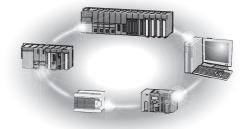


Programmable Controller

CC-Link System Compact Type Remote I/O Module User's Manual



• SAFETY PRECAUTIONS •

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product. For the safety precautions of the programmable controller system, refer to the user's manual for the CPU module used.

In this manual, the safety precautions are classified into two levels: "/!\ WARNING " and "/!\ CAUTION".



Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under " \triangle CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Precautions]

⚠ WARNING

- In the case of a communication failure in the network, the status of the error station will be as follows:
 - (1) All inputs from remote I/O stations are turned off.
 - (2) All outputs from remote I/O stations are turned off.
 - Check the communication status information and configure an interlock circuit in the sequence program to ensure that the entire system will operate safely.
 - Incorrect output or malfunction due to a communication failure may result in an accident.
- Outputs may remain on or off due to a failure of a remote I/O module. Configure an external circuit for monitoring output signals that could cause a serious accident.

A CAUTION

- Use the module in an environment that meets the general specifications in this manual.
 Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100mm (3.94 inches) or more between them. Failure to do so may result in malfunction due to noise.

[Installation Precautions]

↑ CAUTION

- Do not directly touch any conductive parts of the module. Doing so can cause malfunction or failure of the module.
- Securely fix the module with a DIN rail or mounting screws. Tighten the screws within the specified torque range. Undertightening can cause drop of the screw, short circuit or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- Securely connect the cable connectors. Poor contact may cause malfunction.

[Wiring Precautions]

↑ WARNING

• Shut off the external power supply for the system in all phases before wiring.

Failure to do so may result in electric shock or cause the module to fail or malfunction.

↑ CAUTION

- Individually ground the FG terminal of the programmable controller with a ground resistance of 100Ω or less. Failure to do so may result in electric shock or malfunction.
- Tighten any unused terminal screws within the specified torque range (0.42 to 0.50N•m). Failure to do so may cause a short circuit due to contact with a solderless terminal.
- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Check the rated voltage and terminal layout before wiring to the module, and connect the cables correctly. Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or failure.
- Tighten the terminal screw within the specified torque range. Undertightening can cause short circuit, fire, or malfunction. Overtightening can damage the screw and/ or module, resulting in drop, short circuit, fire, or malfunction.
- When fixing the CC-Link dedicated cable and the power cable through the pipes for transmission or power supply line of the waterproof type remote I/O module, securely tighten the nuts with a wrench. Undertightening can cause water intrusion, resulting in failure. (AJ65SBTW□-16□ only.)
- Tighten the communication adapter mounting screw or the waterproof cap within the specified torque range. Undertightening can cause short circuit, fire, or malfunction. Overtightening can damage the screw or the cap, resulting in short circuit or malfunction. (AJ65FBTA□-16□ only.)
- This product meets IP67 standard under the condition that the waterproof plugs, waterproof caps, and communication adapter are all installed. (AJ65FBTA□-16□ only.)
- Do not connect the cable to an incorrect connector. The I/O connector, communication connector, and power connector have the same interface. Doing so can cause malfunction or failure of the module. (AJ65FBTA□-16□ only.)

[Wiring Precautions]

↑ CAUTION

- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- Place the cables in a duct or clamp them. If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.
- Do not install the control lines together with the communication cables, or bring them close to each other. Failure to do so may cause malfunctions due to noise.
- When an overcurrent caused by an error of an external device or a failure of the programmable controller flows for a long time, it may cause smoke and fire. To prevent this, configure an external safety circuit, such as a fuse.
- When disconnecting the cable from the module, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. For the cable connected to the terminal block, loosen the terminal screw. Pulling the cable connected to the module may result in malfunction or damage to the module or cable.

[Starting and Maintenance Precautions]

⚠ WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
- Shut off the external power supply for the system in all phases before cleaning the module or retightening the terminal screws or module mounting screws. Failure to do so may result in electric shock.
- Set the sink/source selector switch after shutting off the power supply at all phases. Failure to do so may result in failures or malfunctions in the opponent device.

A CAUTION

- Do not disassemble or modify the modules. Doing so may cause failure, malfunction, injury, or a fire
- Do not drop or apply strong shock to the module. Doing so may damage the module.
- Shut off the external power supply for the system in all phases before mounting or removing a module. Failure to do so may cause the module to fail or malfunction.
- After the first use of the product, do not mount/remove the terminal block to/from the module more than 50 times (IEC 61131-2 compliant).
- Before handling the module, touch a conducting object such as a grounded metal to discharge
 the static electricity from the human body. Failure to do so may cause the module to fail or
 malfunction.

[Disposal Precautions]

↑ CAUTION

• When disposing of this product, treat it as industrial waste.

CONDITIONS OF USE FOR THE PRODUCT

- (1) Mitsubishi programmable controller ("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 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'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.

("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- 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 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 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 representative in your region.

REVISIONS

* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
June 1998	SH(NA)-4007-A	First printing
Nov. 1998	SH(NA)-4007-B	Additional model AJ65SBTB1-8D, AJ65SBTC4-16D, AJ65SBTW4-16D, AJ65SBTB1-8T,
		AJ65SBTC4-16DT, AJ65SBTW4-16DT
		Addition Section 7.3, 7.4
		Correction
		Section 1.1, 1.2, 1.4, Chapter 2, 4, 5, 6, Section 7.1, Appendix 1
Apr. 1999	SH(NA)-4007-C	Addition Contents, Section 8.2.2
June 1999	SH(NA)-4007-D	Additional model
		AJ65SBTB1-32T1, AJ65SBTCF1-32D, AJ65SBTCF1-32T, AJ65SBTCF1-32DT
Nov. 1999	SH(NA)-4007-E	Addition
		Section 1.4, 4.1.6, 4.1.7, 4.4, 5.1.8, 5.1.9, 5.1.10, 5.1.11, 5.3, 6.1, 6.4, 7.4, Appendix 1.6, 1.7, 1.8
		Correction Chapter 2 Chapter 2 Chapter 4 2 4 4 2 4
		Section 1.1, 1.2, 1.3, 1.5, 1.6, Chapter 2, Chapter 3, Section 4.2.1, 4.3.1, 6.2.1, 6.3.1, Section 7.1, 7.4, 8.2.1, Appendix 1
		Additional model
		AJ65SBTB1-32DT, AJ65SBTCF1-32D, AJ65SBTCF1-32T, AJ65SBTCF1-32DT, AJ65SBTB2-8A, AJ65SBTB2-16A, AJ65SBTB2-8R, AJ65SBTB2-16R, AJ65SBTB2-8S, AJ65SBTB2-16S
Dec. 1999	SH(NA)-4007-F	Addition
		Section 1.2, 4.1.6, 4.1.7, 5.1.8, 5.1.9, 5.1.10, 5.1.11
Mar. 2000	SH(NA)-4007-G	Additional model
		AJ65SBTB2N-8A, AJ65SBTB2N-16A, AJ65SBTB3-8D, AJ65SBTB3-16D, AJ65SBTB2-8T, AJ65SBTB2-16T, AJ65SBTB2N-8R, AJ65SBTB-16R,
		AJ65SBTB2N-8S, AJ65SBTB2N-16S, AJ65SBTB32-8DT,
		AJ65SBTB32-16DT, AJ65SBTB1-16DT, AJ65SBTB1-16DT1, AJ65SBTB1-32DT1
		Addition
		Section 4.1.8, 4.1.9, 4.1.10, 4.1.11, Section 5.1.12, 5.1.13, 5.1.14, 5.1.15, 5.1.16, 5.1.17, Section 6.1.1, 6.1.3, 6.1.4, 6.1.5, 6.1.6, Appendix 1.9, 1.10
Oct. 2000	SH(NA)-4007-H	Additional model
		AJ65VBTCU3-8D1, AJ65VBTCU3-16D1, AJ65VBTCU2-8T, AJ65VBTCU2-16T, AJ65VBTCF1-32DT1
		Addition
		Section 4.5, 5.4, 6.5, 7.2.3, 7.2.4, Appendix 1.13
		Correction Section 4.3.1.7.1
		Section 1.1, 1.4, 1.5, Chapter 2, Section 4.3.1, 7.1 Deletion
		Deletion
		AJ65SBTB2-8S, AJ65SBTB2-16S

Print Date	* Manual Number	Revision
Jan. 2001	SH(NA)-4007-I	Additional model AJ65FBTA4-16D, AJ65FBTA4-16DE, AJ65FBTA42-16DT, AJ65FBTA42-16DTE
		Addition Section 1.6, 7.4, Appendix 1.14 Correction Section 1.2, 1.4, 1.5, Chapter 2,3, Section 4.5.2, 5.3.1, 5.4.1, 5.4.2, 6.5.1,
		7.1, Appendix 1.13
Jul. 2001	SH(NA)-4007-J	Additional model AJ65FBTA2-16T, AJ65FBTA2-16TE Correction Section 1.2, 1.4, 1.5, 4.1.6, 4.1.7, 4.2.1, 4.2.2, 4.3.1, 6.2.1, 6.2.2, 6.3.1,
Sep. 2001	SH(NA)-4007-K	6.5.1, 6.6.1, 6.6.2, 7.2.3, Appendix 1.14 Additional model AJ65SBTB1-16DT2, AJ65SBTB1-32DT2 Correction Section 1.4, 6.1.1, 8.2.1, Appendix 1.13
Jan. 2002	SH(NA)-4007-L	Additional model AJ65SBTB1-8T1, AJ65SBTB2-8T1, AJ65SBTB2-16T1, AJ65SBTC1-32T1, AJ65SBTB1-16DT3, AJ65SBTB1-32DT3, AJ65SBTB32-8DT2, AJ65SBTB32-16DT2, AJ65SBTC4-16DT2, AJ65SBTC1-32DT2, AJ65SBTC1-32DT3 Correction Section 1.3, 1.4, 1.5, 5.5.2, 6.1.1, 7.7, 8.2.1, Appendix 1.13 Changed item numbers Section 5.1.4 to Section 5.1.9 \rightarrow Section 5.1.5 to Section 5.1.10 Section 5.1.10 to Section 6.1.13 \rightarrow Section 5.1.13 to Section 5.1.16 Section 6.1.5 to Section 6.1.6 \rightarrow Section 6.1.9 to Section 6.1.10 Section 6.2.2 to Section 6.2.3 \rightarrow Section 6.2.3 to Section 6.2.4
Dec. 2002	SH(NA)-4007-M	Correction Section 2, Section 4 to Section 6, Section 8.2.1
May 2003	SH(NA)-4007-N	Correction Section 1.3, 1.6
Jun. 2004	SH(NA)-4007-O	Additional model AJ65VBTS3-16D, AJ65VBTS3-32D, AJ65VBTS2-16T, AJ65VBTS2-32T, AJ65VBTS32-16DT, AJ65VBTS32-32DT, AJ65VBTCE3-8D, AJ65VBTCE3-16D, AJ65VBTCE2-8T, AJ65VBTCE2-16T, AJ65VBTCE32-16DT Addition Section 1.6.1 to 1.6.3, 4.5.3 to 4.5.5, 5.4.3 to 5.4.5, 6.5.2 to 6.5.4, 7.8, 7.9 Appendix 1.15, 1.16 Correction Chapter 1, 2, Section 4.4.1, 4.5, 5.1, 5.4, 6.1, 6.5, 6.2.2, 6.4.1, 6.5.1, 7.2 to 7.4
Oct. 2004	SH(NA)-4007-P	Correction Section 1.1, 1.3 to 1.5, Chapter 2, 3, 4 to 6, Section 7.1, 7.4.2, 7.6, 7.7, 7.9.2, APPENDIX

Print Date	* Manual Number	Revision
May 2005	SH(NA)-4007-Q	Additional model
		AJ65VBTCE3-32D, AJ65SBTC4-16DN, AJ65SBTC4-16DE,
		AJ65VBTCE32-32DT
		Addition
		Section 4.3.3, 4.4.3, 4.4.4, 6.3.2
		Correction
		SAFETY PRECAUTION, About Manuals, Compliance with the EMC and
		Low Voltage Directives, Section 1.1, 1.2, 1.4, 1.5, Chapter 2,
		Chapter 4 to 6, Section 7.1, 7.5, 7.7, 7.8.2, 7.9.2, Appendix 1.1, 1.2, 1.4, 1.5 to 1.10, 1.14
		Changed item numbers
		The order of section numbers has been changed in Chapters 4 through 6
Sep. 2005	SH(NA)-4007-R	Correction
		Chapter 4, through 6 have been changed for the external connection
		diagrams
Sep. 2006	SH(NA)-4007-S	Additional model
		AJ65SBTB1B-16TE1, AJ65SBTB1-32TE1, AJ65SBTB1-32DTE1
		Addition
		Section 5.1.13, 5.1.14, 6.1.13
		Correction
		SAFETY PRECAUTION, Section 1.2, 1.4, Chapter 2, Section 7.1, 8.2.1,
		8.2.2, Appendix 1.8
		F.G symbol is generally revised.
		Changed item numbers
		Section 5.1.13 → Section 5.1.15 Section 5.1.14 → Section 5.1.16
		Section 5.1.14 → Section 5.1.16 Section 5.1.15 → Section 5.1.17
		Section 5.1.16 → Section 5.1.18
Jan. 2007	SH(NA)-4007-T	Additional model
		AJ65SBTB3-16D5, AJ65SBTB1-32D5
		Addition
		Section 4.1.8, 4.1.11
		Correction
		Section 1.2, 1.4, Chapter 2, Section 5.1.17, 5.1.18, 8.2.2
		Chapter 4 to 6 have been changed for specifications and external
		connection diagrams.
		Changed item numbers
		Section 4.1.8 → Section 4.1.9 Section 4.1.9 → Section 4.1.10
		SECTION 4.1.3 → SECTION 4.1.10

Print Date	* Manual Number	Revision
Mar. 2007	SH(NA)-4007-U	Additional model
		AJ65DBTB1-32D, AJ65DBTB1-32T1, AJ65DBTB1-32R, AJ65DBTB1-
		32DT1, AJ65DBTB1-32DR
		Addition
		Section 4.1.12, 5.1.19, 5.1.20, 6.1.14, 6.1.15, 7.10, 7.10.1, 7.10.2, 7.10.3,
		7.10.4, 7.11, Appendix 1.15
		Correction
		Section 1.2, 1.3, 1.4, 1.5, Chapter 2, Section 4.3.1, 5.1.17, 5.1.18, 6.4.1,
		6.4.2, 6.6.1, 6.6.2, 7.1
Sep. 2007	SH(NA)-4007-V	Additional model
		AJ65SBTB32-16DR, AJ65SBTB3-16KD, AJ65SBTB1-32KD,
		AJ65SBTB32-16KDT2, AJ65SBTB32-16KDT8, AJ65SBTB1-32KDT2,
		AJ65SBTB1-32KDT8
		Addition
		Section 4.1.8, 4.1.11, 6.1.9, 6.1.10, 6.1.11, 6.1.15, 6.1.17, Appendix 1.16
		Correction
		Section 1.2, 1.3, 1.4, Chapter 2, Section 6.6.3, 7.1
		Changed item numbers
		Section 4.1.8 → Section 4.1.9
		Section 4.1.9 → Section 4.1.10
		Section 4.1.10 → Section 4.1.12
		Section 4.1.11 → Section 4.1.13
		Section 4.1.12 → Section 4.1.14
		Section 6.1.9 → Section 6.1.12
		Section 6.1.10 → Section 6.1.13
		Section 6.1.11 → Section 6.1.14
		Section 6.1.12 → Section 6.1.16
		Section 6.1.13 → Section 6.1.18
		Section 6.1.14 \rightarrow Section 6.1.19 Section 6.1.15 \rightarrow Section 6.1.20
Oct. 2007	SH(NA)-4007-W	
001. 2007	011(14/1)-4007-44	Additional model
		AJ65SBTB32-16KDR
		Addition
		Section 6.1.12
		Correction
		Section 1.2, 1.4, Chapter 2
		Changed item numbers
		Section 6.1.12 → Section 6.1.13
		Section 6.1.13 → Section 6.1.14
		Section 6.1.14 → Section 6.1.15
		Section 6.1.15 → Section 6.1.16
		Section 6.1.16 \rightarrow Section 6.1.17 Section 6.1.17 \rightarrow Section 6.1.18
		Section 6.1.17 \rightarrow Section 6.1.18 Section 6.1.19 \rightarrow Section 6.1.20
		Section 6.1.20 → Section 6.1.21
		555.5 5 2 0 / 555.6 5 2 1

Print Date	* Manual Number	Revision
Oct. 2008	SH(NA)-4007-X	Additional model AJ65VBTCFJ1-32DT1 Addition Section 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 4.4.1, 4.4.5, 5.2.1, 5.2.2, 5.3.1, 5.3.1, 6.5.3 Correction
		Section 1.3
Jan. 2010	SH(NA)-4007-Y	This manual was revised in accordance with IEC 60617.
		Additional model AJ65VBTCE3-16DE, AJ65VBTCE3-32DE Addition SAFETY PRECAUTION, Section 1.3.1, 1.4, 1.6.2, 1.7, 4.3.2, 4.3.3, 7.1, 7.2.3, 7.2.4, 7.5, 7.7 Correction
Mar. 2011	SH(NA)-4007-Z	CONDITIONS OF USE FOR THE PRODUCT, Section 4.3.4, 4.3.5 This manual was revised in accordance.
Dec. 2011	SH(NA)-4007-AA	Additional model
		AJ65VBTCE3-16TE, AJ65VBTCE3-16DTE, AJ65VBTCE3-32DTE Addition Section 5.3.3, 6.3.2, 6.3.4 Correction Chapter 3, Section 1.3.1 to 1.3.3, 1.4, 1.5, 4.6.3, 5.1.19, 6.1.1, 6.1.2, 6.1.7 to 6.1.12, 6.1.20, 6.2.1, 6.2.2, 6.3.1, 6.3.3, 6.4.1, 6.4.2, 6.6.1 to 6.6.3, 7.1, 7.2.2, 7.8.2, 8.1 Changed item numbers Section 6.3.2 → Section 6.3.3
Jun. 2012	SH(NA)-4007-AB	Addition Appendix 2 Correction ABOUT MANUALS, COMPLIANCE WITH EMC AND LOW VOLTAGE DIRECTIVES, Chapter 2, 3, Section 1.5, 1.6.2, 6.5.3, 7.2.1, 7.6, 7.7, 8.2.1, Appendix 1.11
Nov. 2012	SH(NA)-4007-AC	Correction Section 4.6.1, 4.6.2, 5.5.1, 5.6.1, 5.6.2, 6.2.2, 6.5.2, 6.6.1, 6.6.2
Jun. 2013	SH(NA)-4007-AD	Correction Section 8.2.1, 8.2.2
Dec. 2013	SH(NA)-4007-AE	Correction Section 4.1.1 to 4.1.14, 4.4.3, 4.4.4, 4.4.6, 4.4.7, 4.5.1, 5.1.1 to 5.1.20, 5.4.3, 5.4.4, 5.5.1, 6.1.1 to 6.1.21, 6.4.1 to 6.4.6, 6.5.1 to 6.5.3

Oct. 2014 SH(NA)-4007-AF Correction About Manuals, Section 1.3.2, 1.6.2, 1.7, Chapter 2, 4, 5, 6, Section 7.2.1, 7.2.6, 7.5, 7.7, 7.8.2, Appendix 1, 2 Mar. 2017 SH(NA)-4007-AG Correction Section 1.3.2 SH(NA)-4007-AH Correction Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2, Appendix 1.13
About Manuals, Section 1.3.2, 1.6.2, 1.7, Chapter 2, 4, 5, 6, Section 7.2.1, 7.2.6, 7.5, 7.7, 7.8.2, Appendix 1, 2 Mar. 2017 SH(NA)-4007-AG Correction Section 1.3.2 Jul. 2018 SH(NA)-4007-AH Correction Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
7.2.6, 7.5, 7.7, 7.8.2, Appendix 1, 2 Mar. 2017 SH(NA)-4007-AG Correction Section 1.3.2 Jul. 2018 SH(NA)-4007-AH Correction Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
Section 1.3.2 Jul. 2018 SH(NA)-4007-AH Correction Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
Jul. 2018 SH(NA)-4007-AH Correction Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
Section 1.3.2, 1.5, 4.2.1, 4.2.2, 4.4.2, 4.6.3, 5.1.11, 5.1.12, 5.1.14, 5.2.1, 5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
5.2.2, 5.6.2, 6.1.19, 6.2.1, 6.2.2, 6.6.2, 6.6.3, 7.1, 7.6, 7.8.2, 8.2.2,
Jananese Manual Version SH-3307-A

Japanese Manual Version SH-3307-AJ

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

© 1998 MITSUBISHI ELECTRIC CORPORATION

A - 10 A - 10

INTRODUCTION

Thank you for purchasing the MELSEC-A series programmable controllers.

Before using this product, please read this manual carefully and develop familiarity with the functions and performance of the MELSEC-A series programmable controller to handle the product correctly.

Make sure that the end users read this manual.

CONTENTS

SAFETY PRECAUTIONS	A- 1
CONDITIONS OF USE FOR THE PRODUCT	A- 4
REVISIONS	A- 5
INTRODUCTION	A-11
CONTENTS	A-11
ABOUT MANUALS	A-16
COMPLIANCE WITH EMC AND LOW VOLTAGE DIRECTIVES	A-16
1 OVERVIEW	1- 1 to 1-36
1.1 Features	
1.2 Identifying the Compact Remote I/O Module Type	1- 4
1.3 Precautions for use of remote I/O modules	1- 5
1.3.1 Input module	1- 5
1.3.2 Output module	
1.3.3 Modules with protection functions	1-22
1.4 Specification List	1-23
1.5 Parts Sold Separately	
1.6 Recommended Connection Device List	
1.6.1 Recommended connection devices for low profile waterproof remote I/O module .	1-33
1.6.2 Recommended connection devices for low profile sensor connector (e-CON)	
remote I/O module	
1.7 About the Generic, Abbreviated and Technical Terms Used in This Manual	1-35
2 NAMES AND SETTINGS FOR EACH PART	2- 1 to 2-26
3 GENERAL SPECIFICATIONS	3- 1 and 3- 2
4 SPECIFICATIONS FOR INPUT MODULES	4- 1 to 4-71
4 SPECIFICATIONS FOR INPUT MODULES 4.1 Terminal Block Type Input Module	
	4- 1
4.1 Terminal Block Type Input Module	4- 1 4- 1
4.1 Terminal Block Type Input Module	4- 1 4- 1
4.1 Terminal Block Type Input Module	4- 1 4- 1 4- 3
4.1 Terminal Block Type Input Module	4- 1 4- 1 4- 3
4.1 Terminal Block Type Input Module	4- 1 4- 1 4- 3
4.1 Terminal Block Type Input Module	4- 1 4- 1 4- 3 4- 5
4.1 Terminal Block Type Input Module	4- 1 4- 1 4- 3 4- 5

4.1.7 AJ65SBTB3-16D 24VDC input module	
(positive common (sink), negative common (source) loading)	4- 9
4.1.8 AJ65SBTB3-16KD 24VDC input module	
(positive common (sink), negative common (source) loading)	4-11
4.1.9 AJ65SBTB3-16D5 5VDC input module	
(positive common (sink), negative common (source) loading)	4-13
4.1.10 AJ65SBTB1-32D 24VDC input module	4 45
(positive common (sink), negative common (source) loading)	4- 15
4.1.11 AJ65SBTB1-32KD 24VDC input module	4 47
(positive common (sink), negative common (source) loading)	4- 17
4.1.12 AJ65SBTB1-32D1 24VDC input module	4 10
(positive common (sink), negative common (source) loading)	4-19
(positive common (sink), negative common (source) loading)	1 21
4.1.14 AJ65DBTB1-32D 24VDC input module	4-21
(positive common (sink), negative common (source) loading)	4-23
4.2 Spring Clamp Terminal Block Type Input Module	
4.2.1 AJ65VBTS3-16D 24VDC input module (positive common (sink type))	
4.2.2 AJ65VBTS3-32D 24VDC input module (positive common (sink type))	
4.3 Sensor Connector (e-CON) Type Input Module	
4.3.1 AJ65VBTCE3-8D 24VDC input module (positive common (sink type))	
4.3.2 AJ65VBTCE3-16D 24VDC input module (positive common (sink type))	
4.3.3 AJ65VBTCE3-32D 24VDC input module (positive common (sink type))	
4.3.4 AJ65VBTCE3-16DE 24VDC input module (negative common (source type))	
4.3.5 AJ65VBTCE3-32DE 24VDC input module (negative common (source type))	
4.4 One-Touch Connector Type Input Module	4-46
4.4.1 AJ65VBTCU3-8D1 24VDC input module (positive common (sink type))	4-46
4.4.2 AJ65SBTC4-16D 24VDC input module	
(positive common (sink), negative common (source) loading)	4-49
4.4.3 AJ65SBTC4-16DN 24VDC input module (positive common (sink type))	
4.4.4 AJ65SBTC4-16DE 24VDC input module (negative common (source type))	
4.4.5 AJ65VBTCU3-16D1 24VDC input module (positive common (sink type))	4-56
4.4.6 AJ65SBTC1-32D 24VDC input module	
(positive common (sink), negative common (source) loading)	4-59
4.4.7 AJ65SBTC1-32D1 24VDC input module	
(positive common (sink), negative common (source) loading)	
4.5 FCN Connector Type Input Module	4-63
4.5.1 AJ65SBTCF1-32D 24VDC input module	4.00
(positive common (sink), negative common (source) loading)	
4.6 Waterproof Type Input Module	
4.6.1 AJ65FBTA4-16D 24VDC input module (positive common (sink type))	
4.6.3 AJ65SBTW4-16D 24VDC input module (negative common (souce type))	4-07
(positive common (sink), negative common (source) loading)	4-60
5 SPECIFICATIONS FOR OUTPUT MODULES	
5.1 Terminal Block Type Output Module	
5.1.1 AJ65SBTB1-8T transistor output module (sink type)	
5.1.2 AJ65SBTB1-8T1 transistor output module (sink type)	5- 3

5.1.3 AJ65SBTB2-8T transistor output module (sink type)	5- 5
5.1.4 AJ65SBTB2-8T1 transistor output module (sink type)	5- 7
5.1.5 AJ65SBTB1-16T transistor output module (sink type)	5- 9
5.1.6 AJ65SBTB1-16T1 transistor output module (sink type)	5-11
5.1.7 AJ65SBTB2-16T transistor output module (sink type)	5-13
5.1.8 AJ65SBTB2-16T1 transistor output module (sink type)	5-15
5.1.9 AJ65SBTB1-32T transistor output module (sink type)	5-17
5.1.10 AJ65SBTB1-32T1 transistor output module (sink type)	5-19
5.1.11 AJ65SBTB1-8TE transistor output module (source type)	5-21
5.1.12 AJ65SBTB1-16TE transistor output module (source type)	5-23
5.1.13 AJ65SBTB1B-16TE1 transistor output module (source type)	5-25
5.1.14 AJ65SBTB1-32TE1 transistor output module (source type)	5-27
5.1.15 AJ65SBTB2N-8R contact output module	5-29
5.1.16 AJ65SBTB2N-16R contact output module	5-31
5.1.17 AJ65SBTB2N-8S triac output module	5-33
5.1.18 AJ65SBTB2N-16S triac output module	5-35
5.1.19 AJ65DBTB1-32T1 transistor output module (sink type)	5-37
5.1.20 AJ65DBTB1-32R contact output module	5-39
5.2 Spring Clamp Terminal Block Type Output Module	5-41
5.2.1 AJ65VBTS2-16T transistor output module (sink type)	5-41
5.2.2 AJ65VBTS2-32T transistor output module (sink type)	5-44
5.3 Sensor Connector (e-CON) Type Output module	5-47
5.3.1 AJ65VBTCE2-8T transistor output module (sink type)	5-47
5.3.2 AJ65VBTCE2-16T transistor output module (sink type)	
5.3.3 AJ65VBTCE3-16TE transistor output module (source type)	5-53
5.4 One-Touch Connector Type Output Module	
5.4.1 AJ65VBTCU2-8T transistor output module (sink type)	
5.4.2 AJ65VBTCU2-16T transistor output module (sink type)	
5.4.3 AJ65SBTC1-32T transistor output module (sink type)	
5.4.4 AJ65SBTC1-32T1 transistor output module (sink type)	
5.5 FCN Connector Type Output Module	
5.5.1 AJ65SBTCF1-32T transistor output module (sink type)	
5.6 Waterproof Type Output Module	
5.6.1 AJ65FBTA2-16T transistor output module (sink type)	
5.6.2 AJ65FBTA2-16TE transistor output module (source type)	5-70
6 SPECIFICATIONS FOR COMBINED MODULES	6- 1 to 6-87
6.1 Terminal Block Type Combined Module	
6.1.1 AJ65SBTB32-8DT combined module	6- 1
6.1.2 AJ65SBTB32-8DT2 combined module	6- 3
6.1.3 AJ65SBTB1-16DT combined module	6- 5
6.1.4 AJ65SBTB1-16DT1 combined module	6- 7
6.1.5 AJ65SBTB1-16DT2 combined module	6- 9
6.1.6 AJ65SBTB1-16DT3 combined module	
6.1.7 AJ65SBTB32-16DT combined module	
6.1.8 AJ65SBTB32-16DT2 combined module	6-15
6.1.9 AJ65SBTB32-16KDT2 combined module	
6.1.10 AJ65SBTB32-16KDT8 combined module	
6.1.11 AJ65SBTB32-16DR combined module	6-21

6.1.12 AJ65SBTB32-16KDR combined module	6-23
6.1.13 AJ65SBTB1-32DT combined module	6-25
6.1.14 AJ65SBTB1-32DT1 combined module	6-27
6.1.15 AJ65SBTB1-32DT2 combined module	6-29
6.1.16 AJ65SBTB1-32KDT2 combined module	6-31
6.1.17 AJ65SBTB1-32DT3 combined module	6-33
6.1.18 AJ65SBTB1-32KDT8 combined module	6-35
6.1.19 AJ65SBTB1-32DTE1 combined module	6-37
6.1.20 AJ65DBTB1-32DT1 combined module	6-39
6.1.21 AJ65DBTB1-32DR combined module	
6.2 Spring Clamp Terminal Block Type Combined Module	6-43
6.2.1 AJ65VBTS32-16DT combined module	6-43
6.2.2 AJ65VBTS32-32DT combined module	
6.3 Sensor Connector (e-CON) Type Combined Module	6-49
6.3.1 AJ65VBTCE32-16DT combined module	
6.3.2 AJ65VBTCE3-16DTE combined module	6-52
6.3.3 AJ65VBTCE32-32DT combined module	6-55
6.3.4 AJ65VBTCE3-32DTE combined module	
6.4 One-Touch Connector Type Combined Module	6-61
6.4.1 AJ65SBTC4-16DT combined module	6-61
6.4.2 AJ65SBTC4-16DT2 combined module	6-63
6.4.3 AJ65SBTC1-32DT combined module	6-65
6.4.4 AJ65SBTC1-32DT1 combined module	6-67
6.4.5 AJ65SBTC1-32DT2 combined module	6-69
6.4.6 AJ65SBTC1-32DT3 combined module	
6.5 FCN Connector Type Combined Module	6-73
6.5.1 AJ65SBTCF1-32DT combined module	6-73
6.5.2 AJ65VBTCF1-32DT1 combined module	6-75
6.5.3 AJ65VBTCFJ1-32DT1 combined module	6-78
6.6 Waterproof Type Combined Module	6-81
6.6.1 AJ65FBTA42-16DT combined module	6-81
6.6.2 AJ65FBTA42-16DTE combined module	6-83
6.6.3 AJ65SBTW4-16DT combined module	6-85
7 HANDLING OF COMPACT REMOTE I/O MODULES	7- 1 to 7-38
7.1 Handling and Installation Precautions	
7.2 Wiring Procedures for One-touch Connector Plugs	
7.2.1 List of one-touch connector plugs	
7.2.2 Precautions for transition wiring of one-touch connector for power supply and FG	
7.2.3 Wiring procedures for the one-touch connector	
7.2.4 Wiring procedures for the one-touch connector for communication	
7.2.5 Wiring procedures for the one-touch connector for power supply and FG	
7.3 Handling of the Waterproof-type Remote I/O Module	
7.3.1 List of dustproof and waterproof caps	
7.3.2 Waterproof plug attachment procedure	
7.3.3 Wiring procedure for the terminal block	
7.4 Handling of the Low Profile Waterproof Type Remote I/O Module	
7.4.1 List of waterproof caps	
7.4.2 Waterproof cap installation method	
·	

7.5 Connectors and Tools Used for Connecting the FCN Connector Cables	7-20
7.6 Attaching and Removing the Protective Cover for the Compact Remote I/O Module	7-21
7.7 Connection Method of CC-Link Dedicated Cable	7-24
7.8 Handling of Spring Clamp Terminal Block Type Remote I/O Module	7-28
7.8.1 Installation and removal of the spring clamp terminal block	7-28
7.8.2 Procedure for wiring the spring clamp terminal block	7-29
7.9 Attaching Mounting Brackets to the Module	7-31
7.9.1 Attachment of mounting brackets	7-31
7.9.2 Precautions for attaching mounting brackets	7-32
7.10 Mounting the DIN Rail Adapter	7-34
7.10.1 Specifications	7-34
7.10.2 Handling precautions	7-34
7.10.3 Attaching the DIN rail adapter to the module	7-34
7.10.4 Mounting the module to a DIN rail	7-35
7.11 Common Terminal Block	7-37
8 TROUBLESHOOTING	8- 1 to 8-11
8.1 Verifying Errors from LED Status	
8.2 Examples of Errors for Compact Remote I/O Modules	8- 3
8.2.1 Errors occurring in the input circuit and corrective actions	8- 3
8.2.2 Errors occurring in the output circuit and corrective action	8- 5
APPENDICES Ap	p- 1 to App-29
Appendix 1 External Dimensions	App-1
Appendix 1.1 AJ65SBTB1-8 remote I/O module	App-1
Appendix 1.2 AJ65SBTB1-16 remote I/O module	App-2
Appendix 1.3 AJ65SBTW4-16□ remote I/O module	App-4
Appendix 1.4 AJ65SBTB1-32 remote I/O module	App-5
Appendix 1.5 AJ65SBTC1-32□, and AJ65SBTC4-16□ remote I/O module	
Appendix 1.6 AJ65SBTCF1-32 remote I/O module	
Appendix 1.7 AJ65SBTB2-8, AJ65SBTB3-8, and AJ65SBTB32-8 remote I/O mod	
Appendix 1.8 AJ65SBTB1B-16 \square ,AJ65SBTB2-16 \square , AJ65SBTB3-16 \square , and AJ65SBTB3	
remote I/O module	
Appendix 1.9 AJ65SBTB2N-8 remote I/O module	
Appendix 1.10 AJ65SBTB2N-16 remote I/O module	
Appendix 1.11 AJ65VBTCU \square -8 \square , AJ65VBTCU \square -16 \square , and AJ65VBTCF1-32 \square remote	
Appendix 1.12 AJ65FBTA -16 remote I/O module	
Appendix 1.13 AJ65VBTS -16 , and AJ65VBTS -32 remote I/O module	
Appendix 1.14 AJ65VBTCE□-8□, AJ65VBTCE□-16□, and AJ65VBTCE□-32□ remot	
A	
Appendix 1.15 AJ65DBTB1-32 remote I/O module	
Appendix 1.16 AJ65SBTB1-32K□, AJ65SBTB3-16KD, and AJ65SBTB32-16K□ remote I	
A	
Appendix 2 CC-Link Versions	Ann-27

ABOUT MANUALS

The following manuals are also related to this product.

Order each manual as needed, referring to the following list.

Relevant manuals

Manual name	Manual number (model code)
CC-Link System Master/Local Module Type AJ61BT11/A1SJ61BT11 User's Manual System configuration, performance specifications, functions, handling, wiring, and troubleshooting of the AJ61BT11 and A1SJ61BT11 (Sold separately)	IB-66721 (13J872)
CC-Link System Master/Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual System configuration, performance specifications, functions, handling, wiring, and troubleshooting of the AJ61QBT11 and A1SJ61QBT11 (Sold separately)	IB-66722 (13J873)
MELSEC-Q CC-Link System Master/Local Module User's Manual System configuration, performance specifications, functions, handling, wiring, and troubleshooting of the QJ61BT11N (Sold separately)	SH-080394E (13JR64)
MELSEC-L CC-Link System Master/Local Module User's Manual System configuration, performance specifications, functions, handling, wiring, and troubleshooting of the LCPU with built-in CC-Link and LJ61BT11 (Sold separately)	SH-080895ENG (13JZ41)
MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Startup) Specifications, procedures before operation, system configuration, wiring, and communication examples of the CC-Link system master/local module (Sold separately)	SH-081269ENG (13JX10)
MELSEC iQ-R CC-Link System Master/Local Module User's Manual (Application) Functions, parameter settings, programming, troubleshooting, I/O signals, and buffer memory of the CC-Link system master/local module (Sold separately)	SH-081270ENG (13JX19)

COMPLIANCE WITH EMC AND LOW VOLTAGE DIRECTIVES

(1) Method of ensuring compliance

To ensure that Mitsubishi Electric programmable controllers maintain EMC and Low Voltage Directives when incorporated into other machinery or equipment, certain measures may be necessary. Please refer to one of the following manuals.

- · User's manual for the CPU module or head module used
- · Safety Guidelines

(This manual is included with the CPU module, base unit, or head module.)

The CE mark on the side of the programmable controller indicates compliance with EMC and Low Voltage Directives.

(2) Additional measures

To ensure that this product maintains EMC and Low Voltage Directives, please refer to one of the manuals listed under (1).

A - 16 A - 16

MEMO

1 OVERVIEW

This manual describes the specifications of the compact remote I/O module (hereinafter referred to as the "compact remote I/O module") used as the remote I/O station of the CC-Link system.

1.1 Features

The following are the features of the compact remote I/O module:

(1) The remote I/O module is reduced in size yet retains all the functions of the conventional module

The conventional remote I/O module has furthermore been reduced in size. [External dimension (comparative example)]

	Compact remote I/O module		Conventional remote I/O module			
Module model name	AJ65SBTB1-8 ☐	AJ65SBTB1-16 ☐ AJ65SBTB2-8 ☐ AJ65SBTB2N-8 ☐ AJ65SBTC1-32 ☐ AJ65SBTC4-16 ☐ AJ65SBTCF1-32 ☐ AJ65SBTB3-8 ☐ AJ65SBTB3-8 ☐	AJ65SBTB1-32 ☐ AJ65SBTB2-16 ☐ AJ65SBTB2N-16 ☐ AJ65SBTB3-16 ☐ AJ65SBTB32-16 ☐	AJ65BTB1-16 ☐	AJ65BTB2-16 □	AJ65BTC1-32 □
Height	50 (1.97)		65 (2.56)			
Width	87.3 (3.44)	118 (4.65)	179 (7.04)	151.9 (5.98)	197.5 (7.78)	165.0 (6.5)
Depth	40 (1.57)		46 (1.81)			

Unit:mm (inch)

(2) More models in the compact remote I/O module lineup

The compact remote I/O modules for the CC-Link system is divided into six types including terminal block type, one-touch connector type, waterproof-type, FCN connector type, spring clamp terminal block type, and sensor connector (e-CON) type.

In addition, the number of I/O points is divided into three types (8 points, 16 points, and 32 points), allowing the user to select a module that is most appropriate for the environment and objective.

(3) 4-wire compact remote I/O module featuring easy connection of a 4-wire sensor

A 4-wire sensor can be easily connected via the common pin provided on each plug without installing a relay terminal block.

For a 4-wire compact remote I/O module, one sensor is connected to each plug. Therefore, sensors can be exchanged by plug, reducing work steps.

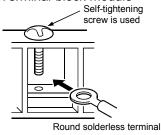
(4) Terminal block connection provides easy connection of 2-wire and 3-wire sensors or loads

Since the terminal block connection allows connection of 2-wire and 3-wire sensors or loads, common connections are not needed and it makes connection easier.

(5) Wiring work can be minimized

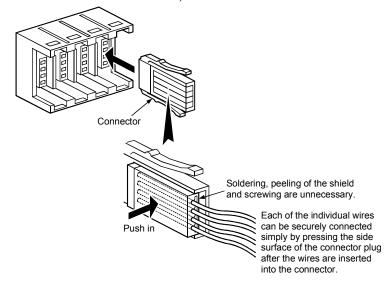
- (a) Terminal-block module
 - The number of wiring steps can be dramatically reduced by adopting the use of self-tightening screws on the terminal block.
- (b) One-touch connector module, connector module The number of wiring steps can be dramatically reduced by adopting use of
 - the pressure-displacement wire-connection method (soldering, peeling of shield and screwing not necessary).
- (c) FCN connector module
 - The number of wiring steps can be dramatically reduced by adopting 40-pin connector for I/O part.
- (d) Spring clamp terminal block module The number of wiring steps can be dramatically reduced by adopting spring clamps (screwing not necessary).



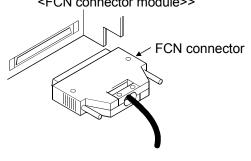


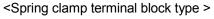
The round solderless terminal can be connected simply by loosening the screw on the terminal block.

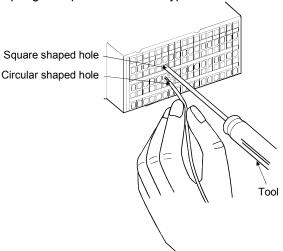
<One-touch connector module, connector module>









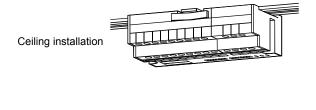


(6) Waterproof remote I/O modules with improved resistance against water and oil

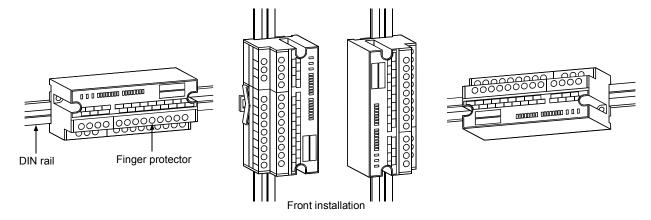
The waterproof remote I/O module, low profile waterproof remote I/O module adopts a protection structure compatible with IP67, providing even safer usage in areas in which water and oil are present.

1 - 2 1 - 2

- (7) Up to a maximum of 64 remote I/O modules can be connected In the CC-Link system, a maximum of 64 remote I/O modules can be connected per master station. Since each remote I/O module occupies 32 points, a maximum of 2048 link
- (8) Modules can be exchanged without stopping the CC-Link system With the adoption of a two-piece terminal block for the CC-Link cable connection, modules may be exchanged without stopping the CC-Link system.
- (9) Direct installation to the machine is feasible The terminal-block remote I/O module may be installed directly to the machine, since the charged area is protected by a finger protector in the upper area of the terminal block.
- (10) The module can be installed in six orientations
 The compact remote I/O module can be installed in six different orientations.
 (Restrictions may apply to some installation orientations.)
 The module can also be installed using the DIN rail.



points can be set.

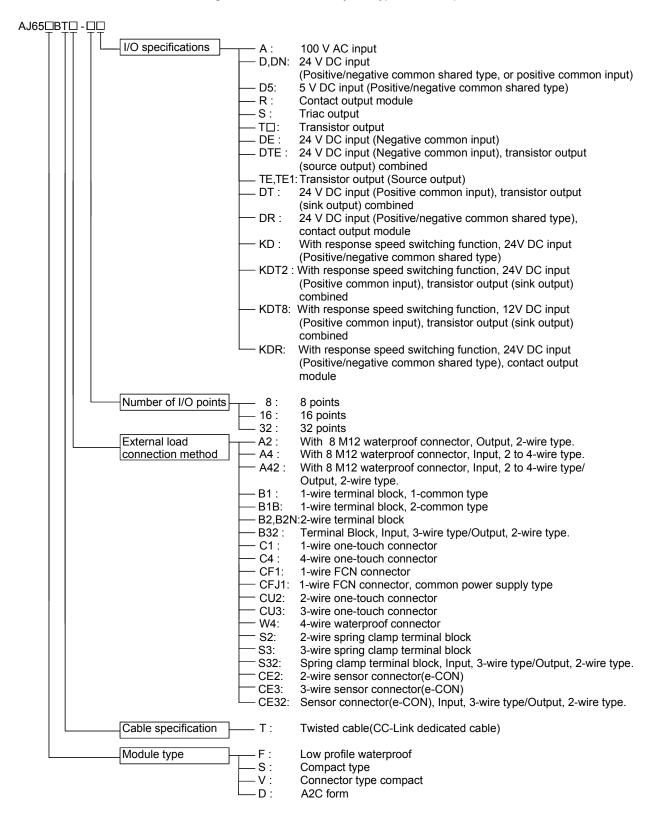




(11) Transistor output module with improved protection functions The transistor output module is designed to achieve an even greater degree of module protection by adopting overload protection, overheat protection and overvoltage protection as standard. As a result, the programmable controller system's reliability is further improved.

1.2 Identifying the Compact Remote I/O Module Type

The following shows how to identify the type of a compact remote I/O module:



1.3 Precautions for use of remote I/O modules

This section describes the precautions for use of remote I/O modules applicable in the CC-Link system and their specifications.

- This is a remote I/O module designed specifically for the CC-Link system.
 Do not connect the module to other data-link systems, such as the MELSECNET/MINI.
- 32 points are assigned per station for a compact remote I/O module.
 For 16-point modules the 16 points in the second half and for 8-points module the 24 points in the second half remain empty but are not usable.
- Do not install the main circuit lines, high-voltage cables, and load cables other than
 those connected to the programmable controller together.
 If doing so, the remote I/O module (especially, AJ65SBTB1-16D1, AJ65SBTB132D1, AJ65VBTCU3-8D1, AJ65VBTCU3-16D1, and AJ65SBTC1-32D1) will be
 susceptible to noise, surge, and induction.
- When a mechanical contact, such as a relay, is connected to the AJ65SBTB1-16D1, AJ65SBTB1-32D1, AJ65VBTCU3-8D1, AJ65VBTCU3-16D1, or AJ65SBTC1-32D1, chattering may be input as a signal.

1.3.1 Input module

(1) Input response time and pulse width

The input module may take noise for inputs due to the signal pulse width. The pulse width of the AJ65SBTB1-32KD□, AJ65SBTB3-16KD□, or AJ65SBTB32-16KD□ is as shown in the following table depending on the response speed set by the input response speed switching switch. In case of setting the response speed, fully consider the operating environment.

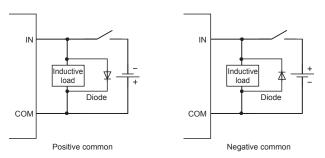
Response speed setting	Minimum value of pulse width that can take noise for		
value (ms)	inputs (ms)		
0.2	0.006		
1.5	0.8		
5	3		
10	6		

When setting "0.2ms" as the response speed under an environment with noise, an input signal line (including a common line) should be 3m or less.

- (2) Precautions when using the DC input module
 - (a) Measures against back EMF

When an inductive load is connected, connect a diode to the load in parallel. Use a diode that meets the following conditions.

- Reverse breakdown voltage is equal to or more than 10 times as large as the circuit voltage.
- Forward current is equal to or more than 2 times as large as the load current.

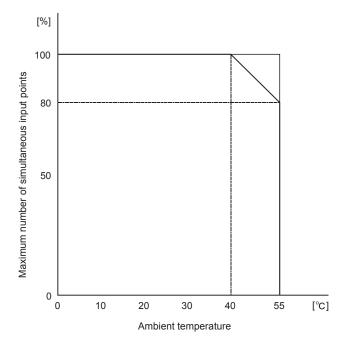


(3) Precautions when using the AJ65SBTC1-32D or AJ65SBTC1-32D1

The maximum number of simultaneous input points of the AJ65SBTC1-32D or AJ65SBTC1-32D1 varies depending on the ambient temperature.

Refer to the derating curve below

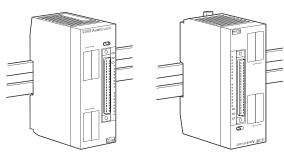
Derating curve for the AJ65SBTC1-32D or AJ65SBTC1-32D1



(4) Precautions when using the AJ65VBTCF1-32DT1

The maximum number of simultaneous input points of the AJ65VBTCF1-32DT1 changes according to the installation orientation.

Installation orientations without limits
 When the module is mounted as shown below, the maximum number of simultaneous input points is not limited.

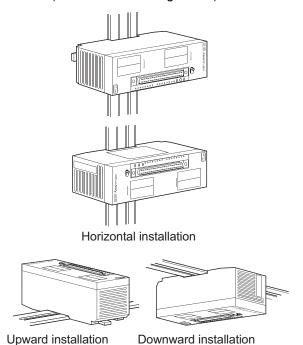


Vertical installation

2) Installation orientations with limits

When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 60% at an ambient temperature of 55° C.

(Refer to the derating curve.)



0 10 20 30 4045 55 [°C]

Ambient temperature

Derating curve

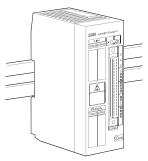
(5) Precautions when using the AJ65VBTCFJ1-32DT1

The maximum number of simultaneous input points of the AJ65VBTCFJ1-32DT1 changes according to the installation orientation.

1) Vertical installation (basic)

When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 65% at an ambient temperature of 55°C.

(Refer to the derating curve (1).)



Vertical installation (basic)

2) For installations other than front installation (basic orientation)

When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 40% at an ambient temperature of 55°C.

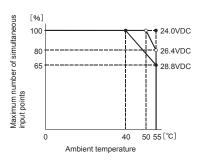
(Refer to the derating curve (2).)



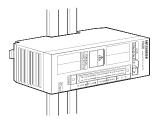
Vertical installation (upside down)



Downward installation



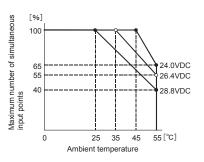
Derating curve (1)



Horizontal installation



Upward installation

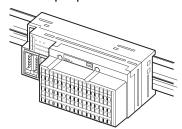


Derating curve (2)

(6) Precautions when using the AJ65VBTS3-16D

The maximum number of simultaneous input points of the AJ65VBTS3-16D changes according to the installation orientation.

Installation orientations without limits
 When the module is mounted as shown below, the maximum number of
 simultaneous input points is not limited.

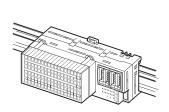


Vertical installation (basic)

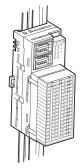
2) Installation orientations with limits

When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 75% at an ambient temperature of 55°C.

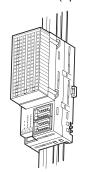
(Refer to the derating curve)



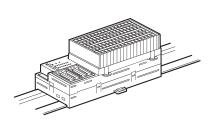
Vertical installation (upside down)



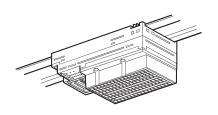
Horizontal installation (basic)



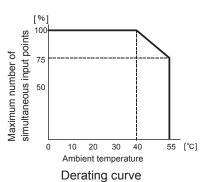
Horizontal installation (upside down)



Upward installation

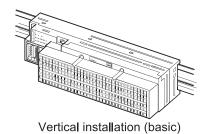


Downward installation



1 - 9

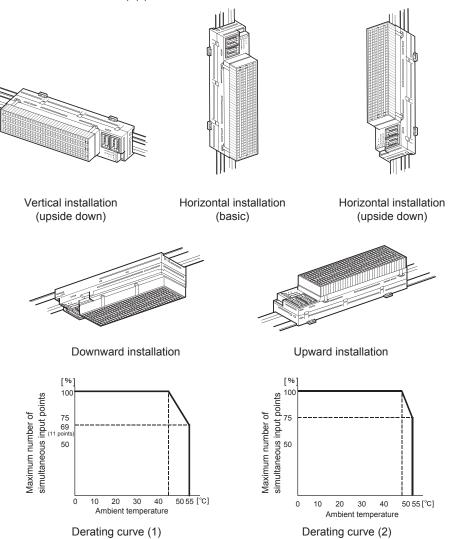
- (7) Precautions when using the AJ65VBTS3-32D or AJ65VBTS32-32DT
 The maximum number of simultaneous input points of the AJ65VBTS3-32D or AJ65VBTS32-32DT changes according to the installation orientation.
 - Installation orientations without limits
 When the module is mounted as shown below, the maximum number of simultaneous input points is not limited.



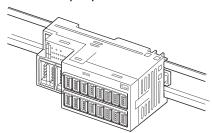
2) Installation orientations with limits

When the module is mounted as shown below, the maximum number of simultaneous input points of the AJ65VBTS3-32D is reduced to 69% (11 points/common) at an ambient temperature of 55°C. (Refer to the derating curve (1).)

That of the AJ65VBTS32-32DT is reduced to 75%. (Refer to the derating curve (2).)



- (8) Precautions when using the AJ65VBTCE3-16D or AJ65VBTCE3-16DE The maximum number of simultaneous input points of the AJ65VBTCE3-16D or AJ65VBTCE3-16DE changes according to the installation orientation.
 - Installation orientations without limits
 When the module is mounted as shown below, the maximum number of simultaneous input points is not limited.

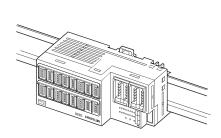


Vertical installation (basic)

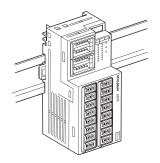
2) Installation orientations with limits

When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 62.5% at an ambient temperature of 55°C.

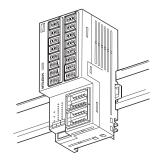
(Refer to the derating curve.)



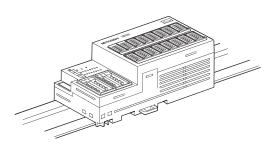
Vertical installation (upside down)



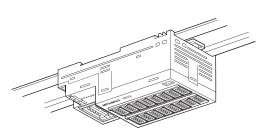
Horizontal installation (basic)



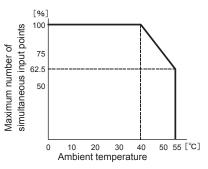
Horizontal installation (upside down)



Upward installation



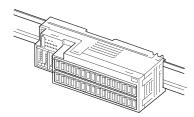
Downward installation



Derating curve

- (9) Precautions when using the AJ65VBTCE3-32D or AJ65VBTCE3-32DE

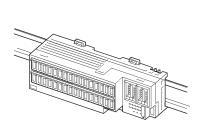
 The maximum number of simultaneous input points of the AJ65VBTCE3-32D or AJ65VBTCE3-32DE changes according to the installation orientation.
 - Installation orientations without limits
 When the module is mounted as shown below, the maximum number of simultaneous input points is not limited.



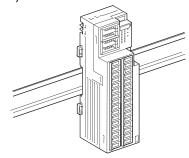
Vertical installation (basic)

2) Installation orientations with limits When the module is mounted as shown below, the maximum number of simultaneous input points is reduced to 75% at an ambient temperature of 55°C.

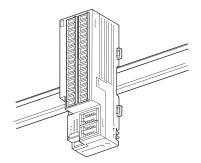
(Refer to the derating curve.)



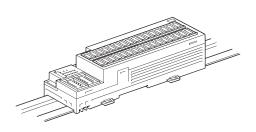
Vertical installation (upside down)



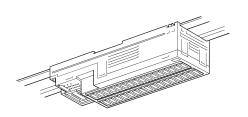
Horizontal installation (basic)



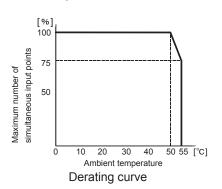
Horizontal installation (upside down)



Upward installation



Downward installation

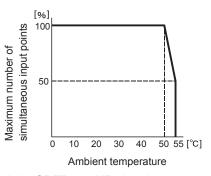


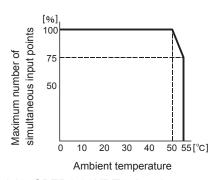
1 - 12

(10) Precautions when using the AJ65SBTB1-32KD or AJ65SBTB1-32KDT2 The maximum number of simultaneous input points of the AJ65SBTB1-32KD or AJ65SBTB1-32KDT2 changes according to the input voltage and ambient temperature.

If the input voltage is higher than 26.4V, the maximum number of simultaneous input points is as shown in the following figures.

(If the input voltage is 26.4V or lower, derating is not required.)





AJ65SBTB1-32KD derating curve

AJ65SBTB1-32KDT2 derating curve

(11) Precautions when using a 3-wire or 4-wire module

When supplying power from a 3-wire or 4-wire module to an external device, such as a sensor, total current must be equal to or less than the value of "supply current for connected device" specified for the module.

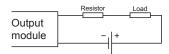
1.3.2 Output module

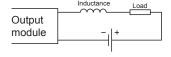
- (1) Maximum switching frequency when the module drives inductive load The output must be on for one second or longer and off for one second or longer.
- (2) Load for connection

When connecting a counter or timer that has a DC-DC converter to a transistor output module (maximum load current 0.1A) as a load, select an output module whose maximum load current is larger than inrush current of the load.

Selecting an output module by average current of the load may cause a failure of the module because inrush current flows at a constant frequency at power-on or during operation due to the connected load.

If an output module needs to be selected by average current of the load, take either of the following actions to reduce an influence from inrush current.





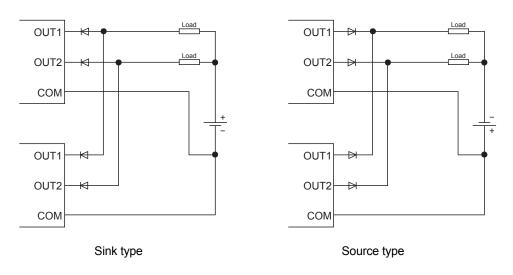
- Connecting a resistor to the load in series
- Connecting an inductor to the load in series

- (3) Precaution for using the transistor output module
 - (a) Action against reverse current

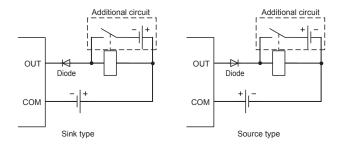
If a transistor output module is wired as shown below, reverse current flows in an output element, causing a failure of the element.

When wiring a transistor output module, connect a diode as shown below.

• When connecting transistor output modules in parallel



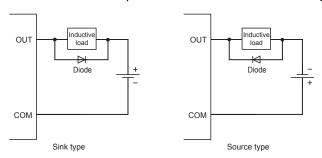
• When incorporating an additional circuit parallel to a transistor output module



(b) Measures against back EMF

When an inductive load is connected, connect a diode to the load in parallel. Use a diode that meets the following conditions.

- Reverse breakdown voltage is equal to or more than 10 times as large as the circuit voltage.
- Forward current is equal to or more than 2 times as large as the load current.



(4) Modules that require an external short-circuit protection circuit

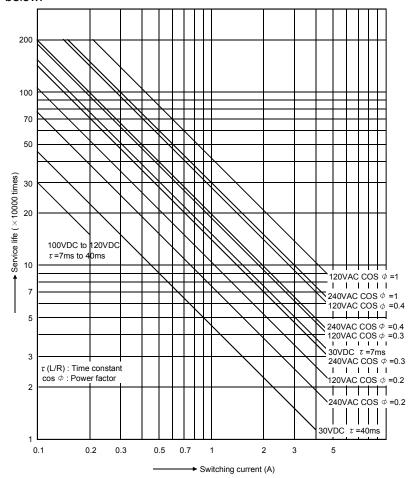
The following modules have no short-circuit protection function. Configure a short-circuit protection circuit external to the programmable controller when they are used.

• AJ65SBTB1-8T1	• AJ65SBTB2-8T1	• AJ65SBTB1-16T1	• AJ65SBTB2-16T1
• AJ65SBTB1B-16TE1	• AJ65VBTS2-16T	• AJ65SBTB1-32T1	• AJ65SBTB1-32TE1
• AJ65DBTB1-32T1	• AJ65VBTS2-32T	• AJ65SBTC1-32T1	
• AJ65SBTB32-8DT2	• AJ65SBTB1-16DT2	• AJ65SBTB1-16DT3	• AJ65SBTB32-16DT2
• AJ65SBTB32-16KDT2	• AJ65SBTB32-16KDT8	• AJ65SBTB1-32DT2	• AJ65SBTB1-32KDT2
• AJ65SBTB1-32DT3	• AJ65SBTB1-32KDT8	• AJ65SBTB1-32DTE1	• AJ65DBTB1-32DT1
• AJ65VBTS32-16DT	• AJ65VBTS32-32DT	• AJ65SBTC4-16DT2	• AJ65SBTC1-32DT2
• AJ65SBTC1-32DT3			

- (5) Precautions when using a 3-wire module When supplying power from a 3-wire module to an external device, such as a sensor, the total current value must be equal to or less than the value of "supply current for connected device" specified for the module.
- (6) Precautions for using the contact output module When using the contact output module, consider the following.
 - Relay life
 - Effects to relay life due to connected load
 - Measures against back EMF
 - (a) Relay life

Applicable module: AJ65SBTB2N-8R, AJ65SBTB2N-16R, AJ65DBTB1-32R, AJ65DBTB1-32DR

The relay life depends on the operating environment. Select a module according to the operating environment. The relay lives shown below are the actual service values, not the guaranteed values. Replace the module well in advance since the actual switching life may be shorter than the one shown below.



Operating environment	Switching life
Rated switching voltage/current, rated load	100 thousand times
200VAC 1.5A, 240VAC 1A (COS ϕ =0.7)	100 thousand times
200VAC 1A, 240VAC 0.5A (COS ϕ =0.35)	100 thousand times
24VDC 1A, 100VDC 0.1A (L/R=7ms)	100 thousand times

POINT

When using the module for the application in which the relay contact is frequently switched, the relay life span should be considered. Therefore, it is recommended to use a triac output module.

(b) Effects to relay life due to connected load

The actual relay life may be significantly shortened compared to the one shown above, depending on the type of a load connected and the characteristics of inrush current.

Also, the inrush current may cause contact welding.

Take the following measures to prevent shortening of the relay life and the contact welding.

- Select a load so that the inrush current will be within the rated current of the module.
- Connect an external relay that can withstand the inrush current.

The following table shows the relation between the load and the inrush current. Select a load so that the inrush current (i) and the rated current (io) will be within the rated switching current specified for the output module used. The inrush current may flow for a longer time depending on the load.

Load type	Signal waveform diagram	Inrush current (i)/rated current (io)	Signal waveform diagram	Inrush current (i)/rated current (io)
Inductive load	Load of a solenoid i i ii i	Approx. 10 to 20 times	Load of an electromagnetic contactor i: Inrush current io: Rated current 0.017 to 0.033 seconds (1 to 2 cycles)	Approx. 3 to 10 times
Lamp load	Load of an incandescent bulb i i: Inrush current io: Rated current Approx. 0.33 seconds	Approx. 3 to 10 times	Load of a mercury lamp i i: Inrush current io: Rated current 180 to 300 seconds (3 to 5 minutes)	Approx. 3 times*1
	Load of a fluorescent i io i: Inrush current io: Rated current Within 10 seconds	Approx. 5 to 10 times	_	_
Capacitive load	Capacitive load*2 i i ii i	Approx. 20 to 40 times	_	_

(c) Measures against back EMF

Configure a contact protection circuit for extending the contact life, preventing noise when the contact is cut off, and suppressing the generation of carbide and nitric acid due to arc discharge.

An Incorrect contact protection circuit may cause contact welding.

Also, when using the contact protection circuit, the recovery time may be long.

The following table shows the representative examples of the contact protection circuit.

	Circuit example	Method for selecting elements	Remarks
Capacitor + Resistor method (CR method)	Capacitor Inductive load	Refer to the following for constants of the capacitor and resistor. Note that the following values may differ depending on a nature of the load and a variation of characteristics of it.	If a load is from a relay or solenoid, the recovery time delays. A capacitor suppresses electric discharge while a contact is off, and a resistor restricts a flow of current
	Capacitor Inductive load	 Capacitor 0.5 to 1 (μF) against contact current of 1A Resistor 0.5 to 1 (Ω) against contact voltage of 1V Use a capacitor whose withstand voltage is 200 to 300V. In AC circuit, use a capacitor having no polarity. 	while a contact is on.
Diode method	Diode A Inductive load	Use a diode that meets both conditions shown below. • Reverse breakdown voltage is equal to or more than 10 times as large as the circuit voltage. • The forward current is equal to or more than 2 times as large as the load current.	The recovery time is later than the CR method.
Diode + Zener diode method	Diode Zener Diode Inductive load	Use zener voltage for the zener diode equal to or more than the power supply voltage.	The diode method is effective when the recovery time is too late.

*1: When using AC power, impedance of CR must be larger enough than that of the load. (prevention of a malfunction due to leak current from the CR)

(To the next page)

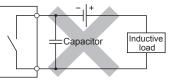
	Circuit example	Method for selecting elements	Remarks
Varistor method	Varistor Inductive load	Select a cut voltage (Vc) for the varistor to meet the following condition. • Vc > power voltage × 1.5(V) • Vc > power voltage × 1.5(V) × √2 (When using AC power) This method is not effective when the Vc is too high	The recovery time delays slightly.

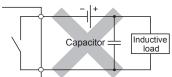
POINT

(1) Avoid providing contact protection circuits shown below.

These circuits are effective for preventing an arc at shut-off. However, the contact welding may occur because the charge current flows to capacitor when the contact turns on or off.

A DC inductive load is usually harder for switching than a resistor load, but if a proper protection circuit is configured, the performance will be similar to the resistor load.





- (2) A protection circuit must be provided closely to a load or contact (module). If their distance is far, the protection circuit may not be effective. Appropriate distance is within 50cm.
- (7) Precautions for using the triac output module

Because of characteristics of a triac, a sudden change of voltage or current may cause unstable operations of a triac used for the triac output module.

Whether the voltage or current change causes a problem differs depending on an individual part (each triac), thus check the following when using the triac output module.

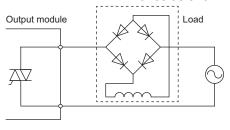
(a) Checking of the load current

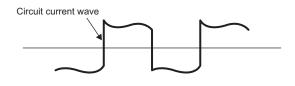
When the current consumption is equal to or smaller than the minimum load current and the margin is low by using an inductive load such as a solenoid valve, a triac may not turn on or off properly. In that case, an action such as connecting a bleeder resistance is required.

For detail on actions, refer to Section 8.2.2.

(b) Precautions on a full-wave rectifier load

The load current of a full-wave rectifier load forms waves similar to rectangular waves as shown below.





A triac may not operate properly if the current forms rectangular waves associated with sudden current changes. To avoid it, use a load with which the load current does not form rectangular waves.

(c) Measures for connecting an inductive load

To connect an inductive load, take measures to reduce noise to the side where
the load is connected as shown below.

	Circuit example	Method for selecting elements	Remarks
Varistor method	Output module Varistor Varistor Inductive load	Select a cut voltage (Vc) for the varistor to meet the following condition. • Vc > Power supply voltage × 1.5(V) × √2 This method is not effective when the Vc is too high.	The recovery time delays slightly.
Capacitor + Resistor method (CR method)	Output module Capacitor Inductive load Resistor	Refer to the following for constants of the capacitor and resistor. Note that the following values may differ depending on a nature of the load and a variation of characteristics of it. • Capacitor: 0.5 to 1 (μF) against load current of 1A • Resistor: 0.5 to 1(Ω) against power supply voltage of 1V Use a capacitor whose withstand voltage is equal to or more than the rated voltage. Use a capacitor having no polarity.	If a load is from a relay or solenoid, the recovery time delays.

(d) Measures for connecting an inductive load (when installing a contact between the load and the output terminal)

To install a contact (such as an interlock) between the load and the output terminal, take measures to reduce noise as shown below.

Though measures (varistor method, capacitor + resistor method) are normally taken to the load side, in some cases, it is more efficient to take the measures to the module side considering the contact effect.

	Circuit example	Method for selecting elements	Remarks
Varistor method	• Measure taken to the load side Output module Contact Varistor Inductive load	Select a cut voltage (Vc) for the varistor to meet the following condition. • Vc > Power supply voltage × 1.5(V) × √2 This method is not effective when the Vc is too high.	The recovery time delays slightly.
	• Measure taken to the module side Output module Contact Varistor Inductive load		

1.3.3 Modules with protection functions

This section describes the protection functions of the following modules.

(1) Modules with overload protection function, overvoltage protection function, and overheat protection function

Output module	AJ65SBTB1-8T, AJ65SBTB1-16T, AJ65SBTB1-32T, AJ65SBTB2-8T, AJ65SBTB2-16T, AJ65SBTC1-32T, AJ65SBTCF1-32T, AJ65VBTCU2-8T, AJ65VBTCU2-16T, AJ65VBTCE2-8T, AJ65VBTCE2-16T
I/O combined module	AJ65SBTB1-16DT, AJ65SBTB1-32DT, AJ65SBTB1-16DT1, AJ65SBTB1-32DT1, AJ65SBTB32-8DT, AJ65SBTB32-16DT, AJ65SBTC4-16DT, AJ65SBTC1-32DT, AJ65SBTC1-32DT1, AJ65SBTW4-16DT, AJ65SBTCF1-32DT, AJ65VBTCF1-32DT1, AJ65VBTCE32-16DT, AJ65VBTCE32-32DT
	(2) Modules with overload protection function and overheat protection function
Output module	AJ65SBTB1-8TE, AJ65SBTB1-16TE, AJ65FBTA2-16T, AJ65FBTA2-16TE, AJ65VBTCE3-16TE
I/O combined module	AJ65FBTA42-16DT, AJ65FBTA42-16DTE, AJ65VBTCE3-16DTE, AJ65VBTCE3-32DTE

Function	Description
Common to protection functions	 When an overcurrent continues to flow and generates overheat, overheat protection is activated. The functions are provided for protecting only the circuits inside the module. A load error may deteriorate output elements or discolour the module case or printed circuit board due to increase in temperature within the module. If a load error occurs, turn off the corresponding output immediately and eliminate the error cause.
Overload protection function	 Protection is activated under an overload condition of 1 to 3A per point. Protection is automatically reset when the load current drops to the rated value.
Overvoltage protection function	This function protects elements from an abrupt surge caused when a coil load is used.
Overheat protection function	 The protection of the following modules is activated in units of two points: AJ65SBTB1-8TE, AJ65SBTB1-16TE, AJ65VBTCE3-16TE, AJ65VBTCE3-16DTE, AJ65VBTCE3-32DTE (For example, when protection is activated for either Y0 or Y1 output signals, Y0 and Y1 simultaneously turn off. When the overheat condition continues, the heat is conducted to other loads and the corresponding protections may also be activated.) For the modules except the above, the protection is activated in units of one point. If protection is activated while an output signal is on, the voltage oscillates between 0V and the load voltage. When the load voltage is 24VDC, the average voltage during oscillation is approximately 7VDC. (The voltage does not oscillate when an output signal is off.) Use an external load that operates at higher than 7VDC. Protection is automatically reset when the temperature falls below the preset value.

1.4 Specification List

Specification list for each compact remote I/O module is shown below.

(1) Input module

Model	Input format	No. of points per module	Insulation method	Rated input voltage	nput current		ration tage OFF voltage		esponse ne ON → OFF	Input display	External connection	Common connection	Internal current consumption	External dimensions	Reference												
AJ65SBTB1-8D		8 points			Approx.	14V or	6V or		or less	_		8 points 1 common	30mA	*1	4.1.3												
AJ65SBTB1-16D					7mA	more	less	1101110	0000				35mA		4.1.5												
AJ65SBTB1-16D1		16 points			Approx. 5mA	15V or more	3V or less	0.2ms	or less			16 points 1 common	40mA	*2	4.1.6												
AJ65DBTB1-32D					Approx. 5mA	15V or more	5V or less	10ms	or less		1-wire	1 Common	45mA	* 3	4.1.14												
AJ65SBTB1-32D	DC input				Approx.	14V or more	6V or less	1.5ms	or less		terminal block		45mA		4.1.10												
AJ65SBTB1-32KD	(Positive/ Negative				7mA	14V or more	5.5V or less	*	14				75mA	*3	4.1.11												
AJ65SBTB1-32D1	common)	32 points			Approx. 5mA	15V or more	3V or less	0.2ms	or less			32 points	50mA	^3	4.1.12												
AJ65SBTB1-32D5					Approx. 4mA	3.5V or more	1.5V or less	1 5mc	or less			1 common	35mA		4.1.13												
AJ65SBTC1-32D						14V or more	6V or less	1.01113	01 1633		1-wire one-touch		45mA		4.4.6												
AJ65SBTC1-32D1						15V or more	3V or less	0.2ms	or less		connector		401117		4.4.7												
AJ65SBTC4-16D	DC input			uo				.000							* 2	4.4.2											
AJ65SBTC4-16DN	(Positive common)		Photocoupler insulation	24VDC	Approx.					display	4-wire one-touch	40	35mA	*2	4.4.3												
AJ65SBTC4-16DE	DC input (Negative common)	DC input (Negative	DC input (Negative	DC input (Negative	DC input (Negative	(Negative common)	(Negative common)	(Negative common)	(Negative common)	(Negative common)	16 points	eldnood		5mA	14V or	6V or less	İ		LED di	connector	16 points 1 common			4.4.4			
AJ65SBTW4-16D											DC input		Photo			more	1622	1.5ms	or less		4-wire waterproof connector		120mA	*4	4.6.3		
AJ65SBTCF1-32D	DC input (Positive/	32 points									1-wire FCN connector	32 points 1 common	45mA	*2	4.5.1												
AJ65SBTB3-8D	(Positive/ negative common)	negative	negative	negative	negative	negative	negative	negative	negative	negative	negative	negative	(Positive/ negative	8 points			Approx.	14V or	6V or					8 points 1 common	40mA	*2	4.1.4
AJ65SBTB3-16D					7mA	more	less				3-wire		45mA		4.1.7												
AJ65SBTB3-16KD		16 points			Approx. 7mA	14V or more	5.5V or less	*	14		terminal block	16 points 1 common	50mA	* 3	4.1.8												
AJ65SBTB3-16D5					Approx. 4mA	3.5V or more	1.5V or less	1.5ms	or less				30mA		4.1.9												
AJ65VBTCU3-8D1	DC input (Positive	8 points			Approx.	15V or	3V or	r 0.2ms or less		3-wire one-touch	8 points 1 common	35mA	*5	4.4.1													
AJ65VBTCU3-16D1	common)	16 points			5mA	more	less	0.21118	01 1035		connector	16 points 1 common	40mA	*6	4.4.5												
AJ65SBTB2N-8A	AC input	8 points		100 to 120VAC	Approx.	80V or	30V or	20ms	or less		2-wire terminal	8 points 1 common	35mA	*2	4.1.1												
AJ65SBTB2N-16A	. to input	16 points		50/60Hz	7mA	more	less	20113	J. 1000		block	16 points 1 common	40mA	*3	4.1.2												

- * 1 : 87.3 (3.44) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 2 : 118 (4.65) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 3 : 179 (7.05) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 4 : 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch)
- * 5 : 41 (1.61) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 6 : 60 (2.36) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- $*7:60 (2.36) (W) \times 200 (7.87) (H) \times 48 (1.89) (D)mm (inch)$
- * 8 : 137 (5.39) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 9 : 222 (8.74) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 10 : 100 (3.94) (W) × 40 (1.57) (H) × 43.5 (1.71) (D)mm (inch)
- * 11 : 100 (3.94) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 12 : 155 (6.10) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 13 : 64 (2.52) (W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)
- * 14 : 0.2ms or less/1.5ms or less/5ms or less/10ms or less (Depending on the input response speed setting value)

Model	Input	No. of points per module	nsulation method	Rated input voltage	urrent		ration tage		esponse ne	Input display	External	Common	Internal current consumption	External dimensions	Reference
iviodei	format	No. of per m	Insulation method	Rated	Input current	ON voltage	OFF voltage	$\begin{array}{c} OFF \to \\ ON \end{array}$	ON → OFF	Input c	connection	connection	Internal current consumpti	Exte dimen	Refer
AJ65FBTA4-16D	DC input (Positive common)				Approx.						2 to 4-wire waterproof		40mA	*7	4.6.1
AJ65FBTA4-16DE	DC input (Negative common)	16 points			7mA						connector	16 points	40IIIA	/	4.6.2
AJ65VBTS3-16D											Spring	1 common	35mA	*8	4.2.1
AJ65VBTS3-32D		32 points	insulation							ay	clamp terminal block 3-wire type		40mA	*9	4.2.2
AJ65VBTCE3-8D	DC input (Positive common)	8 points	upler ir	24VDC		14V or more	6V or less	1.5ms	or less	LED display		8 points 1 common	30mA	* 10	4.3.1
AJ65VBTCE3-16D	Common	16 points	Photocoupler		Approx. 5mA					"	Sensor	16 points 1 common	35mA	* 11	4.3.2
AJ65VBTCE3-32D		32 points	ш.								connector (e-CON)	32 points 1 common	40mA	* 12	4.3.3
AJ65VBTCE3-16DE	DO Imput	16 points									3-wire type	16 points 1 common	35mA	* 11	4.3.4
AJ65VBTCE3-32DE	(Negative common)	32 points										32 points 1 common	40mA	* 12	4.3.5

- * 1 : 87.3 (3.44) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 2 : 118 (4.65) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 3 : 179 (7.05) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 4 : 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch)
- * 5 : 41 (1.61) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 6 : 60 (2.36) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 7:60 (2.36) (W) × 200 (7.87) (H) × 48 (1.89) (D)mm (inch)
- * 8 : 137 (5.39) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 9 : 222 (8.74) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 10 : 100 (3.94) (W) × 40 (1.57) (H) × 43.5 (1.71) (D)mm (inch)
- * 11 : 100 (3.94) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 12: 155 (6.10) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 13 : 64 (2.52) (W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)
- * 14: 0.2ms or less/1.5ms or less/5ms or less/10ms or less
 - (Depending on the input response speed setting value)

1 - 24 1 - 24

(2) Output module

Model	Output	No. of points per module	Insulation	Rated load voltage	Maxir cu	num load urrent	tir	esponse	Output display	Surge	External	Common	Internal current consumption	External	Reference
	format	No. o	sul	& - y	1 point	1 common	OFF → ON	ON → OFF	0 🕏	ldns S	connection	connection	Suoo C Jul	Ex	Ref
AJ65SBTB1-8T		8 points				2.4 A					1-wire	8 points 1 common	35mA	*1	5.1.1
AJ65SBTB1-16T	Transistor	16 points			0.5 A	3.6 A					terminal	16 points 1 common	50mA	*2	5.1.5
AJ65SBTB1-32T	output * 14					4.8 A					block	1 common	65mA	*3	5.1.9
AJ65SBTC1-32T	(sink type)	32 points			0.1 A	3.2 A					1-wire one-touch connector	32 points 1 common	60mA	*2	5.4.3
AJ65SBTB1-8T1		8 points			0.5 A	2.4 A					1-wire	8 points 1 common	35mA	*1	5.1.2
AJ65SBTB1-16T1	Transistor	16 points				3.6 A					1-wire terminal	16 points 1 common	50mA	*2	5.1.6
AJ65DBTB1-32T1	output * 13		u			8 A					block		65mA	* 12	5.1.19
AJ65SBTB1-32T1	(sink type)	00	latio			4.8 A						32 points	65mA	*3	5.1.10
AJ65SBTC1-32T1		32 points	Photocoupler insulation	12/24 VDC	0.1 A	3.2 A	0.5ms or less	1.5ms or less		Zener diode	1-wire one-touch connector	1 common	60mA	*2	5.4.4
AJ65SBTB1-8TE		8 points	otocor		0.4.4	0.8 A						8 points 1 common	35mA	*1	5.1.11
AJ65SBTB1-16TE	Transistor	16 points	Phc		0.1 A	1.6 A					1-wire	16 points 1 common	50mA	*2	5.1.12
AJ65SBTB1B- 16TE1	output * 13 (source type)	40			0.5 A	4 A			LED display		terminal block	8 points 1 common	50mA	*3	5.1.13
AJ65SBTB1- 32TE1		32 points				4.8A						32 points 1 common	65mA	*3	5.1.14
AJ65SBTB2-8T	Transistor	8 points				2.4 A						8 points 1 common	45mA	*2	5.1.3
AJ65SBTB2-16T	output * 14 (sink type)	16 points			0.5 A	3.6 A						16 points 1 common	55mA	*3	5.1.7
AJ65SBTB2-8T1	Transistor	8 points			0.5.4	2.4 A					2-wire	8 points 1 common	45mA	*2	5.1.4
AJ65SBTB2-16T1	output * 12 (sink type)	16 points			0.5 A	3.6 A					terminal	16 points 1 common	55mA	*3	5.1.8
AJ65SBTB2N-8R		8 points	insulation			4 A					block	8 points 1 common	85mA	* 2	5.1.15
AJ65SBTB2N-16R	Contact output	16 points	Relay in:	24VDC 240VAC	2 A	8 A	10ms or less	12ms or less		None		16 points 1 common	120mA	* 3	5.1.16
AJ65DBTB1-32R		32 points	sulation			4 A					1-wire terminal block	8 points	80mA	* 1 2	5.1.20
AJ65SBTB2N-8S	Triac output	8 points	Photocoupler insulation	100 to 240VAC	0.6 A	2.4 A	1ms	1ms + 0.5		CR	2-wire terminal	1 common	55mA	* 2	5.1.17
AJ65SBTB2N-16S	* 16	16 points	Photoc	50/60Hz	0.0 A	4.8 A	or less	cycle or less		Absorber	block	32 points 1 common	85mA	*3	5.1.18

- * 1 : 87.3 (3.44) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 2 : 118 (4.65) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 3 : 179 (7.05) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 4: 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch)
- * 5 : 41 (1.61) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- *6:60 (2.36) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 7 : 60 (2.36) (W) × 200 (7.87) (H) × 48 (1.89) (D)mm (inch)
- * 8: 137 (5.39) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 9: 222 (8.74) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 10 : 100 (3.94) (W) × 40 (1.57) (H) × 43.5 (1.71)(D)mm (inch)
- * 11 : 100 (3.94) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 12 : 64 (2.52) (W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)
- * 13 : Leakage current when the transistor output is OFF (0.1mA or less)
- * 14 : Leakage current when the transistor output is OFF (0.25mA or less)
- * 15 : Leakage current when the transistor output is OFF (0.3mA or less)
- $*\,16$: Leakage current when the triac output is OFF 1.5mA rms or less (100VAC rms 60Hz), 3mA rms or less (200VAC rms 60Hz)

Model	Output	No. of points per module	Insulation	Rated load voltage	Maxir cı	num load urrent	Output r	•	Output display	Surge	External	Common	Internal current consumption	External dimensions	Reference	
iviodei	format	No. of per m	Insul	Ra lo volt	1 point	1 common	$\begin{array}{c} OFF \to \\ ON \end{array}$	$\begin{array}{c} ON \to \\ OFF \end{array}$	Our	nS nS	connection	connection	Inte cun consul	Exte	Refe	
AJ65SBTCF1-32T	Transistor	32 points				3.2 A	0.5ms or less	1.5ms or less			1-wire FCN connector	32 points 1 common	60mA	* 2	5.5.1	
AJ65VBTCU2-8T	output * 13 (sink type)	8 points			0.1 A	0.8 A	1ms	1ms			2-wire one-touch	8 points 1 common	35mA	* 5	5.4.1	
AJ65VBTCU2-16T	` ' '					1.6 A	or less	or less			connector		40mA	* 6	5.4.2	
AJ65FBTA2-16T	Transistor output * 14 (sink type)	16 points			0.5 A		0.5ms	1.5ms			2-wire waterproof		50mA	* 7	5.6.1	
AJ65FBTA2-16TE	Transistor output * 15 (source type)	stor * 15	nsulation		1.0 A	4.0 A	or less	or less	ılay	ì	connector	16 points 1 common	50mA	*7	5.6.2	
AJ65VBTS2-16T			leri	12/24					disp	Zener	Spring		45mA	* 8	5.2.1	
AJ65VBTS2-32T	Transistor output * 12	32 points	Photocoupler insulation	VDC	0.5 A				LED display	diode	clamp terminal block 2-wire type		60mA	* 9	5.2.2	
AJ65VBTCE2-8T	output * 12		8 points				0.8 A	1ms	1ms			Sensor connector	8 points 1 common	35mA	* 10	5.3.1
AJ65VBTCE2-16T							or less	or less			(e-CON) 2-wire type				5.3.2	
AJ65VBTCE3- 16TE	Transistor output * 13 (source type)	13			0.1 A	1.6 A					Sensor connector (e-CON) 3-wire type	16 points 1 common	45mA	* 11	5.3.3	

- * 1 : 87.3 (3.44) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 2 : 118 (4.65) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 3 : 179 (7.05) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 4 : 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch)
- * 5 : 41 (1.61) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 6 : 60 (2.36) (W) × 115 (4.53) (H) × 62 (2.44) (D)mm (inch)
- * 7 : 60 (2.36) (W) × 200 (7.87) (H) × 48 (1.89) (D)mm (inch)
- * 8: 137 (5.39) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 9: 222 (8.74) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 10 : 100 (3.94) (W) × 40 (1.57) (H) × 43.5 (1.71)(D)mm (inch)
- * 11 : 100 (3.94) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 12 : 64 (2.52) (W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)
- * 13 : Leakage current when the transistor output is OFF (0.1mA or less)
- * 14 : Leakage current when the transistor output is OFF (0.25mA or less)
- * 15 : Leakage current when the transistor output is OFF (0.3mA or less)
- * 16 : Leakage current when the triac output is OFF 1.5mA rms or less (100VAC rms 60Hz), 3mA rms or less (200VAC rms 60Hz)

(3) Combined I/O module In the combined I/O module, the input side and the output side are structure as a pair.

