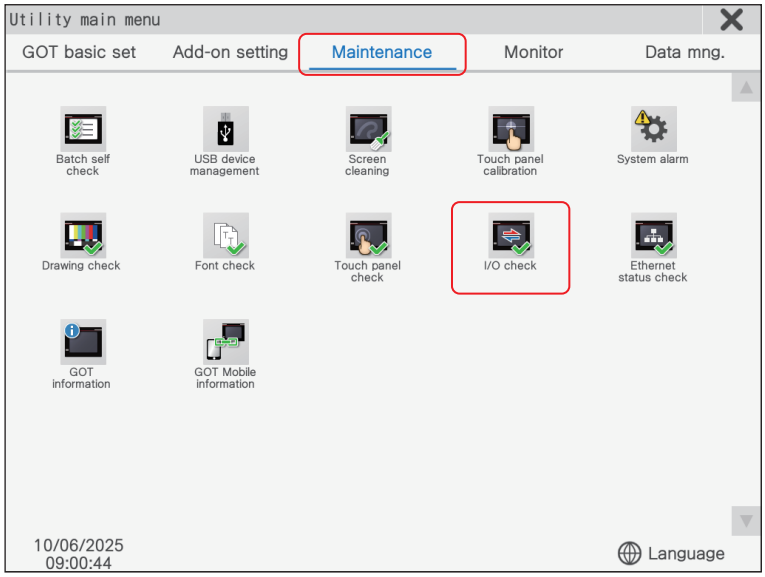
45 [I/O check]

GT37 SoftGOT3000

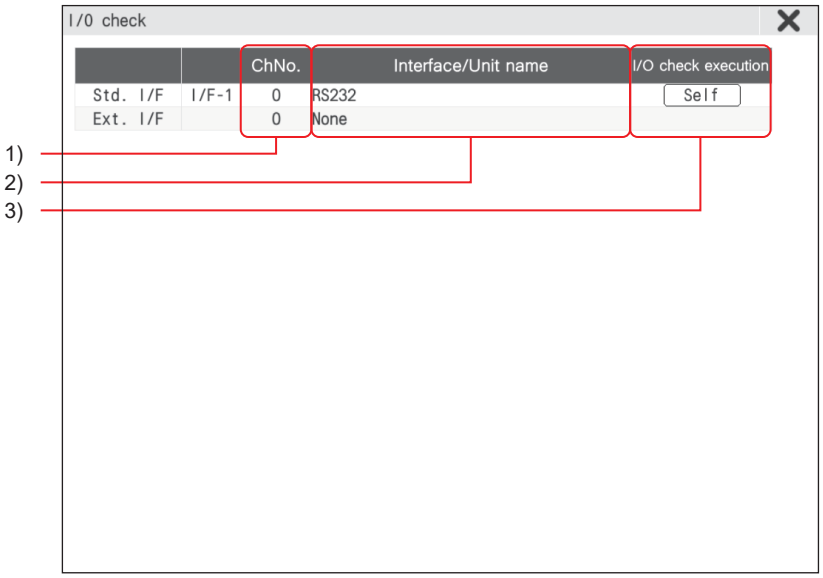
I/O check is a function that checks for normal communication between the GOT and the PLC.
This function can be used only when the GOT and the PLC are connected using the RS-422/485 or RS-232 connection.
When I/O check ends normally, the hardware of the communication interface and connection cable is regarded as normal.
Before executing the I/O check, write the applicable communication driver from GT Designer3 to the GOT.
Refer to the following for details on the installation of the communication driver.
GT Designer3 (GOT3000) Screen Design Manual

45.1 How to display the screen

Select [I/O check] in the [Maintenance] tab.



45.2 [I/O check] screen



Item			Description	Setting range
1)	[ChNo.]		Displays the channel number corresponding to the unit. [—] is displayed for Ethernet.	[0] to [4]
2)	[Interface/Unit name]		Displays the unit names set to the standard interface and extension interface. For [Standard I/F], the value set under [Interface/Unit name] in the [Controller] screen ([Communication setting] tab) is displayed.	• [RS422/485] • [RS232] • [None]
3)	[I/O check execution]	—	Displays the button to execute I/O check. A different button is displayed depending on the setting of [ChNo.] or [Interface/Unit name].	• [CPU] button • [Self] button
		[CPU] button	Appears when [ChNo.] is [1] to [4]. Touch this button to execute the connecting target confirmation. Abnormalities in communication between RS-422/485 or RS-232 and the CPU are checked. For information on the operation of the connecting target confirmation, refer to the following. ☞ Page 196 Connecting target confirmation	—
		[Self] button	Appears when the following settings are met simultaneously. • [Interface/Unit name]: [RS232] • [ChNo.]: [0] Touch this button to perform the RS-232 self-loopback check. The RS-232 interface is checked for abnormalities. For information on the operation of the RS-232 self-loopback check, refer to the following. ☞ Page 197 RS-232 self-loopback check	—

PART 6

45.3 I/O check operation

☞ Page 196 Connecting target confirmation
☞ Page 197 RS-232 self-loopback check

45.3.1 Connecting target confirmation

Operating procedure

1. Touch the [CPU] button.

The connecting target confirmation will be executed.

If the confirmation is not successful, the relevant error dialog will appear.

For details, refer to the following.

☞ Page 196 Error dialogs

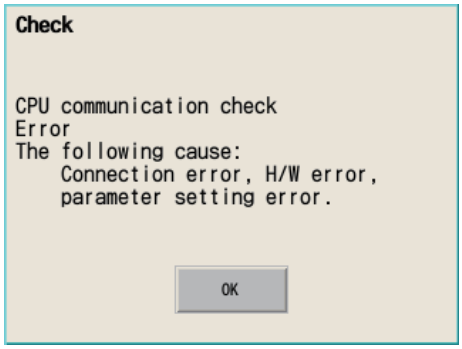
2. Touch the [OK] button to return to the [I/O check] screen.

Error dialogs

■CPU communication check error dialog

This dialog appears when there is an error with the connecting target confirmation (connection error, hardware error, parameter setting error, etc.).

Touch the [OK] button in the dialog to return to the [I/O check] screen.



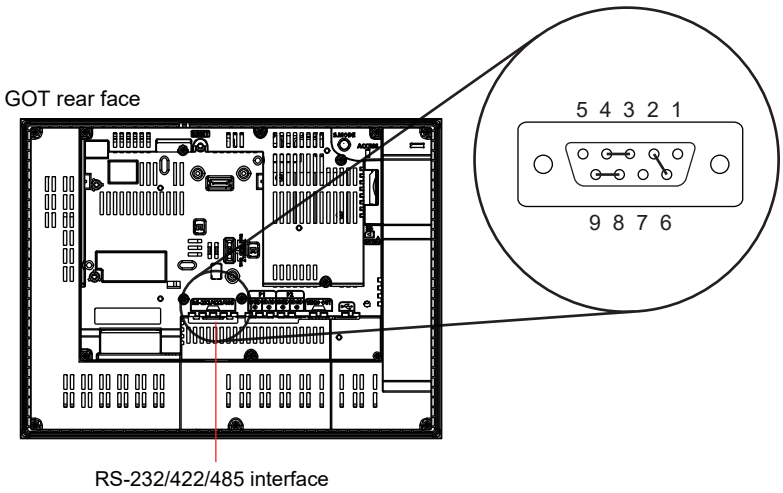
If the CPU communication check error dialog appears, check the following.

Check item	Reference
Misconnection with the CPU	📖GOT3000 Series User's Manual (Connection)
Missetting of parameters	☞ Page 97 [Communication setting] tab
Hardware problems	📖GOT3000 Series User's Manual (Hardware)

45.3.2 RS-232 self-loopback check

The RS-232 self-loopback check requires the following preparations in advance.

- Short the RS-232/422/485 interface of the GOT under the combinations of pins 3 and 4, 2 and 6, and 8 and 9.
- Set [0] to [ChNo.] for [I/F-1] on the [Communication setting] screen.



Operating procedure

1. Touch the [Self] button.

The sent data and the received data are verified through the RS-232 self-loopback connector.

If the check is not successful, the relevant error dialog will appear.

For details, refer to the following.

☞ Page 198 Error dialogs

2. Touch the [OK] button to return to the [I/O check] screen.

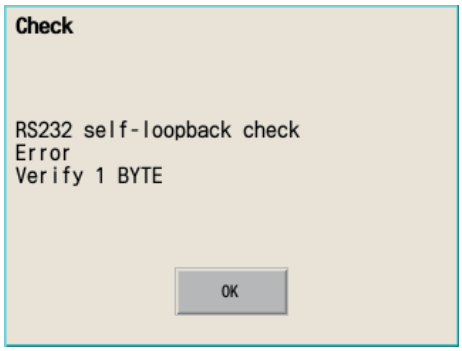
Precautions

RS-232 self-loopback check is not possible when connected via MODBUS RTU (GOT: client).

Error dialogs

■Verification error dialog

If an error occurs, a dialog will appear notifying you of abnormal termination and the byte with an error.



If the verification error dialog appears, check the following.

Check item	Reference
Hardware problems	GOT3000 Series User's Manual (Hardware)

■SIO error dialog

This dialog will appear if the GOT cannot receive data during data transmission.

If the SIO error dialog appears, check the following.

Check item	Reference
Check if the pins of the connector for self-loopback check are incorrectly shorted.	☞ Page 197 RS-232 self-loopback check
Check if the settings for [I/F-1] are configured as shown below on the [Communication setting] screen of the utility. • [Interface/Unit name]: [RS-232] • [Driver]: [None]	☞ Page 97 [Communication setting] tab
Hardware problems	GOT3000 Series User's Manual (Hardware)

■Port open failure dialog

When RS-232 port is not opened, a dialog will appear.

If the port open failure dialog appears, check the following.

Check item	Reference
Hardware problems	GOT3000 Series User's Manual (Hardware)

46 [Ethernet status check]

GT37 SoftGOT3000

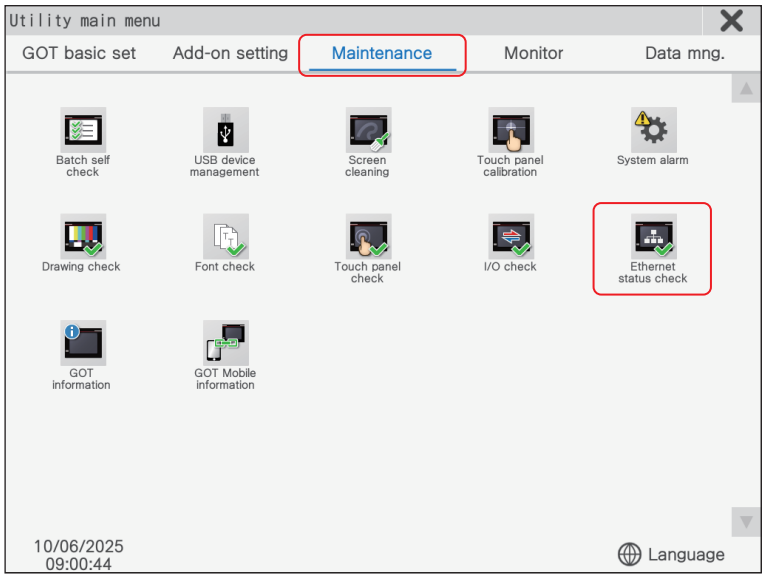
Ethernet status check is a function that checks the connection status with the equipment via Ethernet.

For information on the configurable settings, refer to the following.

☞ Page 200 [Ethernet status check] screen

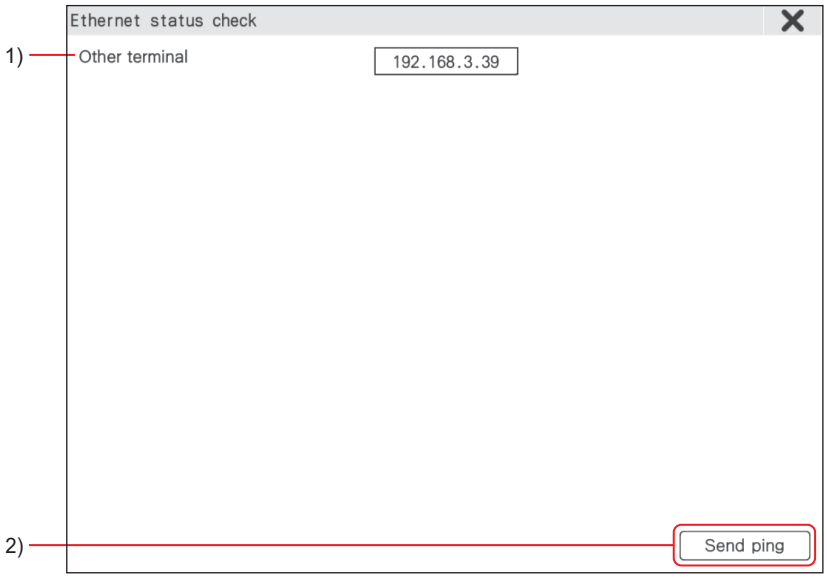
46.1 Screen display procedure

Select [Ethernet status check] in the [Maintenance] tab.



PART 6

46.2 [Ethernet status check] screen



Item		Description	Setting range
1)	[Other terminal]	Set the IP address of the device to which a ping is to be sent.	[0].[0].[0].[0] to [255].[255].[255].[255] <Default: [192].[168].[3].[39]>
2)	[Ping transmission] button	Touch this button to send a ping to the IP address set to [Other terminal]. Sending a ping checks communication between the GOT and the equipment connected via Ethernet. If there is no response for about five seconds after the [Ping transmission] button is touched, the connection will timeout.	—

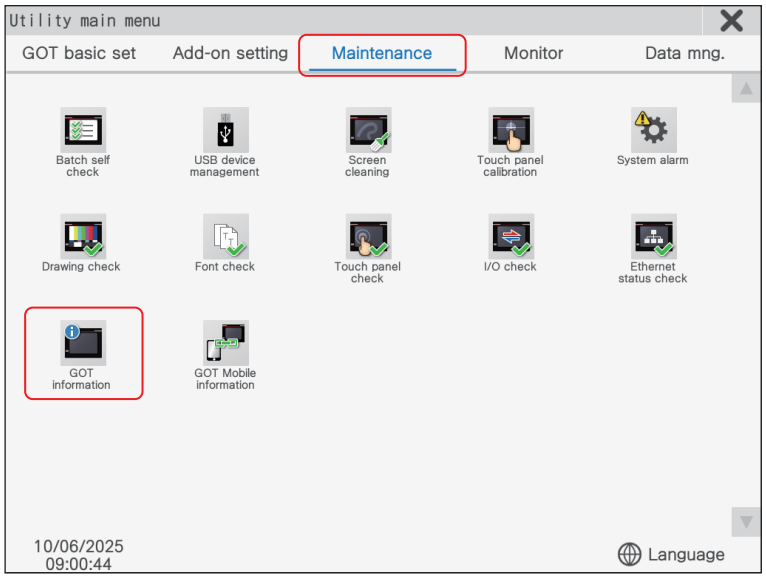
47 [GOT information]

GT37 SoftGOT3000

This function displays the model, serial number, MAC address and version of the GOT.
For information on the details that are displayed, refer to the following.
☞ Page 202 [GOT information] screen

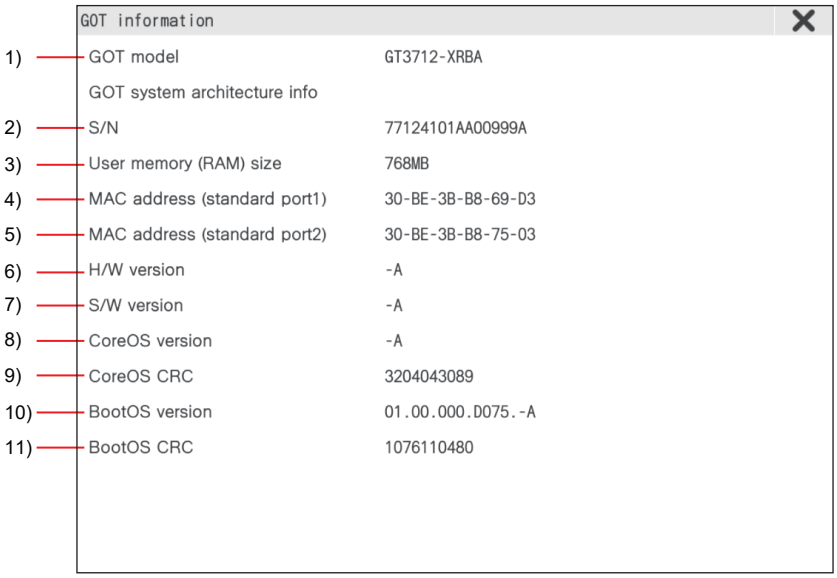
47.1 Screen display procedure

Select [GOT information] in the [Maintenance] tab.



PART 6

47.2 [GOT information] screen



Item		Description
1)	[GOT model]	Displays the GOT model.
2)	[S/N]	Displays the serial number.
3)	[User memory (RAM) size]	Displays the size of the user work memory area in the built-in GOT RAM.
4)	[MAC address (standard port 1)]	Displays the MAC address for Ethernet standard port 1.
5)	[MAC address (standard port 2)]	Displays the MAC address for the Ethernet communication unit and Ethernet standard port 2. A hyphen (-) is displayed if the MAC address cannot be acquired.
6)	[H/W version]	Displays the hardware version.
7)	[S/W version]	Displays the software version at factory settings.
8)	[CoreOS version]	Displays the CoreOS version.
9)	[CoreOS CRC]	Displays the CRC values of CoreOS.
10)	[BootOS version]	Displays the BootOS version. 01.16.000.R001.-V └BootOS
11)	[BootOS CRC]	Displays the CRC values of BootOS.

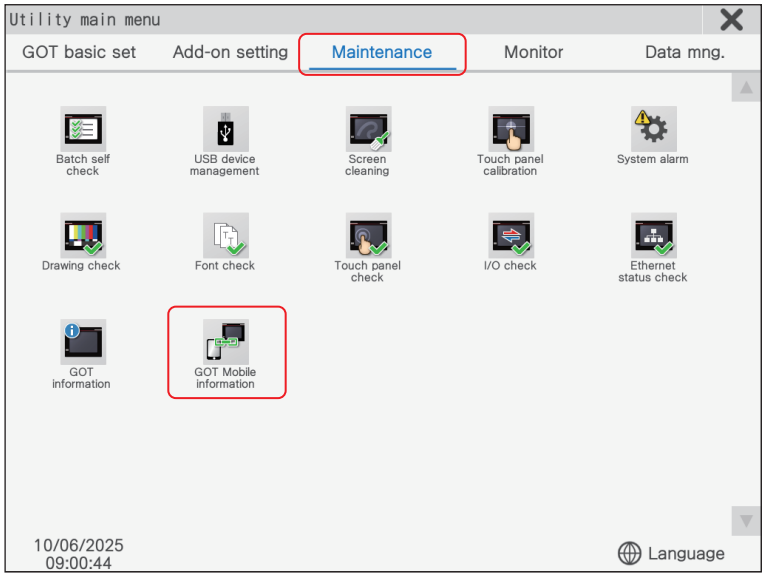
48 [GOT Mobile Information]

GT37 SoftGOT3000

This function displays the GOT Mobile function settings and the connected clients.
For information on the configurable settings, refer to the following.
☞ Page 204 [GOT Mobile Information] screen
If the GOT Mobile function is not set, the [GOT Mobile Information] screen is not displayed.
For information on the GOT Mobile function settings, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

48.1 Screen display procedure

Select [GOT Mobile Information] in the [Maintenance] tab.

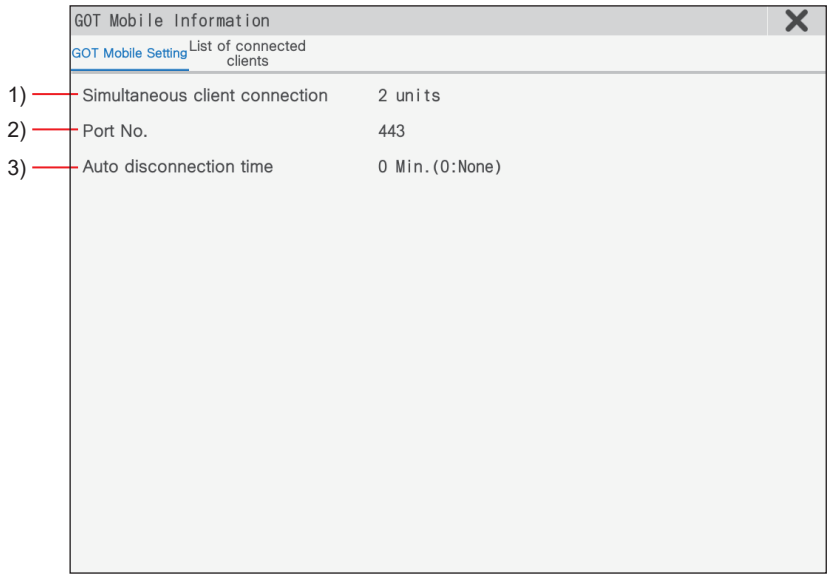


PART 6

48.2 [GOT Mobile Information] screen

☞ Page 204 [GOT Mobile Setting] tab
☞ Page 205 [List of connected clients] tab

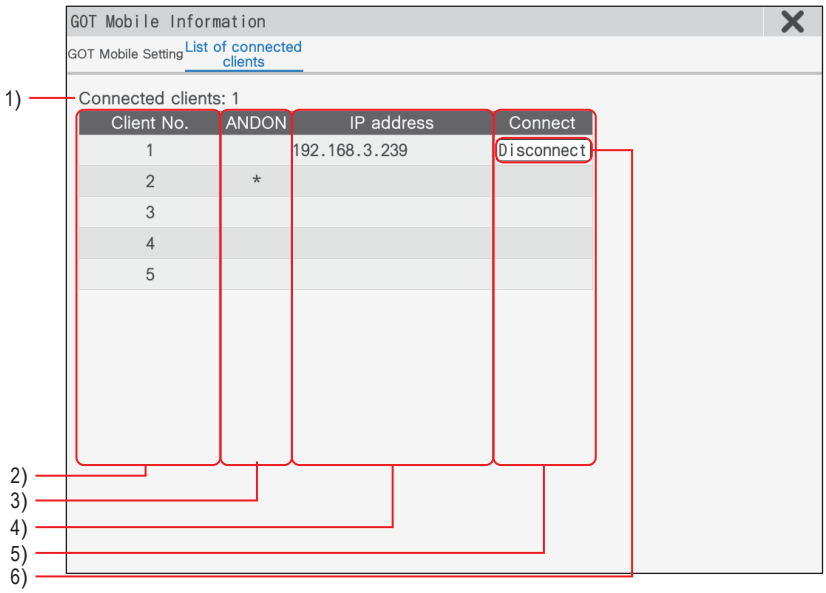
48.2.1 [GOT Mobile Setting] tab



Item*1		Description
1)	[Simultaneous client connection]	Displays the maximum number of clients that can be connected simultaneously. If the GOT Mobile function license is not registered, the value set in GT Designer3 is displayed.
2)	[Port No.]	Displays the port number used for the HTTP connection.
3)	[Auto disconnection time]	Displays the time period until a client is automatically disconnected from the server if no operation is performed on the client. If this is set to [0], the automatic disconnection time will not be set.

*1 The settings can be configured in the [GOT Mobile Setting] window ([Basic Setting]) in GT Designer3.
For details, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual

48.2.2 [List of connected clients] tab



Item		Description	Setting range
1)	[Connected clients]	Displays the number of clients connected to the GOT or GT SoftGOT3000.	• GOT: [0] to [5] • GT SoftGOT3000: [0] to [15]
2)	[Client No.]	Displays the client numbers of the clients connected to the GOT or GT SoftGOT3000.	• GOT: [0] to [5] • GT SoftGOT3000: [0] to [15]
3)	[ANDON]	The client numbers of the clients connected to the GOT or GT SoftGOT3000 using the ANDON connection is marked with an asterisk [*].	[*]
4)	[IP address]	Displays the IP addresses assigned to the client numbers of the clients connected to the GOT or GT SoftGOT3000.	[0].[0].[0].[0] to [255].[255].[255].[255]
5)	[Connect]	Displays the [Disconnect] button if the client is connected to the GOT or GT SoftGOT3000.	—
6)	[Disconnect] button	Touch this button to disconnect the client from the GOT or GT SoftGOT3000.	—

Precautions

Before disconnecting a client from the server (GOT or GT SoftGOT3000), the server operator must notify the client operator about the disconnection.
Not doing so may cause an accident.

PART 7 Monitor

49 [System launcher]

50 [Sequence program monitor (ladder display)]

51 [Intelligent module monitor]

52 [R Motion Monitor]

53 [Network status display]

54 [iQSS utility]

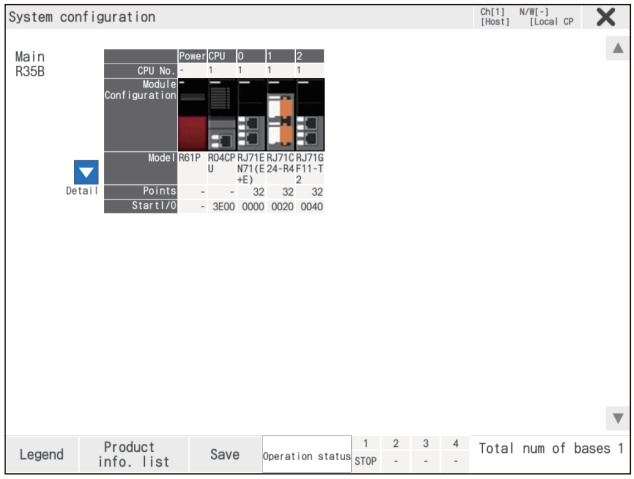
55 [CC-Link IE diagnostics]

49 [System launcher]

GT37 SoftGOT3000

The following functions are available in the system launcher for devices connected to the GOT.

- Displays the status of each module
- Starts the add-on functions for each module
- Performs module changes
- Displays the product information of each module
- Outputs the product information of each module to a file



PART 7

49.1 System launcher specifications

☞ Page 208 System configuration
☞ Page 211 Add-on functions compatible with the system launcher
☞ Page 211 Online module change

49.1.1 System configuration

This section explains the system configuration of the system launcher.
For connection type settings and precautions regarding the communication unit, cable, and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)
📖GT SoftGOT3000 User's Manual

Target controller

Controller
MELSEC iQ-R series *1
QCPU (Q mode)
LCPU
Motion CPU (MELSEC iQ-R series) *1
Motion CPU (Q series)
CNC C80
CNC C70
Robot controller*2

*1 The online module change is not available.
*2 CRnD-700 and CR800-D do not support the system launcher.

Connection type

This function can be used for the following connection types.
○ Available, ×: Unavailable

Function		Connection type between GOT and controller								
Name	Description	Bus connection	Direct CPU connection (serial)	Serial communication connection	Ethernet connection (Ethernet port built in the CPU)	Ethernet connection (Ethernet module)	MELSECNET/H connection, MELSECNET/10 connection	CC-Link IE TSN connection*1	CC-Link IE Controller connection, CC-Link IE Field connection	CC-Link connection (Intelligent device station)
System launcher	Displays controller status.	○	○	○	○	○	○	○	○	○
	Starts add-on functions.									
	Online module change									

*1 Only the host station can display the system configuration when connected to the built-in Ethernet port of the GOT.
For the connection type between the GOT and each controller, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual
📖GT SoftGOT3000 User's Manual

System applications (add-on functions)

■Required system applications (add-on functions)

For the required system applications (add-on functions), refer to the following.

- [System launcher]

■Installing system applications (add-on functions)

Write the package data that contains system applications (add-on functions) for the system launcher to the GOT.

To use an add-on function compatible with the system launcher, write the package data that contains the corresponding system application (add-on function) to the GOT.

For the communication method with the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System applications (add-on function) size

There needs to be enough space in the user area to install the system application (add-on functions) on the GOT.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Applicable hardware

A USB mouse can be used.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series (GOT-A-0233)

Precautions

For GT SoftGOT3000, target screens in the table below are displayed according to the following conditions:

- The screens are displayed according to the GOT screen resolution and orientation set in GT Designer3.
- If the screens fit both in vertical display and horizontal display, they are displayed horizontally.

Any screens other than the target screens are displayed in the same way as the GOT3000 series.

The following shows the sizes of the target screens displayed with GT SoftGOT3000.

■Target screen

- [System configuration] screen
- [Online module change] screen

If the GT SoftGOT3000 resolution set in GT Designer3 is higher than the resolution of the target screen, the target screen will be displayed at the center of the GT SoftGOT3000 screen.

In such instances, the margin around the target screen will be filled with black.

■GT SoftGOT3000 resolution set in GT Designer3

Vertical (Y)	Horizontal (X)									
	480	600	640 to 767	768 to 799	800 to 1023	1024 to 1079	1080 to 1200	1201 to 1279	1280 to 1919	1920
480 to 599	-	-	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)
600 to 767	-	-	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)
768 to 799	-	-	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)
800 to 1023	-	-	VGA (horizontal)	VGA (horizontal)	VGA (horizontal)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)	WXGA (horizontal)	WXGA (horizontal)
1024 to 1079	-	-	VGA (horizontal)	XGA (vertical)	XGA (vertical)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)	WXGA (horizontal)	WXGA (horizontal)
1080 to 1200	-	-	VGA (horizontal)	XGA (vertical)	XGA (vertical)	XGA (horizontal)	XGA (horizontal)	XGA (horizontal)	WXGA (horizontal)	FHD (horizontal)
1201 to 1279	-	-	VGA (horizontal)	XGA (vertical)	XGA (vertical)	XGA (horizontal)	XGA (horizontal)	-	-	-
1280 to 1919	-	-	VGA (horizontal)	XGA (vertical)	WXGA (vertical)	WXGA (vertical)	WXGA (vertical)	-	-	-
1920	-	-	VGA (horizontal)	XGA (vertical)	WXGA (vertical)	WXGA (vertical)	FHD (vertical)	-	-	-

49.1.2 Add-on functions compatible with the system launcher

The following shows the add-on functions that can be started up from the system launcher.

Add-on functions
Sequence program monitor (Q/L ladder)
Sequence program monitor (iQ-R/iQ-L ladder)
R motion monitor
Intelligent module monitor
Backup/restoration *1
iQSS utility
CC-Link IE diagnostics

*1 The CPU number setting is not transferred. Only the channel of the connected controller is in its selected state.

49.1.3 Online module change

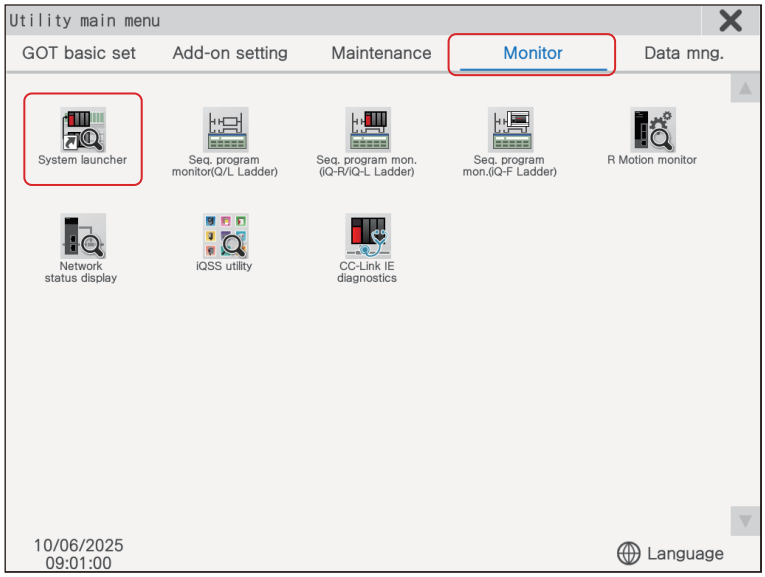
To enable online module change, configure the setting in [System Launcher] under [Add-on setting] in the utility.
Set [Online module change] to [Effective].
☞ Page 155 [System launcher]

Precautions

When you replace a module online, the module stops its operation.
Check that the operations of the PLC are not affected, then perform an online module change.
The following shows the applicable modules.
QCPU (Q mode)
Input module, output module, I/O module, analog input module, analog output module, temperature input module, temperature control module, loop control module, pulse input module
For details on the online module change, refer to the following.
📖Manual of the CPU or module used

49.2 How to display the screen

Select [System launcher] in the [Monitor] tab.



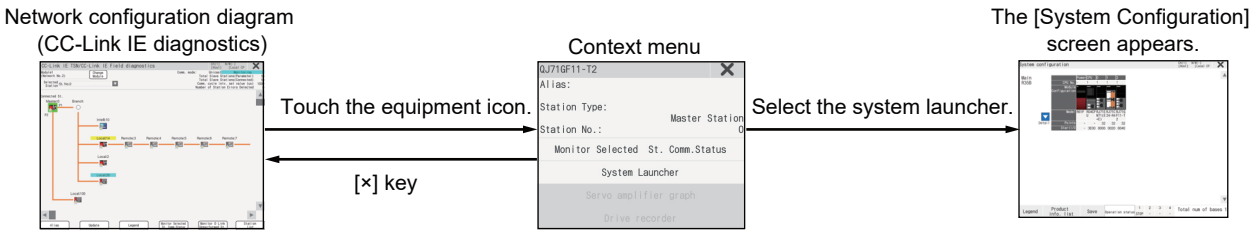
Starting the system launcher from the special function switch

The system launcher can be started from a user-created monitor screen by assigning it to the special function switch set in the project.

For information on how to set a special function switch, refer to the following. 📖 GT Designer3 (GOT3000) Screen Design Manual

Starting the system launcher from CC-Link IE diagnostics

The system launcher can be started from CC-Link IE diagnostics by selecting [System launcher] in the context menu of CC-Link IE diagnostics.

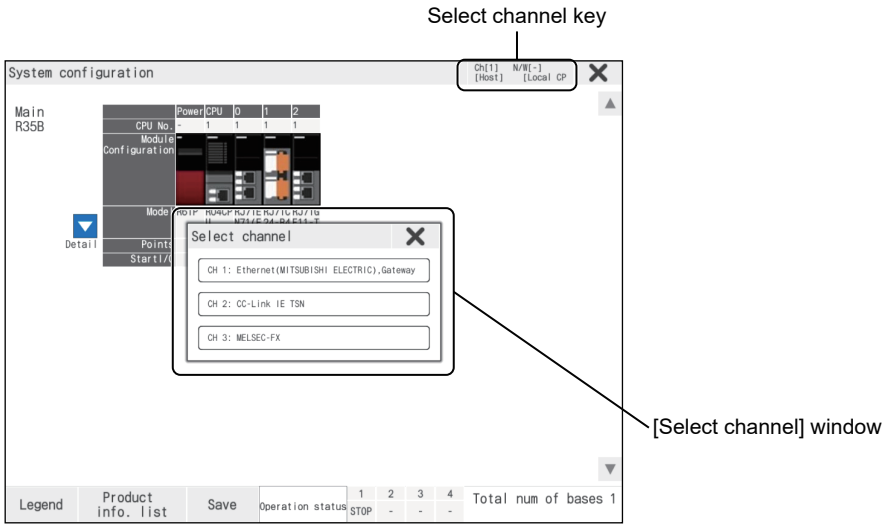


For the context menu of CC-Link IE diagnostics, refer to the following.

☞ Page 404 Context menu

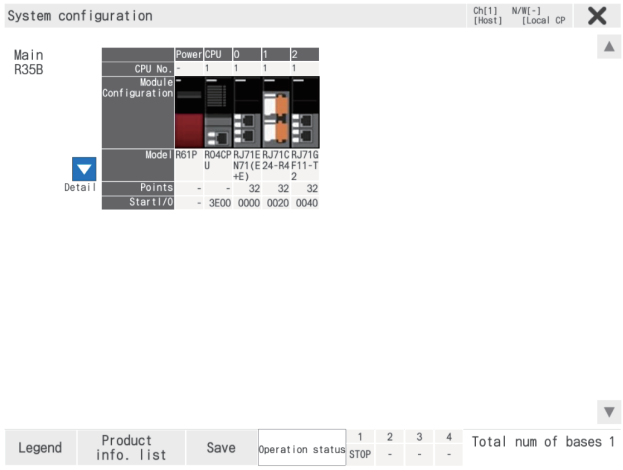
[Select channel] window

The [Select channel] window appears only at the first startup of the system launcher.
Set the channel number of the PLC connected to the GOT.
When the channel number is not set, touching the [×] key closes the [Select channel] window and sets the channel number to [1].
To display the [Select channel] window at the second startup or later, touch the select channel key on the [System configuration] screen.
☞ Page 215 [System configuration] screen



[System configuration] screen

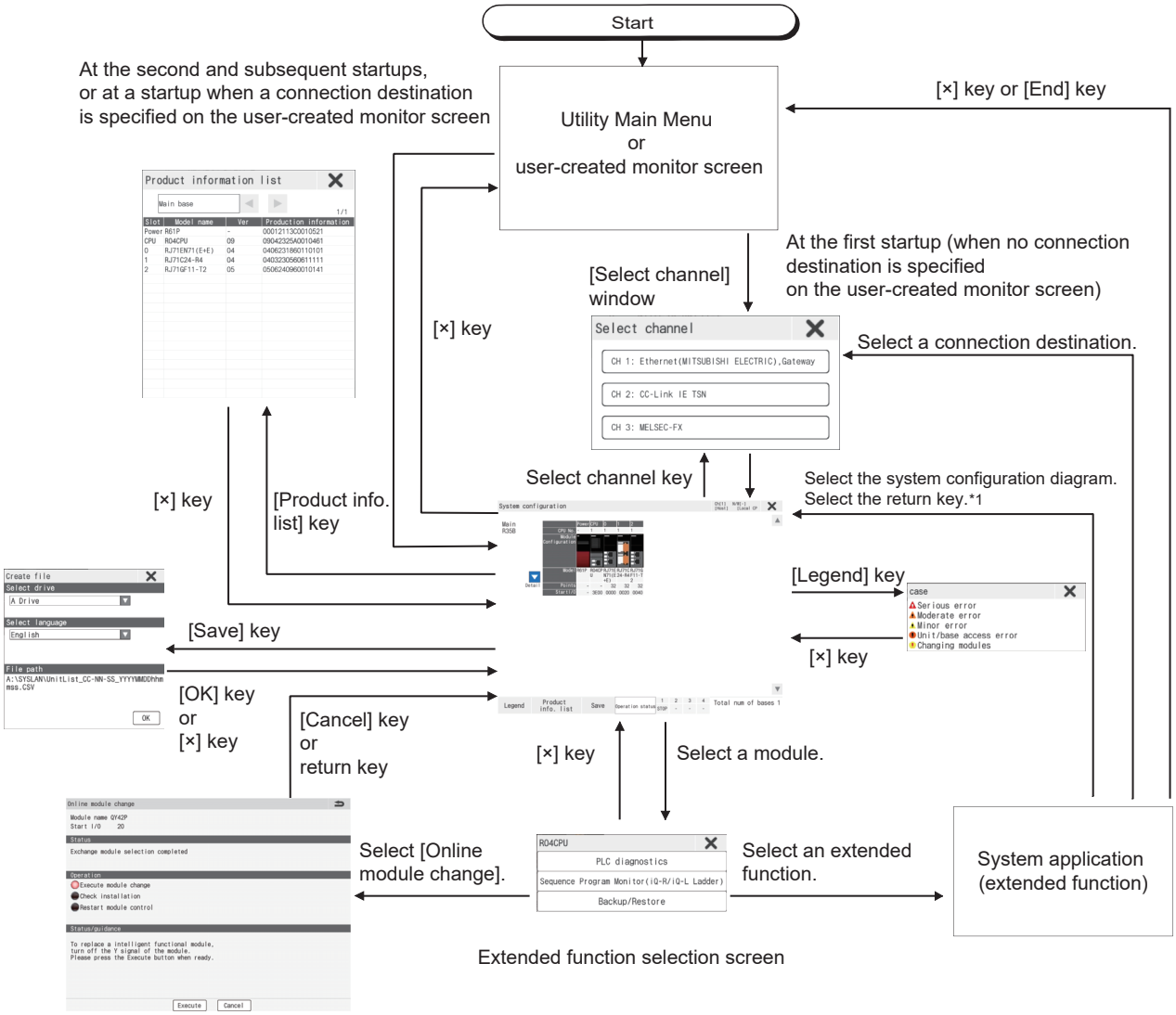
The system configuration screen will appear after selecting a channel No. for the first time, or after starting the utility, special function switch, or CC-Link IE diagnostics for the second time or later.
To change the connection destination, touch the select channel key on the [System configuration] screen.
☞ Page 215 [System configuration] screen



Point

The same module may be displayed with different icons on the [System configuration] screen of the system launcher and in the system monitor function of GX Works2.

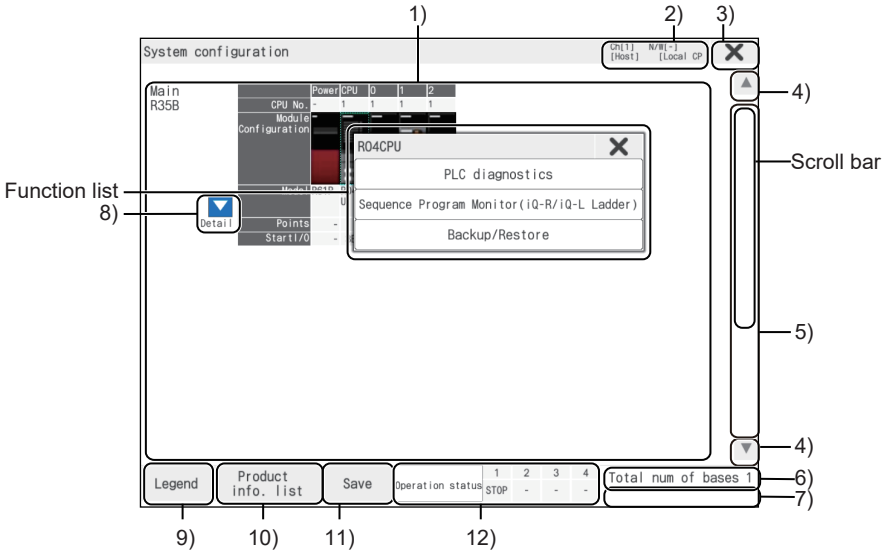
Screen transitions



*1 Only available for the system launcher (servo network) function.

49.3 [System configuration] screen

The following explains the structure of the system configuration screen and the function of the keys displayed on the screen after the system launcher is started.



Item		Description
1)	Module status display	Displays the information about [CPU No.], [Model], [Points], and [Start I/O] of the modules. When an RQ extension base unit is connected, the system configuration screen for MELSEC iQ-R series appears. Select a module to display the function list window.
2)	Select channel key	Displays the [Select channel] window.
3)	[×] key	Exits the system configuration screen and returns the screen to a screen from which the system launcher was started.
4)	Scroll keys	Scrolls the display up or down one stage.
5)	Scroll bar	Touch an area on the upper or lower part of the scroll bar to scroll one page up or down. Alternatively, touch and slide the knob to scroll through the list.
6)	[Total num of bases]	The number of base units displayed in the system configuration diagram. When the monitoring target is the LCPU, [Total num of blocks] is displayed.
7)	Message display	If communication with the connected PLC cannot be established, [Communication error] appears.
8)	Display list key (only for MELSEC iQ-R series)	Displays the detailed information of each module on the target base unit. The following shows the display items. [Error No.] Displays an error number (hexadecimal) for the module with the error. ■[Network info. (port 1)] Displays the network information of port 1. ■[Network info. (port 2)] Displays the network information of port 2. ■[IP address (port 1)] Displays the IP address of port 1. ■[IP address (port 2)] Displays the IP address of port 2. ■[Module sync. status] Displays the synchronization status between the modules. • In synchronization: [ON] • In preparation: [OFF] • Error: [ERR]
9)	[Legend] key	Displays the [Legend] window. For details, refer to the following. ☞ Page 217 [Legend] window
10)	[Product info. list] key	Displays the [Product information list] window. For details, refer to the following. ☞ Page 217 [Product information list] window
11)	[Save] key	Displays the [Create file] window. For details, refer to the following. ☞ Page 218 [Create file] window

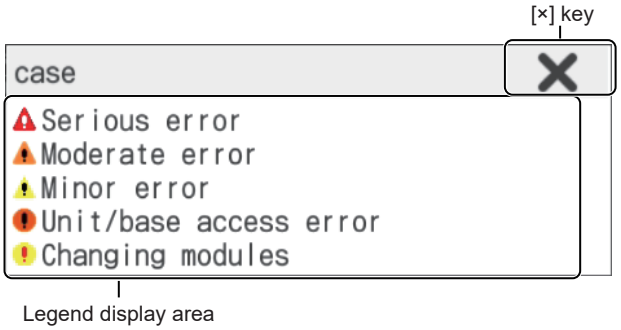
Item		Description
12)	CPU operation status (only for MELSEC iQ-R series)	Displays the operation status of each CPU. • Running: [RUN] • Stopped: [STOP] • Paused: [PAUSE] • Initializing: [INIT] • Resetting: [-]

Precautions

There are two types of system configuration diagrams: one for the system launcher and one for the add-on function.
When you select a module supported by the system launcher, the system configuration diagram for the system launcher appears.
When you select a module unsupported by the system launcher, and the system application (add-on function) supports displaying a system configuration diagram, the add-on function's diagram appears.
For the screen transitions in the system configuration diagram of the add-on function, refer to the add-on function used.
When the system application (add-on function) for the system launcher is not installed on the GOT, the system configuration diagram for the add-on function will appear even if a module supported by the system launcher is selected.

49.3.1 [Legend] window

Example) MELSEC iQ-R series



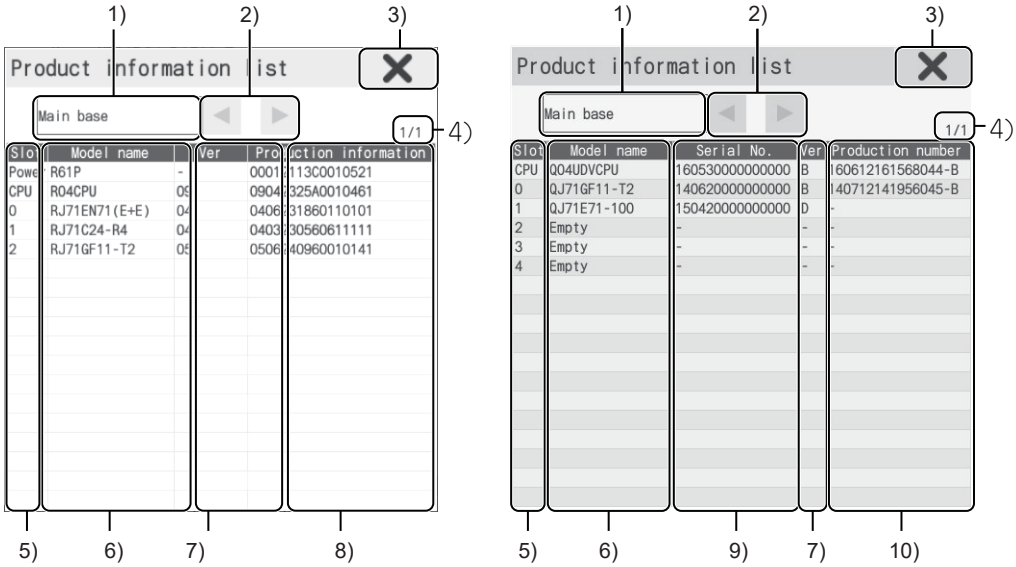
Item		Description
1)	[×] key	Exits the [Legend] window and returns the screen to the [System configuration] screen.
2)	Legend display area	Lists the descriptions of the icons appearing on the system configuration diagram.

49.3.2 [Product information list] window

Product information of the modules is listed.

For MELSEC-Q or MELSEC-L series, the power supply module is not displayed.

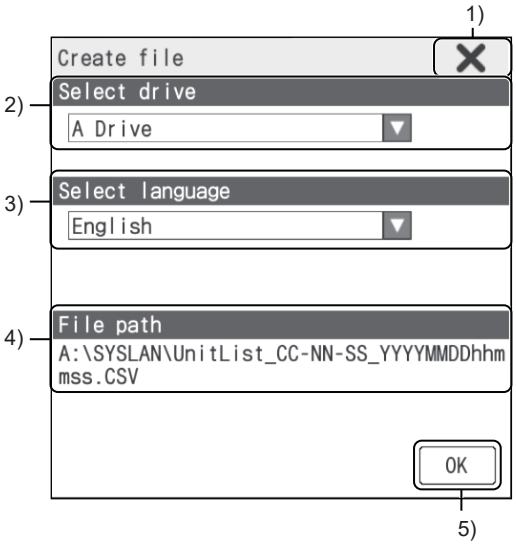
Information that cannot be acquired is displayed with [-].



Item		Description
1)	Base unit display area	Displays the selected base unit.
2)	Select base unit key	Switches the current base unit to the base unit in the upper or lower level.
3)	[×] key	Closes the [Product information list] window, and returns the screen to the system configuration screen.
4)	Level number	Displays the level of the selected base unit out of all base units.
5)	[Slot]	Displays the slot number of a module.
6)	[Model name]	Displays the model of a module.
7)	[Ver]	Displays the firmware version of a module.
8)	[Production information] (MELSEC iQ-R series)	Displays the production information of a module. For the RQ extension base unit, the firmware version and first five digits of the serial number are displayed.
9)	[Serial No.] (MELSEC-Q or MELSEC-L series)	Displays the serial number of a module.
10)	[Production number] (MELSEC-Q or MELSEC-L series)	Displays the production number of a module. When CPU No. 1 is a Universal model QCPU with a function version earlier than B01, [-] is displayed.

49.3.3 [Create file] window

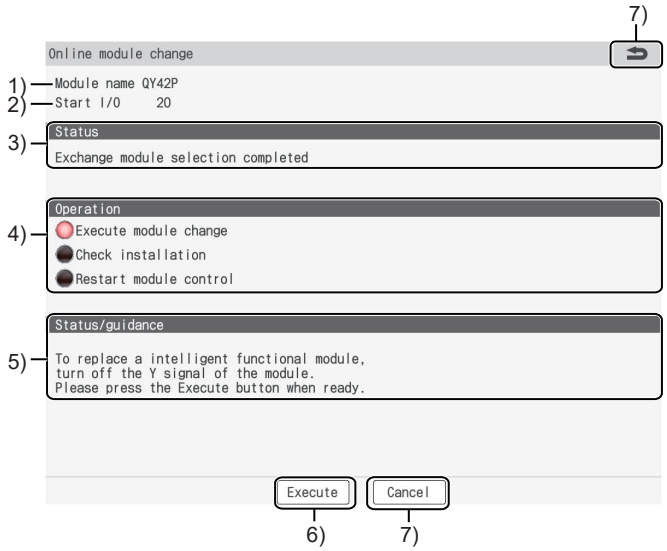
Product information of the modules is saved to a CSV file in the selected language on the selected drive.
The file is saved in Unicode with BOM.



Item		Description
1)	[×] key	Closes the [Create file] window, and returns the screen to the system configuration screen.
2)	[Select Drive]	Select a drive to save the CSV file. The [Create file] window displays accessible drives only. A folder named SYSLAN is automatically created in the selected drive.
3)	[Select language]	Select the language of the CSV file. The following shows selectable items. • [Japanese] • [English] • [Chinese (Simplified)] • [Chinese (Traditional)] • [Korean]
4)	[File Path]	Displays the path where a CSV file is to be saved. The file is saved to the drive selected in [Select drive]. The file is automatically named as shown below. If a file with the same name already exists, touch the [OK] key to display the [Checked] dialog. Selected drive SYSLAN UnitList_CC-NN-SS_YYYYMMDDhhmmss.CSV Channel No. Network No. Station No. Year Month Day Hour Minute Second
5)	[OK] key	Creates a CSV file.

49.4 [Online module change] screen

The following explains the structure of the [Online module change] screen and the function of the keys displayed on the screen.



Item		Description
1)	[Module name]	Displays the module name.
2)	[Start I/O]	Displays the module start I/O.
3)	[Status]	Displays the status of [Operation].
4)	[Operation]	Displays the items executed in the actual operation. The lamp of the item to be executed is on.
5)	[Status/guidance]	Displays the procedure or precautions for [Operation].
6)	[Execute] key	Executes the item whose lamp is on in [Operation].
7)	[Return] key/[Cancel] key	Exits the [Online module change] screen and returns the screen to the system configuration screen. Cancels the operation during the module change and returns the screen to the system configuration screen.

The following shows the procedure for online module change.

Operating procedure

1. Check the following items, and then touch the [Execute] key.

The message [Exchange module selection completed] is displayed in [Status].

The lamp of [Execute module change] is on in [Operation].

The Y signal of the target module is off.

2. The confirmation dialog for the module change appears.

Touch the [OK] key, and then check the following items.

The message [Module replaceable] is displayed in [Status].

The lamp of [Check installation] is on in [Operation].

To cancel the operation and return the screen to the system configuration screen, touch the return key or [Cancel] key and then touch the [OK] button in a dialog appearing immediately after the cancellation.

3. Replace the target module, and then touch the [Execute] key.

4. When the module is correctly mounted, the following appears.

The message [Module change completed] is displayed in [Status].

The lamp of [Restart module control] is on in [Operation].

To cancel the operation and return the screen to the system configuration screen, touch the return key or [Cancel] key and then touch the [OK] button in a dialog appearing immediately after the cancellation.

5. Touch the [Execute] key. When the module control is properly restarted, the screen returns to the system configuration screen.

50 [Sequence program monitor (ladder display)]

GT37 SoftGOT3000

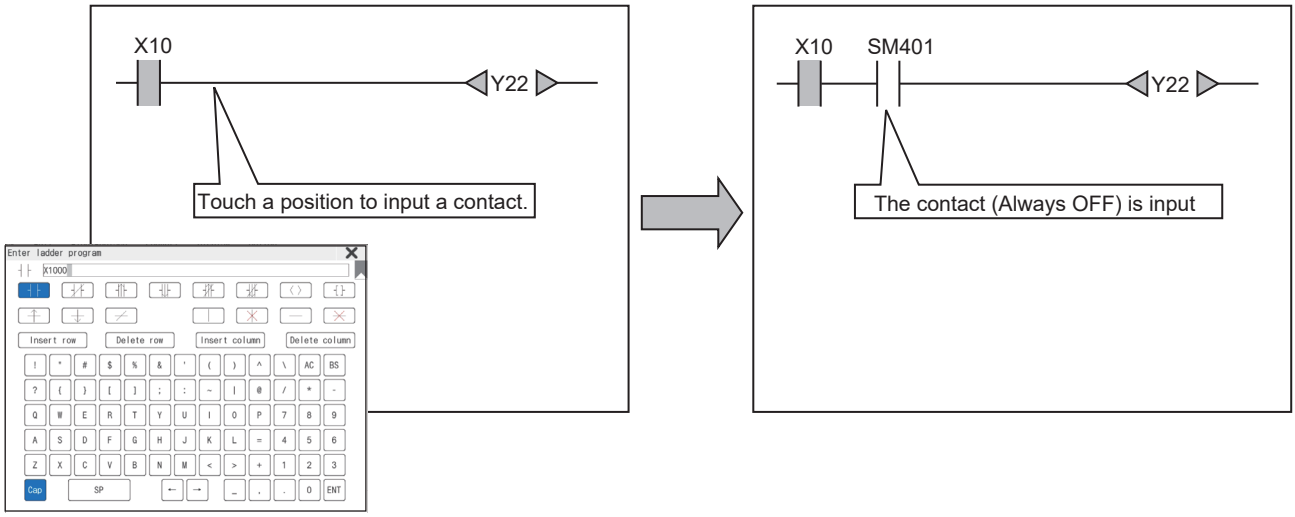
This chapter describes the following functions.

Function	Target CPU	Remarks
Sequence program monitor (Q/L ladder)	QCPU, LCPU	The explanation common to the functions shown on the left is referred to as the explanation of the sequence program monitor (ladder display).
Sequence program monitor (iQ-R/iQ-L ladder)	RCPU	
Sequence program monitor (iQ-F ladder)	FX5CPU	

The sequence program monitor (ladder display) allows you to monitor and edit a sequence program of a controller in ladder format on the GOT, as well as change the current device value.
The following shows features of the sequence program monitor (ladder display).

Editing sequence programs on the GOT

Sequence programs are editable in ladder format.



The following screens are displayed with the sequence program monitor (ladder display).

[PLC Read] screen

☞ Page 257 [PLC Read] screen

[Ladder monitor] screen

☞ Page 263 [Ladder monitor] screen

[Ladder editor] screen

☞ Page 268 [Ladder editor] screen

Switching display formats, displaying device comments, and switching languages

The following are available.

Switching whether to display or hide device comments

Switching the language of sequence program file names, comments, etc.

■Switching the displayed device comment

Whether to display or hide device comments used in sequence programs can be switched.

■Switching the language (for the sequence program monitor (Q/L ladder))

Preparing a comment file created in either of the following character codes enables switching of the character code of the header or file comment when the language is changed in the utility.

SJIS

GB

Big5

KS

ASCII

When comment files created in each character code are stored on a data storage, you can switch the language of the comments, regardless of the language selected in the utility.

■Switching the language (for the sequence program monitor (iQ-R/iQ-L ladder))

When the system language is switched in the utility, the comment language is switched accordingly.

When comment files in different languages are written to an RCPU, you can switch the language to display comments in, regardless of the language selected in the utility.

■Switching languages (for the sequence program monitor (iQ-F ladder))

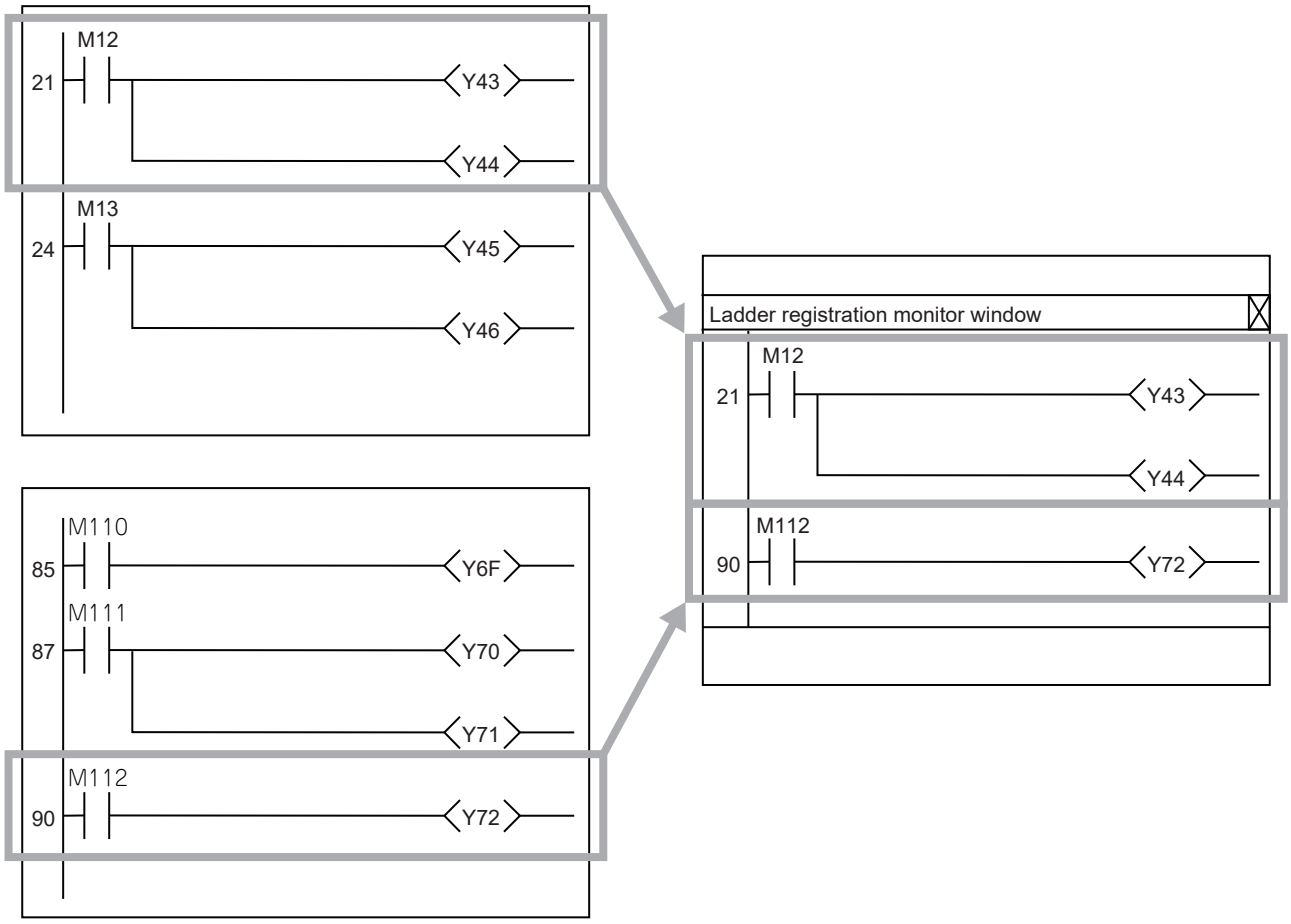
When the system language is switched in the utility, the comment language is switched accordingly.

When comment files created in different languages are written to an FX5CPU, you can switch the language comments are displayed in, regardless of the language selected in the utility.

Collating and displaying registered ladder blocks only

In the [Ladder registration monitor] window, only registered ladder blocs can be collected and displayed.

☞ Page 267 [Ladder registration monitor] window



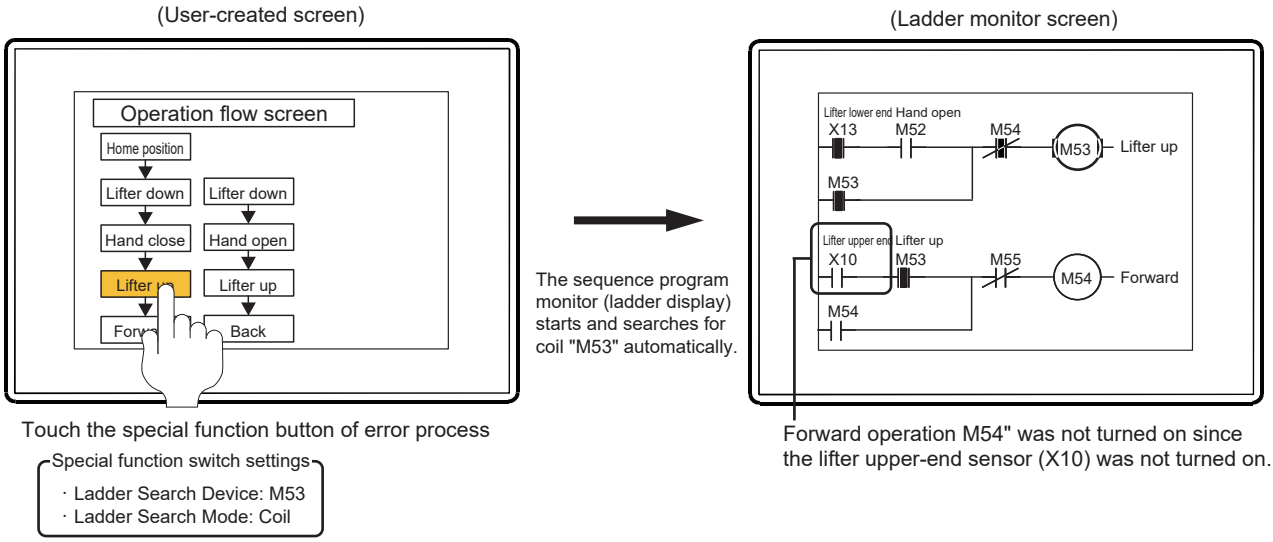
Enhanced interaction with objects (one-touch ladder jump function)

■Interaction with the special function switch

Automatic PLC read or automatic device search can be executed at startup of the sequence program monitor (ladder display) by the following method. Place a special function switch on a user-created screen, specify the search file and search device in the special function switch setting, and then touch the special function switch.

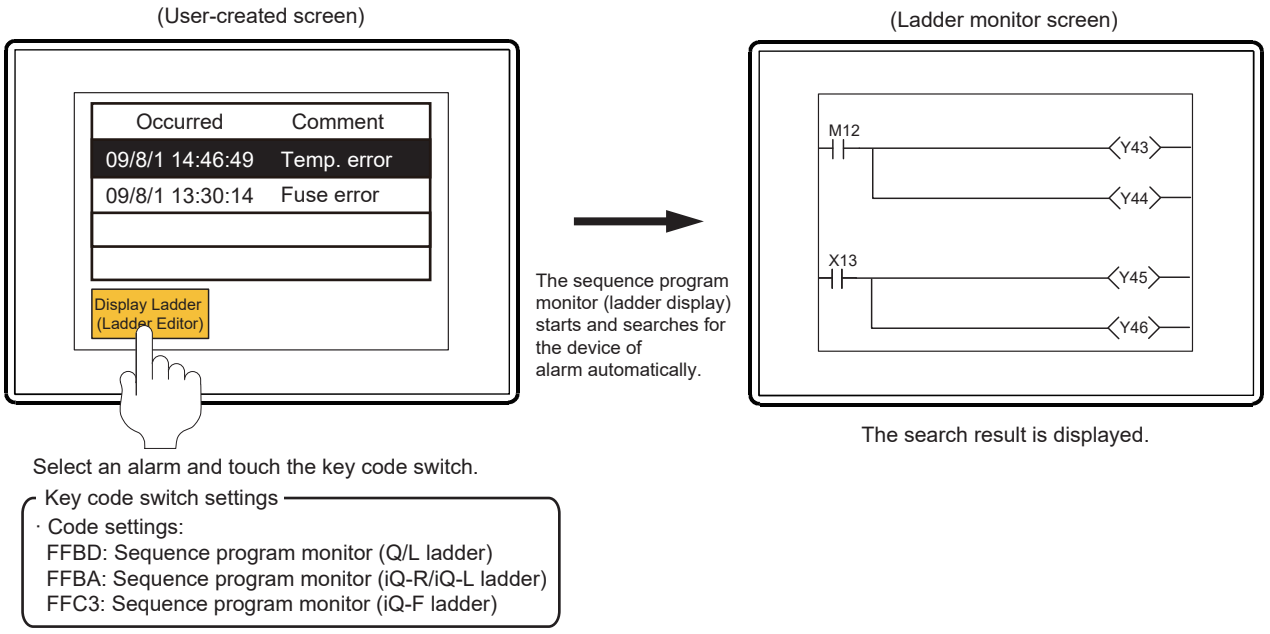
Even operators unfamiliar with the equipment inside can reliably identify the cause of a malfunction by simple operations, reducing time to stop the error.

Example) Coil searching by touching a special function switch



■Interaction with the alarm display (user) or simple alarm display

The sequence program monitor (ladder display) can be started to search for a device that has an alarm using the following method. Select an alarm in the alarm display, and touch a key code switch (Display ladder (Ladder Editor)).



PART 7

Reading program files and comment files

The program files and comment files read from the RCPU, FX5CPU, QCPU, or LCPU are stored in a data storage mounted on the GOT. Therefore, the startup time and the read time are shortened from the next startup.

Comment files written to an SD card with GX Works3

The comment files written to an SD card with GX Works3 can be used for displaying device comments by storing them on the data storage in the GOT.

50.1 Sequence program monitor (ladder display) specifications

☞ Page 225 System configuration
☞ Page 230 Devices and ranges that can be monitored

50.1.1 System configuration

This section explains the system configuration of the sequence program monitor (ladder display).
For connection type settings and precautions regarding the communication unit, cable, and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)

Target controller

Controller		Model
RCPU*10*11*12*13*14*15		R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU*1, R120CPU*1, R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU*1, R120ENCPU*1, R08PCPU*5, R16PCPU*5, R32PCPU*1*5, R120PCPU*1*5, R08SFCPU*6*7*9, R16SFCPU*6*7*9, R32SFCPU*1*6*7*9, R120SFCPU*1*6*7*9
FX5CPU*16		FX5U, FX5UC, FX5UJ*17, FX5S*18*19
QCPU (Q mode)	Basic model	Q00JCPU, Q00CPU, Q01CPU
	High Performance model	Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU
	Universal model*2	Q00UJCPU, Q00UJCPU-S8, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU*1, Q100UDEHCPU*1, Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU
LCPU		L02SCPU, L02SCPU-P, L02CPU, L02CPU-P, L06CPU, L06CPU-P, L26CPU, L26CPU-P, L26CPU-BT, L26CPU-PBT
Motion CPU (Q series)*3		Q170MCPU, Q170MCPU-S1, Q170MSCPU, Q170MSCPU-S1
CNC C70*4		Q173NCCPU
CNC C80*8		R16NCCPU-S1

*1 A sequence program that has 260k steps or more cannot be read.
*2 To write a sequence program containing the following instructions to a PLC CPU, the PLC CPU must have a serial number starting with 10102 or later in the first 5 digits.

Instruction
DBKCMP=(P), DBKCMP<>(P), DBKCMP>(P), DBKCMP>=(P), DBKCMP<(P), DBKCMP<=(P), DBK+(P), DBK-(P), DFMOV(P) SFTBR(P), SFTBL(P), SFTWR(P), SFTWL(P), MEAN(P), DMEAN(P), STRINS(P), STRDEL(P), POW(P), POWD(P), LOG10(P), LOG10D(P), SCL(P), DSCL(P), SCL2(P), DSCL2(P), LDDT=, ANDDT=, ORDT=, LDDT<>, ANDDT<>, ORDT<>, LDDT>, ANDDT>, ORDT>, LDDT>=, ANDDT>=, ORDT>=, LDDT<, ANDDT<, ORDT<, LDDT<=, ANDDT<=, ORDT<=, LDTM=, ANDTM=, ORTM=, LDTM<>, ANDTM<>, ORTM<>, LDTM>, ANDTM>, ORTM>, LDTM<=, ANDTM<=, ORTM<=, LDTM<, ANDTM<, ORTM<, LDTM>=, ANDTM>=, ORTM>=, LDPI, LDFI, ANDPI, ANDFI, ORPI, ORFI, CCOM(P)

PART 7

A sequence program containing the following instruction cannot be written to a PLC CPU.

Instruction
TYPERD

*3 Only the PLC CPU area (CPU No.1) can be monitored.
*4 The function version must be A2 or later.
*5 This model can be monitored only when its operation mode is the process mode.
*6 The safety program of the PLC CPU cannot be edited.
*7 The device test is not supported.
*8 The ladder editor and the device test are not supported.
*9 If the firmware version is 11 or earlier, the safety CPU cannot read the safety program while monitoring a safety program.
*10 The following instructions cannot be displayed.

Instruction
LD=_U, LD<>_U, LD>_U, LD>=_U, LD<_U, LD<=_U, AND=_U, AND<>_U, AND>_U, AND>=_U, AND<_U, AND<=_U, OR=_U, OR<>_U, OR>_U, OR>=_U, OR<_U, OR<=_U, LDD=_U, LDD<>_U, LDD>_U, LDD>=_U, LDD<_U, LDD<=_U, ANDD=_U, ANDD<>_U, ANDD>_U, ANDD>=_U, ANDD<_U, ANDD<=_U, ORD=_U, ORD<>_U, ORD>_U, ORD>=_U, ORD<_U, ORD<=_U, DI, EI, COM, M.DDRD, MP.DDRD, M.DDWR, MP.DDWR, M.GINT, MP.GINT, M.BITWR, MP.BITWR, M.CHGA, MP.CHGA, M.CHGAS, MP.CHGAS, M.CHGT, MP.CHGT, M.CHGV, MP.CHGV, M.CHGVS, MP.CHGVS, M.MCNST, MP.MCNST, M.SFCS, MP.SFCS, QMSEND

*11 The following instructions are available for the RnPCPU only.

Instruction
S.IN, S.OUT1, S.OUT2, S.MOUT, S.DUTY, S.BC, S.PSUM, S.PID, S.2PID, S.PIDP, S.SPI, S.IPD, S.BPI, S.R, S.PHPL, S.LLAG, S.I, S.D, S.DED, S.HS, S.LS, S.MID, S.AVE, S.LIMIT, S.VLMT1, S.VLMT2, S.ONF2, S.ONF3, S.DBND, S.PGS, S.SEL, S.BUMP, S.AMR, S.FG, S.IFG, S.FLT, S.SUM, S.TPC, S.ENG, S.IENG, S.ADD, S.SUB, S.MUL, S.DIV, S.SQR, S.ABS, S.>, S.<, S.=, S.>=, S.<=, S.AT1

*12 The following instructions are not available for the RnSFCPU.

Instruction
LD Sn/BLm\Sn, LDI Sn/BLm\Sn, AND Sn/BLm\Sn, ANI Sn/BLm\Sn, OR Sn/BLm\Sn, ORI Sn/BLm\Sn, LD BLm, LDI BLm, AND BLm, ANI BLm, OR BLm, ORI BLm, MOV K4Sn/BLm\K4Sn, MOVP K4Sn/BLm\K4Sn, DMOV K4Sn/BLm\K4Sn, DMOVP K4Sn/BLm\K4Sn, BMOV K4Sn/BLm\K4Sn, BMOVP K4Sn/BLm\K4Sn, SET BLm, RST BLm, PAUSE BLm, RSTART BLm, SET Sn/BLm\Sn, RST Sn/BLm\Sn, BRSET, D.DDRD, DP.DDRD, D.DDWR, DP.DDWR, D.GINT, DP.GINT

*13 The following instructions are not available for the R00CPU.

Instruction
SP.FREAD, SP.FWRITE, LOGTRG, LOGTRGR

*14 The following instructions are not available for the R00CPU, R01CPU, and R02CPU.

Instruction
DBOPEN, DBOPENP, DBCLOSE, DBCLOSEP, DBINSERT, DBINSERTP, DBUPDATE, DBUPDATEP, DBSELECT, DBSELECTP, DBDELETE, DBDELETEP, DBIMPORT, DBIMPORTP, DBEXPORT, DBEXPORTP, DBTRANS, DBTRANSP, DBCOMMIT, DBCOMMITP, DBROLBAK, DBROLBAKP

*15 The following instructions are not available for the RnSFCPU and RnPCPU.

Instruction
CMP, CMPP, CMP_U, CMPP_U, DCMP, DCMPP, DCMP_U, DCMPP_U, ZCP, ZCPP, ZCP_U, ZCPP_U, DZCP, DZCPP, DZCP_U, DZCPP_U, SFTR, SFTRP, SFTL, SFTLP, WSFR, WSFRP, WSFL, WSFLP, SMOV, SMOVP, DSWAP, DSWAPP, ECMP, ECMPP, EDCMP, EDCMPP, EZCP, EZCPP, EDZCP, EDZCPP, CCD, CCDP, SERMM, SERMMP, DSERMM, DSERMMP, BON, BONP, DBON DBONP, SQRT, SQRTP, DSQRT, DSQRTP, CRC, CRCP, TCMP, TCMPP, TZCP, TZCPP, HOURM, DHOURM, SP.SLMPSND, SP.FTPPUT, SP.FTPGET, PID

*16 The following instructions cannot be displayed.

Instruction
LD=_U, LD<>_U, LD>_U, LD>=_U, LD<_U, LD<=_U, AND=_U, AND<>_U, AND>_U, AND>=_U, AND<_U, AND<=_U, OR=_U, OR<>_U, OR>_U, OR>=_U, OR<_U, OR<=_U, LDD=_U, LDD<>_U, LDD>_U, LDD>=_U, LDD<_U, LDD<=_U, ANDD=_U, ANDD<>_U, ANDD>_U, ANDD>=_U, ANDD<_U, ANDD<=_U, ORD=_U, ORD<>_U, ORD>_U, ORD>=_U, ORD<_U, ORD<=_U, TRAN (for FX5U and FX5UC), RBFM (for FX5UJ and FX5S), WBFM (for FX5UJ and FX5S)

*17 The following instructions are not available for the FX5UJ.

Instruction
$MOV_WS, $MOVP_WS, WS2SJIS, WS2SJISP, SJIS2WS, SJIS2WSP, SJIS2WSB, SJIS2WSBP, LD S□/BL□\S□, LDI S□/BL□\S□, AND S□/BL□\S□, ANI S□/BL□\S□, OR S□/BL□\S□, ORI S□/BL□\S□, LD BL□, LDI BL□, AND BL□, ANI BL□, OR BL□, ORI BL□, MOV KnS□/BL□\KnS□, MOVP KnS□/BL□\KnS□, DMOV KnS□/BL□\KnS□, DMOVP KnS□/BL□\KnS□, BMOV KnS□/BL□\KnS□, BMOVP KnS□/BL□\KnS□, SET BL□, RST BL□, SET S□/BL□\S□, RST S□/BL□\S□, OUT S□/BL□\S□, ZRST S□/BL□\S□, ZRSTP S□/BL□\S□, TRAN, SP.FDELETE, SP.FCOPY, SP.FMOVE, SP.FRENAME, SP.FSTATUS, SP.FTPGET, G.SLMPSND, GP.SLMPSND, G.CCPASETX, GP.CCPASETX

*18 The following instructions are not available for the FX5S.

Instruction
FROM, FROMP, DFROM, DFROMP, TO, TOP, DTO, DTOP, FROMD, FROMDP, DFROMD, DFROMDP, TOD, TODP, DTOD, DTODP, GP.READ, GP.SREAD, GP.WRITE, GP.SWRITE, GP.SEND, GP.RECV, G.RECVS, G.CCPASET, GP.CCPASET, G.UINI, GP.UINI, G.ABRST1, G.ABRST2, GP.PSTRT1, GP.PSTRT2, GP.TEACH1, GP.TEACH2, GP.PFWRT, GP.PINIT, GP.OPEN, GP.CLOSE, GP.SOCRCV, GP.SOCSND, LD S□/BL□\S□, LDI S□/BL□\S□, AND S□/BL□\S□, ANI S□/BL□\S□, OR S□/BL□\S□, ORI S□/BL□\S□, LD BL□, LDI BL□, AND BL□, ANI BL□, OR BL□, ORI BL□, MOV KnS□/BL□\KnS□, MOVP KnS□/BL□\KnS□, DMOV KnS□/BL□\KnS□, DMOVP KnS□/BL□\KnS□, BMOV KnS□/BL□\KnS□, BMOVP KnS□/BL□\KnS□, SET BL□, RST BL□, SET S□/BL□\S□, RST S□/BL□\S□, OUT S□/BL□\S□, ZRST S□/BL□\S□, ZRSTP S□/BL□\S□, TRAN, G.SLMPSND, GP.SLMPSND, G.CCPASETX, GP.CCPASETX

*19 An SD card slot is available for FX5SCPU as an option.
If you use an SD card, insert it into the SD card slot.

Connection type

This function can be used for the following connection types.

(○: Available, ×: Unavailable)

Function		Connection type between GOT and controller						
Name	Description	Bus connection*1	Direct CPU connection (serial)*2	Serial communication connection	Ethernet connection*7	MELSECNET/H connection*1, MELSECNET/10 connection*1*3	CC-Link IE controller connection*1*4, CC-Link IE Field connection*5*6	CC-Link connection (Intelligent device station)
Sequence program monitor (ladder display)	Allows you to monitor or edit sequence programs in ladder format and change current device values	○	○	○	○	○	○	○

*1 The LCPU does not support the connection type.
*2 When connecting the GOT with the LCPU, use L6ADP-R2.
*3 For the MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71LP21G, and QJ71BR11) with function version B or later.
*4 This connection type indicates the CC-Link IE Controller Network connection.
*5 This connection type indicates the CC-Link IE Field Network connection.
*6 This connection type cannot be used to connect a Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU or Q25HCPU.
*7 Ladder editor cannot be used when using CC-Link IE field network Ethernet adapter.

System application (add-on function)

■Required system applications (add-on functions)

For the required system applications (add-on functions), refer to the following.

Function	Required system application (add-on function)
Sequence program monitor (Q/L ladder)	[Sequence Program Monitor(Q/L ladder)]
	[GOT Platform Library]
	[GOT Function Expansion Library]
Sequence program monitor (iQ-R/iQ-L ladder)	[Sequence Program Monitor(iQ-R/iQ-L Ladder)]
	[GOT Platform Library]
	[GOT Function Expansion Library]
	[GOT Function Expansion Library(Additional/MELSEC iQ-R/MELSEC iQ-L)]
Sequence program monitor (iQ-F ladder)	[Sequence Program Monitor(iQ-F ladder)]
	[GOT Platform Library]
	[GOT Function Expansion Library]
	[GOT Function Expansion Library(Additional/MELSEC iQ-F)]

■Installing system applications (add-on functions)

Write the package data that contains the system applications (add-on functions) for the sequence program monitor (ladder display) to the GOT.

For the communication method with the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

To install a system application (add-on function) on the GOT, enough space in the user area is required.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Required hardware

The following hardware is required.

Required hardware
Data storage (SD card, USB memory, etc.)

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

List of Validated Devices for the GOT3000 Series (GOT-A-0233)

Precautions

Do not perform the following operations on the GOT while the sequence program monitor (ladder display) is running.
Doing so may cause the stored data to be deleted, or the sequence program monitor (ladder display) to run improperly.
Opening the SD card cover (when an SD card is used)
Installing/removing the data storage (SD card or USB memory)

Usable hardware

A USB mouse can be used.
For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

List of Validated Devices for the GOT3000 Series (GOT-A-0233)

50.1.2 Devices and ranges that can be monitored

The device range varies depending on the CPU to be used.

When RCPU is connected

(○: Possible, ×: Not possible)

Device[*1]	Device range	Program display	Device monitor display	Search operation	Device comment display
Input	RCPU: X0 to X2FFF, DX0 to DXFFF CNC C80: X0 to X1FFF	○	○	○	○
Output	RCPU: Y0 to Y2FFF, DY0 to DYFFF CNC C80: Y0 to Y1FFF	○	○	○	○
Internal relay	Rn(EN)CPU: M0 to M161882111 RnPCPU: M0 to M94773247 RnSFCPU: M0 to M94674943 CNC C80: M0 to M61439	○	○	○	○
Latch relay	RCPU: L0 to L32767 CNC C80: L0 to L1023	○	○	○	○
Link relay	Rn(EN)CPU: B0 to B9A61FFF RnPCPU: B0 to B5A61FFF RnSFCPU: B0 to B5A49FFF CNC C80: B0 to BDFFF	○	○	○	○
Timer	Rn(EN)CPU: T0 to T8993439 RnPCPU: T0 to T5265151 RnSFCPU: T0 to T5259711 CNC C80: T0 to T2047	○	○	○	○
Long timer	Rn(EN)CPU: LT0 to LT2529407 RnPCPU: LT0 to LT1480831 RnSFCPU: LT0 to LT1479295	○	○	○	○
Retentive timer	Rn(EN)CPU: ST0 to ST8993439 RnPCPU: ST0 to ST5265151 RnSFCPU: ST0 to ST5259711 CNC C80: ST0 to ST127	○	○	○	○
Long retentive timer	Rn(EN)CPU: LS0 to LS2529407 RnPCPU: LS0 to LS1480831 RnSFCPU: LS0 to LS1479295	○	○	○	○
Counter	Rn(EN)CPU: C0 to C8993439 RnPCPU: C0 to C5265151 RnSFCPU: C0 to C5259711 CNC C80: C0 to C512	○	○	○	○
Long counter	Rn(EN)CPU: LC0 to LC4761215 RnPCPU: LC0 to LC2787391 RnSFCPU: LC0 to LC2784543	○	○	○	○
Data register	Rn(EN)CPU: D0 to D10117631 RnPCPU: D0 to D5923327 RnSFCPU: D0 to D5917183 CNC C80: D0 to D8191	○	○	○	○
Link register	Rn(EN)CPU: W0 to W9A61FF RnPCPU: W0 to W5A61FF RnSFCPU: W0 to W5A49FF CNC C80: W0 to W2FFF	○	○	○	○
Annunciator	RCPU: F0 to F32767 CNC C80: F0 to F2047	○	○	○	○
Edge relay	RCPU: V0 to V32767 CNC C80: V0 to V511	○	×	○	○
File register	Rn(EN)CPU: R0 to 32767, ZR0 to ZR10027007 RnPCPU: R0 to R32767, ZR0 to ZR5832703 RnSFCPU: R0 to R32767, ZR0 to ZR5832703 CNC C80: R0 to R32767	○	○	○	○

Device[*1]	Device range	Program display	Device monitor display	Search operation	Device comment display
Link special relay	Rn(EN)CPU: SB0 to SB9A61FFF RnPCPU: SB0 to SB5A61FFF RnSFCPU: SB0 to SB5A49FFF CNC C80: SB0 to SB3FF	○	○	○	○
Link special register	Rn(EN)CPU: SW0 to SW9A61FF RnPCPU: SW0 to SW5A61FF RnSFCPU: SW0 to SW5A49FF CNC C80: SW0 to SW3FF	○	○	○	○
Step relay	RCPU: S0 to S16383	○	×	○	×
Index register	RCPU: Z0 to Z23	○	○	○	×
Long index register	RCPU: LZ0 to LZ11	○	○	○	×
Special relay	RCPU: SM0 to SM4095 CNC C80: SM0 to SM4095	○	○	○	○
Special register	RnSFCPU: SD0 to SD4095 CNC C80: SD0 to SD4095	○	○	○	○
Function input	RCPU: FX0 to FXF	○	×	○	×
Function output	RCPU: FY0 to FYF	○	×	○	×
Function register	RCPU: FD0 to FD4	○	×	○	×
Link direct device	RCPU: J□□\□□	○	×	×	○
Module access device	RCPU: U□□\□□, U3En□□\□□	○	×	×	○
CPU buffer memory access device	RCPU: U3E0 to 3\G0 to 268435455	○	○[*3]	○[*4]	○
CPU buffer memory access device (fixed cycle communication area)	RCPU: U3E0 to 3\HG0 to 12287	○	○	○[*4]	○
Nesting	RCPU: N0 to N14	○	×	×	×
Pointer	RCPU: P0 to P32767	○	×	○[*2]	○
Interrupt pointer	RCPU: I0 to I1023	○	×	○[*2]	○
SFC block device	RCPU: BL0 to BL319, BL□□\S□□	○	×	○	○
Network No. specification device	RCPU: J0 to J255	○	×	×	○
I/O No. specification device	RCPU: U0 to U1FF, U3E0 to U3E3	○	×	×	○
Module refresh device	RCPU: RD0 to RD1048575	○	○	○	○
Safety input relay	RnSFCPU: SA\X0 to SA\X2FFF	○	○	○	○
Safety output relay	RnSFCPU: SA\Y0 to SA\Y2FFF	○	○	○	○
Safety link relay	RnSFCPU: SA\B0 to SA\B9BFFF	○	○	○	○
Safety internal relay	RnSFCPU: SA\M0 to SA\M638975	○	○	○	○
Safety timer	RnSFCPU: SA\T0 to SA\T35487	○	○	○	○
Safety counter	RnSFCPU: SA\C0 to SA\C35487	○	○	○	○
Safety retentive timer	RnSFCPU: SA\ST0 to SA\ST35487	○	○	○	○
Safety special relay	RnSFCPU: SA\SM0 to SA\SM4095	○	○	○	○
Safety data register	RnSFCPU: SA\D0 to SA\D39935	○	○	○	○
Safety special register	RnSFCPU: SA\SD0 to SA\SD4095	○	○	○	○
Safety link register	RnSFCPU: SA\W0 to SA\W9BFF	○	○	○	○

*1 For applicable devices and device ranges, refer to manual of the PLC CPU.
*2 Device cannot be replaced.
*3 The range of the monitoring-supported devices for the sequence program monitor (iQ-R/iQ-L ladder) is U3E0 to 3\G524287 (number of devices: 512K).
*4 Searches for the device that exactly matches the specified device.

Precautions

■Files and programs that cannot be displayed on the ladder display

The ladder display does not support the following files and programs.

- File protected with a security key
- File protected with a block password
- Ladder block that includes structured text or inline structured text
- Files that include the output instruction using one of the following labels

Timer, retentive timer, counter, long timer, long retentive timer, long counter

■Programs that cannot be edited

The following programs cannot be edited with the ladder editor.

- Program consisting of multiple program blocks
- Program other than the ladder program
- Program using a label
- Program using an inline ST
- Program using an MC/MCR instruction
- Program using a statement that exceeds 64 one-byte characters
- Program using a character string constant that exceeds 32 one-byte characters
- Program using a note that exceeds 32 one-byte characters
- Program using a peripheral statement or note
- Program using a line feed in a statement, note, or character string constant
- Program using the special character ($") in a character string constant
- Safety program
- Program using an FB or FUN
- Program consisting of ladder blocks with 25 lines or more

Even if a ladder block is displayed with 24 lines or less on GX Works3, the block may be displayed with 25 lines or more on the GOT.

■Unreadable programs

The sequence program monitor (iQ-R/iQ-L ladder) cannot read the sequence program files that use notes for the instructions starting with "M." or "MP." to access other CPU modules.

■Display of programs using FBs or FUNs

The ladder monitor screen displays programs that use FBs or FUNs, while the programs look differently in GX Works3.
The programs contained in FBs or FUNs are not displayed.
Where an FB or FUN is used, a function block call statement or function call statement appears.
The following shows FBs or FUNs that are displayed as a call instruction.

- Subroutine type function block (created by users)
- Standard function blocks
- Function block and function included in the application library or MELSOFT Library (Sample library)
- Function (created by users)
- Standard functions

■Display of programs using labels

The sequence program monitor (iQ-R/iQ-L ladder) does not display label names.

■Available constants

Only the constants available for QCPU are editable with the sequence program monitor (iQ-R/iQ-L ladder).
The constants available for QCPU are as follows.

- K: Decimal constant
- H: Hexadecimal constant
- E: Real number
- "": Character string

When GX Works3 displays a ladder program using constants other than the above, the constants are displayed as they are.
If you edit the constants with the sequence program monitor (R ladder) and then GX Works3 reads the program, the display and settings of the constants are changed to those available for QCPU.

■When $" is included in a character string constant

When $" is included in a character string constant, $" and subsequent characters are not displayed on the ladder monitor screen and the ladder editor screen.

■When a line feed character is included

When a line feed character is included in a note or statement, the line feed character and subsequent characters are not displayed on the ladder editor screen.

■When monitoring the RnSFCPU with enhanced vulnerability protection

When the RnSFCPU (firmware version 27 or later) and GX Works3 (Version 1.087R or later, or Version 1.325P or earlier) are used for communications with enhanced vulnerability countermeasures, the sequence program monitor (iQ-R/iQ-L ladder) cannot communicate with the RnSFCPU.
Before using the RnSFCPU, change the settings to disable communications with enhanced vulnerability protection.
For details, refer to the following.
📖GX Works3 Operating Manual

When FX5CPU is connected

(○: Possible, ×: Not possible)

Device*1	Device range	Program display	Device monitor display	Search operation	Device comment display
Input	X0 to 1777, DX0 to 1777	○	○	○	○
Output	Y0 to 1777, DY0 to 1777	○	○	○	○
Internal relay	M0 to 32767	○	○	○	○
Latch relay	L0 to 32767	○	○	○	○
Link relay	B0 to 7FFF	○	○	○	○
Timer	T0 to 1023	○	○	○	○
Retentive timer	ST0 to 1023	○	○	○	○
Counter	C0 to 1023	○	○	○	○
Long counter	LC0 to 1023	○	○	○*3	○
Data register	D0 to 7999	○	○	○	○
Link register	W0 to 7FFF	○	○	○	○
Annunciator	F0 to 32767	○	○	○	○
File register	R0 to 32767	○	○	○	○
Link special relay	SB0 to 7FFF	○	○	○	○
Link special register	SW0 to 7FFF	○	○	○	○
Step relay*4*5	S0 to 4095	○	×	○	×
Index register	Z0 to 23	○	○	○	×
Long index register	LZ0 to 11	○	○	○*3	×
Special relay	SM0 to 9999	○	○	○	○
Special register	SD0 to 11999	○	○	○	○
Module access device	U□□\□□	○	×	×	○
Nesting	N0 to 14	○	×	×	×
Pointer	P0 to 4095	○	×	○*2	○
Interrupt pointer	I0 to 177	○	×	○*2	○
SFC block device	BL0 to BL31	○	×	○	○
Step relay (block)	BL0\S0 to BL31\S511	○	×	○	○

*1 For applicable devices and device ranges, refer to manual of the PLC CPU.
*2 Device cannot be replaced.
*3 Searches for the device that exactly matches the specified device.
*4 When [SFC] is set to [Use] in the SFC program setting of the CPU parameter, the devices can only be used for SFC control instructions. For details, refer to the following.
📖MELSEC iQ-F FX5 Programming Manual (Program Design)
*5 The following shows the instructions restricted when the step relay (S) is used.

Instruction		Instruction name	Restrictions on the display	Editing restrictions
Output instruction	Out (except for the timer, counter, and annunciator)	OUT	[OUT Sn] is displayed. "[ ]" indicates the conductive status.	-
Contact instruction	Pulse operation start Pulse series connection Pulse parallel connection	LDP, LDF, ANDP, ANDF, ORP, ORF	When the program is editable, the ladder block that contains instructions displays only the first step number of the ladder block as an error block. When a step relay (S) is used for an instruction, the step relay (S) is not targeted for a device search.	Programs cannot be edited using the step relay (S).
	Pulse NOT operation start Pulse NOT series connection Pulse NOT parallel connection	LDPI, LDFI, ANDPI, ANDFI, ORPI, ORFI		
Relational operation instruction	Comparing 16-bit binary data	LD□, AND□, OR□		
	Comparing 32-bit binary data	LDD□, ANDD□, ORD□		
Structuring instruction	FOR to NEXT	FOR	When the program is editable, the ladder block that contains instructions displays only the first step number of the ladder block as an error block. For the programs that cannot be edited, the display differs depending on the ladder structure.	

Instruction		Instruction name	Restrictions on the display	Editing restrictions
Master control instruction	Setting of the master control instruction	MC	When a step relay (S) is used for an instruction, the step relay (S) is not targeted for a device search.	-

Precautions

■Files and programs that cannot be displayed on the ladder display

The ladder display does not support the following files and programs.

- File protected with a security key
- File protected with a block password
- Ladder block that includes structured text or inline structured text
- Files that include the output instruction using one of the following labels

Timer, retentive timer, counter, long counter

■Programs that cannot be edited

The following programs cannot be edited with the ladder editor.

- Program consisting of multiple program blocks
- Program other than the ladder program
- Program using a label
- Program using an inline ST
- Program using an MC/MCR instruction
- Program using a statement that exceeds 64 one-byte characters
- Program using a character string constant that exceeds 32 one-byte characters
- Program using a note that exceeds 32 one-byte characters
- Program using a peripheral statement or note
- Program using a line feed in a statement, note, or character string constant
- Program using the special character ($") in a character string constant
- Program using an FB or FUN
- Program consisting of ladder blocks with 25 lines or more

Even if a ladder block is displayed with 24 lines or less on GX Works3, the block may be displayed with 25 lines or more on the GOT.

■Display of programs using FBs or FUNs

The ladder monitor screen displays programs that use FBs or FUNs, while the programs look differently in GX Works3.

The programs contained in FBs or FUNs are not displayed.

Where an FB or FUN is used, a function block call statement or function call statement appears.

The following shows FBs or FUNs that are displayed as a call instruction.

- Function blocks (created by users, user library) *1
- Standard function blocks
- Module function blocks *1
- Function blocks and functions included in the application library or MELSOFT Library (Sample library) *1
- Functions (created by users, user library)
- Standard functions

*1 For a macro type, the function block is displayed by selecting whether to display the program that uses the function block.
For details, refer to the following.
☞ Page 262 Displaying programs in the sequence program monitor

■Display of programs using labels

The sequence program monitor (iQ-F ladder) does not display label names.

■Available constants

Only the constants available for QCPU are editable with the sequence program monitor (iQ-F ladder).

The constants available for QCPU are as follows.

- K: Decimal constant
- H: Hexadecimal constant
- E: Real number
- "": Character string

When GX Works3 displays a ladder program using constants other than the above, the constants are displayed as they are.

If you edit the constants with the sequence program monitor (R ladder) and then GX Works3 reads the program, the display and settings of the constants are changed to those available for QCPU.

■When $" is included in a character string constant

When $" is included in a character string constant, $" and subsequent characters are not displayed on the ladder monitor screen and the ladder editor screen.

■When a line feed character is included

When a line feed character is included in a note or statement, the line feed character and subsequent characters are not displayed on the ladder editor screen.

When QCPU or LCPU is connected

(○: Possible, ×: Not possible)

Device*1	Device range	Program display	Device monitor display	Search operation
Input	X0 to 1FFF, DX0 to FFF	○	○	○
Output	Y0 to 1FFF, DY0 to FFF	○	○	○
Internal relay	M0 to 8191 to 61439	○	○	○
Latch relay	L0 to 32767	○	○	○
Link relay	B0 to 1FFF to EFFF	○	○	○
Timer	T0 to 32767	○	○	○
Retentive timer	ST0 to 32767	○	○	○
Counter	C0 to 32767	○	○	○
Data register	D0 to 12287	○	○	○
Link register	W0 to 1FFF	○	○	○
Annunciator	F0 to 32767	○	○	○
Edge relay	V0 to 2047	○	×	○
File register	R0 to 32767	○	○	○
	ZR0 to 4849663	○	○	○
Extended data register*2	D0 to 4910079	○	○	○
Extended link register*2	W0 to 4AEBFF	○	○	○
Link special relay	SB0 to 7FFF	○	○	○
Link special register	SW0 to 7FFF	○	○	○
Index register	Z0 to 19	○	○	○
Special relay	SM0 to 2047	○	○	○
Special register	SD0 to 2047	○	○	○
Function input	FX0 to F	○	×	○
Function output	FY0 to F	○	×	○
Function register	FD0 to 4	○	×	○
Link direct device	J□□¥□□	○	×	×
Module access device	U□□\□□ U3En□□¥□□	○	×	×
Nesting	N0 to 14	○	×	×
Pointer	P0 to 8191	○	×	○*3
Interrupt pointer	I0 to 255	○	×	○*3
SFC block device	BL0 to 319	○	×	○
SFC transition device	TR0 to 511, BL□¥TR□	○	×	○
Network No. specification device	J0 to 255	○	×	×
I/O No. specification device	U0 to 1FF 3E0 to 3	○	×	×
Macro instruction argument device	VD0 onward	○	×	×

*1 Local devices can be monitored.
For applicable devices and device ranges, refer to manual of the PLC CPU.
*2 The extended data register and extended link register can only be used with Universal model QCPU and LCPU.
*3 Device cannot be replaced.

Precautions

■Precautions for creating the program

The sequence program monitor (Q/L ladder) is not available for programs that use labels.

When using the sequence program monitor (Q/L ladder), create the program in a simple project that does not use labels.

■Programs that cannot be edited

The following programs cannot be edited with the ladder editor.

- Program consisting of ladder blocks with 25 lines or more

Even if a ladder block is displayed with 24 lines or less on GX Works2 or GX Developer, the block may be displayed with 25 lines or more on the GOT.

50.1.3 Access range

The access range is the same as when the GOT is connected to a controller.

For details on the access range, refer to the following.

📖GOT3000 Series User's Manual (Connection)

PART 7

50.2 How to display the screen

- Sequence program monitor (Q/L ladder)

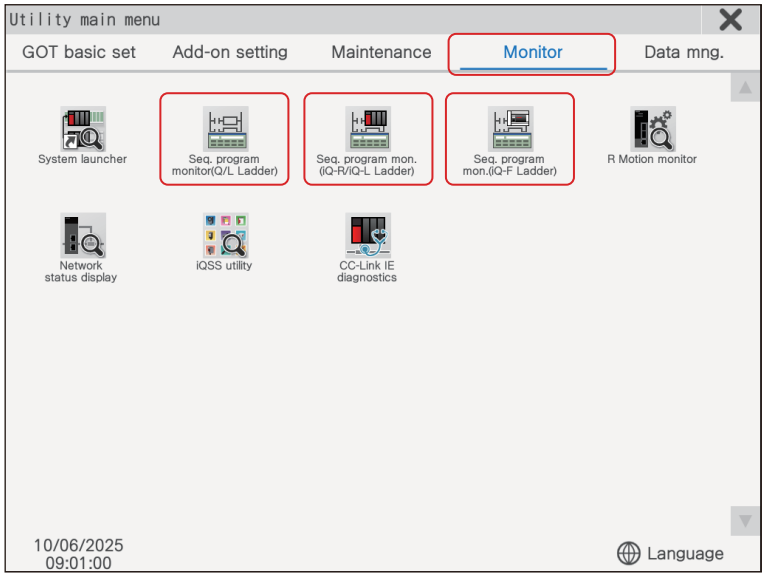
Select [Seq. program monitor(Q/L Ladder)] in the [Monitor] tab.

- Sequence program monitor (iQ-R/iQ-L ladder)

Select [Seq. program mon.(iQ-R/iQ-L Ladder)] in the [Monitor] tab.

- Sequence program monitor (iQ-F ladder)

Select [Seq. program mon.(iQ-F Ladder)] in the [Monitor] tab.



Startup from the special function switch (sequence program monitor (ladder display))

By setting a sequence program monitor (ladder display) to the special function switch set in the project, the sequence program monitor (ladder display) can be started from a user-created monitor screen.

For information on how to set a special function switch, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Communication setting window

The communication setting window will appear when the sequence program monitor (ladder display) is started for the first time.

Set the channel No., network No., station No., and CPU No. of the PLC CPU connected to the GOT.

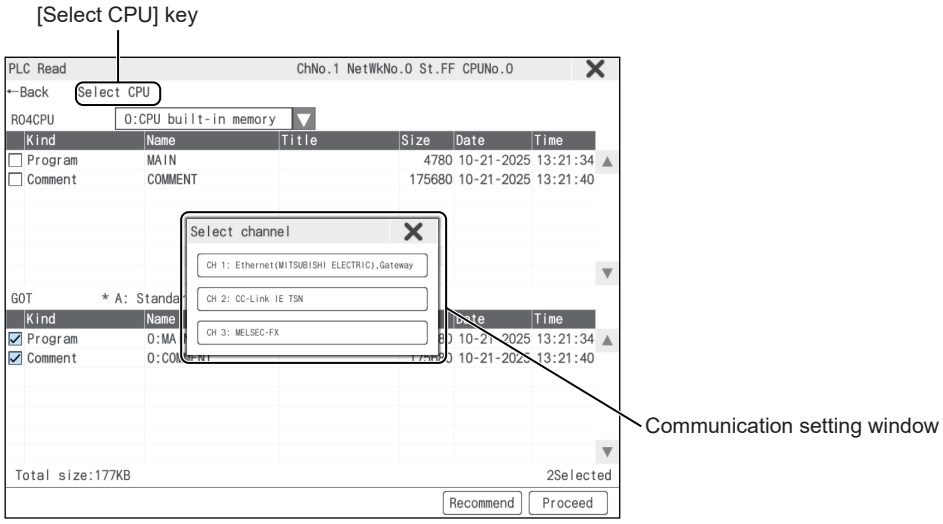
To display the communication setting window after the first startup, touch the [Specify connection destination] key in the [PLC Read] screen and configure the communication setting window.