(a) Input side

Division	Model	Input	of points r module	Insulation method	Rated input voltage	nput current	Oper volt	ation age		esponse ne	display	External	Common	Internal current consumption	External dimensions	Reference																						
Divi		format	No. of per m	Insn	Ratec volt	Input o	ON voltage	OFF voltage	OFF → ON	ON → OFF	Input o	connection	connection	Inte cur consu	Exte	Refe																						
	AJ65SBTC1-32DT						14V or more	6V or less	1.5ms	or less						6.4.3																						
	AJ65SBTC1-32DT1		16				15V or more	3V or less	0.2ms	or less		1-wire	32 points 1 common	504		6.4.4																						
	AJ65SBTC1-32DT2		points				14V or more	6V or less	1.5ms	or less		one-touch connector	(shared with output)	50mA	*1	6.4.5																						
	AJ65SBTC1-32DT3					Approx. 5mA	15V or more	3V or less	0.2ms	or less						6.4.6																						
	AJ65SBTC4-16DT	•				•						4-wire one-touch	16 points	40mA		6.4.1																						
	AJ65SBTC4-16DT2		8 points									connector	1 common (shared with	401117		6.4.2																						
	AJ65SBTW4-16DT	DC input (Positive common)	points				14V or	6V or	1 5ms	or less		4-wire waterproof connector	output)	90mA	* 3	6.6.3																						
	AJ65SBTB1-16DT		8 points			Approx.	more	less	1.01113	01 1033			16 points 1 common (shared with output)	50mA	* 1	6.1.3																						
	AJ65SBTB1-32DT		16 points		24	7mA							32 points 1 common (shared with output)	32mA	* 2	6.1.13																						
	AJ65SBTB1-16DT1		8 points		VDC	Approx. 5mA		3V or	0.2ms	or less			16 points 1 common (shared with output)	55mA	* 1	6.1.4																						
	AJ65SBTB1-32DT1	·		tion			15V or more	less	0.21113	01 1033			32 points 1 common (shared with output)	60mA	* 2	6.1.14																						
ge	AJ65DBTB1-32DT1		DO in . 1	16 points	insula			•	5V or less	10ms	or less	Selds 1-wire	16 points 1 common	55mA	* 5	6.1.20																						
Input side	AJ65SBTB1-32DTE1	DC input (Negative common)	C input legative				Photocoupler insulation				C) / ==			_ED display	terminal block	32 points 1 common (shared with output)	50mA	* 2	6.1.19																			
	AJ65SBTB1-16DT2	common)		Photoc		Approx. 7mA	14V or more	6V or less	1.5ms	or less			16 points 1 common (shared with output)	50mA	* 1	6.1.5																						
	AJ65SBTB1-32DT2	,	16					5.5V or				32 points 1 common (shared	60mA	* 2	6.1.15																							
	AJ65SBTB1-32KDT2		points					less	*	: 11			with output)	65mA	`-	6.1.16																						
	AJ65SBTB1-16DT3			f	f	<u> </u>	f		<u> </u>			<u> </u>	+	-	-	-	-	+	+	F	+	F	8 points			Approx. 5mA	15V or more	3V or less	0.2ms	or less			16 points 1 common (shared with output)	55mA	* 1	6.1.6		
	AJ65SBTB1-32DT3												16		12	Approx.	5.6V or	2.4V or					32 points 1 common (shared	60mA	*2	6.1.17												
	AJ65SBTB1-32KDT8	DC input	points		VDC	11mA	more	less	*	11			with output)	65mA	_	6.1.18																						
	AJ65SBTB32-8DT	DC input (Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive	(Positive 4	DC input (Positive 4										8 points 1 common (shared with output)	45mA	* 1	6.1.1								
	AJ65SBTB32-16DT		8 points		24	Approx.	14V or	6V or less	1.5ms	or less		Input 3-wire	16 points 1 common (shared with output)	50mA	* 2	6.1.7																						
	AJ65SBTB32-8DT2	po		F			F	ļ.	l l		F	-	<u> </u>	F	<u> </u>	<u> </u>	 	+	 	F	<u> </u>	<u> </u>		4	4 points	<u> </u> 	VDC	7mA	more					Output 2-wire terminal	8 points 1 common (shared with output)	45mA	* 1	6.1.2
	AJ65SBTB32-16DT2															<i>E E</i> \' :				block	16 m = i = t =	50mA		6.1.8														
	AJ65SBTB32-16KDT2		8 points					5.5V or less	*	11		16 points 1 common (shared	55mA	* 2	6.1.9																							
	AJ65SBTB32-16KDT8		points		12 VDC	Approx. 11mA	5.6V or more	2.4V or less	*	11			with output)	55mA		6.1.10																						

^{* 1 : 118 (4.65) (}W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)

^{* 2 : 179 (7.05) (}W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)

^{*} 3 : 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch)

^{* 4 : 41 (1.61) (}W) × 115 (4.53) (H) × 67 (2.64) (D)mm (inch)

^{* 5 : 64 (2.52) (}W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)

^{* 6 : 60 (2.36) (}W) × 200 (7.87) (H) × 48 (1.89) (D)mm (inch)

^{*7 : 137 (5.39) (}W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)

^{*8 : 222 (8.74) (}W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)

^{*9 : 100 (3.94) (}W) × 50 (1.97) (H) × 41.5 (1.63) (D)mm (inch)

^{* 10 : 155 (6.10) (}W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)

^{* 11 : 0.2}ms or less/1.5ms or less/5ms or less/10ms or less (Depending on the input response speed setting value)

Division	Model	Input format	No. of points per module	Insulation method	Rated input voltage	nput current	Oper volt	age	Input re	nė	display	External connection	Common connection	Internal current consumption	External dimensions	Reference																
Θ			No. o per r	Inst	Rate vo	Input	ON voltage	OFF voltage	OFF → ON	ON → OFF	Input	CONNECTION	CONTRECTION	Int CO Sons	ding	Refe																
	AJ65SBTB32-16DR		0			A = = ===	44)/	6V or less	1.5ms	or less		Input 3-wire	0 mainta	85mA		6.1.11																
	AJ65SBTB32- 16KDR	DC input (Positive/	8 points			Approx. 7mA	14V or more	5.5V or less	*	11		Output 2-wire terminal block	8 points 1 common	100mA	*2	6.1.12																
	AJ65DBTB1-32DR	negative common)					15V or more	5V or less	10ms (or less		1-wire terminal block		60mA	* 5	6.1.21																
	AJ65SBTCF1-32DT		16 points			Approx. 5mA	14V or more	6V or less	1.5ms	or less		1-wire	16 points 1 common		* 1	6.5.1																
	AJ65VBTCF1-32DT1		p =				15V or	3V or				one-touch			*4	6.5.2																
	AJ65VBTCFJ1- 32DT1	DC input (Positive common) DC input (Negative common) 8 point		no			more	less	0.2ms	or less		connector		50mA		6.5.3																
	AJ65FBTA42-16DT		common)		sulati		Approx.					зу	2 to 4-wire	8 points		* 6	6.6.1															
Input side	AJ65FBTA42-16DTE		8 points	Photocoupler insulation	24 VDC	7mA					LED display	waterproof connector	1 common (Shared with output)	45mA		6.6.2																
	AJ65VBTS32-16DT			Photoco								Spring clamp terminal	16 points 1 common (shared with output)	40mA	* 7	6.2.1																
	AJ65VBTS32-32DT	DC input	16 points				407	0) (block 3-wire type	16 points 1 common	50mA	* 8	6.2.2																
	AJ65VBTCE32-16DT	(Positive common)	(Positive common)	(Positive common)	(Positive common)	(Positive common) DC input	(Positive common)	(Positive common)	(Positive common)	(Positive common) DC input	(Positive common)	(Positive common)	(Positive common) DC input	(Positive common) DC input	(Positive common)	(Positive common)	DC input (Positive common) Points 8 points 16 points DC input 8 points	points 8			Approx.	14V or more	6V or less	1.5ms	or less			16 points 1 common (shared with output)	40mA	* 9	6.3.1	
	AJ65VBTCE32-32DT																	·	16			5mA					Sensor connector	connector	32 points 1 common (shared with output)	45mA	* 10	6.3.3
	AJ65VBTCE3-16DTE																	20put	20put	DC input poi	ut points	1							(e-CON)	(e-CON) 3-wire type	16 points 1 common (shared with output)	40mA
	AJ65VBTCE3-32DTE	common)	16 points										32 points 1 common (shared with output)	45mA	* 10	6.3.4																

- * 1 : 118 (4.65) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 2 : 179 (7.05) (W) × 50 (1.97) (H) × 40 (1.57) (D)mm (inch)
- * 3 : 184.7 (7.27) (W) × 57.9 (2.28) (H) × 86 (3.39) (D)mm (inch) * 9 : 100 (3.94) (W) × 50 (1.97) (H) × 41.5 (1.63) (D)mm (inch)
- * 4 : 41 (1.61) (W) × 115 (4.53) (H) × 67 (2.64) (D)mm (inch) * 5 : 64 (2.52) (W) × 170 (6.70) (H) × 80 (3.15) (D)mm (inch)
- * 6 : 60 (2.36) (W) × 200 (7.87) (H) × 48 (1.89) (D)mm (inch)
- *7 : 137 (5.39) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- *8 : 222 (8.74) (W) × 50 (1.97) (H) × 51.5 (2.03) (D)mm (inch)
- * 10 : 155 (6.10) (W) × 50 (1.97) (H) × 45.5 (1.79) (D)mm (inch)
- * 11 : 0.2ms or less/1.5ms or less/5ms or less/10ms or less (Depending on the input response speed setting value)

1 - 28 1 - 28

(b) Output side

Division	Model	Output	No. of points per module	Insulation method	Rated load voltage		num load urrent		tput se time	Output display	Surge suppressor	External	Common	Internal current consumption External dimensions Reference	
Divis	Wodel	format	No. of per m	Insul	Ratec	1 point	1 common	OFF → ON	ON → OFF	Output	Sul Suppr	connection	connection	Internal consul Exte dimer Refer	
	AJ65SBTC1-32DT	Transistor													
	AJ65SBTC1-32DT1	output * 13 (sink type)	16									1-wire	32 points		
	AJ65SBTC1-32DT2	Transistor	points			0.1A	1.6A					one-touch connector	1 common (shared with input)		
	AJ65SBTC1-32DT3	output * 12 (sink type)													
	AJ65SBTC4-16DT	Transistor output * 13 (sink type)										4-wire one-touch	46 points		
	AJ65SBTC4-16DT2	Transistor output * 12 (sink type)	8 points		24		2.4A					connector	16 points 1 common (shared with input)		
	AJ65SBTW4-16DT				VDC							4-wire waterproof connector			
	AJ65SBTB1-16DT		8 points	3									16 points 1 common (shared with input)		
	AJ65SBTB1-32DT	Transistor output * 13 (sink type)	16 points				3.6A						32 points 1 common (shared with input)		
	AJ65SBTB1-16DT1	(Slink type)	, , ,	, ,	8 points				2.4A					16 points 1 common (shared with input)	
	AJ65SBTB1-32DT1			12/2 VD		0.5A	3.6A	0.5ms or less		olay			32 points 1 common (shared with input)		
ide	AJ65DBTB1-32DT1	Transistor output * 12 (sink type)	16 points		12/24 VDC		4A					1-wire	16 points 1 common		
Output side	AJ65SBTB1-32DTE1	Transistor output * 12 (source type)		Photocoupler insulation	24		3.6A		1.5ms or less	LED displa	Zener diode	terminal block	32 points 1 common (shared with input)	See input side	
	AJ65SBTB1-16DT2		8 points	Ą			2.4A						16 points 1 common (shared with input)		
	AJ65SBTB1-32DT2		16		VDC		3.6A						32 points 1 common		
	AJ65SBTB1-32KDT2	Transistor	points			,							(shared with input)		
	AJ65SBTB1-16DT3	output * 12 (sink type)	8 points				2.4A					16 points 1 common (shared with input)			
	AJ65SBTB1-32DT3		16		40		3.6A						32 points 1 common		
	AJ65SBTB1-32KDT8		points		12 VDC		0.071						(shared with input)		
	AJ65SBTB32-8DT	Transistor output * 13	4 points				1.2A						8 points 1 common (shared with input)		
	AJ65SBTB32-16DT	(sink type)	8 points				2.4A						16 points 1 common (shared with input)		
	AJ65SBTB32-8DT2		4 points		24 VDC		1.2A					Input 3-wire Output 2-wire	8 points 1 common (shared with input)		
	AJ65SBTB32-16DT2	Transistor output * 12										terminal block	16 points		
	AJ65SBTB32-16KDT2	(sink type)	8 points		4.5		2.4A						1 common (shared with input)		
	AJ65SBTB32-16KDT8				12 VDC										

 $[\]ast$ 12 : Leakage current when the transistor output is OFF (0.1mA or less)

st 13 : Leakage current when the transistor output is OFF (0.25mA or less)

 $[\]ast$ 14 : Leakage current when the transistor output is OFF (0.3mA or less)

Division	Model	Output format	No. of points per module	Insulation method	Rated load voltage		num load urrent		tput se time	Output display	Surge suppressor	External	Common	Intemal current consumption	External dimensions	Reference	
Divis	Wodel	Catput ionnat		Insul	Rater	1 point	1 common	OFF → ON	ON → OFF	Output	Sul	connection	connection	Intemal	Exte	Refer	
	AJ65SBTB32-16DR		8	ay tion								Input 3-wire Output	4 points				
	AJ65SBTB32-16KDR	Contact output	points	Relay insulation	24 VDC 240	2A	4A	10ms or less	12ms or less		None	2-wire terminal block	1 common				
	AJ65DBTB1-32DR		16 points		VAC							1-wire terminal block	8 points 1 common				
	AJ65SBTCF1-32DT	Transistor			12/24			0.5ms or less	1.5ms or less			1-wire					
	AJ65VBTCF1-32DT1	output * 12	16 points		VDC	0.1A	1.6A	1ms	1ms			FCN	16 points 1 common	,			
	AJ65VBTCFJ1- 32DT1	(sink type)	,	ľ				or less	or less			connector					
d)	AJ65FBTA42-16DT	Transistor output * 13 (sink type)			24	0.5A	2.4A	0.5ms	1.5ms	λí		2-wire waterproof	8 points 1 common				
Output side	AJ65FBTA42-16DTE	Transistor output * 14 (source type)	8 points	Photocoupler insulation	VDC	1.0A		or less or less	or less	LED display		connector	(shared with input)	See	input	side	
	AJ65VBTS32-16DT			coupleri		0.5A	4.0A 5A				Zener diode	Spring clamp terminal	16 points 1 common (shared with input)				
	AJ65VBTS32-32DT	Transistor	16 points	Photo	12/24 VDC							block 2-wire type	16 points 1 common				
	AJ65VBTCE32-16DT	output * 12 (sink type)	8 points	,			0.8A	1ms	1ms			Sensor 16 points Sensor 1 common (shared with input)	1 common (shared with input)				
	AJ65VBTCE32-32DT		16 points		24	0.1A	1.6A	or less	or less			(e-CON) 2-wire type	32 points 1 common (shared with input)				
	AJ65VBTCE3- 16DTE	Transistor	8 points		VDC	U. IA	0.8A					Sensor connector	16 points 1 common (shared with input)				
	AJ65VBTCE3- 32DTE						1.6A					(e-CON) 3-wire type	32 points 1 common (shared with input)				

 $[\]ast$ 12 : Leakage current when the transistor output is OFF (0.1mA or less)

 $[\]ast$ 13 : Leakage current when the transistor output is OFF (0.25mA or less)

^{* 14 :} Leakage current when the transistor output is OFF (0.3mA or less)

1.5 Parts Sold Separately

Plugs for one-touch connector type modules are sold separately. Please purchase them as necessary.

	Mitsubishi model name	Part model name (manufacturer)	Specit	ications		Color of the cover
			Applicable cable size (core)	Applicable cable size (diameter)	Maximum rated current	
Plug for	A6CON-P214	33104-6000FL (3M)	0.14 to 0.2mm ²	φ 1.0 to 1.4mm	2A * 5	Transparent
one-touch connector * 1	A6CON-P220	33104-6100FL (3M)	(26 to 24 AWG)	φ 1.4 to 2.0mm	2A * 3	Yellow
	A6CON-P514	33104-6200FL (3M)	0.3 to 0.5mm ²	φ 1.0 to 1.4mm	- 3A * 5	Red
	A6CON-P520	33104-6300FL (3M)	(22 to 20 AWG)	φ 1.4 to 2.0mm	3A * 3	Blue
One-touch	400011150	35505-6000-	Communication line 0.5mm ² (20 AWG)	φ2.2 to 3.0mm		
connector for communication * 2	A6CON-L5P	BOM GF (3M)	Shielded cable 0.5mm ² (20 AWG)			Red
One-touch	A6CON-PW5P	35505-6080-A00 GF (3M)	0.75mm² (0.66 to 0.98mm²) (18 AWG) ϕ 2.2 to 3.0mm			Gray
connector for power supply and FG * 2 * 4	A6CON-PW5P- SOD	35505-6180-A00 GF(3M)	Wire diameter: 0.16mm or more Insulating coating material: PVC (heat-resistant)	φ 2.0 to 2.3mm	7A * 5	Blue
Dustproof cap * 1	A6CAP-DC1	_	(AJ65SBTW□-16□	only)		_
Waterproof cap * 1	A6CAP-WP1		Protection construction (AJ65SBTW□-16□		_	_
waterproof cap * 1	A6CAP-WP2	_	Protection of degree (AJ65FBTA□-16□	_	_	
	A6CON1		Soldering type (Straigh			
FCN connector	A6CON2		Crimp-contact type (Straig		_	
1 OIV COINICOLOI	A6CON3		Pressure-displacement type	_		
	A6CON4		Soldering type (Straight-out/d	_	_	
Online connector for communication * 3	A6CON-LJ5P	35720-L200-B00 AK (3M)	_		_	_
Online connector for power supply *3	A6CON-PWJ5P	35720-L200-A00 AK (3M)	_		_	_
One-touch connector plug with terminating	A6CON-TR11	_	With terminating resist	or (110Ω)	_	_
resistor (1 piece)	A6CON-TR11N	_ _	With terminating resistor (110		_	_
Metal installation fitting for the connector type	A6PLT-J65V1	_	For modules with a widt (AJ65VBTCU□-8□, AJ65V AJ65VBTCU-68 10 M4×8 SWPW attached ho	′BTCU□-32□, 5□)	_	_
module (set of 5)	A6PLT-J65V2	_	For modules with a widt (AJ65VBTCU□-1 10 M4×8 SWPW attached ho	6□)	_	_

^{*1} The A6CON-P \square and A6CAP- \square \square 1 (manufactured by Mitsubishi) are available in packs of 20 pieces.

^{*2} The A6CON-□5P (manufactured by Mitsubishi) is available in packs of 10 pieces.

^{*3} The A6CON-□J5P (manufactured by Mitsubishi) is available in packs of 5 pieces.

imes4 Check the outside diameter of an applicable cable and select a connector.

^{*5} Keep the current within the allowable range of the connected cable.

	Mitsubishi					
	model name			Applicable module		
	•	Input :	AJ65SBTB1-8D			
	A6CVR-8	Output :	AJ65SBTB1-8T	AJ65SBTB1-8TE	AJ65SBTB1-8T1	
	AbCVR-8	Repeater :	AJ65SBT-RPT	AJOJOBIBI-OIL	A3030B1B1-011	
1		•		A 1050DTD4 40D4	A 1050DT04 00D	A 1050DT04 00D4
		Input :	AJ65SBTB1-16D	AJ65SBTB1-16D1	AJ65SBTC1-32D	AJ65SBTC1-32D1
			AJ65SBTC4-16D	AJ65SBTC4-16DN	AJ65SBTC4-16DE	AJ65SBTB3-8D
		Outract.	AJ65SBTB2-8A	AJ65SBTB2N-8A	A 1050DTD4 40T4	A IOSOPTRO OT
		Output :	AJ65SBTB1-16T	AJ65SBTC1-32T	AJ65SBTB1-16T1	AJ65SBTB2-8T
	A6CVR-16		AJ65SBTB1-16TE	AJ65SBTB2-8R	AJ65SBTB2-8S	AJ65SBTB2N-8R
		O - malaina and a	AJ65SBTB2N-8S	AJ65SBTB2-8T1	A 1050DTO4 40DT	A IOCODEDA ODE
		Combined :	AJ65SBTC1-32DT	AJ65SBTC1-32DT1	AJ65SBTC4-16DT	AJ65SBTB1-6DT
Protective			AJ65SBTB1-16DT1	AJ65SBTB1-16DT2	AJ65SBTB32-8DT	AJ65SBTC1-32DT2
cover for the		0 " 10 1	AJ65SBTC1-32DT3	AJ65SBTC4-16DT2	AJ65SB1B1-16D13	AJ65SBTB32-8DT2
compact type		Optical Repeater		AJ65SBT-RPG		
remote I/O		Input:	AJ65SBTB1-32D	AJ65SBTB1-32D1	AJ65SBTB2-16A	AJ65SBTB2N-16A
module			AJ65SBTB3-16D			
(10 pieces)	A6CVR-32	Output :	AJ65SBTB1-32T	AJ65SBTB1-32T1	AJ65SBTB2-16T	AJ65SBTB2-16R
(10 pieces)			AJ65SBTB2-16S	AJ65SBTB2N-16R	AJ65SBTB2N-16S	AJ65SBTB2-16T1
		Combined :	AJ65SBTB1-32DT	AJ65SBTB1-32DT1	AJ65SBTB1-32DT2	AJ65SBTB32-16DT
]			AJ65SBTB1-32DT3	AJ65SBTB32-16DT2		
	A6CVR-VCE8	Input:	AJ65VBTCE3-8D			
	AUCVIN-VOLU	Output :	AJ65VBTCE2-8T			
		Input:	AJ65VBTCE3-16D	AJ65VBTCE3-16DE		
	A6CVR-VCE16	Output :	AJ65VBTCE2-16T	AJ65VBTCE3-16TE		
		Combined :	AJ65VBTCE32-16DT	AJ65VBTCE3-16DTE		
		Input:	AJ65VBTS3-16D			
	A6CVR-VS16	Output :	AJ65VBTS2-16T			
		Combined :	AJ65VBTS32-16DT			
		Input :	AJ65DBTB1-32D			
DIN adapter	A6DIN1C	Output :	AJ65DBTB1-32T1	AJ65DBTB1-32R		
		Combined :	AJ65DBTB1-32DT1	AJ65DBTB1-32DR		
		Input :	AJ65DBTB1-32D			
Common	A2CCOM-TB	Output :	AJ65DBTB1-32T1	AJ65DBTB1-32R		
terminal block		Combined :	AJ65DBTB1-32DT1	AJ65DBTB1-32DR		

1.6 Recommended Connection Device List

1.6.1 Recommended connection devices for low profile waterproof remote I/O module

The following shows communication devices needed for use of the low profile waterproof type remote I/O module (AJ65FBTA \square -16 \square).

(1) Communications Module Waterproof Plug (Male / Female) · · · 4-pin / 5-pin can be used.

(a) For LINK In Side (Female)

Model name	Maker	Specifications	Connection cable diameter
ELKA 4012 PG9	HIRSCHMANN	M12-4-pin Female Straight Type	φ6.0 to 8.0mm
ELKA 5012 PG9	HIRSCHMANN	M12-5-pin Female Straight Type	φ6.0 to 8.0mm
CM02A-8DP5S(03)	DDK Ltd.	M12-4-pin Female Straight Type	φ7.2 to 7.9mm
ELWIKA 4012 PG9	HIRSCHMANN	M12-4-pin Female Right-angle Type	φ6.0 to 8.0mm
ELWIKA 5012 PG9	HIRSCHMANN	M12-5-pin Female Right-angle Type	φ6.0 to 8.0mm

(b) For LINK OUT Side (Male)

Model name	Maker	Specifications	Connection cable diameter
ELST 4012 PG9	HIRSCHMANN	M12-4-pin Male Straight Type	φ6.0 to 8.0mm
ELST 5012 PG9	HIRSCHMANN	M12-5-pin Male Straight Type	φ6.0 to 8.0mm
CM02A-8DJ5P(03)	DDK Ltd.	M12-4-pin Female Straight Type	φ7.2 to 7.9mm
ELWIST 4012 PG9	HIRSCHMANN	M12-4-pin Male Right-angle Type	φ6.0 to 8.0mm
ELWIST 5012 PG9	HIRSCHMANN	M12-5-pin Male Right-angle Type	φ6.0 to 8.0mm

(2) Power Supply Module - Waterproof Plug (Female) - · · 5-pin only can be used.

Model name	Maker	Specifications	Connection cable diameter
ELKA 5012 PG7	HIRSCHMANN N	MAC E min Formala Chroimht Time	φ4.0 to 6.0mm
ELKA 5012 PG9	HIRSCHIVIANIN	M12-5-pin Female Straight Type	φ6.0 to 8.0mm
ELWIKA 5012 PG7	LUDCCUMANN	MAC E min Fernale Dight angle Time	φ4.0 to 6.0mm
ELWIKA 5012 PG9	HIRSCHMANN	M12-5-pin Female Right-angle Type	φ6.0 to 8.0mm

(3) I/O connector waterproof plug (male) · · · 4-pin/5-pin can be used. The plug for LINK OUT side (male) mentioned in Section (1) (b) can be used.

(4) I/O Connector Y Branch Connector

Model name	Maker	Remarks
SAC-3P-M12Y	PHOENIX CONTACT	
SAC-5P-M12Y	PHOENIX CONTACT	_
XS2R series	OMRON Corporation	_
VA-4YG-2	CORRENS Corporation	_

(5) CC-Link Cable

Model name	Maker	Remarks
FA-CBL series	•	CC-Link dedicated cable with waterproof connector
Cable with M12 Connector	Shinwa Co.,Ltd	The CA series cannot be used.

1 OVERVIEW

1.6.2 Recommended connection devices for low profile sensor connector (e-CON) remote I/O module

The following shows communication devices needed for use of the sensor connector (e-CON) remote I/O module (AJ65VBTCE \square - \square).

For how to wire the sensor connector (e-CON), refer to the catalog of the corresponding maker.

(1) I/O sensor connector (e-CON) plug *1

		Sp		Color of	
Model name	Maker	Applicable cable size (core)	Applicable cable	Maximum rated	the
		,	size (diameter)	current	cover
ECN-A014R ECN-A004Y ECN-A024BL		0.08 to 0.20mm ²	φ0.9 to 1.0mm		Red
		(28 to 24 AWG)	φυ.9 το 1.0111111		Neu
	(Mitsubishi	0.20 to 0.30mm ²	φ1.0 to 1.15mm		Yellow
		(24 to 22 AWG)	φ1.0 to 1.15mm	2A * 2	
		0.30 to 0.50mm ²	41 15 to 1 2mm		Blue
ECIN-AU24BL		(22 to 20 AWG)	φ1.15 to 1.3mm		Diue
ECN-M014R	Electric System Service Co., Ltd.)	0.44 to 0.20 may 2	φ0.8 to 1.0mm		Red
ECN-M024Y	Service Co., Ltd.)	0.14 to 0.30mm ²	φ1.0 to 1.2mm		Yellow
ECN-M034OR		(26 to 24 AWG)	φ1.2 to 1.6mm		Orange
ECN-M044GN		0.00 to 0.50	φ1.0 to 1.2mm		Green
ECN-M054BL		0.30 to 0.50mm ²	φ1.2 to 1.6mm		Blue
ECN-M064GY		(22 to 20 AWG)	φ1.6 to 2.0mm		Gray

^{*1} The ECN- $\Box\Box\Box\Box$ is available in packs of 20 pieces.

^{*2} Keep the current within the allowable range of the connected cable.

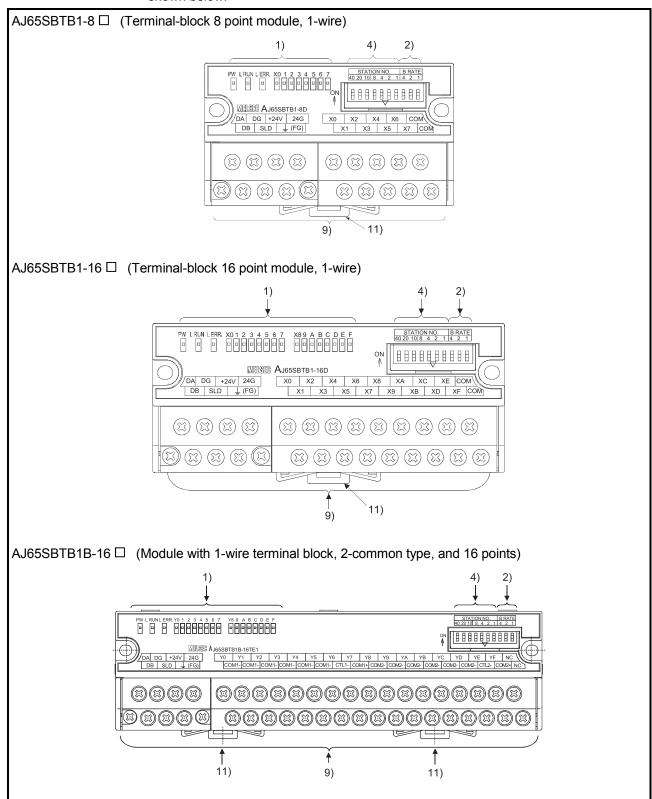
1.7 About the Generic, Abbreviated and Technical Terms Used in This Manual

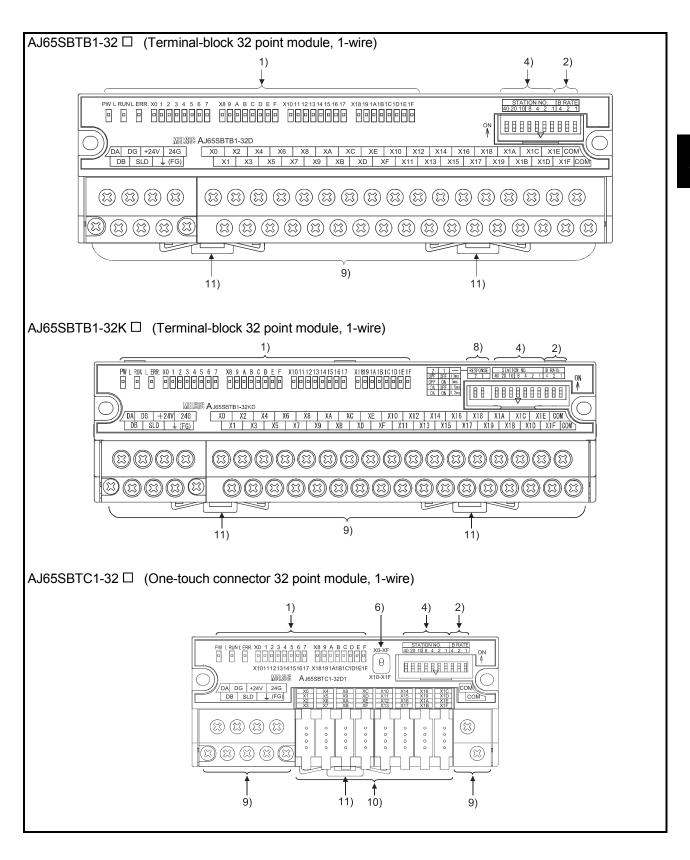
The abbreviated and technical terms used in this manual are listed below:

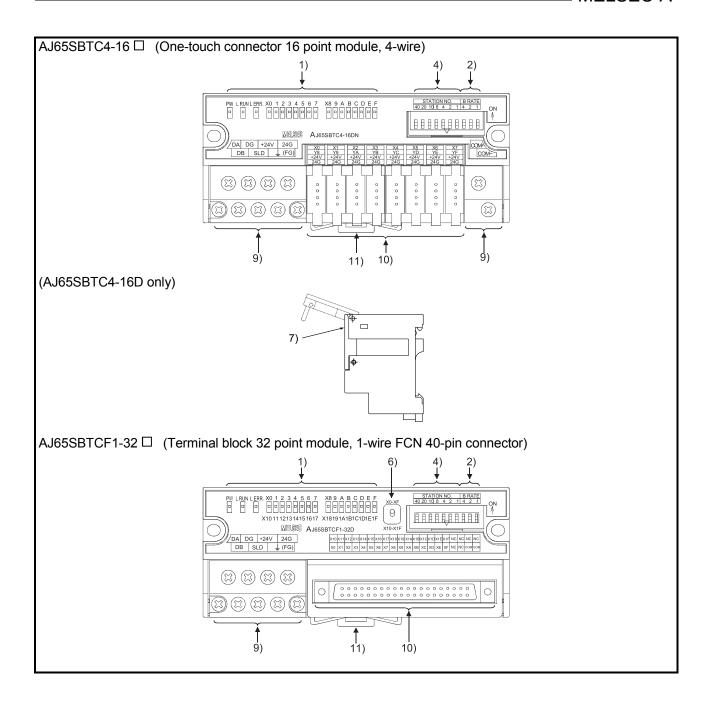
Generic/abbreviated/ technical term	Description
Master/local module	Generic term for the AJ61BT11, A1SJ61BT11, AJ61QBT11, A1SJ61QBT11, QJ61BT11, QJ61BT11N, L26CPU-BT, L26CPU-PBT, LJ61BT11, and RJ61BT11 CC-Link system master/local modules
Compact remote I/O module	Generic term for the AJ65SBT□□-□□ CC-Link system compact remote I/O modules
Conventional remote I/O module	Generic term for the AJ65BT□□-□□ CC-Link system remote I/O modules
Remote I/O module	Generic term for the AJ65BT \(\Pi - \Pi \Pi / AJ65SBT \(\Pi - \Pi \Pi / AJ65F \(\Pi - \Pi \Pi \Pi) \) CC-Link system remote I/O modules
Input module	Generic term for the AJ65SBT□□-□A/D(1) remote I/O modules
Output module	Generic term for the AJ65SBT□□-□R/T /T1/TE remote I/O modules
Combined module	Generic term for the AJ65SBT□□-□DT(1) remote I/O modules
Waterproof type remote I/O module	Generic term for the AJ65SBTW4-16□ remote I/O modules
Low profile waterproof type remote I/O module	Generic term for the AJ65FBTA□-16□ remote I/O modules
Spring clamp terminal block type remote I/O module	Generic term for the AJ65VBTS□-□□ remote I/O modules
Sensor connector (e-CON) type remote I/O module	Generic term for the AJ65VBTCE□-□□ remote I/O modules

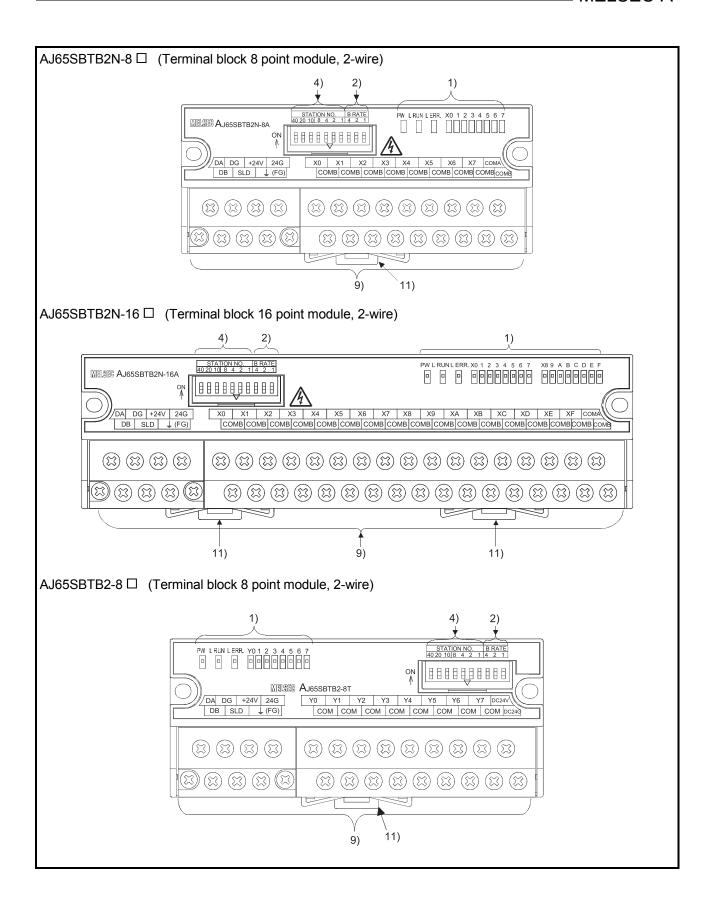
2 NAMES AND SETTINGS FOR EACH PART

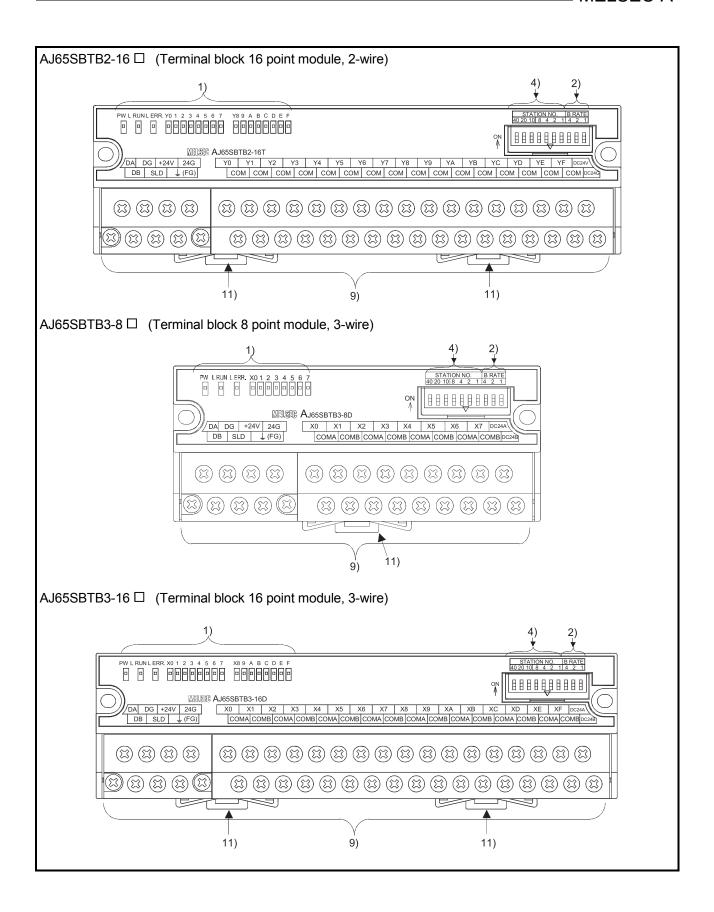
The names and settings for the components of the compact remote I/O module are shown below:

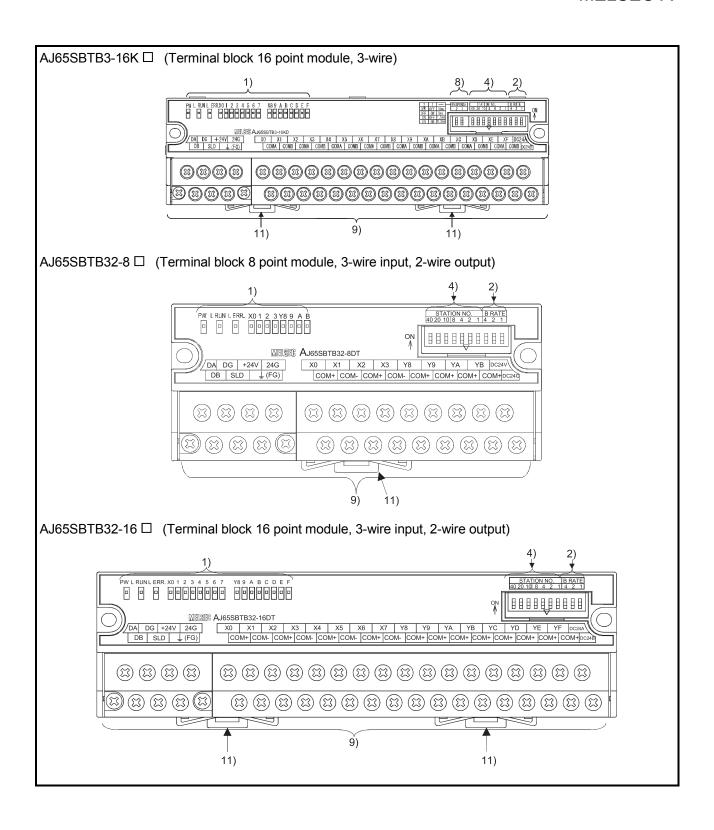


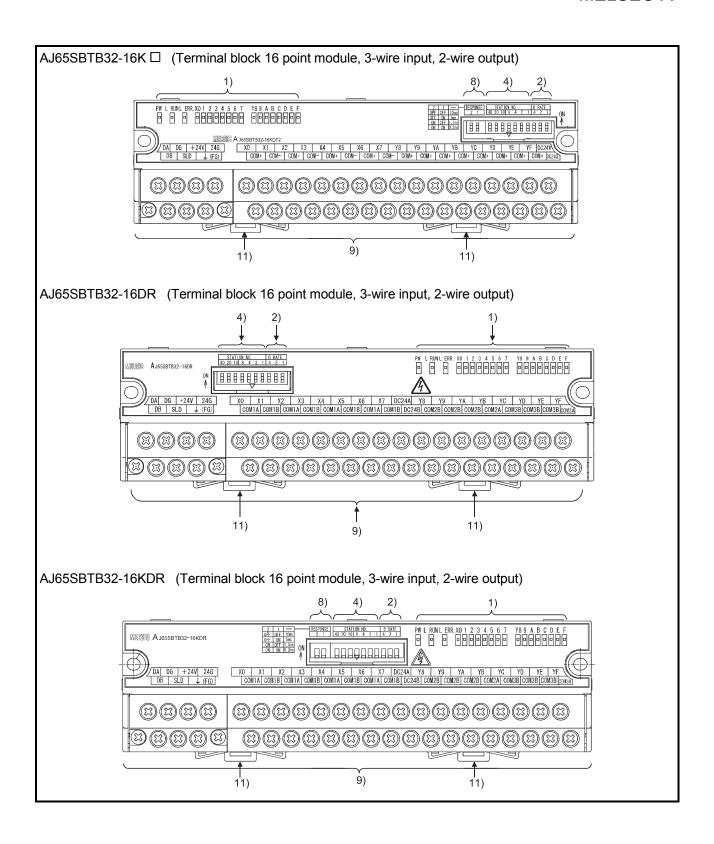


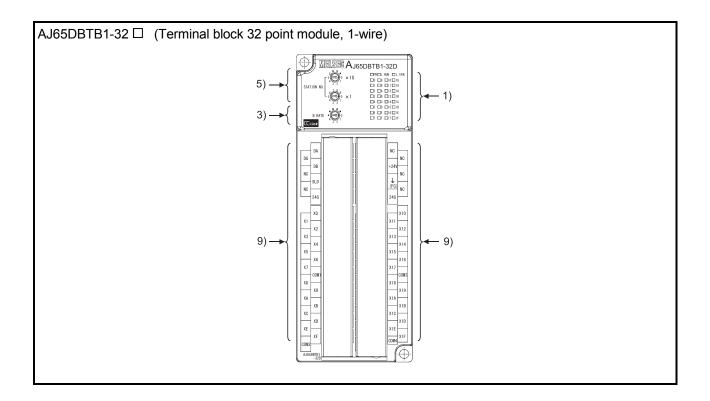












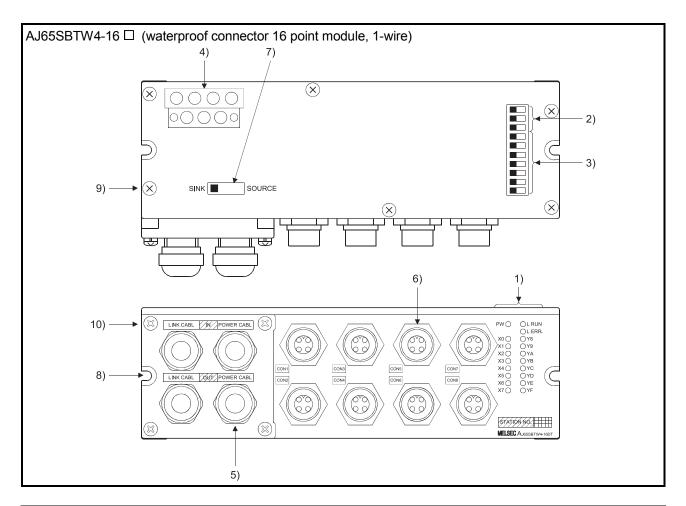
No.	Item				Descriptio	n				
1)	Operation status indicator LED	LED	name			Details				
		_	PW	On: Power being supplied						
		F	7 V V	Off: No power supplied						
			On: Normal communication							
		LF	KUN	Off: No comr	munication	(timeout e	rror)			
			On: Communication error							
				The station	n number o	r transmis	sion speed switch	setting		
				is changed	d while pow	er is on.				
		LE	RR.	Flashing irre	gularly:					
			The terminating resis			tor setting	is incorrect.			
						ink dedicated cable is affected by				
				noise.						
				Off: Normal communication						
		X0 to 1F		On: Input/output ON						
		Y0	to 1F	Off: Input/output OFF						
2)	Transmission speed setting			0.711.411						
	switch		Setting	4	Switch status 2	1	Transmission speed			
			0	OFF	OFF	OFF	156kbps			
			1	OFF	OFF	ON	625kbps			
			2	OFF	ON	OFF	2.5 Mbps			
			3 4	OFF ON	ON OFF	ON OFF	5.0 Mbps 10 Mbps			
		Cot the t	<u> </u>	L.			το ινιόρε			
2)	Transmission and a atting	Set the ti	ansmissioi	n speed within	i iile above	ialige.				
3)	Transmission speed setting		Setting	Transmissi	ion spood					
	switch		Setting 0	156k	1					
			1	625k						
			2	2.5 Mbps						
			3 4	5.0 M 10 M						
		Set the to		n speed within		range				
Ь		OCT THE I	unannaalu	i specu witilli	i ii c above	range.				

No.	Item	Description								
4)	Station number setting switch	·								
(4)	Station number setting switch	Select "10", "20", or "40" for the tens place.								
		Select "1", "2", "4", or "8" for the ones place.								
		Set the station number within the range of 1 to 64.*1								
			Station		Tens place				place	
		 	number 1	40 OFF	20 OFF	10 OFF	8 OFF	4 OFF	2 OFF	1 ON
			2	OFF	OFF	OFF	OFF	OFF	ON	OFF
			3	OFF	OFF	OFF	OFF	OFF	ON	
			4	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		 	: 10	: OFF	: OFF	ON	OFF	: OFF	: OFF	OFF
			11	OFF	OFF	ON	OFF	OFF	OFF	ON
			:	:	:	:	:	:	:	:
		L	64	ON	ON	OFF	OFF	ON	OFF	OFF
		(Example	e) Setting	the stat	ion numb	per to 3	2:			
			Station		Tens place			Ones	place	
			number	40	20	10	8	4	2	1
			32	OFF	ON	ON	OFF	OFF	ON	OFF
6)	Indication selector switch*2 Sink/source switch (For AJ65SBTC1-16D only)	Set the station number within the range of 1 to 64.*1 • Use "×10" for the tens place. • Use "×1" for the ones place. When the switch is set to "X0-XF", LEDs indicate the ON/OFF status of X0 to XF. When the switch is set to "X10-X1F", LEDs indicate the ON/OFF status of X10 to X1F. Switches the input type (sink or source). Open the module top cover to set the switch. SOURCE SOURCE SOURCE SINK SINK SINK								
8)	Input response speed switch			0 1 2 3	2 OF OF ON	F F	1 OFF ON OFF ON	Input r	10ms 5ms 1.5ms 0.2ms	peed
	Tamain al blad	Default: 2 (1.5ms) ^{*2}								
9)	Terminal block	Terminal block for module power supply, transmission, and I/O signals.								
10)	Connector	Connector for I/O signals.								
11)	DIN rail hook	When mounting the module to a DIN rail, push in the DIN rail hook until it clicks.								

^{*1} A unique station number should be set.

When it is changed while power is on, turn off the power and then on again.

 $[\]ensuremath{\$2}$ The switch setting is reflected/held at power-on.

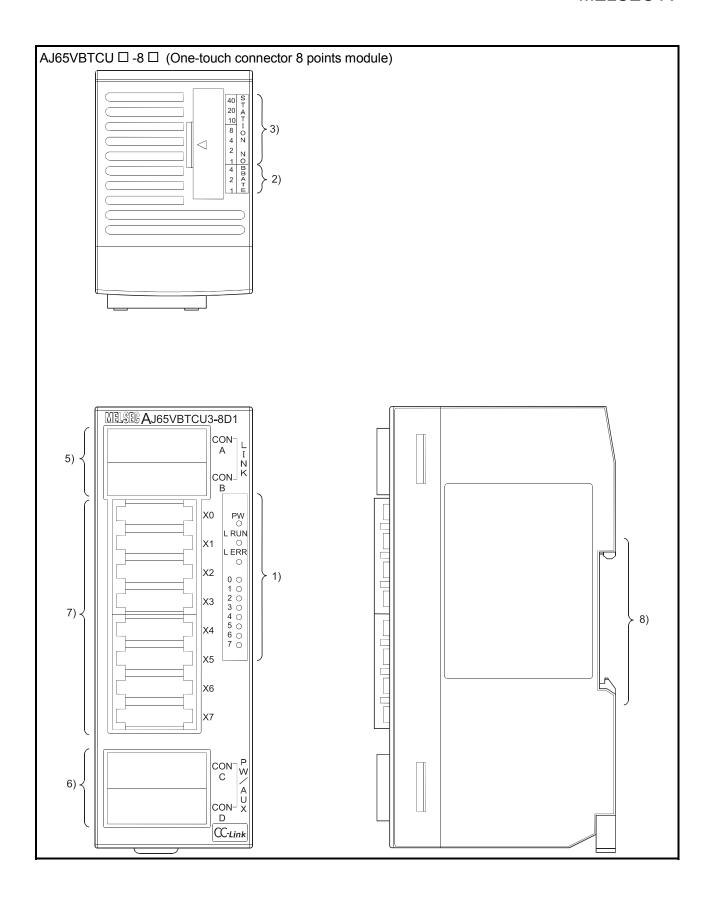


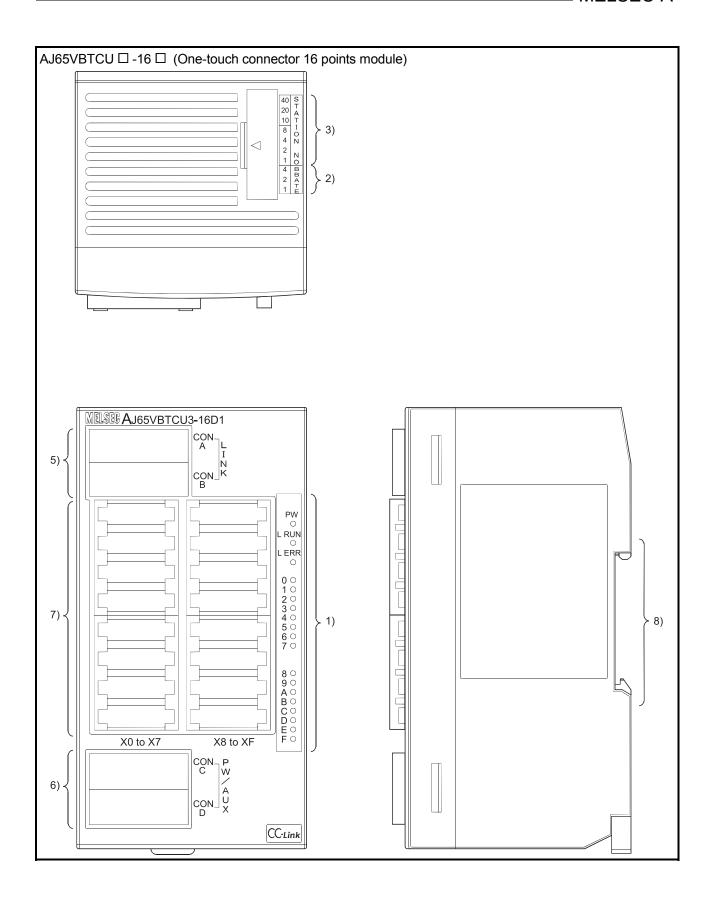
No.	Item	Description					
1)	Operating status indicator LED	LED name	Details				
		PW	On: Power being supplied				
			Off: No power supplied				
		L RUN	On: Normal communication				
		LIXON	Off: No communication (timeout error)				
			On: Communication error				
			Flashing regularly:				
			The station number or transmission speed switch setting				
			is changed while power is on.				
		L ERR.	Flashing irregularly:				
			The terminating resistor setting is incorrect.				
			The module or CC-Link dedicated cable is affected by				
			noise.				
			Off: Normal communication				
		X0 to 7	On: Input/output ON				
		Y8 to F	Off: Input/output OFF				

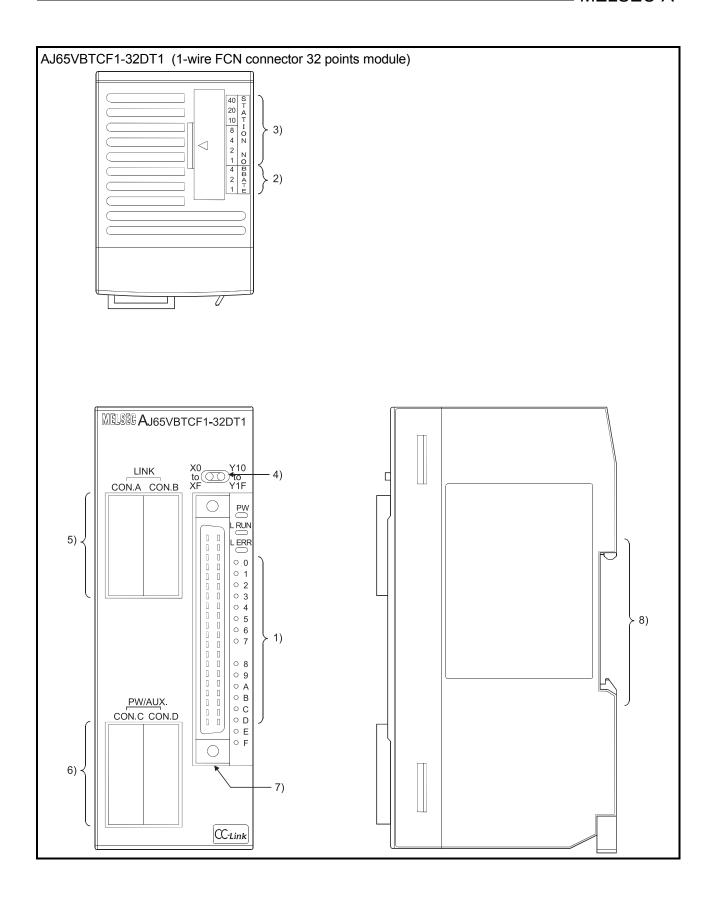
2 - 11 2 - 11

No.	Item	Description										
2)	Transmission speed setting switch											
,		Setting		, -	Switch state		us 1		Transmission speed			
			0		OFF	OFF	OFI	=	156kbps	_		
			1		OFF	OFF	ON		625kbps			
			2		OFF	ON	OFI		2.5 Mbps			
			3		OFF	ON	ON	ı	5.0 Mbps			
			4		ON	OFF	OFI	F	10 Mbps			
		Set the	transmiss	ion spe	ed withir	the abo	ve range	е.				
		Open th	e module	top cov	er to set	t the tran	smissior	n speed				
3)	Station number setting switch	Select "10", "20", or "40" for the tens place.										
		Select "1", "2", "4", or "8" for the ones place.										
		Set the station number within the range of 1 to 64.*1										
			Station Tens place Ones place							1		
			number	40	20	10	8	4	2	1		
			1	OFF	OFF	OFF	OFF	OFF	OFF	ON		
			2	OFF	OFF	OFF	OFF	OFF	ON	OFF		
			3	OFF	OFF	OFF	OFF	OFF	ON	055		
			. 4	OFF :	OFF :	OFF :	OFF :	OFF :	OFF :	OFF		
			10	OFF	OFF	ON	OFF	OFF	OFF	OFF		
			11	OFF	OFF	ON	OFF	OFF	OFF	ON		
			:	:	:	:	:	:	:	:		
		L	64	ON	ON	OFF	OFF	ON	OFF	OFF	l	
		(Example) Setting the station number to 32:										
		Station Tens place Ones place										
		<u> </u>	number	40	20	10	8	4	2	1		
			32	OFF	ON	ON	OFF	OFF	ON	OFF	L	
		Open the module top cover to set the station number.										
4)	Terminal block	Termina	al block for	r modul	e power	supply a	nd trans	mission	circuit.			
5)	Pipe for transmission or power	Pipe for connecting a transmission cable or a power supply cable to the										
	supply line	terminal block.										
		Open the module top cover to connect a transmission cable or a power supply										
		cable to the terminal block.										
		Attach a	a waterpro	of plug	provided	d with the	produc	t to the	unused p	oipe.		
6)	Waterproof connector for I/O	Waterpr	roof conne	ectors fo	or I/O sig	nals.						
		1	an optiona		-		-DC1) to	the unu	ısed			
			oof conne	•	•		•					
7)	Sink/source switch		s the inpu		sink or s	ource).						
' '	(For AJ65SBTW4-16D only)		e module	• • • •			ch.					
	(. 6. 7. 66662	O P O	< When s	-				ettina fo	r source	tvne >		
			· WIICIT]	SOURCE	урс	_	JRCE	300100	type		
				ı	$\overline{\Box}$							
		Switch —										
		SINK SINK										
8)	Metal fitting	FG term	ninal for m	odule.								
9)	Module top-cover installation											
	screw (M3)	Dofor to	Soction 3	7 1 for +	ahtonina	torque :	value for	or installation screws.				
10)	Module front-cover installation	Leiei (0	Section /	. 1 101 [griteriing	, torque '	value 101	แรเสแส	uon scre	vv5.		
	screw (M3)											

st1 A unique station number should be set.





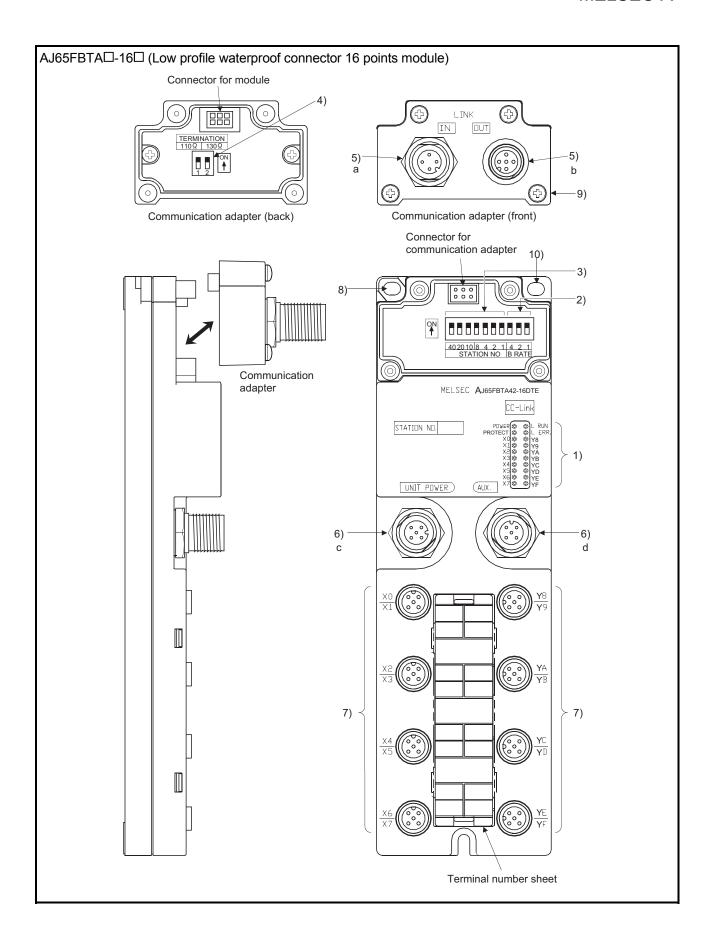


No.	Item	Description											
1)	Operating status indicator LED	LED	name	Details									
		PW		On: Power being supplied									
				Off: No power supplied									
		L RUN		On: Normal communication									
				Off: No communication (timeout error)									
				On: Communication error									
				Flashing regularly:									
				The station number or transmission speed switch setting									
				is changed while power is on.									
		L E	ERR.	Flash	ing irreg	jularly:							
				The	e termina	ating resi	stor sett	ing is ir	correct.				
					The terminating resistor setting is incorrect. The module or CC-Link dedicated cable is affected by								
				noi									
				Off: Normal communication									
				On: Input/output ON									
		l 0 to F		Off: Input/output OFF									
2)	Transmission speed setting switch	Ton. Inputoutput of 1											
۷)	Transmission speed setting switch	Ca#:		Switch statu		IS		Transmission					
			Setting		4	2	1		speed				
			0		OFF	OFF	OFI		156kbps				
			2		OFF OFF	OFF ON	ON OF		625kbps 2.5 Mbps				
			3		OFF	ON	ON		5.0 Mbps				
			4		ON	OFF	OFI	=	10 Mbps				
		Set the transmission speed within the above range.											
3)	Station number setting switch	Select "10", "20", or "40" for the tens place.											
		Select "1", "2", "4", or "8" for the ones place.											
		Set the station number within the range of 1 to 64.*1											
			Station		Tens place	е		Ones	s place		1		
			number	40	20	10	8	4	2	1			
		_	1	OFF	OFF	OFF	OFF	OFF	OFF	ON	-		
		-	3	OFF OFF	OFF OFF	OFF OFF	OFF OFF	OFF OFF	ON ON	OFF	-		
			4	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
			:	:	:	:	:	:	:	:			
		-	10	OFF	OFF	ON	OFF	OFF	OFF	OFF	-		
			11 :	OFF :	OFF :	ON :	OFF :	OFF :	OFF :	ON :	1		
			64	ON	ON	OFF	OFF	ON	OFF	OFF]		
		(Examp	le) Setting	the sta	ation nun	nber to 3	2:						
		Station Tens place Ones place]					
		<u>L</u>	number	40	20	10	8	4	2	1			
		L	32	OFF	ON	ON	OFF	OFF	ON	OFF	l		

^{*1} A unique station number should be set.

No.	Item	Description
4)	Indication selector switch*2	When the switch is set to "X0-XF", LEDs indicate the ON/OFF status of X0 to XF. When the switch is set to "Y10-Y1F", LEDs indicate the ON/OFF status of Y10
		to Y1F.
5)	Connector for communication	One-touch connector for communication line.
		When carrying out wiring, connect two optional one-touch connector plugs for
		communication (A6CON-L5P) at top and bottom.
		When changing the module online, connect the optional online connectors
		(A6CON-LJ5P) between the connector and plugs.
		When the module is used at either end of the CC-Link system, attach an
		optional one-touch connector plug with terminating resistor (110 Ω) (A6CON-
		TR11(N)).
6)	Connector for power supply and	One-touch connector for module power supply line, I/O power supply line, and
	FG	FG.
		When carrying out jumper wiring, connect two optional one-touch connector
		plugs for power supply and FG at top and bottom. Two different types
		(A6CON-PW5P, A6CON-PW5P-SOD) are available as the one-touch
		connector plugs for power supply and FG.
		When not carrying out jumper wiring, also connect the plugs (for safety and
		dust prevention).
		When changing the module online, connect the optional online connectors
		(A6CON-PWJ5P) between the connector and plugs.
7)	Connector	Connector for I/O signals.
8)	DIN rail hook	Hook to install the module to the DIN rail or connector type Metal installation
		fitting (option).
		When mounting the module to a DIN rail, push in the DIN rail hook until it
		clicks.

^{*2} To operate the indication selector switch, do not use a tool such as a screwdriver. Doing so may damage the switch.

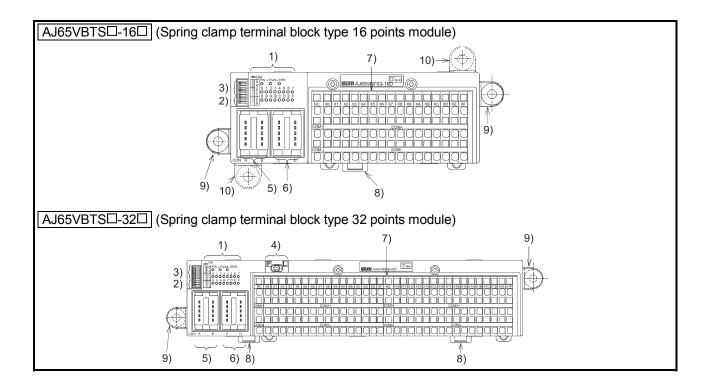


No.	Item				De	escription					
1)	Operating status indicator	LED name				D	etails				
	LED	DOMED	Power being	supplied							
		POWER	Off: I	Off: No power supplied							
			On: /	Any protectio	n of the	output p	art was a	t was activated.			
		PROTECT		(The blown fuse was detected in the master module.)							
			Off: Normal operation								
		L RUN	On: I	On: Normal communication							
		On. No communication (timeout error)									
		On: Communication error									
			Flashing regularly: The station number or transmission speed switch setting is changed.							o obongod	
			The station number or transmission speed switch setting is changed while power is on.								
		L ERR.	ERR. Flashing irregularly:								
		The terminating resistor setting is incorrect.									
		The module or CC-Link dedicated cable is affected by noise.							se.		
		Off: Normal communication									
		X0 to X7/									
		Y0 to YF/ On: Input/output ON									
		X0 to X7, Off: Input/output OFF Y8 to YF									
2)	Transmission speed setting										
۷)	,	C-#i			Switch	ch status			Transmission speed		
	switch	Settir	ng	4		2	1	Tra	nsmissio	n speed	
		0		OFF	0	FF	OFF		156kbps		
		1		OFF		FF	ON		625kbps		
		2		OFF	+	ON	OFF		2.5 Mbps		
		3		OFF ON		ON FF	ON OFF		5.0 Mbps 10 Mbps		
				ssion speed within the above range.						03	
				n speed with unication ada			-	nn sneed	(Defau	lt: all OFF)	
3)	Station number setting			"40" for the	•		21101111001	эн оросо	. (Bolad	it. dii Oi i j	
3)	Station number setting				•						
	switch			or "8" for the			a *1				
				ber within the	•		+ .				
		(⊏xample) S	eung t	he station nu	mber to	32.	0255	nlanc		 1	
		Station n	umber	Tens place 40	20	10	8	place 4	2	1	
		10		ON	OFF	ON	OFF	OFF	OFF	OFF	
			comm						•		
41	Terminal resistor setting			unication ada		sei iiie Si	auon nur	IIDEI. (DE	riduit. dli	UFF)	
4)		USed to set t		ninating resis switch	ιΟI.						
	switch	1	DIF	2 switch				Contents			
		OFF	=	OFF			No tern	ninating re	esistor		
		ON		OFF				minating			
		OF		ON				minating			
		ON		ON				ng prohibi			
		(Default: all	OFF)								
		(Default: all	OFF)								

^{*1} A unique station number should be set.

No.	Item		Description					
5)	Waterproof connector for							
	transmission line*2			Printing	Description			
			а	LINK IN	Connector (male, 4 pins) for the IN-side (master station side) transmission line			
			b LINK OUT		Connector (female, 5 pins) for the OUT-side transmission line. Attach a waterproof cap (accessory) to the unused connector. (Tightening torque range:0.29 to 0.34N•m)			
6)	Waterproof connector for							
	power line*2			Printing	Description			
			С	UNIT POWER	Connector (male, 5 pins) for supplying power to the module			
			d	AUX.	Connector (male, 5 pins) for supplying power to loads			
7)	Waterproof connector for I/O 2	Att	Waterproof connectors for I/O signals. Attach an optional waterproof cap (A6CAP-WP2) to the unused waterproof connector. (Tightening torque range: 0.29 to 0.34N•m)					
8)	FG terminal	FG	termina	I for module				
9)	Communication adapter mounting screw		Used to mount or remove a communication adapter while the module is online. (Tightening torque range: 0.42 to 0.58N•m)					
10)	Module mounting hole			s for mounting the torque range: 0.78	module (2-4.5 × 6, M4 screw) 8 to 1.18N•m)			

^{*2} Waterproof connector (compliant with IEC 60947-5-2, M12)



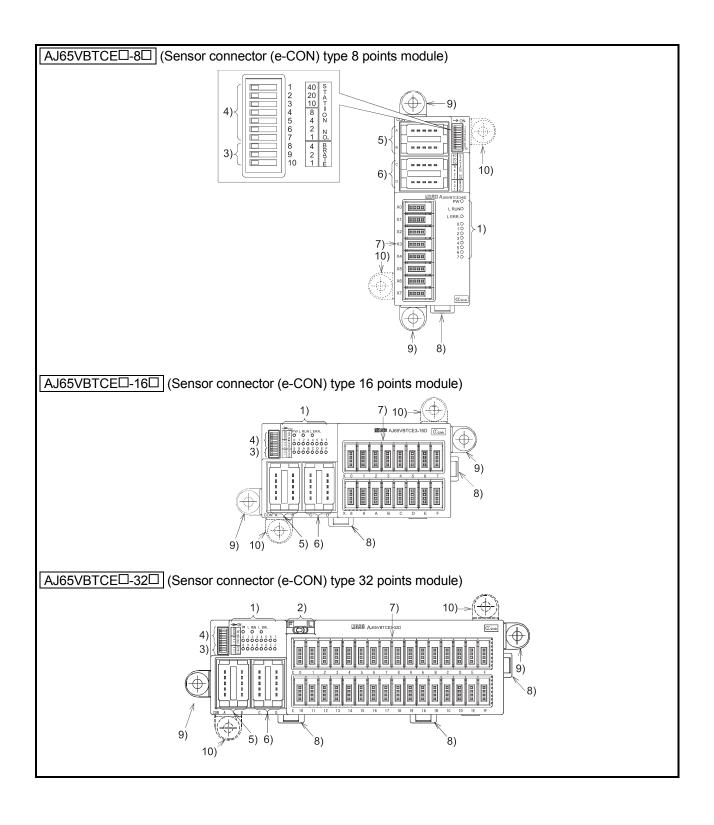
2 - 21 2 - 21

No.	Item					Descript	ion				
1)	Operating status indicator LED	LED	name				Deta	ails			
		PW		On: Power being supplied							
				Off: N	lo powe	r supplied	ł				
			RUN	On: N	lormal c	ommunic	ation				
		LI	KUN	Off: No communication (timeout error)							
				On: C	Commun	ication er	ror				
				Flash	ing regu	larly:					
				The	e station	number	or trans	missior	speed s	witch se	etting
						while po			•		ŭ
		LE	ERR.		ing irreg	-					
						ating resi	stor sett	ina is ir	correct		
						e or CC-L		-		ffected	hv
						00 00 2	iiiik dod	ioatoa (Jabie ie e	ncolou	. J
					noise.						
				Off: Normal communication							
		0	to F	On: Input/output ON							
		Off: Input/output OFF									
2)	Transmission speed setting switch			Switch statu		S		Transmission			
			Setting		4	2	1		speed	J.,	
			0		OFF	OFF	OFI	=	156kbps		
			1		OFF	OFF	ON		625kbps		
			3		OFF OFF	ON ON	OFI ON		2.5 Mbps 5.0 Mbps		
			4		ON	OFF	OF		10 Mbps		
		Set the	transmissio	on sne	ed withir	the abo	ve range				
3)	Station number setting switch		10", "20", c					J			
,	Citation number setting switch		1", "2", "4",			•					
			station nun			-		*1			
						1	1 10 04.				1
			Stationnumber	40	Tens place	10	8	One 4	s place 2	1	-
			1	OFF	OFF	OFF	OFF	OFF	OFF	ON	1
			2	OFF	OFF	OFF	OFF	OFF	ON	OFF]
			3	OFF	OFF	OFF	OFF	OFF	ON	055	4
			. 4	OFF	OFF	OFF ·	OFF	OFF	OFF	OFF ·	1
			10	OFF	OFF	ON	OFF	OFF	OFF	OFF]
			11	OFF	OFF	ON	OFF	OFF	OFF	ON	4
			64	: ON	: ON	: OFF	: OFF	: ON	: OFF	: OFF	-
		(Evama			•	•		ON	UFF	UFF	J
		(⊏xamp	le) Setting			1	۷.				٦
			Station		Tens place				s place		-
			number 32	40 OFF	20 ON	10 ON	8 OFF	4 OFF	2 ON	1 OFF	1
			JŁ	OI.L	ON	ON	OI.L	OFF	ON	OFF	1

^{*1} A unique station number should be set.

No.	Item	Description
4)	Indication selector switch*2	When the switch is set to "F", LEDs indicate the ON/OFF status of the first 16 points. When the switch is set to "L", LEDs indicate the ON/OFF status of the latter 16 points.
5)	Connector for communication	One-touch connector for communication line. When carrying out wiring, connect two optional one-touch connector plugs for communication (A6CON-L5P) at top and bottom. When changing the module online, connect the optional online connectors (A6CON-LJ5P) between the connector and plugs. When the module is used at either end of the CC-Link system, attach an optional one-touch connector plug with terminating resistor (110Ω) (A6CON-TR11(N)).
6)	Connector for power supply and FG	One-touch connector for module power supply line, and FG. When carrying out jumper wiring, connect two optional one-touch connector plugs for power supply and FG at top and bottom. Two different types (A6CON-PW5P, A6CON-PW5P-SOD) are available as the one-touch connector plugs for power supply and FG. When not carrying out jumper wiring, also connect the plugs (for safety and dust prevention). When changing the module online, connect the optional online connectors (A6CON-PWJ5P) between the connector and plugs.
7)	2-piece spring clamp terminal block	2-piece terminal block for I/O signals.
8)	DIN rail hook	Hook to install the module to the DIN rail or connector type Metal installation fitting (option). When mounting the module to a DIN rail, push in the DIN rail hook until it clicks.
9) 10)	Mounting bracket (accessory)	Used to install the module to a control panel.

^{*2} To operate the indication selector switch, do not use a tool such as a screwdriver. Doing so may damage the switch.



2 - 24 2 - 24

Setting 4 2 1 0 OFF OFF OFF 1 OFF OFF ON 2 OFF ON OFF 3 OFF ON ON S	correct. able is affect	first 16				
PW On: Power being supplied Off: No power supplied L RUN On: Normal communication Off: No communication (timeout error) On: Communication error Flashing regularly: The station number or transmission s is changed while power is on. L ERR. Flashing irregularly: The terminating resistor setting is incommunication one off: Normal communication O to F Off: Normal communication On: Input/output ON Off: Input/output OFF 2) Indication selector switch When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF O OFF OFF O O OFF O OFF O O O OFF O O	correct. able is affect	first 16				
L RUN On: Normal communication Off: No communication (timeout error) On: Communication error Flashing regularly: The station number or transmission s is changed while power is on. L ERR. Flashing irregularly: The terminating resistor setting is incompleted in the module or CC-Link dedicated canoise. Off: Normal communication On: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting Setting Switch status Transmission speed setting switch	correct. able is affect	first 16				
Communication (timeout error)	correct. able is affect	first 16				
On: Communication error Flashing regularly: The station number or transmission is is changed while power is on. L ERR. Flashing irregularly: The terminating resistor setting is incompleted in the module or CC-Link dedicated canoise. Off: Normal communication On: Input/output ON Off: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF ON OFF 1 OFF OFF ON OFF 1 OFF OFF ON OFF 3 OFF ON OFF 3 OFF ON OFF Set the transmission speed within the above range.	correct. able is affect	first 16				
The station number or transmission is is changed while power is on. L ERR. Flashing irregularly: The terminating resistor setting is incompleted to the terminating resistor setting is incompleted. The module or CC-Link dedicated canoise. Off: Normal communication On: Input/output ON Off: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting Switch status Transmission speed setting switch Set to "GFF OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	correct. able is affect	first 16				
is changed while power is on. L ERR. Flashing irregularly: The terminating resistor setting is inc. The module or CC-Link dedicated ca noise. Off: Normal communication On: Input/output ON Off: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF ON Set the transmission speed within the above range.	correct. able is affect	first 16				
L ERR. Flashing irregularly: The terminating resistor setting is incompleted to the terminating resistor setting is incompleted to the terminating resistor setting is incompleted. Off: Normal communication On: Input/output ON Off: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF ON OFF ON OFF Setting OFF OFF ON ON OFF Setting OFF ON ON ON ON ON Setting OFF ON	able is affect	first 16				
The terminating resistor setting is incompleted in the module of CC-Link dedicated canoise. Off: Normal communication On: Input/output ON Off: Input/output OFF When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting A 2 1 O OFF OFF OFF ON OFF OFF ON OFF Set the transmission speed within the above range.	able is affect	first 16				
The module or CC-Link dedicated ca noise. Off: Normal communication On: Input/output ON Off: Input/output OFF 2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting Switch status Transmission speed setting switch O OFF OFF OFF ON 1 OFF OFF ON 2 OFF ON OFF 3 OFF ON OFF 3 OFF ON ON 4 ON OFF OFF Set the transmission speed within the above range.	able is affect	first 16				
noise. Off: Normal communication On: Input/output ON Off: Input/output OFF 2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting South status Transmission speed setting switch Setting OFF OFF OFF ON OFF OFF ON OFF OFF ON Set the transmission speed within the above range.	status of the	first 16				
Off: Normal communication On: Input/output ON Off: Input/output OFF 2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF O OFF OFF O OFF OFF O OFF OFF						
On: Input/output ON Off: Input/output OFF 2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF 1 OFF OFF ON 2 OFF ON OFF 3 OFF ON OFF 3 OFF ON OFF 4 ON OFF 5 Set the transmission speed within the above range.						
2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting 4 2 1 O OFF OFF OFF 1 OFF OFF 1 OFF OFF 2 OFF ON OFF 3 OFF ON OFF 3 OFF ON ON 4 ON OFF OFF Set the transmission speed within the above range.						
2) Indication selector switch*1 When the switch is set to "F", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting O OFF OFF OFF ON OFF OFF ON OFF OFF ON ON SETTING ON OFF OFF OFF ON ON SETTING ON OFF OFF OFF OFF ON ON SETTING ON OFF OFF OFF OFF OFF ON ON OFF OFF OF						
points. When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Tra 0 OFF OFF OFF 1 OFF OFF 1 OFF ON OFF 2 OFF ON OFF 3 OFF ON ON 4 ON OFF OFF Set the transmission speed within the above range.						
When the switch is set to "L", LEDs indicate the ON/OFF st points. 3) Transmission speed setting switch Setting Switch status Tra 0 OFF OFF OFF 1 OFF OFF ON 2 OFF ON OFF 3 OFF ON ON 4 ON OFF OFF Set the transmission speed within the above range.	tatus of the	latter 16				
Transmission speed setting switch Setting Switch status Transmission speed setting switch Setting 4						
3) Transmission speed setting switch Setting Switch status Transmission speed setting switch		 1				
Setting		1				
0 OFF OFF OFF 1 OFF OFF ON 2 OFF ON OFF 3 OFF ON ON 4 ON OFF OFF Set the transmission speed within the above range.	ransmission					
1 OFF OFF ON 2 OFF ON OFF 2 3 OFF ON ON ON 4 ON OFF OFF Set the transmission speed within the above range.	speed					
2 OFF ON OFF 2 3 OFF ON ON S 4 ON OFF OFF Set the transmission speed within the above range.	156kbps	4				
3 OFF ON ON S 4 ON OFF OFF Set the transmission speed within the above range.	625kbps 2.5 Mbps					
Set the transmission speed within the above range.	5.0 Mbps	•				
	10 Mbps]				
4) Station number setting switch Select "10" "20" or "40" for the tens place						
1, State Hamber country and to the place.						
Select "1", "2", "4", or "8" for the ones place.						
Set the station number within the range of 1 to 64.*1						
Station Tens place Ones p	place					
number 40 20 10 8 4	2 1					
1 OFF OFF OFF OFF OFF OFF OFF OFF OFF OF	OFF OF					
2	ON OF					
4 OFF OFF OFF OFF	OFF OF	FF				
10 OFF OFF OFF OFF	: :	<u>: </u>				
10 OFF OFF ON OFF OFF 11 OFF OFF ON OFF OFF	OFF OF					
	: :	:				
64 ON ON OFF OFF ON	OFF OF	-F				
(Example) Setting the station number to 32:	(Example) Setting the station number to 32:					
Station Tens place Ones p						
number 40 20 10 8 4		—				
32 OFF ON OFF OFF	place 2 1					

^{*1} A unique station number should be set.

No.	Item	Description
5)	Connector for communication	One-touch connector for communication line.
		When carrying out wiring, connect two optional one-touch connector plugs for
		communication (A6CON-L5P) at top and bottom.
		When changing the module online, connect the optional online connectors
		(A6CON-LJ5P) between the connector and plugs.
		When the module is used at either end of the CC-Link system, attach an
		optional one-touch connector plug with terminating resistor (110 Ω) (A6CON-
		TR11(N)).
6)	Connector for power supply and	One-touch connector for module power supply line, I/O power supply line, and
	FG	FG.
		When carrying out jumper wiring, connect two optional one-touch connector
		plugs for power supply and FG at top and bottom. Two different types
		(A6CON-PW5P, A6CON-PW5P-SOD) are available as the one-touch
		connector plugs for power supply and FG.
		When not carrying out jumper wiring, also connect the plugs (for safety and
		dust prevention).
		When changing the module online, connect the optional online connectors
		(A6CON-PWJ5P) between the connector and plugs.
7)	Connector for I/O	Connector for I/O signals.
8)	DIN rail hook	Hook to install the module to the DIN rail or connector type Metal installation
		fitting (option). When mounting the module to a DIN rail, push in the DIN rail
		hook until it clicks.
9)	Mounting bracket (accessory)	Used to install the module to a control panel.
10)		(Can be attached in two different ways, 9) and 10).)
		Holding fixtures for screw installation are removal.

3 GENERAL SPECIFICATIONS

The following table lists the general specifications of the compact type remote I/O module.

Item	Specifications						
Operating ambient temperature	0 to 55°C * ⁶						
Storage ambient temperature			-20 to 75	5°C * ⁶			
Operating ambient humidity	10 to 90% RH, non-condensing (The waterproof type remote I/O module is compliant with IP67. st ⁴)						
Storage ambient humidity		1	0 to 90% RH, no	on-condensing			
			Frequency	Constant acceleration	Half amplitude	Sweep count	
	Compliant	Under intermittent vibration Under continuous vibration	5 to 8.4Hz	_	3.5mm	10 times each	
Vibration resistance	with JIS B 3502 and IEC 61131-2		8.4 to 150Hz	9.8m/s ²	_	in X, Y, Z directions	
			5 to 8.4Hz	_	1.75mm		
			8.4 to 150Hz	4.9m/s ²	_	_	
Shock resistance			ant with JIS B 35 s ² , 3 times each i				
Operating atmosphere			No corrosiv	e gases			
Operating altitude * 3	0 to 2000m						
Installation location	Inside a control panel * 5						
Overvoltage category * 1	II or less						
Pollution degree * 2			2 or le	ess			

- *1 This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises.
 - Category II applies to equipment for which electrical power is supplied from fixed facilities. The surge voltage withstand level for up to the rated voltage of 300V is 2500V.
- *2 This index indicates the degree to which conductive material is generated in terms of the environment in which the equipment is used.

 Pollution level 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must be expected occasionally.
- *3 Do not use or store the programmable controller under pressure higher than the atmospheric pressure of altitude 0m. Doing so may cause malfunction. When using the programmable controller under pressure, please consult your local Mitsubishi representative.
- *4 This applies only when all waterproof connectors are being used or when waterproof caps are attached to unused waterproof connectors or pipes. (Only the AJ65SBTW□-16□ has pipes.)
- *5 The module can be used in an environment other than inside a control panel if the conditions such as the operating ambient temperature and humidity are satisfied.
- *6 For the waterproof type remote I/O module (AJ65SBTW□-16□ only), the operating ambient temperature and storage ambient temperature will be as follows.

Ite	Specifications	
Operating ambient temperature	0 to 45°C	
Otana na ambiant tanan na amb	Not wired (individual product)	-20 to 65°C
Storage ambient temperature	Wired (after cable installation)	-10 to 55°C

REMARK

To ensure that the product maintains EMC and Low Voltage Directives, certain measures may be necessary. Please refer to the user's manual for the CPU module used.

MEMO		

4 SPECIFICATIONS FOR INPUT MODULES

This chapter describes the specifications for a input module that can be connected to the CC-Link system.