For details on the [PLC Read] screen, refer to the following.

☞ Page 257 [PLC Read] screen

For information on how to configure the communication setting window, refer to the following.

☞ Page 260 Communication setting window



[Ladder monitor] screen

Select a program in the program list on the [PLC Read] screen to display the [Ladder monitor] screen.

For details on the [Ladder monitor] screen, refer to the following.

☞ Page 263 [Ladder monitor] screen

[Ladder editor] screen

Select [Start editing] from the edit menu on the [Ladder monitor] screen to display the [Ladder editor] screen.

☞ Page 268 [Ladder editor] screen

To display the [Ladder editor] screen in the sequence program monitor (iQ-R/iQ-L ladder), [Ladder editor (iQ-R/iQ-L ladder)] must be enabled in the [Seq. program monitor] screen.

For details on the [Seq. program monitor] screen, refer to the following.

☞ Page 147 [Seq. program monitor]

For information on how to start the sequence program monitor (ladder display) using the one-touch ladder jump function, refer to the following.

☞ Page 242 Start operation when using the one-touch ladder jump function

For information on screen transitions when configuring security settings, refer to the following.

☞ Page 251 Security settings

Start operation when using the one-touch ladder jump function

By using a special function switch, alarm display (user), or others, you can start the sequence program monitor (ladder display) to automatically read sequence program files or search for a device.
The following shows objects which can use the one-touch ladder jump function.

Object
Special function switch, alarm display (user), simple alarm display

■Before executing the automatic PLC read

• Setting automatic PLC read

When reading a sequence program file or a comment file from controllers, automatic PLC read must be set in GT Designer3 (GOT3000) or in the utility.
For the setting of automatic PLC read, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual
☞ Page 147 [Seq. program monitor]

• Specifying an automatic PLC read file

With the special function switch or alarm display (user), the target sequence program of automatic PLC read can be specified.
However, the operation differs depending on the automatic PLC read setting in GOT setup or utility.

Automatic PLC read setting in GT Designer3/utility	File name specification with objects	Operation
Done	Done	The specified sequence program file is read automatically.
	None	All sequence program files are read automatically.
None	Done	No sequence program file is read. Automatic search will be executed if a sequence program file with the specified name exists among the files already read to the GOT.
	None	No sequence program file is read. Automatic search will be executed for all files if sequence program files have already been read to the GOT.

■Starting from the special function switch

To start the sequence program monitor (Q/L ladder), touch a special function switch that has the following settings: [Sequence Program Monitor (Q/L ladder)] is selected for [Switch Action], and [Use One-touch Ladder Jump] is selected.

To start the sequence program monitor (iQ-R/iQ-L ladder), touch a special function switch that has the following settings: [Sequence Program Monitor (iQ-R/iQ-L Ladder)] is selected for [Switch Action], and [Use One-touch Ladder Jump] is selected.

To start the sequence program monitor (iQ-F ladder), touch a special function switch that has the following settings: [Sequence Program Monitor (iQ-F ladder)] is selected for [Switch Action], and [Use One-touch Ladder Jump] is selected.

- Special function switch settings

For the setting items for the special function switch, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

- Operation when the function switch is touched

The operation at startup differs according to the special function switch settings.

The following table shows the operations when the special function switch is touched.

Setting		Operation when the function switch is touched
Search method	**Specify search file**	
Specify Search Device*1	Set	Reads the sequence program specified by the file name from the specified connected station and displays the target device on the ladder monitor screen.
	Not set	Reads all the sequence programs from the specified connected station and displays the target device on the ladder monitor screen.
Specify Connected Station*2	Set	Reads the sequence program specified by the file name from the specified connected station and displays it on the ladder monitor screen.
	Not set	Displays the [PLC Read] screen of the specified connected station.

*1 When [Specify Search Device] is selected, set [Ladder Search Device] and [Ladder Search Mode].
The setting of PLC station number is included in the [Ladder Search Device] settings.

*2 When [Specify Connected Station] is selected, set [CH No.] and [Network].
If [Other] in [Network] is selected, also set [Net No.], [Station No.] and [CPU Machine].

Point

Operations for the special function switch when not using the one-touch ladder jump function

When the [Use One-touch Ladder Jump] is not selected, the operation for touching the special function switch is the same as when starting from the utility.

☞ Page 240 How to display the screen

■Starting from the alarm display (user)

The sequence program monitor (ladder display) can be started to search for devices that have an alarm using the following method. Select an alarm in an alarm display (user) and touch a key code switch (Display ladder (sequencer program monitor)).

- User alarm monitoring settings

For details on the user alarm monitoring setting items, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

- Operations when a key code switch is touched

Operation at start differs depending on the setting contents of the user alarm observation.

The following shows operations when a key code switch is touched.

Ladder search setting*1		Operations when a key code switch is touched
Ladder search mode	**Specify search file**	
Set	Set	Reads all the sequence programs from the specified connected station and displays the target device on the ladder monitor screen using the specified search mode.
Set	Not set	Reads the sequence program specified by the file name from the specified connected station and displays the target device on the ladder monitor screen using the specified search mode.

*1 The setting of PLC station number is included in the target device.

■Starting from the simple alarm display

The ladder editor can be started to coil search for devices that have an alarm using the following method. Select an alarm in simple alarm display and touch a key code switch (sequencer program monitor (display ladder)).

- Simple alarm display settings

For details on the simple alarm display, refer to the following.

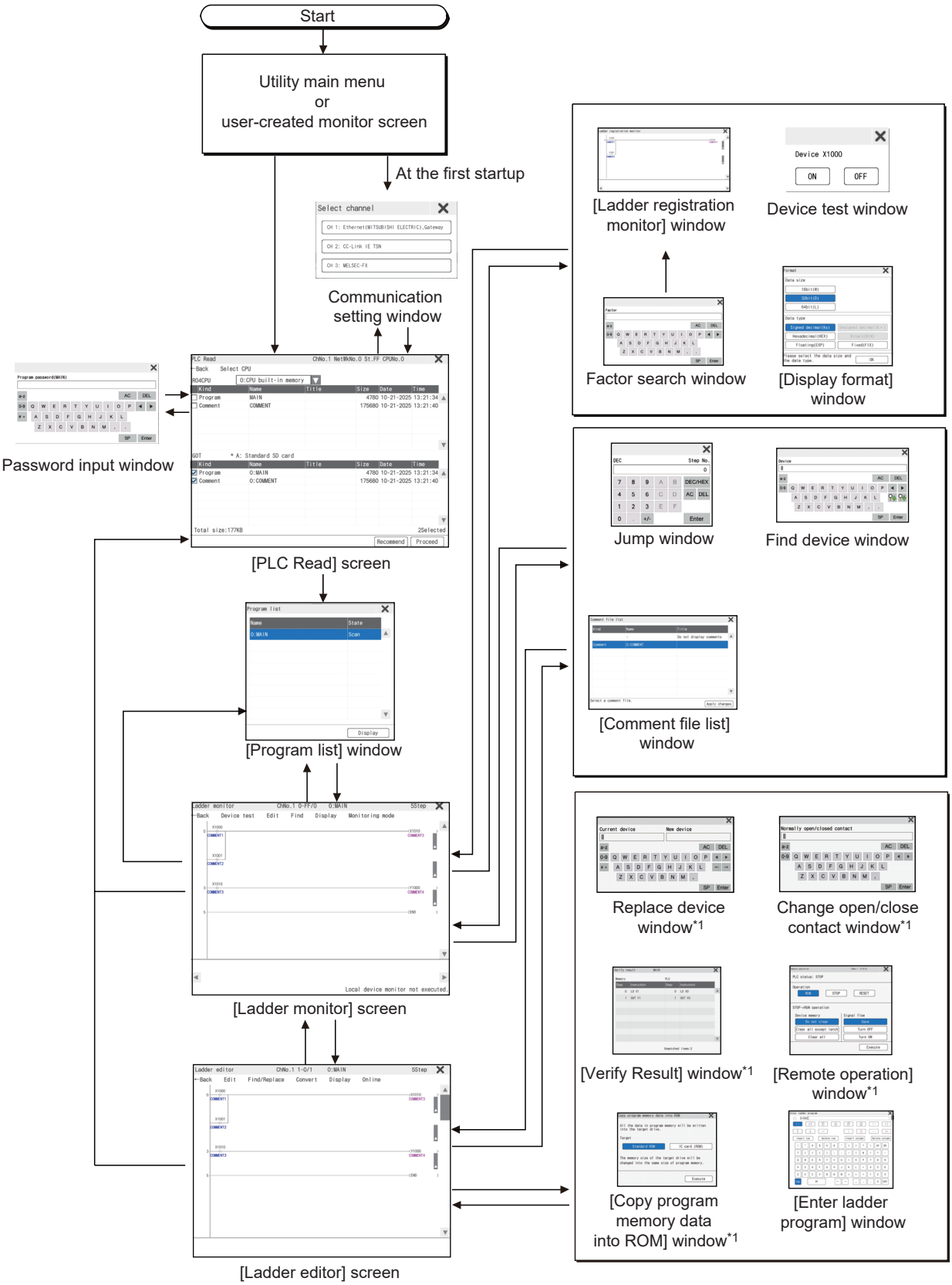
📖GT Designer3 (GOT3000) Screen Design Manual

- Operations when a key code switch is touched

Reads all the sequence programs from the specified connected station and displays the target device on the ladder monitor screen.

Screen transitions

The following describes screen transitions.



*1 Only for the sequence program monitor (Q/L ladder).

Point

- Screen transitions when using the one-touch ladder jump function

For information on screen transitions when using the one-touch ladder jump function, refer to the following.

☞ Page 242 Start operation when using the one-touch ladder jump function

- Screen transitions when setting the security

For information on screen transitions when configuring security settings, refer to the following.

☞ Page 251 Security settings

50.2.1 Setting ladder data storage location

The ladder data (sequence programs and device comments) used for the sequence program monitor (ladder display) can be stored in a selected drive.

Only the A drive (standard SD card) or B drive (USB drive) is available for storing ladder data.

For the ladder data storage destination setting, refer to the following.

- When setting in the utility

☞ Page 147 [Seq. program monitor]

- When setting in GT Designer3 (GOT3000)

📖GT Designer3 (GOT3000) Screen Design Manual

50.2.2 Reading comment files from data storage

Sequence program monitor (Q/L ladder)

The sequence program monitor (Q/L ladder) uses the comment files that are stored on the data storage in the GOT.

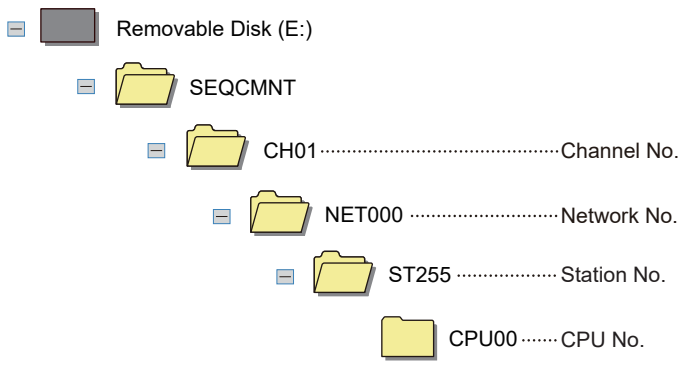
■Procedure for using comment files stored on data storage

The following shows the procedure for using a comment file stored on a data storage.

1. Create a SEQCMNT folder on a data storage.

If the SEQCMNT folder already exists, creating a new one is not required.

2. In the SEQCMNT folder, create folders for CH No., network No., station No., and CPU number of the monitored controller in a hierarchy as shown below.

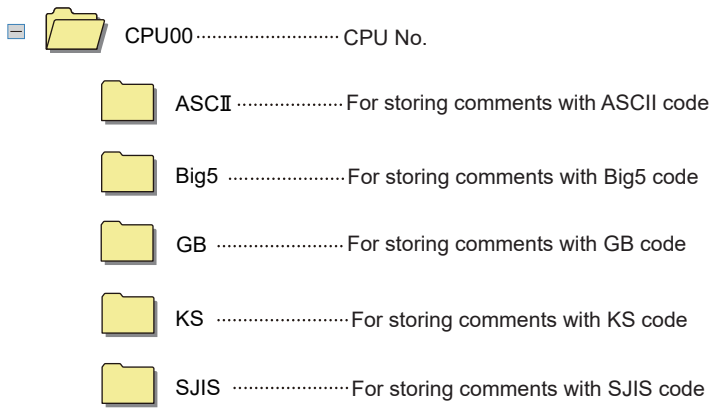


Item	Folder name
CH No.	CH**
Network No.	NET***
Station No.	ST***
CPU No.	CPU**

Insert numbers in place of the "*" symbols.

(When the CH No. is 1, the folder name is CH01. When the monitor target is the host station, the folder name is ST255.)

3. In the CPU No. folder, create folders for storing comment files by character code.



Item	Folder name
Folder for SJIS code	SJIS
Folder for GB code	GB
Folder for Big5 code	Big5
Folder for KS code	KS
Folder for ASCII code	ASCII

4. Copy a comment file (.wcd) from the saved project.

When the GX Works2 project is used, the creation method of a comment file (.wcd) differs depending on whether the project used can be or cannot be saved in the GX Developer format.

Project that can be saved in the GX Developer format

A comment file (.wcd) is created when the project is saved in the GX Developer format.

Project that cannot be saved in the GX Developer format

Export the project by using [Write IC Memory Card] of GX Works2, and change the comment file extension from [.qcd] to [.wcd].

5. Store the copied comment files in the folders for each character code in the data storage.

6. Install the data storage with the comment file on the GOT.

Point

• Restrictions on using comment files

If the comments of a comment file stored in the data storage are displayed, the comments that are assigned to the bits of word devices cannot be displayed.

• Displaying comments in a language different from the language of the utility

Store the comment file corresponding to the language to display comments on the data storage.

Switch comment files on the ladder monitor screen for displaying the comments in appropriate language.

Sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder)

The sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder) use the comment files that are stored in the data storage in the GOT.

The following shows the characters and the number of characters usable for the name of a comment file.

- One-byte alphanumeric characters
- Symbols
- When the comment files are used for all the controllers: 60 one-byte characters or less
- When the comment files are used for a specified controller: 38 one-byte characters or less

■Procedure for using comment files stored on data storage

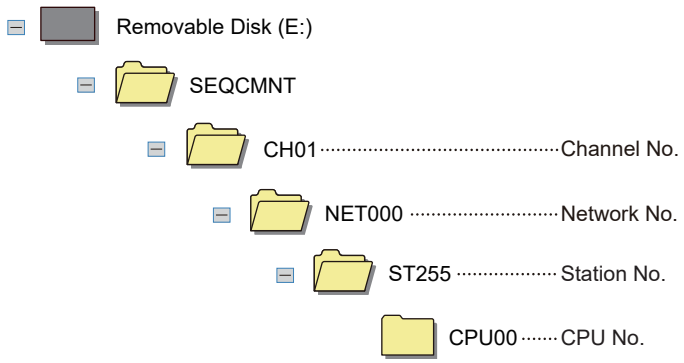
The following shows the procedure for using a comment file stored on a data storage.

1. Create a comment file (.DCM) and SourceInfo.CAB using the function to write data to the memory card in GX Works3.

2. Create a SEQCMNT folder on a data storage.

If the SEQCMNT folder already exists, creating a new one is not required.

3. In the SEQCMNT folder, create folders for CH No., network No., station No., and CPU number of the monitored controller in a hierarchy as shown below.



Item	Folder name
CH No.	CH**
Network No.	NET***
Station No.	ST***
CPU No.	CPU**

Insert numbers in place of the "*" symbols.

(When the CH No. is 1, the folder name is CH01. When the monitor target is the host station, the folder name is ST255.)

4. When the comment files are used for a specified controller, store the comment files (.DCM) and SourceInfo.CAB in the CPU number folder corresponding to the monitored controller.

When the comment files are used for all the controllers, store the comment files (.DCM) and SourceInfo.CAB directly under the [SEQCMNT] folder.

5. Install the data storage with the comment file on the GOT.

Point

Displaying comments in a language different from the language of the utility

Store the comment file corresponding to the language to display comments on the data storage.

Switch comment files on the ladder monitor screen for displaying the comments in appropriate language.

50.2.3 Program update check

The GOT checks if there is any difference between sequence program files read to the GOT and sequence programs stored in controllers, while the ladder monitor screen or ladder editor screen is displayed.

Program update check specifications

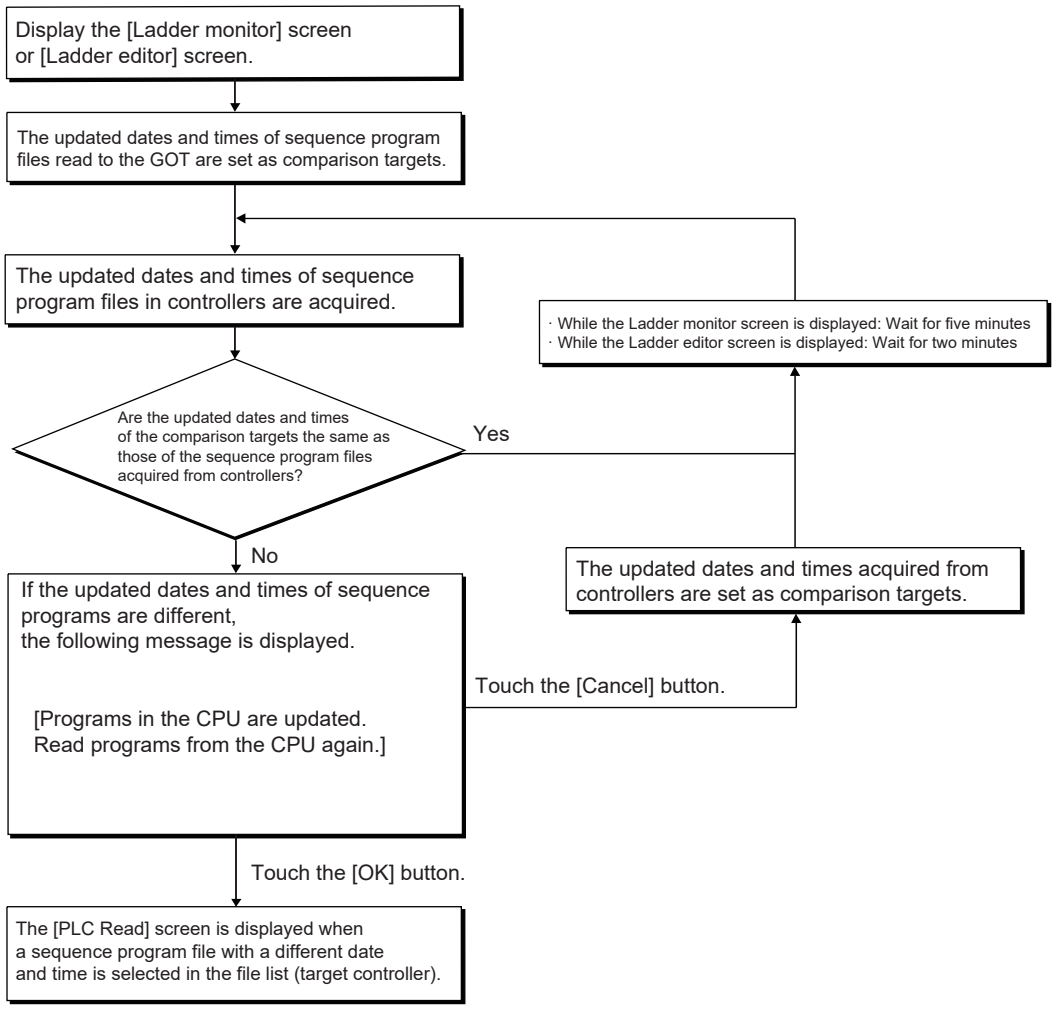
■Check criterion

The updated dates and times of sequence program files are compared.

■Check timing

The program update is checked when the ladder monitor screen or ladder editor screen are displayed.
After that, it is checked in a five minute cycle while the ladder monitor screen is displayed and in a two minute cycle while the ladder Editor screen is displayed.

Operations for the program update check



50.2.4 Security settings

The device test window and ladder editor screens can be restricted by bit devices, passwords, and security levels.

Security setting specifications

■Security types

Type	Description
Restriction by bit devices	Screen transitions are restricted by the authorization device. Screen transitions are authorized when the authorization device is ON.
Restriction with a password	Screen transitions are restricted with a password. The security password input dialog will appear when the screen transitions.
Restriction with a security level	Screen transitions are restricted with security level. Screen transitions are permitted when the GOT security level is equal to or higher than the set security level, or when an operator with the set security level or higher logs in.

Precautions

A combination of security restrictions can be used but password control and security level control cannot be used at the same time.

When using a combination of security restrictions, use either a combination of bit device control and password control, or a combination of bit device control and security level control.

■Security setting method

To configure the security settings, select [Common] → [GOT Environmental Setting] → [Security] from the menu of GT Designer3 to display the [Environmental Setting] window, and select the [Functional Operation Security] tab.

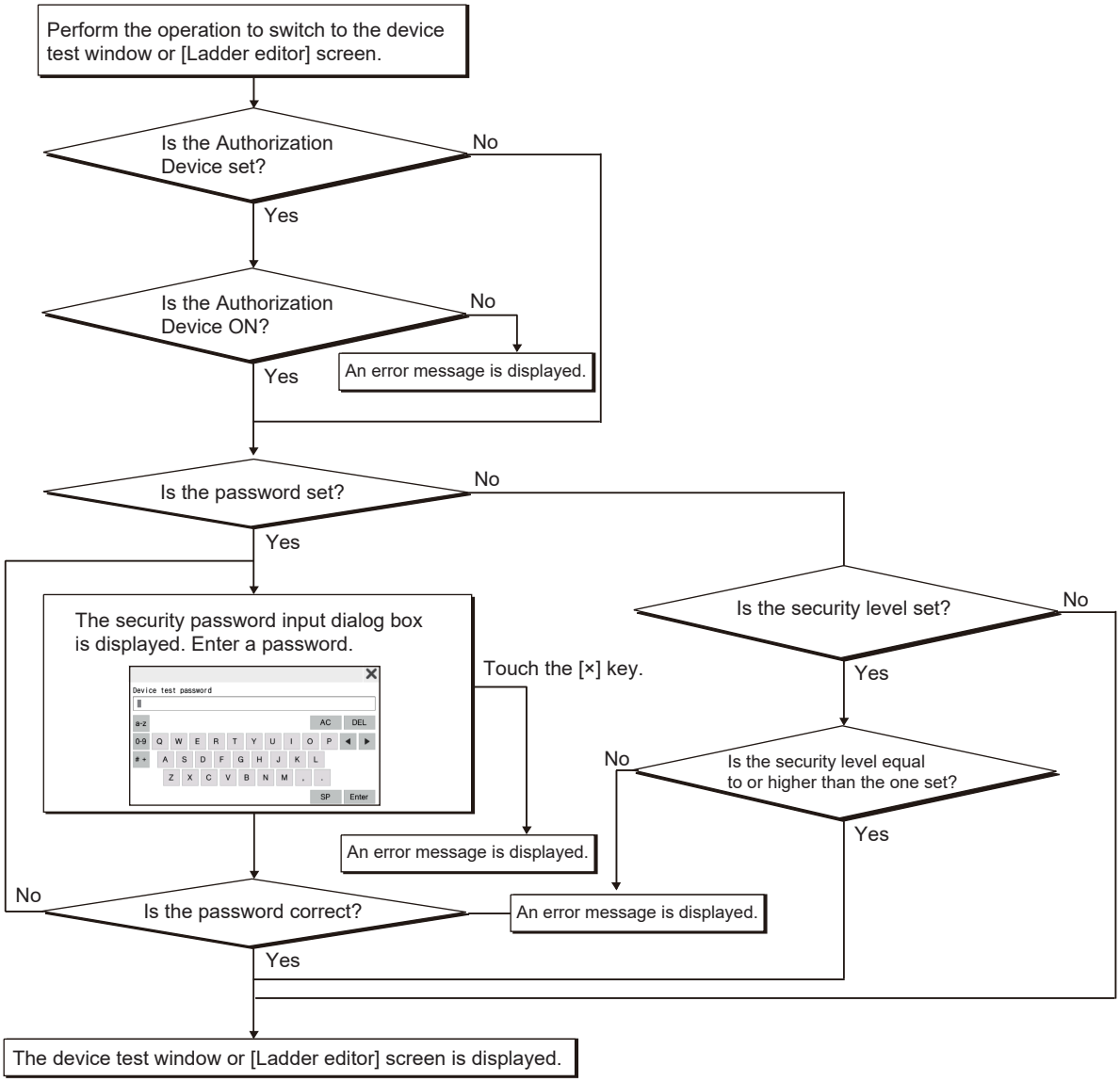
The following shows the setting method for each security type.

Type	Description
Restriction by bit devices	Select the [Authorization Device] check box of [Device Test Operation (Sequence Program Monitor)] or [Ladder Editor Screen Display (sequence program monitor)] and set bit devices.
Restriction with a password	Select the [Authentication Method] check box of [Device Test Operation (Sequence Program Monitor)] or [Ladder Editor Screen Display (sequence program monitor)] and set [Password].
Restriction with a security level	Select [Security Level] in [Authentication Method] of [Device Test Operation (Sequence Program Monitor)] or [Ladder Editor Screen Display (sequence program monitor)] and set [Security Level].

For the setting of the [Environmental Setting] dialog, refer to the following.

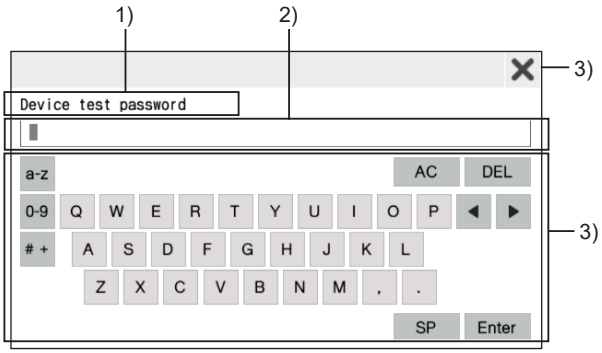
📖GT Designer3 (GOT3000) Screen Design Manual

Screen transitions when setting the security



Operations for the security password input window

■Displayed screen



No.	Item	Description
1)	Password type	Displays the type of the password to be input. • Device test password • Ladder editor password
2)	Password input area	Set the password.
3)	Keys	Keys for operations in the security password input window. ☞ Page 253 Key functions

■Key functions

Key	Function
[×]	Closes the security password input window and cancels the password input operation.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the password input area.
[SP]	Enters a space in the password input area.
[Enter]	Verifies the password set in the password input area.

PART 7

50.2.5 User authentication function

The user authentication function restricts the operation of the PLC CPU by an unauthenticated user.
Only the safety CPU (RnSFCPU) is supported.

User authentication function specifications

■Operations that require user authentication

To perform the following operations, user authentication is required.

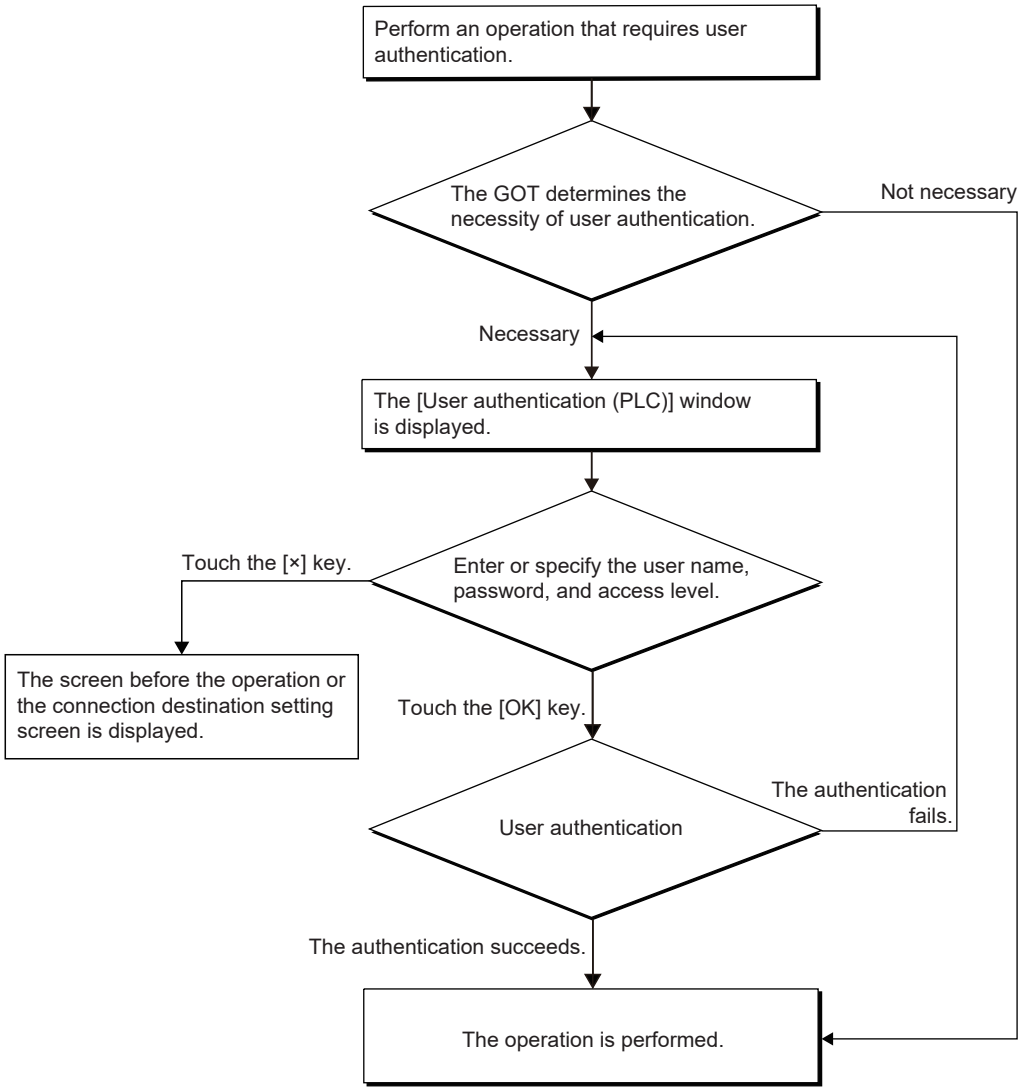
- Connecting to the PLC CPU in the specify connection destination dialog
- Connecting to the PLC CPU with the one-touch ladder jump function
- Connecting to the PLC CPU when restarting the sequence program monitor (Q/L ladder or iQ-R/iQ-L ladder)
- Selecting a file in the file list of the PLC CPU
- Reading a file from the PLC CPU
- Writing a file to the PLC CPU
- Touching [Recommend]

■User authentication method

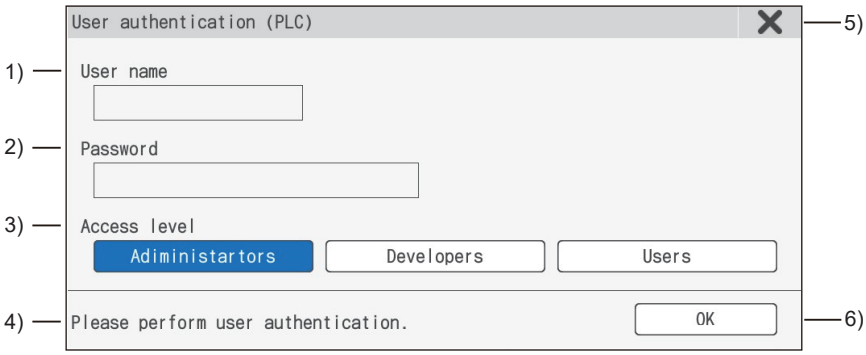
For user authentication, enter or specify the following items.

- User name
- Password
- Access level

Screen transitions when user authentication function is used



[User authentication (PLC)] window



No.	Item	Description
1)	[User Name]	Enter a user name for authentication.
2)	[Password]	Enter a password.
3)	[Access level]	Select an access level.
4)	Message display area	Displays messages.
5)	[×] key	Cancels user authentication.
6)	[OK] key	Executes user authentication for the entered contents.

50.3 Setting Display Format

On the sequence program monitor (ladder display) screen, you can change the display format of word device values or display mode of sequence programs, switch the display language, and so on.

50.3.1 Switching languages of sequence programs

You can switch the display language (Japanese, Simplified Chinese, Traditional Chinese, or Korean) of the sequence program monitor (ladder display) at monitoring.

For switching languages, comment files in the language to be displayed must be created in advance.

☞ Page 247 Sequence program monitor (Q/L ladder)
☞ Page 249 Sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder)

The following shows the relationship between the language selected in the utility and comment files with each character code.

Language	Comment file
Japanese	Comment files with SJIS code
Simplified Chinese	Comment files with GB code
Traditional Chinese	Comment files with Big5 code
Korean	Comment files with KS code
Other than the above	Comment files with ASCII code

50.3.2 Switching comment display mode

For the sequence program monitor (ladder display), whether to display comments, statements, and notes is selectable on the ladder monitor screen or ladder editor screen.

☞ Page 265 [Display] menu
☞ Page 271 [Display] menu

The display color of the device comment differs depending on the contact position.

The following shows the display colors.

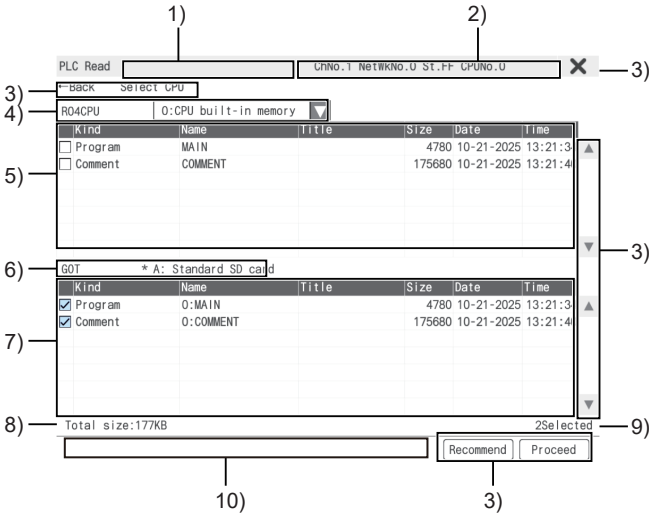
Contact position	Display color of the device comment
Odd number line	Light blue
Even number line	Purple

50.4 [PLC Read] screen

On the [PLC Read] screen, the GOT reads sequence programs and comment files used for the sequence program monitor (ladder display).
The following describes how to operate the PLC read screen.

Displayed screen

This section explains the structure of the [PLC Read] screen and the functions of the keys displayed on the screen after the sequence program monitor (ladder display) is started.



No.	Item	Description
1)	PLC name	Displays the label set in the PLC name setting for the target PLC CPU.
2)	Target controller	Displays CH No., network No., station No., and CPU No. of the target PLC CPU.
3)	Keys	Keys for the operations on the [PLC Read] screen. ☞ Page 258 Key functions
4)	Target drive list (target controller)	Displays the model name and drive list of the connected device. Selecting a drive displays files within the drive in the file list (target controller). For drives that store files selected in the file list (target controller), [*] is displayed to the left of the drive name.
5)	File list (target controller)	Displays the program types, file names, titles, sizes, dates, and times of all the files within the drive selected in the target drive list (target controller). (The date and time show those of updated files.) A file to be read can be selected from the file list. (The selected file is highlighted.) For program files, only sequence program files in the program memory can be selected. If a file with the same name is selected in the file list (GOT), that selection is deselected, and the file selected in the file list (destination) becomes selected. When a password is set for the selected file, the password input window appears. ☞ Page 259 Displayed screen
6)	Target drive list (GOT)	Displays the drive set for [Data save location] in the sequence program monitor settings. (Only the A drive (standard SD card) or B drive (USB drive) is available.) For drives that store files displayed in the file list (GOT), [*] is displayed to the left of the drive name.
7)	File list (GOT)	Displays the program types, file names, titles, sizes, dates, and times of all the files within the drive selected in the target drive list (GOT). (The date and time show those of updated files.) When the connection destination is an RCPU, only the program files and comment files read from the RCPU are displayed. Other files in the same drive are not displayed. A file to be read can be selected from the file list. (The selected file is highlighted.) If a file with the same name is selected in the file list (destination), that selection is deselected, and the file selected in the file list (GOT) becomes selected.
8)	Total file size	Displays the total data size of files selected in the file list (target controller) and file list (GOT).
9)	Number of selected files	Displays the total number of files selected in the file list (target controller) and file list (GOT).
10)	Message display area	Displays error messages and other items.

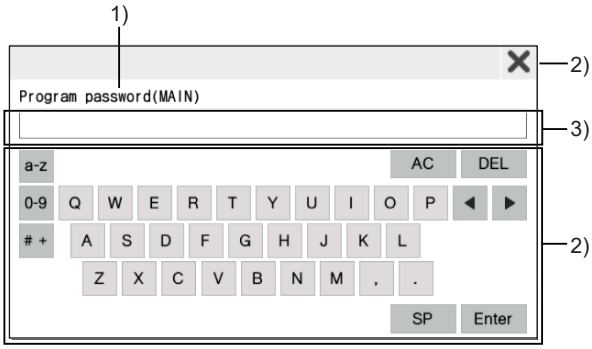
Key functions

The following shows the functions of the keys used for operating the [PLC Read] screen.

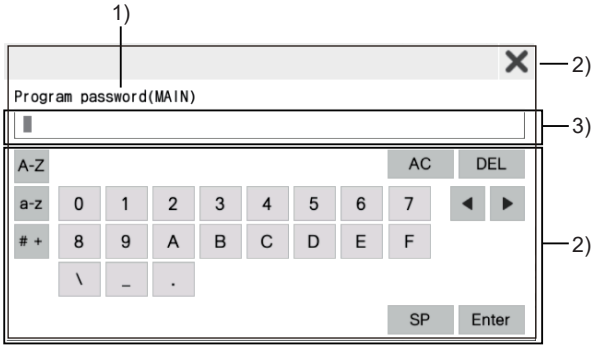
Key	Function
[←Back]	Returns the screen to the last screen that is displayed right before the [PLC Read] screen appears. The key is disabled when the last screen is the utility screen or user-created monitor screen.
[Select CPU]	Displays the communication setting window. ☞ Page 260 Displayed screen
[×]	Exits the sequence program monitor (Q/L ladder) and returns the screen to the sequence program monitor (Q/L ladder) startup screen.
▲ ▼	Scrolls the display up or down.
[Recommend]	This key can be used when program files are displayed in the target drive list (connection destination). Touching this key, selects the comment file of the file list (target controller). When files with the same name are displayed in the file list (target controller) and file list (GOT), touching the key selects a file as shown below. • For sequence program files When the updated dates and times differ between the files, touching the key selects the file in the file list (target controller). When the updated dates and times are the same between the files, touching the key selects the file in the file list (GOT). • For comment files When the updated dates and times differ between the files, touching the key selects the latest file. When the updated dates and times are the same between the files, touching the key selects the file in the file list (GOT). If you have stored files directly in the SEQCMNT folder in the data storage, all the files are selected.
[Proceed]	Writes the file selected in the file list (target controller) to the data storage displayed in the target drive list (GOT). When the connection destination is an RCPU, data is read from the data storage. The file written to the data storage on the [PLC Read] screen is stored in the SEQDAT folder. After writing, among files other than comment files in the data storage, files that are not selected in the file list (GOT) are deleted. Then the program list window appears. If you have stored files directly in the SEQCMNT folder on the data storage, the files are not deleted. ☞ Page 261 [Program list] window

50.4.1 Password input window

Displayed screen



(For alphabet input)



(For numerical input)

The following information is displayed.

No.	Item	Description
1)	Password type	Displays the entered password type and file name. • Program password (***) • Comment password (***) • Parameter password (***) • Safety parameter password (***) • FB/FUN password (***) "(***)" displays the file name.
2)	Keys	Keys for operations in the password input window. ☞ Page 259 Key functions
3)	Password input area	Set the password.

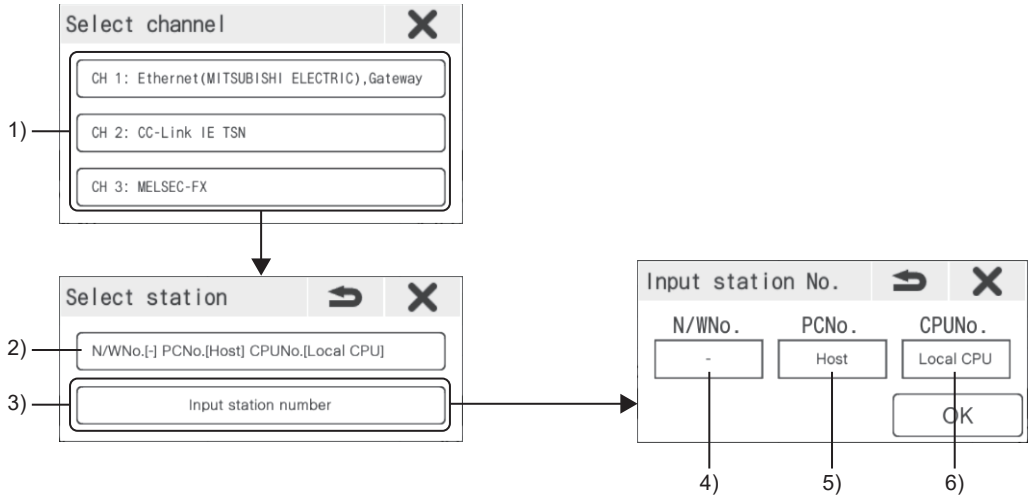
Key functions

Key	Function
[×]	Closes the password input window and cancels the password input operation.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the password input area.
[SP]	Enters a space in the password input area.
[Enter]	Verifies the password set in the password input area. When password verification for the first file is successful, password verification for the other files is automatically executed with the same password.

PART 7

50.4.2 Communication setting window

Displayed screen

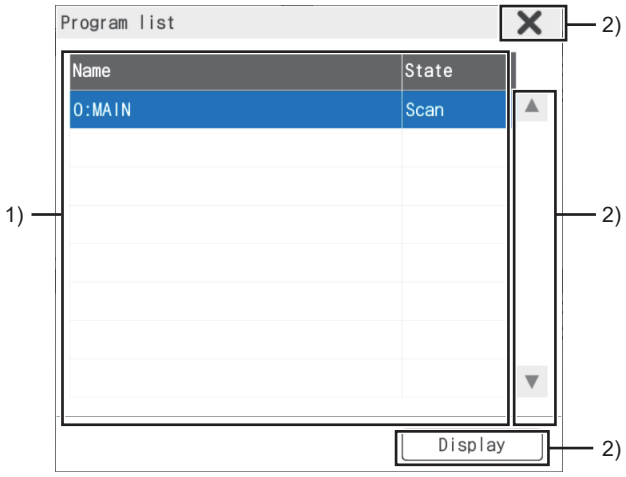


No.	Item	Description
1)	Channel selection keys	Select the channel number of the connected controller.
2)	Station selection keys	The setting shown on the key is used for connection.
3)	[Input station No.] keys	Displays a dialog for specifying the network number, station number, and module number.
4)	Network No. input area	Set the network No. for the target controller.
5)	Station No. input area	Set the station No. of the target controller. When the station No. is set to the host station (FF), set the network No. to 0.
6)	CPU No. input area	Set the CPU No.

50.4.3 [Program list] window

Displaying the read sequence programs in a list is possible.

Displayed screen



No.	Item	Description
1)	Sequence program file list	Displays the file names and execution state of the read sequence programs. The execution state shows execution types set for the programs.*1 A touched sequence program file is highlighted. The execution status is not displayed when the FX5CPU is connected.
2)	Key	Keys for operations in the program list window shown in (b). (Touch input) ☞ Page 261 Key functions

*1 The execution state is not displayed when the CNC C80 is connected.

Key functions

Key	Function
[×]	Closes the [Program List] window.
▲ ▼	Scrolls the display up or down.
[Display]	Displays the sequence program file selected in the sequence program file list on the [Ladder monitor] screen. ☞ Page 263 [Ladder monitor] screen

PART 7

50.4.4 Displaying programs in the sequence program monitor

In the sequence program monitor (iQ-R/iQ-L ladder or iQ-F ladder, whether the programs can be displayed depends on the status of the read source sequence program file.

Status of the read source sequence program file				Displaying programs in the sequence program monitor
Use of function block or function (except the standard function)	Use of security keys for the function block file and function files	Use of macro type function block files	Use of block passwords for the macro type function block files	
Used	Used	Used/unused	Used/unused	Cannot be displayed
Used	Unused	Used	Used	Cannot be displayed
Used	Unused	Used	Unused	Whether the program can be displayed depends on the selection in the dialog shown below.*1 • [Yes]: Can be displayed*2 • [No]: Cannot be displayed
Used	Unused	Unused	-	Can be displayed
Unused	-	-	-	Can be displayed

*1 Touch [Proceed] in the [PLC Read] screen to display the following message.
[Do you want to check the block password of the macro type FB file?]

*2 If a program is read from CNC C80, it cannot be displayed even if [Yes] is selected.

Point

If all of the following conditions are satisfied, the program will not be displayed because the block password setting cannot be checked and thus whether the program file can be displayed is not determined correctly.

- No security key has been set for the function block file in the read source drive.
- No block passwords has been set for the function block in the read source drive.
- Multiple function blocks have been defined in the function block file.
- A function block is used in the function block file.

50.5 [Ladder monitor] screen

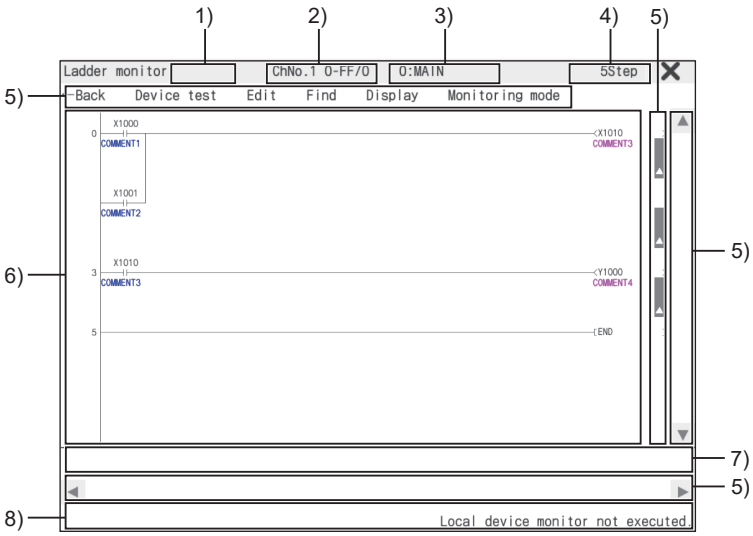
On the [Ladder monitor screen], the GOT displays the read sequence program.
The following describes how to operate the [Ladder monitor] screen.

Precautions

Before editing a sequence program with the sequence program monitor (ladder display), make sure to back up the program with the backup/restoration function so that you can restore the original program.
☞ Page 475 [Backup/restoration function]

Displayed screen

The following describes the configuration of the [Ladder monitor] screen, menus and key functions on the screen.



No.	Item	Description
1)	PLC name	Displays the label set in the PLC name setting for the target PLC CPU.
2)	Target controller	Displays the CH No., network No., station No., and CPU No of the target PLC CPU as shown below. • CH No. network No.-station No./CPU No.
3)	Program name	Displays the file name of the displayed sequence program.
4)	Number of steps	Displays the number of steps for the displayed sequence program.
5)	Keys	Keys for operations on the ladder monitor screen. ☞ Page 264 Key functions
6)	Ladder display area*1	Displays the read sequence program. When a device is touched, it is selected and surrounded with a green frame. The following shows the conductive status. Non-conductive state / Conductive state Contact Coil Instruction*2 When contacts, coils, and outputs are selected, touching the area displays the Find device window. ☞ Page 286 Device/Contact/Coil search When the [Ladder registration monitor] window is opened, the first step number of registerable ladder blocks is highlighted. Touching the area registers the specified ladder block in the window. (In factor search mode, it is not registered even if it is touched.) ☞ Page 267 [Ladder registration monitor] window
7)	Current device value display area	Displays the current value of the displayed word device. Touch this area to change the display format. ☞ Page 266 [Display format] window

No.	Item	Description
8)	Message display area	Displays error messages and other items.

*1 In the ladder display area, 11 contacts can be displayed using one-byte characters in four rows and eight columns.
*2 The conductive status of the following instructions only is displayed on the screen:
SET, RST, PLS, PLF, SFT, SFTP, FF, DELTA, DELTAP, MC

Key functions

The following shows the functions of the keys used for operating the [Ladder monitor] screen.

Key	Function
[←Back]	Returns the screen to the last screen that is displayed right before the [Ladder monitor] screen appears. The key is disabled when the last screen is the utility screen or user-created monitor screen.
[Device test]	Sets the device test mode. Touching the key in the device test mode cancels the device test mode. ☞ Page 292 Test operation
[Edit]	Displays the [Edit] menu. Touching [Start editing] displays the [Ladder editor] screen. ☞ Page 268 [Ladder editor] screen
[Find]	Displays the [Find] menu. ☞ Page 265 [Find] menu
[Display]	Displays the [Display] menu. ☞ Page 265 [Display] menu
[Monitoring mode]	Displays the [Monitoring Mode] menu. ☞ Page 265 [Monitoring mode] menu
	The comment and note of the touched line can be displayed/hidden. If the touched line is the first line in the ladder block, the statement of the touched ladder block can be displayed/hidden.
	Scrolls the display up or down.

Menu

The following shows operations for the menus displayed on the [Ladder monitor] screen.

■[Edit] menu

Key	Function	Reference
[Start editing]	Switches to the ladder editor screen.	☞ Page 268 [Ladder editor] screen

■[Find] menu

Key	Function	Reference
[Jump]	Displays the jump window.	☞ Page 280 Jump window
[Find device]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Find contact]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Coil search]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Factor search]	Displays the factor search window.	☞ Page 288 Factor search

■[Display] menu

Key	Function	Reference
[Hide comments]	Hides the comments, statements or notes in the ladder display area.	☞ Page 256 Switching comment display mode
[Show comments]	Displays the comments, statements or notes in the ladder display area.	
[Comment change]	Displays the [Comment file list] window.	☞ Page 281 [Comment file list] window
[Change comment column]*1	Displays the [Change comment column] window.	☞ Page 282 [Change comment column] window
[Ladder registration monitor]	Displays the [Ladder registration monitor] window.	☞ Page 267 [Ladder registration monitor] window
[Delete all registered ladder]	Deletes all registered ladder blocks in the [Ladder registration monitor] window.	☞ Page 267 [Ladder registration monitor] window
[Program list]	Displays the [Program list] window.	☞ Page 261 [Program list] window
[PLC diagnosis]*1	Displays the [PLC diagnosis] screen.	☞ Page 284 [PLC diagnosis] window
[PLC Read]	Displays the [PLC Read] screen.	☞ Page 257 [PLC Read] screen

*1 Not supported by the sequence program monitor (Q/L ladder).

■[Monitoring mode] menu

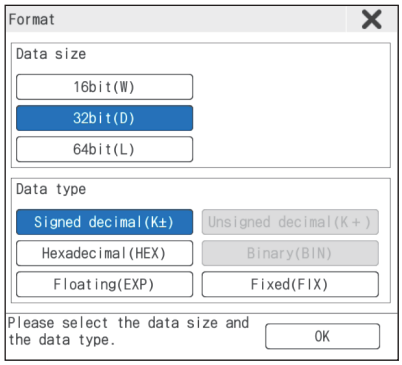
Key	Function	Reference
Local device monitor*1	Displays the local device.	☞ Page 265 Monitoring local devices

*1 Not supported by the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

■Monitoring local devices

- When the GOT monitors local devices, the scan time increases.
- When local devices are displayed on the screen, touching the [local device monitor] key hides local devices.
- When the [Ladder monitor] screen is switched to another screen, or the displayed program is switched to another program, the GOT stops displaying local devices.

50.5.1 [Display format] window

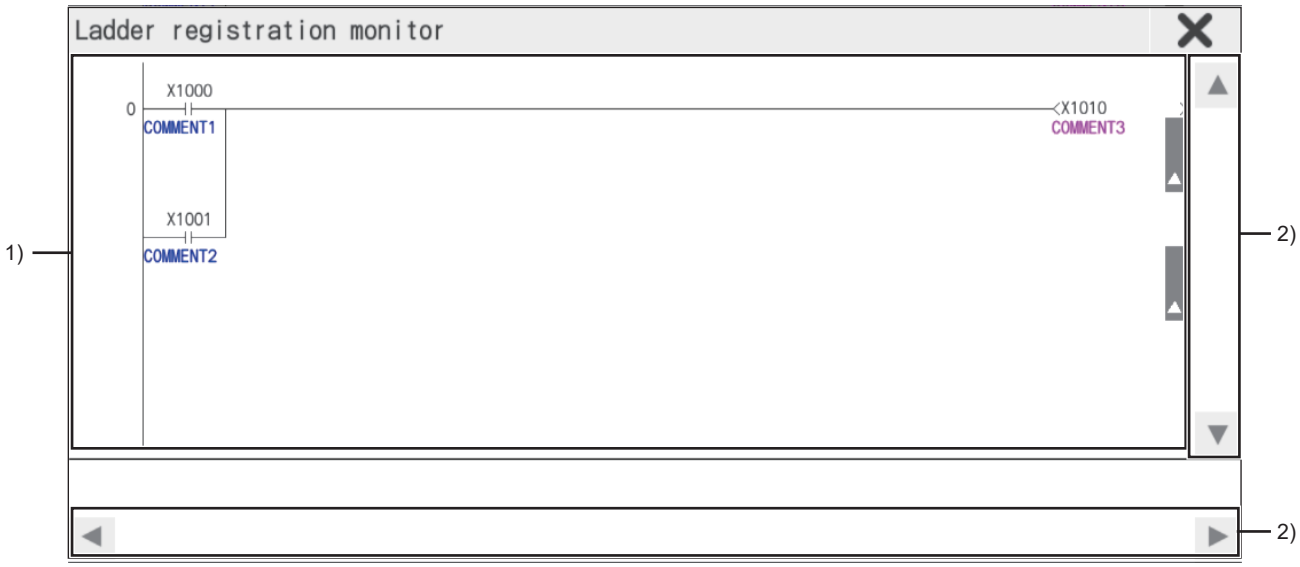


Item	Function
[Data type]	Select the device data type. • [16bit(W)] • [32bit(D)] • [64bit(L)] Fixed to [16bit(W)] for the timer, counter, retentive timer, safety timer, safety counter, and safety retentive timer. Fixed to [32bit(D)] for the long timer, long counter, long retentive timer, and long index register.
[Data type]	Select the device display format. • [Signed decimal(K±)] • [Hexadecimal(HEX)] • [Floating(EXP)] • [Fixed(FIX)] The selectable display formats differ depending on the data type. • [16bit(W)]: [Signed decimal(K±)], [Hexadecimal(HEX)] • [32bit(D)]: [Signed decimal(K±)], [Hexadecimal(HEX)], [Floating(EXP)], [Fixed(FIX)] • [64bit(L)]: [Floating(EXP)], [Fixed(FIX)]
[×]	Closes the [Display format] window without reflecting the settings.
[OK]	Closes the [Display format] window after reflecting the settings.

50.5.2 [Ladder registration monitor] window

Registered ladder blocks can be displayed or deleted.

Displayed screen



No.	Item	Description
1)	Ladder display area	A ladder block selected in the ladder monitor screen is added as the last registered ladder block in the [Ladder registration monitor] window. Touching the first step number displays the dialog box to delete the ladder block. (In factor search mode, touching it does not delete the block.)
2)	Keys	Keys for operations in the [Ladder registration monitor] window shown in (b). ☞ Page 267 Key functions

Key functions

Key	Function
[×]	Closes the [Ladder registration monitor] window.
▲ ▼	Scrolls the display up or down.
◀ ▶	Scrolls the display right or left.

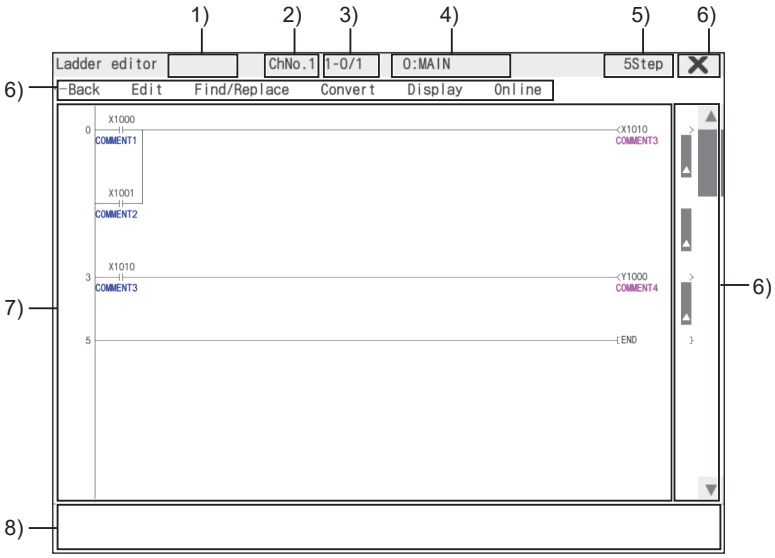
PART 7

50.6 [Ladder editor] screen

On the Ladder editor screen, you can edit sequence programs, search devices, and display comments.
To display the [Ladder editor] screen in the sequence program monitor (iQ-R/iQ-L ladder), [Ladder editor (iQ-R/iQ-L ladder)] must be enabled in the [Seq. program monitor] screen.
For details on the [Seq. program monitor] screen, refer to the following.
☞ Page 147 [Seq. program monitor]
The following describes how to operate the [Ladder editor] screen.

Displayed screen

The following describes the configuration of the ladder editor screen, menus and key functions on the screen.



No.	Item	Description
1)	PLC name	Displays the label set in the PLC name setting for the target PLC CPU.
2)	Target controller	Displays the CH No., network No., station No., and CPU No of the target PLC CPU as shown below. CH No. network No.-station No./CPU No.
3)	Drive name	Displays the drive of the controller for the displayed sequence program.
4)	Program name	Displays the file name of the displayed sequence program.
5)	Number of steps	Displays the number of steps for the displayed sequence program.
6)	Keys	Keys for operations on the ladder editor screen. ☞ Page 269 Key functions
7)	Ladder display area	Displays the read sequence program as follows. By touching a contact, coil, output, statement, or note, the item is highlighted and the [Ladder input] window is displayed. ☞ Page 272 [Enter ladder program] window Touch [Show comments] from the [Display] menu to display comments, statements or notes. Touch [Hide comments] from the [Display] menu to hide comments, statements or notes. Displays the first step number of ladder blocks. Touching the first step number of ladder blocks highlights the touched position, and displays the [Enter ladder program] window. ☞ Page 272 [Enter ladder program] window Displays the device comments in the comment display mode. Device comments are displayed using one-byte characters in four rows and twelve columns.
8)	Message display area	Displays error messages and other items.

Point

Displaying the [Ladder editor] screen when setting the security
By setting the security on GT Designer3 (GOT3000), the display of the Ladder editor screen can be restricted.
For the security setting, refer to the following.
☞ Page 251 Security settings

Key functions

The following shows the functions of keys used for operating the [Ladder editor] screen.

Key	Function
[←Back]	Returns the screen to the last screen that is displayed right before the [Ladder editor] screen appears. The key is disabled when the last screen is the utility screen or user-created monitor screen.
[Edit]	Displays the [Edit] menu. ☞ Page 270 [Edit] menu
[Find/Replace]	Displays the [Find/Replace] menu. When the Find/Replace menu is displayed, touching the key closes the menu. ☞ Page 270 [Find/Replace] menu
[Convert]	Displays the [Convert] menu. ☞ Page 270 [Jump] menu
[Display]	Displays the [Display] menu. ☞ Page 271 [Display] menu
[Online]	Displays the [Online] menu. ☞ Page 271 [Online] menu
[×]	Exits the sequence program monitor (ladder display) and returns the screen to the sequence program monitor (ladder display) startup screen.
	The comment and note of the touched line can be displayed/hidden. If the touched line is the first line in the ladder block, the statement of the touched ladder block can be displayed/hidden.
	Scrolls the display up or down.

PART 7

Menus

The following shows operations for the menus displayed on the [Ladder editor] screen.

■[Edit] menu

Key	Function	Reference
[Undo]*1	Undoes the last edit operation. The GOT can be returned to the state right after the second-to-last conversion, online change, device replacement, or open/close contact change.	-
[Redo]*1	Redoes the operation which was undone using the [Undo] key.	-
[Restore program to the state after conversion]	Restores the edited ladder to the state just after conversion.	-
[Check program]*1	Executes the program check to check if programs have consistency or whether double coils exist.	-

*1 Not supported by the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

Point

Deleting ladders which are not converted

When deleting ladders which are not converted, a dialog box is displayed.

When touching the [OK] button in the dialog box, the ladders which are not converted are deleted, as well as the operation history. Therefore, the [Undo] and [Redo] keys do not operate.

Touch the [Cancel] button to return to the previous screen.

■[Find/Replace] menu

The [Find/Replace] menu is only available for the sequence program monitor (Q/L ladder).

Key	Function	Reference
[Jump]	Displays the jump window.	☞ Page 280 Jump window
[Find device]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Find contact]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Coil search]	Displays the Find device window.	☞ Page 286 Device/Contact/Coil search
[Replace device]	Displays the replace device window.	☞ Page 290 Device replacement
[Change open/close contact]	Displays the change open/close contact window.	☞ Page 291 Change open/close contact

■[Jump] menu

Key	Function	Reference
[Convert]	Convert the editing program to an execution program.	-
[Convert (Online change)]*1	Converts the program being edited to an execution program and writes it to the controller while online.	-

*1 Not supported by the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

Precautions

The precautions for executing program changes while online are the same as those for GX Works2/GX Developer, except for the following.

For details on precautions on executing program changes while online, refer to the following.

📖GX Works2 Version1 Operating Manual (Common)

📖GX Developer Version8 Operating Manual

📖QnUCPU User's Manual (Function Explanation, Program Fundamentals)

The following items are the different when executing program changes while online in GX Works2/GX Developer.

Executing program changes while online is not possible for programs other than program memories.

Executing program changes while online is not possible with the pointer at the top.

Do not execute program changes while online from multiple points.

Executing program changes for individual files while online is not possible.

No option setting is available to prevent rise/fall instructions from being executed.

Executing program changes while online is not possible if the reserved area is exceeded by the change.

Execute Write to PLC if the reserved area is exceeded.

Selecting whether to transfer to the program memory cannot be changed after writing is completed.

When executing program changes while online to the universal model QCPU, all the information in the program cache memory is transferred at once, after the change.

If the GOT date is set to February 29th when using the Q00JCPU, Q01CPU or Q00CPU, online program changes are not possible.

Change the GOT date to a value other than February 29th and re-execute the online program change.

■[Display] menu

Key	Function	Reference
[Hide comments]	Hides the comments, statements or notes in the ladder display area.	☞ Page 256 Switching comment display mode
[Show comments]	Displays the comments, statements or notes in the ladder display area.	
[Comment change]	Displays the [Comment file list] window.	☞ Page 281 [Comment file list] window
[Change comment column]*2	Displays the [Change comment column] window.	☞ Page 282 [Change comment column] window
[Program list]	Displays the [Program list] window.	☞ Page 261 [Program list] window
[PLC diagnosis]*1	Displays the [PLC diagnosis] screen.	☞ Page 284 [PLC diagnosis] window
[PLC Read]	Displays the [PLC Read] screen.	☞ Page 257 [PLC Read] screen

*1 Not supported by the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

*2 Not supported by the sequence program monitor (Q/L ladder).

■[Online] menu

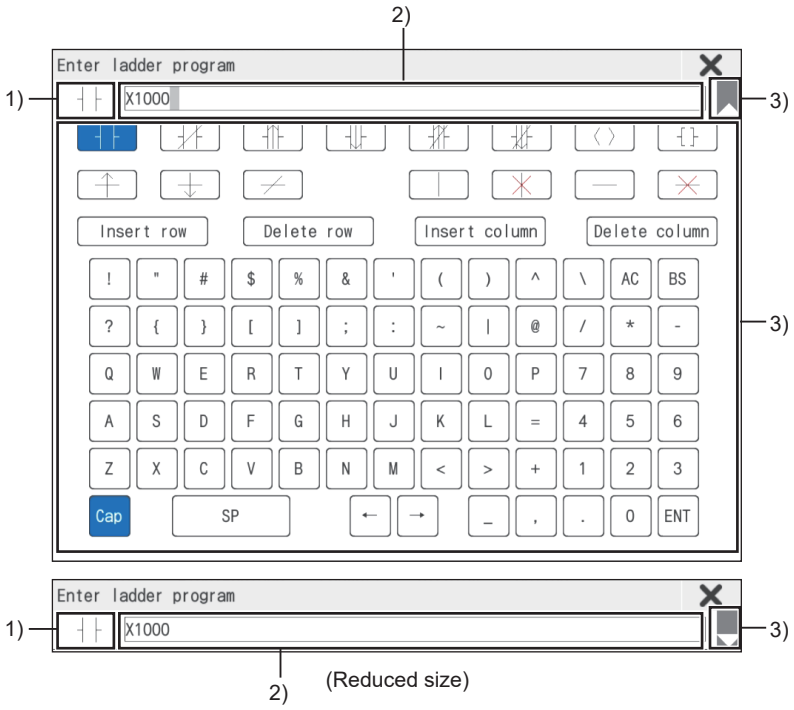
Key	Function	Reference
[PLC Read]	Displays the [PLC Read] screen.	☞ Page 257 [PLC Read] screen
[Write to PLC]	Checks the edited sequence program, and writes the program to the PLC CPU. Set the PLC CPU to the STOP status, and write the program to the PLC CPU. To execute changes while online, use the [Convert (Online change)] key in the [Convert] menu. ☞ Page 270 Menus	-
[Verify with PLC]*1	Verifies the sequence program displayed on the ladder display area and the program on the PLC CPU. If the programs do not match, the [Verify result] window is displayed.	☞ Page 283 [Verify result] window
[PLC diagnosis]*1	Displays the [PLC diagnosis] screen.	☞ Page 284 [PLC diagnosis] window
[Remote operation]*1	Displays the [Remote operation] window.	☞ Page 285 [Remote operation] window
[Write the program memory to ROM]*1	Displays the [Copy program memory data into ROM] window.	☞ Page 285 [Write the program memory to ROM] window
[Start monitor]	Displays the [Ladder monitor] screen.	☞ Page 263 [Ladder monitor] screen

*1 Not supported by the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

50.6.1 [Enter ladder program] window

Edit the sequence program.

Displayed screen



No.	Item	Description
1)	Ladder symbol display area	Displays the ladder symbol selected in the ladder display area.
2)	Text display area	Displays devices, sequence programs, statements, and notes selected in the Ladder symbol display area. The cursor is displayed at the position to be input. The cursor can be moved with touch operation. If devices, sequence programs, statements, and notes are not fully displayed in the display area, move the cursor to the border of the side where the display was cut, and touch the cursor to scroll the displayed contents. Only one-byte alphanumeric characters can be input for statements and notes. If characters other than one-byte alphanumeric characters input on GX Works2/GX Developer are deleted on the GOT, they cannot be input again.
3)	Key	Keys for operations in the [Enter ladder program] window shown in (b). ☞ Page 273 Key functions

Point

Types of statements and notes that can be entered

Statements and notes that can be entered are integrated statements and notes.

Peripheral statements and notes cannot be entered.

(If an asterisk is entered at the start of statements and notes, an error occurs.)

Key functions

Key	Function
[×]	Closes the [Enter ladder program] window. The displayed contents are not reflected.
	Touch the key to input a normally open contact.
	Touch the key to input a normally closed contact.
	Touch the key to input a leading edge pulse.
	Touch the key to input a trailing edge pulse.
	Touch the key to input a leading edge pulse rejection.
	Touch the key to input a trailing edge rejection.
	Touch the key to input a conversion of operation result to leading edge pulse.
	Touch the key to input a conversion of operation result to trailing edge pulse.
	Touch the key to input a coil.
	Touch the key to input an application instruction.
	Touch the key to input a vertical line.
	Touch the key to delete a vertical line.
	Touch the key to input a horizontal line.
	Touch the key to delete a ladder.
[Insert row]	Inserts one row in the specified position.
[Delete row]	Deletes the specified row.
[Insert column]	Inserts one column in the specified position.
[Delete column]	Deletes the specified column.
[ENT]	Reflects the displayed contents, and closes the [Enter ladder program] window.
	Reduces the size of the [Enter ladder program] window.
	Changes the [Enter ladder program] window from the reduced size to the default size.
[Cap]	Switches alphabetic characters between uppercase and lowercase.

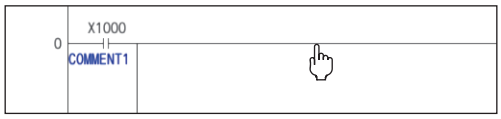
Operation

■Inputting or deleting ladders

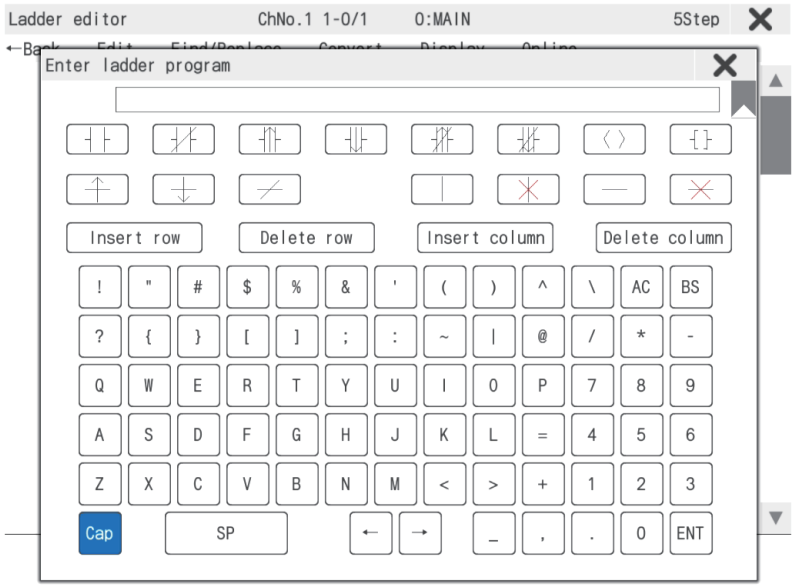
Inputting contacts or instructions

(Operation example: Inputting the X0 contact)

1. Touch a position to input a contact.

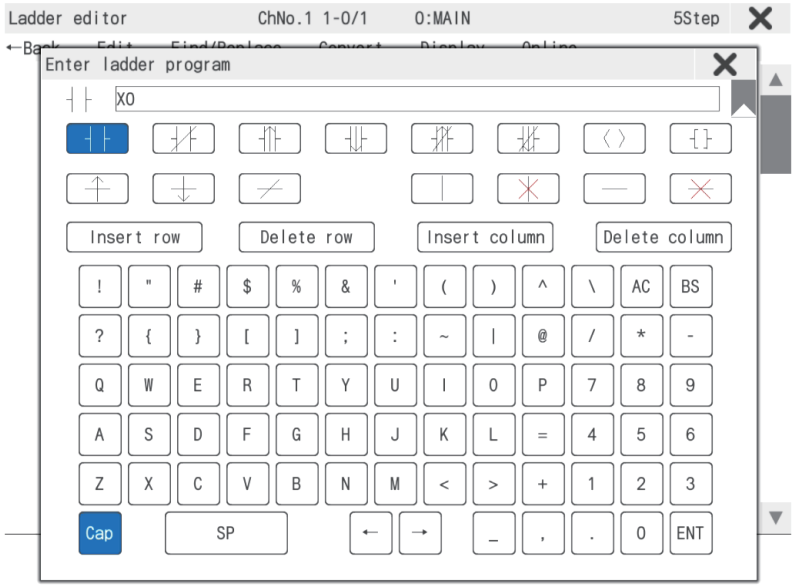


2. The [Enter ladder program] window appears.

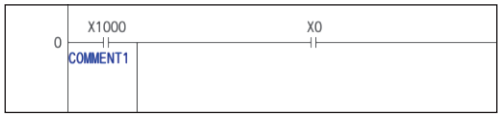


3. [ ] Touch the key.

The ladder symbol corresponding to the touched key is displayed on the ladder symbol display area. Input X0 in the text display area, and touch the [ENT] key.



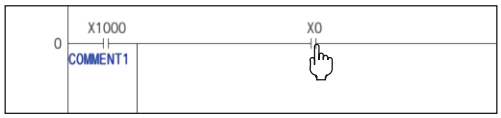
4. The X0 contact is input.



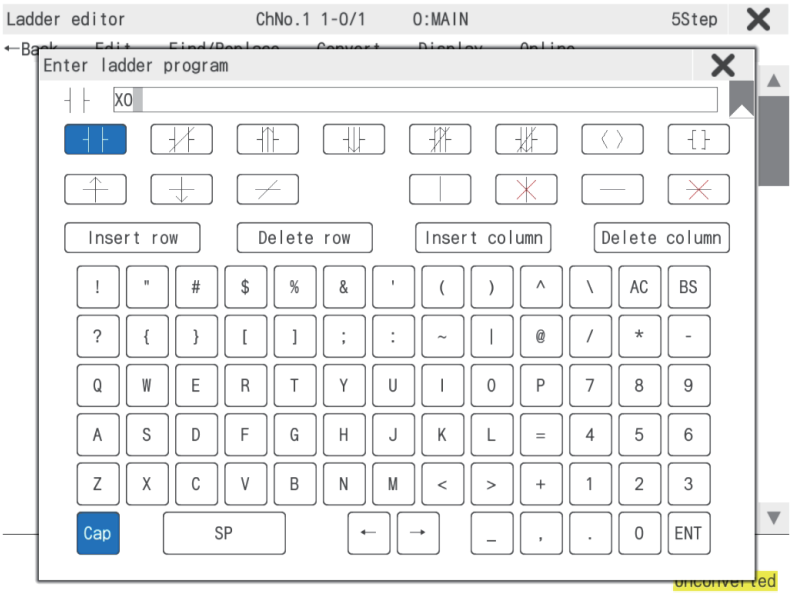
■Deleting contacts or instructions

(Operation example: Deleting the X0 contact)

1. Touch the X0 contact.

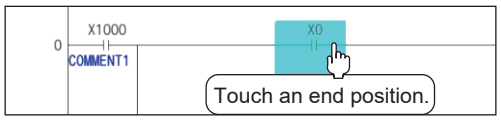


2. The [Enter ladder program] window appears.

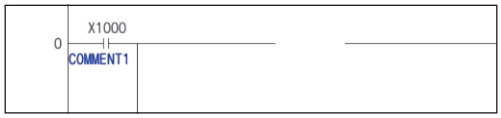


3. [ ] Touch the key.

Touch the end position (end point) of the contact.



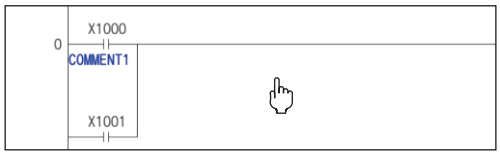
4. The X0 contact is deleted.



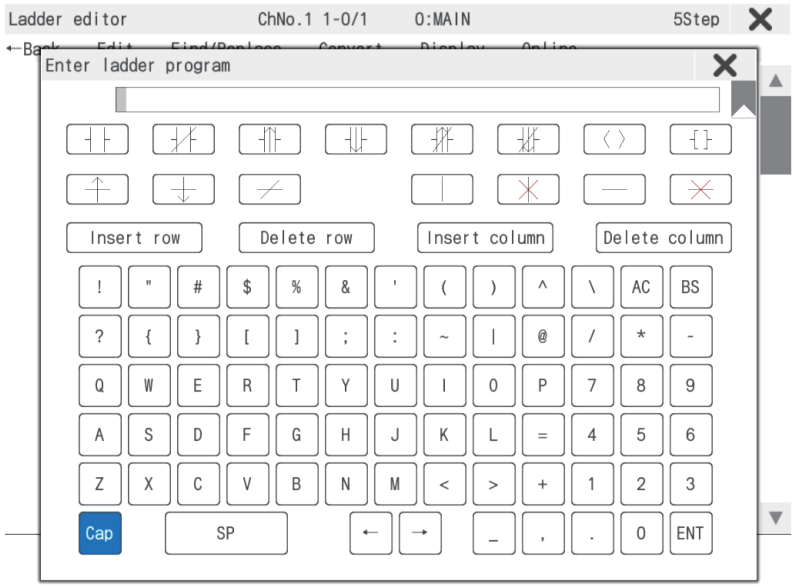
■Inputting vertical lines or horizontal lines

(Operation example: Inputting a vertical line)

1. Touch a position to input a contact.

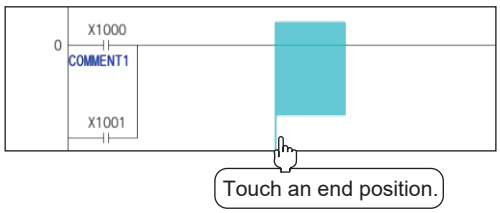


2. The [Enter ladder program] window appears.

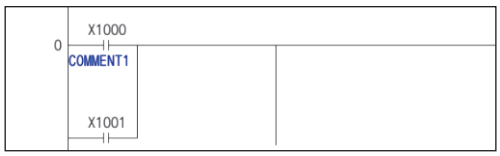


3. [|] Touch the key.

Touch the end position (end point) of the vertical line.



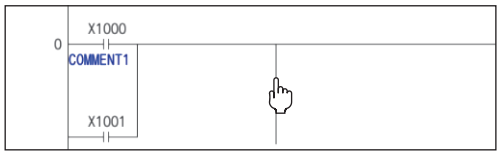
4. A vertical line is input.



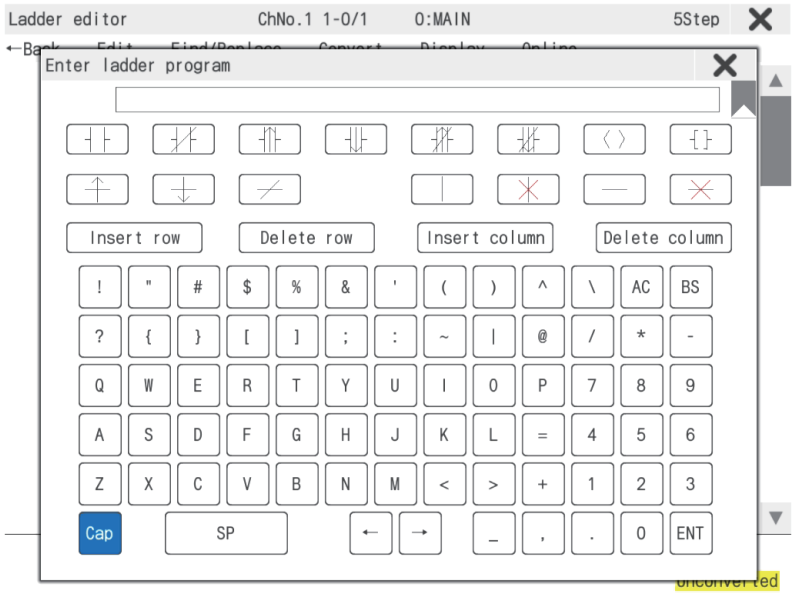
■Deleting vertical lines or horizontal lines

(Operation example: Deleting a vertical line)

1. Touch the position of where to delete a vertical line.

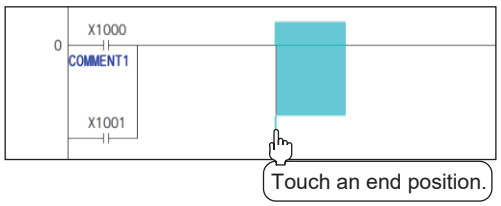


2. The [Enter ladder program] window appears.

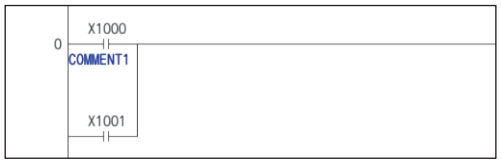


3. [ ] Touch the key.

Touch the end position (end point) to delete the vertical line.



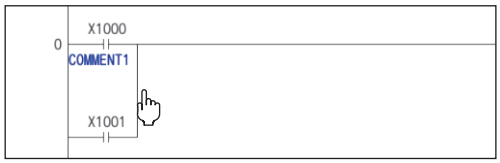
4. The vertical line is deleted.



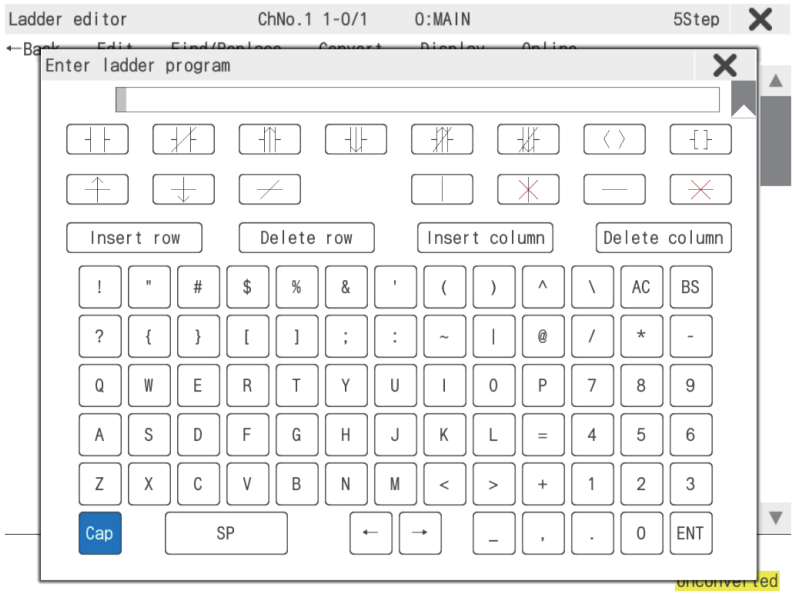
■Inputting rows and columns

(Operation example: Inputting a row)

1. Touch a position to insert a row.

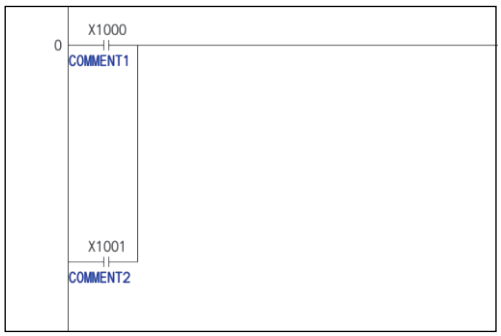


2. The [Enter ladder program] window appears.



3. Touch the [Insert row] key.

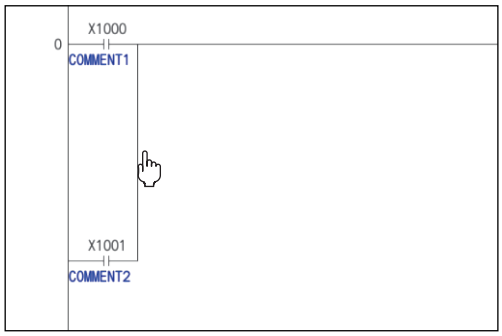
The [Enter ladder program] window is closed and the row is inserted.



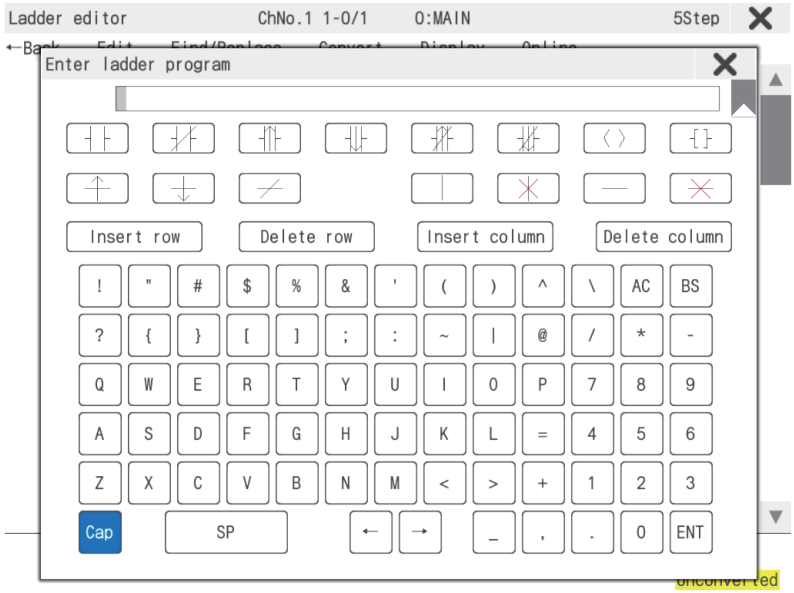
■Deleting rows and columns

(Operation example: Deleting a row)

1. Touch the position to delete a row.

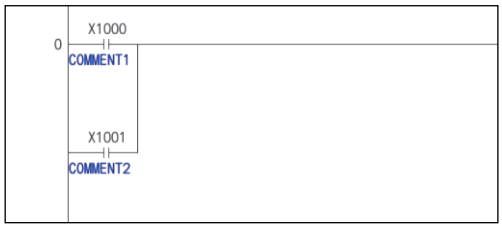


2. The [Enter ladder program] window appears.



3. Touch the [Delete row] key.

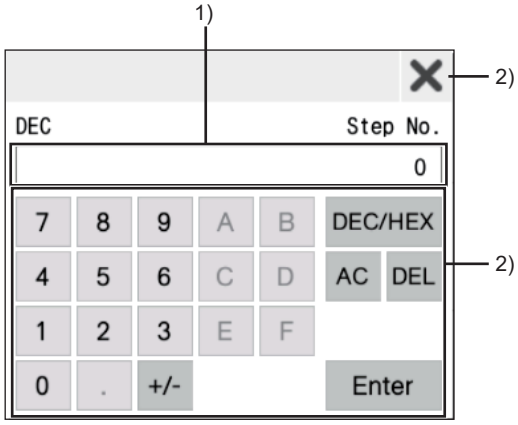
The Enter ladder program window is closed, and the row is deleted.



PART 7

50.6.2 Jump window

Displayed contents



No.	Item	Description
1)	Jump destination step number input area	Displays the input step number.
2)	Keys	Keys for operations in the jump window shown in (b). (Touch input) ☞ Page 280 Key functions

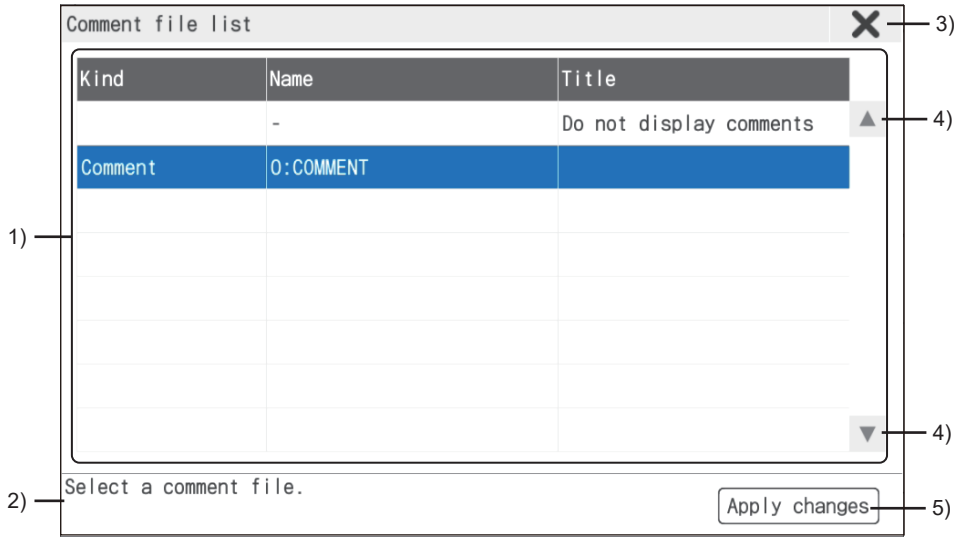
Key functions

Key	Function
[×]	Closes the jump window.
[Enter]	Displays a row that includes the input step number in the center of the ladder display area.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.

50.6.3 [Comment file list] window

Displays a list of comment files.

The [Comment file list] window is available for the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).

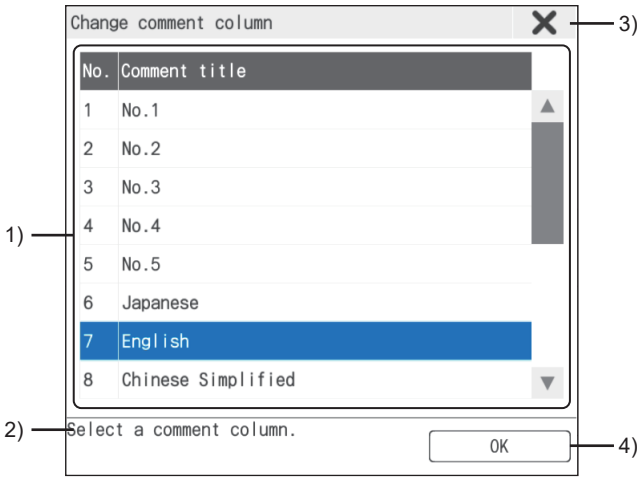


No.	Item	Description
1)	Comment file list	Among comment files stored in the data storage, the file names and titles of the comment files, and common comment files used for the displayed sequence program are displayed. To switch comments, select a comment file to be used. The selected comment file is highlighted.
2)	Message display area	Displays messages.
3)	[×]	Closes the [Comment file list] window.
4)	▲ ▼	Scrolls the display area up and down by one line.
5)	[Apply changes]	Closes the [Comment file list] window and displays the ladder display area with the comments of the file selected from the comment file list.

PART 7

50.6.4 [Change comment column] window

Displays the comment column list of the sequence program monitor (iQ-R/iQ-L ladder and iQ-F ladder).



No.	Item	Description
1)	Comment column list	Displays the comment titles in the multiple comments display setting of GX Works3. To change the comment columns, select the comment column to switch to. Only one comment column is selectable.
2)	Message display area	Displays messages.
3)	[×]	Closes the [Change comment column] window.
4)	[OK]	Closes the [Change comment column] window, and displays the ladder display area using the comment column selected from the comment column list.

Point

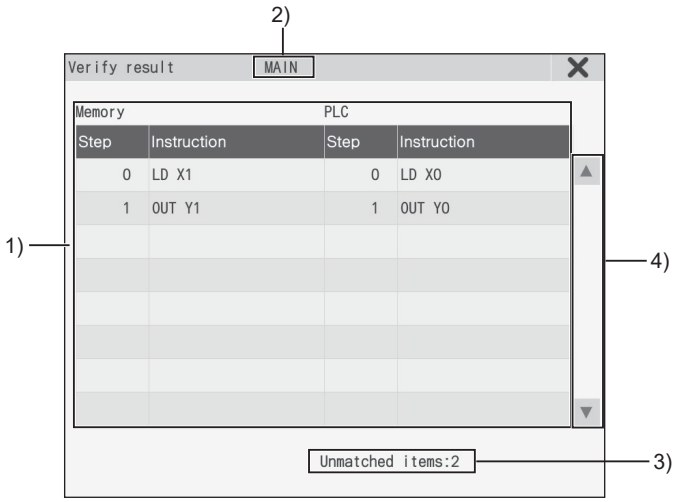
Comment title

If the comment titles cannot be acquired, the corresponding comment column numbers are displayed in the comment column list.

50.6.5 [Verify result] window

Displays the result of PLC verification.

Displayed screen



No.	Item	Description
1)	Verification result display area	Displays unmatched items. Up to 100 items are displayed. Program verification stops when unmatched items exceed 100.
2)	Program name display area	Displays the file name of the verified program.
3)	Unmatched item count display area	Displays the number of unmatched items displayed on the [Verify result] window.
4)	Keys	Keys for operations in the [Verify result] window shown in (b). (Touch input) ☞ Page 283 Key functions

Key functions

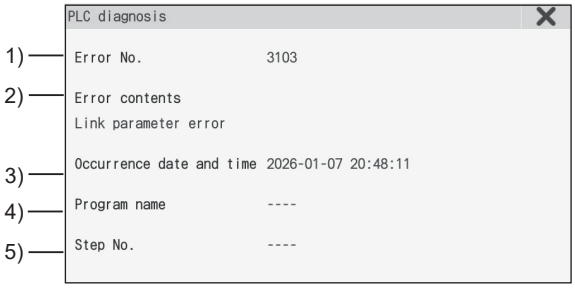
Keys	Function
[×]	Closes the [Verify result] window.
▲ ▼	Scrolls the display area up and down by one line.

PART 7

50.6.6 [PLC diagnosis] window

Displays the result of the PLC diagnosis.

Displayed screen



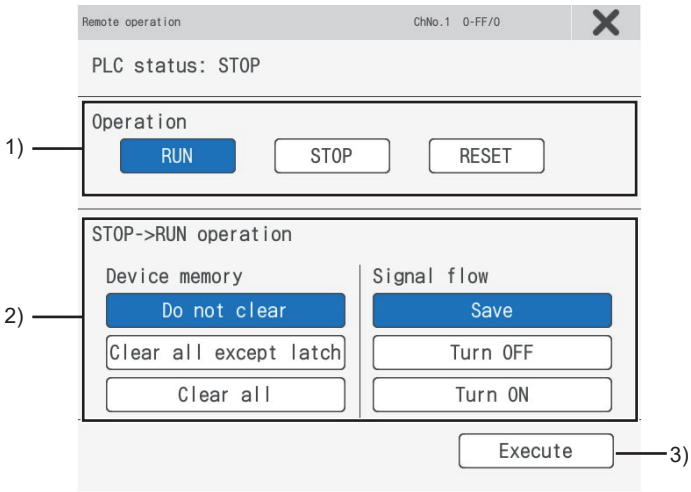
No.	Item	Description
1)	Error No.	Displays the error number of the destination PLC found by PLC diagnosis. Displays [No errors exist.] when no errors occur.
2)	Description	Displays the message corresponding to the error number of the destination PLC.
3)	Occurrence date and time	Displays the error occurrence date and time when an error occurs in the destination PLC.
4)	Program name	Displays the program name when the error in the destination PLC has a program error. If the error is not a program error, [----] is displayed.
5)	Step No.	Displays the sequence step number highlighted in yellow when the error in the destination PLC is a program error. By touching the sequence step number where an error occurs, the [PLC diagnosis] window will be closed and the screen will be switched to the ladder display. The screen jumps to sequence step number where the error occurs and the area of error is highlighted in a red rectangle. If the error is not a program error, [----] is displayed.

Key functions

Key	Function
[×]	Closes the [PLC diagnosis] window.

50.6.7 [Remote operation] window

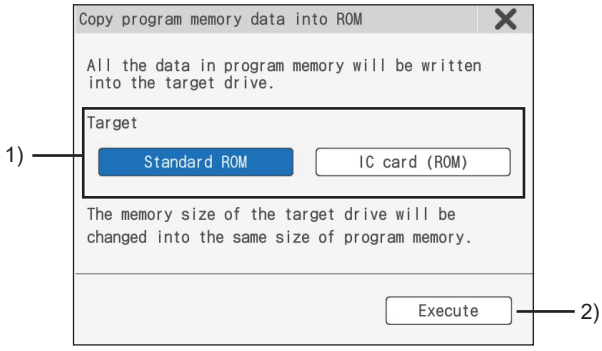
The operation status of the PLC CPU can be changed via remote operation.



No.	Item	Description
1)	Operation	Select an operation (RUN or STOP key), and touch the [Execute] key. • RUN: The PLC CPU enters the remote RUN execution standby state. • STOP: The PLC CPU enters the remote STOP execution standby state. • RESET: The PLC CPU exits the RUN or STOP execution standby state and enters the RESET execution standby state.
2)	STOP → RUN operation	Set the status of devices and signals when executing remote RUN. Device memory • Do not clear: The PLC CPU operates device values prior to remote STOP. • Clear all except latch: Clears all device values to zero except the latched devices. • Clear all: Clears all device values to zero. Signal flow • Save: Keeps signals prior to remote STOP, and outputs the signals. • Turn OFF: Turns the signal off. • Turn ON: Turns the signal on.
3)	[Execute]	Executes remote RUN or STOP.

50.6.8 [Write the program memory to ROM] window

Write data in the program memory to the ROM.



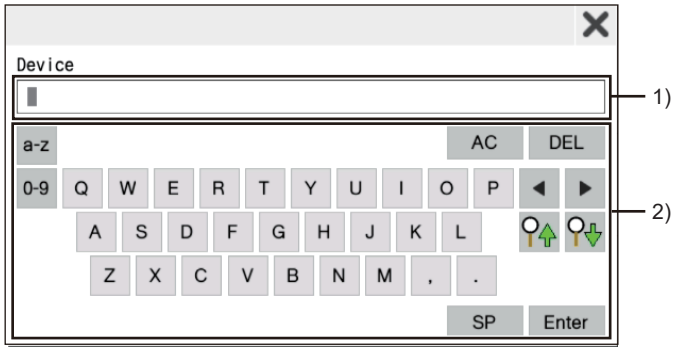
No.	Item	Description
1)	Target	Touch the target ROM. • Standard ROM: Set the standard ROM in the PLC CPU as the target. • IC card (ROM): Set the IC memory card (Flash card) inserted in the PLC CPU as the target.
2)	[Execute]	Touching the key writes data in the program memory to the target ROM.

50.7 Find/Replace Operation

50.7.1 Device/Contact/Coil search

Ladder blocks including the set devices can be searched.
They can be searched continuously in multiple sequence program files.

Displayed screen



No.	Item	Description
1)	Device input area	Set a device to be searched. The device can be input also by selecting a device on the [Ladder monitor] screen, [Ladder editor] screen, [Ladder registration monitor] window.
2)	Keys	Keys for operations in the Find device window shown in (b). ☞ Page 286 Key functions

Key functions

Key	Function
[×]	Closes the Find device window.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the device input area.
	Searches the input device in descending order of the step number.
	Searches the input device in ascending order of the step number. If the device is selected on the Ladder monitor screen or Ladder editor screen, the search starts from the selected device.
[SP]	Enters a space in the device input areas.
[Enter]	Searches the input device in ascending order of the step number. If the device is selected on the Ladder monitor screen or Ladder editor screen, the search starts from the selected device. However, the search starts always from the start of the program in the following conditions. • When searching for the first time after the Find device window is displayed • When starting to search consecutively after searching

Operating procedure

1. Execute any of the following operations to display the Find device window.

Touch the [Find] → [Find device]/[Find contact]/[Find coil] menu on the [Ladder monitor] screen.

Touch the [Find/Replace] → [Find device]/[Find contact]/[Find coil] menu on the [Ladder editor] screen.

2. Set a device to be searched and touch the / /[Enter] key.

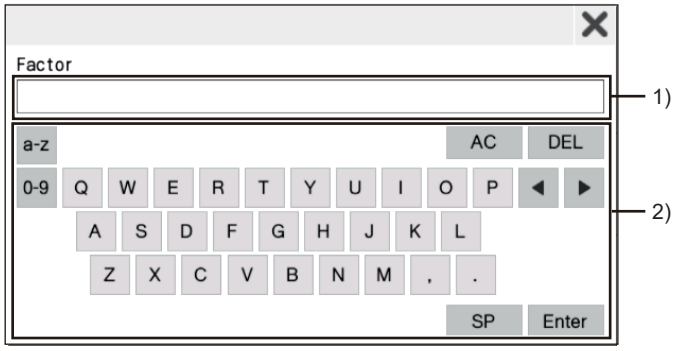
3. The ladder block which has the searched device is displayed and the device is surrounded with a green frame.

PART 7

50.7.2 Factor search

The contact point that affected the set device status (ON/OFF) is searched backwards in ladder blocks.

Displayed screen



No.	Item	Description
1)	Device input area	Set a device to be searched. Bit device words cannot be specified. Also, by selecting a device on the Ladder monitor screen, the device can be input.
2)	Keys	Keys for operations in Factor search window. ☞ Page 288 Key functions

Key functions

Keys	Function
[×]	Closes the Factor search window.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the device input areas.
[SP]	Enters a space in the device input areas.
[Enter]	Touching the key closes the factor search window and displays the [Ladder registration monitor] window. If the device is selected on the [Ladder monitor] screen, the search starts from the selected device. When the search is executed, ladder blocks registered in the [Ladder registration monitor] window are deleted.

Operating procedure

1. Touch the [Find] → [Factor] menu on the [Ladder monitor] screen to display the factor search window.

2. Set a device to be searched, and touch the [Enter] key.

The following shows the target instructions and coils for Factor search.

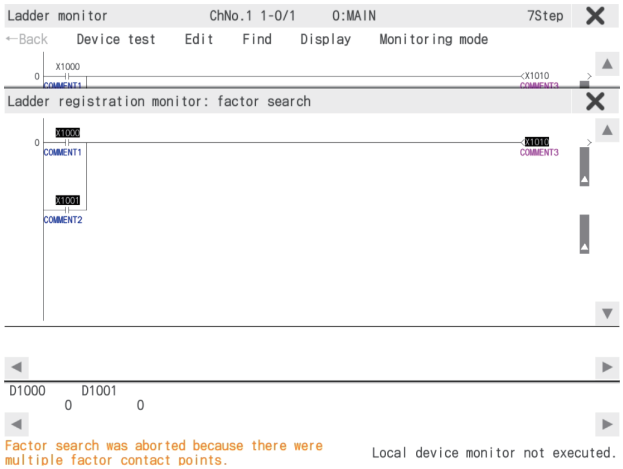
Instruction, coil	Target of the search operation
Instruction	LD, LDI, AND, ANI, OR, ORI
Coil	OUT, OUTH

3. The Factor search window is closed and the [Ladder registration monitor] window is displayed.

The sequence programs displayed on the [Ladder monitor] screen are searched. Then, the factor ladder blocks for the set device are registered in order.

The ladder blocks newly registered are always displayed in the [Ladder monitor] screen during the factor search.

The factor devices are highlighted.



For the [Ladder registration monitor] window, refer to the following.

☞ Page 267 Monitoring local devices

4. The message [Factor search is completed.] is displayed in the message area when the search is completed. The search starts from the last step.

When closing the [Ladder registration monitor] window, factor search mode is released.

Point

Cancellation of factor search

- When there are multiple factor contacts

The message [Factor search was aborted because there were multiple factor contact points.] is displayed in the message area on the [Ladder monitor] screen.

When continuing the factor search based on the interrupted result, execute the factor search based on one of the found contacts.

- When the ladder blocks registered in the [Ladder registration monitor] window exceed 100

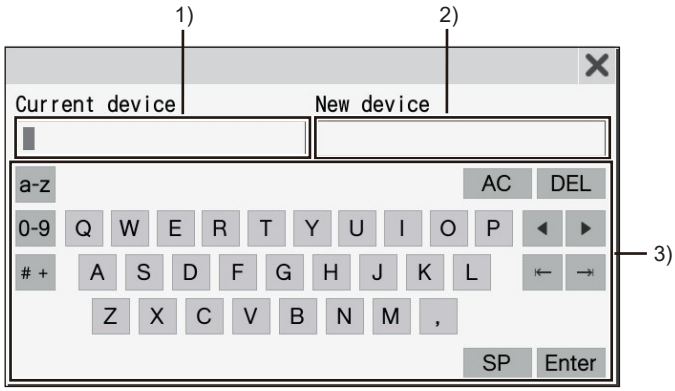
The message [Factor search was aborted because the number of ladder blocks exceeded 100.] is displayed in the message area on the [Ladder monitor] screen.

When restarting the factor search, proceed the factor search based on the contact of the 100th ladder block.

50.7.3 Device replacement

Device replacement is available only in the sequence program monitor (Q/L ladder).

Displayed screen



No.	Item	Description
1)	Current device input area	Set a current device. The device can be input also by selecting a device on the [Ladder editor] screen.
2)	New device input area	Set a new device. The device can be input also by selecting a device on the [Ladder editor] screen.
3)	Keys	Displays the keys used in the operation in the Replace device window. ☞ Page 290 Key functions

Key functions

Key	Function
[×]	Closes the Replace device window.
⇤	Touching this key after entering a new device moves the cursor to the current device input area.
⇥	Touching the key after inputting a current device moves the cursor to the new device input area.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the device input areas.
[SP]	Enters a space in the device input areas.
[Enter]	Replaces the current device to the new device.

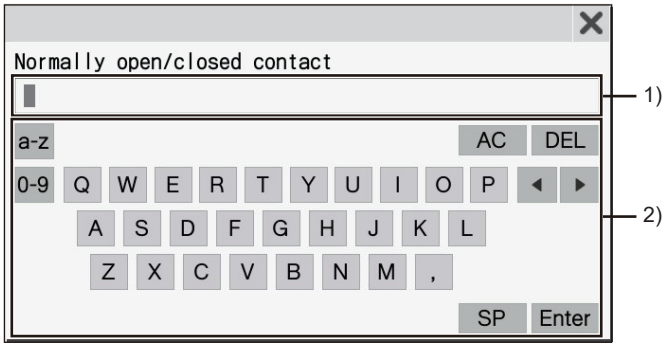
Operating procedure

1. Touch [Find/Replace] → [Replace device] from the menu on the [Ladder editor] screen to display the device replacement window.
2. Set the current device and new device, and touch the [Enter] key.
3. All the old devices in the sequence programs displayed on the [Ladder editor] screen are replaced with new devices.

50.7.4 Change open/close contact

Open/close contact switching is only available for the sequence program monitor (Q/L ladder).

Displayed screen



No.	Item	Description
1)	Device input area	Set a device for changing a normally open contact or a normally closed contact. This item can be set also by selecting in the ladder editor screen.
2)	Keys	Displays the keys used in the operation in the change open/close contact window. ☞ Page 291 Key functions

Key functions

Key	Function
[×]	Closes the change open/close contact window.
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[a-z]	Switches the key type to the alphabet (lowercase).
[A-Z]	Switches the key type to the alphabet (uppercase).
[0-9]	Switches they key type to numeric characters.
[#+]	Switches the key type to symbols.
◀ ▶	Moves the cursor in the device input areas.
[SP]	Enters a space in the device input areas.
[Enter]	Changes a normally open contact or a normally closed contact.

Operating procedure

1. Touch [Find/Replace] → [Change open/close contact] from the menu on the [Ladder editor] screen to display the change open/close contact window.
2. Set the device to change the contact and touch the [Enter] key.
3. The contacts of devices in the sequence program displayed in the [Ladder editor] screen are changed from A to B or B to A.

PART 7

50.8 Test operation

In device test mode, device values can be changed on the screen.
To set the device test mode, refer to the following.
☞ Page 264 Key functions
Test operation of devices is possible by touching devices on the following screens in the device test mode.

Screen applicable to device test mode	Reference
Ladder monitor screen	☞ Page 264 Key functions

Point

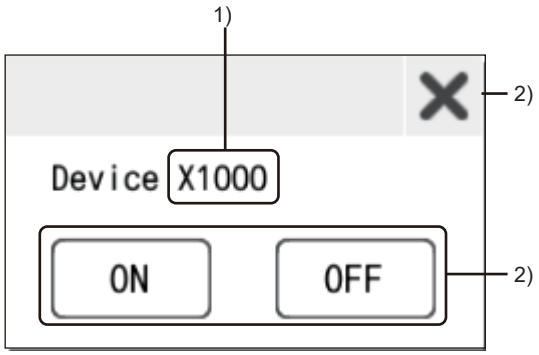
Displaying the device test window when setting the security
By configuring the security settings in GT Designer3 (GOT3000), it is possible to restrict displaying the device test window.
For the security setting, refer to the following.
☞ Page 251 Security settings

Touching a device displays the device test window.
When touching a bit device
A bit device is switched between ON and OFF states in the device test window.
When touching word devices
The GOT writes the value input in the device test window into the selected word device.

50.8.1 How to operate device test window

Bit devices

■Displayed screen



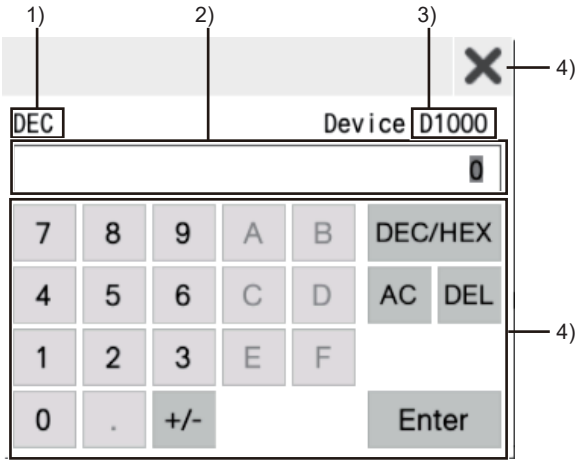
No.	Item	Description
1)	Device	Displays the selected device.
2)	Keys	Keys for operations in the device test window shown in (b). ☞ Page 292 Key functions

■Key functions

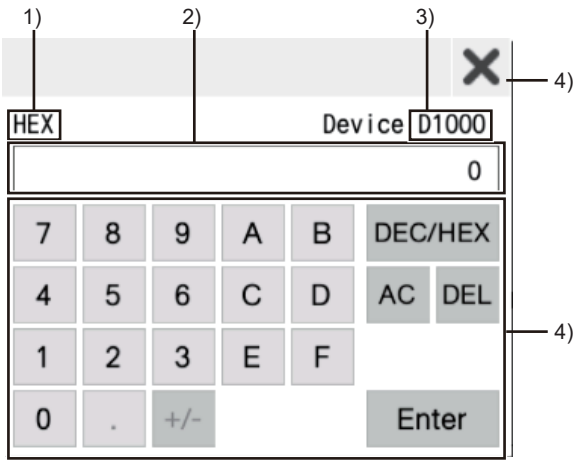
Key	Function
[×]	Closes the device test window.
[ON]	Turns on the bit device and writes the device state to the PLC CPU.
[OFF]	Turns off the bit device and writes the device state to the PLC CPU.

Word devices

■Displayed screen



(Monitoring mode: 16-bit integer (DEC))



(Monitoring mode: 32-bit integer (HEX))

No.	Item	Description
1)	Input mode	Displays the current input mode. (DEC: decimal number. HEX: hexadecimal number)
2)	Device value input area	Set the value to be written into the selected device.
3)	Device	Displays the selected device.
4)	Keys	Keys for operations in the device test window shown in (b). ☞ Page 293 Key functions

■Key functions

Key	Function
[×]	Closes the device test window.
[DEC/HEX]	Switches the input modes. (DEC, HEX)
[AC]	Deletes all the input values and characters.
[DEL]	Deletes an input value or character.
[Enter]	Writes the value input in the device value input area to the PLC CPU.

PART 7

50.9 Error messages and corrective action

This section explains the error messages displayed when the sequence program monitor (ladder display) is executed, and the corrective actions.

Error messages for data-storing destination access

Error message	Description	Corrective action
File access error. Please check the [drive name] drive.	• No data storage is inserted into the GOT. • The SD card cover is open. • A data storage with a format error is inserted into the GOT. • The data storage has insufficient free space for writing a file. • The folder for the sequence program monitor (ladder display) in the data storage is write-protected.	• Insert a data storage without a format error into the GOT. • Close the SD card cover. • Delete files on the data storage. • Insert a data storage with a large capacity. • Cancel the write-protect setting for the folder that is used for the sequence program monitor (ladder display) in the data storage.
Failed to write the (file name) to the [drive name] drive. Please check the [drive name] drive.	• No data storage is inserted into the GOT. • The SD card cover is open. • A data storage with a format error is inserted into the GOT. • The data storage has insufficient free space for writing a file. • The folder for the sequence program monitor (ladder display) in the data storage is write-protected.	• Insert a data storage without a format error into the GOT. • Close the SD card cover. • Delete files on the data storage. • Insert a data storage with a large capacity. • Cancel the write-protect setting for the folder that is used for the sequence program monitor (ladder display) in the data storage.
The [drive name] drive has insufficient free space. The file cannot be saved.	The data storage has insufficient free space for writing a file.	• Delete files on the data storage. • Insert a data storage with a large capacity.
The file (file name) is broken. Perform PLC Read and read the file again.	• The temporary file used on the [Ladder editor] screen or the [Ladder monitor] screen on the data storage is corrupted. • Writing files to data storage failed due to insufficient data storage capacity.	• Read the file from the PLC CPU again. • Delete unnecessary files on the data storage. Or insert a data storage with a larger free space.
The file (file name) is broken. Please read the file in the program list again.	The temporary file used on the [Ladder editor] screen or the [Ladder monitor] screen on the data storage is corrupted.	Select the program displayed in the [Program list] window again.
The file (file name) is broken.	A corrupted file on the data storage was found when searching for devices in an undisplayed program.	Read the file from the PLC CPU again.
Failed to check program. Please check the [drive name] drive.	The GOT could not access the temporary file on the data storage during the program check.	• Insert a data storage without a format error into the GOT. • Close the SD card cover. • Delete files on the data storage. • Insert a data storage with a large capacity. • Cancel the write-protect setting for the folder that is used for the sequence program monitor (ladder display) in the data storage.
PLC verification failed. Please check the [drive name] drive.	The GOT could not access the temporary file on the data storage during PLC program verification.	• Insert a data storage without a format error into the GOT. • Close the SD card cover. • Delete files on the data storage. • Insert a data storage with a large capacity. • Cancel the write-protect setting for the folder that is used for the sequence program monitor (ladder display) in the data storage.
Parameter file is corrupted. Please restart the ladder editor.	The parameter file on the data storage is corrupt.	Exit the sequence program monitor (ladder display), and then start the function again.

Error messages for communication

Error message	Description	Corrective action
Failed to communicate with CPU.	The GOT cannot communicate with the PLC CPU.	• Check the line status between the GOT and the PLC CPU, and make the GOT communicate with the PLC CPU. • Check if the PLC CPU supports the sequence program monitor (ladder display).
Failed to communicate with CPU.	The GOT cannot communicate with the PLC CPU.	• Check the line status between the GOT and the PLC CPU, and make the GOT communicate with the PLC CPU. • Check if the PLC CPU supports the sequence program monitor (ladder display).
Failed to get the information of CPU because of bad connection.	The GOT cannot communicate with the PLC CPU.	Check the line status between the GOT and the PLC CPU, and make the GOT communicate with the PLC CPU.
Failed to get the information.	• The GOT cannot communicate with the PLC CPU. • A file with invalid file name is selected.	• Check the line status between the GOT and the PLC CPU, and enable communication between the GOT and PLC CPU. • Select the file after changing the message display language to one which can display the file name in the utility. • Change the file name with GX Works2/GX Developer.
The CPU protect switch is ON. Turn OFF the protect switch.	• The system protect switch of the PLC CPU is on. • The PLC CPU is in the boot process.	• Turn off the PLC CPU system protect switch. • Wait until the PLC CPU boot process has completed.
The CPU is not in STOP mode. Please change the CPU to STOP mode.	An operation that the PLC CPU cannot execute while running was performed.	Set the PLC CPU to the STOP state.
CPU drive error. Please check the drive status.	The target drive is faulty.	Format the target drive using GX Works2/GX Developer.
PLC cannot be remotely reset when it is in RUN mode. Execute again after the PLC stops.	Remote reset was performed while the PLC CPU was running.	Put the PLC CPU in the STOP state then perform remote reset.
Remote reset operation is not allowed by parameters.	Remote reset was attempted without permission to remote reset parameters.	Write the parameter with remote reset permission to the controller using GX Works2/GX Developer.
The specified file does not exist in the CPU. Please confirm the file in the drive.	The specified file does not exist in the PLC CPU.	Read data from the PLC, and check if the file exists on the specified drive.
The specified file in the CPU is invalid. Please confirm the file in the drive.	The file specified in the PLC is corrupt.	Delete the specified file using GX Works2/GX Developer then recreate the file.
The file cannot be accessed while it is being accessed by other connected equipment or it is being transferred.	• Other GOTs or GX Works2/GX Developer are accessing the connected PLC CPU. • The QCPU transfers program files from the program cache memory to the program memory.	• Access the file when other devices are not accessing the connected PLC CPU. • Access the file after QCPU finishes transferring it from the program cache memory to the program memory.
The data cannot be written to the specified CPU because the total data size may exceed the drive capacity.	The specified drive of the PLC CPU has run out of space.	Reduce the size of the file to be written.
The specified file is invalid.	The specified file stored on the PLC CPU is corrupt.	Format the target drive using GX Works2/GX Developer, and then write the specified file.
There is no consecutive free space in the drive of the specified CPU. Please clean up the drive.	The specified drive of the PLC CPU does not have consecutive free space.	Execute [Arrange PLC memory] with GX Works2/GX Developer.
Failed to write data to the specified CPU. Please check if the target flash ROM has an error or not.	An error occurred when writing/deleting data to/from the specified drive of the PLC CPU.	Check the specified drive using GX Works2/GX Developer.
The specified file does not exist.	The specified drive or file does not exist on the PLC CPU.	Read data from the PLC, and check if the specified drive exists.
The specified CPU drive has an error. Please check the drive.	The specified drive of the PLC CPU is faulty.	• Execute [Format PLC memory] with GX Works2/GX Developer. • If the specified drive is the flash ROM, write data to the PLC (flash ROM) again.
The specified file is under processing.	The specified drive of the PLC CPU is in use.	Execute the same operation later.
Invalid password.	The password to access the specified file is incorrect.	Input the correct password.
The specified CPU drive is write-protected.	There was an attempt to write data to the write-protected drive of the PLC CPU.	Remove the write-protect setting for the specified drive of the PLC CPU.
Too many files are being accessed at the same time.	Other devices are accessing too many files on the PLC CPU at the same time.	Reduce the number of files being accessed by other devices.

Error message	Description	Corrective action
The specified CPU drive cannot be accessed.	The specified drive does not exist on the PLC CPU.	Read data from the PLC, and specify a drive that exists on the PLC CPU.
Failed to access the specified CPU drive. Please check the drive status.	• No memory card is inserted in the specified drive of the PLC CPU. • The memory card is faulty.	• Insert a memory card into the specified drive of the PLC CPU. • Format the memory card in the specified drive using GX Works2/GX Developer.
The specified CPU drive has an error. Please check the drive status.	The specified drive in the PLC CPU is faulty.	Format the specified drive using GX Works2/GX Developer.
The specified CPU drive is not formatted.	The specified drive of the PLC CPU is not formatted.	Format the specified drive using GX Works2/GX Developer.
CPU memory card is not inserted.	No memory card is inserted in the specified drive of the PLC CPU.	Insert a memory card into the specified drive.
The type of the CPU memory card is wrong. Please check the memory card.	• An unsupported memory card is inserted into the specified drive of the PLC CPU. • No memory card is inserted into the specified drive of the PLC CPU. • The program memory of QnUDVCPU was written to the ROM.	• Insert a supported memory card into the specified drive. • The program memory of QnUDVCPU cannot be written to the ROM.
The CPU is write protected. Please remove the protection.	The PLC CPU is write-protected.	Remove the write-protect setting for the PLC CPU.
The specified CPU drive cannot be used. Please check the drive.	The specified drive of the PLC CPU does not exist.	Read data from the PLC, and check if the specified drive exists.
PLC types of the program (file name) and the connected PLC are not the same. Perform PLC Read and read the file again.	The PLC CPU type of the program file stored on the data storage differs from the connected PLC CPU type.	Read a program file that exists on the PLC CPU.
The program before modification on the GOT and the program being registered on the CPU do not match. Please perform PLC Read and read the program again.	When a program is written to the PLC, the target file does not exist on the PLC CPU, or the type of the program differs from that of the target file.	Read a program file that exists on the PLC CPU.
Failed to write the value to the device.	The GOT could not write device values to the PLC CPU in the device test.	Read the program being displayed from the PLC again.
Parameter file is corrupted. The sequence program monitor cannot be used.	The GOT cannot read parameters from the PLC CPU.	Write the parameters to the PLC CPU using GX Works2/GX Developer.
The file has invalid date or timestamp. Please check the GOT clock data.	• The date of the GOT is wrong. • PLC writing or online change was executed on the Q00JCPU, Q00CPU, or Q01CPU when the date of the GOT was Feb. 29th.	• Set the date of the GOT properly. • When executing PLC writing or online change on the Q00JCPU, Q00CPU, or Q01CPU, set the date of the GOT to a date other than Feb. 29th.
Communication of the online debug function failed.	Communication of the online debug function failed.	• Execute after registering the online debug function (online change, trace, monitor with conditions, etc.) in GX Works2/GX Developer. • Execute after checking the communication path such as communication cables.
Specified contents of the online debug function are invalid.	Specified contents of the online debug function are invalid.	• Check the setting data of the online debug function (online change, trace, monitor with conditions, etc.) in GX Works2/GX Developer. • Execute after checking the communication path such as communication cables.
An error occurred when verifying the specified program and the program in the CPU. Please read the file again.	The sequence program after modification of the online change operation differs from the program before modification.	Execute PLC read to ensure that the GOT and PLC CPU programs are the same, then execute online change again.
END instruction cannot be written to a CPU module while the module is running.	An END instruction was inserted or deleted by the online change.	• Check the contents of the specified sequence program file. • Set the PLC CPU to the STOP state then write the program.
Reserved area for online change is insufficient.	The file capacity is exceeded by the online change.	• Check the capacity of the specified sequence program file. • Set the PLC CPU to the STOP state then write the program.
There are instructions that cannot be handled in the CPU.	An instruction, which is not compatible with the CPU type set in the project, exists in the sequence program executing the online change.	• Check if the PLC CPU type is correct. • Check the sequence program and delete the invalid instruction.
The step to be written is invalid.	• The step to be written is invalid. • The start position of the online change was not specified with a correct program step No.	• Set the PLC CPU to the STOP state then write the program. • Check if GX Works2/GX Developer is compatible with the CPU type and CPU version set in the project.
The instruction that was written during online change is invalid.	The instruction written during the online change is wrong.	• Execute the online change again. • Set the PLC CPU to the STOP state then write the program.

Error message	Description	Corrective action
The number of blocks to be written by online change is invalid.	Block size error (The number of blocks written during the online change is invalid.)	Check the number of blocks for the online change.
The specified file is too large to read.	A program file exceeding 260k steps was read.	Split the program into sections within 260k steps.
The parameter file cannot be read. The sequence program monitor cannot be used.	The password input dialog was closed without entering the parameter file password.	Clear the file password or enter the correct password when reading the parameter file.
The function is not supported by the specified CPU version.	• A function that is not supported by the specified PLC CPU was used. • The program memory of QnUDVCPU was written to the ROM.	The executed function cannot be used.
The specified file cannot be accessed.	• The specified file is protected with a security key. • The specified file is protected with a block password.	The executed function cannot be used. Delete programs from the PLC CPU, initialize the memory, and then write the project data again.
Please wait for a while and execute again.	A password to access the specified file was incorrectly entered a specified number of times, causing the PLC CPU to lock out access.	Wait for a while, and input the correct password.
The program (file name) is not supported by the sequence program monitor.	• A program that includes instructions or labels unsupported by the sequence program monitor was read. • A file that includes the output instruction that uses any label of the timer, retentive timer, counter, long timer, long retentive timer, or long counter was specified.	• Input the correct instruction. • Modify the program so that unsupported labels will not be used.

Error messages for editing

Error message	Description	Corrective action
The instruction is incorrect.	• The input instruction is incorrect. • An instruction not supported by the sequence program monitor (iQ-R/iQ-L ladder) was input. • An instruction that cannot be used with the RCPU was input.	• Input the correct instruction. • Edit the program with the MELSOFT application supported by the PLC CPU, and write it to the PLC CPU.
The specified device is not available.	The input device name is incorrect.	Input the correct device name.
The device number is out of range.	The device number outside the range is input.	Input the correct device number.
Too many rows are being edited. Data cannot be entered.	49 or more rows were input on the ladder being edited.	Delete rows so that there are 48 rows or less.
The ladder block is too large. Data cannot be entered.	25 or more rows were input.	Delete rows so that there are 24 or less per ladder block.
The edit position is incorrect.	• A ladder that cannot be placed in the specified position was input. • The specified position is too narrow to input a ladder. • A vertical line was input with the end point specified in a different column from the start point. • A vertical line was input with the end point specified in a row above the start point. • A horizontal line was input with the end point specified on a different line from the start point. • A ladder was deleted with the end point specified on a different line from the start point.	• Input a ladder in the correct position. • Insert columns, and then input a ladder. • Specify the correct end position for the vertical line or horizontal line, and then input the line. • Specify the correct end position, and then delete the ladder.
The data being edited is too large. Convert the data before you continue editing.	Too many ladders are not converted. The data cannot be converted.	Reduce the ladders which are not converted before conversion.
Line statements exist in the ladder program and the data cannot be edited. Please delete the line statements from the ladder program.	A vertical line that overlaps an interlinear statement was input.	Delete the interlinear statement, and then input a vertical line.

Error message	Description	Corrective action
PI devices exist in the ladder program and the data cannot be edited. Please delete the PI devices from the ladder program.	A vertical line that overlaps a pointer or interrupt pointer was input.	Delete the pointer or interrupt pointer, and then input a vertical line.
There is a ladder block which cannot be displayed in the ladder program. Data cannot be edited.	• A ladder block exceeding 25 or more rows was edited. • An incomplete ladder block was edited.	• Edit the ladder block to 24 rows or less using GX Works2/GX Developer, and then write the program to the PLC CPU. • Write the program to the PLC CPU by using GX Works2/GX Developer again because the program may be corrupted.
The entered command cannot be executed on the specified CPU.	A controller version that does not support the input command was used.	• Input a different command. • Use a controller version that supports the command.
Statements should be 64 characters or less.	A statement with 65 characters or more was entered.	Enter statements with 64 characters or less.
Notes should be 32 characters or less.	A note with 33 characters or more was entered.	Enter notes with 32 characters or less.
Conversion (online change) failed due to communication error.	The GOT failed to communicate with the PLC during conversion (online change).	• Check the communication setting. • Check cables. • Verify with PLC. • Set the GOT to read the program from the PLC.
Peripheral statements cannot be entered.	A peripheral statement was entered.	Delete the peripheral statement.
Peripheral notes cannot be entered.	A peripheral note was entered.	Delete the peripheral note.
Cannot edit because NOP is in selected range.	A ladder block in the edit area including NOP was edited.	• Exclude NOP from the edit area. • Delete NOP with the MELSOFT application, and write the program to the PLC CPU.
Unusable command is specified.	• An instruction not supported by the sequence program monitor (iQ-R/iQ-L ladder) was input. • An instruction that cannot be used with the RCPU was input.	Edit the program with the MELSOFT application, and write it to the PLC CPU.
The program is not editable.	The following programs, which cannot be edited, were edited. • Multiple program blocks are defined. • The program language is different from the ladder language. • A label is used. • Inline structured text is used. • An MC/MCR instruction is used. • A statement that exceeds 64 one-byte characters is used. • A note that exceeds 32 one-byte characters is used. • A text string constant that exceeds 32 one-byte characters is used. • A peripheral statement/note is used. • A line feed is used in the statement/note/text string constant. • A special character ($") is used in the text string constant. • The target program is a safety program. • An FB or FUN is used.	Perform the following operations with the MELSOFT application, and write the program to the PLC CPU. • Define one program block. • Change the program language to the ladder. • Delete the label. • Delete the inline structured text. • Delete the MC/MCR instruction. • Delete the statement that exceeds 64 one-byte characters. • Delete the note that exceeds 32 one-byte characters. • Delete the text string constant that exceeds 32 one-byte characters. • Delete the peripheral statement/note. • Delete the line feed in the statement/note/text string constant. • Delete the special character ($") in the text string constant. • Edit the safety program with the MELSOFT application. • Delete the FB or FUN.

Error messages for conversion

Error message	Description	Corrective action
The data being edited is too large. Convert the data before you continue editing.	Too many ladders are not converted. The data cannot be converted.	Reduce the ladders which are not converted before conversion.
There is a ladder which cannot be converted. Correct the ladder at the cursor position.	Conversion was attempted when there was an incomplete ladder block.	Complete the ladder block before conversion.
The ladder block is too large to convert. Please reduce the size of the ladder block.	The ladder block is too large to be converted.	Delete or split the ladder block before conversion.
Adding/deleting ladder blocks is not allowed.	The number of ladder blocks in the edit area is different to before and after the edit.	Edit the program so that the total number of ladder blocks and line statements in the edit area is the same before and after the edit, and then convert it.

Error messages for file selection

Error message	Description	Corrective action
You cannot select programs other than ladder programs.	A program that is not a ladder program is selected.	• Use the sequence program monitor (SFC) to monitor SFC programs. • Use GX Works2 or GX Developer to monitor SFC programs.
The specified file is too large to read.	A program file with 260k steps or more was selected.	Split the program.
Function blocks or functions that cannot be displayed in the sequence program are used.	• A security key or block password is set for the function blocks or functions. • A macro type function block file exists in the read drive of the program file.	• Delete the security key or block password set for the function block or function. • Delete the macro type function block file in the reading drive of the program file.

Error messages for user authentication

Error message	Description	Corrective action
User authentication with PLC is not completed. The sequence program monitor cannot be used. Do you want to reset the connection status with the PLC and display the PLC Read screen?	The user authentication was cancelled when the sequence program monitor was restarted.	Execute user authentication.
User authentication with PLC is not completed. The sequence program monitor cannot be used.	User authentication was cancelled when the sequence program monitor was restarted.	Execute user authentication.
User authentication with PLC is not completed. This function cannot be used.	User authentication was canceled when file selection, file read, or PLC write was attempted.	Execute user authentication.
The user name or password does not match.	An incorrect user name or password was used for the authentication request to the PLC CPU.	Input the correct user name and password.
The access level does not match.	An incorrect access level was specified for the user name used for the authentication request to the PLC CPU.	Specify the correct access level.
You cannot log on because the number of logged-on users exceeds the limit.	The user authentication cannot be executed because the number of log-on users exceeds the limit.	Reduce the number of log-on users.
Please wait for a while and execute again.	The user authentication has failed more than a specified number of times.	Wait for a while, and execute the user authentication.

51 [Intelligent module monitor]

GT37 SoftGOT3000

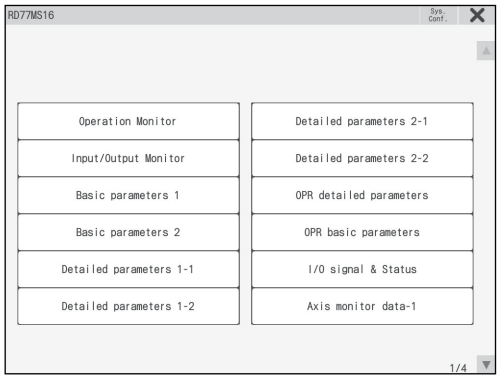
With the intelligent module monitor, you can use dedicated screens to monitor the buffer memory of the intelligent function module and make changes to the data.
In addition, you can monitor the signal statuses of the I/O modules.
The features of the intelligent module monitor are described below.

Monitoring with dedicated screens

You can monitor the intelligent function module(s) and I/O module(s) and make changes to the data using dedicated screens.
There is no need to create screens for monitoring or data changes, thereby reducing the drawing workload.

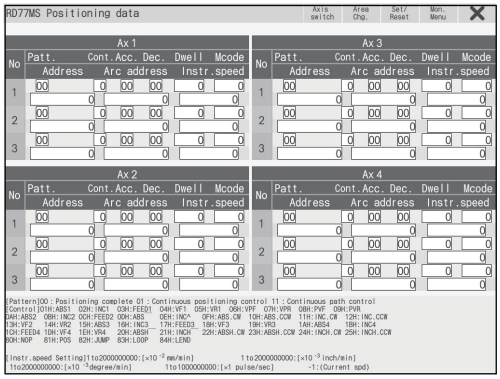
■For intelligent function module

As a menu of monitor items is displayed, select an item from the menu, and the corresponding monitor screen is then displayed.
Details on the buffer memory and the I/O signal statuses between the buffer memory and the PLC CPU are displayed in text, numerical values, and graphs on the monitor screens.



Select a monitor from the menu

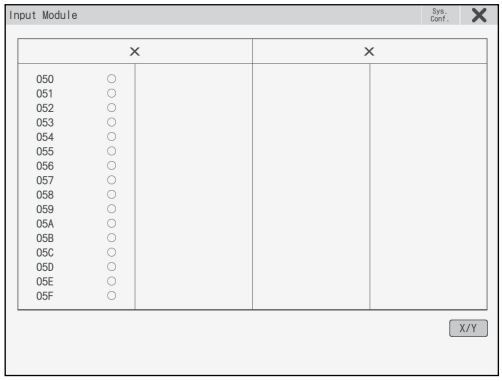
Select a menu →



Monitor screen

■For I/O module

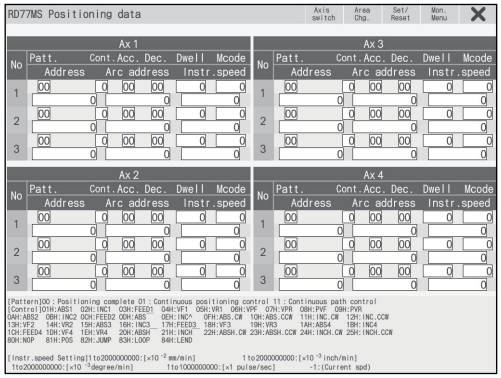
The status of I/O signals to and from an external module is monitored.



Monitor screen

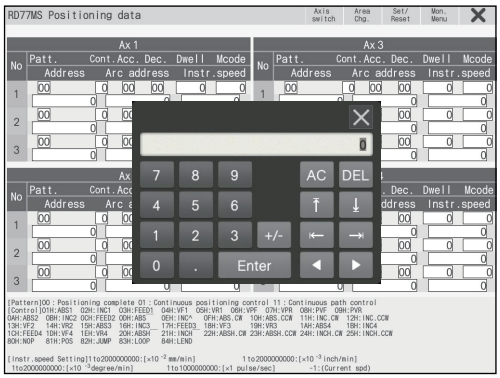
Enabled data change by write operations

The values are written into the buffer memory of the intelligent function module by writing values from the monitor screen.



Monitor screen

Select writing →



When changing a change-permitted channel

Precautions

The project data for the intelligent module monitor cannot be edited by modifying or adding an object.

PART 7

51.1 Intelligent module monitor specifications

☞ Page 302 System configuration
☞ Page 304 Access range

51.1.1 System configuration

This section describes the system configuration of the intelligent module monitor.
For connection type settings and precautions regarding the communication unit, cable, and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)

Targeted equipment for the intelligent module monitor

■PLC CPU, Motion CPU, and robot controller

Controller	Model
RCPU	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU, R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU R08PCPU*2, R16PCPU*2, R32PCPU*2, R120PCPU*2 R08PSFCPU, R16PSFCPU, R32PSFCPU, R120PSFCPU
QCPU	Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU, Q25PRHCPU
	Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU, Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU
	Q00UJCPU, Q00UJCPU-S8, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU
Motion CPU (Q series)*1	Q170MCPU, Q170MCPU-S1, Q170MSCPU, Q170MSCPU-S1
Robot controller	CR800-R(R16RTCPU)

*1 Only the PLC CPU area (CPU No.1) can be monitored.
The PERIPHERAL I/F does not support the Ethernet connection.
*2 When a redundant system is configured, the intelligent module monitor is not supported.

■Intelligent function module and I/O module

Controller	Intelligent function module*1	I/O module
RCPU	R60AD4, R60ADV8, R60ADI8, R60DA4, R60DAV8, R60DAI8, RD62P2, RD62P2E, RD62D2, RD75P2, RD75P4, RD75D2, RD75D4, RD77MS2, RD77MS4, RD77MS8, RD77MS16, RD77GF4, RD77GF8, RD77GF16	RX10, RX40C7, RX41C4, RX42C4, RY40NT5P, RY41NT2P, RY42NT2P, RY10R2, RH42C4NT2P
QCPU	—	MELSEC-Q series input modules, MELSEC-Q series output modules, QH42P, QX48Y57, QX41Y41P
Motion CPU (Q series)		
C Controller module (Q Series)		

*1 The intelligent function module mounted on the RQ extension base unit cannot be monitored.

Connection type

○: Available, ×: Unavailable

Function		Connection type between GOT and controller							
Name	Description	Bus connection*5	Direct CPU connection (serial)*5	Serial communication connection	Ethernet connection*2	MELSECNET/H connection*5, MELSECNET/10 connection*5	CC-Link IE TSN connection	CC-Link IE controller connection*3 CC-Link IE Field connection*4	CC-Link connection (Intelligent device station)
Intelligent module monitor	Monitors buffer memory of intelligent function module and signal statuses of I/O modules	○	○	○	○	○*1	○	○	○

*1 For MELSECNET/H and MELSECNET/10 connection, use a QCPU and network module (QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71LP21G, and QJ71BR11) with the function version B or later.
*2 Intelligent module monitor cannot be used when using CC-Link IE field network Ethernet adapter.
*3 Indicates the CC-Link IE controller network connection.
*4 Indicates the CC-Link IE field network connection.
*5 The RCPU does not support the connection type.

System application (add-on function)

■Required system application (add-on function)

For the required system applications (add-on functions), refer to the following.

- [Intelligent module monitor]

■Installing system applications (add-on functions)

Write the package data that contains the system application (add-on function) for the intelligent module monitor to the GOT.

For the communication method with the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

To install a system application (add-on function) on the GOT, enough space in the user area is required.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Applicable hardware

A USB mouse can be used.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series (GOT-A-0233)

Required memory space for use of the intelligent module monitor

To check the required memory space for use of the intelligent module monitor, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

The memory space required for storing data on the internal memory of the GOT is the same as the memory space required for storing data on the hard disk of a personal computer.

51.1.2 Access range

When using the bus connection, direct CPU connection (serial), or serial communication connection

The intelligent module monitor can monitor intelligent function modules on the bases of the connected station and other stations.

When connected via serial communication, the intelligent module monitor is available only for the systems that use the following combinations.

PLC CPU used	Serial communication module used*1
QCPU (Q mode)	QJ71C24, QJ71CMO, QJ71CMON

*1 For details on module names, refer to the following.
GOT3000 Series User's Manual (Connection)

The following restrictions apply when monitoring other stations of MELSECNET/II data link systems.

Only the host and master stations can be monitored when the connected station is a local station.

Regardless of the type of connected station, no stations other than ACPU can be monitored.

When connected to a remote I/O station on the MELSECNET/H network system, the remote I/O station on the MELSECNET/H network system is displayed as QCPU in the system configuration display of the intelligent module monitor.

PLC diagnostics cannot be performed on the remote I/O station on the MELSECNET/H network system.

Intelligent function modules on the base of remote I/O stations other than those on the MELSECNET/H network system are not monitored.

When using MELSECNET/H, MELSECNET/10, or CC-Link IE controller network

The intelligent module monitor can monitor intelligent function modules on the bases of the control station and normal stations.

To monitor another network, routing parameters have to be set to the GOT side and PLC side.

(Only with the MELSECNET/H communication unit or CC-Link IE controller network communication unit)

For the routing parameter setting, refer to the following.

Routing parameter setting for the GOT

GOT3000 Series User's Manual (Connection)

Routing parameter setting for PLC CPU

For MELSECNET/H communication unit

Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

For CC-Link IE controller network communication unit

CC-Link IE Controller Network Reference Manual

CC-Link IE Field Network connection

The intelligent module monitor can monitor intelligent function modules on the bases of the master station and local stations.

To monitor another network, routing parameters have to be set to the GOT side and PLC side.

For the routing parameter setting, refer to the following.

Routing parameter setting for the GOT

GOT3000 Series User's Manual (Connection)

Routing parameter setting for PLC CPU

User's manual of the CC-Link IE Field Network master/local module used

When using CC-Link connection (Intelligent device station)

The intelligent module monitor can monitor intelligent function modules on the bases of the master station and local stations.

When using Ethernet connection

The intelligent module monitor can monitor the intelligent function module on the base of the PLC CPU assigned the IP address.

(The station assigned in the Ethernet setting of GT Designer3 (GOT3000) can be monitored.)

To monitor another network, routing parameters have to be set to the GOT side and PLC side.

For the routing parameter setting, refer to the following.

Routing parameter setting for the GOT

📖GOT3000 Series User's Manual (Connection)

Routing parameter setting for PLC CPU

📖Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

When the intelligent module monitor monitors the master station of the MELSECNET/II network on which any remote I/O station exists

Intelligent function modules on the base of remote I/O stations are not monitored.

Precautions

Modules displayed as "SP" on the System Configuration screen cannot be monitored using the intelligent module monitor.

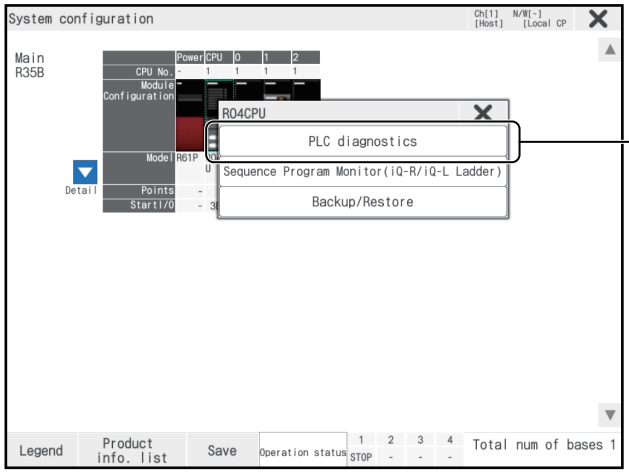
51.2 How to display the screen

Launch the intelligent module monitor from the [System Configuration] screen of the system launcher.
Select the unit to monitor in the [System Configuration] screen of the system launcher and select the intelligent module monitor screen from the context menu.

- [PLC diagnostics]
- [Unit Detail Info]
- [Intelligent module monitor]
- I/O module monitor

For details on the [System Configuration] screen of the system launcher, refer to the following.

☞ Page 213 [System configuration] screen



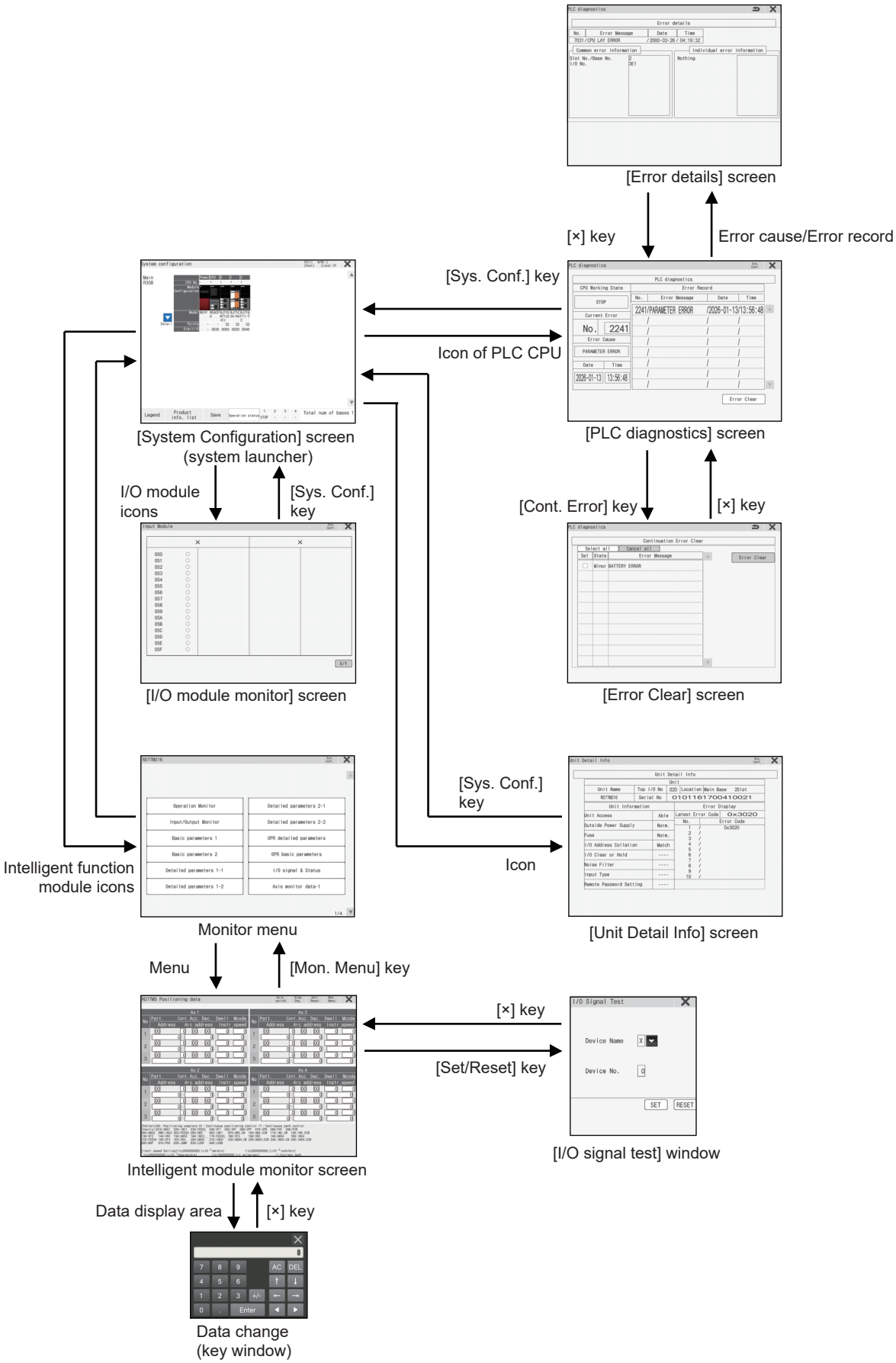
Example)
Displays the [PLC diagnostics] screen of the R04CPU

Precautions

The system launcher needs to be installed because the intelligent module monitor is displayed from the system launcher context menu.
Install the system launcher when using the intelligent module monitor.

Screen transitions

The following describes screen transitions.



PART 7

51.3 Operation of each intelligent module monitor screen

This section explains how to operate the screens when using the intelligent module monitor.

☞ Page 308 [PLC diagnostics] screen
☞ Page 314 [Unit Detail Info] screen
☞ Page 315 Intelligent module monitor screen
☞ Page 321 I/O module monitor screen

Point

Launch each intelligent module monitor screen from the [System Configuration] screen of the system launcher.
For the [System Configuration] screen of the system launcher, refer to the following.
☞ Page 213 [System configuration] screen

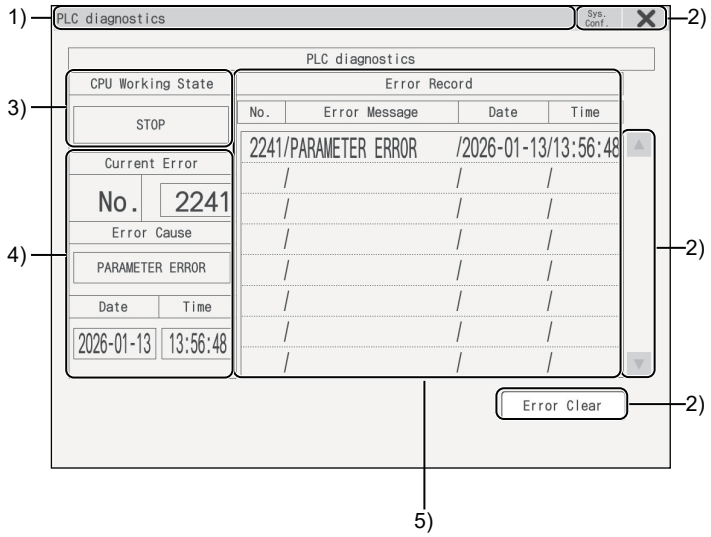
51.4 [PLC diagnostics] screen

This section describes the structure of the [PC Information] screen and the functions of the keys displayed on screen. The [PLC diagnostics] screen is displayed by specifying the RCPU or QCPU (Q mode) on the [System Configuration] screen of the system launcher.
The GOT displays the [PLC diagnostics] screen only when the following controllers are used.

- RCPU
- QCPU (Q mode)

51.4.1 [PLC diagnostics] screen

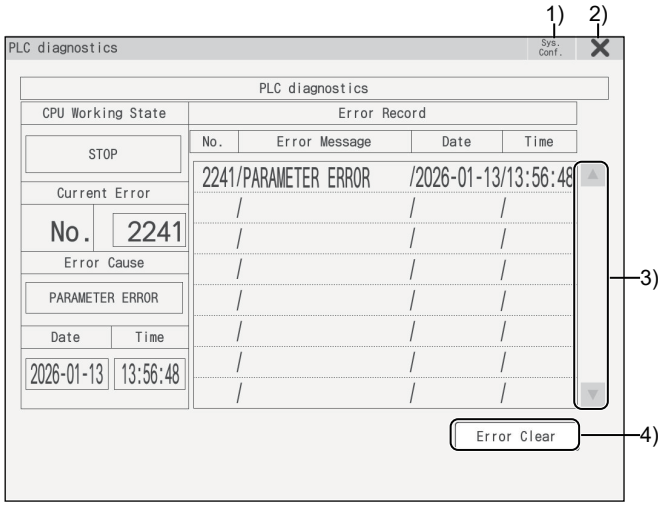
Displayed contents



No.	Item	Description
1)	Monitored station	Displays the channel number, network number and station number of the monitored station.
2)	Touch key	Displays the keys used for operation on the [PLC diagnostics] screen. ☞ Page 310 Key functions
3)	[CPU Working State]	Displays the operating status of the PLC CPU.
4)	[Current Error]	Displays current errors.

No.	Item	Description
5)	[Error Record]	Displays the error record in sequential order. The number of error events to be displayed varies depending on the monitored PLC CPU. • When monitoring the RCPU: Up to 16 error events can be displayed. • When monitoring the QCPU (Q mode): Up to 100 error events can be displayed.

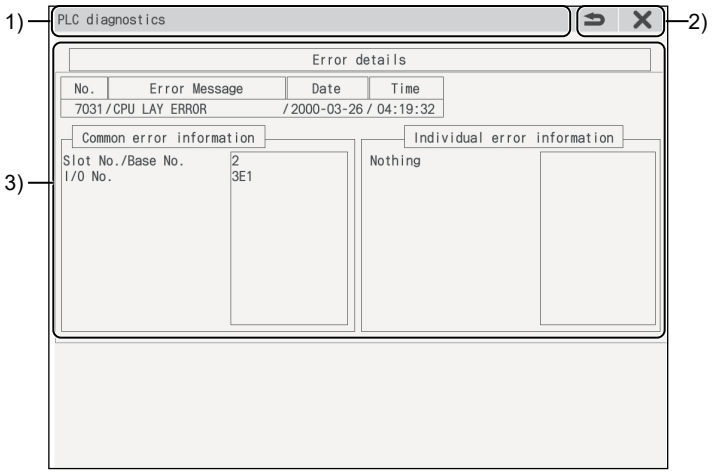
Key functions



No.	Item	Description
1)	[Sys. Conf.] key	Transitions to the [System Configuration] screen of the system launcher. ☞ Page 213 [System configuration] screen
2)	[×] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.
3)	Up/down scroll key	Scrolls the display up or down one page.
4)	[Cont. Error] key	This key is displayed when the RCPU, QnUDVCPU or QnUDPVCPU is monitored. Pressing the screen transitions to the [Continuation error clear] screen. ☞ Page 312 [Continuation Error Clear] screen

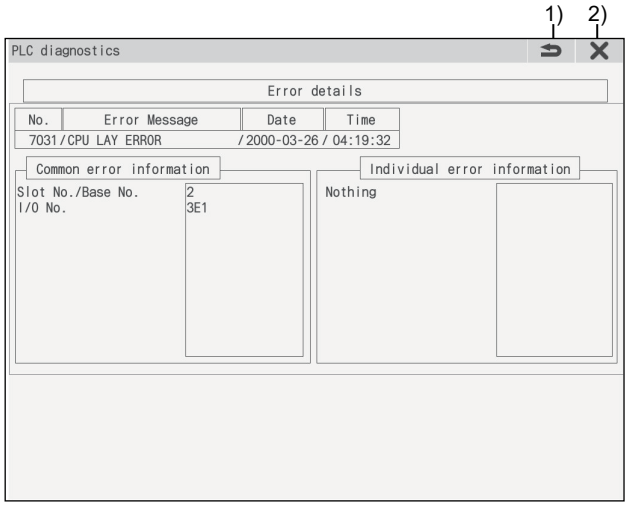
51.4.2 [Error details] screen

Displayed contents



No.	Item	Description
1)	Monitored station	Displays the channel number, network number and station number of the monitored station.
2)	Touch key	Displays the keys that are used for operation on the [Error details] screen. ☞ Page 311 Key functions
3)	[Error details]	Displays common error information and individual error information based on the information stored in SD4 and SD5 of the PLC CPU.

Key functions

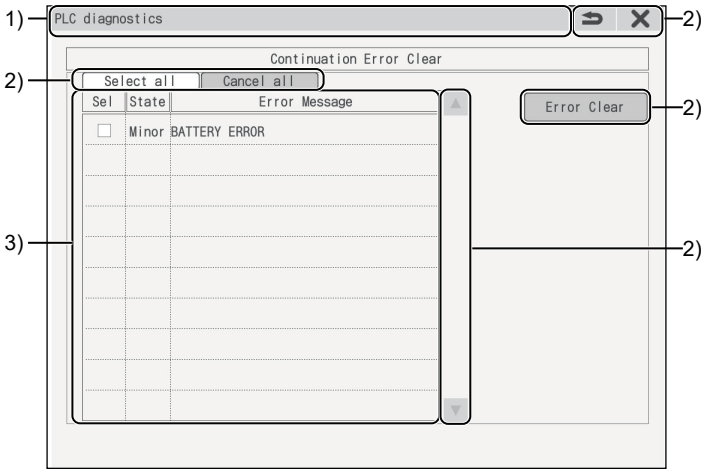


No.	Item	Description
1)	RET key	Returns the screen to the [PLC diagnostics] screen.
2)	[×] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.

PART 7

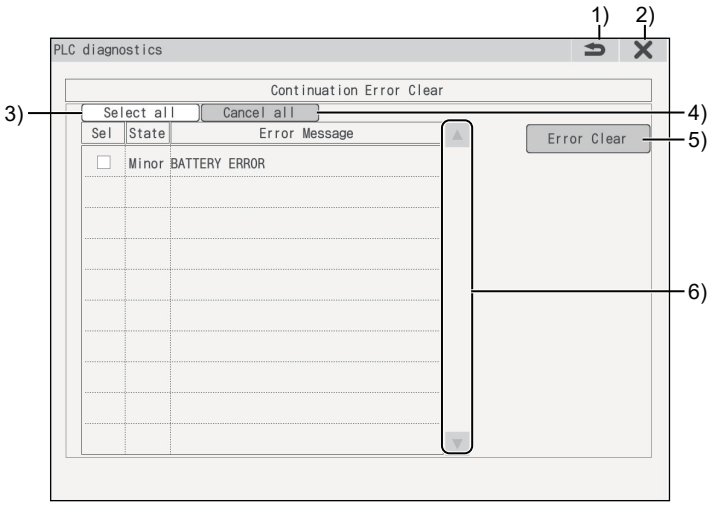
51.4.3 [Continuation Error Clear] screen

Displayed contents



No.	Item	Description
1)	Monitored station	Displays the channel number, network number and station number of the monitored station.
2)	Touch key	Displays the keys used for operation on the [Continuation error clear] screen. ☞ Page 312 Key functions
3)	Continuation error list	Displays the status of removable continuation errors, and error messages. The following shows the continuous error status. • Specification: User specification error • Minor: Minor error Touch the check box for each continuation error to select or deselect it for removal.

Key functions



No.	Item	Description
1)	RET key	Returns the screen to the [PLC diagnostics] screen. ☞ Page 308 [PLC diagnostics] screen
2)	[×] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.
3)	[Select all] key	Selects all continuation errors so that they can be released.
4)	[Cancel all] key	Deselects all selected continuation errors.
5)	[Error Clear] key	Releases the selected continuation errors.
6)	Up/down scroll key	Scrolls the display up or down one row.

Precautions

■Release of errors with the same message

If the error messages are the same, the errors are released regardless of the error code. Therefore, some error codes may be unintentionally released.

■Release of annunciators

The annunciator memorizes the number of annunciators detected in the CPU modules.
To release multiple annunciators, execute the error release operation multiple times.

■Error record of continuation errors

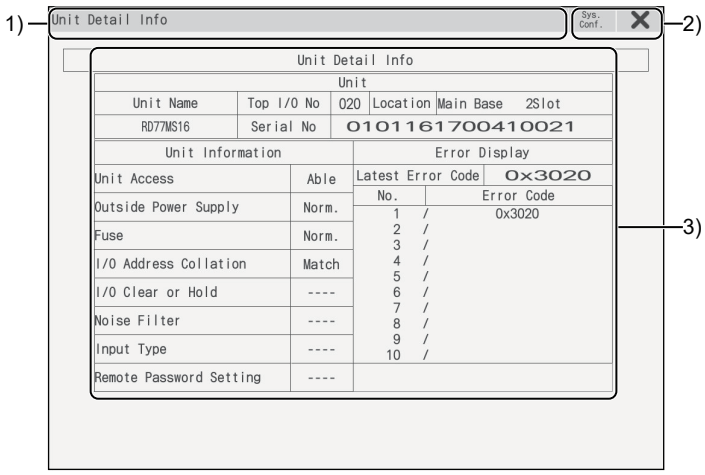
Even after releasing errors, the record of the detected errors is not deleted.

51.5 [Unit Detail Info] screen

This section describes the structure of the [Unit Detail Info] screen and the functions of the keys displayed on the screen. The [Unit Detail Info] screen is displayed by specifying a module on the [System Configuration] screen of the system launcher.
The GOT displays the [Unit Detail Info] screen only when the following controllers are used.

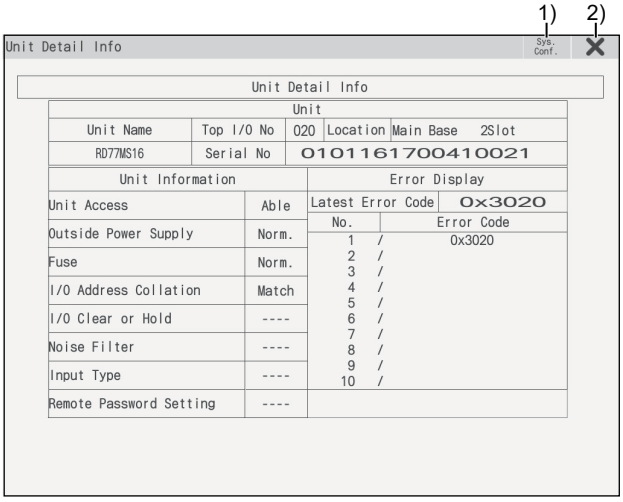
- RCPU
- QCPU (Q mode)

Displayed contents



No.	Item	Description
1)	Monitored station	Displays the channel number, network number and station number of the monitored station.
2)	Touch key	Displays keys used for operations on the [Unit Detail Info] screen. ☞ Page 314 Key functions
3)	[Unit Detail Info]	Displays information about the error touched on the [PLC diagnostics] screen.

Key functions



No.	Item	Description
1)	[Sys. Conf.] key	Transitions to the [System Configuration] screen of the system launcher. ☞ Page 213 [System configuration] screen
2)	[×] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.

51.6 Intelligent module monitor screen

This section describes the structure of the monitor screen and the functions of the keys displayed on the screen. The monitor screen is displayed by specifying a module on the [System Configuration] screen of the system launcher.

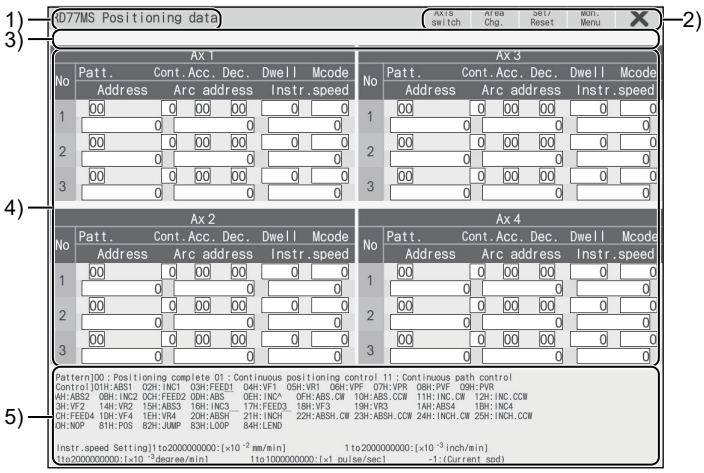
Point

The intelligent module monitor screen differs depending on the connected module.
This section describes the screen using a typical intelligent module monitor screen.
For the buffer memory address of the module and others, refer to the following.
User's Manual of the intelligent function module used

Precautions

To display the intelligent module monitor screen on the GOT, write special data (intelligent module monitor data) to be monitored.
For the capacity of the special data to be written to the GOT and the writing procedure, refer to the following.
☞ Page 302 System configuration

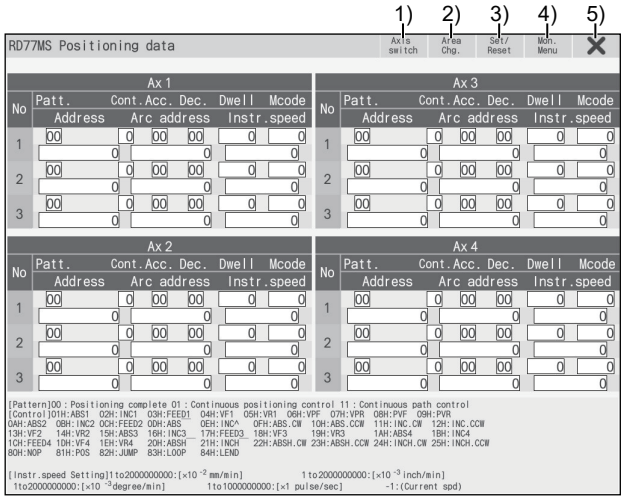
Displayed contents



No.	Item	Description
1)	Module name	Displays the name of the target module and the name of the monitor screen.
2)	Touch key	Displays keys used for operations on the intelligent module monitor screen. ☞ Page 316 Key functions
3)	Message display area	If communication with the connected PLC cannot be established, [No PLC Communications] appears. The message disappears when communication is restored.
4)	Data display area	Displays the buffer memory data of the module in its current form or in a graph. The status of I/O signals to and from PLC CPU are monitored. All data are displayed when the readout from the intelligent function module is completed. When testing, test after moving the cursor to the display position of the target data.
5)	Setting range display area	Displays the setting range for each data item.

PART 7

Key functions



No.	Item	Description
1)	[Axis switch] key	Switches the axes being monitored.
2)	[Area Chg.] key	Changes the positioning data area number.
3)	[Set/Reset] key	Starts testing (SET/RST) of the I/O signal between the PLC CPU and the intelligent function module.
4)	[Mon. Menu] key	Closes the current monitor and returns to the screen displaying monitor menu. This operation can only be used when the intelligent function module has a monitor menu.
5)	[×] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.

51.6.1 Specifying a module to monitor and selecting monitor menu

This section uses the positioning module as an example to describe the operations when starting the intelligent module monitor to monitor a desired module.

Operating procedure

1. Display the [System Configuration] screen of the system launcher.

☞ Page 213 [System configuration] screen

2. Touch the display position of an intelligent function module to be monitored to specify the module.

From among the modules installed in the corresponding base unit, specify the intelligent function module whose format is displayed.

To specify an input module or output module, refer to the following.

☞ Page 321 I/O module monitor screen

3. Display the screen that shows the monitor menu.

Specify the menu corresponding to the type of data to be monitored.

4. Display the monitor screen of a specific menu.

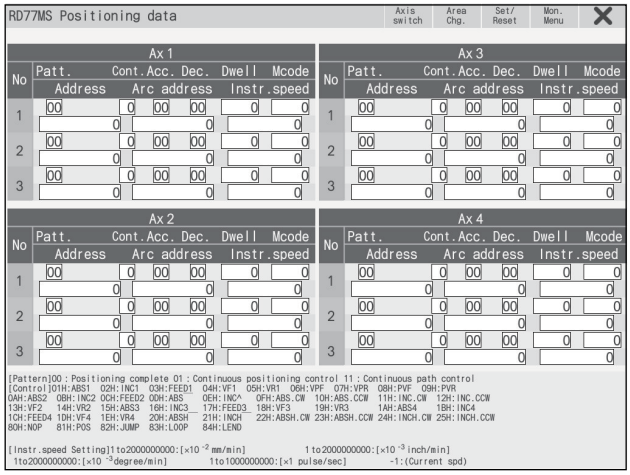
For information on how to check the display contents and the rest of the procedure, refer to the following.

☞ Page 315 Intelligent module monitor screen

For the test of the displayed data, refer to the following.

☞ Page 318 Testing of the intelligent function module

- Changing the current value of the buffer memory
- Turn output signal from PLC CPU on and off



PART 7

51.6.2 Testing of the intelligent function module

⚠ WARNING

- When testing the operation (changing a current buffer memory value) of the intelligent module monitor, read this manual carefully to fully understand the operation.
  For devices that perform significant operations for the system, never perform test operation to change data.
  Doing so can cause accidents due to false outputs or malfunctions.

Testing can be performed for all buffer memory data displayed on the current monitor screen.

This section describes the operations for changing the current value of the buffer memory and turning on and off the output signal from the PLC CPU to the intelligent function module.

Point

- PLC signals used for the test

Test the buffer memory that can be written from the PLC CPU and output signals that are output from the PLC CPU.

- Status of the PLC CPU for the test

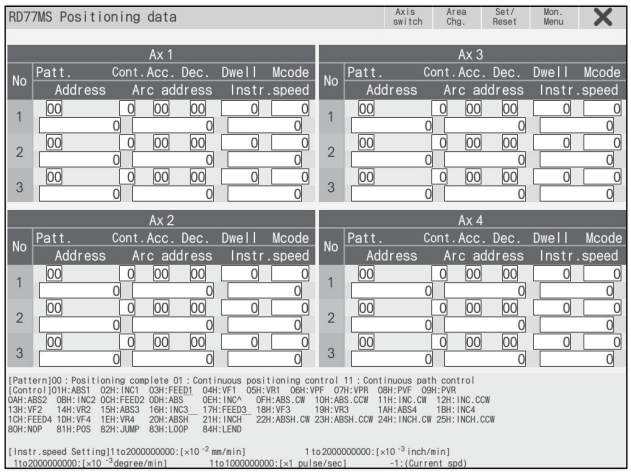
It is recommended that testing be performed with the PLC CPU in the STOP state.

If the PLC CPU is tested in the RUN state, the test monitor display returns to display values output from the sequence program and output statuses.

Operating procedure

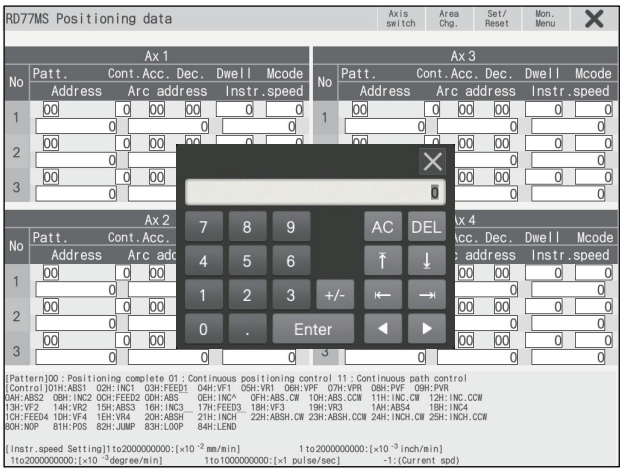
1. Touch either of the following on the monitor screen.

- When changing the current value of the buffer memory: Data display area
- When performing the test for the corresponding I/O signal: [Set/Reset] key



2. The key window or [I/O signal test] window will appear at the top of the monitor screen.

- When the data display area is touched (changes current value of buffer memory)



All of the following operations can be carried out by touching the keys in the displayed key window.

When you touch [×] key in the upper left of the key window, the key window closes and the display returns to the monitor screen.

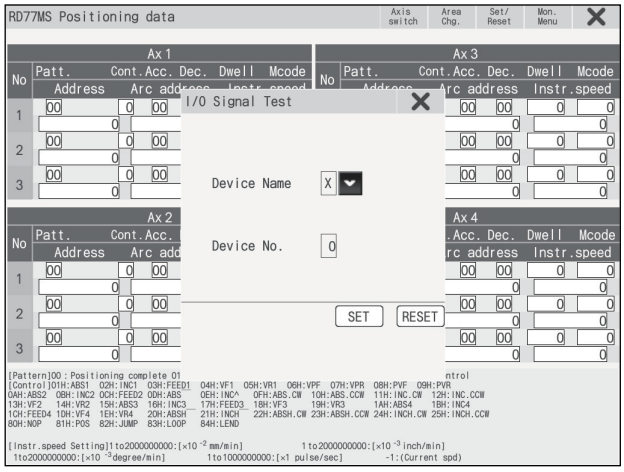
Move the cursor to the position where the data to be tested is displayed.

Use the numeric keys to specify the value to be changed.

The [Del] key can be used to clear individual characters among those input.

Touch the [Enter] key to confirm the entry to change the current values of the buffer memory.

- When [Set/Reset] key is touched (tests the I/O signal)



All of the following operations can be carried out by touching the keys in the [I/O Signal Test] window.

When you touch [×] key in the key window, the [I/O Signal Test] window closes and the display returns to the monitor screen.

Select the device to be tested from the [Device Name] drop-down list.

When you touch [Device No.], the key window will appear. Set the device to be tested.

Touch the [SET] key to turn on the device to be tested. Touch the [RESET] key to turn it off.

3. To continue the test, return to step 2.

To end the test, touch the [×] key and return to the monitor screen.

Precautions

■Precautions for executing the test

Do not perform the following tests.

If these tests are performed, the module may not operate correctly.

or the buffer memory/input signal may return to the output value/output status from the intelligent function module.

- Testing of read-only buffer memory from the PLC CPU.
- Testing of input signals from the intelligent function module to the PLC CPU.

■Precautions for executing the test for buffer memory data

For data where 16 or 32 bits are displayed with one number, specify a new value in decimal format.

For data where one number of 16 or 32 bits is displayed as a percent, such as with an A/D conversion module, specify a new value corresponding to the percentage in decimal format.

Ex.

When the set value of the offset or gain is 0 to 2000 and you intend to change it to "50%", input "1000".

For data where 16 bits are displayed with "0" or "1" for each bit, specify the new value with a decimal.

51.7 I/O module monitor screen

This section describes the operation of the various screens in the intelligent module monitor function, when monitoring input or output modules.

☞ Page 321 Specifying the module to be monitored
☞ Page 322 Monitor screen

51.7.1 Specifying the module to be monitored

This section describes how to start monitoring an input or output module with the intelligent module monitor function.

Operating procedure

1. Display the [System Configuration] screen of the system launcher.

☞ Page 213 [System configuration] screen

2. Touch the display position of the I/O module to be monitored.

From among the modules installed in the corresponding base unit, specify the module whose input or output is displayed.
To specify the intelligent function module, refer to the following.

☞ Page 215 [System configuration] screen

3. Display the monitor screen for the specified module.

For information on how to check the display contents and the rest of the procedure, refer to the following.

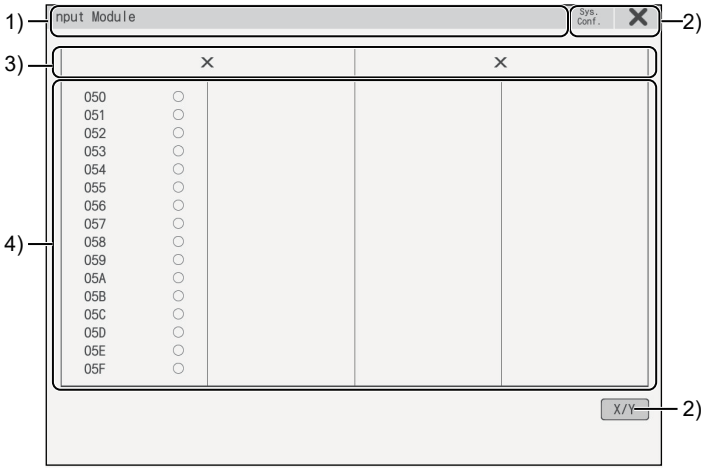
☞ Page 322 Monitor screen

Tests cannot be conducted on input or output modules.

51.7.2 Monitor screen

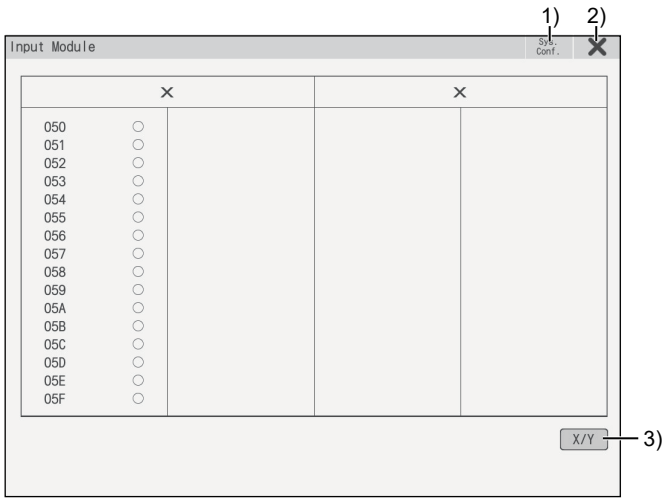
This section describes the structure of the monitor screen and the functions of the keys displayed on the screen. The monitor screen is displayed by specifying an input module or output module on the [System Configuration] screen of the system launcher. This section uses an input module for explanation.

Displayed contents



No.	Item	Description
1)	Module name	Displays the type of module (input or output module).
2)	Touch key	Displays keys used for operations on the monitor screen. ☞ Page 322 Key functions
3)	Signal name	Displays the name of the signal being monitored (X or Y).
4)	Status display	Displays the number and status of the I/O signal. The status of input and output signals is displayed after they are read out from the corresponding module. Displays up to 64 points. (Black circle: ON, white circle: OFF)

Key functions



No.	Item	Description
1)	[Sys. Conf.] key	Closes the current monitor and returns to the [System Configuration] screen of the system launcher.
2)	[END] key	Closes the monitor and returns the screen to the one for starting the intelligent module monitor.
3)	[X/Y] key	Switches between the display contents (for an input module and for an output module) when an I/O combined module is used.

51.8 Error messages and corrective action

This section describes the error messages displayed when the intelligent module monitor is executed, and corrective action.

Error message	Description	Corrective action
[Communication error]	Communication could not be established with the PLC CPU.	Check the connection status between the PLC CPU and the GOT (disconnected or cut cables). Check if an error has occurred with the PLC CPU.
[Monitor data not found]	The special data (intelligent module monitor data) has not been downloaded to the GOT.	Write the special data (intelligent module monitor data) to the GOT.
[This PLC type is not supported]	The intelligent module monitor does not support the selected PLC CPU.	Use a PLC CPU supported by the intelligent module monitor. ☞ Page 302 System configuration

PART 7

52 [R Motion Monitor]

GT37 SoftGOT3000

The R motion monitor enables servo monitoring and parameter setting of the Motion CPU (MELSEC iQ-R series).
The following are the features of the R motion monitor.

Servo monitoring on multiple monitoring screens

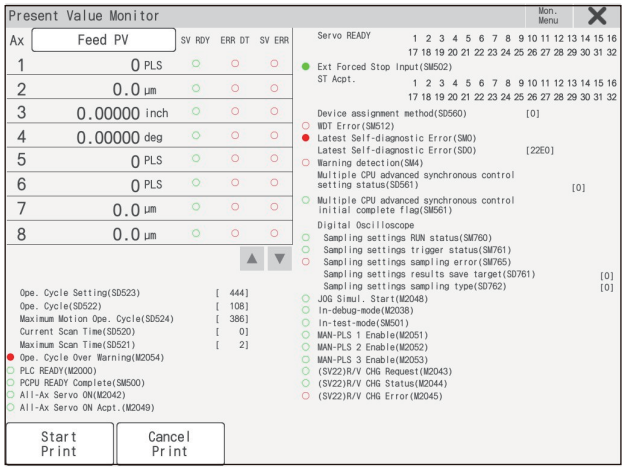
The R motion monitor function has multiple monitor screens, on which you can monitor servo data in a variety of patterns.

Ex.

Present Value Monitor

Monitors and displays the current feed values and actual current values of all running axes.

☞ Page 334 [Present Value Monitor] screen

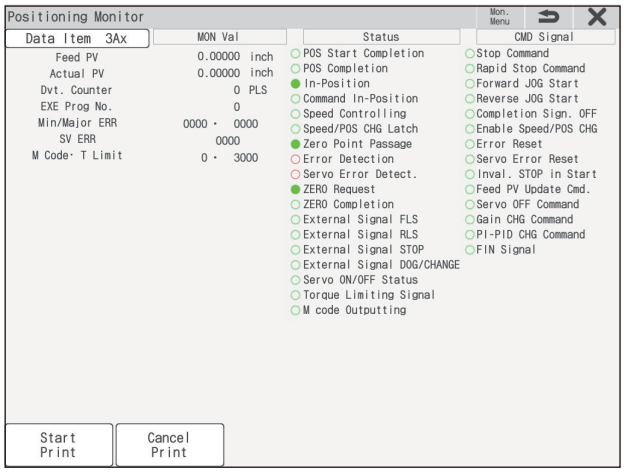


Ex.

Positioning Monitor

Monitors the details of the positioning data set to any axis.

☞ Page 339 [Positioning Monitor] screen

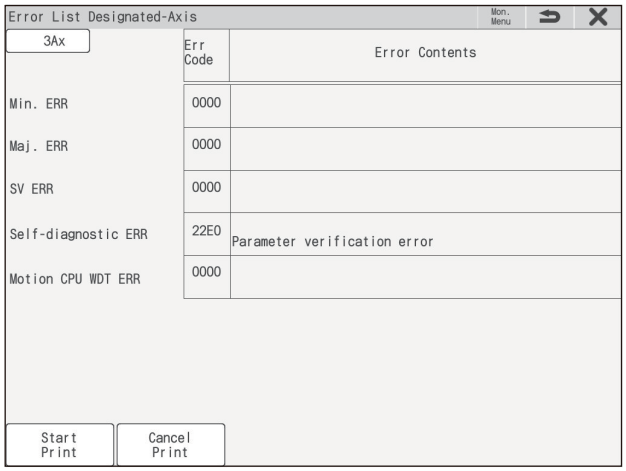


Ex.

Error List Designated-Axis

Displays the latest errors that occurred on the specified axis.

☞ Page 338 [Error List Designated-Axis] screen



Configuring servo parameter settings through write operations

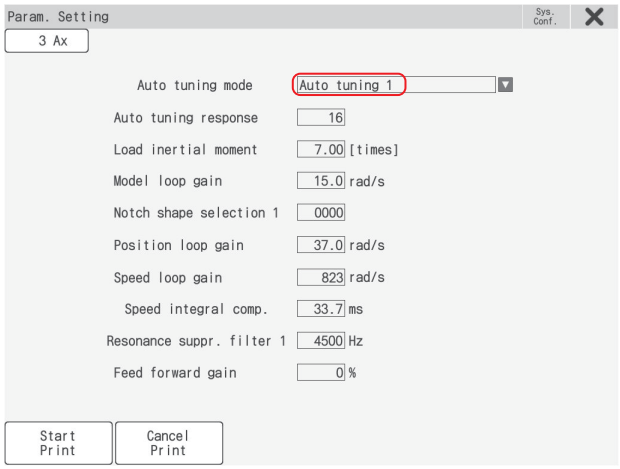
Write the servo parameter settings (basic parameters and adjustment parameters) to the Motion CPU (MELSEC iQ-R series) through write operations from the parameter setting screen.

To change a servo parameter setting, enter the necessary numerical value or option number from the automatically displayed key window, and write it to the Motion CPU (MELSEC iQ-R series).

Ex.

Changing the setting of the auto tuning function

Parameter setting screen



PART 7

52.1 R motion monitor specifications

☞ Page 326 System configuration
☞ Page 327 Access range

52.1.1 System configuration

This section describes the system configuration of the R motion monitor.
For connection type settings and precautions regarding the communication unit, cable, and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)

Target Motion CPU of the R motion monitor

For the compatible operating system software versions of the Motion CPU, refer to the following.

Operating system software version of the Motion CPU	Controller	Device assignment method
Version 05 or earlier	R32MTCPU, R16MTCPU	Q series motion-compatible device assignment
Version 06 or later	R64MTCPU, R32MTCPU, R16MTCPU	Q series motion-compatible device assignment MELSEC iQ-R motion device assignment

Precautions

The only usable motion CPU (MELSEC iQ-R series) OS software package is SW10DNC-RMTFW.

Connection type

This function can be used for the following connection types.

■When the GOT is connected to the Motion CPU (MELSEC iQ-R series)

○ Available, ×: Unavailable

Function		Connection type between GOT and controller							
Name	Description	Bus connection	Direct CPU connection (serial)	Serial communication connection	Ethernet connection*1	MELSECNET/H connection, MELSECNET/10 connection	CC-Link IE Controller Network connection	CC-Link IE Field Network connection	CC-Link connection (Intelligent device station)
Servo monitor	Monitors the present value, positioning error, and other servo-related items on multiple monitor screens.	×		○	○	×	○	○	○
Parameter settings	Changes the setting of the servo parameter.								

*1 When the CC-Link IE Field Network Ethernet adapter module is used, the R motion monitor cannot be used.

System application (add-on function)

■Required system application (add-on function)

For the required system applications (add-on functions), refer to the following.

- [R Motion Monitor]

■Installing system applications (add-on functions)

Write the package data that contains the system application (add-on function) for the R motion monitor to the GOT.

For the communication method with the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

There needs to be enough space in the user area to install the system application (add-on functions) on the GOT.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Required special data

Write the package data that contains the R motion monitor data to the GOT.

The required user area space depends on the R motion monitor data to be used.

For the R motion monitor data size and information on how to write the data to the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Servo amplifiers whose parameter can be set

The R motion monitor allows you to set the parameters of servo amplifiers shown below.

Motion CPU (MELSEC iQ-R series)	Servo amplifier
R64MTCPU, R32MTCPU, R16MTCPU	MR-J4-B, MR-J4W-B, MR-J4-B-RJ

Applicable hardware

A USB mouse is usable.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series (GOT-A-0233)

52.1.2 Access range

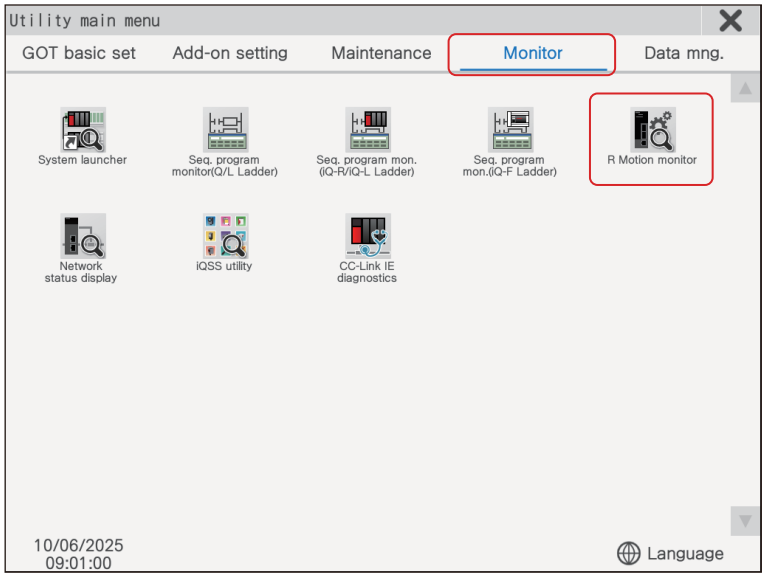
The access range is the same as when the GOT is connected to a controller.

For details on the access range, refer to the following.

📖GOT3000 Series User's Manual (Connection)

52.2 How to display the screen

Select [R Motion Monitor] from the [Monitor] tab.



The [System Configuration] screen of the system launcher will appear.

Select the Motion CPU to be monitored in the [System Configuration] screen then start the R motion monitor from the context menu.

- [Motion Monitor]
- [Parameter Setting]

For details on the [System Configuration] screen of the system launcher, refer to the following.

☞ Page 213 [System configuration] screen

Starting the R motion monitor from an extended function switch

The R motion monitor can be started from a user-created screen by setting the R motion monitor to the special function switch set in the project.

For information on how to set a special function switch, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Communication setting window

The communication setting window is displayed at the first startup of the R motion monitor.

Set the channel number, network number, and station number of the controller to be monitored with the R motion monitor.

To display the communication setting window at the second startup or later, touch the select channel key on the [System Configuration] screen of the system launcher, and configure the settings in the communication setting window.

For information on how to configure the settings in the communication setting window, refer to the following.

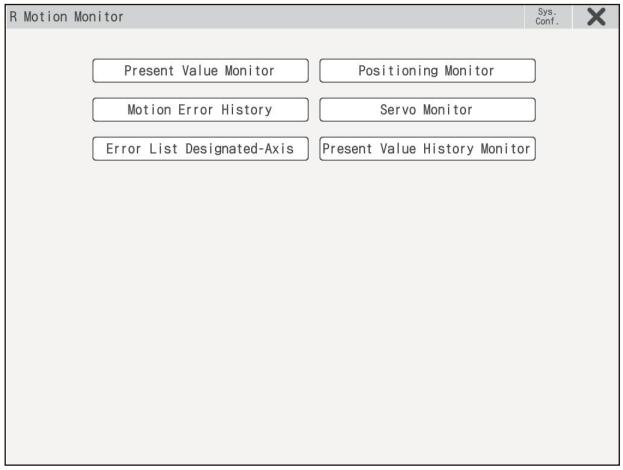
☞ Page 328 Communication setting window

[R Motion Monitor] screen

Select the Motion CPU to be monitored in the [System Configuration] screen of the system launcher, then touch [Motion Monitor] in the context menu to display the [R Motion Monitor] screen.

Select an item on the monitor menu to display the selected monitor function.

☞ Page 333 [R Motion Monitor] screen



- [Present Value Monitor]

☞ Page 334 [Present Value Monitor] screen

- [Motion Error History]

☞ Page 336 [Motion Error History] screen

- [Error List Designated-Axis]

☞ Page 338 [Error List Designated-Axis] screen

- [Positioning Monitor]

☞ Page 339 [Positioning Monitor] screen

- [Servo Monitor]

☞ Page 341 [Servo Monitor] screen

- [Present Value History Monitor]

☞ Page 342 [Present Value History Monitor] screen

[Parameter Setting] screen

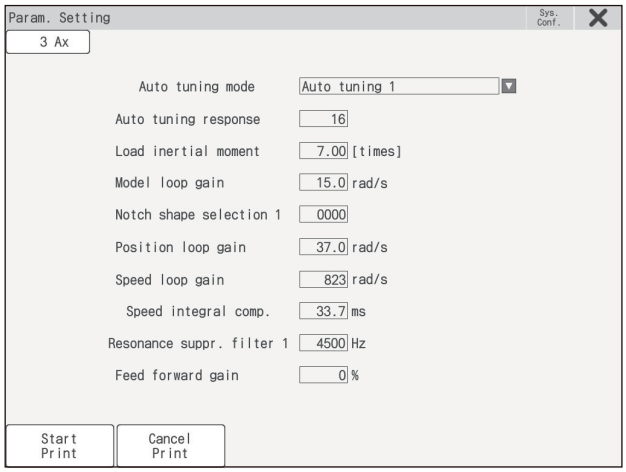
Select the Motion CPU to be monitored in the [System Configuration] screen of the system launcher, then touch [Parameter Setting] in the context menu to display the [Parameter Setting] screen.

If a password is set for [Parameter Setting Display (Motion Monitor)] in GT Designer3 (GOT3000), enter the password.

☞ Page 344 [Parameter Setting] screen

If password authentication or security level authentication is set for [Security] in GT Designer3 (GOT3000), refer to the following.

☞ Page 330 Security settings



Security settings

Displaying the [Parameter Setting] screen can be restricted by setting a password or security level.

■Security types

Type	Description
Restriction with a password	Screen transitions are restricted with a password. The security password input dialog will appear when the screen transitions.
Restriction with a security level	Screen transitions are restricted with a security level. Screen transition is permitted when the GOT security level is equal to or higher than the set security level, or when an operator with the set security level or higher logs in.

Precautions

A password and security level cannot be used at the same time.

■Security setting method

To configure the security settings, select [Common] → [GOT Environmental Setting] → [Security] from the menu of GT Designer3 to display the [Environmental Setting] window, and select the [Functional Operation Security] tab.

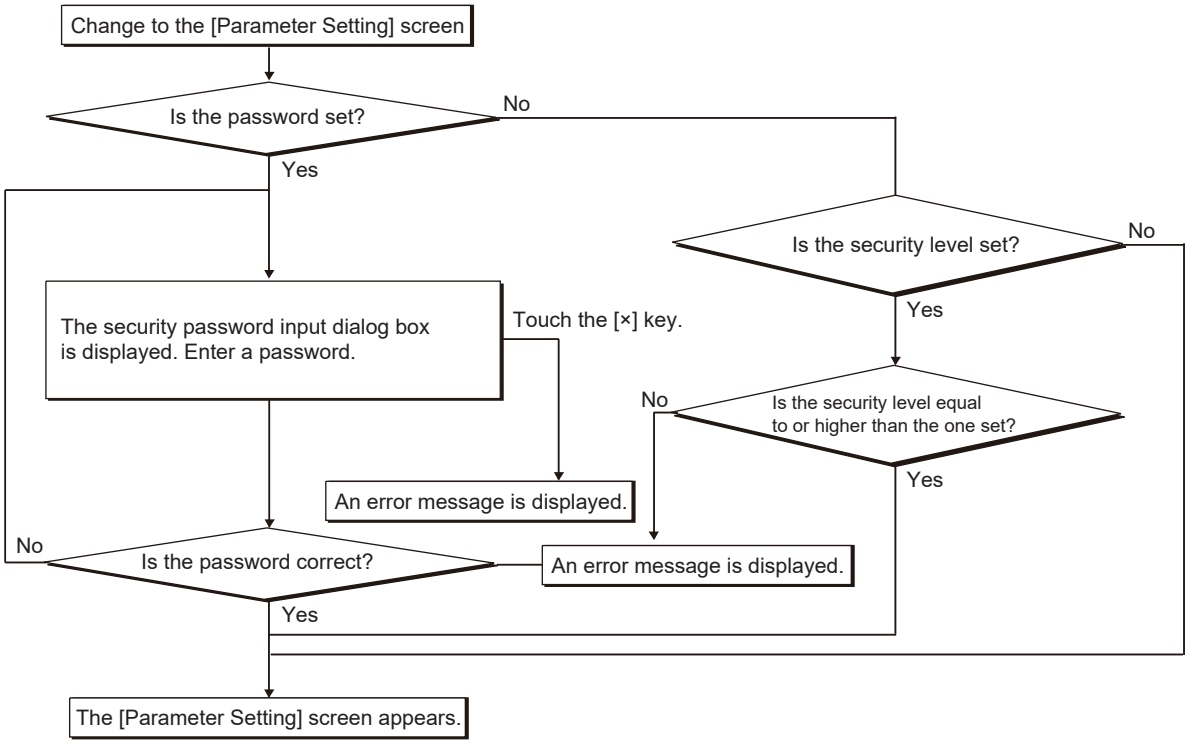
The following shows the setting method for each security type.

Type	Description
Restriction with a password	Select [Password] for [Authentication Method] in [Parameter Setting Display (Motion Monitor)], then set a password.
Restriction with a security level	Select [Security Level] for [Authentication Method] in [Parameter Setting Display (Motion Monitor)], then set a security level.

For the settings in the [Environmental Setting] dialog, refer to the following.

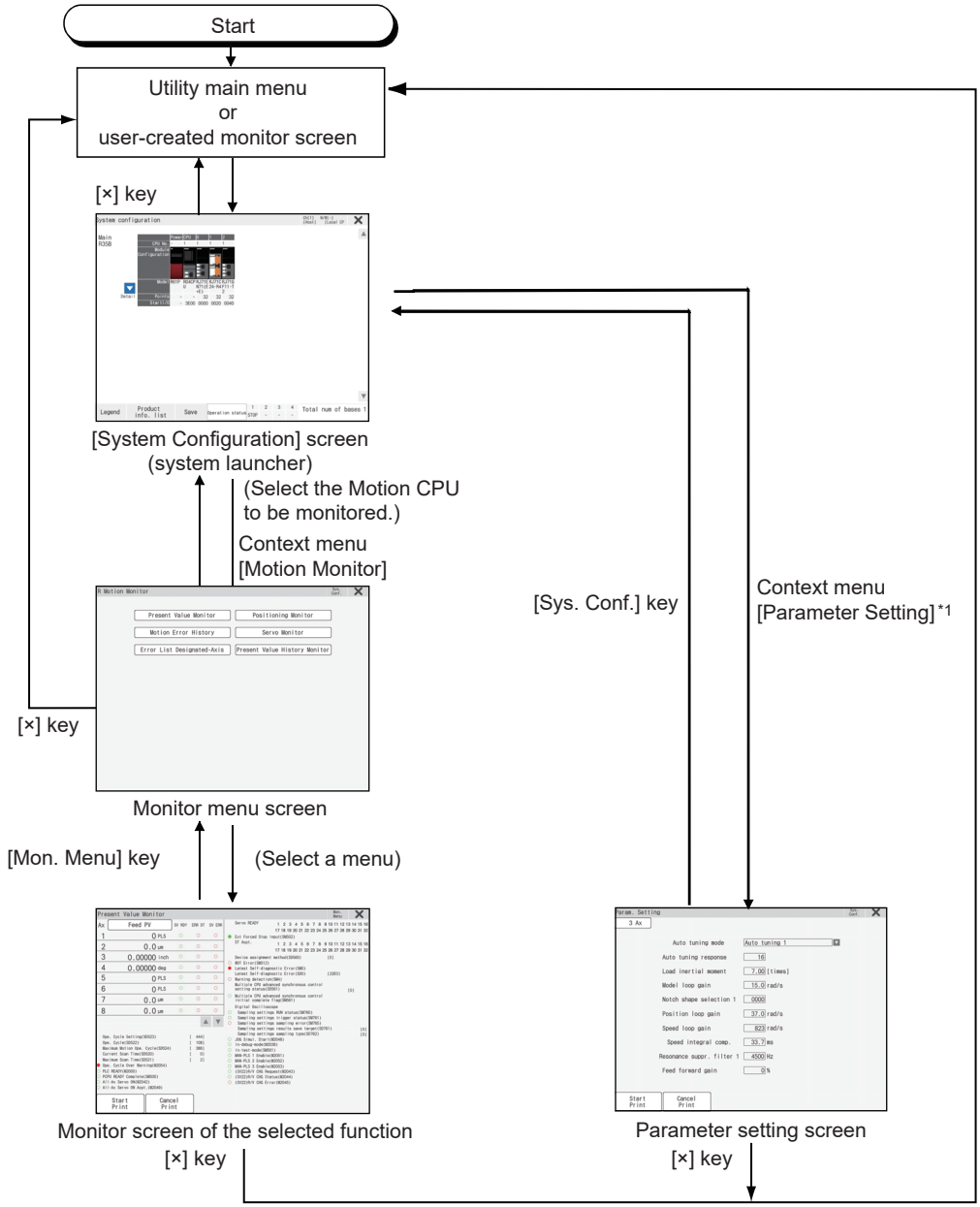
📖GT Designer3 (GOT3000) Screen Design Manual

■Screen transitions when setting the security



PART 7

Screen transitions



*1 If a password is set for [Parameter Setting Display (Motion Monitor)] in GT Designer3 (GOT3000), enter the password.
☞ Page 344 [Parameter Setting] screen

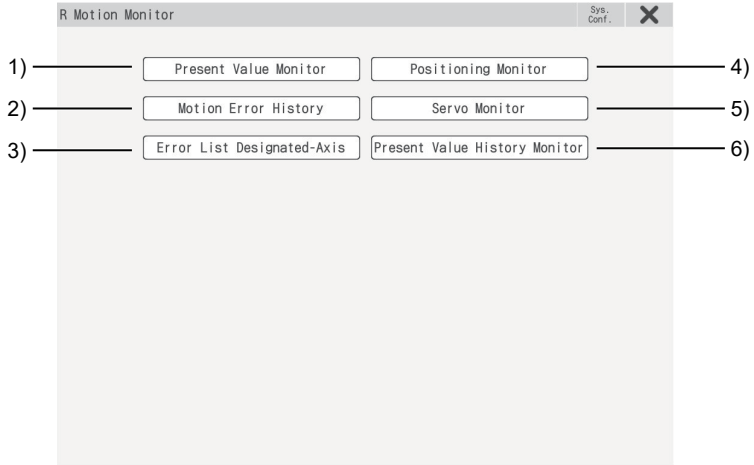
At next startup, the last exited screen is displayed.

However, the last exited screen will not be displayed when the GOT is restarted due to an installation of the OS, turning the GOT power from off to on, or a reset.

When the function is started with a special function switch to which a connection destination different from the one at the last exit is set, the [System Configuration] screen of the system launcher appears.

52.3 [R Motion Monitor] screen

The R motion monitor allows you to monitor various servo monitor data on multiple monitor screens.
To display a monitor screen, select it from the [R Motion Monitor] screen.

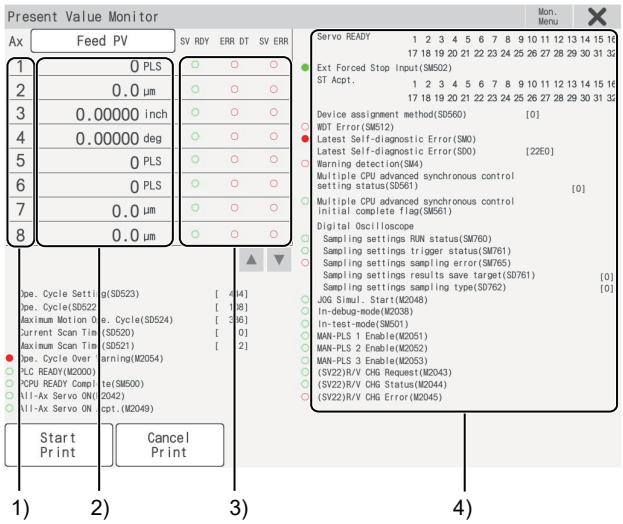


No.	Item	Description
1)	[Present Value Monitor] key	Monitors and displays the current feed values and actual current values of all running axes. ☞ Page 334 [Present Value Monitor] screen
2)	[Error History] key	Displays the history of errors that occurred in the Motion CPU (MELSEC iQ-R series). ☞ Page 336 [Motion Error History] screen
3)	[Error List Designated-Axis] Key	Displays the latest errors that occurred on the specified axis. ☞ Page 338 [Error List Designated-Axis] screen
4)	[Positioning Monitor] key	Monitors the details of the positioning data set to any axis. ☞ Page 339 [Positioning Monitor] screen
5)	[Servo Monitor] key	Monitors the servo monitor/servo amplifier. ☞ Page 341 [Servo Monitor] screen
6)	[Present Value History Monitor] Key	Displays the history of current encoder values, servo command values and monitor present values of the ABS axis at servo amplifier power-on/off or at home position return. ☞ Page 342 [Present Value History Monitor] screen

52.3.1 [Present Value Monitor] screen

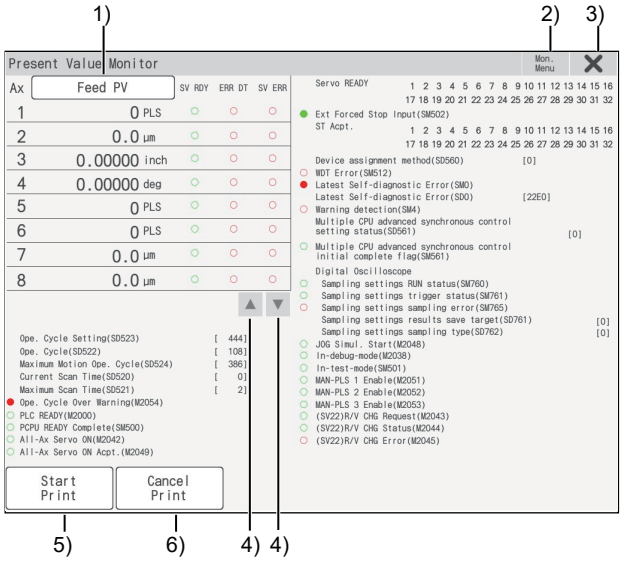
The following describes the display data of the [Present Value Monitor] screen and the functions of the keys displayed on the screen.

Displayed contents



No.	Item	Description
1)	[Ax]	Displays the number of the operating axis being monitored.
2)	[Feed PV] and [Actual PV]	Displays the feed present values or actual present values of the operating axes.
3)	[SV RDY], [ERR DT], and [SV ERR]	Displays the ON (lit)/OFF (not lit) status of the servo ready signal, major/minor error and servo error detection signal. Touching the error indication [○] switches the screen to the [Error List Designated-Axis] screen of the touched axis number. ☞ Page 338 [Error List Designated-Axis] screen
4)	Bit device screen	The common bit devices are always monitored and displayed. Bit devices for error detection: marked with a red circle Bit devices for general status: marked with a green circle

Key functions



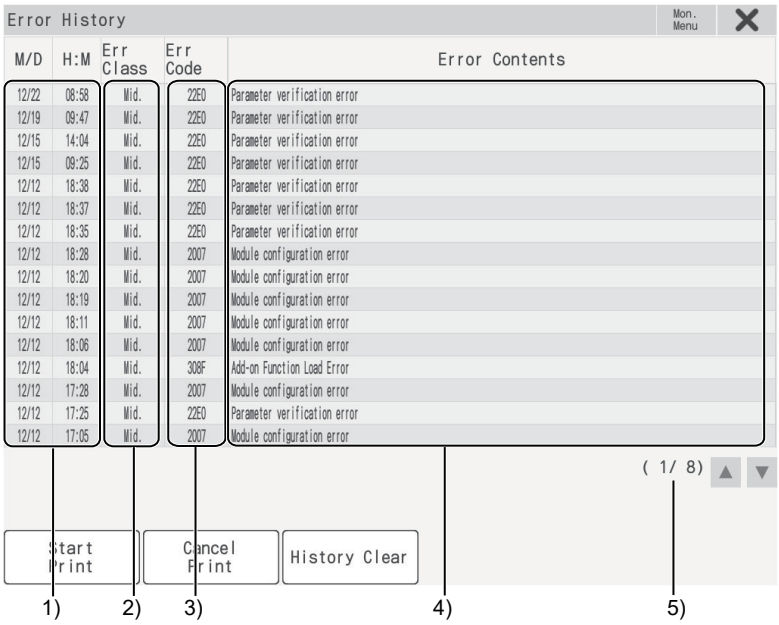
No.	Item	Description
1)	[Feed PV] key and [Actual PV] key	Each touch switches between [Feed PV] and [Actual PV].
2)	[Mon. Menu] key	Returns to the monitor menu screen.
3)	[×] key	Exits the present value monitor and returns to the screen where the R motion monitor was started.
4)	Scroll keys	Switches the displayed axis number.
5)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
6)	[Cancel Print] key	Touch operation for this key is disabled.