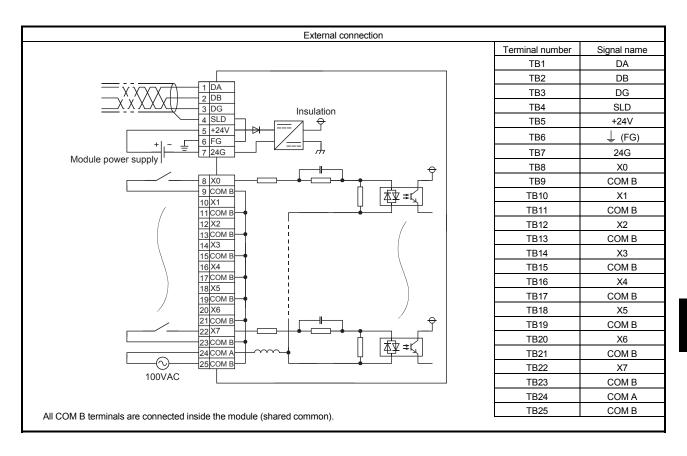
4.1 Terminal Block Type Input Module

4.1.1 AJ65SBTB2N-8A 100VAC input module

	_	Туре	AC input module	
Item			AJ65SBTB2N-8A	Appearance
Number of	input points		8 points	
Isolation me	ethod		Photocoupler	
Rated input voltage/rated frequency			100 to 120VAC, 50/60Hz	
Rated input current			Approx. 7mA (at 100VAC, 60Hz)	7
	oltage range		85 to 132VAC (50/60Hz ±3Hz, ripple ratio: within 5%)	7
	er of simultane	eous input	100% (at 110VAC)	
points			60% (at 132VAC)	
Max. inrush	current		200mA within 1ms (at 132VAC)	7
ON voltage	ON current		80VAC or higher/3.5mA or higher	
OFF voltag	e/OFF current		30VAC or lower/1.7mA or lower	
Input resist	ance		Approx.15kΩ at 60Hz, approx.18kΩ at 50Hz	
Response t		OFF→ON	20ms or less (at 100VAC, 60Hz)	7
		ON→OFF	20ms or less (at 100VAC, 60Hz)	
Wiring met	hod for commo	- 1	8 points/common (2-wire, terminal block type)	
·	occupied statio		32-point assignment/station (8 points used)	
Module pov		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
		Current	35mA or lower (at 24VDC and all points ON)	Na Na Na Na Na Na Na Na
Noise immu	ınitv	1000000	Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	
	y		noise frequency 25 to 60Hz (noise simulator condition)	LEUN LER. X X X X X X X X X
			Fast transient/burst immunity test IEC 61000-4-4:1kV	NIN X
Withstand v	voltage		1780VACrms for 3 cycles between all AC external terminals and ground	PW LRI
	3-		(2000m above sea level)	
			500VAC for 1 minute between all DC external terminals and ground	
Insulation r	esistance		10M Ω or higher between all AC external terminals and ground (500VDC	
			insulation resistance tester)	TX OO
			$10M\Omega$ or higher between all DC external terminals and ground (500VDC	
			insulation resistance tester)	
Weight	•		0.20kg	S ← S 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
External	Communication	on part,	7-point two-piece terminal block	
connection	module power	r supply part	[Transmission circuit, module power supply, FG]	Aussentezh-an
system			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	DALT ON THE SECOND OF THE SECO
	I/O power sup	oply part,	18-point direct-mount terminal block	
	I/O part		[I/O power supply, I/O signal]	
			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	_
Module mo	unting screw		M4 screw with plain washer finished round	
			(tightening torque range: 0.78 to 1.08N•m)	
Applicable DIN rail			Mountable with a DIN rail in 6 orientations TH35.7.550, TH35.7.501 (compliant with IEC 60715)	\dashv
1	solderless term	ninal	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805)	-
Applicable	SOIUEITESS (EM	midi	Applicable wire size: 0.3 to 1.25mm ² (22 to 16 AWG) stranded wire	
			 V2-MS3, RAP2-3SL, TGV2-3N 	
			Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire	
Wire	Material		Copper	┥
l	Temperature	rating	75°C or more	7
Accessory		<u> </u>	User's manual	
				-

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

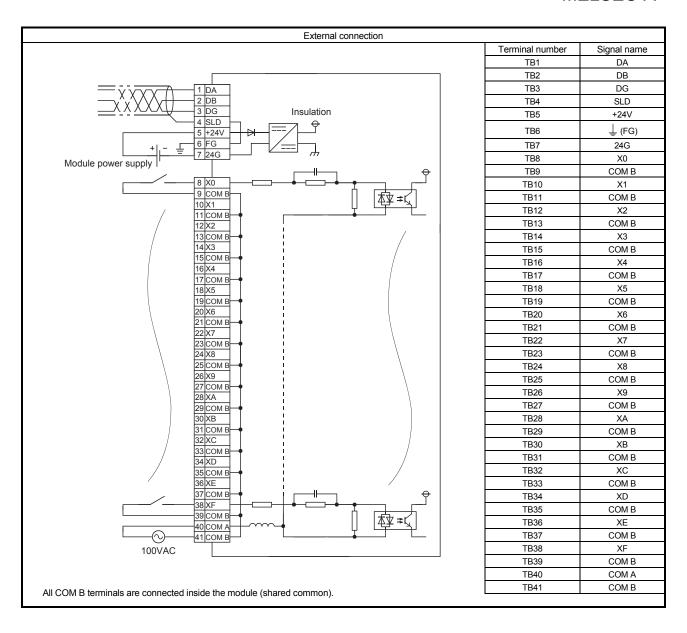
4 - 1 4 - 1



4.1.2 AJ65SBTB2N-16A 100VAC input module

		Туре	AC input module		
Item			AJ65SBTB2N-16A	Appea	arance
Number of	input points		16 points		
Isolation method			Photocoupler		
Rated input voltage/rated frequency			100 to 120VAC, 50/60Hz		
Rated input	t current		Approx. 7mA (at 100VAC, 60Hz)		
Operating v	oltage range		85 to 132VAC (50/60Hz ±3Hz, ripple ratio: within 5%)		
Max. numb	er of simultaneou	is input	100% (at 110VAC),		
points			60% (at 132VAC)		
Max. inrush	current		200mA within 1ms (at 132VAC)		
ON voltage.	/ON current		80VAC or higher/5mA or higher		
OFF voltage	e/OFF current		30VAC or lower/1.7mA or lower		
Input resista	ance		Approx.15kΩ at 60Hz, approx.18kΩ at 50Hz		
Response t	time	OFF→ON	20ms or less (at 100VAC, 60Hz)		(3)
		ON→OFF	20ms or less (at 100VAC, 60Hz)	O E F	
Wiring meth	nod for common		16 points/common (2-wire, terminal block type)	X8 A 8 C D E F	
Number of	occupied stations	3	32-point assignment/station (16 points used)		1 60 100 H
Module pov	ver supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	S B S S S S S S S S S S S S S S S S S S	
•		Current	40mA or lower (at 24VDC and all points ON)	X0 1 2 3 4 5 6 7	
Noise immu	unity	•	Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,		
	•		noise frequency 25 to 60Hz (noise simulator condition)	OMB CO	
			Fast transient/burst immunity test IEC61000-4-4:1kV		
Withstand v	/oltage	1780VACrms for 3 cycles between all AC external terminals and ground (2000m above		N S X S	
			sea level)		
			500VAC for 1 minute between all DC external terminals and ground	X Xe	
Insulation re	esistance		10M Ω or higher between all AC external terminals and ground (500VDC insulation	x xs	
			resistance tester)		
			$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation		
			resistance tester)		
Weight	ı		0.25kg		l W lab
External	Communication	•	7-point two-piece terminal block		
	module power s	upply part	[Transmission circuit, module power supply, FG]		
system			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	N-16A	
			Applicable solderless terminal: 2 or less	SBTB2	
	I/O power supply	y part,	34-point direct-mount terminal block	MARKE AJ65SBTBZN-	
	I/O part		[I/O power supply, I/O signal]		
			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less		
Module mo	Module mounting coreu		··		
Module mounting screw			M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations		
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
• • • • • • • • • • • • • • • • • • • •	solderless termin	al	• RAV1.25-3 (compliant with JIS C 2805)		
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			• V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper		
	Temperature rat	ing	75°C or more		
Accessory			User's manual		

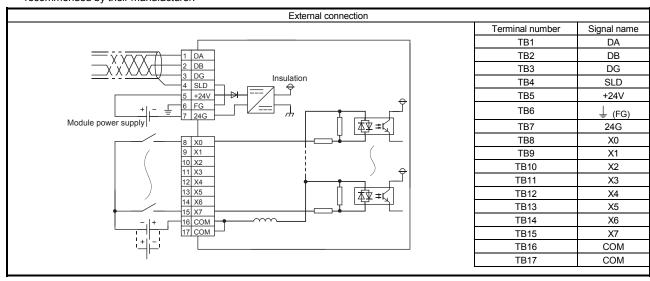
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.3 AJ65SBTB1-8D 24VDC input module (positive common (sink), negative common (source) loading)

		/pe DC input module	
Item		AJ65SBTB1-8D	Appearance
	input points	8 points	11
Isolation method		Photocoupler	†
Rated input	t voltage	24VDC	
Rated input	t current	Approx. 7mA	
Operating v	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. number	er of simultaneous	100%	
input points	•		
ON voltage	/ON current	14VDC or higher/3.5mA or higher	
OFF voltage	e/OFF current	6VDC or lower/1.7mA or lower	
Input resista	ance	Approx. 3.3kΩ	
Response t	time OFF→0	N 1.5ms or less (at 24VDC)	
	ON→O	F 1.5ms or less (at 24VDC)	
Wiring meth	nod for common	8 points/common (2 points) (1-wire, terminal block type)	
Input type		Positive/negative common shared type (sink/source shared type)	
	occupied stations	32-point assignment/station (8 points used)	
Module pov	ver supply Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
	Current	30mA or lower (at 24VDC and all points ON)	
Noise immu	unity	Noise voltage 500Vp-p, noise width 1µs,	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand v		500VAC for 1 minute between all DC external terminals and ground	
Insulation re	esistance	$10M\Omega$ or higher between all DC external terminals and ground (500VDC	2 3 4 4 El-80 (Fo) (Fo) (Fo) (Fo) (Fo) (Fo) (Fo) (Fo)
<u> </u>		insulation resistance tester)	
Protection o	degree	IP2X	2012 34 2012 34 2012 34 2012 34 2013 34 2014 34 2014 34 2014 34 2015 34 2015 34 2015 34 2015 34 2015 34 2015 34 2015 34 201
Weight	lo	0.14kg	&
	Communication particular module power support		
system	part	oly M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less	DAN LAGE
	I/O power supply	10-point direct-mount terminal block [I/O power supply, I/O signal]	
	part,	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
	I/O part	Applicable solderless terminal: 2 or less	
	unting screw	M4 screw with plain washer finished round	
	· ·	(tightening torque range: 0.78 to 1.08N•m)	
		Mountable with a DIN rail in 6 orientations	
Applicable DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable s	solderless terminal	RAV1.25-3 (compliant with JIS C 2805)	
		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
		• V2-MS3, RAP2-3SL, TGV2-3N	
ļ		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material	Copper	
	Temperature ratin		
Accessory		User's manual	

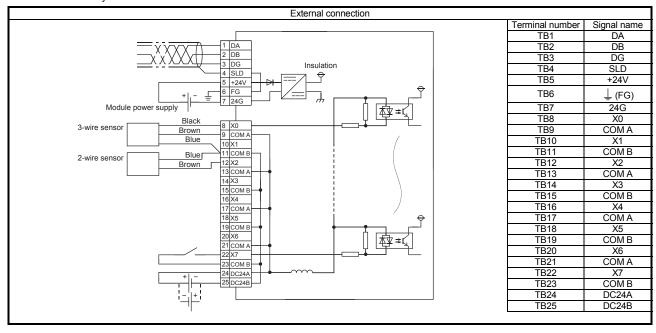
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.4 AJ65SBTB3-8D 24VDC input module (positive common (sink), negative common (source) loading)

Туре			DC input module			
Item			AJ65SBTB3-8D	Appea	rance	
Number of input points			8 points	'''		
Isolation me	thod		Photocoupler	1		
Rated input voltage			24VDC	1		
Rated input			Approx. 7mA			
Operating vo	oltage range		19.2 to 26.4VDC (ripple ratio: within 5%)			
	er of simultaneo	ous input	100%			
points						
ON voltage/	ON current		14VDC or higher/3.5mA or higher			
OFF voltage	/OFF current		6VDC or lower/1.7mA or lower	1 (○) _		
Input resista	nce		Approx. $3.3k\Omega$		(m	
Response ti	me	OFF→ON	1.5ms or less (at 24VDC)	H		(33)
·		ON→OFF	1.5ms or less (at 24VDC)			_
Wiring meth	od for commor	1	8 points/common (3-wire, terminal block type)		1	(33)
Input type			Positive/negative common shared type (sink/source shared type)			
Supply curre	ent for connecte	ed device	1.0A or lower/common	STATION 1 40.20 10]8 4 40.20 10]8 4 1		(33)
Number of o	ccupied station	าร	32-point assignment/station (8 points used)	4 S E S E		
Module pow	er supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		(3)	
	,	Current	40mA or lower (at 24VDC and all points ON)	1 *	_	
Noise immu	nity	•	Noise voltage 500Vp-p, noise width 1µs,	1		- V/
	,		noise frequency 25 to 60Hz (DC type noise simulator condition)			
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	[2] [2]		_
Insulation re	sistance		10MΩ or higher between all DC external terminals and ground (500VDC	11 유버ல		
			insulation resistance tester)	MAA X I B3	(33)	
Protection d	egree		IP2X		(23)	I ()
Weight			0.18kg			
External	Communicati		7-point two-piece terminal block [Transmission circuit, module power supply, FG]			(13)
connection	module power	er supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	2 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(3)	
system			Applicable solderless terminal: 2 or less	X0.1 2 24V 2 4V 2 (F	_	(33)
	I/O power su	pply part,	18-point direct-mount terminal block [I/O power supply, I/O signal]	R X012 3 4 □ □ □ □ □ □ □ +24V 24G □ □ □ □ □ □ □ 0		-
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			(33)
Module mou	inting corour		Applicable solderless terminal: 2 or less M4 screw with plain washer finished round	DA DG	(3)	
wodule mod	inting screw		(tightening torque range: 0.78 to 1.08N•m)		(3)	(33)
			Mountable with a DIN rail in 6 orientations			
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	$\mathbf{H} \cup \mathbf{H} \cup \mathbf{H}$		
Applicable blivial Applicable solderless terminal		inal	• RAV1.25-3 (compliant with JIS C 2805)	1		
Applicable solueness terminal		iiai	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]			
			• V2-MS3, RAP2-3SL, TGV2-3N			
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]			
Wire	Material		Copper			
	Temperature	rating	75°C or more	1		
Accessory			User's manual	1		
	-1:1-11-1-		als connected to the terminal block, refer to the table above. Use applical	la la contra a face than		

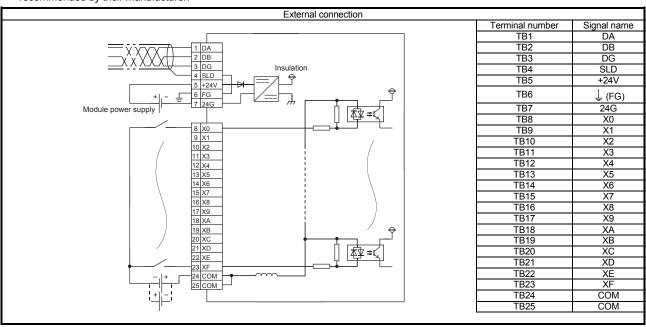
* For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.5 AJ65SBTB1-16D 24VDC input module (positive common (sink), negative common (source) loading)

		Type	DC input module	
Item			AJ65SBTB1-16D	Appearance
Number of	f input points		16 points	••
Isolation method			Photocoupler	
Rated inpu			24VDC	
Rated inpu	ut current		Approx. 7mA	
Operating	voltage rang	е	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. numl	ber of simulta	aneous input	100%	
points				
	e/ON current		14VDC or higher/3.5mA or higher	
OFF voltage	ge/OFF curre	ent	6VDC or lower/1.7mA or lower	
Input resis	tance		Approx. 3.3kΩ	SA COOM
Response	time	OFF→ON	1.5ms or less (at 24VDC)	H H H H H H H H H H H H H H H H H H H
		ON→OFF	1.5ms or less (at 24VDC)	
Wiring me	thod for com	mon	16 points/common (2 points) (1-wire, terminal block type)	
Input type			Positive/negative common shared type (sink/source shared type)	X X B X B X X B X X B X X B X X B X B X X B
	foccupied st	ations	32-point assignment/station (16 points used)	
Module po	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
		Current	35mA or lower (at 24VDC and all points ON)	
Noise imm	nunity		Noise voltage 500Vp-p, noise width 1µs,	
			noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation	resistance		10M Ω or higher between all DC external terminals and ground (500VDC	
			insulation resistance tester)	
Protection	degree		IP2X	A A A B S B T B 1 T B B B B B B B B B B B B B B B
Weight			0.18kg	
External	Communic	ation part,	7-point two-piece terminal block	
	module po	wer supply	[Transmission circuit, module power supply, FG]	
system	part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			Applicable solderless terminal: 2 or less	MM (Fig. 246)
		supply part,	18-point direct-mount terminal block [I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw(tightening torque range: 0.59 to 0.88N•m)	S S S S S S S S S S S S S S S S S S S
Madula			Applicable solderless terminal: 2 or less	
iviodule m	ounting screv	N	M4 screw with plain washer finished round	DB D DB
			(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations	
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
		orminal	• RAV1.25-3 (compliant with JIS C 2805)	
Applicable	Applicable solderless terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
			• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	
	Temperatu	re rating	75°C or more	
Accessory		o ruung	User's manual	
			minals connected to the terminal block, refer to the table above. Use an	

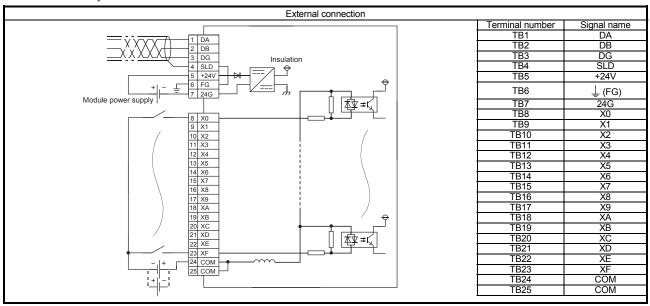
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.6 AJ65SBTB1-16D1 24VDC input module (positive common (sink), negative common (source) loading)

		Туре	DC input module		
Item			AJ65SBTB1-16D1	Appea	arance
Number of	input points	3	16 points	13.	
Isolation m			Photocoupler		
Rated inpu	ıt voltage		24VDC		
Rated inpu	ıt current		Approx. 5mA		
Operating	voltage rang	ge	19.2 to 26.4VDC (ripple ratio: within 5%)		
Max. numb	per of simult	aneous input	100%		
points		•			
ON voltage	e/ON curren	t	15VDC or higher/3mA or higher		
OFF voltag	ge/OFF curr	ent	3VDC or lower/0.5mA or lower		
Input resist	tance		Approx. 4.7kΩ	RATE 2 1	1 (070) 1
Response	time	OFF→ON	0.2ms or less (at 24VDC)		1 _ 1030 1
		ON→OFF	0.2ms or less (at 24VDC)		
Wiring met	thod for com	nmon	16 points/common (2 points) (1-wire, terminal block type)	N A A N A N A N A N A N A N A N A N A N	
Input type			Positive/negative common shared type (sink/source shared type)	STATION NO 40.20 10 8 4 2	
Number of	occupied s	tations	32-point assignment/station (16 points used)		
Module po	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		1 (0%) 1
		Current	40mA or lower (at 24VDC and all points ON)		
Noise imm	unity		Noise voltage 500Vp-p, noise width 1µs,		T = 1(050) F//
			noise frequency 25 to 60Hz (DC type noise simulator condition)		
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground		1 (300) / 1
Insulation i	resistance		$10 \text{M}\Omega$ or higher between all DC external terminals and ground (500VDC	X89 A B C D E O O O O O O O O O O O O O O O O O O	1 1)()
			insulation resistance tester)	AJ65SBTB1-16D1	
Protection	degree		IP2X	X89 A A B B B B B B B B B B B B B B B B B	
Weight			0.18kg	II Ψ ΙΟ ΙΙΙ	
External		cation part,	7-point two-piece terminal block		
connection		wer supply	[Transmission circuit, module power supply, FG]	20 00	
system	part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	2 3 4 5 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
			Applicable solderless terminal: 2 or less		
		supply part,	18-point direct-mount terminal block [I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less		I = (ΩξΩ I
Modulo mo	unting scre	14/	M4 screw with plain washer finished round	L RUN LE	
Module III	Juliung Scre	vv	(tightening torque range: 0.78 to 1.08N•m)		1 (000)
			Mountable with a DIN rail in 6 orientations		
Applicable DIN rail			TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)		
	solderless t	erminal	• RAV1.25-3 (compliant with JIS C 2805)		
, ppaa.io oo.aa.iiooo toiiia			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper		
	Temperatu	re rating	75°C or more		
Accessory			User's manual		

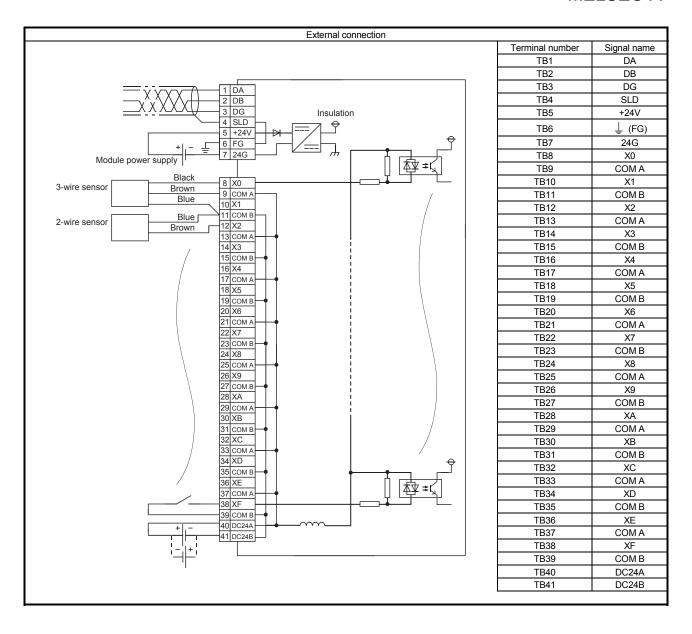
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.7 AJ65SBTB3-16D 24VDC input module (positive common (sink), negative common (source) loading)

		Туре	DC input module		
Item			AJ65SBTB3-16D	Appea	arance
Number of	input points		16 points		
Isolation method			Photocoupler		
Rated input voltage			24VDC		
Rated input	t current		Approx. 7mA		
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)		
Max. numb	er of simultaneous	s input points	100%		
ON voltage	e/ON current		14VDC or higher/3.5mA or higher		
OFF voltag	e/OFF current		6VDC or lower/1.7mA or lower		
Input resist	ance		Approx. 3.3 k $Ω$		
Response t	time	OFF→ON	1.5ms or less (at 24VDC)		
		ON→OFF	1.5ms or less (at 24VDC)	BBB XF los	
Wiring metl	hod for common		16points/common (3-wire, terminal block type)	BBBBB B	₩ @ h
Input type	·		Positive/negative common shared type (sink/source shared type)		
Supply curr	rent for connected	device	1.0A or lower/common	- × × × × × × × × × × × × × × × × × × ×	
Number of	occupied stations		32-point assignment/station (16points used)	XB MAA CO	
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	XX XX	
		Current	45mA or lower (at 24VDC and all points ON)	X9 MA CC	W M
Noise imm	unity		Noise voltage 500Vp-p, noise width 1µs,	8X 8X 800	W M
			noise frequency 25 to 60Hz (DC type noise simulator condition)	x7 OMA[CC	W M
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground	x e	W M
Insulation r	esistance		$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation	OMAC	W M
			resistance tester)	WB X	
Protection of	degree		IP2X	E F	W M
Weight			0.25kg	X88 A B C D E F O D D D D D D D D D D D D D D D D D D	₩ @
External	Communication p		7-point two-piece terminal block [Transmission circuit, module power supply, FG]	28783- 20MA C	
connection	module power su	pply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	Aussi	
system			Applicable solderless terminal: 2 or less	X0 1 2 3 4 5 6 7 	
	I/O power supply	part,	34-point direct-mount terminal block [I/O power supply, I/O signal]	24V 2	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	SUNLERR.	@ W
			Applicable solderless terminal: 2 or less	MALEN BERNELLEN	
Module mo	ounting screw		M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable DIN rail			TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)		
Applicable solderless terminal		li .	• RAV1.25-3 (compliant with JIS C 2805)		
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper		
	Temperature ratir	ng	75°C or more		
Accessory	•	-	User's manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

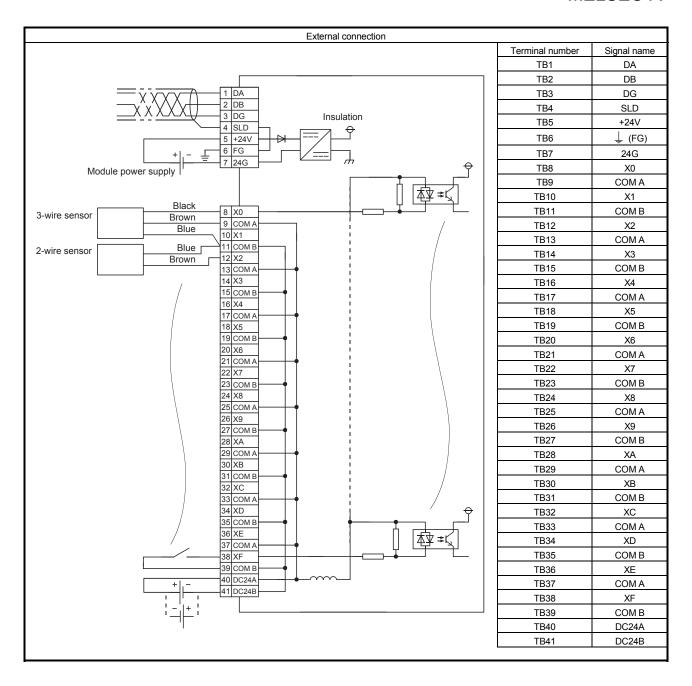


4.1.8 AJ65SBTB3-16KD 24VDC input module (positive common (sink), negative common (source) loading)

	_	Туре			DC input modu	le		
Item				AJ65SBT			Appea	rance
Number of input points		16 points						
Number of input points Isolation method		Photocoupler				1		
Rated input voltage		24VDC				1		
Rated input			Approx. 7mA				1	
Operating v	oltage range		20.4 to 28.8VDC (ripp	ole ratio: within 5%)			1	
		eous input points	`	,			1	
	/ON current		14VDC or higher/4m/	A or higher			1	
OFF voltage	e/OFF current	ŧ	5.5VDC or lower/1.7m				l	
Input resista	ance		Approx. 3.0kΩ					
Response t	time	Input response speed	0.2ms	1.5ms	5ms	10ms		
		OFF→ON	0.2ms or less	1.5ms or less	5ms or less	10ms or less	T COWN	
		ON→OFF	0.2ms or less	1.5ms or less	5ms or less	10ms or less	BB B B	
Wiring meth	hod for commo	on	16 points/common (3-	-wire, terminal block ty	rpe)		T WWO	1 🛎 1 🕸 h
Input type		-	· ·	nmon shared type (sin	. /			
	ent for connec	cted device	1.0A or lower/commo				00 N 8 See 1 10 N 10 See 1 10	i y la f
	occupied stati			station (16 points used	i)		NO XA	
Module pov	ver supply	Voltage	i	20.4 to 26.4VDC (ripple ratio: within 5%)				
	,,,	Current	50mA or lower (at 24VDC and all points ON)					
Noise immu	unity		Noise voltage 500Vp-		,		X7	
	,			noise frequency 25 to 60Hz (DC type noise simulator condition)				
Withstand v	/oltage		500VAC for 1 minute between all DC external terminals and ground □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □					
Insulation re	esistance		10M Ω or higher between all DC external terminals and ground (500VDC insulation				X4 COI	
			resistance tester)					
Protection of	degree		IP2X			X8 9 A B C D E F F F F F F F F F F F F F F F F F F		
Weight			0.26kg				0 8 4 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
External	Communicati	ion part,	7-point two-piece term	ninal block [Transmiss	ion circuit, module po	wer supply, FG]	X8.9 X8.0 00.0 X8.0 0.0 0.0	
connection	module power	er supply part	M3×5.2 screw (tighter	ning torque range: 0.5	9 to 0.88N•m)		RX01 2 3 4 5 6 7 GOOD GOOD GOOD GOOD GOOD GOOD GOOD GOO	
system			Applicable solderless				3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	I/O power su	pply part,		terminal block [I/O po]	244	
	I/O part		M3×5.2 screw (tighter					
			Applicable solderless				PIN L RUN	
Module mo	unting screw		IM4 screw with plain wasner finished round (tightening torque range: 0.78 to 1.08N•m)					
A collected DIAL coll		Mountable with a DIN rail in 6 orientations						
Applicable DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)			-			
Applicable s	solderless terr	nınal	• RAV1.25-3 (complia	,	to 16 A\A(O) =t====1	udro]		
				e: 0.3 to 1.25mm ² (22	to 16 AWG) stranded	wiiej		
			V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
Wire	Material		Copper	5. 1.20 to 2.0111111 (10	to 14 AVVO) Stranded	wiicj	1	
vviie	Temperature	rating	75°C or more				1	
Accessory	po.a.u.o	19	User's manual				1	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

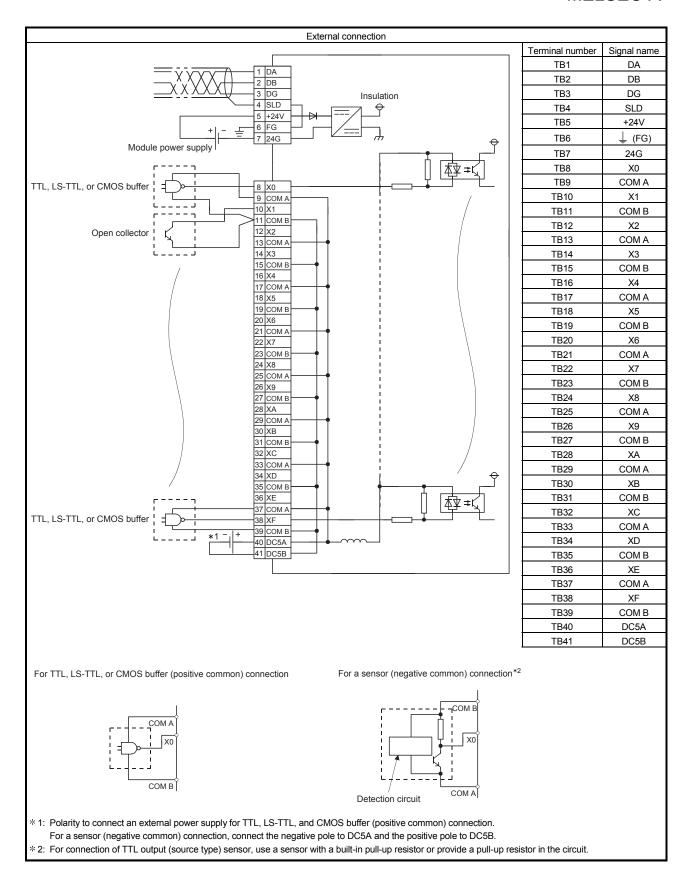
4 - 11 4 - 11



4.1.9 AJ65SBTB3-16D5 5VDC input module (positive common (sink), negative common (source) loading)

	_	Туре	DC input module		
Item			AJ65SBTB3-16D5	Appea	arance
Number of inp	out points		16 points		
Isolation method			Photocoupler		
Rated input voltage			5VDC		
Rated input voltage Rated input current			Approx. 4mA		
Operating volt	tage range		4.25 to 6VDC (ripple ratio: within 5%)		
Max. number		us input	100%		
points		•			
ON voltage/O	N current		3.5VDC or higher/2mA or higher		
OFF voltage/0	OFF current		1.5VDC or lower/1mA or lower	B B B CSA	
Input resistand	ce		Approx. 1.0kΩ	WAX BEE	
Response tim	ne	OFF→ON	1.5ms or less (at 5VDC)		
		ON→OFF	1.5ms or less (at 5VDC)	40 201 XD A CO	
Wiring method	d for common		16 points/common (3-wire, terminal block type)	ON B ON C COMB COMA C	
Input type			Positive/negative common shared type (sink/source shared type)	COMB	
Supply curren	nt for connecte	d device	1.0A or lower/common	A XB	
Number of occ	cupied station	S	32-point assignment/station (16 points used)	AX AX	
Module power	r supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	7 X8 X9 XA	
		Current	30mA or lower (at 24VDC and all points ON)	X8 88 88	
Noise immuni	ity		Noise voltage 500Vp-p, noise width 1µs,	X X	
			noise frequency 25 to 60Hz (DC type noise simulator condition)	(6 X7	
Withstand volt	tage		500VAC for 1 minute between all DC external terminals and ground	COMB	
Insulation resi	istance		10M Ω or higher between all DC external terminals and ground (500VDC insulation	4 X5	
			resistance tester)	X4 COMB	
Protection deg	gree		IP2X	- E	
Weight			0.25kg	X8 9 A B C D E F	
External C	Communication	n part,	7-point two-piece terminal block [Transmission circuit, module power supply, FG]	8 P S S S S S S S S S S S S S S S S S S	
connection m	nodule power :	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	6 7 X8 9 A B C D E F	
system			Applicable solderless terminal: 2 or less	X0 1 2 3 4 5 6 7	
1/0	O power supp	ly part,	34-point direct-mount terminal block [I/O power supply, I/O signal]	2 3 4 5 9 9 9 9 0 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
1/0	O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	100 m	
			Applicable solderless terminal: 2 or less	ERR. X	
Module moun	nting screw		M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
Applicable sol	lderless termi	nal	• RAV1.25-3 (compliant with JIS C 2805)		
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			V2-MS3, RAP2-3SL, TGV2-3N Applicable wire size 4.25 to 2.0mm² (46 to 4.4 AWC) atranded wire.		
Wire M	/laterial		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
	emperature ra	ating	Copper 75°C or more		
Accessory	cinperature is	aurig	User's manual		
, 10000301 y			Coor o mandal		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

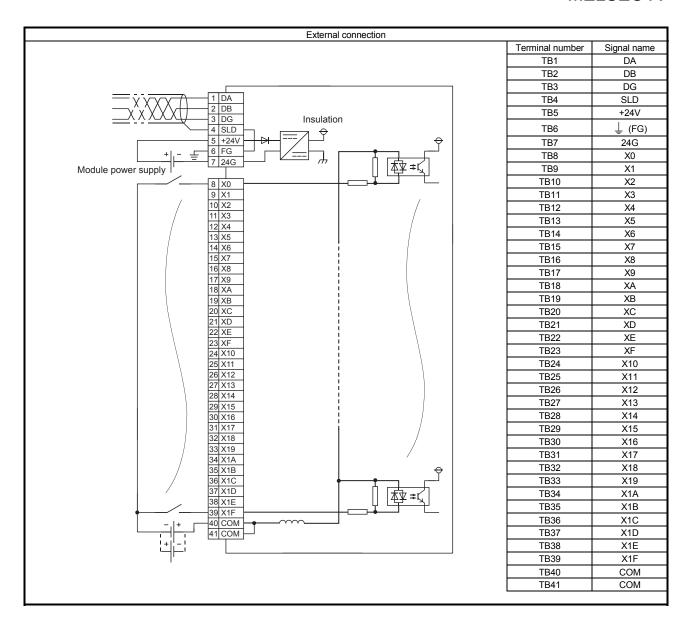


4 - 14 4 - 14

4.1.10 AJ65SBTB1-32D 24VDC input module (positive common (sink), negative common (source) loading)

	_	Type	DC input module	
Item			AJ65SBTB1-32D	Appearance
Number of	input points		32 points	
Isolation method			Photocoupler	1
Rated input voltage			24VDC	1
Rated input	t current		Approx. 7mA	1
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	1
Max. numb	er of simultaneo	us input	100%	1
points				
ON voltage	e/ON current		14VDC or higher/3.5mA or higher	
OFF voltag	e/OFF current		6VDC or lower/1.7mA or lower	
Input resist	ance		Approx. 3.3kΩ	
Response t	time	OFF→ON	1.5ms or less (at 24VDC)	
		ON→OFF	1.5ms or less (at 24VDC)	
Wiring metl	hod for common		32 points/common (2 points) (1-wire, terminal block type)	
Input type			Positive/negative common shared type (sink/source shared type)	
Number of	occupied station	s	32-point assignment/station (32 points used)	
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
		Current	45mA or lower (at 24VDC and all points ON)	1 1 1811 1 030 1 - 1
Noise imm	unity		Noise voltage 500Vp-p, noise width 1µs,	
			noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	1 ×
Insulation r	esistance		10M Ω or higher between all DC external terminals and ground (500VDC insulation	
			resistance tester)	
Protection of	degree		IP2X	
Weight			0.25kg	
External	Communication	part,	7-point two-piece terminal block [Transmission circuit, module power supply, FG]	
connection	module power s	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
system			Applicable solderless terminal: 2 or less	
	I/O power suppl	ly part,	34-point direct-mount terminal block [I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw(tightening torque range: 0.59 to 0.88N•m)	
NA1 1			Applicable solderless terminal: 2 or less	1 1 8 1 1 1 1 1 () 1 () 1
Module mo	ounting screw		M4 screw with plain washer finished round	AND STATE OF
			(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations	
Applicable DIN rail				
Applicable DIN rail		nal	TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805)	
Applicable solderless terminal		iai	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
			• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	1
	Temperature ra	ting	75°C or more	1
Accessory			User's manual	

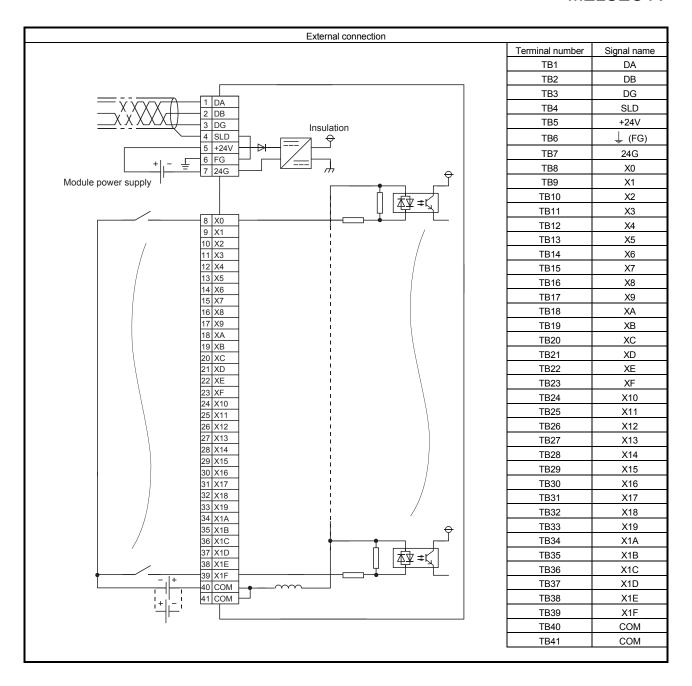
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.11 AJ65SBTB1-32KD 24VDC input module (positive common (sink), negative common (source) loading)

	_	Туре			DC input mod	dule		
Item		.,,,,,	AJ65SBTB1-32KD				Appearance	
Number of input points		32 points						
' '		Photocoupler				1		
Rated input voltage		24VDC				†		
Rated input			Approx. 7mA				†	
	oltage range		20.4 to 28.8VDC (rip	ple ratio: within 5%)			†	
	er of simultane	eous input	100% (at 26.4VDC),				†	
points	o. o. oa.a	Jour III put	100% (412011120),					
ON voltage	/ON current		14VDC or higher/4m	A or higher				
OFF voltag	e/OFF current		5.5VDC or lower/1.7	mA or lower				
Input resista	ance		Approx. 3.0kΩ					
		Input response speed	0.2ms	1.5ms	5ms	10ms	B B B B B I I I I I I I I I I I I I I I	
Response t	time	OFF→ON	0.2ms or less	1.5ms or less	5ms or less	10ms or less	3 ALON W 46.20 10 8 46.20 10 8 46.20 10 8 X1A X1C	
		ON→OFF	0.2ms or less	1.5ms or less	5ms or less	10ms or less		
Wiring meth	nod for commo	on	32 points/common (1	-wire, terminal block	type)			
Input type					nk/source shared type	9)	X16 NA	
	occupied station	ons		station (32 points use		. 7	X14 000 000 000 000 000 000 000 000 000 0	
Module pov		Voltage	20.4 to 26.4VDC (rip	` '	,			
		Current	75mA or lower (at 24VDC and all points ON)					
Noise immu	unity	I.	Noise voltage 500Vp					
			noise frequency 25 to 60Hz (DC type noise simulator condition)					
Withstand v	/oltage		500VAC for 1 minute between all DC external terminals and ground				X1011121314151617	
Insulation re	esistance		10MΩ or higher betw					
			resistance tester)					
Protection of	degree		IP2X					
Weight			0.26kg				X8 9 A B C D E F	
External	Communicati	on part,	7-point two-piece ter	minal block [Transmis	sion circuit, module p	ower supply, FG]	32KO A B B X3	
connection	module powe	r supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)				X8 9 0 X 18181	
system			Applicable solderless	A.c.				
	I/O power sup	oply part,	34-point direct-moun	t terminal block [I/O p	ower supply, I/O sign	al]	X0 1 2 3 4 5 6 7 □□□□□□□□□□□	
	I/O part		M3×5.2 screw (tighte	ning torque range: 0.	59 to 0.88N•m)		240	
			Applicable solderless	terminal: 2 or less				
Module mo	unting screw		M4 screw with plain	washer finished round	l			
				nge: 0.78 to 1.08N•m)				
		Mountable with a DIN rail in 6 orientations						
Applicable DIN rail		·	.5AI (compliant with II	EC 60715)		4		
Applicable solderless terminal		, ,	ant with JIS C 2805)					
				•	to 16 AWG) stranded	a wirej		
			V2-MS3, RAP2-3S Applicable wire size		to 14 AMO) -t	d udral		
\\/!ro	Material	1		e. 1.∠5 to ∠.Umm² (16	to 14 AWG) stranded	u wirej	+	
Wire	Temperature	rating	Copper 75°C or more				1	
Accessory	I i cimperature	idang	User's manual				†	
/ toccoodi y	-1:1-11-1		OSCI S IIIAIIUAI				1	

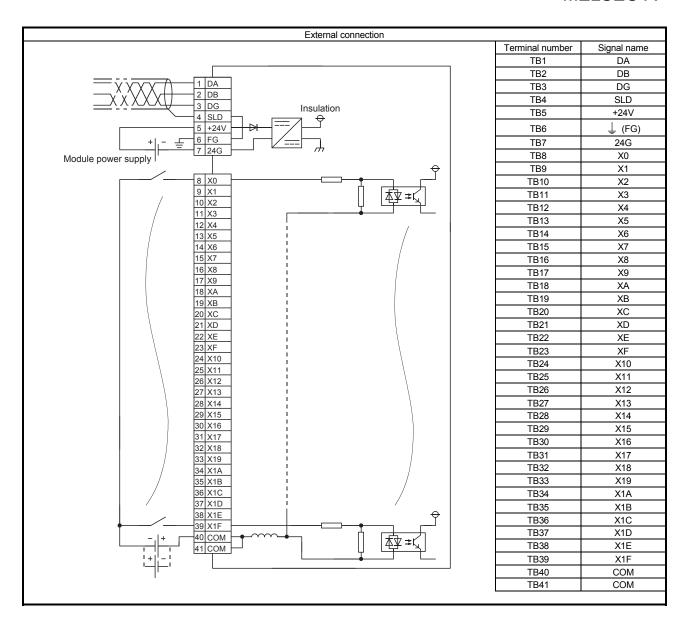
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.1.12 AJ65SBTB1-32D1 24VDC input module (positive common (sink), negative common (source) loading)

	_	Type	DC input module	
Item			AJ65SBTB1-32D1	Appearance
Number of	input points		32 points	
Isolation method			Photocoupler	
			24VDC	
Rated inpu	t current		Approx. 5mA	
Operating v	voltage rang	е	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. numb	er of simulta	aneous input	100%	
points				
ON voltage	e/ON current		15VDC or higher/3mA or higher	
OFF voltag	e/OFF curre	ent	3VDC or lower/0.5mA or lower	
Input resist	tance		Approx. 4.7kΩ	
Response	time	OFF→ON	0.2ms or less (at 24VDC)	
		ON→OFF	0.2ms or less (at 24VDC)	
Wiring met	hod for com	mon	32 points/common (2 points) (1-wire, terminal block type)	
Input type			Positive/negative common shared type (sink/source shared type)	
Number of	occupied sta	ations	32-point assignment/station (32 points used)	
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
-		Current	50mA or lower (at 24VDC and all points ON)	
Noise imm	unity	· · · · · · · · · · · · · · · · · · ·		
	-		noise frequency 25 to 60Hz (DC type noise simulator condition)	S (S) (S) (S) (S) (S) (S) (S) (S) (S) (S
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation r	resistance		$10 \text{M}\Omega$ or higher between all DC external terminals and ground (500VDC	
			insulation resistance tester)	
Protection (degree		IP2X	
Weight			0.25kg	
External	Communic	ation part,	7-point two-piece terminal block [Transmission circuit, module power supply, FG]	88181-3201 X X X X X X X X X
connection	module po	wer supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
system			Applicable solderless terminal: 2 or less	A A Medica British and a second
	I/O power s	supply part,	34-point direct-mount terminal block [I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	
Module mo	ounting screv	V	M4 screw with plain washer finished round	
			(tightening torque range: 0.78 to 1.08N•m)	BOAL FRUN
			Mountable with a DIN rail in 6 orientations	
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable solderless terminal		erminal	• RAV1.25-3 (compliant with JIS C 2805)	
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
			V2-MS3, RAP2-3SL, TGV2-3N Applicable wire size 4.25 to 2.0mm² (46 to 4.4 AMC) atranded wire?	
Wire	Material		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
vviie	Temperatu	re rating	Copper 75°C or more	,
Accessory	Licinperatu	io rating	User's manual	;
y				

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

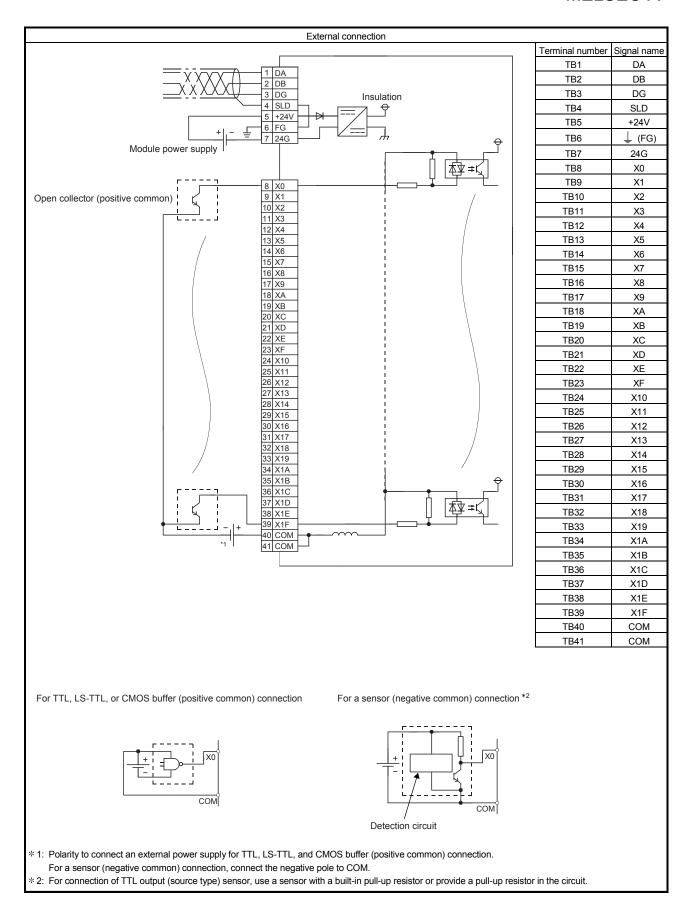


4.1.13 AJ65SBTB1-32D5 5VDC input module (positive common (sink), negative common (source) loading)

		Туре	DC input module	_
Item			AJ65SBTB1-32D5	Appearance
Number of	input points		32 points	
Isolation m			Photocoupler	1
Rated input voltage			5VDC	1
Rated inpu			Approx. 4mA	1
	voltage range		4.25 to 6VDC (ripple ratio: within 5%)	1
	per of simultaneou	ıs input	100%	
points		ao in par		
ON voltage	e/ON current		3.5VDC or higher/2mA or higher	
	e/OFF current		1.5VDC or lower/1mA or lower	S S S S S S S S S S S S S S S S S S S
Input resist	ance		Approx. 1.0kΩ	
Response		OFF→ON	1.5ms or less (at 5VDC)	
		ON→OFF	1.5ms or less (at 5VDC)	
Wiring met	hod for common		32 points/common (1-wire, terminal block type)	
Input type			Positive/negative common shared type (sink/source shared type)	
•	occupied stations	3	32-point assignment/station (32 points used)	
Module pov		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
modulo po	capp.y	Current	35mA or lower (at 24VDC and all points ON)	
Noise imm	unity	0 0.11 0.11	Noise voltage 500Vp-p, noise width 1µs,	
110.00	uy		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation r			10MΩ or higher between all DC external terminals and ground (500VDC	
			insulation resistance tester)	
Protection (degree		IP2X	
Weight	-		0.26kg	
External	Communication	part,	7-point two-piece terminal block	
connection	module power s	•	[Transmission circuit, module power supply, FG]	
system			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	A MASSERIE - 2305 A MASSERIE -
	I/O power suppl	y part,	34-point direct-mount terminal block [I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	Mass 1 2 2 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Module mo	ounting screw		M4 screw with plain washer finished round	MINISTER AVEC
			(tightening torque range: 0.78 to 1.08N•m)	M No 1-24VI
			Mountable with a DIN rail in 6 orientations	
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable solderless terminal		al	RAV1.25-3 (compliant with JIS C 2805)	
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
			• V2-MS3, RAP2-3SL, TGV2-3N	
	Tarana a		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	4
Wire	Material		Copper	4
_	Temperature ra	ting	75°C or more	4
Accessory			User's manual	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

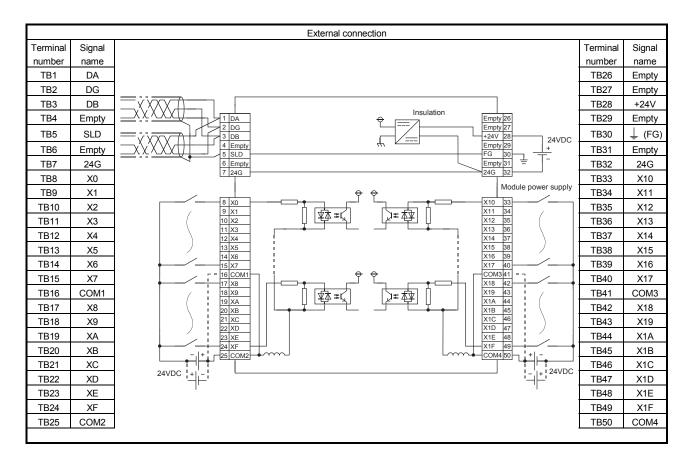
4 - 21 4 - 21



4.1.14 AJ65DBTB1-32D 24VDC input module (positive common (sink), negative common (source) loading)

	Туре	DC input module	
Item	,,,,	AJ65DBTB1-32D	Appearance
Number of input points		32 points	••
Isolation method		Photocoupler	
Rated input voltage	е	24VDC	
Rated input current	t	Approx. 5mA	
Operating voltage	range	20.4 to 31.2VDC (ripple ratio: within 5%)	
Max. number of sir	nultaneous input	100% (at 26.4VDC)	
points			
ON voltage/ON cui	rrent	15VDC or higher/3mA or higher	
OFF voltage/OFF	current	5VDC or lower/1.5mA or lower	MICHIGER A
Input resistance	1	Αρριοχ. 4.7kΩ	MELSEG AJ65DBTB1-32D
Response time	OFF→ON	10ms or less (at 24VDC)	STATION WA STATION WAS STATION
	ON→OFF	10ms or less (at 24VDC)	Logo x1
Wiring method for	common	16 points/common (2 points) (1-wire, terminal block type)	B RATE - 00 01 01 01 01 01
Input type		Positive/negative common shared type (sink/source shared type)	OCtink 172
Number of occupie	ed stations	32-point assignment/station (32 points used)	DA NC
Module power	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	DG NC
supply	Current	45mA or lower (at 24VDC and all points ON)	NC H24V
Noise immunity		Noise voltage 500Vp-p, noise width 1µs,	NC SLD (FG) NC
		noise frequency 25 to 60Hz (DC type noise simulator condition)	246
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground	x1 x10
Insulation resistant	ce	10MΩ or higher between all DC external terminals and ground (500VDC	x2 x12 x12
-		insulation resistance tester)	X4 X14 X15
Protection degree		IP2X	X6 X16 X17 X16
Weight		0.6kg	COM COM
External connection	n system	50-point terminal block	X8 X9 X18 X18
		[Transmission circuit, module power supply, FG, I/O power supply, I/O signal]	XA XB X1B
		M3.5×7 screw (tightening torque range: 0.68 to 0.92N•m) Applicable solderless terminal: 2 or less	XC XID XID
Module mounting s	screw	M4 screw with plain washer finished round	XE XF COM2
module moduling s	,	(tightening torque range: 0.78 to 1.08N•m)	COM2 COM4
Applicable solderle	ess terminal	• R1.25-3.5 (compliant with JIS C 2805)	-320
7 phoduse condended terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
		• RAV2-3.5 (compliant with JIS C 2805)	
		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material	Copper	
	Temperature	75°C or more	
	rating		
Accessory		User's manual	
Part sold separatel	у	A6DIN1C, A2CCOM-TB	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



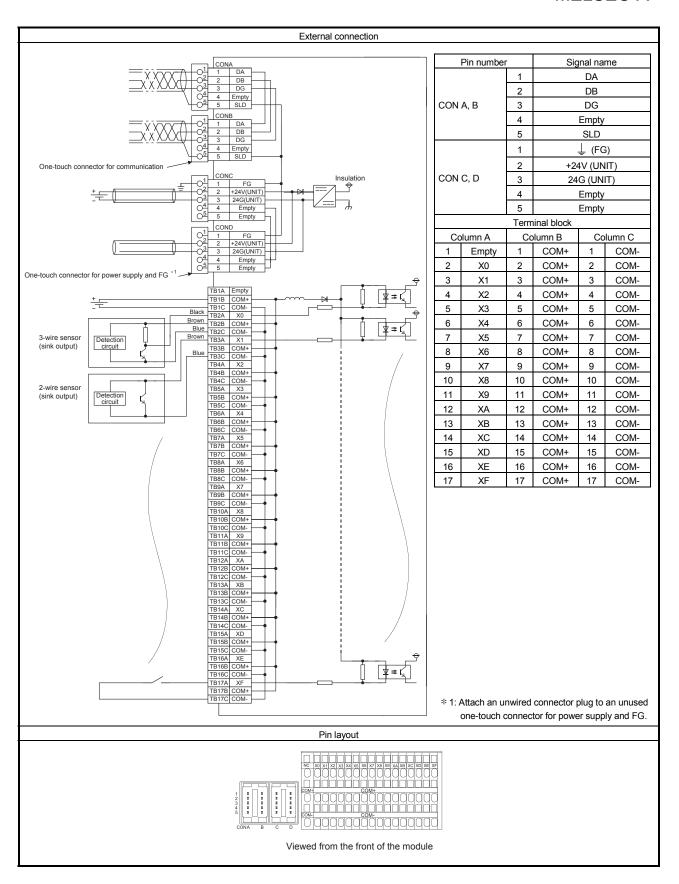
4 - 24 4 - 24

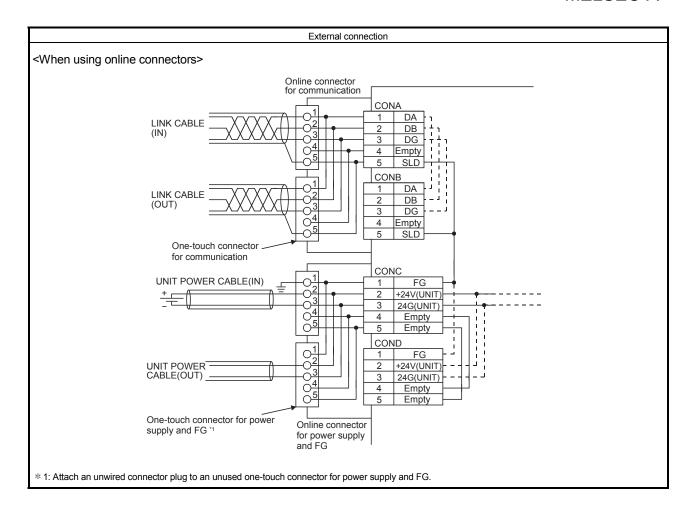
4.2 Spring Clamp Terminal Block Type Input Module

4.2.1 AJ65VBTS3-16D 24VDC input module (positive common (sink type))

Item	Туре	DC input module AJ65VBTS3-16D	Annegrance
	nout points		Appearance
Number of i		16 points Photocoupler	
		24VDC	
Rated input voltage Rated input current		Approx. 5mA	
		 ''	
	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
input points	er of simultaneous	100% or 75% (Refer to Section1.3.)	
ON voltage	ON current	14VDC or higher/3.5mA or higher	
OFF voltage	e/OFF current	6VDC or lower/1.7mA or lower	
Input resista	ance	Approx. $4.7k\Omega$	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	
Wiring meth	nod for common	16 points/common (3-wire, spring clamp terminal block type)	
Input type		Positive common (sink type)	
	ent for connected	1.0A or lower/common	
device			
	occupied stations	32-point assignment/station (16points used)	
Module	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
power supp		35mA or lower (at 24VDC and all points ON)	
Noise immu	, , , , , , , , , , , , , , , , , , , ,	Noise voltage 500Vp-p, noise width 1µs,	
TVOISC IIIIIII	uncy	noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand v	roltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re		10MΩ or higher between all DC external terminals and ground (500VDC insulation	
Ilisulation i	2313141100	resistance tester)	
Protection of	legree	IP1XB	
Weight	.09.00	0.24kg	
External	Communication	One-touch connector for communication [Transmission circuit]	
connectio	part	5-pin IDC plug is sold separately: A6CON-L5P	
n system	part	<pre><pre><pre></pre></pre></pre> <pre></pre> <p< td=""><td></td></p<>	
		Online connector for communication: A6CON-LJ5P	
	Power supply	One-touch connector for power supply and FG [Module power supply, FG]	
	part	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
		<optional></optional>	~o~o
		Online connector for power supply: A6CON-PWJ5P	0 40 0 0 BBBBB 0 0
	I/O part	2-piece spring clamp terminal block [I/O power supply, I/O signals]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Applicable I	OIN rail	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable	Connector for	Applicable cable:	V 0403018 + 5 1 1 5 2 1 O DIN NOTITATE ≣TAR 8
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for	0.66 to 0.98mm ² (18 AWG)	NOON THE PROPERTY OF THE PROPE
	power supply and	[φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	FG	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	
	Spring clamp	Stranded wire 0.08 to 1.5mm² (28 to 16 AWG) * 1	
	terminal block for	Wire strip length: 8 to 11mm	
	I/O		
	Applicable	TE0.5 [Applicable wire size: 0.5mm ²]	
	solderless	TE0.75 [Applicable wire size: 0.75mm²]	
	terminal	TE1 [Applicable wire size: 0.9 to 1.0mm ²]	
		TE1.5 [Applicable wire size: 1.25 to 1.5mm ²]	
		TGV TC1.25-9T [Applicable wire size: 0.3 to 1.65mm ²]	
		TGWV TC1.25-T9 [Applicable wire size: 0.3 to 1.65mm ²]	
Accessory		User's manual, Holding fixtures for screw installation	

st 1: Insert one wire per terminal.

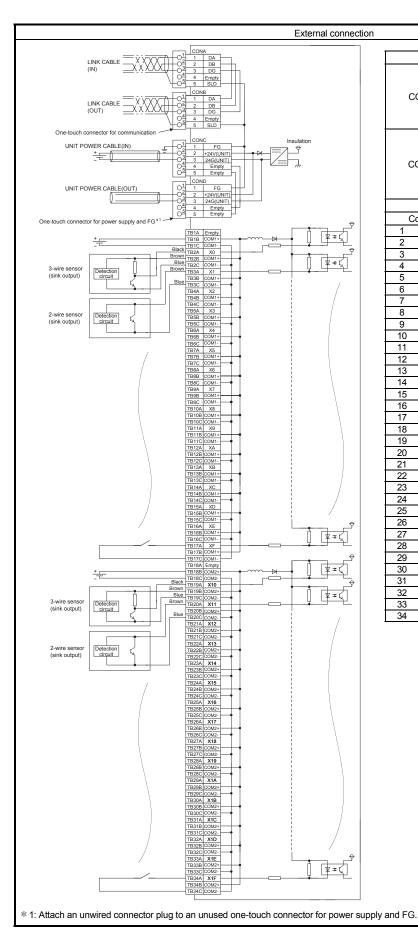




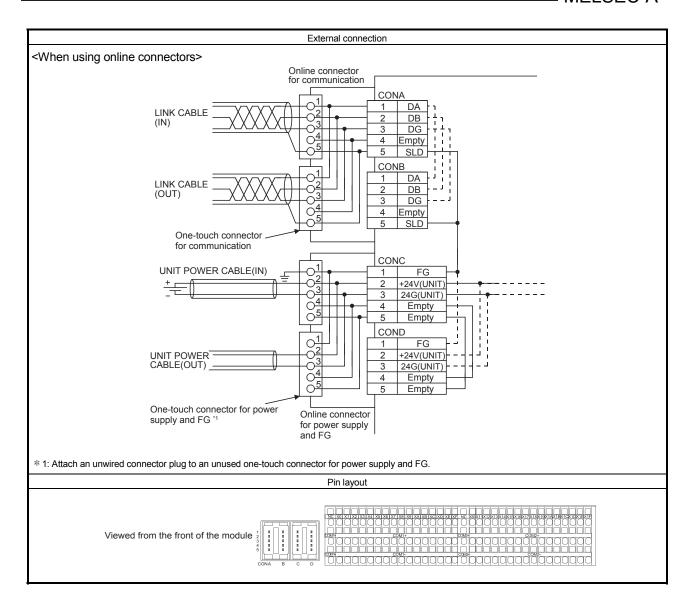
4.2.2 AJ65VBTS3-32D 24VDC input module (positive common (sink type))

	Туре	DC input module	
Item	.,,po	AJ65VBTS3-32D	Appearance
Number of in	nput points	32 points	
Isolation me		Photocoupler	
Rated input voltage		24VDC	7
Rated input		Approx. 5mA	7
1	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	7
1	er of simultaneous	100% or 69% (Refer to Section1.3.)	7
input points		,	
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
OFF voltage	/OFF current	6VDC or lower/1.7mA or lower	
Input resista	nce	Approx. 4.7kΩ	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	7
Wiring meth	od for common	16 points/common (3-wire, spring clamp terminal block type)	
Input type		Positive common (sink type)	
	ent for connected	2.0A or lower/common	
device			
Number of o	occupied stations	32-point assignment/station (32 points used)	
Module	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
power suppl	y Current	40mA or lower (at 24VDC and all points ON)	7
Noise immu	nity	Noise voltage 500Vp-p, noise width 1µs,	
		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand vo	oltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re	sistance	10M Ω or higher between all DC external terminals and ground (500VDC insulation	25-52 20-20
		resistance tester)	
Protection d	egree	IP1XB	
Weight		0.41kg	
External	Communication	One-touch connector for communication [Transmission circuit]	
connection	part	5-pin IDC plug is sold separately: A6CON-L5P	
system		<optional></optional>	
		Online connector for communication: A6CON-LJ5P	-
	Power supply	One-touch connector for power supply and FG [Module power supply, FG]	
	part	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
		<pre><optional></optional></pre>	
	1/0	Online connector for power supply: A6CON-PWJ5P	
A P I.I. P	I/O part	2-piece spring clamp terminal block [I/O power supply, I/O signals]	
Applicable D		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable	Connector for	Applicable cable:	
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for	0.66 to 0.98mm² (18 AWG)	O O O O O O O O O O O O O O O O O O O
	power supply and FG	[\psi_2.2 to 3.0mm (A6CON-PW5P), \psi_2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	10	Wire diameter: 0.16mm or more Insulating coating material: PVC (heat-resistant)	V (2000) (2010)
	Spring clamp	Stranded wire 0.08 to 1.5mm ² (28 to 16 AWG) * ¹	
	terminal block for	Wire strip length: 8 to 11mm	
	1/0	The carp origin at a time.	
	Applicable	TE0.5 [Applicable wire size: 0.5mm ²]	
	solderless	TE0.75 [Applicable wire size: 0.75mm ²]	
	terminal	TE1 [Applicable wire size: 0.9 to 1.0mm ²]	
		TE1.5 [Applicable wire size: 1.25 to 1.5mm²]	
		TGV TC1.25-9T [Applicable wire size: 0.3 to 1.65mm ²]	
		TGWV TC1.25-T9 [Applicable wire size: 0.3 to 1.65mm ²]	
Accessory		User's manual, Holding fixtures for screw installation	

^{* 1:} Insert one wire per terminal.



	Pin number		Signal name			
		1	DA			
		2	DB			
C	ON A, B	3		DG		
		4		Empty		
		5		SLD		
		1		↓ (FG)	١	
		2		24V (UN		
CC	ON C, D					
00	DIN O, D	3	2	4G (UNI	1)	
		4		Empty		
		5		Empty		
			ninal block			
	lumn A		olumn B		lumn C	
1	Empty	1	COM1+	1	COM1-	
2	X0	2	COM1+	2	COM1-	
3	X1	3	COM1+	3	COM1-	
4	X2	4	COM1+	4	COM1-	
5	X3	5	COM1+	5	COM1-	
6	X4	6	COM1+	6	COM1-	
7	X5	7	COM1+	7	COM1-	
8	X6	8	COM1+	8	COM1-	
9	X7	9	COM1+	9	COM1-	
11	X8 X9	10 11	COM1+	10 11	COM1-	
12	XA XA	12	COM1+	12	COM1-	
13	XB	13	COM1+	13	COM1-	
14	XC	14	COM1+	14	COM1-	
15	XD	15	COM1+	15	COM1-	
16	XE	16	COM1+	16	COM1-	
17	XF	17	COM1+	17	COM1-	
18	Empty	18	COM2+	18	COM2-	
19	X10	19	COM2+	19	COM2-	
20	X11	20	COM2+	20	COM2-	
21	X12	21	COM2+	21	COM2-	
22	X13	22	COM2+	22	COM2-	
23	X14	23	COM2+	23	COM2-	
24	X15	24	COM2+	24	COM2-	
25	X16	25	COM2+	25	COM2-	
26	X17	26	COM2+	26	COM2-	
27	X18	27	COM2+	27	COM2-	
28	X19	28	COM2+	28	COM2-	
29	X1A	29	COM2+	29	COM2-	
30	X1B	30	COM2+	30	COM2-	
31	X1C	31	COM2+	31	COM2-	
32	X1D	32	COM2+	32	COM2-	
33	X1E	33	COM2+	33	COM2-	
34	X1F	34	COM2+	34	COM2-	

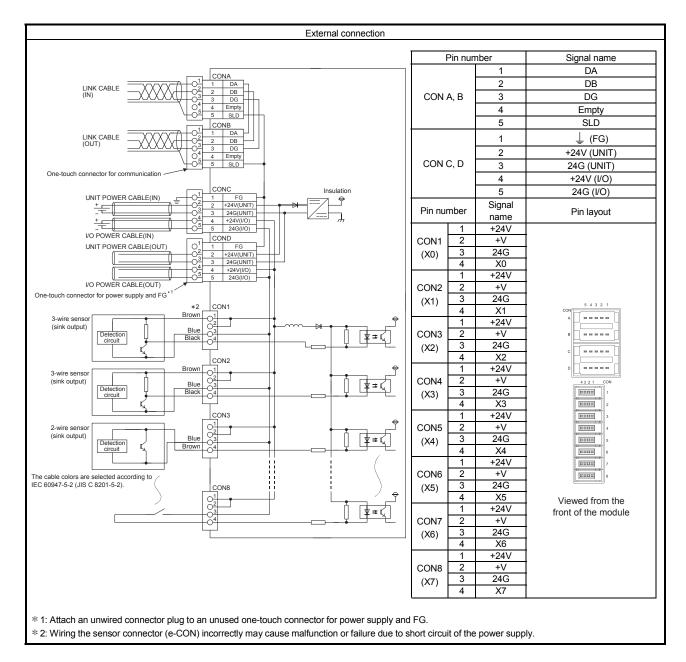


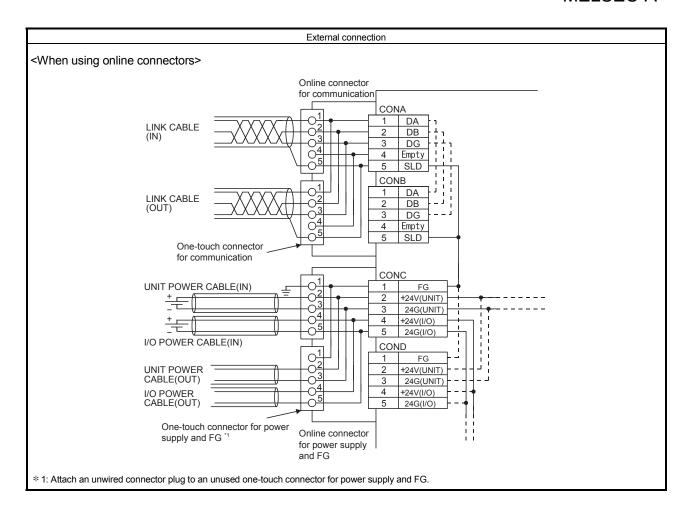
4.3 Sensor Connector (e-CON) Type Input Module

4.3.1 AJ65VBTCE3-8D 24VDC input module (positive common (sink type))

	Туре	DC input module	
Item		AJ65VBTCE3-8D	Appearance
Number of i	nput points	8 points	· ·
Isolation me		Photocoupler	
Rated input voltage		24VDC	
Rated input		Approx. 5mA	
	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
	er of simultaneous	100%	-
input points	or or simultaneous	100 /6	
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
	e/OFF current	6VDC or lower/1.7mA or lower	
		Approx. 4.7kΩ	
Input resista			1
Response	OFF→ON	1.5ms or less (at 24VDC)	\dashv
time	ON-OFF	1.5ms or less (at 24VDC)	$+$ $\mathbb{N} \cup \mathbb{N}$
	od for common	8 points/common (3-wire, sensor connector (e-CON) type)	1
Input type		Positive common (sink type)	CON
	ent for connected	1.0A or lower/common	
device			
	occupied stations	32-point assignment/station (8 points used)	B B B B B B B B B B B B B B B B B B B
Module pow		20.4 to 26.4VDC (ripple ratio: within 5%)	40 S 20 T
supply	Current	30mA or lower (at 24VDC and all points ON)	40 S T 20 A T 10 T 1 B O T 1 B
Noise immu	nity	Noise voltage 500Vp-p, noise width 1µs,	I I I I I I I I I I I I I I I I I I I
		noise frequency 25 to 60Hz (DC type noise simulator condition)	D 1 0. 4 B 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Withstand v	oltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re	esistance	$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation	MELSEC AJ65VBTCE3-8D
		resistance tester)	X0 PWO LRUNO
Protection d	egree	IP1XB	L ERR O
Weight		0.10kg	
External	Communication	One-touch connector for communication [Transmission circuit]	X2 10 20
connection	part	5-pin IDC plug is sold separately: A6CON-L5P	30
system		<optional></optional>	50
		Online connector for communication: A6CON-LJ5P	X4 000 70
	Power supply	One-touch connector for power supply and FG	X5 EDDD
	part	[Module power supply, I/O power supply, FG]	
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	X6
		<optional></optional>	X7
		Online connector for power supply: A6CON-PWJ5P	CC-tink
	I/O part	Sensor connector (e-CON) [I/O signals]	
		4-pin IDC plug is sold separately. * 1	
Applicable [OIN rail	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable	Connector for	Applicable cable:	
	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for	0.66 to 0.98mm ² (AWG18)	
	power supply and	[\psi_2.2 to 3.0mm (A6CON-PW5P),	
	FG	φ2.0 to 2.3mm (A6CON-PW5P-SOD)]	
		Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	
	Connector for I/O	Sensor connector (e-CON).	
		Applicable connector plugs are sold separately. * 1	
		(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	
		User's manual, Holding fixtures for screw installation	

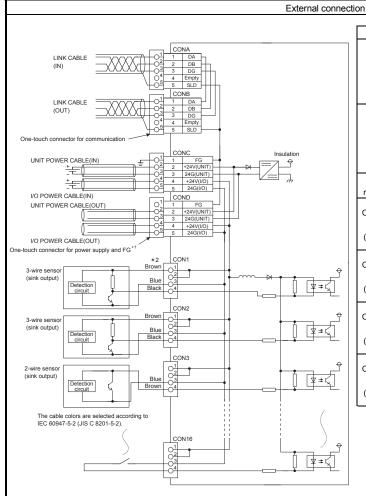
^{* 1:} Refer to Section 1.6.2 for details.





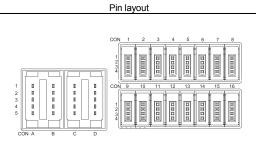
4.3.2 AJ65VBTCE3-16D 24VDC input module (positive common (sink type))

	Туре	DC input module	
Item	Туре	AJ65VBTCE3-16D	Appearance
Number of in	nout points	16 points	простанос
Isolation me		Photocoupler	
Rated input voltage		24VDC	
Rated input		Approx. 5mA	
Operating vo		19.2 to 26.4VDC (ripple ratio: within 5%)	
· ·	r of simultaneous	100% or 62.5% (Refer to Section 1.3.)	
input points	i oi siiriditarieods	100 % of 02.5 % (Neter to Section 1.5.)	
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
	/OFF current	6VDC or lower/1.7mA or lower	
Input resista		Αρριοχ. 4.7kΩ	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	
	od for common	16 points/common (3-wire, sensor connector (e-CON) type)	
Input type	od for common	Positive common (sink type)	
	nt for connected	1.0A or lower/common	
device	int for confidence	1.07 of formation in the first formation in t	
	ccupied stations	32-point assignment/station (16 points used)	
Module	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
power supply		35mA or lower (at 24VDC and all points ON)	A HERE C D D D D D D D D D D D D D D D D D D
Noise immur		Noise voltage 500Vp-p, noise width 1µs,	2 SVBT
TTOICC IIIIIII	y	noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand vo	oltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re		10MΩ or higher between all DC external terminals and ground (500VDC	
ouidioo	0.010.100	insulation resistance tester)	
Protection de	earee	IP1XB	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
Weight	- J	0.10kg	
External	Communication	One-touch connector for communication [Transmission circuit]	
connection	part	5-pin IDC plug is sold separately: A6CON-L5P	© 0 0 0 0
system	ľ	<optional></optional>	
-		Online connector for communication: A6CON-LJ5P	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Power supply	One-touch connector for power supply and FG	2 CM NOTIVES 31A8 6 1 → 1 → 1 → 1 → 1 → 1 → 1 → 1 → 1 → 1
	part	[Module power supply, I/O power supply, FG]	1 2 4 1 2 4 8 1 0 20 0 0
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
		<optional></optional>	
		Online connector for power supply: A6CON-PWJ5P	
	I/O part	Sensor connector (e-CON) [I/O signals]	
		4-pin IDC plug is sold separately. * 1	
Applicable D	IN rail	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable	Connector for	Applicable cable:	
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for	0.66 to 0.98mm ² (18 AWG)	
	power supply	[\phi2.2 to 3.0mm (A6CON-PW5P), \phi2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	and FG	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	_
	Connector for	Sensor connector (e-CON).	
	I/O	Applicable connector plugs are sold separately. * 1	
		(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	_
Accessory		User's manual, Holding fixtures for screw installation	

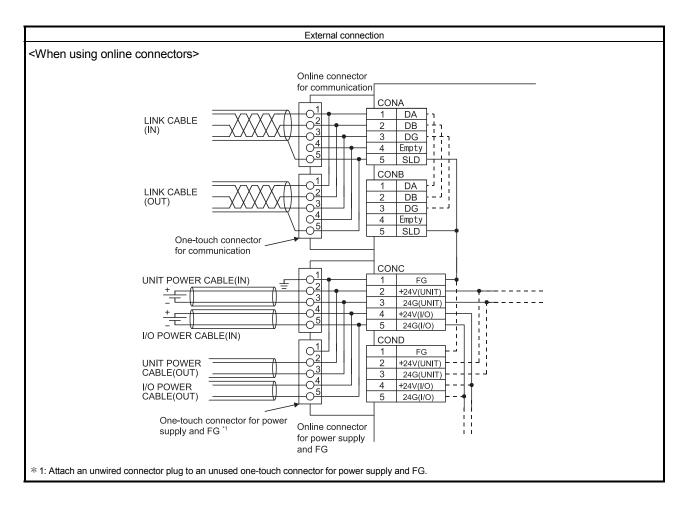


	Pin number							Signal name			
					1	DA					
					2	DB					
	С	ON A, I	3		3			D	G		
					4			Em	pty		
					5			SI	D		
					1			Ţ	(FG)		
					2			+24V	(UNIT)		
	С	ON C, I	D		3			24G (UNIT)		
					4			+24V	(I/O)		
								24G	(I/O)		
Pin		Signal	Pin		Signal	Pin		Signal	Pin		Signal
numb	er	name	numb	er	name	numbe	number name		number n		name
CON	1	+24V	CON	1	+24V	CON 9 (X8)	1	+24V	CON 13 (XC)	1	+24V
CON 1	2	+V	5 5	2	+V		2	+V		2	+V
(X0)	3	24G	(X4)	3	24G		3	24G		3	24G
(710)	4	X0	(*4)	4	X4		4	X8		4	XC
CON	1	+24V	CON	1	+24V	CON	1	+24V	CON	1	+24V
CON 2	2	+V	CON 6	2	+V	10	2	+V	14	2	+V
(X1)	3	24G	(X5)	3	24G	(X9)	3	24G	(XD)	3	24G
(X1)	4	X1	(7(3)	4	X5	(///3)	4 X9	X9	(AD)	4	XD
001	1	+24V	001	1	+24V	001	1	+24V	001	1	+24V
CON 3	2	+V	CON 7	2	+V	CON 11	2	+V	CON 15	2	+V
(X2)	3	24G	(X6)	3	24G	(XA)	3	24G	(XE)	3	24G
(//2)	4	X2	(7.0)	4	X6	(///)	4	XA	(//L)	4	XE
001	1	+24V	0011	1	+24V	001	1	+24V	001	1	+24V
CON 4	2	+V	CON 8	2	+V	CON 12	2	+V	CON	2	+V
(X3)	3	24G	(X7)	3	24G	(XB)	3	24G	16 (XF)	3	24G
(۸۵)	4	X3	(///)	4	X7	(VD)	4	XB	(//1/)	4	XF

- st 1: Attach an unwired connector plug to an unused one-touch connector for power supply and FG.
- * 2: Wiring the sensor connector (e-CON) incorrectly may cause malfunction or failure due to short circuit of the power supply.



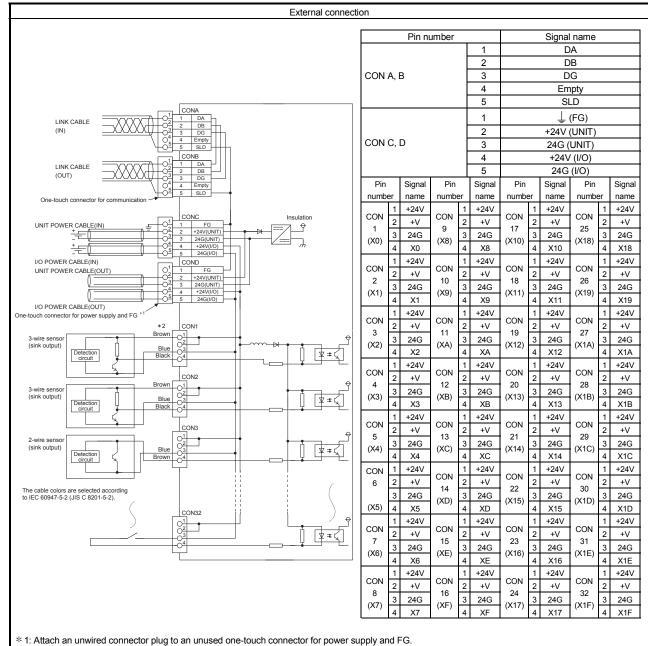
Viewed from the front of the module



4.3.3 AJ65VBTCE3-32D 24VDC input module (positive common (sink type))

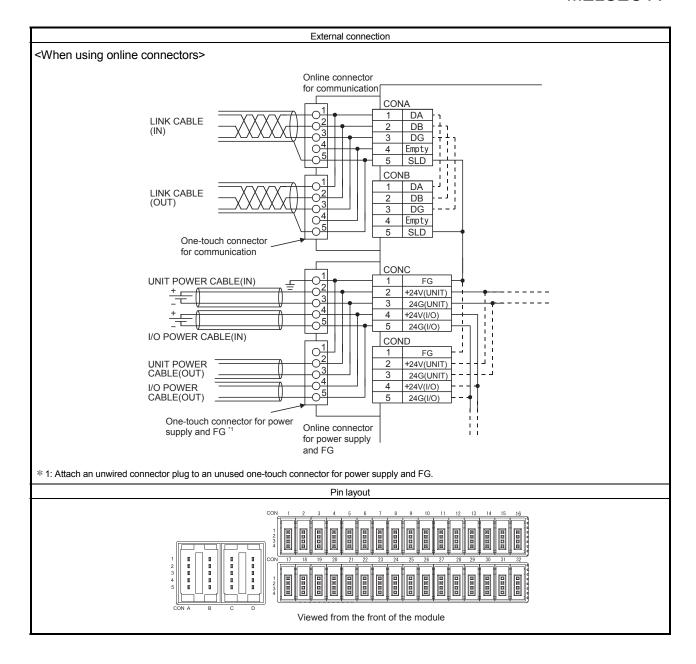
	Туре	DC input module	
Specification		AJ65VBTCE3-32D	Appearance
Number of it	nput points	32 points	
Isolation method		Photocoupler	
Rated input voltage		24VDC	1
Rated input	current	Approx. 5mA	
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. number	er of simultaneous	100% or 75% (Refer to Section1.3.)	
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
	e/OFF current	6VDC or lower/1.7mA or lower	
Input resista		Approx. 4.7kΩ	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	
Wiring meth	od for common	32 points/common (3-wire, sensor connector (e-CON) type)	assa lassa
Input type		Positive common (sink type)	
	ent for connected	2.0A or lower/common	2000 0 0000 0
	occupied stations	32-point assignment/station (32 points used)	
Module pow		20.4 to 26.4VDC (ripple ratio: within 5%)	4 BBB 4 BBB 4
supply	Current	40mA or lower (at 24VDC and all points ON)	
Noise immu		Noise voltage 500Vp-p, noise width 1µs,	8
	,	noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand v	oltage	500VAC for 1 minute between all DC external terminals and ground	A A A A A A A A A A A A A A A A A A A
Insulation re		$10 \text{M}\Omega$ or higher between all DC external terminals and ground (500VDC insulation	2 C C C C C C C C C C C C C C C C C C C
		resistance tester)	
Protection d	egree	IP1XB	
Weight	T	0.16kg	
External	Communication	One-touch connector for communication [Transmission circuit]	
connection	part	5-pin IDC plug is sold separately: A6CON-L5P	
system		<pre><pre><pre></pre></pre></pre>	
	Dawar aunnly nort	Online connector for communication: A6CON-LJ5P	
	Power supply part	One-touch connector for power supply and FG [Module power supply, I/O power supply, FG]	~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~0 ~
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	O O O O O O O O O O O O O O O O O O O
		<optional></optional>	
		Online connector for power supply: A6CON-PWJ5P	₩ (0.0003) 8 ± 5 1 ± 5 1
	I/O part	Sensor connector (e-CON) [I/O signals]	
		4-pin IDC plug is sold separately. * 1	
Applicable D	IN rail	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	1 ((0))
Applicable	Connector for	Applicable cable:	
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	1
	Connector for	0.66 to 0.98mm ² (18 AWG)	
	power supply and	[φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	FG	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	4
	Connector for I/O	Sensor connector (e-CON). Applicable connector plugs are sold separately. * 1 (applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	
Accessory		User's manual, Holding fixtures for screw installation	7

 $[\]ast$ 1: Refer to Section 1.6.2 for details.



4 - 38 4 - 38

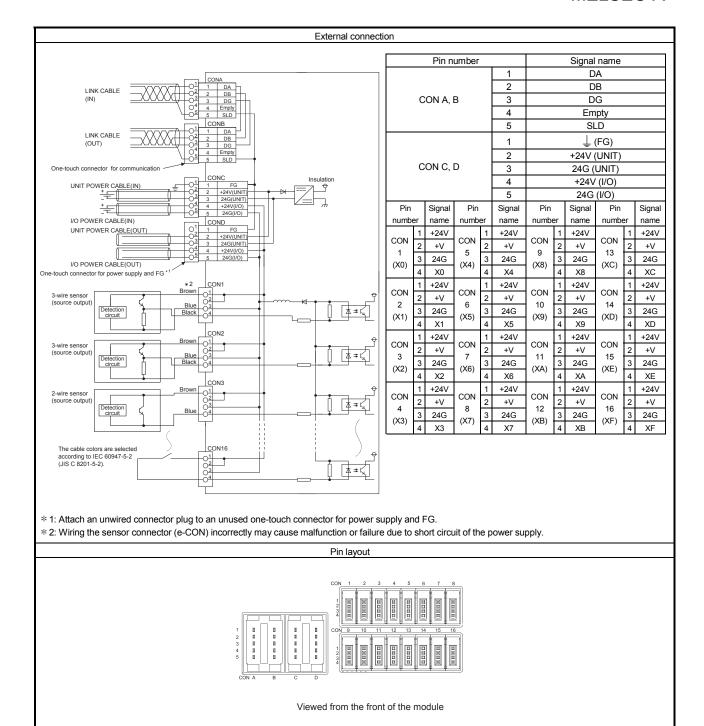
^{* 2:} Wiring the sensor connector (e-CON) incorrectly may cause malfunction or failure due to short circuit of the power supply.



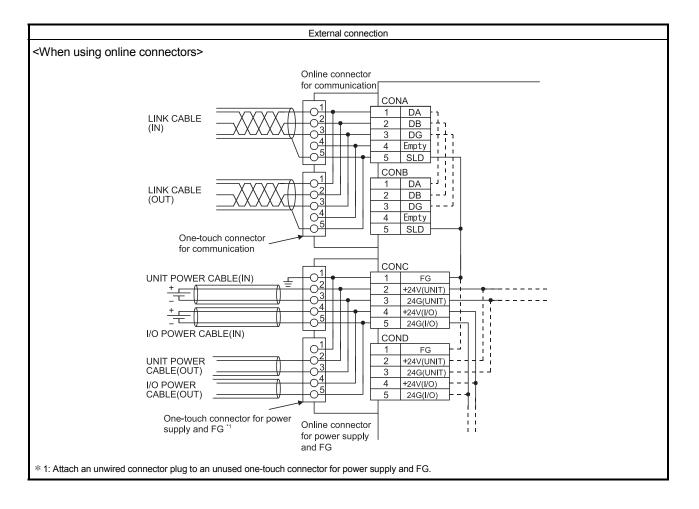
4.3.4 AJ65VBTCE3-16DE 24VDC input module (negative common (source type))

	Туре	DC input module	
Item		AJ65VBTCE3-16DE	Appearance
Number of in	nput points	16 points	
Isolation me		Photocoupler	
Rated input	voltage	24VDC	
Rated input	current	Approx. 5mA	
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. numbe	er of simultaneous	100% or 62.5% (Refer to Section1.3.)	
input points		· · · · · · · · · · · · · · · · · · ·	
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
OFF voltage	OFF current	6VDC or lower/1.7mA or lower	
Input resista	nce	Approx. 4.7kΩ	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	
Wiring meth	od for common	16 points/common (3-wire, sensor connector (e-CON) type)	
Input type		Negative common (source type)	
Supply curre	ent for connected	1.0A or lower/common	
device			
Number of c	ccupied stations	32-point assignment/station (16 points used)	
Module	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
power suppl	y Current	35mA or lower (at 24VDC and all points ON)	
Noise immu	nity	Noise voltage 500Vp-p, noise width 1µs,	
		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand vo	oltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re	sistance	10M Ω or higher between all DC external terminals and ground (500VDC	* HEED * HEED *
		insulation resistance tester)	
Protection d	egree	IP1XB	
Weight	T	0.11kg	
External	Communication	One-touch connector for communication [Transmission circuit]	10 mo mo
connection	part	5-pin IDC plug is sold separately: A6CON-L5P	E @0@0
system		<optional></optional>	E 0[0]000
		Online connector for communication: A6CON-LJ5P	ANTENNE PER PER PER PER PER PER PER PER PER PE
	Power supply	One-touch connector for power supply and FG	
	part	[Module power supply, I/O power supply, FG]	
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <pre></pre>	
		Online connector for power supply: A6CON-PWJ5P	
	I/O part	Sensor connector (e-CON) [I/O signals]	
	"O part	4-pin IDC plug is sold separately. *1	
A!:b!- F	I III III III III III III III III III	<u> </u>	
Applicable D		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	-
Applicable wire size	Connector for communication	Applicable cable: FANC-110SBH, FA-CBL200PSBH, CS-110	
WII C SIZC		0.66 to 0.98mm ² (18 AWG)	
	Connector for power supply	[\(\phi \) \(\text{0.98mm} \) (18 AWG) [\(\phi \) 2.2 to 3.0mm (A6CON-PW5P), \(\phi \) 2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	and FG	Wire diameter: 0.16mm or more	
	and i G	Insulating coating material: PVC (heat-resistant)	
	Connector for	Sensor connector (e-CON).	
	I/O	Applicable connector plugs are sold separately. * 1	
	_	(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	
Accessory		User's manual, Holding fixtures for screw installation	

^{* 1:} Refer to Section 1.6.2 for details.



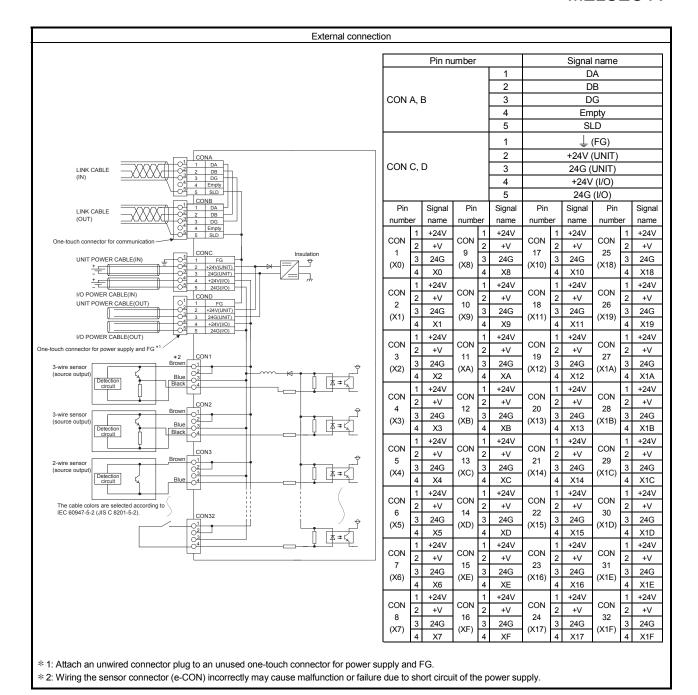
4 - 41 4 - 41

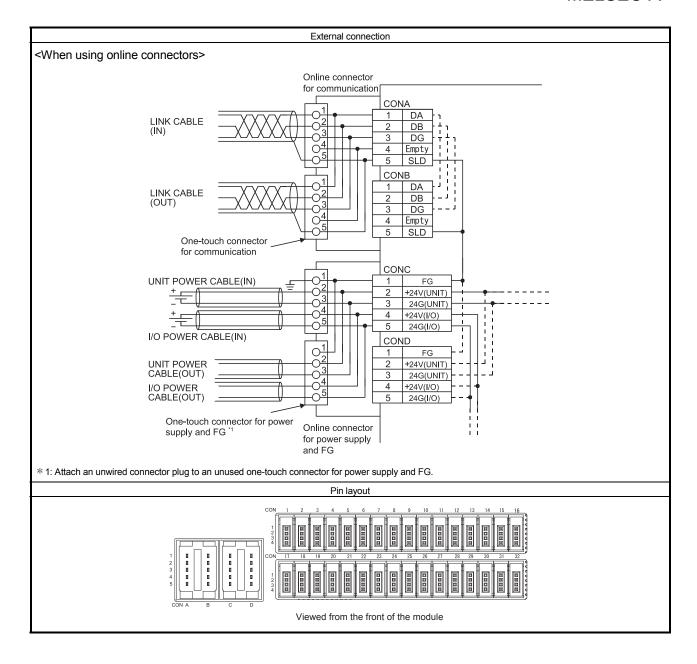


4.3.5 AJ65VBTCE3-32DE 24VDC input module (negative common (source type))

	Туре	DC input module	
Specification		AJ65VBTCE3-32DE	Appearance
Number of input points		32 points	·
Isolation method		Photocoupler	
Rated input voltage		24VDC	
Rated input		Approx. 5mA	
Operating vo		19.2 to 26.4VDC (ripple ratio: within 5%)	
	er of simultaneous	100% or 75% (Refer to Secion1.3.)	
input points			
ON voltage/	ON current	14VDC or higher/3.5mA or higher	
OFF voltage	/OFF current	6VDC or lower/1.7mA or lower	
Input resista	nce	Approx. $4.7k\Omega$	
Response	OFF→ON	1.5ms or less (at 24VDC)	
time	ON→OFF	1.5ms or less (at 24VDC)	1 (+)
Wiring meth	od for common	32 points/common (3-wire, sensor connector (e-CON) type)	
Input type		Negative common (source type)	S FEET FEET F
Supply curre	ent for connected	2.0A or lower/common	
device			
Number of o	ccupied stations	32-point assignment/station (32 points used)	BEER O BEER &
Module pow	er Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
supply	Current	40mA or lower (at 24VDC and all points ON)	NEED HEED
Noise immu	nity	Noise voltage 500Vp-p, noise width 1µs,	9 DEED 9
		noise frequency 25 to 60Hz (DC type noise simulator condition)	9
Withstand vo	oltage	500VAC for 1 minute between all DC external terminals and ground	4 0000 4 0000
Insulation re	sistance	10M Ω or higher between all DC external terminals and ground (500VDC insulation	
		resistance tester)	EEEH ** EEEH \$
Protection d	egree	IP1XB	8 ==== 4 ==== 2
Weight		0.16kg	S FEER W FEER D
External	Communication part	One-touch connector for communication [Transmission circuit]	
connection		5-pin IDC plug is sold separately: A6CON-L5P	#### 8 HERB 2
system		<optional></optional>	
		Online connector for communication: A6CON-LJ5P	
	Power supply part	One-touch connector for power supply and FG	
		[Module power supply, I/O power supply, FG]	
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
		<optional> Online connector for neuron cumply: AGCON, DW, IED.</optional>	American III
	1/0	Online connector for power supply: A6CON-PWJ5P	
	I/O part	Sensor connector (e-CON) [I/O signals]	
		4-pin IDC plug is sold separately. * 1	
Applicable D		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	_
	Connector for	Applicable cable:	
l -	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for power	0.66 to 0.98mm² (18 AWG)	
	supply and FG	[\phi2.2 to 3.0mm (A6CON-PW5P), \phi2.0 to 2.3mm (A6CON-PW5P-SOD)]	
		Wire diameter: 0.16mm or more	
ŀ	Connector for I/O	Insulating coating material: PVC (heat-resistant)	
	CONTRECTOR FOR I/O	Sensor connector (e-CON). Applicable connector plugs are sold separately. * 1	
		(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	
1			

^{* 1:} Refer to Section 1.6.2 for details.