PART 7

52.3.2 [Motion Error History] screen

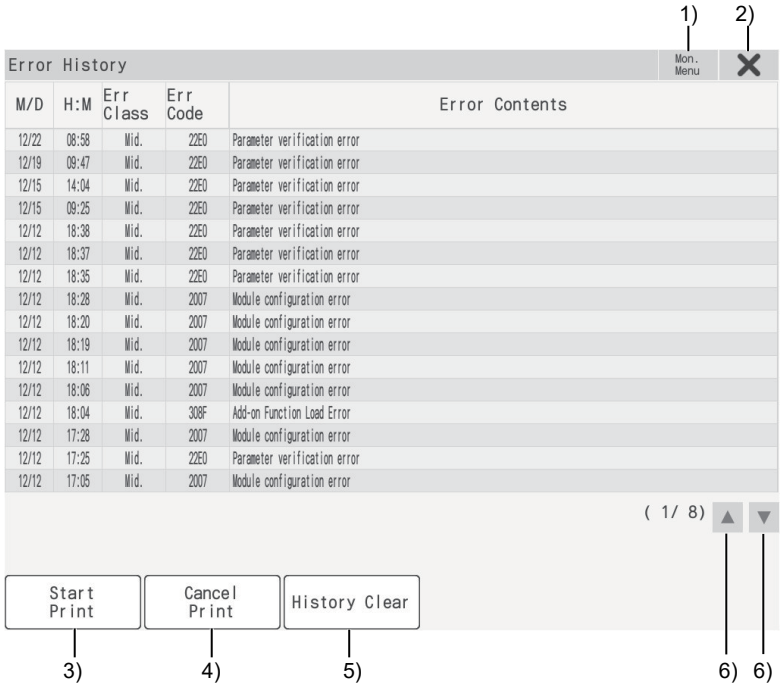
This section describes the contents of the [Motion Error History] screen and the functions of the keys displayed on the screen.
The [Motion Error History] screen displays the history of errors which occurred in the Motion CPU (MELSEC iQ-R series).
Up to 128 errors are displayed in order of [M/D H:M], starting from the most recent.

Displayed contents



No.	Item	Description
1)	[M/D H:M]	Displays the date and time of when the error occurred in the Motion CPU.
2)	[Err Class]	Displays the classifications of errors that occurred. The following shows the error classifications. • [Wrng] • [Min.] • [Mid.] • [Maj.]
3)	[Err Code]	Displays the error code of the error that occurred.
4)	[Error Contents]	Displays the definition of the error that occurred in the Motion CPU.
5)	Page number display area	Displays the page number of the currently displayed page and total number of pages. Up to eight pages can be displayed. If no error history exists, "1/1" is displayed.

Key functions

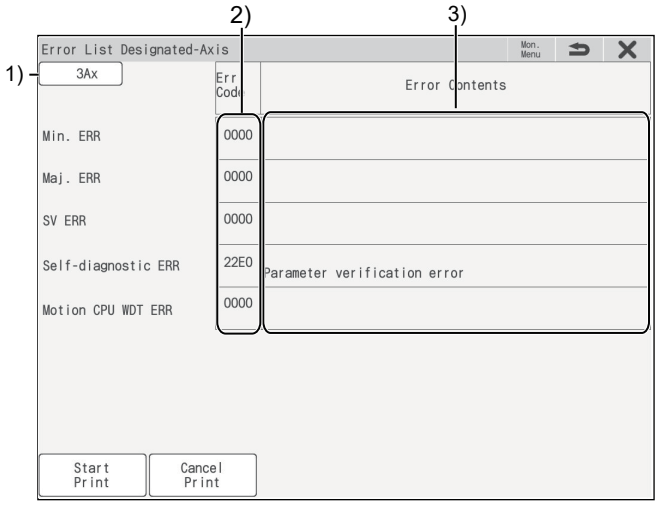


No.	Item	Description
1)	[Mon. Menu] key	Returns to the monitor menu screen.
2)	[×] key	Exits the motion error history monitor and returns to the screen where the R motion monitor was started.
3)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
4)	[Cancel Print] key	Touch operation for this key is disabled.
5)	[History Clear] key	Clears the error history.
6)	Scroll keys	Scrolls the motion error history up or down by 16 error events. If no further error event exists, the history is not scrolled.

52.3.3 [Error List Designated-Axis] screen

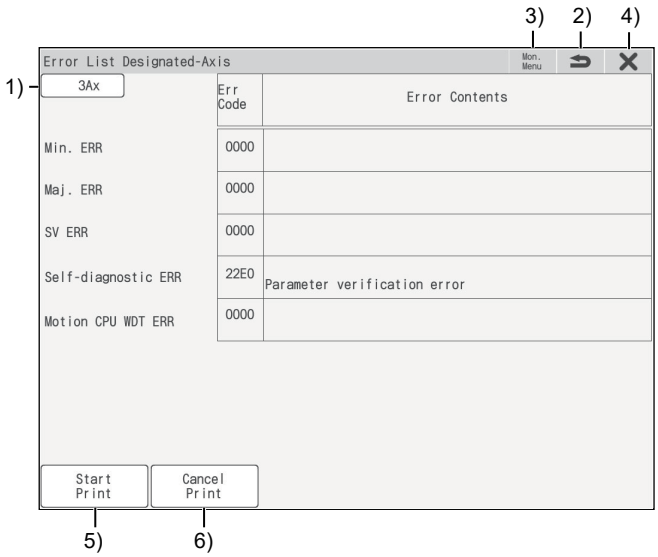
This section describes the displayed contents of the [Error List Designated-Axis] screen and the functions of the keys displayed on the screen.

Displayed contents



No.	Item	Description
1)	Axis No.	Displays the axis number currently being monitored.
2)	[Err Code]	Displays the error codes of errors that are currently occurring.
3)	[Error Contents]	Displays the definition of the error that occurred.

Key functions

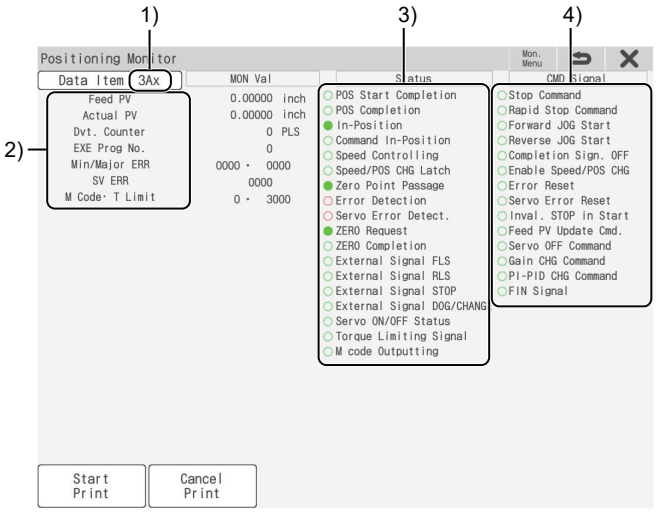


No.	Item	Description
1)	[Ax] key	Opens the axis No. selection screen. Select the axis number.
2)	[Mon. Menu] key	Returns to the monitor menu screen.
3)	RET key	Returns to the previous screen.
4)	[×] key	Exits the error list designated-axis monitor and returns to the screen where the R motion monitor was started.
5)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
6)	[Cancel Print] key	Touch operation for this key is disabled.

52.3.4 [Positioning Monitor] screen

This section describes the displayed contents of the [Positioning Monitor] screen and the functions of the keys displayed on the screen.

Displayed contents



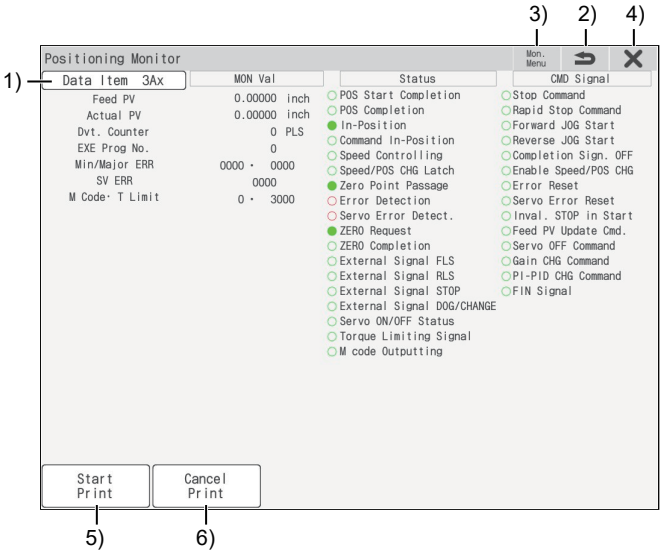
No.	Item	Description
1)	Axis No.	Displays the number of the operating axis being monitored.
2)	Positioning control data*1	Displays the data during positioning control of the PCPU.
3)	[Status]	Displays ON and OFF symbols that represent the control status of each axis. The symbol turns green when the control status is "ON". Upon detection of an error or servo error, the symbol turns red.
4)	[CMD Signal]	Displays whether the positioning command signal is ON or OFF. The symbol turns green when the control status is "ON".

*1 The following shows the data currently under control.

Item	Description
[Feed PV]	Target address output to the servo amplifier
[Actual PV]	Actually traveled present value
[Dvt. Counter]	Difference between feed present value and actual present value
[EXE Prog No.]	The number of the servo program being executed
[Min/Major ERR]	The error code of the latest minor/major servo error
[M Code · T Limit]	The M code and torque limit of the servo program in execution

PART 7

Key functions

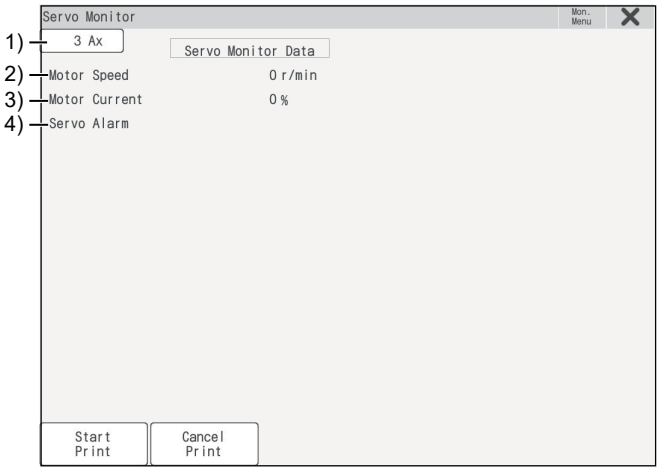


No.	Item	Description
1)	[Data Item Ax]	Switches the axes to be monitored.
2)	[Mon. Menu] key	Returns to the monitor menu screen.
3)	RET key	Returns to the previous screen.
4)	[×] key	Exits the positioning monitor and returns to the screen where the R motion monitor was started.
5)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
6)	[Cancel Print] key	Touch operation for this key is disabled.

52.3.5 [Servo Monitor] screen

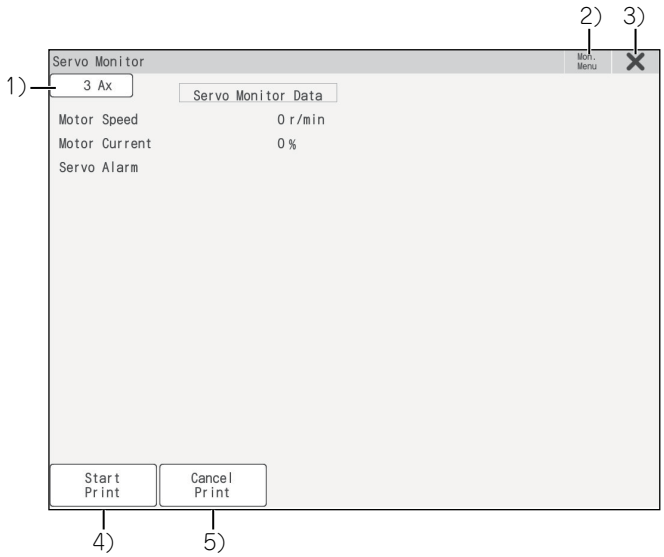
This section describes the displayed contents of the [Servo Monitor] screen and the functions of the keys displayed on the screen.

Displayed contents



No.	Item	Description
1)	Axis	Displays the axis number currently being monitored.
2)	[Motor Speed]	Displays the actual speed of the servo motor.
3)	[Motor Current]	Displays the motor current value by using the rated current as 100%.
4)	[Servo Alarm]	Displays the alarm detected by the servo amplifier.

Key functions

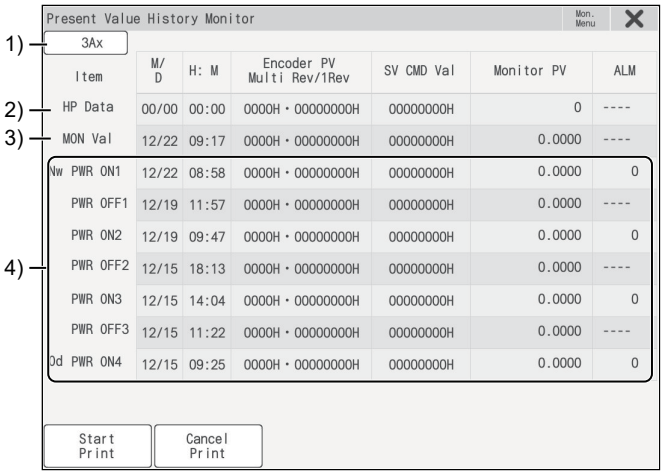


No.	Item	Description
1)	[Ax] key	Switches the axes to be monitored.
2)	[Mon. Menu] key	Returns to the monitor menu screen.
3)	[×] key	Exits the servo monitor and returns to the screen where the R motion monitor was started.
4)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
5)	[Cancel Print] key	Touch operation for this key is disabled.

52.3.6 [Present Value History Monitor] screen

This section describes the displayed contents of the [Present Value History Monitor] screen and the functions of the keys displayed on the screen.

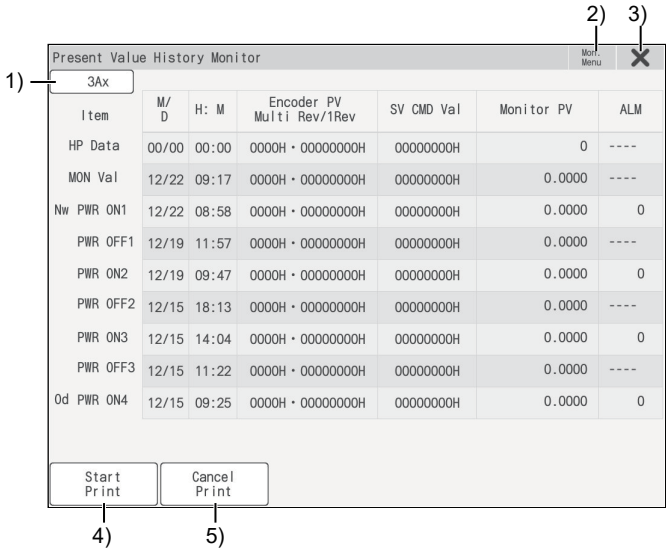
Displayed contents



Item	M/D	H: M	Encoder PV Multi Rev/1Rev	SV CMD Val	Monitor PV	ALM
HP Data	00/00	00:00	0000H・00000000H	00000000H	0	----
MON Val	12/22	09:17	0000H・00000000H	00000000H	0.0000	----
Nw PWR ON1	12/22	08:58	0000H・00000000H	00000000H	0.0000	0
PWR OFF1	12/19	11:57	0000H・00000000H	00000000H	0.0000	----
PWR ON2	12/19	09:47	0000H・00000000H	00000000H	0.0000	0
PWR OFF2	12/15	18:13	0000H・00000000H	00000000H	0.0000	----
PWR ON3	12/15	14:04	0000H・00000000H	00000000H	0.0000	0
PWR OFF3	12/15	11:22	0000H・00000000H	00000000H	0.0000	----
Od PWR ON4	12/15	09:25	0000H・00000000H	00000000H	0.0000	0

No.	Item	Description
1)	Axis	Displays the number of the axis being monitored.
2)	[HP Data]	Displays the following values monitored at home position return. • Home position return completion time • Encoder present value • Multi-revolution data of absolute position reference point data • Within one-revolution position of absolute position reference point data • Servo command value • Monitor present value
3)	[MON Val]	Displays the following present monitor values. • Current time • Encoder present value • Present multi-revolution data of encoder present value • Present within one-revolution position of encoder present value • Present servo command value • Present monitor present value
4)	PWR ON and PWR OFF	Displays the last four present values of the ABS axis at servo amplifier power-on/off. • At power-on • Power-on time • Encoder present value • Multi-revolution data of initial encoder • One-revolution data of initial encoder • Servo command value after recovery • Monitor present value after recovery • Alarm occurrence information at present value recovery (error code of a minor/major error) • At power-off • Time immediately before servo amplifier power-off • Encoder present value • Multi-revolution data of encoder present value before servo amplifier power-off • One-revolution data of encoder present value before servo amplifier power-off • Servo command immediately before servo amplifier power-off • Monitor present value immediately before servo amplifier power-off

Key functions



No.	Item	Description
1)	[Ax] key	Switches the axes to be monitored.
2)	[Mon. Menu] key	Returns to the monitor menu screen.
3)	[×] key	Exits the present value history monitor and returns to the screen where the R motion monitor was started.
4)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
5)	[Cancel Print] key	Touch operation for this key is disabled.

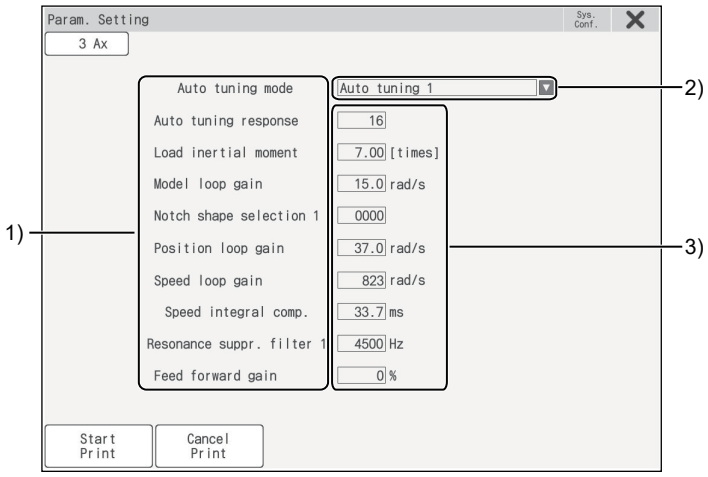
PART 7

52.3.7 [Parameter Setting] screen

You can set the servo parameters (basic parameters/adjustment parameters) of the connected Motion CPU (MELSEC iQ-R series).

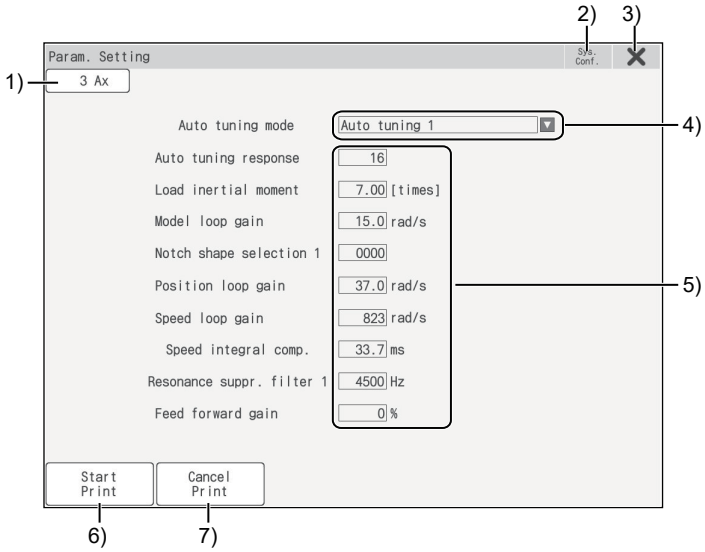
This section describes the displayed contents of the [Parameter Setting] screen and the functions of the keys displayed on the screen.

Displayed contents



No.	Item	Description
1)	Parameter setting items	Displays the setting items of the servo parameters.
2)	Auto tuning modes	Displays the set auto tuning mode.
3)	Parameter setting values	Displays the setting values of the servo parameters.

Key functions



No.	Item	Description
1)	[AxNo.] key	Changes the axis whose parameter setting will be made.
2)	[Sys. Conf.] key	Returns to the system configuration screen.
3)	[×] key	Exits the parameter setting and returns to the screen where the R motion monitor was started.
4)	Auto tuning mode selection key	Select an auto tuning mode. • 2 Gain adjust 1 • Auto tuning 1 • Auto tuning 2 • Manual • 2 Gain adjust 2
5)	Change parameter setting value keys	Touch the setting value of the parameter to be changed to display the parameter setting value change window. ☞ Page 346 Parameter setting operation
6)	[Print Screen] key	Saves the image of the displayed screen to a file. For further information about hard copies, refer to the following. ☞ Page 347 Hard copy output
7)	[Cancel Print] key	Touch operation for this key is disabled.

Inputting the password

If you have set a password in [Parameter Setting Display (Motion Monitor)] in GT Designer3 (GOT3000), the password input key window appears when you access the [Parameter Setting] screen of the motion monitor.

For details on the password setting, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■Function

If the password matches, the [Parameter Setting] screen is displayed.

If the password does not match, an error message is displayed.

Touching the [Sys. Conf] key returns to the system configuration screen.

Numbers and the characters A to F can be used to set a password.

■Operations

Enter a password.

Touch the key window and enter a password.

After entering the password, touch the [Enter] key to confirm the entry.

To edit the entered characters, touch the [Del] key to delete the characters, and enter the new ones.

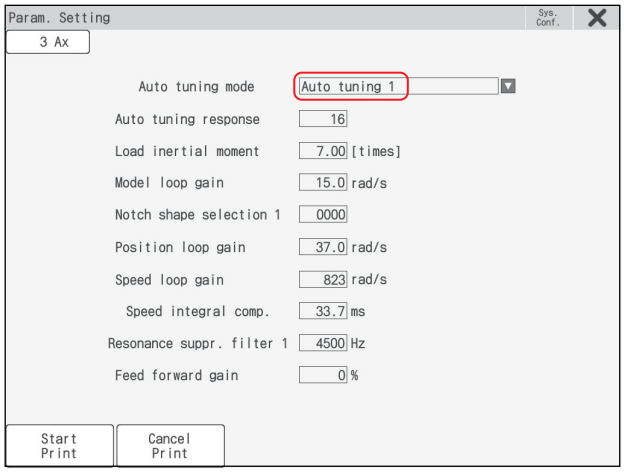
To cancel the password entry, touch the [×] key to return to the monitor screen.

Parameter setting operation

As an example of the parameter setting operation, the following describes how to change the setting of [Auto tuning mode].

Operating procedure

1. Touch the setting value of the item to configure its parameter.



2. Touch the new setting from the displayed list.

3. In the confirmation window, touch the [OK] key to write the parameter setting to the Motion CPU (MELSEC iQ-R series).

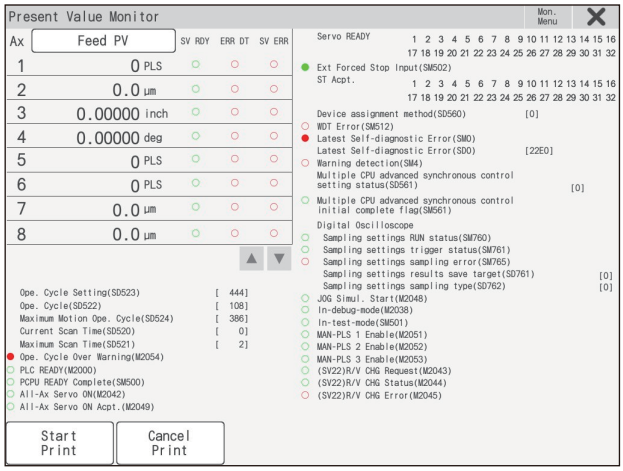
To cancel writing of the parameter setting, touch the [Cancel] key.

4. After writing is completed, the [Parameter Setting] screen appears, displaying the updated parameter setting.

52.3.8 Hard copy output

This section describes how to save an image of the displayed screen to a file.

Touching the [Print Screen] key outputs the data.



The output destination for hard copies can be set in [Hard Copy] of GT Designer3 (GOT3000).

For details on the hard copy setting, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

PART 7

52.4 Error messages and corrective action

This section describes the error messages that may be displayed during R motion monitor operation and the corrective actions.

Error message	Description	Corrective action
No PLC Communications	Communication cannot be established with the PLC CPU of the monitor target.	• Check the communication setting. • Check the status of the connection between the controller and the GOT (disconnected or cut cables). • Check that no error has occurred with the controller. • Check if the R motion monitor supports the PLC CPU.
This PLC type is not supported	An unsupported Motion CPU (MELSEC iQ-R series) has been selected on the [System Configuration] screen.	Select a supported Motion CPU (MELSEC iQ-R series) on the [System Configuration] screen. ☞ Page 326 Target Motion CPU of the R motion monitor
Controller's OS type is different	An operating system other than SW10DNC-RMTFW is installed on the monitored Motion CPU (R64MTCPU, R32MTCPU, or R16MTCPU).	Install the SW10DNC-RMTFW operating system on the Motion CPU (R64MTCPU, R32MTCPU, or R16MTCPU).
It is not a version for GOT	The version of the motion controller OS, which is installed on the Motion CPU (MELSEC iQ-R series) of the monitor target, does not support the R motion monitor.	Install a motion controller OS supporting the R motion monitor to the Motion CPU (MELSEC iQ-R series).
Unused axis selected	The axis number selected has not been set.	• Select the axis number that has been set. • Set the axis using the relevant software.
It is not possible to select.	During servo parameter setting, an item that cannot be set has been selected.	Select an item that can be set.
Incorrect setting range	During servo parameter setting, a value outside the setting range has been set.	Set the value within the setting range.
Unmatched password	The entered password is invalid.	Enter the correct password.
Communication Channel Setup Error.	A communication driver supporting the R motion monitor is not installed.	Install an applicable communication driver.
Unsupport amp. selected	The number of the axis, which is set to a servo amplifier having no settable parameter, has been selected.	Select the number of the axis, which is set to a servo amplifier having the settable parameter.

Point

How to clear a displayed error message

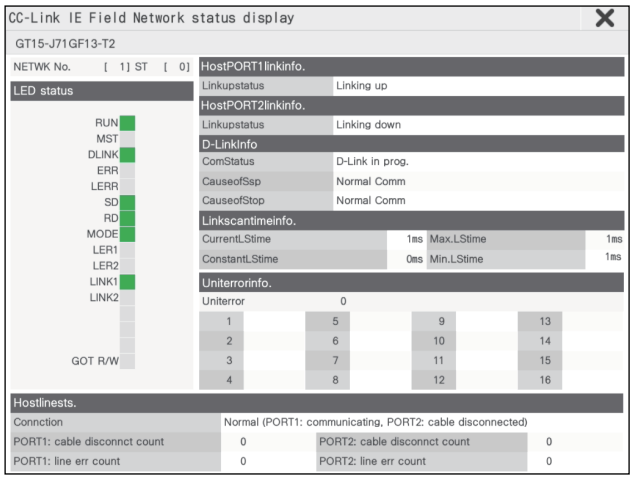
For errors that occur during the communication with a controller (such as communication errors), the error message does not disappear even after the cause of the error has been removed.

To clear the error message, restart the GOT.

53 [Network status display]

GT37 SoftGOT3000

The network status display function monitors the network status using a communication unit mounted on the GOT.
You can check the LED status, error status, and other items of the network module.



53.1 Network status display specifications

53.1.1 System configuration

Target communication units

The network status display function monitors the network status using the following communication units.

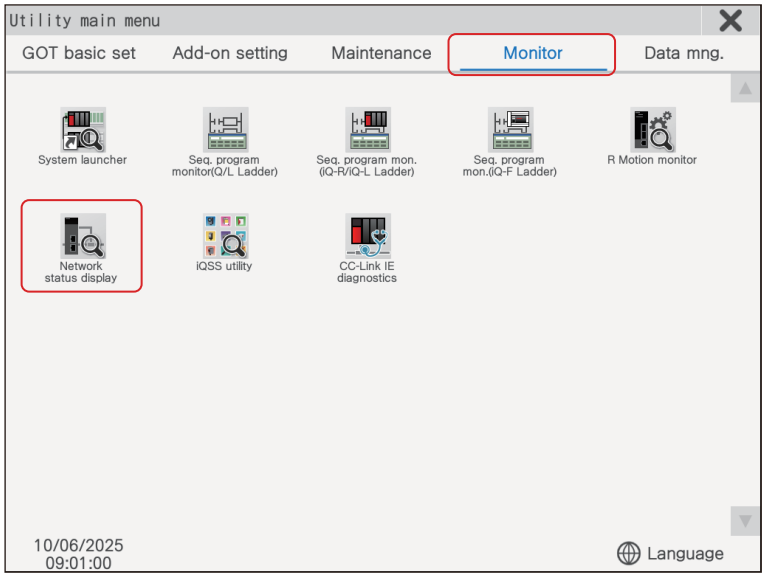
- CC-Link IE TSN communication unit (GT25-J71GN13-T2)
- CC-Link IE Controller Network communication unit (GT15-J71GP23-SX)
- CC-Link IE Field Network communication unit (GT15-J71GF13-T2)
- CC-Link communication unit (GT15-J61BT13)
- MELSECNET/H communication unit (GT15-J71LP23-25, GT15-J71BR13)

Usable hardware

A USB mouse can be used.
For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
List of Validated Devices for the GOT3000 Series (for Overseas) (GOT-A-0233)

53.2 How to display the screen

Select [Network status display] in the [Monitor] tab.

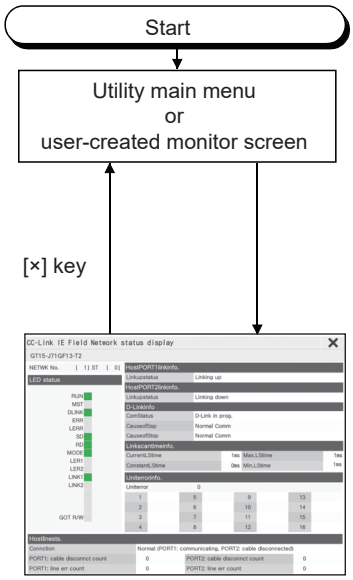


Starting network status display from an extended function switch

Network status display can be started from a user-created screen by setting an extended function switch in the project to network status display.

For information on how to set a special function switch, refer to the following. GT Designer3 (GOT3000) Screen Design Manual

Screen transitions



Network status display monitor

53.3 Network status display monitor

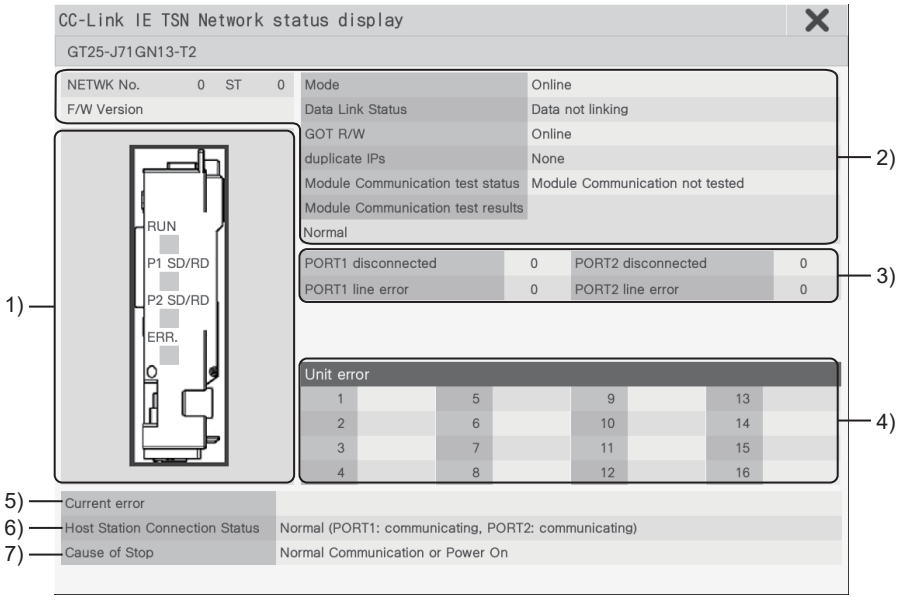
This section describes the displayed contents of the network status display screen.

☞ Page 351 CC-Link IE TSN communication unit
☞ Page 354 CC-Link IE Controller Network communication unit
☞ Page 358 CC-Link IE Field Network communication unit
☞ Page 362 CC-Link communication unit
☞ Page 364 MELSECNET/H communication unit

53.3.1 CC-Link IE TSN communication unit

For the corrective actions of error, refer to the following.

📖User's manual of the master/local module for the CC-Link IE TSN system



No.	Item	Description
1)	LED status	Displays the operation status of the CC-Link IE TSN communication unit. ☞ Page 352 LED status
2)	Unit information	Displays the unit information of the CC-Link IE TSN communication unit. ☞ Page 352 Unit information
3)	Host station line status	Displays the connection status of the CC-Link IE TSN communication unit. ☞ Page 352 Host station line status
4)	Unit error information	Lists error codes. ☞ Page 352 Unit error information
5)	Current error information	Displays current errors. ☞ Page 353 Current error information
6)	Host station connection status	Displays the connection status of the host station. ☞ Page 353 Host station connection status
7)	CauseofStop	Displays the cause that stopped the data link of the CC-Link IE TSN communication unit. ☞ Page 353 CauseofStop

LED status

Item	LED color	On	Off	Flashing
[RUN]	Green	Operating normally	Communication unit error	-
[P1 SD/RD]	Green	PORT1: Sending or receiving data	PORT1: Not sending or receiving data	-
[P2 SD/RD]	Green	PORT2: Sending or receiving data	PORT2: Not sending or receiving data	-
[ERR]	Red	Unit error or errors in all stations	Operating normally	• Flashing (high speed): Error • Flashing (medium speed): Faulty data link station detected*1

*1 This is available only in multicast mode.
Note that the LED remains off when there is a data link error on a remote station of CC-Link IE TSN Class A (Realtime Communication) while a data link is established.

Unit information

Item	Description
[Network No.]	1 to 239
[ST]	1 to 120 and 255 (No station number)
[F/W Version]	01 or later (2-byte ASCII code)
[Mode]	• [Online] • [Multi-cast Mode] • [Offline] • [Module Communication Test]
[Data Link Status]	• [Data linking] • [Data linking stop] • Data not linking] • [Offline]
[GOT R/W]	• [Online] • [Online] • [Testing Module Comm]
[Duplicate IPs]	• [None] • [Exist]
[Module Communication test status]	• [Module Communication not tested] • [Testing Module Comm] • [Module Communication test complete]
[Module Communication test results]	• [Normal] • [Internal LoopBK Test Abnormal End(PORT1)] • [External LoopBK Test Abnormal End(PORT1)] • [External LoopBK Test Abnormal End(PORT1)] • [Internal LoopBK Test Abnormal End(PORT2)] • [External LoopBK Test Abnormal End(PORT2)] • [External LoopBK Test Abnormal End(PORT2)]

Host station line status

Item	Description
[PORT1: cable disconnect count]	• [0]: No error • [1] or larger: Number of accumulated errors
[PORT1: line err count]	
[PORT2: cable disconnect count]	
[PORT2: line err count]	

Unit error information

Item	Description
[Err Code]	A history of 16 errors is displayed in 16 rows, starting from the latest one.

Current error information

Item	Description
[Current error]	Displays current errors.

Host station connection status

Item	Description
[Host Station Connection Status]	Displays the connection status of the host station. • [Normal (PORT1: communicating, Port2: communicating)] • [Normal (PORT1: communicating, PORT2: cable disconnected)] • [Loopback on PORT1 Side (Cable disconnected on PORT2 side)] • [Normal (PORT1: cable disconnected, PORT2: communicating)] • [Disconnecting (PORT1: cable disconnected, PORT2: cable disconnected)] • [Disconnecting (PORT1: cable disconnected, PORT2: connecting a line)] • [Disconnecting (PORT1: connecting a line, PORT2: cable disconnected)] • [Disconnecting (PORT1: connecting a line, PORT2: connecting a line)] • [Loopback on PORT2 Side (Cable disconnected on PORT1 side)]

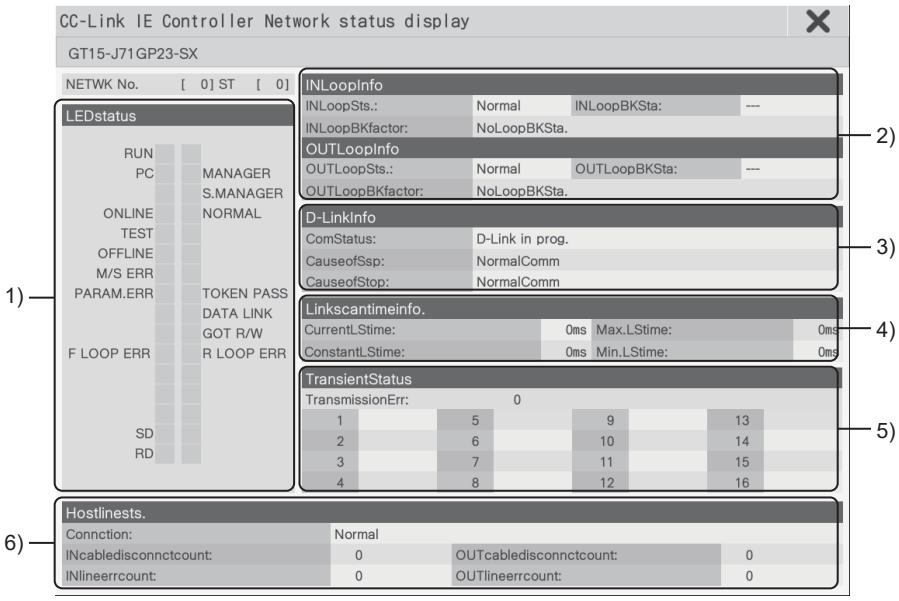
CauseofStop

Item	Description
[CauseofStop]	• [Normal Communication or Power On] • [Monitoring Time Up] • [Parameter not received] • [Out of Host Station No. Range] • [Host Reserved Station Setting] • [Station No. Unassigned] • [Parameter Error] • [Parameter Communicating] • [CPU Module Moderate/Major Error]

53.3.2 CC-Link IE Controller Network communication unit

For the corrective actions of error, refer to the following.

📖CC-Link IE Controller Network Reference Manual



No.	Item	Description
1)	LED status	Displays the operation status of the CC-Link IE Controller Network communication unit. ☞ Page 355 LED status
2)	Loop information	Displays the loop status of the CC-Link IE Controller Network communication unit. ☞ Page 355 Loop information
3)	Data link information	Displays the data link information of the CC-Link IE Controller Network communication unit, including the communication status, cause of a communication suspension, and cause of a communication stop. ☞ Page 356 Data link information
4)	Link scan time information	Displays the link scan time information. ☞ Page 356 Link scan time information
5)	Transient status	Displays the number of transient transmission errors and the error codes. ☞ Page 356 Transient status
6)	Host station connection status	Displays the connection status of the host station. ☞ Page 353 Host station connection status

LED status

Item	LED color	On	Off	Flashing
[RUN]	Green	Operating normally	Hardware failure or WDT error	-
[PC]		Controller network	Network not established	-
[ONLINE]		Online mode	Other than online mode	-
[TEST]		Test mode	Other than test mode	
[OFFLINE]		Offline mode	Other than offline mode	
[M/S.ERR]	Red	Duplicate control station or station No. detected	Not detected	
[MANAGER]	Green	Control station in operation	Other than control station	
[S.MANAGER]		Sub-control station in operation	Other than sub-control station	
[NORMAL]		Normal station in operation	Other than normal station	
[PARAM.ERR]	Red	Parameter error detected	Not detected	-
[F LOOP ERR]		IN-side error detected		
[SD]	Green	Data being sent	Data not sent	
[RD]		Data being received	Data not received	
[TOKEN PASS]		Baton pass being executed	Baton pass not executed	
[DATA LINK]		Data link being executed (Cyclic transmission in progress)	Data link not executed	Data link being executed (Cyclic transmission stopped)
[GOT R/W]		• Hardware test in progress • Offline • Self-loopback test in progress • Internal self-loopback test in progress • Station-to-station test in progress	• Online • Line test in progress	-
[R LOOP ERR]	Red	OUT-side error detected	Not detected	

Loop information

Item	Description
[IN: Loop Sts.]	Displays the connection status of the host station on the IN side. • [Normal] • [Rev connect]
[IN: LoopBK Sta]	Displays the station number of the IN-side loopback station. • No loopback executing station: [---] • Station No.: [1] to [120]
[IN: LoopBK factor]	Displays the cause of the loopback. • [No LoopBK Sta.] • [OUT: cable disconnection] • [OUT: connecting a line] • [OUT: wrong cable connection]
[OUT: Loop Sts.]	Displays the connection status of the host station on the OUT side. • [Normal] • [Rev connect]
[OUT: LoopBK Sta]	Displays the station number of the OUT-side loopback station. • No loopback executing station: [---] • Station No.: [1] to [120]
[OUT: LoopBK factor]	Displays the cause of the loopback. • [No LoopBK Sta.] • [IN: cable disconnection] • [IN: connecting a line] • [IN: wrong cable connection]

Data link information

Item	Description
[Com Status]	Displays the communication (Data link) status of the host station. • [D-Link in prog.] • [B-Pass exec] • [B-Pass stopped] • [Testing Offline] • [Offline]
[Cause of Ssp]	Displays the cause for which the communication (Transient transmission) of the host station is disabled. • [Normal Comm] • [Cable disconnection] • [Wrong cable connection] • [Checking cable IN/OUT] • [Disconnecting/returning to system] • [Offline] • [Offline test] • [Self-check mode]
[CauseofStop]	Displays the cause for which the data link (Cyclic transmission) of the host station is disabled. • [Normal Comm] • [Stop Order] • [D-Link observation timer time up] • [Testing Line] • [Param not rcvd] • [Host out of range] • [Host reservation] • [Dup Host No.] • [Dup CtrlSta] • [Sta.No. not set] • [Invalid Network No.] • [Param Err] • [Params in comm.] • [CPU stop error] • [CPU pwr stp err]

Transient status

Item	Description
[Transmission Err]	Displays the number of transient transmission errors.
[Err Code]	A history of 16 errors is displayed in 16 rows, starting from the latest one.

Link scan time information

Item	Description
[CurrentLStime]	Displays the current link scan time.
[Max.LStime]	Displays the maximum link scan time.
[Min.LStime]	Displays the minimum link scan time.
[ConstantLStime]	Displays the link scan time set in the parameter.

Host station line status

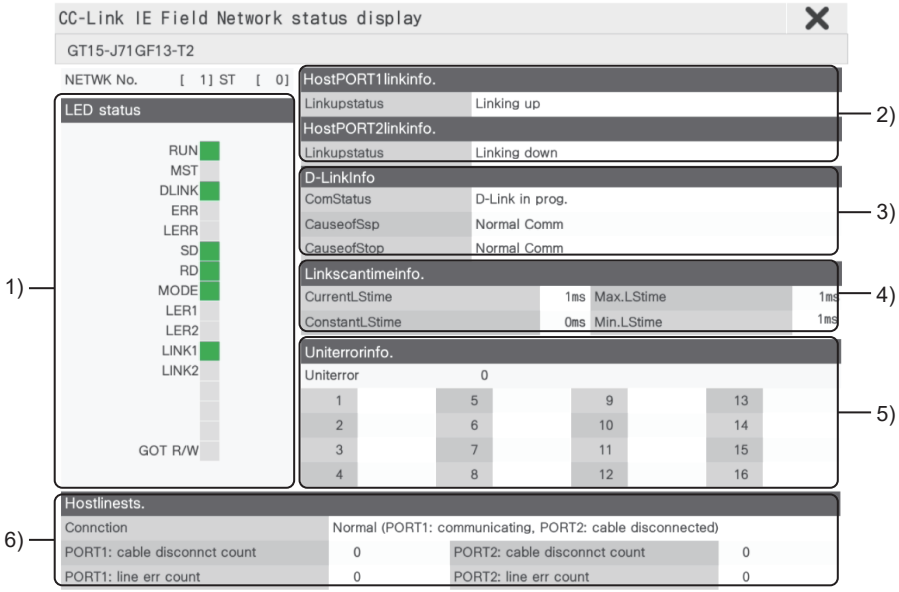
Item	Description
[Connection]	Displays the connection status of the host station. • [Normal] • [INLoopBack(OUTcabledisconnection)] • [INLoopBack(OUTconnectingaline)] • [INLoopBack(OUTwrongcableconnection)] • [OUTLoopBack(INcabledisconnection)] • [OUTLoopBack(INconnectingaline)] • [OUTLoopBack(INwrongcableconnection)] • [Disconnect(INcabledisconnection,OUTcabledisconnection)] • [Disconnect(INcabledisconnection,OUTconnectingaline)] • [Disconnect(INcabledisconnection,OUTwrongcableconnection)] • [Disconnect(INconnectingaline,OUTcabledisconnection)] • [Disconnect(INconnectingaline,OUTconnectingaline)] • [Disconnect(INconnectingaline,OUTwrongcableconnection)] • [Disconnect(INwrongcableconnection,OUTcabledisconnection)] • [Disconnect(INwrongcableconnection,OUTconnectingaline)] • [Disconnect(INwrongcableconnction,OUTwrongcableconnction)]
[INcabledisconnctcount]	• [0]: No error • [1] or larger: Number of accumulated errors
[INlineerrcount]	
[OUTcabledisconnctcount]	
[OUTlineerrcount]	

PART 7

53.3.3 CC-Link IE Field Network communication unit

For the corrective actions of error, refer to the following.

User's manual of the CC-Link IE Field Network master/local module used



No.	Item	Description
1)	LED status	Displays the operation status of the CC-Link IE Field Network communication unit. ☞ Page 359 LED status
2)	Link information	Displays the link status of the CC-Link IE Field Network communication unit. ☞ Page 359 Link information
3)	Data link information	Displays the data link information of the CC-Link IE Field Network communication unit, including the communication status, cause of a communication suspension, and cause of a communication stop. ☞ Page 360 Data link information
4)	Link scan time information	Displays the link scan time information. ☞ Page 360 Link scan time information
5)	Unit error information	Displays the number of unit errors and the error codes. ☞ Page 360 Unit error information
6)	Host station line status	Displays the connection status of the CC-Link IE Field Network communication unit. ☞ Page 361 Host station line status

LED status

Item	LED color	On	Off	Flashing
[RUN]	Green	Operating normally	• Hardware failure • WDT error occurred • Communication unit being reset	-
[MST]		Operating as master station	Operating as a station other than master station	
[DLINK]		• For online mode: Data link in progress • For test mode: Test completed	• For online mode: Data link stopped • For test mode: Test being executed	Data link being executed
[ERR]	Red	Communication error occurred	• Normal • Unit being reset	Data link faulty station detected
[LERR]		Receive data error	Receive data normal	-
[SD]	Green	Data being sent	Data not sent	
[RD]		Data being received	Data not received	
[MODE]		Online mode	Offline mode	Test mode
[LER1]	Red	PORT1 side receive frame error	PORT1 side receive frame normal	-
[LER2]		PORT2 side receive frame error	PORT2 side receive frame normal	
[LINK1]	Green	PORT1 side linking up	PORT1 side linking down	
[LINK2]		PORT2 side linking up	PORT2 side linking down	
[GOT R/W]		No access from GOT	Access from GOT	

Link information

Item	Description
[Host PORT1 link info.]	Displays the link up status of the host station PORT1 side. • [Linking up] • [Linking down]
[Host PORT2 link info.]	Displays the link up status of the host station PORT2 side. • [Linking up] • [Linking down]

Data link information

Item	Description
[Com Status]	Displays the communication (Data link) status of the host station. • [D-Link in prog.] • [B-Pass exec] • [B-Pass stopped] • [Testing Offline] • [Offline]
[Cause of Ssp]	Displays the cause for which the communication (Transient transmission) of the host station is disabled. • [Normal Comm] • [Cable disconnection] • [Disconnecting/returning to system] • [Offline] • [Offline test - H/W test] • [Offline test - self-loopback test] • [Offline test - shipping test]
[CauseofStop]	Displays the cause for which the data link (Cyclic transmission) of the host station is disabled. • [Normal Comm] • [Stop Order] • [D-Link observation timer time up] • [Slave stations do not exist] • [Param not rcvd] • [Host out of range] • [Dup Host No.] • [Dup Master Sta.: Master detected] • [Sta.No. not set] • [Parameter Error] • [Params in comm.] • [CPU stop error] • [Invalid ring configuration]

Unit error information

Item	Description
[Unit error]	Displays the number of unit errors.
[Err Code]	A history of 16 errors is displayed in 16 rows, starting from the latest one.

Link scan time information

Item	Description
[CurrentLStime]	Displays the current link scan time.
[Max.LStime]	Displays the maximum link scan time.
[Min.LStime]	Displays the minimum link scan time.
[ConstantLStime]	Displays the link scan time set in the parameter.

Host station line status

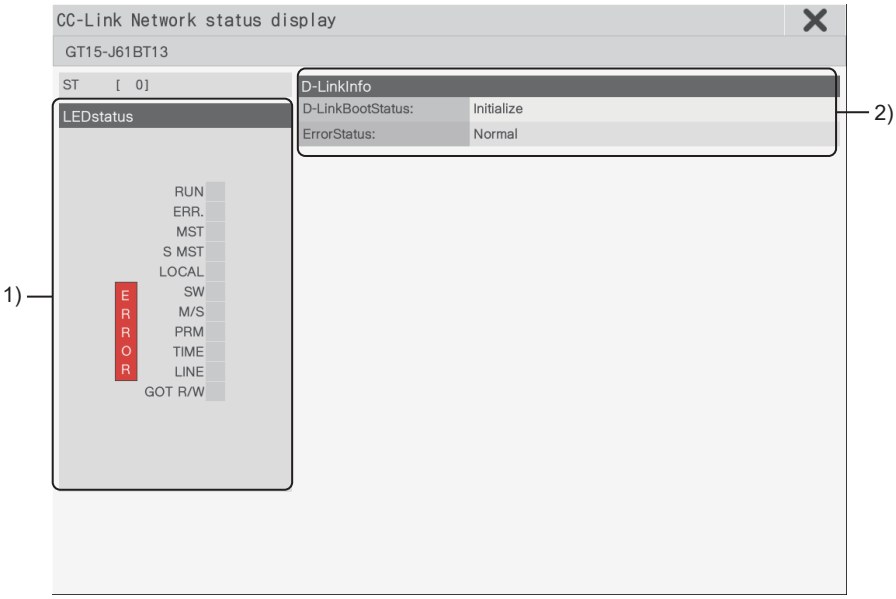
Item	Description
[Connection]	Displays the connection status of the host station. • [Normal (PORT1: communicating, Port2: communicating)] • [Normal (PORT1: communicating, PORT2: cable disconnected)] • Normal (PORT1: in loopBK communication, PORT2 cable disconnected)] • [Normal (PORT1: cable disconnected, PORT2: communicating)] • [Normal (PORT1: cable disconnected, PORT2: in loopBK communication)] • [Disconnecting (PORT1: cable disconnected, PORT2: cable disconnected)] • [Disconnecting (PORT1: cable disconnected, PORT2: connecting a line)] • [Disconnecting (PORT1: connecting a line, PORT2: cable disconnected)] • [Disconnecting (PORT1: connecting a line, PORT2: connecting a line)]
[PORT1 cable disconnect count]	• [0]: No error • [1] or larger: Number of accumulated errors
[PORT1 line err count]	
[PORT2 cable disconnect count]	
[PORT2 line err count]	

PART 7

53.3.4 CC-Link communication unit

For the corrective actions of error, refer to the following.

User's Manual (detailed) of the CC-Link System Master/Local Module used



No.	Item	Description
1)	LED status	Displays the operation status of the CC-Link communication unit (GT15-J61BT13). ☞ Page 362 LED status
2)	Data link information	Displays the data link startup status and errors of the CC-Link communication unit (GT15-J61BT13). ☞ Page 363 Data link information

LED status

Item	LED color	On	Off	Flashing
[RUN]	Green	Operating normally	• WDT error occurred • Unit being reset	-
[ERR.]	Red	All station communication error	• No communication error • Unit being reset	Communication error in a station, or station numbers duplicated
[TIME]		• Cable disconnection • No responses from all stations due to transmission path affected by noise	Responses from all stations	-
[MST]	Green	Operating as master station	Operating as a station other than master station	
[SW]	Red	Switch setting error	No switch setting error	
[LINE]		Cable disconnection error	No cable disconnection error	
[S MST]	Green	Operating as standby master station	Operating as a station other than standby master station	
[M/S]	Red	Master station duplication error	No master station duplication error	
[LOCAL]	Green	Operating as local station	Operating as a station other than local station	
[PRM]	Red	Parameter error	No parameter error	
[GOT R/W]	Green	No access from GOT	Access from GOT	

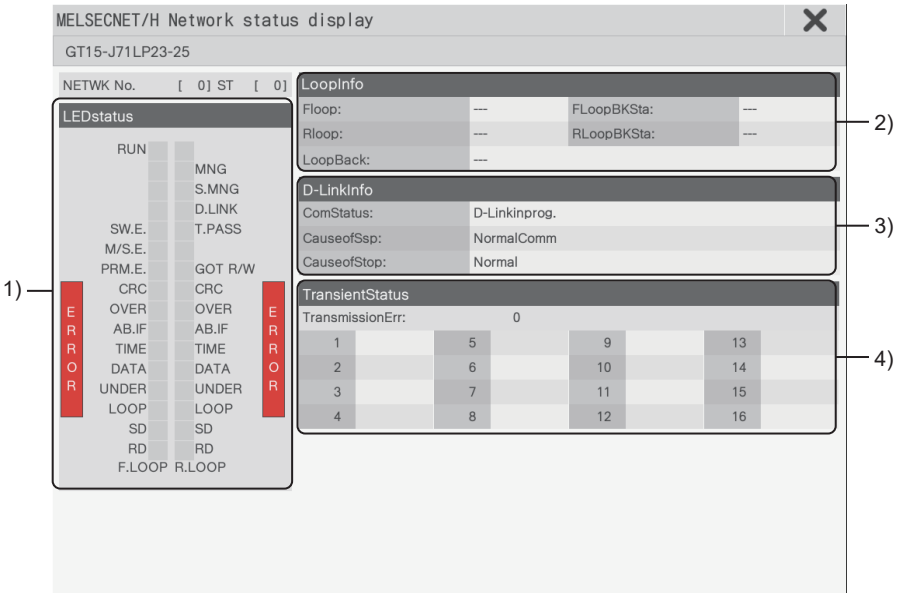
Data link information

Item	Description
[D-Link Boot Status]	Displays the data link startup status. • [D-Link in prog.]: Data link being executed • [D-Link Offline]: Data link stopped • [Initialize]: Set to the initial status • [Parameter wait]: Parameter not received • [Disconnect (No Polling)]: In cut-off status with no inquiry from master station • [Disconnect (Line Err)]: In cut-off status due to line error • [Disconnect (Other)]: In cut-off status due to other causes • [Testing Line]: Line test being executed • [Testing Pram Setup]: Parameter setting test being executed from master station • [Auto Reconnecting]: Return processing being executed automatically • [Reset. in prgr.]: CC-Link communication unit being reset (GOT reset status)
[Error Status]	Displays the status of the current error. • [Normal]: Normal status • [Invalid TransPath]: Transmission path error detected • [Invalid Parameter]: Parameter error detected • [CRC Error]: Receive data error detected • [Time Out Error]: Timeout error detected in data reception • [Abort Error]: Error detected in data communication • [Invalid Setup]: Invalid station number, station type, transmission speed, or mode setting detected • [Other Abnormality]: Error due to some other cause detected

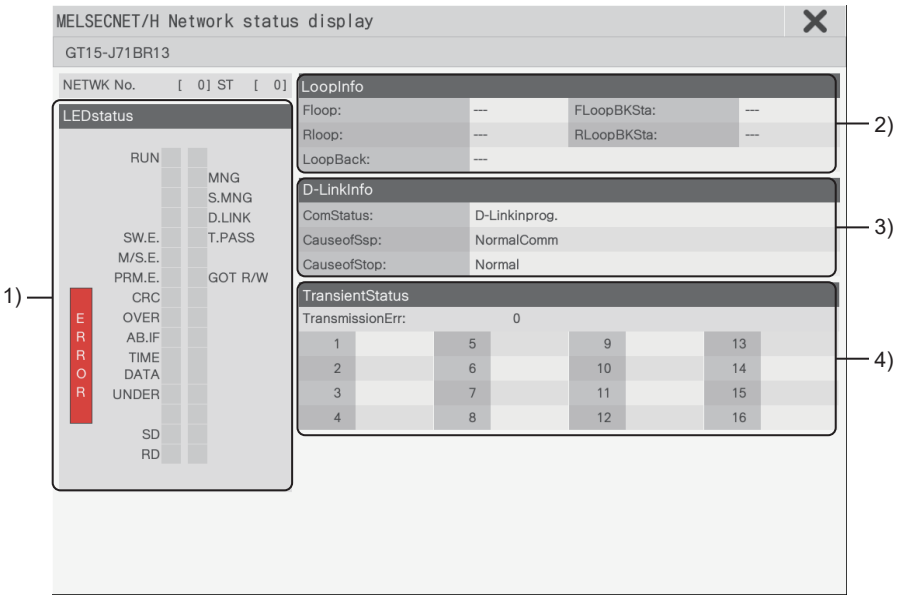
53.3.5 MELSECNET/H communication unit

For the corrective actions of error, refer to the following.

Reference manual of the MELSECNET/H network system (PLC to PLC network) used



GT15-J71LP23-25



GT15-J71BR13

No.	Item	Description
1)	LED status	Displays the operation status of the MELSECNET/H communication unit. ☞ Page 365 LED status
2)	Loop information	Displays the loop status of the MELSECNET/H communication unit. ☞ Page 365 Loop information
3)	Data link information	Displays the data link information of the MELSECNET/H communication unit, including the communication status, cause of a communication suspension, and cause of a communication stop. ☞ Page 366 Data link information
4)	Transient status	Displays the number of transient transmission errors and the error codes. ☞ Page 366 Transient status

LED status

Item	LED color	On	Off
[RUN]	Green	Operating normally	WDT error occurred
[MNG]		Operating as control station	Operating as a station other than control station
[S.MNG]		Operating as sub-control station	Operating as a station other than sub-control station
[D.LINK]		Data link in progress	Data link stopped
[T.PASS]		Baton pass being executed	Baton pass not executed
[SW.E.]		Switch setting error	Normal
[M/S.E.]		Station No. or control station duplication error	
[PRM.E.]		Parameter error	
[GOT R/W]		No access from GOT	Access from GOT
[CRC]	Red	Code check error	Normal
[OVER]		Data entry delay error	
[AB.IF]		All receive data: 1	
[TIME]		Time limit exceeded	
[DATA]		Receive data error	
[UNDER]		Send data error	
[LOOP]		Forward/reverse loop receive error	
[SD]	Green	Data being sent	-
[RD]		Data being received	-

Loop information

Loop information is displayed when using the GT15-J71LP23-25.

When using the GT15-J71BR13, [---] is displayed.

Item	Description
[F loop]	Displays the status of the F loop. • [Normal] • [NG]
[R loop]	Displays the status of the R loop. • [Normal] • [NG]
[FLoopBK Sta]	Displays the F loopback station execution status. • [No per] • Number of the loopback station executed
[RLoopBK Sta]	Displays the F loopback station execution status. • [No per] • Number of the loopback station executed
[Loop Back]	Displays the loopback status. • [No per]: Loop normal, forward loop error, reverse loop error, data link not possible • [Perf]: During loopback

Data link information

Item	Description
[Com Status]	Displays the communication (Data link) status of the host station. • [D-Link in prog.]: Data link in progress • [D-Link Stop(A)]: Cyclic transmission stopped from other station • [D-Link Stop (H)]: Cyclic transmission stopped by host station • [B-Pass exec (No Area)]: Host B/W send no allocation • [B-Pass exec (Param Err)]: Error in host parameters • [B-Pass exec (Param unreceived)]: Common parameters not received • [Disconnect (No B-Pass)]: Station numbers duplicated, cable not connected • Disconnect (Line Err)]: Cable not connected • [Testing]: Testing online or offline/loop test/setting check/station order check/comm check/offline test • [Reset. in prgr.]: Hardware failure
[Cause of Ssp]	Displays the cause for which the communication (Transient transmission) of the host station is disabled. • [Normal Comm]: Communicating normally • [Offline]: Offline • [Offline test]: Testing offline • [Initialize]: Error (error code: F101, F102, F105) • [Change Ctrl Sta]: Error (error code: F104, F106) • [Testing Online]: Error (error code: F103, F109, F10A) • [Baton Missing]: Error (error code: F107) • [Baton Duplicated]: Error (error code: F108) • [Dup Sta No]: Error (error code: F10B) • [Dup Ctrl Sta]: Error (error code: F10C) • [Rcv Retry Err]: Error (error code: F10E) • [Send Retry Err]: Error (error code: F10F) • [Time Out Err]: Error (error code: F110) • [Abnormal Line]: Error (error code: F112) • [Disconnection]: Error (error code: F11B) • [No Own Sta Baton]: Error (error code: F11F) • [Other (error code)]: Error (error code: displayed)
[CauseofStop]	Displays the cause for which the data link (Cyclic transmission) of the host station is disabled. • [Normal]: Communicating normally • [StopOrder]: Cyclic transmission of all stations stopped from host station or other stations • [No Shared Param]: Parameters not received • [Bad Shared Param]: Set parameter error • [Bad Self Sta CPU]: A medium/critical error occurred in the host CPU • [Com Aborted]: Host data link error occurred

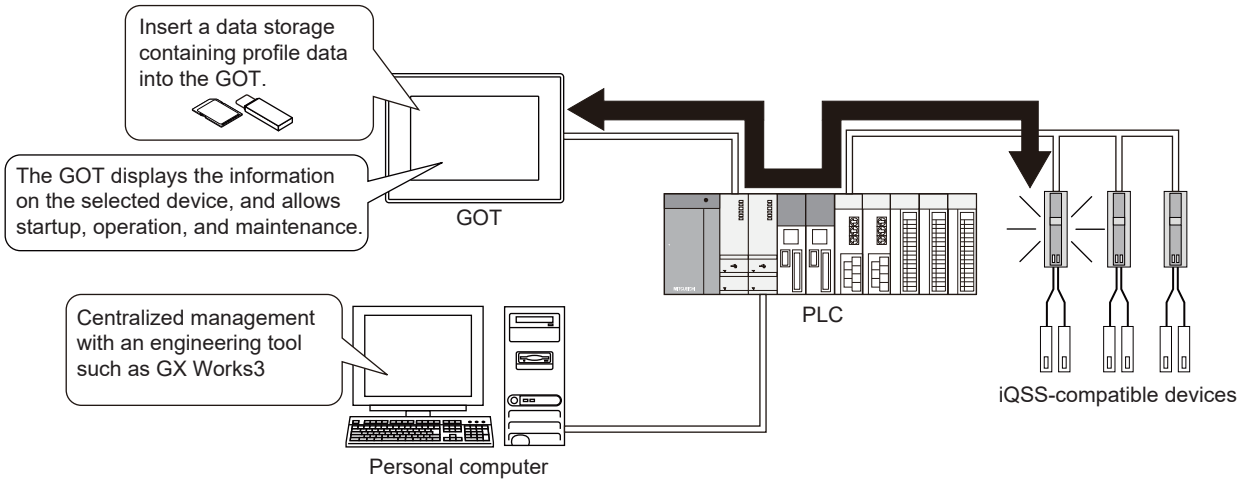
Transient status

Item	Description
[Transmission Err]	Displays the number of transient transmission errors.
[Err Code]	A history of 16 errors is displayed in 16 rows, starting from the latest one.

54 [iQSS utility]

GT37 SoftGOT3000

With the iQSS utility function, information of the selected iQSS-compatible device can be displayed on the GOT by inserting a data storage containing profile data of iQSS-compatible devices.
You can also start, operate, and maintain the selected iQSS-compatible devices.



PART 7

54.1 iQSS utility specifications

☞ Page 368 System configuration
☞ Page 370 Access range

54.1.1 System configuration

This section explains the GOTs that support the iQSS utility, the target PLCs, and the connection types between the GOT and PLC.
For connection type settings and precautions regarding the communication unit, cable, and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)
For the connection between iQSS-compatible devices and a PLC, refer to the following.
📖MELSEC iQ-R AnyWireASLINK Master Module User's Manual (Startup)
📖MELSEC iQ-F FX5 User's Manual (AnyWireASLINK)
📖MELSEC-Q/L AnyWireASLINK Master Module User's Manual

Target controller

■PLC CPU

Controller	Model
RCPU	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU, R08PCPU, R16PCPU, R32PCPU, R120PCPU R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU
MELSEC iQ-F	FX5U*1, FX5UC*1, FX5UJ
QCPU (Q mode)	Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU, Q25PRHCPU, Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU, Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU, Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU
LCPU*2	L02CPU, L06CPU, L26CPU, L26CPU-BT, L02CPU-P, L06CPU-P, L26CPU-P, L26CPU-PBT, L02SCPU, L02SCPU-P

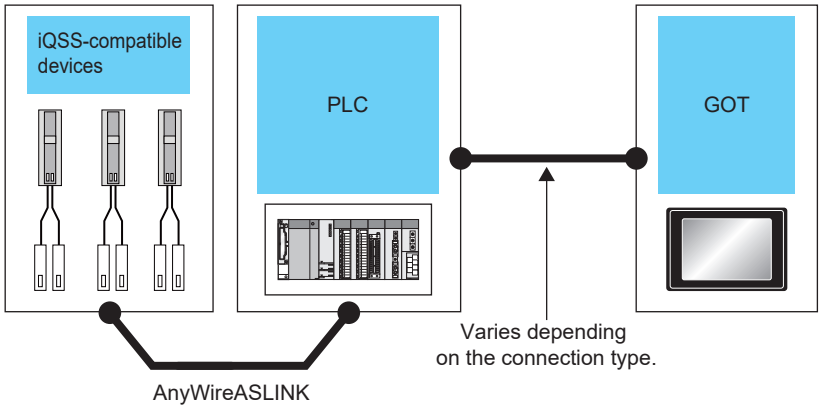
*1 Controllers with version 1.050 or later are supported.
*2 Detection of controllers connected to a CC-Link communication unit is supported by controllers with a serial number starting with 15052 or higher.

■AnyWireASLINK master module

Controller	Model	Supported AnyWireASLINK version
RCPU	RJ51AW12AL	AnyWireASLINK Ver.1.0 AnyWireASLINK Ver.1.1*1*2
MELSEC iQ-F	FX5-ASL-M	AnyWireASLINK Ver.1.0
QCPU (Q mode)	QJ51AW12AL*3	AnyWireASLINK Ver.1.0
LCPU	LJ51AW12AL*3	AnyWireASLINK Ver.1.0

*1 Devices whose first two digits of the manufacturing information are 03 or later are supported.
*2 When using word data, use devices which support AnyWireASLINK Ver.1.1 for both master and remote modules.
*3 Controllers with a serial number starting with 14102 or higher are supported.

Connection type



For the connection method between the GOT and the PLC, refer to the following.

GOT3000 Series User's Manual (Connection)

System application (add-on function)

■Required system application (add-on function)

For the system application (add-on function) required, refer to the following.

- [iQSS utility]

■Installing system applications (add-on functions)

Write the package data that contains the system application (add-on function) for the iQSS utility to the GOT.

For the communication method with the GOT, refer to the following.

GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

There needs to be enough space in the user area to install system applications (add-on function) on the GOT.

For information on how to check the available space of the user area and data sizes, refer to the following.

GT Designer3 (GOT3000) Screen Design Manual

■Settings of the special function switch (iQSS utility special control function)

The settings of the special function switch are supported by the iQSS utility special control function only in the following cases.

- A connected CPU is specified.
- The object name is set to a name that contains "<iQSS=*>" (* is 0 to 65534).

Required hardware

A data storage (SD card or USB memory) is required to use the iQSS utility.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

List of Validated Devices for the GOT3000 Series (for Overseas) (GOT-A-0233)

Usable hardware

A USB mouse can be used.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series (for Overseas) (GOT-A-0233)

Applicable non-Mitsubishi equipment

The iQSS utility can monitor the devices of non-Mitsubishi Electric controllers by using profile data.

For target controllers, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

The target controllers support the following functions.

- Acquiring a list of controllers for the GOT
- Monitoring controllers using the GOT
- Reading/writing parameters from the GOT to the controller

Multiple-language display

For profile data that contains information in multiple languages, multiple-language display is supported.

Some parts of profile data support multiple languages and some parts do not.

The system language of the GOT is applied to parts that do not support multiple languages.

If a data storage has no profile data supporting multiple languages, the language is not switched.

For the details of system language switching, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

54.1.2 Access range

The access range is the same as when the GOT is connected to a controller.

For details on the access range, refer to the following.

📖GOT3000 Series User's Manual (Connection)

54.2 Preparing profile data

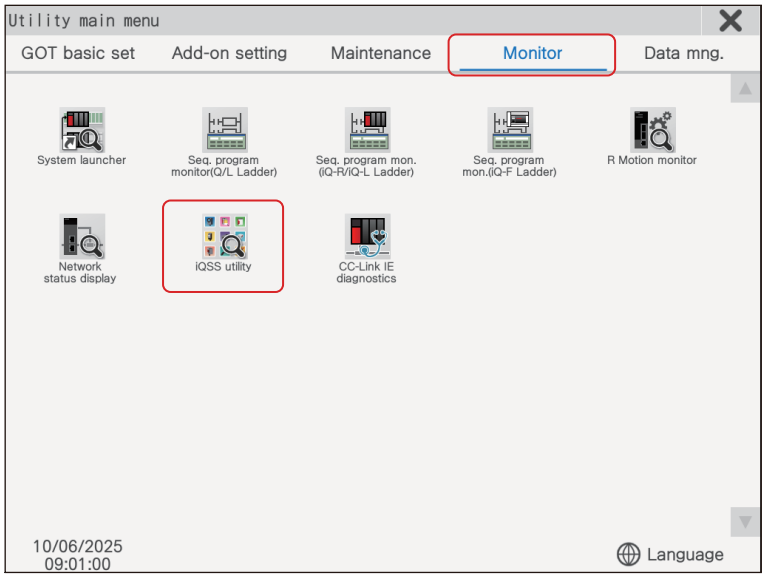
To display iQSS-compatible devices with the iQSS utility, store profile data in a data storage with GT Designer3 and mount the storage on the GOT.

For information on how to store profile data, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

54.3 How to display the screen

Select [iQSS utility] in the [Monitor] tab.



Point

Insert a data storage containing profile data into the GOT before powering on the GOT.

☞ Page 371 Preparing profile data

Starting iQSS utility from an extended function switch

The iQSS utility can be started from a user-created screen by setting an extended function switch in the project to the iQSS utility.

For information on how to set a special function switch, refer to the following. 📖 GT Designer3 (GOT3000) Screen Design Manual

[Select channel] window

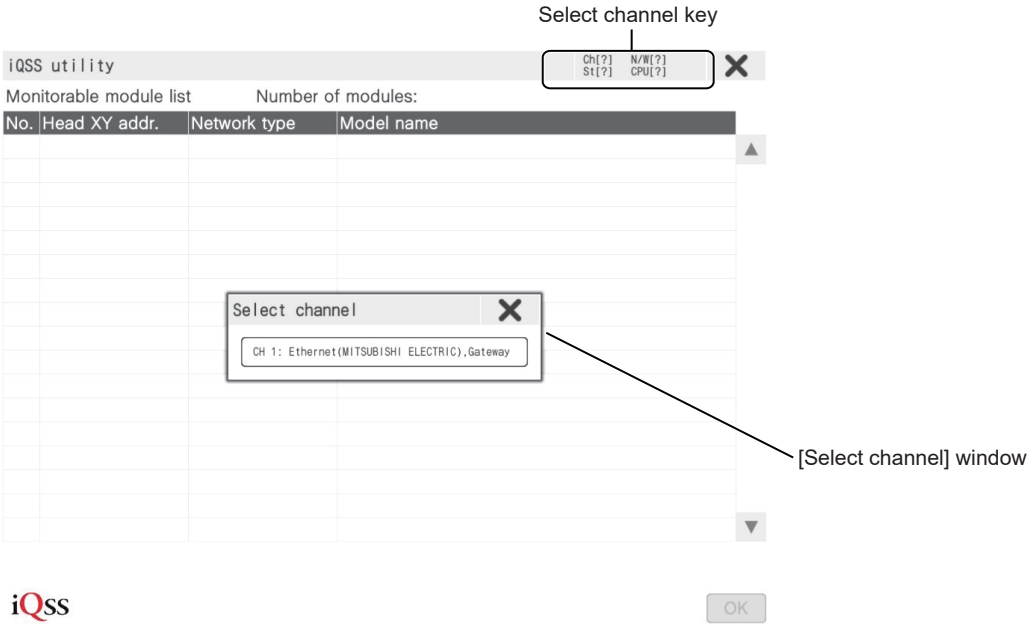
The [Select channel] window appears only at the first startup of the iQSS utility.

Set the channel number of the PLC connected to the GOT.

When the channel number is not set, touching the [×] key closes the [Select channel] window and sets the channel number to [1].

To display the [Select channel] window at the second startup or later, touch the select channel key on the [iQSS utility] screen.

☞ Page 375 [iQSS utility] screen



iQSS utility special control function

The iQSS utility special control function specifies a GD device with a GS device, and displays the screen of the target sensor device specified by the parameter set in the GD device.

After configuring the following settings and touching the special function switch, specify the screen of the target sensor device to display the screen.

- Turn on b0 of the Special Function Switch Special Control (GS1810).
- Set the iQSS Utility Special Control Start GD Device No. Specification (GS1811).
- Set the iQSS Utility Special Control Number of Parameters (GS1812).
- Set the connected CPU and object name for the special function switch.
- Set the parameter for the GD device specified by the iQSS Utility Special Control Start GD Device No. Specification (GS1811).

For how to set the parameter, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■iQSS utility special control GS device

The following shows the devices used for the iQSS utility special control.

GS device	Description
b0 of Special Function Switch Special Control (GS1220)	Notifies when there is an iQSS utility special control execution error. It turns on when an error occurs during the execution of the iQSS utility special control. The next time the iQSS utility special control is executed, it will turn off.
iQSS Utility Special Control Error Sensor Device No. (GS1221)	Stores the sensor device number where an error occurs during the execution of the iQSS utility special control. When an error has occurred during the execution of the iQSS utility special control, the affected sensor device number is stored. When no error has occurred, the reset value (65535) is stored.
b0 of Special Function Switch Special Control (GS1810)	Enables the iQSS utility special control function. The iQSS utility special control is executed by turning on this signal and touching the special function switch for which the connected CPU is specified to start the iQSS utility.
iQSS Utility Special Control Start GD Device No. Specification (GS1811)	Specifies the start number of the GD device used for the iQSS utility special control.
iQSS Utility Special Control Number of Parameters (GS1812)	The number of parameters set for iQSS utility special control.

For how to set each device, refer to the following.

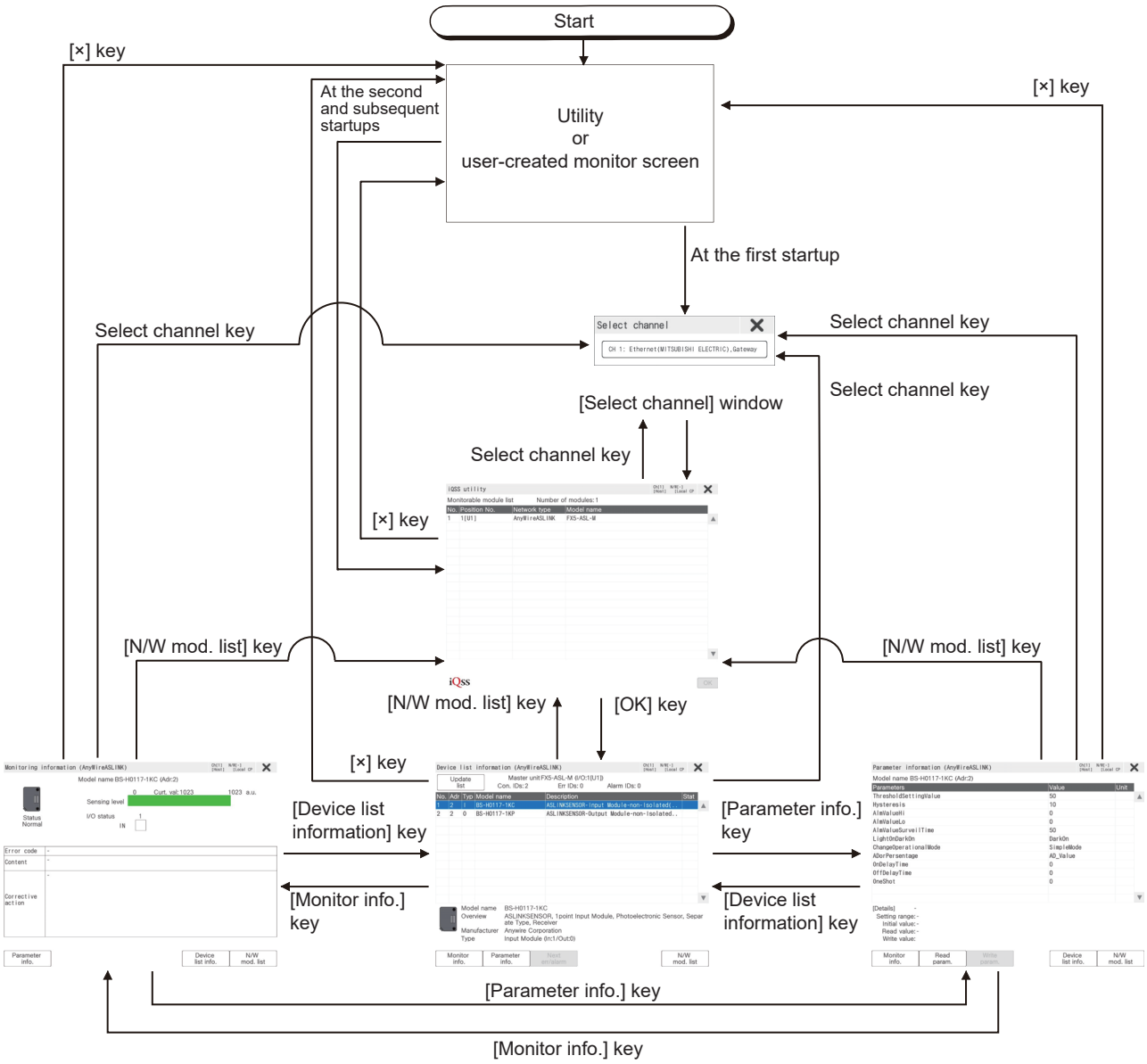
📖GT Designer3 (GOT3000) Screen Design Manual

Precautions

In the following cases, since the conditions of iQSS utility special control are not satisfied, the operation is the same as when the special function switch is touched on a user screen.

- Touching the special function switch when b0 of the Special Function Switch Special Control (GS1810) is off
- Touching the special function switch when the iQSS Utility Special Control Number of Parameters (GS1812) is 0
- Setting a value outside the valid range of the iQSS utility special control parameter, and then touching the special function switch

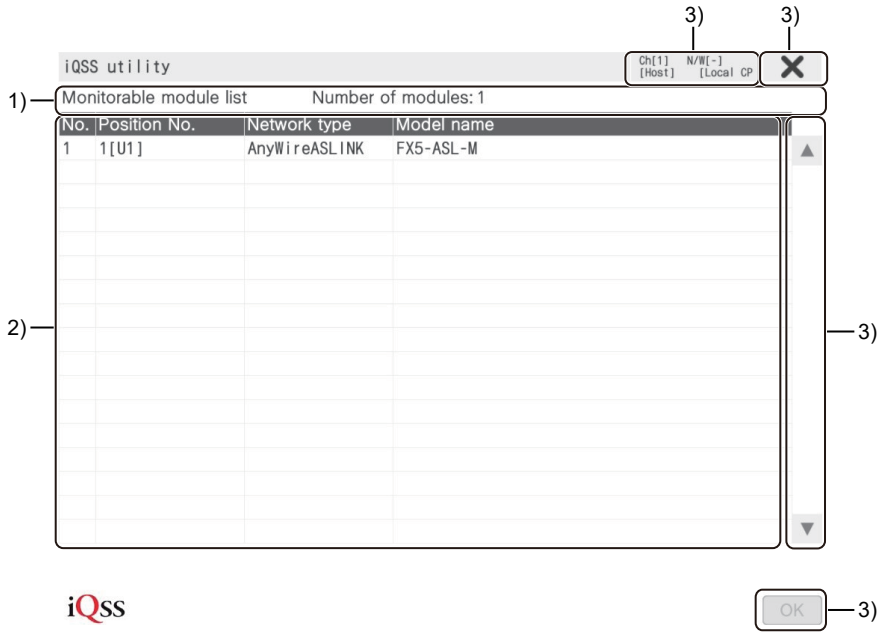
54.3.1 Screen transitions



54.4 [iQSS utility] screen

This section explains the structure of the [iQSS utility] screen and the function of the keys displayed on the screen after the iQSS utility is started.

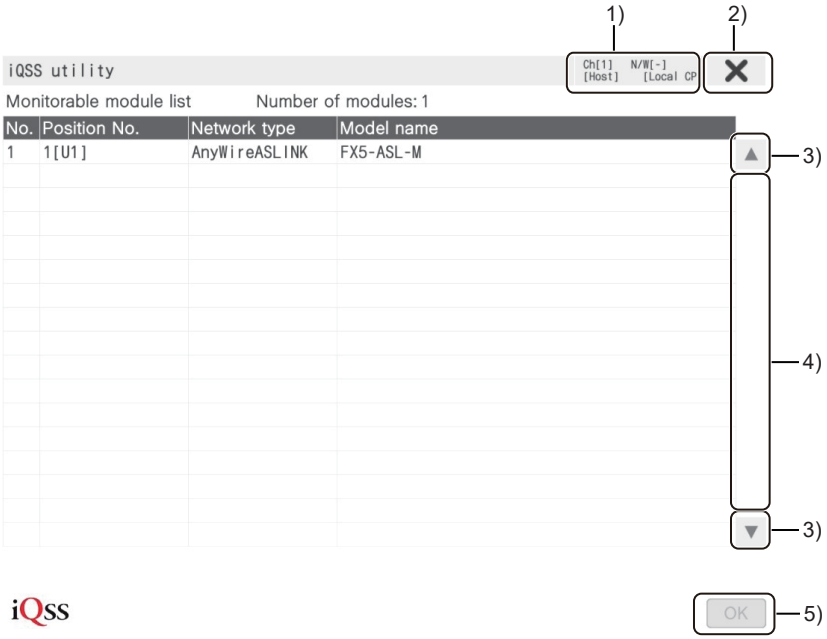
Displayed screen



No.	Item	Description
1)	Title display area	Displays the title and the number of connected CPU modules.
2)	Module list display area	Lists modules that can be monitored. Different contents are displayed according to the connected CPU. When the GOT is connected to an FXCPU, [Position No.] is displayed.
3)	Touch key	Displays the keys used for the operations on the [iQSS utility] screen. ☞ Page 376 Key functions

PART 7

Key functions

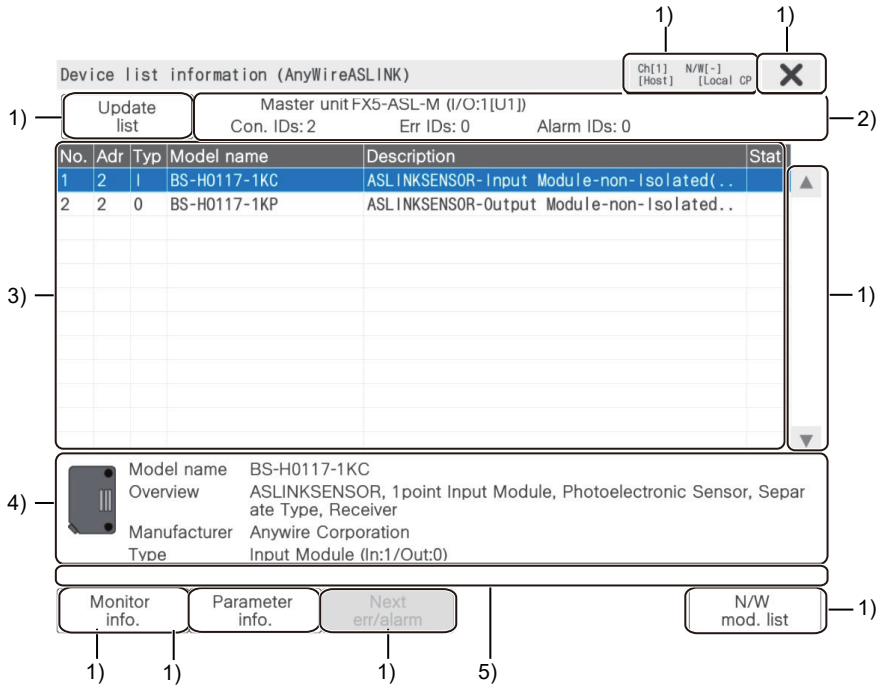


No.	Item	Description
1)	Select channel key	Displays the [Select channel] window.
2)	[×] key	Exits the iQSS utility.
3)	Scroll keys	Scroll the contents in the list up or down by one item.
4)	Scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. You can also scroll the page by sliding the scroll bar.
5)	[OK] key	Displays the [Device list information] screen of the selected device.

54.5 [Device list information] screen

This section describes the displayed contents of the [Device list information] screen and the functions of the keys displayed on the screen.

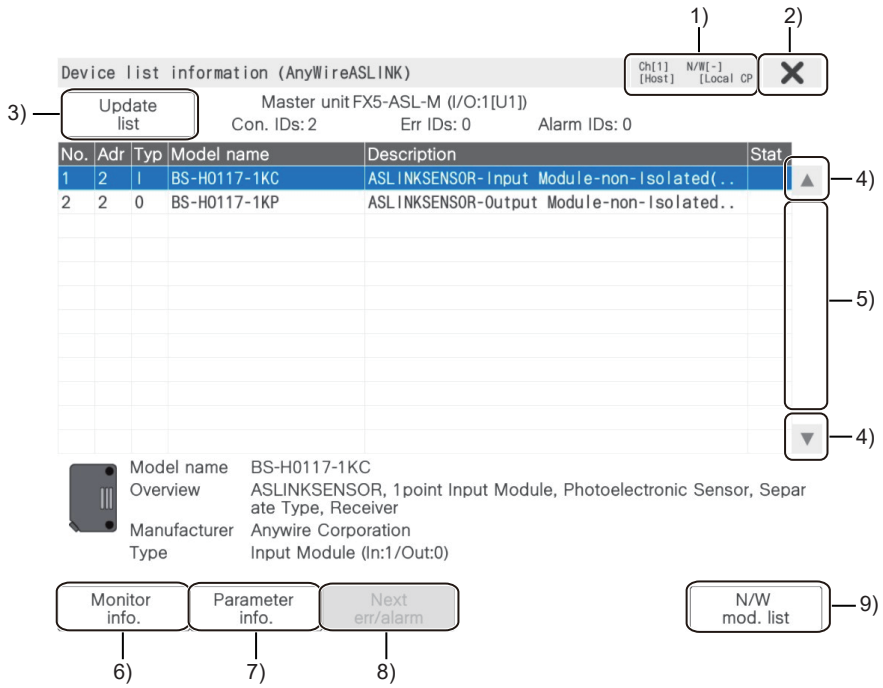
Displayed screen



No.	Item	Description
1)	Touch key	The keys used for the operations on the [Device list information] screen. ☞ Page 378 Key functions
2)	Network information display area	Displays the network information of the connection destination. Different contents are displayed according to the connected CPU. When the GOT is connected to an FXCPU, the installation position number is displayed.
3)	Device list display area	Lists devices that can be monitored.
4)	Selected device information display area	Displays the information of the device selected in the device list display area.
5)	Error status display area	[Communication error] will be displayed if the controller is disconnected.

PART 7

Key functions



No.	Item	Description
1)	Select channel key	Displays the [Select channel] window.
2)	[×] key	Exits the iQSS utility.
3)	[Update list] key	Updates the information in the device list display area.
4)	Scroll keys	Scroll the contents in the list up or down by one item.
5)	Scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. You can also scroll the page by sliding the scroll bar.
6)	[Monitor info.] key	Switches the screen to the [Monitoring information] screen.
7)	[Parameter info.] key	Switches the screen to the [Parameter information] screen.
8)	[Next err/alarm] key	Moves the cursor to the device on which an error or alarm has occurred.
9)	[N/W mod. list] key	Switches the screen to the [iQSS utility] screen.

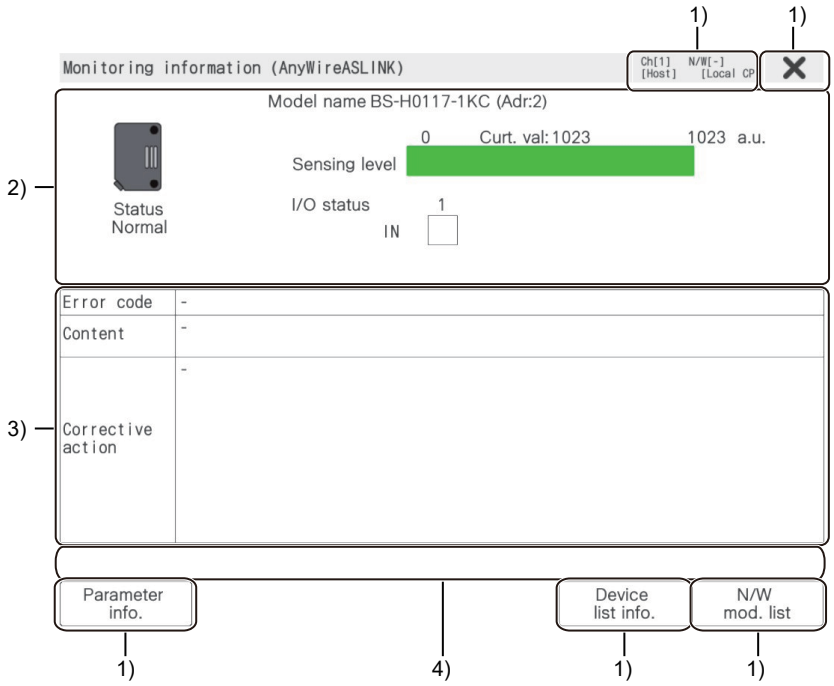
Precautions

After touching the [Update list] key on the [Device list information] screen, do not perform an operation that uses the operation signal (Y signal) while the update is processing.

54.6 [Monitoring information] screen

This section describes the displayed contents of the [Monitoring information] screen and the functions of the keys displayed on the screen.

Displayed screen



No.	Item	Description	
1)	Touch key	The keys used for the operations on the [Monitoring information] screen. ☞ Page 382 Key functions	
2)	Monitored device status display area	Displays the status of the device being monitored. The following shows the displayed items.	
		[Model name]	Displays the model of the device being monitored.
		[Status]	Displays the status of the device being monitored. ☞ Page 379 [Status]
		[Sensing level]	Displays the current sensing level in a numerical value and bar graph when an ASLINKAMP or ASLINKSENSOR is selected on the [Device list information] screen. In the bar graph, the current value is always refreshed while the monitoring information screen is being displayed and the left side from the current value is filled in green. ☞ Page 380 [Sensing level]
		[I/O status]	Displays the I/O status of the device being monitored. When the device being monitored has no I/O, no item is displayed. ☞ Page 381 [I/O status]
3)	Error status display area	Displays the error code, content, and corrective action if an error occurs in the device being monitored.	
4)	Error status display area	[Communication error] will be displayed if the controller is disconnected.	

■[Status]

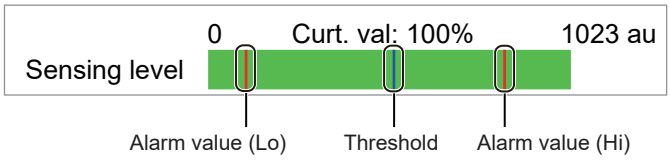
The following shows the items displayed in [Status].

If multiple states are detected, the state having the highest priority is displayed.

Displayed item	Priority
[Remote module voltage drop]	High ↓ Low
[Sensing level drop]	
[I/O disconnection]	
[I/O short-circuit]	
[I/O volt. drop]	
[Normal]	

■[Sensing level]

The [Sensing level] display differs depending on the AnyWireASLINK version of the remote module.

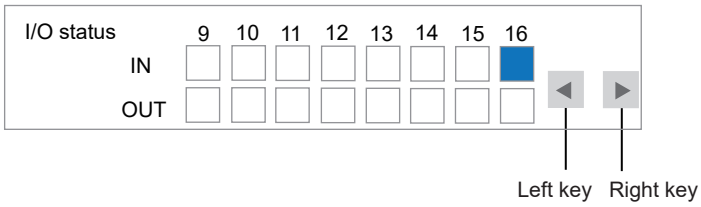
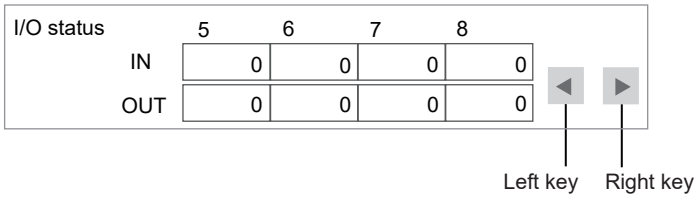
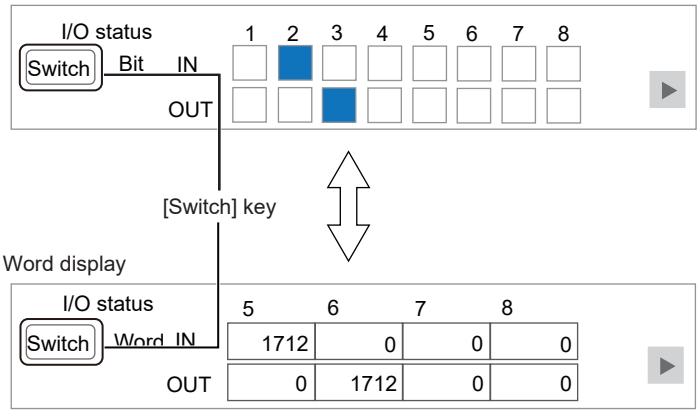
AnyWireASLINK Ver.	Sensing level display mode	Situations each [Sensing level] mode is displayed
AnyWireASLINK Ver.1.0	—	• When AnyWireASLINK Ver.1.0 or AnyWireASLINK Ver.1.1 is used and [Sensing level display mode] is set to 0 to 100%: [Sensing level] is displayed as a decimal value from 0 - 100. Alarm value lines for "Hi", "Low", and "Threshold" are displayed on the bar graph. If the value of [Sensing level] is out of the range, [0%] is displayed. 
AnyWireASLINK Ver.1.1	0 - 100%	
	AD value (raw value)	• When AnyWireASLINK Ver.1.1 is used and [Sensing level display mode] is set to AD value (raw value): The sensing level is displayed as decimal AD value (raw value).

Point

For devices which can switch a channel to output the sensing level, such as CH0 or CH1, the "Hi", "Low", and "Threshold", alarm value lines for the CH0 value are displayed regardless of the channel that is output.

■[I/O status]

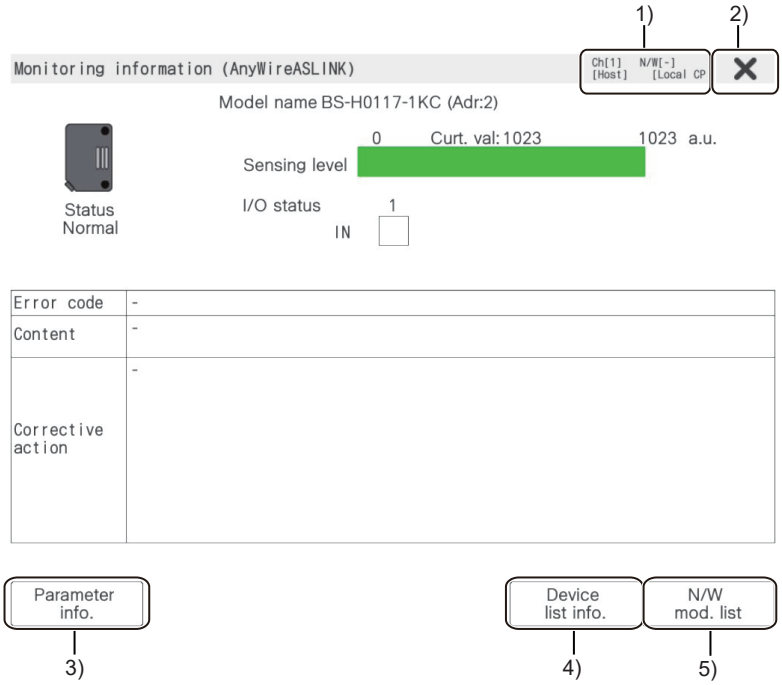
The [I/O status] display differs depending on the AnyWireASLINK version of the remote module and [Address setting].

AnyWireASLINK Ver.	Address setting	[I/O status] indicator
AnyWireASLINK Ver.1.0	—	• Bit address setting with AnyWireASLINK Ver.1.0 or AnyWireASLINK Ver.1.1: For a device that has nine I/Os or more, touching the left key or the right key scrolls the display left or right eight I/Os. For a device that has eight I/Os or less, the left key and the right key do not appear.
AnyWireASLINK Ver.1.1	Bit address setting	
	Word address setting	• Word address setting with AnyWireASLINK Ver.1.1: For a device that has five words or more, touching the left key or the right key scrolls the display left or right four words. For a device that has four words or less, the left key and right key do not appear. 
	Word address setting (bit indicator and word indicator)	• Word address setting (bit indicator and word indicator) with AnyWireASLINK Ver.1.1: Touching the [Switch] key switches between the bit indicator and word indicator. The initial indicator is the bit indicator. When the beginning of the displayed information is scrolled and the bit indicator is switched to the word indicator, the previous display state is maintained even if you switch back to the previous indicator. Bit display 

Point

For parameters whose number of bits or words is to be changed, update the list on the [Device list information] screen after changing the parameters.
If the list is not updated, the number of bits and words before change is displayed.

Key functions

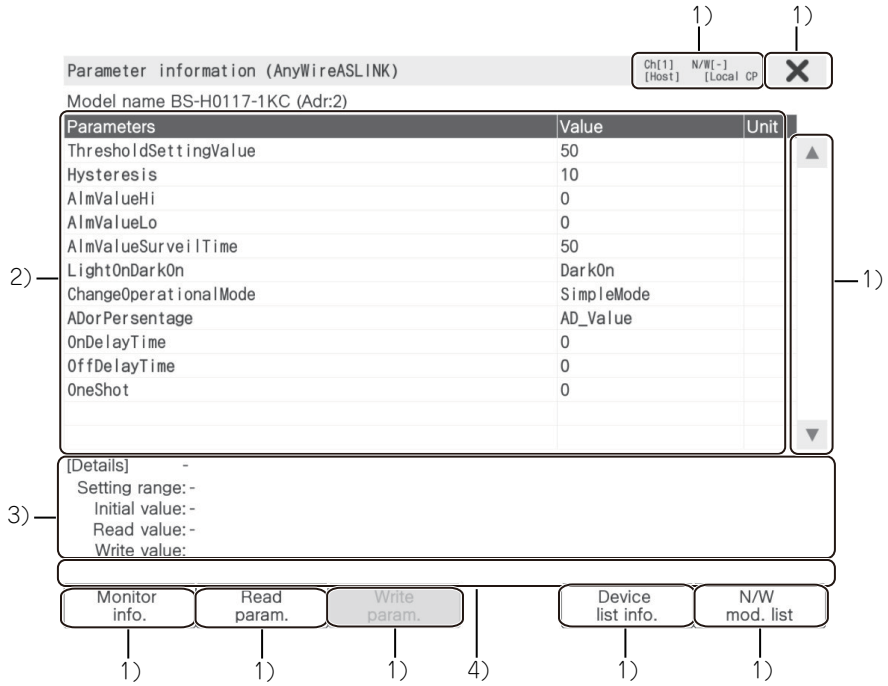


No.	Item	Description
1)	Select channel key	Displays the [Select channel] window.
2)	[×] key	Exits the iQSS utility.
3)	[Parameter info.] key	Switches the screen to the [Parameter information] screen.
4)	[Device list information] key	Switches the screen to the [Device list information] screen.
5)	[N/W mod. list] key	Switches the screen to the [iQSS utility] screen.

54.7 [Parameter information] screen

This section describes the displayed contents of the [Parameter information] screen and the functions of the keys displayed on the screen.

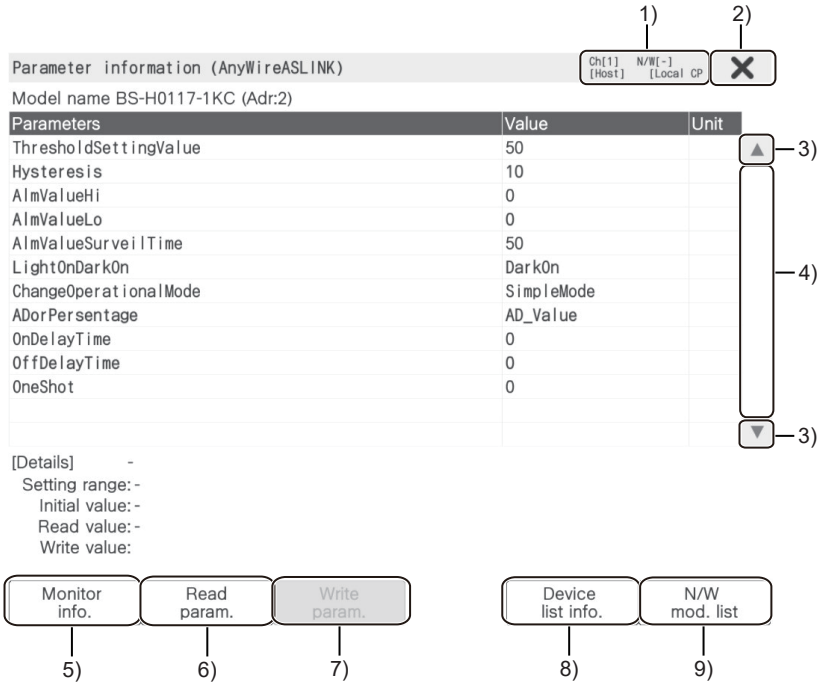
Displayed screen



No.	Item	Description
1)	Touch key	The keys used for the operations on the [Parameter information] screen. ☞ Page 384 Key functions
2)	Parameter display area	Lists the parameters of the device being monitored. Parameter change is available. Up to 128 parameters are displayed. The 129th parameter and later are not displayed.
3)	Detailed parameter information display area	Displays the details of the parameter selected in the parameter display area.
4)	Error status display area	[Communication error] will be displayed if the controller is disconnected.

PART 7

Key functions



No.	Item	Description
1)	Select channel key	Displays the [Select channel] window.
2)	[×] key	Exits the iQSS utility.
3)	Scroll keys	Scroll the contents in the list up or down by one item.
4)	Scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. You can also scroll the page by sliding the scroll bar.
5)	[Monitor info.] key	Switches the screen to the [Monitoring information] screen.
6)	[Read parameters] key	Reads the parameter information of the device being monitored and refreshes the parameter display area.
7)	[Write parameters] key	Writes the parameter information changed in the parameter display area to the device being monitored.
8)	[Device list information] key	Switches the screen to the [Device list information] screen.
9)	[N/W mod. list] key	Switches the screen to the [iQSS utility] screen.

Precautions

After touching the [Read parameters] key or [Write parameters] key on the [Parameter information] screen, do not perform an operation that uses the operation signal (Y signal) while read or write is processing.

54.8 Error messages and corrective action

For the error messages displayed in the iQSS utility and the corrective actions, refer to the following.

📖MELSEC iQ-R AnyWireASLINK Master Module User's Manual (Application)
📖MELSEC-Q/L AnyWireASLINK Master Module User's Manual

55 [CC-Link IE diagnostics]

GT37 SoftGOT3000

The CC-Link IE diagnostics function monitors and diagnoses the network status of CC-Link IE TSN or CC-Link IE Field Network.
This section describes the features of the CC-Link IE diagnostics function.

Diagnosing a CC-Link IE TSN or CC-Link IE Field Network on the GOT

The function enables you to diagnose the status of the CC-Link IE TSN or CC-Link IE Field Network and check errors on the GOT instead of using a personal computer.

Displaying the event history and outputting the data to a CSV file (CC-Link IE Field Network diagnostics)

With the function, you can display the acquired event history and event details in chronological order, and output the data to a CSV file.

55.1 CC-Link IE specifications

☞ Page 387 System configuration
☞ Page 389 Station types and transition to extended functions available for the target modules
☞ Page 394 Supported diagnostics items and station types
☞ Page 394 Access range

55.1.1 System configuration

This section explains the system configuration of the CC-Link IE diagnostics function.
For connection type settings and precautions regarding the communication unit/cable and connection type, refer to the following.
📖GOT3000 Series User's Manual (Connection)

Target controller

The following shows the PLC CPUs that support the CC-Link IE diagnostics function.

Controller	Model
RCPU	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU, R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU, R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU, R08PCPU*3*4, R16PCPU*3*4, R32PCPU*3*4, R120PCPU*3*4,
C Controller module (MELSEC iQ-R series)*4	R12CCPU-V
MELSEC iQ-F	FX5U, FX5UC, FX5UJ
QCPU (Q mode)*4	Q00UJCPU*1, Q00UCPU*1, Q01UCPU*1, Q02UCPU*1, Q03UDCPU*1, Q04UDHCPU*1, Q06UDHCPU*1, Q10UDHCPU*1, Q13UDHCPU*1, Q20UDHCPU*1, Q26UDHCPU*1, Q03UDECPU*1, Q04UDEHCPU*1, Q06UDEHCPU*1, Q10UDEHCPU*1, Q13UDEHCPU*1, Q20UDEHCPU*1, Q26UDEHCPU*1, Q50UDEHCPU*1, Q100UDEHCPU*1, Q03UDVCPU*1, Q04UDVCPU*1, Q06UDVCPU*1, Q13UDVCPU*1, Q26UDVCPU*1, Q04UDPVCPU*1, Q06UDPVCPU*1, Q13UDPVCPU*1, Q26UDPVCPU*1
C Controller module (Q series)*4	Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS
LCPU*2*4	L02SCPU, L02SCPU-P, L02CPU, L02CPU-P, L06CPU, L06CPU-P, L26CPU, L26CPU-P, L26CPU-BT, L26CPU-PBT

*1 Use a Universal model QCPU that has a serial number starting with 12012 or higher for the first 5 digits.
*2 Use an LCPU that has a serial number starting with 13012 or higher for the first 5 digits.
*3 When a redundant system is configured, the CC-Link IE diagnostics function is not supported.
*4 The CC-Link IE TSN diagnostics function is not supported.

Connection type

This function can be used for the following connection types.
○ Available, ×: Unavailable

Function		Connection type between GOT and controller			
Name	Description	Direct CPU connection (serial)*1	Serial communication connection*2	Ethernet connection (Ethernet port built in the CPU)	CC-Link IE TSN connection*3*4
CC-Link IE diagnostics	Diagnosing the status of the CC-Link IE TSN and CC-Link IE Field Networks, displaying the event history, and outputting data to a CSV file	○	○	○	○

*1 The RCPU and MELSEC iQ-F do not support this connection.
*2 The MELSEC iQ-F does not support this connection during CC-Link IE Filed Network diagnostics.
*3 The QCPU (Q mode), C Controller module (Q series), and LCPU do not support this connection.
*4 Connection to the built-in Ethernet port is not supported.

System application (add-on function)

■Required system application (add-on function)

For the system application (add-on function) required, refer to the following.

- [CC-Link IE diagnostics]

■Installing system applications (add-on functions)

Write the package data that contains the system application (add-on function) for the CC-Link IE diagnostics function to the GOT.

To use an extended function that can be started from CC-Link IE diagnostics, also incorporate the applicable system application (add-on function) into the package data.

For the communication method with the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

There needs to be enough space in the user area to install system applications (add-on functions) on the GOT.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Usable hardware

A USB mouse can be used.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series (for Overseas) (GOT-A-0233)

55.1.2 Station types and transition to extended functions available for the target modules

The following shows the station types and transition to extended functions available for the modules that support CC-Link IE diagnostics.

CC-Link IE Field Network diagnostics

○: Applicable, ×: Not applicable

Target module		Station type					Transition to extended function
		Master station	Submaster station	Local station	Remote device station	Intelligent device station	System launcher function
PLC CPU module with built-in CC-Link IE	R04ENCPU	○	○	○	×	×	○
	R08ENCPU	○	○	○	×	×	○
	R16ENCPU	○	○	○	×	×	○
	R32ENCPU	○	○	○	×	×	○
	R120ENCPU	○	○	○	×	×	○
CC-Link IE Field Network master/local module	RJ71GF11-T2	○	○	○	×	×	○
	QJ71GF11-T2	○	○	○	×	×	○
	LJ71GF11-T2	○	○	○	×	×	○
Multi-network supporting Ethernet module	RJ71EN71	○	○	○	×	×	○
CC-Link IE Field Network Simple Motion module	RD77GF4	○	×	×	×	×	○
	RD77GF8	○	×	×	×	×	○
	RD77GF16	○	×	×	×	×	○
	RD77GF32	○	×	×	×	×	○
	QD77GF4	○	×	×	×	×	○
	QD77GF8	○	×	×	×	×	○
	QD77GF16	○	×	×	×	×	○
CC-Link IE Field Network remote head module	RJ72GF15-T2	×	×	×	×	○	○
CC-Link IE Field Network head module	LJ72GF15-T2	×	×	×	×	○	○

PART 7

Target module			Station type					Transition to extended function
			Master station	Submaster station	Local station	Remote device station	Intelligent device station	System launcher function
CC-Link IE Field Network Block type remote module	Main input module	NZ2GF2B1-16D	×	×	×	○	×	×
		NZ2GF2B1N-16D	×	×	×	○	×	×
		NZ2GF2S1-16D	×	×	×	○	×	×
		NZ2GFCE3-16D	×	×	×	○	×	×
		NZ2GFCE3-32D	×	×	×	○	×	×
		NZ2GFCE3-16DE	×	×	×	○	×	×
		NZ2GFCM1-16D	×	×	×	○	×	×
		NZ2GFCM1-16DE	×	×	×	○	×	×
		NZ2GFCF1-32D	×	×	×	○	×	×
		NZ2GFSS2-32D	×	×	×	○	×	×
	Main output module	NZ2GF2B1-16T	×	×	×	○	×	×
		NZ2GF2B1N-16T	×	×	×	○	×	×
		NZ2GF2B1-16TE	×	×	×	○	×	×
		NZ2GF2B1N-16TE	×	×	×	○	×	×
		NZ2GF2S1-16T	×	×	×	○	×	×
		NZ2GF2S1-16TE	×	×	×	○	×	×
		NZ2GFCE3-16T	×	×	×	○	×	×
		NZ2GFCE3-32T	×	×	×	○	×	×
		NZ2GFCE3-16TE	×	×	×	○	×	×
		NZ2GFCM1-16T	×	×	×	○	×	×
		NZ2GFCM1-16TE	×	×	×	○	×	×
		NZ2GFCF1-32T	×	×	×	○	×	×
CC-Link IE Field Network Block type remote module	Main I/O combined module	NZ2GFCF1-32DDT	×	×	×	○	×	×
		NZ2GFCE3-32DT	×	×	×	○	×	×
	Extension input module	NZ2EX2B1-16D	×	×	×	×	×	×
	Extension output module	NZ2EX2B1-16T	×	×	×	×	×	×
		NZ2EX2B1-16TE	×	×	×	×	×	×
	Main A/D converter module	NZ2GF2B-60AD4	×	×	×	○	×	×
		NZ2GF2BN-60AD4	×	×	×	○	×	×
	Main D/A converter module	NZ2GF2B-60DA4	×	×	×	○	×	×
		NZ2GF2BN-60DA4	×	×	×	○	×	×
	Extension A/D converter module*1	NZ2EX2B-60AD4	×	×	×	×	×	×
	Extension D/A converter module*1	NZ2EX2B-60DA4	×	×	×	×	×	×
	Temperature control module	NZ2GF2B-60TCTT4	×	×	×	○	×	×
		NZ2GF2B-60TCRT4	×	×	×	○	×	×
	High-speed counter module	NZ2GFCF-D62PD2	×	×	×	○	×	×
CC-Link IE Field Network interface board		Q80BD-J71GF11-T2	○	×	○	×	×	×
		Q81BD-J71GF11-T2	○	×	○	×	×	×
CC-Link IE Field Network Ethernet adapter module		NZ2GF-ETB	×	×	×	×	○	×

Target module			Station type					Transition to extended function
			Master station	Submaster station	Local station	Remote device station	Intelligent device station	System launcher function
CC-Link IE Field Network CC-Link bridge module		NZ2GF-CCB	×	×	×	×	○	×
CC-Link IE Field Network intelligent device station module		FX5-CCLIEF	×	×	×	×	○	×
CC-Link IE Field Network compatible servo amplifier*2		MR-J4-□GF	×	×	×	×	○	×
		MR-J4-B-□RJ010 (+MR-J3-T10)	×	×	×	×	○	×
GOT communication unit	CC-Link IE Field Network communication unit	GT15-J71GF13-T2	×	×	×	×	○	×

*1 This is not displayed in the network configuration diagram, but is displayed in the extension module name display area in the [Selected station communication status monitor] window.

*2 This is displayed in the network configuration diagram, but is not displayed in the [Selected station communication status monitor] window.

PART 7

CC-Link IE TSN diagnostics

○: Applicable, ×: Not applicable

Target module			Station type			Extended function	
			Master station	Local station	Remote station	System launcher function	Servo amplifier graph function*1
CC-Link IE TSN master/local module		RJ71GN11-T2	○	○	×	○	×
		FX5-CCLGN-MS	○	○	×	×	×
CC-Link IE TSN compatible Motion module		RD78G4	○	×	×	○	×
		RD78G8	○	×	×	○	×
		RD78G16	○	×	×	○	×
		RD78G32	○	×	×	○	×
		RD78G64	○	×	×	○	×
		RD78GHV	○	×	×	○	×
		RD78GHW	○	×	×	○	×
CC-Link IE TSN Block type remote module	Input module	NZ2GN2B1-32D	×	×	○	×	×
		NZ2GN2B1-32D	×	×	○	×	×
		NZ2GNCF1-32D	×	×	○	×	×
		NZ2GNCE3-32D	×	×	○	×	×
		NZ2GNSS2-8D	×	×	○	×	×
	Output module	NZ2GN2S1-32T	×	×	○	×	×
		NZ2GN2B1-32T	×	×	○	×	×
		NZ2GNCF1-32T	×	×	○	×	×
		NZ2GN2S1-32TE	×	×	○	×	×
		NZ2GN2B1-32TE	×	×	○	×	×
		NZ2GNSS2-8TE	×	×	○	×	×
	I/O combined module	NZ2GN2S1-32DT	×	×	○	×	×
		NZ2GN2B1-32DT	×	×	○	×	×
		NZ2GNCE3-32DT	×	×	○	×	×
		NZ2GN2S1-32DTE	×	×	○	×	×
		NZ2GN2B1-32DTE	×	×	○	×	×
		NZ2GNSS2-16DTE	×	×	○	×	×
	A/D converter module	NZ2GN2S-60AD4	×	×	○	×	×
		NZ2GN2B-60AD4	×	×	○	×	×
	D/A converter module	NZ2GN2S-60DA4	×	×	○	×	×
		NZ2GN2B-60DA4	×	×	○	×	×
CC-Link IE TSN compatible servo amplifier		MR-J5-□G	×	×	○	×	○
		MR-J5-□G-RJ	×	×	○	×	○
		MR-J5W2-□G	×	×	○	×	○
		MR-J5W3-□G	×	×	○	×	○
		MR-J5D1-□G4	×	×	○	×	○
		MR-J5D2-□G4	×	×	○	×	○
		MR-J5D3-□G4	×	×	○	×	○
		MR-JET-□G	×	×	○	×	○

Target module			Station type			Extended function	
			Master station	Local station	Remote station	System launcher function	Servo amplifier graph function*1
CC-Link IE TSN compatible inverter		FR-A8□0-GN	×	×	○	×	×
		FR-A8□2-GN	×	×	○	×	×
		FR-A8□0(+FR-A8NCG)	×	×	○	×	×
		FR-A8□2(+FR-A8NCG)	×	×	○	×	×
		FR-A8□6(+FR-A8NCG)	×	×	○	×	×
		FR-F8□0(+FR-A8NCG)	×	×	○	×	×
		FR-F8□2(+FR-A8NCG)	×	×	○	×	×
		FR-F8□6(+FR-A8NCG)	×	×	○	×	×
		FR-E8□0-E	×	×	○	×	×
		FR-E8□0-SCE	×	×	○	×	×
GOT communication unit	CC-Link IE TSN communication unit	GT25-J71GN13-T2	×	○	×	×	×
	GOT3000 (Built-in Ethernet interface of the GOT)	—	×	×	○	×	×

*1 This is selectable when the connected station is a master station.

PART 7

55.1.3 Supported diagnostics items and station types

The following shows the station types supported by CC-Link IE diagnostics, and the available diagnostics items by station type.

○: Available, ×: Unavailable

Item		Target station type		
		Master station	Local station	Submaster station
Network configuration diagram monitor	Display system configuration diagram function (Acquiring connection information)	○	○	○
	Displaying cable disconnection	○	○	○
	Selecting a module on another network to be diagnosed upon startup of the diagnostics function	○	○	○
	Deleting the disconnected station	○	○	○
Selected station communication status monitor*1	Displaying the status of the selected station	○	○	○
	Displaying the MAC address	○	○	○
	Displaying the IP address	○	○	○
	Displaying error details (troubleshooting)	○	○	○
Disconnected station status monitor	Displaying the disconnected station	○	○	○
Network event history*2*3	Displaying the events that have occurred on the own station	○	○	○
	Displaying all network events	○	×	○
	Saving the event history	○	○	○
	Clearing the own station event history	○	○	○
	Clearing the whole network event history	○	×	○
	Displaying the network event details	○	○	○
Station information list*4	Station information list display function	○	○	○

*1 The status of an unsupported module is not displayed.
*2 Not available when the connection destination is an RCPU or MELSEC iQ-F.
*3 Only available for the CC-Link IE Field Network diagnostics.
*4 Only available for the CC-Link IE TSN diagnostics.

Precautions

When the master station supports the SNMP community name setting function and the [community name] parameter of the master station is set to a value other than the default value (public), the CC-Link IE TSN diagnostics function cannot be used. To use the CC-Link IE TSN diagnostics function, set the [community name] parameter of the master station to the default value (public), then cycle the power of all stations or reset them.

55.1.4 Access range

The access range is the same as when the GOT is connected to a controller.
For details on the access range, refer to the following.
📖GOT3000 Series User's Manual (Connection)

Precautions

To monitor another network, routing parameters have to be set to the GOT side and PLC side.
For the routing parameter setting, refer to the following.

- Routing parameter setting for the GOT

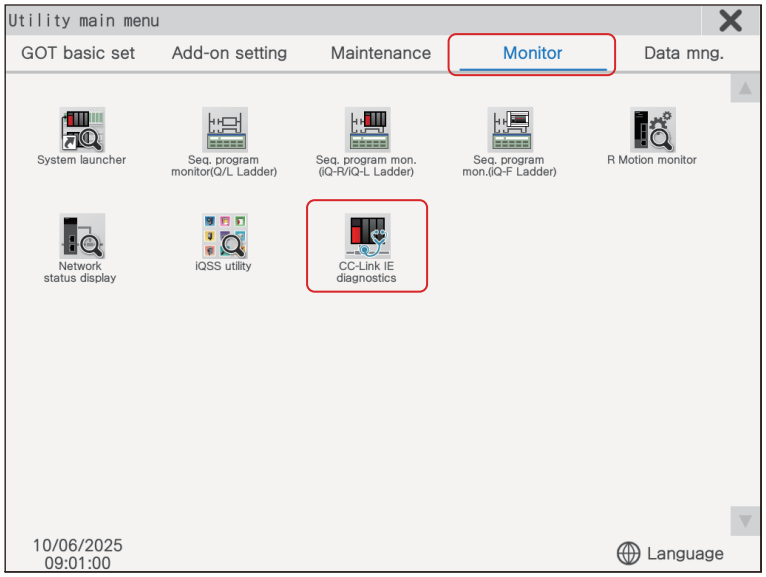
📖GOT3000 Series User's Manual (Connection)

- Routing parameter setting for PLC CPU

📖The user's manual for the master/local module of the CC-Link IE TSN or CC-Link IE Field Network system used

55.2 How to display the screen

Select [CC-Link IE diagnostics] in the [Monitor] tab.



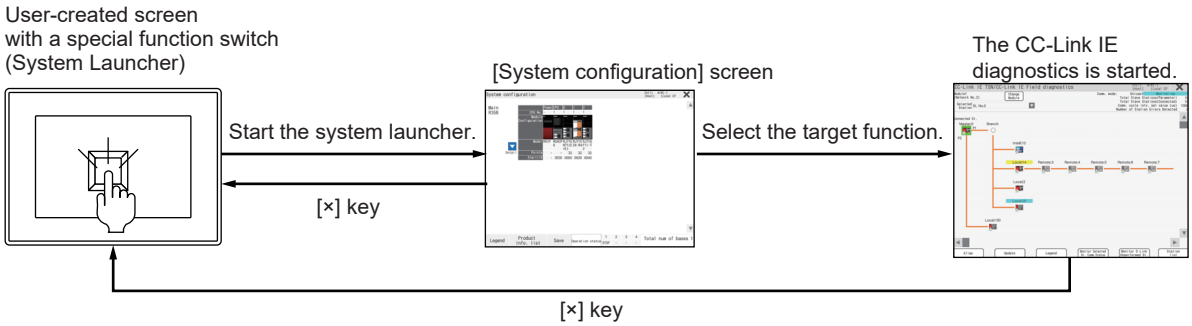
Starting the function using a special function switch (CC-Link IE diagnostics)

You can start CC-Link IE diagnostics from a user-created screen by selecting a special function switch in the project which is set to CC-Link IE diagnostics.

For information on how to set a special function switch, refer to the following. 📖 GT Designer3 (GOT3000) Screen Design Manual

Starting the function by using the special function switch (System launcher)

You can start CC-Link IE diagnostics from a user-created screen by selecting the connection destination with a special function switch to which [System Launcher] is set.



Point

When the system launcher does not support the connection destination

When the system launcher does not support the set connection destination, a dialog appears at startup.

For details on the system launcher function, refer to the following.

☞ Page 207 [System launcher]

[Select channel] window

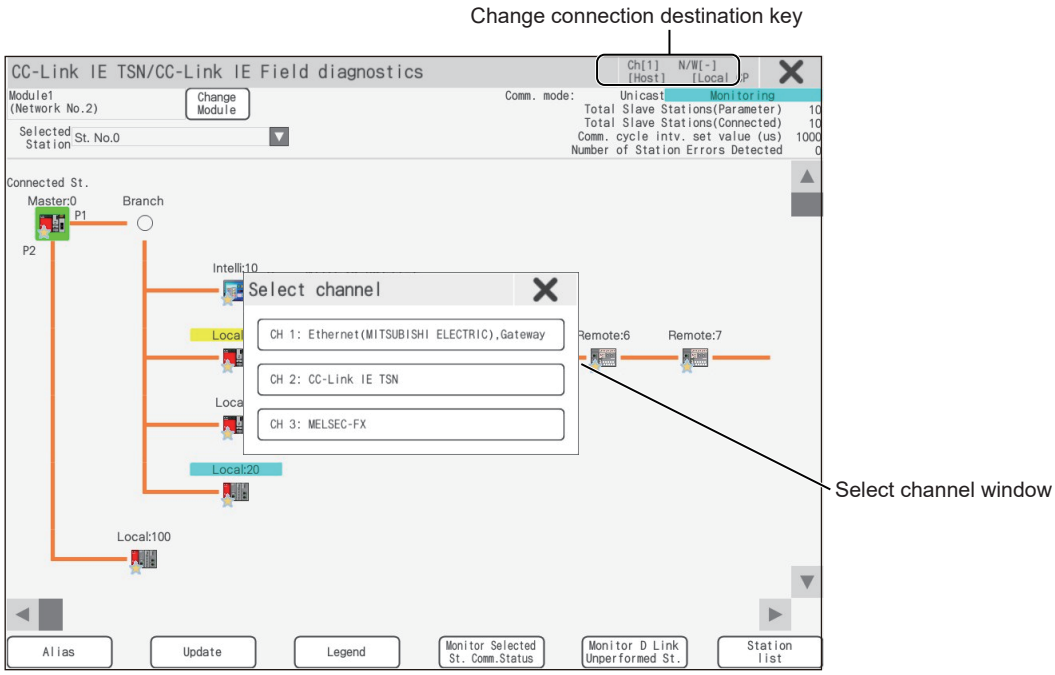
The [Select channel] window is displayed only at the first startup of CC-Link IE diagnostics.

Set the channel number of the PLC connected to the GOT.

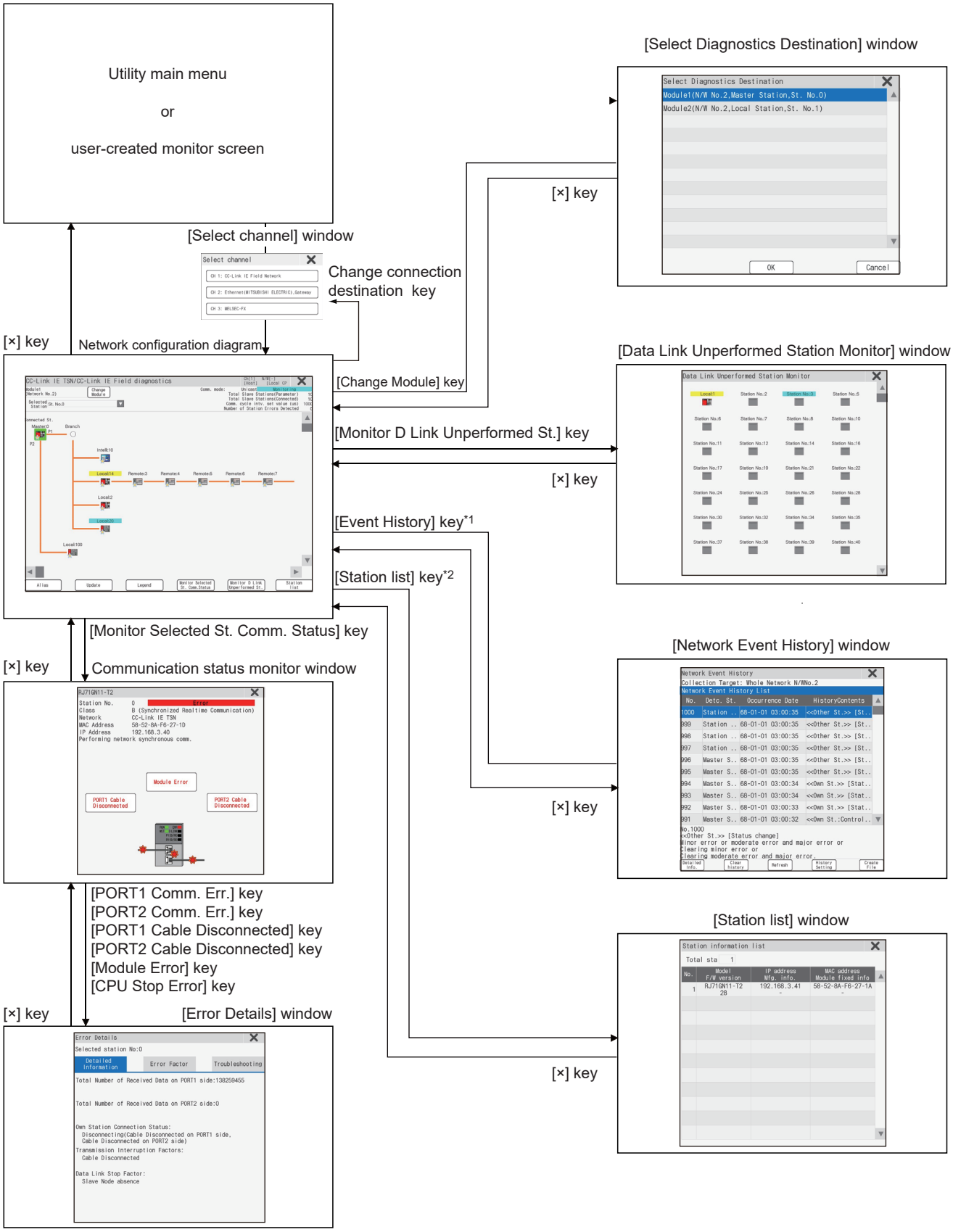
When the channel number is not set, touching the [×] key closes the [Select channel] window and sets the channel number to [1].

To display the [Select channel] window at the second startup or later, touch the select channel key on the network configuration diagram screen.

☞ Page 398 Network configuration diagram screen



Screen transitions

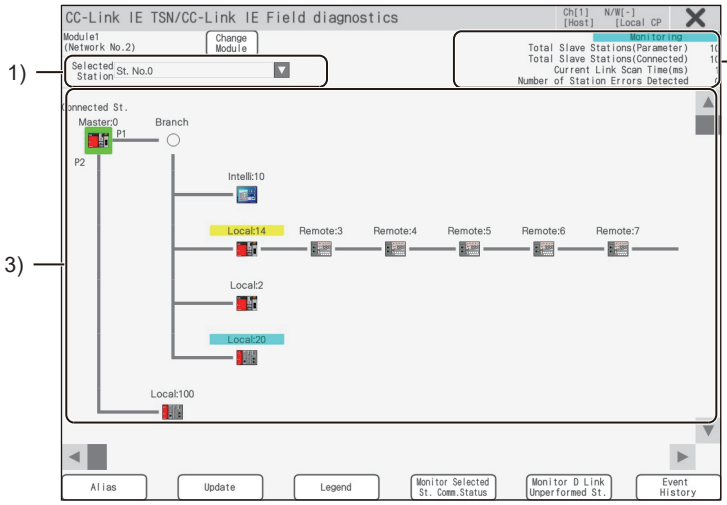


*1 Only available for the CC-Link IE Field Network diagnostics.
*2 Only available for the CC-Link IE TSN diagnostics.

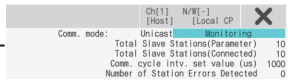
55.3 Network configuration diagram screen

This section explains the contents of the CC-Link IE diagnostics screen and the functions of the keys displayed on the screen.
The CC-Link IE diagnostics screen differs depending on the GOT used.
This section explains the structure of the network configuration diagram screen and the functions of the keys displayed on the screen after CC-Link IE diagnostics is started.

Displayed screen

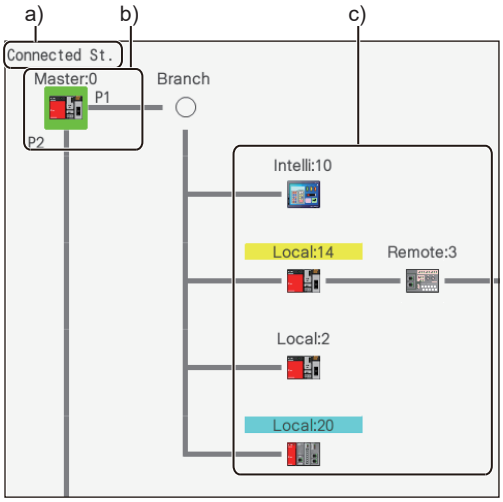


CC-Link IE Field Network diagnostics



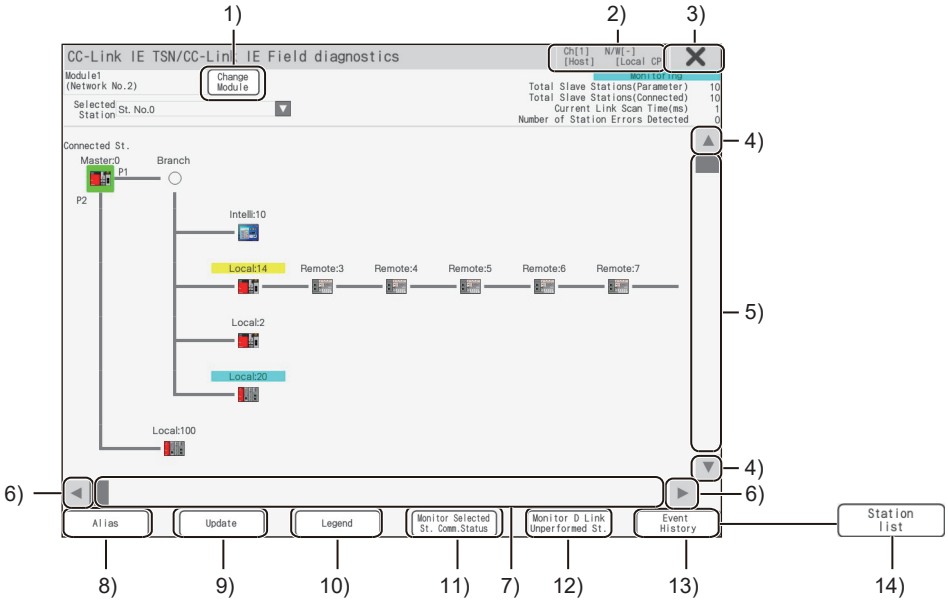
CC-Link IE TSN diagnostics

No.	Item	Description
1)	[Selected Station]	Select a monitoring target station from the drop-down list. The network configuration diagram of the selected station appears in the network configuration diagram display area.
2)	Network status display area	Displays the status of the network being monitored. The following shows the displayed items. • Comm. mode Displays the communication mode set by the parameter of the master station during the CC-Link IE TSN diagnostics. The display range is [Unicast] or [Multicast]. • Monitoring status Displays the current monitoring status. [Monitoring], [Stop Monitor], or [Communication error] is displayed. • [Total Slave Stations(Parameter)] Indicates the total number of slave stations specified with parameters. The displayed value ranges from [1] to [120]. • [Total Slave Stations(Connected)] Indicates the number of slave stations connected in the network configuration diagram. The master station and disconnected station are not included. The displayed value ranges from [0] to [120]. • [Current Link Scan Time(ms)] Indicates the link scan time of the network being monitored during the CC-Link IE Field Network diagnostics. The displayed value ranges from [0] to [65535]. • [Comm. cycle intv. set value (µs)] Displays the setting value of the communication cycle for the network being monitored during the CC-Link IE TSN diagnostics. The displayed value ranges from [0] to [10000]. • [Number of Station Errors Detected] Indicates the total number of stations where errors have occurred in the network configuration diagram.

No.	Item	Description
3)	Network configuration diagram display area	Displays the network configuration diagram of the diagnostics target network. The following shows the displayed items.  a) Station connected with the GOT Displays the IP address of the connected station during the CC-Link IE TSN diagnostics. b) Port where a cable is connected • P1: PORT1 • P2: PORT2 c) Equipment icon The station type and station number, or the device name and station number are displayed above each equipment icon. The IP address of the device station is displayed when the CC-Link IE TSN diagnostics runs. To switch the display between station type and device name, use the [Alias] key. The highlight color of the text varies with the station type as shown below. • Turquoise: Reserved station • Orange: Reserved station that is temporarily canceled • Yellow: Temporary error invalid station • Gray: Error invalid station • Red: Master station that is operating as a submaster station

PART 7

Key functions



CC-Link IE Field Network diagnostics　　CC-Link IE TSN diagnostics

Item		Description
1)	[Change Module] key	Displays the [Select Diagnostics Destination] window. While the [Select Diagnostics Destination] window is being displayed, monitoring of the network configuration diagram stops. ☞ Page 402 [Select Diagnostics Destination] window
2)	Change connection destination key	Displays the [Select channel] window.
3)	[×] key	Closes CC-Link IE diagnostics, and returns to the screen where the diagnostics was started.
4)	Up/down scroll keys	Scrolls the network configuration diagram display area up or down one row.
5)	Up/down scroll bar	Touch an empty area above or below the scroll bar to scroll the network configuration diagram display area up or down one page. Alternatively, touch and slide the scroll bar to scroll through the area.
6)	Left/right scroll key	Scrolls the network configuration diagram display area left or right one column.
7)	Left/right scroll bar	Touch an empty area above or below the scroll bar to scroll the network configuration diagram display area left or right one page. Alternatively, touch and slide the scroll bar to scroll through the area.
8)	[Station Type] key	Switches the display between the station type and device name during the CC-Link IE Field Network diagnostics. Switches the display to the station type, device name, IP address (decimal), or IP address (hexadecimal) during the CC-Link IE TSN diagnostics.
9)	[Update] key	• For master stations that have serial numbers starting with 17022 or higher for the first 5 digits, the network configuration diagram is updated if it differs from the actual network configuration. • For master stations that have serial numbers starting with 17021 or higher for the first 5 digits, disconnected stations are deleted from the network configuration diagram. The deleted stations are displayed in the [Data Link Unperformed Station Monitor] window. ☞ Page 411 [Data Link Unperformed Station Monitor] window
10)	[Legend] key	Displays the [Legend] window. You can check the descriptions of the icons appearing on the network configuration diagram.
11)	[Monitor Selected St. Comm. Status] key	Displays the window for monitoring the communication status of the selected station. ☞ Page 406 Communication status monitor window
12)	[Monitor D Link Unperformed St.] key	Displays the [Data Link Unperformed Station Monitor] window. ☞ Page 411 [Data Link Unperformed Station Monitor] window
13)	[Event History] key	Displays the [Network Event History] window during CC-Link IE Field Network diagnostics. While the [Network Event History] window is displayed, monitoring of the network configuration diagram stops. ☞ Page 413 [Network Event History] window
14)	[Station list] key	Displays the [Station information list] window during the CC-Link IE TSN diagnostics. ☞ Page 421 [Station information list] window

When configuration information cannot be acquired from the module to be diagnosed

If configuration information cannot be acquired from the module to be diagnosed, the following message is displayed in the network configuration diagram.

[Unable to acquire network configuration information. Please diagnostics from selected station communication status monitor.]

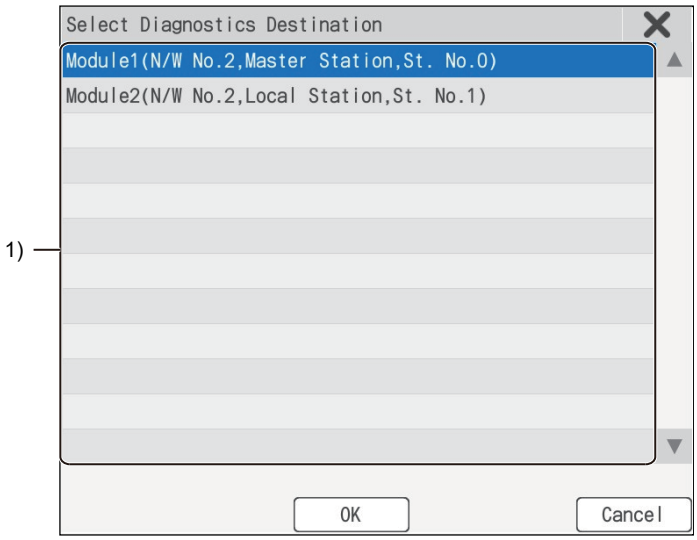
The selected station is fixed to the connected station, and the following windows can be displayed.

- Communication status monitor window
- [Legend] window
- [Network event history] window (only for CC-Link IE Field Network diagnostics)

55.3.1 [Select Diagnostics Destination] window

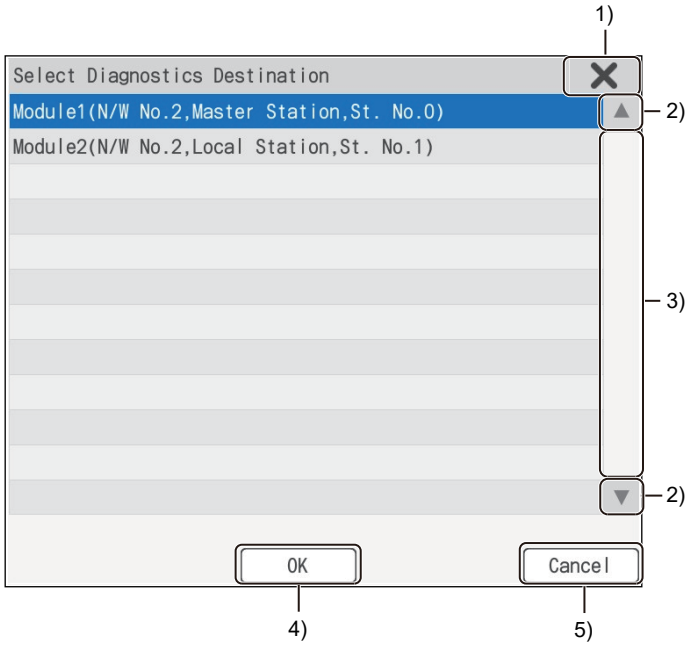
When multiple CC-Link IE TSN modules or CC-Link IE Field Network modules are connected to the CPU in the connected station, select a module to be diagnosed.
This section explains the structure of the [Select Diagnostics Destination] window and the functions of the keys displayed on the screen.

Displayed screen



No.	Item	Description
1)	Module selection list	Lists the CC-Link IE TSN modules or CC-Link IE Field Network modules that are connected to the CPU in the connected station. The following shows the displayed items. • Module number Displays the module number of each CC-Link IE TSN module or CC-Link IE Field Network module. The displayed value ranges from [1] to [64]. • Network number Displays the network number of each CC-Link IE TSN module or CC-Link IE Field Network module. The displayed value ranges from [1] to [239]. • Station type Displays the station type of each CC-Link IE TSN module or CC-Link IE Field Network module. [Master Station], [Local Station], or [Sub-Master Station] is displayed. • Station number Displays the station number of each CC-Link IE TSN module or CC-Link IE Field Network module. The displayed value ranges from [0] to [120], or [Sta.No. not set] is displayed.

Key functions

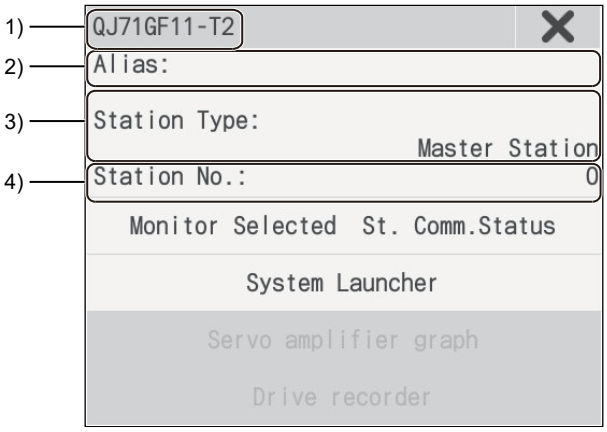


Item		Description
1)	[×] key	Closes the [Select Diagnostics Destination] window, and returns to the network configuration diagram.
2)	Up/down scroll keys	Scroll the contents in the list up or down one row.
3)	Up/down scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. Alternatively, touch and slide the scroll bar to scroll through the area.
4)	[OK] key	Closes the [Select Diagnostics Destination] window and displays the selected diagnostics destination in the network configuration diagram display area.
5)	[Cancel] key	Cancels the selected item, closes the [Select Diagnostics Destination] window, and returns to the network configuration diagram.

55.3.2 Context menu

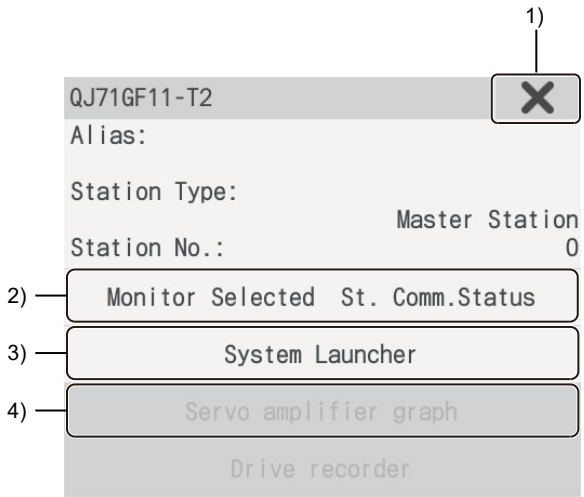
Touch an equipment icon in the network configuration diagram to display the context menu.
This section explains the structure of the context menu and the functions of the keys displayed on the menu.

Displayed screen



No.	Item	Description
1)	Title bar	Displays the model of the module in the selected station.
2)	[Alias]	Displays the user-specified name of the module in the selected station. Displays nothing when no model name is specified.
3)	[Station type]	Displays the station type of the selected station.
4)	[Station No.]	Displays the station number of the selected station.

Key functions

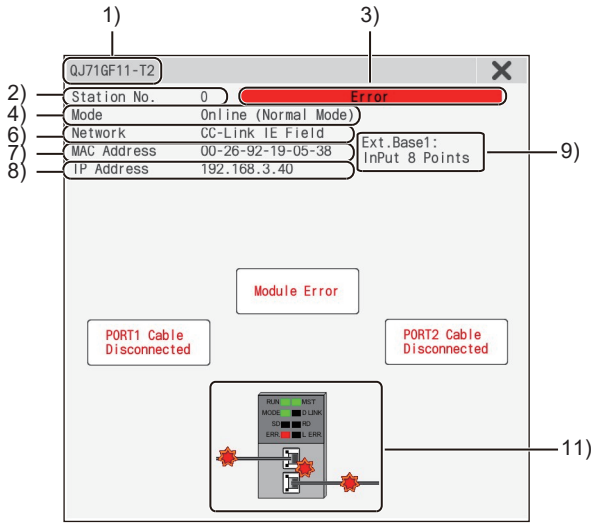


Item		Description
1)	[×] key	Exits the context menu and returns to the network configuration diagram.
2)	[Monitor Selected St. Comm. Status] key	Displays the window for monitoring the communication status of the selected station. This key can be used for all selected stations.
3)	[System Launcher] key	Exits the CC-Link IE diagnostics and starts the system launcher function. During the CC-Link IE Field network diagnostics, when one of the following stations is selected, the system launcher is not started. • CC-Link IE Field Network interface board • Remote device station When a remote station is selected during CC-Link IE TSN diagnostics, the system launcher does not start.
4)	[Servo amplifier graph] key	During the CC-Link IE TSN diagnostics, exits the CC-Link IE TSN diagnostics and starts the servo amplifier graph when a master station is monitored and MR-J5 or MR-JET is selected.

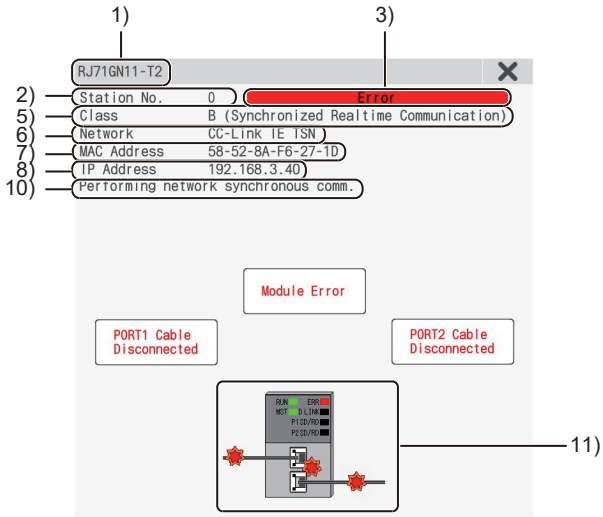
55.3.3 Communication status monitor window

This window displays the communication status of the module that is selected in the network configuration diagram.
This section explains the structure of the communication status monitor window and the functions of the keys displayed on the screen.

Displayed screen



CC-Link IE Field Network diagnostics

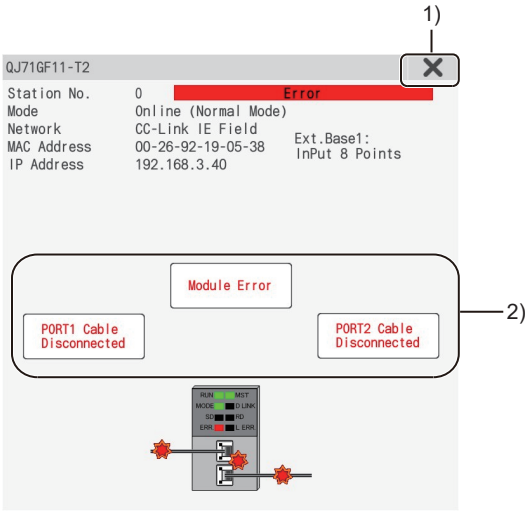


CC-Link IE TNS diagnostics

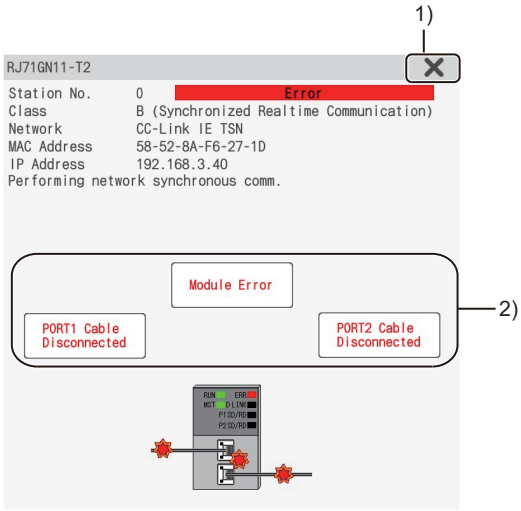
No.	Item	Description
1)	Title bar	Displays the model of the module in the selected station.
2)	[Station No.]	Displays the station number of the selected station.
3)	Error notification	Displays [Error] when an error has occurred with the selected station.
4)	[Mode]	Displays the mode of the selected station during CC-Link IE Field Network diagnostics. The following shows the displayed items. • [Online] • [Online (Normal Mode)] • [Online (High-Speed Mode)] • [Online (High-Speed Remote Net Mode)] • [Loop Test]
5)	[Class]	Displays the CC-Link IE TSN Class of the selected station during CC-Link IE TSN diagnostics. The following shows the displayed items. • [A (Realtime Communication)] • [B (Synchronized Realtime Communication)]
6)	[Network]	Displays the network type. The following shows the displayed items. • [CC-Link IE Field] • [CC-Link IE TSN]
7)	[MAC Address]	Displays the MAC address of the selected station.
8)	[IP Address]	Displays the IP address set for the CC-Link IE TSN module or CC-Link IE Field Network module. In the following situations, no IP address is displayed. • Station where no IP address has been set • Station where no station number has been set • Remote device station • Bridge module • Counter module • Motion module Displays the IP address in hexadecimal on the selected station communication status monitor window during CC-Link IE TSN diagnostics, if the IP address is displayed in hexadecimal in the network configuration diagram.
9)	Extension module name display area	Displays the type and number of points of each extension module that is connected to the selected main module during CC-Link IE Field Network diagnostics. Displays nothing when no extension module is connected. Displays nothing when the extension module information cannot be acquired from the connected station.

No.	Item	Description
10)	Network synchronous communication in-progress message	Appears while the selected station is performing network synchronous communication during CC-Link IE TSN diagnostics. It does not appear when network synchronous communication is not being performed.
11)	Communication status of the selected station	Displays the communication status of the selected station.

Key functions



CC-Link IE Field Network diagnostics



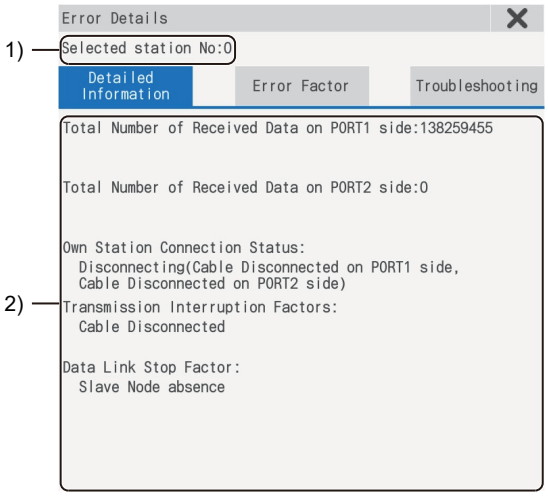
CC-Link IE TSN diagnostics

Item		Description
1)	[×] key	Closes the communication status monitor window, and returns to the network configuration diagram.
2)	[PORT1 Comm. Err.] key	Appears when the line status of PORT1 of the selected station is abnormal. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window
	[PORT1 Cable Disconnected] key	Appears when the cable connected to PORT1 of the selected station is faulty. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window
	[PORT2 Comm. Err.] key	Appears when the line status of PORT2 of the selected station is abnormal. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window
	[PORT2 Cable Disconnected] key	Appears when the cable connected to PORT2 of the selected station is faulty. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window
	[Module Error] key	Appears when an a module has an error. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window
	[CPU Stop Error] key	Appears when a CPU stop error has occurred. Touch this key to display the [Error Details] window. ☞ Page 409 [Error Details] window

55.3.4 [Error Details] window

This window displays the error details when an error has occurred with the module that is selected in the network configuration diagram.
This section explains the structure of the [Error Details] window and the functions of the keys displayed in the window.

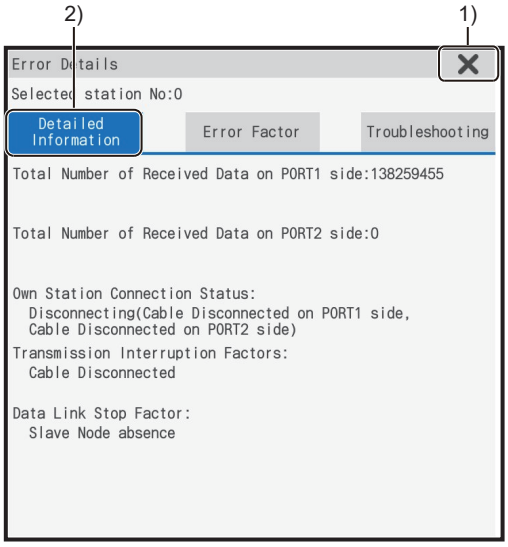
Displayed screen



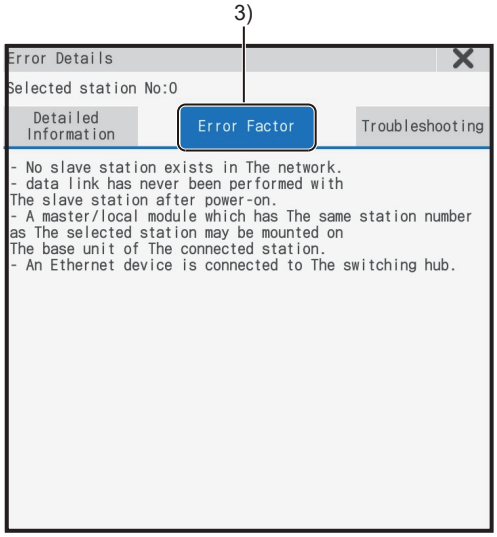
No.	Item	Description
1)	[Selected station]	Displays the station number of the selected station.
2)	Display area for detailed information, error factors, or troubleshooting	Displays detailed information, error factors, or troubleshooting for the generated error. To switch the display, touch the [Detailed Information] key, [Error Factor] key, or [Troubleshooting] key. The following lists the displayed items for [Detailed Information]. • [Total Number of Received Data on PORT1 side] • [Total Number of Received Data on PORT2 side] • [Own Station Connection Status] • [Transmission Interruption Factors] • [Cable Disconnection Detection Counts on PORT1 Side] • [Cable Disconnection Detection Counts on PORT2 Side] • [Data Link Stop Factor]

PART 7

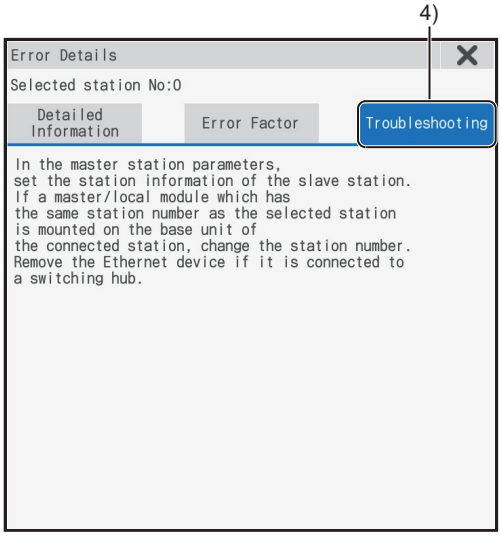
Key functions



When [Detailed Information] is selected



When [Error Factor] is selected



When [Troubleshooting] is selected

Item		Description
1)	[×] key	Closes the [Error Details] window, and returns to the network configuration diagram.
2)	[Detailed Information] key	Displays the error details in the display area.
3)	[Error Factor]	Displays the error factors in the display area.
4)	[Troubleshooting] key	Displays troubleshooting information in the display area.

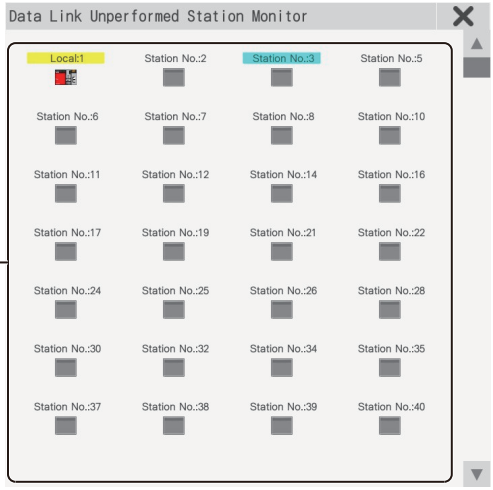
55.3.5 [Data Link Unperformed Station Monitor] window

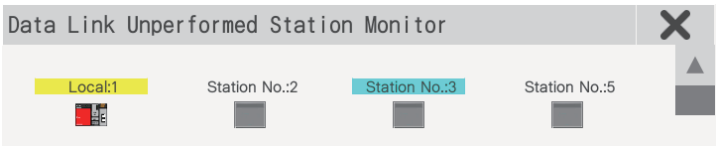
This window lists the stations where data link is not performed.

This section explains the structure of the [Data Link Unperformed Station Monitor] window and the functions of the keys displayed on the screen.

Displayed screen

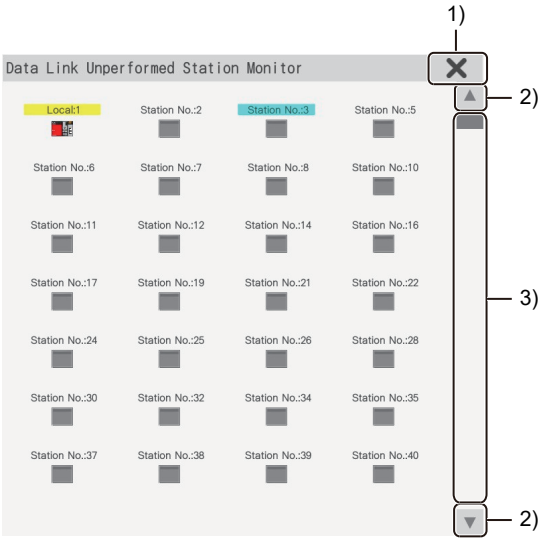
1)



No.	Item	Description
1)	Data link unperformed station display area	Lists the icons of the stations where data link is not performed. The station type and station number are displayed above each icon. The highlight color of the text varies with the station type as shown below. • Turquoise: Reserved station • Orange: Reserved station that is temporarily canceled • Yellow: Temporary error invalid station • Gray: Error invalid station  During CC-Link IE Field Network diagnostics, when the master station has a serial number starting with 17021 or lower in the first 5 digits, updating the network configuration diagram deletes the disconnected stations. The deleted stations are displayed as data link unperformed stations.

PART 7

Key functions



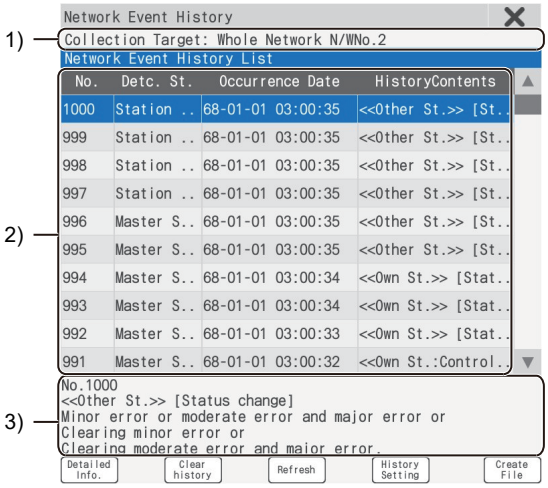
Item		Description
1)	[×] key	Closes the [Data Link Unperformed Station Monitor] window, and returns to the network configuration diagram.
2)	Up/down scroll keys	Scroll the contents in the list up or down one row.
3)	Up/down scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. Alternatively, touch and slide the scroll bar to scroll through the area.

55.3.6 [Network Event History] window

During CC-Link IE Field Network diagnostics, this window displays the history of network events and the event details in chronological order.

This section explains the structure of the [Network Event History] window and the functions of the keys displayed in the window.

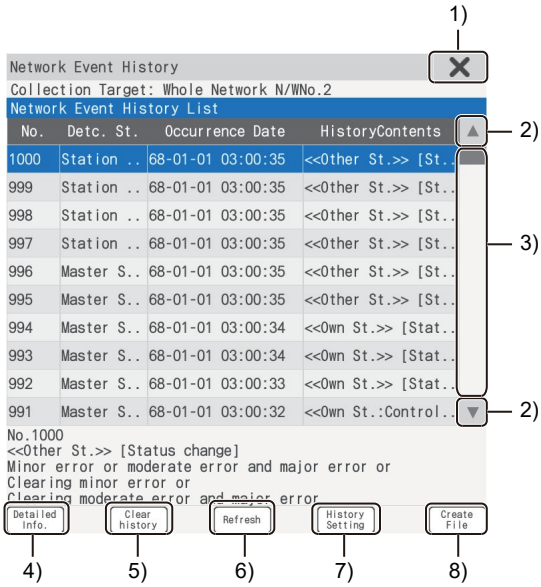
Displayed screen



No.	Item	Description
1)	Collection target display area	Displays the collection target.
2)	Network event history list display area	Displays the network event history list. The following shows the displayed items. Network event number • [Detc. St.] • [Occurrence Date] • [HistoryContents]
3)	Display area for event details	Displays the number and details of the event selected in the network event history list.

PART 7

Key functions

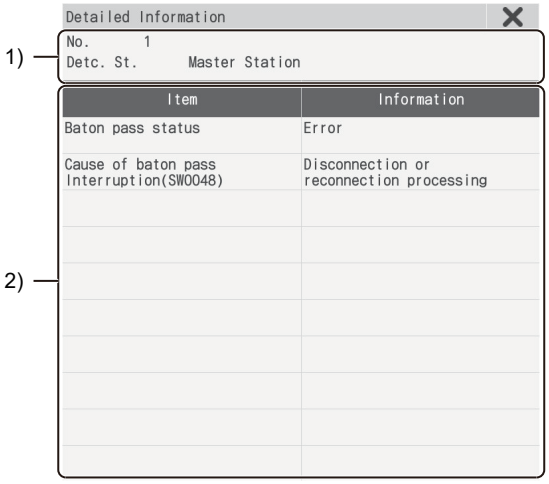


Item		Description
1)	[×] key	Closes the [Network Event History] window, and returns to the network configuration diagram.
2)	Up/down scroll keys	Scroll the contents in the list up or down one row.
3)	Up/down scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. Alternatively, touch and slide the scroll bar to scroll through the area.
4)	[Detailed Info.] key	Displays the [Detailed Information] window. ☞ Page 415 [Detailed Information] window
5)	[Clear history] key	Deletes the network event history that the module retains.
6)	[Refresh] key	Acquires the latest network event history from the module and updates the network event history list.
7)	[History Setting] key	Displays the [History Acquisition Setting] window. ☞ Page 416 [History Acquisition Setting] window
8)	[Create File] key	Displays the [Create File] window. ☞ Page 419 [Create File] window

■[Detailed Information] window

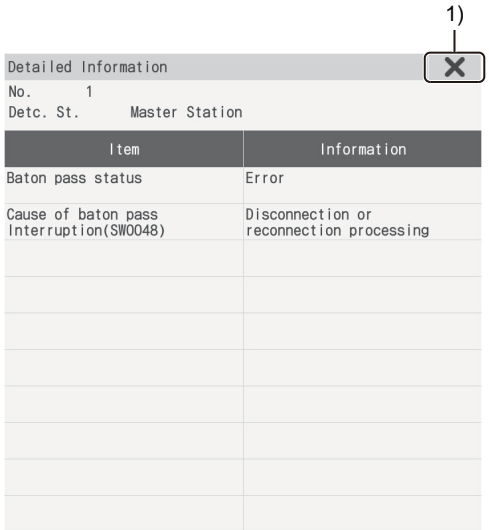
This section explains the structure of the [Detailed Information] window and the functions of the keys displayed in the window.

- Displayed screen



No.	Item	Description
1)	Collection target display area	Displays the collection target.
2)	Detailed information display area	Displays the details of the event selected in the network event history list.

- Key functions

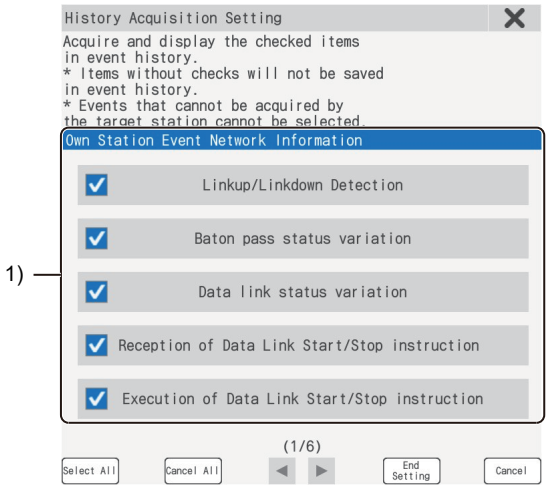


No.	Item	Description
1)	[×] key	Exits the [Detailed information] window.

■[History Acquisition Setting] window

This section explains the structure of the [History Acquisition Setting] window and the functions of the keys displayed in the window.

- Displayed screen



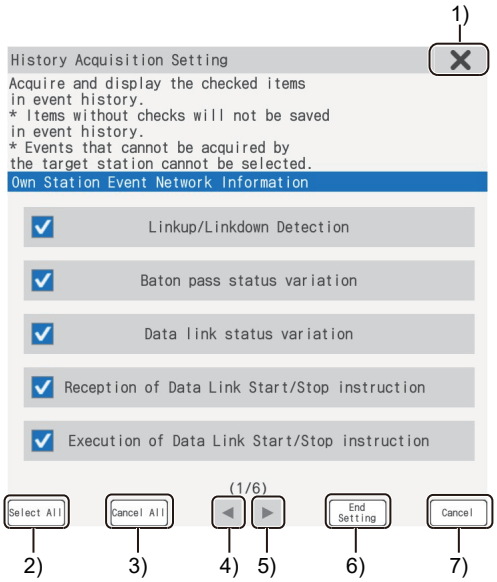
No.	Item	Description
1)	Event history acquisition setting list*1	Lists the collection target events. Select the event to save it in the history.

*1 The following table lists the collection target events.

Displayed items		Details
Events on the own station	Linkup/Linkdown Detection	Indicates that the linkup or linkdown is detected on PORT1 or PORT2 of the own station.
	Baton pass status variation	Indicates that the baton pass status of the own station is changed.
	Data link status variation	Indicates that the data link status of the own station is changed.
	Reception of Data Link Start/Stop instruction	Indicates that the own station receives the data link start/stop instruction.
	Execution of Data Link Start/Stop instruction	Indicates that the own station sends the data link start/stop instruction to the own station or another station.
	Reception of Enable/Disable temporary Error Invalid Station instruction	Indicates that the own station receives the enable/disable temporary error invalid station instruction from the master station.
	Execution of Enable/Disable temporary Error Invalid Station instruction	Indicates that the own station sends the enable/disable temporary error invalid station instruction to the device station.
	Reception of Enable/Restore reserved station instruction	Indicates that the own station receives the enable/restore reserved station instruction from the master station.
	Execution of Enable/Restore reserved station instruction	Indicates that the own station sends the enable/disable temporary reserved station instruction to the device station.
	Reception of station No. setting	Indicates that the own station receives the station number setting instruction from the master station.
	Execution of station No. setting	Indicates that the own station sends the station number setting request to a station where no station number is set.
	Parameter changes	Indicates that the parameter setting of the module in the own station has changed.
	Own station CPU run status change	Indicates that the RUN status of the CPU in the own station has changed.
	Received Frame Error	Indicates that a frame error occurs on PORT of the own station.
	Error in own station module	Indicates that an error occurs in the module of the own station.
	Error in own station CPU	Indicates that an error occurred in the CPU of the own station.

Displayed items		Details
Events on other stations	Baton pass status variation	Indicates that the baton pass status has changed.
	Data link status variation	Indicates that the data link status of a station has changed.
	Temporary Error Invalid Station setting status change	Indicates that the setting status of a temporary error invalid station was changed by the enable/disable temporary error invalid station instruction.
	Reserved station status change	Indicates that the setting status of a reserved station was changed by the enable/restore reserved station instruction.
	Own station CPU run status change	Indicates that the RUN status of the CPU in a station has changed.
	Received Frame Error	Indicates that PORT1 or PORT2 in another station received a faulty frame.
	Error in CPU	Indicates that a CPU error (continuation/stop) occurred in another station.
	Parameter Error	Indicates that the parameter analysis result contains an error.
	Master station overlap/station No. overlap	Indicates that a master station duplication error or station number duplication error occurred on the network.
	Path was switched while using Loopback function	Indicates that path switching occurred when the loopback function was used.

• Key functions

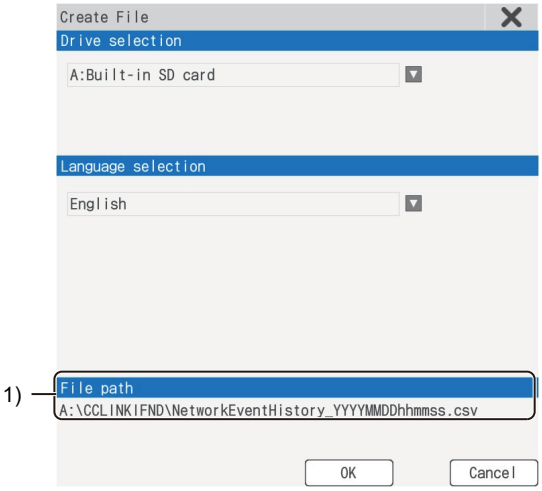


No.	Item	Description
1)	[×] key	Discards the setting and exits the [History Acquisition Setting] window.
2)	[Select All] key	Selects all items of the own station events and other stations events.
3)	[Cancel All] key	Clears all items of the own station events and other stations events.
4)	Left key	Moves to the previous page.
5)	Right key	Moves to the next page.
6)	[End Setting] key	Completes the settings.
7)	[Cancel] key	Discards the setting and exits the [History Acquisition Setting] window.

■[Create File] window

This section explains the structure of the [Create File] window and the functions of the keys displayed in the window.

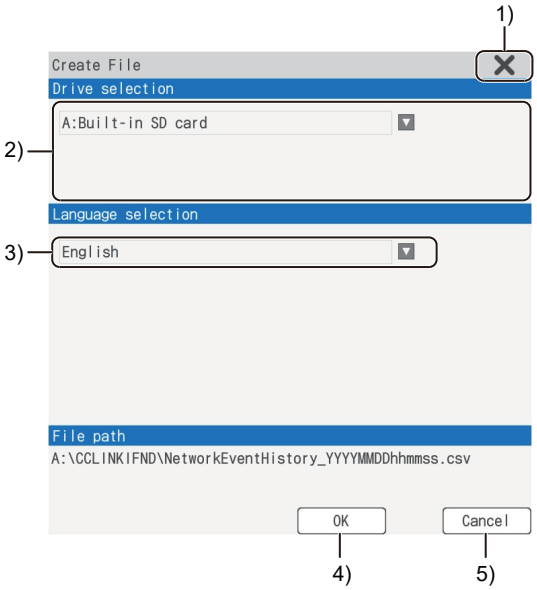
- Displayed screen



No.	Item	Description
1)	File path	Displays the path where a CSV file is to be saved. The drive that has been selected in [Select drive] is used. The following shows an example of a CSV file name. NetworkEventHistory_YYYYMMDDhhmmss.csv Year Month Date Hour Minute Second

PART 7

• Key functions

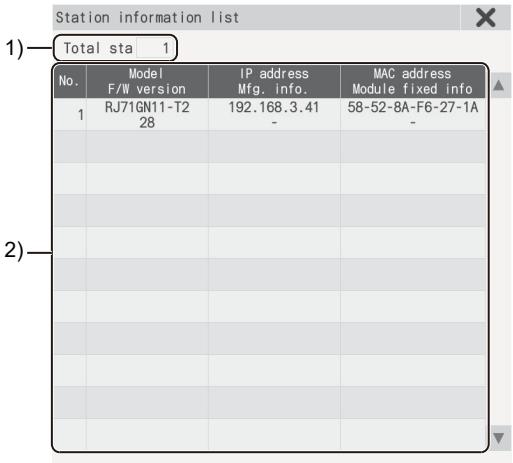


No.	Item	Description
1)	[×] key	Cancels the setting, and closes the [Create File] window.
2)	[Drive selection]	Select the drive to save the CSV file. Select a drive that the GOT can access when the [Create File] window is displayed.
3)	[Language selection]	Select the language for the CSV file. The following shows the selectable languages. • [Japanese] • [English] • [Chinese (Simplified)] • [Chinese (Traditional)] • [Korean]
4)	[OK] key	Creates a CSV file with the set language on the selected drive.
5)	[Cancel] key	Cancels the setting, and closes the [Create File] window.

55.3.7 [Station information list] window

This window lists the information of the stations in the whole network during the CC-Link IE TSN diagnostics.
This section explains the structure of the [Station information list] window and the functions of the keys displayed in the window.

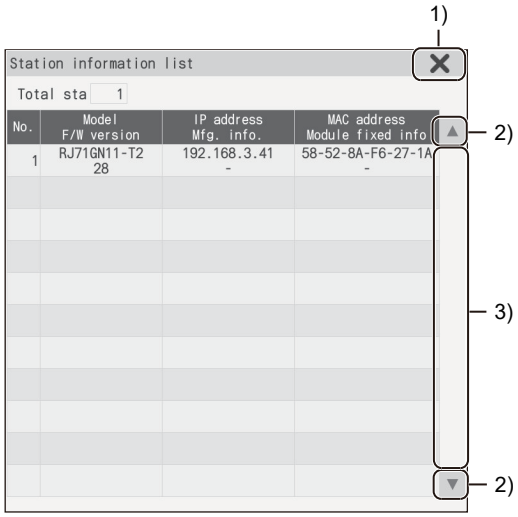
Displayed screen



No.	Item	Description
1)	[Total stations]	Displays the number of device stations displayed in the station information list.
2)	Station information list area	Displays the station information list. The following shows the displayed items. • [Station No.] • [Model] • [F/W version] • [IP Address] • [Mfg. info.] • [MAC Address] • [Module fixed info] When IP address in the network configuration diagram is displayed in hexadecimal, [IP address] in the station information list is also displayed in hexadecimal.

PART 7

Key functions



No.	Item	Description
1)	[×] key	Closes the [Station information list] window, and returns to the network configuration diagram.
2)	Up/down scroll keys	Scrolls the contents in the list up or down one station.
3)	Up/down scroll bar	Touch an area above or below the scroll bar to scroll one page up or down. Alternatively, touch and slide the scroll bar to scroll through the area.

55.4 Error messages and corrective action

This section describes the error messages that may be displayed during CC-Link IE diagnostics and the corrective actions.

Error message	Description	Corrective action
Failed to access the □: drive.[*1] Check the memory card status and access switch.	The GOT cannot access the drive where the file saved.	• Check that a memory card has been installed to the drive. • Check that the access switch is on. (Only when drive A is used)
The □: drive format is not correct.[*1] Please use a memory card in the correct format.	The format of the memory card (file storage destination drive) is invalid.	Format the memory card to a GOT compatible format.
The drive is write protected. The file cannot be saved. Check the write destination drive (*:).	The memory card (file storage destination drive) is write-protected.	Check that the memory card is not write-protected. Otherwise, remove the write protection.
Free space in the □: drive is insufficient. Failed to save the file.[*1] Select a drive with sufficient free space.	The memory card (file storage destination drive) does not have enough space.	• Use a memory card that has enough space. • Delete unnecessary files to free up space on the memory card.
Failed to create a file. Check if the write destination memory card is correct and try the operation again.	File creation failed due to factors other than those above.	Check the memory card, install it again, and create the file.
Communication error occurred. Please confirm that cables and communication routes are correct. Please also check that the PLC is running and the routing information is set.	The communication with the connected PLC CPU cannot be established.	• Check the connection between the PLC and the GOT. (No disconnected connectors and no broken cables) • Check that no error occurs in the PLC. • When using the Ethernet connection, check that the routing parameter setting on GT Designer3 is correct.
Cannot access the connection destination. Please select the connection destination again.	The communication with the connected PLC CPU cannot be established.	• Check the connection between the PLC and the GOT. (No disconnected connectors and no broken cables) • Check that no error occurs in the PLC. • When using the Ethernet connection, check that the routing parameter setting on GT Designer3 is correct.
The device set to the connection destination is not supported by this function.	CC-Link IE diagnostics does not support the PLC CPU that is specified as the connection destination.	Specify a PLC CPU that is supported by CC-Link IE diagnostics.
This function cannot be performed using the current connection target setting. Please change the current connection destination and try again.	For serial connection, another station has been specified as the connection destination of the PLC CPU.	For serial connection, specify the own station as the connection destination of the PLC CPU.
Selected module does not exist. Please select again.	• The module selected in the [Select Diagnostics Destination] window does not exist in the connected station. • CC-Link IE diagnostics was started using a special function switch without specifying a module, while the module displayed during the previous startup was no longer present on the connected station. • CC-Link IE diagnostics was started from the utility while the module displayed during the previous startup was no longer present on the connected station. • CC-Link IE diagnostics was started using a special function switch with a specified module, but the specified module was not present on the connected station.	Mount the target CC-Link IE TSN module or CC-Link IE Field Network module on the connected master station.
The connection destination station does not have any CC-Link IE TSN/CC-Link IE Field modules.	• The connected station had no CC-Link IE TSN module or CC-Link IE Field Network module when the [OK] button in the [Select Diagnostics Destination] window was touched. • The connected station had no CC-Link IE TSN module or CC-Link IE Field Network module when the [Change Module] key was touched.	Add a CC-Link IE TSN module or CC-Link IE Field Network module as a station controlled by the connection destination PLC CPU.

Error message	Description	Corrective action
CC-Link IE TSN/CC-Link IE Field diagnostics cannot be started. Possible causes are as follows. • The target module in the connection destination is not in online mode. • A communication mode not supported by this version is specified. Set the module operation mode of the module parameter to online.	The CC-Link IE TSN module or CC-Link IE Field Network module to be diagnosed is not in the online mode or loop test mode.	Set the online mode or line test mode for the CC-Link IE TSN module or CC-Link IE Field Network module to be diagnosed.
Select station No. is not set. Please execute again after setting station No.	The user has attempted to start the system launcher or the drive recorder from the context menu of a station that has no station number.	Use peripheral software to set a station number for the selected station.
CC-Link IE TSN/CC-Link IE Field diagnostics cannot be started. Possible causes are as follows. • The target module does not exist in the connected station. • I/O assignment of system parameters does not match the actual config. Check the actual configuration using peripheral S/W and set I/O assignment in programmable controllers correctly.	CC-Link IE diagnostics was started when no CC-Link IE TSN module or CC-Link IE Field Network module was present on the station controlled by the connected PLC CPU, or when the I/O assignment within the PLC was incorrect.	• Add a CC-Link IE TSN module or CC-Link IE Field Network module as a station controlled by the connection destination PLC CPU. • Use peripheral software to check if the I/O assignment setting of the PLC is correct.
This function cannot be performed using the current connection target setting. Please change the current connection destination and try again.	A connection type unsupported by the CC-Link IE diagnostics was specified.	Specify a connection type (serial or Ethernet) that is supported by CC-Link IE diagnostics.
The set port No. is not supported by this function. Review the port No. in the Ethernet setting on the GOT.	A port number unsupported by CC-Link IE Field Network diagnostics was set when Ethernet connection was used.	Specify a port number supported by CC-Link IE Field Network diagnostics in the Ethernet setting in GT Designer3. • RCPU: 5006 (fixed) • MELSEC iQ-F: 5562 (fixed) • QCPU: 5006 • LCPU: 5006 (fixed)
The same network No. is used in the Ethernet setting the diagnostics target. Review the network No. of the Ethernet setting.	A network number registered in the Ethernet setting was specified for the CC-Link IE diagnostics target module that was connected by Ethernet.	Check the Ethernet setting in GT Designer3. Specify a network number other than that registered in the Ethernet setting for the CC-Link IE diagnostics target module.
The link module is not in the online mode. Please set the link module's switch to the online mode.	The CC-Link IE TSN module or CC-Link IE Field Network module to be diagnosed is not in the online mode.	Set the online mode for the CC-Link IE TSN module or CC-Link IE Field Network module to be diagnosed.
The network No. and the station No. of the connection destination do not exist in the Ethernet setting. Please review the settings in the screen design software.	The PLC CPU connected by Ethernet has a network number and station number that are not registered in the Ethernet setting.	Add the network number and station number of the connected PLC CPU to the Ethernet setting in GT Designer3.
This function does not support setting the Ethernet unit as the connection destination.	An Ethernet interface module was specified in the Ethernet setting when the Ethernet connection is used.	Specify a Built-in Ethernet port CPU in the Ethernet setting in GT Designer3.
Connected station No. has not been set. Please set it.	No station number has been set for the module selected in the [Select Diagnostics Destination] window.	Set the station number for the selected station with the peripheral software.
The specified function cannot be executed. Check the manual of the connection destination module.	The connected module cannot execute this function.	Refer to the manual of the connected module to check if the function is supported. If the function is not supported, update the firmware to support the function.
The network topology of the diagnostic target is not supported. Possible causes are as follows. • A network topology not supported by this version is used.	Unsupported network topology is set to the connected module.	Set the network topology that supports this function to the connected module.

*1 "□:" indicates the name of the selected drive.

PART 8 Data management

56 [File manager]

57 [Image file management]

58 [Recipe information]

59 [Logging information]

60 [Operation log information]

61 [Alarm information]

62 [Package management]

63 [Backup/restoration function]

64 [NVRAM management]

65 [Memory card format]

66 [Memory check]

67 [GOT data pkg. acquisition]

68 [GOT Full Initialization]

69 [Certificate management]

56 [File manager]

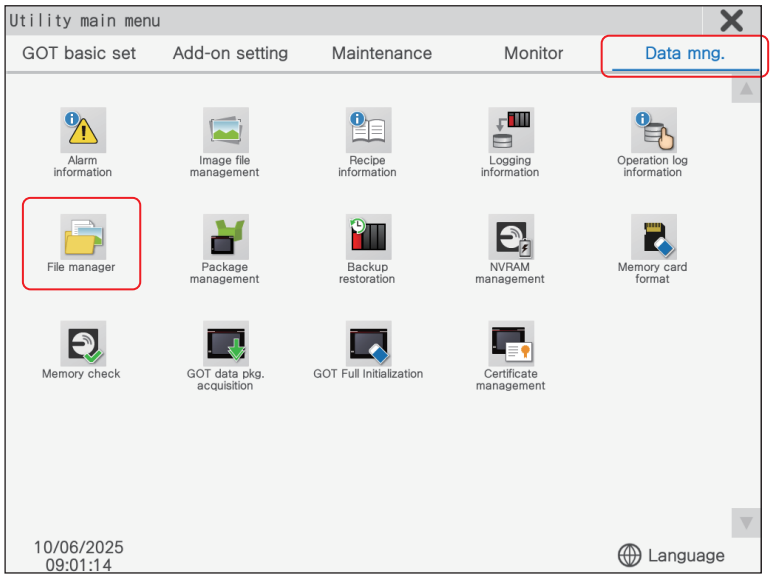
GT37 SoftGOT3000

You can manage the files and folders stored on each drive on the GOT.
Manage files that are created with functions on the management screens.
For details on the files of the management screens, refer to the following.

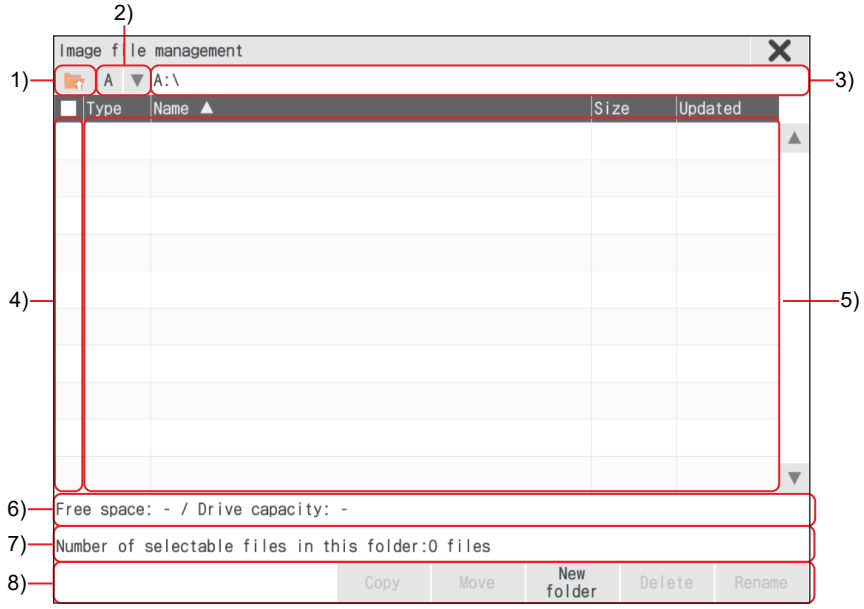
Function	File	Reference
Hard copy	Image file: BMP, JPEG, and PNG files	☞ Page 433 [Image file management]
Recipe	Recipe file (G3P files): CSV and Unicode text files	☞ Page 438 [Recipe information]
Logging	Logging file (G3L files): CSV and Unicode text files	☞ Page 443 [Logging information]
Operation log	Operation log file (G3O files): CSV and Unicode text files	☞ Page 449 [Operation log information]
Alarm	Alarm log file (G3A files): CSV and Unicode text files	☞ Page 462 [Alarm information]

56.1 How to display the screen

Select [File manager] in the [Data mng.] tab.



56.2 [File manager] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive display		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed.	• [A] • [B] • [E] • [F] • [G] <Default: [A]>
			When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file or folder. To select all files and folders, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the file and folder names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive, folders, or files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and folders, and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—

Item		Description	Setting range
8)	Operation buttons	These buttons are used to perform various operations on files and folders. ☞ Page 431 Operations on the file manager screen When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 428 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

Selectable drives differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drive
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	Only the [Copy] button is functional.	All of the operation buttons are functional.*1
○	—	—	Only the [Copy] button is functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	The file manager cannot be used.	

*1 The current drive cannot be selected as the copy or move destination from non-current drives.

File and folder names displayed in the file list

■Displaying file and folder names that exceed the display range of the file list

If the folder name exceeds the display range, the excess part is not displayed.

If the file name exceeds the display range, touch the file name to display the entire file name.

■Files and folders not displayed in the file list

The following files and folders are not displayed.

- The full path to the file or folder contains 79 or more characters including delimiters (\).
- File/folder names starting with G3, G2, or G1

Character strings usable for files and folders

■Number of characters in the file or folder name

GOT recognizes file location according to path explained below.

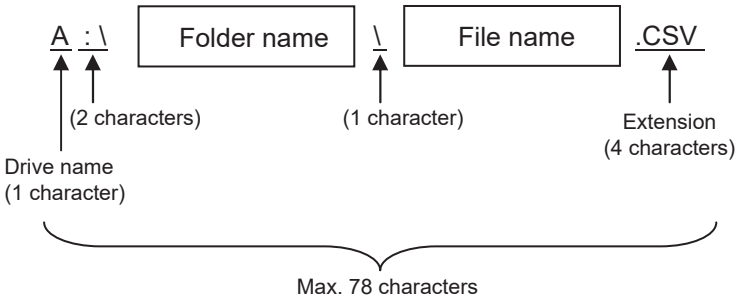
Specify file or folder name, and total characters of path cannot exceed 78 characters.

Users only can rename file or folder name.

(Other than file/folder name is automatically printed.)

Ex.

CSV file path in a data storage



Point

If folder is assigned the hierarchy

The \ mark is displayed between a folder name and folder name, a folder name and file name. The \ mark is also counted as one character.

■Character strings that cannot be set to a file/folder

The following character strings cannot be used in folder or file names.

Description	Operation
One-byte alphanumeric characters and symbols	The following cannot be used. • " • * • / • < • > • ? • \ (available as a partition between folder names) • One-byte space
	The following texts (case-insensitive) cannot be used as a folder name or file name. However, they can be used if included as part of a name. • COM0 to COM9 • LPT0 to LPT9 • AUX • CON • NUL • PRN • CLOCK$
	Do not use any of the following because they cannot be shown on the GOT utility. • A folder name or file name starting with G1, G2, or G3 • A folder named SYSLOG • Files with .INI or .G3G extensions
User-selected characters using Unicode	Surrogate pairs (character code: 0xD800 to 0xDBFF, 0xDC00 to 0xDFFF) cannot be used.

■Available character codes

Although characters other than one-byte alphanumeric characters (ASCII) can be entered for a file or folder name, the characters become garbled when the file name is displayed in the file list of the utility screen.

To manipulate files or folders on the utility screen, use one-byte alphanumeric characters (ASCII) for file and folder names.

56.3 Operations on the file manager screen

The following operations can be performed on files and folders using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file or folder.
[Move] button	Moves the selected file or folder.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file or folder.
[Rename] button	Renames the selected file or folder.

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Ensure that the SD card access LED is turned off before removing the SD card.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce the total number of files and folders to 2000 or less by methods such as deleting or moving them.

■Copying or moving a folder

When a folder is copied or moved to another folder with the same name, any file with the same name in the destination folder is automatically overwritten.

■Deleting a folder used by another function

The deletion of a folder is executed even if another function is using a file in the folder.

If such a file is deleted, the function that is using the file may not operate properly.

Do not delete a folder that is set for another function.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

If the read-only file has been moved to another folder, delete the original folder it was moved from.

■Deleting a read-only file

Read-only files cannot be deleted.

Folders containing read-only files cannot be deleted either.

Remove the read-only status and delete the file.

■Changing a file or folder name

You cannot change only the case of the characters in a file or folder name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file or folder name, rename the folder or file to a different name, and then rename the file or folder back to its original name with the case changed.

57 [Image file management]

GT37 SoftGOT3000

You can manage the image files (BMP, JPEG, and PNG files) created using the hard copy function on the GOT.
For details on the hard copy function, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

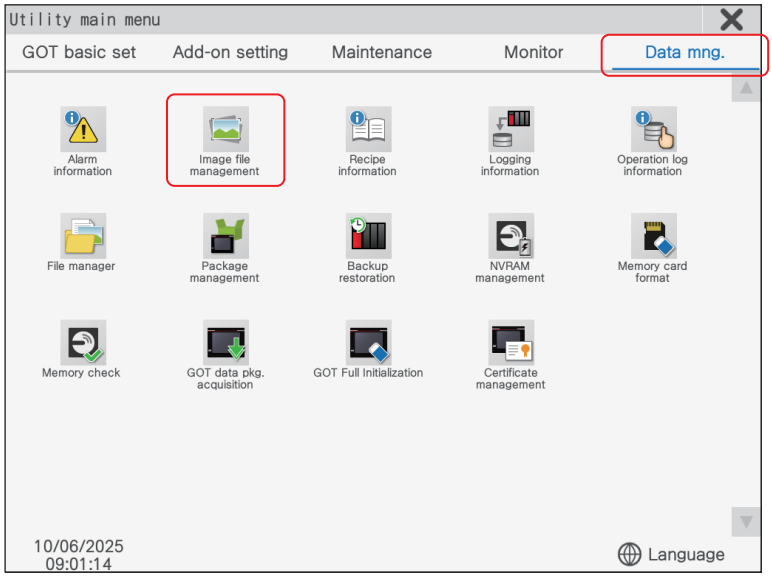
■System Screen Operation Restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

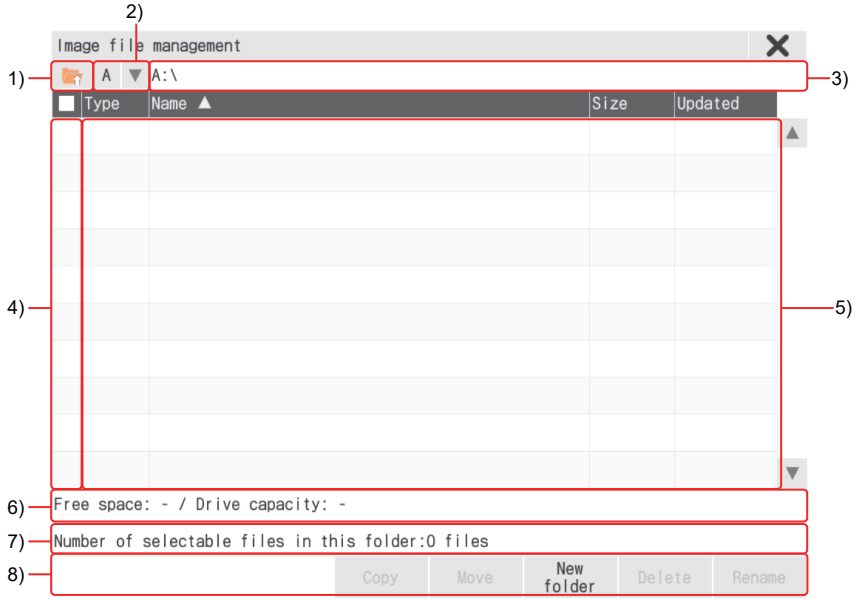
- GS622.b0: Restricts access operations to the drive using the [Image file management] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

57.1 How to display the screen

Select [Image file management] in the [Data mng.] tab.



57.2 [Image file management] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive display		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed. When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	• [A] • [B] • [E] • [F] • [G] <Default: [A]>
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file. To select all files, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the file and folder names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive and files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—

Item		Description	Setting range
8)	Operation buttons	These buttons are used to perform various operations on files. ☞ Page 437 Operation of image file management When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 436 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

The drives that can be selected differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drives
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	Only the [Copy] button is functional.	All of the operation buttons are functional.*1
○	—	—	Only the [Copy] button is functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	Image file management cannot be used.	

*1 The copy source and move source from non-current drives cannot be selected for the current drive.

57.3 Operation of image file management

The following operations can be performed on files using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file.
[Move] button	Moves the selected file.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file.
[Rename] button	Renames the selected file.

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Even if the cover of the SD card interface is opened while the GOT is processing files and folders, the processing continues to be executed.

Do not remove the SD card while the SD card access LED is flashing.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce the number of files and folders to 2000 or less by methods such as deleting or moving them.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

■Deleting a read-only file

Read-only files cannot be deleted.

Remove the read-only status and delete the file.

■Changing a file name

You cannot change only the case of the characters in a file name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file name, rename the file to a different name, and then rename the file back to its original name with the case changed.

58 [Recipe information]

GT37 SoftGOT3000

You can manage the recipe files used by the recipe function on the GOT.
For details on the recipe function, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

■System screen operation restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

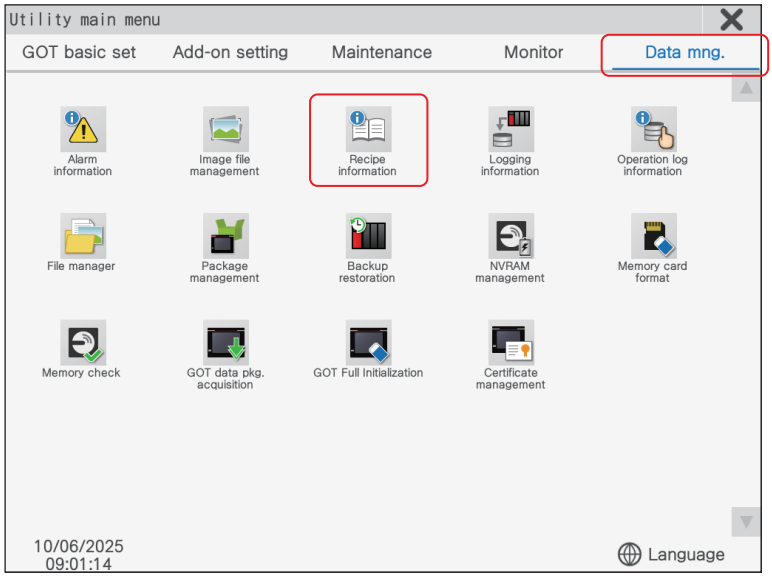
- GS622.b0: Restricts access operations to the drive using the [Recipe information] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

■Special Control Function 2 During Specific Application Execution

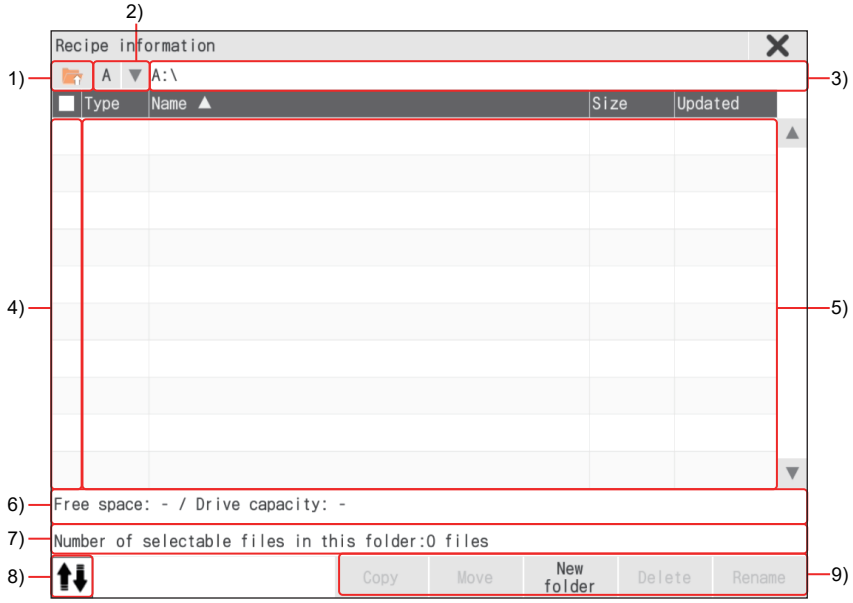
When GS2564.b0 is turned on, button operations are restricted and only viewing is permitted.

58.1 Screen display procedure

Select [Recipe information] in the [Data mng.] tab.



58.2 [Recipe information] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed. When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	• [A] • [B] • [E] • [F] • [G] <Default: [A]>
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file. To select all files, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the file and folder names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive and files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—
8)	Display switching button		Switches the contents displayed on the operation buttons.	—

Item		Description	Setting range
9)	Operation buttons	These buttons are used to perform various operations on files. ☞ Page 441 Recipe information operation When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 440 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

The drives that can be selected differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drives
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	The [Copy] and [Convert] buttons are functional.	All of the operation buttons are functional.*1
○	—	—	The [Copy] and [Convert] buttons are functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	Recipe information cannot be used.	

*1 The current drive cannot be selected as the copy destination, move destination, or conversion destination from non-current drives.

58.3 Recipe information operation

The following operations can be performed on files using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file.
[Move] button	Moves the selected file.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file.
[Rename] button	Renames the selected file.
[CSV/TXT→G3P] button	Converts selected recipe files (G3P) to CSV or Unicode text files.
[G3P→CSV] button and [G3P→TXT] button	Converts selected recipe files (G3P) to CSV or Unicode text files.

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete
- Conversion of a recipe file (G3P) to a CSV or Unicode text file

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Even if the cover of the SD card interface is opened while the GOT is processing files and folders, the processing continues to be executed.

Do not remove the SD card while the SD card access LED is flashing.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce the number of files and folders to 2000 or less by methods such as deleting or moving them.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

■Deleting a read-only file

Read-only files cannot be deleted.

Remove the read-only status and delete the file.

■Changing a file name

You cannot change only the case of the characters in a file name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file name, rename the file to a different name, and then rename the file back to its original name with the case changed.

■Conversion with multiple files selected

Multiple files cannot be converted simultaneously.

Only the last selected file can be converted.

59 [Logging information]

GT37 SoftGOT3000

You can manage the logging files created using the logging function on the GOT.
For details on the logging function, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

■System Screen Operation Restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

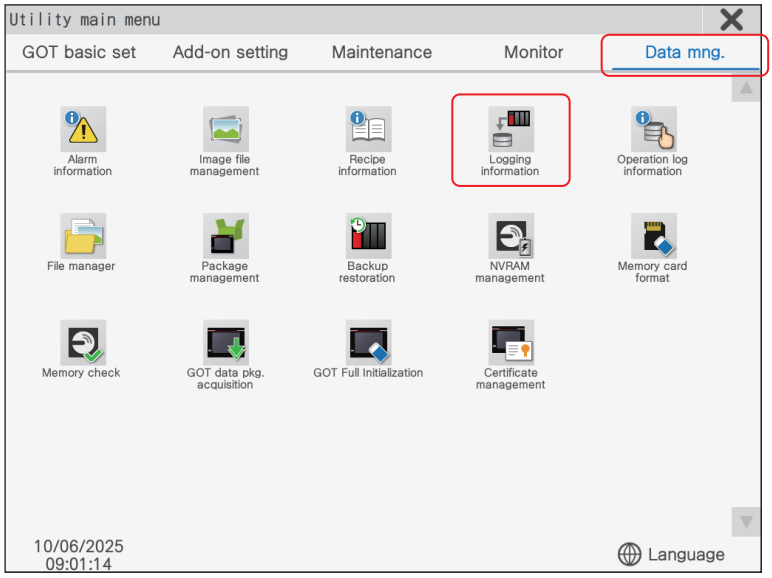
- GS622.b0: Restricts access operations to the drive using the [Logging information] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

■Special Control Function 2 During Specific Application Execution

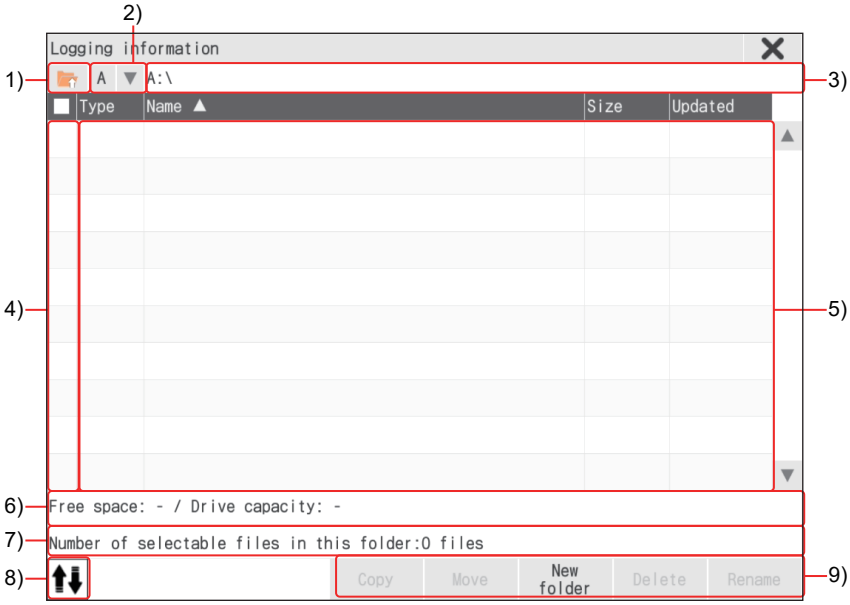
When GS2564.b1 is turned on, button operations are restricted and only viewing is permitted.

59.1 How to display the screen

Select [Logging information] in the [Data mng.] tab.