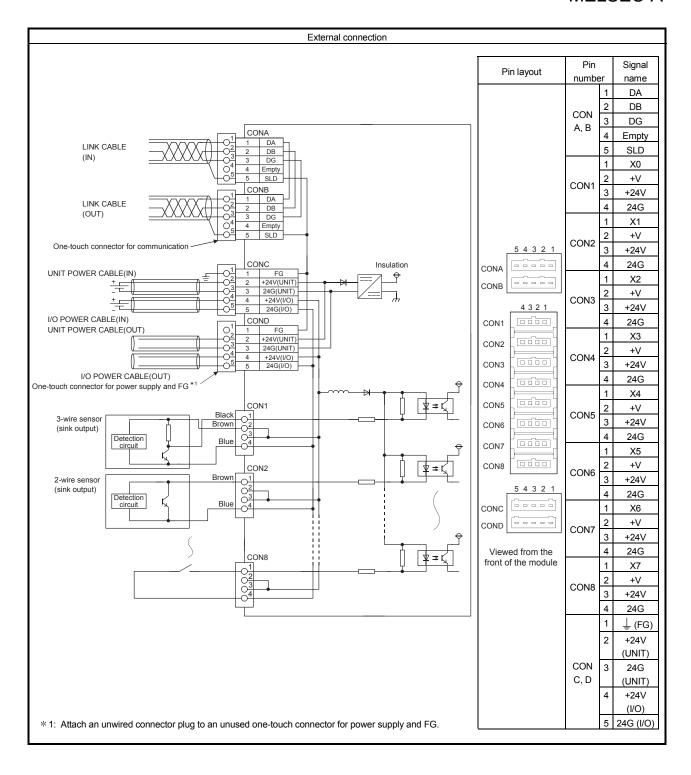


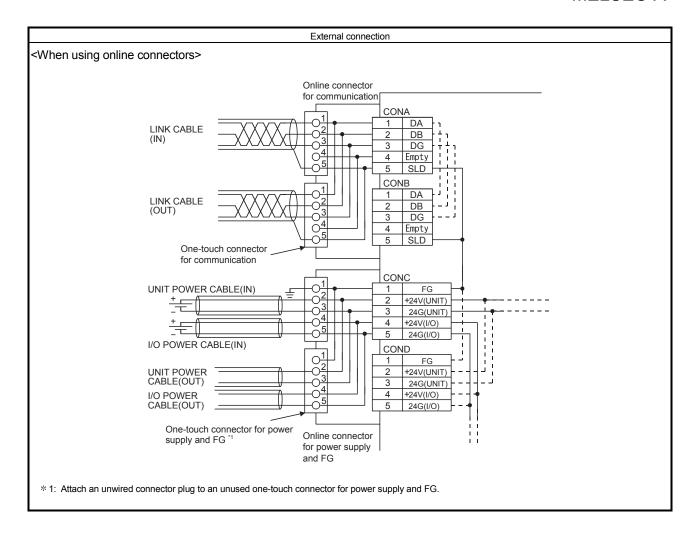


4.4 One-Touch Connector Type Input Module

4.4.1 AJ65VBTCU3-8D1 24VDC input module (positive common (sink type))

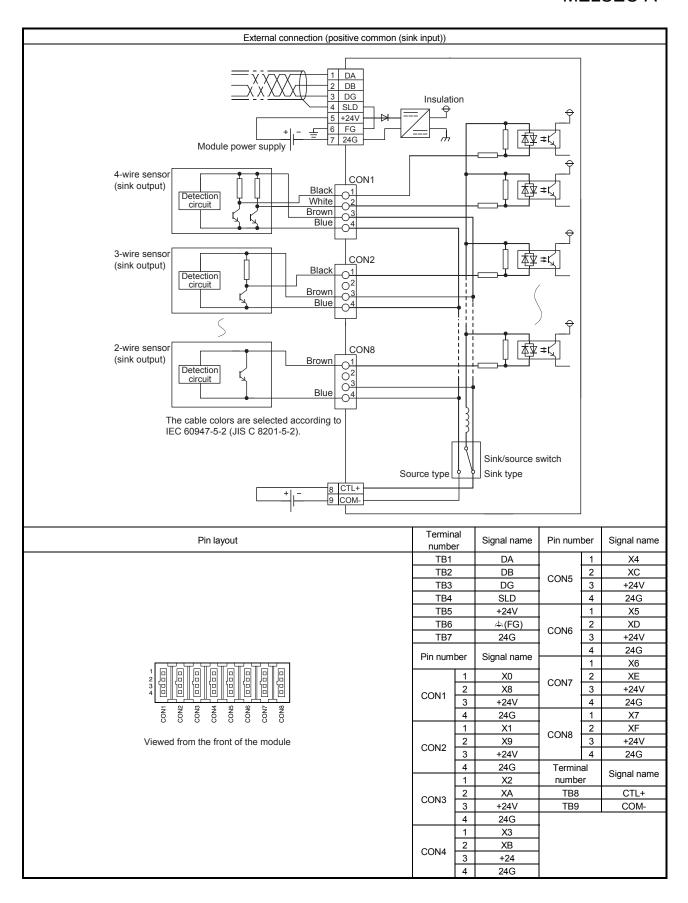
	_	Type DC input module	
Item		AJ65VBTCU3-8D1	Appearance
Number of	input points	8 points	
Isolation me	ethod	Photocoupler	
Rated input voltage		24VDC	
Rated input	t current	Approx. 5mA	
Operating v	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. numb	er of simultaneou	100%	
input points	3		_
ON voltage	ON current	15VDC or higher/3mA or higher	<u> </u>
OFF voltag	e/OFF current	3VDC or lower/0.5mA or lower	_
Input resista	ance	Approx. 4.7kΩ	_
Response t	time OFF→O	N 0.2ms or less (at 24VDC)	_
	ON→OF	F 0.2ms or less (at 24VDC)	MELSEG AJ65VBTCU3-8D1
Wiring meth	hod for common	8 points/common (3-wire, one-touch connector type)	con ¬.
Input type		Positive common (sink type)	
	rent for connected	1.0A or lower/common	I N K
device			CON J B
	occupied stations	32-point assignment/station (8 points used)	
Module pov	1 -	20.4 to 26.4VDC (ripple ratio: within 5%)	X0 PW
supply	Current	35mA or lower (at 24VDC and all points ON)	→ L RUN X1 C RUN
Noise immu	unity	Noise voltage 500Vp-p, noise width 1µs,	L ERR
		noise frequency 25 to 60Hz (DC type noise simulator condition)	→
Withstand v		500VAC for 1 minute between all DC external terminals and ground	
Insulation re	esistance	$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)	30
Protection of	degree	IP1XB	X4 5 0
Weight		0.15kg	X5
External	Communication	oart One-touch connector for communication [Transmission circuit]	
connection		5-pin IDC plug is sold separately.	
system		<optional></optional>	
		Online connector for communication: A6CON-LJ5P	
	Power supply pa		
		[Module power supply, I/O power supply, FG]	CON
		5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	c w
		<pre><optional></optional></pre>	
	I/O nort	Online connector for power supply: A6CON-PWJ5P	
	I/O part	One-touch connector for I/O 4-pin IDC plug is sold separately.	CC-Link
Applicable	DIN rail	TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)	
		Applicable cable:	†
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for po		†
	supply and FG	[\phi2.2 to 3.0mm (A6CON-PW5P), \phi2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	,	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	
	Connector for	φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)	
	I/O	[Applicable wire size: 0.14 to 0.2mm ²]	
		φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)	
		[Applicable wire size: 0.3 to 0.5mm ²]	<u> </u>
Accessory		User's manual	

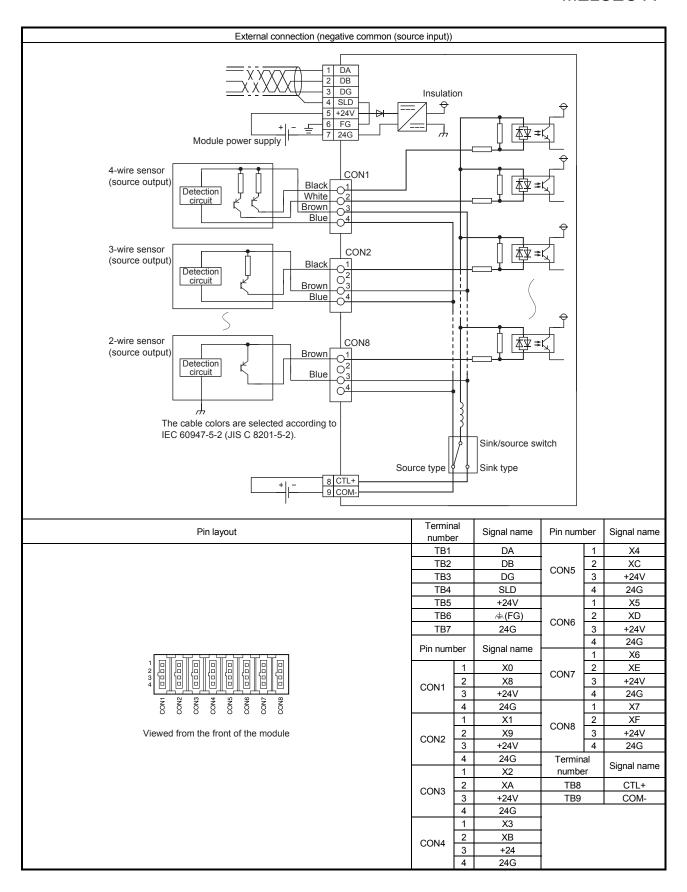




4.4.2 AJ65SBTC4-16D 24VDC input module (positive common (sink), negative common (source) loading)

			Туре	DC input module			
Item			. 7 -	AJ65SBTC4-16D	Appearance		
Number of	input po	oints		16 points			
Isolation method				Photocoupler			
Rated input voltage				24VDC			
Rated input	t current	t		Approx. 5mA			
Operating v	voltage i	range		19.2 to 26.4VDC (ripple ratio: within 5%)			
Max. numb	er of sin	multaneous inp	out points	100%			
ON voltage	e/ON cui	rrent	•	14VDC or higher/3.5mA or higher			
OFF voltag	je/OFF (current		6VDC or lower/1.7mA or lower			
Input resist	ance			Approx. 4.7 k Ω			
Response t	time		OFF→ON	1.5ms or less (at 24VDC)			
			ON→OFF	1.5ms or less (at 24VDC)			
Wiring metl	hod for o	common		16 points/common (4-wire, one-touch connector type)			
Input type				Positive/negative common shared type (sink/source shared type)			
				(Selected using the switch.)			
Number of	occupie	ed stations		32-point assignment/station (16 points used)			
Module pov	wer sup	ply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)			
			Current	35mA or lower (at 24VDC and all points ON)	11.0 11.0		
Noise imm	unity			Noise voltage 500Vp-p, noise width 1µs,			
				noise frequency 25 to 60Hz (DC type noise simulator condition)	STATION N X X X X X X X X X X X X X X X X X X		
Withstand v	voltage			500VAC for 1 minute between all DC external terminals and ground			
Insulation r	esistano	се		10M Ω or higher between all DC external terminals and ground (500VDC			
				insulation resistance tester)			
Protection of	degree			IP2X			
Weight				0.15kg			
External		Communication		7-point two-piece terminal block			
connection		module power	r supply part	[Transmission circuit, module power supply, FG]	A A Less Sara A		
system				M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
		1/0	.11	Applicable solderless terminal: 2 or less			
		I/O power sup	ріу рап	2-point direct-mount terminal block			
				[I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
				Applicable solderless terminal: 2 or less			
		I/O part		Dedicated one-touch connector [I/O signals]			
		I/O part		4-pin IDC plug is sold separately.			
Module mo	untina s	screw		M4 screw with plain washer finished round			
	9			(tightening torque range: 0.78 to 1.08N•m)			
				Mountable with a DIN rail in 6 orientations			
Applicable	DIN rail			TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)			
		unication part,	Applicable	RAV1.25-3 (compliant with JIS C 2805)	1		
wire size	module	e power supply					
	part		terminal	• V2-MS3, RAP2-3SL, TGV2-3N			
	I/O pov	ver supply part	t	[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]			
				φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)			
	I/O par	+		[Applicable wire size: 0.14 to 0.2mm ²]			
	"O pai			φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)			
				[Applicable wire size: 0.3 to 0.5mm ²]			
Accessory				User's manual			

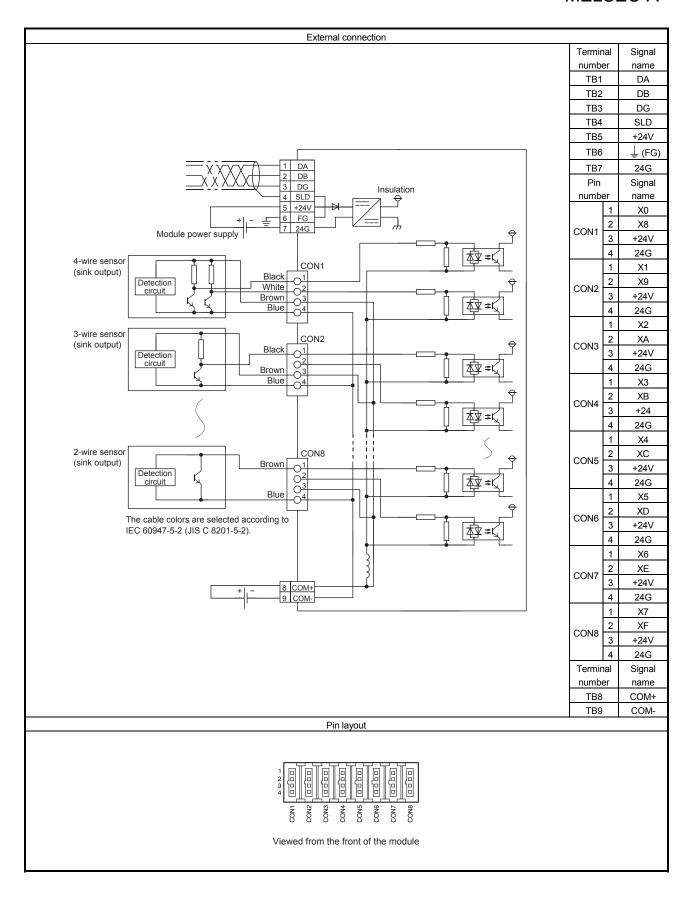




4.4.3 AJ65SBTC4-16DN 24VDC input module (positive common (sink type))

			Туре	DC input module				
Specificatio	n		.,,,,,	AJ65SBTC4-16DN	Appearance			
Number of input points				16 points				
Isolation method				Photocoupler				
Rated input voltage				24VDC				
Rated input				Approx. 5mA				
Operating v	oltage range			19.2 to 26.4VDC (ripple ratio: within 5%)				
	er of simultaneous	input po	ints	100%				
ON voltage	/ON current			14VDC or higher/3.5mA or higher				
OFF voltage	e/OFF current			6VDC or lower/1.7mA or lower				
Input resista	ance			Approx. 4.7kΩ				
Response t	time	OFF→0	N	1.5ms or less (at 24VDC)				
		ON→OF	F	1.5ms or less (at 24VDC)				
Wiring meth	nod for common			16 points/common (4-wire, one-touch connector type)				
Input type				Positive common (sink type)				
Supply curr	ent for connected	device		1.0A or lower/common				
Number of	occupied stations			32-point assignment/station (16 points used)				
Module pov	wer supply	Voltage		20.4 to 26.4VDC (ripple ratio: within 5%)				
		Current		35mA or lower (at 24VDC and all points ON)				
Noise immu	unity			Noise voltage 500Vp-p, noise width 1µs,				
				noise frequency 25 to 60Hz (DC type noise simulator condition)				
Withstand v	/oltage			500VAC for 1 minute between all DC external terminals and ground				
Insulation re	esistance			10M Ω or higher between all DC external terminals and ground (500VDC				
				insulation resistance tester)				
Protection of	degree			IP2X				
Weight				0.15kg				
External	Communication	part,		7-point two-piece terminal block				
connection	module power s	upply par	rt	[Transmission circuit, module power supply, FG]	N96-25-25-25-25-25-25-25-25-25-25-25-25-25-			
system				M3×5.2 screw (tightening torque range:0.59 to 0.88N•m)				
				Applicable solderless terminal: 2 or less				
	I/O power supply	y part		2-point direct-mount terminal block				
				[I/O power supply]				
				M3×5.2 screw (tightening torque range:0.59 to 0.88N•m)				
				Applicable solderless terminal: 2 or less				
	I/O part			Dedicated one-touch connector [I/O signals]				
Madula				4-pin IDC plug is sold separately.				
Module moi	unting screw			M4 screw with plain washer finished round				
				(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations				
Applicable [DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	†			
	Communication p	art	Annlicable	• RAV1.25-3 (compliant with JIS C 2805)	†			
	module power su			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]				
0 0120	I/O power supply		terminal	• V2-MS3, RAP2-3SL, TGV2-3N				
	o porror supply	Part		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]				
	I/O part			φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)	†			
	1			[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire]				
				φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)				
				[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]				
Wire	Material			Copper				
	Temperature rating			75°C or more				
Accessory				User's manual				

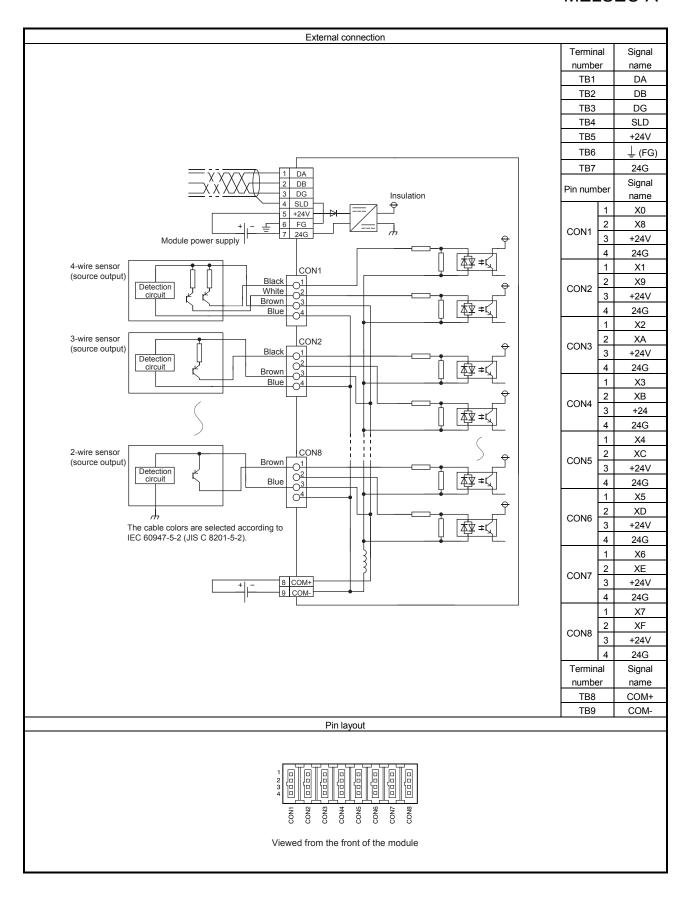
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



4.4.4 AJ65SBTC4-16DE 24VDC input module (negative common (source type))

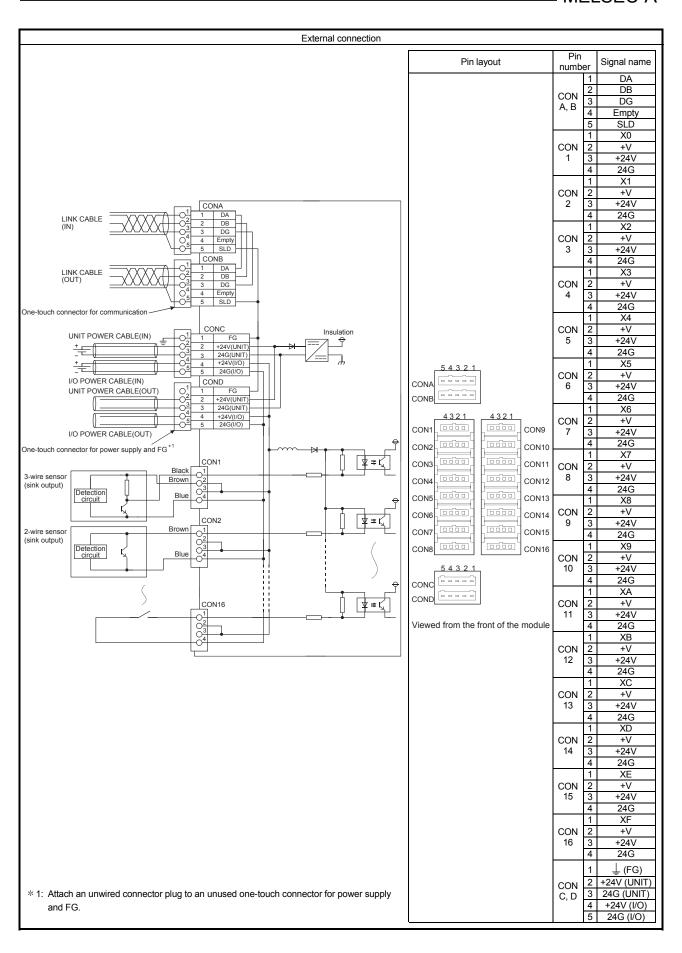
			Туре	DC input module				
Specification	n	_	.,,,,	AJ65SBTC4-16DE	Appearance			
Number of input points				16 points				
Isolation method				Photocoupler	1			
Rated input voltage				24VDC				
Rated input				Approx. 5mA	1			
	oltage range			19.2 to 26.4VDC (ripple ratio: within 5%)	1			
	er of simultaneous	input po	ints	100%				
ON voltage/	ON current			14VDC or higher/3.5mA or higher				
OFF voltage	e/OFF current			6VDC or lower/1.7mA or lower				
Input resista	ance			Approx. 4.7kΩ				
Response ti	ime	OFF→0	ON	1.5ms or less (at 24VDC)				
		ON→O	FF	1.5ms or less (at 24VDC)				
Wiring meth	nod for common			16 points/common (4-wire, one-touch connector type)				
Input type				Negative common (source type)				
Supply curre	ent for connected	device		1.0A or lower/common				
Number of o	occupied stations			32-point assignment/station (16 points used)				
Module pow	ver supply	Voltage		20.4 to 26.4VDC (ripple ratio: within 5%)				
		Current		35mA or lower (at 24VDC and all points ON)				
Noise immu	ınity			Noise voltage 500Vp-p, noise width 1µs,				
	•			noise frequency 25 to 60Hz (DC type noise simulator condition)				
Withstand v	oltage			500VAC for 1 minute between all DC external terminals and ground				
Insulation re	esistance			10M Ω or higher between all DC external terminals and ground (500VDC				
				insulation resistance tester)	3888 · · · · · · · · · · · · · · · · · ·			
Protection d	degree			IP2X				
Weight				0.15kg				
External	Communication	part,		7-point two-piece terminal block				
connection	module power si	upply pa	rt	[Transmission circuit, module power supply, FG]				
system				M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	A A B S S S S C C + 1 G D G G G G G G G G G G G G G G G G G			
				Applicable solderless terminal: 2 or less				
	I/O power supply	y part		2-point direct-mount terminal block				
				[I/O power supply]				
				M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)				
				Applicable solderless terminal: 2 or less				
	I/O part			Dedicated one-touch connector [I/O signals]				
Modulo m -	unting core:::			4-pin IDC plug is sold separately.				
ivioquie mol	unting screw			M4 screw with plain washer finished round				
				(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations				
Applicable [DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	†			
	Communication page	art	Annlicable	• RAV1.25-3 (compliant with JIS C 2805)	†			
	module power sup			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]				
5 5120	I/O power supply		terminal	• V2-MS3, RAP2-3SL, TGV2-3N				
	o porior suppry	Part		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]				
•	I/O part			φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)	1			
	P			[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire]				
				φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)				
				[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]				
Wire	Material			Copper	1			
	Temperature rating			75°C or more	1			
Accessory				User's manual	1			

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

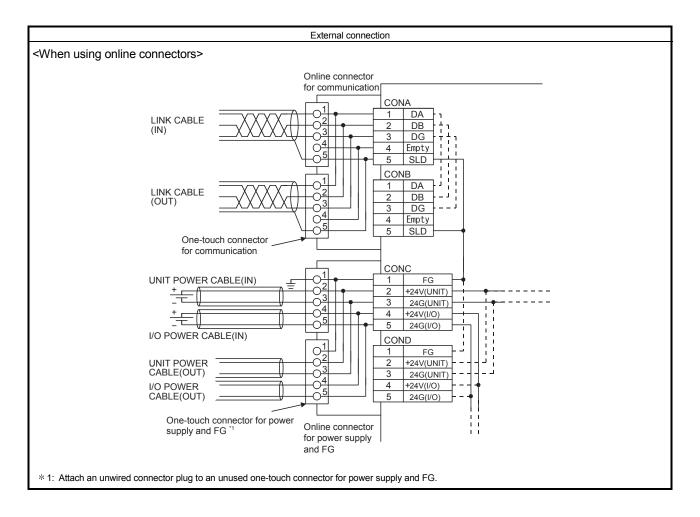


4.4.5 AJ65VBTCU3-16D1 24VDC input module (positive common (sink type))

	Туре	DC input module	
Item	711	AJ65VBTCU3-16D1	Appearance
Number of input points		16 points	
Isolation method		Photocoupler	
Rated input	voltage	24VDC	<u> </u>
Rated input	current	Approx. 5mA	
Operating vo	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	
Max. number of simultaneous		100%	
input points			
ON voltage/ON current		15VDC or higher/3mA or higher	
OFF voltage/OFF current		3VDC or lower/0.5mA or lower	
Input resista		Approx. 4.7kΩ	
Response tir	me OFF→ON	0.2ms or less (at 24VDC)	
	ON→OFF	0.2ms or less (at 24VDC)	
Wiring methor	od for common	16 points/common (3-wire, one-touch connector type)	MELSEG AJ65VBTCU3-16D1
Input type		Positive common (sink type)	CON 7,
Supply curre device	ent for connected	1.0A or lower/common	A I N CON L
Number of o	ccupied stations	32-point assignment/station (16 points used)	CON TO
Module pow	er Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
supply	Current	40mA or lower (at 24VDC and all points ON)	
Noise immur	nity	Noise voltage 500Vp-p, noise width 1µs,	L RUN
		noise frequency 25 to 60Hz (DC type noise simulator condition)	_ ERR
Withstand vo	oltage	500VAC for 1 minute between all DC external terminals and ground	
Insulation re	sistance	10M Ω or higher between all DC external terminals and ground (500VDC	
		insulation resistance tester)	4050
Protection de	egree	IP1XB	
Weight	1	0.19kg	
External	Communication	One-touch connector for communication [Transmission circuit]	80
connection	part	5-pin IDC plug is sold separately.	A O B O C D O
system		<optional></optional>	DE O
		Online connector for communication: A6CON-LJ5P	X0~X7 X8~XF F O
	Power supply	One-touch connector for power supply and FG	CON
	part	[Module power supply, I/O power supply, FG] 5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
		Soptimize plug is sold separately. Accon-PWSP, Accon-PWSP-SOD	CON X
		Online connector for power supply: A6CON-PWJ5P	D
	I/O part	One-touch connector for I/O	CC-Link
	o pa	4-pin IDC plug is sold separately.	
Applicable DIN rail		TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)	
Applicable	Connector for	Applicable cable:	
wire size	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for	0.66 to 0.98mm² (18 AWG)	7
	power supply	[φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	and FG	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	
	Connector for	φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)	
	I/O	[Applicable wire size: 0.14 to 0.2mm ²]	
		φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)	
		[Applicable wire size: 0.3 to 0.5mm ²]	<u> </u>
Accessory		User's manual	



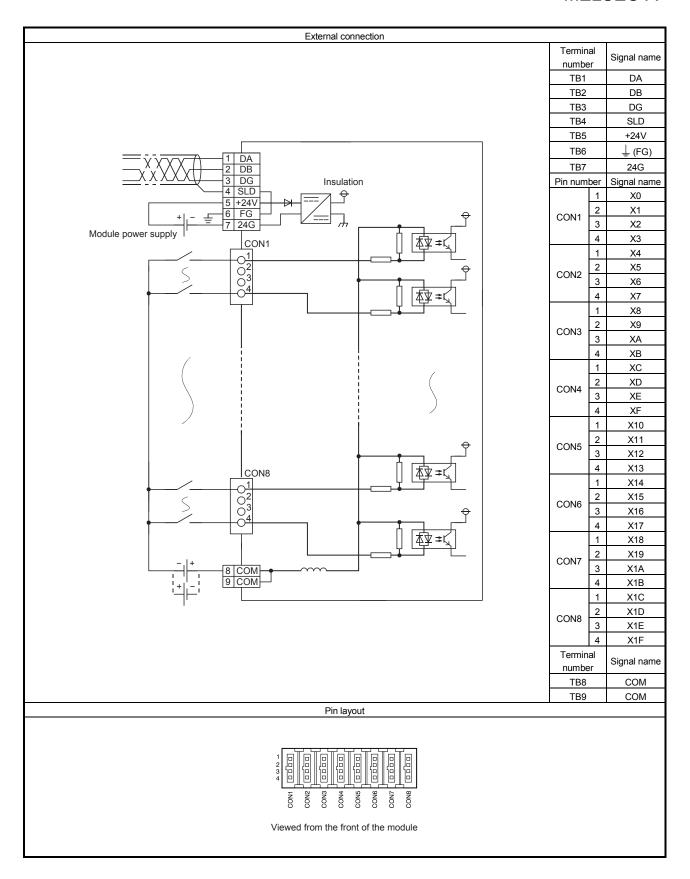
4 - 57 4 - 57



4.4.6 AJ65SBTC1-32D 24VDC input module (positive common (sink), negative common (source) loading)

		Тур	DC input module			
Item			AJ65SBTC1-32D	Appearance		
Number of	input points		32 points			
Isolation m	ethod		Photocoupler	1		
Rated inpu	t voltage		24VDC			
Rated inpu	t current		Approx. 5mA			
Operating voltage range			19.2 to 26.4VDC (ripple ratio: within 5%)			
Max. number of simultaneous input points			80%			
ON voltage/ON current			14VDC or higher/3.5mA or higher	1		
OFF voltage/OFF current			6VDC or lower/1.7mA or lower			
Input resistance			Approx. 4.7kΩ			
Response	time	OFF→ON	1.5ms or less (at 24VDC)			
		ON→OFF	1.5ms or less (at 24VDC)			
Wiring met	hod for common		32 points/common (2 points) (1-wire, one-touch connector type)			
Input type			Positive/negative common shared type (sink/source shared type)			
Number of	occupied stations		32-point assignment/station (32 points used)	3 (3)		
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)			
		Current	45mA or lower (at 24VDC and all points ON)	- U U U U U U U U U U U U U U U U U U U		
Noise imm	unity		Noise voltage 500Vp-p, noise width 1µs,	88.48 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
			noise frequency 25 to 60Hz (DC type noise simulator condition)	THE RESULT OF STATE O		
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Insulation r	esistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC			
			insulation resistance tester)	# # # # # # # # # # # # # # # # # # #		
Weight			0.16kg	× × ××××××××××××××××××××××××××××××××××		
External	Communication p	art,	7-point two-piece terminal block			
connection	ction module power supply part		[Transmission circuit, module power supply, FG]	X8 9 A B C D E F K8 9 A B C O B F K8 9 A B C O D E		
system			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	8.7 X8.9 A B B B B B B B B B B B B B B B B B B		
			Applicable solderless terminal: 2 or less	× 5 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		
	I/O power supply	part	2-point direct-mount terminal block			
			[I/O power supply]	2 3 4 5 2 3 4 5 12 131411 246 (FG) (FG)		
			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
			Applicable solderless terminal: 2 or less			
	I/O part		Dedicated one-touch connector [I/O signals]			
			4-pin IDC plug is sold separately.			
Module mo	ounting screw		M4 screw with plain washer finished round			
			(tightening torque range: 0.78 to 1.08 N•m) Mountable with a DIN rail in 6 orientations			
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	1		
Applicable		art, Applicable	<u> </u>	1		
wire size	module power su		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]			
1111 0 3120	part	terminal	• V2-MS3, RAP2-3SL, TGV2-3N			
	I/O power supply		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]			
·	I/O part		\$\psi_1.0 \to 1.4 (A6CON-P214), \$\phi_1.4 \to 2.0 (A6CON-P220)\$			
	I/O part		[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire]			
			φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)			
			[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]			
Wire	Material		Copper	1		
	Temperature rating		75°C or more	1		
		J	User's manual	†		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

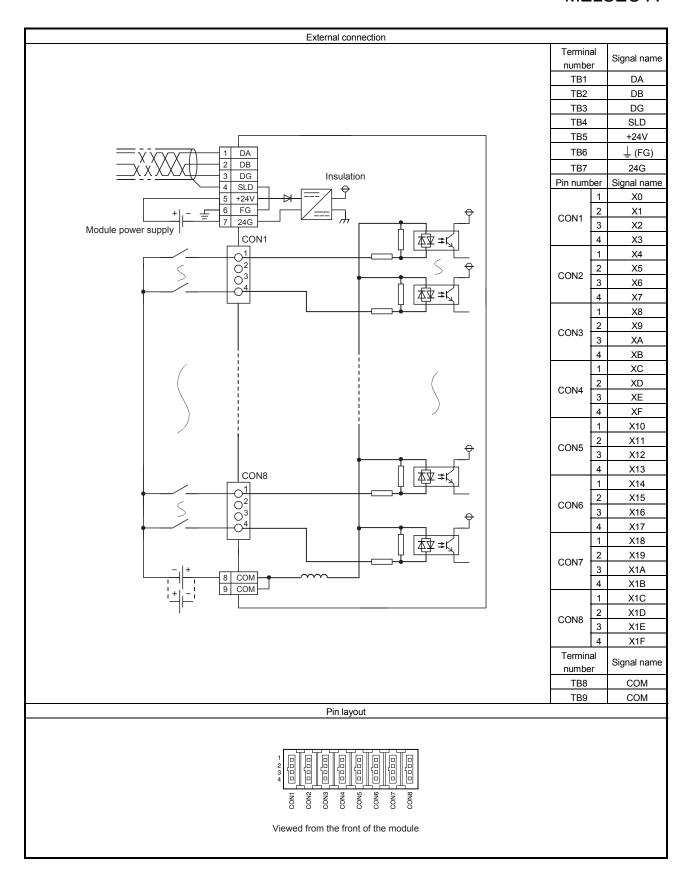


4.4.7 AJ65SBTC1-32D1 24VDC input module (positive common (sink), negative common (source) loading)

		Туре	DC input module			
Item			AJ65SBTC1-32D1	Appearance		
Number of input points			32 points			
Isolation method			Photocoupler	Ţ		
Rated input	t voltage		24VDC	Ţ!		
Rated input			Approx. 5mA	†		
	oltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	†		
Max. number of simultaneous input points			100%	1		
ON voltage	ON current		15VDC or higher/3mA or higher	1		
OFF voltage/OFF current			3VDC or lower/0.5mA or lower	†		
Input resista	ance		Approx. 4.7kΩ	1		
		OFF→ON	0.2ms or less (at 24VDC)	†		
Response t	time		0.2ms or less (at 24VDC)	†		
Wiring meth	hod for common		32 points/common (2 points) (1-wire, one-touch connector type)	†		
Input type			Positive/negative common shared type (sink/source shared type)	†		
	occupied stations		32-point assignment/station (32 points used)			
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)			
Modulepow	ver supply	Current	45mA or lower (at 24VDC and all points ON)			
		Curront	Noise voltage 500Vp-p, noise width 1µs,			
Noise immu	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)			
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
VVIIIISIAITA	voltage		10MΩ or higher between all DC external terminals and ground (500VDC	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Insulation re	esistance		insulation resistance tester)			
Protection of	degree		IP2X	A		
Weight	acgree		0.16kg	2000 CO 2000 C		
External	Communication part,		7-point two-piece terminal block	XX		
	module power supply	nart	[Transmission circuit, module power supply, FG]	1.1.32D1		
system	module power suppry	part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	88 88 87 50 50 50 50 50 50 50 50 50 50 50 50 50		
-,			Applicable solderless terminal: 2 or less	2		
	I/O power supply part		2-point direct-mount terminal block	11516		
			[I/O power supply]	2 3 4 5 2 3 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
			Applicable solderless terminal: 2 or less			
	I/O part		Dedicated one-touch connector [I/O signals]			
			4-pin IDC plug is sold separately.			
Module mo	unting screw		M4 screw with plain washer finished round			
			(tightening torque range: 0.78 to 1.08N•m)			
			Mountable with a DIN rail in 6 orientations	<u> </u>		
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	1		
Applicable	Communication part,	Applicable	RAV1.25-3 (compliant with JIS C 2805)			
wire size	module power supply	solderless	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]			
	part	terminal	• V2-MS3, RAP2-3SL, TGV2-3N			
	I/O power supply part		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	1		
	I/O part		φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)			
			[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire]			
			φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)			
			[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	1		
Wire	Material		Copper			
	Temperature rating		75°C or more			
Accessory			User's manual			

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

4 - 61 4 - 61



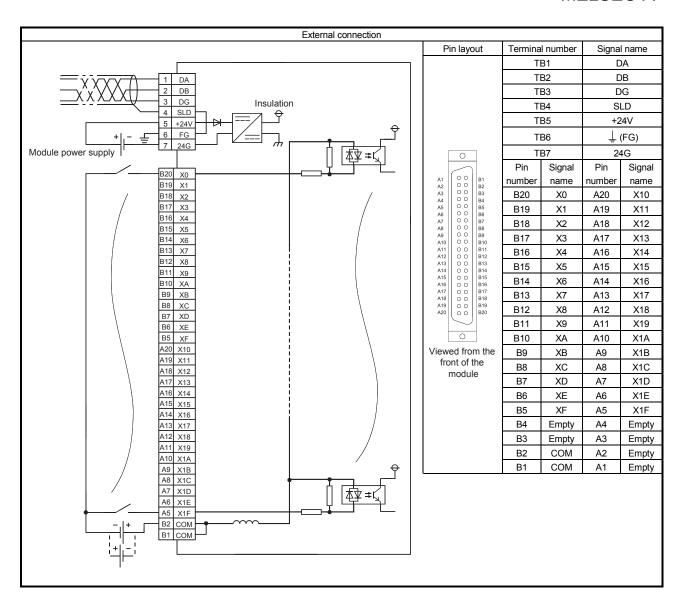
4.5 FCN Connector Type Input Module

4.5.1 AJ65SBTCF1-32D 24VDC input module (positive common (sink), negative common (source) loading)

		Type	DC input module		
Item		.,,,,	AJ65SBTCF1-32D	Appea	rance
Number of	input points		32 points		
Isolation method			Photocoupler	İ	
Rated input	t voltage		24VDC	İ	
Rated input	t current		Approx. 5mA	i	
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	i	
Max. numb	er of simultaneou	s input points	100%	i	
ON voltage	e/ON current		14VDC or higher/3.5mA or higher	i	
OFF voltag	je/OFF current		6VDC or lower/1.7mA or lower	Ì	
Input resist	ance		Approx. 4.7kΩ	Ì	
Response t	time	OFF→ON	1.5ms or less (at 24VDC)	l	
		ON→OFF	1.5ms or less (at 24VDC)	l	
Wiring metl	hod for common		32 points/common (1-wire, FCN connector type)		
Input type			Positive/negative common shared type (sink/source shared type)	. ₹ <u>~</u> <i>\\</i>	
Number of	occupied stations	3	32-point assignment/station (32 points used)		
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	STATION NO. BRA 20 10 8 4 2 14 2 B B B B B B B B B B B B B B B B B B B	0 0
		Current	45mA or lower (at 24VDC and all points ON)	NO.	0 0
Noise immu	unity		Noise voltage 500Vp-p, noise width 1µs,	A NO XE	0 0
			noise frequency 25 to 60Hz (DC type noise simulator condition)	ST 871	0 0 0 0 0 0
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground	80 80 XXX	
Insulation r	esistance		10M Ω or higher between all DC external terminals and ground (500VDC	X0-XF X10-X1F X7 X8 X7 X8 X	
			insulation resistance tester)		
Protection of	degree		IP2X	X8 9 A B C D E F D D D D D D D D X18191A1B1C1D1E1F SSBTCF1-32D KDK11K17X17X17K14K16K16 X0 X1 X2 X1 X4 X2 X2	
Weight			0.15kg	8 C 8 C	
External	Communication	part,	7-point two-piece terminal block	6.7 X89 A B 6 6.7 X89 A B 6 6.7 X8191A181 6.7 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181 7.8 X18191A181	
connection	module power s	upply part	[Transmission circuit, module power supply, FG]	X X X X X X X X X X X X X X X X X X X	
system			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	2 4 15	
			Applicable solderless terminal: 2 or less		
	I/O power supply	/ part,	40-pin connector [I/O power supply, I/O signal]	112. 112. 112. 124. 14. 15. 16. 17. 17. 17. 17. 17. 17. 17. 17	- 1(592) 1
	I/O part		(A6CON1, A6CON2, A6CON3, A6CON4)	X101 X101 S +24V	
Module mo	ounting screw		M4 screw with plain washer finished round	N LEF	1 (570) 1
			(tightening torque range: 0.78 to 1.08N•m)	PW LRU	10701
			Mountable with a DIN rail in 6 orientations		
Applicable	1		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
	Communication	Applicable	• RAV1.25-3 (compliant with JIS C 2805)	İ	
wire size	part,	solderless	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	İ	
	module power	terminal*1	• V2-MS3, RAP2-3SL, TGV2-3N	İ	
	supply part		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	i	
	I/O power supply	у рап,	• 0.08 to 0.3mm² (28 to 22 AWG) stranded wire (A6CON1 and A6CON4)*2	ı	
	I/O part		 0.08 to 0.2mm² (28 to 24 AWG) stranded wire (A6CON2) 0.08mm² (28 AWG) stranded wire,	1	
Wire	Motorial			I	
vviie	Material	ina	Copper 75°C or more	I	
Annlingh! -	Temperature rat	ıııy	75°C or more	I	
Applicable		ndula	A6TBXY36, A6TBXY54, A6TBX70	ı	
	ock conversion m	ouule	Hoor's manual	I	
Accessory			User's manual		

^{*1} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

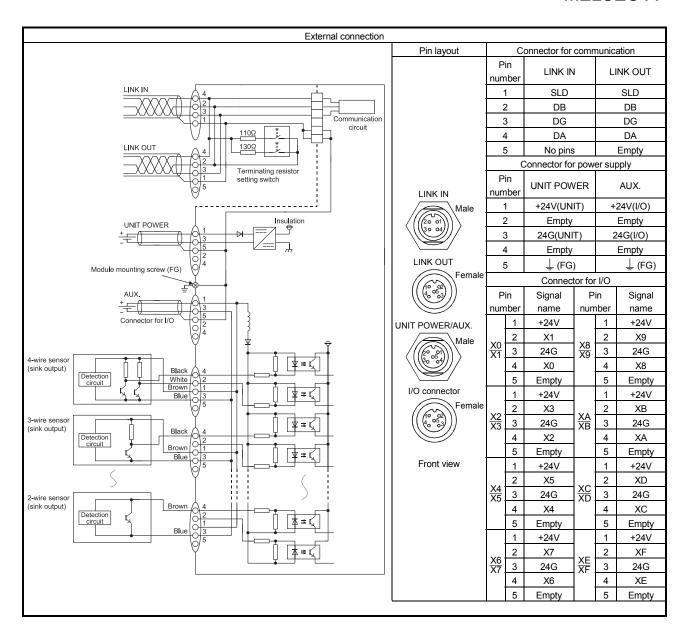
^{*2} Use cables with outside diameter of 1.3mm or shorter to connect 40 cables to the connector. In addition, consider the amount of current to be used and select appropriate cables.



4.6 Waterproof Type Input Module

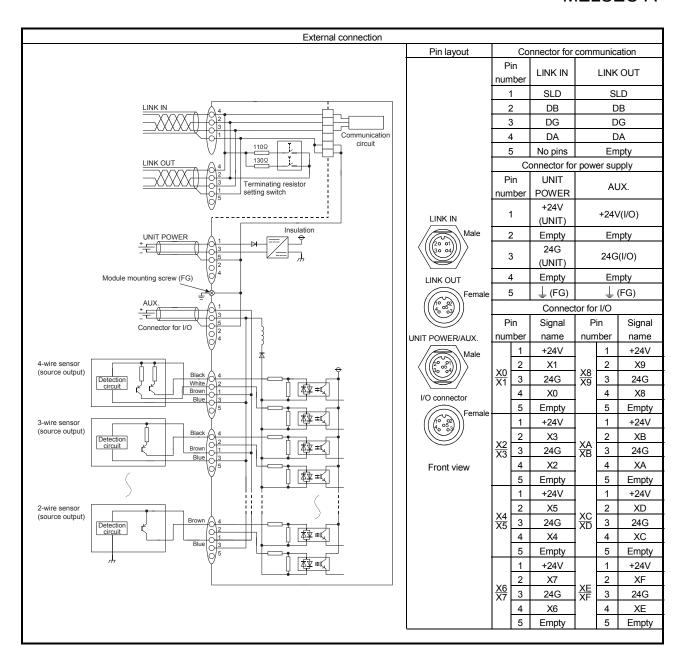
4.6.1 AJ65FBTA4-16D 24VDC input module (positive common (sink type))

Туре		DC input module	
Item		AJ65FBTA4-16D	Appearance
Number of input points		16 points	
Isolation method		Photocoupler	
Rated input voltage		24VDC	
Rated input current		Approx. 7mA	
Operating voltage range		20.4 to 26.4VDC (ripple ratio: within 5%)	
Max. number of simultane	ous input points	100%	
ON voltage/ON current		14VDC or higher/3.5mA or higher	MELSEC Assettm-160
OFF voltage/OFF current		6VDC or lower/1.7mA or lower	CC-LINK STATION NO. POWER OL RAN
Input resistance		Approx. 3.3kΩ	
Response time	OFF→ON	1.5ms or less (at 24VDC)	30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	ON→OFF	1.5ms or less (at 24VDC)	UNIT POWER AUX. NO SE
Wiring method for commo	n	16 points/common (2- to 4-wire, waterproof connector type)	
Input type		Positive common (sink type)	
Supply current for connec	ted device	1.0A of lower/common	
Number of occupied static	ons	32-point assignment/station (16 points used)	
Module power supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
	Current	40mA or lower (at 24VDC and all points ON)	
Noise immunity		Noise voltage 500Vp-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition)	X2 W XA
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation resistance		$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)	$\frac{X4}{X5}$
Protection degree		IP67	
Weight		0.40kg	
Accessory		User's manual	
Optional item		Waterproof cap: A6CAP-WP2 (20 pieces)	
Other connecting devices		Refer to Section 1.6.1.	



4.6.2 AJ65FBTA4-16DE 24VDC input module (negative common (source type))

Туре		DC input module		
Item		AJ65FBTA4-16DE	Appearance	
Number of input points		16 points		
Isolation method		Photocoupler		
Rated input voltage		24VDC	DO LINK O	
Rated input current		Approx. 7mA		
Operating voltage range		20.4 to 26.4VDC (ripple ratio: within 5%)		
Max. number of simultaneo	ous input points	100%	()	
ON voltage/ON current		14VDC or higher/3.5mA or higher	MELSEC AJ65FBTA4-16DE	
OFF voltage/OFF current		6VDC or lower/1.7mA or lower	CC-Link STATION NO. PURS P. P. P. P.	
Input resistance		Approx. 3.3kΩ	STATION NO.	
Response time	OFF→ON	1.5ms or less (at 24VDC)	(조리 현 현재 (조리 현재) (조리 현재) (조리 현재)	
	ON→OFF	1.5ms or less (at 24VDC)	UNIT POWER AUX. XTO ONE	
Wiring method for common	<u> </u>	16 points/common (2- to 4-wire, waterproof connector type)		
Input type		Negative common (source type)		
Supply current for connecte	ed device	1.0A or lower/common		
Number of occupied station	is	32-point assignment/station (16 points used)		
Module power supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
	Current	40mA or lower (at 24VDC and all points ON)		
Noise immunity		Noise voltage 500Vp-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition)	$\frac{\chi_2}{\chi_3} \bigcirc \boxed{\qquad} \boxed{\qquad} \chi_2 \downarrow \qquad \qquad \chi_2 \downarrow \qquad \qquad \chi_3 \downarrow \qquad \qquad \chi_4 \downarrow \qquad \qquad \chi_5 \downarrow \qquad \qquad $	
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground		
Insulation resistance		10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester)		
Protection degree		IP67		
Weight		0.40kg		
Accessory		User's manual		
Optional item		Waterproof cap: A6CAP-WP2 (20 pieces)	<u> </u>	
Other connecting devices		Refer to Section 1.6.1.		



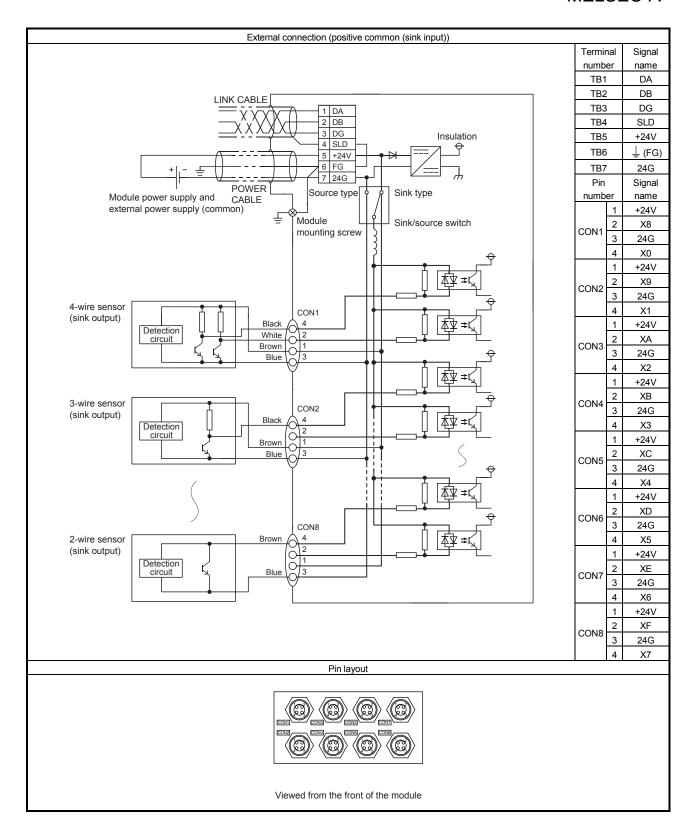
4.6.3 AJ65SBTW4-16D 24VDC input module (positive common (sink), negative common (source) loading)

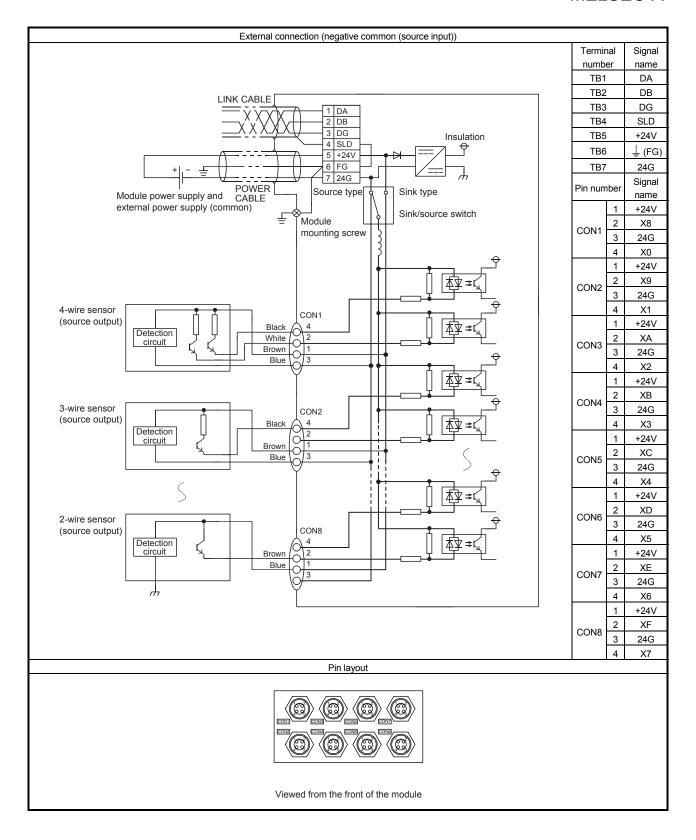
	_	Туре	DC input module	
Item			AJ65SBTW4-16D	Appearance
Operating a	ambient tempera	ature	0 to 45°C	
Storage ambient temperature		ire	-20 to 65°C ^{11 *3}	
Number of input points			16 points	
Isolation me	ethod		Photocoupler	
Rated input	t voltage		24VDC	
Rated input	t current		Approx. 5mA	
Operating v	oltage range		20.4 to 26.4VDC (ripple ratio: within 5%)	
Max. numb points	er of simultaned	us input	100%	
ON voltage	/ON current		14VDC or higher/3.5mA or higher	
OFF voltag	e/OFF current		6VDC or lower/1.7mA or lower	
Input resist	ance		Approx. 4.7kΩ	
Response t	timo	OFF→ON	1.5ms or less (at 24VDC)	WO O PRUN 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Response	uitie	ON→OFF	1.5ms or less (at 24VDC)	OU RUN OU ERR OUY OUY OUY OUY OUY OUY A LEGSBTTWA
Wiring metl	nod for common		16 points/common (4-wire, waterproof connector type)	0 00000000
vviiing mea			Same as that for the module power supply	WELSE WELSE
Input type			Positive/negative common shared type (sink/source shared type)	
input typo			(Selected using the switch.)	(6) (6)
Number of	occupied station	ıs	32-point assignment/station (16 points used)	LAWES COOK
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module pov	ver supply	Current	35mA or lower (at 24VDC and all points ON),	
		Ourient	excluding input current for I/O part	(6) (6)
Noise imm	ınitv		Noise voltage 500Vp-p, noise width 1μs,	900
NOISE IIIIIII	ariity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand v	/oltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation r	esistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)	
Protection of	degree		IP67	
Weight	<u></u>		0.70kg	
Wolght			7-point two-piece terminal block	† (69) (69)
			[Transmission circuit, module power supply, FG] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Waterproof connector	inco (S)
External co	nnection system	1	[compliant with IEC 60947-5-2, M12, male, 4 pins, IP67] (connector for I/O) <optional></optional>	POWER CABL
			Dustproof cap: A6CAP-DC1 (20 pieces), waterproof cap: A6CAP-WP1 (20 pieces)	
	Module top-cov	er mounting	0.54 to 0.64N•m	INK CAE
Tightening	Module front-co	ver mounting	0.54 to 0.64N•m	
torque range*2	Module mountin (M4 with plain water) finished round)	_	1.27 to 1.47N•m	
	Nut for pipe		0.99 to 1.48N•m	<u> </u>
	e r		Applicable cable size: φ5.0 to 8.0mm	†
	Communication	part,	• RAV1.25-3 (compliant with JIS C 2805)	
Applicable	module power s	•	[Applicable wire size: 0.3 to 1.25mm²]	
wire size	I/O power supp		• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
	Connector for I/	0	-]
Accessory			User's manual, waterproof plug (2 pieces)]

 $[\]pm$ 1: Store the wired module in the ambient temperatures of -10 to 55°C.

st 2: Do not apply an excessive force (39N or more) to the connected cable at the inlet of the pipe.

^{*} 3: To use the wired module that has been stored exceeding the ambient temperature of 55°C, retighten the nuts.





4 - 71 4 - 71

5 SPECIFICATIONS FOR OUTPUT MODULES

This chapter describes the specifications for an output module that can be connected to the CC-Link system.

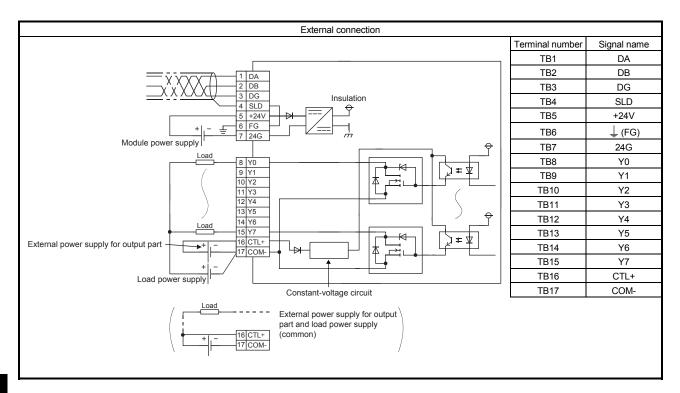
5.1 Terminal Block Type Output Module

5.1.1 AJ65SBTB1-8T transistor output module (sink type)

		Туре	Transistor output module		_
Item			AJ65SBTB1-8T	Appearance	
Number of	f output points		8 points		
Isolation m	nethod		Photocoupler	\neg	
Rated load	d voltage		12/24VDC	\neg	
Operating	load voltage rang	je	10.2 to 26.4VDC (ripple ratio: within 5%)	7	
Max. load	current		0.5A/point, 2.4A/common	7	
Max. inrus	sh current		1.0A, 10ms or less	7	
Leakage c	current at OFF		0.25mA or lower	7	
Max. volta	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	7	
Output typ	ie		Sink type	7	
Protection			Overload protection, overvoltage protection, overheat protection	7	
		OFF→ON	0.5ms or less	7	
Response	time	ON→OFF	1.5ms or less (resistive load)	7	
External p	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	7	
output par		Current	15mA or lower (TYP. 24VDC/common), excluding external load current	7	
Surge sup		1	Zener diode		
	thod for common		8 points/common (1-wire, terminal block type)		
	f occupied station		32-point assignment/station (8 points used)		
	. occupiou ciauci.	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Module po	ower supply	Current	35mA or lower (at 24VDC and all points ON)		
		Carrent	Noise voltage 500Vp-p, noise width 1µs,)
Noise imm	nunity		noise frequency 25 to 60Hz (DC type noise simulator condition)		
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground		7
11101010110	Tollago		10MΩ or higher between all DC external terminals and ground (500VDC		
Insulation	resistance		insulation resistance tester)		J
Protection	degree		IP2X	2 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	\
Weight			0.14kg	COURT OF THE PROPERTY OF THE P)
110.9.1			7-point two-piece terminal block		
	Communication	part.	[Transmission circuit, module power supply, FG]	B B B B B B B B B B B B B B B B B B B	
	module power s		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
External	·	, .	Applicable solderless terminal: 2 or less		
connection	1		10-point direct-mount terminal block		
system	I/O power supp	ly part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less		
			M4 screw with plain washer finished round		
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations	_	
Applicable	Applicable DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	_	
			RAV1.25-3 (compliant with JIS C 2805)		
Applicable	solderless termin	nal	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper		
	Temperature ra	ting	75°C or more		
Accessory	· · · · · · · · · · · · · · · · · · ·		User's manual		
			1		_

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 1 5 - 1

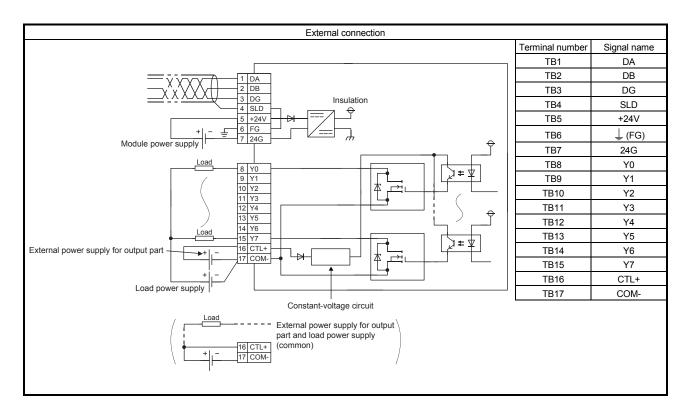


5

5.1.2 AJ65SBTB1-8T1 transistor output module (sink type)

		Туре	Transistor output module	
Item			AJ65SBTB1-8T1	Appearance
Number of	output points		8 points	
Isolation m	ethod		Photocoupler	7
Rated load	voltage		12/24VDC	7
Operating I	load voltage rang	е	10.2 to 26.4VDC (ripple ratio: within 5%)	7
Max. load o	current		0.5A/point, 2.4A/common	7
Max. inrush	n current		1.0A, 10ms or less	7
Leakage cu	urrent at OFF		0.1mA or lower	7
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	7
Output type	Э		Sink type]
Protection	function		None	7
_		OFF→ON	0.5ms or less	7
Response	time	ON→OFF	1.5ms or less (resistive load)	7
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	7
output part		Current	15mA or lower (TYP. 24VDC/common), excluding external load current	7
Surge supp	oressor		Zener diode	
	hod for common		8 points/common (1-wire, terminal block type)	
	occupied stations	S	32-point assignment/station (8 points used)	
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module po	wer supply	Current	35mA or lower (at 24VDC and all points ON)	
			Noise voltage 500Vp-p, noise width 1µs,	TATE OF THE PERSON IN THE PERS
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
			10M Ω or higher between all DC external terminals and ground (500VDC	
Insulation r	esistance		insulation resistance tester)	
Protection	degree		IP2X	(1) (2) (4 % 6) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Weight			0.14kg	. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			7-point two-piece terminal block	1 % - 4 H = 10°0
	Communication	part,	[Transmission circuit, module power supply, FG]	
C. 44	module power s	upply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
External connection			Applicable solderless terminal: 2 or less	
system			10-point direct-mount terminal block	
Зузісні	I/O power suppl	y part,	[I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	!
			Applicable solderless terminal: 2 or less	-
			M4 screw with plain washer finished round	!
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)	
			Mountable with a DIN rail in 6 orientations	-}
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	-}
			• RAV1.25-3 (compliant with JIS C 2805)	
Applicable	solderless termin	al	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
''			• V2-MS3, RAP2-3SL, TGV2-3N	
Wire	Material		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	┥ '
vviie	Material Temperature ret	ina	Copper 75°C or more	┥ '
A	Temperature rat	urig		┥ '
Accessory			User's manual	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

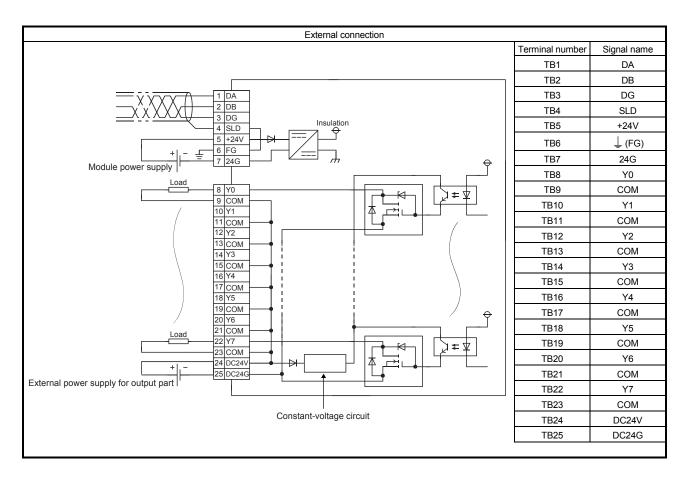


5 - 4 5 - 4

5.1.3 AJ65SBTB2-8T transistor output module (sink type)

		Туре	Transistor output module		
Item			AJ65SBTB2-8T	Appearance	
Number of	output points		8 points		
Isolation m	nethod		Photocoupler	_	
Rated load	l voltage		12/24VDC	7	
Operating	load voltage rang	ge	10.2 to 26.4VDC (ripple ratio: within 5%)	7	
Max. load	current		0.5A/point, 2.4A/common	7	
Max. inrus	h current		1.0A, 10ms or less	7	
Leakage c	urrent at OFF		0.25mA or lower		
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	_	
Output type	е		Sink type	7	
Protection	function		Overload protection, overvoltage protection, overheat protection	7	
	P	OFF→ON	0.5ms or less	7	
Response	ume	ON→OFF	1.5ms or less (resistive load)		
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part	t	Current	17.8mA or lower (TYP. 24VDC/common), excluding external load current	SSPE28TE	(597)
Surge sup	pressor		Zener diode	BRATE 1 4 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 1 2 T 1 2	
Wiring met	thod for common		8 points/common (2-wire, terminal block type)	MNO. 1	
Number of	occupied station	ıs	32-point assignment/station (8 points used)	STATION NO. 40 20 1018 A 4 2 4 2 4 4 2 4 4 4 4 4 4 4 4 4 4 4 4	(2 _n ()
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	STA 40.201	
Module po	wer supply	Current	45mA or lower (at 24VDC and all points ON)	NOW 4-	
			Noise voltage 500Vp-p, noise width 1µs,	→ N × 4 × N N N N N N N N N N N N N N N N	
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)		() <u>() </u>
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground		
Lea Lagran			10M Ω or higher between all DC external terminals and ground (500VDC	18 T8 WOO	
Insulation i	resistance		insulation resistance tester)	STB2-	
Protection	degree		IP2X	AJ65SBTB2-81	
Weight			0.18kg	1 4 5 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
			7-point two-piece terminal block	2 3 4 5 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Communication	n part,	[Transmission circuit, module power supply, FG]		10.01
External	module power s	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		(5-0)
connection			Applicable solderless terminal: 2 or less		
system	'		18-point direct-mount terminal block	DA C DB	10.01
Gyotom	I/O power supp	ly part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less	4	
			M4 screw with plain washer finished round		
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations	+	
Applicable	DIN Lail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	+	
			• RAV1.25-3 (compliant with JIS C 2805)		
Applicable	solderless termin	nal	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			• V2-MS3, RAP2-3SL, TGV2-3N		
Wire	Material		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Copper	+	
VVIIC	Temperature ra	itina	75°C or more	†	
Δοοροροπι		iuriy	User's manual	†	
Accessory			USCI S Manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

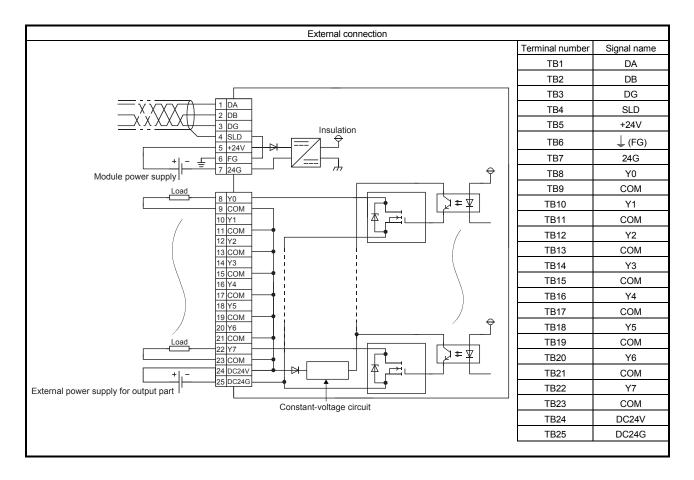


5 - 6 5 - 6

5.1.4 AJ65SBTB2-8T1 transistor output module (sink type)

		Туре	Transistor output module		
Item			AJ65SBTB2-8T1	Appearance	
Number of	output points		8 points		
Isolation m	ethod		Photocoupler		
Rated load	l voltage		12/24VDC		
Operating I	load voltage rang	ge	10.2 to 26.4VDC (ripple ratio: within 5%)	Ī	
Max. load o	current		0.5A/point, 2.4A/common		
Max. inrush	h current		1.0A, 10ms or less		
Leakage cu	urrent at OFF		0.1mA or lower		
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Output type	е		Sink type		
Protection	function		None		
_		OFF→ON	0.5ms or less		
Response	time	ON→OFF	1.5ms or less (resistive load)		
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part		Current	17.8mA or lower (TYP. 24VDC/common), excluding external load current		1 (50) 1 - 1
Surge supp	oressor		Zener diode		
	hod for common		8 points/common (2-wire, terminal block type)	0M /77	10.01
	occupied station		32-point assignment/station (8 points used)	W Y6	
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Module po	wer supply	Current	45mA or lower (at 24VDC and all points ON)		10.01
			Noise voltage 500Vp-p, noise width 1µs,	N	
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)		$ (\Sigma C) = V $
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	SSBTB2-811 Con	
			10MΩ or higher between all DC external terminals and ground (500VDC	MOM Y	10.0111
Insulation r	resistance		insulation resistance tester)	TB2-8	(323) - 1
Protection	degree		IP2X		
Weight	<u> </u>		0.18kg		
Ĭ			7-point two-piece terminal block		
	Communication	n part,	[Transmission circuit, module power supply, FG]	MRIU V 246	
	module power s	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		0-0
External			Applicable solderless terminal: 2 or less		
connection system			18-point direct-mount terminal block		10.01
System	I/O power supp	ly part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less	1	
			M4 screw with plain washer finished round		
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations	1	
Applicable	Applicable DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	<u> </u>	
			• RAV1.25-3 (compliant with JIS C 2805)		
Applicable	solderless termin	nal	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
11.			• V2-MS3, RAP2-3SL, TGV2-3N		
\\/iro	Motoric		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	1	
Wire	Material	. ti	Copper 75°C or more	+	
A · · ·	Temperature ra	aung		+	
Accessory	Accessory		User's manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

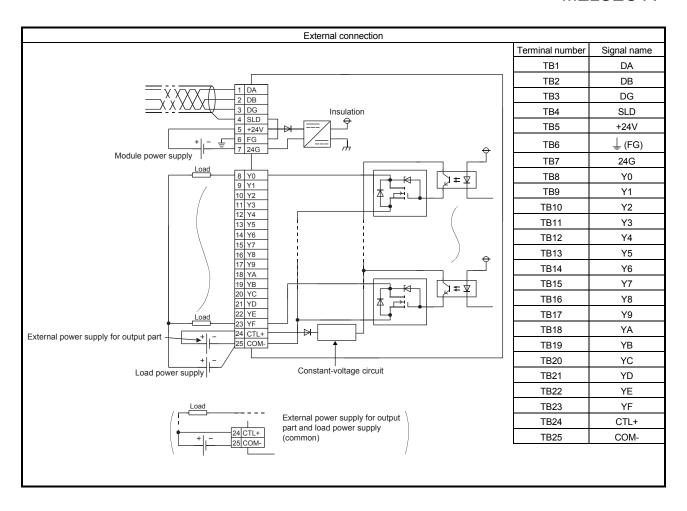


5 - 8 5 - 8

5.1.5 AJ65SBTB1-16T transistor output module (sink type)

	_	Туре	Transistor output module		
Item			AJ65SBTB1-16T	Appea	rance
Number of or	utput points		16 points		
Isolation met	hod		Photocoupler		
Rated load v	oltage		12/24VDC		
Operating loa	ad voltage rang	je	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load cu	rrent		0.5A/point, 3.6A/common		
Max. inrush o	current		1.0A, 10ms or less		
Leakage curi	rent at OFF		0.25mA or lower		
Max. voltage	drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Output type			Sink type		
Protection fu	nction		Overload protection, overvoltage protection, overheat protection		
		OFF→ON	0.5ms or less		
Response tin	ne	ON→OFF	1.5ms or less (resistive load)		
External Pow	ver supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part		Current	30mA or lower (TYP. 24VDC/common), excluding external load current	RATE COLL.	(398) -
Surge suppre	essor	1	Zener diode		117.17
	od for common		16 points/common (1-wire, terminal block type)		
	ccupied station	s	32-point assignment/station (16 points used)	1 Sell	()-()
	ocapioa cianoi.	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	STAT	
Module power	er supply	Current	50mA or lower (at 24VDC and all points ON)		10.01
		04.10.11	Noise voltage 500Vp-p, noise width 1µs,	N≪	
Noise immur	nity		noise frequency 25 to 60Hz (DC type noise simulator condition)		(5%) - 1//
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	Y89 A B C D E F C D C D C D C D C D C D C D C D C D C	1 () () () () ()
			10MΩ or higher between all DC external terminals and ground (500VDC		
Insulation res	sistance		insulation resistance tester)	789 A	(398) - 1
Protection de	earee		IP2X	1 11 % 15 1	
Weight			0.18kg		
			7-point two-piece terminal block	Y01 2 3 4 5 6 7	
	Communication	on part,	[Transmission circuit, module power supply, FG]	ME ME 246	
	module power	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	424V	()-()
External	-		Applicable solderless terminal: 2 or less	SI SI	
connection system			18-point direct-mount terminal block		1()-() 1
System	I/O power sup	ply part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less		
			M4 screw with plain washer finished round		
Module mou	nting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable D	IN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	-	
			• RAV1.25-3 (compliant with JIS C 2805)		
Applicable so	olderless termir	nal	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			V2-MS3, RAP2-3SL, TGV2-3N The state of the state		
Miro	Material		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	-	
Wire	Material		Copper 75°C or more	-	
A	Temperature	raung		-	
Accessory	Accessory		User's manual]	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



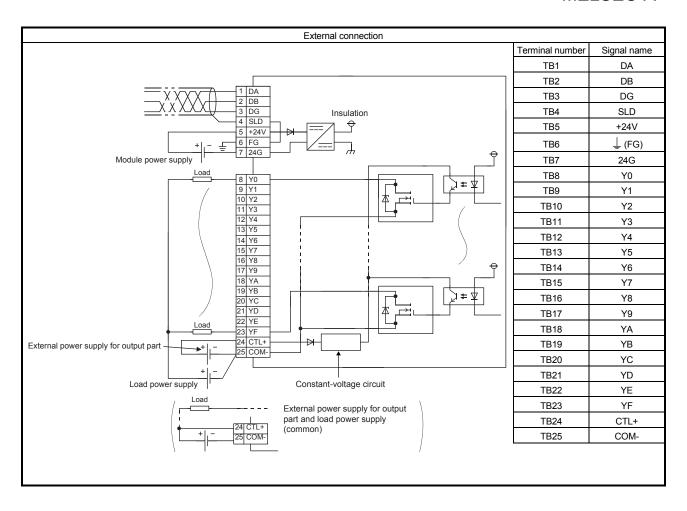
5 - 10 5 - 10

5.1.6 AJ65SBTB1-16T1 transistor output module (sink type)

		Туре	Transistor output module		
Item			AJ65SBTB1-16T1	Appea	rance
Number of	output points		16 points		
Isolation m	ethod		Photocoupler	Ī	
Rated load	l voltage		12/24VDC	Ī	
Operating I	load voltage rang	je	10.2 to 26.4VDC (ripple ratio: within 5%)	Ī	
Max. load o	current		0.5A/point, 3.6A/common	Ī	
Max. inrush	h current		1.0A, 10ms or less	Ī	
Leakage cu	urrent at OFF		0.1mA or lower	Ī	
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	Ī	
Output type	9		Sink type	Ī	
Protection			None	†	
		OFF→ON	0.5ms or less	†	
Response	time	ON→OFF	1.5ms or less (resistive load)		
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part		Current	30mA or lower (TYP. 24VDC/common), excluding external load current		(30)
Surge supp		o arront	Zener diode	BRATE 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	hod for common		16 points/common (1-wire, terminal block type)	STATION NO. 18 BRATE 14.2 14.2 14.2 14.2 14.2 14.2 14.2 14.2	
	occupied station	9	32-point assignment/station (16 points used)	T NOW T NOW T	1 ()-() 1
Number of	occupied station	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	STATIC 4020 10 E H H H H YA YB	
Module pov	wer supply	Current	50mA or lower (at 24VDC and all points ON)		113.(11
		Current	Noise voltage 500Vp-p, noise width 1µs,	- N → N → 1 → 1 → 1 → 1 → 1 → 1 → 1 → 1 →	I 0:0 I - D I
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	ا ا ا ا	
Withstand	voltago		500VAC for 1 minute between all DC external terminals and ground		11 2.01
vviiiistariu	voltage		· · · · · · · · · · · · · · · · · · ·	6T1	
Insulation r	resistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)	Y89 A E	I ()2() I \ J
Protection	dograd		IP2X		
Weight	degree		0.18kg		
vveigni			7-point two-piece terminal block	3 4 5 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Communication	nart	Transmission circuit, module power supply, FG	2 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	module power s		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	R. Y01	
External	module power s	supply part	Applicable solderless terminal: 2 or less	N LERR	10501
connection			18-point direct-mount terminal block	DA DO	
system	I/O power suppl	lv nart	[I/O power supply, I/O signal]		
	I/O part	iy part,	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
	" o part		Applicable solderless terminal: 2 or less		
	1.0		M4 screw with plain washer finished round	†	
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)		
	J		Mountable with a DIN rail in 6 orientations		
Applicable	Applicable DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	Ī	
			RAV1.25-3 (compliant with JIS C 2805)	Ī	
Annlinekti		- =1	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
Applicable solderless terminal		ıaı	• V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]]	
Wire	Material		Copper]	
	Temperature ra	ting	75°C or more]	
Accessory			User's manual	1	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 11 5 - 11



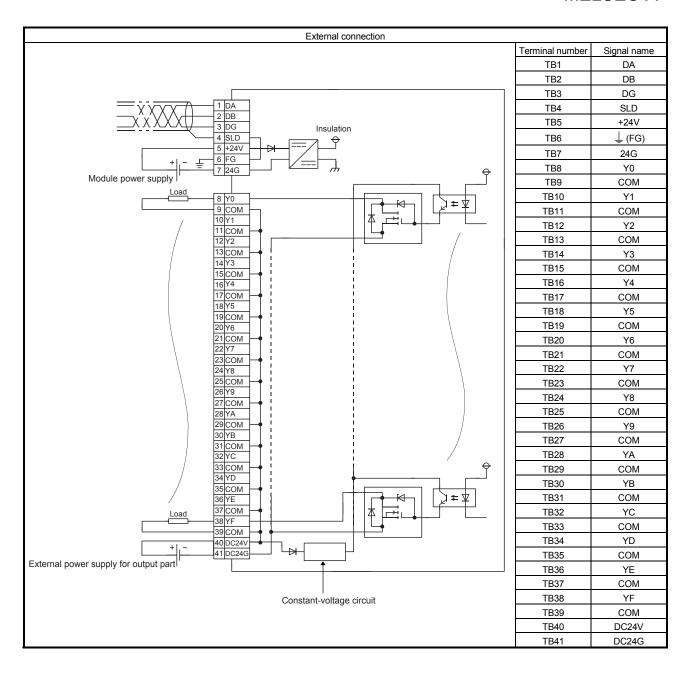
5 - 12 5 - 12

5.1.7 AJ65SBTB2-16T transistor output module (sink type)

		Type	Transistor output module	
Item			AJ65SBTB2-16T	Appearance
Number of	output points		16 points	
Isolation method			Photocoupler	
Rated load voltage			12/24VDC	
Operating I	load voltage range	е	10.2 to 26.4VDC (ripple ratio: within 5%)	
Max. load o	current		0.5A/point, 3.6A/common	
Max. inrush	h current		1.0A, 10ms or less	
Leakage cu	urrent at OFF		0.25mA or lower	
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Output type			Sink type	
Protection			Overload protection, overvoltage protection, overheat protection	
		OFF→ON	0.5ms or less	
Response	time	ON→OFF	1.5ms or less (resistive load)	
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	
output part		Current	24.2mA or lower (TYP. 24VDC/common), excluding external load current	
Surge supp			Zener diode	
	thod for common		16 points/common (2-wire, terminal block type)	
	occupied stations	<u> </u>	32-point assignment/station (16 points used)	
	occupiou ciai.ci.i.	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module power supply		Current	55mA or lower (at 24VDC and all points ON)	
		Odircit	Noise voltage 500Vp-p, noise width 1µs,	
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	
***************************************	Tollago		10MΩ or higher between all DC external terminals and ground (500VDC insulation	
Insulation r	resistance		resistance tester)	
Protection	dearee		IP2X	
Weight	acgice		0.25kg	
vvoignt			7-point two-piece terminal block	
	Communication	part.	[Transmission circuit, module power supply, FG]	182-167 182-167 183 (8) (8) (8) (8) (8) (8) (8) (8) (8) (8)
	module power s		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	17 78 8 A B L L L L L L L L L L L L L L L L L L
External	·		Applicable solderless terminal: 2 or less	
connection	1		34-point direct-mount terminal block	1 2 3 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
system	I/O power supply	y part,	[I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	₩ Û /
			Applicable solderless terminal: 2 or less	
			M4 screw with plain washer finished round	
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)	
			Mountable with a DIN rail in 6 orientations	
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
			RAV1.25-3 (compliant with JIS C 2805)	
Applicable	solderless termin	al	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
присавіс	30Ideness terriiri	ai	• V2-MS3, RAP2-3SL, TGV2-3N	
	Table 1		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	
	Temperature rat	ing	75°C or more	
Accessory			User's manual	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 13 5 - 13



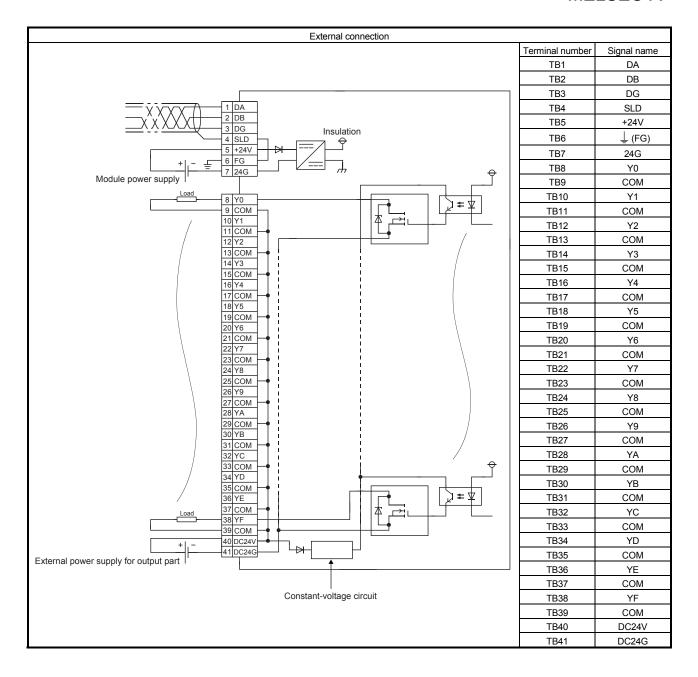
5 - 14 5 - 14

5.1.8 AJ65SBTB2-16T1 transistor output module (sink type)

		Туре	Transistor output module		
Item			AJ65SBTB2-16T1	Appea	arance
Number of	output points		16 points		
Isolation method			Photocoupler		
Rated load voltage			12/24VDC		
Operating I	load voltage rang	е	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load o	current		0.5A/point, 3.6A/common		
Max. inrush	n current		1.0A, 10ms or less		
Leakage cu	urrent at OFF		0.1mA or lower		
Max. voltaç	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Output type	9		Sink type		
Protection 1	function		None		(8)
		OFF→ON	0.5ms or less		
Response	time	ON→OFF	1.5ms or less (resistive load)	BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	N N N N N N N N N N N N N N N N N N N	
output part		Current	24.2mA or lower (TYP. 24VDC/common), excluding external load current		
Surge supp	oressor		Zener diode		
	hod for common		16 points/common (2-wire, terminal block type)	6 <	
	occupied stations	3	32-point assignment/station (16 points used)	NG C	
	'	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Module pov	wer supply	Current	55mA or lower (at 24VDC and all points ON)	6× 1×	
		ou.rom	Noise voltage 500Vp-p, noise width 1µs,	100	
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)		
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground		
			$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation	, COM	
Insulation r	esistance		resistance tester)	J WOS	
Protection	degree		IP2X		
Weight	-		0.25kg	- L	
			7-point two-piece terminal block	98 A B C D E F B B B B B B B B B B B B B B B B B B	
	Communication	part,	[Transmission circuit, module power supply, FG]	82-16	
C. da al	module power s	upply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	788BTI BSSBTI	
External			Applicable solderless terminal: 2 or less	.vo 1 2 3 4 5 6 7 □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□	L - L
connection system			34-point direct-mount terminal block	3 4 6 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1	
System	I/O power supply	y part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less	L RUN	
			M4 screw with plain washer finished round		
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
			• RAV1.25-3 (compliant with JIS C 2805)		
Applicable solderless terminal		al	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			• V2-MS3, RAP2-3SL, TGV2-3N		
\A/:	Industrial		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	1	
Wire	Material	•	Copper 75°C or more	1	
A	Temperature rat	ıng		1	
Accessory			User's manual	1	

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 15 5 - 15



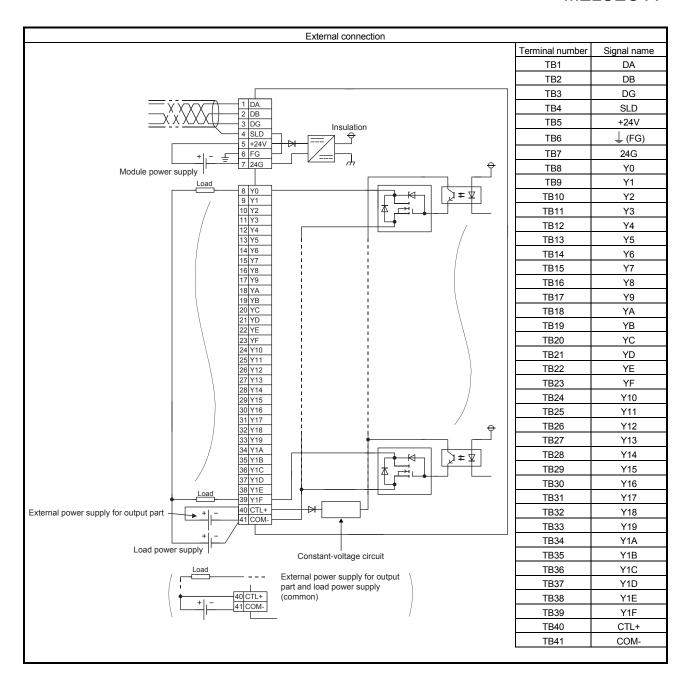
5 - 16 5 - 16

5.1.9 AJ65SBTB1-32T transistor output module (sink type)

		Туре	Transistor output module		
Item		-7,6-2	AJ65SBTB1-32T	Appearance	
Number of output points			32 points		
Isolation m	nethod		Photocoupler		
Rated load	d voltage		12/24VDC		
Operating	load voltage rang	е	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load			0.5A/point, 4.8A/common		
Max. inrus	h current		1.0A, 10ms or less	•	
Leakage c	current at OFF		0.25mA or lower		
	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Output typ	· .		Sink type	WE WE WE WE WE WE WE WE WE WE WE WE WE W	
Protection			Overload protection, overvoltage protection, overheat protection		(3-6)
		OFF→ON	0.5ms or less		
Response	time		1.5ms or less (resistive load)	100 PM 10	W M 1
External no	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	H H H Y11A	1 1 2 () 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
output part		Current	50mA or lower (TYP. 24VDC/common), excluding external load current		
Surge sup		Odiron	Zener diode		
	thod for common		32 points/common (1-wire, terminal block type)	7 × 16	
	f occupied stations		32-point assignment/station (32 points used)	- 141 - ×	
Number of	occupied stations	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Module po	wer supply	Current	65mA or lower (at 24VDC and all points ON)		
		Current	Noise voltage 500Vp-p, noise width 1µs,	119 141B1C1D1E1	D:O
Noise imm	nunity		noise voltage 500 Vp-p, noise width Tµs, noise frequency 25 to 60Hz (DC type noise simulator condition)	141B10	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground		
vviiiisiaiiu	voitage		· ·		
Insulation	resistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)		(7.5)
Drotostion	dograp		IP2X	11121314151617 Y	
Protection Weight	degree		0.25kg		
Weight					
	Communication	nart	7-point two-piece terminal block [Transmission circuit, module power supply, FG]		
	Communication part, module power supply part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		11 2 () 1//
External	Inlocatie power s	ирріу рап	Applicable solderless terminal: 2 or less	89 A B B B B B B B B B B B B B B B B B B	
connection	1		34-point direct-mount terminal block		
system	I/O power suppl	v nart	[I/O power supply, I/O signal]	- FED 65	
	I/O part	y part,	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	2 3 4 5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	"O part		Applicable solderless terminal: 2 or less	~ <u> </u>	- 1020 P)
	1		M4 screw with plain washer finished round		
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)	₹	
	.		Mountable with a DIN rail in 6 orientations	PW L RUI	
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
			RAV1.25-3 (compliant with JIS C 2805)		
A 10 10 -1	aaldada oo too d	-1	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
Applicable solderless terminal		aı	• V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper		
Temperature rating		ing	75°C or more		
Accessory			User's manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 17 5 - 17