59.2 [Logging information] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive display		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed. When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	• [A] • [B] • [E] • [F] • [G] <Default: [A]>
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file. To select all files, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the file and folder names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive and files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—
8)	Display switching button		Switches the contents displayed on the operation buttons.	—

Item		Description	Setting range
9)	Operation buttons	These buttons are used to perform various operations on files. ☞ Page 444 [Logging information] screen When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 446 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

The drives that can be selected differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drives
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	The [Copy] and [Convert] buttons are functional.	All of the operation buttons are functional.*1
○	—	—	The [Copy] and [Convert] buttons are functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	Logging information cannot be used.	

*1 The current drive cannot be selected as the copy destination, move destination, or conversion destination from non-current drives.

59.3 Logging information operation

The following operations can be performed on files using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file.
[Move] button	Moves the selected file.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file.
[Rename] button	Renames the selected file.
[G3L→CSV] button and [G3L→TXT] button	Converts selected logging files (G3L) to CSV or Unicode text files.

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete
- G3L logging file conversion to a CSV file or Unicode text file

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Even if the cover of the SD card interface is opened while the GOT is processing files and folders, the processing continues to be executed.

Do not remove the SD card while the SD card access LED is flashing.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce the total number of files and folders to 2000 or less by methods such as deleting or moving them.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

■Deleting a read-only file

Read-only files cannot be deleted.

Remove the read-only status and delete the file.

■Changing a file name

You cannot change only the case of the characters in a file name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file name, rename the file to a different name, and then rename the file back to its original name with the case changed.

■Conversion with multiple files selected

Multiple files cannot be converted simultaneously.

Only the last selected file can be converted.

60 [Operation log information]

GT37 SoftGOT3000

You can manage the operation log files created using the operation log function on the GOT.
For details on the operation log function, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

■Special Control During Specific Function Execution

When GS522.b3 is turned on, all buttons except the [Latest] and [List] buttons are disabled.

■System Screen Operation Restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

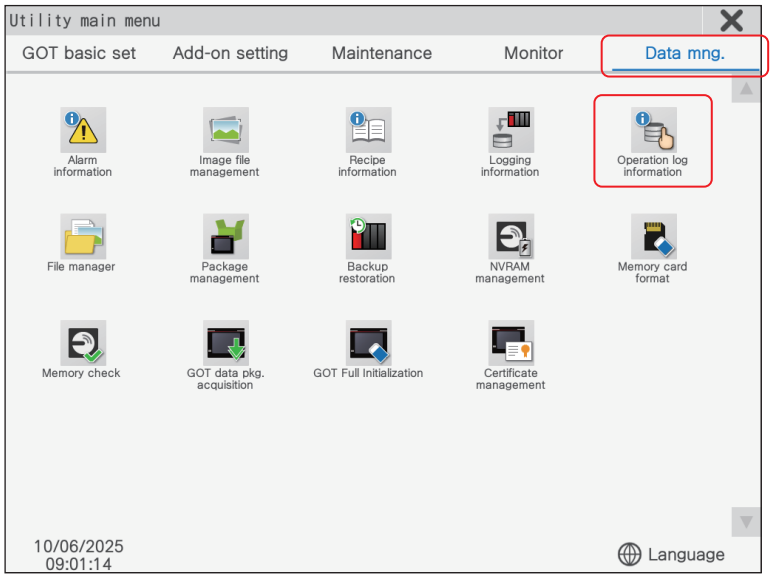
- GS622.b0: Restricts access operations to the drive using the [Operation log information] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

■Date Format Control

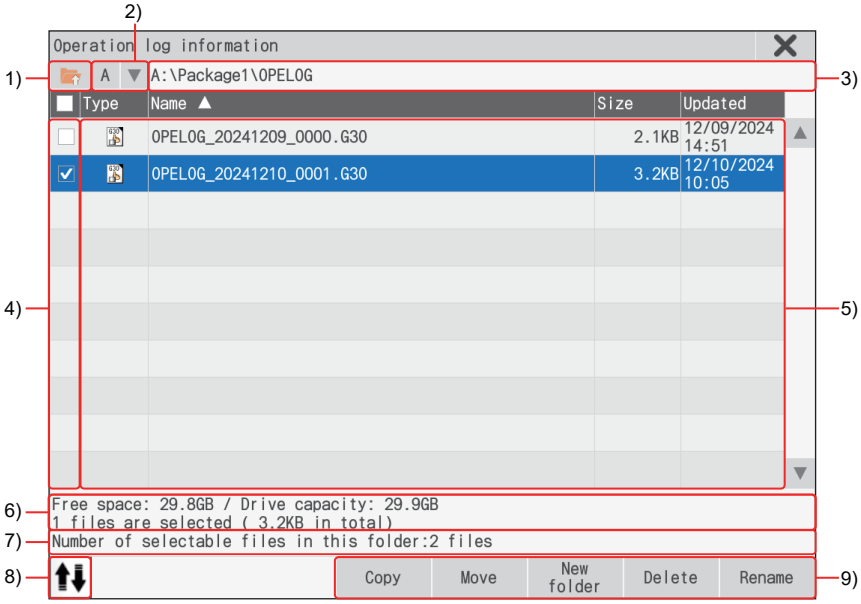
The date format is controlled by turning GS632.b0 and GS632.b1 on and off.
The date format applies to the [Operation Log Data List] screen and the screens displayed from the [Operation Log Data List] screen.

60.1 How to display the screen

Select [Operation log information] in the [Data mng.] tab.



60.2 [Operation log information] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed.	• [A] • [B] • [E] • [F] • [G] <Default: [A]>*1
			When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file. To select all files, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the file and folder names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive and files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—
8)	Display switching button		Switches the contents displayed on the operation buttons.	—

Item		Description	Setting range
9)	Operation buttons	These buttons are used to perform various operations on files. ☞ Page 453 Operation of operation log information When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 452 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

*1 When the save destination for operation logs is set in GT Designer3, the displayed default drive is the one set in GT Designer3.

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

Selectable drives differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drives
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	The [Copy] and [Convert] buttons are functional.	All of the operation buttons are functional.*1
○	—	—	The [Copy] and [Convert] buttons are functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	Operation logs cannot be used.	

*1 The current drive cannot be selected as the copy or move destination from non-current drives.

60.3 Operation of operation log information

The following operations can be performed on files using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file.
[Move] button	Moves the selected file.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file.
[Rename] button	Renames the selected file.
[Latest] button	Displays the latest operation logs in an operation log file (G3O) on the [Operation Log Data List] screen. ☞ Page 455 [Operation Log Data List] screen
[List] button	Displays the selected operation logs in an operation log file (G3O) on the [Operation Log Data List] screen. ☞ Page 455 [Operation Log Data List] screen
[G3O→CSV] button and [G3O→TXT] button	Converts selected operation log files (G3O) to CSV or Unicode text files. When you click the [OK] button and the output confirmation message appears, click the [OK (Detail)] button to output the detailed log file, or click the [OK] button to output the regular log file. The converted file is saved in the same location as the operation log file (G3O).

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete
- Conversion of an operation log file (G3O) to a CSV file or Unicode text file

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Even if the cover of the SD card interface is opened while the GOT is processing files and folders, the processing continues to be executed.

Do not remove the SD card while the SD card access LED is flashing.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce their total number to 2000 or less by deleting or moving them, or by other methods.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

■Deleting a read-only file

Read-only files cannot be deleted.

Remove the read-only status and delete the file.

■Changing a file name

You cannot change only the case of the characters in a file name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file name, rename the file to a different name, and then rename the file back to its original name with the case changed.

■Conversion with multiple files selected

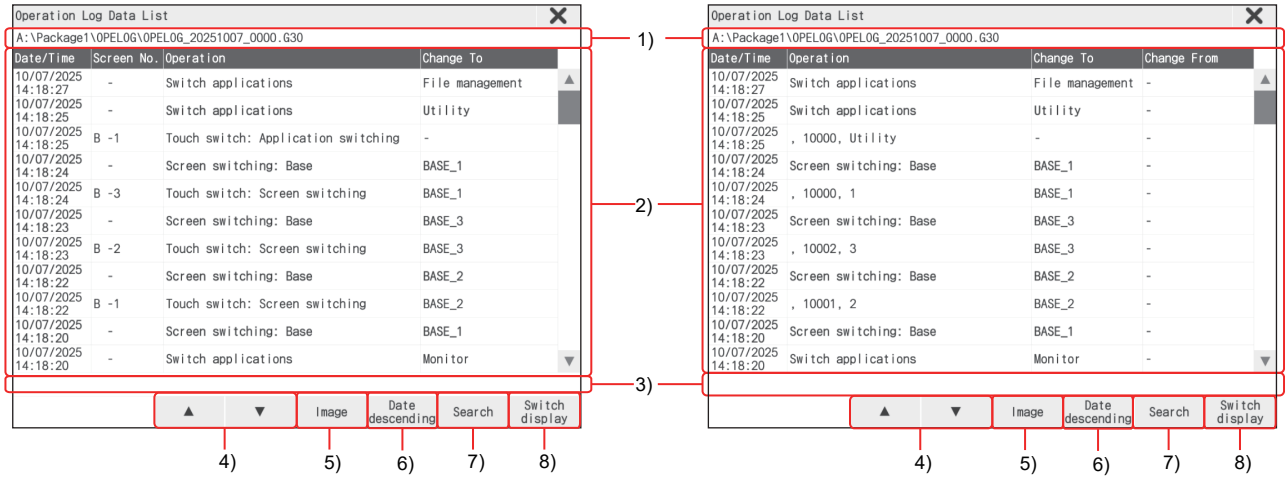
Multiple files cannot be converted simultaneously.

Only the last selected file can be converted.

60.3.1 [Operation Log Data List] screen

The contents of the operation log can be displayed in a list.

Touch the [Switch display] button to switch the displayed contents.



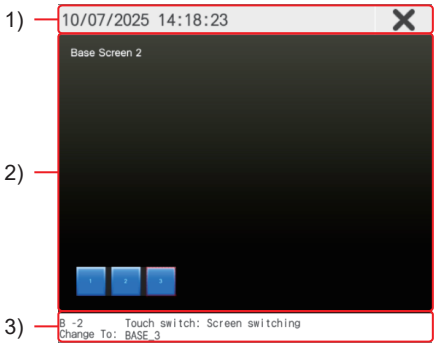
Display type 1 Display type 2

Item			Description
1)	Operation log file (G3O) display		Displays the path to the currently displayed operation log (G3O).
2)	Operation log list		Displays the contents of the operation log in a list. When touched once, the row is highlighted, and part of the detailed information is displayed in the operation log information. If the displayed content for each item exceeds the display range, the entire content is displayed by scrolling. Touching the highlighted row again displays the [Detailed information] screen. ☞ Page 459 [Detailed information] screen
	Display type 1	[Date/Time]	Displays the date and time of the operation.
		[Screen No.]	Displays the operated screen number as the screen type and screen number. If there is no screen number, a hyphen (-) is displayed. The following formats are used to display the screen types. • Base screen: B • Overlap window 1: O1 • Overlap window 2: O2 • Overlap window 3: O3 • Overlap window 4: O4 • Overlap window 5: O5 • Superimpose window 1: S1 • Superimpose window 2: S2 • Dialog: D • Key window: K • Operation panel: P • Mobile screen: M*1
		[Operation]	Displays the operation contents.
		[Change To]	Displays the value after an operation or setting change. (Value after the change)
	Display type 2	[Date/Time]	Displays the date and time of the operation.
		[Operation]	Displays the name set for the operation. Note that the name is set in GT Designer3 and remains unchanged when the system language is switched. If the name is not set in GT Designer3, the operation type is displayed.
		[Change To]	Displays the value set by the user on the GOT. (Value after the change (operation)) If the value after the change (operation) is not the output target, the value after the change is displayed. If the value after the change is not the output target and the operation log indicates operator authentication, the operator name (operator ID) is displayed. Otherwise, a hyphen (-) is displayed.
		[Change From]	Displays the value displayed on the object before the change. (Value before change (display)) If there is no "value before the change (display)", the "value after the change", which is the value before the operation or setting change, is displayed.

Item		Description
3)	Operation log information	Displays part of the detailed information of the operation log. The displayed contents vary depending on the following settings. • Display type of the [Operation Log Data List] screen • Security mode • [Access Level] settings If the displayed content exceeds the display range, the excess part is not displayed.
	Display type 1	The following sets of information are displayed as normal operation log information. • Operation name [Device] • Operator name (operator ID) If no name is set in GT Designer3, a hyphen (-) is displayed.
	Display type 2	The following sets of information are displayed as normal operation log information. • Screen No. Operation type [Device] • Operator name (operator ID)
4)	[▲] button, [▼] button	Moves the highlighted display position up or down. If the highlighted row falls outside the display range of the operation log list, the contents of the operation log list are displayed so that the highlighted row is the top or bottom row.
5)	[Image] button	Touching this button displays the screen image viewer window. Scaled-down images of the screens for the selected operation log data are displayed in the screen image viewer window. ☞ Page 457 Screen image viewer window
6)	[Date descending] button, [Date ascending] button	Switches the display order of the operation log list between ascending and descending based on the date and time. Since the highlighted display position remains unchanged, the highlighted row may not be displayed in the operation log list when the display order is switched between descending and ascending.
7)	[Search] button	Displays the [Conditions] screen. Specify a date and time to search the operation logs. ☞ Page 460 [Conditions] screen
8)	[Switch display] button	Switches the display format of the [Operation Log Data List] screen. If the highlighted row falls outside the display range of the operation log list, the highlight is canceled. If the [Detailed information] screen is displayed, the screen closes.

*1 Common to the base screen (GOT Mobile), overlap windows 1 to 2 (GOT Mobile), and superimpose windows 1 to 2 (GOT Mobile)

Screen image viewer window



Item		Description
1)	Title bar	Displays the date and time of the operation log selected on the [Operation Log Data List] screen.
2)	Screen image area	Displays scaled-down images of the screens for the operation log data selected on the [Operation Log Data List] screen. The size of the scaled-down image is half the original screen resolution in both width and height. In GT SoftGOT3000, the screen size may be scaled-down to 1/4 of the original screen resolution.
		• When the selected operation log is a log of an object operated on the screen, the object will be highlighted in a red dotted line (target object frame). • If the selected operation log is not the log for the operated screens, [No screens] is displayed in the screen image area. • When the operation type of the selected log is [Screen switch] and the log is for operations other than closing windows, the screen after switching is displayed in the screen image area. • When the operation type of the selected log is [Screen switch] and the log is for closing window operations, [No screens] is displayed in the screen image area.
3)	Selected information area	Displays the following information of the selected operation log on the [Operation Log Data List] screen. • Row 1: [Screen No.], [Operation] • Row 2: [Change To]

■Displayed objects

The following shows the objects displayed in the screen image area.

Object	Remarks
Numerical display	—
Text display object	—
Comment display	• When comment display (bit) is set to [Text display], the comments displayed in the screen image area change to match settings. In the situation above, the comment group number (changed by specifying a device) is reflected in the screen image area. • Comments set to [Hold] are not displayed. • The settings of Comment Display Start Row and Number of Comment Display Rows are not reflected in the screen image area.
Time display	—
Numerical input	—
Text input object	—
When on and off shapes are set, the off shape is displayed.	When on and off shapes are set, the off shape is displayed.
Parts display	• The setting of the mark is reflected. • The display settings of parts that are set to [Hold] are not displayed. • Image files and screens with [Indirect Device] or [Hold] display settings are not displayed. • Image files stored on a data storage as a part are not displayed. • Parts set as move animations are not displayed.
Touch switch	When on and off shapes are set, the off shape is displayed.
Panel meter	When the device to be monitored is not set, panel meter scale values are not displayed.
Line graph	When the device to be monitored is not set, line graph scale values are not displayed.
Horizontal bar chart	—
Pie chart	—
Bar chart	When the device to be monitored is not set, bar chart scale values are not displayed.
Scatter diagram	When the device to be monitored is not set, scatter diagram scale values are not displayed.
Trend graph	—
Historical data list display	—
Alarm display	—
Slider	• The slider bar is not displayed. • When the device to be monitored is not set, slider scale values are not displayed.
Graphical meter	—
Recipe display (record list)	—

Precautions

■Changing settings after operation log collection

When the settings are changed after the operation logs are collected, the current settings are reflected in the screen image area.

■Objects displayed in the screen image area

All objects are displayed in the screen image area regardless of the security settings or operation settings.

Objects are displayed even if the device to be monitored is an unset object or communication is not established.

■Objects with placement limits

Even if there is a limit to the number of objects that can be placed on one screen, all objects set in the project are displayed in the screen image area regardless of the limit.

The actual GOT screen may differ from the contents in the screen image area, so delete any objects that cannot be displayed.

■Incorrectly displayed target object frame

The red dotted line (target object frame), which indicates the operated object, is displayed depending on the screen number, object ID, and whether the object is subject to operation logs.

A red dotted line may appear around the wrong object in the following situations:

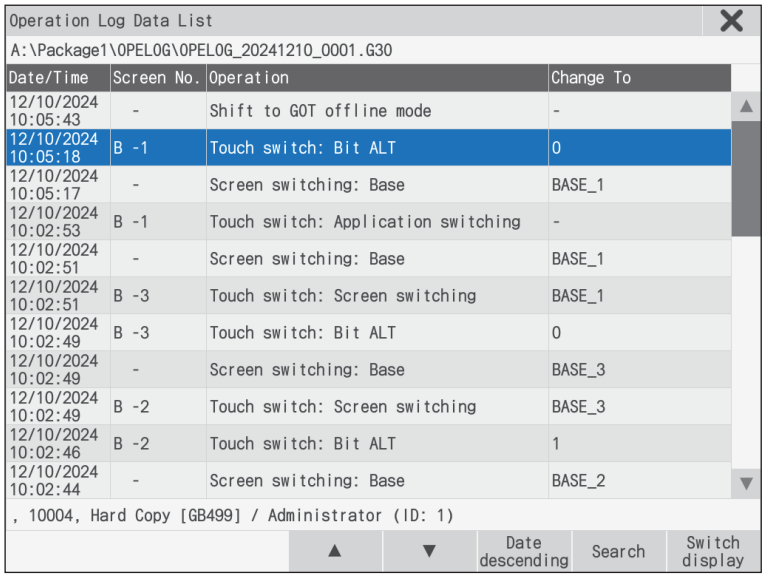
- When changes are made to the project after operation logs have been collected
- When there are multiple objects on the same screen with the same object ID

[Detailed information] screen

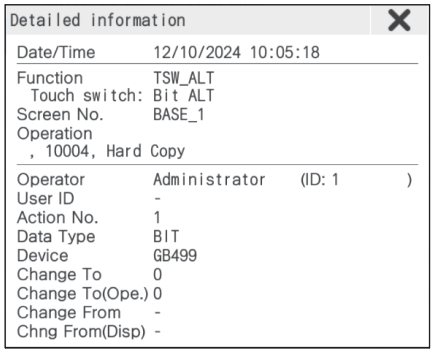
Displays detailed information about the operation log.

Operating procedure

1. Touch the operation log on the [Operation Log Data List] screen to highlight the log.

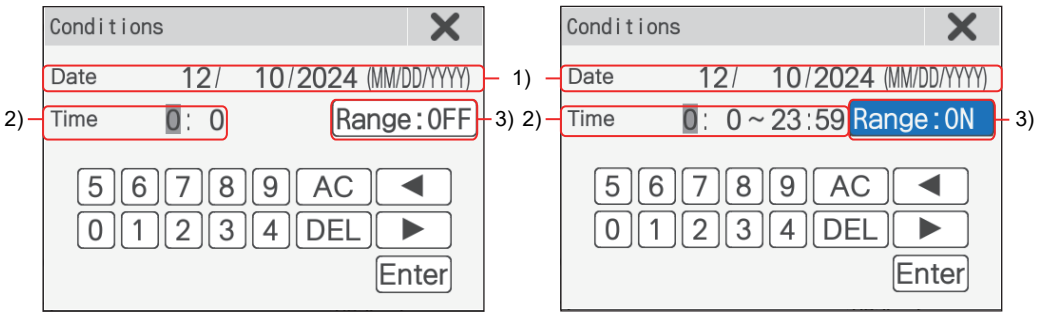


2. Touch the highlighted log again to display its [Detailed information] screen.



[Conditions] screen

Specify the date and time to search the operation logs displayed on the [Operation Log Data List] screen.

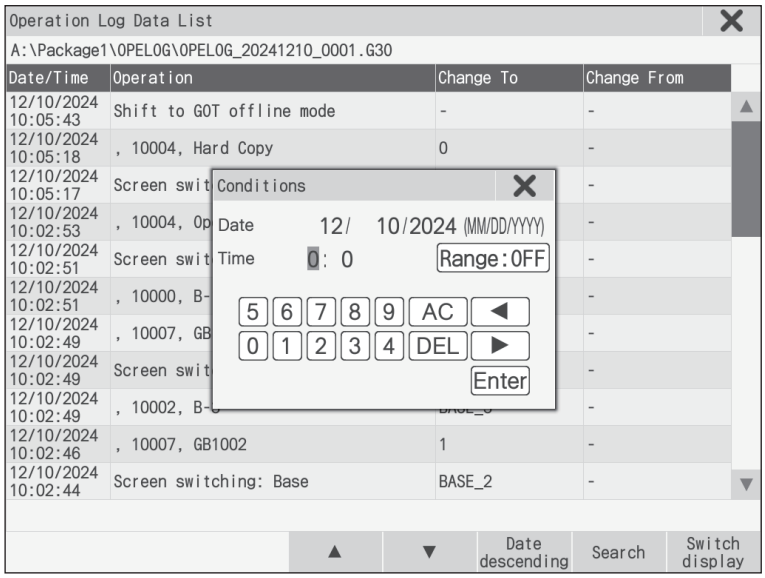


Range specification is off　　Range specification is on

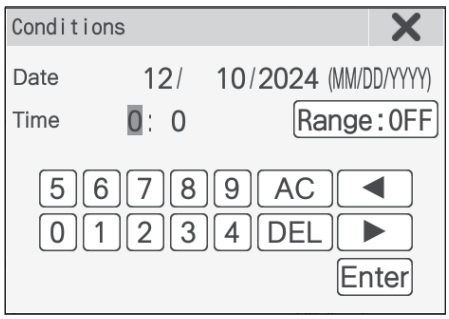
Item		Description	Setting range
1)	[Date]	Set the date and time of the operation log to be searched.	• Year: [2000] to [2099] • Month: [1] to [12] • Day: [1] to [31] <Default: Current date and time>
2)	[Time]	Set the time of the operation log to be searched. If specifying a range, set the start time and end time.	• Hour: [0] to [23] • Minute: [0] to [59] <Default: [0]>
3)	[Range: OFF] button, [Range: ON] button	Switches between specifying and not specifying a range for [Time]. When a time range is specified, the operation logs within the range can be searched.	—

Operating procedure

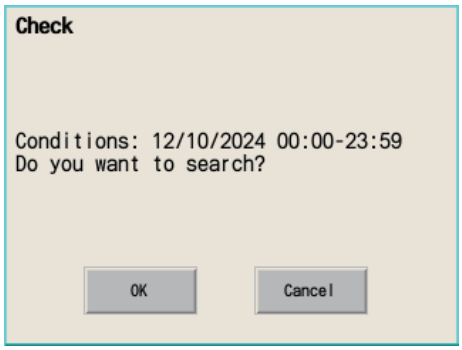
1. Touch the [Search] button on the [Operation Log Data List] screen to display the [Conditions] screen.



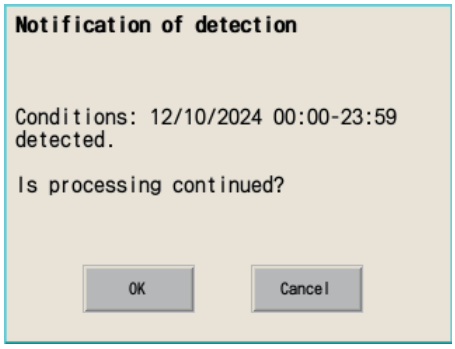
2. Set the search conditions on the [Conditions] screen.



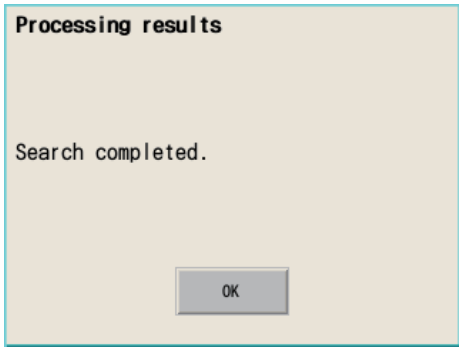
3. Touch the [Enter] button on the [Conditions] screen to display the confirmation screen.
Touch the [OK] button to execute the search.



4. The search result is displayed.
To continue the search, touch the [OK] button.
To complete the search, touch the [Cancel] button.



5. When the search is complete, a completion dialog appears.
Touching the [OK] button closes the dialog box.



61 [Alarm information]

GT37 SoftGOT3000

You can manage the alarm log files created using the alarm function on the GOT.
For details on the alarms, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
📖GT Designer3 (GOT2000) Screen Design Manual

■System Screen Operation Restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

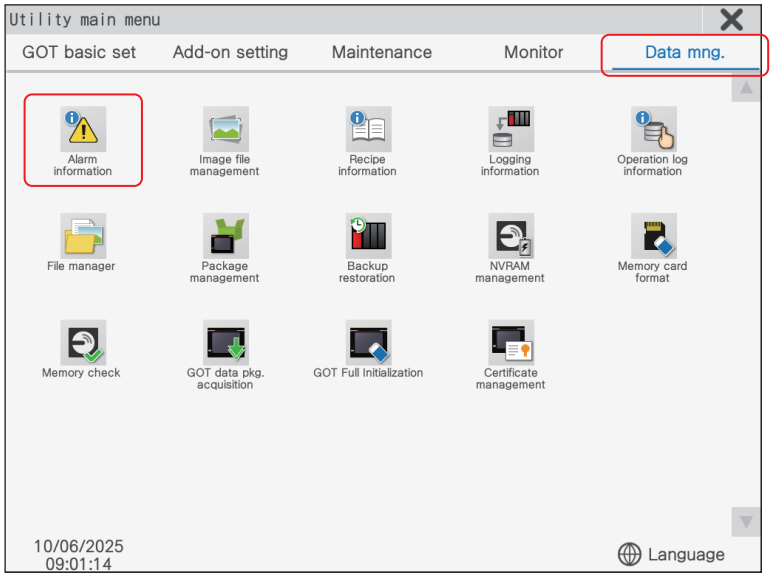
- GS622.b0: Restricts access operations to the drive using the [Alarm information] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

■Special Control Function 2 During Specific Application Execution

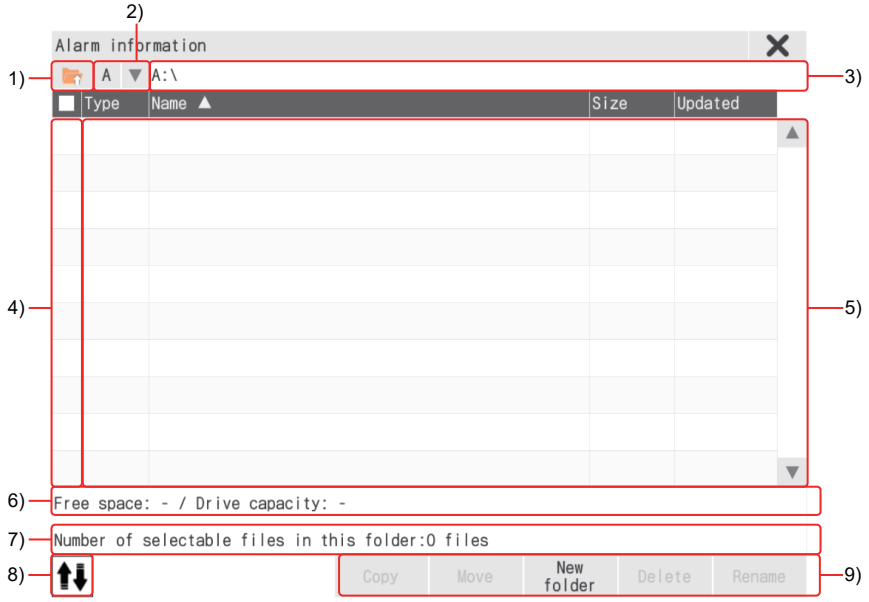
When GS2564.b2 is turned on, button operations are restricted and only viewing is permitted.

61.1 How to display the screen

Select [Alarm information] in the [Data mng.] tab.



61.2 [Alarm information] screen



Item			Description	Setting range
1)	Move-to-parent folder button		Moves to the parent folder.	—
2)	Drive display		Set a drive from the list. When a drive is set, the files and folders on the drive are displayed. When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading] or [Current drive writing]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	• [A] • [B] • [E] • [F] • [G] <Default: [A]>
3)	Drive and folder path display		Displays the path to the drive or folder that stores the currently listed files or folders. If the number of characters in the path exceeds the limit, only the characters within the limit are displayed. For details on character strings usable for files and folders, refer to the following. ☞ Page 429 Character strings usable for files and folders	—
4)	Checkbox		Select a checkbox to select a file. To select all files, select the top checkbox.	—
5)	File list	[Type]	Displays the file and folder icons.	—
		[Name]	Displays the file and folder names. For details on the folder names and file names displayed in the file list, refer to the following. ☞ Page 429 File and folder names displayed in the file list	—
		[Size]	Displays the file size. This item is not displayed for folders.	—
		[Updated]	Displays the updated date and time of each file or folder.	—
6)	Drive information		Displays the information of the drive and files. The following information is displayed. • Available space and capacity of the selected drive • Number of selected files and their total size	—
7)	Number of selectable files		Displays the number of selectable files in the folder.	—
8)	Display switching button		Switches the contents displayed on the operation buttons.	—

Item		Description	Setting range
9)	Operation buttons	These buttons are used to perform various operations on files. ☞ Page 466 Alarm information operation When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 465 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2) If you manipulate a file or folder with an operation button while the GOT is accessing another file (such as alarm data), the GOT completes the current process and then your manipulation is processed. Therefore, it may take some time for the manipulation to be processed.	—

Point

Displaying the file list

The file list will not be updated if files are created or updated while the list is displayed.

To update the list, move one of the files to a higher-level folder, then display the source folder again.

Differences in selectable drives depending on operator rights (when the security mode is mode 2)

The drives that can be selected differ depending on operation rights.

The current drive refers to the drive the project is running on.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Selectable drives	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	Current drive	Non-current drives
○	○	○	Selectable	
○	○	—	Selectable	Not selectable
○	—	○	Selectable	
○	—	—	Selectable	Not selectable
—	○	○	Selectable	
—	○	—	Selectable	Not selectable
—	—	○	Not selectable	Selectable
—	—	—	The file manager cannot be used.	

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

The available operation buttons differ depending on the operation rights.

The current drive refers to the drive where the project is running.

○: Operation rights possessed

—: Operation rights not possessed

Operator operation rights			Functional operation buttons	
[Current drive reading]	[Current drive writing]	[Non-current drive reading/writing]	When the current drive is selected	When a non-current drive is selected
○	○	○	All of the operation buttons are functional.	
○	○	—	All of the operation buttons are functional.	None of the operation buttons are functional.
○	—	○	The [Copy] and [Convert] buttons are functional.	All of the operation buttons are functional.*1
○	—	—	The [Copy] and [Convert] buttons are functional.	None of the operation buttons are functional.
—	○	○	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	All of the operation buttons are functional.
—	○	—	The [Move], [New folder], [Delete], and [Rename] buttons are functional.	None of the operation buttons are functional.
—	—	○	None of the operation buttons are functional.	All of the operation buttons are functional.
—	—	—	Alarm information cannot be used.	

*1 The current drive cannot be selected as the copy and move destination from non-current drives.

61.3 Alarm information operation

The following operations can be performed on files using the operation buttons.

Operation buttons	Operation
[Copy] button	Copies the selected file.
[Move] button	Moves the selected file.
[New folder] button	Creates a new folder.
[Delete] button	Deletes the selected file.
[Rename] button	Renames the selected file.
[G3A→CSV] button and [G3A→TXT] button	Converts selected alarm log files (G3A) to CSV or Unicode text files.

Precautions

■Files larger than 2 GB

If the file size is larger than 2 GB, the following operations cannot be performed.

- Copy
- Move
- Delete
- G3A alarm log file conversion to a CSV file or Unicode text file

Connect the data storage to the personal computer to perform these operations.

■Precautions when using an SD card

Even if the cover of the SD card interface is opened while the GOT is processing files and folders, the processing continues to be executed.

Do not remove the SD card while the SD card access LED is flashing.

■Maximum number of files and folders displayable in the list

Up to 2000 files and folders stored in the same path are displayable in the list.

If the number of files and folders stored in the same path is 2001 or more, the overflow files and folders are not displayed.

You cannot select or sort the overflow files and folders.

To display all files and folders, reduce the total number of files and folders to 2000 or less by methods such as deleting or moving them.

■Overwriting a read-only file

Read-only files cannot be overwritten.

If the copy destination folder has a read-only file with the same name, rename the file before copying it.

■Moving a read-only file

Read-only files cannot be moved.

Remove the read-only status and move the file.

■Deleting a read-only file

Read-only files cannot be deleted.

Remove the read-only status and delete the file.

■Changing a file name

You cannot change only the case of the characters in a file name.

Ex.

Before change		After change
JANUARY	→	january
january	→	JANUARY
january	→	January

To change only the case of the characters in a file name, rename the file to a different name, and then rename the file back to its original name with the case changed.

■Conversion with multiple files selected

Multiple files cannot be converted simultaneously.

Only the last selected file can be converted.

62 [Package management]

GT37 SoftGOT3000

A list of the packages stored on each drive can be displayed.
It is also possible to check whether the data of system applications, communication drivers, and projects contained in packages is corrupt.
For information on the configurable settings, refer to the following.
☞ Page 469 [Package management] screen

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

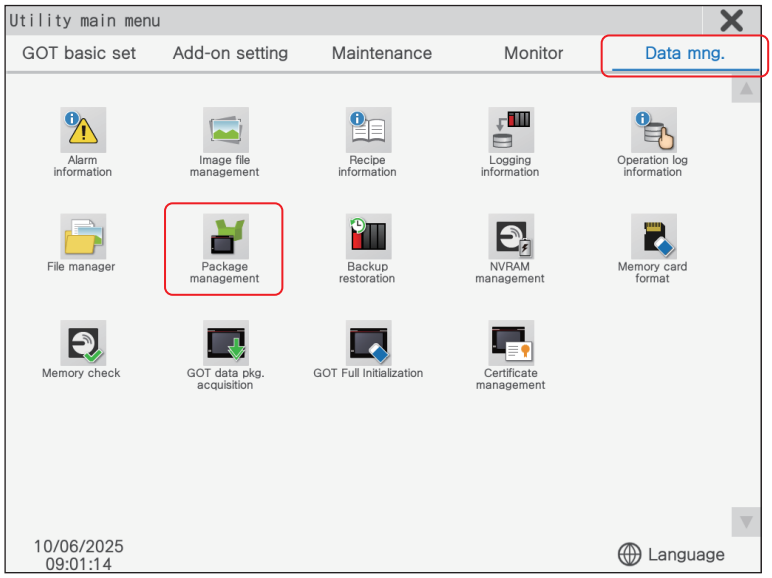
■System screen operation restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

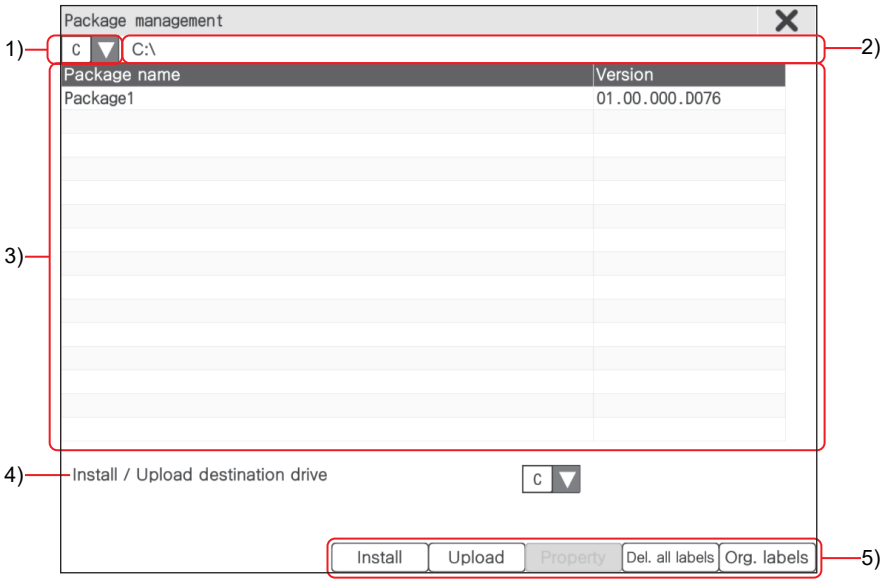
- GS622.b1: Restricts the display of the [Package management] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

62.1 Screen display procedure

Select [Package management] in the [Data mng.] tab.



62.2 [Package management] screen



Item			Description	Setting range
1)	Drive		Select the drive you want to display in the list view. All the packages on the selected drive will be listed.	• [A] • [B] • [C] • [E] • [F] • [G] <Default: [A]>
			When the security mode is set to mode 1, the [C] drive is always displayed. The other drives are displayed only when they are usable.	
			When the security mode is mode 2, the drives that are displayed differ depending on the operation rights of the operator. • When an operator has operation rights for [Current drive reading]: Current drive • When an operator has operation rights for [Non-current drive reading/ writing]: Drives other than the current drive	
2)	Path		Displays the path of the file displayed in the package list.	—
3)	Package list	[Package name]	Displays the package name.	—
		[Version]	Displays the package version.	—
4)	[Install / Upload destination drive]		Set the destination drive for installing or uploading packages.	• [A] • [B] • [C] • [E] • [F] • [G] <Default: [A]>

Item			Description	Setting range
5)	Operation buttons	—	These buttons are used to perform various operations on packages. When the security mode is mode 2, the operations of the buttons differ depending on the operation rights of the operator. For details on the operations of the operation buttons, refer to the following. ☞ Page 470 Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)	—
		[Install] button*1	Not available for GT SoftGOT3000. Touch this button to install the packages written to the drive selected for [Install / Upload destination drive]. During installation, communication from GT Designer3 to the GOT cannot be performed.	—
		[Upload] button*1	Not available for GT SoftGOT3000. Touch this button to upload a package to a drive other than drive C.	—
		[Property] button	Not available for GT SoftGOT3000. Touch this button to display the [Property] screen. For details on the [Property] screen, refer to the following. ☞ Page 472 [Property] screen	—
		[Delete all labels] button	Touch this button to delete all label name resolution information. For details on label name resolution information, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual	—
		[Sort out labels] button	Touch this button to delete unused label name resolution information. For details on label name resolution information, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual	—

*1 If the data transfer security settings have been configured for the package, enter the password set for the data transfer security settings.
For details on data transfer security settings, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

Difference in the operation of operations buttons depending on operator rights (when the security mode is mode 2)

○: Operation rights possessed

—: Operation rights not possessed

Operation rights		Operation
[GOT settings in the utility]	[Startup package data reading/writing / F/W update]	
—	—	Not all operation buttons are displayed.
○	—	All operation buttons are displayed. The [Delete all labels] button and [Sort out labels] button can be operated.
—	○	All operation buttons are displayed. All operation buttons are operational.
○	○	All operation buttons are displayed. All operation buttons are operational.

Precautions

■If package installation fails:

If package installation fails, the following are possible causes.

Causes
The package data to be installed does not exist.
The package data to be installed is broken.
The install destination memory card is not mounted.
The available capacity in the install destination memory card is insufficient.
The GOT type does not match between the project data to be installed and the installation destination.
The installation destination memory card is write-protected.
The memory card was removed during installation of the project data or system package, resulting in an error in the installation process.

■If uploading the package fails:

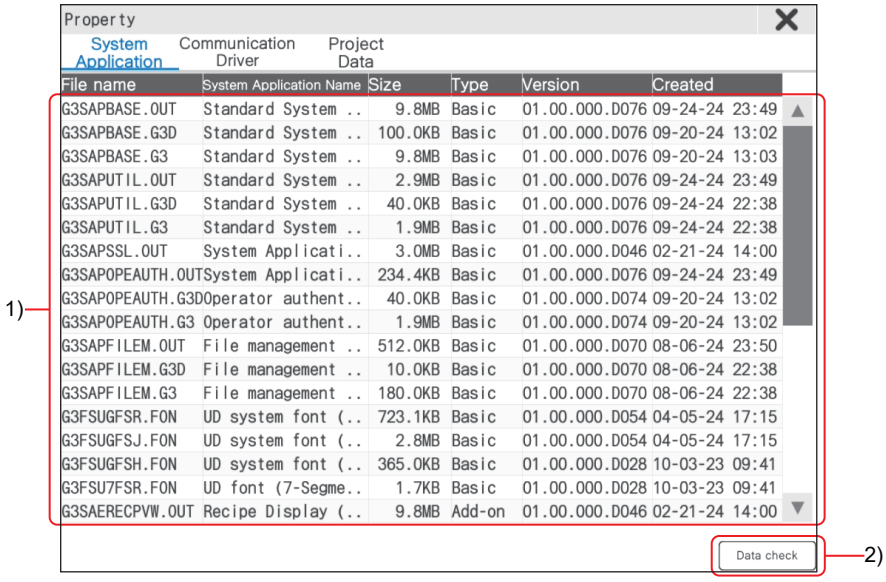
If uploading the package fails, the following are possible causes.

Causes
The upload source is drive A and the SD card cover is open.
The specified file does not exist.
The upload destination memory card is write-protected.
The available capacity in the upload destination memory card is insufficient.
The upload destination memory card was removed during the upload process, interrupting the access.

62.2.1 [Property] screen

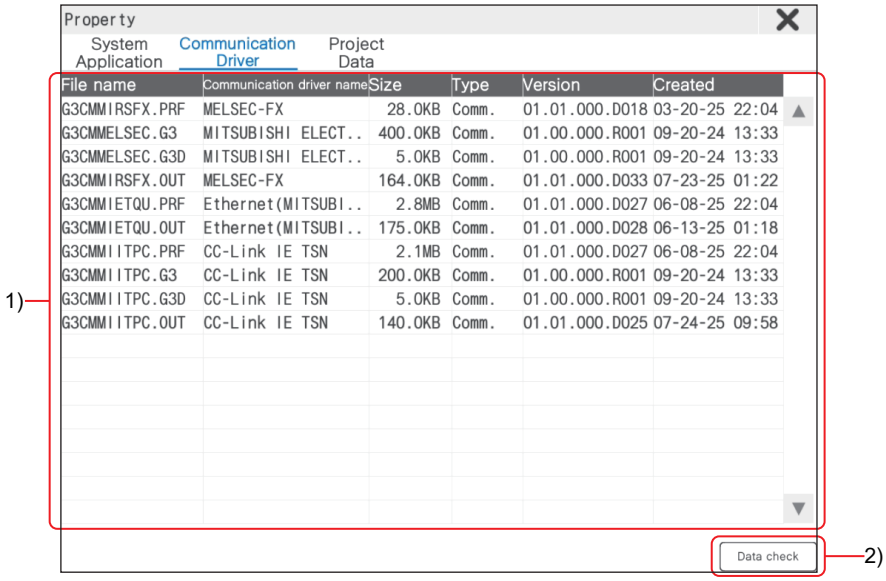
☞ Page 472 [System Application] tab
☞ Page 473 [Communication driver] tab
☞ Page 474 [Project Data] tab

[System Application] tab



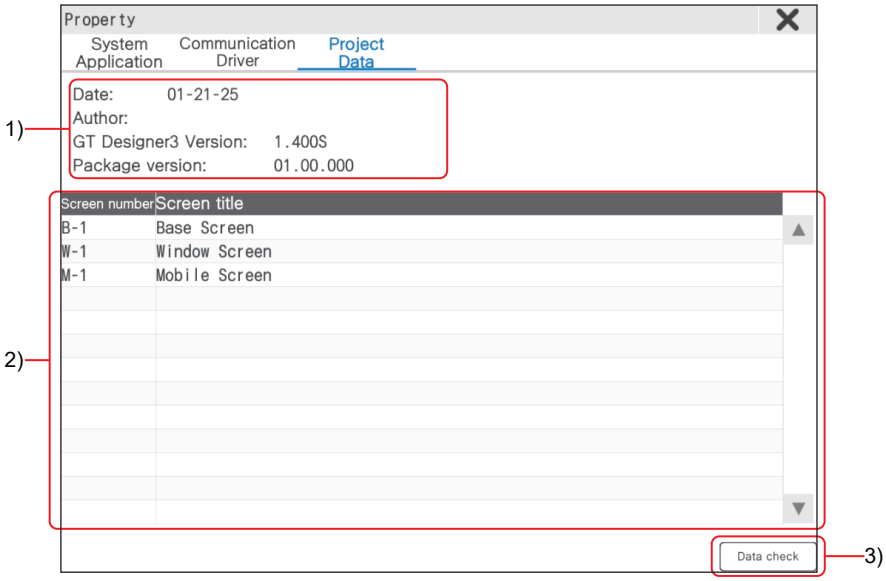
Item			Description
1)	System application list	—	The files in the [G3SYS] folder of the package selected in the [Data mng.] screen are listed.
		[File name]	Displays the system application file name.
		[System Application Name]	Displays the system application name.
		[Size]	Displays the system application size.
		[Type]	Displays the system application type. [Basic] is displayed for the basic system application. [Add-on] is displayed for the add-on application.
		[Version]	Displays the package version.
		[Created]	Displays the generated date and time found in the system application master file.
2)	[Data check] button		Touch this button to check whether the file data of a file selected in the system application list is normal. If the selected file fails the data check, the file may be corrupt. Re-install the system application if it fails the data check.

[Communication driver] tab



Item			Description
1)	Communication driver list	—	The files in the [G3COM] folder of the package selected in the [Data mng.] screen are listed.
		[File name]	Displays the communication driver file name.
		[Communication driver name]	Displays the communication driver name.
		[Size]	Displays the communication driver size.
		[Type]	Displays the communication driver type. The only type that will be displayed is "Communication".
		[Version]	Displays the package version.
		[Created]	Displays the generated date and time found in the system application master file.
2)	[Data check] button		Touch this button to check whether the file data of a file selected in the communication driver list is normal. If the selected file fails the data check, the file may be corrupt. Re-install the communication driver if it fails the data check.

[Project Data] tab



Item			Description
1)	Project data information	[Date]	Displays the date the project data was created.
		[Author]	Displays the author of the project data.
		[GT Designer3 Version]	Displays the GT Designer3 version that the project data was written with.
		[Package version]	Displays the package version.
2)	Project data list	—	Displays the [Screen number] and [Screen title] for the following screens set in GT Designer3: • Base screen • Window screen • Mobile screen
		[Screen number]	Displays the screen number for each screen as follows: • Base screen: B-xx • Window screen: W-xx • Mobile screen: M-xx The "xx" after the hyphen (-) indicates the screen number.
		[Screen title]	Displays the screen title for each screen.
3)	[Data check] button		Touch this button to check whether the project data is normal. If the selected file fails the data check, the file may be corrupt. Re-install the project data if it fails the data check.

63 [Backup/restoration function]

GT37 SoftGOT3000

The setting data of controllers connected to the GOT (PLC programs, parameters, setting values, etc.) can be saved (backed up) to a data storage with this function.
The settings saved on the GOT can also be restored to the controller, which is useful for restoration during controller maintenance or when problems occur.

Point

Use the GOT data package acquisition function to backup GOT setting data.
For details on the GOT data package acquisition function, refer to the following.
☞ Page 576 [GOT data pkg. acquisition]

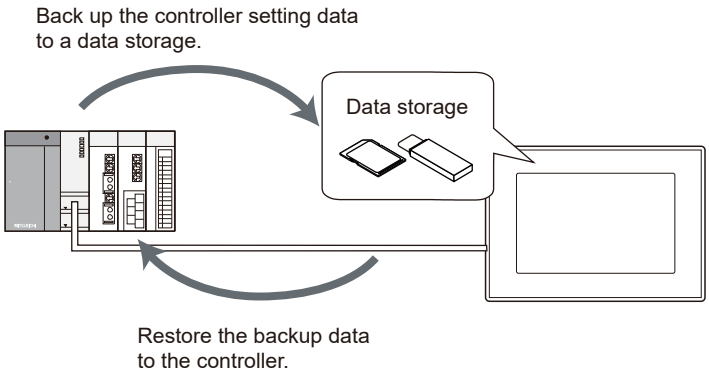
☞ Page 476 Backup/restoration features
☞ Page 478 Requirements for backup/restoration
☞ Page 479 Controllers that can be backed up/restored
☞ Page 487 System configurations for backup/restoration
☞ Page 498 Data to be backed up/restored
☞ Page 509 Data created during backup/restoration and the save destination
☞ Page 513 Security and password
☞ Page 518 Trigger backup
☞ Page 529 Network batch backup/restoration
☞ Page 535 How to display the screen
☞ Page 541 Backup/restoration function: Main menu
☞ Page 543 [Backup function: Select CPU No.] screen
☞ Page 544 [Backup function: Progress] screen
☞ Page 545 [Restoration function: Data list] screen
☞ Page 546 [Restoration function: Progress] screen
☞ Page 547 [Backup/restoration function: Edit device list] screen
☞ Page 548 [Restoration function: Device selection] screen
☞ Page 549 [Restoration func.: Individual (Q17nNC)] screen
☞ Page 550 Backup Data Conversion Tool
☞ Page 555 Precautions
☞ Page 564 Errors and corrective actions

63.1 Backup/restoration features

This section describes the backup/restoration function.

Using storage devices to reduce downtime

Controllers connected to the GOT can be backed up using only the GOT.
By backing up the setting information of the connected controller to the GOT, setting information can be restored from the connected GOT even if the connected controller is replaced due to a malfunction. This makes it easy to restore the system.

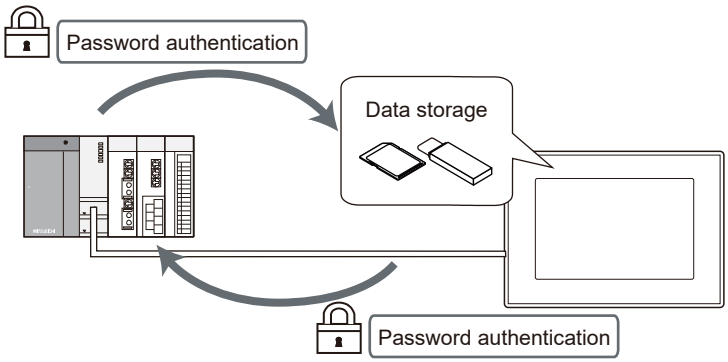


Creating the same system without a personal computer

By restoring the backed up setting information to another controller in the system, the same system can be created without using a computer.

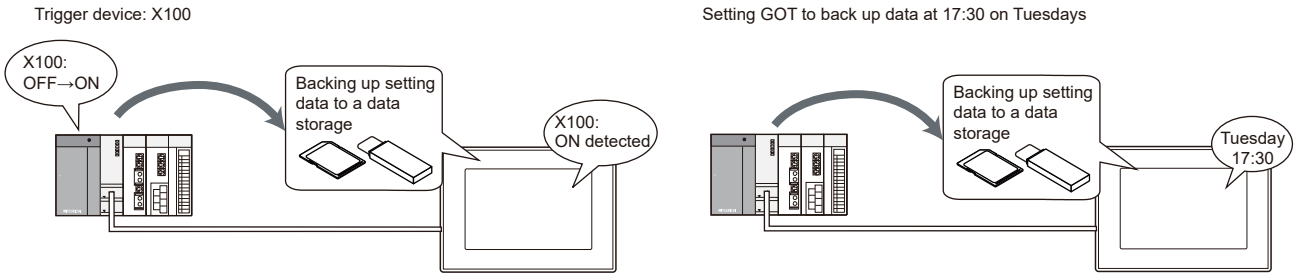
Improving security

When the backup/restoration function is used, browsing and changing setting data is restricted by a password to improve security.



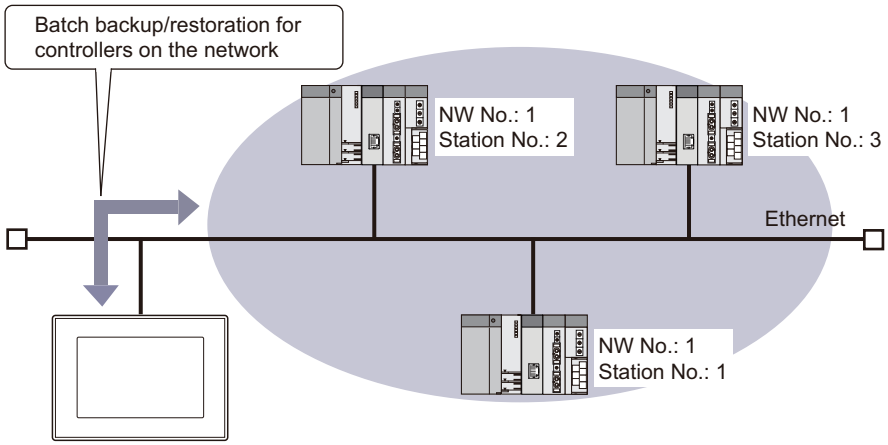
Automatically backing up data using a trigger

By setting a trigger device or the day and time, controller setting data can be backed up automatically at a preferred time.
By controlling the backup with the set trigger device, the GOT can automatically back up setting data for controllers after the data are changed.
By setting the day and time, the GOT can back up setting data for controllers periodically.



Batch backup/restoration of multiple controllers

Multiple controllers on the network can be backed up and restored at once on each channel.
Target controllers for the backup/restoration can be specified per station.
☞ Page 529 Network batch backup/restoration



Retaining file register information at restoration

When executing restoration, you can select whether or not to retain the file registers stored on the PLC CPU.
Set whether to retain the file register in the GOT utility or GT Designer3.
For details, refer to the following.
☞ Page 149 [Backup restoration]
📖GT Designer3 (GOT3000) Screen Design Manual

Precautions

The file register is not retained when restoring MELSEC-Q series PLC CPUs (QCPUs) if the save destination for the file register is set to the PLC CPU memory card ROM (flash card).
To retain the QCPU file register during restoration, set the save destination to a location other than the memory card ROM (flash card).

63.2 Requirements for backup/restoration

GT37 SoftGOT3000

This section describes the requirements for using the backup/restoration function.

☞ Page 478 Required hardware
☞ Page 478 System applications (add-on functions)
☞ Page 478 Required software (when backing up CNC C70 series onward)
☞ Page 478 Usable hardware

Required hardware

A data storage (SD card, USB memory, etc.) is required for backup/restoration.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series(GOT-A-0233)

System applications (add-on functions)

■Required system applications (add-on functions)

For the required system applications (add-on functions), refer to the following.

- [Backup/restoration]

■Installing system applications (add-on functions)

Write the package data that contains the system applications (add-on functions) for the backup/restoration function to the GOT.

For information on how to write package data to the GOT, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System application (add-on function) size

There needs to be enough space in the user area to install the system applications (add-on functions) on the GOT.

For information on how to check the available space of the user area and data sizes, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Required software (when backing up CNC C70 series onward)

The Remote Monitor Tool is required to restore the C language module backed up from the CNC C70 series.

■How to obtain the software

Consult your local sales office.

■Operating environment

For the software operating environment, refer to the following.

📖MITSUBISHI CNC C70 / C64 Series Remote monitor tool Operating Manual

■How to install the software

For the installation instructions, refer to the following.

📖MITSUBISHI CNC C70 / C64 Series Remote monitor tool Operating Manual

Usable hardware

A USB mouse can be used.

For the devices whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

📖List of Validated Devices for the GOT3000 Series(GOT-A-0233)

63.3 Controllers that can be backed up/restored

GT37 SoftGOT3000

The following controllers can be backed up/restored using the backup/restoration function.

☞ Page 479 PLC CPU
☞ Page 482 Computerized numerical controllers (CNCs)
☞ Page 483 Motion CPU
☞ Page 485 Robot controller
☞ Page 485 Servo amplifier
☞ Page 486 Inverter

63.3.1 PLC CPU

GT37 SoftGOT3000

☞ Page 479 MELSEC iQ-R series
☞ Page 479 MELSEC iQ-F series
☞ Page 479 MELSEC-Q series
☞ Page 481 MELSEC-L series
☞ Page 481 MELSEC-F series

MELSEC iQ-R series

Model	Reference	
	System configuration	Target data
R00CPU R01CPU R02CPU R04CPU R08CPU R16CPU R32CPU R120CPU	☞ Page 488 PLC CPU	☞ Page 498 MELSEC iQ-R series
R08PCPU*1 R16PCPU*1 R32PCPU*1 R120PCPU*1	☞ Page 488 PLC CPU	☞ Page 498 MELSEC iQ-R series
R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	☞ Page 488 PLC CPU	☞ Page 498 MELSEC iQ-R series

*1 Backup/restoration is possible when the operation mode is process mode.
Back/restoration is not possible when multiple process modes are set.

MELSEC iQ-F series

Model	Reference	
	System configuration	Target data
FX5U FX5UC FX5UJ FX5S	☞ Page 488 PLC CPU	☞ Page 499 MELSEC iQ-F series

MELSEC-Q series

■Basic model

Backup/restoration is possible when the CPU function version is B or later.

Back/restoration is not possible when the CPU function version is A.

Model	Reference	
	System configuration	Target data
Q00JCPU Q00CPU Q01CPU	☞ Page 488 PLC CPU	☞ Page 500 Basic model

■High Performance model

Backup/restoration is possible when the CPU function version is B or later.

Back/restoration is not possible when the CPU function version is A.

Model	Reference	
	System configuration	Target data
Q02HCPU Q06HCPU Q12HCPU Q25HCPU	☞ Page 488 PLC CPU	☞ Page 500 High Performance model
Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	☞ Page 488 PLC CPU	☞ Page 500 High Performance model

■Universal model

Model	Reference	
	System configuration	Target data
Q00UJCPU Q00UCPU Q01UCPU Q02UCPU	☞ Page 488 PLC CPU	☞ Page 501 Universal model
Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU	☞ Page 488 PLC CPU	☞ Page 501 Universal model
Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	☞ Page 488 PLC CPU	☞ Page 501 Universal model
Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	☞ Page 488 PLC CPU	☞ Page 501 Universal model
Q04UDPVCPU Q06UDPVCPU Q13UDPVCPU Q26UDPVCPU	☞ Page 488 PLC CPU	☞ Page 501 Universal model

MELSEC-L series

Model	Reference	
	System configuration	Target data
L02CPU L02CPU-P L02SCPU L02SCPU-P L06CPU L06CPU-P L26CPU L26CPU-P L26CPU-BT L26CPU-PBT	☞ Page 488 PLC CPU	☞ Page 502 MELSEC-L series

MELSEC-F series

Model	Reference	
	System configuration	Target data
FX3U FX3UC FX3G FX3GC FX3S	☞ Page 488 PLC CPU	☞ Page 502 MELSEC-F series

63.3.2 Computerized numerical controllers (CNCs)

GT37 SoftGOT3000

☞ Page 482 CNC C80 series
☞ Page 482 CNC C70 series

CNC C80 series

Model	Reference	
	System configuration	Target data
R16NCCPU-S1	☞ Page 491 Computerized numerical controllers (CNCs)	☞ Page 503 CNC C80 series

CNC C70 series

Model	Reference	
	System configuration	Target data
Q173NCCPU	☞ Page 491 Computerized numerical controllers (CNCs)	☞ Page 503 CNC C70 series

Precautions when using computerized numerical controllers (CNCs)

■Handling backup data

Some backup data can be checked with a text editor. Do not change the contents.

The data cannot be restored if the contents are changed.

■Individual restoration of the C language module for the CNC C70 series onward

The C language module cannot be restored on individual restoration screens of the GOT for the CNC C70 series onward.

To restore C language modules individually, use the Remote Monitor Tool with version is C0 or later.

☞ Page 478 Required software (when backing up CNC C70 series onward)

63.3.3 Motion CPU

GT37 SoftGOT3000

☞ Page 483 Motion CPU (MELSEC iQ-R series)
☞ Page 483 Motion CPU (MELSEC-Q series)

Motion CPU (MELSEC iQ-R series)

Model	Reference	
	System configuration	Target data
R16MTCPU R32MTCPU R64MTCPU	☞ Page 492 Motion CPU	☞ Page 504 Motion CPU (MELSEC iQ-R series)

Motion CPU (MELSEC-Q series)

Model	Reference	
	System configuration	Target data
Q172CPUN*1*2 Q173CPUN*1*2 Q172HCPU*1 Q173HCPU*1	☞ Page 492 Motion CPU	☞ Page 506 Motion CPU (MELSEC-Q series)
Q172DCPU*1 Q173DCPU*1 Q172DCPU-S1 Q173DCPU-S1 Q172DSCPU Q173DSCPU	☞ Page 492 Motion CPU	☞ Page 506 Motion CPU (MELSEC-Q series)
Q170MCPU Q170MSCPU Q170MSCPU-S1	☞ Page 492 Motion CPU	☞ Page 506 Motion CPU (MELSEC-Q series)

*1 SV13 or SV22 can be used for the OS package.
*2 Use a motion CPU with OS version OOH or later.

Precautions when using a motion CPU

■Motion CPU OS

The motion CPU OS cannot be backed up or restored.

When backing up or restoring setting data for the Motion CPU, install an appropriate OS on the Motion CPU in advance.

■Backup/restoration target

The GOT backs up or restores data stored on the SRAM built into the Motion CPU, regardless of the operation mode.

To write data to the FLASH ROM built in the Motion CPU, restore the data to the SRAM, and then write the data on the SRAM to the FLASH ROM with MT Developer.

■Backup

When backing up controllers that include a Motion CPU, do not set the Motion CPU to installation mode.

When the Motion CPU is set to the installation mode, the GOT does not backup the Motion CPU.

(The GOT backs up the other controllers on the same base unit.)

■Restoration

When restoring data to controllers that include a Motion CPU, do not set the Motion CPU to the installation mode or test mode.

Doing so cancels the restoration of the GOT.

If restoration is canceled, be sure to execute the restoration again.

Failure to do so causes the GOT to not write all the data to the controllers, resulting in incorrect operation of the controllers.

63.3.4 Robot controller

GT37 SoftGOT3000

Target controller	Model	Reference	
		System configuration	Target data
CR800-R	CR800-R(R16RTCPU)	☞ Page 485 Robot controller	☞ Page 507 Robot controller
CR800-D	CR800-D		
CRnQ-700	CRnQ-700(Q172DRCPU)		
CR750-Q	CR750-Q(Q172DRCPU)		
CR751-Q	CR751-Q(Q172DRCPU)		
CR800-Q	CR800-Q(Q172DSRCPU)		
CRnD-700	CRnD-700		
CR750-D	CR750-D		
CR751-D	CR751-D		

63.3.5 Servo amplifier

GT37 SoftGOT3000

Target controller	Model	Reference	
		System configuration	Target data
MELSERVO-J4	MR-J4-GF*1	☞ Page 494 Servo amplifier	☞ Page 507 Servo amplifier

*1 Use a servo amplifier with OS version A1 or later.

63.3.6 Inverter

GT37 SoftGOT3000

Target controller		Model	Reference	
			System configuration	Target data
FREQROL-A series	FREQROL-A800 series*1	FR-A8□0 FR-A8□2 FR-A8□6	☞ Page 496 Inverter	☞ Page 508 Inverter
		FR-A8□0-E FR-A8□2-E FR-A8□6-E		
		FR-A8□0-GF FR-A8□2-GF		
		FR-A8□0-GN FR-A8□2-GN		
	FREQROL-A800 Plus series*1	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-LC	☞ Page 496 Inverter	☞ Page 508 Inverter
		FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC		
FREQROL-F series	FREQROL-F800 series*1	FR-F8□0 FR-F8□2 FR-F8□6	☞ Page 496 Inverter	☞ Page 508 Inverter
		FR-F8□0-E FR-F8□2-E		

*1 When connecting to the MELSEC iQ-R series, use an inverter with a SERIAL (serial No.) "□62○○○○○○" or later.
When connecting to the MELSEC-Q series or MELSEC-L series, use an inverter with a SERIAL (serial No.) "□83○○○○○○" or later.

63.4 System configurations for backup/restoration

GT37 SoftGOT3000

This section describes system configurations that can be used with the backup/restoration function.
For connection type settings and precautions regarding the communication unit, communication cable, and connection type, refer to the following.
GOT3000 Series User's Manual (Connection)

Point

- Backup/restore each channel when using the multi-channel function.
- For a multi-CPU system, you can select to back up all CPU modules at once or specify a module number from 1 to 4 in the utility settings.

For restoration, specify a module number from 1 to 4.
When specifying a CPU module number from 1 to 4 for backup or restoration, multiple PLCs (No.1 to No.4) can be selected as backup/restoration targets.

☞ Page 488 PLC CPU
☞ Page 491 Computerized numerical controllers (CNCs)
☞ Page 492 Motion CPU
☞ Page 493 Robot controller
☞ Page 494 Servo amplifier
☞ Page 496 Inverter

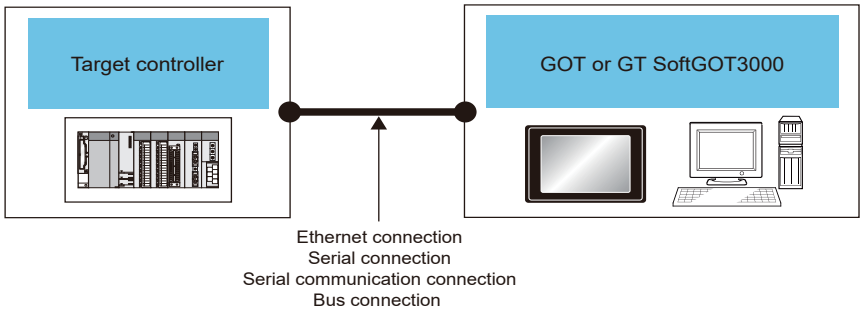
Precautions

Restoration may not be possible depending on the communication status between the GOT and target controllers.
For information on whether restoration is possible depending on the communication status of the controllers, refer to the following.
☞ Page 489 Connection status of the controller being restored

63.4.1 PLC CPU

GT37 SoftGOT3000

Connection type



○: Possible, ×: Not possible

Target controller	Connection type between the GOT and controller			
	Ethernet*1	Serial	Serial communication	Bus
MELSEC iQ-R series	○	×	○	×
MELSEC iQ-F series	○	○	×	×
MELSEC-Q series	○	○	○	○
MELSEC-L series*2	○	○	○	×
MELSEC-F series	○	○	×	×

*1 Backup/restoration is not possible when using the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB).
*2 For serial connection, use the L6ADP-R2.

Access range

The following shows a target controller for backup/restoration with each connection type.

Connection type	Target controller
Ethernet connection	• Host station • Other station
• Serial • Serial communication • Bus	Host station

Connection status of the controller being restored

To perform restoration, enable the target controllers of the restoration to communicate with the GOT.

If the target controllers of the restoration cannot communicate with the GOT, the restoration cannot be executed.

The following shows whether restoration is possible depending on the connection type and controller status.

■MELSEC iQ-R series

○: Restoration possible, ×: Restoration not possible

Connection type	CPU No.1 status	Single CPU system	Multiple CPU system		
		CPU No.1	CPU No.1	CPU No.2 onward	
				Parameter normal	Parameter error Factory default
Ethernet connection	Parameter normal	○	○	○	○
	Parameter error*1 Factory default*2	○	○	○	○

*1 Parameter errors of Ethernet communication are excluded.

*2 If the default IP address (192.168.3.39) is used, resetting to factory default is possible.
If the default IP address is not used, set the IP address of the CPU to enable communication with the GOT.

■MELSEC-Q series (basic and high-performance models)

○: Restoration possible, ×: Restoration not possible

Connection type	CPU No.1 status	Single CPU system	Multiple CPU system			
		CPU No.1	CPU No.1	CPU No.2 onward		
				Parameter normal	Parameter error	Factory default
Ethernet connection	Parameter normal	○	○	○	×	×
	Parameter error*1	○	×	×	×	×
	Factory default	×	×	×	×	×
Serial connection*2	Parameter normal	○	○	○	○	○
	Parameter error	○	○	○	○	○
	Factory default	○	○	○	○	○
Bus	Parameter normal	○	○	○	×	×
	Parameter error	○	×	×	×	×
	Factory default	○	×	×	×	×

*1 Parameter errors of Ethernet communication are excluded.

*2 For a multi-CPU system, connect the GOT to CPU No.1.

■MELSEC-Q series (universal model)

○: Restoration possible, ×: Restoration not possible

Connection type	CPU No.1 status	Single CPU system	Multiple CPU system			
		CPU No.1	CPU No.1	CPU No.2 onward		
				Parameter normal	Parameter error	Factory default
Ethernet connection	Parameter normal	○	○	○	○	○
	Parameter error*1	○	○	○	○	○
	Factory default*2	○	○	×	×	×
Serial connection*3	Parameter normal	○	○	○	○	○
	Parameter error	○	○	○	○	○
	Factory default	○	○	○	○	○
Bus	Parameter normal	○	○	○	○	○
	Parameter error*4	○	○	○	○	○
	Factory default	○	○	×	×	×

*1 Parameter errors of Ethernet communication are excluded.

*2 If the default IP address (192.168.3.39) is used, resetting to factory default is possible.
If the default IP address is not used, set the IP address of the CPU to enable communication with the GOT.

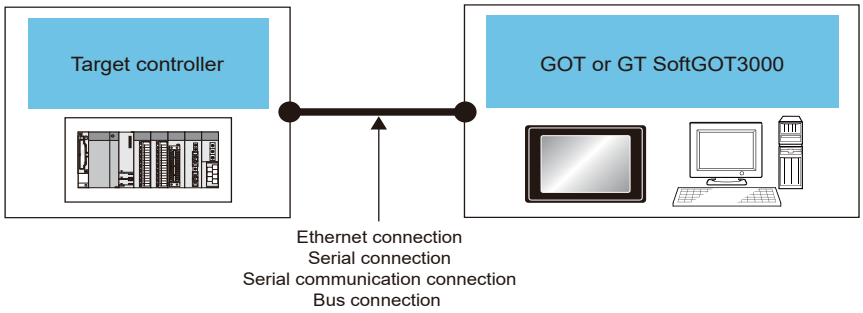
*3 For a multi-CPU system, connect the GOT to CPU No.1.

*4 The following PLC CPUs that have a serial number starting with 10122 or higher for the first 5 digits cannot be restored.
- Q00UJCPU, Q00UCPU, Q01UCPU: Software version A or earlier
- Q02UCPU: Software version K or earlier
- Q03UD(E)CPU, Q04UD(E)HCPU, Q06UD(E)HCPU: Software version N or earlier
- Q10UD(E)HCPU, Q13UD(E)HCPU, Q20UD(E)HCPU, Q26UD(E)HCPU: Software version F or earlier

63.4.2 Computerized numerical controllers (CNCs)

GT37 SoftGOT3000

Connection type



○: Possible, ×: Not possible

Target controller	Connection type between the GOT and controller			
	Ethernet connection*1	Serial connection	Serial communication	Bus
CNC C80 series	○	×	○	×
CNC C70 series	○	○	○	○

*1 Backup/restoration is not possible when using the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB).

Access range

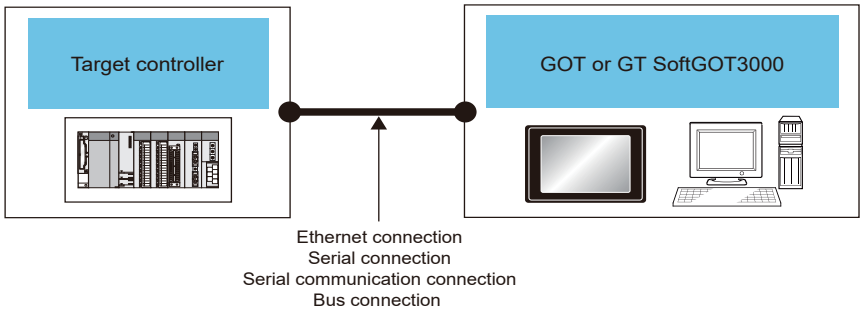
The following shows a target controller for backup/restoration with each connection type.

Connection type	Target controller
Ethernet connection	• Host station • Other station
• Serial connection • Serial communication • Bus	Host station

63.4.3 Motion CPU

GT37 SoftGOT3000

Connection type



○: Possible, ×: Not possible

Target controller	Connection type between the GOT and controller			
	Ethernet connection*1	Serial connection	Serial communication	Bus
Motion CPU (MELSEC iQ-R series)	○	×	○	×
Motion CPU (MELSEC-Q series)	○	○	○	○

*1 Backup/restoration is not possible when using the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB).

Access range

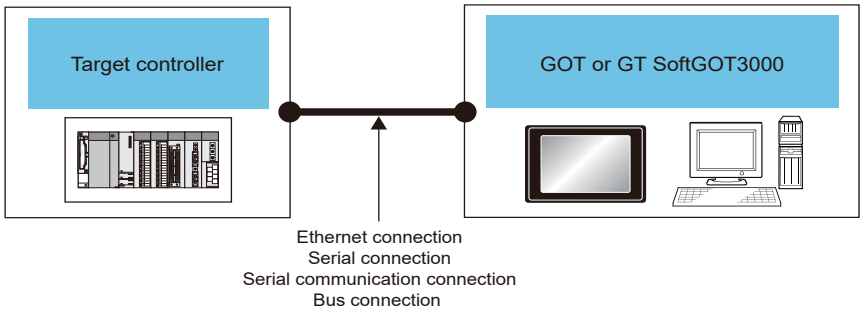
The following shows a target controller for backup/restoration with each connection type.

Connection type	Target controller
Ethernet connection	• Host station • Other station
• Serial connection • Serial communication • Bus	Host station

63.4.4 Robot controller

GT37 SoftGOT3000

Connection type



○: Possible, ×: Not possible

Target controller	Connection type between the GOT and controller			
	Ethernet connection*1	Serial connection	Serial communication	Bus
Robot controller	○	○	○	○

*1 Backup/restoration is not possible when using the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB).

Access range

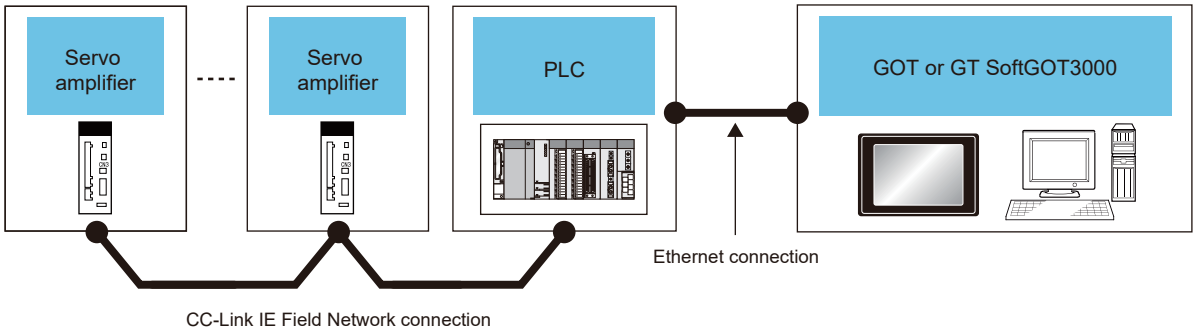
The following shows a target controller for backup/restoration with each connection type.

Connection type	Target controller
Ethernet connection	• Host station • Other station
• Serial connection • Serial communication • Bus	Host station

63.4.5 Servo amplifier

GT37 SoftGOT3000

Connection type



Target controller	PLC	
	Intelligent function module	**PLC CPU**
MELSERVO-J4*1	RJ71GF11-T2*2 RJ71EN71*2	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU R08PCPU, R16PCPU, R32PCPU, R120PCPU
	RD77GF4*3, RD77GF8*3, RD77GF16*3, RD77GF32	
	— (Connect to the built-in Ethernet port of the PLC CPU)	R04ENCPU*7, R08ENCPU*7, R16ENCPU*7, R32ENCPU*7, R120ENCPU*7
	QJ71GF11-T2*4	Q00UJCPU*8, Q00UCPU, Q01UCPU*8, Q02UCPU*8 Q03UDCPU*8, Q04UDHCPU *4, Q06UDHCPU*8, Q10UDHCPU*8, Q13UDHCPU*8, Q20UDHCPU*8, Q26UDHCPU*8 Q03UDECPU*8, Q04UDEHCPU*8, Q06UDEHCPU*8, Q10UDEHCPU*8, Q13UDEHCPU*8, Q20UDEHCPU*8, Q26UDEHCPU*8, Q50UDEHCPU*8, Q100UDEHCPU*8 Q03UDVCPU*8, Q04UDVCPU*8, Q06UDVCPU*8, Q13UDVCPU*8, Q26UDVCPU*8 Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU Q06CCPU-V*9, Q06CCPU-V-B*9, Q12DCCPU-V*10, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS
	QD77GF4, QD77GF8, QD77GF16*5	
	LJ71GF11-T2*6	L02SCPU*11, L02SCPU-P*11, L02CPU*11, L02CPU-P*11, L06CPU*11, L06CPU-P*11, L26CPU*11, L26CPU-P*11, L26CPU-BT*11, L26CPU-PBT*11

*1 For the MR-J4-GF, use a servo amplifier with OS version A1 or later.
*2 Use a module with version 09 or later.
*3 Use a module with version 02 or later.
*4 Use a CPU that has a serial number starting with 17062 or higher for the first 5 digits.
*5 Use a CPU that has a serial number starting with 17102 or higher for the first 5 digits.
*6 Use a CPU that has a serial number starting with 16072 or higher for the first 5 digits.
*7 For the network parts, use version 09 or later.
*8 Use a CPU that has a serial number starting with 12012 or higher for the first 5 digits.
*9 Use a CPU that has a serial number starting with 12082 or higher for the first 5 digits.
*10 For basic mode, use a CPU that has a serial number starting with 12042 or higher for the first 5 digits.
*11 Use a CPU that has a serial number starting with 13012 or higher for the first 5 digits.

Access range

Servo amplifiers connected to the GOT through a PLC CPU (master station) via CC-Link IE Field Network can be backed up or restored.
Connect the GOT and the PLC CPU via Ethernet.
Backup and restoration via other networks is not possible.

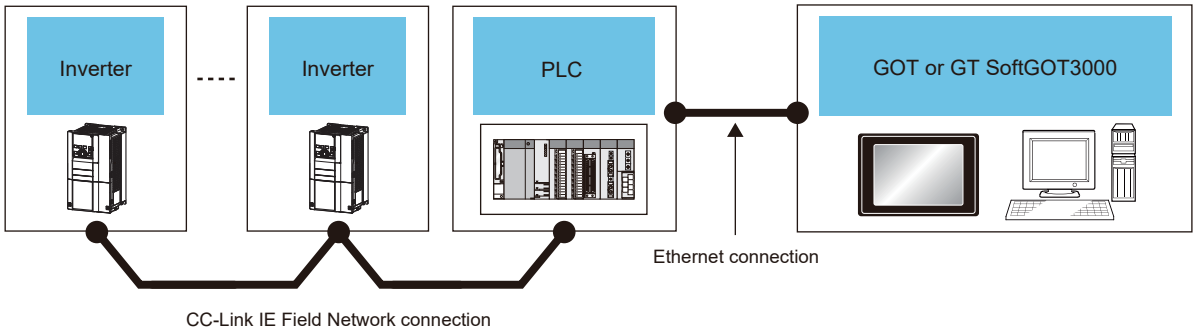
Servo amplifier settings for restoration

Use the rotary switch on the servo amplifier to set the network No. and station No. that are specified in the controller list file.
For the setting method, refer to the manual of the servo amplifier used.
After configuring the settings, turn the servo amplifier off then on.

63.4.6 Inverter

GT37 SoftGOT3000

Connection type



Target controller	PLC	
	Intelligent function module	**PLC CPU**
FREQROL-A series*1 FREQROL-F series*1	RJ71GF11-T2*2 RJ71EN71*2	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU R08PCPU, R16PCPU, R32PCPU, R120PCPU
	RD77GF4*3, RD77GF8*3, RD77GF16*3, RD77GF32	
	— (Connect to the built-in Ethernet port of the PLC CPU)	R04ENCPU*7, R08ENCPU*7, R16ENCPU*7, R32ENCPU*7, R120ENCPU*7
	QJ71GF11-T2*4	Q00UJCPU*8, Q00UCPU, Q01UCPU*8, Q02UCPU*8 Q03UDCPU*8, Q04UDHCPU*8, Q06UDHCPU*8, Q10UDHCPU*8, Q13UDHCPU*8, Q20UDHCPU*8, Q26UDHCPU*8 Q03UDECPU*8, Q04UDEHCPU*8, Q06UDEHCPU*8, Q10UDEHCPU*8, Q13UDEHCPU*8, Q20UDEHCPU*8, Q26UDEHCPU*8, Q50UDEHCPU*8, Q100UDEHCPU*8 Q03UDVCPU*8, Q04UDVCPU*8, Q06UDVCPU*8, Q13UDVCPU*8, Q26UDVCPU*8 Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU Q06CCPU-V*9, Q06CCPU-V-B*9, Q12DCCPU-V*10, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS
	QD77GF4, QD77GF8, QD77GF16*5	
	LJ71GF11-T2*6	L02SCPU*11, L02SCPU-P*11, L02CPU*11, L02CPU-P*11, L06CPU*11, L06CPU-P*11, L26CPU*11, L26CPU-P*11, L26CPU-BT*11, L26CPU-PBT*11

*1 For connection to MELSEC iQ-R series controllers, the inverter must be version □62○○○○○○ or later.
For connection to MELSEC-Q or MELSEC-L series controllers, the inverter must be version □83○○○○○○ or later.
*2 Use a module with version 09 or later.
*3 Use a module with version 02 or later.
*4 Use a CPU that has a serial number starting with 17062 or higher for the first 5 digits.
*5 Use a CPU that has a serial number starting with 17102 or higher for the first 5 digits.
*6 Use a CPU that has a serial number starting with 16072 or higher for the first 5 digits.
*7 For the network parts, use version 09 or later.
*8 Use a CPU that has a serial number starting with 12012 or higher for the first 5 digits.
*9 Use a CPU that has a serial number starting with 12082 or higher for the first 5 digits.
*10 For basic mode, use a CPU that has a serial number starting with 12042 or higher for the first 5 digits.
*11 Use a CPU that has a serial number starting with 13012 or higher for the first 5 digits.

Access range

Inverters that are connected to the GOT through a PLC CPU (master station) via CC-Link IE Field Network can be backed up or restored.

Connect the GOT and the PLC CPU via Ethernet.

If the inverter or servo amplifier is connected to the PLC CPU via any other network, backup/restoration is not possible.

Inverter settings for restoration

Use the parameter unit (PU) to set the network No. and station No. that are specified in the controller list file.

For the setting method, refer to the manual of the inverter used.

After configuring the settings, turn the inverter off then on and preform the restoration on the GOT.

63.5 Data to be backed up/restored

GT37 SoftGOT3000

The following shows data to be backed up and restored.

☞ Page 498 PLC CPU
☞ Page 503 Computerized numerical controllers (CNCs)
☞ Page 504 Motion CPU
☞ Page 507 Robot controller
☞ Page 507 Servo amplifier
☞ Page 508 Inverter
☞ Page 508 Data for software

63.5.1 PLC CPU

GT37 SoftGOT3000

☞ Page 498 MELSEC iQ-R series
☞ Page 499 MELSEC iQ-F series
☞ Page 500 MELSEC-Q series
☞ Page 502 MELSEC-L series
☞ Page 502 MELSEC-F series

MELSEC iQ-R series

Item	Description	File name
Parameters	CPU parameter	CPU.PRM
	System parameter	SYSTEM.PRM
	Unit parameter	UNIT.PRM
	Unit expansion parameter	UEXmmmnn.PRM*1
Sequence program	Sequence program	*.PRG
	FB file	*.PFB
Device comment	Device comment to be stored on a programmable controller	*.DCM
Device initial value	Sets the device initial value	*.DID
Device memory*2	File Register	*.QDR
General-purpose file	Files created by users	Optional
Device data file	File for storing device data	DEVSTORE.QST
Global label setting file	File for storing the data related to global labels	GLBLINF.IFG
Label initial value	File for storing the label initial value	*.LID
Restoration information	File for storing the restoration information	*.CAB
Logging setting file	Logging individual setting file	LOG01.LIS to LOG10.LIS
Remote password	Remote password settings	00000001.SYP

*1 Numbers are assigned for the "mmmnn" part automatically.
*2 Whether to retain the file register of a PLC at restoration is selectable.
☞ Page 150 [Backup restoration] screen

MELSEC iQ-F series

Item	Description	File name
Common parameter	CPU parameter	CPU.PRM
	System parameter	SYSTEM.PRM
	Unit parameter	UNIT.PRM
	Unit expansion parameter	UEXmmmnn.PRM*1
Sequence program	Sequence program	*.PRG
	FB file	*.PFB
Device comment	Device comment to be stored on a programmable controller	*.DCM
Device initial value	Sets the device initial value	*.DID
Device data file	For storing device data	DEVSTORE.QST
Global label setting file	File for storing the data related to global labels	GLBLINF.IFG
Restoration information	File for storing the restoration information	*.CAB
Logging setting file*2	Logging individual setting file	LOG**.LIS
Memory dump setting file*2	Memory dump function setting file	MEMDUMP.DPS
Remote password*2	Remote password settings	00000001.SYP
Communication protocol support setting file	File for storing the parameters of the predefined protocol support setting	.PPR
Firmware update prohibited file	File for prohibiting the firmware update of the PLC	FWUPDP.SYU

*1 Numbers are assigned for the "mmmnn" part automatically.
*2 When the password is set, backup is not possible.

MELSEC-Q series

■Basic model

Item	Description	File name
Parameters	Parameters for operating the PLC	PARAM.QPA
Intelligent function module parameters*1	Parameters for intelligent function modules	IPARAM.QPA
Sequence program	Program that the CPU operates	MAIN.QPG
SFC program	Sequence program with SFC programming format	MAIN-SFC.QPG
File Register*2*3	Data stored in file registers	MAIN.QDR
Device comment	Device comment to be stored on a programmable controller	MAIN.QCD
Device initial value	Sets the device initial value	MAIN.QDI

*1 Only parameters of the intelligent function modules controlled by the CPU module are included.
The parameters stored on the intelligent function module are not included.

*2 The file register on the flash card installed in the CPU is always restored without overwrite confirmation.
Whether the file register on the SRAM card or standard RAM is restored can be selected in a dialog displayed at restoration.
If the file register is not restored, the existing file register is deleted. Therefore, controller programs may not work properly.
If a problem occurs in the operation of the controller after restoration, perform the restoration again (including the file register).

*3 Whether to retain the file register of a PLC at restoration is selectable.
☞ Page 150 [Backup restoration] screen

■High Performance model

Item	Description	File name
Parameter	Parameters for operating the programmable controller	PARAM.QPA
Intelligent function module parameters*1	Parameters for intelligent function modules	IPARAM.QPA
Program	Program that the CPU operates (Including SFC program)	***.QPG
Device comment	Device comment to be stored on a programmable controller	***.QCD
Boot operation specification file	Batch file for starting programs stored on ROM and other media	AUTOEXEC.QBT
Device initial value	Sets the device initial value	***.QDI
File Register*2*3	Data stored in file registers	*.QDR
Sampling trace file*4	Sampling trace data that continuously collects specified device data at specified times	***.QTD
Failure history data*4	Failure history data that records the results of self-diagnostics	***.QFD
Programmable controller user data	Any user-created data stored on a memory card	***.*** (Optional)

*1 Only parameters of the intelligent function modules controlled by the CPU module are included.
The parameters stored on the intelligent function module are not included.

*2 The file register on the flash card installed in the CPU is always restored without overwrite confirmation.
Whether the file register on the SRAM card or standard RAM is restored can be selected in a dialog displayed at restoration.
If the file register is not restored, the existing file register is deleted. Therefore, controller programs may not work properly.
If a problem occurs in the operation of the controller after restoration, perform the restoration again (including the file register).

*3 Whether to retain the file register of a PLC at restoration is selectable.
☞ Page 150 [Backup restoration] screen

*4 This item can only be backed up.

■Universal model

Item	Description	File name
Parameters	Parameters for operating the programmable controller	PARAM.QPA
Intelligent function module parameters*1	Parameters for intelligent function modules	IPARAM.QPA
Program	Program that the CPU operates (Including SFC program)	***.QPG
Device comment	Device comment to be stored on a programmable controller	***.QCD
Boot operation specification file	Batch file for starting programs stored on ROM and other media	AUTOEXEC.QBT
Device initial value	Sets the device initial value	***.QDI
File Register*2*3	Data stored in file registers	*.QDR
Sampling trace file*4	Sampling trace data that continuously collects specified device data at specified times	***.QTD
Programmable controller user data	Any user-created data stored on a memory card	***.*** (Optional)
File for storing device data	Device data used for the SP.DEVST and S.DEVLD instructions	DEVSTORE.QST
Drive heading	The heading of the drive	QN.DAT
Operation history file*5	Operation history data that are collected by the operation history function	OPERATE.QOL
Remote password	Remote password settings	00000000.QTM
Monitor sequence extension	Data to increase the monitoring speed from other stations	MONITOR.Q0*
Latch data backup file	Stores the backup data for the latch data backup function to the standard ROM.	LCHDAT00.QBK
Data logging setting file	Data logging settings	LOGCOM.QLG LOG01.QLG to LOG10.QLG

*1 Only parameters of the intelligent function modules controlled by the CPU module are included.
The parameters stored on the intelligent function module are not included.

*2 The file register on the flash card installed in the CPU is always restored without overwrite confirmation.
Whether the file register on the SRAM card or standard RAM is restored can be selected in a dialog displayed at restoration.
If the file register is not restored, the existing file register is deleted. Therefore, controller programs may not work properly.
If a problem occurs in the operation of the controller after restoration, perform the restoration again (including the file register).

*3 Whether to retain the file register of a PLC at restoration is selectable.
☞ Page 150 [Backup restoration] screen

*4 This item can only be backed up.

*5 Only available for the QnUD(P)VCPU.

MELSEC-L series

Item	Description	File name
Parameters	Parameters for operating the programmable controller	PARAM.QPA
Intelligent function module parameters*1	Parameters for intelligent function modules	IPARAM.QPA
Program	Program that the CPU operates (Including SFC program)	***.QPG
Device comment	Device comment to be stored on a programmable controller	***.QCD
Boot operation specification file	Batch file for starting programs stored on ROM and other media	AUTOEXEC.QBT
Device initial value	Sets the device initial value	***.QDI
File Register*2*4	Data stored in file registers	*.QDR
Sampling trace file*3	Sampling trace data that continuously collects specified device data at specified times	***.QTD
Programmable controller user data	Any user-created data stored on a memory card	***.*** (Optional)
File for storing device data	Device data used for the SP.DEVST and S.DEVLD instructions	DEVSTORE.QST
Drive heading	Drive heading	QN.DAT
Remote password	Remote password settings	00000000.QTM
Monitor sequence extension	Data to increase the monitoring speed from other stations	MONITOR.Q0*
Latch data backup file	Stores the backup data for the latch data backup function to the standard ROM.	LCHDAT00.QBK
Data logging setting file	Data logging settings	LOGCOM.QLG LOG01.QLG to LOG10.QLG
Menu definition file	Menu definition file	MENUDEF.QDF

*1 Only parameters of the intelligent function modules controlled by the CPU module are included.
The parameters stored on the intelligent function module are not included.

*2 The file register on the flash card installed in the CPU is always restored without overwrite confirmation.
Whether the file register on the SRAM card or standard RAM is restored can be selected in a dialog displayed at restoration.
If the file register is not restored, the existing file register is deleted. Therefore, controller programs may not work properly.
If a problem occurs in the operation of the controller after restoration, perform the restoration again (including the file register).

*3 This item can only be backed up.

*4 Whether to retain the file register of a PLC at restoration is selectable.
☞ Page 150 [Backup restoration] screen

MELSEC-F series

Item	Description	File name
Parameters	Parameters for operating the programmable controller	INFO.FPG
Device comment	Device comment to be stored on a programmable controller	
Sequence program	Program that the CPU operates	
Special program*1	Positioning setting/Initial value parameter	
File Register	Data stored in file registers	
Extension file register*2	Data stored in extension file registers	
Built-in CC-Link/LT setting*3	CC-Link/LT parameter	
Source information*2	Data used with programing tools	
Special parameters	Special adapter/special block parameter saved in the main unit	

*1 The data can be backed up or restored with the FX3U(C) series and FX3G(C) series.

*2 The data can be backed up or restored with the FX3U(C) series only.

*3 The data are stored in the FX3U-32MT-LT-2 only.

63.5.2 Computerized numerical controllers (CNCs)

GT37 SoftGOT3000

CNC C80 series

Item	Description	File name
System file	File used for the system	SYSPRM.BIN
Parameters	Parameters for operating the CNC	ALL.PRM
Machining program	Program for running the CNC	ALL.PRG
	Program for running the CNC (extended area)	ALL2.PRG*1
Machine manufacturer macro	Machine manufacturer macro program file	MACROALL.BIN
MDI program	MDI program file	MDIALL.PRG
Tool offset*2	Offset of the tool length compensation and tool radius compensation	TOOL.OFS
All tool data	All tool data including tool life and tool length compensation data	TOOLALL.DAT
Workpiece offset	Offset of the workpiece coordinate system from the machine coordinate system	WORK.OFS
Common variable	Common macro variables that can be used in different machining programs	COMMON.VAR
Safety parameter*3	Safety parameter file	SAFEPARA.BIN
Safety ladder*3	Safety PLC program file for the host station	SAFEPLC1.LAD
	Safety PLC program file for other stations	SAFEPLC2.LAD
APLC load module	APLC load module	APLC.BIN
SRAM data*2	SRAM data files	SRAM.BIN

*1 The CNC C80 with version B0 or later supports this file.
Any backup data containing unsupported data by the CNC C80 cannot be restored.
Restore the backup data after updating the CNC C80 to the version that supports the data.

*2 This item can only be backed up.
It cannot be restored.

*3 This data cannot be restored when the safety observation function of the CNC is enabled and a safety password is set for the CNC.
Even if you remove the safety password for the CNC, a write error will occur if the safety passwords of the CNC and the restoration target file are not the same.

CNC C70 series

Item	Description	File name
Machining program	Program for running the CNC	ALL.PRG
Parameters	Parameters for operating the CNC	ALL.PRM
Tool offset	Offset of the tool length compensation and tool radius compensation	TOOL.OFS
Workpiece offset	Offset of the workpiece coordinate system from the machine coordinate system	WORK.OFS
Common variable	Common macro variables that can be used in different machining programs	COMMON.VAR
CNC ladder	Ladder program created by users	USERPLC.LAD
C language module*1	C language module created by users	APLC.O

*1 The data can be backed up or restored only when the version C4 or later of the CNC C70 is used.
To restore the data, use the version C0 or later of Remote Monitor Tool.

63.5.3 Motion CPU

GT37 SoftGOT3000

Motion CPU (MELSEC iQ-R series)

Item	Description	File name
Common parameter	CPU parameter	CPU.PRM
	System parameter	SYSTEM.PRM
	Unit parameter	UNIT.PRM
Motion CPU common parameter	Basic setting	mot_sys.csv
	Servo network setting	motnet01.csv to motnet02.csv
	High-speed input request signal setting	fsinput.csv
	Mark detection setting	markdt.csv
	Limit output data setting	limitout.csv
	Manual pulse generator connection setting	mpulser.csv
	Vision system parameter	vs_sys.csv vs_prg.csv
	Head module setting	rioref.csv
	Multiple CPU refresh (main cycle, operation cycle) setting	fastref.csv
Motion control parameter	Axis setting parameter	axpara01.csv to axpara64.csv
	Servo parameter (servo amplifier axis)	svpara01.csv to svpara64.csv
	Servo parameter (sensing module (RIO axis))	svpara91.csv to svpara98.csv
	Parameter block	para_blk.csv
	Machine common parameter file	mcn_com.csv
	Machine parameter file	mcn01.csv to mcn08.csv
	Cam data	cam0001.csv to cam1024.csv
	Servo input axis parameter	in_servo.csv
	Synchronous encoder axis parameter	in_enc.csv
	Command generation axis parameter	in_cmgen.csv
	Synchronous parameter	out01.csv to out64.csv
	Machine CPU advanced synchronous control setting file	cpu_sync.csv
Program	Online change file (arithmetic control program)	df_f0000.prg to df_f4095.prg
	Online change file (transition program)	df_g0000.prg to df_g4095.prg
	Online change file (servo program)	df_k0000.prg to df_k8191.prg[*1]
	Online change file (motion SFC diagram)	df_sf000.prg to df_sf511.prg[*2]
	Servo program	servo2.prg[*3]
	Motion SFC parameter	motsfcp2.bin[*4]
	Motion SFC program	motsfc2.prg[*5]
Other data	Digital oscilloscope sampling data	***.csv[*6]
	Digital oscilloscope setting	osc01.csv
	Boot log	bootlog.txt bootlog.bak (previous boot log)
	Event history	EVENT.LOG
	Device comment file	DEVCMNT.DC2[*7]
	Label and structure file	GL_LABEL.IF2[*8]

*1 For operating system software version 09 or earlier, df_k0000.prg to df_k4095.prg are applied.
*2 For operating system software version 09 or earlier, df_sf000.prg to df_sf255.prg are applied.
*3 For operating system software version 09 or earlier, or if the extension setting is disabled and the operating software is version 10 or later, servo.prg is applied.
*4 For operating system software version 09 or earlier, or if the extension setting is disabled and the operating software is version 10 or later, motsfcpr.bin is applied.
*5 For operating system software version 09 or earlier, or if the extension setting is disabled and the operating software is version 10 or later, motsfc.bin is applied.
*6 Numbers are automatically assigned to the asterisks (***).
*7 For operating system software version 02 or earlier, DEVCMNT.IFG is applied.
*8 For operating system software version 02 or earlier, GL_LABEL.DCM is applied.

Precautions

■Compatibility of the backup data from the Motion CPU (MELSEC iQ-R series)

Restore the following backup data with the operating system software version that operates the Motion CPU properly after the restoration.

Backup data		Operating system software version that operates the Motion CPU properly after the restoration*1
Name	**File name**	
Online change file (servo program)	df_k0000.prg to df_k4095.prg	All versions
	df_k4096.prg to df_k8191.prg	03 or later
Online change file (motion SFC diagram)	df_sf000.prg to df_sf255.prg	All versions
	df_sf256.prg to df_sf511.prg	03 or later
Servo program	servo.prg	All versions
	servo2.prg	03 or later
Motion SFC parameter	motsfcpr.bin	All versions
	motsfcpr2.bin	03 or later
Motion SFC program	motsfc.prg	All versions
	motsfc2.prg	03 or later
Device comment file	DEVCMNT.IFG	All versions
	DEVCMNT.DC2	
Label and structure file	GL_LABEL.DCM	All versions
	GL_LABEL.IF2	

*1 The Motion CPU may not operate properly when its operating system software version differs between the backup execution and restoration execution.
Use the same operating system software version for the Motion CPU to execute the backup and restoration.

Motion CPU (MELSEC-Q series)

Item	Description	File name
Motion SFC program conversion file (control code)	File where motion SFC code, G-code and F/FC code files are combined and converted into CPU's Motion SFC program code memory storage format	sfcprog.cod
Motion SFC program conversion file (text)	File where the G list and F/FS list files are combined and converted into CPU's Motion SFC program text memory storage format	sfcprog.bin
Motion SFC parameter file	Motion SFC control parameter setting information files	sfcprmD.bin*1
		sfcprm.bin*2
K code file	Internal code files of servo program	svprog.bin
System setting data file	System setting data information files	svsystemD.bin*1
		svsystemH.bin*3
		svsystem.bin*4
High speed read setting file	High speed read setting information files	svlatchD.bin*1
		svlatch.bin*2
Optional data monitor setting file	Optional data monitor information files	svsysmonD.bin*1
		svsysmon.bin*2
Servo data file	Axis data parameter block information files	svdataD.bin*1
		svdataH.bin*3
	Servo parameter information files	svparaH.bin*6
	Servo parameter information files	svdata.bin*4
		svdata2.bin*4
	Limit switch setting data information files	svls.bin
Mechanical system program conversion file	File after conversion of mechanical system program edit information file into internal codes	svmchprm.bin*5
Cam data conversion file	Cam data files of cam No.1 to 64	svcamprm.bin*5
	Cam data files of cam No.101 to 164	svcampr2.bin*5
	Cam data files of cam No.201 to 264	svcampr3.bin*5
	Cam data files of cam No.301 to 364	svcampr4.bin*5
Cam Edit data	Cam Edit data files	svcameditD.bin*1*5
Vision sensor parameter	Vision sensor parameter setting information files	visionD.bin*1
User safety sequence program	Safety sequence program files	safetyD.bin*1
Mark detection setting data	Mark detection setting data	svmarkD.bin*1
Q series PLC common parameter file	Data files of Multiple CPU setting, I/O assignment, and others	param.wpa
Multiple CPU high speed refresh setting	Multiple CPU high speed refresh setting information files	svrefresh.bin*1

*1 The data can be backed up or restored only with the Q172DCPU, Q173DCPU, Q170MCPU, or Q170MSCPU.
*2 The data can be backed up or restored only with the Q172HCPU, Q173HCPU, Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.
*3 The data can be backed up or restored only with the Q172HCPU or Q173HCPU.
*4 The data can be backed up or restored only with the Q172CPU, Q173CPU, Q172CPUN, or Q173CPUN.
*5 The data can be backed up or restored with the SV22 operating system software only.
*6 The data can be backed up or restored only with the Q172HCPU, Q173HCPU, Q172DCPU, Q173DCPU, Q170MCPU, or Q170MSCPU.

63.5.4 Robot controller

GT37 SoftGOT3000

Item	Description	File name
Error log	Error log (all levels)	AError.LOG
	Error log (low level)	LError.LOG
	Error log (caution level)	CError.LOG
	Error log (high level)	HError.LOG
Error count	Total errors	TTLERROR.DAT
Common parameter	Common parameters	COMMON.PRM
Mechanical information	Information on the robot	(Machine name) # (Machine No. 1 to 3).PRM
Backup information	Setting information on backup	BKUP.SYS
Mechanical information	Information on the robot	MECHA.SYS
System program	System based program files	sysalgn.MB6/MB5/MB4
		sysimac.MB6/MB5/MB4
		Sysorg.MB6/MB5/MB4
		Syssafe.MB6/MB5/MB4
		Systembase.MB6/MB5/MB4
User program	User-created robot programs	***.MB6/MB5/MB4
Robot serial	Serial No. for robots	RobotSerial.ser
Maintenance forecast information	Information on maintenance forecast	MFInfo.mfb

63.5.5 Servo amplifier

GT37 SoftGOT3000

Item	Description	File name
Parameters	Parameters for operating the servo amplifier	***.param
Point table	Point table data	***.pttbl
Cam data*1*2*3*4	Cam data	***.cam

*1 When the simple cam function is disabled, cam data can only be restored.
*2 Cam data cannot be restored to a servo amplifier having software version A2 or earlier that does not support the simple cam function.
*3 Restore cam data after the network communication between a servo amplifier and the controller is established.
Set the servo parameter [Pr. PN03 Station-specific mode setting] to □□□1 to select the I/O mode.
*4 Power off and on the servo amplifier before restoring cam data again.
Otherwise, [AL.F5.2 Cam data - Area miswriting warning] occurs.

63.5.6 Inverter

GT37 SoftGOT3000

Item	Description	File name
Parameters	Parameters for operating the inverter	***.CP1
Parameter file	PLC function parameter	***.QPA
Program file	Sequence program	***.QPG
Function block source information	Function block source information	***.C32
Global text comment information	Global text comment information	***.QCD

For details on backup/restoration of target parameters, refer to the following.

📖FR-A800 INSTRUCTION MANUAL (DETAILED)
📖FR-F800 INSTRUCTION MANUAL (DETAILED)

63.5.7 Data for software

GT37 SoftGOT3000

Item		Description	File name*1
Label program		Data for GX Developer	PROJINFO.CAB PROJINFO.C32
Symbolic data		Data for GX IEC Developer	SYMBOLIC.MMP
Symbolic data		Symbolic data for PX Developer	#FBDQINF.BIN
Source information	Simple project (with label)	GX Works2 data	SRCINFOM.CAB SRCINFOM.C32
	Structured project	GX Works2 data	SRCINFOI.CAB SRCINFOI.C32
New source information	Simple project (with label)	GX Works2 data	SRCINF1M.CAB SRCINF2M.CAB SRCINF1M.C32 SRCINF2M.C32
	Structured project	GX Works2 data	SRCINF1I.CAB SRCINF2I.CAB SRCINF1I.C32 SRCINF2I.C32

*1 Files with the ".CAB extension" are for the MELSEC-Q series.
Files with the ".C32 extension" are for the MELSEC-L series.

63.6 Data created during backup/restoration and the save destination

GT37 SoftGOT3000

This section describes the data created during backup/restoration and the save destination.

☞ Page 509 Backup settings
☞ Page 510 Backup data
☞ Page 511 Log files for backup/restoration

63.6.1 Backup settings

Backup settings are created when executing the backup, and are stored on a data storage with the following folder structure.

```
Data storage.................................. Data storage on the drive set as the storage location for the backup setting
  |
  |-- BKUPLIST
  |     |
  |     |-- SYS1BKUP.G3B............Backup setting file for CH No.1
  |     |
  |     |-- SYS2BKUP.G3B............Backup setting file for CH No.2
```

For information how to set the storage location for the backup setting, refer to the following.

☞ Page 149 [Backup restoration]

📖GT Designer3 (GOT3000) Screen Design Manual

63.6.2 Backup data

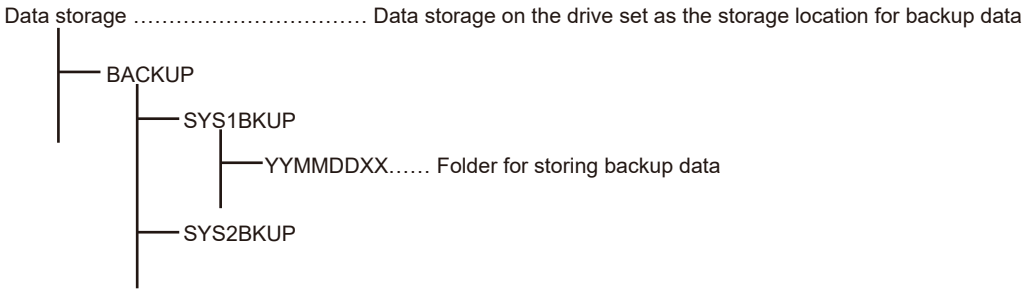
☞ Page 510 Storing backup data
☞ Page 510 Storage location for backup
☞ Page 510 Folders for backup data

Storing backup data

When backups for the same channel are executed several times, the backup data are stored on a data storage.
(Backup data stored on the data storage are not overwritten.)

Storage location for backup

Backup data are stored on a data storage with the following folder structure.

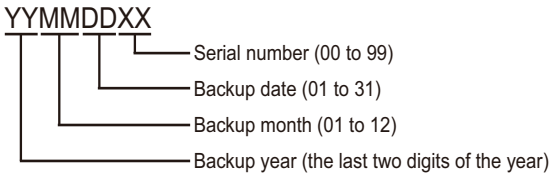


For information how to set the storage location for the backup data, refer to the following.

☞ Page 149 [Backup restoration]
📖GT Designer3 (GOT3000) Screen Design Manual

Folders for backup data

Backup data are stored by the folder, and a folder name (YYMMDDXX) is set as follows.



Example) Folder name for the 10th backup data for Ch.1 on September 15th, 2025
Folder name: 25091509
If a backup data folder includes "XX=99", the backup data cannot be stored.
Up to 100 backups can be executed per channel in a day.

63.6.3 Log files for backup/restoration

☞ Page 511 Log files
☞ Page 511 File format
☞ Page 512 Format

Log files

Backed up/restored controllers and files are recorded in log files.

Log files are created in the folder where each backup data is stored.

☞ Page 510 Backup data

Log files are overwritten during backup/restoration.

File format

The following table shows the file formats of log files.

Item	Setting
File name, extension	RESULT.TXT
File format	UTF-8

Format

This section describes the formats of log files.

```
[BACKUP]                                  Header
BACKUP_NAME=SYS1BKUP                      Backup settings
TIME=09/09/25 20:25:46                    Start time
 1 / 2 , NG=1                             Backup/restoration status
CH=01,NET=001,ST=002                      Target devices
CPU=01,PLC,Q02HCPU
COPYFILES0000=D0¥PARAM.QPA OK             Files
COPYFILES0001=D0¥MAIN.QPG OK
COPYFILES0002=D0¥PRG1.QPG OK
COPYFILES0003=D0¥MAIN.QCD OK
 2 / 2 , NG=1                             Backup/restoration status
```

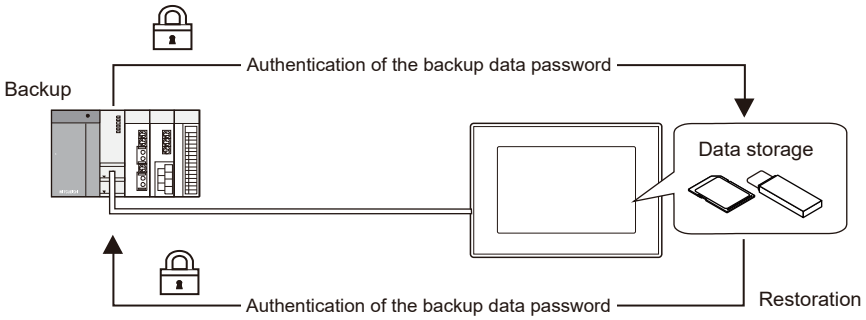
Item	Setting
Header	Displays the executed operation type. • [BACKUP]: Backup • [RESTORE]: Restore
Backup settings	Displays the backup setting name.
Start time	Displays the start time for backup/restoration.
Target devices	Displays the CH No., network No., station No., CPU No., unit type, and model of the target device when backing up or restoring. The following shows the display contents for unit types. • PLC: PLC CPU • NC: Computerized numerical controller • MC: Motion controller • SV: Servo amplifier • INV: Inverter • RC: Robot controller • SLMP: Servo amplifier or inverter connected to the master station of the PLC CPU and CC-Link IE Field Network
Files	Displays the backed up or restored flies.*1
Backup/restoration status	Recorded only when network batch backing up or restoring. Displays the number of controllers for which the backup/restoration is completed, the number of all target controllers, and the number of errors for each station.

*1 A shortened file name is displayed when using a PLC CPU from the following series with GX Works3.
- MELSEC iQ-R series
- MELSEC iQ-F series

63.7 Security and password

GT37 SoftGOT3000

By setting passwords, password authentication is available when the backup/restoration is executed.
Authentication uses a backup data password.



The following shows information on passwords used for backup/restoration.

Password	Description
Backup data password	Password for authentication at backup/restoration. Set the password on the GOT at the first backup.

Point

If you forget the backup data password, backup/restoration will not be possible.
If that happens, format the data storage or use a new data storage for the backup.

For information on how to set the backup data password, refer to the following.
☞ Page 514 Backup data password settings
For information on the operating procedure once the backup data password has been set, refer to the following.
☞ Page 516 Setting the backup data password

63.7.1 Backup data password settings

This section explains the operating procedure for the first backup.

Precautions

■Setting the password

To ensure security, setting a password of eight or more characters that cannot be easily guessed is recommended.

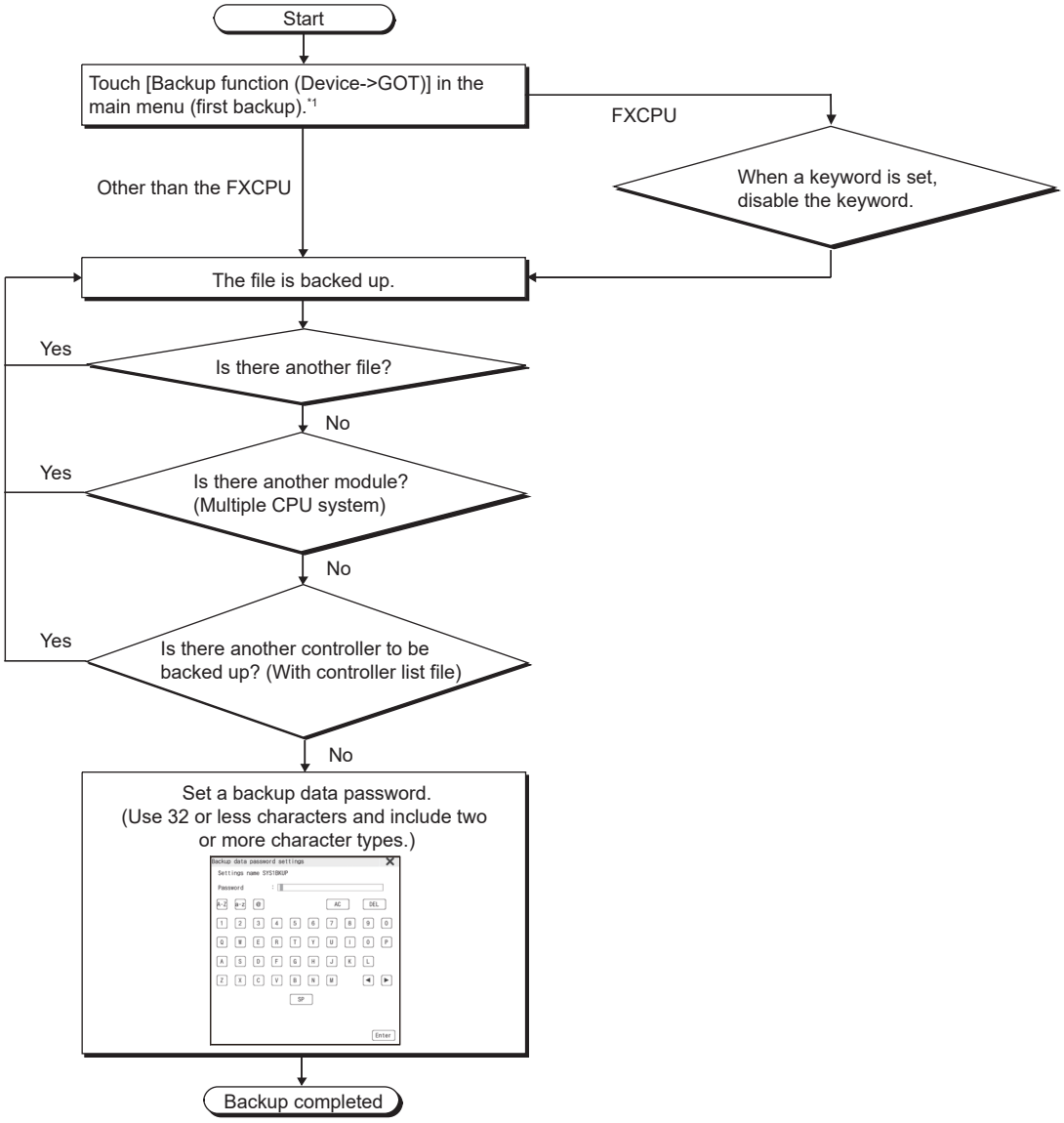
If the password is leaked, the same system can be created. Ensure passwords are managed properly.

■Keywords for MELSEC-F series PLC CPUs

When backing up or restoring a MELSEC-F series PLC CPU with a keyword set, release the keyword beforehand.

☞ Page 101 [Keyword] screen

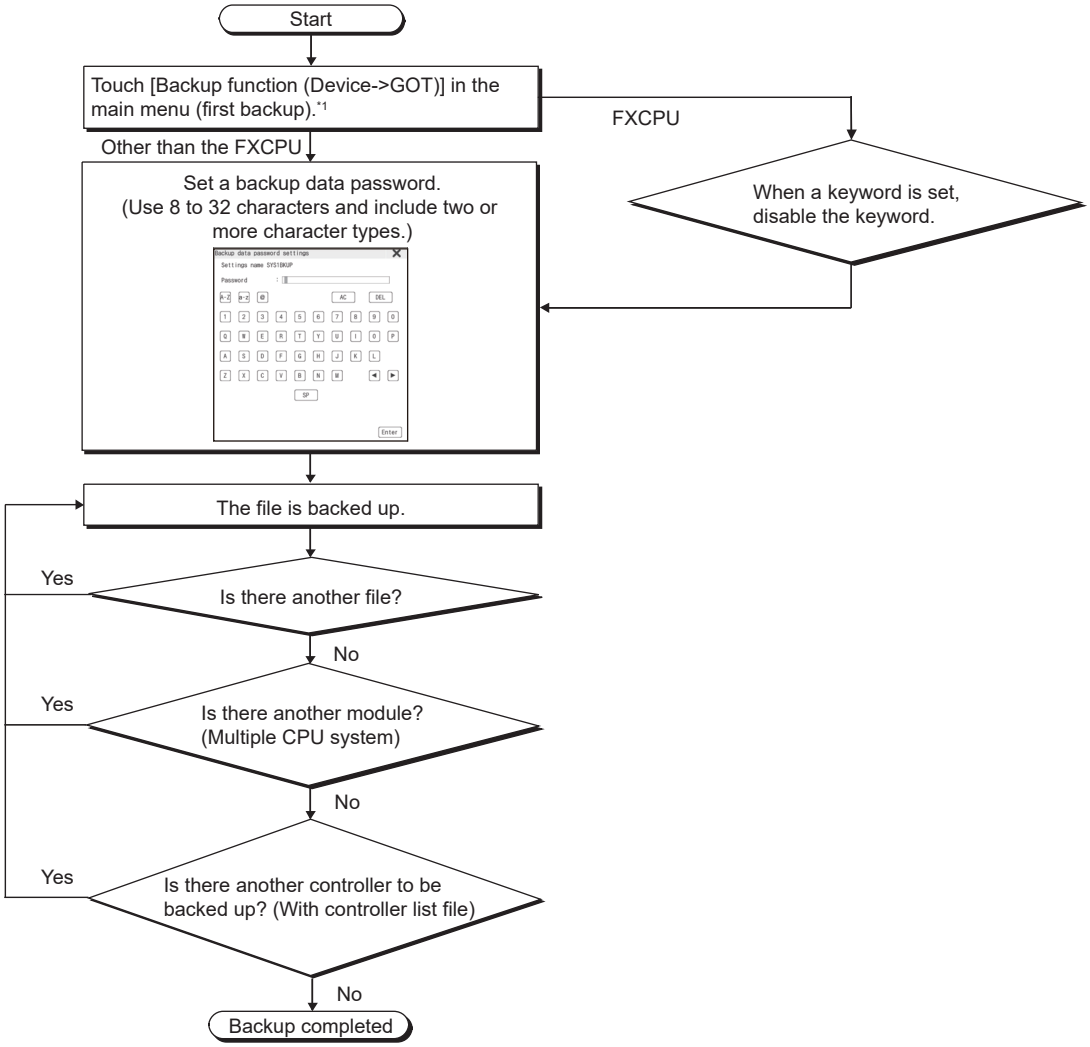
When the security mode is mode 1



*1 For details, refer to the following.

☞ Page 541 Backup/restoration function: Main menu

When the security mode is mode 2

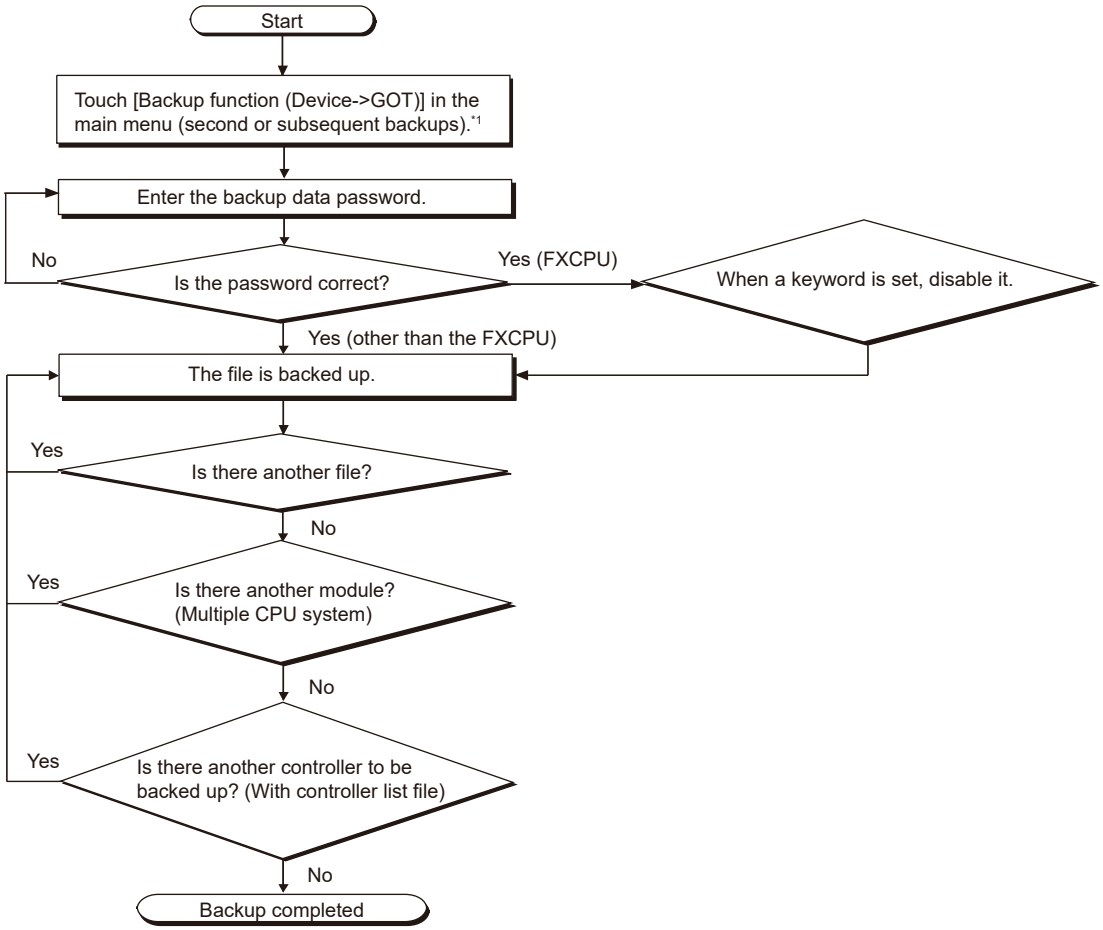


*1 For details, refer to the following.
☞ Page 541 Backup/restoration function: Main menu

63.7.2 Setting the backup data password

The following shows the backup operating procedure once the backup data password is set.

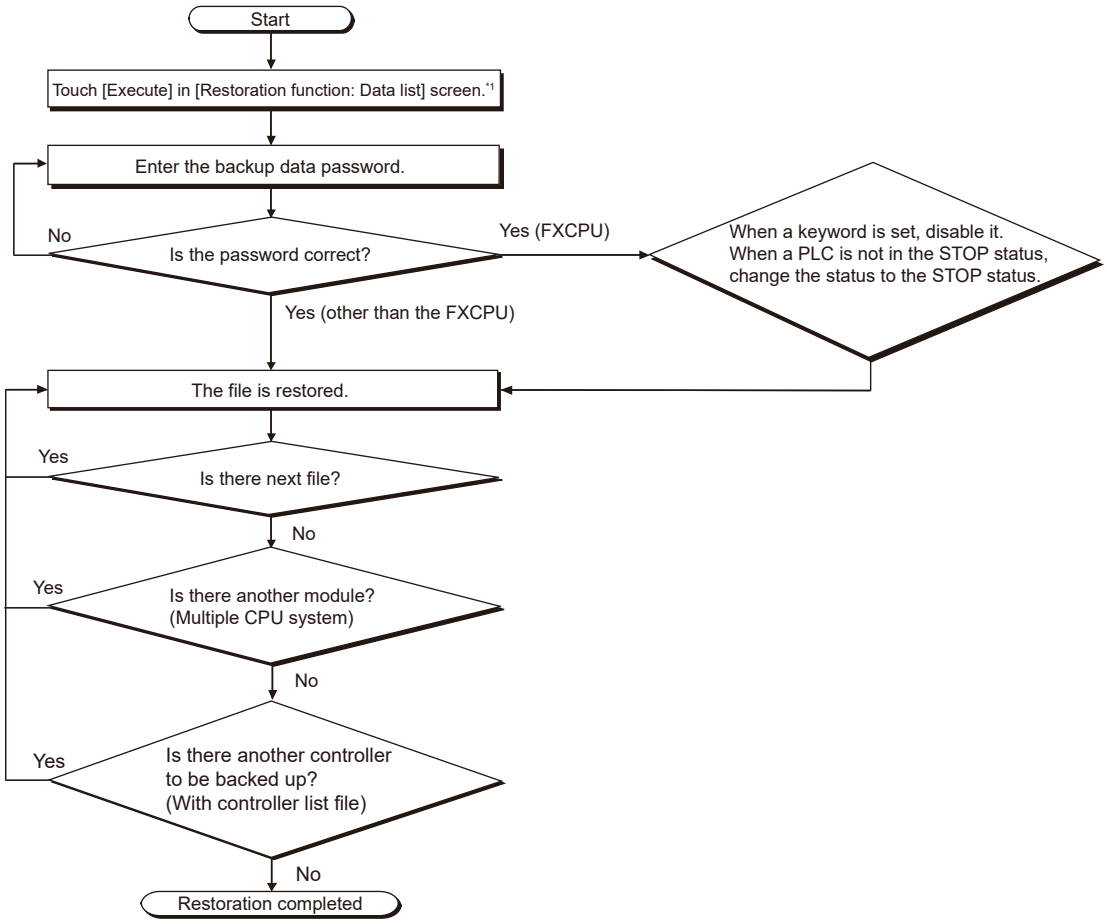
Backup



*1 For details, refer to the following.
☞ Page 541 Backup/restoration function: Main menu

Restoration

The following shows the restoration operating procedure once the backup data password is set.



*1 For details, refer to the following.
☞ Page 545 [Restoration function: Data list] screen

63.8 Trigger backup

GT37 SoftGOT3000

Point

Set the trigger backup in GT Designer3 and the GOT utility.
For the setting items in GT Designer3, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual
For the setting items in the utility, refer to the following.
☞ Page 149 [Backup restoration]

☞ Page 519 Trigger types for backup
☞ Page 520 Trigger backup specifications
☞ Page 521 Setting the trigger backup
☞ Page 522 Controlling backups with devices
☞ Page 524 GOT data package acquisition at the timing of the trigger backup
☞ Page 525 Precautions for trigger backup

63.8.1 Trigger types for backup

GT37 SoftGOT3000

The GOT can automatically back up setting data for controllers with the trigger device or the days and time set.
Setting the trigger type selects whether to execute the backup with the trigger device or with the days and time.
☞ Page 519 When trigger type is set (Trigger type: [Rise])
☞ Page 519 When the time and date are set (Trigger type: [Time])

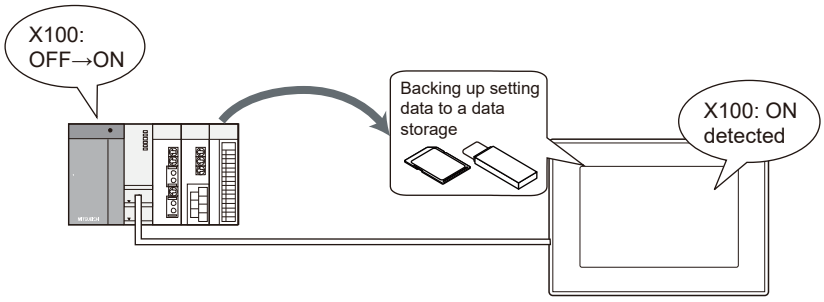
Point

Set the trigger type on the [Trig bkup setting] screen.
☞ Page 151 [Trigger backup setting] screen

When trigger type is set (Trigger type: [Rise])

The GOT executes the backup when the set trigger device turns on.
Use the backup with the trigger device to automatically backup setting data of controllers after the setting data are changed.

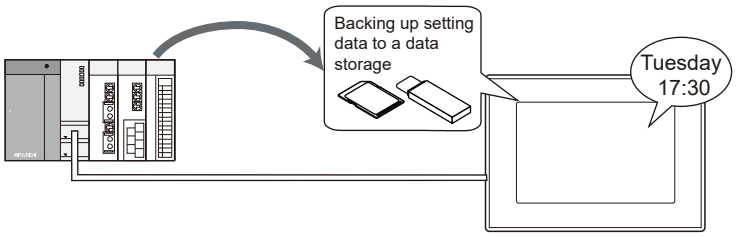
Trigger device: X100



When the time and date are set (Trigger type: [Time])

The GOT executes the backup at the specified time on the specified days.
Use this trigger type for backing up setting data periodically.

Setting GOT to back up data at 17:30 on Tuesdays



63.8.2 Trigger backup specifications

GT37 SoftGOT3000

☞ Page 520 Maximum number of backups
☞ Page 520 Checking backup data changes

Maximum number of backups

The maximum number of backups that can be stored can be specified.

☞ Page 150 [Backup restoration] screen

The oldest backup is automatically deleted once the maximum number of backups is exceeded.
This ensures that the latest backup data is always saved.

Checking backup data changes

When backing up data, the GOT compares the previous backup data with the setting data for each controller.
If the current setting data for any of the controllers differ from the previous backup data, the GOT backs up setting data for all the controllers on the same base unit.
If the current setting data for all the controllers are the same as the previous backup data, the GOT does not execute the backup.
This prevents the same backup data from being saved.

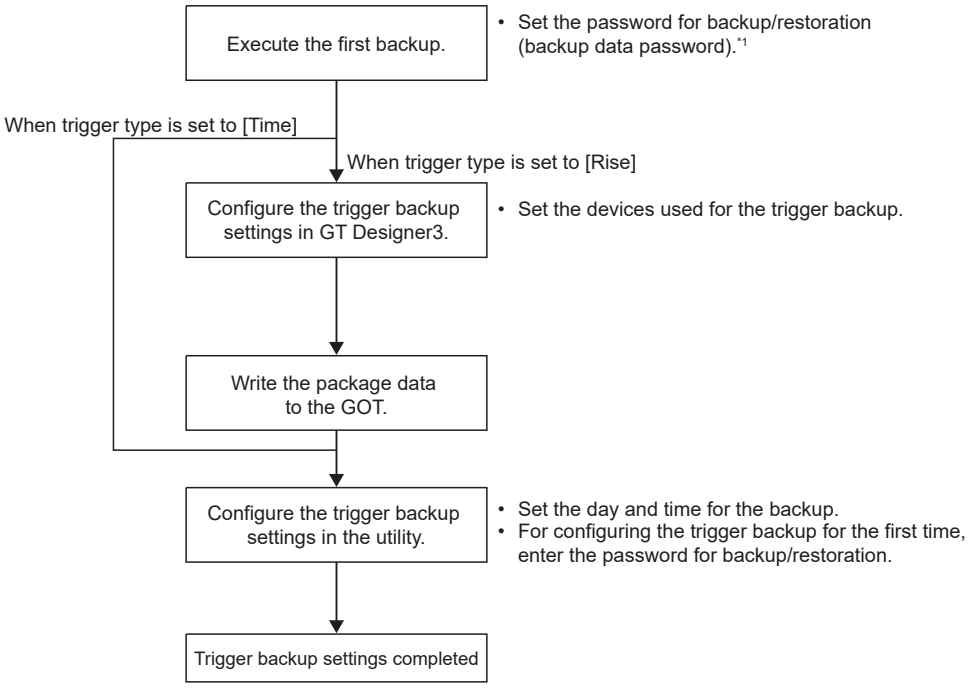
63.8.3 Setting the trigger backup

GT37 SoftGOT3000

☞ Page 521 Setting procedure

Setting procedure

The following shows the setting procedure to use the trigger backup.



*1 For details, refer to the following.
☞ Page 513 Security and password

Precautions

A password (backup data password) must be entered for backup/restoration at the first backup.
Therefore, trigger backup is not possible for the first backup.
Execute the first backup manually, then configure the trigger backup once a password is set.
Once the trigger backup is configured, the password set for the first backup will be used to automatically authenticate the backup from the second time onward.

63.8.4 Controlling backups with devices

GT37 SoftGOT3000

The GOT controls the trigger backup with devices.
The following shows the devices used for the trigger backup.

- Trigger device
- Process notification device
- Backup error notification device
- Trigger backup processing setting No. notification (GS657)
- Trigger backup data send delay (GS521)

Point

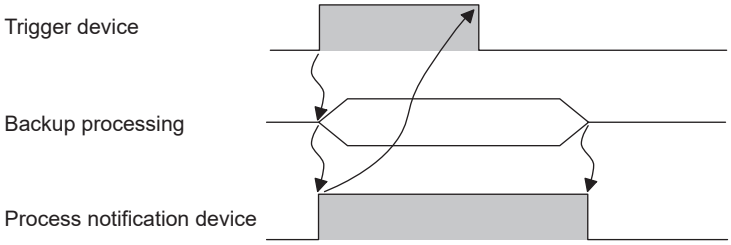
Configure each device in GT Designer3.
For details, refer to the following.
GT Designer3 (GOT3000) Screen Design Manual

☞ Page 522 Processing when normal backup is executed
☞ Page 523 Error handling
☞ Page 523 Setting send delay time

Processing when normal backup is executed

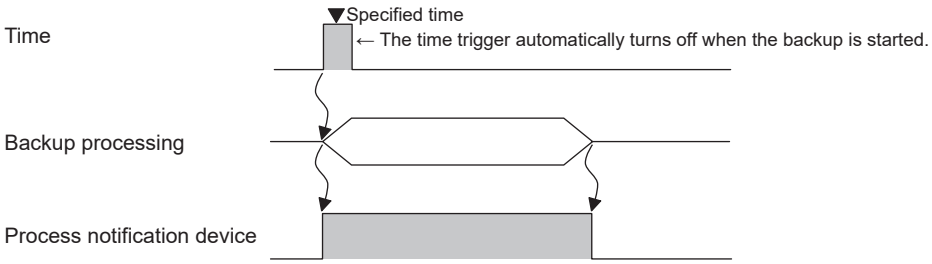
■When trigger type is set to [Rise]

Turn on the trigger device to start the backup.
When the backup is started, the process notification device turns on.
Turn off the trigger device right after the process notification device turns on.
(The trigger device does not automatically turn off.)
The process notification device turns off once the backup is completed.



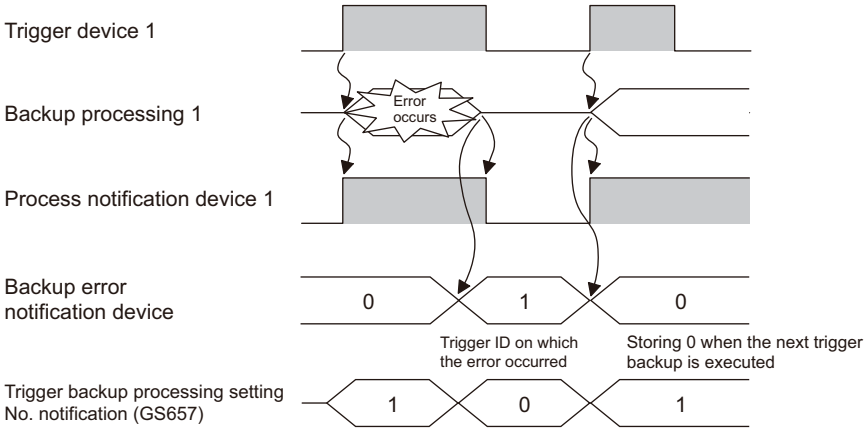
■When trigger type is set to [Time]

The GOT starts the backup at the time specified for the trigger backup.
When the backup is started, the process notification device turns on,
and the time trigger automatically turns off.
The process notification device turns off once the backup is completed.



Error handling

When an error occurs during the trigger backup, the backup error notification device stores the trigger ID corresponding to the trigger setting set for the backup with the error,
and a system alarm occurs.
Check the system alarm, and then remove error causes.
For information on system alarms and corrective actions, refer to the following manual.
GT Designer3 (GOT3000) Screen Design Manual
The backup error notification device stores 0 when the next trigger backup is executed.



Setting send delay time

By setting the trigger backup data send delay (GS521), a delay time can be set for backup communication intervals in the backup/restoration function.
Setting of the delay time can adjust the communication load of the backup to reduce the effects on other processes (such as monitoring objects).
The delay times that can set using setting values are shown below.

Setting value	Delay time
0	None
1 to 100	Setting value × 5 (ms)
101 or more	500(ms)

Precautions

Backup communication times are longer than a default when the Trigger Backup Data Send Delay is set.
Set a suitable delay time to match the processing condition of backup function and others (such as monitoring objects).

63.8.5 GOT data package acquisition at the timing of the trigger backup

GT37 SoftGOT3000

Turn on b6 of trigger backup GOT data package acquisition (GS522) to execute GOT data package acquisition when the trigger backup completes successfully using the backup/restoration function.
When any backup trigger condition of any channel is satisfied, the GOT data package acquisition is executed.

Save destination

Data is saved to the copy destination drive set in the backup/restoration function.
For information on how to set the save destination for the backup data, refer to the following.
☞ Page 149 [Backup restoration]
The latest data is only saved to one copy destination drive.
If the latest data has already been saved, GOT data package acquisition is not performed and processing ends.

Timing at which 0 is stored in the trigger backup processing setting No. notification (GS657)

When the trigger backup is not processed, 0 is stored in the Trigger Backup Processing Setting No. Notification (GS657).
When GOT data package acquisition is executed, 0 is stored after the acquisition is complete.

Trigger backup error notification device

If there is an error in the GOT data package acquisition, the system alarm is displayed and 1000 is stored in the Trigger Backup Error Notification device.
For information on the system alarm, refer to the following.
☞ Page 586 Display contents of the system alarm
When the error still occurs after taking the action described in the system alarm, the possible causes are as follows.

- The copy destination drive and project startup drive are the same.
- A security key is set.
- Data transfer security is set.

63.8.6 Precautions for trigger backup

This section explains precautions for the trigger backup.

☞ Page 525 GOT operations during trigger backup
☞ Page 525 Displaying device names on GOT
☞ Page 525 File register backup
☞ Page 525 Checking file register changes
☞ Page 526 Backing up the Motion CPU, MELSEC-F series, or robot controller
☞ Page 526 Backing up the robot controller
☞ Page 526 Screens on which trigger backup can be executed
☞ Page 527 When another trigger condition is met during backup
☞ Page 528 When multiple trigger conditions are met simultaneously
☞ Page 528 When trigger device is on at GOT startup

GOT operations during trigger backup

Device monitoring and GOT operations may be less responsive during trigger backup.
Execute the trigger backup while the GOT is not being operated.
Updating data with the functions that collect device values, including the logging function, may also take a long time.

Displaying device names on GOT

When the trigger device is set to [Rise], the GOT displays device names as [??] when the device name converter library is not installed.
To display device names correctly, install the device name converter library on the GOT.

File register backup

To check if the file register has been changed, the date of the last file update and the date of writing data to the controller are compared.
The backup is not executed if the device values in the file register have changed.
Set the backup data to not be checked for changes so that all data in the file register is backed up.
For details, refer to the following.

☞ Page 151 [Trigger backup setting] screen

Checking file register changes

Do not check for file register changes if trigger backup is performed frequently.
Since the contents of the file register are changed frequently, a backup is performed every time a trigger condition is satisfied, even if the there is no change to the controller settings.
As a result, unnecessary backup data may accumulate on the data storage, and depending on the setting for the maximum number of backups, older backup data may be lost.
Use the recipe function to acquire file register data only.
For information on how to use the recipe function, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual
When the MELSEC-F series is connected to a PLC CPU, the file register is not checked for changes.
(This applies even if the setting is configured in the utility.)

Backing up the Motion CPU, MELSEC-F series, or robot controller

The GOT does not compare the previous backup data with the controller setting data in the following situations:

- When the motion CPU and robot controller are mounted on the same base unit
- When a MELSEC-F series PLC CPU is used

As a result, the GOT performs the backup even if there are no changes to the controller setting data.

To backup setting data only when the data are changed, set the trigger type to [Rise].

To minimize the amount of backup data, create a sequence program so that the trigger device turns on only when the setting data are changed.

Backing up the robot controller

The robot controller does not support checking data changes. Therefore, communication speed and program execution speed may slow if the backup is executed in the following situations:

- The trigger backup is executed frequently.
- Multiple robot controllers are connected.
- Backup data is large due to a large number of programs.

Screens on which trigger backup can be executed

The trigger backup can be executed only when the GOT displays a monitor screen.

The GOT cannot execute the backup in the following situations.

■When the backup trigger conditions are satisfied while a screen other than a monitor screen is displayed

When the trigger condition is met while the GOT displays a screen other than a monitor screen, including the utility screen and ladder monitor screen, the GOT does not execute the backup.

When a screen other than a monitor screen is switched to a monitor screen, the GOT executes the backup.

■When a screen other than a monitor screen is switched to a monitor screen during backup

When a monitor screen is switched to a screen other than a monitor screen during the trigger backup, the GOT stops the backup deletes the data being backed up.

When the screen is switched to a monitor screen, the GOT executes the backup again.

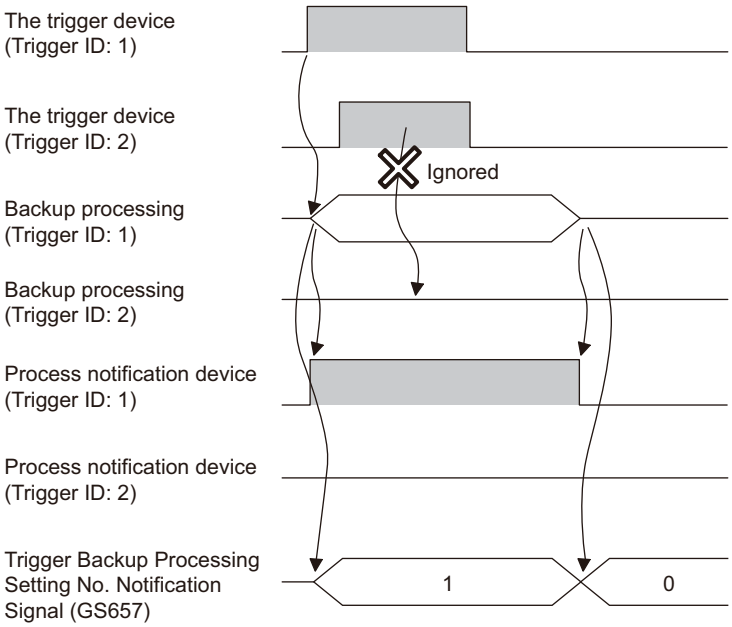
■Other situations

The GOT does not execute the backup even if a screen other than a monitor screen is switched to a monitor screen in the following situations:

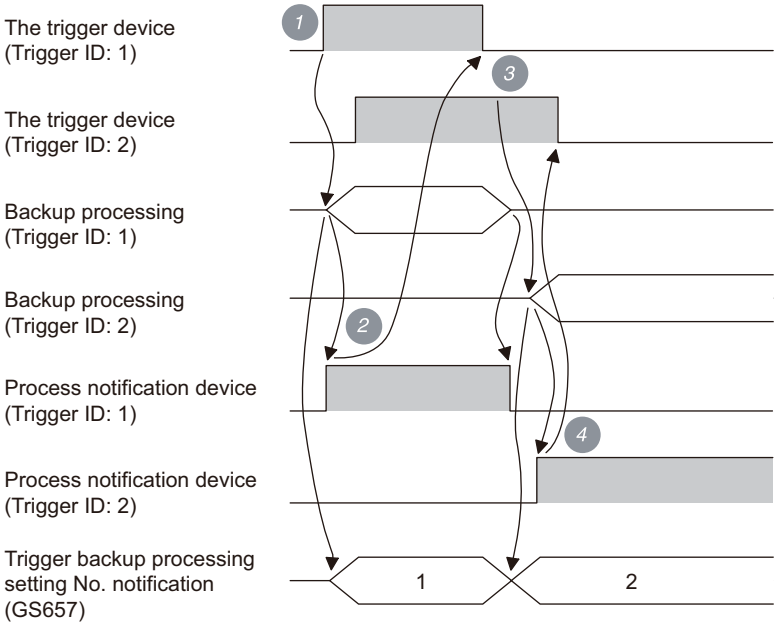
- When the GOT is restarted
- When the trigger backup settings are changed in the utility

When another trigger condition is met during backup

The GOT ignores that another trigger condition was met.



To ensure the trigger backup is executed, establish a handshake with the trigger device and the process notification device.
An example of a handshake is shown below.



1. The trigger device (Trigger ID: 1) turns on,
and then the GOT starts the backup (Trigger ID: 1).

2. When the backup starts, the process notification device (Trigger ID: 1) turns on, and the trigger backup processing setting No. notification (GS657) stores the trigger ID.
When the process notification device turns on, the trigger device (Trigger ID: 1) turns off.

3. When the backup (Trigger ID: 1) is completed, the trigger device (Trigger ID: 2) is enabled,
and then the GOT starts the backup (Trigger ID: 2).

4. When the backup starts, the process notification device (Trigger ID: 2) turns on, and the trigger backup processing setting No. notification (GS657) stores the trigger ID.
When the process notification device turns on, the trigger device (Trigger ID: 2) turns off.

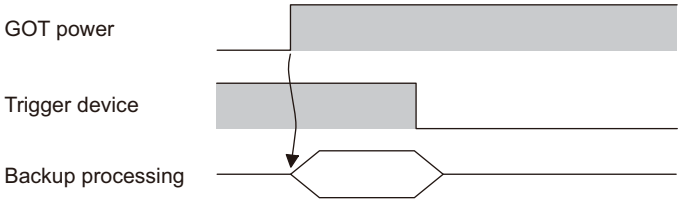
When multiple trigger conditions are met simultaneously

The GOT executes the backup with the smallest trigger ID first.

When trigger device is on at GOT startup

The GOT recognizes that the trigger condition is met, and then the GOT executes the backup.

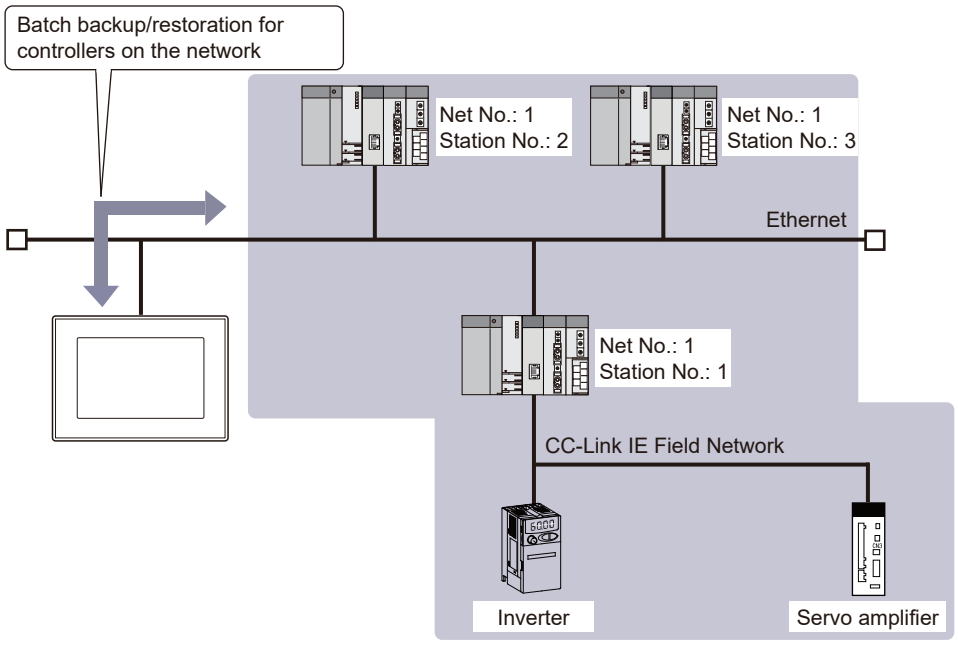
Create a sequence program so that the trigger device turns off after the GOT checks that the process notification device turns on.



63.9 Network batch backup/restoration

☞ Page 530 Preliminary steps
☞ Page 531 Controller list files
☞ Page 534 Operation after executing the network batch backup or restoration

The backup/restoration can be executed on multiple controllers on the network system.



Create a controller list file to backup or restore multiple controllers on the network.

Point

When backing up or restoring controllers on the network, set the parameters for the controllers so that they can communicate with the GOT.
If the controller cannot communicate with the GOT, backup/restoration cannot be performed.
For information on how to connect controllers with the GOT, refer to the following.
📖GOT3000 Series User's Manual (Connection)
📖GT SoftGOT3000 User's Manual

63.9.1 Preliminary steps

This section shows the steps to be taken before executing network batch backup/restoration.

Step		Reference
1	Create a controller list file.	☞ Page 531 Controller list files
2	Store the controller list file in the BKUPLIST folder.	☞ Page 531 Controller list files
3	Insert a data storage that contains the controller file list into the GOT.	📖GOT3000 Series User's Manual (Hardware)
4	Display the backup/restoration function on the main menu.	☞ Page 535 How to display the screen
5	Select a channel to be backed up or restored.	☞ Page 541 Backup/restoration function: Main menu
6	Execute the backup/restoration.	☞ Page 541 Backup/restoration function: Main menu

For information on operation after executing the network batch backup/restoration, refer to the following.

☞ Page 534 Operation after executing the network batch backup or restoration

63.9.2 Controller list files

For the controller list file, set the network No. and the station No. of the controller to be backed up or restored.
The controller list file can be set to each backup setting file.

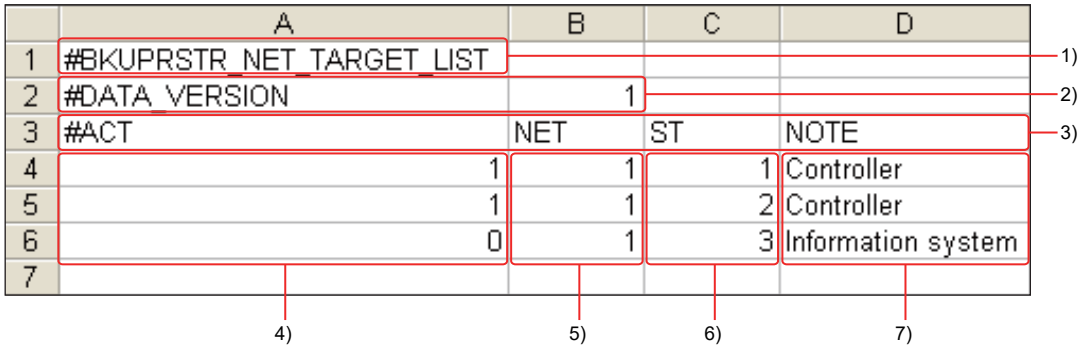
About controller list files

■Specifications

Item	Setting
File name, extension	SYSnNET.INI (Assign the CH No. to be backed up or restored to "n" in the file name.)
File format	Unicode text format
Encode format	Little endian with UTF-16 BOM

■Format

Up to 64 controllers can be set to be backed up or restored. (65 or more controllers cannot be backed up or restored.)
When performing the backup/restoration, the controller list file settings are executed from the top.



No.	Item	Setting
1)	Header	Indicates that it is the controller list file.
2)	Data version	Displays the data version of the controller list file. Set the version to 1.
3)	Controller list	Indicates the title of the controller list.
4)	Execution/non-execution	Set whether to execute backup/restoration. The setting range which specifies whether to execute backup/restoration differs depending on the controller to be backed up or restored. • For controllers other than servo amplifiers and inverters 0: Not executed, 1: Executed • For servo amplifiers and inverters (connected through an RCPU on the master station) 2: Not executed, 3: Executed • For servo amplifiers and inverters (connected through a QCPU or LCPU on the master station) 4: Not executed, 5: Executed
5)	Network No.	Set the network numbers of the controllers to be backed up or restored. (0 to 239)
6)	Station No.	Set the station numbers of the controllers to be backed up or restored. (0 to 120) If the network No. is 0, 255 (host) can also be set.
7)	Memo	Both 2-byte and 1-byte characters can be set. Up to 30 characters are displayed on the controller list screen.

Creating controller list files

The controller list file must be created by the user.

The following shows how to create it with Microsoft Excel.

1. Start Microsoft Excel and set the controllers to be backed up or restored, according to the controller list file format.

	A	B	C	D
1	#BKUPRSTR_NET_TARGET_LIST			
2	#DATA_VERSION	1		
3	#ACT	NET	ST	NOTE
4	1	1	1	Controller
5	1	1	2	Controller
6	0	1	3	Information system
7				

For the controller list file formats, refer to the following.

☞ Page 531 Format

2. Select [File] → [Save As] to display the [Save As] dialog box.

3. Select [Unicode Text (*.txt)] in [Save as type].

4. Enter the file name according to the CH No. to be used and press the [Save] button with the extension INI.

For the file name specifications, refer to the following.

☞ Page 531 Specifications

Precautions

■Controller list files that contain quotation marks

Even if quotation marks are entered in the memo, they are not treated as a quotation marks for the character string, and the text up to the next line is considered a character string instead.

A format error will occur if values are placed in quotation marks.

■When creating controller list files with a text editor

When controller list files are created with a text editor, delimit data with tabs.

A format error will occur if unnecessary tabs are used.

Storing controller list files

Store the created controller list file in the same folder as the backup setting.

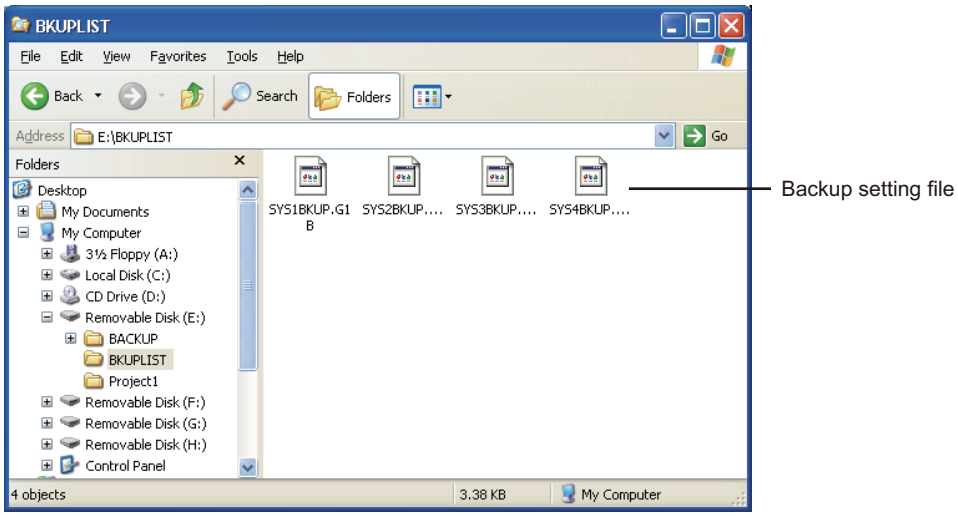
For the storage location for the backup setting, refer to the following.

☞ Page 510 Storage location for backup

1. Check whether a storage folder for the backup (BKUPLIST) exists on the data storage.

(A storage folder is automatically created when the backup is executed.)

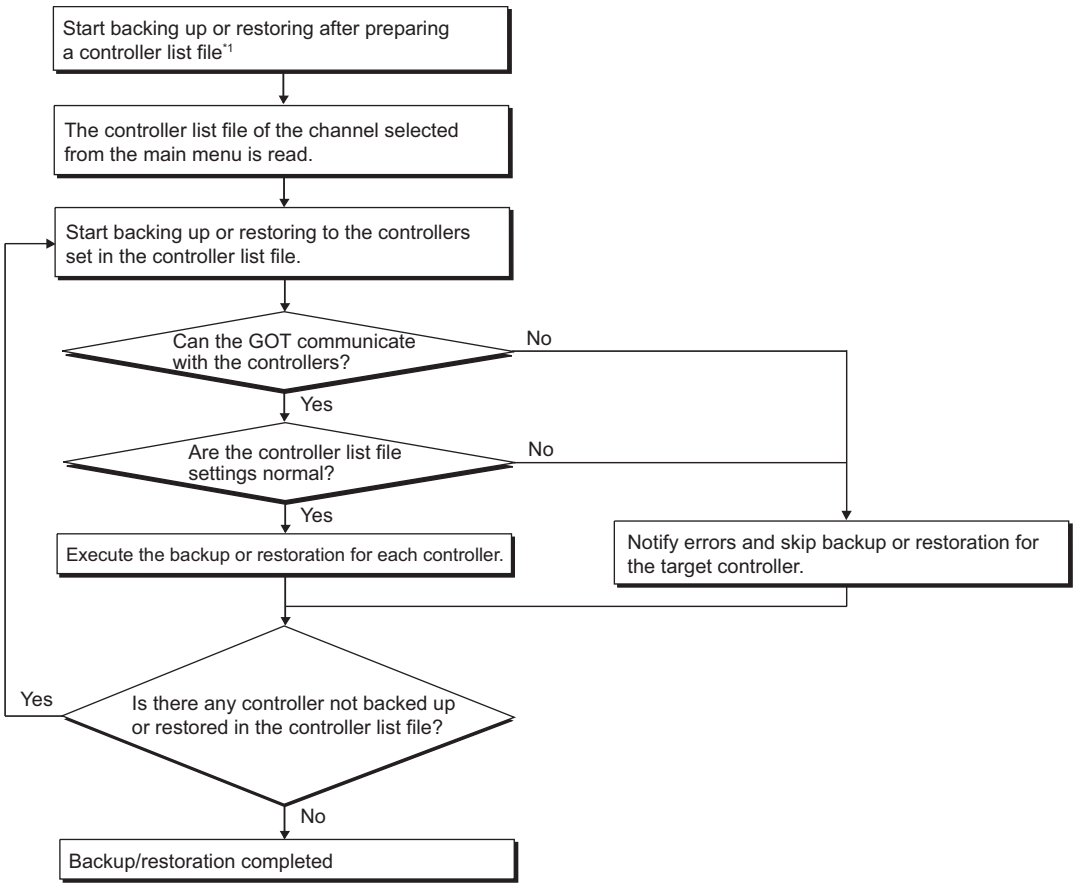
If a storage folder is not created, create one.



2. Store the created controller list files in the storage folder for the backup.

63.9.3 Operation after executing the network batch backup or restoration

When the network batch backup/restoration is executed, the following operations are performed.



*1 For details, refer to the following.
☞ Page 541 Backup/restoration function: Main menu

Operations if an error occurs during backup

If an error occurs, the backup being executed is canceled and the error dialog box is displayed. (The error is displayed by the controller set in the controller list file.)

After the error dialog box is closed, the backup for the next controller set in the controller list file is executed.

However, if the backup data cannot be written to the data storage because it is not inserted or has insufficient memory, the back to all controllers is canceled.

Handling of the backup data when the backup is canceled

The backup data of controllers that are disconnected due to error or aborted password entry is deleted by the controller set in the controller list file.

Successfully backed up backup data remains on the controller set in the controller list file.

Trigger backup operations

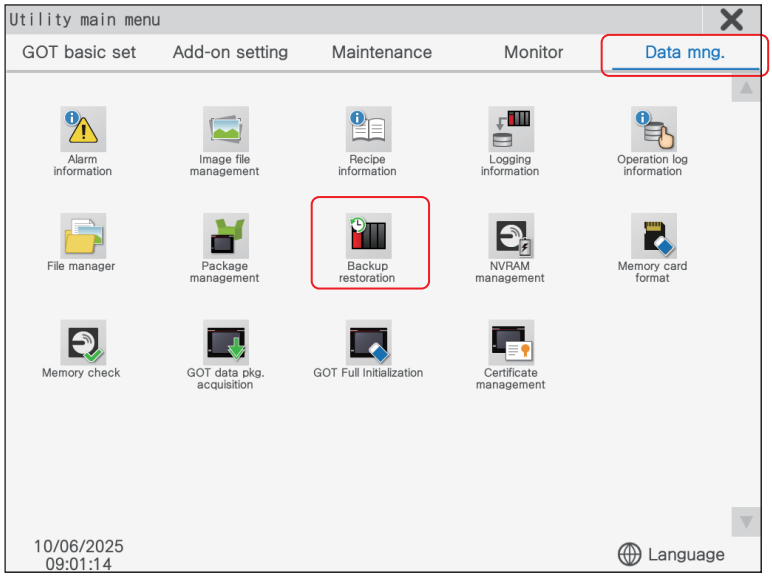
The backup is not executed if the GOT cannot communicate with controllers because of a communication error or otherwise.

If no previous backup data to be compared exists, the backup is executed.

Even if the backup being executed is canceled due to an error, the next controller set in the controller list file is backed up.

63.10 How to display the screen

Select [Backup restoration] in the [Data mng.] tab.



Starting the function by using a special function switch (backup/restoration)

The backup/restoration function can be started from a user-created screen by setting the backup/restoration function to the special function switch set in the project.

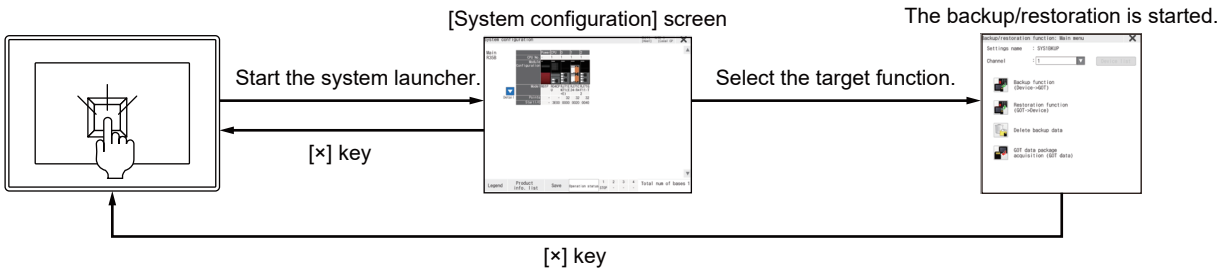
For information on how to set a special function switch, refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

Starting the function by using the special function switch (System launcher)

You can start the backup/restoration function from a user-created screen by selecting the connection destination with a special function switch to which [System Launcher] is set.

User-created screen with a special function switch (System Launcher)



Point

When the system launcher does not support the connection destination

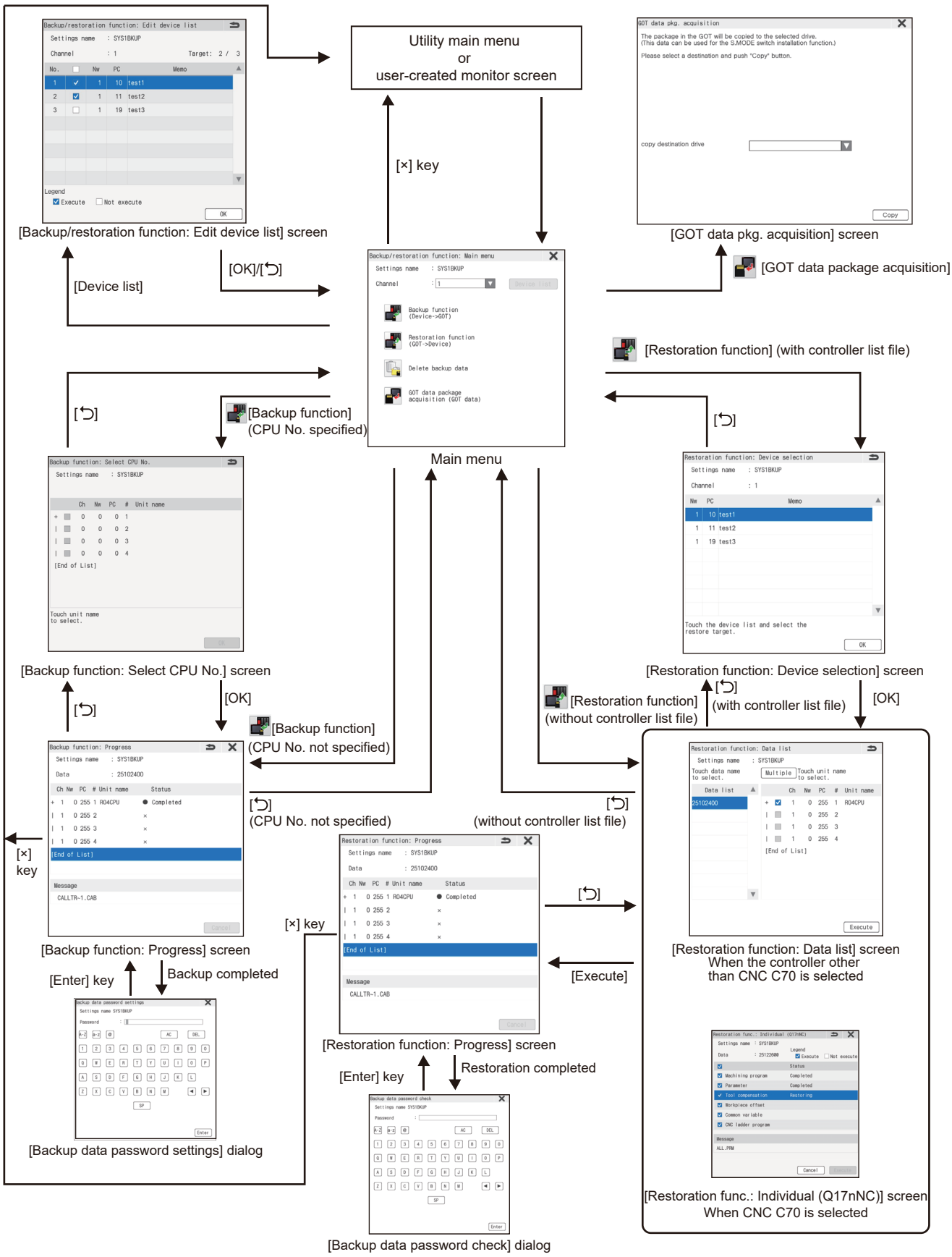
When the system launcher does not support the set connection destination, a dialog appears at startup.

For details on the system launcher function, refer to the following.

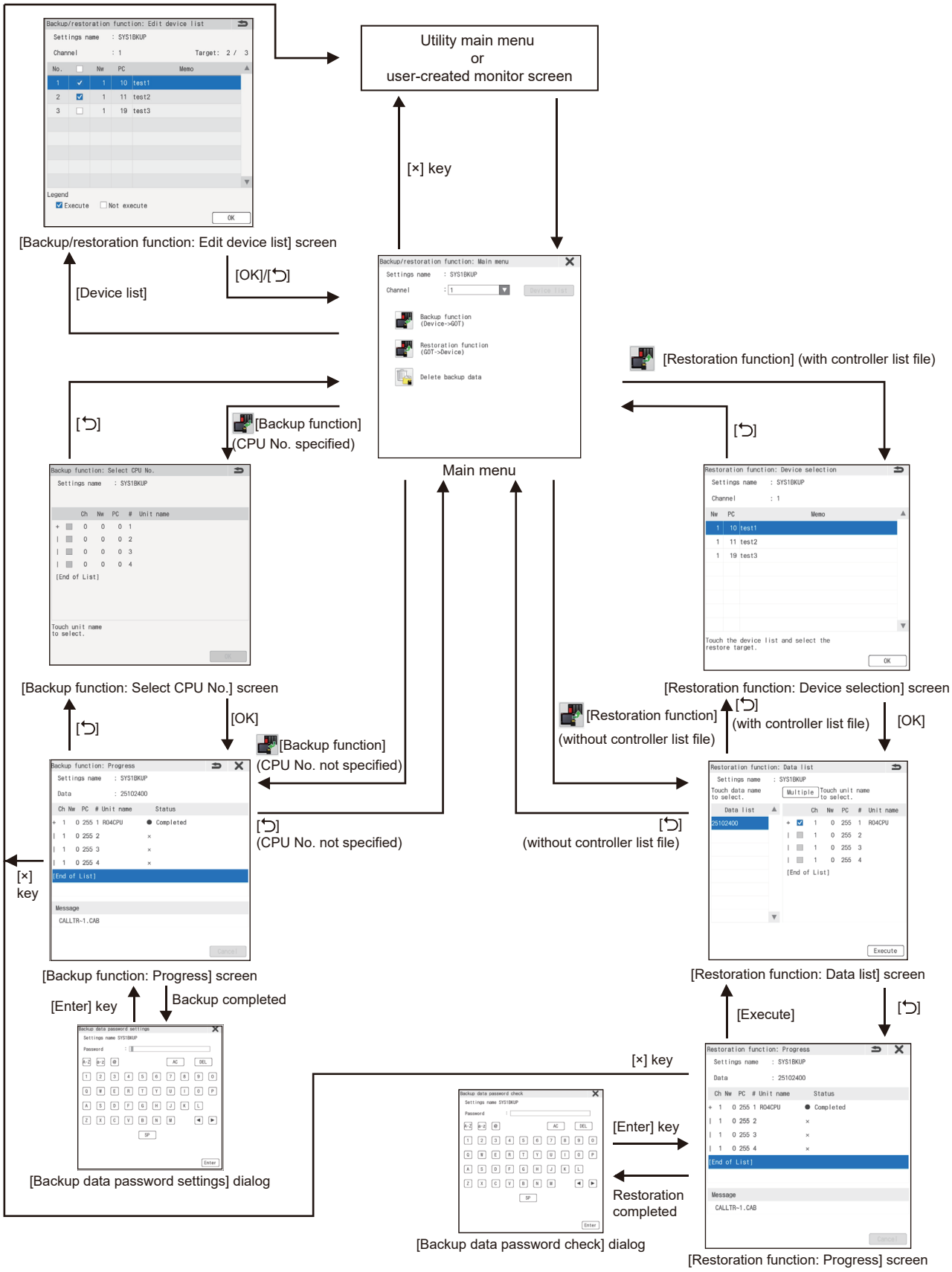
☞ Page 207 [System launcher]

Screen transitions

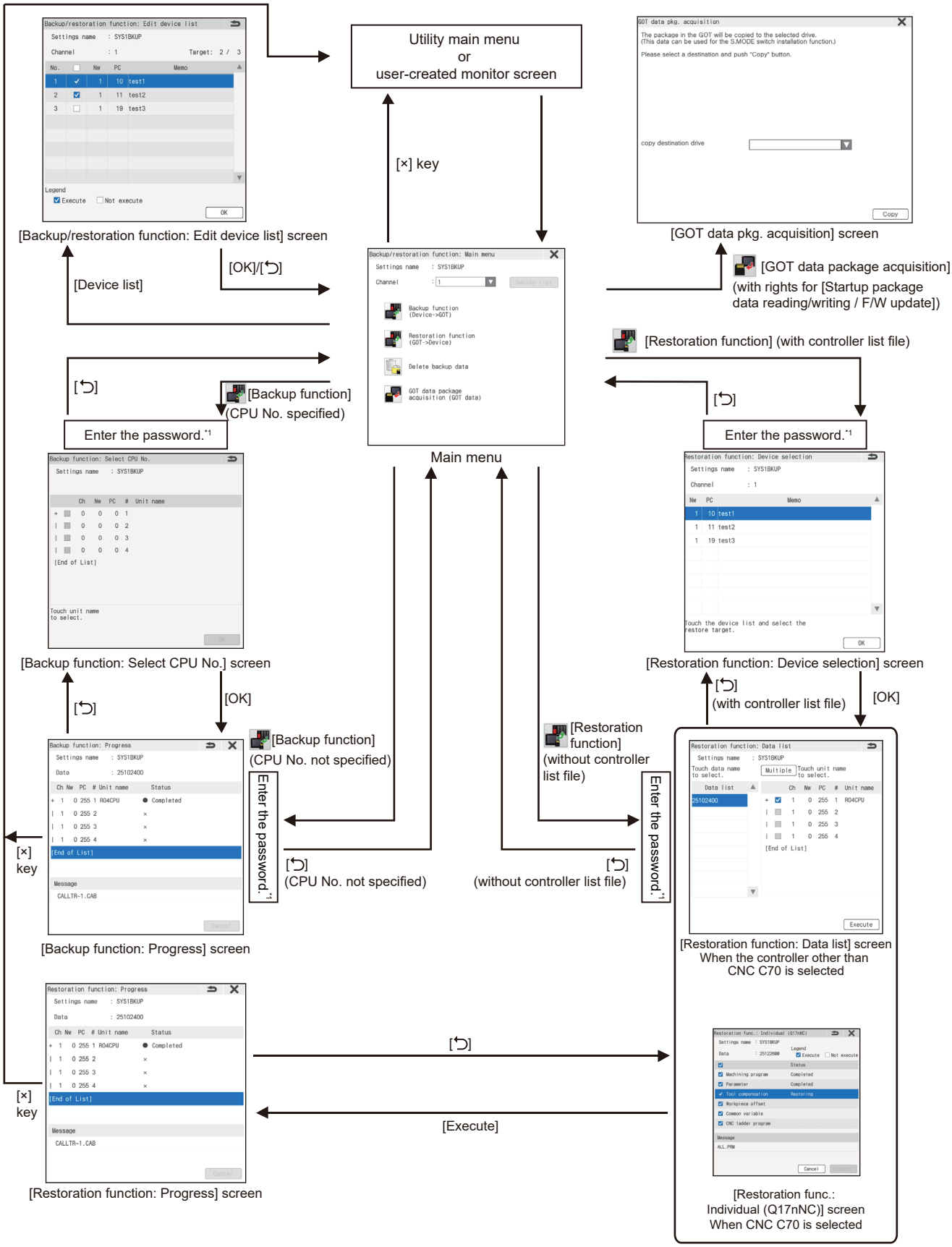
■GOT3000 (When the security mode is mode 1. Excluding GT SoftGOT3000.)



■GT SoftGOT3000 (When the security mode is mode 1)

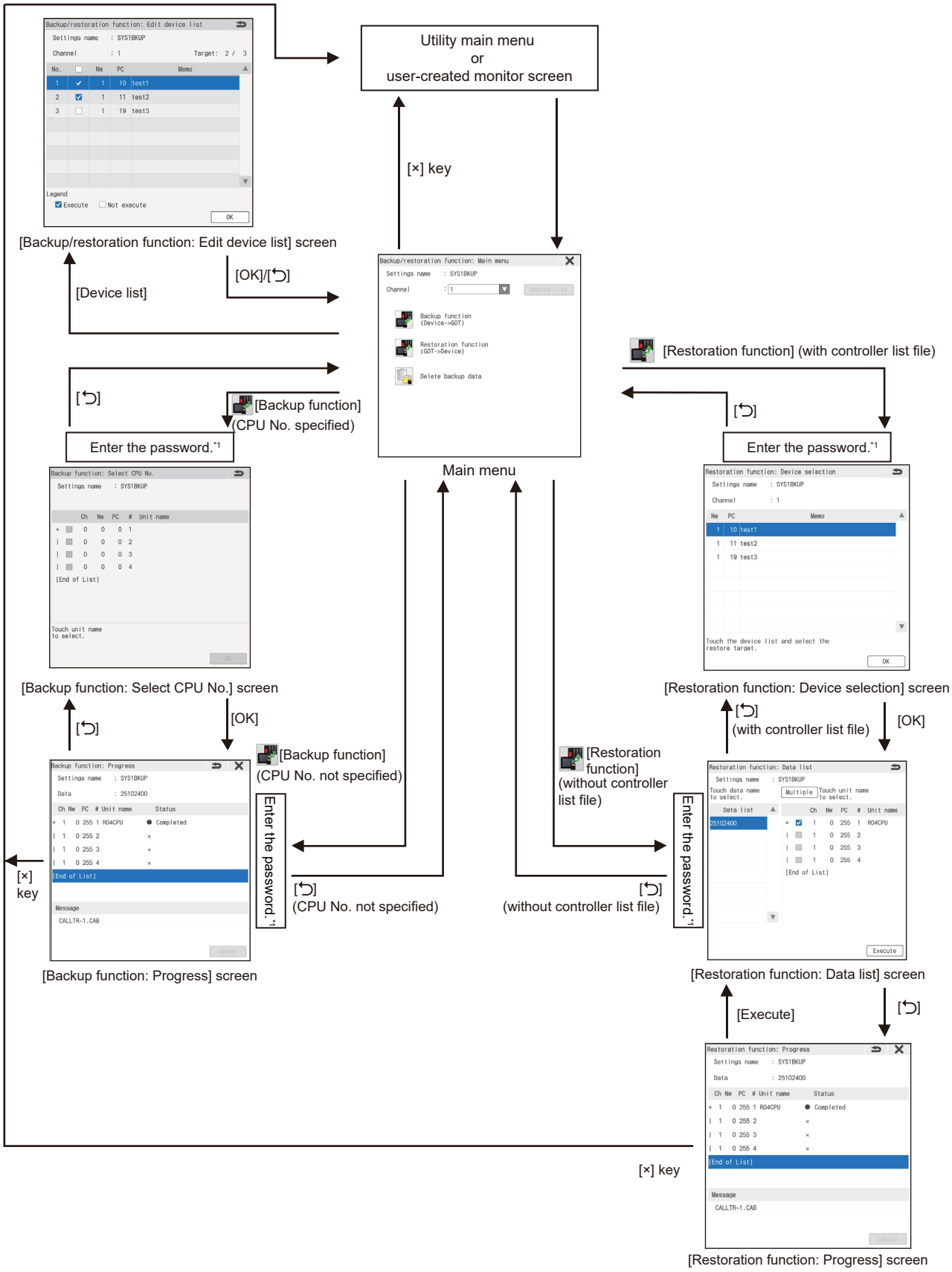


■GOT3000 (When the security mode is mode 2. Excluding GT SoftGOT3000.)



*1 For details, refer to the following.
☞ Page 513 Security and password

■GT SoftGOT3000 (When the security mode is mode 2)

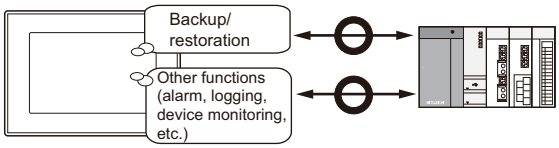


*1 For details, refer to the following.
☞ Page 513 Security and password

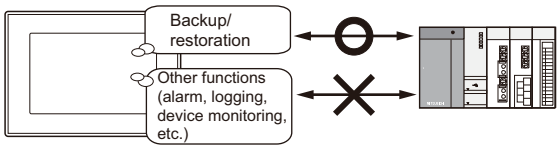
Stopping background processes

Background processing by other functions, such as alarm, logging, device monitoring, can be stopped during backup/restoration by using the background processing stop signal (GS522.b0).
When background processing is performed, backup/restoration and other functions are performed alternately.
Consequentially, it may take some time to perform backup/restoration but the controller will continue to be monitored.
When background processing is not performed, processing of other functions stop until the backup/restoration is completed.
Therefore, monitoring of the controller stops, but the backup/restoration takes less time.

- When background processing is performed
  Backup/restoration and other functions alternately perform communication.



- When background processing is stopped
  Other functions stop communication until backup/restoration is completed.



GOT special register	Description	
Background processing stop signal (GS522.b0)	OFF	Background processing is performed during backup/restoration.
	ON	Background processing is not performed during backup/restoration.

Precautions

■Log file save setting

Before stopping background processing, ensure that file saving is on for functions that collect data such as alarm and logging.
If file saving is not on, all log data such as alarm data and logging data are lost after backup/restoration is completed.

■Functions disabled while background processing is stopped

When background processing is stopped, all functions except for the backup/restoration function stop during backup/restoration.
Therefore, the following functions that collect logging data will not be able to acquire data during backup/restoration.

- Operation log
- Alarm
- Logging
- Recipe

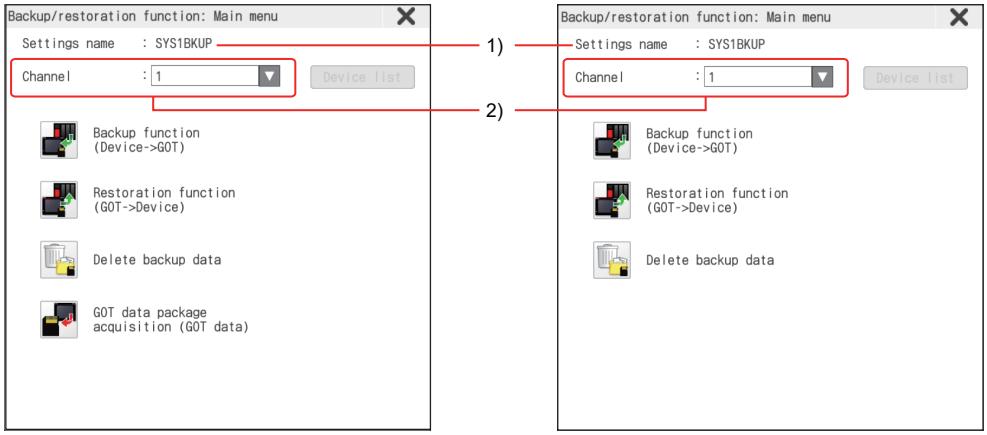
■Stopping background processing during trigger backup

During trigger backup, turning on the background processing stop signal (GS522.b0) does not stop background processing.
Background processing is always performed.

63.11 Backup/restoration function: Main menu

This section describes the displayed contents of the [Backup/restoration function: Main menu] screen and the functions of the keys displayed on the screen.

Displayed screen



GOT3000 GT SoftGOT3000

Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Channel]	Selects the channel number that the target controller for backup/restoration is connected to.

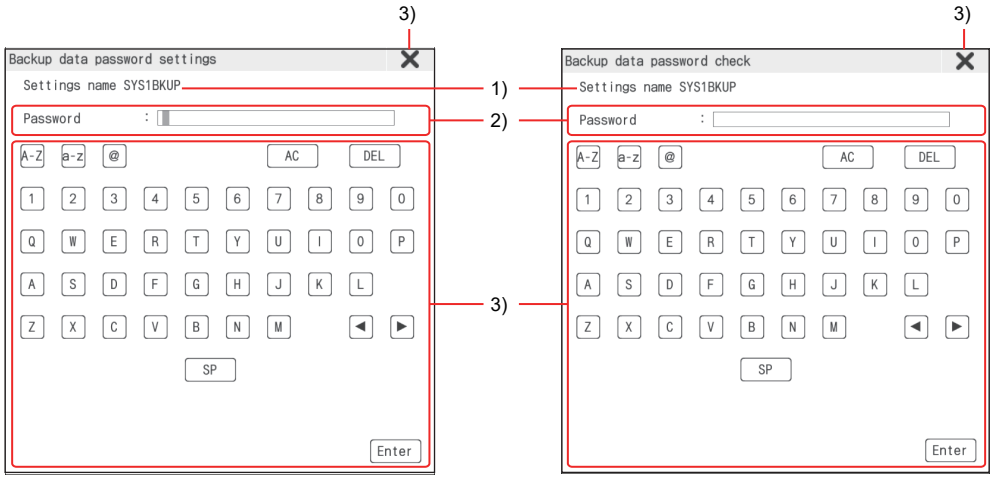
Key functions

Key	Function
[Device list]	This function can be used if the device list file is stored in the same folder as the backup settings. ☞ Page 511 Log files for backup/restoration Touch this key to switch to the [Device list] screen. The [Device list] button will be disabled after displaying the [Backup/restoration function: Main menu] screen or inserting a data storage containing a device list file into the GOT after switching the channel. To enable the [Device list] button, select the same channel again.
[Backup function (Device->GOT)]	When the security mode is 1, touch this key to switch the screen to the [Backup function: Select CPU No.] or [Backup function: Progress] screen. The screen which is switched differs depending on whether the CPU No. is specified at backup. ☞ Page 150 [Backup restoration] screen • If the CPU No. is specified at backup, the screen switches to the [Backup function: Select CPU No.] screen. ☞ Page 543 [Backup function: Select CPU No.] screen • If the CPU No. is not specified at backup, the screen switches to the [Backup function: Progress] screen. ☞ Page 544 [Backup function: Progress] screen
	When the security mode is 2, password setting and authentication is conducted in the [Backup data password settings] dialog before the screen is switched to the [Backup function: Select CPU No.] or [Backup function: Progress] screen. ☞ Page 542 [Backup data password settings] and [Backup data password check] dialogs
[Restoration function (Device->GOT)]	When the security mode is 2, touch this key to switch the screen to the [Restoration function: Device selection] or [Restoration function: Data list] screen. The screen which is switched differs depending on whether the device list file is configured. ☞ Page 532 Controller list files • If the device list file is configured, the screen transitions to the [Restoration function: Device selection] screen. ☞ Page 548 [Restoration function: Device selection] screen • If the device list file is not configured, the screen transitions to the [Restoration function: Data list] screen. ☞ Page 545 [Restoration function: Data list] screen
	When the security mode is 2, password authentication is conducted in the [Backup data password check] dialog before the screen is switched to the [Restoration function: Device selection] or [Restoration function: Data list] screen. ☞ Page 542 [Backup data password settings] and [Backup data password check] dialogs
[Delete backup data]	Deletes the oldest backup data already stored on the GOT storage.

Key	Function
[GOT data package acquisition (GOT data)]	The GT SoftGOT3000 does not support the GOT data package acquisition function. Touch this key to switch the screen to the [GOT data package acquisition] setting screen. ☞ Page 576 [GOT data pkg. acquisition]
	When the security mode is 2, operators who do not possess rights for [Startup package data reading/writing / F/W update] cannot perform GOT data package acquisition so [GOT data package acquisition (GOT data)] is not displayed. Login as an operator with rights for [Startup package data reading/writing / F/W update] to perform GOT data package acquisition. ☞ Page 117 [Startup package data reading/writing / F/W update]
[FX keyword]	Touch this key to display the [Keyword] screen. (Can be used when connected to a MELSEC-F series PLC CPU.) For information on keyword operations such as releasing keywords, refer to the following. ☞ Page 101 [Keyword] screen
[×]	Exits backup/restoration, and returns to the screen before the backup or restoration started.

[Backup data password settings] and [Backup data password check] dialogs

■Displayed screen



[Backup data password settings] dialog

[Backup data password check] dialog

Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Password]	Displays the password.
		When the security mode is mode 1, a backup data password of up to 32 characters can be set. Leave [Password] blank if you do not want to set a backup data password.
		When the security mode is mode 2, set a backup data password of 8 to 32 characters which includes two or more of the following character types. • Uppercase alphabet (A to Z) • Lowercase alphabet (a to z) • Numeric characters (0 to 9) • One-byte space • Symbols: !" # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~
3)	Key	Displays keys used for operations in the dialog. ☞ Page 542 Key functions

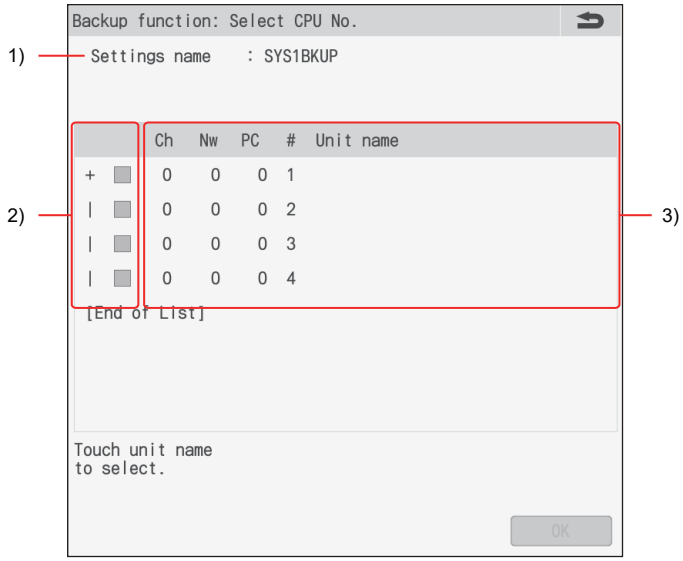
■Key functions

Key	Function
[×]	Closes the dialog and aborts password entry. When the security mode is mode 1, the [×] key for the [Backup data password settings] dialog cannot be used.
[A-Z]	Switches the key type to uppercase alphabet.
[a-z]	Switches the key type to lowercase alphabet.
[@]	Switches the key type to numeric characters.
[AC]	Deletes all characters.
[DEL]	Deletes the value or character at the cursor position.
[Enter]	Performs authentication using the entered password.

63.12 [Backup function: Select CPU No.] screen

This section describes the displayed contents of the [Backup function: Select CPU No.] screen and the functions of the keys displayed on the screen.

Displayed screen



Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	Controller status	Displays the status of controllers to be backed up. • Selected: Backup will be performed. • Deselected: Backup will not be performed. • Deselected (grayed out): The controller does not exist or is not the target controller.
3)	[Ch] [Nw] [PC] [#] [Module name]	Displays the channel No., network No., station No., CPU No., and module name for the target controller in a list. When the CPU No. setting is enabled, select the controller to be backed up by touching it. Also displays the progress of each station when network batch backup is executed. ([Progression: (Number of completed controllers)/(Number of set controllers) NG = (Number of error controllers)])

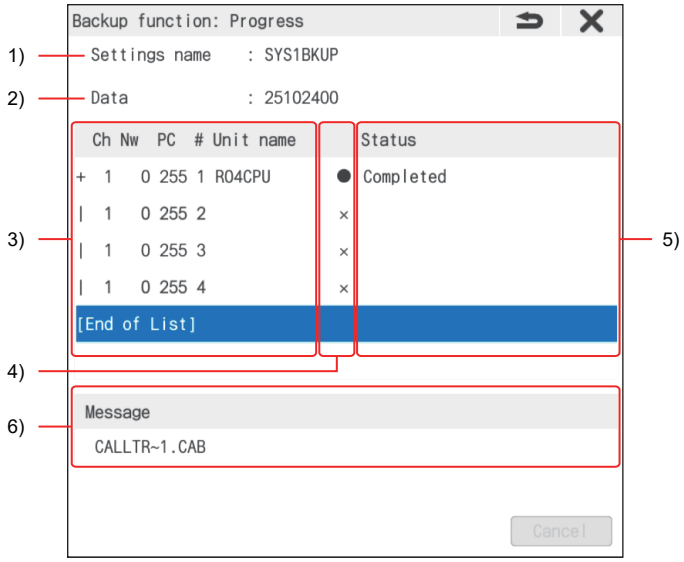
Key functions

Key	Function
[⮌]	Returns to the screen before the [Backup function: Select CPU No.] screen.
[OK]	Touch this button to execute the backup for the selected controller in the controller status area.

63.13 [Backup function: Progress] screen

This section describes the displayed contents of the [Backup function: Progress] screen and the functions of the keys displayed on the screen.

Displayed screen



Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Data]	Displays the name of the backup data.
3)	[Ch] [Nw] [PC] [#] [Module name]	Displays the channel No., network No., station No., CPU No., and module name for the target controller in a list. When the CPU No. setting is enabled, select the controller to be backed up by touching it. Also displays the progress of each station when network batch backup is executed. ([Progression: (Number of completed controllers)/(Number of set controllers) NG = (Number of error controllers)])
4)	Backup progress	Displays the following information. • [●]: Backup target • [○]: Not backup target • [×] Not accessible
5)	[Status]	Displays the backup progress. • [Backing up]: The backup is processing. • [Aborting]: Backup cancellation is processing. • [Completed]: The backup is completed.
6)	[Message]	Displays the name of the file being processed.

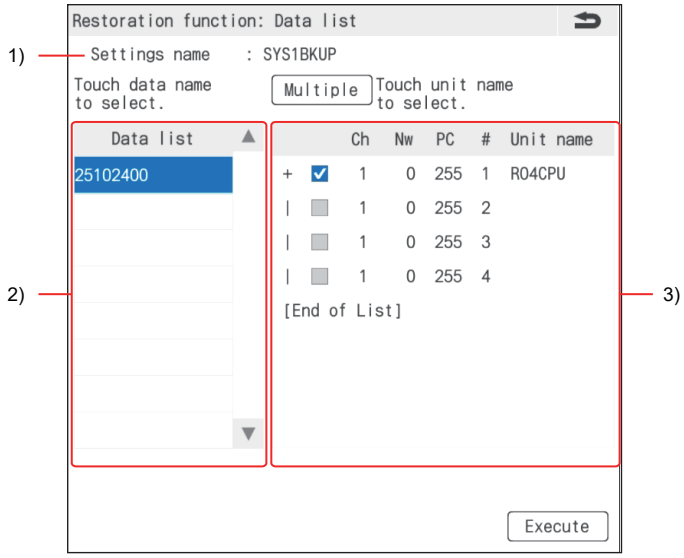
Key functions

Key	Function
[⮌]	Returns the screen to the [Backup/restoration function: Main menu] screen.
[Cancel]	Cancels the backup.
[×]	Exits backup/restoration, and returns to the screen before the backup or restoration started.

63.14 [Restoration function: Data list] screen

This section describes the displayed contents of the [Restoration function: Data list] screen and the functions of the keys displayed on the screen.

Displayed screen



Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Data list]	Displays a list of backup data stored on the data storage. Select the backup data to be restored.
3)	[Ch] [Nw] [PC] [#] [Module name]	Displays the channel No., network No., station No., CPU No., and module name for the target controller of the restoration in a list.

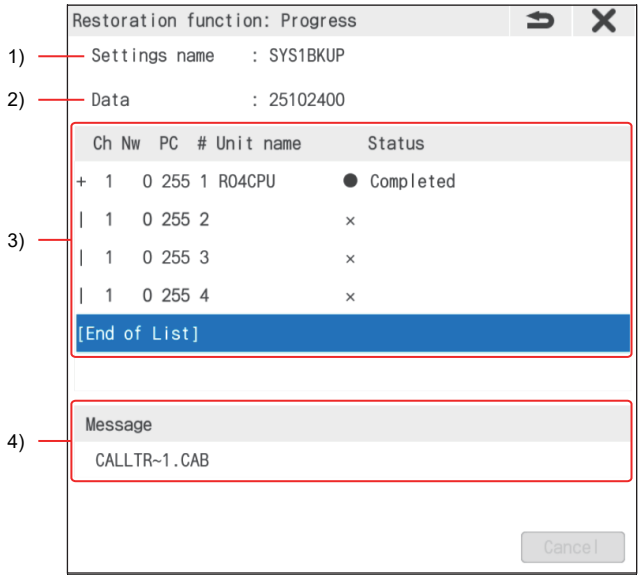
Key functions

Key	Function
[Multiple selection] / [Single selection]	Switches the number of target controllers for restoration. Select [Single selection] when selecting only one target controller for restoration. Select [Multiple selection] when selecting multiple target controllers for restoration.
[⮌]	Returns to the screen before the [Restoration function: Data list] screen.
[Execute]	Starts the restoration.

63.15 [Restoration function: Progress] screen

This section describes the displayed contents of the [Restoration function: Progress] screen and the functions of the keys displayed on the screen.

Displayed screen



Item			Description
1)	[Settings name]		Displays the file name of the selected backup settings file.
2)	[Data]		Displays the name of the backup data.
3)	Backup progress	[Ch] [Nw] [PC] [#] [Module name]	Displays the channel No., network No., station No., CPU No., and unit name for the target controller of the restoration.
		—	Displays the following information. • [●]: Restoration target • [○]: Not restoration target • [×] Not accessible • [?] : Restoration failed
		[Status]	Displays the restoration progress. • [Restoring]: The restoration is processing. • [Aborting]: Restoration cancellation is processing. • [Completed]: The restoration is completed. • [Abort]: Restoration cancellation is completed. • [Comm.error]: The restoration failed due to communication loss. • [Data error]: The restoration failed due to backup data errors.
4)	[Message]		Displays the name of the file being processed.

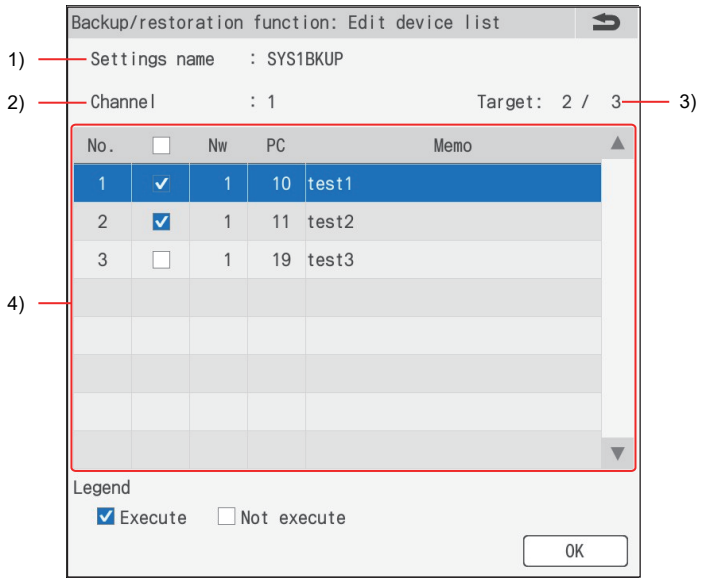
Key functions

Key	Function
[⮌]	Returns the screen to the [Backup/restoration function: Main menu] screen.
[Cancel]	Cancels the restoration. This key is disabled for servo amplifiers and inverters.
[×]	Exits backup/restoration, and returns to the screen before the backup or restoration started.

63.16 [Backup/restoration function: Edit device list] screen

This section describes the displayed contents of the [Backup/restoration function: Edit device list] screen and the functions of the keys displayed on the screen.

Displayed screen



Item			Description
1)	[Settings name]		Displays the file name of the selected backup settings file.
2)	[Channel]		Displays the target channel No. for backup/restoration.
3)	[Target]		Displays the number of backups/restorations to be executed. (Executed/all settings)
4)	Controller list	Checkbox (Switches between Execute all/Do not execute all)	You can set whether to batch backup/restore all the controllers registered in the controller list. Select the checkbox in the header to select all the controllers in the list. Deselect the checkbox in the header to deselect all the controllers in the list.
		Checkbox (Switches between Execute/Do not execute)	You can set whether to backup/restore individual controllers registered in the controller list.
		[Nw]	Displays the network number.
		[PC]	Displays the station number.
		[Memo]	Displays memos. If the memo has 31 or more characters, only the first 30 are displayed.

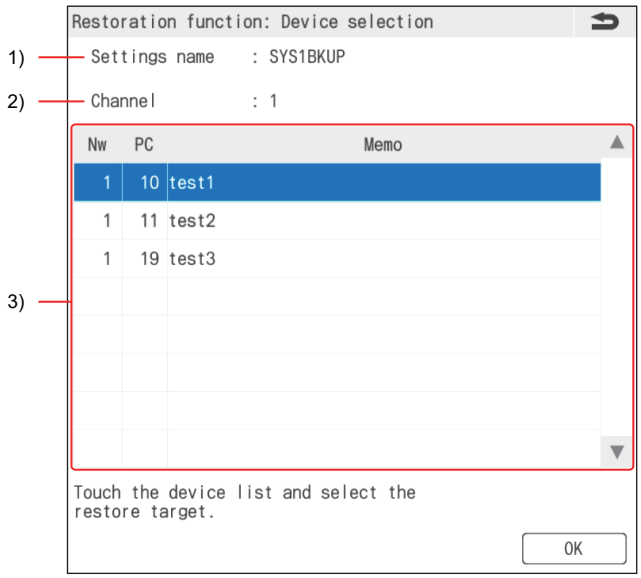
Key functions

Key	Function
[OK]	Saves the edited information in the device list file and returns the screen to the [Backup/restoration function: Main menu] screen.
[↩]	Discards the edited information and returns the screen to the [Backup/restoration function: Main menu] screen.

63.17 [Restoration function: Device selection] screen

This section describes the displayed contents of the [Restoration function: Device selection] screen and the functions of the keys displayed on the screen.

Displayed screen



Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Channel]	Displays the target channel No. for backup/restoration.
3)	Controller list	Displays all the settings of the device list file. Touch a row to select or deselect a device for restoration. Highlighted rows are selected for restoration.

Key functions

Key	Function
[OK] button	Switches to the [Data list] screen.
[⮌] button	Returns the screen to the [Backup/restoration function: Main menu] screen.

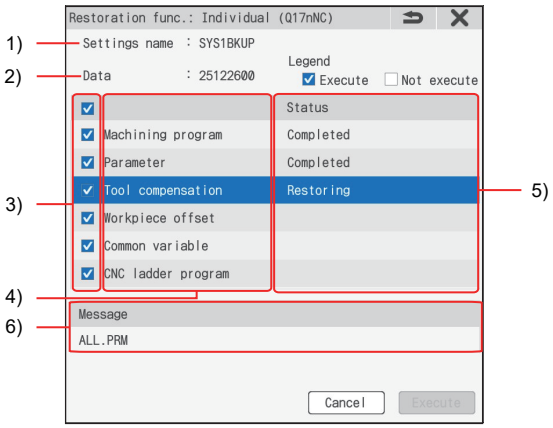
63.18 [Restoration func.: Individual (Q17nNC)] screen

This section describes the displayed contents of the [Restoration func.: Individual] screen and the functions of the keys displayed on the screen.

Precautions

The individual restoration screen cannot be configured in GT SoftGOT3000 as connection with the CNC C70 series (Q173NCCPU) is not supported.

Displayed screen



Item		Description
1)	[Settings name]	Displays the file name of the selected backup settings file.
2)	[Data]	Displays the name of the backup data.
3)	Checkbox	Selects the files to restore. The item will be grayed out if the target backup file does not exist.
4)	Items for restoration	Displays the data type of the items for restoration.
5)	[Status]	Displays the restoration progress. • [Restoring]: The restoration is processing. • [Aborting]: Restoration cancellation is processing. • [Completed]: The restoration is completed. • [Abort]: Restoration cancellation is completed.
6)	[Message]	Displays the name of the files that have been restored.

Key functions

Key	Function
[⮌]	Returns the screen to the individual restoration screen.
[Cancel]	Cancels the restoration.
[Sec./Can. All]	Selects all files or deselects the selected files.
[Execute]	Starts the restoration.

63.19 Backup Data Conversion Tool

GT37 SoftGOT3000

The Backup Data Conversion Tool allows you to convert data backed up via the GOT's backup/restore function into a format editable with GX Works2 or GX Developer, and to convert the edited data back into a format restorable by the GOT.
To edit data in GX Works2, use Ver.1.73B or later.

☞ Page 550 Operating environment
☞ Page 551 How to install and operate the software
☞ Page 552 How to use Backup Data Conversion Tool
☞ Page 554 Precautions for Backup Data Conversion Tool

Precautions

Only backup data created by the backup/restoration function can be converted with Backup Data Conversion Tool.
The following data cannot be converted with Backup Data Conversion Tool:

- Data created with GX Works2 or GX Developer
- Backup data to which a new file is added with GX Works2 or GX Developer
- Backup data for the Q00JCPU, Q00CPU, Q01CPU, and FXCPU

63.19.1 Operating environment

Use Backup Data Conversion Tool in one of the following operating environments.

Item	Description
Personal computer	A personal computer that runs on windows.
OS*1*2*3	• Microsoft Windows 11 Education (64-bit)*4 • Microsoft Windows 11 Enterprise (64-bit)*4 • Microsoft Windows 11 Pro (64-bit)*4 • Microsoft Windows 11 Home (64-bit)*4 • Microsoft Windows 10 Enterprise (32-bit, 64-bit)*4 • Microsoft Windows 10 Pro (32-bit, 64-bit)*4 • Microsoft Windows 10 Home (32-bit, 64-bit)*4
CPU	The system requirements for the above operating systems must be met. For the system requirements for the operating systems, refer to the following. ☞ Official Microsoft website
Memory	
Display	Resolution: 1024 × 768 dots or higher
Hard disk space	500 KB or more
Display color	High Color (16 bits) or higher
Other	Microsoft Visual C++ 2015-2022 Redistributable Package (Version 14.29.30139.0 or later is recommended)

*1 The following functions are not supported.
Starting applications in Windows compatibility mode
Fast user switching
Changing desktop themes (fonts)
Remote desktop
Setting the size of text and illustrations on the screen to any size other than [Small-100%]
*2 The touch feature is not supported.
*3 Operation in a virtual environment such as Hyper-V is not supported.
*4 Use the same language version of Windows OS as that of the Backup Data Conversion Tool.
Example: When using the Japanese version of the Backup Data Conversion Tool, use the Japanese version of Windows OS.

63.19.2 How to install and operate the software

Installing Backup Data Conversion Tool is not required.

Start Backup Data Conversion Tool using the following procedure.