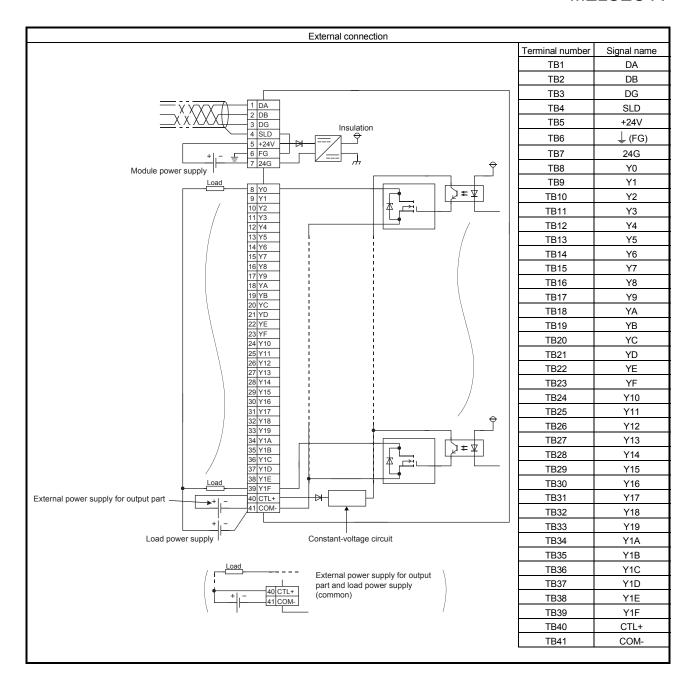
5 - 18 5 - 18

5.1.10 AJ65SBTB1-32T1 transistor output module (sink type)

Туре		Туре	Transistor output module			
Item			AJ65SBTB1-32T1	Appearance		
Number of output points			32 points			
Isolation m	nethod		Photocoupler			
Rated load	d voltage		12/24VDC			
Operating	load voltage ran	ge	10.2 to 26.4VDC (ripple ratio: within 5%)	1		
Max. load	current		0.5A/point, 4.8A/common			
Max. inrus	h current		1.0A, 10ms or less	1		
Leakage c	urrent at OFF		0.1mA or lower			
Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A			
Output type	е		Sink type			
Protection	function		None			
		OFF→ON	0.5ms or less			
Response	time	ON→OFF	1.5ms or less (resistive load)			
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)			
output part		Current	50mA or lower (TYP. 24VDC/common), excluding external load current			
Surge supp			Zener diode			
	thod for commor	1	32 points/common (1-wire, terminal block type)			
	f occupied station		32-point assignment/station (32 points used)			
	occupiou ciano.	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	1 II HEIL 100 P)		
Module power supply		Current	65mA or lower (at 24VDC and all points ON)			
		Carrone	Noise voltage 500Vp-p, noise width 1µs,			
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)			
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground			
			10M Ω or higher between all DC external terminals and ground (500VDC			
Insulation i	resistance		insulation resistance tester)			
Protection	degree		IP2X			
Weight			0.25kg			
			7-point two-piece terminal block			
	Communication	n part,	[Transmission circuit, module power supply, FG]			
External	module power supply part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	SET 1.22 1.22		
connection	,		Applicable solderless terminal: 2 or less			
system	'		34-point direct-mount terminal block			
System	I/O power supp	oly part,	[I/O power supply, I/O signal]	2 3 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
			Applicable solderless terminal: 2 or less			
			M4 screw with plain washer finished round			
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)			
			Mountable with a DIN rail in 6 orientations			
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)			
			• RAV1.25-3 (compliant with JIS C 2805)			
Applicable	Applicable solderless terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]			
F.F 20012 20012 40011114			• V2-MS3, RAP2-3SL, TGV2-3N			
Miro	Matoric		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	1		
Wire	Material Temperature re	nting	Copper 75°C or more	†		
Temperature rating		aurig		 		
Accessory			User's manual			

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 19 5 - 19



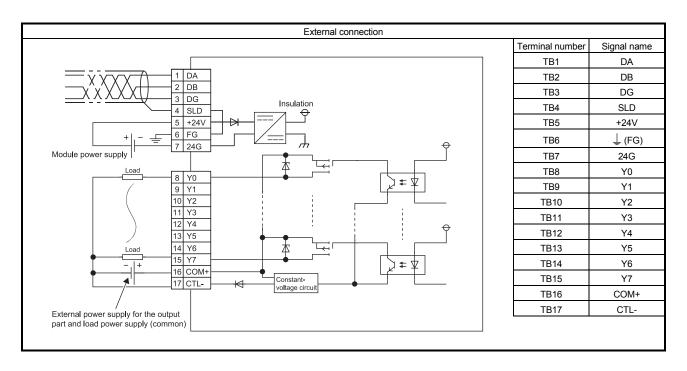
5 - 20 5 - 20

5.1.11 AJ65SBTB1-8TE transistor output module (source type)

		Туре	Transistor output module	
Item		. ,,,,	AJ65SBTB1-8TE	Appearance
Number of output points			8 points	
	Isolation method		Photocoupler	1
Rated load			12/24VDC	1
Operating lo	oad voltage rang	e	10.2 to 26.4VDC (ripple ratio: within 5%)	1
Max. load c			0.1A/point, 0.8A/common	1
Max. inrush			1.0A, 10ms or less	1
Leakage cu	urrent at OFF		0.1mA or lower	1
Max. voltag	ge drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A	1
Output type	•		Source type	1
Protection f	function		Overload protection, overheat protection	1
		OFF→ON	0.5ms or less	1
Response t	time	ON→OFF	1.5ms or less (resistive load)]
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)]
output part		Current	15mA or lower (TYP. 24VDC/common), excluding external load current	
Surge supp	ressor		Zener diode	
Wiring meth	hod for common		8 points/common (1-wire, terminal block type)	
Number of	occupied stations	3	32-point assignment/station (8 points used)	
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module pov	wer supply	Current	35mA or lower (at 24VDC and all points ON)	
			Noise voltage 500Vp-p, noise width 1µs,	
Noise immu	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground	
la a dati a a a	!		10M Ω or higher between all DC external terminals and ground (500VDC	
Insulation re	esistance		insulation resistance tester)	246 246 (FG) 1811
Weight			0.14kg	
			7-point two-piece terminal block	
	Communication part, module power supply part		[Transmission circuit, module power supply, FG]	
External			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
connection			Applicable solderless terminal: 2 or less	
system			10-point direct-mount terminal block	
ľ	I/O power supply	y part,	[I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	+
Modulo mo	unting screw		M4 screw with plain washer finished round	
ivioquie mo	unung sciew		(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations	
Annlicable I	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	†
Applicable DIN rail			• RAV1.25-3 (compliant with JIS C 2805)	†
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
Applicable solderless terminal		al	• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	1
	Temperature rating		75°C or more]
Accessory			User's manual	1

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

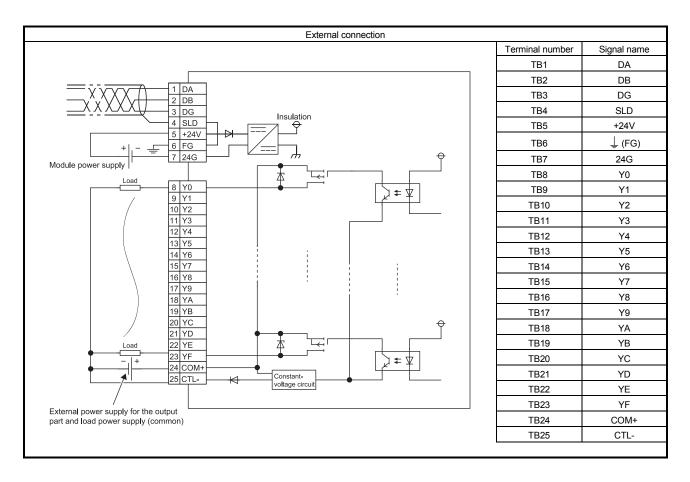
5 - 21 5 - 21



5.1.12 AJ65SBTB1-16TE transistor output module (source type)

	_	Type	Transistor output module		
Item			AJ65SBTB1-16TE	Appea	rance
Number of output points			16 points		
Isolation met	hod		Photocoupler		
Rated load v	oltage		12/24VDC		
Operating loa	ad voltage rang	е	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load cu	rrent		0.1A/point, 1.6A/common		
Max. inrush	current		1.0A, 10ms or less		
Leakage cur	rent at OFF		0.1mA or lower		
Max. voltage	drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A		
Output type			Source type		
Protection fu	nction		Overload protection, overheat protection		
D		OFF→ON	0.5ms or less		
Response tir	ne	ON→OFF	1.5ms or less (resistive load)		
External pow	er supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part	-	Current	30mA or lower (TYP. 24VDC/common), excluding external load current	B BRATE 4 2 1 1 1 COM+	
Surge suppre	essor		Zener diode		(3%) -
Wiring metho	od for common		16 points/common (1-wire, terminal block type)		
Number of o	ccupied stations	S	32-point assignment/station (16 points used)		- 105-01
NA. d. I.		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	# B \$ 6	
Module power	er supply	Current	50mA or lower (at 24VDC and all points ON)	8 → 8	
Naisa immuu			Noise voltage 500Vp-p, noise width 1µs,	7. A	
Noise immur	iity		noise frequency 25 to 60Hz (DC type noise simulator condition)		1030 / 1
Withstand vo	ltage		500VAC for 1 minute between all DC external terminals and ground	989 A B C D E F U U U U U U U U U U U U U U U U U U	
Insulation res	niotanaa		10M Ω or higher between all DC external terminals and ground (500VDC	AJ65SBTB1-16TE	1 (258) 1 - 1/ 1
Insulation res	sistance		insulation resistance tester)	V89 A	
Weight			0.18kg		
			7-point two-piece terminal block	VO 1 2 3 4 5 6 7 VO 1 2 3 4 5 6 7 VO 1 2 3 4 5 6 7 VO 1 2 3 4 5 6 7 VO 1 2 4 7 VO 1	
	Communication part, module power supply part		[Transmission circuit, module power supply, FG]	2 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
External			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	× × × × × × × × × × × × × × × × × × ×	1 0:0 1 1
connection			Applicable solderless terminal: 2 or less		
system			18-point direct-mount terminal block	L RUN DA D	I D.O.I
	I/O power sup	ply part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less		
			M4 screw with plain washer finished round	1	
Module mou	nting screw		(tightening torque range: 0.78 to 1.08N•m)		
Wodule IIIou	nung screw		Mountable with a DIN rail in 6 orientations		
Applicable D	IN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
Applicable Dily fall			• RAV1.25-3 (compliant with JIS C 2805)	1	
Applicable so	Applicable solderless terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material Temperature rating		Copper	1	
			75°C or more	7	
Accessory		3	User's manual		
0000001 j				I .	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

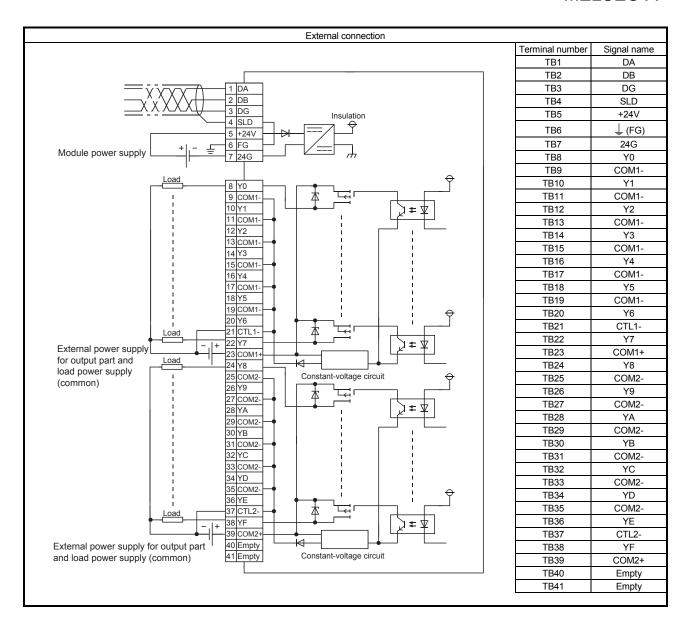


5 - 24 5 - 24

5.1.13 AJ65SBTB1B-16TE1 transistor output module (source type)

		Туре	Transistor output module			
Item			AJ65SBTB1B-16TE1	Appearance		
Number of output points			16 points			
Isolation method			Photocoupler			
Rated load v	oltage		12/24VDC			
Operating loa	ad voltage rang	je	10.2 to 26.4VDC (ripple ratio: within 5%)	-		
Max. load cu	rrent		0.5A/point, 4A/common			
Max. inrush o	current		1.0A, 10ms or less			
Leakage curi	rent at OFF		0.1mA or lower			
Max. voltage	drop at ON		0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A			
Output type			Source type			
Protection fu	nction		None	BBB BEATE SOWEHER INC.		
		OFF→ON	0.5ms or less			
Response tin	ne	ON→OFF	1.5ms or less (resistive load)	S VE VE VE VE VE VE VE VE VE VE VE VE VE		
External pow	er supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)			
output part		Current	10mA or lower (TYP. 24VDC/common), excluding external load current		(3) L	
Surge suppre	essor		Zener diode			
	od for common		8 points/common (1-wire, terminal block type)	NZ SON		
	ccupied station	s	32-point assignment/station (16 points used)			
	soup.ou otution	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)			
Module power supply		Current	45mA or lower (at 24VDC and all points ON)			
		04.70.11	Noise voltage 500Vp-p, noise width 1µs,			
Noise immur	iity		noise frequency 25 to 60Hz (DC type noise simulator condition)			
Withstand vo	ltage		500VAC for 1 minute between all DC external terminals and ground			
	-		10M Ω or higher between all DC external terminals and ground (500VDC	1		
Insulation res	sistance		insulation resistance tester)			
Protection de	earee		IP2X			
Weight			0.26kg			
			7-point two-piece terminal block			
	Communication part, module power supply part		[Transmission circuit, module power supply, FG]			
			M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
External			Applicable solderless terminal: 2 or less			
connection			34-point direct-mount terminal block			
system	I/O power sup	ply part,	[I/O power supply, I/O signal]			
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)			
			Applicable solderless terminal: 2 or less	SID 1		
			M4 screw with plain washer finished round			
Module mou	nting screw		(tightening torque range: 0.78 to 1.08N•m)			
			Mountable with a DIN rail in 6 orientations		(3)	
Applicable D	IN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)			
			RAV1.25-3 (compliant with JIS C 2805)			
Applicable so	Applicable solderless terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]			
, wpilodole soldeness terrilla			• V2-MS3, RAP2-3SL, TGV2-3N			
100	Indian de la		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	4		
Wire	Material		Copper 75°C or more	_		
Temperature rating		rating	75°C or more	4		
Accessory			User's manual			

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



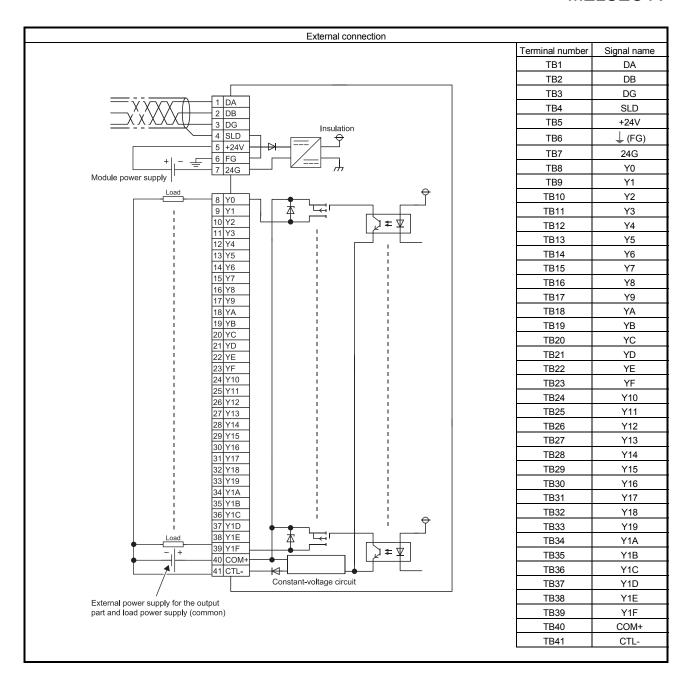
5 - 26 5 - 26

5.1.14 AJ65SBTB1-32TE1 transistor output module (source type)

		Туре	Transistor output module	
Item		.,,,,,	AJ65SBTB1-32TE1	Appearance
Number of	Number of output points		32 points	•
Isolation method			Photocoupler	7
Rated load voltage			12/24VDC	7
Operating load voltage range			10.2 to 26.4VDC (ripple ratio: within 5%)	7
Operating load voltage range Max. load current			0.5A/point, 4.8A/common	7
Max. load current Max. inrush current			1.0A, 10ms or less	7
Leakage c	Max. inrush current Leakage current at OFF		0.1mA or lower	7
Max. voltag	ge drop at ON		0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A	
Output type	e		Source type	
Protection	function		None	
_		OFF→ON	0.5ms or less	
Response	time	ON→OFF	1.5ms or less (resistive load)	
External po	External power supply for		10.2 to 26.4VDC (ripple ratio: within 5%)	
output part		Voltage Current	15mA or lower (TYP. 24VDC/common), excluding external load current	
Surge supp	pressor		Zener diode	
	thod for common		32 points/common (1-wire, terminal block type)	
Number of	Number of occupied stations		32-point assignment/station (32 points used)	
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module po	Module power supply Current		60mA or lower (at 24VDC and all points ON)	
			Noise voltage 500Vp-p, noise width 1µs,	
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	
la a colatia a c			10M Ω or higher between all DC external terminals and ground (500VDC	
Insulation i	resistance		insulation resistance tester)	
Protection	degree		IP2X	
Weight			0.26kg	
			7-point two-piece terminal block	
	Communication	part,	[Transmission circuit, module power supply, FG]	
External	module power s	upply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
connection	, <u> </u>		Applicable solderless terminal: 2 or less	
system			34-point direct-mount terminal block	
	I/O power supply	/ part,	[I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	
Madule	ounting o		M4 screw with plain washer finished round	PW LENALERON 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 2 1 2 1 2 2 1
ivioaule mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)	
Applicable	DIN roil		Mountable with a DIN rail in 6 orientations	
Applicable	ווא ואווע ווווע		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
			 RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] 	
Applicable	Applicable solderless terminal		• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm ² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	┪
1	Temperature rati	ina	75°C or more	7
Accessory		···9	User's manual	7
, 10003301 y			Oct o mandal	I

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 27 5 - 27

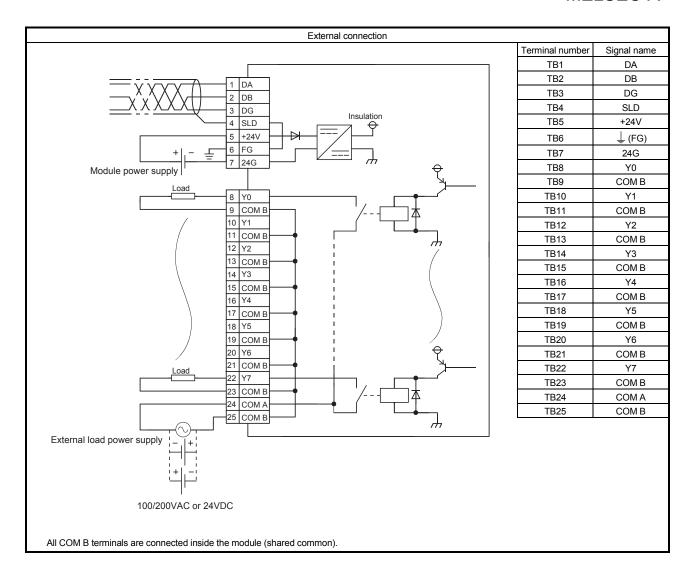


5 - 28 5 - 28

5.1.15 AJ65SBTB2N-8R contact output module

		Туре	Contact output module	
Item		· ypc	AJ65SBTB2N-8R	Appearance
Number of	output points		8 points	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Isolation method			Relay	
			2A/point, 4A/common	
Rated load voltage/current			at 24VDC (resistive load) or 240VAC (cosφ=1)	
Min. switching load			5VDC, 1mA	
Min. switching load Max. switching voltage			264VAC, 125VDC	
D	ti	OFF→ON	10ms or less	
Response	time	ON→OFF	12ms or less	
		Mechanical	20 million times or more	
			Rated switching voltage/current load: 100 thousand times or more	
Life			200VAC 1.5A, 240VAC 1A (cosφ=0.7): 100 thousand times or more	
		Electrical	200VAC 1A, 240VAC 0.5A (cos∮=0.35): 100 thousand times or more	
			24VDC 1A, 100VDC 0.1A (L/R=7ms): 100 thousand times or more	7
Max. switch	hing frequency	•	3600 times/hour	
Surge supp			None	
	hod for commor	1	8 points/common (2-wire, terminal block type)	OWNER SE S S S S S S S S S S S S S S S S S
	occupied station		32-point assignment/station (8 points used)	1
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module po	wer supply	Current	85mA or lower (at 24VDC and all points ON)	Vol. 1 2 3 4 Vol.
			Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	
			noise frequency 25 to 60Hz (noise simulator condition)	LRIN LER.
Noise imm	unity		Fast transient/burst immunity test	Man 44 Land
			IEC61000-4-4:1kV	
			2830VACrms for 3 cycles between all AC external terminals and ground	
Withstand	voltage		(2000m above sea level)	
			500VAC for 1 minute between all DC external terminals and ground	WATER AND THE PROPERTY OF THE
			10M Ω or higher between all AC external terminals and ground (500VDC	SA 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Insulation r	recistance		insulation resistance tester)	
Ilisulation	esistance		10M Ω or higher between all DC external terminals and ground (500VDC	
			insulation resistance tester)	<u> </u>
Weight	1		0.25kg	
			7-point two-piece terminal block	SSBTB2
	Communicatio	•	[Transmission circuit, module power supply, FG]	Aussbard Ball Ball Ball Ball Ball Ball Ball Bal
External	module power	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
connection			Applicable solderless terminal: 2 or less	
system			18-point direct-mount terminal block	
•	I/O power supp	oly part,	[I/O power supply, I/O signal]	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
			Applicable solderless terminal: 2 or less	-
Modulo mo	unting scrow		M4 screw with plain washer finished round (tightening targue range: 0.78 to 1.08Nem)	
Wodule IIIC	ounting screw		(tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations	
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	+
, ippiidable	Dirtiuii		• RAV1.25-3 (compliant with JIS C 2805)	
			[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
Applicable	Applicable solderless terminal		• V2-MS3, RAP2-3SL, TGV2-3N	
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	7
	Temperature r	ating	75°C or more	\neg
Accessory			User's manual	7
			1	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

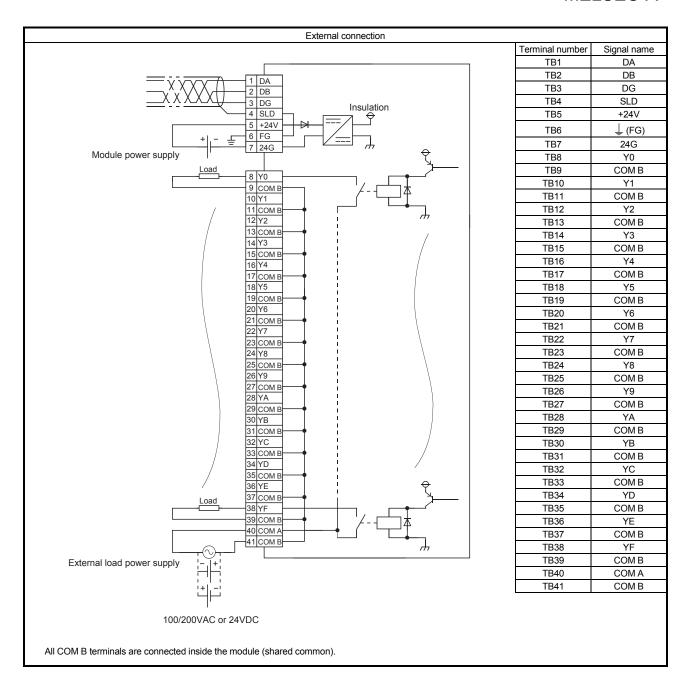


5.1.16 AJ65SBTB2N-16R contact output module

		Туре	Contact output module		
Item		.,,,,,	AJ65SBTB2N-16R	Appear	rance
Number of	output points		16 points		
Isolation method			Relay		
			2A/point, 8A/common	†	
Rated load voltage/current			at 24VDC (resistive load) or 240VAC (cosφ=1)		
Min. switching load			5VDC, 1mA]	
Min. switching load Max. switching voltage			264VAC, 125VDC	1	
Max. switching voltage Response time		OFF→ON	10ms or less	1	
Response t	time	ON→OFF	12ms or less	1	
		Mechanical	20 million times or more	1	
			Rated switching voltage/current load: 100 thousand times or more	1	
Life			200VAC 1.5A, 240VAC 1A (cosφ=0.7): 100 thousand times or more		
		Electrical	200VAC 1A, 240VAC 0.5A (cosφ=0.35): 100 thousand times or more		-
			24VDC 1A, 100VDC 0.1A (L/R=7ms): 100 thousand times or more	†∥ <u>"</u>	
Max. switch	ning frequency		3600 times/hour	Jan John Jan Jan Jan Jan Jan Jan Jan Jan Jan Ja	
Surge supp			None	Y89 A B C D E F	W M
	hod for commor	1	16 points/common (2-wire, terminal block type)		(A) (A)
·	occupied station		32-point assignment/station (16 points used)		
rtarribor or	occupiou ciano	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	4 L	
Module pov	wer supply	Current	120mA or lower (at 24VDC and all points ON)	A YO 1 2 3 4 5 6 7	
		Odiront	Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	COMF	@ W
	noise frequency 25 to 60Hz (noise simulator condition)		SOMB THE SUN THE STATE OF THE S		
Noise immu				N. A. A. A. A. A. A. A. A. A. A. A. A. A.	
			IEC 61000-4-4:1kV	8 × 8 × 8 × 8 × 8 × 8 × 8 × 8 × 8 × 8 ×	W M
			2830VACrms for 3 cycles between all AC external terminals and ground (2000m	4 A	
Withstand v	voltage		above sea level)	76 V6	
	Ū		500VAC for 1 minute between all DC external terminals and ground	Y5	
			10MΩ or higher between all AC external terminals and ground (500VDC insulation	1	@ W
las datis a	!		resistance tester)		
Insulation re	esistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation		
			resistance tester)	H H H	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
Weight			0.35kg	14.2 14.2 TE	W M h
			7-point two-piece terminal block		
	Communicatio	•	[Transmission circuit, module power supply, FG]		
External	module power	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	16R 9N (FG)	
connection			Applicable solderless terminal: 2 or less	B2N-	(A)
system			34-point direct-mount terminal block	88 90 Se Se Se Se Se Se Se Se Se Se Se Se Se	
,	I/O power supp	oly part,	[I/O power supply, I/O signal]	Auessetezh-16r	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
	<u> </u>		Applicable solderless terminal: 2 or less	1	
Madula			M4 screw with plain washer finished round		
ivioaule mo	unting screw		(tightening torque range: 0.78 to 1.08N•m)		
Applicable	A collected a DIN coll		Mountable with a DIN rail in 6 orientations	1	
Applicable	ווא ומוו		TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)	1	
			 RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] 		
Applicable solderless terminal		inal	Applicable wire size: 0.3 to 1.25mm (22 to 16 AVVG) stranded wirej V2-MS3, RAP2-3SL, TGV2-3N		
			[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material		Copper	†	
	Temperature ra	ating	75°C or more	1	
Accessory		· · · · · · · · · · · ·	User's manual	†	
Accessory				I	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

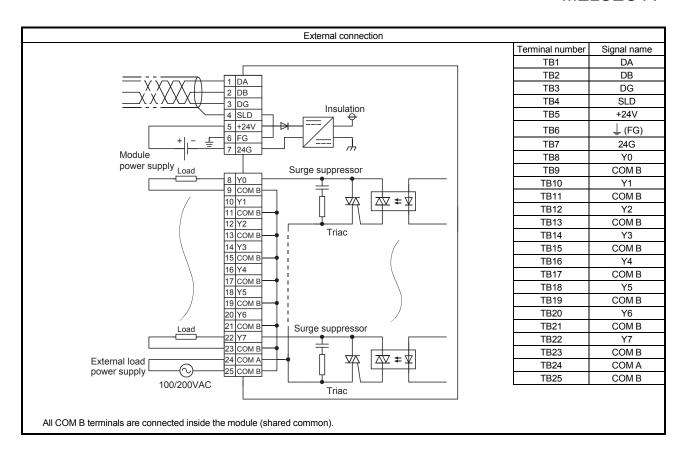
5 - 31 5 - 31



5.1.17 AJ65SBTB2N-8S triac output module

		Туре	Triac output module		
Item		Турс	AJ65SBTB2N-8S	Appear	ance
Number of	output points		8 points		
Isolation method			Photocoupler		
Rated load voltage			100 to 240VAC, 50/60Hz ±5%		
Load voltage distortion ratio			Within 5%		
Load voltage distortion ratio Max. load voltage			264VAC		
Max. load voltage Max. load current			0.6A/point, 2.4A/common		
Max. load current Min. load voltage/current			50VAC 100mA, 100VAC 10mA, 240VAC 10mA		
Min. load voltage/current Max. inrush current			25A, 10ms or less		
····axi			1.5mArms or lower (at 100VACrms, 60Hz),		
Leakage co	urrent at OFF		3mArms or lower (at 200VACrms, 60Hz)		
Max. voltad	ge drop at ON		1.5VACrms or lower (at 0.6A)		
,		OFF→ON	1ms or less		
Response	time	ON→OFF	Total of 1ms and 0.5 cycles or less		
Surge supr	ON→OFF urge suppressor		CR absorber (0.01 μ F + 47 Ω)		
	thod for common		8 points/common (2-wire, terminal block type)		
	occupied station	s	32-point assignment/station (8 points used)	5 6 7 COMM	DEOLE
rtambor or	cocapica ctation	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	- 4 B	
Module po	wer supply	Current	55mA or lower (at 24VDC and all points ON)	2 3 S	
		Current	Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	Y0 1 2 3 4	[37]
			noise frequency 25 to 60Hz (noise simulator condition)	LERR.	m W
Noise imm	unity		Fast transient/burst immunity test	LRUN I	
			IEC61000-4-4:1kV	MB 4	
			2830VACrms for 3 cycles between all AC external terminals and ground		D_C //
Withstand	voltage		(2000m above sea level)	SOM SOM SE	11.2.01 1/ 1
vvitilotaria	voltage		500VAC for 1 minute between all DC external terminals and ground	BRATE 4 2 14 1 72 OMB C	
			10MΩ or higher between all AC external terminals and ground (500VDC		DEO I IVII
			insulation resistance tester)	S 4 4 B B CON NO.	
Insulation r	resistance		10MΩ or higher between all DC external terminals and ground (500VDC		
			insulation resistance tester)		
Weight			0.25kg	0 N → 24G → (FG)	
			7-point two-piece terminal block	MBLASS AJ65SBTBZN-8S MBLASS AJ65SBTBZN-8S MDA DG +24V 108 SLD 4	D_C
	Communication	part,	[Transmission circuit, module power supply, FG]	558TB2N	10.01
	module power s		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	AJ65SI	
External			Applicable solderless terminal: 2 or less		(20)
connection system			18-point direct-mount terminal block		
System	I/O power suppl	ly part,	[I/O power supply, I/O signal]		
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less		
			M4 screw with plain washer finished round		
Module mo	Module mounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
			RAV1.25-3 (compliant with JIS C 2805)		
Applicable	Applicable solderless terminal		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
			• V2-MS3, RAP2-3SL, TGV2-3N		
10.0	Indian de la		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	_	
Wire	Material		Copper 75°C or more	+	
	Temperature ra	ting	75°C or more	_	
Accessory			User's manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

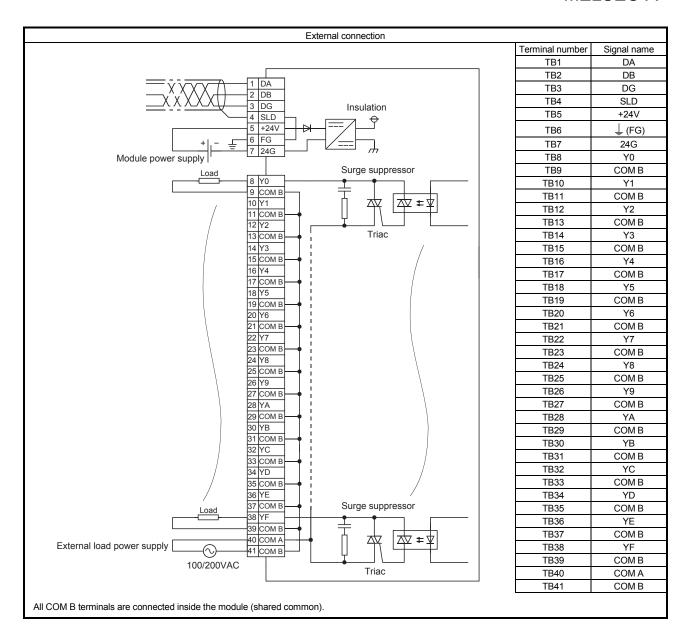


5 - 34 5 - 34

5.1.18 AJ65SBTB2N-16S triac output module

		Туре	Triac output module		
Item			AJ65SBTB2N-16S	Appea	rance
Number of	output points		16 points		
Isolation method			Photocoupler		
Rated load voltage			100 to 240VAC, 50/60Hz ±5%		
Load voltage distortion ratio			Within 5%		
Load voltage distortion ratio Max. load voltage			264VAC		
Max. load voltage Max. load current			0.6A/point, 4.8A/common		
Max. load current Min. load voltage/current			50VAC 100mA, 100VAC 10mA, 240VAC 10mA		
Max. inrust			25A, 10ms or less		
			1.5mArms or lower (at 100VACrms, 60Hz),		
Lеакаде ci	urrent at OFF		3mArms or lower (at 200VACrms, 60Hz)		
Max. voltaç	ge drop at ON		1.5VACrms or lower (at 0.6A)		
	P	OFF→ON	1ms or less		
Response	time	ON→OFF	Total of 1ms and 0.5 cycles or less	V89 A B C D E F	
Surge supp	pressor	•	CR absorber (0.01 μ F + 47 Ω)		
	thod for common		16 points/common (2-wire, terminal block type)	8 E S S S S S S S S S S S S S S S S S S	
	occupied station		32-point assignment/station (16 points used)	- 🖳	@ @
	occupiou ciulion	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Module por	Nodule power supply Current		85mA or lower (at 24VDC and all points ON)	EVOT 2 3 4 5 8 7	
		Carron	Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	R Y OMB OMB	
			noise frequency 25 to 60Hz (noise simulator condition)	OMB CO	
Noise imm	unity		Fast transient/burst immunity test	% B %	() _e () _
			IEC 61000-4-4:1kV	8/8	
			2830VACrms for 3 cycles between all AC external terminals and ground (2000m		@ @
Withstand	voltage		above sea level)	S N N	
			500VAC for 1 minute between all DC external terminals and ground	3 Nowa No	
			10M Ω or higher between all AC external terminals and ground (500VDC insulation	7 VS	
			resistance tester)		
Insulation r	esistance		stance $10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation		
			resistance tester)		
Weight			0.35kg		
			7-point two-piece terminal block	SOWNS COMME	
	Communication	n part,	[Transmission circuit, module power supply, FG]		
C. da ma al	module power :	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
External connection			Applicable solderless terminal: 2 or less	-16S	
system	'		34-point direct-mount terminal block	MISSE AJESSBTBZN-	
Зузісні	I/O power supp	ly part,	[I/O power supply, I/O signal]	Jesse Jesse	
	I/O part		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)		
			Applicable solderless terminal: 2 or less		
			M4 screw with plain washer finished round		
Module mo	Module mounting screw		(tightening torque range: 0.78 to 1.08N•m)		
			Mountable with a DIN rail in 6 orientations		
Applicable	Applicable DIN rail		TH35-7.5Fe, TH35-7.5AI (compliant with IEC 60715)		
			• RAV1.25-3 (compliant with JIS C 2805)		
Applicable solderless terminal		nal	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
l			• V2-MS3, RAP2-3SL, TGV2-3N		
\A/iro	Motorici		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		
Wire	Material	4!	Copper 75°C or more		
A · · ·	Temperature ra	ıtıng			
Accessory			User's manual		

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

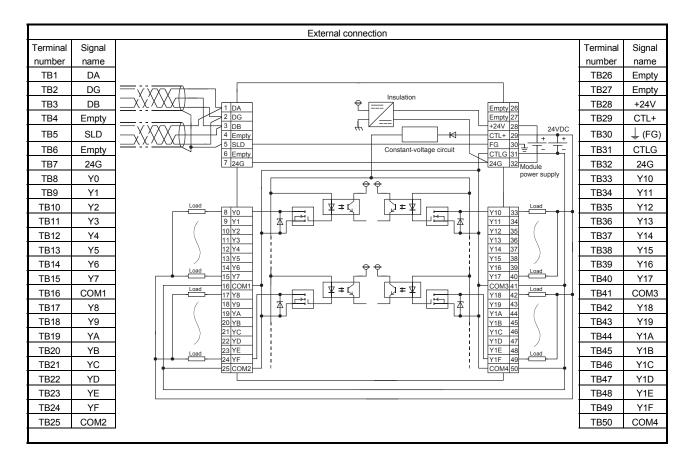


5 - 36 5 - 36

5.1.19 AJ65DBTB1-32T1 transistor output module (sink type)

	Type	Transistor output module	
Item		AJ65DBTB1-32T1	Appearance
Number of output points		32 points	
Isolation method		Photocoupler	ļ
Rated load voltage		12/24VDC	ļ
Operating load voltage rang	ge	10.2 to 31.2VDC (ripple ratio: within 5%)	ļ
Max. load current		0.5A/point, 8A/common (2A/terminal)	
Max. inrush current		1.2A, 10ms or less	ļ
Leakage current at OFF		0.1mA or lower	ļ
Max. voltage drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Output type		Sink type	
Protection function		None	Data orac
Poononce time	OFF→ON	0.5ms or less	MELSEG AJ65DBTB1-32T1
Response time	ON→OFF	1.5ms or less (resistive load)	STATION NO. 2 0 00 00 00 00 00 00 00 00 00 00 00 00
External power supply for	Voltage	10.2 to 31.2VDC (ripple ratio: within 5%)	Lo⊕o ×1
output part	Current	50mA or lower (at 24VDC and all points ON), excluding external load current	B RATE 600 00 00 00 00 00 00 00 00 00 00 00 00
Surge suppressor		Zener diode	CEINK
Wiring method for common		32 points/common (4 points) (1-wire, terminal block type)	
Number of occupied station	IS	32-point assignment/station (32 points used)	DG DA NC NC
Madula assumation	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	NC DB +24V CTL4
Module power supply	Current	65mA or lower (at 24VDC and all points ON)	NC SLD (FG) CTLG
Noise immunity		Noise voltage 500Vp-p, noise width 1µs,	246
Noise immunity		noise frequency 25 to 60Hz (DC type noise simulator condition)	Y10
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground	Y1 Y2 Y11 Y12
Insulation resistance		10M Ω or higher between all DC external terminals and ground (500VDC	Y3 Y4 Y14
insulation resistance		insulation resistance tester)	Y5 Y6 Y15 Y16
Protection degree		IP2X	Y17 COM3
Weight		0.7kg	Y18 Y19 Y18
		50-point terminal block	YA YA
External connection system	1	[Transmission circuit, module power supply, FG, I/O power supply, I/O signal]	YIC YID
External confidence of 3ystem	•	M3×7 screw (tightening torque range: 0.68 to 0.92N•m)	YE YD Y1E
		Applicable solderless terminal: 2 or less	COM4 Y1F
Module mounting screw		M4 screw with plain washer finished round	AJ6506TB1
		(tightening torque range: 0.78 to 1.08N•m)	
Applicable solderless terminal		• R1.25-3.5 (compliant with JIS C 2805)	
		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
		• RAV2-3.5 (compliant with JIS C 2805)	
	Matarial	[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material	Copper 75°C or more	
vviie	•	75°C or more	
Accessory	rating	Hear's manual	
Accessory Part sold soparately		User's manual	
Part sold separately		A6DIN1C, A2CCOM-TB	

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

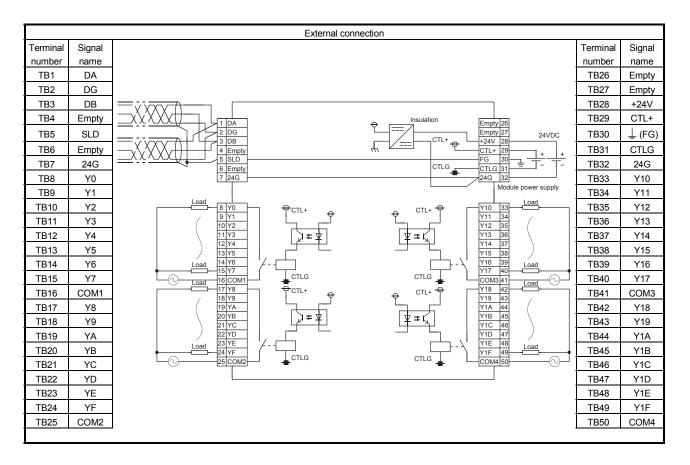


5 - 38 5 - 38

5.1.20 AJ65DBTB1-32R contact output module

		Туре	Contact output module	
Item			AJ65DBTB1-32R	Appearance
Number of output po	oints		32 points	·
Isolation method			Photocoupler	
			2A/point, 4A/common (2A/terminal)	
Rated load voltage/current			at 24VDC (resistive load) or 240VAC (cos ϕ =1)	
Min. switching load			5VDC, 1mA	
Max. switching voltage			264VAC, 125VDC	
Max. switching voltage OFF→ON Response time		N	10ms or less	
Response time	ON→OF	F	12ms or less	
	Mechan	ical	20 million times or more	
			Rated switching voltage/current load: 100 thousand times or more	
Life	Electrica	al	200VAC 1.5A, 240VAC 1A (cosφ=0.7): 100 thousand times or more	
	Licotrio	41	200VAC 1A, 240VAC 0.5A (cosφ=0.35): 100 thousand times or more	
			24VDC 1A, 100VDC 0.1A (L/R=7ms): 100 thousand times or more	
Max. switching frequ	iency		3600 times/hour	MELSEG AJ65DBTB1-32R
Surge suppressor		1	None	STATION NO. 03 00 01 01 01 01 01 01 01 01 01 01 01 01
External power suppoutput part	oly for	Voltage	24VDC ±10% (ripple ratio: 4Vp-p or lower)	2 A 170 15 A 170 15 A 170 15 A 170 15 A 170 15 A 170 170 A 170
(CTL+ and CTLG ter	rminals)	Current	180mA or lower (at 24VDC and all points ON)	8 RATE - 100 SE ST ST ST ST ST ST ST ST ST ST ST ST ST
Wiring method for co	ommon		8 points/common (1-wire, terminal block type)	
Number of occupied	stations		32-point assignment/station (32 points used)	DG DA NC NC
Module power suppl	, <u>v</u>	oltage	20.4 to 26.4VDC (ripple ratio: within 5%)	DB +24V
module power cuppi	, c	urrent	80mA or lower (at 24VDC and all points ON)	NC SLD
Noise immunity			Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,	NC 24G 24G A
140i00 illillianity			noise frequency 25 to 60Hz (noise simulator condition)	
Withstand voltage			1500VAC for 1 minute between all AC external terminals and ground	Y1 Y2 Y11 Y12
			500VAC for 1 minute between all DC external terminals and ground	Y13 Y4 Y14
			$10 \mathrm{M}\Omega$ or higher between all AC external terminals and ground (500VDC	Y5 - Y15 -
Insulation resistance)		insulation resistance tester)	Y6 Y17 Y16
			10MΩ or higher between all DC external terminals and ground (500VDC	718 Y18 Y18
Drotostian dograe			insulation resistance tester) IP1X	YA YA AYY
Protection degree			0.7kg	71B
Weight				YE YIE YIE
			50-point terminal block [Transmission circuit, module power supply, FG,	γF COM.
External connection	svstem		I/O power supply, I/O signal]	ANSORTISI OSPR
	0,000		M3.5×7 screw (tightening torque range: 0.68 to 0.92N•m)	
			Applicable solderless terminal: 2 or less	
M. d. Iv			M4 screw with plain washer finished round	
Module mounting sc	rew		(tightening torque range: 0.78 to 1.08N•m)	
	· · · · · ·		• R1.25-3.5 (compliant with JIS C 2805)	
Applicable solderles	e termine		[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
Applicable Solueiles:	o (CITIIII)		RAV2-3.5 (compliant with JIS C 2805)	
	1		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire	Material		Copper	1
	Tempera	ature	75°C or more	
	rating			-
Accessory			User's manual	-
Part sold separately			A6DIN1C, A2CCOM-TB	

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



5 - 40 5 - 40

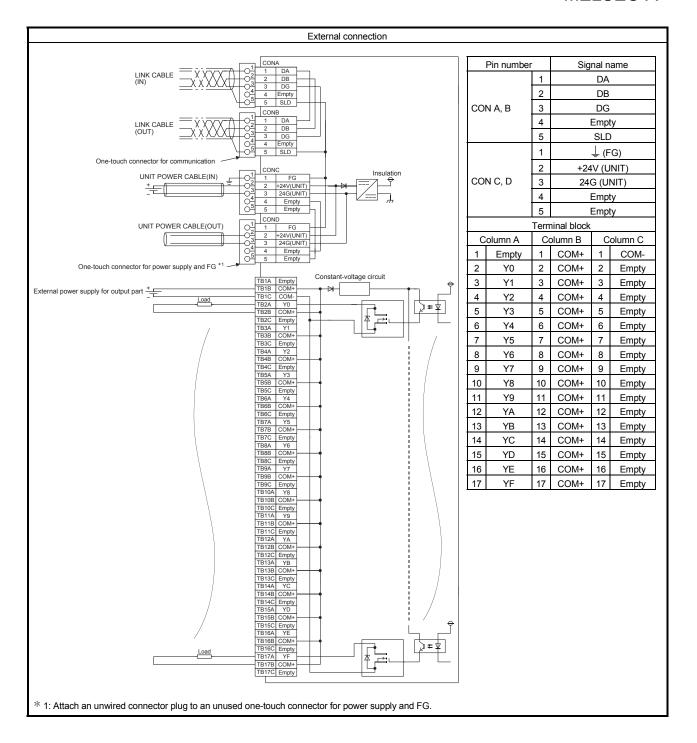
5.2 Spring Clamp Terminal Block Type Output Module

5.2.1 AJ65VBTS2-16T transistor output module (sink type)

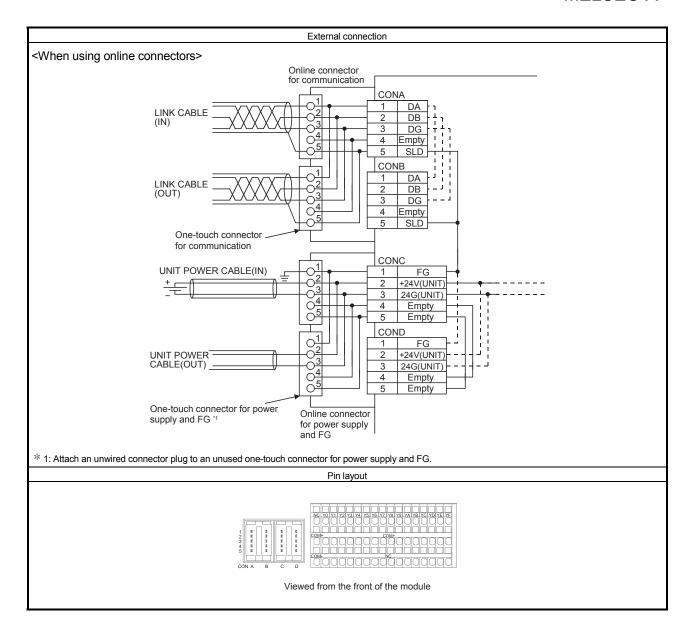
		Туре	Transistor output module	
Item			AJ65VBTS2-16T	Appearance
Number of output points			16 points	
Isolation method			Photocoupler	
Rated load voltage			12/24VDC	
Operating load voltage range			10.2 to 26.4VDC (ripple ratio: within 5%)	
Max. load current			0.5A/point, 4A/common	
Max. inrush current			1.0A, 10ms or less	
Leakage current at OFF			0.1mA or lower	
Leakage current at OFF Max. voltage drop at ON			0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Max. voltage drop at ON Output type			Sink type	
Protection function			None	
Response time		FF→ON	1ms or less	
Response in	0	N→OFF	1ms or less (resistive load)	
External pov	ver Vo	oltage	10.2 to 26.4VDC (ripple ratio: within 5%)	
supply for ou	utput part C	urrent	30mA or lower (at 24VDC and all points ON), excluding external load current	
Surge suppr	essor		Zener diode	
Wiring method	od for commo	on	16 points/common (2-wire, spring clamp terminal block type)	
Number of occupied stations		ons	32-point assignment/station (16 points used)	
Module pow	Module power Voltage		20.4 to 26.4VDC (ripple ratio: within 5%)	
supply	· ·		45mA or lower (at 24VDC and all points ON)	
Noise immuu			Noise voltage 500Vp-p, noise width 1µs,	
Noise immur	illy		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation re	cictanco		$10 \text{M}\Omega$ or higher between all DC external terminals and ground (500VDC	
Insulation re	Sistance		insulation resistance tester)	
Protection de	egree		IP1XB	
Weight	1		0.24kg	
			One-touch connector for communication [Transmission circuit]	
	Communic	ation part	5-pin IDC plug is sold separately: A6CON-L5P	
			<optional></optional>	
External			Online connector for communication: A6CON-LJ5P	
connection			One-touch connector for power supply and FG [Module power supply, FG]	
system	Power sup	ply part	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <optional></optional>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
			Online connector for power supply: A6CON-PWJ5P	O O O O O O O O O O O O O O O O O O O
	I/O part		2-piece spring clamp terminal block [I/O power supply, I/O signals]	0000 000 000 000 000 000 000 000 000 0
Applicable D			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
	Connector fo	r	Applicable cable:	
	communication		FANC-110SBH, FA-CBL200PSBH, CS-110	
		···	0.66 to 0.98mm ² (18 AWG)	8
	Connector fo	r power	[\psi_2.2 to 3.0mm (A6CON-PW5P), \psi_2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	supply and F	'	Wire diameter: 0.16mm or more	
			Insulating coating material: PVC (heat-resistant)	
Applicable	Spring clamp	terminal	Stranded wire 0.08 to 1.5mm ² (28 to 16 AWG) * 1	
wire size	block for I/O		Wire strip length: 8 to 11mm	
			TE0.5 [Applicable wire size: 0.5mm ²]	
			TE0.75 [Applicable wire size: 0.75mm ²]	
	Applicabl	le	TE1 [Applicable wire size: 0.9 to 1.0mm ²]	
	solderles	s terminal	TE1.5 [Applicable wire size: 1.25 to 1.5mm ²]	
			TGV TC1.25-9T [Applicable wire size: 0.3 to 1.65mm ²]	
			TGWV TC1.25-T9 [Applicable wire size: 0.3 to 1.65mm ²]	
Accessory			User's manual, Holding fixtures for screw installation	

 $[\]ensuremath{^{*}}$ 1: Insert one wire per terminal.

5 - 41 5 - 41



5 - 42 5 - 42

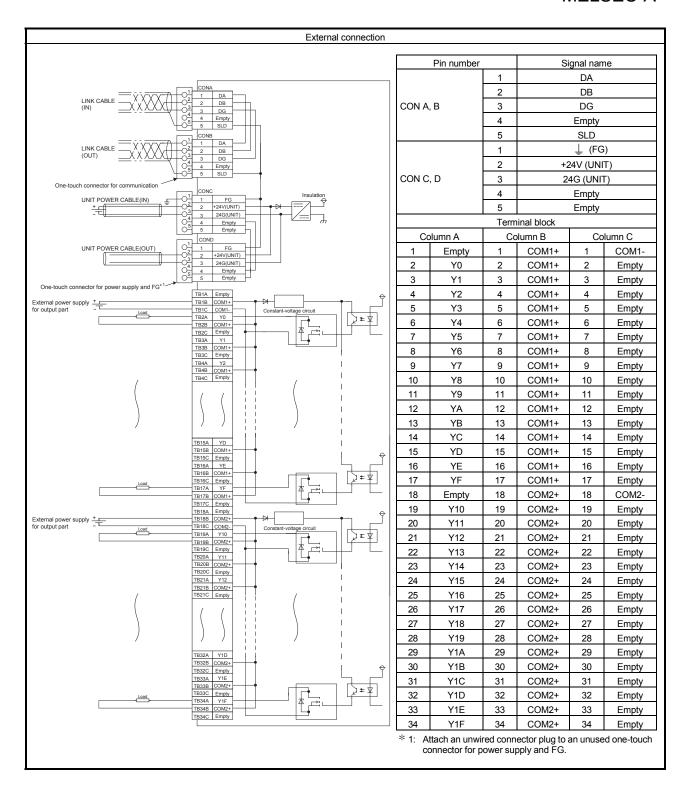


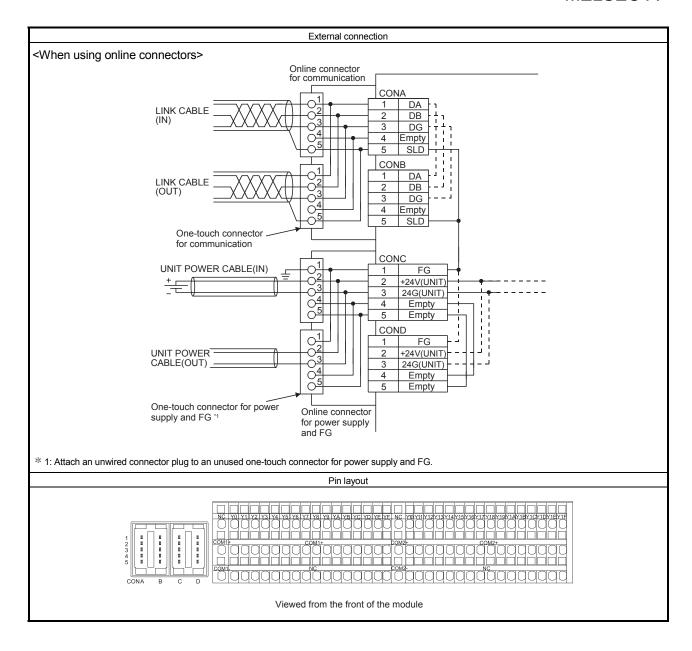
5 - 43 5 - 43

5.2.2 AJ65VBTS2-32T transistor output module (sink type)

		Туре	Transistor output module	
Item		.,,,,,	AJ65VBTS2-32T	Appearance
Number of output points		ts	32 points	
Isolation method Rated load voltage			Photocoupler	1
Rated load voltage			12/24VDC	
Operating load voltage range			10.2 to 26.4VDC (ripple ratio: within 5%)]
Operating load voltage range Max. load current			0.5A/point, 4A/common]
Max. inrush current			1.0A, 10ms or less	
Leakage current at OFF		F	0.1mA or lower	1 (O)
Max. voltage drop at ON		N	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Max. voltage drop at ON Output type			Sink type	
Output type Protection function			None	11 11 12 51 51 55
Response time OFF→ON		OFF→ON	1ms or less	
Response ti	me	ON→OFF	1ms or less (resistive load)	
External power		Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	11 114384 84 81
	xternal power upply for output part		30mA or lower (at 24VDC and all points ON), excluding external load current	11 H#8#8#6#6
Surge suppr			Zener diode	
		nmon	16 points/common (2-wire, spring clamp terminal block type)	
Wiring method for common Number of occupied stations			32-point assignment/station (32 points used)	
	ocupiou o	1	20.4 to 26.4VDC (ripple ratio: within 5%)	11
Module pow	Module power supply Voltage Current		60mA or lower (at 24VDC and all points ON)	
		Ouricii	Noise voltage 500Vp-p, noise width 1µs,	
Noise immu	nity		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	
			10MΩ or higher between all DC external terminals and ground (500VDC insulation	
Insulation re	sistance		resistance tester)	
Protection d	egree		IP1XB	
Weight			0.40kg	
	Weight		One-touch connector for communication [Transmission circuit]	
	Commu	ınication	5-pin IDC plug is sold separately: A6CON-L5P	
	part		<optional></optional>	
External			Online connector for communication: A6CON-LJ5P	
connection			One-touch connector for power supply and FG [Module power supply, FG]	
system	Power s	supply part	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	
			<pre><optional></optional></pre>	
			Online connector for power supply: A6CON-PWJ5P	
	I/O part		2-piece spring clamp terminal block [I/O power supply, I/O signals]	
Applicable D			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
	Connecto		Applicable cable:	
-	communic	cation	FANC-110SBH, FA-CBL200PSBH, CS-110	- 1
			0.66 to 0.98mm² (18 AWG)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		r for power	[\psi_2.2 to 3.0mm (A6CON-PW5P), \psi_2.0 to 2.3mm (A6CON-PW5P-SOD)]	
	supply an	d FG	Wire diameter: 0.16mm or more	V (alegalists riss) Norincisarines α N
Annlinable	0		Insulating coating material: PVC (heat-resistant)	
Applicable wire size	Spring cla		Stranded wire 0.08 to 1.5mm² (28 to 16 AWG) * 1	8
WIIC SIZE	terminar b	lock for I/O	Wire strip length: 8 to 11mm	
			TE0.5 [Applicable wire size: 0.75mm²]	
	Applic	able	TE0.75 [Applicable wire size: 0.75mm²]	
	solder	less	TE1 [Applicable wire size: 0.9 to 1.0mm²]	
	termin	nal	TE1.5 [Applicable wire size: 1.25 to 1.5mm²] TGV TC1.25-9T [Applicable wire size: 0.3 to 1.65mm²]	
			TGWV TC1.25-91 [Applicable wire size: 0.3 to 1.65mm ²]	
Accessory	ı		User's manual, Holding fixtures for screw installation	1
, woodsou y			OSCI S mandal, Holding lixtures for Sciew installation	_1

 $[\]boldsymbol{\ast}$ 1: Insert one wire per terminal.





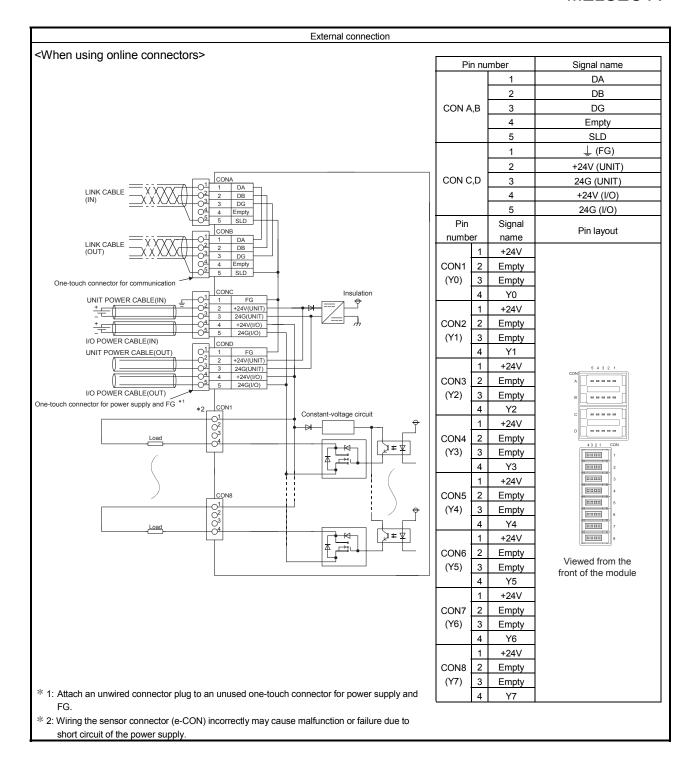
5 - 46 5 - 46

5.3 Sensor Connector (e-CON) Type Output Module

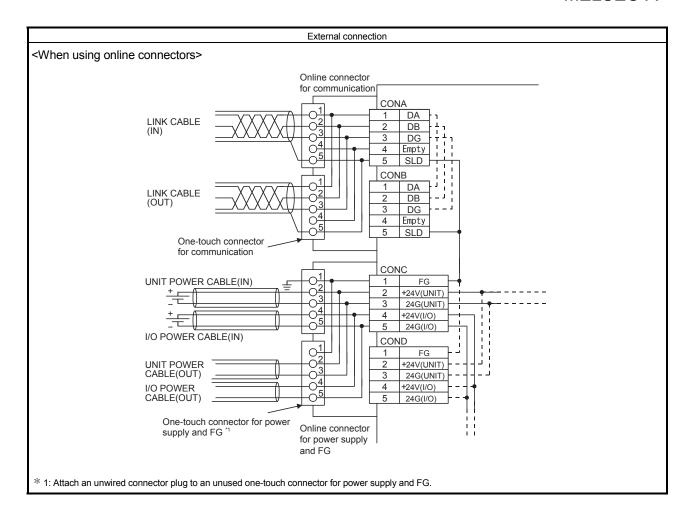
5.3.1 AJ65VBTCE2-8T transistor output module (sink type)

	Туре	Transistor output module	
Item		AJ65VBTCE2-8T	Appearance
Number of o	output points	8 points	
Number of output points Isolation method		Photocoupler	
Rated load voltage		12/24VDC	1
Operating load voltage range		10.2 to 26.4VDC (ripple ratio: within 5%)	-
Operating load voltage range Max. load current		0.1A/point, 0.8A/common	╡
			┥
		0.7A, 10ms or less	-
		0.1mA or lower	-
Max. voltage drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A	-
Output type Protection function		Sink type	4
Protection function		Overload protection, overvoltage protection, overheat protection	_
Response time OFF→ON		1ms or less	
. tooponeo ti	ON→OFF	1ms or less (resistive load)	
External pov supply for or	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	
part	Current	5mA or lower (at 24VDC and all points ON), excluding external load current	
Surge suppl	ressor	Zener diode	
Wiring meth	od for common	8 points/common (2-wire, sensor connector (e-CON) type)	B B B B B B B B B B B B B B B B B B B
Number of o	occupied stations	32-point assignment/station (8 points used)	
Module pow	ver Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	40 S 20 Å 10 T
supply	Current	35mA or lower (at 24VDC and all points ON)	8 0 A N
		Noise voltage 500Vp-p, noise width 1µs,	2 NO. 1 A B B B B B B B B B B B B B B B B B B
Noise immu	nity	noise frequency 25 to 60Hz (DC type noise simulator condition)	D 4 8 2 A 1 E
Withstand v	oltage	500VAC for 1 minute between all DC external terminals and ground	MISI AJ65VBTCE2-8T
		10MΩ or higher between all DC external terminals and ground (500VDC insulation	I VOI I
Insulation re	esistance	resistance tester)	LERRO
Protection d	egree	IP1XB	Y1 000 00
Weight		0.10kg	Y2 20 10 20
	Communication part	One-touch connector for communication [Transmission circuit] 5-pin IDC plug is sold separately: A6CON-L5P <optional> Online connector for communication: A6CON-LJ5P</optional>	Y3
External		One-touch connector for power supply and FG	
connection system	Power supply part	[Module power supply, I/O power supply, FG] 5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <optional></optional>	Y6 BEED CCtink
		Online connector for power supply: A6CON-PWJ5P	
	I/O part	Sensor connector (e-CON) [I/O signals]	
	1	4-pin IDC plug is sold separately. * 1	-
Applicable D		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	4
	Connector for	Applicable cable:	
	communication	FANC-110SBH, FA-CBL200PSBH, CS-110	-
	Connector for	0.66 to 0.98mm² (18 AWG)	
Applicable	power supply and	[φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]	
wire size	FG	Wire diameter: 0.16mm or more	
		Insulating coating material: PVC (heat-resistant)	4
		Sensor connector (e-CON).	
	Connector for I/O	Applicable connector plugs are sold separately. * 1	
		(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)	_
Accessory		User's manual, Holding fixtures for screw installation	

 $[\]boldsymbol{*}$ 1: Refer to Section 1.6.2 for details.



5 - 48 5 - 48

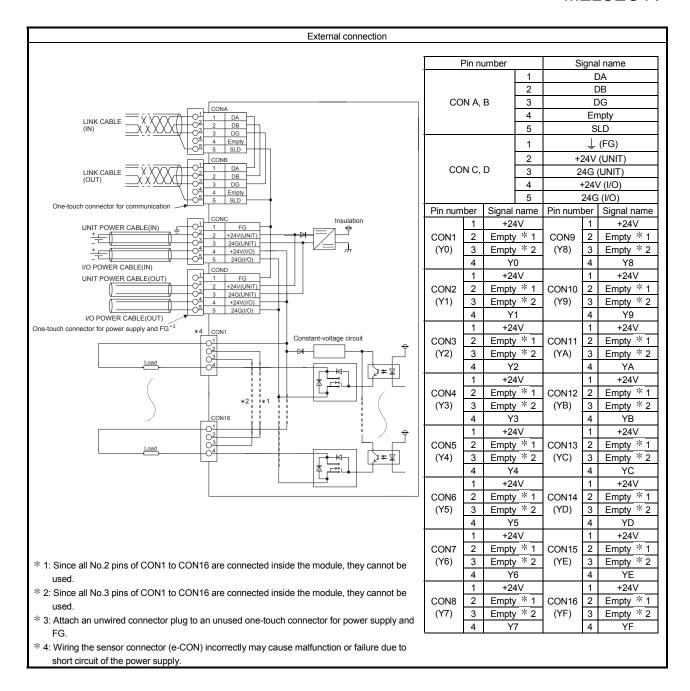


5 - 49 5 - 49

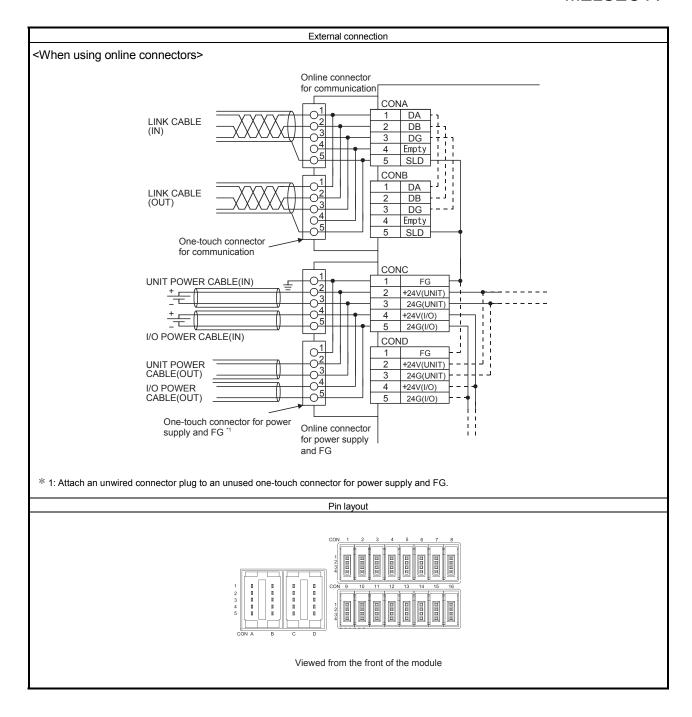
5.3.2 AJ65VBTCE2-16T transistor output module (sink type)

		Transistor output module			
Item		AJ65VBTCE2-16T	Appearance		
Number of o	output points	16 points	7.500.01.00		
Isolation me		Photocoupler	1		
Rated load voltage		12/24VDC	1		
Rated load voltage Operating load voltage range			1		
Operating load voltage range Max. load current		0.1A/point, 1.6A/common	1		
Max. load current Max. inrush current		0.7A, 10ms or less	1		
Max. inrush current Leakage current at OFF		0.1mA or lower	1		
		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A	1		
Max. voltage drop at ON Output type		Sink type	1		
Protection fu	ınction	Overload protection, overvoltage protection, overheat protection	1		
	OFF-		1		
Response time OFF - ON \rightarrow					
External pov	wer Voltag	, , ,			
supply for o	Curre	10mA or lower (at 24VDC and all points ON), excluding external load current			
Surge suppl	ressor	Zener diode	Cctink		
Wiring meth	od for commo	16 points/common (2-wire, sensor connector (e-CON) type)			
Number of o	occupied static	ns 32-point assignment/station (16 points used)			
Module pow	ver Volta	,			
supply	Curre	nt 45mA or lower (at 24VDC and all points ON)	0.00 4 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Noise immu	nitv	Noise voltage 500Vp-p, noise width 1µs,	A 4 COLOR		
		noise frequency 25 to 60Hz (DC type noise simulator condition)			
Withstand v	oltage	500VAC for 1 minute between all DC external terminals and ground			
Insulation re	esistance	$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)			
Protection d	egree	IP1XB	>		
Weight	<u> </u>	0.10kg			
Word	Communica part	One-touch connector for communication [Transmission circuit]	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
External		One-touch connector for power supply and FG	Dow OO O O S O S O O S O O S O O S O O S O O S O O S O O S O S O O O O S O O S O O O O O S O O O S O O O O O S O O S O O O O S O		
connection system	Power support	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <optional></optional>			
	I/O part	Online connector for power supply: A6CON-PWJ5P Sensor connector (e-CON) [I/O signals] 4-pin IDC plug is sold separately. * 1			
Applicable [DIN rail	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)			
	Connector for communication	Applicable cable: n FANC-110SBH, FA-CBL200PSBH, CS-110			
Applicable wire size	Connector for power supply FG	1162.2 to 3.0mm (A6CON-PW/5P) 62.0 to 2.3mm (A6CON-PW/5P-SOD)			
	Connector for	Sensor connector (e-CON). Applicable connector plugs are sold separately. * 1 (applicable wire size: 0.08 to 0.5mm², depending on the connector plug)			
Accessory		User's manual, Holding fixtures for screw installation			

st 1: Refer to Section 1.6.2 for details.



5 - 51 5 - 51

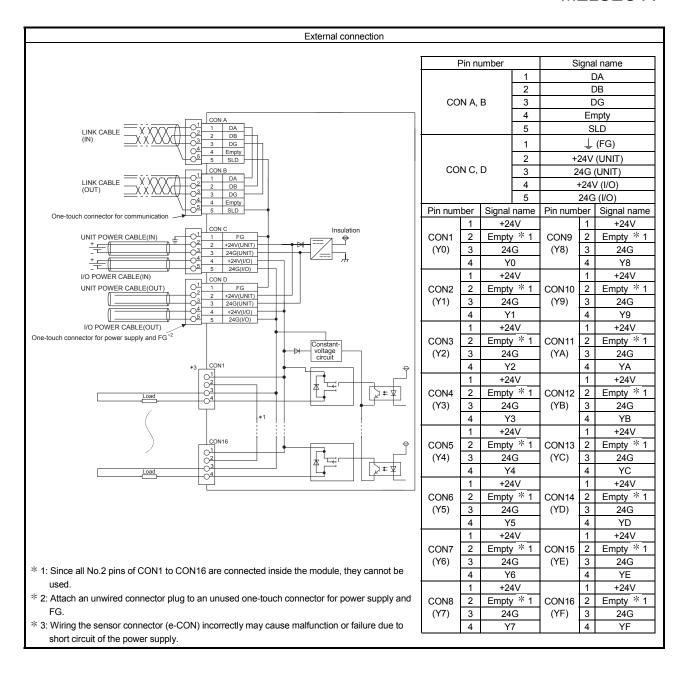


5 - 52 5 - 52

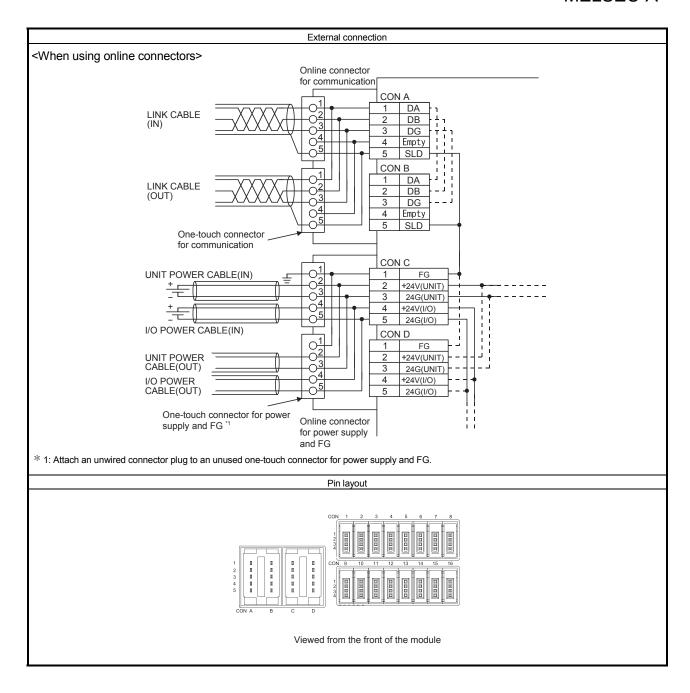
5.3.3 AJ65VBTCE3-16TE transistor output module (source type)

	_	Туре	Transistor output module		
Item			AJ65VBTCE3-16TE	Appearance	
Number of o	utput point	rs	16 points	, p - 2 - 2 - 2	
Isolation method			Photocoupler		
Rated load voltage			12/24VDC		
Operating load voltage range		range	10.2 to 26.4VDC (ripple ratio: within 5%)		
Operating load voltage range Max. load current		95	0.1A/point, 1.6A/common		
Max. load current Max. inrush current			0.7A, 10ms or less		
Max. inrush current Leakage current at OFF		F	0.1mA or lower		
Max. voltage	Leakage current at OFF Max. voltage drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A		
Output type			Source type		
Protection fu	ınction		Overload protection, overheat protection		
D	OF	FF→ON	1ms or less		
Response tir	me ON	N→OFF	1ms or less (resistive load)		
External pow	ver Vo	ltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
supply for ou		ırrent	11mA or lower (at 24)/DC and all points (ON), evaluding external lead current		
part	l l	ıııcııl	11mA or lower (at 24VDC and all points ON), excluding external load current		
Surge suppr			Zener diode		
Supply curre device	ent for conn	nected	1.0A or lower/common	CCLINK	
Wiring metho	od for com	mon	16 points/common (3-wire, sensor connector (e-CON) type)	0000 w 0000 w	
Number of o	ccupied sta	ations	32-point assignment/station (16 points used)		
Module power	er Vo	ltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
supply	Cu	ırrent	45mA or lower (at 24VDC and all points ON)		
Maine insuran	-14.		Noise voltage 500Vp-p, noise width 1µs,	VSSVAUCES-1678 VSSVAUCES-1678	
Noise immur	nity		noise frequency 25 to 60Hz (DC type noise simulator condition)		
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	\$ 6000 - 6000 o	
Insulation re	sistance		$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)		
Protection de	ograa		IP1XB		
Weight	egree		0.11kg		
vvoigne	Commur	nication	One-touch connector for communication [Transmission circuit] 5-pin IDC plug is sold separately: A6CON-L5P	OON C/C	
	part		<pre><optional></optional></pre>	1 Md 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Ľ		Online connector for communication: A6CON-LJ5P	SHARE STRONGOLOGY	
External			One-touch connector for power supply and FG		
connection	Power s	upply	[Module power supply, I/O power supply, FG]		
system	part	•	5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <optional></optional>		
			Online connector for power supply: A6CON-PWJ5P		
			Sensor connector (e-CON) [I/O signals]		
	I/O part		4-pin IDC plug is sold separately. * 1		
Applicable D	IN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
	Connector	r for	Applicable cable:		
	communic	ation	FANC-110SBH, FA-CBL200PSBH, CS-110		
[Connector	for	0.66 to 0.98mm ² (18 AWG)		
	Connector		[φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]		
	power sup FG	piy and	Wire diameter: 0.16mm or more		
WII C SIZE			Insulating coating material: PVC (heat-resistant)		
	Connector	r for	Sensor connector (e-CON).		
	I/O		Applicable connector plugs are sold separately. * 1		
			(applicable wire size: 0.08 to 0.5mm², depending on the connector plug)		
Accessory			User's manual, Holding fixtures for screw installation		

^{* 1:} Refer to Section 1.6.2 for details.



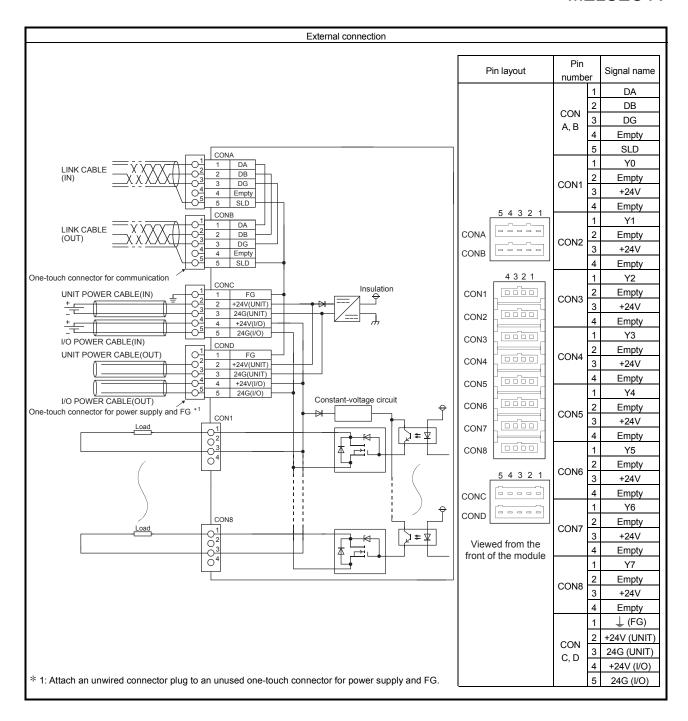
5 - 54 5 - 54



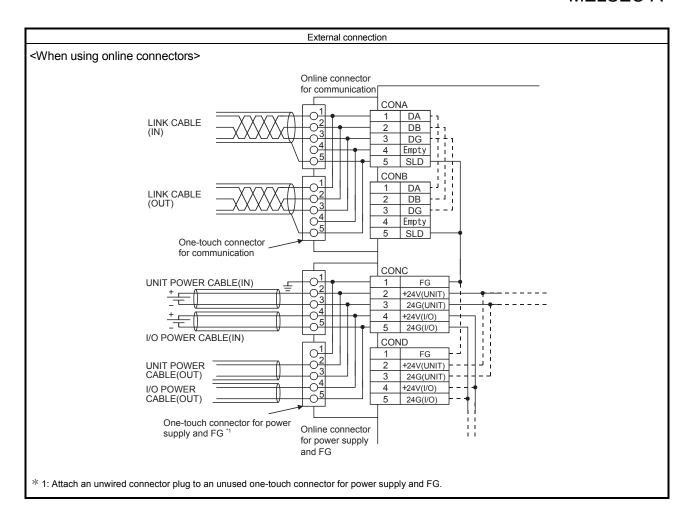
5.4 One-Touch Connector Type Output Module

5.4.1 AJ65VBTCU2-8T transistor output module (sink type)

		Type	Transistor output module	
Item			AJ65VBTCU2-8T	Appearance
Number of output points			8 points	
Isolation m	ethod		Photocoupler	
Rated load voltage			12/24VDC	
Operating I	load voltage range	е	10.2 to 26.4VDC (ripple ratio: within 5%)	
Max. load o			0.1A/point, 0.8A/common	
Max. inrush	n current		0.7A, 10ms or less	
Leakage cu	urrent at OFF		0.1mA or lower	
Max. voltac	ge drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A	
Output type			Sink type	
Protection			Overload protection, overvoltage protection, overheat protection	
		OFF→ON	1ms or less	
Response	time	ON→OFF	1ms or less (rated load, resistive load)	
External po	ower supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	MELSEG AJ65VBTCU2-8T
output part		Current	5mA or lower (TYP., 24VDC/common)	CON 7.
Surge supp			Zener diode	A
	hod for common		8 points/common (2-wire, one-touch connector type)	N K
	occupied stations	.	32-point assignment/station (8 points used)	CON J
110111001 01	occupiou cianoni	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Module pov	wer supply	Current	35mA or lower (at 24VDC and all points ON)	YO PW
		Ourient	Noise voltage 500Vp-p, noise width 1µs,	L RUN
Noise imm	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	L ERR
Withstand	voltage		500VAC for 1 minute between all DC external terminals and ground	Y2 00
Withotalia	vollago		10MΩ or higher between all DC external terminals and ground (500VDC insulation	
Insulation r	resistance		resistance tester)	
Protection (degree		IP1XB	Y4 5 0
Weight			0.15kg	7 °
	Communication part		One-touch connector for communication [Transmission circuit] 5-pin IDC plug is sold separately. <optional> Online connector for communication: A6CON-LJ5P</optional>	Y6 Y7
External			One-touch connector for power supply and FG	
connection system	Power supply part		[Module power supply, I/O power supply, FG] 5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD <optional> Online connector for power supply: A6CON-PWJ5P</optional>	CON X
	I/O part		One-touch connector for I/O 4-pin IDC plug is sold separately.	CC-Link
Applicable DIN rail			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
Applicable wire size	Connector for communication		Applicable cable: FANC-110SBH, FA-CBL200PSBH, CS-110	
	Connector for power supply		0.66 to 0.98mm² (18 AWG) [\$\phi\$2.2 to 3.0mm (A6CON-PW5P), \$\phi\$2.0 to 2.3mm (A6CON-PW5P-SOD)] Wire diameter: 0.16mm or more Insulating coating material: PVC (heat-resistant) \$\phi\$1.0 to 1.4 (A6CON-P214), \$\phi\$1.4 to 2.0 (A6CON-P220)	
	Connector for I/O		[Applicable wire size: 0.14 to 0.2mm²] φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5mm²]	
Accessory			User's manual	



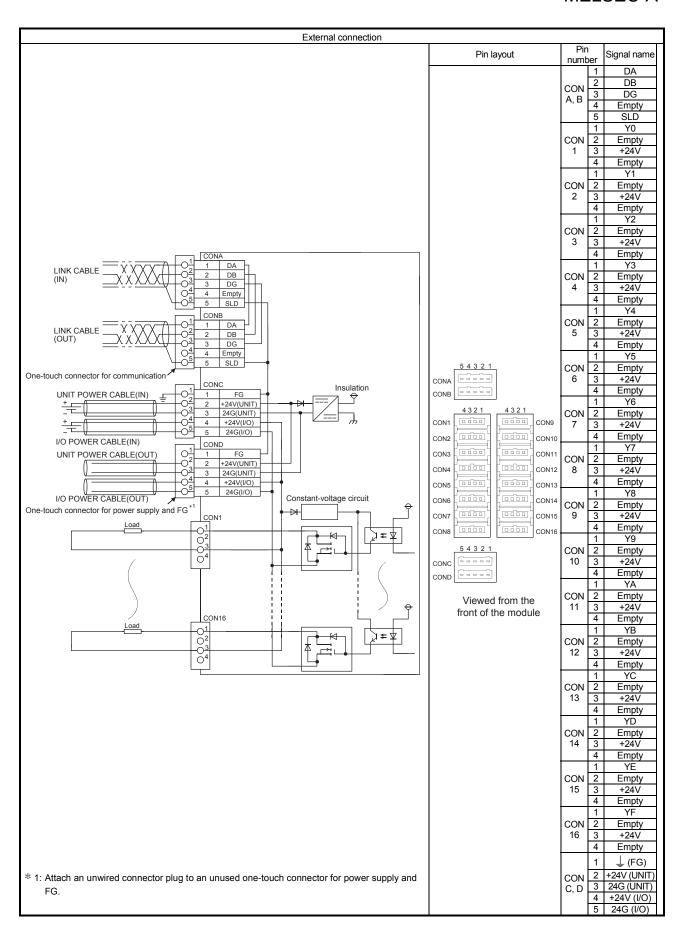
5 - 57 5 - 57



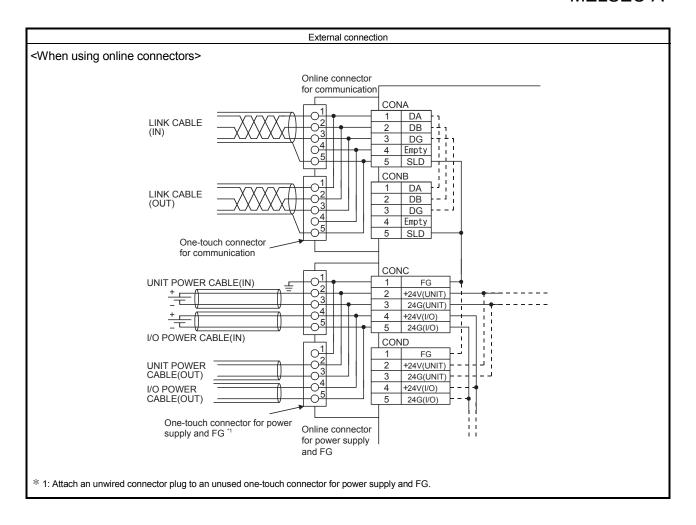
5 - 58 5 - 58

5.4.2 AJ65VBTCU2-16T transistor output module (sink type)

		Туре	Transistor output module		
Item		.,,,,	AJ65VBTCU2-16T	Appearance	
Number of o	output poi	nts	16 points		
Isolation me	Isolation method		Photocoupler		
Rated load	voltage		12/24VDC		
Operating Ic	oad voltag	je range	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load ci	urrent		0.1A/point, 1.6A/common		
Max. inrush	current		0.7A, 10ms or less		
Leakage cu	rrent at O	FF	0.1mA or lower		
Max. voltage	e drop at	ON	0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A		
Output type			Sink type		
Protection fu	unction		Overload protection, overvoltage protection, overheat protection		
Doonanaa ti		OFF→ON	1ms or less		
Response ti	me	ON→OFF	1ms or less (resistive load)		
External pov		Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
part	•	Current	10mA or lower (TYP. 24VDC/common), excluding external load current	MELSEG AJ65VBTCU2-16T	
Surge suppl			Zener diode	CON 7,	
Wiring meth			16 points/common (2-wire, one-touch connector type)	A I	
Number of o	occupied	stations	32-point assignment/station (16 points used)	con lk	
Module pow	/er	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
supply		Current	40mA or lower (at 24VDC and all points ON)		
Noise immu	ınitv		Noise voltage 500Vp-p, noise width 1μs,	L RUN	
			noise frequency 25 to 60Hz (DC type noise simulator condition)	L ERR	
Withstand v	oltage		500VAC for 1 minute between all DC external terminals and ground		
Insulation re	esistance		10MΩ or higher between all DC external terminals and ground (500VDC insulation	20	
			resistance tester)	40	
Protection d	legree		IP1XB		
Weight			0.19kg	8 0	
	Communication part		One-touch connector for communication		
			[Transmission circuit] 5-pin IDC plug is sold separately.		
			S-pin in the ping is sold separately. Optional>	Y0~Y7 Y8~YF F°	
			Online connector for communication: A6CON-LJ5P		
External	Power supply part		One-touch connector for power supply and FG] c	
connection			[Module power supply, I/O power supply, FG]	CON UX	
system			5-pin IDC plug is sold separately: A6CON-PW5P, A6CON-PW5P-SOD	D	
			<optional></optional>	CC-Link	
			Online connector for power supply: A6CON-PWJ5P		
			One-touch connector for I/O		
			4-pin IDC plug is sold separately.		
Applicable [DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
	Connect	or for	Applicable cable:		
	communication		FANC-110SBH, FA-CBL200PSBH, CS-110		
	Connector for power supply and FG		0.66 to 0.98mm ² (18 AWG)		
			[\psi_2.2 to 3.0mm (A6CON-PW5P), \psi_2.0 to 2.3mm (A6CON-PW5P-SOD)]		
Applicable			Wire diameter: 0.16mm or more		
wire size			Insulating coating material: PVC (heat-resistant)	1	
	Connector for I/O		φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)		
			[Applicable wire size: 0.14 to 0.2mm²]		
			φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)		
A 000000000000000000000000000000000000	<u> </u>		[Applicable wire size: 0.3 to 0.5mm²]	1	
Accessory			User's manual	l	



5 - 60 5 - 60

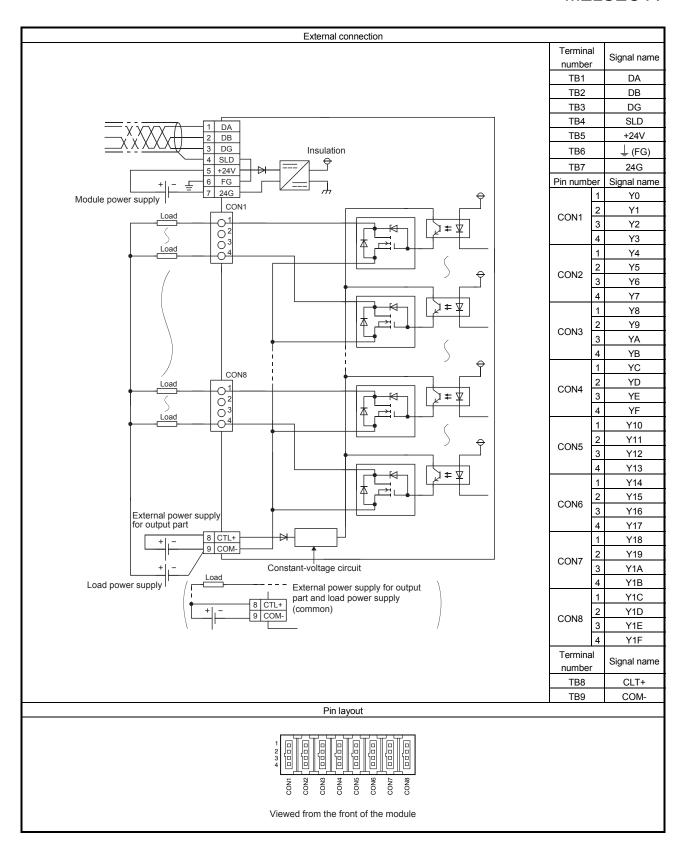


5 - 61 5 - 61

5.4.3 AJ65SBTC1-32T transistor output module (sink type)

Appearance Appearance Number of output points 32 points Sociation method Photocoupler 122 to 26 4VDC (ripple ratio: within 5%) Max. Invala current 10, 1 non or less 2.eakage current at OFF 0.25mA or lower Max. voltage drop at ON 0.33VDC or lower (MAX.) 0.1A 0.24put type Sink type Protection function OFF0N 0.5ms or less ONOFF 1.5ms or less (resistive load) OnOFF 1.5ms or less (resistive load) OnOFF 1.5ms or less (Туре			Transistor output module		
Soldifor method Protocougler Alreade toad voltage 1224VDC Devailing load voltage ange 102 to 26 AVDC (tipple ratio: within 5%) Make. Incurrent 10.4 (Arpoint, 3.2A/common 10.4 (Arpoint, 3.2A/common 10.5 (Arpoint, 3.2A/common 10.5 (Argoint, m			·	Appearance		
Communication part, module power supply part wo-place terminal block (Transmission crecult, module power supply part wo-place terminal block (Transmission crecult, module power supply part wo-place terminal block (Transmission crecult, module power supply part wo-place terminal block (Transmission crecult, module power supply part wo-place terminal block (Transmission crecult, module power supply part wo-place between all DC external Environment (September 20) and part (September 2	Number of	output points		32 points		
Decreating load voltage range 10 2 to 26 AVDC (figher ratio: within 5%) Max. toad current 10 1A, 10ms or less 2.68kage current at OFF 0.25mA or lower 10 2.5mA	Isolation me	ethod		Photocoupler	1	
Max. Inrush current 1. 0. 1 Alpoint, 3. 2A/common Max. irrush current 1. 0. 1. Oms or less 2. 25md or lower Max. voltage drop at ON 0. 3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A 2. 25md or lower Max. voltage drop at ON 0. 3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A 2. 25md or lower 0. 25md or lower 1. 25md or lower 0. 25md or lower 1	Rated load	voltage		12/24VDC		
Max. Intent current 1 DA. 10ms or less 2.25mA or lower Wax. vottage drop at ON 0.5VDC or lower (TVP.) 0.1A. 0.6VDC or lower (MAX.) 0.1A Dutput type ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resistive load) ON-OFF 15ms or less (resist	Operating le	oad voltage range		10.2 to 26.4VDC (ripple ratio: within 5%)		
Leakage current at OFF	Max. load o	current		0.1A/point, 3.2A/common		
Max. voltage drop at ON 0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A Sink type Sink type OPT-ORD (Sink type) OPT-Ordection function OPF-30N 0.5ms or less ON-OFF 1.5ms or less External power supply for output Voltage ON-OFF 1.5ms or less resistive load) Output Soma or lower (TYP.) 24VDC/common), excluding external load current. Soma or lower (TYP.) 24VDC/common, excluding external load current. Soma or lower (TYP.) 24VDC/common, excluding external load current. Soma or lower (TYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, excluding external load current. Soma or lower (LYP.) 24VDC/common, exc	Max. inrush	n current		1.0A, 10ms or less		
Sink type	Leakage cu	urrent at OFF		0.25mA or lower		
Overload protection, overvoltage protection, overheat protection	Max. voltag	ge drop at ON		0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A		
CFF_ON 0.5ms or less (resistive load)	Output type	9		Sink type		
Name Name	Protection f	function		Overload protection, overvoltage protection, overheat protection		
External power supply for output Voltage 10 2 to 26 AVDC (pipple ratio: within 5%) Current 50mA or lower (TYP. 24VDC/common), excluding external load current Source suppressor Wiring method for common 32 points common (1-wire, one-touch connector type) Wodule power supply Voltage 20.4 to 26 AVDC (ripple ratio: within 5%) Current 60mA or lower (at 24VDC and all points ON) Noise immunity Noise immunity Noise voltage 600Vp-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition) Nithstand voltage 500VAC for 1 minute between all DC external terminals and ground (500VDC insulation resistance insulation resistance insulation resistance visualization register (10 power supply part Noise (10 power supply part Noise (10 power supply part Noise (10 power supply part Noise (10 power supply part Noise (10 power supply part Noise) Module mounting screw Module mounting	Daananaa	tim a	OFF→ON	0.5ms or less		
Surge suppressor	Response t	time	ON→OFF	1.5ms or less (resistive load)		
Zener diode Suppressor Zener diode Signature Zener diode Signature Suppressor Su	External po	ower supply for output	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
Wining method for common 32 points/common (1-wire, one-touch connector type) 32-point assignment/station (32 points used) 33-point assignment/station (32 points used) 34-point assignment/station (32 points used) 35-point assignment/station (32 points used) 36-point assignment/station (32 points used) 37-point sesignment/station (32 points used) 38-point assignment/station (32 points used) 39-point assignment/station (32 points used) 30-point assignment/station (32 poi	part		Current	50mA or lower (TYP. 24VDC/common), excluding external load current		
Miring method for common 32 points/common (1-wire, one-touch connector type) Wumber of occupied stations 32-point assignment/station (32 points used) 32-point assignment/station (32 points used) 32-point assignment/station (32 points used) Voltage Current 60mA or lower (at 24VDC and all points ON) Noise voltage 500Vp-p, noise width 1µs, noise frequency 25 fo 60Hz (20 fype noise simulator condition) Withstand voltage 500VAC for 1 minute between all DC external terminals and ground (500VDC insulation resistance insulation resistance ester) Protection degree P2X Weight Communication part, module power supply part Communication part, module power supply part P3 point direct-mount terminal block (1/O power supply) 1/O part 1/O part P4 policable solderless terminal: 2 or less 2-point direct-mount terminal block (1/O power supply) M3×5.2 screw (tightening torque range: 0.59 to 0.88N+m) Applicable solderless terminal: 2 or less 1/O part P5 point direct-mount terminal block (1/O power supply) M3×5.2 screw (tightening torque range: 0.59 to 0.88N+m) Applicable solderless terminal: 2 or less 1/O part P5 point direct-mount terminal block (1/O power supply) M3×5.2 screw (tightening torque range: 0.59 to 0.88N+m) Applicable solderless terminal: 2 or less P5 point direct-mount terminal block (1/O power supply) M3×5.2 screw (tightening torque range: 0.59 to 0.88N+m) Applicable solderless terminal: 2 or less P6 policated one-touch connector (1/O signals) P6 policated one-touch connector (1/O signals) P6 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touch connector (1/O signals) P7 policated one-touc	Surge supp	pressor		·		
Module power supply Voltage Current BomA or lower (at 24VDC and all points ON) Noise immunity Noise immunity Noise immunity Noise immunity Noise woltage 500VP-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition) Source frequency 25 to 60Hz (DC type noise simulator condition) Source frequency 25 to 60Hz (DC type noise simulator condition) Noise immunity Noise woltage 500VAC for 1 minute between all DC external terminals and ground (500VDC insulation resistance Protection degree IP2X Neight O.16kg T-point two-piece terminal block [Transmission circuit, module power supply, FG] M3*5.2 screw (tightening torque range: 0.59 to 0.88N-m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.59 to 1.08N-m) Mountable with a DIN rail in 6 orientations TH35*-7.5Fi. (TH35*-7.5Al (compliant with IEC 60715) *RAV1.25-3 (compliant with ISC 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] *Very M3* RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 1.05mm² (25 to 24 AWG) stranded wire] *Very M3* RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] *Very M3* RAP2-3SL or more Wire Material Copper Temperature rating T5* C or more				32 points/common (1-wire, one-touch connector type)		
Voltage Current SomA or lower (at 24/VDC and all points ON)	Number of	occupied stations		32-point assignment/station (32 points used)		
Current 60mA or lower (at 24/VDC and all points ON)			Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)		
Noise immunity Noise voltage 500V-p. noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition) Mithstand voltage 500VAC for 1 minute between all DC external terminals and ground (500VDC insulation resistance) 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester) Protection degree P	Module pov	wer supply		60mA or lower (at 24VDC and all points ON)		
noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage 500VAC for 1 minute between all DC external terminals and ground (500VDC insulation resistance 10Mc0 or higher between all DC external terminals and ground (500VDC insulation resistance tester) Protection degree Protect		.41		Noise voltage 500Vp-p, noise width 1µs,		
Mithstand voltage 500VAC for 1 minute between all DC external terminals and ground 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance ester) Protection degree P	Noise immi	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
insulation resistance insulation resistance tester) Protection degree P2X Meight	Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground		
insulation resistance insulation resistance tester) Protection degree P2X Meight	ter tegere			10M Ω or higher between all DC external terminals and ground (500VDC		
External connection part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less 2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] vire size Material Copper Temperature rating Communication part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fe, (compliant with IEC 60715) **RAV1.25-3 (compliant with JIS C 2805) **part** I/O power supply part** ### Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P214), #1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P514), #1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	Insulation re	esistance		insulation resistance tester)		
External connection part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less 2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] vire size Material Copper Temperature rating Communication part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fe, (compliant with IEC 60715) **RAV1.25-3 (compliant with JIS C 2805) **part** I/O power supply part** ### Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P214), #1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P514), #1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	Protection of	degree		IP2X	CID CID	
External connection part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less 2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] vire size Material Copper Temperature rating Communication part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fe, (compliant with IEC 60715) **RAV1.25-3 (compliant with JIS C 2805) **part** I/O power supply part** ### Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P214), #1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P514), #1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	Weight			0.16kg	1.32T 1.32T	
External connection part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less 2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] vire size Material Copper Temperature rating Communication part, module power supply part M3×5.2 screw (tightening torque range: 0.59 to 0.88N·m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N·m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fe, (compliant with IEC 60715) **RAV1.25-3 (compliant with JIS C 2805) **part** I/O power supply part** ### Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P214), #1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] ### 4.0 to 1.4 (A6CON-P514), #1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] ### Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]				7-point two-piece terminal block	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
External Applicable solderless terminal: 2 or less 2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less I/O part Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] vire size Material Copper Material Copper Temperature rating T35°C or more		Communication part,		[Transmission circuit, module power supply, FG]	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fl (compliant with IEC 60715) Communication part, module power supply part Applicable I/O power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] ### v1-No part ### Material Copper Temperature rating M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicables DiN rail Cipher		module power supply	part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	9 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fl (compliant with IEC 60715) Communication part, module power supply part Applicable I/O power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] ### v1-No part ### Material Copper Temperature rating M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicables DiN rail Cipher	External			Applicable solderless terminal: 2 or less		
M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Fl (compliant with IEC 60715) Communication part, module power supply part Applicable I/O power supply part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] ### V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] ### v1-No part ### Material Copper Temperature rating M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicables DiN rail Cipher				·		
Applicable DIN rail Applicable billo part Module mounting screw Module mounting screw Module mounting screw Module mounting screw Module mounting screw Module mounting screw Module mounting screw Module mounting screw Module mounting screw Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) **RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] **V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] **W10 part Mountable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] **M10 to 1.4 (A6CON-P214), **M14 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] **M15-7.5Fe, TH35-7.5Fe, TH35-7.5Al (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (26 to 24 AWG) stranded wire] **M2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] **M16-MS16-MS16-MS16-MS16-MS16-MS16-MS16-M	system					
Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately. M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size I/O power supply part Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] ### ### ### ### ### ### ### ### ### #	,,,,,,	live power supply part				
Applicable wire size VO part						
Module mounting screw M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N+m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) Communication part, module power supply part Applicable solderless terminal Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] vire size M10 part M2 part M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N+m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] vire size 41.0 to 1.4 (A6CON-P214), \$1.4 to 2.0 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] \$\phi\$ 1.0 to 1.4 (A6CON-P514), \$\phi\$1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more		I/O part				
Module mounting screw (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) Communication part, module power supply part Applicable part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (26 to 24 AWG) stranded wire] V10 part V10 part Material Copper Temperature rating (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V1-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.2mm² (22 to 20 AWG) stranded wire]				 		
Mountable with a DIN rail in 6 orientations Applicable DIN rail Communication part, module power supply part Applicable wire size Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V10 part Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V10 part Mire Material Copper Temperature rating Mountable with a DIN rail in 6 orientations TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V10 part Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] Copper Temperature rating T5°C or more	Module mo	unting screw		•		
Applicable DIN rail Communication part, module power supply part Applicable Wire size Applicable Wire size I/O part Material Material Communication part, module power supply part TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V1-0 part Material Copper Temperature rating TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (26 to 24 AWG) stranded wire] V1-0 part Material Copper Temperature rating TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 20 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.20 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V1-0 part Mire Material Copper Temperature rating TH35-7.5Fe, TH35-7.5Al (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 20 AWG) stranded wire]	Module IIIo	ditting sciew				
Communication part, module power supply part Applicable part Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V1O part V1O part V1O part V1O part Applicable wire size: 0.14 to 0.20 (A6CON-P220) [Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] V1.0 to 1.4 (A6CON-P514), \$\phi_1.4\$ to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] V1 to 0.5 mm² (22 to 20 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.14 to 0.20 (A6CON-P520) [Applicable wire size: 0.14 to 0.2 mm² (22 to 20 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 0.3 mm² (22 to 20 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	Applicable	DIN rail				
module power supply part Applicable solderless terminal Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V5-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V5-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 2.0mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 2.0mm² (26 to 24 AWG) stranded wire] V5-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 2.0mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 2.0mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.2 to 2.0mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire] V6-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 0.3 to 0.5 mm² (26 to 24 AWG) stranded wire]	Applicable		solderless	· · · · · · · · · · · · · · · · · · ·		
Part Solderless V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire size		-		· · · · · · · · · · · · · · · · · · ·		
Applicable Wire size VO power supply part terminal [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] vire size vire siz				, , , , , , , , , , , , , , , , , , , ,		
wire size	Applicable		terminal			
I/O part	wire size	har a safety barr	1			
## ## ## ## ## ## ## ## ## ## ## ## ##						
[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more		I/O part		- ' '		
Temperature rating 75°C or more						
Temperature rating 75°C or more	Wire	Material		Copper		
<u> </u>		Temperature rating				
	Accessory			User's manual		

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



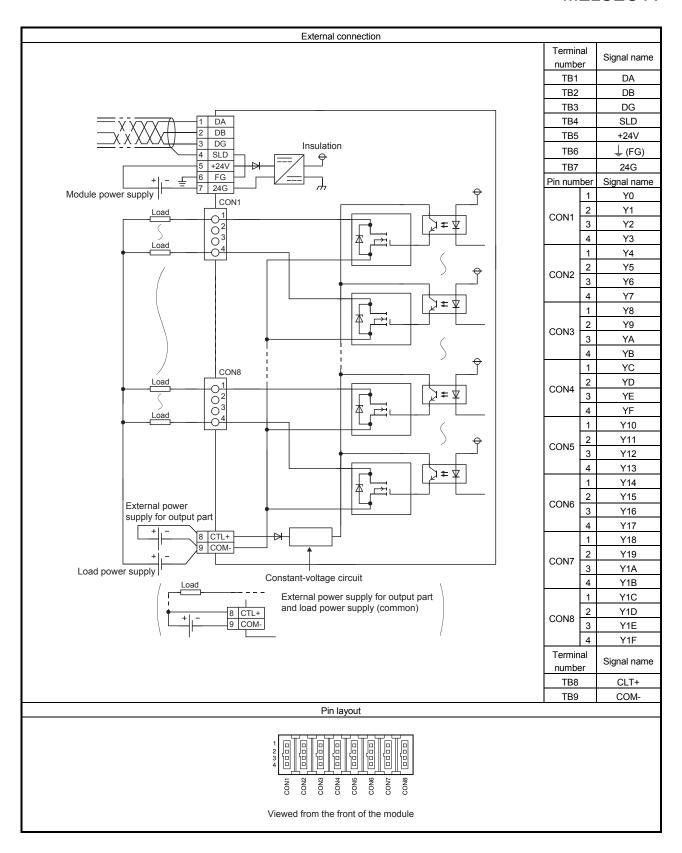
5 - 63 5 - 63

5.4.4 AJ65SBTC1-32T1 transistor output module (sink type)

	_	Туре	Transistor output module					
Item		Турс	AJ65SBTC1-32T1	Appearance				
Number of	output points		32 points					
Isolation me	ethod		Photocoupler	7				
Rated load	voltage		12/24VDC	7				
	load voltage rar	nge	10.2 to 26.4VDC (ripple ratio: within 5%)	7				
Max. load o			0.1A/point, 3.2A/common	7				
	Max. inrush current		1.0A, 10ms or less	7				
	urrent at OFF		0.1mA or lower	7				
	ge drop at ON		0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A	1				
Output type			Sink type	7				
Protection f			None	1				
		OFF→ON	0.5ms or less	1				
Response t	time -	ON→OFF	1.5ms or less (resistive load)	1				
External no		Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	7				
for output p		Current	50mA or lower (TYP. 24VDC/common), excluding external load current	7				
Surge supp	•		Zener diode	†				
	hod for commo	n	32 points/common (1-wire, one-touch connector type)					
	occupied static		32-point assignment/station (32 points used)	- I se O I I				
I TUITIDEI OI		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)					
Module pov	wer supply	voilage Current	60mA or lower (at 24VDC and all points ON)					
	!	Current	Noise voltage 500Vp-p, noise width 1µs,					
Noise immu	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)	138 H 88 N 0 0 0 0				
Withstand v	voltago		500VAC for 1 minute between all DC external terminals and ground					
vviuistariu v	voitage		-					
Insulation re	resistance		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)	4444 4444 4444 4444 4444 6000 0000 0000				
Drotootion (dograd		IP2X					
Protection of Weight	degree		0.16kg	W8 9 A B C D E F G G G G G G G G G G G G G G G G G G				
vveigni			7-point two-piece terminal block	- 11 2 11 12 11 12 11 12 11 11 11 11 11 1				
	Communication	n nart	[Transmission circuit, module power supply, FG]	6.17 Y8 9 A B C C C C C C C C C C C C C C C C C C				
	module power		M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	88 H 88 H 88 H 88 H 88 H 88 H 88 H 88				
	module power	Supply part	Applicable solderless terminal: 2 or less					
External			2-point direct-mount terminal block	# 12 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2				
connection			[I/O power supply]	(10 1 2 3 4 6 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
system	I/O power sup	ply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	# Y 0 1 2 4 7 10 11 11 11 11 11 11 11 11 11 11 11 11				
			Applicable solderless terminal: 2 or less					
			Dedicated one-touch connector [I/O signals]					
	I/O part		4-pin IDC plug is sold separately.					
	•		M4 screw with plain washer finished round					
Module mo	ounting screw		(tightening torque range: 0.78 to 1.08N•m)					
			Mountable with a DIN rail in 6 orientations					
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	_				
	Communication	on						
	part,	Applicable	RAV1.25-3 (compliant with JIS C 2805)					
	module power	solderless	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]					
	supply part	terminal	• V2-MS3, RAP2-3SL, TGV2-3N					
Applicable	Applicable I/O power supply		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
wire size	wire size part			4				
			φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)					
	I/O part		[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire]					
			φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)					
			[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]	4				
Wire	Material		Copper	4				
l	Temperature	rating	75°C or more	-				
Accessory			User's manual					

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 64 5 - 64



5.5 FCN Connector Type Output Module

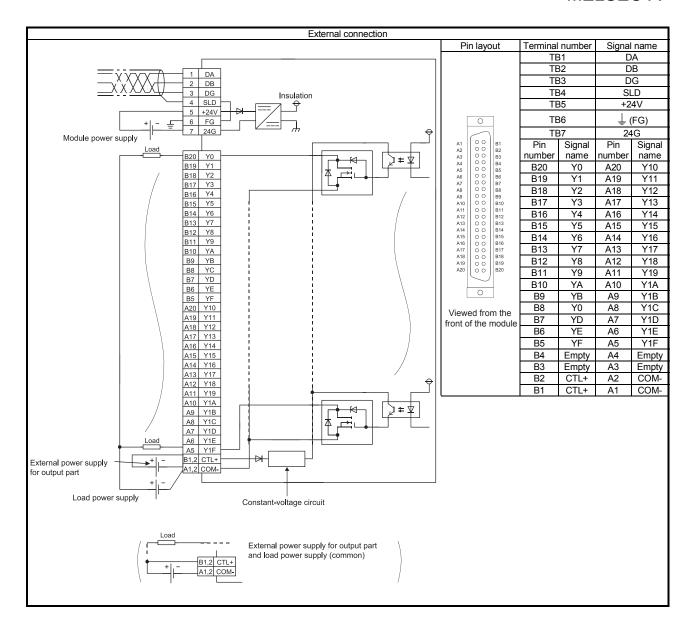
5.5.1 AJ65SBTCF1-32T type transistor output module (sink type)

		Туре	Triac output module		
Item			AJ65SBTCF1-32T	Appear	rance
Number of o	utput points		32 points		
Isolation met	thod		Photocoupler		
Rated load v	/oltage		12/24VDC		
Operating lo	ad voltage ran	ge	10.2 to 26.4VDC (ripple ratio: within 5%)		
Max. load cu	urrent		0.1A/point, 3.2A/common		
Max. inrush	current		1.0A, 10ms or less		
Leakage cur	rent at OFF		0.1mA or lower		
Max. voltage	e drop at ON		0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A		
Output type			Sink type		
Protection fu	ınction		Overload protection, overvoltage protection, overheat protection		
Doonongo tir	mo	OFF→ON	0.5ms or less		
Response tir	nie	ON→OFF	1.5ms or less (resistive load)		
External pov	ver supply for	Voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
output part		Current	50mA or lower (TYP. 24VDC/common), excluding external load current		
Surge suppr	essor		Zener diode		
Wiring metho	od for commor	1	32 points/common (1-wire, FCN connector type)	H H H H H H W NC CONFIDENCE	00
Number of o	ccupied station	าร	32-point assignment/station (32 points used)		0 0
		Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	STATION NO. 40 20 10 8 4 2 2 10 10 8 4 2 2 10 8 4 2 2 10 8 4 2 2 10 10 10 10 10 10 10 10 10 10 10 10 10	0 0
Module pow	er supply	Current	60mA or lower (at 24VDC and all points ON)	A STATION 40 20 10 8 H H H H WB YC YD YE	0 0
			Noise voltage 500Vp-p, noise width 1µs,	4 m (2 4)	0 0
Noise immur	nity		noise frequency 25 to 60Hz (DC type noise simulator condition)	47.00	
Withstand vo	oltage		500VAC for 1 minute between all DC external terminals and ground	70-Y	000
			10M Ω or higher between all DC external terminals and ground (500VDC	1	
Insulation re	sistance		insulation resistance tester)		
Weight			0.15kg	6 7 Y89 A B C 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
			7-point two-piece terminal block	78 E SB 10 S	
Futament (Communicatio	n part,	[Transmission circuit, module power supply, FG]	617 AJ658	
External connection	module power	supply part	M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	14151	
			Applicable solderless terminal: 2 or less	12 3 4 112131 MRIS 24G ↓ (FG)	(5%)
system	I/O power supp	oly part,	40-pin connector [I/O power supply, I/O signal]		
	I/O part		(A6CON1, A6CON2, A6CON3, A6CON4)		11.3 () 1
			M4 screw with plain washer finished round		
Module mou	inting screw		(tightening torque range: 0.78 to 1.08N•m)	PW LRU	
			Mountable with a DIN rail in 6 orientations		
Applicable D	IN rail	•	TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)		
l '	Communicatio	n Applicable	RAV1.25-3 (compliant with JIS C 2805)		
	part,	solderless	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]		
1	module power	terminal*1	• V2-MS3, RAP2-3SL, TGV2-3N		
I '' -	supply part		[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	_	
wire size			• 0.08 to 0.3mm² (28 to 22 AWG) stranded wire (A6CON1 and A6CON4)*2		
I/O power supply part,		oly part,	• 0.08 to 0.2mm² (28 to 24 AWG) stranded wire (A6CON2)		
	I/O part		• 0.08mm² (28 AWG) stranded wire, φ0.25mm (30 AWG) single wire		
10/:	Matarial		(A6CON3)	+	
I +	Material		Copper	+	
	Temperature r	ating	75°C or more	+	
Applicable of terminal block	onnector/ ck conversion r	module	A6TBXY36, A6TBXY54		
Accessory	or convension i	nouule	User's manual	†	
, locessory			Ober 5 manual		

^{*1} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

5 - 66 5 - 66

^{*2} Use cables with outside diameter of 1.3mm or shorter to connect 40 cables to the connector. In addition, consider the amount of current to be used and select appropriate cables.

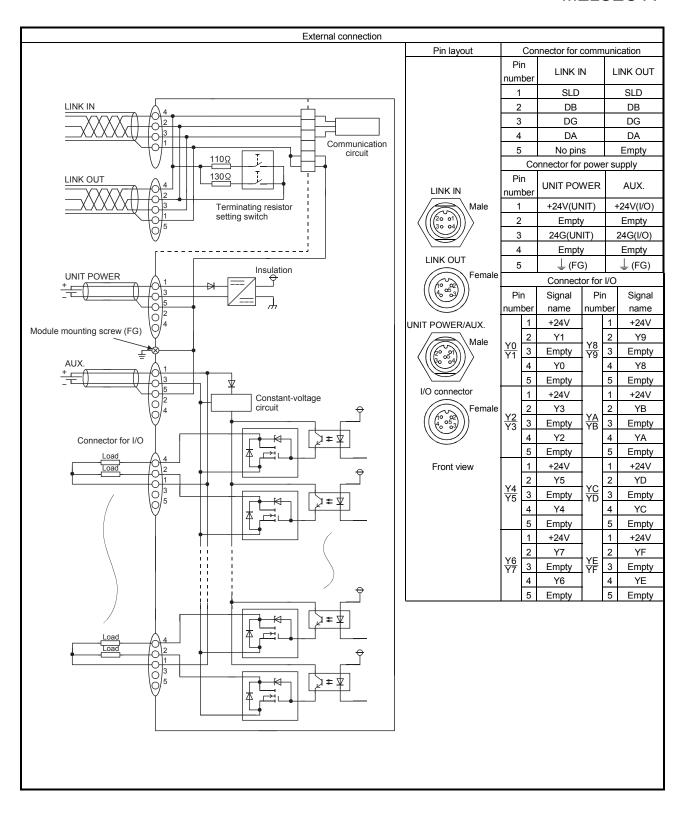


5 - 67 5 - 67

5.6 Waterproof Type Output Module

5.6.1 AJ65FBTA2-16T transistor output module (sink type)

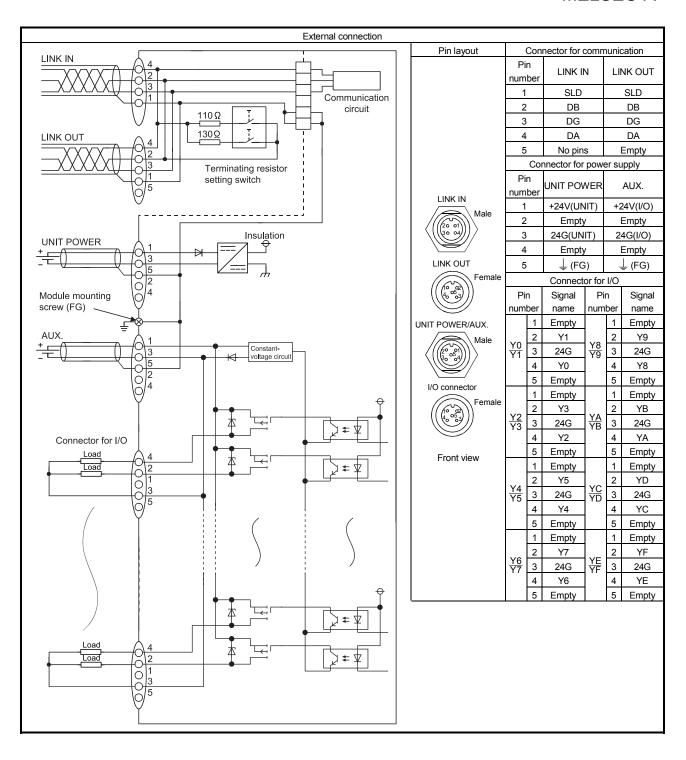
	Туре	Transistor output module	
Item		AJ65FBTA2-16T	Appearance
Number of output points		16 points	
Isolation method		Photocoupler	
Rated load voltage		12/24VDC	
Operating load voltage ra	ange	10.2 to 28.8VDC (ripple ratio: within 5%)	
Max. load current		0.5A/point, 4A/common	
Max. inrush current		1.0A, 10ms or less	
Leakage current at OFF		0.25mA or lower	
Max. voltage drop at ON		0.15VDC or lower (TYP.) 0.5A, 0.25VDC or lower (MAX.) 0.5A	MELSEC AJ65FBTA2-16T
Output type		Sink type	CC-Link
Protection function		Overload protection, overheat protection	STATEUN NO.
Response time	OFF→ON	0.5ms or less	X300 89 YB X400 89 YC X500 89 YD X400 89 YF
Response une	ON→OFF	1.5ms or less (resistive load)	UNIT POWER AUX. X76 6 VF
External power supply	Voltage	10.2 to 28.8VDC (ripple ratio: within 5%)	
for output part	Current	20mA or lower (at 24VDC and all points ON), excluding external load current	
Surge suppressor		Zener diode	
Wiring method for comm	on	16 points/common (2-wire, waterproof connector type)	
Number of occupied stat	ions	32-point assignment/station (16 points used)	
Module power supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
iviodule power supply	Current	50mA or lower (at 24VDC and all points ON)	
Noise immunity		Noise voltage 500Vp-p, noise width 1µs,	
Noise initiality		noise frequency 25 to 60Hz (DC type noise simulator condition)	
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation resistance		$10 M\Omega$ or higher between all DC external terminals and ground (500VDC insulation	
induation redictance		resistance tester)	
Protection degree		IP67	
Weight		0.40kg	
Accessory		User's manual	_
Optional item		Waterproof cap: A6CAP-WP2 (20 pieces)	
Other connecting device	S	Refer to Section 1.6.1.	



5 - 69 5 - 69

5.6.2 AJ65FBTA2-16TE transistor output module (source type)

	Туре	Transistor output module	
Item		AJ65FBTA2-16TE	Appearance
Number of output points		16 points	
Isolation method		Photocoupler	
Rated load voltage		12/24VDC	
Operating load voltage range	ge	10.2 to 28.8VDC (ripple ratio: within 5%)	
Max. load current		1.0A/point, 4A/common	
Max. inrush current		2.0A, 10ms or less	
Leakage current at OFF		0.3mA or lower	
Max. voltage drop at ON		0.15VDC or lower (TYP.) 1.0A, 0.2VDC or lower (MAX.) 1.0A	(0 — 0
Output type		Source type	MELISEC AJ65FBTA2-16TE CC-Link
Protection function		Overload protection, overheat protection	STATION NO. PROTECT & CL. ERR. XIQ CH. ERR. XIQ CH. ERR. XIQ CH. ERR. XIQ CH. ERR. XIQ CH. XIQ
T TOLOGIOTI TUTTOLOTI	1	(The LED turns on when any protection is activated.)	X32 6 6/17 X32 6 6/18 X32 6 6/18 X44 6 6/10
Response time	OFF→ON	0.5ms or less	UNIT POWER AUX.
- tooponoo umo	ON→OFF	1.5ms or less (resistive load)	
External power supply for	Voltage	10.2 to 28.8VDC (ripple ratio: within 5%)	
output part	Current	30mA or lower (at 24VDC and all points ON), excluding external load current	
Surge suppressor		Zener diode	vo
Wiring method for common		16 points/common (2-wire, waterproof connector type)	
Number of occupied station	is	32-point assignment/station (16 points used)	
Module power supply	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	Y2 (C) YA YB
medale perior cappi)	Current	50mA or lower (at 24VDC and all points ON)	
Noise immunity		Noise voltage 500Vp-p, noise width 1μs,	
•		noise frequency 25 to 60Hz (DC type noise simulator condition)	Y4 (Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
Withstand voltage		500VAC for 1 minute between all DC external terminals and ground	
Insulation resistance		10M Ω or higher between all DC external terminals and ground (500VDC insulation resistance tester)	
Protection degree		IP67	
Weight		0.40kg	
Accessory		User's manual	
Optional item		Waterproof cap: A6CAP-WP2 (20 pieces)	
Other connecting devices		Refer to Section 1.6.1.	
Care Commeding devices		total to obstant the ti	



5 - 71 5 - 71

6 SPECIFICATIONS FOR COMBINED MODULES

This chapter describes the specifications for a combined module that can be connected to the CC-Link system.

6.1 Terminal Block Type Combined Module

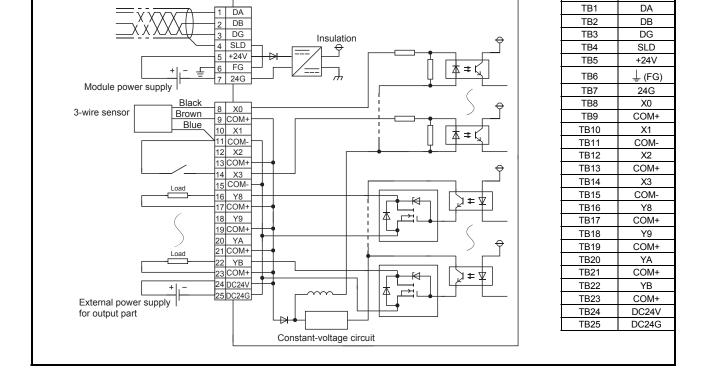
6.1.1 AJ65SBTB32-8DT combined module

	T	pe			output combined module			
Item			AJ65	SBTB32-8DT		Appea	arance	
		nput			Output			
	input points	4 points	Number of outp		4 points			
Isolation me		Photocoupler	Isolation metho		Photocoupler			
Rated input	voltage	24VDC	Rated load volta	age	24VDC			
Rated input	current	Approx. 7mA	Operating load	voltage range	19.2 to 26.4VDC (ripple ratio: within 5%)			
	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load curre	nt	0.5A/point, 1.2A/common			
Max. number input points	er of simultaneo	100%	Max. inrush cur	rent	1.0A, 10ms or less			
ON voltage	/ON current	14VDC or higher/ 3.5mA or higher	Leakage curren	t at OFF	0.25mA or lower			
OFF voltage/OFF current		6VDC or lower/ 1.7mA or lower	Max. voltage dr	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A			
			Output type		Sink type			
Input resista	ance	Approx. 3.3kΩ	Protection funct	tion	Overload protection, overvoltage protection, overheat protection			
Response t		N 1.5ms or less (at 24VDC)	Response time	OFF→ON	0.5ms or less			
response t	ON→O	F 1.5ms or less (at 24VDC)	response unite	ON→OFF	1.5ms or less (resistive load)			
			External power	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)			
			supply for output part	Current	14.6mA or lower (at 24VDC and all points ON), excluding external load current			
Input type		Positive common (sink type)	Surge suppress	or	Zener diode			
Supply curred device	ent for connecte	1.0A or lower/common				NS Y8		
Wiring meth	nod for common	8 points/common (input: 3-wi	ire terminal block	type, output: 2	-wire terminal block type)	COM+		
Number of o	occupied station					Z-8DT		
Module pov	ver Voltage	20.4 to 26.4VDC (ripple ratio				Auessetes2-edi		
supply	Current	45mA or lower (at 24VDC ar						
Noise immu	unity	Noise voltage 500Vp-p, noise noise frequency 25 to 60Hz (X0123788 AB	(3) (3)			
Withstand v	/oltage	500VAC for 1 minute between	n all DC external	terminals and	ground			
Insulation re	esistance	10M Ω or higher between all tester)	DC external term	inals and grour	nd (500VDC insulation resistance	LIRLIN LEGG.		
Protection of	degree	IP2X						
Weight		0.18kg						
External connection	Communication part, module power supply part	7-point two-piece terminal blo M3×5.2 screw (tightening tor Applicable solderless terminal	que range: 0.59 t		e power supply, FG]			
system	I/O power supp part, I/O part	M3×5.2 screw (tightening tor Applicable solderless termina	que range: 0.59 t al: 2 or less	to 0.88N•m)	•			
	unting screw	M4 screw with plain washer to Mountable with a DIN rail in the	6 orientations		e range: 0.78 to 1.08N•m)			
Applicable [DIN rail	TH35-7.5Fe, TH35-7.5AI (co	mpliant with IEC	60715)		_		
		 RAV1.25-3 (compliant with 	RAV1.25-3 (compliant with JIS C 2805)					
Applicable solderless terminal		V2-MS3, RAP2-3SL, TGV2	[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
Wire	Material	Copper	•	•				
	Temperature rating	75°C or more						
Accessory		User's manual						
					o table above. I lee applicable wir			

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

number

Signal name



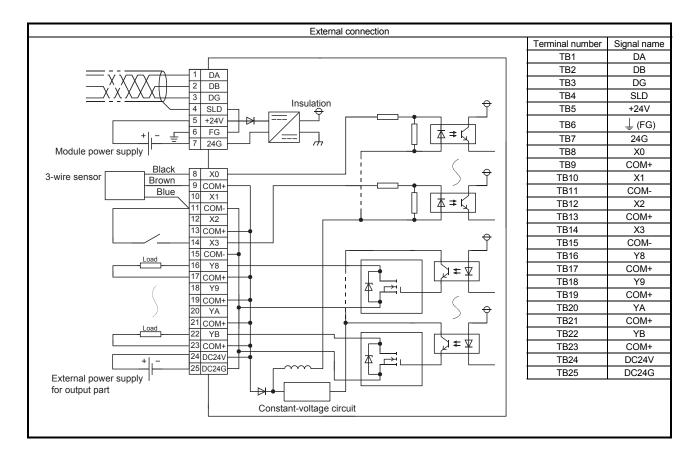
External connection

6

6.1.2 AJ65SBTB32-8DT2 combined module

		Туре		DC in	put transisto	output combined module		
Item					B32-8DT2	,	Appe	arance
		ln	put			Output		
Number of	input points		4 points	Number of o	utput points	4 points		
Isolation m	ethod		Photocoupler	Isolation me	thod	Photocoupler	<u> </u>	
Rated inpu	t voltage		24VDC	Rated load v	roltage	24VDC	<u> </u>	
Rated inpu	t current		Approx. 7mA	Operating lo	ad voltage	19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating voltage range			19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	ırrent	0.5A/point, 1.2A/common		
Max. numb	per of simultane	ous	100%	Max. inrush	current	1.0A, 10ms or less	1	
	e/ON current		14VDC or higher/3.5mA or higher	Leakage cur	rent at OFF	0.1mA or lower	1	
OFF voltag	je/OFF current		6VDC or lower/1.7mA or lower	Max. voltage	drop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resist	ance		Approx. 3.3kΩ	Output type		Sink type	‡	
	٥٢٢	· ON	1 5mg or loop (at 24) (DC)	Protection fu		None	+	
Response	time OFF-		1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	+	
	ON→	UFF	1.5ms or less (at 24VDC)	time External	ON→OFF Voltage	1.5ms or less (resistive load) 19.2 to 26.4VDC (ripple ratio: within 5%)		
				power supply for output part	Current	14.6mA or lower (at 24VDC and all points ON), excluding external load current	SANSA 4.2 14.2 ATE	
Input type			Positive common (sink type)	Surge suppr	essor	Zener diode	H H H	
Supply curi device	rent for connec	ted	1.0A or lower/common				NO WELLOW	
Wiring met	hod for commo	n	8 points/common (input: 3-wire te	erminal block t	ype, output:	2-wire terminal block type)	X3	
Number of	occupied station	ons	32-point assignment/station (8 pc	ints used)			-8DT2	
Module pov	wer Voltag	je	20.4 to 26.4VDC (ripple ratio: with	nin 5%)			A.B. A.B. S.B. S.B. S.B. S.B. S.B. S.B.	
supply	Curre	nt	45mA or lower (at 24VDC and all	points ON)		A August Market		
Noise imm	unity		Noise voltage 500Vp-p, noise wid noise frequency 25 to 60Hz (DC		nulator condit	MAN 2 3 3 9 6 A B B B B B B B B B B B B B B B B B B	(3) (B)	
Withstand	voltage		500VAC for 1 minute between all	DC external t	erminals and	ground		
Insulation r	esistance		10M Ω or higher between all DC etester)	external termin	nals and grou	and (500VDC insulation resistance	PW LRINLERS XC	
Protection	dearee		IP2X					
Weight	J		0.18kg				<u> </u>	
	Communication part, module powe		7-point two-piece terminal block [Transmission circuit, module pow M3×5.2 screw (tightening torque		-			
External connection	supply part		Applicable solderless terminal: 2	or less			1	
system	I/O power sup part, I/O part	ply	18-point direct-mount terminal blo [I/O power supply, I/O signal] M3×5.2 screw (tightening torque Applicable solderless terminal: 2	range: 0.59 to	0.88N•m)			
Module mo	ounting screw		M4 screw with plain washer finish Mountable with a DIN rail in 6 orion	ned round (tigh	ntening torqu	e range: 0.78 to 1.08N•m)		
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (complia					0715)		†	
• RAV1.25 Applicable solderless terminal			 RAV1.25-3 (compliant with JIS [Applicable wire size: 0.3 to 1.2 V2-MS3, RAP2-3SL, TGV2-3N 	RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]				
[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]						nded wire]	4	
Wire	Material		Copper 75°C or more				-	
	Temperature	rating	75°C or more				4	
Accessory			User's manual				1	

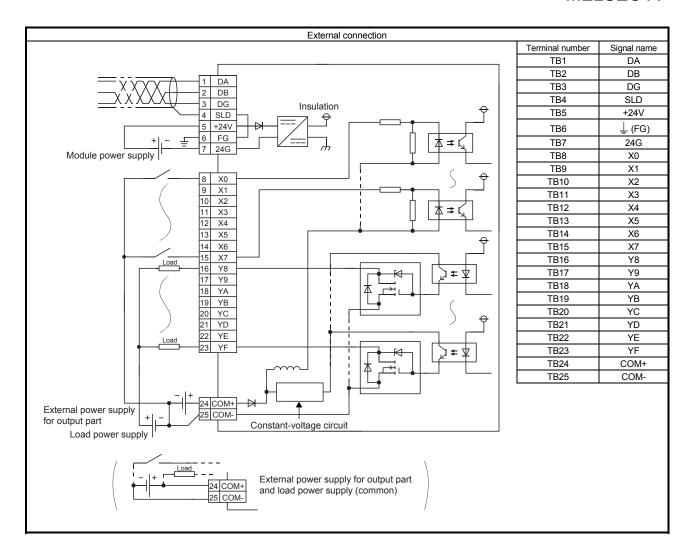
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.3 AJ65SBTB1-16DT combined module

	_	Туре		DC inp	ut transistor	output combined module		
Item				AJ65SB1	B1-16DT		Appe	arance
		Int	out			Output		
Number of	input po	ints	8 points	Number of ou	tput points	8 points		
Isolation me	ethod		Photocoupler	Isolation meth	nod	Photocoupler		
Rated input	t voltage		24VDC	Rated load vo		24VDC		
Rated input	t current		Approx. 7mA	Operating load voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating v	voltage r	ange	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cur	rent	0.5A/point, 2.4A/common		
Max. number of simultaneous input points		nultaneous	100%	Max. inrush c	urrent	1.0A, 10ms or less		
ON voltage	e/ON cur	rent	14VDC or higher/3.5mA or higher	Leakage curre	ent at OFF	0.25mA or lower		
OFF voltag	e/OFF c	urrent	6VDC or lower/1.7mA or lower	Max. voltage	drop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
				Output type		Sink type		
Input resista	ance		Approx. 3.3kΩ	Protection fun	iction	Overload protection, overvoltage protection, overheat protection		
D :	e	OFF→ON	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less		
Response t	time	ON→OFF	1.5ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)		1
				External	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)		
				power supply		17.8mA or lower		
				for output	Current	(at 24VDC and all points ON),	NC HEE	
				part		excluding external load current	AYA AY	
Input type			Positive common (sink type)	Surge suppre	ssor	Zener diode	- S → S + S + S + S + S + S + S + S + S +	
Wiring meth	hod for c	ommon	16 points/common (1-wire, term				III 🛒 X	
Number of	occupie	d stations	32-point assignment/station (16	points used)			X89 A B C D E F C C C C C C C C C C C C C C C C C C	
Module pov	wer	Voltage	20.4 to 26.4VDC (ripple ratio: wi	thin 5%)			6.7 Y89 A B C D 6.9 Y89 A B C D 7.8 B A B C D 7.8 B A B C D 7.8 B A B C D 7.8 B A B C D 7.8 B A B C D 7.8 B A B A B C D 7.8 B A B A B A B A B A B A B A B A B A B	
supply		Current	50mA or lower (at 24VDC and all points ON)				7889 H.S.	
Niele e lesses			Noise voltage 500Vp-p, noise width 1µs,					
Noise immu	uriity		noise frequency 25 to 60Hz (DC type noise simulator condition)				MR.388 A MR.388 A V 246 ↓ (FG)	
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground				X012 3 4 5 6 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(~) U
Insulation re	esistanc	е	$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)				RUN LERR	
Protection of	degree		IP2X					
Weight			0.18kg					
Ĭ			7-point two-piece terminal block					
		ınication part,	Transmission circuit, module po	wer supply, FG	6]			
External	part	power supply	M3×5.2 screw (tightening torque	range: 0.59 to	0.88N•m)			
External connection			Applicable solderless terminal: 2	or less				
system		er supply	18-point direct-mount terminal b	lock				
oyotonii	part,	ici suppiy	[I/O power supply, I/O signal]					
	I/O part		M3×5.2 screw (tightening torque	•	0.88N•m)			
			Applicable solderless terminal: 2					
Module mo	unting s	crew	M4 screw with plain washer finis Mountable with a DIN rail in 6 or	, •	itening torqu	ue range: 0.78 to 1.08N•m)		
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (comp		0715)			
ppiioubic	•		RAV1.25-3 (compliant with JIS)		. 10,			
			[Applicable wire size: 0.3 to 1.2	,	6 AWG) stra	anded wire		
Applicable :	solderles	ss terminal	 V2-MS3, RAP2-3SL, TGV2-3N 	•	0,1110,011			
			[Applicable wire size: 1.25 to 2		4 AWG) stra	anded wire]		
Wire	Materia		Copper					
	Temper	ature rating	75°C or more					
Accessory			User's manual					

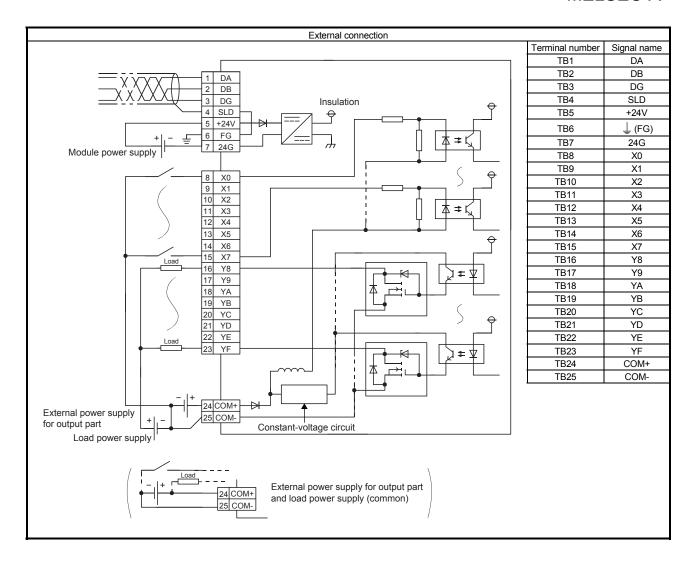
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.4 AJ65SBTB1-16DT1 combined module

		Туре		DC in	put transistor	output combined module		
Item				AJ65SB	TB1-16DT1		Appea	rance
		Inp	out			Output		
Number of in	put point	ts	8 points	Number of o	utput points	8 points		
Isolation met	hod		Photocoupler	Isolation me	thod	Photocoupler		
Rated input v	/oltage		24VDC	Rated load v	oltage	24VDC		
				Operating lo	ad voltage	19.2 to 26.4VDC		
Rated input of	current		Approx. 5mA			(ripple ratio: within 5%)		
Operating vo	ltage ran	nge	19.2 to 26.4VDC (ripple ratio: within 5%)			0.5A/point, 2.4A/common		
Max. number input points	r of simul	Itaneous	100%	Max. inrush	current	1.0A, 10ms or less	-	
ON voltage/ON current		nt	15VDC or higher/3mA or higher	Leakage cur	rent at OFF	0.25mA or lower		
055	(OFF :	1	0) (D0 (0.5			0.3VDC or lower (TYP.) 0.5A,		
OFF voltage/	OFF cur	rent	3VDC or lower/0.5mA or lower	Max. voltage	e drop at ON	0.6VDC or lower (MAX.) 0.5A		
				Output type		Sink type		
Input resistar	nce		Approx. 4.7kΩ			Overload protection, overvoltage		
				Protection fu	inction	protection, overheat protection		
	0	FF→ON	0.2ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less]	
Response tin	ne 💳		0.2ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)	Ī	
			,			19.2 to 26.4VDC		<u> </u>
				External	Voltage	(ripple ratio: within 5%)		
				power		17.8mA or lower		
				supply for	Current	(at 24VDC and all points ON),	- X	
				output part		excluding external load current	B B B B K	
Input type			Positive common (sink type)	Surge suppr	essor	Zener diode		
Wiring metho	od for cor	mmon	16 points/common (1-wire, termi				N	
Number of oc			32-point assignment/station (16		- /			
Module power		oltage	20.4 to 26.4VDC (ripple ratio: wit				160 T1	
supply		urrent	55mA or lower (at 24VDC and al	•			**************************************	
сарріў	Į.	unciit	Noise voltage 500Vp-p, noise wi				X01234567 VB 	
Noise immun	nity		noise frequency 25 to 60Hz (DC type noise simulator condition)					
Withstand vo	ltane							
VVIIIISIAITU VO	ntage		500VAC for 1 minute between all DC external terminals and ground 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance					
Insulation res	sistance		tester)	external term	iliais aliu gio	und (500 VDC insulation resistance	SE OS	
Protection de	ograd		IP2X				PW LEUN	
	gree							
Weight	Commi	nicotics	0.18kg					
		nication	7-point two-piece terminal block	wor cupply F	Cl			
	part,	nower	[Transmission circuit, module po M3×5.2 screw (tightening torque		-			
External	module	-	Applicable solderless terminal: 2	•	0.00N*III)			
connection	supply p						1	
system	I/O pow	er supply	18-point direct-mount terminal bl [I/O power supply, I/O signal]	OUR				
	part,		M3×5.2 screw (tightening torque	range: 0 50 t	0 () 88NI•m			
	I/O part		Applicable solderless terminal: 2	•	5 5.00(N-111)			
	1		M4 screw with plain washer finis		nhtening torg	ie range: 0.78 to 1.08N•m)	1	
Module mour	nting scre	ew	Mountable with a DIN rail in 6 or		jineimiy wiqi	ac range. 0.70 to 1.0014-111)		
Applicable D	IN rail				60715\		1	
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with JIS 6				001 10)		1		
			• RAV1.25-3 (compliant with JIS	•	16 A\WC\ c+~	anded wirel		
Applicable so	olderless	terminal	[Applicable wire size: 0.3 to 1.2	•	IO AWG) STA	anded wifej		
			V2-MS3, RAP2-3SL, TGV2-3N Applicable wire size: 1.25 to 2.		14 A\N(C) ct	anded wirel		
Wire	Material	1	[Applicable wire size: 1.25 to 2	.0111111- (110 10	14 AVVG) ST	anueu wilej	1	
vviie			Copper 75°C or more				+	
Λοοοο	remper	ature rating					1	
Accessory			User's manual					

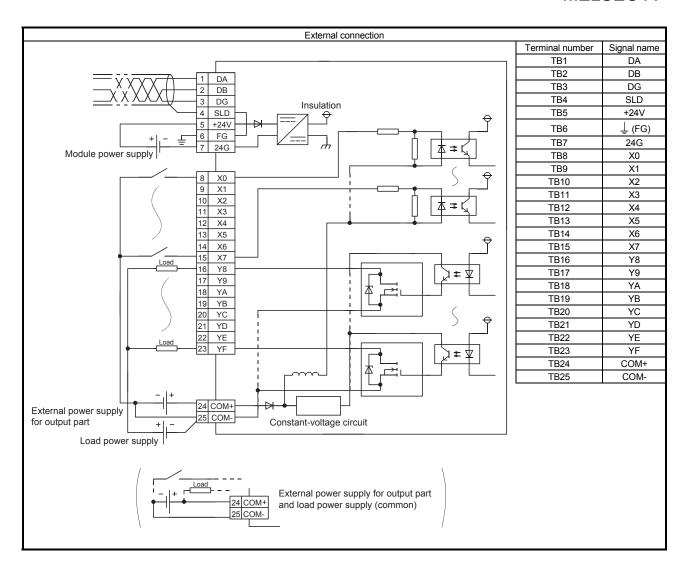
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.5 AJ65SBTB1-16DT2 combined module

		Туре		DC inp	ut transistor	output combined module		
Item	_				B1-16DT2	,	Appea	arance
		In	put			Output	''	
Number of i	input po	oints	8 points	Number of ou	tput points	8 points		
Isolation me	ethod		Photocoupler	Isolation meth	nod	Photocoupler		
Rated input	t voltage	9	24VDC	Rated load vo	oltage	24VDC		
Rated input	Rated input current Approx. 7mA		Approx. 7mA	Operating loa range	d voltage	19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating v	/oltage i	range	19.2 to 26.4VDC	Max. load cur	rent	0.5A/point, 2.4A/common		
Max. number of simultaneous input points		multaneous	(ripple ratio: within 5%)	Max. inrush c	urrent	1.0A, 10ms or less		
ON voltage		rrent	14VDC or higher/3.5mA or higher	Leakage curre	ent at OFF	0.1mA or lower		
OFF voltage	e/OFF	current	6VDC or lower/1.7mA or lower	Max. voltage	drop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resista	ance		Approx. 3.3kΩ	Output type Protection fun	ection	Sink type None		
		OFF→ON	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	- 	
Response t	time	1		time			+	
		ON→OFF	1.5ms or less (at 24VDC)	•	ON→OFF	1.5ms or less (resistive load)		
				External	Voltage	19.2 to 26.4VDC		
				power supply for output		(ripple ratio: within 5%)	STATEMENT REATE MAZA 12 14 2 14 2 14 2 14 2 14 2 14 2 14 2	
				part	Current	17.8mA or lower	97 =	
				part		(at 24VDC and all points ON),	MB 4 70 MB 4 MB 4 MB 4 MB 4 MB 4 MB 4 MB 4 MB	
land the same			Danisti / . i	0		excluding external load current		
Input type	had for		Positive common (sink type)	Surge suppre	SSOF	Zener diode	- N - N - N - N - N - N - N - N - N - N	
Wiring meth			16 points/common (1-wire, termin					
Number of			32-point assignment/station (16 p				Y89 A B C D E F G G G G G G G G G G G G G G G G G G	
Module pov	wer	Voltage	20.4 to 26.4VDC (ripple ratio: with		·			
supply		Current	50mA or lower (at 24VDC and all					
Noise immu	unity		Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition)					
\Mithetand \	voltage							
Withstand v	voitage		500VAC for 1 minute between all DC external terminals and ground					
Insulation re	esistano	ce	10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance					
Protection of	dograa		tester)					
	uegree		0.18kg					
Weight			7-point two-piece terminal block					
	Comm	unication	Transmission circuit, module pov	wer sunnly FG	ì			
	part, m	odule power	M3×5.2 screw (tightening torque					
External	supply	part	Applicable solderless terminal: 2	-	,			
connection system		wer supply	18-point direct-mount terminal blo [I/O power supply, I/O signal]	ock				
	part,		M3×5.2 screw (tightening torque	range: 0.50 to (0 88Nem)			
	I/O par	t	Applicable solderless terminal: 2	•	J.0014-111)			
			M4 screw with plain washer finish		ening torque	e range: 0.78 to 1.08N•m)		
Module mounting screw			Mountable with a DIN rail in 6 original		criming torque	2 range: 0.70 to 1.0014 m)		
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (complian								
• RAV1.25-3 (compliant with JIS C				,				
l			[Applicable wire size: 0.3 to 1.2	,	AWG) strai	nded wire]		
Applicable s	Applicable solderless terminal		 V2-MS3, RAP2-3SL, TGV2-3N 	•	5, 50 0			
			[Applicable wire size: 1.25 to 2.		AWG) strai	nded wire]		
Wire	Materia	al	Copper	•	, -	<u>-</u>		
	Tempe	erature rating	75°C or more					
Accessory			User's manual					

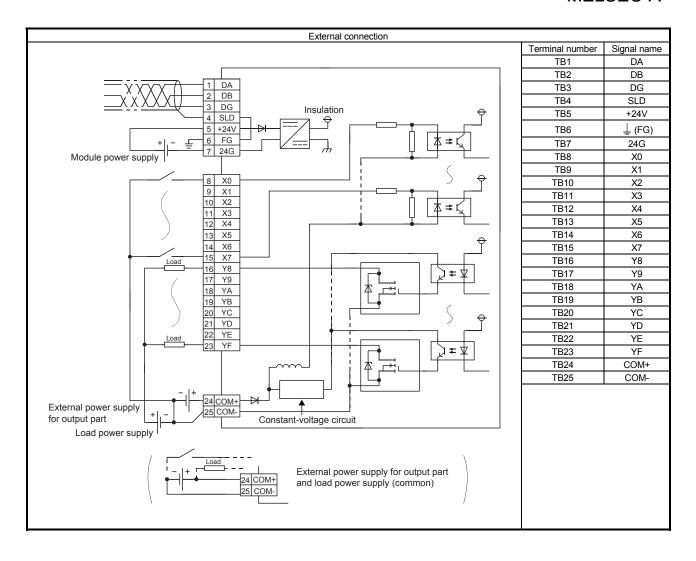
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.6 AJ65SBTB1-16DT3 combined module

		Туре		DC input	t transistor o	output combined module		
Item				AJ65SBTB			Appea	rance
		Ing	out			Output	1,1,	
Number of	input po	oints	8 points	Number of outp	out points	8 points		
Isolation me	ethod		Photocoupler	Isolation metho	d	Photocoupler		
Rated input	t voltag	е	24VDC	Rated load volt	age	24VDC		
				Operating load	voltage	19.2 to 26.4VDC		
Rated input	t curren	nt	Approx. 5mA	range	· ·	(ripple ratio: within 5%)		
0			19.2 to 26.4VDC	Mary land arms		0.50/25-1-1-2-0.40/25-25-25-2		
Operating \	voitage	range	(ripple ratio: within 5%)	Max. load curre	erit	0.5A/point, 2.4A/common		
Max. numb input points		multaneous	100%	Max. inrush cui	rent	1.0A, 10ms or less		
ON voltage	ON cu	rrent	15VDC or higher/3mA or higher	Leakage currer	nt at OFF	0.1mA or lower		
OFF voltage/OFF current		current	3VDC or lower/0.5mA or lower	Max. voltage dı	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Les Constitues			Approx 4.7kO	Output type	· · · · · · · · · · · · · · · · · · ·	Sink type		
Input resist	ance	_	Approx. 4.7kΩ	Protection func	tion	None		
Doonana - 1	time	OFF→ON	0.2ms or less (at 24VDC)	Poononee tire -	OFF→ON	0.5ms or less		
Response t	ume	ON→OFF	0.2ms or less (at 24VDC)	Response time	ON→OFF	1.5ms or less (resistive load)		
				External power	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)		
				supply for		17.8mA or lower	B B B B B B B B B B B B B B B B B B B	
				output part	Current	(at 24VDC and all points ON),		
						excluding external load current	H H H	
Input type			Positive common (sink type)	Surge suppressor Zener diode			W 44 A	
Wiring metl	hod for	common	16 points/common (1-wire, termi	inal block type)			- N - N - N - N - N - N - N - N - N - N	
Number of	occupie	ed stations	32-point assignment/station (16	points used)				
Module pov	wer	Voltage	20.4 to 26.4VDC (ripple ratio: wi	thin 5%)				
supply		Current	55mA or lower (at 24VDC and a	Il points ON)			X89 A B C D O O O O O O X82 - X47 X1 X3 X3	
Noise imm	unity		Noise voltage 500Vp-p, noise winoise frequency 25 to 60Hz (DC					
Withstand v	voltage			all DC external terminals and ground			2 3 4 5 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Insulation r	esistan	ce	10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance					8 8
Protection (dograd		tester) IP2X					
Protection of Weight	ucyiee		0.18kg				- NA CENTRAL PROPERTY OF THE P	
External connection	modul part	nunication part, e power supply	7-point two-piece terminal block [Transmission circuit, module po M3×5.2 screw (tightening torque Applicable solderless terminal: 2	ower supply, FG] e range: 0.59 to 0	J.88N•m)			
system		wer supply	18-point direct-mount terminal bl [I/O power supply, I/O signal] M3×5.2 screw (tightening torque Applicable solderless terminal: 2	e range: 0.59 to 0	J.88N•m)			
Module mo	unting	screw	M4 screw with plain washer finis Mountable with a DIN rail in 6 or	hed round (tighte	ening torque	range: 0.78 to 1.08N•m)		
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compl		715)			
Applicable solderless terminal			RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
Wire	Materi	 al	Copper		AWG) Stian	ucu Wilej	\exists	
		erature rating	75°C or more				1	
Accessory	rompe		User's manual				†	
ACCESSUI Y			USEI S IIIAIIUAI					

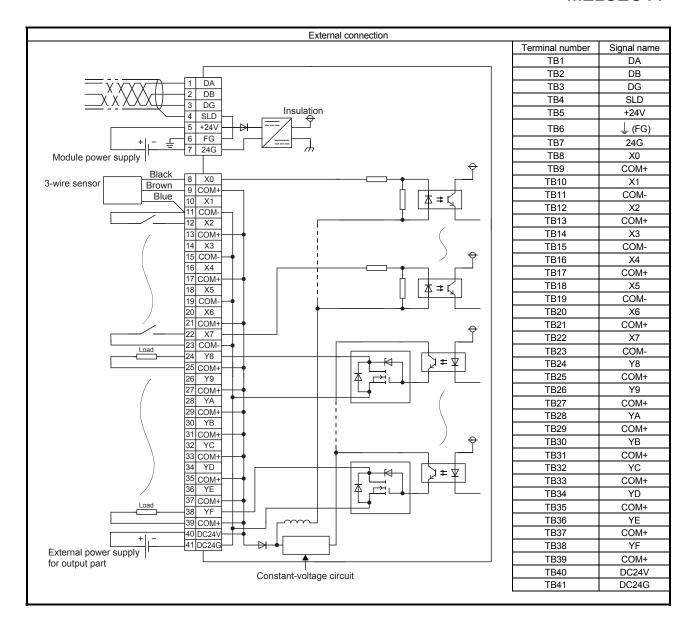
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.7 AJ65SBTB32-16DT combined module

		Туре		DC inpu	t transistor o	output combined module		
Item				AJ65SBTB	32-16DT		Appea	arance
			Input			Output		
Number of	input points		8 points	Number of out	put points	8 points		
Isolation me	ethod		Photocoupler	Isolation meth	od	Photocoupler	\exists	
Rated input	t voltage		24VDC	Rated load vol	tage	24VDC		
Datable			A	Operating load	d voltage	19.2 to 26.4VDC	7	
Rated input	t current		Approx. 7mA	range		(ripple ratio: within 5%)		
Operating v	voltage range	9	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load current		0.5A/point, 2.4A/common		
Max. number of simultaneous input points		neous	100%	Max. inrush cu	ırrent	1.0A, 10ms or less		
ON voltage	e/ON current		14VDC or higher/3.5mA or higher	Leakage curre	ent at OFF	0.25mA or lower		
OFF voltag	je/OFF currer	nt	6VDC or lower/1.7mA or lower	Max. voltage o	frop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
				Output type		Sink type	\exists	
Input resista	ance		Approx. 3.3kΩ	D		Overload protection, overvoltage	7	
				Protection fund	ction	protection, overheat protection		
D	OFF	→ON	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less		(3)
Response t	time t		1.5ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)		
	1		, -/			19.2 to 26.4VDC		
				External	Voltage	(ripple ratio: within 5%)	MA CC	
				power supply		17.8mA or lower		
				for output part	Current	(at 24VDC and all points ON),	8- 2	
				, ,		excluding external load current	√8 COM	
Input type			Positive common (sink type)	Surge suppressor		Zener diode	AA COM	
	rent for conne		•	, J. 2.3pp.00	-		4.60W	
device	. ,		1.0A or lower/common				X VB	
	hod for comm	non	16 points/common (input: 3-wire ter	minal block typ	e, output: 2-	-wire terminal block type)	T COW	
	occupied sta		32-point assignment/station (16 poi		•	. ,	T See	
Module pov	•		20.4 to 26.4VDC (ripple ratio: within				T Sx Sx Sx Sx Sx Sx Sx Sx Sx Sx Sx Sx Sx	
supply	Curr		50mA or lower (at 24VDC and all pe	•			X4 COM+	
	•		Noise voltage 500Vp-p, noise width		1 m 1 m			
Noise immu	unity		noise frequency 25 to 60Hz (DC typ	199 A B C D E F P P P P P P P P P P P P P P P P P P				
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground					
Insulation re	_		$10M\Omega$ or higher between all DC external terminals and ground (500VDC insulation resistance tester)					
Protection of	dearee		IP2X					
Weight	-5		0.25kg				MESS Ave	
- 5			7-point two-piece terminal block					
	Communica		Transmission circuit, module powe	r supply. FG1			NW.LRUN OAL OB	
	part, module		M3×5.2 screw (tightening torque rai		88N•m)			
External	power suppl	ıy part	Applicable solderless terminal: 2 or	-				
connection			34-point direct-mount terminal block				7	
system	I/O power su	upply	[I/O power supply, I/O signal]				1	
	part, I/O part		M3×5.2 screw (tightening torque ra	nge: 0.59 to 0.8	88N•m)		1	
	"O part		Applicable solderless terminal: 2 or	less				
Modulo mo	unting corew	,	M4 screw with plain washer finished	d round (tighten	ning torque r	ange: 0.78 to 1.08N•m)	1	
Module mounting screw Mountable with a DIN rail in 6 orientations							_	
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)						_		
Applicable :	solderless ter	rminal	• RAV1.25-3 (compliant with JIS C [Applicable wire size: 0.3 to 1.25n	_ ′	WG) strand	ed wire]		
			V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]				1	
					vvo) strand	eu wiiej	┥	
* * II G	Material		Copper 75°C or more				┪	
	Temperature rating	C	. o o more				1	
Accessory	Irauriy		User's manual				†	
, iccessory			OSCI S IIIailuai					

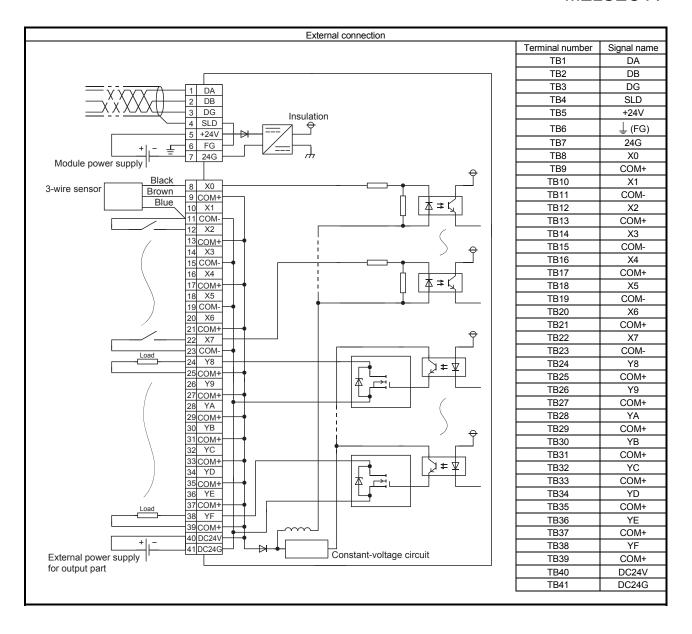
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.8 AJ65SBTB32-16DT2 combined module

	_	Туре		DC inp	ut transistor	output combined module		
Item	_				332-16DT2		Appe	arance
		l	nput			Output		
Number of	input poin	nts	8 points	Number of out	put points	8 points		
Isolation me	ethod		Photocoupler	Isolation metho	od	Photocoupler		
Rated input	t voltage		24VDC	Rated load vol	tage	24VDC		
Rated input	t current		Approx. 7mA	Operating load	l voltage	19.2 to 26.4VDC		
rtated input	it current			range		(ripple ratio: within 5%)	_	
Operating voltage range		nge	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load curr	ent	0.5A/point, 2.4A/common		
Max. number of simultaneous input points		ultaneous	100%	Max. inrush cu	ırrent	1.0A, 10ms or less		
ON voltage	e/ON curre	ent	14VDC or higher/3.5mA or higher	Leakage curre	nt at OFF	0.1mA or lower		
OFF voltag	ge/OFF cu	rrent	6VDC or lower/1.7mA or lower	Max. voltage d	lrop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
			4 0.01.0	Output type		Sink type		
Input resista	ance		Approx. 3.3kΩ	Protection fund	ction	None		
D		OFF→ON	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less		
Response t	time t		1.5ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)	18 B B B B B B B B B B B B B B B B B B B	
	•		,			19.2 to 26.4VDC		
				External	Voltage	(ripple ratio: within 5%)	MAN TO THE TENTE OF THE TENTE O	
				power supply		17.8mA or lower		
				for output part	Current	(at 24VDC and all points ON),	- N	
						excluding external load current		
Input type			Positive common (sink type)	Surge suppressor		Zener diode	1 × × × × × × × × × × × × × × × × × × ×	
Supply curr device	rent for co	nnected	1.0A or lower/common					
Wiring meth	hod for co	mmon	16 points/common (input: 3-wire	terminal block tv	pe, output: 2	2-wire terminal block type)		
Number of			32-point assignment/station (16 p		. , T	- 71:-7	we leave	
Module pov		/oltage	20.4 to 26.4VDC (ripple ratio: with				@	
supply		Current	50mA or lower (at 24VDC and all					
			Noise voltage 500Vp-p, noise width 1µs,					
Noise immu	unity		noise frequency 25 to 60Hz (DC type noise simulator condition)					
Withstand v	voltage		500VAC for 1 minute between all DC external terminals and ground					
Insulation re	esistance		10M Ω or higher between all DC etester)	external terminal	s and groun	d (500VDC insulation resistance	6 7 789 A 8 C D E F	
Protection of	degree		IP2X					
Weight			0.25kg				No. 1 2 3 4 5 6 7 Object	
<u> </u>			7-point two-piece terminal block					
	Commun		[Transmission circuit, module pov	wer supply, FG]			W L RUN	
Cutor: -!	part, mod		M3×5.2 screw (tightening torque	range: 0.59 to 0	.88N•m)			
External		upply part	Applicable solderless terminal: 2	or less				
connection		or our selec	34-point direct-mount terminal blo	ock				
system	I/O powe	er supply	[I/O power supply, I/O signal]					
	part,		M3×5.2 screw (tightening torque	range: 0.59 to 0	.88N•m)			
	I/O part		Applicable solderless terminal: 2	or less				
Module mo	ountina sci	rew	M4 screw with plain washer finish	, ,	ening torque	range: 0.78 to 1.08N•m)		
Applicable			Mountable with a DIN rail in 6 original TH35-7.5Fe, TH35-7.5Al (compliant)		15)			
Applicable	וואוועו				10)		 	
			• RAV1.25-3 (compliant with JIS	•	AMC) atraca	dod wirol		
Applicable :	solderless	s terminal	[Applicable wire size: 0.3 to 1.2]	•	Avvo) stranc	ueu wiiej		
			V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
				0111111 (10 10 14	nvvoj sudili	ueu wiiej	 	
	Tempera	ature	Copper 75°C or more				 	
	rating	atul C						
Accessory	9		User's manual				7	

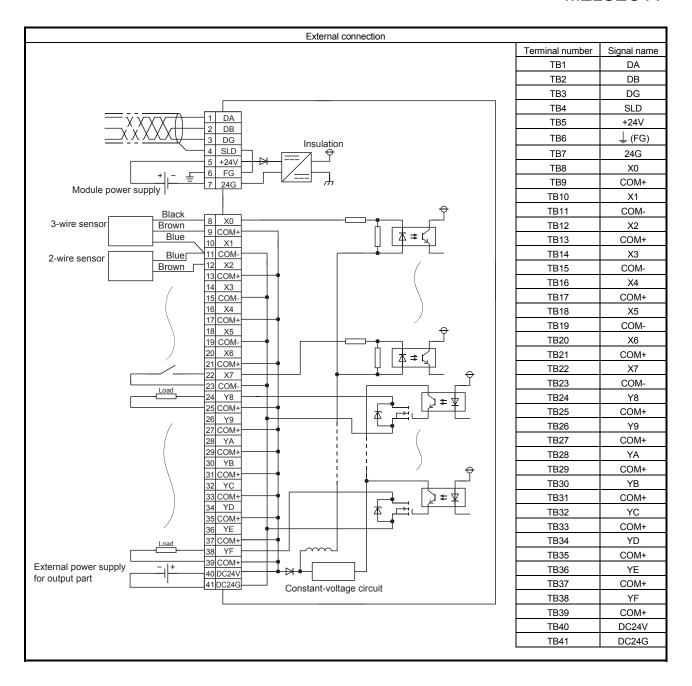
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.9 AJ65SBTB32-16KDT2 combined module

Input Number of input points Spoints S			Type					DC i	nnut transist	or output combined module					
Input response from the property of the protection of the protecti	Item	·								Annearance					
Number of output points 8 points Number of output points 8 points Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Photocoupler Solation method Solation method Photocoupler Solation method									тррса	Tarioc					
Solation method Photocoupler Solation method Photocoupler Rated injust voltage 24/DC Rated injust voltage 24/DC Rated injust voltage 24/DC 20.4 to 28.8 VDC (inpite ratio: within 5%) (inpite ratio: wit															
Rated input current Aprox. 7mA Aprox. 7mA Operating voltage range (inpple ratic-within 5%) Operating voltage range Operating voltage range (inpple ratic-within 5%) Max. load current O. 5A/point, 2.4A/common 1.00% Max. number of simultaneous input points 100% Max. load current O. 5A/point, 2.4A/common 1.0A, 10ms or less ON voltage/ON current OFF voltage/OFF curr							<u> </u>	•							
Rated input current Approx. 7mA Operating load voltage 20.4 to 28.8VDC (inpple ratio: within 5%) Max. Innuher of simultaneous 100% Max. Voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.5VDC or lower (TYP.		•													
Operating voltage range Color 20.4 to 28.8 V/OC (imple ratio: within 5%) Max. number of simultaneous 100% Max. number of simultaneous 100% Max. inrush current 1.0A, 10ms or less				Approx 7mA				Operating loa		20.4 to 28.8VDC					
Max. Inrush current 1.00, 10ms or less	Operating v	/oltage r	ange	20.4 to 28.8VDC				Ů	ırrent						
No voltage/ON current higher shigher			nultaneous	` ' ' '	alio. Wili	1111 370)		Max. inrush	current	1.0A, 10ms or less					
OFF voltage/OFF current S-SVDC or lower/1.7mA or lower Nax. voltage drop at ON 0.3VDC or lower (TYP.) 0.5A 0.8VDC or lower (MAX.) 0.5A			rent		or highe	er/4mA	or	Leakage cur	rent at OFF	0.1mA or lower					
Input resistance Approx. 3.0k2 Output type Protection function None				5.5VDC	or lowe	er/1.7m <i>P</i>	A or	Max. voltage	drop at ON						
Input response Speed O.2ms 1.5ms 5ms 10ms Response OFF→ON O.5ms or less OFF→ON O.7ms 1.5ms 5ms or loss or less or less or less or less or less or less ON→OFF 1.5ms or less (resistive load) ON→OFF					3 040				<u>'</u>	` '					
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points	ii iput 165i5la	ai iCE		Αρριοχ.	J.UK12			Protection fu	nction	None					
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points			Input response	0.2	1 5	Ema	10	İ			71	H H B			
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points	Response ti	1		0.2ms	1.5ms	5ms or	10ms		OFF→ON	0.5ms or less		BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB			
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points			ON→OFF	0.2ms	1.5ms	5ms or	10ms		ON→OFF	1.5ms or less (resistive load)					
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points				l l				External	Voltage						
Input type Positive common (sink type) Surge suppressor Zener diode 1.0A or lower/common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type) Wiring method for common 16 points/common (input: 3-wire terminal block type) Wiring method for common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 16 points/common 17 point furth (it prints) 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points/common 18 points								1		10mA or lower (at 24VDC and all points ON),		~4888 X			
Number of occupied stations 32-point assignment/station (16 points used) Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%) supply Current 55mA or lower (at 24VDC and all points ON) Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage Insulation resistance Insulation resistance Protection degree Weight Communication part, module power supply part livo part Vo part Vo power supply part, li/O part Module mounting screw Module m									Current			6.			
Number of occupied stations 32-point assignment/station (16 points used) Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%) supply Current 55mA or lower (at 24VDC and all points ON) Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage Insulation resistance Insulation resistance Protection degree Weight Communication part, module power supply part livo part Vo part Vo power supply part, li/O part Module mounting screw Module m	Input type			Positive	commo	n (sink	tyne)	Surge suppr							
Number of occupied stations 32-point assignment/station (16 points used) Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%) supply Current 55mA or lower (at 24VDC and all points ON) Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage Insulation resistance Insulation resistance Protection degree Weight Communication part, module power supply part livo part Vo part Vo power supply part, li/O part Module mounting screw Module m		ent for c	onnected	` ,, ,								1 +N00			
Number of occupied stations 32-point assignment/station (16 points used) Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%) supply Current 55mA or lower (at 24VDC and all points ON) Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage Insulation resistance Insulation resistance Protection degree Weight Communication part, module power supply part livo part Vo part Vo power supply part, li/O part Module mounting screw Module m	device														
Noise immunity Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage 500VAC for 1 minute between all DC external terminals and ground Insulation resistance 10MΩ or higher between all DC external terminals and ground 10MΩ or higher betwee															
Noise immunity Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage 500VAC for 1 minute between all DC external terminals and ground Insulation resistance 10MΩ or higher between all DC external terminals and ground 10MΩ or higher betwee															
Noise immunity Noise voltage 500Vp-p, noise width 1μs, noise frequency 25 to 60Hz (DC type noise simulator condition) Withstand voltage 500VAC for 1 minute between all DC external terminals and ground Insulation resistance 10MΩ or higher between all DC external terminals and ground 10MΩ or higher betwee				, , ,											
Insulation resistance 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester) Protection degree IP2X	supply		Current												
Insulation resistance 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester) Protection degree IP2X	Noise immu	unity										B C C			
Insulation resistance 10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester) Protection degree IP2X	Withstand v	oltage										1832-18 00/+ X1	I W L		
Communication part, module power supply part May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Module mounting screw Module mounting screw Applicable DIN rail Applicable solderless terminal: 2 module terminal: 2 or less Module mounting screw Applicable solderless terminal: 2 or less May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	vviii istariu v	ollage		š .								X X X X X X X X X X X X X X X X X X X			
Communication part, module power supply part May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Module mounting screw Module mounting screw Applicable DIN rail Applicable solderless terminal: 2 module terminal: 2 or less Module mounting screw Applicable solderless terminal: 2 or less May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	Insulation re	esistance	e				,, uii DC	- CALCITICITICITI	ais and gi	- Insulation		4 5 E			
Communication part, module power supply part May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Module mounting screw Module mounting screw Applicable DIN rail Applicable solderless terminal: 2 module terminal: 2 or less Module mounting screw Applicable solderless terminal: 2 or less May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw May 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less Module mounting screw Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	Protection d	degree		IP2X								H 24			
External connection system Communication part, module power supply part Max5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less	Weight			,								D + 24			
External connection system Max 5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less		Commi	inication part												
External connection system VO power supply part, VO part VO											J l				
Sa-point direct-mount terminal block [I/O power supply part, I/O part M34-5.2 screw (tightening torque range: 0.59 to 0.88N+m) Applicable solderless terminal M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N+m) Mountable with a DIN rail in 6 orientations Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) PRAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] PV2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	External			, ,											
/O power supply part, /O part M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	connection	 													
M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) Applicable solderless terminal FAV1.25-3 (compliant with JIS C 2805) Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	system	I/O now	er supply part					o.oon							
Applicable solderless terminal: 2 or less M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) • RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more								e range: 0.59	to 0.88N•m)						
Mountable with a DIN rail in 6 orientations Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715) RAV1.25-3 (compliant with JIS C 2805) [Applicable solderless terminal V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating Mountable with a DIN rail in 6 orientations RAV1.25-3 (compliant with IEC 60715) RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] V3-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]		Applicable solderless terminal: 2 or less													
RAV1.25-3 (compliant with JIS C 2805) [Applicable solderless terminal	Module mou	Module mounting screw							ightening tor	que range: 0.78 to 1.08N•m)					
Applicable solderless terminal [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more	Applicable DIN rail														
Applicable solderless terminal [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire Material Copper Temperature rating 75°C or more				• RAV1	.25-3 (c	omplian	t with JI	S C 2805)							
V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] Wire	Applicable solderless terminal			,	•		,	o 16 AWG) s	tranded wire]						
Wire Material Copper Temperature rating 75°C or more	Applicable s	solueries	s terriinai												
Temperature rating 75°C or more									14 AWG) s	tranded wire]					
	Wire	I	Copper												
Accessory User's manual															
	Accessory			User's manual											

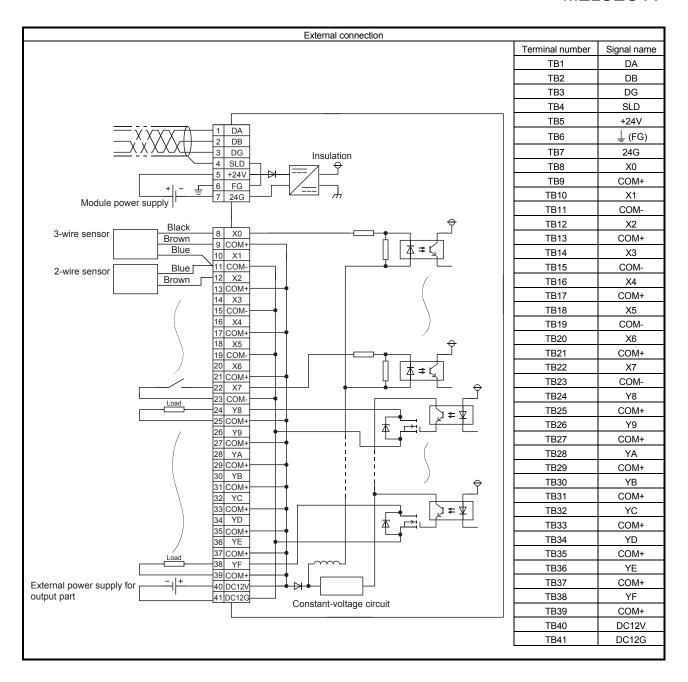
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.10 AJ65SBTB32-16KDT8 combined module

	Туре					DC in	out transistor	r output combined module				
Item						Δ	nnea	rance				
	nput			7,0000011	AJ65SBTB32-16KDT8 Output			фрса	ianoc			
Number of in					Number of o	utput points	8 points					
Isolation met						Isolation met		Photocoupler		_		
Rated input v		· · · · · · · · · · · · · · · · · · ·				Rated load v		12VDC				
Rated input of	current	Approx 11mA				Operating lo		10.2 to 14.4VDC (ripple ratio: within 5%)				
Operating vo	ltage range		14.4VDC	n 5%)		Max. load cu	ırrent	0.5A/point, 2.4A/common				
	r of simultaneous	100%	ido. Widii	11 3 /0)		Max. inrush	current	1.0A, 10ms or less				
input points ON voltage/0	N current	5.6VDC	or highe	r/4mA or	higher	Leakage cur	rent at OFF	0.1mA or lower				
		3.0VDC	or riigitei	1/4IIIA UI	nignei	Leakage cui	ieni ai Oi i	0.3VDC or lower (TYP.) 0.5A,	_			
OFF voltage	OFF current	2.4VDC	or lower/	1.7mA o	or lower	Max. voltage	drop at ON	0.6VDC or lower (MAX.) 0.5A				
Input resistar	nce	Approx.	1.0kΩ			Output type		Sink type				
		FF -				Protection fu	inction	None				
Response tir	Input response speed ne OFF→ON	0.2ms 0.2ms	1.5ms 1.5ms	5ms 5ms or	10ms 10ms	Response	OFF→ON	0.5ms or less				
	ON→OFF	or less 0.2ms or less	or less 1.5ms or less	less 5ms or less	or less 10ms or less	time	ON→OFF	1.5ms or less (resistive load)	ESPONSE AS SOUTH	7C YD +		
		01 1000	01 1000	1000	01 1000	External	Voltage	10.2 to 14.4VDC	- 10 00 00 00 00 00 00 00 00 00 00 00 00	.0M+ COM		
						power supply for output part		(ripple ratio: within 5%) 10mA or lower	~+6555	× ±		
							Current	(at 12VDC and all points ON), excluding external load current		78 Y9		
Input type		Positive	common	(sink ty	pe)	Surge suppr						
	nt for connected	1.0A or lower/common				3		Xe				
Wiring metho	od for common	16 points/common (input: 3-wire terminal block type, output: 2-wire terminal block type)							71	£ ×2		
Number of o	ccupied stations	32-point assignment/station (16 points used)								×4		
Module power	er Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)								S S S		
supply	Current	55mA or lower (at 24VDC and all points ON)								200//+		
Noise immur	nity	Noise voltage 500Vp-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition)							Y8 9 A B C D E F	X 1 X		
Withstand vo	ltage	500VAC for 1 minute between all DC external terminals and ground							8% E	, iii		
Insulation res	sistance	$10 M\Omega$ or	higher b	etween	all DC e	xternal termin	als and grou	nd (500VDC insulation resistance	8 A.	_		
		tester)							2 3 4 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	246 (FG)		
Protection de	egree	IP2X							R.XO. 1 2 3 4 5 6 7	24		
Weight		0.26kg							ERR.	SED		
r	Communication part, module power supply part	7-point two-piece terminal block [Transmission circuit, module power supply, FG] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less										
system I	/O power supply part, /O part	M3×5.2	screw (tio	ghtening	torque r	ck [I/O power ange: 0.59 to						
Module mou		w with pla	ain wash	er finish	ed round (tigh	tening torque	e range: 0.78 to 1.08N•m)					
		Mountab										
Applicable DIN rail		1				nt with IEC 60	0715)					
Applicable solderless terminal		 RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] 										
Wire N	Material	Copper	`									
_	emperature rating	75°C or more										
Accessory	User's manual											

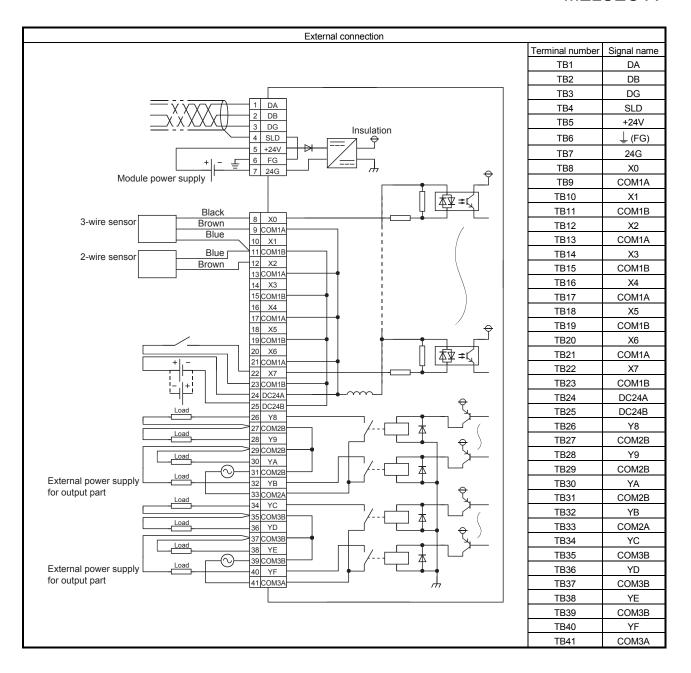
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.11 AJ65SBTB32-16DR combined module