1. Copy BkupRstrDataConv.exe to the hard disk or another form of media on the personal computer.

Obtain the file above from one of the following:

- The GTD3 folder in the installation destination folder of GT Designer3 *1
- Consult your local sales office.

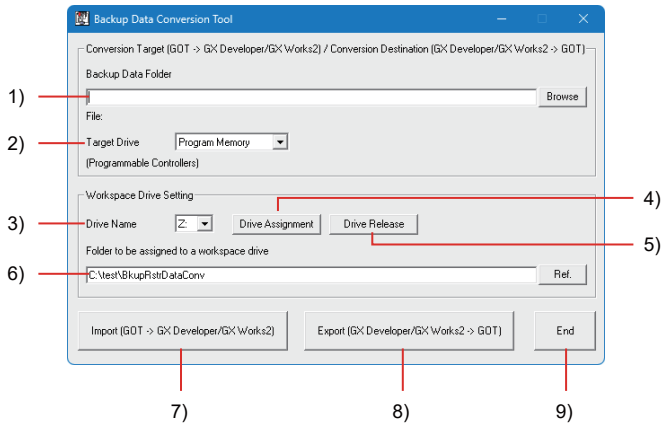
2. Double-click BkupRstrDataConv.exe to start the tool. Refer to the following explanation then configure the tool.

*1 If BkupRstrDataConv.exe is run in the folder where the software is installed, the settings in the setting dialog are not retained when the file is run next time.
To retain the settings, copy and run BkupRstrDataConv.exe in any location other than in the folder where the software is installed.

63.19.3 How to use Backup Data Conversion Tool

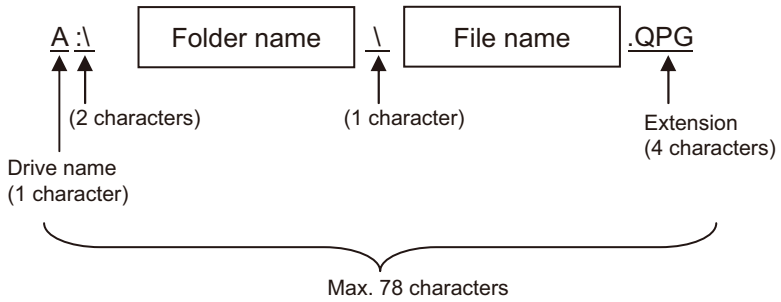
Setting items

The following shows the setting items of Backup Data Conversion Tool.



Item		Description
1)	[Backup Data Folder]*1	Specify the storage location of the backup data (setting data: UNITINFO.G3B) created with the backup/restoration function by clicking the [Browse] button.
2)	[Target Drive]	Select the PLC drive that has setting data to be converted.
3)	[Drive Name]	Specify the IC memory card drive to be set for IC memory card reading/writing in GX Works2 or GX Developer.
4)	[Drive Assignment]	Click this button to assign [Folder to be assigned to a workspace drive] to [Drive Name]. (A drive is normally assigned at import/export automatically. Use this button when a drive is not assigned or to assign a drive again.) A dive cannot be assigned to folders that do not contain the setting information file created on import.
5)	[Drive Release]	Click this button to unassign the drive.
6)	[Folder to be assigned to a workspace drive]*2	Specify the target folder of [Drive Name] by clicking the [Ref.] button.
7)	[Import (GOT → GX Developer/GX Works2)]	Converts the backup data into a file format editable with GX Works2 or GX Developer. If the specified backup data file is exported from a GOT in security mode 2, a backup data password is required on import.
8)	[Export (GX Developer/GX Works2 → GOT)]	Converts the backup data edited with GX Works2 or GX Developer into a file format compatible with the backup/restoration function. If the specified backup data file is exported from a GOT in security mode 2, a backup data password is required on export.
9)	[End]	Closes Backup Data Conversion Tool.

*1 The GOT recognizes the file location with a path as shown below.
Set the folder and file names so that the total number of characters in the path is within 78 characters.
Users can only set the folder and file names.
(Items other than the folder and file names are automatically set.)
Example) Path of a QPG file stored on a data storage



*2 Set the file name so that the total number of characters in the path is within 246 characters.

Operation flow

This section shows the operation flow for Backup Data Conversion Tool.

■Editing the backup data with GX Works2 or GX Developer

GOT	Back up setting data with the backup/restoration function on the GOT.
	↓
	Copy the backup data to the personal computer.
	↓
Backup Data Conversion Tool	Specify [Drive Name] in [Workspace Drive Setting].
	↓
	Specify [Folder to be assigned to a workspace drive].
	↓
	Click the [Import (GOT → GX Developer/GX Works2)] button.
	↓
	Perform authentication with the backup data password when importing backup data exported from a GOT in security mode 2.*1
	↓
GX Works2 or GX Developer	Read the IC memory card in GX Works2 or GX Developer.

*1 Enter the backup data password that was set when backing up the data.
The data cannot be imported if an incorrect backup data password is entered.

■Restoring the backup data edited with GX Works2 or GX Developer to the controller

GX Works2 or GX Developer	Write the IC memory card in GX Works2 or GX Developer.
	↓
Backup Data Conversion Tool	Specify [Backup Data Folder].
	↓
	Specify [Target Drive].
	↓
	Specify [Drive Name] in [Workspace Drive Setting].
	↓
	Click the [Export (GX Developer/GX Works2 → GOT)] button.
	↓
	Perform authentication with the backup data password when exporting backup data exported from a GOT in security mode 2.*1
	↓
	Store the backup data on a memory card or other form of media, and then insert the card into the GOT.
	↓
GOT	Restore the backup data with the backup/restoration function on the GOT.

*1 Enter the backup data password that was set when backing up the data.
The data cannot be exported if an incorrect backup data password is entered.

63.19.4 Precautions for Backup Data Conversion Tool

Precautions when converting backup data

■When using a PLC CPU not compatible with IC memory cards

The Q00JCPU, Q00CPU, Q01CPU, and MELSEC-F series PLC CPU do not support the read/write IC memory card function in GX Developer. Therefore, backup data converted with Backup Data Conversion Tool cannot be edited.

■If files other than the backup data exist in the drive folder to be converted

Backup data cannot be imported if files other than the ones created during the backup exist in the drive folder to be converted.

63.20 Precautions

☞ Page 555 Precautions when backing up data
☞ Page 557 Precautions for backup
☞ Page 558 Precautions for backup/restoration
☞ Page 559 Precautions for MELSEC-Q series PLC CPUs
☞ Page 560 Precautions for MELSEC-F series PLC CPUs
☞ Page 561 Precautions for robot controllers
☞ Page 562 Precautions for MELSERVO-J4 series
☞ Page 563 Precautions for FR-A800 series, FR-A800 Plus series, and FR-F800 series

63.20.1 Precautions when backing up data

Data that cannot be backed up

The GOT cannot back up current device values and data stored in device memories.
Use the recipe function to collect current device values.
For information on how to use the recipe function, refer to the following manual.
📖GT Designer3 (GOT3000) Screen Design Manual
Use GX Developer to collect data stored in device memories.

Names of files to be backed up

When characters other than the characters defined in the shift JIS code and ASCII code are used for file names, the file names may not be correctly displayed with the data backed up on the GOT.
When using the backup/restoration function, use characters in the JIS code and ASCII code for file names.

File register backup

File register backups take a long time to process.
Therefore, some file register data in the same backup may have different time stamps. As a result, data synchronization cannot be assured.
If data synchronization is required, consider backing up the data on the PLC side by running a sequence program that stops updating the file registers or other means.

Backing up intelligent function module parameters

When backing up the intelligent function module parameter (IPARAM.QPA), only the parameters that can be stored on the PLC CPU are the target parameters.
To back up other parameters, GX Works2 or a version of GX Configurator compatible with the module is required.
For the intelligent function module parameter that can be stored on the PLC CPU, refer to the following.
📖GX Works2 Version 1 Operating Manual (Intelligent Function Module)

Backing up a multi-CPU configuration

The backup process of a multi-CPU configuration varies depending on whether the backup/restoration function of CPU No.1 supports multi-CPU backup.

■If CPU No.1 does not support the backup/restoration function

When connected to a MELSEC iQ-R series PLC CPU, the GOT skips CPU No.1 and checks whether CPUs from No.2 onward are backup targets.

If the CPUs after No.2 do not support the backup/restoration function, the GOT skips backing up data for the CPUs and backs up data for the next CPU.

When connected to a CPU other than a MELSEC iQ-R series PLC CPU, the GOT does not acquire information about the multi-configuration from CPU No.1; therefore the GOT does not back up data for the CPUs after No.2 as well.

■If CPU No.1 supports the backup/restoration function

Determine whether the CPUs after No.2 are backup targets.

If the CPUs after No.2 do not support the backup/restoration function, the GOT skips backing up data for the CPUs and backs up data for the next CPU.

Viewing and editing data backed up on a GOT in security mode 2

Data backed up on a GOT in security mode 2 is encrypted.

Therefore, the backup data cannot be viewed or edited with the following engineering tools.

Target equipment for backup	Engineering tool
Computerized numerical controllers (CNCs)	Text data
Motion CPU	MT Developer MT Developer2
Robot controller	RT ToolBox2
Servo amplifier	MR Configurator2
Inverter	FR Configurator2

63.20.2 Precautions for backup

STOP status during restoration

PLC CPUs and Motion CPUs enter STOP status via remote STOP before restoration.
For MELSEC-F series PLC CPUs, remote STOP cannot be performed during restoration. The user must set the CPU to STOP status.
The STOP status remains unchanged after the restoration is complete.
Restart the controllers.

When restoration is canceled

When restoration is canceled, not all of the data is restored to the controllers and the controllers may not operate correctly.
If restoration is canceled, be sure to execute the restoration again.
Also, the STOP status is not cleared even after interruption.
Restart the controllers.

System configuration of controllers for restoration

Set the same system configuration of the controllers for restoration as those for the backup.
Failure to do so stops the GOT from restoring data to the controllers.
When the system configuration of the controllers for the restoration is the same as those for the backup, the GOT can restore data to the controllers even if the connection type and CH No. for the restoration differ from those for the backup.
When connecting to a MELSEC-F series PLC CPU, ensure that the system configuration, including the model, the presence or absence of a memory cassette, and the memory capacity of the memory cassette are the same as when the memory cassette was backed up.

Controller operations

Changing setting values, device values, and other settings during restoration may cause controllers to malfunction.
Check that the data to be restored is correct, then execute the restoration while paying attention to the controller operations.

63.20.3 Precautions for backup/restoration

Precautions for GT Designer3

Do not execute the following operations with GT Designer3 during the backup/restoration.

- BootOS installation
- Stop backup/restoration when writing package data, communication drivers,

and system applications (standard functions and add-on functions).

Precautions for GX Developer

- The target controller for backup/restoration with GX Developer cannot be accessed while backup or restoration is in progress.
- Do not execute backup or restoration while GX Developer is accessing the target controller.

Doing so causes a communication error in GX Developer.
(The backup/restoration is executed.)

Precautions for using multiple GOTs

Do not access the target controller of the backup/restoration with multiple GOTs at the same time.
Doing so stops the backup/restoration.

PLC CPUs that have a security key set

PLC CPUs that have a security key set cannot be backed up or restored.
Remove the security key settings before backing up or restoring the PLC CPUs.
If the backup/restoration target includes both PLC CPUs with a security key and those without, only the PLC CPUs without a security key can be backed up or restored.

Precautions when using a Flash card

All the backup data created by the backup/restoration function are saved in one file (FlashCard.dat) on the flash card.

Backup and restoration from GOTs in different security modes

Data backed up on a GOT in security mode 1 cannot be restored to a GOT in security mode 2.
Data backed up on a GOT in security mode 2 cannot be restored to a GOT in security mode 1.

63.20.4 Precautions for MELSEC-Q series PLC CPUs

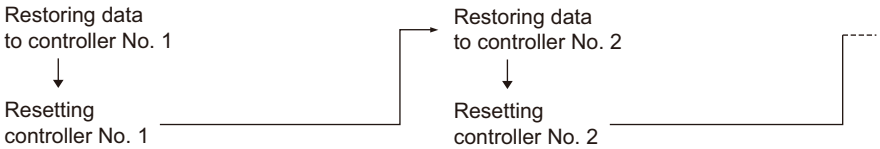
Restoration to the PLC CPU

Restoration of MELSEC-Q series PLC CPUs with factory-settings or formatted memory is only possible in the following cases.

- For a single CPU system: When the connection type is bus connection or serial connection
- For a multi-CPU system: When the connection type is serial connection

However, in a multi-CPU system which includes a MELSEC-Q series PLC CPU with factory settings or formatted memory, batch restoration to multiple controllers cannot be performed.

Restore each controller with the following procedure.



QnUD(P)VCPU for which [Disable clearing operation history] is selected

Data cannot be restored to QnUD(P)VCPUs that have [Disable clearing operation history] selected.

Deselect [Disable clearing operation history] when restoring data.

Even if [Disable clearing operation history] is selected, restoration is possible when an SD card is specified as the storage destination of the operation history file.

You can back up the data of the QnUD(P)VCPU for which [Disable clearing operation history] is selected.

63.20.5 Precautions for MELSEC-F series PLC CPUs

When a memory cassette is installed

When a memory cassette is installed, the data on the memory cassette is backed up.

When a memory cassette is not installed, the data in the built-in memory is backed up.

Keyword setting

The following table shows whether the backup/restoration function is executed or not by each keyword setting.

○: Executed, ×: Not executed

Function	Protection that cannot be disabled by keyword			With keyword						Without keyword
	Write protection	Read/Write protection	Prohibit all operations:	Write protection		Read/Write protection		Prohibit all operations:		
	Enabled	Enabled	Enabled	Enabled	Disabled	Enabled	Disabled	Enabled	Disabled	
(Trigger) Backup	○	×	×	○	○	×	○	×	○	○
Restoration	×	×	×	×	○	×	○	×	○	○

Keywords for restoring data

When data are restored to a target MELSEC-F series PLC CPU, a keyword is stored PLC CPU.

For information on setting or disabling keywords for MELSEC-F series PLC CPUs, refer to the following manual.

☞ Page 101 [Keyword] screen

📖 Programming manual of the MELSEC-F series PLC CPU used

Backup data which contains source information

When the target MELSEC-F series PLC CPU of the restoration does not support source information, the backup data which contains source information cannot be restored.

63.20.6 Precautions for robot controllers

Restoration during program execution

The restoration cannot be performed during program execution.

Preliminary checks

Check the causes of any errors in advance since the error record is deleted once the data is restored.
Check that the error C7500 "No battery voltage" does not occur during the restoration.

Restoration when replacing a robot

The restoration cannot be performed if the robots models are different.
If a robot, motor, reducer, or belt is replaced, configure the origin setting.
If a robot controller is compatible with the maintenance forecast, reset the maintenance forecast when replacing the robot or belt.

Operations during GOT backup/restoration

Do not execute [Program read], [Program save], [Backup/Restore] or others for robot controllers to be backed up or restored from RT ToolBox2 or R56TB, while backing up or restoring on the GOT.
Doing so causes lack of consistency in the data of the robot controller or data acquired from RT ToolBox2.

Robot controller version

Backed up data for robot controller version R1d/S1d or later cannot be restored to robot controller version R1c/S1c or earlier.

Editing and restoring backup data

The data backed up on the GOT can be edited and restored with RT ToolBox3 or RT ToolBox2.
To edit and restore data with RT ToolBox3 or RT ToolBox2, copy the data backed up on the GOT to the Backup folder in the project folder in RT ToolBox3 or RT ToolBox2.
The following data cannot be restored on the GOT:

- Data edited with RT ToolBox3 or RT ToolBox2 after the backup on the GOT
- Data backed up with RT ToolBox3, RT ToolBox2, or R56TB

63.20.7 Precautions for MELSERVO-J4 series

Engineering tool

The GOT backup/restoration function backs up the data of the servo amplifier to the data storage inserted into the GOT. You can read the data from the data storage by using the engineering tool (MR Configurator2 Ver1.52E or later).
However, the GOT backup/restoration function cannot restore the data edited with the engineering tool.

Backup

The GOT collectively backs up the data of all the MELSERVO-J4 series servo amplifiers that are specified by their network numbers and station numbers in the controller list file.

Restoration

To restore data to MELSERVO-J4 series servo amplifiers, select target servo amplifiers based on the network numbers and station numbers. All the data for the selected servo amplifiers will be restored.
In an absolute position detection system, if you replace a servo amplifier and then restore data to a new one, set the home position again.
Turn the servo amplifier off and on after restoration is performed.

Backup/restoration availability

Backup/restoration is possible in the following situations.
○: Possible, ×: Not possible

Operation	While the servo amplifier is in servo-off state	While the servo motor is stopped	Other situations
Backup	○	○	×
Restoration	○	×	×

63.20.8 Precautions for FR-A800 series, FR-A800 Plus series, and FR-F800 series

Engineering tool

The GOT backup/restoration function backs up the data of the inverter to the data storage installed in the GOT. You can read the data from the data storage by using the engineering tool (FR Configurator2 Ver1.10L or later).
After editing the backup data with the engineering tool, you can restore the data to the servo amplifier by using the GOT backup/restoration function.
Do not change the file name and the extension,
or you cannot restore the data.

Backup

The GOT collectively backs up the data of all the FR-A800 series, FR-A800 Plus series, and FR-F800 series inverters that are specified by their network numbers and station numbers in the controller list file.

Restoration

To restore data to the FR-A800 series, FR-A800 Plus series, and FR-F800 series inverters, select target inverters based on the network numbers and station numbers. All the data for the selected inverters will be restored.

Backup/restoration availability

Backup/restoration is possible in the following situations.
○: Possible, ×: Not possible

Operation	Being reset	Password being registered	Parameter being copied	Start command signal (STF/STR) ON	When parameter write is disabled	PLC function running	Other operations
Backup	×	×	×	○	○	○	○
Restoration	×	×	×	×	×	×	○

63.21 Errors and corrective actions

☞ Page 564 Common to backup and restoration
☞ Page 565 Backup
☞ Page 565 Restoration

63.21.1 Common to backup and restoration

Error	Cause	Corrective action
The backup/restoration function cannot be used.	The system applications (add-on functions) for the backup/restoration function are not installed on the GOT.	Install the system applications (add-on functions) on the GOT.
The backup settings could not be found.	The backup setting is not stored on the data storage in the GOT. No data storage exists in the drive specified for storing the backup settings.	• Connect a data storage that contains the backup settings. • Check the storage location for the backup setting with the utility.
The backup data could not be found.	The backup data is not stored in the data storage in the GOT. No data storage exists in the drive specified for storing the backup settings.	• Connect a data storage that contains the backup settings. • Check the storage location for the backup data with the utility.
The backup/restoration cannot be executed because the user does not know the password for the backup/restoration.	The user does not remember the password. The password is incorrect.	• Check with the system administrator regarding the password for the backup/restoration. • Execute the backup again by using a formatted or new data storage.
The FXCPU sequence program cannot be backed up/restored.	The sequence program has been protected with a block password.	Clear the block password setting for the sequence program.
An error occurs in the communication with the controller during the backup/restoration. The backup/restoration cannot be performed.	The communication settings or the communication driver of the GOT are incorrect.	Check if the communication settings or communication driver of the GOT are correct.
	The GOT is not recognized because the controller's parameters are incorrect.	Check if the controller's parameters have been correctly set using a tool for the controller, such as GX Developer.
	The controller is not powered on.	Power on the controller.
	Cables are not correctly connected.	Check the cables.
The controller list file is abnormal.	The description in the header part of the controller list file is abnormal.	Check the format of the controller list file and describe following the format. ☞ Page 511 Log files for backup/restoration
The controller list file is invalid.	• The description in the controller list file is invalid. • The network number and station number are outside the range. • The network number and station number are duplicated.	• Check the format of the controller list file and describe following the format. ☞ Page 511 Log files for backup/restoration • Describe the network number and the station number so that they are not overlapped in the available setting range.

63.21.2 Backup

Error	Cause	Corrective action
The backup data cannot be written to the data storage.	No data storage is inserted into the GOT.	Insert a data storage into the drive specified for storing the backup setting or backup data.
	The data storage does not have free space.	Insert a data storage with enough free space. Delete unnecessary files on the data storage.
	The data storage is set to write-protect.	Set the data storage to writable. The attributes of backup data files stored in the data storage cannot be changed with the GOT. Set the files to writable with a personal computer.
	The drive does not exist.	Check if the drive specified for storing the backup setting or backup data exists. (Check if the data storage is inserted into the GOT.)
Setting data (files and data) cannot be obtained from the controller.	The GOT cannot communicate with the controller.	Check the following settings: GOT • Are the cables connected correctly? • Is the correct communication driver is installed on the GOT? • Are the communication settings set correctly? Controller • Are the parameters set? • Are the cables connected correctly? • Is the power on?
The backup cannot be executed because passwords for files of the controller are set.	The user does not remember the password. The password is incorrect. (The first backup) Passwords for files of the controller were changed.	Check with the system administrator regarding the passwords for files of the controller.

63.21.3 Restoration

Error	Cause	Corrective action
Setting data (files and data) cannot be written to the controller.	The GOT cannot communicate with the controller.	Check the following settings: GOT • Are the cables connected correctly? • Is the correct communication driver is installed on the GOT? • Are the communication settings set correctly? Controller • Are the parameters set? • Are the cables connected correctly? • Is the power on?
	The target controller of the restoration is a different kind of controller from the target controller of the backup.	• Check if the system configuration for the restoration is the same as that for the backup. • Check if the target controller of the restoration is the same as that of the backup or the same kind of controller.
The restoration cannot be executed because passwords for files of the controller are set.	The passwords for files written to the controller were changed.	Check with the system administrator regarding the passwords for files of the controller.
Data cannot be restored to the robot controller because robot program initialization failed.	A program name that does not exist in the robot controller may be set to the slot.	Check the parameter [SLTn] or [Online] → [Parameter] → [Slot list] in the workspace of RT ToolBox2, and check whether a program name that does not exist in the robot controller is set to the slot. If it is set, set a blank space for the program name and restore again after restarting.
Restoration cannot be executed because the function version of the target controller does not satisfy the conditions at the time of restoration.	The function version of the target controller is older than the one at the time of backup.	Replace the target controller with a controller with its function version later than the one at the time of backup.

64 [NVRAM management]

GT37 SoftGOT3000

The usage status check, backup, restoration, and initialization of the non-volatile RAM user area can be performed.
For the functions using the non-volatile RAM user area, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

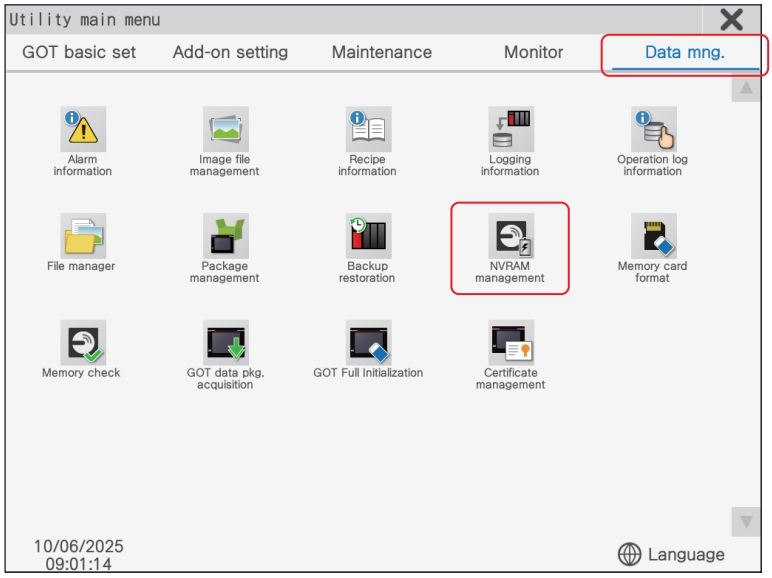
■System screen operation restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

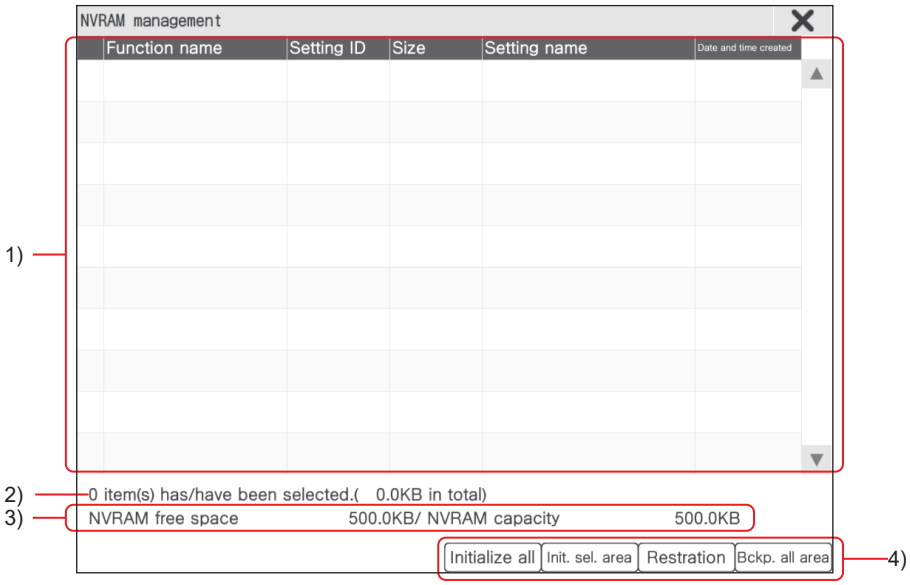
- GS622.b2: Restricts the display of the [NVRAM management] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

64.1 Screen display procedure

Select [NVRAM management] in the [Data mng.] tab.



64.2 [NVRAM management] screen



Item			Description
1)	Nonvolatile RAM list	Checkbox	Touch the check box to select or clear the item.
		[Function name]	Displays the function names using the non-volatile RAM in the following order: system alarm, user alarm, logging, recipe, and internal device.
		[Setting ID]	Displays the setting IDs. For the system alarm function, the setting IDs are not displayed.
		[Size]	Displays each data size. The value is rounded to the first decimal place.
		[Setting name]	Only characters within the display range are displayed.
		[Created]	Displays the creation date and time of each data.
2)	Selected items		Displays the information of the items currently selected.
3)	Non-volatile RAM capacity		Displays the current free space and the total size of the non-volatile RAM user area.
4)	Operation buttons	[Initialize all] button	Initializes all areas of the non-volatile RAM user area.
		[Init. sel. area] button	Select multiple areas of the non-volatile RAM user area individually and initialize them.
		[Restoration] button	Saves data in the selected drive to the non-volatile RAM user area.
		[Bckp. all area] button	Saves data in the non-volatile RAM user area to the selected drive.

64.3 Non-volatile RAM management operation

☞ Page 568 Operation to initialize all or selected areas of the SRAM user area
☞ Page 569 Operation to restore data
☞ Page 570 Operation to back up all data in the SRAM user area

64.3.1 Operation to initialize all or selected areas of the SRAM user area

Operating procedure

1. Perform any of the following operations.

To initialize all areas of the non-volatile RAM user area,
touch the [Initialize all] button.
To initialize selected areas of the non-volatile RAM user area,
select the checkboxes of the areas to be initialized, and then touch the [Initialize selected area] button.

2. When you touch the [Initialize all] or [Initialize selected area] button, a dialog appears.

Check the description in the dialog and touch the [OK] button.

3. Touch the [OK] button in the dialog displayed in step 2.

A confirmation dialog appears.

4. Touch the [OK] button in the dialog displayed in step 3 to start initialization.

When the initialization is completed, a dialog notifying the completion appears.

5. Touch the [OK] button in the dialog displayed in step 4.

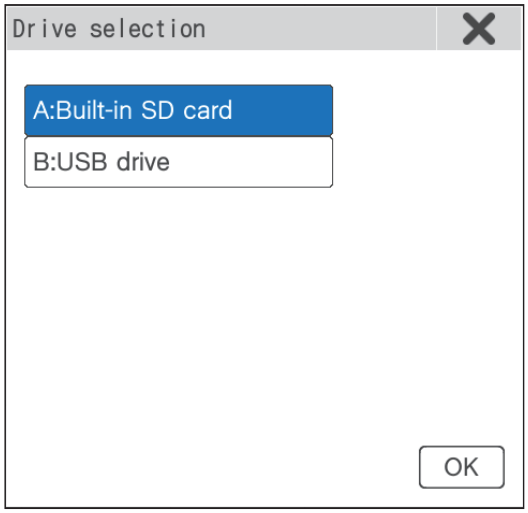
The GOT restarts.

64.3.2 Operation to restore data

Operating procedure

1. Touch the [Restoration] button.

The [Select drive] screen is displayed.



2. Select the drive that stores the data to be restored from the [Select drive] screen, then touch the [OK] button.

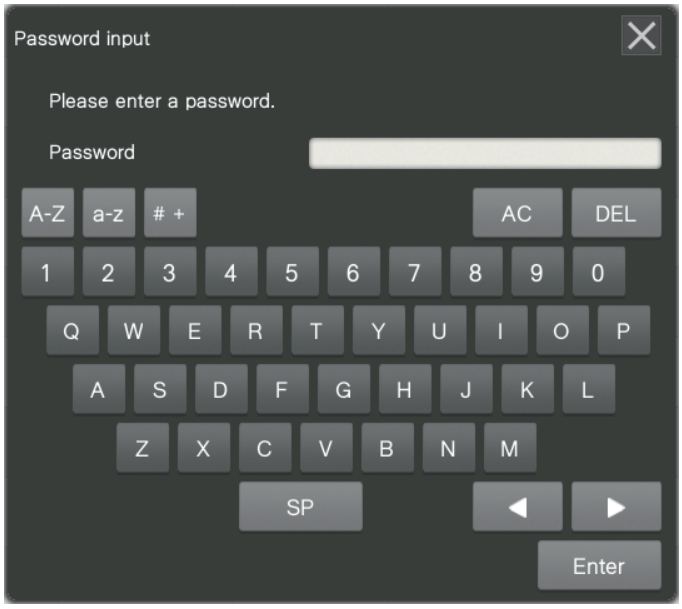
A confirmation dialog appears.

3. Touch the [OK] button in the dialog displayed in step 2.

A reconfirmation dialog appears.

4. Touch the [OK] button in the dialog displayed in step 3.

The [Password input] screen appears.



5. Input the password, then touch the [Enter] button.

Upon successful authentication, a dialog appears.

6. Touch the [OK] button in the dialog displayed in step 5 to start restoration.

When the restoration is completed normally, a dialog notifying the completion appears.

7. Touch the [OK] button in the dialog displayed in step 6.

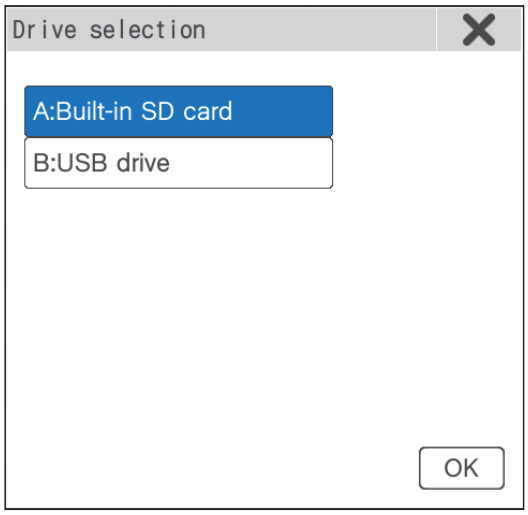
The GOT restarts.

64.3.3 Operation to back up all data in the SRAM user area

Operating procedure

1. Touch the [Backup all area] button.

The [Select drive] screen is displayed.



2. Select the drive that stores the data to be restored from the [Select drive] screen, then touch the [OK] button.

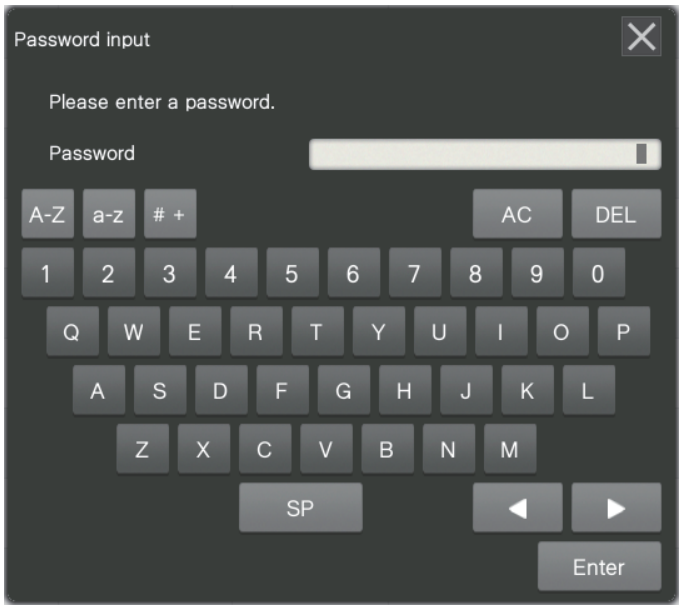
A confirmation dialog appears.

3. Touch the [OK] button in the dialog displayed in step 2.

A reconfirmation dialog appears.

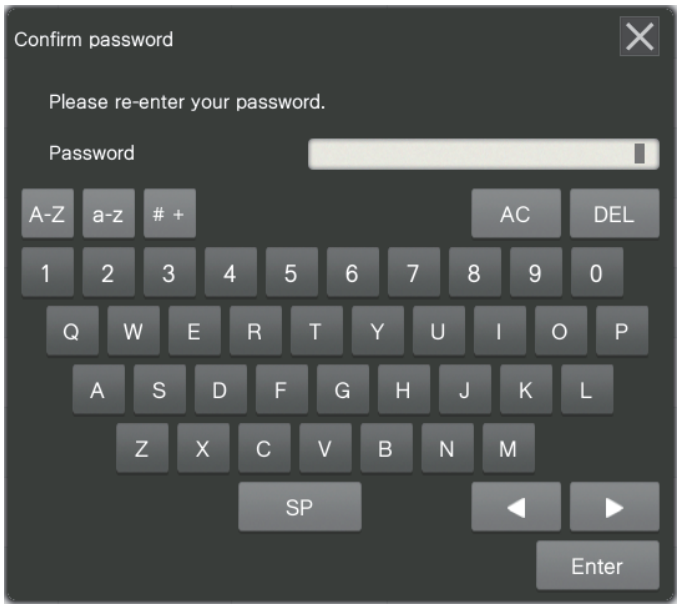
4. Touch the [OK] button in the dialog displayed in step 3.

The [Password input] screen appears.



5. Input the password, then touch the [Enter] button.

Upon successful authentication, a [Confirm password] screen will appear.



6. Input the password again, then touch the [Enter] button.

Upon successful authentication, all area backup starts.

When the backup is completed normally, a dialog appears.

7. Touch the [OK] button in the dialog displayed in step 6.

The GOT restarts.

65 [Memory card format]

GT37 SoftGOT3000

The data storage is formatted.

The following shows the specifications of the memory cards compatible with formatting.

- SD specifications Version 2.0
- SDHC

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.

GT Designer3 (GOT3000) Screen Design Manual

■System screen operation restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

- GS622.b0: Restricts access operations to the drive using the [Memory card format] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

Precautions

Format the data storage on a personal computer before using it with the GOT.

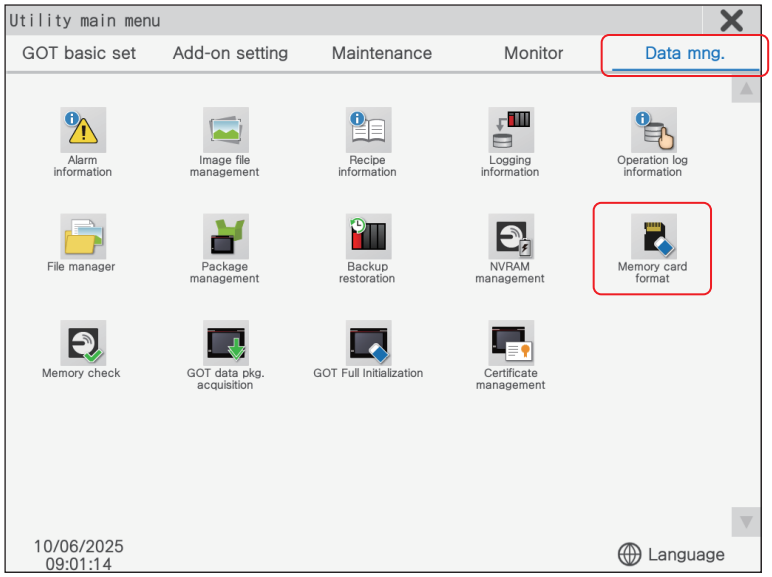
The GOT cannot format an unformatted data storage.

Formatting the GOT does not change the file system of the data storage (example: FAT16).

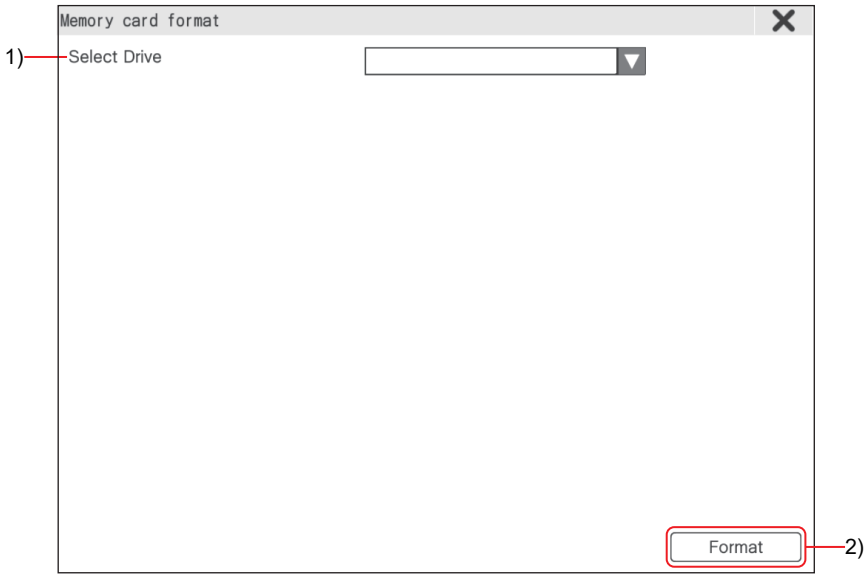
The file system before formatting is inherited.

65.1 Screen display procedure

Select [Memory card format] in the [Data mng.] tab.



65.2 [Memory card format] screen



Item		Description	Setting range
1)	[Select Drive]	Set the drive where the memory card is to be formatted.	• [A:Built-in SD card] • [B:USB drive] • [E:USB drive] • [F:USB drive] • [G:USB drive] <Default: Blank>
2)	[Format] button	This button is used to format the drive selected for [Select Drive]. Touch this button to display the [Password input] screen. Enter [1111] (fixed) on the [Password input] screen, then touch the [OK] button to format the selected drive.	—

66 [Memory check]

GT37 SoftGOT3000

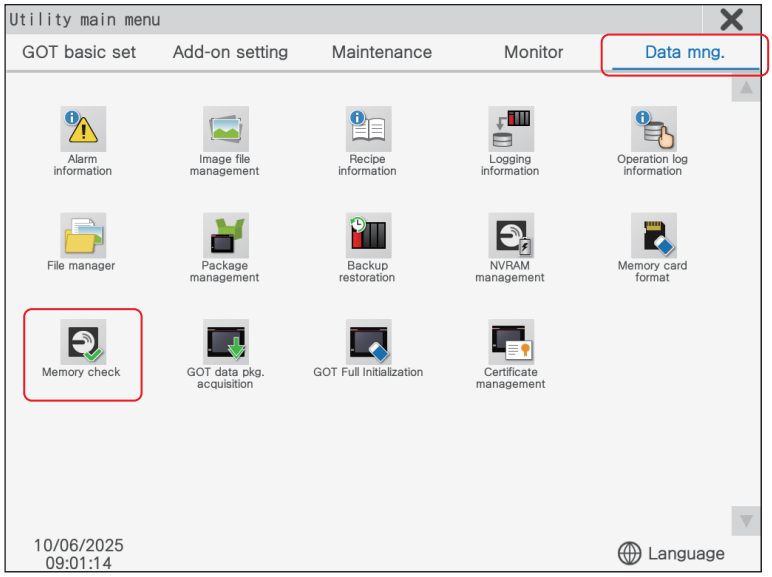
This function checks if reading from/writing to the selected drive can be performed normally.
If there is no free space (512 bytes) required for write/read check, only disk check is performed.

Point

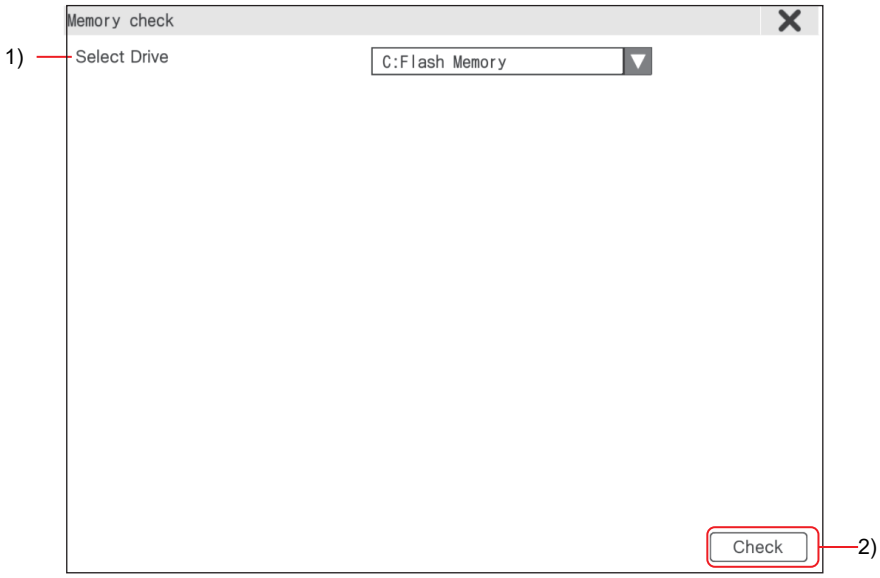
If an error is found during the memory check, a dialog notifying the error appears.
In case of error, contact your local Mitsubishi (Electric System) Service.

66.1 Screen display procedure

Select [Memory check] in the [Data mng.] tab.



66.2 [Memory check] screen



Item		Description	Setting range
1)	[Select Drive]	Set the drive where the memory check is to be performed.	• [A:Built-in SD card] • [B:USB drive] • [C:Flash Memory] • [E:USB drive] • [F:USB drive] • [G:USB drive] <Default: [C:Flash Memory]>
2)	[Check] button	This button is used to perform a memory check for the drive selected for [Select Drive]. Touch this button to display the [Password input] screen. Enter [5920] (fixed) on the [Password input] screen, then touch the [OK] button to format the selected drive.	—

Point

If the drive (memory) to be checked is not displayed, check the installation procedure or memory type by referring to the following.

📖GOT3000 Series User's Manual (Hardware)

If there is no problem with the installation or other operations, the possible cause may be a memory failure.

Replace the data storage or built-in flash memory (drive C).

For details on the built-in flash memory, contact your local Mitsubishi (Electric System) Service.

67 [GOT data pkg. acquisition]

GT37 SoftGOT3000

The GOT data package acquisition function copies the following data and system applications installed on the GOT to a data storage.

Copy target
System applications (basic system applications, add-on system applications, and communication drivers)
Project data
Special data

The copied data can be:

- Used as a backup
- Used to create the same GOT system on another GOT

For installation function of the GOT, refer to the following.

☞ Page 40 Installing the BootOS and package data using a data storage

Control using the GOT special registers (GS)

For details on the GOT special registers (GS), refer to the following.

📖GT Designer3 (GOT3000) Screen Design Manual

■System Screen Operation Restriction

The following GOT special registers (GS) can be set to restrict writing to the drive and the visibility of the drive (display/hide).

- GS622.b1: Restricts the display of the [Package management] screen.
- GS623.b0 to b6: Prohibits writing to the specified drives.
- GS624.b0 to b6: Restricts access to specified drives.

Precautions

■When project data is copied to the GOT

The utility settings will also be copied if system applications and project data are installed on a GOT using the data storage created with the GOT data package acquisition function.

After installing project data on another GOT, check all the settings in the utility and change them if necessary.

■Data storage to be used

When performing the GOT data package acquisition, do not store other data to the data storage.

If doing so, the previous data will be unavailable.

■Copying project data

Project data cannot be copied when the boot source drive (the drive containing the project data used to start the GOT) is the same as the copy destination drive.

If the boot source drive and the copy destination drive are the same, cancel the setup.

To cancel the setup, change the boot source drive to another drive.

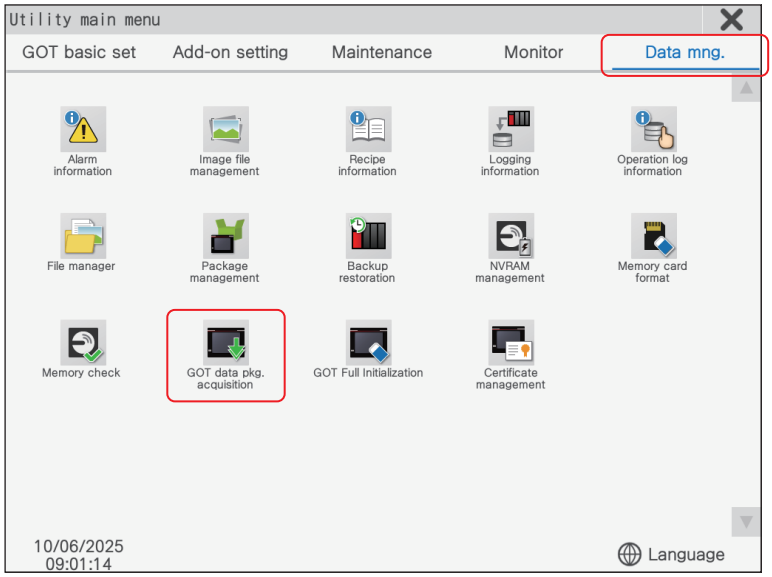
Ex.

If the boot source drive and copy destination drive are both specified as drive A:

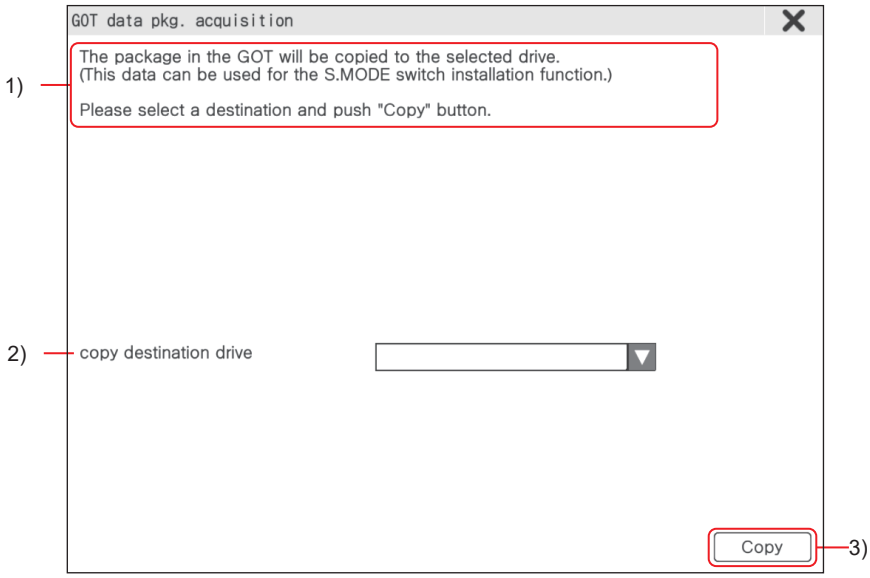
Change the boot source drive from drive A to drive C.

67.1 How to display the screen

Select [GOT data pkg. acquisition] in the [Data mng.] tab.



67.2 [GOT data pkg. acquisition] screen



Item		Description	Setting range
1)	[Copy destination drive]	Set the destination drive to copy data such as system applications to. Only accessible drives will be displayed.	• [A:Built-in SD card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] <Default: Blank>
2)	[Copy] button	Copies data such as system applications to the selected destination drive. When the security mode is mode 1 and data transfer security has been set, a password will be requested when the [copy] button is touched. The data will be copied if the password set for data transfer security is correct. For details on data transfer security, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual	—

Point

For information on the S.MODE switch installation function, refer to the following.

☞ Page 47 Installing when starting the GOT

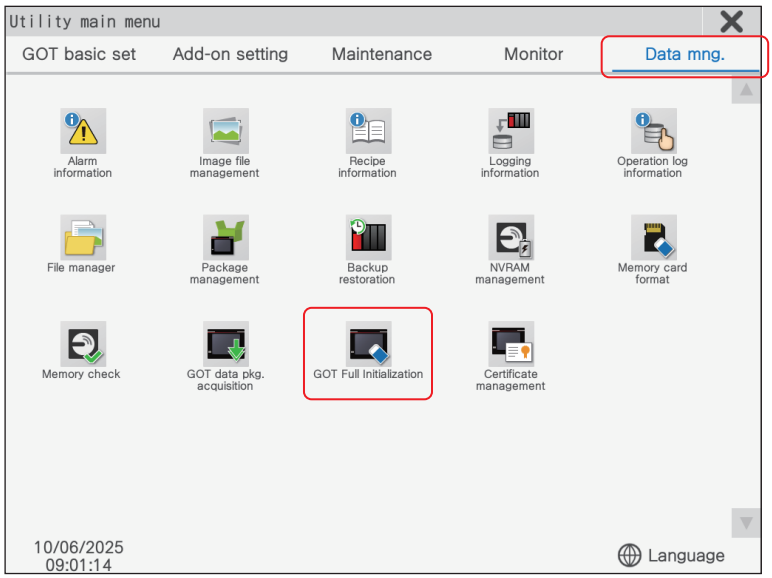
68 [GOT Full Initialization]

GT37 SoftGOT3000

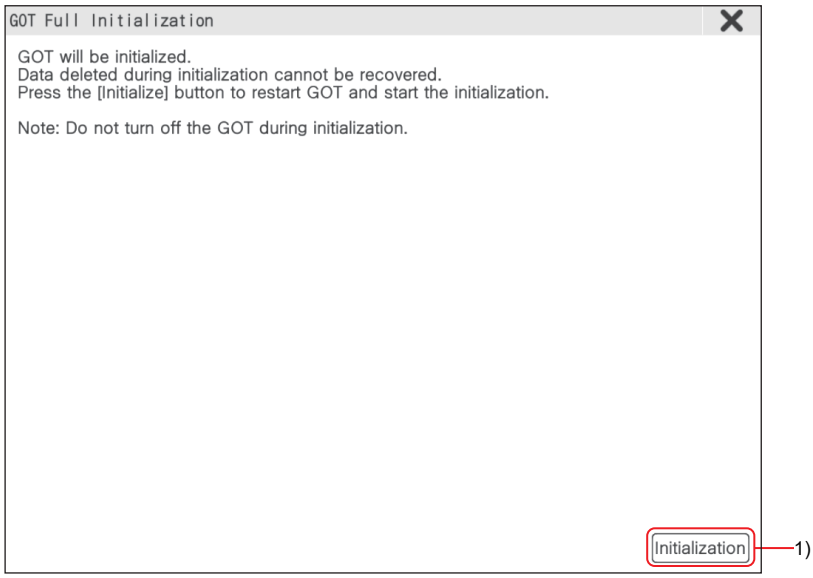
This function erases all data from the GOT's nonvolatile memory.
Use this function to delete all internal data when disposing of the GOT.

68.1 How to display the screen

Select [GOT Full Initialization] in the [Data mng.] tab.



68.2 [GOT Full Initialization] screen



Item		Description
1)	[Initialization] button	This button is used to initialize the GOT. Touch this button to display the [Password input] screen. Enter [1234] (fixed)*1 in the [Password input screen], then touch the [OK] button to start initialization. Do not power off the GOT during the initialization.

*1 Password entry for this function prevents users from accidentally initializing information saved on the GOT.

69 [Certificate management]

GT37 SoftGOT3000

The following operations can be performed with this function.

- Check server certificate or client certificate information
- Update server certificate or client certificate information
- Export GOT-related server certificates and clients certificates
- Import device-related server certificates and client certificates

For information on configurable settings, refer to the following.

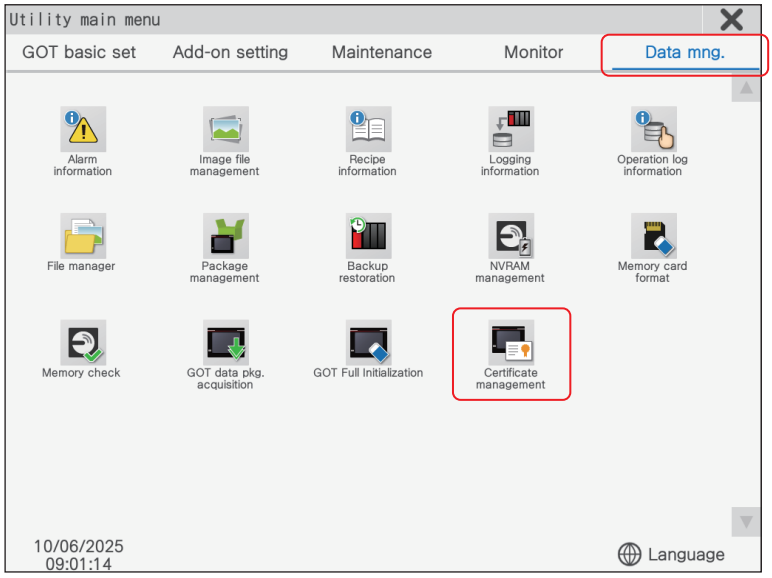
☞ Page 581 [Certificate management] screen

For details on certificates, refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

69.1 How to display the screen

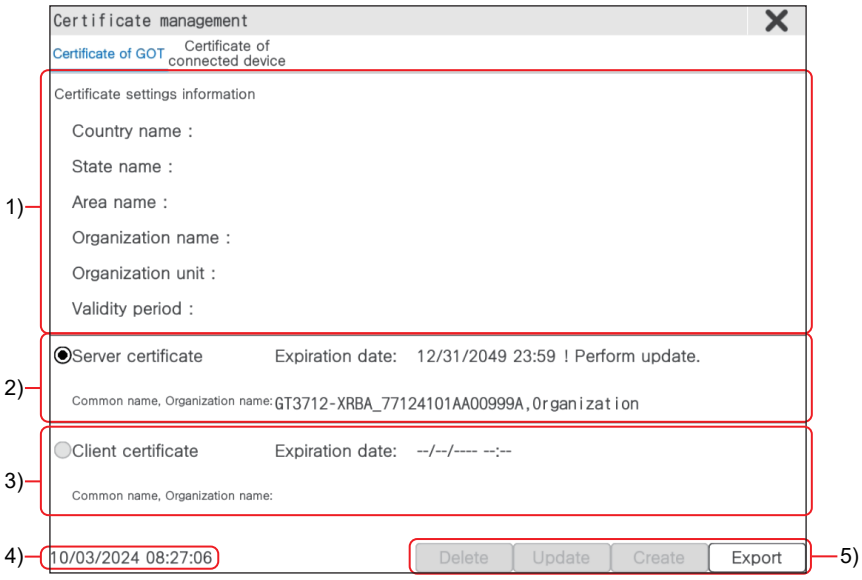
Select [Certificate management] in the [Data mng.] tab.



69.2 [Certificate management] screen

☞ Page 581 [Certificate of GOT] tab
☞ Page 583 [Certificate of connected device] tab

69.2.1 [Certificate of GOT] tab



Item			Description
1)	[Certificate settings information]	—	Displays certificate setting information set for the certificate.
		[Country]	Displays the country set for the certificate.
		[State name]	Displays the state name set for the certificate.
		[Region name]	Displays the region name set for the certificate.
		[Organization name]	Displays the organization name set for the certificate.
		[Organization unit]	Displays the organization unit set for the certificate.
		[Validity period]	Displays the expiration date set for the certificate.
2)	Server certificate settings	—	Displays the server certificate settings.
		[Server certificate]	Touch this setting to enable the following operations for the server certificate: • Update • Export
		[Expiration date]	Displays the expiration date of the server certificate.
		[Common name, Organization name]	Displays the common name and organization name for the subject separated by a comma.
		Update certificate message	A message will be displayed if an inconsistency is detected during the certificate consistency check. The consistency check will be performed while the [Certificate management] screen is displayed. If the message is displayed, the certificate must be updated manually. For details on the consistency check and the contents of the message, refer to the following. ☞ Page 582 Consistency checks and corresponding messages
3)	Client certificate information	—	Displays the client certificate information.
		[Client certificate]	Touch this setting to enable the following operations for the client certificate: • Update • Export
		[Expiration date]	Displays the expiration date of the client certificate.
		[Common name, Organization name]	Displays the common name and organization name for the subject separated by a comma.
4)	Current time		Displays the current time.

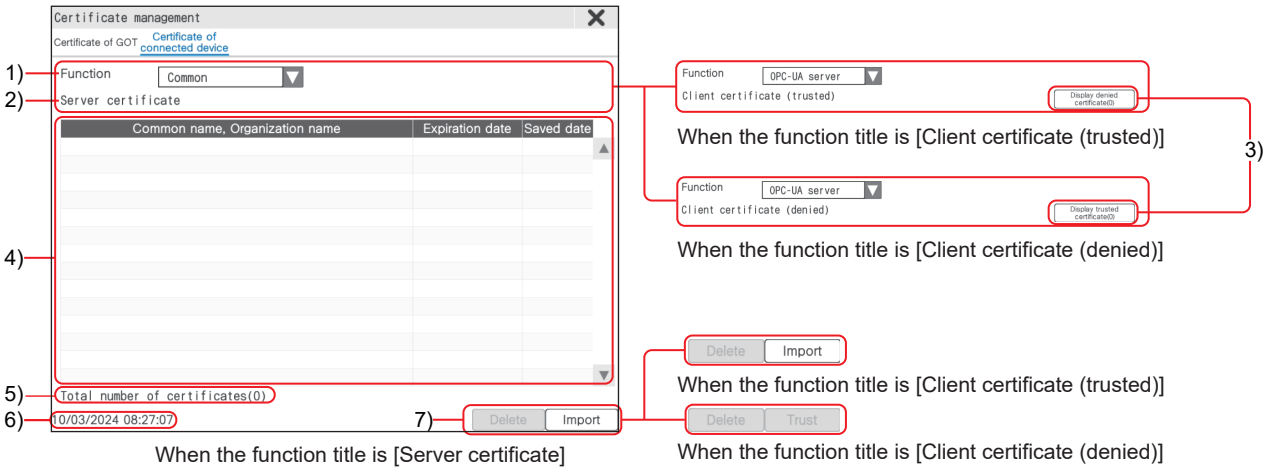
Item			Description
5)	Operation buttons	[Edit] button	This button is operational when both the certificate and certificate settings exist on the GOT. Touch this button to update the following information for the GOT server certificates: • Updated setting information • IP address • Validity period It takes approximately ten seconds to update the certificate.
		[Export] button	Touch this button to export a certificate. Encrypted communication is possible when the exported certificate is installed on the GOT and communicating controller. For details on encrypted communication, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual The file save format can be selected from a dialog that appears when the [Export] button is touched. The file save formats are "DER" and "PEM". The file names of exported files are as follows: Example: GT3712-XRBA_0123456789123456_S_20230401.der └Common name S (server certificate) Date └Extension

Consistency checks and corresponding messages

The following shows the consistency checks and the corresponding messages if an inconsistency is detected.

Check	Message
Consistency between the server certificate IP address and the GOT IP address	[Perform certification update.]
Consistency between the information of the created server/client certificate and the certificate setting information	[Perform certification update.]

69.2.2 [Certificate of connected device] tab



Item			Description	Setting range
1)	[Function]		Set which functions require a certificate. When [Common] is set, server certificate information will be displayed in the certificate information list for the following function. • Encrypted communication with the MX controller When [OPC UA] is set, information about client certificate (trusted) or client certificate (denied) is displayed in the certificate information list.	• [Common] • [OPC-UA] <Default: [Common]>
2)	Function title		Displays the certificate type of the certificate that is displayed in the certificate information list.	—
3)	Display trusted certificate / Display denied certificate buttons		These buttons are displayed when [Function] is set to [OPC UA]. Touch these buttons to switch between the trusted certificates list and the denied certificates list. The number at the end of the button name indicates the total number of trusted or denied certificates.	—
4)	Certificate information list	—	Lists the certificate information of the controllers.	—
		[Common name, Organization name]	Displays the common name and organization name for the subject separated by a comma.	—
		[Expiration date]	Displays the expiration date of the server certificate.	—
		[Saved date]	Displays the date that the certificate was saved.	—
5)	[Total number of certificates]		The total number of certificates is displayed on the GOT. When [Function] is set to [Common], the total number of server certificates is displayed. When [Function] is set to [OPC UA], the total number of client certificates is displayed. The total number of client certificates is the total number of trusted and denied client certificates.	—
6)	Current time		Displays the current time.	—
7)	Operation buttons	[Delete] button	Touch this button to delete the controller certificate.	—
		[Import] button	Touch this button to delete the controller certificate. Importing the controller certificate to the GOT allows for encrypted communication between the GOT and communicating device. Store the certificate file to be imported in the root folder of the data storage inserted into the GOT. For details on encrypted communication, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual	—
		[Trust] button	Displayed when the function title is [Client certificate (denied)]. Touch this button to change the client certificate status from "denied" to "trusted".	—

PART 9 System alarms

70 System alarm display

71 Display contents of the system alarm

70 System alarm display

70.1 How to check system alarms

Checking method using the utility

System alarms can be checked on the [System alarm] screen of the utility.

☞ Page 184 [System alarm]

Checking method when the system alarm settings are configured in GT Designer3

The display method for system alarms can be set in GT Designer3.

For details on the settings and the contents displayed in GT Designer3, refer to the following manual.

📖GT Designer3 (GOT3000) Screen Design Manual

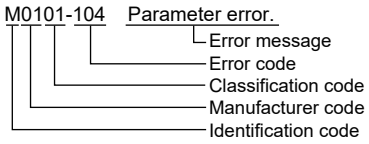
71 Display contents of the system alarm

A system alarm contains an identification code, manufacturer code, and classification code. The identification code indicates the category of the error. The manufacturer code and classification code indicate the area where the error occurred.

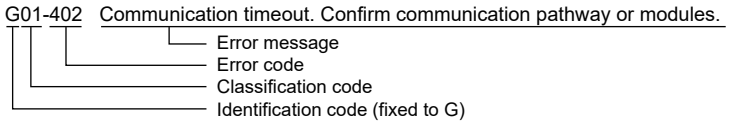
☞ Page 589 Identification code
☞ Page 589 Manufacturer code
☞ Page 589 Classification code
☞ Page 590 Error code

The display contents differ according to the error source.

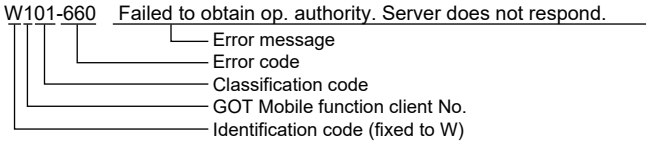
Controller error



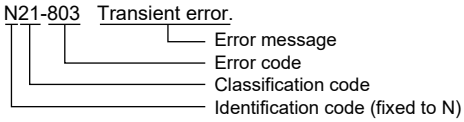
GOT error



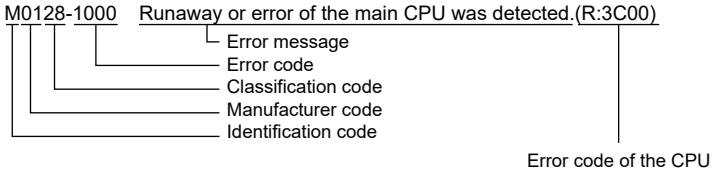
GOT Mobile error



Network error



CPU error



Error codes displayed on the GOT

The following shows the error codes displayed on the GOT and the relevant manuals.

■Error codes for GOT errors and network errors

Error source	Error code	Description	Storage location of channel No. with error*1	Reference
Controller	0 to 99 (Value of D9008)	Error codes of CPU (ACPU)	GS263	User's manual of the ACPU connected to the GOT
	100 to 299	Error codes of the following controllers • FXCPU*2 • Non-Mitsubishi Electric PLC		Manual of the controller connected to the GOT
GOT	300 to 399	Error codes of the GOT functions	GS262*3	☞ Page 590 Error code
	400 to 499	Error codes of the GOT communication functions		
	500 to 699	Error codes of the GOT functions		
	751 to 799	Security error codes		
Network	800 to 999	Network error cords	GS264	
CPU	1000 to 10000 (Value of SD0)	Error codes of the CPU (QCPU, LCPU)	GS263	User's manual of the QCPU or LCPU connected to the GOT
		Error codes of RCPU or Motion CPU (MELSEC iQ-R series)		User's manual of the RCPU connected to the GOT
		FX5CPU error codes		User's manual of the FX5CPU connected to the GOT
		MX-R error codes		User's manual of the MX-R connected to the GOT
		MX-F error codes		User's manual of the MX-F connected to the GOT
Motion CPU	10001 to 10999	Motion CPU error codes (Q173D (S)CPU/Q172D (S)CPU/ Q170M (S)CPU)		*4
CNC C70	11000 to 11999	CNC error codes (Q173NCCPU)		*5
Robot controller	12000 to 12999	Robot controller error codes		*6
CPU	15000 to 15999	RCPU error codes		*7
	16000	FX5CPU error codes		*8
	18000	MX-R error codes		*9
	19000	MX-F error codes		*10
Servo amplifier*11	20016 to 21121	Servo amplifier error codes		Manual of the servo amplifier connected to the GOT

*1 For details on the GOT special registers, refer to the following.
📖GT Designer3 (GOT3000) Screen Design Manual

*2 The FXCPU error codes 100 to 109 indicate the status of M8060 to M8069.
Example) If an error (error code 100) occurs, deal with it according to the explanation of M8060.

*3 Channel No. will not be stored depending on the error code.
For details on the channel No. storage by error code, refer to the following.
☞ Page 590 List of GOT error codes

*4 The GOT displays the error code corresponding to an error occurring in the multiple CPU system.
Check the error details with MT Developer or MT Works2.
For error handling, refer to the manual of the Motion CPU.

*5 The GOT displays the error code corresponding to an error occurring in the multiple CPU system.
Check the error details with the CNC monitor.
For error handling, refer to the manual of the CNC.

*6 The GOT displays the error code corresponding to an error occurring in a robot controller in the multiple CPU system or a standalone robot controller.
Check the error details with RT ToolBox2 or RT ToolBox3.
For error handling, refer to the manual of the robot controller.

*7 The GOT displays the error code corresponding to an error occurring in an RCPU or Motion CPU (MELSEC iQ-R series).
Check the error details with GX Works3 or MT Works2.
For error handling, refer to the manual of the RCPU or Motion CPU (MELSEC iQ-R series).

*8 The GOT displays the error code corresponding to an error occurring in an FX5CPU.
Check the error details with GX Works3.
For error handling, refer to the manual of the FX5CPU.

*9 The GOT displays the error code corresponding to an error occurring in an MX-R.
Check the error details with GX Works3.
For error handling, refer to the manual of the MX-R.

*10 The GOT displays the error code corresponding to an error occurring in an MX-F.
Check the error details with GX Works3.
For error handling, refer to the manual of the MX-F.

*11 The GOT displays the error code (hexadecimal) displayed on the servo amplifier as a decimal value + 20000.
Therefore, when referring to the servo amplifier manual based on the error code displayed on the GOT, subtract 20000 from the GOT error code and convert the last three digits to a hexadecimal number.
Example) When the GOT system alarm is 20144, the error code of the servo amplifier is 90H.

■Controller error codes

Error source	Error code	Description	Error channel number storage destination	Reference
Controller	1 to 32767	Error codes for each controller	GS263	Manual of the controller

71.1 Identification code

Identification code	Description
G	GOT error
W	GOT Mobile error
N	Network error (in the network unit that is mounted on the GOT)
M	Mitsubishi Electric controller error
C	Non-Mitsubishi controller, microcomputer, or MODBUS error

71.2 Manufacturer code

Manufacturer code	Description
01h	Mitsubishi Electric Corporation
20h	Computer, MODBUS
36h	ALLEN-BRADLEY
3Ah	SIEMENS

71.3 Classification code

The details of the classification code differ according to the identification code and manufacturer code.

Identification code	Manufacturer code	Classification code	Description
G, W	—	00h	Related to the monitor function or object function
		01h	Related to the communication or controllers
		02h	Related to operations
		03h	Related to the file access
M	01h	10h	[Ethernet(MITSUBISHI ELECTRIC),Gateway]
		11h	[Ethernet(FX),Gateway]
		13h	[CC-Link IE TSN (built-in Ethernet)]
		23h	[CC-Link IE Field Network]
		28h	[CC-Link IE TSN]
		40h	[Ethernet(MELSERVO), Gateway]
		61h	[Ethernet(FREQROL(Batch monitor)), Gateway]
C	20h	E0h	[MODBUS/RTU Client]
		E2h	[MODBUS/RTU Server]
		F0h	[MODBUS/TCP Client, Gateway]
		F1h	[Ethernet(MICROCOMPUTER)]
		F2h	[Ethernet(SLMP),Gateway]
		F3h	[MODBUS/TCP Server, Gateway]
C	36h	11h	[Ethernet(AB Tag), Gateway]
	3Ah	11h	[Ethernet(SIEMENS OP)]

71.4 Error code

☞ Page 590 List of GOT error codes
☞ Page 599 Network error code list

71.4.1 List of GOT error codes

○: Stored
—: Not stored

Error code	Error message	Action	Channel No. storage in GS262
300	Project data contains unsupported objects.	Install the latest version of GT Designer3 and write the package data again to the GOT.	—
301	Project data contains unsupported functions.	Install the latest version of GT Designer3 and write the package data again to the GOT.	—
302	Project data contains unsupported settings.	Install the latest version of GT Designer3 and write the package data again to the GOT.	—
303	Set monitor points too large. Decrease setting points.	Decrease the number of objects on the displayed screen. For the number of maximum objects for 1 screen, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual	—
		Place the objects with quantity limit on either of the following screens when outputting a hidden screen's image using the hard copy function. • Displayed monitor screen • Hard copy output target screen	—
304	Set trigger points too large. Decrease setting points.	The number of objects using [Sampling]/[ON Sampling]/[OFF Sampling] exceeds 100. • Decrease the number of objects using [Sampling]/[ON Sampling]/[OFF Sampling].	—
305	Background loading of the system package failed.	Check that the data storage, which stores the package data and GOT project data, is installed and the data is not damaged.	—
306	The screen specified with the overlay screen function does not exist. Check the screen call settings.	The screen specified by the screen call does not exist. • Check whether the screen call settings are correct.	—
307	Monitor devices are not set.	The monitor device of the object is not set. • Set the monitor device of the object.	—
308	No comment data. Download comment.	The comment file does not exist. • Create the comment file and download to GOT.	—
309	Device reading error. Correct device.	The error occurred during the reading of a continuous device. • Correct the device.	—
310	Project data does not exist or out of range.	The specified base screen or window screen does not exist in the project data or it exists outside of the permissible area. • Specify an existing base screen or window screen.	—
311	No. of alarm has exceeded upper limit. Delete restored alarm.	The number of alarm histories that can be observed by the alarm history display function has exceeded the maximum points. • Delete the restored history to decrease the number of alarm histories.	—
312	No. of sampling has exceeded upper limit. Delete collected data.	The collection frequency exceeded the upper limit when "Store Memory" and "Accumulate/Average" were set in the scatter graph. • Approve "Clear trigger" setup in the scatter graph. • Set the "Operation at frequency over time" to "Initialize and Continue" in scatter graph.	—
313	Insufficient key window design information. Download extended system application.	Install a system application (add-on function) of [Key Window Design Information] on the GOT.	○
315	Device writing error. Correct device.	Error occurred while writing in the device. • Correct the device.	○
316	Cannot display or input operation value. Review expression.	In indirect specification of comment/parts number, the data operation result exceeded the range in which device type can be expressed. • Review the data operational expression, in order not exceeding the range in which the device type can be expressed.	—

Error code	Error message	Action	Channel No. storage in GS262
317	Too high frequency of data collection. Review conditions.	Data of an object, to which [Collect data only when trigger conditions are satisfied] is set, are collected too frequently, or the number of objects has exceeded the number of objects collectable simultaneously. • Set a longer cycle for trigger occurrence to each object. • Configure the settings so that 257 or more objects with [Collect data only when trigger conditions are satisfied] set are not displayed simultaneously.	—
318	The sound data with the specified number does not exist.	The sound data with the specified number does not exist in the sound file list. • Check the specified number. • Register a sound file with the specified number.	—
320	Specified object does not exist or out of range.	The part file does not exist. • Create the part file and download to GOT.	—
322	The specified device is out of range. Confirm device range.	The monitored device No. is out of the permissible area of the targeted PLC CPU. • Check the PLC CPU to be monitored and its parameter settings, and set a valid device in GT Designer3.	—
		The specified data type is not supported by the devices of the connected controller. • Check the controller settings and specify a data type supported by the devices of the controller.	—
		Consecutive device setting is specified for devices that cannot be specified as consecutive devices. • Change the device so that consecutive device setting can be specified, or do not set consecutive devices. For how to set the devices, refer to the following. GT Designer3 (GOT3000) Screen Design Manual	—
323	The specified device No. is out of range. Confirm device range.	The monitored device number is out of the permissible area of the target PLC CPU. • Correct the offset value or the address of the base device so that the resulting address, after applying the offset, is valid.	—
326	Label/tag data types do not match. Confirm the label/tag setting.	The data type of the device assigned to the label or tag is incorrect. • For the usable data types, refer to the following. GT Designer3 (GOT3000) Screen Design Manual	—
		The data types are inconsistent between the object or others and the label or tag set on the PLC side. • Correct the data type of the object or others according to that of the label or tag set on the PLC side.	—
		String-type labels or tags may have not been imported. • If the labels or tags have not been imported, import them with GT Designer3.	—
327	Label names have not been resolved. Resolve label names again.	Check the connection status of the PLC and execute the label name resolution again. GT Designer3 (GOT3000) Screen Design Manual	—
328	There are label/tag settings that can not be monitored. Check the label/tag settings or resolve the label name again.	The label or tag is set for the PLC which does not support labels. • Correct the network No. and station number.	—
		The label name or tag name specified in the project data does not exist on the PLC side. • Check if the label name or tag name specified in the project data exists on the PLC side.	—
		The GOT access the label or tag inaccessible from external devices. • Enable the access from external devices in the label/tag setting on the PLC side.	—
		When a global label of structure has members to which devices are manually assigned, the GOT fails to perform the label name resolution. • Perform operations so that the devices are automatically assigned to the members, or directly set the manually assigned devices as monitor devices.	—
		Label name resolution cannot be performed during the PLC initial processing. • Change the title display time of the GOT so as to execute the label name resolution after the PLC initial processing.	—
329	Station No. switching does not support labels/tags.	Do not perform the station No. switching to the station using labels or tags.	—
330*2	Insufficient memory media capacity. Confirm M-card capacity.	The available space of the memory card is insufficient. • Check the available space of the memory card. GT Designer3 (GOT3000) Screen Design Manual	—
331*2	Cannot access the memory card. Please check the memory card (inserted)/SD card cover/access switch.	No memory card is inserted into the drive or the SD card cover is open. • Install the memory card in the specified drive. • Close the SD card cover to make the SD card accessible.	—

Error code	Error message	Action	Channel No. storage in GS262
332*2	Memory media is not formatted.	Memory card (standard SD card) is not formatted or formatted incorrectly. • Format the memory card.	—
333*2	Unable to overwrite. Memory card is write-protected.	Memory card (standard SD card) is write-protected. • Cancel the write-protection of memory card.	—
334*2	Memory media error. Replace memory media.	Memory card (standard SD card) is faulty. • Replace the memory card.	—
336	The target file size is too large to be accessed.	The size of the file that the GOT attempts to access is not supported. • Make sure that the file size does not exceed 2 GB. • For GT37, the size of the image file must be less than 3840 KB.	—
337*2	File output failed. Confirm output file path.	A folder with the same name as the file to be created or a write-protected file exists on the destination SD card/USB memory. • Delete the file or folder with the same name. • Rename the output destination file or change the file path.	—
345	BCD/BIN conversion error. Correct data.	Any value that cannot be converted to a BCD/BIN value is being displayed/input. • Change the device data to be displayed to the BCD value. • Correct the input value to the 4 digits integer.	○
351	The specified comment file does not exist.	The comment file was inaccessible at the GOT startup. • Check that the comment file is in the read source folder.	—
352	The format of the comment file is invalid.	Reading the comment file has failed due to one of the following causes. • The GOT cannot read the format of the comment file. • The comment file does not have a comment column or comment row. Correct the format of the comment file, and read the file again.	—
353	Failed to read the comment file due to insufficient user area.	The user area required for reading the comment file is insufficient. • Secure the capacity of the user area by deleting data or taking other similar actions.	—
359	Thumbnail output is not available.	If the output format is set to PDF, BMP, or JPG, and the output target is set as stated below, thumbnail output is not supported. • The output target is one of overlap windows 1 to 5 being displayed. • The output target is a hidden window screen.	—
360	0 divisor division error. Confirm operation expression.	Zero division occurred by the data operational expression. • Review the data operational expression so that the divisor should not become 0.	—
361	Specified device No. is out of range.	The entered file number is out of range. • Check the entered file number, and enter a valid value (1 to 9999).	—
362	Invalid device value in time action setting	When controllers are controlled with the GOT's time action function, the set No. is out of range, or the set device values regarding the operation settings are out of range or invalid. • Set valid values.	—
363	The file number exceeds the limitation. File output failed.	Delete the file that has the largest file No. and unnecessary files.	—
364	Cannot start hard copy. Confirm destination setting.	Check if the output destination specified with the special function switch in which the hard copy start is set and the output destination specified by setting of the hard copy are matched.	—
365	Cannot start hard copy. Output target is not displayed.	The overlap window specified for the output target is not displayed. • Display the overlap window to be output.	—
366	Unable to output hard copy. Confirm output target setting.	An invalid setting or screen operation is detected while the image of a screen other than the displayed monitor screen is being output. For the corrective actions, refer to the following manual. 📖GT Designer3 (GOT3000) Screen Design Manual	—
367	Cannot start hard copy. Confirm the external control device value.	Invalid values are set for the following external control devices. Set valid values. • Output file format • Output target screen • Number of output target screens	—
368	Unable to output hard copy. The specified screen is invalid.	Correct the settings of the output target screen. A hard copy output is not executed if any of the following applies. • There are insufficient sequentially numbered screens for the specified number of screens. • The security level is insufficient. • The screen number of the displayed screen is included.	—
369	Unable to output hard copy. The output screen data size exceeds the user area.	The data size of the output target screen exceeds the user area (20 MB). • Adjust the number of output target screens and the contents of those screens.	—

Error code	Error message	Action	Channel No. storage in GS262
370	Upper and lower limit value error. Confirm value setting.	The setting of lower/upper limit value is [Upper limit ≤ Lower limit]. • Correct the setting so as to be "Upper limit > Lower limit".	—
372	Cannot display bookmark contents over 1000.	Set the number of bookmarks of the PDF file so that it does not exceed 1000.	—
373	Overflow occurred in 64-bit bitwise operations. Confirm operation expression.	An overflow has occurred in a 64-bit data operation. • Correct the expression for a data operation.	—
380	Insufficient extension drive capacity. Confirm drive capacity.	Available memory of the extension drive is insufficient. • Check and increase the available memory.	—
381	Extension drive is not installed or in a removable state.	Install the extension drive if it is not installed. Reinstall the extension drive if it is in the removable status.	—
382	Extension drive is not formatted.	The extension drive is not formatted or the format is incompatible with the GOT. Reformat the extension drive.	—
383	Unable to overwrite. Extension drive is write-protected.	Extension driver is write-protected. Cancel the write-protection of extension drive.	—
384	Extension drive error. Replace the extension drive.	Extension drive is faulty. Replace the extension drive.	—
397	The cycle of the frame update cycle device is invalid. Please check the update cycle.	The cycle specified by the frame update cycle device of the frame animation is out of range. (The cycle refers to the operated cycle when the displayed data operation is specified.) • Check the cycle of the frame update cycle device.	—
398	The specified frame No. does not exist. Please check the frame No. setting.	The frame number specified by the frame number device of the frame animation does not exist. (The frame number refers to the operated frame number when the displayed data operation is specified.) • Check the frame number setting.	—
401	An error response has been received from the connected device.	• Eliminate the cause of the CPU error. • Review the operating conditions of the CPU, parameters, and others.	○
402	Communication timeout. Confirm communication pathway or modules.	The time-out error occurred during communicating. • Confirm the cable omission, the communication unit mounting status and status of the PLC. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the manual for the controller being used to identify the channel affected by the error. 📖GOT3000 Series User's Manual (Connection) • This error may occur when the load of PLC CPU becomes heavier while accessing other stations. In such case, transfer the data of the other station to the host station PLC CPU and monitor them at the host. • Insert the COM instruction if the PLC scanning takes a long time. • Check if the version of the communication driver supports the controller. For how to check the version of the communication driver, refer to the following. 📖GT Designer3 (GOT3000) Screen Design Manual • Change the IP address of the GOT or the other device to avoid duplication.	○
403	SIO status error. Confirm communication pathway or modules.	Either of the overrun error, parity bit error or flaming error was generated when the RS-422 / RS-232 communication was received. Confirm the cable omission, the communication module mounting status, status of the PLC and the transmission speed of the computer link. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the manual for the controller being used to identify the channel affected by the error. 📖GOT3000 Series User's Manual (Connection)	○
404	Response does not match communication request.	• Resolve crosstalk on the line. • Lengthen the communication timeout time. Change the communication timeout time by one of the following methods. • Changing the setting in [Detail setting] of the utility. ☞ Page 99 [Communication detail setting] screen • Changing the setting of the communication detail settings in GT Designer3. 📖GOT3000 Series User's Manual (Connection)	○
406	Specified station access is out of range. Confirm station no.	• A PLC CPU other than QCPU is accessed. Confirm the station number of the project data.	○

Error code	Error message	Action	Channel No. storage in GS262
407	Accessed other network. Change network setting.	When monitoring other networks Change the routing information settings in GT Designer3. Otherwise, change the routing parameter settings in GX Developer. When using GT15-75J71LP23-Z/ GT15-75J71BR13-Z Other networks cannot be monitored. Confirm the network number of the project data so as not to access to other networks.	○
413	Unsupported CPU has been accessed.	• Check the latest manual to see if the CPU is supported. • Update the package data.	○
414	Data cannot be written to a write-protected device. Please review the settings.	The external device write-protection setting is configured in the CPU to which data was attempted to be written. Perform one of the following actions. • Do not write data to a device to which external write-protection is set. • Write data to the available device again. • Disable the external device write-protection setting and write data again.	○
415	Failed to write to a file because the external operation prohibition setting of the operation history file was enabled.	The external write-protection function for the device is enabled on the CPU where the file write was attempted. Perform one of the following actions. • Do not write a device initial value file or file register file. • Disable the external device write-protection setting and write data again.	○
416	Failed to write to a file because the external operation prohibition setting of the operation history file was enabled.	[Disable clearing operation history] is enabled in the CPU to which a file was attempted to be written. Disable this setting and write the file again.	○
420	E71 specification is ASCII.	[ASCII code] is selected in [Ethernet operations] of the PLC side setting. Select [Binary code].	○
421	E71 is set as read-only. Clear setting.	The Ethernet module on the PLC side is write-protected. • Set the Ethernet module on the PLC side to write-enabled.	○
422	Not communicating between CPU and E71. Confirm CPU error.	PLC CPU error. Communication between PLC CPU and the PLC side Ethernet module impossible. Check for errors in the PLC CPU using GX Developer or similar software. (Check the buffer memory.)	○
423	Insufficient network table information. Add station no.	The station number set in the project data and the station number set to the station number switching device do not exist in the Ethernet settings in GT Designer3. • Add the station number set in the project data to the Ethernet setting of GT Designer3. • When using the station number switching function, check the data of the station number switching device. When the station number is not set in the Ethernet settings, add the station number to the settings. If the station number does not exist in the system, check the settings in the station number switching device. (Set the station number so that it becomes the same as the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.)	○
424	Same sta. on GOT & project data. Review communication parameter.	The station number set in the GOT's utility is the same as the station number set in the Ethernet setting of GT Designer3 (the station number of the PLC side Ethernet module) or in the project data. Check the following contents so that the multiple station numbers should not be the same. • Check the GOT's station number in the GOT's utility. • Check the station number set in the project data. • Check the station number set in the Ethernet setting. (Set the station number so that it becomes the same as the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.) • When using the station number switching function, check the data of the station number switching device.	○
425	A duplicate IP address has been detected. Confirm the setting.	The GOT has the same IP address as another device. Change the IP address of the GOT or the device.	—
440	The label information has been updated.	The label name resolution will be executed automatically. Wait for the completion.	—
441	The specified CPU is updating the label information.	The global label information of the specified CPU will be updated. Wait for the completion.	—
442	Resolving the label information. Do not turn off the power during the process.	The label name resolution is being executed. Wait for the completion.	—

Error code	Error message	Action	Channel No. storage in GS262
443	Label names were resolved with the batch method because the firmware version of the programmable controller CPU does not support the split method. It may take time to complete the process.	The firmware of the PLC CPU does not support performing the label name resolution in units of global label blocks. Update the firmware version of the PLC CPU.	—
448	PLC cannot handle as requested. Correct devices.	A device outside the range of PLC CPU file registers and the buffer memory was specified. • Correct the monitor device by setting the file register of the PLC CPU.	○
		Data was written to a label where a device out of range was assigned. • Assign a device within the device range to the label of the PLC CPU or correct the device range.	
449	The specified device is out of range. Confirm device range.	• Check the PLC CPU to be monitored and its parameter settings, and set a valid device in GT Designer3. • Set the address for the special function module in the GOT monitor available range.	○
450	Path has changed or timeout occurred in redundant system.	The path has been switched or timeout occurred in the redundant system. • Check the PLC CPU to see if the path has been switched. • Check for cable connection, communication unit installation, and PLC CPU status. • This error may occur when the load of the PLC CPU becomes heavier when accessing other stations. In such a case, transfer the data of the other stations to the host station PLC CPU and monitor them at the host. • Perform one of the following operations if the PLC scan time is long: use the COM instruction, extend the END processing, set the number of processing times for general data, or use data update batch processing.	○
451	MELSEC redundant system settings and current config. do not match.	Change the MELSEC redundant setting in accordance with the actual MELSEC redundant system.	○
460	Communication unit error	• Cycle the power of the GOT or reset the GOT. • Replace the unit. • Correct the detail settings in the controller setting in GT Designer3.	○
461	Communication error occurred between option units and the GOT.	Check the following manual for the vibration resistance specifications and the method of mounting the option units. After that, cycle the power of the GOT or reset the GOT. GOT3000 Series User's Manual (Hardware)	○
470	No routing params. Communication not established with specified sta.	Set routing parameters.	○
480	Communication channel not set. Set channel number on Utility.	Channel (CH No.1 to 4) to communicate with a controller is not set. • After setting the Communication Settings on the GT Designer3, download it to the GOT. • Change the channel assignment in the Communication Setting on the utility.	○*1
481	Communication unit not mounted to the slot of active channel.	The interface where the channel (CH No.1 to 4) is set does not have a communication unit installed. • Install a communication unit to the interface where the channel (CH No.1 to 4) is set. • Configure the communication settings in GT Designer3 and write the settings to the GOT. • Change assignment of the channel (CH No.1 to 4) in the Communication Setting.	○*1
485	Too many units are mounted on GOT. Confirm the number of units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○*1
486	Communication unit not corresponded to set communication driver. Confirm value setting.	The communication driver set in the Communication Setting and the communication unit installed on the GOT do not match. • Check whether the communication driver set in the Communication Setting is correct. • Check whether any incorrect communication unit has been installed on the GOT.	○*1
489	Inactive channel has been selected at Communication Settings.	Inactive channel No. has been set in the project data. • Check whether any unnecessary channel No. has been set in the project data. • Check whether channel Nos. set in the project data are set in the Communication Settings.	○
492	Unusable communication unit(s) is/are mounted.	Unit unusable for GOT is installed. Remove the unusable unit.	○*1

Error code	Error message	Action	Channel No. storage in GS262
496	GOT settings do not meet operating conditions of the comm. driver.	An unusable IP address is set. • Set the IP address within the range from [0].[0].[0].[1] to [223].[255].[255].[254]. • Multiple Ethernet interfaces are set to access the same network. Set an IP address and a subnet mask for each Ethernet interface so that each interface accesses a different network.	○
		Another device is using port number 61451. • Change the port number of the device that uses the port number 61451.	
497	Failed to start communication driver(s).	Install the communication driver(s) again.	○
498	Internal memory cannot be ensured.	The memory required for the multi-channel function could not be allocated.	○
500	Warning! Built-in battery voltage is low.	Replace the GOT built-in battery.	—
510	Clock data input out of range.	The value that is input as clock data is out of the input enabled range. In this case, the input value is not accepted. Check the input range of the value to be input as clock data, and input the proper value again.	—
512	Contactless tag function error.	The contactless tag may be faulty. Consult your local sales office.	—
522	Unnecessary file deleted to create new file.	The old file was deleted and a new file was created because there was a file of the same name with different contents. Rename the file as necessary.	—
523	The read alarm log file has a different number of alarm points.	When the alarm settings (number of monitored alarms, hierarchy) are changed, the alarm log file before the change is read because the data structure remains unchanged, but alarms are collected according to the new settings. An alarm displayed after the change may differ from one before the change. Delete the alarm log file as necessary.	—
525	Alarm log file error.	The alarm log file is corrupted. When the alarm is saved again, the invalid file is deleted and a new file is created.	—
526*2	File conversion failed.	The file specified for the file conversion does not exist. Check the settings for specifying a file to be converted.	—
527	Insufficient NVRAM capacity.	The free space for the buffering area is insufficient in the non-volatile RAM. • Check the size of the specified buffering area. • Check the non-volatile RAM specification (power-failure backup) in the buffering area.	—
528	Error in NVRAM. Failed to write data.	The error may be caused by a failure in the GOT main unit. Contact your local Mitsubishi representative.	—
529	Data error in NVRAM.	The data in the NVRAM is invalid. Initialize the NVRAM. For initialization of NVRAM, refer to the following. ☞ Page 568 Operation to initialize all or selected areas of the SRAM user area	—
531	Failed to ensure the device latch area.	The available capacity of the NVRAM is insufficient to assign the internal device latch. • Delete unnecessary data in the NVRAM area using the utility. • Check the number of the devices in the internal device latch area or the settings of the other functions that use the NVRAM to ensure there is enough NVRAM area to assign the internal device latch.	—
535*2	Error occurred while opening image file.	The specified file does not exist in the drive. • Add the file to the drive. • Set the file name correctly.	—
536	Image file error or invalid file format.	The image file is corrupt or the image file format is unsupported. • Update the image file to a valid one.	—
537	The display position of the image file is invalid.	The image file extends beyond the screen on the upper or left side. • Place the object so that the image file does not extend beyond the screen on the left or upper side.	—
550	Operation log file error.	A corrupted operation log file exists. The GOT will create a new operation log file.	—
562	Install the font appropriate for the specified system language.	An appropriate font is not installed for the system language specified by system language switching. Install the appropriate font.	—
565	Files for the extended system application are missing.	Install the failed system application (add-on function) again.	—

Error code	Error message	Action	Channel No. storage in GS262
577	Newly readable records do not exist.	Even when record names and device values are all set, reading is performed by specifying a nonexistent record name. Delete unnecessary records.	—
578	The specified record name is invalid. Check the record name.	A blank record with no name and device value does not exist. Set such a blank record in advance.	—
581	Abnormal recipe file	The recipe cannot be executed because an inappropriate recipe file exists. Perform one of the following actions. • Delete the relevant recipe file from the drive. • Delete the relevant recipe data with the non-volatile RAM management function, and execute the recipe again.	—
582*2	Cannot generate recipe file.	Generating the recipe file failed. Check that the following conditions are satisfied, and then execute the recipe special control again. • Confirm whether the SD card or USB memory is installed. • Close the SD card cover to make the SD card accessible. • Confirm the available memory of the SD card or USB memory. • Check that the SRAM user area has enough free space.	—
583*2	Unable to write device value to recipe file.	Writing to the recipe file failed. • Confirm the write-protection of the SD card or USB memory. • Check if the attribute of the recipe file is read only.	—
584*2	Recipe file write error.	An error has occurred while writing to the recipe file. Perform one of the following actions. • Insert a memory card and execute the recipe again. • If the recipe data is set to be saved in the non-volatile RAM user area, the physical memory of the GOT may be corrupted. Consult your local sales office.	—
585*2	Recipe file read error.	An error has occurred while reading the recipe file. Perform one of the following actions. • Insert a memory card and execute the recipe again. • If the recipe data is set to be saved in the non-volatile RAM user area, the physical memory of the GOT may be corrupted. Consult your local sales office.	—
586	Specified recipe number does not exist.	A nonexistent recipe ID was specified, and the recipe was attempted. Specify an existing recipe ID, then execute recipe.	—
587	Specified record number does not exist.	A nonexistent record number was specified, and the recipe was attempted. Specify an existing record number, then execute recipe.	—
588	Cannot write recipe data to read only record.	Recipe data read/conversion was attempted against the record that does not allow editing of the recipe device value. Make the recipe device value of the record editable with Recipe Setting of GT Designer3 or specify the record of which recipe device value can be edited.	—
589	Recipe device read/conversion error. The file save destination is not specified.	Reading or conversion were executed on a recipe setting whose save destination was not specified. • Specify a recipe setting whose save destination is specified.	—
590	Recipe device read error. Recipe device value does not exist.	You specified a record in which device values are not set and attempted recipe data write. Specify the record of which recipe device value is set.	—
591	Recipe error. Check recipe data.	The recipe setting is not correct. Confirm the recipe setting of the project data and download it to the GOT again.	—
592	The extension specified to the recipe file is invalid.	The extension of the recipe file name specified by the file name specification device in the recipe function is set to other than *.G3P (binary format), *.CSV (CSV format), or *.TXT (Unicode text format). • Correct the extension that was specified by the recipe file name specification device.	—
593	The setting of G2P file of the original diversion is different from the project data.	The settings of the GOT2000 source recipe file do not match with those of the GOT3000 recipe file, or are incorrect. • To create a GOT3000 recipe file (G3P file) utilizing a GOT2000 recipe file (G2P file), use a recipe file (G2P file) with the settings that matches with those of the file to be created. Alternatively, delete an unnecessary advanced recipe file from the memory card.	—

Error code	Error message	Action	Channel No. storage in GS262
594	Abnormal device values were detected in the conversion source file.	Abnormal device values (out of range, or character string including a character that cannot be converted to a numerical value) were detected during file conversion with the recipe function. • Select the recipe file whose device values are valid for the conversion source. • If the file format of the conversion source is a CSV or text file, check and correct the device value using a personal computer.	—
595*2	Logging file error.	A corrupted logging file exists. To continue logging, ignore the error. When collecting data again, delete logging files and management files.	—
596	Logging setting does not exist or setting value error.	The logging setting specified in the historical data list does not exist or the logging setting is incorrect. Specify an existing logging setting in the historical data list setting.	—
597	The specified logging ID does not exist.	• Specify an existing logging ID in the Logging ID External Control device. • Select the indirect specification (device) for the logging ID specification function to specify a logging ID that exists in the logging settings.	—
598	The specified logging setting is invalid.	• Configure the setting so that the number of logging devices set for the logging ID exceeds that of data lines on the historical trend graph. • Configure the setting so that the data type of the logging device set for the logging ID is the same as that of the device specified in the historical trend graph.	—
607	There are too many digital video display objects. Please reduce the number of set objects.	Reduce the number of digital video display objects to be displayed simultaneously.	—
608	The hierarchy of the digital video display objects cannot be displayed correctly.	Avoid complex overlapping of digital video display objects.	—
609	Communication/Option unit is not mounted.	Mount the communication unit or option unit correctly.	—
616	Cannot connect to SNTP Server. Check the Server.	The settings for the SNTP server are wrong or the network to the SNTP server is made up incorrectly. • Check the operating conditions of the SNTP server. • Check the network to the SNTP server.	—
620	Trial connection has started.	While the license number of the GOT Mobile function is unregistered, the GOT is accessed by information devices. To use the GOT Mobile function in the full version, register the license number on the GOT.	—
621	Failed to start the GOT Mobile function.	• Check if the HTTP connection port number is duplicated. (For GT SoftGOT3000, use the set port number, the port number +1, and the port number +2.) • Restart the personal computer.	—
622	Cannot display the overlap window having a width wider than the base screen.	Set the width (excluding the frame width) of an overlap window with the title bar equal or less than the width of the base screen.	—
623	Failed to start OPC-UA server.	The server certificate does not exist on the GOT (OPC UA server), or the project data is corrupted. • Create a server certificate using the certificate management function. • Write normal project data to the GOT.	—
640	An error occurred in a File transfer process.	• Correct the file transfer settings. • Check the operating status and network line of the FTP server. For the error details, check the file transfer error notification device (GS989). 📖GT Designer3 (GOT3000) Screen Design Manual	—
641	The license key has not been registered. Confirm your license.	The license number of the function to be used is not registered. • Register the license to the GOT.	—
645	An unexpected error has been detected in the VPN function.	Consult your local sales office.	—
646	The trial connection period has expired. Please register a license for the function you are using.	The trial period of the VPN function has expired. Register a license to use the VPN function. Refer to the following for how to register a license. ☞ Page 153 [License management]	—
660	Failed to obtain op. authority. Server does not respond.	• Check the connection with the operation rights management device and ensure that it is running. • Enable the GOT network interaction function on the operation rights management device. • Check the settings of the GOT network table.	—

Error code	Error message	Action	Channel No. storage in GS262
697	Package writing of the old version is not allowed.	An older version of the package data was transferred while the downgrading prohibition function was enabled. • Check if the package data to be transferred was created with a version equal to or newer than the version currently running on the GOT. • Disable the downgrading prohibition function.	—
751	No client certificate found in the GOT.	Client authentication is required on the GOT when it accesses an OPC UA server as an OPC UA client. Create a client certificate on the GOT. ☞ Page 580 [Certificate management] Import the created client certificate into the OPC UA server terminal.	—
752	The certificate will expire within 90 days.	A certificate managed on the GOT has an expiration date of 90 days or less. Update the server certificate on the GOT. ☞ Page 580 [Certificate management]	—
753	The certificate is expired.	A certificate managed on the GOT has expired. If any of the following certificates have expired, update them. ☞ Page 580 [Certificate management] • Server certificate on the GOT • Encrypted communication with the MELSEC MX controller: Server certificate on the MELSEC MX controller • OPC UA client connection: Server certificate on the OPC UA server	○
754	A certificate error has been detected.	An error has occurred in the certificate management information. Delete all certificates on the connected devices and import them again. ☞ Page 580 [Certificate management]	○
755	There is no certificate for the connection destination.	There is no server certificate on the device that the GOT (client) connects to. When using the following functions, obtain and import the server certificate into the GOT if it has not yet been imported. • Encrypted communication with the MELSEC MX controller: Server certificate on the MELSEC MX controller • OPC UA client connection: Server certificate on the OPC UA server • GOT network interaction function: Server certificate on the master GOT	○
756	An error was detected in the system package.	The required system package or GOT project cannot be read. • Write a normal system package or project to the GOT.	—

*1 When there is an error, "0" is stored to the channel No.

*2 The drive where the alarm occurred cannot be identified only by the system alarm related to file access.
The drive where the alarm occurred can be checked using the file access error signals (b7, b8) of system signal 2-2.

71.4.2 Network error code list

Error code	Error message	Action
800	Abnormal module status	A module status error has occurred on the connected network. For the causes and corrective actions, refer to the network manual.
801	Abnormal baton passing status	Refer to explanations of SB0047 on the applicable network manual.
802	Abnormal cyclic transmission status	Refer to explanations of SB0049 on the applicable network manual.
804	The cable on the IN side is disconnected or is not connected.	Refer to explanations of SB0067 on the applicable network manual.
805	The cable on the OUT side is disconnected or is not connected.	Refer to explanations of SB0068 on the applicable network manual.
821	Update the comm. unit firmware. Unsupported functions were detected.	Update the firmware of the communication unit.
854	Duplicate master stations are set in the same network.	Set only one master station(specified control station) in the network.
855	Disconnected.	The GOT is waiting for a request from the master station(specified control station). Check the status of the master station(specified control station).

Revisions

*The manual number is given on the bottom left of the back cover.

Revision date	*Manual number	Description
April 2025	SH(NA)-082592ENG-A	First edition
December 2025	SH(NA)-082592ENG-B	Compatible with GT Works3 Version1.410C • The GOT internal device monitor is supported. • The SoftGOT-GOT link function is supported. • The sequence program monitor is supported. • Backup/restore is supported. • The system launcher is supported. • The iQSS utility is supported. • The file manager is supported. • Email is supported. • The Web browser function is supported. • The intelligent module monitor is supported. • The R motion monitor is supported. • Network status display is supported. • CC-Link IE diagnostics is supported.
April 2026	SH(NA)-082592ENG-C	Typographical errors have been corrected.

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WARRANTY

Please check the following product warranty details before using this product.

■1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion.
Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

(1) Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.
Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months.
The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

(2) Gratis Warranty Range

(a) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense.
The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.

(b) The range shall be limited to normal use within the usage state, usage methods, and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(c) Even within the gratis warranty term, repairs shall be charged in the following cases.

- Failure occurring from inappropriate storage or handling, carelessness or negligence by the user.
  Failure caused by the user's hardware or software design.
- Failure caused by unapproved modifications, etc., to the product by the user.
- When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
- Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
- Replacing consumable parts such as a battery
- Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
- Failure caused by reasons that could not be predicted by scientific technology standards at the time of shipment from Mitsubishi.
- Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

■2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Mitsubishi shall not accept a request for product supply (including spare parts) after production is discontinued.

■3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center.
Note that the repair conditions at each FA Center may differ.

■4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.

(2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.

(3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.

(4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

■5. Changes in product specifications

The specifications given in the catalogs, manuals, or technical documents are subject to change without prior notice.

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