	Туре			DC inpu	t contact output combined module		
Item				AJ65SBTB32-	16DR	Appe	arance
	In	put			Output		
Number of	input points	8 points	Num point	ber of output s	8 points		
Isolation method		Photocoupler	· ·		Relay		
Rated input voltage		24VDC			2A/point, 4A/common at 24VDC (resistive load) or 240VAC (cosφ=1)		
Rated input	t current	Approx. 7mA	Number of simultaneous ON points		All points		
Operating v	voltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	Min.	switching load	5VDC, 1mA		
Max. numb	er of us input points	100%	Max.	switching voltage	e 264VAC, 125VDC		
	e/ON current	14VDC or higher/3.5mA or higher	Lifo	Mechanical	20 million times or more Rated switching voltage/current load: 100 thousand times or more 200VAC 1.5A, 240VAC 1A (cos¢=0.7):	COM38 COM38	
OFF voltag	e/OFF current	6VDC or lower/1.7mA or lower	Life Electrical		100 thousand times or more 200VAC 1A, 240VAC 0.5A (cosφ=0.35 100 thousand times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms): 100 thousand times or more		
Input resista	ance	Approx. 3.3kΩ		switching iency	3600 times/hour	X0 1 2 3 4 12	
Doononoo t	OFF→ON	1.5ms or less (at 24VDC)	Resp	onse OFF→ON	1 10ms or less	COM2B	
Response t	oN→OFF	1.5ms or less (at 24VDC)	time	ON→OFF	12ms or less	RUNL F	
Wiring meth	hod for common	8 points/common (3-wire, terminal block type)	Wirir	ng method for mon	4 points/common (2-wire, terminal block type)	Z48 C0	
Input type		Positive/negative common shared type (sink/source shared type)	Surg	e suppressor	None	X7 DC24	
Supply curr device	rent for connected	1.0A or lower/common			Now 18 com		
Number of	occupied stations		WIA XE				
Module pov		20.4 to 26.4VDC (ripple ratio:		,		- III × III × III	
supply Noise immu	Current	85mA or lower (at 24VDC an Noise voltage: 1500Vp-p (AC	MIA CON				
Noise illilli	uriity	noise frequency 25 to 60Hz (RATE				
Withstand v	voltage	2830VACrms for 3 cycles bet level) 500VAC for 1 minute betwee	MO 2 1 4 1 1 4 1 1 4 1 1 4 1 1 4 1 1 1 1 1				
Insulation re	esistance	10M Ω or higher between all A tester) 10M Ω or higher between all [8 H H H K X X X X X X X X X X X X X X X X				
Protection of	degree	tester) IP1X	⊣∥				
Weight		0.28kg				A-065831832-160R DA DG +24V DB SLD	
External connection	Communication part, module power module power (Transmission circuit, module power supply, FG) M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less						
system	part, M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) l/O part Applicable solderless terminal: 2 or less						
Module mounting screw		M4 screw with plain washer f Mountable with a DIN rail in 6			ng torque range: 0.78 to 1.08N•m)		
Applicable	DIN rail	TH35-7.5Fe, TH35-7.5Al (cor	mpliar	nt with IEC 60715)	_	
Applicable solderless terminal		RAV1.25-3 (compliant with [Applicable wire size: 0.3 to V2-MS3, RAP2-3SL, TGV2 [Applicable wire size: 1.25 the complex of the comple					
Wire	Material Temperature	Copper 75°C or more	7				
A	rating					_	
Accessory		User's manual				J	

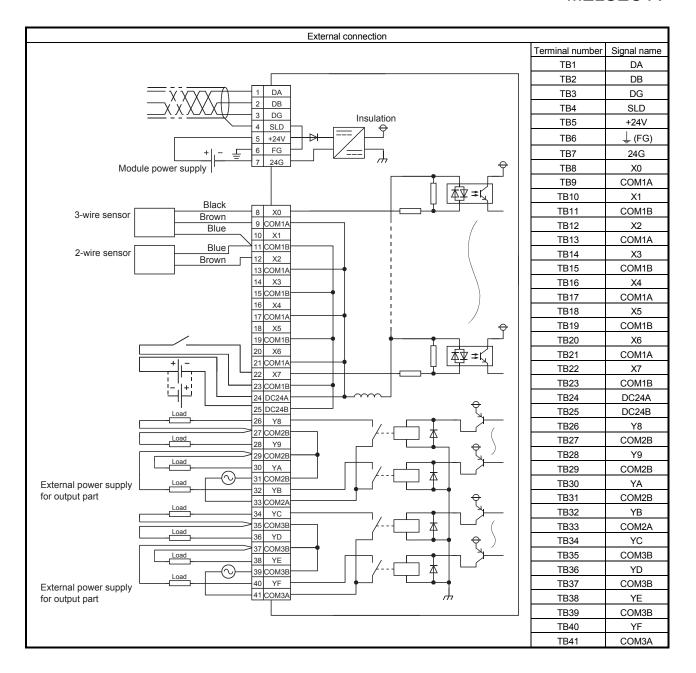
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.12 AJ65SBTB32-16KDR combined module

	Туре						OC input contact	ct output combined module				
Item	,,,,,	AJ65SBTB32-16KDR								Appearance		
		Input						Output	1,1			
Number of	input points	8 points				Number of output points 8 points						
Isolation method		Photocoupler				Isolation n	nethod	Relay				
Rated input voltage		24VDC				Rated load voltage		2A/point, 4A/common at 24VDC (resistive load) or 240VAC (cos (cos =1)				
Rated input	t current	IANNIOX /MA				Number of simultaneous ON points		All points				
	oltage range	20.4 to 28.8VDC (ripple ratio: within 5%)			Min. switching load		5VDC, 1mA					
	us input points	100%				Max. swite	ching voltage	264VAC, 125VDC				
ON voltage	ON current	14VDC	or higher	/4mA or	higher		Mechanical	20 million times or more	_			
OFF voltage	e/OFF current	5.5VDC	or lower	/1.7mA d	or lower	-		Rated switching voltage/current load: 100 thousand times or more				
Input resista	1	Approx.	3.0kΩ	I	1	Life	Electrical	200VAC 1.5A, 240VAC 1A (cos¢=0.7): 100 thousand times or more				
Doggoogo	Input response speed	0.2ms 0.2ms	1.5ms 1.5ms	5ms 5ms or	10ms 10ms	-		200VAC 1A, 240VAC 0.5A (cos = 0.35 100 thousand times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms):	78 9 A B C D E F B B B B B F F F F F F F F F F F F F			
Response time	OFF→ON	or less	or less	less 5ms or	or less	Max. swite	china	100 thousand times or more	6 7 78 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9			
	ON→OFF	or less	or less	less	or less	frequency	T	3600 times/hour	R. XO 1 2 3 4 5 6 7			
Wiring meth	hod for common	(3-wire,	commor terminal	block typ		Response	OFF→ON Response	10ms or less	RUN L ERR. XO 1			
Input type		Positive/negative common shared type (sink/source shared type)				time ON→OFF		12ms or less	PW L	88888888888888888888888888888888888888		
Supply current for connected		1.0A or lower/common				Wiring me common	thod for	4 points/common (2-wire, terminal block type)				
device			Surge suppressor None						HERE			
		32-point assignment/station (16 points used)										
Module pov supply	wer Voltage Current	20.4 to 26.4VDC (ripple ratio: within 5%)										
зирріу	Current	100mA or lower (at 24VDC and all points ON) Noise voltage: 1500Vp-p (AC type), 500Vp-p (DC type), noise width 1µs,										
Noise immu	unity		equency	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	196h							
Withstand v	voltage	2830VACrms for 3 cycles between all AC external terminals and ground (2000m above sea level) 500VAC for 1 minute between all DC external terminals and ground										
Insulation re	esistance		r higher I r higher I									
Protection of	degree	IP1X		DI SID								
Weight	I	0.29kg							A A A A			
	Communication part, module power supply part	M3×5.2	wo-piece screw (ti ble solde									
	I/O power supply part, I/O part	34-point M3×5.2 Applicat	screw (ti									
Module mounting screw			w with pl ole with a			,	ightening torqu	e range: 0.78 to 1.08N•m)				
Applicable DIN rail						ant with IEC	60715)					
Applicable solderless terminal		 RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] 										
			aule Wife	SIZE. T.	20 IU 2.U	אווווו (10 נכ	14 AWG) Stra	nucu wiiej				
Wire	Material	Conner										
Wire	Material Temperature rating	Copper 75°C or	more						_			

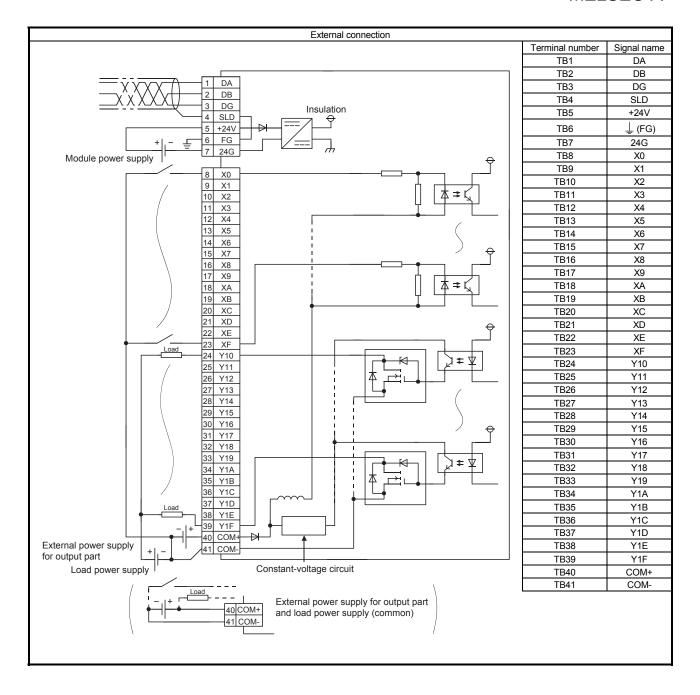
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.13 AJ65SBTB1-32DT combined module

		Туре		DC input	transistor ou	tput combined module				
Item		- Type		AJ65SBTB ²		nput combined module	Appearance			
			Input	7.00002.2	. 025 .	Output	7,0000.0.100			
Number of	input po		16 points	Number of outp	out points	16 points	†			
Isolation method			Photocoupler	Isolation metho	<u>'</u>	Photocoupler	†			
Rated input voltage			24VDC	Rated load volt		24VDC	†			
·				Operating load	•	19.2 to 26.4VDC	†			
Rated input current			Approx. 7mA	range	ronago	(ripple ratio: within 5%)				
Operating v	oltage r	ange	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load curre	ent	0.5A/point, 3.6A/common				
Max. numb input points		nultaneous	100%	Max. inrush cur	rent	1.0A, 10ms or less				
ON voltage	/ON cur	rent	14VDC or higher/3.5mA or higher	Leakage currer	nt at OFF	0.25mA or lower				
OFF voltag	e/OFF o	current	6VDC or lower/1.7mA or lower	Max. voltage dr	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A				
				Output type		Sink type				
Input resista	ance		Approx. 3.3kΩ	Protection func	tion	Overload protection, overvoltage protection, overheat protection				
		OFF→ON	1.5ms or less (at 24VDC)		OFF→ON	0.5ms or less				
Response t	time		1.5ms or less (at 24VDC)	Response time	ON→OFF	1.5ms or less (resistive load)				
		0.1. 70	nome of loop (at 2 1 1 2 0)			19.2 to 26.4VDC				
				External power	Voltage	(ripple ratio: within 5%)				
				supply for		30mA or lower (24VDC/common),				
				output part	Current	excluding external load current				
Input type			Positive common (sink type)							
Wiring meth	nod for o	common	32 points/common (1-wire, terminal							
Number of	occupie	d stations	32-point assignment/station (32 poir							
Module pov	ver	Voltage	20.4 to 26.4VDC (ripple ratio: within	5%)						
supply		Current	60mA or lower (at 24VDC and all po	oints ON)						
			Noise voltage 500Vp-p, noise width							
Noise immu	unity		noise frequency 25 to 60Hz (DC typ							
Withstand v	oltage/		500VAC for 1 minute between all Do							
Insulation re	esistano	e	10M Ω or higher between all DC extension tester)							
Protection of	degree		IP2X							
Weight			0.25kg							
	Comm	unication	7-point two-piece terminal block							
	part,		[Transmission circuit, module power	r supply, FG]						
Cutomol	module	power	M3×5.2 screw (tightening torque rar	nge: 0.59 to 0.88	N•m)					
External connection	supply	part	Applicable solderless terminal: 2 or	less						
system	I/O nov	ver supply	34-point direct-mount terminal block	(
Gyotom	part,		[I/O power supply, I/O signal]							
	I/O par	t	M3×5.2 screw (tightening torque rar							
	"o pa	`	Applicable solderless terminal: 2 or	<u> </u>						
Module mounting screw		crew	M4 screw with plain washer finished							
			Mountable with a DIN rail in 6 orient	+						
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5Al (compliant)		+			
Applicable solderless terminal		ss terminal	 RAV1.25-3 (compliant with JIS C 2 [Applicable wire size: 0.3 to 1.25m V2-MS3, RAP2-3SL, TGV2-3N 							
\A/:	NA=4 - 4		[Applicable wire size: 1.25 to 2.0m	m² (16 to 14 AV	/G) stranded	d wire]	+			
Wire	Materia		Copper 75°C or more							
1	Tempe rating	rature	75°C or more							
Accessory	·uuiig		User's manual				†			
, woodsouly			Occi o manadi				1			

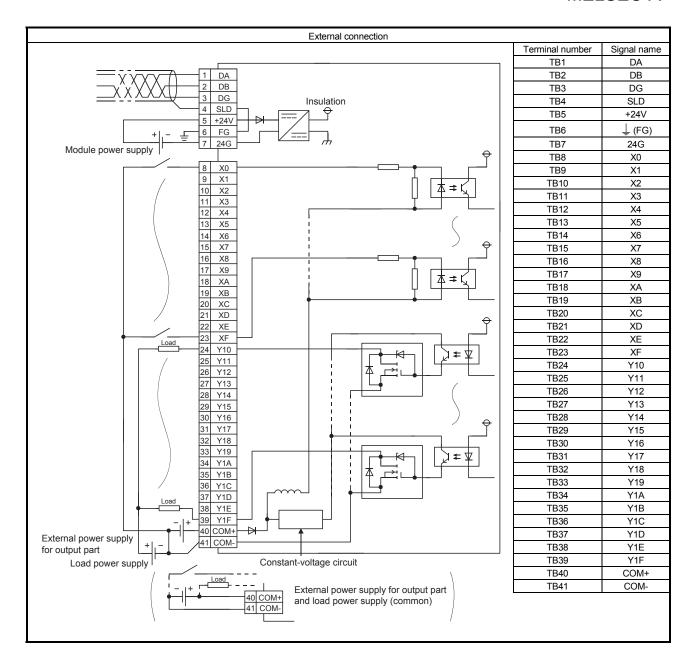
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.14 AJ65SBTB1-32DT1 combined module

	_	Туре		DC in	put transisto	output combined module		
Item					TB1-32DT1	·	Appe	arance
		In	put			Output		
Number of	input po	oints	16 points	Number of c	output points	16 points	\exists	
Isolation m	ethod		Photocoupler	Isolation me	thod	Photocoupler	7	
Rated inpu	t voltage	e	24VDC	Rated load v	/oltage	24VDC	7	
				Operating load voltage		19.2 to 26.4VDC	7	
Rated inpu	t curren	t	Approx. 5mA	range		(ripple ratio: within 5%)		
Operating v	voltage	range	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	urrent	0.5A/point, 3.6A/common		
Max. number of simultaneous input points 100%			Max. inrush	current	1.0A, 10ms or less			
ON voltage	e/ON cu	rrent	15VDC or higher/3mA or higher	Leakage cur	rrent at OFF	0.25mA or lower	7	
			3VDC or lower/0.5mA or lower	Max. voltage		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resist	tance		Approx. 4.7kΩ	Output type Protection fu	unction	Sink type Overload protection, overvoltage protection, overheat protection		
		OFF→ON	0.2ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less		
Response	time	ON→OFF	0.2ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)		
		JOIN 7011	10.2113 Of 1033 (dt 24VDO)	External	Voltage	19.2 to 26.4VDC		
				power		(ripple ratio: within 5%)	3-18	
				supply for		24.2mA or lower	716 717	
				output part	Current	(at 24VDC and all points ON),	714	
			<u></u>			excluding external load current	+	
Input type			Positive common (sink type)	Surge suppr		Zener diode	-	
Wiring met			32 points/common (1-wire, termin)			
Number of			32-point assignment/station (32 p					
Module pov	wer	Voltage	20.4 to 26.4VDC (ripple ratio: with					
supply		Current	60mA or lower (at 24VDC and all					
Noise imm	unity		Noise voltage 500Vp-p, noise wid	-				
			noise frequency 25 to 60Hz (DC t					
Withstand	voltage		500VAC for 1 minute between all			•		
Insulation r	esistan	ce	10MΩ or higher between all DC e	X X X X X X X X X X X X X X X X X X X				
			tester)					
Protection	degree		IP2X		1 2 3 1 1 2 4 G			
Weight	T _o		0.25kg				ERR. X0	
		unication	7-point two-piece terminal block		01		BE BUNIT	
	part,	e nower	[Transmission circuit, module pov		-			
External	supply	e power	M3×5.2 screw (tightening torque Applicable solderless terminal: 2	-	J.00014*111)			
connection system		wer supply	34-point direct-mount terminal blc [I/O power supply, I/O signal]					
	part,		M3×5.2 screw (tightening torque	range: 0 50 to	0 88N•m)			
	I/O par	rt	Applicable solderless terminal: 2	•	0.0014 111)			
	1				htenina torau	e range: 0.78 to 1.08N•m)	7	
Module mounting screw M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations								
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)								
ppiioubie	J., 1 (all		RAV1.25-3 (compliant with JIS)				7	
[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]							1	
Applicable	olicable solderless terminal V2-MS3, RAP2-3SL, TGV2-3							
			[Applicable wire size: 1.25 to 2.0	0mm² (16 to 1	I4 AWG) stra	nded wire]	1	
Wire	Materia	al	Copper	(-, -: 0		7	
		erature rating	75°C or more				7	
Accessory		3	User's manual				7	

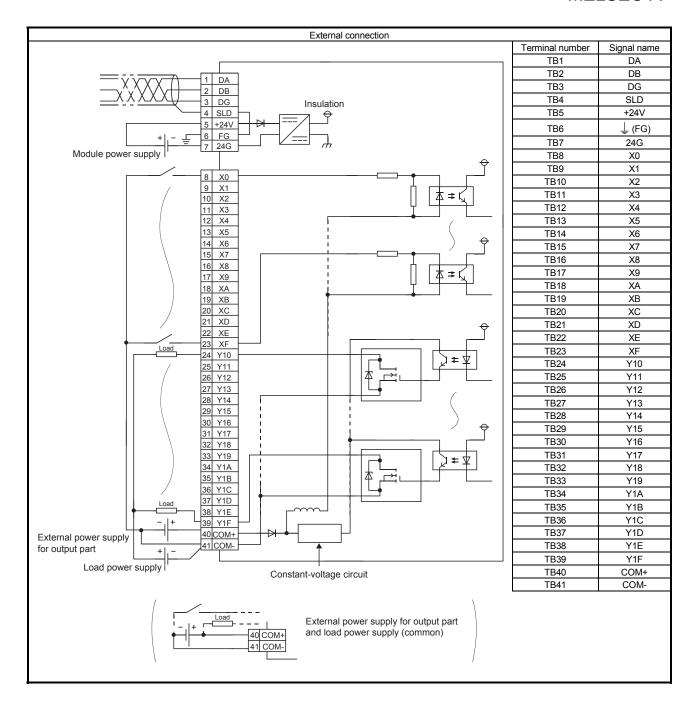
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.15 AJ65SBTB1-32DT2 combined module

	_	Туре		DC input tr	ansistor out	out combined module			
Item	_			AJ65SBTB1-			Appea	arance	
			Input		(Output			
Number of	input po	oints	16 points	Number of outpu	ıt points	16 points			
Isolation me	ethod		Photocoupler	Isolation method		Photocoupler	Ī		
Rated input		9	24VDC	Rated load volta		24VDC			
				· · · · · · · · · · · · · · · · · · ·		19.2 to 26.4VDC	1		
Rated input	t curren	t	Approx. 7mA	range		(ripple ratio: within 5%)			
Operating v	voltage	range	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load currer	nt	0.5A/point, 3.6A/common			
Max. numb input points	• •			Max. inrush curr	ent	1.0A, 10ms or less			
· ·			14VDC or higher/3.5mA or higher	Leakage current	at OFF	0.1mA or lower			
OFF voltage/OFF current			6VDC or lower/1.7mA or lower	Max. voltage dro	p at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A			
Input resistance			Approx. 3.3kΩ	Output type Protection function	on	Sink type None			
		OFF→ON	1.5ms or less (at 24VDC)		OFF→ON	0.5ms or less		(3)	
Response t	time	ON→OFF	1.5ms or less (at 24VDC)	Response time	ON→OFF	1.5ms or less (resistive load)	## S		
		011 7011	The first (at 21 v 20)			19.2 to 26.4VDC			
				External power	Voltage	(ripple ratio: within 5%)	M M M M M M M M M M M M M M M M M M M		
				supply for		30mA or lower	# HE HE		
				output part	Current	(at 24VDC and all points ON),	- S - S - S - S - S - S - S - S - S - S		
				output puit	Odiront	excluding external load current	15 Y		
Input type			Positive common (sink type)	ive common (sink type) Surge suppressor Zener diode					
Wiring metl	hod for	common	32 points/common (1-wire, terminal		-				
Number of			32-point assignment/station (32 poi	** /			1011 12 31 41 5 607 Y819 A (1810 1810 1810 1810 1810 1810 1810 181		
Module pov		Voltage	20.4 to 26.4VDC (ripple ratio: within						
supply	WEI	Current	60mA or lower (at 24VDC and all p						
Зарріу		Current	Noise voltage 500Vp-p, noise width	-			→ \$2 \$2 → \$2 → \$3 → \$3 → \$3 → \$3 → \$3 → \$3 → \$3 → \$3 → → \$3 → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → → →		
Noise immu	unity		noise frequency 25 to 60Hz (DC typ	 					
Withstand v	voltage		500VAC for 1 minute between all D						
Insulation r		ce	10M Ω or higher between all DC extenser)	28 A B C D E F S S S S S S S S S S S S S S S S S S					
Protection of	dearee		IP2X				× Second		
	uegree		0.25kg						
Weight			7-point two-piece terminal block				12 3 MB 1246 (FG)		
	Comm	unication	[Transmission circuit, module power	ar eupply EG1			ERR. 30		
	part, m	nodule	M3×5.2 screw (tightening torque ra		•m)		BB DE BE		
External	power	supply part	Applicable solderless terminal: 2 or		,				
connection			34-point direct-mount terminal block						
system		wer supply	[I/O power supply, I/O signal]	· ·					
	part,		M3×5.2 screw (tightening torque ra	nae:0.59 to 0.88N	•m)				
	I/O par	t	Applicable solderless terminal: 2 or	-	•,				
			M4 screw with plain washer finished		torque rand	ge: 0.78 to 1.08N•m)	1		
Module mounting screw Mountable with a DIN rail in 6 orientations]				
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)									
• RAV1.25-3 (compliant with JIS C 2805)									
Annlicable	[Applicable wire size: 0.3 to 1.25mm² (G) stranded	wire]			
Applicable	oplicable solderless terminal • V2-MS3, RAP2-3SL, TGV2-								
[Applicable wire size: 1.25 to 2.0mm ² (1				nm ² (16 to 14 AW	G) stranded	wire]	<u> </u>		
Wire									
	Tempe	erature	75°C or more						
<u> </u>	rating						1		
Accessory			User's manual						

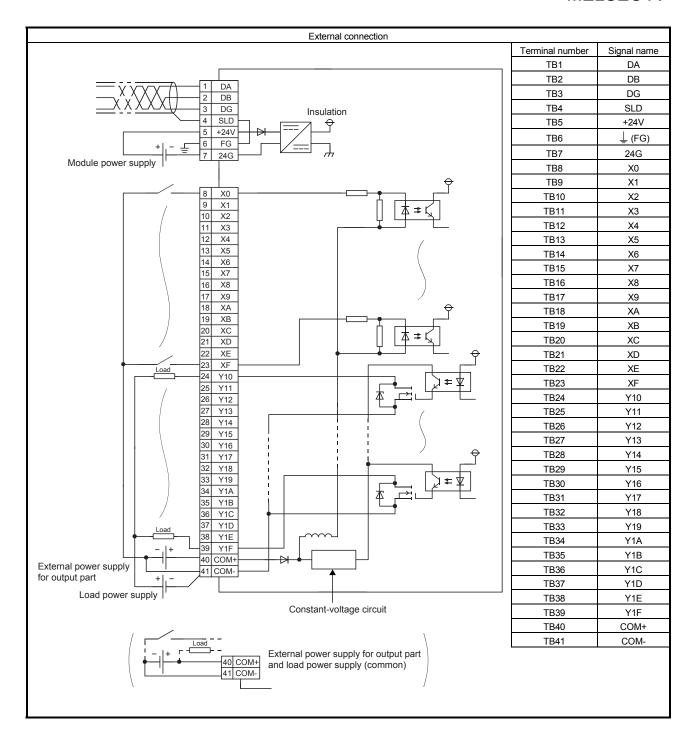
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.16 AJ65SBTB1-32KDT2 combined module

	Туре					DC input	transiator ou	strut combined module		
Item	Туре			tput combined module	Appea	ranco				
itom		lanut				AJ65SBTB1-3		Outnut	Арреа	rance
Ni a f i a .		Input	_			Niverbara of such		Output	_	
Number of inp		16 points				Number of outp		16 points		
Isolation meth		Photocoi 24VDC	upier			Isolation metho		Photocoupler 24VDC	_	
Rated input v	Oilage	24VDC				Rated load volt		20.4 to 28.8VDC		
Rated input c	urrent	Approx.	7mA					(ripple ratio: within 5%)		
		20.4 to 2	8 8VDC			range		(hppic rado. within 670)		
Operating vol	tage range		itio: withir	า 5%)		Max. load curre	nt	0.5A/point, 3.6A/common		
Max. number	of simultaneous		t 26.4VD							
input points	I IMax. inrush current 11.0A. 10ms or less									
ON voltage/O	N current	14VDC d	or higher/	4mA or h	igher	Leakage currer	t at OFF	0.1mA or lower		
OFF voltage/0	OFF current	5.5VDC	or lower/	1.7mA or	lower	Max. voltage dr	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
						Output type		Sink type	┪ <i>═</i>	
Input resistan	ce	Approx.	3.0 k Ω			Protection func	tion	None	┥║╺╾╟╟	
	Input response	0.2ms	1.5ms	5ms	10ms	Response time	OFF→ON	0.5ms or less	SOLON N. S. 1 S. S. S. S. S. S. S. S. S. S. S. S. S.	
	speed						ON→OFF	1.5ms or less (resistive load)	HE HE	
Response	OFF ON	0.2ms	1.5ms	5ms or	10ms			19.2 to 28.8VDC	M H H H	
time	OFF→ON	or less	or less	less	or less	External power	Voltage	(ripple ratio: within 5%)		l á leh
		0.2ms	1.5ms	5ms or	10ms	supply for		15mA or lower		
	ON→OFF	or less	or less	less	or less	output part	Current	(at 24VDC and all points ON),	02 04 00 00 00 00 00 00 00 00 00 00 00 00	
		0. 1000	0000	.000	0. 1000			excluding external load current		
Input type				(sink type		Surge suppress	sor	Zener diode	- HIT	
	d for common					block type)			M8191A1B1C1D1E1F	
	cupied stations			ent/statio						
Module powe supply	r Voltage Current			(ripple rat t 24VDC :					-	
зирріу	Current		`)Vp-p, no					13.141.1 X9 X9 X9 X9 X9 X9 X9 X9 X9 X9 X9 X9 X9 X	
Noise immuni	ity		-			e noise simulato	or condition)		Y101112131415.1617 Y	
Withstand vol	Itage					C external termin		und		
								500VDC insulation resistance	3X9 A B C D E F e e e e e e e e e e e e e e e e e e e	
Insulation resi	istance	tester)							(8.9 A TB1.322 X1 X2	
Protection de	gree	IP2X								
Weight		0.26kg							R. XXX 1 2 3 4 5 6 7	
	Communication			terminal					MSI 246	
	part,	-				r supply, FG]	NI>		FRR. X0	
External	module power			intening t less termi	•	nge: 0.59 to 0.88 Jess	in•III)			
connection	supply part			ount term						
	I/O power supply			, I/O sign		-				
	part,			_	-	nge: 0.59 to 0.88	N•m)			
	I/O part	Applicab	le solderl	ess termi	nal: 2 or	less				
Module moun	ntina screw	M4 screv	w with pla	ain washe	r finished	d round (tightenin	ng torque ra	nge: 0.78 to 1.08N•m)		
		Mountable with a DIN rail in 6 orientations								
Applicable DI	N rail			5-7.5Al (_				
	• RAV1.25-3 (compliant with JIS C 2805)									
Applicable solderless terminal [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] • V2-MS3, RAP2-3SL, TGV2-3N										
	[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]									
Wire	Material	Copper	, , , ,							
l F	Temperature	75°C or i	more							
	rating									
4			anual					<u> </u>		

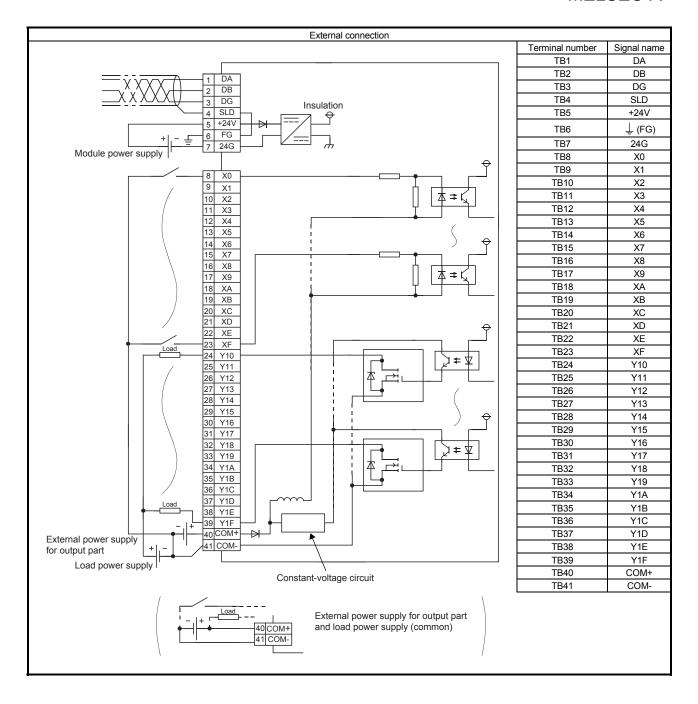
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.17 AJ65SBTB1-32DT3 combined module

		Туре		DC input	transistor o	output combined module		
Item				AJ65SBTB		•	Appea	rance
		Ing	out			Output	11,1	
Number of i	input po	oints	16 points	Number of outp	ut points	16 points		
Isolation me	ethod		Photocoupler	Isolation metho	d	Photocoupler		
Rated input	voltage	9	24VDC	Rated load volta	age	24VDC		
				Operating load	voltage	19.2 to 26.4VDC		
Rated input	current	I .	Approx. 5mA	range		(ripple ratio: within 5%)		
Operation	altono i		19.2 to 26.4VDC	May load aurrent		0.54/noint 2.64/sommon		
Operating v	ollage i	ange	(ripple ratio: within 5%)	Max. load curre	erit.	0.5A/point, 3.6A/common		
Max. numbe	er of sin	nultaneous	100%	Max. inrush cur	ront	1.0A, 10ms or less		
input points			10070	Wax. IIII usii cui	TOTIL	T.OA, TOTAS OF 1635		
ON voltage/ON current 15			15VDC or higher/3mA or higher	Leakage currer	nt at OFF	0.1mA or lower		
OFF voltage	e/OFF (current	3VDC or lower/0.5mA or lower	Max. voltage dr	on at ON	0.3VDC or lower (TYP.) 0.5A,		
Of F Voltage		Janon	OVEC OF TOWORK OF TOWOR	Wax. Voltage al	op at ort	0.6VDC or lower (MAX.) 0.5A	_	
Input resista	ance		Approx. 4.7kΩ	Output type		Sink type		
				Protection func	tion	None		8 8
Response ti	ime	1 1	0.2ms or less (at 24VDC)	Response time	OFF→ON	0.5ms or less		
r tooponoo t		ON→OFF	0.2ms or less (at 24VDC)	recoporide unic	ON→OFF	1.5ms or less (resistive load)		3 8 8
					Voltage	19.2 to 26.4VDC	7.4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
				External power	vollage	(ripple ratio: within 5%)		
				supply for		24.2mA or lower	× × × × × × × × × × × × × × × × × × ×	
				output part	Current	(at 24VDC and all points ON),	4 × × × × × × × × × × × × × × × × × × ×	
			<u></u>			excluding external load current	- 13 4	
Input type			Positive common (sink type)	Surge suppress	sor	Zener diode	- 5	
Wiring meth			32 points/common (1-wire, ten					
Number of o			32-point assignment/station (3					
Module pow	ver	Voltage	20.4 to 26.4VDC (ripple ratio:					888
supply		Current		60mA or lower (at 24VDC and all points ON)				
Noise immu	unity		Noise voltage 500Vp-p, noise width 1µs, noise frequency 25 to 60Hz (DC type noise simulator condition)					888
Marilla da esta						•	- × 5	
Withstand v	oitage		500VAC for 1 minute between			*	- ST ST ST ST ST ST ST ST ST ST ST ST ST	
Insulation re	esistano	ce	10M Ω or higher between all D tester)	X8 9 A B C D E F Y				
Protection of	dearee		IP2X					
Weight			0.25kg					
. J			7-point two-piece terminal bloc	ck			2.00 1 2 3 4 5 6 7	
		unication part,	[Transmission circuit, module		6]		SLD SLD	
External		e power supply	M3×5.2 screw (tightening torque	ue range: 0.59 to	0.88N•m)		DA DA DA DA DA DA DA DA DA DA DA DA DA D	
External connection	part		Applicable solderless terminal:	2 or less				
system	1		34-point direct-mount terminal	block				
оуосон	I/O pov	ver supply part	[I/O power supply, I/O signal]					
	I/O par	t	M3×5.2 screw (tightening torque	-	0.88N•m)			
	<u> </u>		Applicable solderless terminal:				4	
Module mounting screw M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m)								
Mountable with a DIN rail in 6 orientations						4		
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant wi • RAV1.25-3 (compliant with JIS C 280					J/ 15)		-	
			` ·	,	6 AMON =4 :-	anded wire!		
Applicable s	onlicable solderless terminal		[Applicable wire size: 0.3 to 1					
	• V2-MS3, RAP2-3SL,			V2-3N 5 to 2.0mm² (16 to 14 AWG) stranded wire]				
Wire	Materia	al	Copper	- 2.011111 (10 to 1	T AVV (3) 311 0	maca wiicj	1	
10		erature rating	75°C or more				1	
Accessory			User's manual				1	
000000i y								

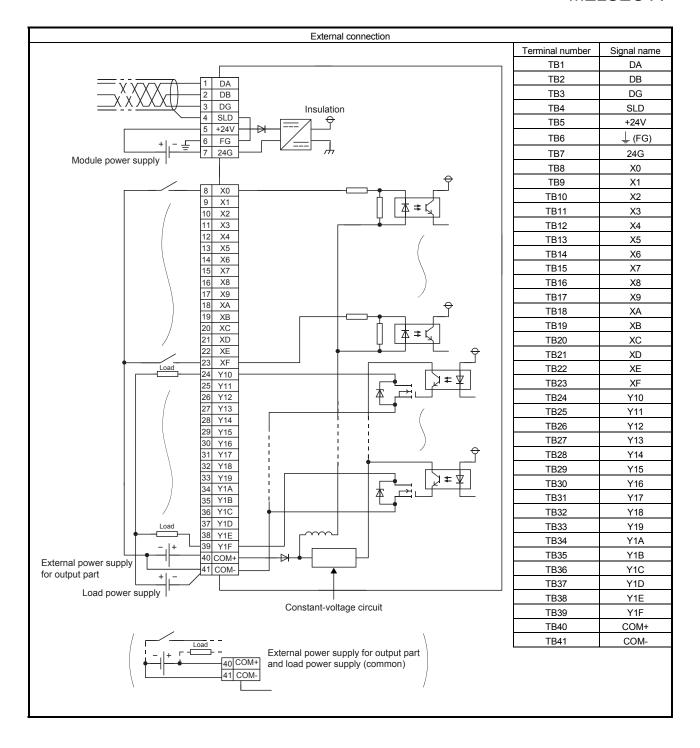
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.18 AJ65SBTB1-32KDT8 combined module

Itom		Type					DC input	transistor o	output combined module		
Item	_	, ypc					AJ65SBTB1		aspat combined module	Anna	arance
10111							AJOSSBIBI	-32ND 10	2.1.1	Appea	arance
		Inp							Output	 	
Number of in			16 point				Number of outp	•	16 points	+	
Isolation meth			Photoco	upler			Isolation metho		Photocoupler	4	
Rated input v	oltag	е	12VDC				i		12VDC	4	
Rated input c	urren	nt .	Approx.	11mA			Operating load voltage range		10.2 to 14.4VDC (ripple ratio: within 5%)		
Operating vol	ltage	range	10.2 to 14.4VDC (ripple ratio: within 5%)			Max. load curre	nt	0.5A/point, 3.6A/common			
Max. number input points	of sir	multaneous	, · ·			Max. inrush cur	rent	1.0A, 10ms or less			
ON voltage/C)N cu	rrent	5.6VDC	or highe	r/4mA or	higher	Leakage currer	t at OFF	0.1mA or lower		
OFF voltage/	OFF	current	2.4VDC	or lower	/1.7mA c	or lower	Max. voltage dr	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resistance			Approx.	1.0kO			Output type		Sink type		
input resistance A			ppi ox.		1	1	Protection funct	tion	None		
speed 0.2ms 1.5ms 5ms or 10ms Response time OFF→ON 0.2ms 1.5ms 5ms or 10ms					5ms or	10ms	Response time	OFF→ON	0.5ms or less	T VIE COMPAN	
or less or less less or less ON→OFF ON→OFF ON→OFF OR or less less or less ON→OFF						10ms or less		ON→OFF	1.5ms or less (resistive load)		
		1					External power	Voltage	10.2 to 14.4VDC (ripple ratio: within 5%)	91, 19 Marie 1	
							supply for output part	Current	15mA or lower (at 12VDC and all points ON), excluding external load current		
Input type			Positi	ve comn	non (sink	type)	Surge suppress	sor	Zener diode		
Wiring metho	d for	common	32 po	ints/com	mon (1-v	vire, tern	ninal block type)				
Number of oc	cupie	ed stations	32-po	int assig	nment/st	ation (32	2 points used)			##1516 	
Module powe	er	Voltage	20.4 t	o 26.4VI	OC (ripple	e ratio: w	vithin 5%)			X8	
supply		Current	65mA	or lowe	(at 24V	DC and	all points ON)		Y1011121314151617		
NI=:==::==	·		Noise	voltage	500Vp-p	, noise v	vidth 1µs,				
Noise immun	ity		noise	frequen	cy 25 to 6	60Hz (D	C type noise simulator condition)			X3 9 A B C D E F Y D	
Withstand vol	Itage		500V	AC for 1	minute b	etween	all DC external to	erminals and	X8 9 A		
Insulation res	istan	се	10MΩ tester	U	er betwee	en all DC	external termin	als and grou	und (500VDC insulation resistance	5 67 B	
Protection de	aree		IP2X	/						2 3 4 10 0 0 10 0 0 10 0 0 10 0 0	
Weight			0.26k	q						ERR X01	
C m External p		nunication part, e power supply	7-poir [Trans M3×5	nt two-pie smission 5.2 screw	(tighteni	nodule p ng torqu	ower supply, FG e range: 0.59 to			SID	
Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less Applicable solderless terminal: 2 or less											
Module mounting screw M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m) Mountable with a DIN rail in 6 orientations											
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)								7			
Applicable solderless terminal Applicable solderless terminal PAV1.25-3 (compliant with J [Applicable wire size: 0.3 to 1 • V2-MS3, RAP2-3SL, TGV2-3 [Applicable wire size: 1.25 to				S C 2805) .25mm ² (22 to 10 N	6 AWG) stra	•					
Wire M	1ateri	al	Copp				•	,		7	
Т	empe	erature rating	_	or more						7	
		<u> </u>	l lser's	s manua						7	

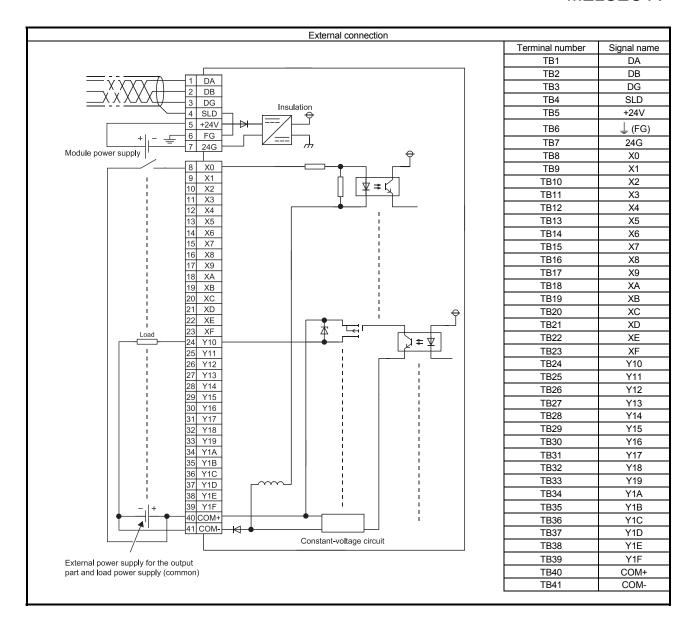
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.19 AJ65SBTB1-32DTE1 combined module

External power supply for output part output ype Negative common (source type) Surge suppressor Zener diode Wiring method for common 32 points/common (1-wire, terminal block type) Number of occupied stations 32-point assignment/station (32 points used)	
Input Number of input points 16 po	
Number of input points 16 points Number of output points 16 points Isolation method Photocoupler Isolation method Photocoupler Rated input voltage 24VDC Rated load voltage 24VDC Rated input current Approx. 7mA Operating load voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) 0.5A/point, 3.6A/common Max. number of simultaneous input points 100% Max. inrush current 1.0A, 10ms or less ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF 0.1mA or lower OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type Response time OFF→ON 1.5ms or less (at 24VDC) OFF→ON 0.5ms or less (resistive load) N→OFF 1.5ms or less (at 24VDC) Voltage 10mA or lower (TYP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Isolation method Photocoupler Isolation method Photocoupler Rated input voltage 24VDC Rated input voltage 24VDC Rated input voltage 24VDC Rated input current Approx. 7mA Operating load voltage 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC Operating load voltage 19.2 to 26.4VDC Operating load voltage Operatio: within 5%) Operating load voltage Operatio: within 5%) Operating load voltage Operatio: within 5%) Operatio: within 5%) Operatio: within 5%) Operating load voltage Operatio: within 5%) Operatio: with	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Rated input voltage 24VDC Rated load voltage 24VDC Rated input current Approx. 7mA Operating load voltage 19.2 to 26.4VDC (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Max. load current 0.5A/point, 3.6A/common Max. number of simultaneous input points 100% Max. inrush current 1.0A, 10ms or less ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF 0.1mA or lower 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 1.5ms or less (at 24VDC) Response time OFF→ON 1.5ms or less (at 24VDC) Response time OFF→ON 0.5ms or less (resistive load) Input type Negative common (source type) Surge suppressor Zener diode Niging method for common 33 points (common (1) wire torminal block type) Niging method for common 23 points (common (1) wire torminal block type)	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Rated input current Approx. 7mA Operating load voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) 19.2 to 26.4VDC (ripple ratio: within 5%) Max. load current 0.5A/point, 3.6A/common Max. number of simultaneous input points ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF 0.1mA or lower 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 0.5ms or less (at 24VDC) ON→OFF 1.5ms or less (at 24VDC) ON→OFF Supply for output part Current Input type Negative common (source type) Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Approx. 7mA range (ripple ratio: within 5%) Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Max. number of simultaneous input points 100% Max. inrush current 1.0A, 10ms or less ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF 0.1mA or lower OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 0.5ms or less (at 24VDC) Response time OFF→ON 1.5ms or less (at 24VDC) (ripple ratio: within 5%) External power supply for output part Output part Output part Output part Output part Output part Source type Source type OFF→ON 0.5ms or less (resistive load) Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%) Max. number of simultaneous input points 100% Max. inrush current 1.0A, 10ms or less ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 1.5ms or less (at 24VDC) ON→OFF 1.5ms or less (at 24VDC) External power supply for output part OVIdage External power supply for output part Input type Negative common (source type) Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Max. number of simultaneous input points 100% Max. inrush current 1.0A, 10ms or less	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
input points ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 0.5ms or less ON→OFF 1.5ms or less (at 24VDC) Response time OFF→ON ON→OFF 1.5ms or less (resistive load) 19.2 to 26.4VDC (ripple ratio: within 5%) 10mA or lower OVltage External power supply for output part OTFP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
input points ON voltage/ON current 14VDC or higher/3.5mA or higher Leakage current at OFF OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 0.5ms or less ON→OFF 1.5ms or less (at 24VDC) External power supply for output part Voltage Figure 19.2 to 26.4VDC (ripple ratio: within 5%) 10mA or lower (TYP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
OFF voltage/OFF current 6VDC or lower/1.7mA or lower Max. voltage drop at ON 0.5VDC or lower (TYP.) 0.5A, 0.8VDC or lower (MAX.) 0.5A Source type OFF→ON ON→OFF 1.5ms or less (at 24VDC) External power supply for output part ON→OFF ON→O	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
OFF voltage/OFF current 6VDC or lower/1./mA or lower Max. voltage drop at ON 0.8VDC or lower (MAX.) 0.5A Input resistance Approx. 3.3kΩ Output type Source type OFF→ON 0.5ms or less ON→OFF 1.5ms or less (resistive load) 19.2 to 26.4VDC (ripple ratio: within 5%) 10mA or lower (TYP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Input resistance	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Response time OFF→ON 1.5ms or less (at 24VDC) ON→OFF 1.5ms or less (at 24VDC) External power supply for output part Input type Negative common (source type) Negative common (source type) Surge suppressor Zener diode OFF→ON 0.5ms or less ON→OFF 1.5ms or less (resistive load) 19.2 to 26.4VDC (ripple ratio: within 5%) 10mA or lower (TYP. 24VDC/common), excluding external load current External power supply for output part OFF→ON 0.5ms or less ON→OFF 1.5ms or less (resistive load) 19.2 to 26.4VDC (ripple ratio: within 5%) 25. The supple suppressor is a supple supple supple supple suppressor is a supple suppressor is a supple supple supple supple su	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Response time ON—OFF 1.5ms or less (at 24VDC) External power supply for output part 1.5ms or less (resistive load) ON—OFF 1.5ms or less (resistive load) Voltage 19.2 to 26.4VDC (ripple ratio: within 5%) 1.5ms or less (resistive load) Input type Negative common (source type) Surge suppressor Zener diode	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
External power supply for output part Current (TYP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode Without method for common (1 wire terminal block type)	
Input type Negative common (source type) Negative common (source type) Surge suppressor Zener diode Wiring method for common 23 points (common (4) wire terminal block type)	0 Zh
Input type Negative common (source type) Negative common (source type) Surge suppressor Zener diode Widen method for common 23 points (common (4 wire terminal block type)	0 Zh
output part Current (TYP. 24VDC/common), excluding external load current Input type Negative common (source type) Surge suppressor Zener diode Vicinity type V	0 Zh
excluding external load current	awii
Input type Negative common (source type) Surge suppressor Zener diode	
Wiring method for common 32 points/common (1 wire terminal block type)	
Number of occupied stations 32-point assignment/station (32 points used) Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%) Supply Current 50mA or lower (21.24VDC and all points CN)	a wp
Module power Voltage 20.4 to 26.4VDC (ripple ratio: within 5%)	M W I
SUPPLY Current 50mA or lower (at 201/DC and all points CN1)	
Supply Current 50mA or lower (at 24VDC and all points ON) │ │ │ │ │ │ │ │ │ │ │ │ │ │ │ │	
Noise voltage 500Vp-p, noise width 1µs,	
Noise immunity noise frequency 25 to 60Hz (DC type noise simulator condition)	\triangle
Withstand voltage 500VAC for 1 minute between all DC external terminals and ground	\triangle
Subvaction 1 minute between all DC external terminals and ground (500VDC insulation resistance lester) Protection degree IP2X Insulation resistanc	@ 1\\\
Insulation resistance tester)	@ W /
Protection degree IP2X	
Weight 0.26kg Communication 7-point two-piece terminal block part, [Transmission circuit, module power supply, FG]	
Communication 7-point two-piece terminal block	
part, [Transmission circuit, module power supply, FG]	m w r
connection supply part Applicable solderless terminal: 2 or less	
system I/O power supply 34-point direct-mount terminal block	8
part [I/O power supply, I/O signal]	
I/O part M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m)	
Applicable solderless terminal: 2 or less	
M4 screw with plain washer finished round Module mounting screw (tightening torque range: 0.78 to 1.08N•m)	
Mountable with a DIN rail in 6 orientations	
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)	
• RAV1.25-3 (compliant with JIS C 2805)	
[Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire]	
Applicable solderless terminal • V2-MS3, RAP2-3SL, TGV2-3N	
[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]	
Wire Material Copper	
Temperature rating 75°C or more	
Accessory User's manual	

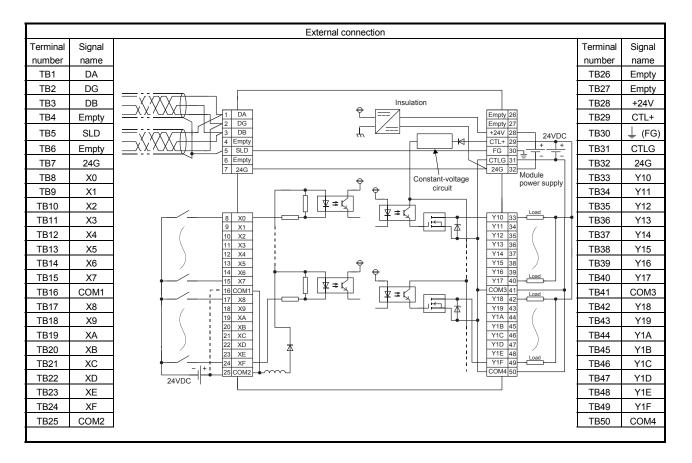
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.20 AJ65DBTB1-32DT1 combined module

	Туре		DC inni	ut transistor o	utput combined module	
Item			AJ65DBTB		aspat combined module	Appearance
	In	put			Dutput	P.F. C. C.
Number of inpu		16 points	Number of outp		16 points	
Isolation metho		Photocoupler	Isolation metho		Photocoupler	
Rated input vol		24VDC	Rated load volt		12/24VDC	
Rated input cui		Approx. 5mA	Operating load range		10.2 to 31.2VDC (ripple ratio: within 5%)	
Operating volta	age range	20.4 to 31.2VDC (ripple ratio: within 5%)	Max. load current		0.5A/point, 4A/common (2A/terminal)	
Max. number of input points	of simultaneous	100% (at 26.4VDC)	Max. inrush current		1.2A, 10ms or less	
ON voltage/ON current		15VDC or higher/3mA or higher	Leakage current at OFF		0.1mA or lower	
OFF voltage/OFF current		5VDC or lower/1.5mA or lower	Max. voltage dr	rop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Input resistance	e	Approx. 4.7kΩ	Output type		Sink type	MELSEG AJ65DBTB1-32DT1
			Protection func	tion	None	F \$ (⊕) × 10
Response	OFF→ON	10ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	STATION NO. 01 09 0110 19 02 04 0120 14 05 05 05 05 05 05 05 05 05 05 05 05 05
time	ON→OFF	10ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)	04 05 04 10 05 00 05 10 05 05 05
			External	Voltage	10.2 to 31.2VDC	B RATE OF DE DE DE DE DE DE DE DE DE DE DE DE DE
			power supply		(ripple ratio: within 5%)	
			for output part	Current	30mA or lower	DA NC NC
					(at 24VDC and all points ON),	DG DB NC +24V CTL+
		T			excluding external load current	SLD J
Input type		Positive common (sink type)	NC 246 CTL6 246			
Wiring method	for common	16 points/common (2 points) (1-	X1 X0 Y11 Y10			
Number of occ	upied stations	32-point assignment/station (32	X2 Y12			
Module power		20.4 to 26.4VDC (ripple ratio: wi			X4 Y14	
supply	Current	55mA or lower (at 24VDC and a	·			X5 X6 Y15 Y16 Y17
Noise immunity	/	Noise voltage 500Vp-p, noise w	COM1 COM3			
1400		noise frequency 25 to 60Hz (DC		X8 X9 Y18 Y18 Y19 Y1A		
Withstand volta	_		C for 1 minute between all DC external terminals and ground or higher between all DC external terminals and ground (500VDC insulation resistance			
Insulation resis	stance	_	external termina	als and ground	d (500VDC insulation resistance	XC XD YIC YID
Drotootion dos	roo	tester) IP2X				XE XF COM4
Protection deg	ICC	0.65kg				A.BSDETBI
Weight	action evetom	50-point terminal block				
External conne	schori system	[Transmission circuit, module po M3.5×7 screw (tightening torque Applicable solderless terminal: 2	e range: 0.68 to 0		upply, I/O signal]	
Module mounti	ng screw	M4 screw with plain washer finis	shed round (tight	ening torque	range: 0.78 to 1.08N•m)	
Applicable sold	lerless terminal	• R1.25-3.5 (compliant with JIS	C 2805)		<u> </u>	
• •		[Applicable wire size: 0.3 to 1.3	25mm ² (22 to 16	AWG) strand	ded wire]	
		RAV2-3.5 (compliant with JIS (C 2805)			
	[Applicable wire size: 1.25 to			AWG) strand	ded wire]	
Wire	Material	Copper				
	Temperature	75°C or more				
	rating					
Accessory		User's manual				
Part sold separ	rately	A6DIN1C, A2CCOM-TB				

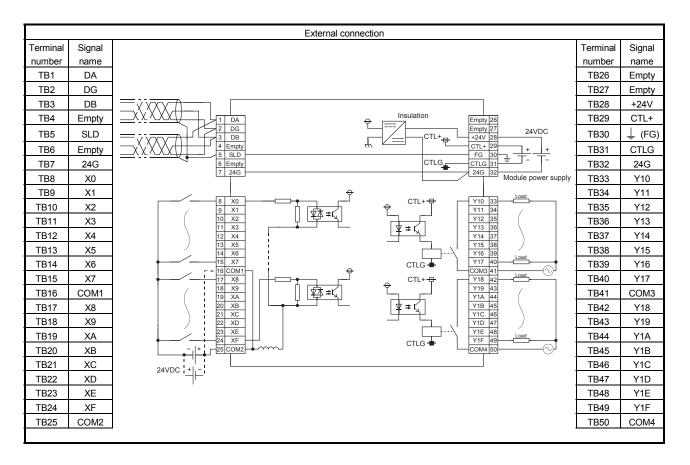
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.1.21 AJ65DBTB1-32DR combined module

	Туре			DC inpu	t contact out	put combined module			
Item			Appearan	ce					
Number of	input points	16 points	Numb	er of output poin	nts	16 points			
Isolation me	ethod	Photocoupler	Isolati	on method		Photocoupler]		
Rated input	t voltage	24VDC	Rated load voltage			2A/point, 4A/common (2A/terminal) at 24VDC (resistive load) or 240VAC (cosφ=1)			
Rated input	t current	Approx. 5mA							
Operating v range	/oltage	20.4 to 31.2VDC (ripple ratio: within 5%)	Max.	switching voltage					
Max. number simultaneous points		100% (at 26.4VDC)		Mechanical					
	N voltage/ON current 15VDC or higher/3mA or higher Electrical			Rated switching voltage/current load: 100 thousand times or more 200VAC 1.5A, 240VAC 1A (cosφ=0.7): 100 thousand times or more 200VAC 1A, 240VAC 0.5A (cosφ=0.35): 100 thousand times or more 24VDC 1A, 100VDC 0.1A (L/R=7ms): 100 thousand times or more	STAT (ON NO.	B1-32DR DPGL RM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM D1 ER. DG D1 GMD BM			
OFF voltage current	FF voltage/OFF 5VDC or lower/1.5mA or Max. switching frequency 3600 times/hour						8 RATE • 🔘 ·	37 OF 01701F	
Input resista	ance	Approx. 4.7kΩ	Respo	onse time	OFF→ON	10ms or less	DA DA	NC MC	
Response	OFF→ON	10ms or less (at 24VDC)			ON→OFF	12ms or less	NC DB	+24V	
time	ON→OFF	10ms or less (at 24VDC)		nal power	Voltage	24VDC ±10%	NC SLD	(F6) CTLG	
	1	, , ,	supply for output part (CTL+ and CTLG terminals)			(ripple ratio: 4Vp-p or lower) 90mA or lower (at 24VDC and all points ON)	24G X0 X1	246 Y10 Y10	
Wiring meth common	hod for	16 points/common (2 points) (1-wire, terminal block type)	Wiring method for common			8 points/common (1-wire, terminal block type)	X2 X3 X4 X5	Y12 Y13 Y14 Y15	
Input type		Positive/negative common shared type (sink/source shared type)	Surge suppressor			None	X6 X7 COM1	Y17 COM3	
Number of stations	occupied	32-point assignment/station (3	32 poin	ts used)			ха хэ хв	Y1A Y1B	
Module	Voltage	20.4 to 26.4VDC (ripple ratio:	within	5%)			XC XD XE	Y1C Y1D	
power supp	Oly Current	60mA or lower (at 24VDC and	d all po	ints ON)				COM4	
Noise immu	-	Noise voltage: 1500Vp-p (AC noise frequency 25 to 60Hz (r				dth 1µs,	XF COM2 AJSSGSTB1 -120R		
Withstand v	voltage	1500VAC for 1 minute between 500VAC for 1 minute between	n all DC	external termin	als and grou	ınd			
Insulation re		10M Ω or higher between all Γ				00VDC insulation resistance tester) 00VDC insulation resistance tester)			
Protection o	degree	IP1X					4		
Weight 0.65kg External connection system 50-point terminal block [Transmission circuit, module power supply, FG, I/O power supply, I/O signal] M3.5×7 screw (tightening torque range: 0.68 to 0.92N•m) Applicable solderless terminal: 2 or less							1		
Module mo	Module mounting screw M4 screw with plain washer finished round (tightening torque range: 0.78 to 1.08N•m)								
 R1.25-3.5 (compliant with JIS C 2805) Applicable solderless terminal RAV2-3.5 (compliant with JIS C 2805) RAV2-3.5 (compliant with JIS C 2805) [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire] 									
Wire	Material		†						
	Temperature rating	Copper 75°C or more	1						
Accessory Part sold se	eparately	User's manual A6DIN1C, A2CCOM-TB							

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

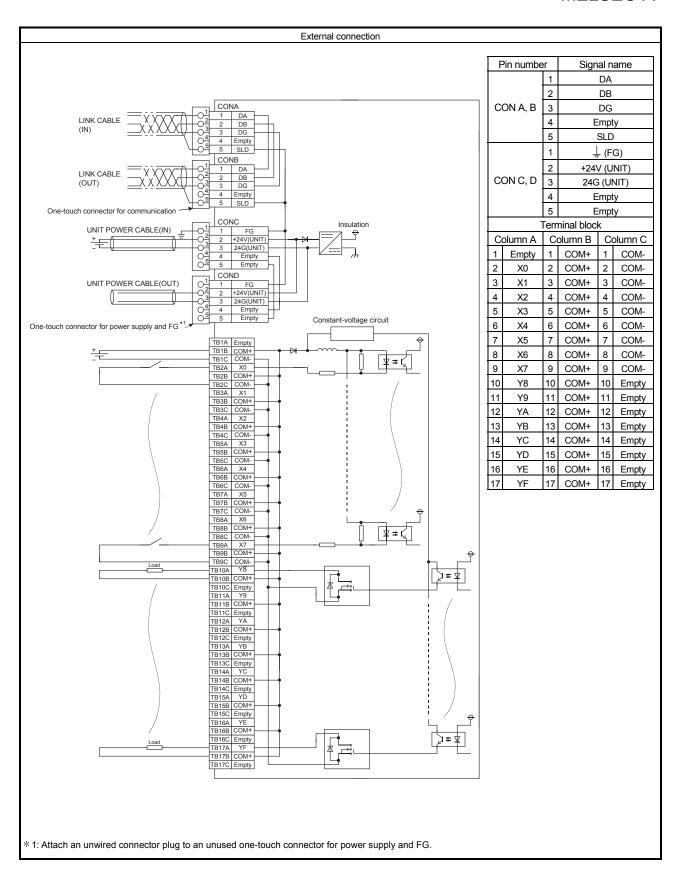


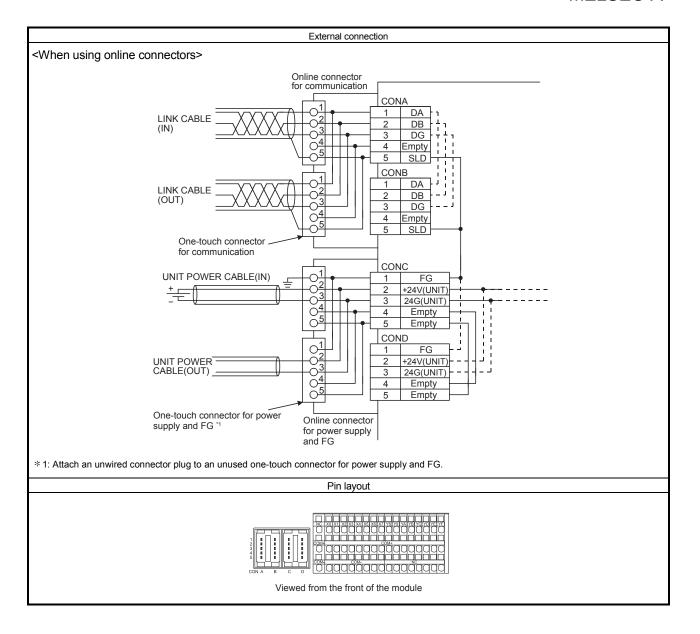
6.2 Spring Clamp Terminal Block Type Combined Module

6.2.1 AJ65VBTS32-16DT combined module

		Туре		DC	input transiste	or output combined module	1
Item		Турс			TS32-16DT	or output combined module	Appearance
		Inp	out			Output	
Number of in			8 points	Number of o	<u> </u>	8 points	
Isolation met			Photocoupler	Isolation me		Photocoupler	
Rated input v	/oltage		24VDC	Rated load v		24VDC	
Rated input o	current		Approx. 5mA	Operating lo range	ad voltage	19.2 to 26.4VDC (ripple ratio: within 5%)	
Operating vo	ltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	ırrent	0.5A/point, 4A/common	
Max. number input points	r of simultane	eous	100%	Max. inrush	current	1.0A, 10ms or less	
ON voltage/0	ON current		14VDC or higher/3.5mA or higher	Leakage current at OFF		0.1mA or lower	
OFF voltage/OFF current			6VDC or lower/1.7mA or lower	May voltage	drop at ON	0.3VDC or lower (TYP.) 0.5A,	
Input resistance			Approx. 4.7kΩ	iviax. voitage	e drop at ON	0.6VDC or lower (MAX.) 0.5A	
Pasnonsa tin	ne OFF→	ON	1.5ms or less (at 24VDC)	Output type		Sink type	
Response time ON→OFF		OFF	1.5ms or less (at 24VDC)	Protection fu		None	
				Response	OFF→ON	1ms or less	
				time	ON→OFF	1ms or less (resistive load)	
				External	Voltage	19.2 to 26.4VDC	
				power		(ripple ratio: within 5%)	
				supply for	Current	15mA or lower (at 24VDC and all points ON),	
				output part	Current	excluding external load current	
Input type			Positive common (sink type)	Surge suppr	essor	Zener diode	
Supply current for connected device 1.0A or lower/common				ou.go oupp.	0000.		
			16 points/common				
Wiring metho	od for commo	on		nal block type	e, output: 2-w	ire spring clamp terminal block type)	
Number of o	ccupied stati	ons	32-point assignment/station (16			7, 7	
Module power	er Voltage	е	20.4 to 26.4VDC (ripple ratio: wi	thin 5%)			
supply .	Curren	nt	40mA or lower (at 24VDC and a	Il points ON)			
Nieje e jesesse			Noise voltage 500Vp-p, noise w				
Noise immur	шц		noise frequency 25 to 60Hz (DC				
Withstand vo	ltage		500VAC for 1 minute between a				
Insulation res	sistance		10M Ω or higher between all DC tester)				
Protection de	egree		IP1XB	00 00 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
Weight			0.24kg				0 %0 %0 %0 %0 %0 %0 %0 %0 %0 %0 %0 %0 %0
External	Communica part	ation	One-touch connector for commu 5-pin IDC plug is sold separately <optional> Online connector for</optional>	: A6CON-L5	Р	-	2 00 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
connection system		ly part	One-touch connector for power 5-pin IDC plug is sold separately <optional> Online connector for</optional>	: A6CON-PV power suppl	V5P, A6CON- y: A6CON-PV	PW5P-SOD VJ5P	
	I/O part		2-piece spring clamp terminal bl			signals]	
Applicable D			TH35-7.5Fe, TH35-7.5Al (comp	liant with IEC	60715)		
	Connector f		Applicable cable:	DI 00 445			
	communica	tion	FANC-110SBH, FA-CBL200PSI	вн, СS-110			
	Connector f	or	0.66 to 0.98mm ² (18 AWG) [\phi2.2 to 3.0mm (A6CON-PW5P)	1 12 0 to 2 2n	am (AGCON I	DWED SODII	
	power supp	ly and	Wire diameter: 0.16mm or more		IIII (AUCUN-I	- W3F-30D)j	
	FG		Insulating coating material: PVC		nt)		
Applicable wire size Spring clamp terminal block for I/O Stranded wire 0.08 to 1.5mm² Wire strip length: 8 to 11mm			28 to 16 AWG	,			
	Applicable	e	TE0.5 [Applicable wire size: 0.5 TE0.75 [Applicable wire size: 0.7 TE1.[Applicable wire size: 0.9 to	75mm²]			
	solderless		TE1 [Applicable wire size: 0.9 to				
TE1.5 [Applicable wire size: 1.25 to 1.5mm²] TGV TC1.25-9T [Applicable wire size: 0.3 to 1.65mm²] TGWV TC1.25-T9 [Applicable wire size: 0.3 to 1.65mm²]							
Accessory	<u> </u>		User's manual, Holding fixtures				
, 10003301 y			Coor o mandar, molaring includes	101 001011 11101	unuuon		I

st 1: Insert one wire per terminal.

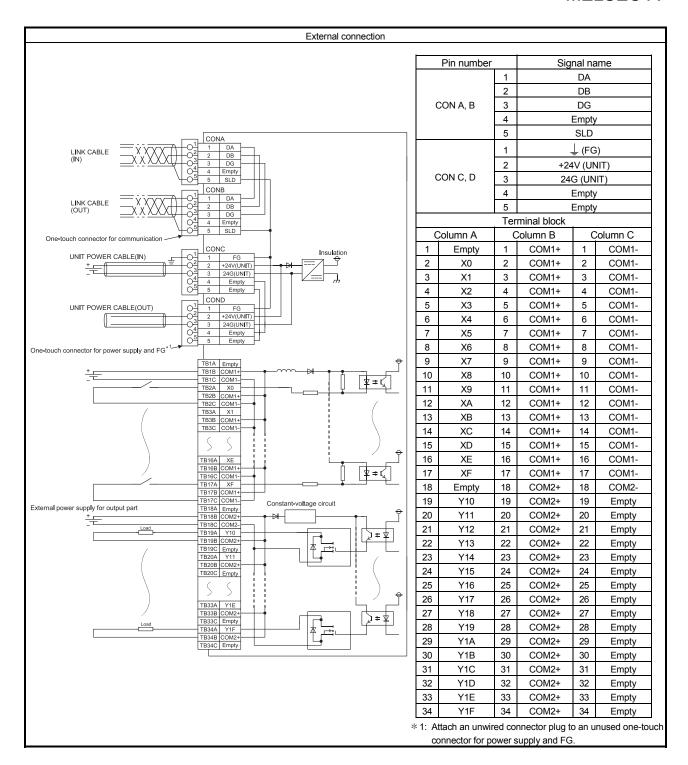


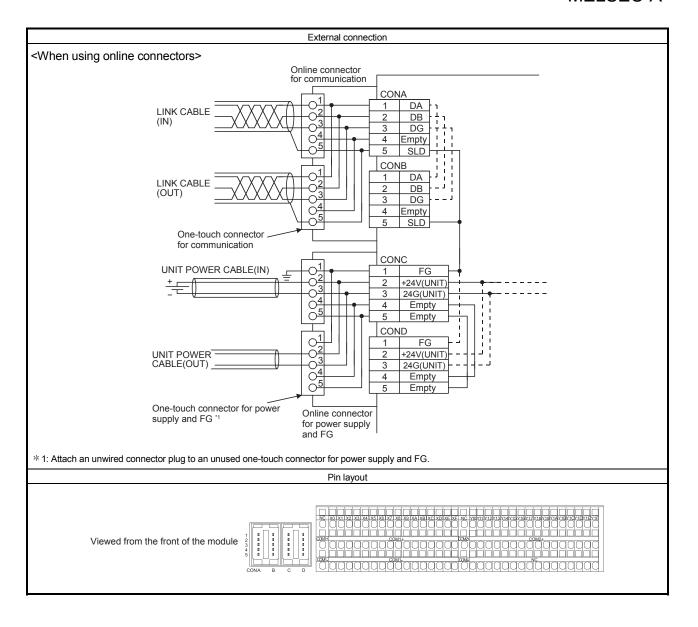


6.2.2 AJ65VBTS32-32DT combined module

	Туре		DC inc	out transistor	output combined module	
Item	,,,,			S32-32DT		Appearance
	In	put			Output	
Number of in	put points	16 points	Number of outp	ut points	16 points	
Isolation met	hod	Photocoupler	Isolation metho	d	Photocoupler	
Rated input v	roltage	24VDC	Rated load volta	age	12/24VDC	
Rated input of	current	Approx. 5mA	Operating load range	voltage	10.2 to 26.4VDC (ripple ratio: within 5%)	
Operating vo	Itage range	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load curre	nt	0.5A/point, 4A/common	
Max. number input points	of simultaneous	100% or 75% (Refer to Section1.3.)	Max. inrush cur	rent	1.0A, 10ms or less	
ON voltage/C	ON current	14VDC or higher/3.5mA or higher	Leakage curren	t at OFF	0.1mA or lower	
OFF voltage/ Input resistar		6VDC or lower/1.7mA or lower Approx. 4.7kΩ	Max. voltage dr	op at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
	OFF→ON	1.5ms or less (at 24VDC)	Output type		Sink type	
Response tin	ne ON→OFF	1.5ms or less (at 24VDC)	Protection funct	tion	None	
	0.1 70.1			OFF→ON	1ms or less	T
			Response time	ON→OFF	1ms or less (resistive load)	
					10.2 to 26.4VDC	
			External power	Voltage	(ripple ratio: within 5%)	
			supply for		30mA or lower	
			output part	Current	(at 24VDC and all points ON), excluding external load current	
		16 points/common			16 points/common	
Wiring metho	d for common	(3-wire, spring clamp terminal	Wiring method t	for common	(2-wire, spring clamp terminal block	
		block type)	_		type)	
Input type		Positive common (sink type)	Surge suppress	sor	Zener diode	
Supply currer device	nt for connected	1.0A or lower/common				A AMERICAN STATE OF THE STATE O
Number of oc	ccupied stations	32-point assignment/station (32	points used)			
Module power	er Voltage	20.4 to 26.4VDC (ripple ratio: with	thin 5%)			
supply	Current	50mA or lower (at 24VDC and a	Il points ON)			
Noise immun	iitv	Noise voltage 500Vp-p, noise wi	idth 1µs,			
		noise frequency 25 to 60Hz (DC				
Withstand vo	ltage	500VAC for 1 minute between a				
Insulation res	sistance	10M Ω or higher between all DC	external termina	ls and groun		
5		tester)				
Protection de	egree	IP1XB				
Weight		0.41kg	i. etie e IT		47	
	Communication	One-touch connector for commu 5-pin IDC plug is sold separately	•	nission circui	tj	
External	part	, , , , , ,	r communication: A6CON-LJ5P			
connection		One-touch connector for powers				
system	Power supply	5-pin IDC plug is sold separately			1137 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	part	<optional> Online connector for</optional>	power supply: A	6CON-PWJ	5P	1 20 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0 ×0
	I/O part	2-piece spring clamp terminal blo	ock [I/O power si	upply, I/O siç	gnals]	© NO 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Applicable DI		TH35-7.5Fe, TH35-7.5Al (compl	iant with IEC 607	715)		V (accepted to 1)
	Connector for	Applicable cable:				
] ,	communication	FANC-110SBH, FA-CBL200PSE	BH, CS-110			-
	Connector for	0.66 to 0.98mm ² (18 AWG)				(0)
	power supply	[\$\psi_2.2 to 3.0mm (A6CON-PW5P)		(A6CON-PV	/5P-SOD)]	
	and FG	Wire diameter: 0.16mm or more Insulating coating material: PVC				
•	Spring clamp	Stranded wire 0.08 to 1.5mm ² (2	`			_
Applicable wire size						
for I/O TE0.5 [Applicable wire size: 0.5mm²]						7
	Applicable solderless	TE1 [Applicable wire size: 0.9 to	1.0mm ²]			
	terminal	TE1.5 [Applicable wire size: 1.25	•			
	Cillina	TGV TC1.25-9T [Applicable wire		• •		
		TGWV TC1.25-T9 [Applicable w				4
Accessory		User's manual, Holding fixtures t	ror screw installa	tion		

st 1: Insert one wire per terminal.



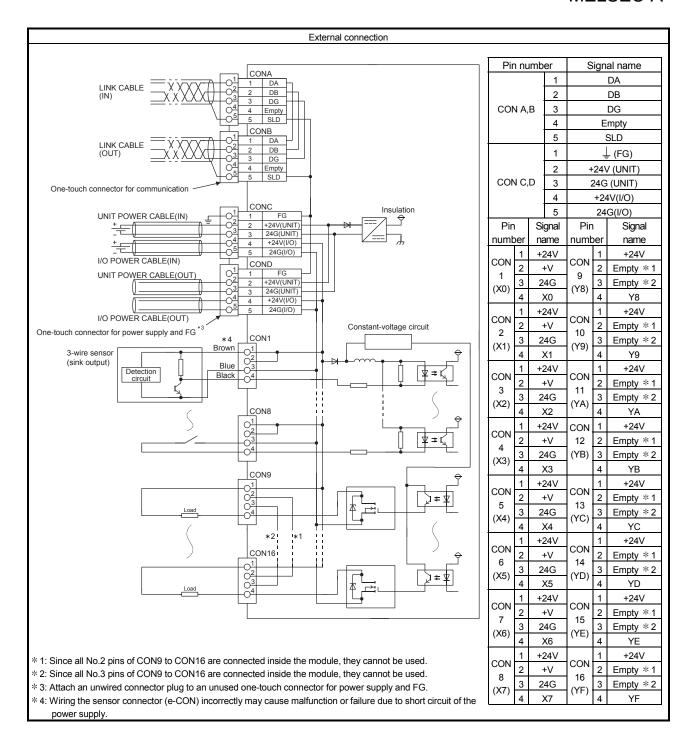


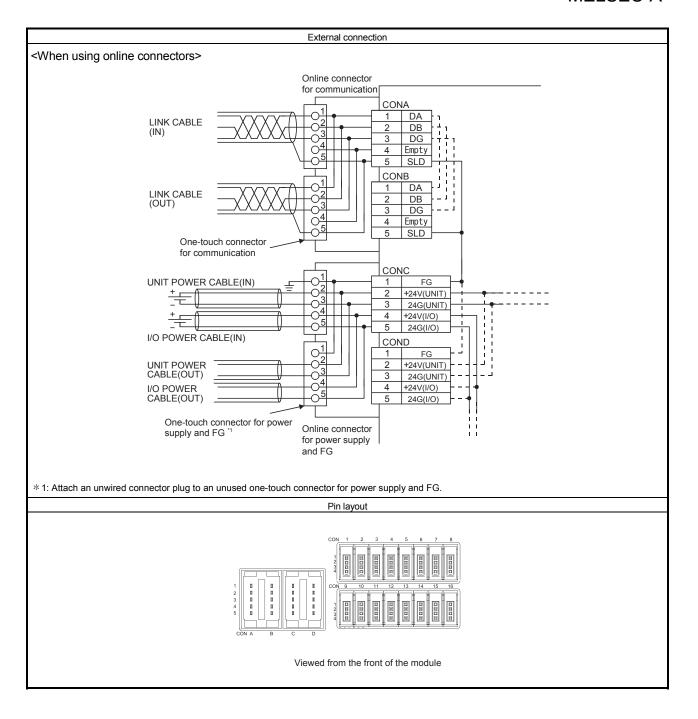
6.3 Sensor Connector (e-CON) Type Combined Module

6.3.1 AJ65VBTCE32-16DT combined module

	Туре		DC i	nput transisto	or output combined module				
Item	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Appearance							
	Inp			(Dutput				
Number of in		8 points	Number of output	t points	8 points				
Isolation met		Photocoupler	Isolation method		Photocoupler				
Rated input v	/oltage	24VDC	Rated load voltag	ge	24VDC				
Rated input o	current	Approx. 5mA	Operating load vo	oltage range	19.2 to 26.4VDC (ripple ratio: within 5%)				
Operating vo	ltage range	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load current	t	0.1A/point, 0.8A/common				
Max. number input points	r of simultaneous	100%	Max. inrush curre	ent	0.7A, 10ms or less				
ON voltage/ON current 14VDC or higher/3.5mA higher			Leakage current	at OFF	0.1mA or lower				
OFF voltage/	OFF current	6VDC or lower/1.7mA or lower	Max. voltage dro	p at ON	0.1VDC or lower (TYP.) 0.1A,				
Input resistar	nce	Approx. 4.7kΩ			0.2VDC or lower (MAX.) 0.1A				
	OFF→ON	1.5ms or less (at 24VDC)	Output type		Sink type				
Response tin	ne ON→OFF	1.5ms or less (at 24VDC)	Protection function	n	Overload protection, overvoltage protection, overheat protection				
	1	1	Response time	OFF→ON	1ms or less				
			Forte me al. 1	ON→OFF Voltage	1ms or less (resistive load) 19.2 to 26.4VDC				
			External power supply for output	_	(ripple ratio: within 5%) 5mA or lower	CCLIP.			
			part	Current	(at 24VDC and all points ON), excluding external load current				
Input type		Positive common (sink type)	Surge suppresso	r	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
	nt for connected	1.0A or lower/common			Zener diode	A DEBEG S DEBEG S			
device		1.0A of lower/common							
Wiring metho	od for common	16 points/common (input: 3-wire sensor connection)	tor (e-CON) type,	output: 2-wire	e sensor connector (e-CON) type)				
Number of o	ccupied stations	32-point assignment/station	(16 points used)						
Module power	er Voltage	20.4 to 26.4VDC (ripple ratio	: within 5%)			00000 00 00 00 00 00 00 00 00 00 00 00			
supply	Current	40mA or lower (at 24VDC ar	d all points ON)		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
Noise immun	nity	Noise voltage 500Vp-p, noise noise frequency 25 to 60Hz (nulator condit	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
Withstand vo	ltage	500VAC for 1 minute between							
Insulation res	sistance	10M Ω or higher between all tester)	DC external termin	nals and grou	and (500VDC insulation resistance	(Management of the Control of the Co			
Protection de	egree	IP1XB							
Weight		0.11kg							
	Communication	One-touch connector for con	nmunication [Trans	smission circ	uit]				
	Communication part	5-pin IDC plug is sold separa	,						
External		<optional> Online connector</optional>				-			
connection	Dower over the second	· ·		•	ver supply, I/O power supply, FG]				
system F	ower supply part	5-pin IDC plug is sold separa Optional> Online connector	,	•					
l	/O part	†							
Applicable D	-		Sensor connector (e-CON) [I/O signals] 4-pin IDC plug is sold separately. * 1 TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)						
l ''	Connector for	1							
	communication								
,	Connector for	0.66 to 0.98mm ² (18 AWG)							
	power supply and	[φ2.2 to 3.0mm (A6CON-PW		m (A6CON-P	W5P-SOD)]				
	-G	Wire diameter: 0.16mm or m							
		Insulating coating material: P	VC (heat-resistan	t)					
	Connector for I/O	Sensor connector (e-CON).	ro cold comerct-t	1					
'	Connector for I/O	Applicable connector plugs a (applicable wire size: 0.08 to			nnector plua)				
Accessory		User's manual, Holding fixtur			medial plug)	1			
, woodsou y		10301 3 Manual, Holding lixtul	CO TOT SOFTW ITISED	iidiiOi i		l .			

^{* 1:} Refer to Section 1.6.2 for details.

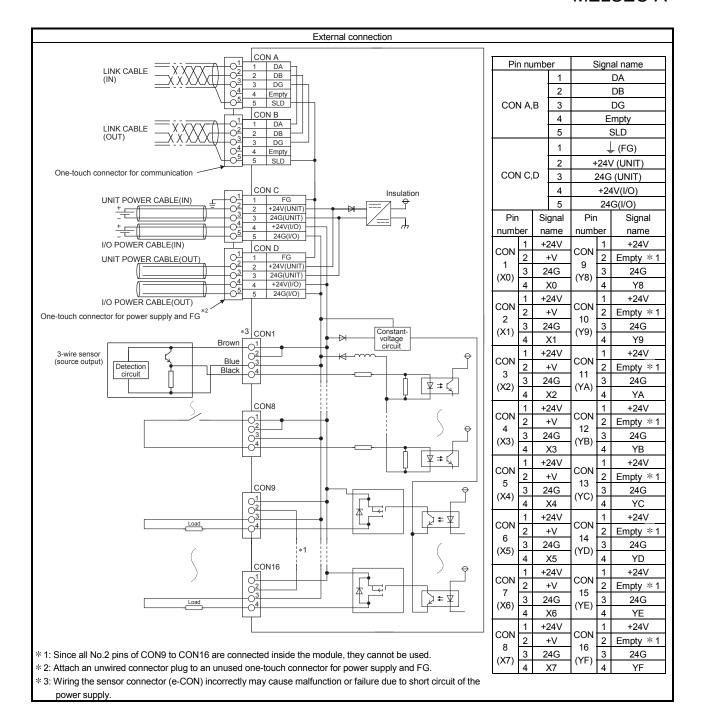


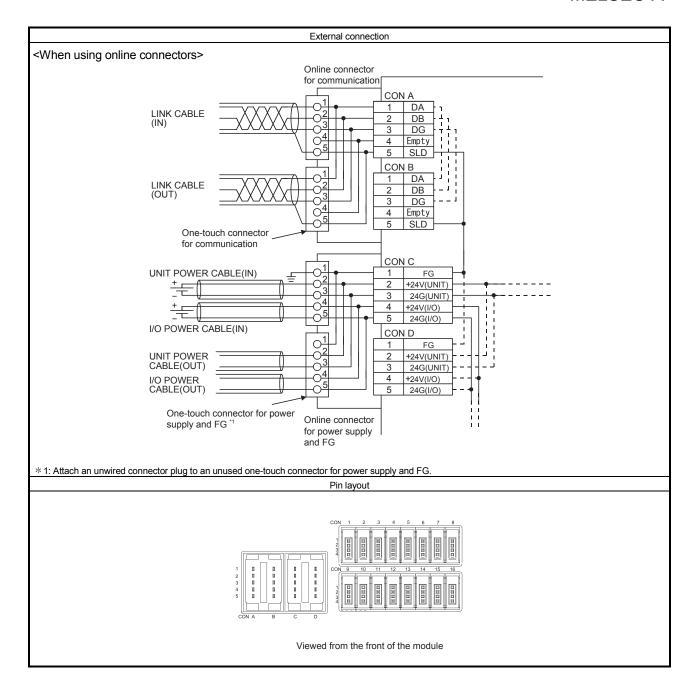


6.3.2 AJ65VBTCE3-16DTE combined module

		Туре		DO:	nnut transist	or output combined module			
Item	_	Annearance							
		Inni	ıt	AJOSVBI	CE3-16DTE	Dutput	Appearance		
Number of i	innut r	Inpu noints	8 points	Number of output		8 points	 		
Isolation me		JOHNS	Photocoupler	Isolation method	t points	Photocoupler	1		
Rated input		ge	24VDC	Rated load voltage	ie	24VDC			
	•				•	19.2 to 26.4VDC			
Rated input	t curre	nt	Approx. 5mA	Operating load vo	oltage range	(ripple ratio: within 5%)			
Operating v			19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load current	t	0.1A/point, 0.8A/common			
Max. numbe input points		imultaneous	100%	Max. inrush curre	ent	0.7A, 10ms or less			
ON voltage/ON current		urrent	14VDC or higher/3.5mA or higher	Leakage current	at OFF	0.1mA or lower			
OFF voltage	e/OFF	current	6VDC or lower/1.7mA or lower	Max. voltage dro	p at ON	0.1VDC or lower (TYP.) 0.1A,			
Input resista	ance		Approx. 4.7kΩ			0.2VDC or lower (MAX.) 0.1A			
•		OFF→ON	1.5ms or less (at 24VDC)	Output type		Source type			
Response to	time	ON→OFF	1.5ms or less (at 24VDC)	Protection function	n	Overload protection, overheat protection			
					OFF→ON	1ms or less			
				Response time	ON→OFF	1ms or less (resistive load)			
				External power	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)			
				supply for output		7mA or lower	CCLimx		
				part	Current	(at 24VDC and all points ON), excluding external load current			
Input type			Negative common (source type)	Surge suppresso	r	A A MINES A MI			
Supply curre	ent for	r connected	(source type)	<u> </u>					
device	One for	Comicolou	1.0A or lower/common			NAME OF STREET OF STREET			
Wiring meth	nod for	r common	16 points/common (input: 3-wire sensor connection)	points/common put: 3-wire sensor connector (e-CON) type, output: 3-wire sensor connector (e-CON) type)					
Number of o	occupi	ied stations	32-point assignment/station	(16 points used)					
Module pow	ver	Voltage	20.4 to 26.4VDC (ripple ratio	: within 5%)					
supply		Current	40mA or lower (at 24VDC ar	id all points ON)			000000 00000 00000 00000 00000 00000 0000		
Noise immu	unity		Noise voltage 500Vp-p, noise	•	aulatar aandit	ion)			
\\/ithatand	, alta a a		noise frequency 25 to 60Hz to 500VAC for 1 minute between			•	CON NOTIFICE TAST		
Withstand v						ind (500VDC insulation resistance			
Insulation re	esistar	nce	tester)	o oxtornar torrin	idio di la groc	(000120000.0			
Protection of	degree)	IP1XB						
Weight	1		0.11kg	 		143			
	Comr	munication	One-touch connector for con	_		uitj			
External	part		5-pin IDC plug is sold separa <optional> Online connector</optional>	•		15P			
connection	 					ver supply, I/O power supply, FG]			
system	Powe	er supply part	5-pin IDC plug is sold separa						
		<optional> Online connector</optional>				<u> </u>			
			Sensor connector (e-CON) [old separately. * 1			
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)									
Connector for Applicable cable:									
1	comn	nunication	FANC-110SBH, FA-CBL200	PSBH, CS-110					
	Conn	ector for	0.66 to 0.98mm ² (18 AWG)	5P) 42 0 to 2 2mi	m (Δ6C∩N. □	W5P-SOD)1			
Applicable power supply and [\(\psi_2.2 \text{ to 3.0mm (A6CON-PW5P), \(\phi_2.0 \text{ to 2.3mm (A6CON-PW5P-SOD)} \)									
wire size	FG		Insulating coating material: F		t)				
1			Sensor connector (e-CON).		-7		1		
	Conn	ector for I/O	Applicable connector plugs a	re sold separately	·. * 1				
			(applicable wire size: 0.08 to			nector plug)]		
Accessory			User's manual, Holding fixtur	es for screw insta	llation				

st 1: Refer to Section 1.6.2 for details.

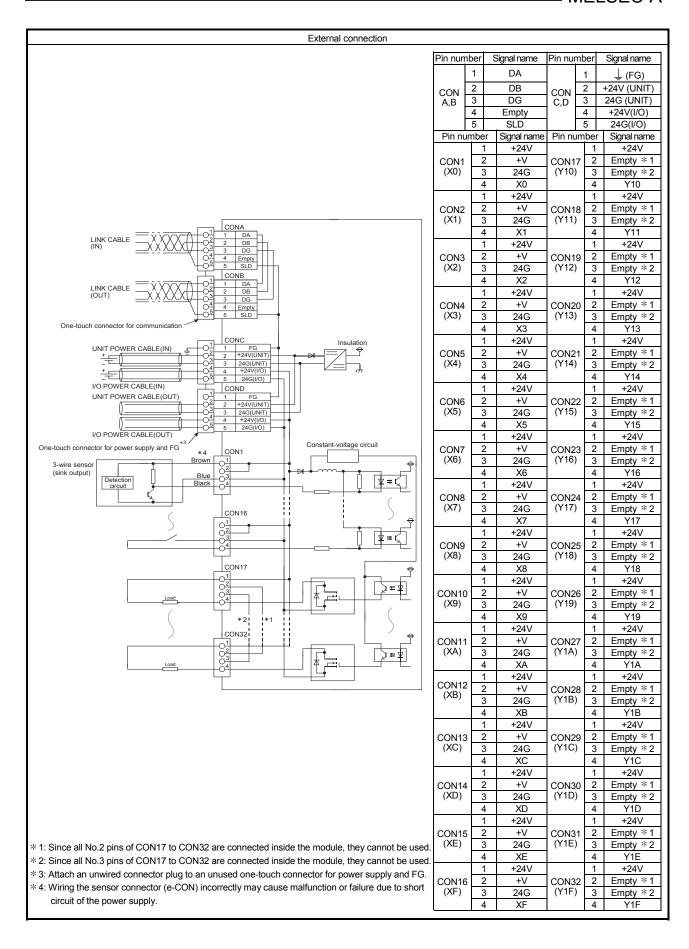


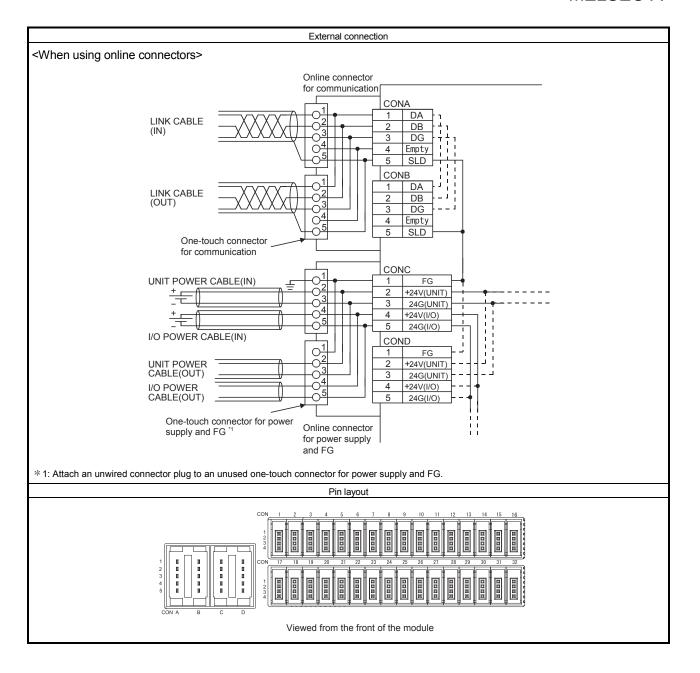


6.3.3 AJ65VBTCE32-32DT combined module

	Туре		DC	input transist	or output combined module		
Item			Appearance				
		Input	Output				
Number of input points		16 points		output points	16 points	_	
Isolation method		Photocoupler	Isolation method		Photocoupler	4	
Rated input voltage		24VDC	Rated load voltage		24VDC		
Rated input current		Approx. 5mA	Operating load voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load current		0.1A/point, 1.6A/common		
Max. number of simultaneous input points		100%	Max. inrush current		0.7A, 10ms or less		
ON voltage/ON current		14VDC or higher/3.5mA or higher	Leakage current at OFF		0.1mA or lower		
OFF voltage/OFF current		6VDC or lower/1.7mA or lower	Max. voltage drop at ON		0.1VDC or lower (TYP.) 0.1A,		
Input resista		Approx. 4.7kΩ			0.2VDC or lower (MAX.) 0.1A	<u> </u>	
Response	OFF→ON	1.5ms or less (at 24VDC)	Output type	!	Sink type		
time	ON→OFF	1.5ms or less (at 24VDC)	Protection function		Overload protection, overvoltage protection, overheat protection		
				OFF→ON	1ms or less		
				ON→OFF	1ms or less (resistive load)		
			External	Voltage	19.2 to 26.4VDC		
			power		(ripple ratio: within 5%) 10mA or lower		
			supply for output part	Current	(at 24VDC and all points ON), excluding external load current		
Input type		Positive common (sink type)			Zener diode		
Supply current for connected		1.0A or lower/common	Surge suppressor Zener diode			A A MONTH CERCA COLUMN 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
device		22 nainta/aamman				VBICE:	
Wiring method for common		32 points/common (input: 3-wire sensor connector (e	Y Command				
Number of occupied stations		32-point assignment/station (32 p	- 2				
Module power Voltage		20.4 to 26.4VDC (ripple ratio: with					
supply Current		45mA or lower (at 24VDC and all	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
Noise immunity		Noise voltage 500Vp-p, noise wid					
Noise illillu	ility	noise frequency 25 to 60Hz (DC t					
Withstand vo	oltage	500VAC for 1 minute between all					
Insulation re	esistance	10M Ω or higher between all DC e	~0 ~0				
Drotootion d	logroo	tester) IP1XB	0 40 % 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
Protection d Weight	egi ee	0.16kg	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
Ĭ		•	nector for communication [Transmission circuit]				
	Communication	5-pin IDC plug is sold separately:					
	part	<optional> Online connector for o</optional>					
External	_	One-touch connector for power si	(\circ)				
	Power supply	[Module power supply, I/O power					
system	part	5-pin IDC plug is sold separately: <optional> Online connector for p</optional>	A6CON-PW5P, A6CON-PW5P-SOD				
		Sensor connector (e-CON) [I/O si	11.7			┪	
	I/O part	4-pin IDC plug is sold separately.					
Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)				60715)			
	Connector for	Applicable cable:					
	communication	FANC-110SBH, FA-CBL200PSB	+				
	Connector for	0.66 to 0.98mm ² (18 AWG) [\phi2.2 to 3.0mm (A6CON-PW5P),					
Applicable	power supply	[φ2.2 to 3.0mm (A6CON-PW5P), Wire diameter: 0.16mm or more					
wire size	and FG	Insulating coating material: PVC (
ļ		Sensor connector (e-CON).	- 1			₫	
	Connector for	Applicable connector plugs are so					
1/0		(applicable wire size: 0.08 to 0.5n	<u></u>				
Accessory		User's manual, Holding fixtures for					

 $[\]ensuremath{\ast}$ 1: Refer to Section 1.6.2 for details.

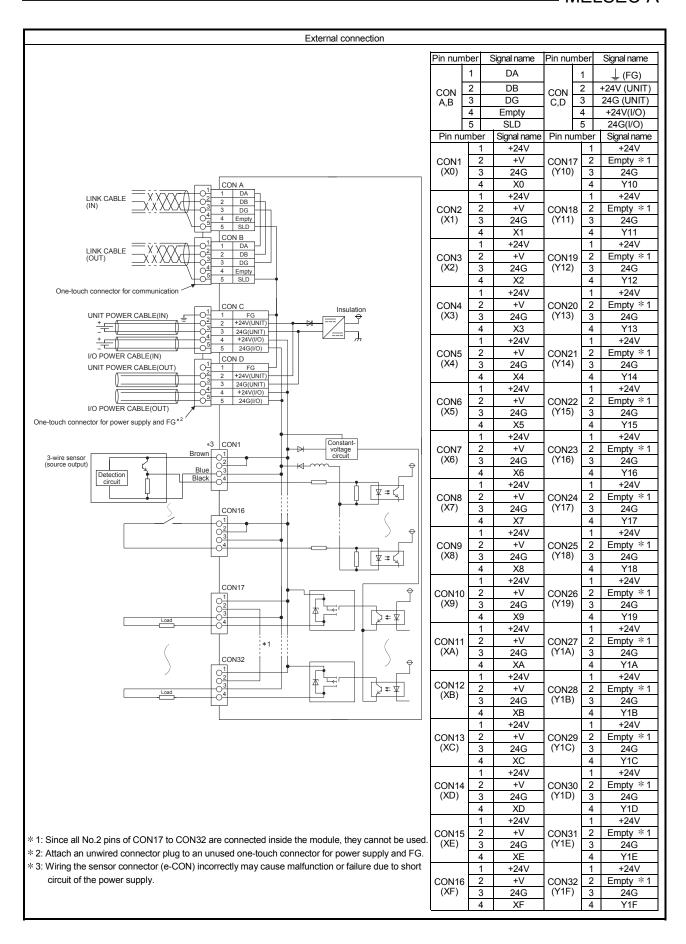


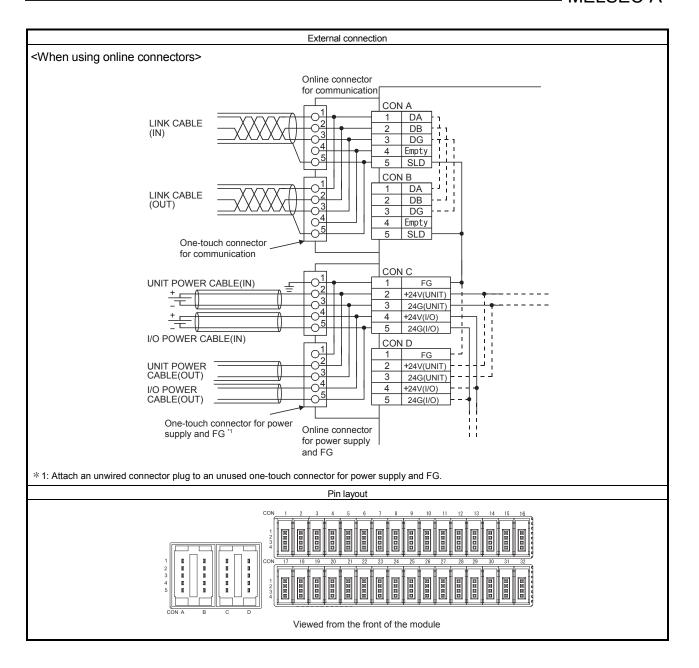


6.3.4 AJ65VBTCE3-32DTE combined module

	Туре		DC	input transist	or output combined module		
Item			Appearance				
		Input			Output	<u> </u>	
Number of input points		16 points			16 points	4	
Isolation method		Photocoupler	Isolation method		Photocoupler	4	
Rated input voltage		24VDC	Rated load voltage		24VDC		
Rated input current		Approx. 5mA	Operating load voltage		19.2 to 26.4VDC (ripple ratio: within 5%)		
· 		19.2 to 26.4VDC	range				
Operating voltage range		(ripple ratio: within 5%)	Max. load current		0.1A/point, 1.6A/common		
Max. number of simultaneous input points		100%	Max. inrush current		0.7A, 10ms or less		
ON voltage/ON current		14VDC or higher/3.5mA or higher	Leakage current at OFF		0.1mA or lower		
	e/OFF current	6VDC or lower/1.7mA or lower	Max. voltage drop at ON		0.1VDC or lower (TYP.) 0.1A,		
Input resista	ance	Approx. 4.7kΩ	wax. voltage drop at ON		0.2VDC or lower (MAX.) 0.1A	_	
Response	OFF→ON	1.5ms or less (at 24VDC)	Output type		Source type		
time	ON→OFF	1.5ms or less (at 24VDC)	Protection function		Overload protection, overheat protection		
			Response	OFF→ON	1ms or less		
			time	ON→OFF	1ms or less (resistive load)	S BEEF C BEEF	
			External	Voltage	19.2 to 26.4VDC		
			power	Voltago	(ripple ratio: within 5%)		
			supply for	0	11mA or lower		
			output part	Current	(at 24VDC and all points ON), excluding external load current		
Input type		Negative common (source type)			Zener diode		
	ent for connected	· · · · · · · · · · · · · · · · · · ·	ourge supp	100001	Zeriei diode		
device		2.0A or lower/common					
Wiring method for common		32 points/common (input: 3-wire sensor connector (e	9 0000 0 0000				
Number of occupied stations		32-point assignment/station (32 p					
Module power Voltage		20.4 to 26.4VDC (ripple ratio: with					
supply	Current	45mA or lower (at 24VDC and all					
	•	Noise voltage 500Vp-p, noise wid					
Noise immu	inity	noise frequency 25 to 60Hz (DC t					
Withstand v	roltage	500VAC for 1 minute between all					
Insulation re	esistance	10M Ω or higher between all DC e					
		tester)					
Protection d	iegree	IP1XB	MO © © © MO MO MO MO MO MO MO MO MO MO MO MO MO				
Weight		0.16kg One-touch connector for commun	ication (Tran				
	Communication	5-pin IDC plug is sold separately:					
	part	Optional> Online connector for of					
External		One-touch connector for power su	7				
connection	Power supply	[Module power supply, I/O power					
system	part		A6CON-PW5P, A6CON-PW5P-SOD				
			Online connector for power supply: A6CON-PWJ5P				
	I/O part	Sensor connector (e-CON) [I/O si					
4-pin IDC plug is sold separately. * 1 Applicable DIN rail TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)					+		
, applicable L	Connector for	Applicable cable:	†				
	communication	FANC-110SBH, FA-CBL200PSBI					
	Connector for	0.66 to 0.98mm ² (18 AWG)					
Applicable	Connector for power supply	[φ2.2 to 3.0mm (A6CON-PW5P),					
wire size	and FG	Wire diameter: 0.16mm or more					
5 5120		Insulating coating material: PVC (4				
	Connector for	Sensor connector (e-CON).					
I/O		Applicable connector plugs are so (applicable wire size: 0.08 to 0.5m					
According		\	+				
Accessory		User's manual, Holding fixtures for screw installation					

^{* 1:} Refer to Section 1.6.2 for details.





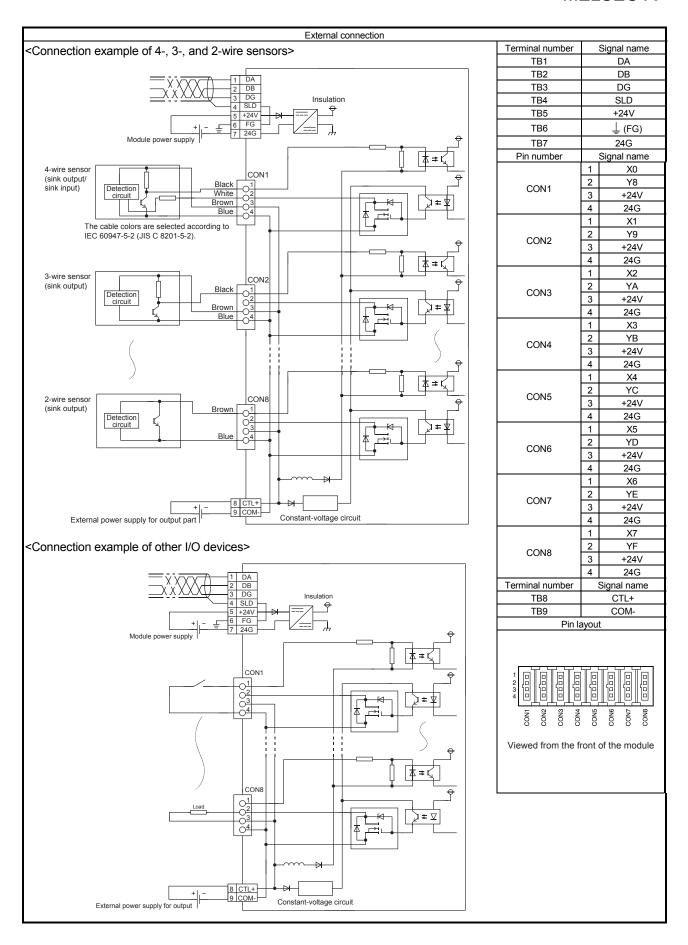
6.4 One Touch Connector Type Combined Module

6.4.1 AJ65SBTC4-16DT combined module

Number of inp Isolation meth Rated input vo Rated input cu		Type					Appearance	
Isolation meth Rated input vo Rated input cu		Input		DC input transistor output combined module AJ65SBTC4-16DT				
Isolation meth Rated input vo Rated input cu			T	Output				
Rated input vo	had		8 points	Number of output points		8 points	<u> </u>	
Rated input cu			Photocoupler	Isolation method		Photocoupler	1	
	oltage		24VDC	Rated load voltage		24VDC	.	
O	current		Approx. 5mA	Operating load voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating voltage range			19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load current		0.5A/point, 2.4A/common		
Max. number of simultaneous input points			100%	Max. inrush current		1.0A 10ms or less		
ON voltage/ON current			14VDC or higher/3.5mA or higher	Leakage current at OFF		0.25mA or lower		
OFF voltage/OFF current			6VDC or lower/1.7mA or lower	Max. voltage drop at ON		0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resistand	nce		Approx. 4.7kΩ	Output type		Sink type		
Dooponoo tim		OFF→ON	1.5ms or less (at 24VDC)	Destantian for	-4:	Overload protection, overvoltage	1	
Response time		N→OFF	1.5ms or less (at 24VDC)	Protection function		protection, overheat protection		
	<u> </u>		,	Response	OFF→ON	0.5ms or less		
				time	ON→OFF	1.5ms or less (resistive load)		
					Voltage	19.2 to 26.4VDC		
				External	Voltage	(ripple ratio: within 5%)	M- H M- M- M- M- M- M- M- M- M- M- M- M- M-	
				power supply		13mA or lower		
				for output part	Current	(at 24VDC and all points ON),		
 			Positive common			excluding external load current	86.82	
Input type			(sink type)	Surge suppressor Zener diode			#188 0000	
Supply current Wiring method			1.0A or lower/common 16 points/common (4-wire, one-touch connector type)					
Number of occ			32-point assignment/sta					
Voltage			20.4 to 26.4VDC (ripple	7 Y8 9 A B B B B B B B B B B B B B B B B B B				
Module power		Current	40mA or lower (at 24VDC and all points ON)				7 1888 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Noise immunit	ity		Noise voltage 500Vp-p					
Withstand volt	Itage		noise frequency 25 to 60Hz (DC type noise simulator condition) 500VAC for 1 minute between all DC external terminals and ground				2 2 3 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
Insulation resi	istance		10MΩ or higher between all DC external terminals and ground (500VDC insulation resistance tester)					
Protection deg	aree		IP2X				1 =	
Weight	9		0.15kg					
External connection system Communication part, module power supply part			7-point two-piece terminal block [Transmission circuit, module power supply, FG] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less					
1/0	I/O power supply part		2-point direct-mount terminal block [I/O power supply] M3×5.2 screw (tightening torque range: 0.59 to 0.88N•m) Applicable solderless terminal: 2 or less					
1/0	I/O part		Dedicated one-touch connector [I/O signals] 4-pin IDC plug is sold separately.					
Module mounting screw		M4 screw with plain wa Mountable with a DIN r						
			TH35-7.5Fe, TH35-7.5Al (compliant with IEC 60715)					
1.1	Communication part, module power supply part Applicable solderless terminal		RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
m su								
	O power upply part							
	I/O part		φ1.0 to 1.4 (A6CON-P214), φ1.4 to 2.0 (A6CON-P220)			†		
			[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG) stranded wire] \$\phi\$1.0 to 1.4 (A6CON-P514), \$\phi\$1.4 to 2.0 (A6CON-P520) [Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]					
			[Applicable wire size: 0] Copper	+				
	Temperature rating 75°C or more						†	
Accessory	po.uturo 1		User's manual				†	

For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

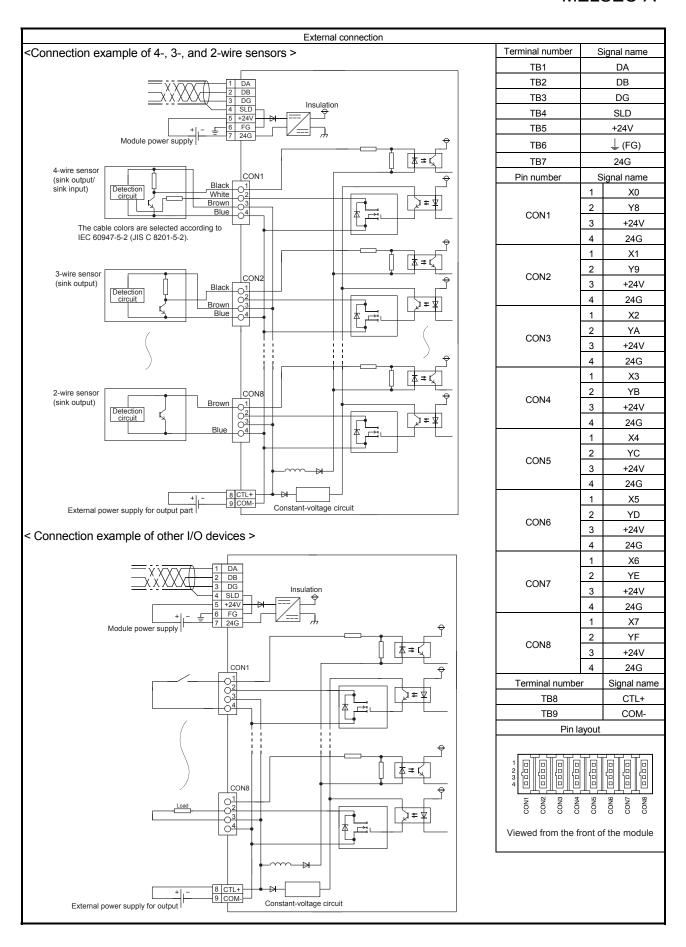
6 - 61 6 - 61



6.4.2 AJ65SBTC4-16DT2 combined module

Type DC input transistor output combined module						tor output combined module		
Item		.,,,,			BTC4-16DT2		Appearance	
		Input	1			Output	- ' '	
Number of	input points		8 points	Number of points	output	8 points		
Isolation me	ethod		Photocoupler	Isolation m	ethod	Photocoupler		
Rated input	t voltage		24VDC	Rated load	voltage	24VDC		
Rated input	t current		Approx. 5mA			19.2 to 26.4VDC (ripple ratio: within 5%)		
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	IMay load current II				
Max. numb points	er of simultaneo	us input	100%	Max. inrush	current	1.0A, 10ms or less		
ON voltage	e/ON current		14VDC or higher/ 3.5mA or higher	Leakage co	urrent at	0.1mA or lower		
OFF voltag	e/OFF current		6VDC or lower/ 1.7mA or lower	Max. voltag	ge drop at	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A		
Input resista	ance		Approx. 4.7kΩ	Output type	9	Sink type		
Response t	time	OFF→ON	1.5ms or less (at 24VDC)	Protection ¹		None		
i coponoe i		ON→OFF	1.5ms or less (at 24VDC)	Response		0.5ms or less		
				time	ON→OFF	1.5ms or less (resistive load)		
				External power	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)	8-Q4 (3)	
				supply for output part	Current	(at 24VDC and all points ON), excluding external load current		
Input type			Positive common (sink type)	Surge supp	ressor	MI 100 NO NO NO NO NO NO NO NO NO NO NO NO NO		
Supply curr	rent for connecte	d device	1.0A or lower/common					
•	hod for common		16 points/common (4-wire, or	ne-touch cor	nector type			
Number of	occupied station		32-point assignment/station (_	ed)		¥5 9 2 0 0 0 0	
Module pov	wer supply	Voltage	20.4 to 26.4VDC (ripple ratio:				1//	
oud.o po.		Current	40mA or lower (at 24VDC and		ON)		8 C D E	
Noise immu			Noise voltage 500Vp-p, noise noise frequency 25 to 60Hz (A 9 8 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8				
Withstand v	voltage		500VAC for 1 minute between	Auesse Britain				
Insulation re			10M Ω or higher between all Γ resistance tester)					
Protection of	degree		IP2X					
Weight			0.15kg					
External connection system	Communication module power s	•	7-point two-piece terminal blo M3×5.2 screw (tightening toro Applicable solderless termina	que range: 0 il: 2 or less	.59 to 0.88N	l•m)		
	I/O power suppl	ly part		minal block [I/O power supply] ng torque range: 0.59 to 0.88N•m) erminal: 2 or less				
	I/O part		Dedicated one-touch connect 4-pin IDC plug is sold separate	tely.	•			
	ounting screw		Mountable with a DIN rail in 6	orientation	3	g torque range: 0.78 to 1.08N•m)		
Applicable		1	TH35-7.5Fe, TH35-7.5Al (cor					
Applicable wire size	Communication part, module power supply part I/O power supply part	Applicable solderless terminal	RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] V2-MS3, RAP2-3SL, TGV2-3N [Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]					
	I/O part	ı	φ1.0 to 1.4 (A6CON-P214), φ [Applicable wire size: 0.14 to φ1.0 to 1.4 (A6CON-P514), φ [Applicable wire size: 0.3 to 0					
Wire	Material		Copper					
	Temperature ra	ting	75°C or more					
Accessory			User's manual					

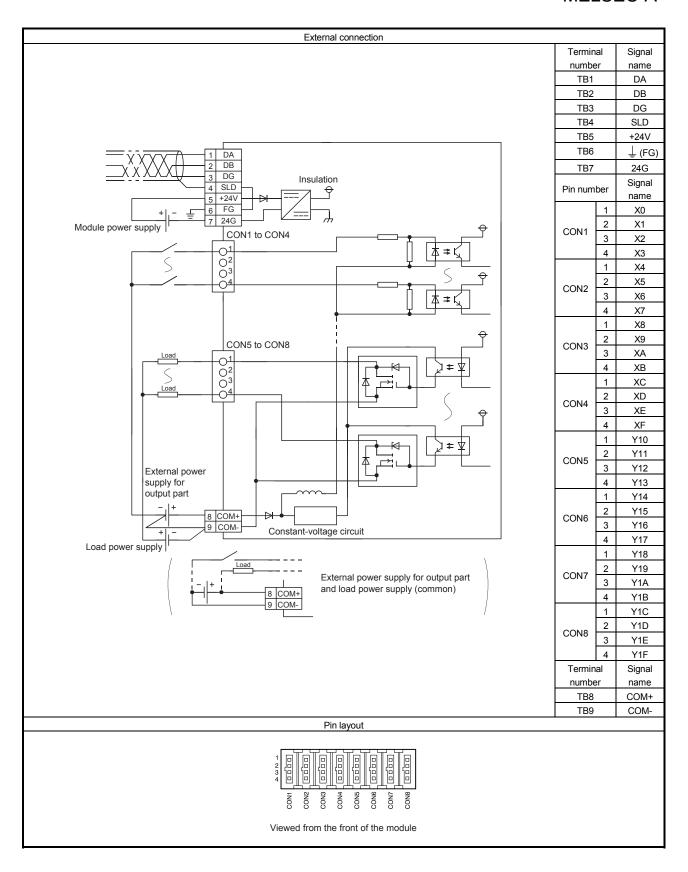
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.4.3 AJ65SBTC1-32DT combined module

		Туре								
Item				AJ6	55SBTC1-32	ansistor output combined module DT	Appearance			
		Input				Output				
Number of	input points		16 points	Number of o	output	16 points				
Isolation me	ethod		Photocoupler	Isolation me	ethod	Photocoupler				
Rated input	t voltage		24VDC	Rated load v	voltage	24VDC	<u>_</u>			
Rated input	Rated input current Approx. 5mA			Operating lo range	oad voltage	19.2 to 26.4VDC (ripple ratio: within 5%)				
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	urrent	0.1A/point, 1.6A/common				
Max. number points	er of simultaneou	s input	100%	Max. inrush	current	1.0A, 10ms or less				
ON voltage.	e/ON current		14VDC or higher/3.5mA or higher	Leakage cur OFF	rrent at	0.25mA or lower				
OFF voltage	e/OFF current		6VDC or lower/ 1.7mA or lower	Max. voltage	e drop at	0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A				
Input resista	ance		Approx. 4.7kΩ	Output type		Sink type				
Despense	time o	OFF→ON	1.5ms or less (at 24VDC)	Protection fu	unction	Overload protection, overvoltage protection, overheat protection				
Response t	JIIIE	ON OFF	1.5ms or less	Response	OFF→ON	0.5ms or less	1			
		ON→OFF	(at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)				
				External	Voltage	19.2 to 26.4VDC	7 5- Up (8)			
				power	Voltage	(ripple ratio: within 5%)				
				supply for	Current	17mA or lower (at 24VDC and all points ON),				
				output part	Current	excluding external load current	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
Input type			Positive common (sink type)	Surge suppressor Zener diode						
Wiring meth	hod for common		32 points/common (1-wi	re. one-touch	connector t	rype)	\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
	occupied stations		32-point assignment/sta			7,50				
	•	Voltage	20.4 to 26.4VDC (ripple				20 1 2 3 4 5 6 7			
Module pov	ver supply	Current	50mA or lower (at 24VD	C and all poi	nts ON)		2 TO 2 SXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Noise immu	unity		Noise voltage 500Vp-p,	noise width 1	lμs,		2 X X 8 9 A B C C C C C C C C C C C C C C C C C C			
INOISE IIIIIII	ariity		noise frequency 25 to 60			8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
Withstand v	/oltage		500VAC for 1 minute be			A XXXX				
Insulation re	esistance		10MΩ or higher between	n all DC exter	rnal terminal	2 3 4 5 12 13 14 16 12 13 14 16 12 13 14 16 12 16 16 16 16 16 16 16 16 16 16 16 16 16				
Weight			resistance tester) 0.16kg							
External				al block ITrai	nemiesion ci	rcuit, module power supply, FG]				
connection	Communication module power su		M3×5.2 screw (tightenin Applicable solderless ter	g torque rang	ge: 0.59 to 0		PW 1 RUN I B 0 0 0 0 0 0 0 0 0			
ľ			2-point direct-mount terr			pply]				
	I/O power supply	/ part	M3×5.2 screw (tightenin		•	.88N•m)				
	110		Applicable solderless ter			- IDO -I - 1 - 1 - 1 - 1	4			
Module	I/O part					n IDC plug is sold separately.	4			
iviodule mol	unting screw		M4 screw with plain was (tightening torque range							
			Mountable with a DIN ra		,					
Applicable I	DIN rail		TH35-7.5Fe, TH35-7.5A			(15)	1			
	Communication		RAV1.25-3 (compliant)			,	1			
wire size	part,	Applicable	[Applicable wire size: 0		n ² (22 to 16	AWG) stranded wire]				
	module power	solderless		V2-MS3, RAP2-3SL, TGV2-3N						
	supply part	terminal	[Applicable wire size: 1	[Applicable wire size: 1.25 to 2.0mm² (16 to 14 AWG) stranded wire]						
	I/O power supply part									
	I/O part	.1	φ1.0 to 1.4 (A6CON-P21	14) 41 4 40 2	0 (46004) 1	2220)	†			
	[Applicable wire size:				•	,				
			φ1.0 to 1.4 (A6CON-P51		•	•				
		VG) stranded wire]								
Wire	Material		Copper		,					
	Temperature rati	ing	75°C or more				1			
Accessory			User's manual]			
		•								

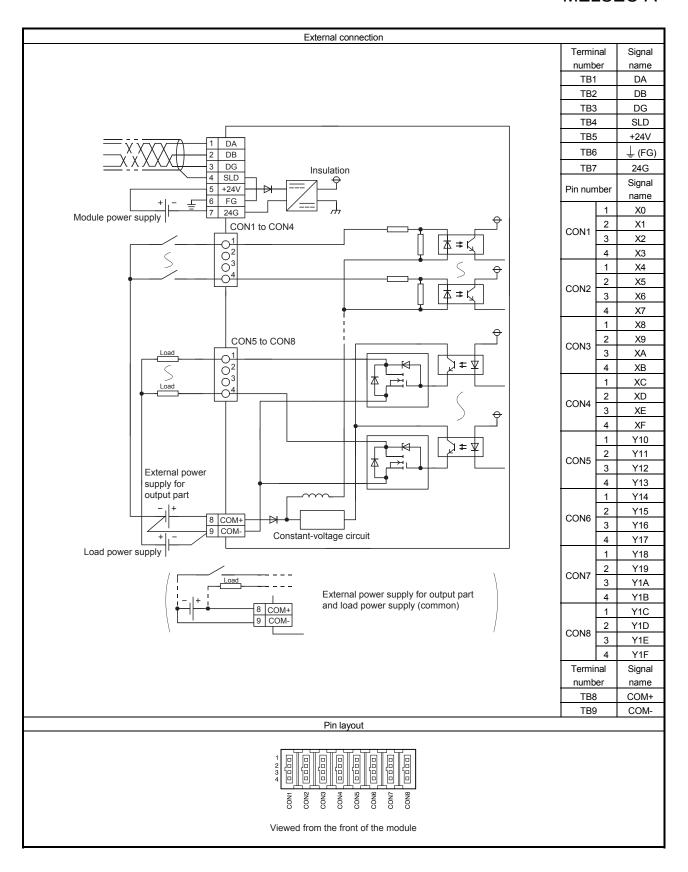
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.4.4 AJ65SBTC1-32DT1 combined module

		Туре			DC innut tr	ansistor output combined module				
Item		1 ypc		AJ6	SSBTC1-32	•	Appearance			
		Input				Output	, , , , , , , , , , , , , , , , , , ,			
Number of	input points	•	16 points	Number of o	output	16 points]			
Isolation me	ethod		Photocoupler	Isolation me	ethod	Photocoupler]			
Rated input	t voltage		24VDC	Rated load		24VDC]			
Rated input	t current		Approx. 5mA	Operating lo	oad voltage	19.2 to 26.4VDC (ripple ratio: within 5%)				
Operating v	oltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load c	urrent	0.1A/point, 1.6A/common				
Max. numb points	er of simultaneou	s input	100%	Max. inrush	current	1.0A, 10ms or less				
ON voltage	/ON current		15VDC or higher/ 3mA or higher	Leakage cu OFF	rrent at	0.25mA or lower				
OFF voltag	e/OFF current		3VDC or lower/ 0.5mA or lower	Max. voltag ON	e drop at	0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A				
Input resista	ance		Approx. 4.7kΩ	Output type		Sink type]			
Response t	time	OFF→ON	0.2ms or less (at 24VDC)	Protection f	unction	Overload protection, overvoltage protection, overheat protection				
		ON→OFF	0.2ms or less	Response	OFF→ON	0.5ms or less				
		OIN-JUFF	(at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)				
				External	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)				
				power supply for output part	Current	17mA or lower (at 24VDC and all points ON), excluding external load current				
Input type Positive common (sink type)				Surge suppressor Zener diode			750000000000000000000000000000000000000			
	nod for common		32 points/common (1-w			type)				
Number of	occupied stations		32-point assignment/sta							
Module pov	ver supply	Voltage	20.4 to 26.4VDC (ripple 50mA or lower (at 24VD							
		Current	Noise voltage 500Vp-p,							
Noise immu	unity		noise frequency 25 to 6			lator condition)	88 0 1 18 18 19 14 19 14 19 14 19 14 19 14 19 14 19 14 19 14 19 19 19 19 19 19 19 19 19 19 19 19 19			
Withstand v	/oltage		500VAC for 1 minute be			A Jessen Cr. 18 19 19 19 19 19 19 19 19 19 19 19 19 19				
Insulation re	esistance		10M $Ω$ or higher betwee resistance tester)	n all DC exte	224 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 1 2 3 4 6 6 7 7 7 7 1 2 3 4 6 6 7 7 7 7 1 2 3 4 6 6 7 7 7 7 7 1 2 3 4 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7					
Protection of	degree		IP2X	P2X						
Weight	ı		0.16kg							
External connection system	Communication pmodule power su		7-point two-piece termin M3×5.2 screw (tightenin Applicable solderless te	ng torque ran	nge: 0.59 to (ircuit, module power supply, FG] 0.88N•m)	De Color (Color Co			
	I/O power supply	part	2-point direct-mount ten M3×5.2 screw (tightenin Applicable solderless te	ng torque ran	nge: 0.59 to (
	I/O part					in IDC plug is sold separately.	1			
Module mo	unting screw		M4 screw with plain was (tightening torque range Mountable with a DIN ra	sher finished e: 0.78 to 1.0	l round 8N•m)]			
Applicable	DIN rail		TH35-7.5Fe, TH35-7.5A			715)	-			
	Communication					• ••,	1			
wire size	part, module power	Applicable solderless	[Applicable wire size: • V2-MS3, RAP2-3SL,	P RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] P V2-MS3, RAP2-3SL, TGV2-3N						
	supply part I/O power supply part	terminal	[Applicable wire size:							
	I/O part	ı	φ1.0 to 1.4 (A6CON-P2 [Applicable wire size: 0.	1						
				1.0 to 1.4 (A6CON-P514), \(\phi 1.4 to 2.0 \) (A6CON-P520) Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]						
Wire	Material		Copper	Copper						
	Temperature rati	ng	75°C or more				4			
Accessory			User's manual	er's manual						

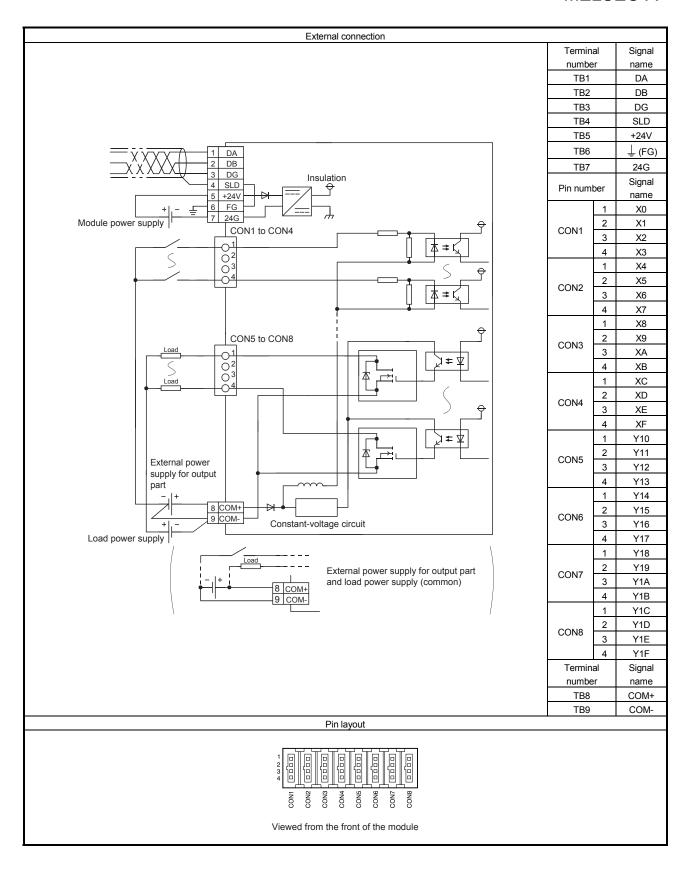
For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.4.5 AJ65SBTC1-32DT2 combined module

		Туре							
Item		i ype		Δ 165	SBTC1-32DT	sistor output combined module	Appearance		
-		Input		7,000	JOD 1 O 1-02D 1	Output	простанос		
Number of	input points		16 points	Number of	output points	16 points			
Isolation me			Photocoupler	Isolation me		Photocoupler			
Rated input			24VDC	Rated load		24VDC			
				1	oad voltage	19.2 to 26.4VDC			
Rated input	t current		Approx. 5mA	range		(ripple ratio: within 5%)			
			(ripple ratio: within 5%)	Max. load c	urrent	0.1A/point, 1.6A/common			
points	er of simultaneo	us input	100%	Max. inrush	current	1.0A, 10ms or less			
ON voltage	/ON current		14VDC or higher/ 3.5mA or higher	Leakage cu	irrent at OFF	0.1mA or lower			
OFF voltag	e/OFF current		6VDC or lower/ 1.7mA or lower	Max. voltag	e drop at ON	0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A			
Input resista	ance		Approx. 4.7kΩ	Output type)	Sink type			
		OFF→ON	1.5ms or less (at 24VDC)	Protection f	unction	None			
Response t	time	ON→OFF	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less			
		•	,	time	ON→OFF	1.5ms or less (resistive load)			
				External	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)	5- O. B. B. B. B. B. B. B. B. B. B. B. B. B.		
				power		17mA or lower			
				supply for output part	Current	(at 24VDC and all points ON), excluding external load current			
Input type Positive common (sink type)				Surge supp	ressor	Zener diode			
	nod for common		32 points/common (1-w			pe)			
Number of	occupied station	s Voltage	32-point assignment/sta 20.4 to 26.4VDC (ripple						
Module pov	ver supply	Current	50mA or lower (at 24VD				STATE OF THE STATE		
Noise immu	unitv		Noise voltage 500Vp-p,	noise width '	1μs,		A ASSESSED SECTION OF		
Withstand v			noise frequency 25 to 6 500VAC for 1 minute be			XXXX			
Insulation re			10M $Ω$ or higher betwee		2 2 2 2				
Protection of	degree		resistance tester)			11 2 3 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
Weight	acgico		0.16kg						
External			7-point two-piece termin	al block					
	Communication		[Transmission circuit, m				MAC POPE DE L'ENNE		
system	module power s	supply part	M3×5.2 screw (tightenin Applicable solderless te	• .	-	88N•m)			
			2-point direct-mount terr						
	1/O nover	ly port	[I/O power supply]	ai biook					
	I/O power suppl	ıy parı	M3×5.2 screw (tightening			8N•m)			
	1/0 = 1		Applicable solderless te			IDO alore la setti con en 1.1			
	I/O part		Dedicated one-touch co			IDC plug is sold separately.			
Module mo	unting screw		(tightening torque range	: 0.78 to 1.08	3N•m)				
Analizzbi	DIN roil		Mountable with a DIN ra						
Applicable Applicable	Communication		TH35-7.5Fe, TH35-7.5A	<u> </u>		J)			
wire size	part, module			 RAV1.25-3 (compliant with JIS C 2805) [Applicable wire size: 0.3 to 1.25mm² (22 to 16 AWG) stranded wire] 					
	power supply	Applicable solderless	• V2-MS3, RAP2-3SL, 1						
	part I/O power suppl	terminal	[Applicable wire size:						
part									
[Applicable wire size: 0.14									
φ1.0 to 1.4 (A6CON-P514), φ1.4 to 2.0 (A6CON-P520)									
[Applicable wire size: 0.3 to 0.5 mm² (22 to 20 AWG) stranded wire]									
Wire	Material Temperature ra	ting	Copper 75°C or more						
Δετρεερην	Temperature ra	urig	75°C or more User's manual						
Accessory			osei s manuai				l		

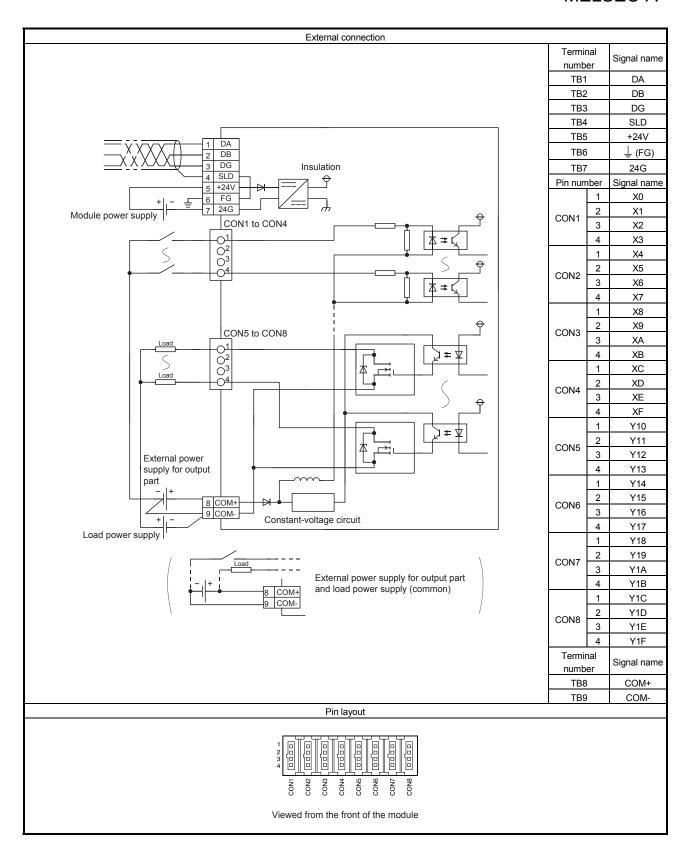
^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



6.4.6 AJ65SBTC1-32DT3 combined module

Item		Туре		A IC		ansistor output combined module	Annogrange
item		Input		AJo	5SBTC1-32[Output	Appearance
		iriput		Number of o	output		
Number of	input points		16 points	points	•	16 points	
Isolation m			Photocoupler	Isolation me		Photocoupler	
Rated input	t voltage		24VDC	Rated load Operating lo		24VDC 19.2 to 26.4VDC	_
Rated input	Rated input current Approx. 5mA			range	au voltage	(ripple ratio: within 5%)	
Operating voltage range 19.2 to 26.4VDC (ripple ratio: within 5%)				Max. load c	urrent	0.1A/point, 1.6A/common	
Max. numb points	er of simultaneou	s input	100%	Max. inrush	current	1.0A, 10ms or less	
ON voltage	e/ON current		15VDC or higher/ 3mA or higher	Leakage cu OFF	rrent at	0.1mA or lower	
OFF voltag	e/OFF current		3VDC or lower/ 0.5mA or lower	Max. voltage	e drop at	0.3VDC or lower (TYP.) 0.1A, 0.6VDC or lower (MAX.) 0.1A	
Input resist	ance		Approx. 4.7kΩ	Output type		Sink type	
		OFF→ON	0.2ms or less (at 24VDC)	Protection for	unction	None	
Response t	time	ON→OFF	0.2ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	
		l .	1,220/	time	ON→OFF	1.5ms or less (resistive load)	
				External power	Voltage	19.2 to 26.4VDC (ripple ratio: within 5%)	
				supply for output part	Current	17mA or lower (at 24VDC and all points ON), excluding external load current	
Input type Positive common (sink type) Surge suppressor Zener diode							
	hod for common		32 points/common (1-wi			ype)	
Number of	occupied stations		32-point assignment/stat				
Module pov	wer supply	Voltage Current	20.4 to 26.4VDC (ripple 50mA or lower (at 24VD				
Noise imm	unity	04.10.11	Noise voltage 500Vp-p,				1617 Y819 A B C C E E E E E E E E E E E E E E E E E
			noise frequency 25 to 60				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Withstand v	voltage		500VAC for 1 minute be $10M\Omega$ or higher between			- 2 4 4 4 4 4 4 4 4 4	
Insulation r			resistance tester)	Tall DO exte			
Protection of Weight	aegree		IP2X 0.16kg			X X X X X X X X X X X X X X X X X X X	
External			7-point two-piece terminate	al block			
	Communication		[Transmission circuit, mo	dule power			
system	module power s	upply part	M3×5.2 screw (tightening Applicable solderless ter	• •	•	.88N•m)	
			2-point direct-mount term	ninal block			
	I/O power supply	part	[I/O power supply] M3×5.2 screw (tightening	n tornue ren	ne: 0 50 to 0	88N•m\	
			Applicable solderless ter			.oor my	
	I/O part				<u> </u>	n IDC plug is sold separately.	
Module mo	ounting screw		M4 screw with plain was 1.08N•m)	her finished	round (tighte	ening torque range: 0.78 to	
	5.1		Mountable with a DIN ra				
Applicable Applicable	DIN rail Communication		TH35-7.5Fe, TH35-7.5A • RAV1.25-3 (compliant			15)	
wire size	part,	A	[Applicable wire size: 0	AWG) stranded wire]			
	module power	Applicable solderless	 V2-MS3, RAP2-3SL, T 				
	supply part	terminal	[Applicable wire size: 1				
	I/O power supply part						
	I/O part	1					
[Applicable wire size: 0.14 to 0.2mm² (26 to 24 AWG)				, .			
			φ1.0 to 1.4 (A6CON-P51				
Wire	Material		[Applicable wire size: 0.3 Copper	10 U.3 MM²	(22 10 20 AV	voj stranueu wirej	
1	Temperature rat	ing	75°C or more				1
Accessory			User's manual				
	occessory User's manual						

^{*} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.



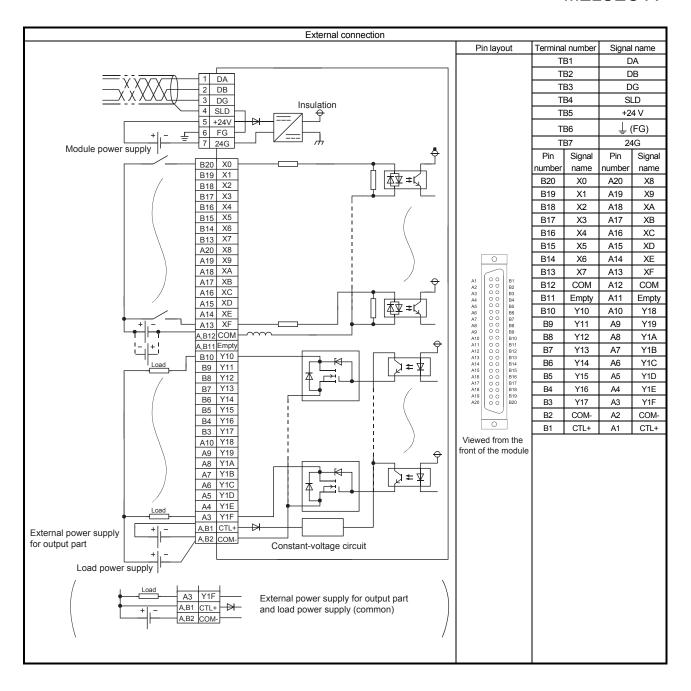
6.5 FCN Connector Type Combined Module

6.5.1 AJ65SBTCF1-32DT combined module

		Туре			OC input tran			
Item					SBTCF1-32D		Appea	rance
		Input				Output		
Number of	input points		16 points	Number of points	output	16 points		
Isolation me	ethod		Photocoupler	Isolation me	ethod	Photocoupler		
Rated input voltage 24VDC		Rated load	voltage	12/24VDC				
Rated input current Approx. 5mA			Operating le	oad voltage	10.2 to 26.4VDC (ripple ratio: within 5%)			
Operating v	voltage range		19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load o	current	0.1A/point (at all points ON: 0.1A/point), 1.6A/common		
Max. numb points	er of simultaned	ous input	100%	Max. inrush	current	1.0A, 10ms or less		
ON voltage	e/ON current		14VDC or higher/ 3.5mA or higher	Leakage cu OFF	ırrent at	0.1mA or lower		
OFF voltag	je/OFF current		6VDC or lower/ 1.7mA or lower	Max. voltag	je drop at	0.1VDC or lower (TYP.) 0.1A, 0.2VDC or lower (MAX.) 0.1A		
Input resist	ance		Approx. 4.7kΩ	Output type	;	Sink type	İ	
_ F			1 PP	Protection f		Overload protection, overvoltage protection, overheat protection		
		1	1 Emp or loss	Doononoo	OEE VON	0.5ms or less	1 3 <u>←</u> ()	
		OFF→ON	1.5ms or less (at 24VDC)	Response time	OFF→ON		RATE STATE	
Response t	time		1.5ms or less	ume	ON→OFF	1.5ms or less (resistive load) 10.2 to 26.4VDC	1 8 R.	0 0
		ON→OFF	(at 24VDC)	External power	Voltage	(ripple ratio: within 5%)	STATON NO	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
			16 points/common	supply for		30mA or lower	STA 00 20 11 10 20 11 10 20 11	0 0
Wiring met	hod for common	1	(1-wire, FCN connector	output part	Current	(at 24VDC and all points ON),	88.40	
			type)			excluding external load current	X	0 0 7/
			Positive/negative	Wiring meth	nod for	16 points/common		
Input type			common shared type	common		(1-wire, FCN connector type)	O D D D D D D D D D D D D D D D D D D D	000
N			(sink/source shared type)	Surge supp		Zener diode	6.7 X8.9 A B C D E F G G G G G G G G G G G G G G G G G G	000
Number of	occupied station		32-point assignment/statio			38 13 GB 89 BTCF BB 80 BTCF BB 80		
Module pov	wer supply	Voltage Current		to 26.4VDC (ripple ratio: within 5%) A or lower (at 24VDC and all points ON)				
Noise imm	unity	Current	Noise voltage 500Vp-p, no				2. X01 2. 3. 4. 5. 6. 7 	(3) (3)
Withstand v	voltage		500VAC for 1 minute betw			% 5 5 44 		
Insulation r						and ground (500VDC insulation		3 2 6
Protection of	degree		IP2X				PW LRU	
Weight	<u> </u>		0.15kg					
External			7-point two-piece terminal	block				
connection			[Transmission circuit, mod					
system	module power	supply part	M3×5.2 screw (tightening Applicable solderless term			38N•m)		
	I/O power supp I/O part	oly part,	40-pin connector [I/O pow (A6CON1, A6CON2, A6C	ON3, A6CO	N4)			
Module mounting screw M4 screw with plain washe (tightening torque range: 0					l• m)			
Applicable	DIN rail		Mountable with a DIN rail in TH35-7.5Fe, TH35-7.5Al (15)	†	
	Communication	n Applicable		3 (compliant with JIS C 2805)				
wire size	part, module power	solderless terminal*1	[Applicable wire size: 0.3 • V2-MS3, RAP2-3SL, TG	3 to 1.25mm ²	,			
supply part [Applicable wire size: 1.3						1		
I/O power supply part, I/O part • 0.08 to 0.3mm² (28 to 22 • 0.08 to 0.2mm² (28 to 24				AWG) strar	nded wire (A	6CON2)		
				nded wire, 🏻	nded wire, ϕ 0.25mm (30 AWG) single wire (A6CON3)			
Wire	Material		Copper					
Λοοοροος:	Temperature ra	aung	75°C or more				-	
Accessory			User's manual				<u> </u>	

^{*1} For applicable solderless terminals connected to the terminal block, refer to the table above. Use applicable wires for the solderless terminals and fix them with an appropriate tightening torque. Use UL listed solderless terminals and, for crimping, use a tool recommended by their manufacturer.

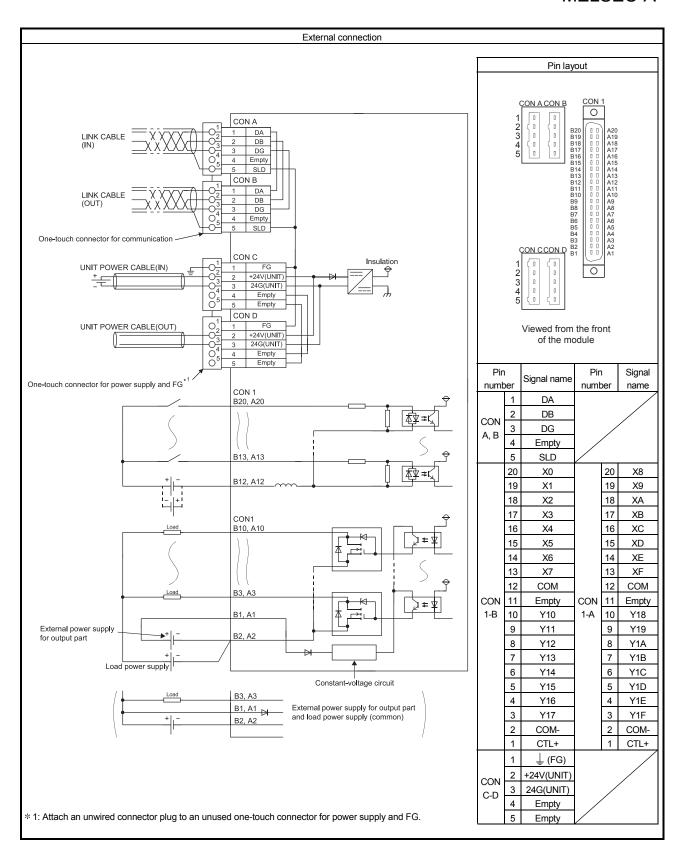
^{*2} Use cables with outside diameter of 1.3mm or shorter to connect 40 cables to the connector. In addition, consider the amount of current to be used and select appropriate cables.

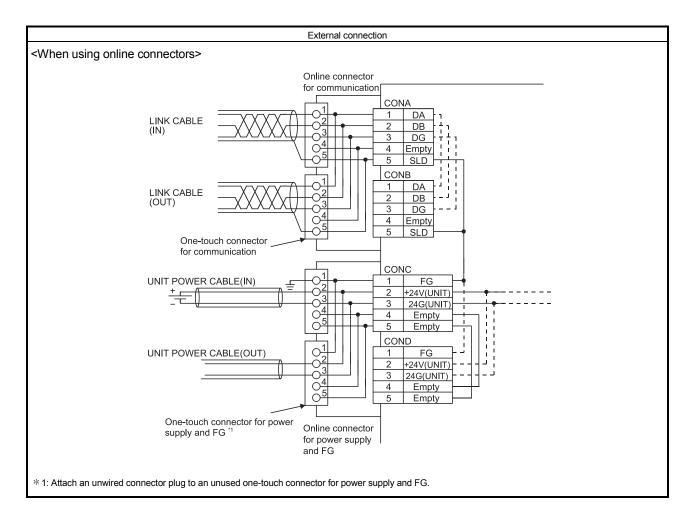


6.5.2 AJ65VBTCF1-32DT1 combined module

	_	Туре		DC ir	nput transisto	or output combined module	
Item	_			AJ65VBT	CF1-32DT1		Appearance
		ln	put			Output	
Number of	input po	ints	16 points	Number of o	utput points	16 points	
Isolation me	ethod		Photocoupler	Isolation me	thod	Photocoupler	
Rated input	Rated input voltage 24VDC Ra		Rated load v	oltage	12/24VDC		
Rated input	Rated input current Approx. 5mA		Operating lo range	ad voltage	10.2 to 26.4VDC (ripple ratio: within 5%)		
Operating v	voltage r	ange	19.2 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	ırrent	0.1A/point, 1.6A/common	
Max. number input points		nultaneous	100% or 60% (Refer to Section 1.3.)	Max. inrush	current	0.7A, 10ms or less	
ON voltage	ON cur	rent	15VDC or higher/3mA or higher	Leakage cur	rent at OFF	0.1mA or lower	
OFF voltage	e/OFF c	current	3VDC or lower/0.5mA or lower	May valtage	dran at ON	0.1VDC or lower (TYP.) 0.1A,	
Input resista	ance		Approx. 4.7kΩ	Max. voltage	e drop at ON	0.2VDC or lower (MAX.) 0.1A	
Response ti	ime	OFF→ON	0.2ms or less (at 24VDC)	Output type		Sink type Overload protection, overvoltage	
		ON→OFF	0.2ms or less (at 24VDC)	Protection fu	ınction	protection, overheat protection	
		1-11 / 511	5 5. 1555 (St. 2 1 1 2 5)	_ OFF→ON		1ms or less	┪
Wiring meth	hod for a	common	16 points/common	Response		1ms or less	†
900			(1-wire, FCN connector type)	time	ON→OFF	(rated load, resistive load)	MELSEG AJ65VBTCF1-32DT1
			<u> </u>			10.2 to 26.4VDC	MISSING AJ65VBTCFT-32DT1
				External	Voltage	(ripple ratio: within 5%)	
				power		10mA or lower	LINK X0 Y10
				supply for output part	Current	(at 24VDC and all points ON), excluding external load current	CON. A CON. B XF Y1F
Positive/negative common Input type shared type			Wiring methor common	od for	16 points/common (1-wire, FCN connector type)	0 0 LERF	
			(sink/source shared type)	Surge suppr	essor	Zener diode	
Number of	occupie	d stations	32-point assignment/station (32 p	oints used)			
Module pov	wer	Voltage	20.4 to 26.4VDC (ripple ratio: with	nin 5%)			
supply		Current	50mA or lower (at 24VDC and all	•			0 0 0 0 0 8
Noise immu	unity		Noise voltage 500Vp-p, noise wid noise frequency 25 to 60Hz (DC t		PW/AUX. 0 0 0 8		
Withstand v	voltage			DC external terminals and ground			CON.C CON.D
Insulation re	esistano	e	10M Ω or higher between all DC etester)	o E O F			
Protection of	degree		IP1XB				
Weight			0.16kg				∐
External			One-touch connector for commur	-	smission circ	cuit]	
connection system	Comm	unication part	5-pin IDC plug is sold separately. <optional></optional>		IED		CCLink
			Online connector for communicat One-touch connector for power si			wer supply FG1	+
	Power	supply part	5-pin IDC plug is sold separately: <optional></optional>		-		
			Online connector for power suppl	y: A6CON-PV	VJ5P		
	I/O par	t	Connector for I/O (40 pins, M3 sc	,			
Applicable I			TH35-7.5Fe, TH35-7.5Al (complia	ant with IEC 6	0715)		」
Applicable wire size		ctor for unication	Applicable cable: FANC-110SBH, FA-CBL200PSB	H, CS-110			
0.66 to 0.98mm² (18 AWG) Connector for power [\$\phi\$2.2 to 3.0mm (A6CON-PW5P), \$\phi\$2.0 Wire diameter: 0.16mm or more					•	PW5P-SOD)]	
Insulating coating material: PVC (heat-resistant) • 0.08 to 0.3mm² (28 to 22 AWG) stranded wire (A6CON1 and A6CON4)*1 • 0.08 to 0.2mm² (28 to 24 AWG) stranded wire (A6CON2) • 0.08mm² (28 AWG) stranded wire, \$\phi\$0.25mm (30 AWG) single wire (A6CON3)							
Applicable of	connect	or for I/O	A6CON1 (soldering type), A6COI A6CON4 (soldering type)	•			
Accessory			User's manual				7

^{*1} Use cables with outside diameter of 1.3mm or shorter to connect 40 cables to the connector. In addition, consider the amount of current to be used and select appropriate cables.

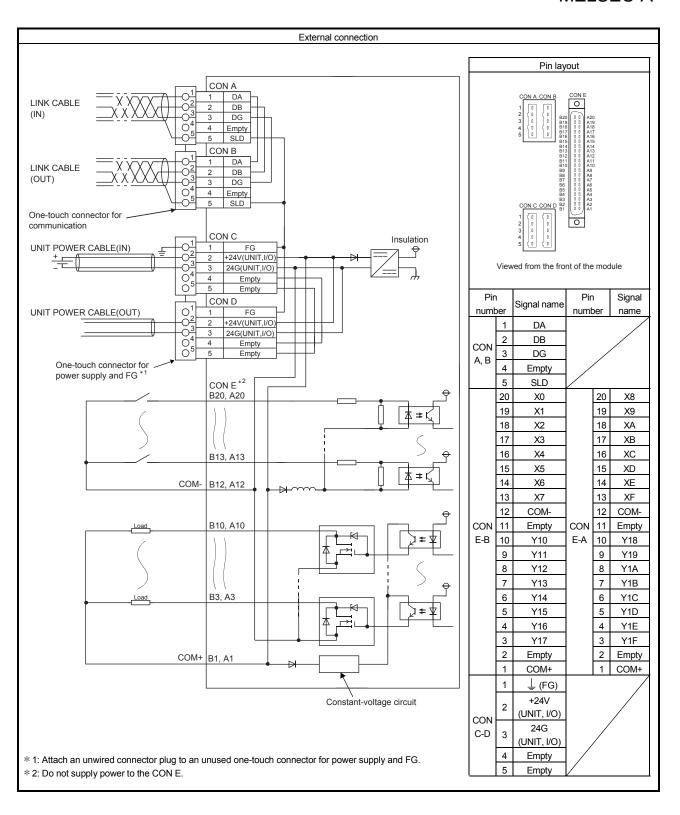


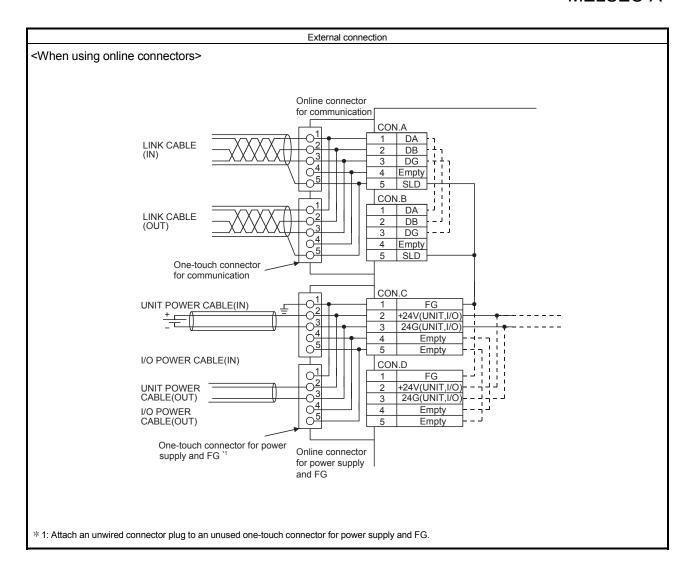


6.5.3 AJ65VBTCFJ1-32DT1 combined module

		Туре		DC in	nut transisto	r output combined module			
Item					CFJ1-32DT1	Appearance			
		In	put	7,0007101	OTOT OZDIT	Output	7 фреагалос		
Number of	innut noi		16 points	Number of o	output points	· ·	†		
Isolation me	•	110	Photocoupler	Isolation me		Photocoupler	†		
Rated input			24VDC	Rated load v		24VDC	+		
Nateu IIIput	i voitage		24700	Operating lo		Same as that for the module power	†		
Rated input	t current		Approx. 5mA	range	au voltage	supply			
Operating v	oltage ra	inge	Same as that for the module power supply	Max. load cu	urrent				
Max. numb	er of sim	ultaneous	100% or 40%	Marri ia arrala		0.74 40			
input points	6		(Refer to Section 1.3.)	Max. inrush	current	0.7A, 10ms or less			
ON voltage	ON curr	ent	15VDC or higher/3mA or higher	Leakage cur	rent at OFF	0.1mA or lower			
OFF voltage	e/OFF cu	ırrent	3VDC or lower/0.5mA or lower			0.1VDC or lower (TYP.) 0.1A,	Ī		
Input resista	ance		Approx. 4.7kΩ	Max. voltage	e drop at ON	0.2VDC or lower (MAX.) 0.1A			
Response ti			- 	Output type		Sink type	†		
l tooponoo a	0	OFF→ON	0.2ms or less (at 24VDC)	o atput typo		Overload protection, overvoltage	†		
i	t.	ON→OFF	0.2ms or less (at 24VDC)	Protection fu	ınction	protection, overheat protection			
		∪.N ∪! !	O.ZIIIO OI 1600 (ALZHVDO)		OFF YOU		†		
Input type			Positive common (sink type)	Response	OFF→ON	1ms or less	†		
Input type			rositive continion (sink type)	time	ON→OFF	1ms or less (rated load, resistive load)			
				External pov	ver supply	Same as that for the module power	MILSE AJ65VBTCFJ1-32DT1		
				for output pa	art	supply	CON.A CON.B X (D) Y		
				Surge suppr	essor	Zener diode			
Wiring meth	hod for co	ommon	32 points/common (1-wire, FCN of	connector type	e)		PW PW		
Number of	occupied	stations	32-point assignment/station (32 p	oints used)					
Module pov	wer '	Voltage	20.4 to 28.8VDC (ripple ratio: with	nin 5%)					
supply	f	Current	50mA or lower (at 24VDC and all		excluding exte	ernal load current			
Noise immu	ınitv		Noise voltage 500Vp-p, noise wid				CAUTION 22 2 2 2 3 6 3 6 3 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4		
110100 11111110			noise frequency 25 to 60Hz (DC t	ype noise sin	nulator condi	tion)	Do not supply 5P5		
Withstand v	voltage		500VAC for 1 minute between all	DC external t	terminals and	d ground	the external power supply to CON.E		
Insulation re	esistance	•	10M Ω or higher between all DC e tester)	xternal termir	nals and grou	and (500VDC insulation resistance	PW/AUX. Bob COC. CON.D COC.		
Protection of	degree		IP1XB						
Weight			0.16kg						
g			One-touch connector for commun	ication (Trans	smission circ	uifl	CON.E		
			5-pin IDC plug is sold separately:	=		a.,			
	Commu	nication part	<optional></optional>				CC-Link		
External			Online connector for communicati	ion: A6CON-L	LJ5P				
connection			One-touch connector for power su			ver supply, FG]			
system			5-pin IDC plug is sold separately:	,		11.77			
	Power s	upply part	<optional></optional>						
			Online connector for power supply	y: A6CON-PV	VJ5P				
	I/O part		Connector for I/O (40 pins, M3 sc						
Applicable I			TH35-7.5Fe, TH35-7.5Al (complia		60715)		†		
1.1	Connec	tor for	Applicable cable:		-,		†		
	commu		FANC-110SBH, FA-CBL200PSBH, CS-110						
			0.66 to 0.98mm² (18 AWG)						
Applicable	Connec	tor for power	(φ2.2 to 3.0mm (A6CON-PW5P), φ2.0 to 2.3mm (A6CON-PW5P-SOD)]						
wire size supply and FG wire diameter: 0.16mm or more									
Insulating coating material: PVC (heat-resistant)							_		
• 0.08 to 0.			• 0.08 to 0.3mm ² (28 to 22 AWG)	stranded wire	e (A6CON1 a	and A6CON4)*1			
Connector for I/O			• 0.08 to 0.2mm ² (28 to 24 AWG)						
• 0.08mm² (28 AWG) stranded wire, φ0.25mm (30					(30 AWG) si	ngle wire (A6CON3)	<u> </u>		
Applicable connector for I/O A6CON1 (soldering type), A6CON2 (crimping type), A6CON3 (IDC type),						N3 (IDC type),			
A 0005 = = =			A6CON4 (soldering type)				+		
Accessory			User's manual				L		

^{*1} Use cables with outside diameter of 1.3mm or shorter to connect 40 cables to the connector. In addition, consider the amount of current to be used and select appropriate cables.

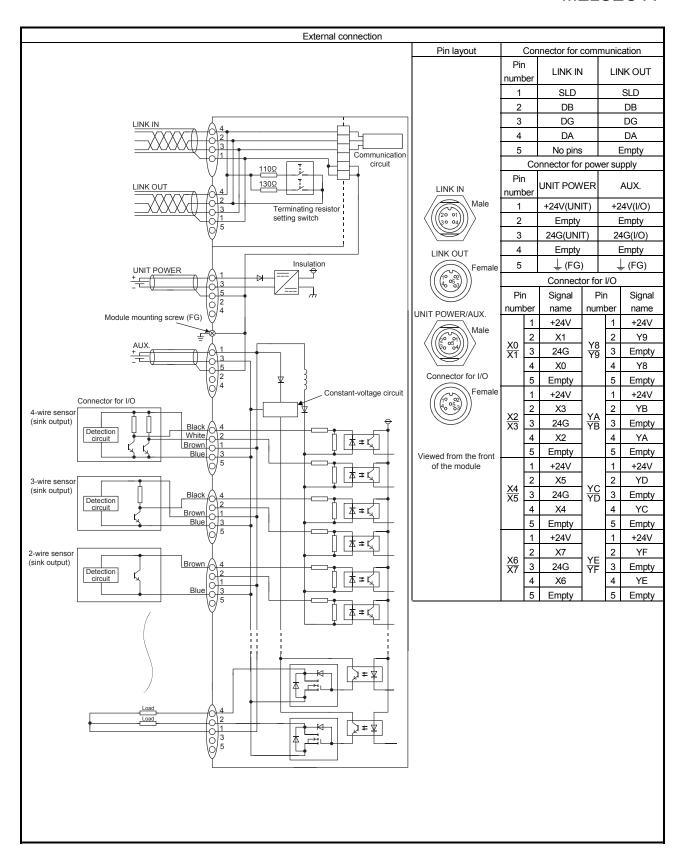




6.6 Waterproof Type Combined Module

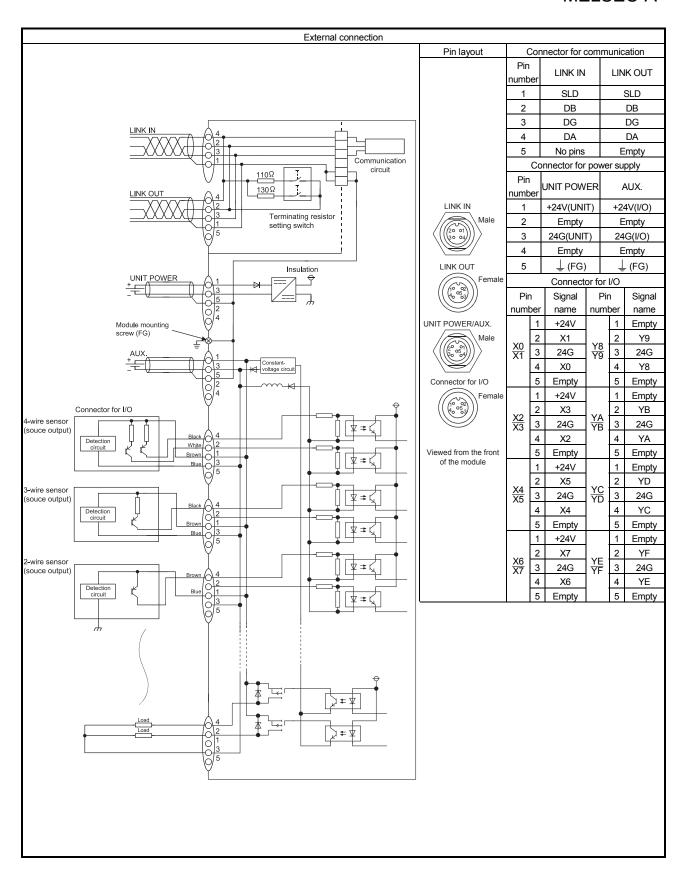
6.6.1 AJ65FBTA42-16DT combined module

	Type		DC in	put transisto	r output combined module	
Item				TA42-16DT		Appearance
	ln	put			Output	
Number of input po	ints	8 points	Number of o	utput points	8 points	
Isolation method		Photocoupler	Isolation me	thod	Photocoupler	1
Rated input voltage		24VDC	Rated load v	oltage	24VDC	
Rated input current		Approx. 7mA	Operating lo range	ad voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Operating voltage ra	ange	20.4 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	ırrent	0.5A/point, 2.4A/common	
Max. number of siminput points	nultaneous	100%	Max. inrush	current	1.0A, 10ms or less	LINK O
ON voltage/ON curr	rent	14VDC or higher/ 3.5mA or higher	Leakage cur	rent at OFF	0.25mA or lower	
OFF voltage/OFF c	urrent	6VDC or lower/1.7mA or lower	Max. voltage	e drop at ON	0.15VDC or lower (TYP.) 0.5A, 0.25VDC or lower (MAX.) 0.5A	MEL SEC AJ66F8TA42-160T
Input resistance		Approx. 3.3kΩ	Output type		Sink type	CC-Link STATEON NO. POVEMO DL RUN
Response time	OFF→ON ON→OFF	1.5ms or less (at 24VDC) 1.5ms or less (at 24VDC)	Protection fu	ınction	Overload protection, overheat protection	STATUN NUT
			Response	OFF→ON	0.5ms or less	UNIT POWER AUX. X70 6 9/F
			time	ON→OFF	1.5ms or less (resistive load)	
			External	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
			power supply for output part	Current	10mA or lower (at 24VDC and all points ON), excluding external load current	X0 Y8 Y9
Input type		Positive common (sink type)	Surge suppr	essor	Zener diode	X2 (C) YA YA YE
Supply current for codevice	onnected	1.0A or lower/common				YE YE
Wiring method for o	ommon	16 points/common (2- to 4-wire,	waterproof cor	nector type))	
Number of occupied	d stations	32-point assignment/station (16 p	points used)			
Module power	Voltage	20.4 to 26.4VDC (ripple ratio: wit	hin 5%)			
supply	Current	50mA or lower (at 24VDC and al	l points ON)			
Noise immunity		Noise voltage 500Vp-p, noise wid noise frequency 25 to 60Hz (DC		nulator condi	tion)	
Withstand voltage 500VAC for 1 minute between all D0						†
Insulation resistance $10M\Omega$ or higher between all DC external terminals and ground (500VDC insulatester)					•	
Protection degree IP67						
Weight 0.40kg						
Accessory User's manual						
Optional item Waterproof cap: A6CAP-WP2 (20 pieces)						
Other connecting de	evices	Refer to Section 1.6.1.				
<u> </u>						



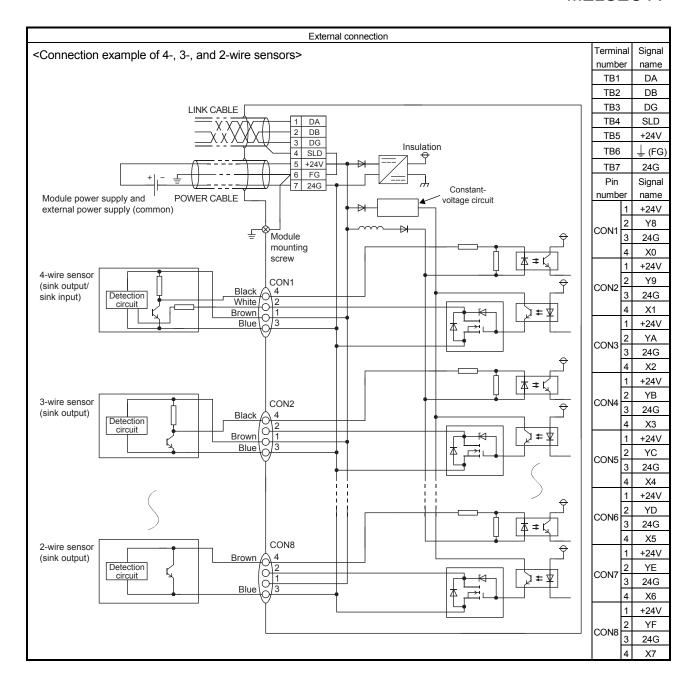
6.6.2 AJ65FBTA42-16DTE combined module

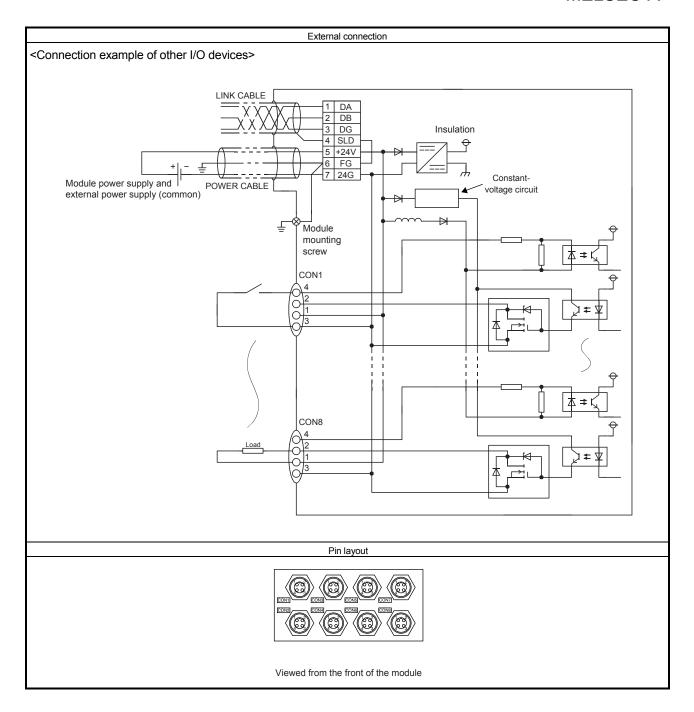
Type DC input transistor output combined mod						
Item			AJ65FE	3TA42-16DTI	E	Appearance
	In	put			Output	
Number of input po	ints	8 points	Number of o	output points	8 points	
Isolation method		Photocoupler	Isolation me	ethod	Photocoupler	7
Rated input voltage		24VDC	Rated load voltage 2		24VDC	
Data diametarina		A	Operating lo	oad voltage	20.4 to 26.4VDC	
Rated input current		Approx. 7mA	range		(ripple ratio: within 5%)	
Operating voltage ra	ange	20.4 to 26.4VDC (ripple ratio: within 5%)	Max. load c	urrent	1.0A/point, 4A/common	
Max. number of siminput points	nultaneous	100%	Max. inrush	current	2.0A, 10ms or less	
ON voltage/ON curi	rent	14VDC or higher/ 3.5mA or higher	Leakage cu	rrent at OFF	0.3mA or lower	
OFF voltage/OFF c	urrent	6VDC or lower/1.7mA or lower	May valtas	a draw at ON	0.15VDC or lower (TYP.) 1.0A,	
Input resistance		Approx. 3.3kΩ	iviax. voitag	e drop at ON	0.2VDC or lower (MAX.) 1.0A	
D	OFF→ON	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	MFL SEC A AGGERTAN2-16DTE
Response time	ON→OFF	1.5ms or less (at 24VDC)	time	ON→OFF	1.5ms or less (resistive load)	MELISEC AUGSPBIAIZ-1601E
			Output type	!	Source type	STATION NO. PROTECT & R.N. PROTECT & D. ERR. NO. 0 178
			Protection function		Overload protection, overheat protection (The LED turns on when any protection is activated.)	LIMIT POWER AUX.
			External	Voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
			supply for output part	Current	15mA or lower (at 24VDC and all points ON), excluding external load current	
Input type		Negative common (source type)	Surge supp	ressor	Zener diode	X2 X3 YB
Supply current for codevice	onnected	1.0A or lower/common				
Wiring method for o		16 points/common				
willing method for d	JOHIHOH	(input: 2- to 4-wire waterproof con	nector type,	output: 2-wire	e waterproof connector type)	
Number of occupied	d stations	32-point assignment/station (16 p	oints used)			L X6 A HONE YE
Module power	Voltage	20.4 to 26.4VDC (ripple ratio: with	nin 5%)			
supply	Current	45mA or lower (at 24VDC and all	points ON)			
Noise voltage 500Vp-p, noise widtl			lth 1µs,			
Noise immunity noise frequency 25 to 60Hz (DC to			type noise sir	mulator condi	ition)	
Withstand voltage 500VAC for 1 minute between all			DC external	terminals an	d ground	
Insulation resistance $10M\Omega$ or higher between all DC extension tester)			external termi	nals and gro		
Protection degree IP67						†
Weight 0.40kg						1
Accessory User's manual						1
Optional item	· · · · · · · · · · · · · · · · · · ·					†
Other connecting de	evices	Refer to Section 1.6.1.	,			1
Other connecting devices Refer to Section 1:6.1.						•



6.6.3 AJ65SBTW4-16DT combined module

		Туре		DC	input transis	tor output combined module	
Item		.,,,,,			SBTW4-16D		Appearance
		Input				Output	
Number of i	nput points		8 points	Number of o	utput points	8 points	
Isolation me	ethod		Photocoupler	Isolation me	thod	Photocoupler	
Rated input	voltage		24VDC	Rated load v	/oltage	24VDC	
Rated input	current		Approx. 5mA	Operating lo range	ad voltage	20.4 to 26.4VDC (ripple ratio: within 5%)	
Operating voltage range		20.4 to 26.4VDC (ripple ratio: within 5%)	Max. load cu	urrent	0.5A/point, 2.4A/common		
Max. numbe	er of simultaneo	us input	100%	Max. inrush	current	1.0A, 10ms or less	
ON voltage/	ON current		14VDC or higher/ 3.5mA or higher	Leakage cui	rent at OFF	0.25mA or lower	
OFF voltage	e/OFF current		6VDC or lower/ 1mA or lower	Max. voltage	e drop at ON	0.3VDC or lower (TYP.) 0.5A, 0.6VDC or lower (MAX.) 0.5A	
Input resista	ance		Approx. 4.7kΩ	Output type		Sink type	
Response ti	ime		1.5ms or less (at 24VDC)	Protection fu	ınction	Overload protection, overvoltage protection, overheat protection	
		UN→UFF	1.5ms or less (at 24VDC)	Response	OFF→ON	0.5ms or less	
				time	ON→OFF	1.5ms or less (resistive load)	RUN RUN
						20.4 to 26.4VDC	MASSO ONE AND
				External	Voltage	(ripple ratio: within 5%)	0 00000000 WHERE
				power		13mA or lower	
				supply for output part	Current	(at 24VDC and all points ON), excluding external load current	
Input type			Positive common (sink type)	e) Surge suppressor Zener diode			
Wiring meth	od for common		16 points/common (4-wire, v	vaterproof cor	nector type)		
			Same as that for the module				BNO BNO
Number of o	occupied station		32-point assignment/station		ed)		
Module pow	er supply	Voltage	20.4 to 26.4VDC (ripple ratio				
		Current	50mA or lower (at 24VDC at		N)		
Noise immu	ınity		Noise voltage 500Vp-p, nois noise frequency 25 to 60Hz		o oimulator o	oppdition)	
Withstand v	oltago		500VAC for 1 minute between	 (6) (6)			
vviti istariu v	ollage		10M Ω or higher between all	CONT			
Insulation re	esistance		resistance tester)				
Protection d	legree		IP67				
Weight			0.70kg	Powers			
_			7-point two-piece terminal bl				
			M3×5.2 screw (tightening to	Tevo Colei			
External cor	nnection system	1	Waterproof connector				THE
External co.			[compliant with IEC 60947-5	-2, M12, male	, 4 pins, IP6	7] (connector for I/O part)	
			<optional></optional>	(20 pieces) 1	votorproof or	on: A6CAD WD1 (20 pieces)	
			Dustproof cap: A6CAP-DC1 Applicable cable size: \$5.0 to		vaterproor ca	ap. ACCAF-WF 1 (20 pieces)	+
			• RAV1.25-3 (compliant with				
Applicable	Transmission o		[Applicable wire size: 0.3 to	,			
wire size	module power	supply part	 V2-MS3, RAP2-3SL, TGV2 	2-3N			
[Applicable wire size: 1.25				to 2.0mm ² (16	to 14 AWG) stranded wire]	
	Connector for I/O –						
Module top-cover 0.54 to 0.64N•m							
	mounting screv						_
Tightening Module front-cover 0.54 to 0.64N•m							
torque mounting screw (M3)						_	
range Module mounting screw		1 27 to 1 47N					
	(M4 with plain finished round)		1.27 to 1.47N•m				
	Nut for pipe		0.99 to 1.48N•m				
			Applicable cable size: $\phi 5.0 \text{ to}$				
Accessory	- opcomoduorie		User's manual, Waterproof)		1
			,	<u>, _</u> p.0000	,		1





7 HANDLING OF COMPACT REMOTE I/O MODULES

7.1 Handling and Installation Precautions

This section lists the precautions for handling and installing the compact remote I/O module for the CC-Link system.

MARNING

• Do not touch any terminal or connector while power is on. Doing so will cause electric shock.

CAUTION

- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- Do not disassemble or modify the module.
 Doing so may cause failure, malfunction, injury, or a fire.
- Do not directly touch any conductive part of the module. Doing so can cause malfunction or failure of the module.
- Do not drop or apply any strong shock to the module. Doing so may damage the module.
- Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Tighten the terminal screw within the specified torque range.
 Undertightening can cause fire or malfunction.
 - Overtightening can damage the screw, resulting in short circuit or malfunction.
- When disposing of this product, treat it as industrial waste.
- Use the module in an environment that meets the general specifications in this manual.
 - Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- Securely fix the module with a DIN rail or mounting screws. Tighten the screws within the specified torque range.
- Undertightening can cause drop of the screw, short circuit or malfunction. Overtightening can damage the screw, resulting in drop or short circuit.
- Shut off the external power supply (all phases) used in the system before mounting
- or removing a module to/from a control panel.

 Failure to do so may cause the module to fail or malfunction.
- (1) Tighten the module mounting screw or terminal block screw within the following torque range. Overtightening can damage the module case.
 - (a) Terminal block type, one-touch connector type, or FCN connector type

Screw	Tightening torque range		
Module mounting screw (M4 screw with plain washer finished round)	0.78 to 1.08N·m		
Terminal block screw (M3)	0.59 to 0.88N·m		
Terminal block installation screw (M3.5)	0.68 to 0.98N·m		

(b) Waterproof type (AJ65SBTW□-16□)

Screw	Tightening torque range
Module top cover mounting screw (M3)	0.54 to 0.64N·m
Module front cover mounting screw (M3)	0.54 to 0.64N·m
Nut for pipe	0.99 to 1.48N·m
Module mounting screw (M4 screw with plain washer finished round)	1.27 to 1.47N·m
Terminal block screw (M3)	0.59 to 0.88N·m
Terminal block installation screw (M3.5)	0.68 to 0.98N·m

7 - 1 7 - 1

1

(c) Low profile waterproof type (AJ65FBTA□-16□)

Screw	Tightening torque range
Communication adapter mounting screw (M4)	0.42 to 0.58N·m
Module mounting screw (M4)	0.78 to 1.18N·m
Waterproof cap (A6CAP-WP2)	0.29 to 0.34N·m

(d) Spring clamp terminal block type or sensor connector (e-CON) type

Screw	Tightening torque range
Mounting bracket (M4)	0.82 to 1.11N·m

POINT

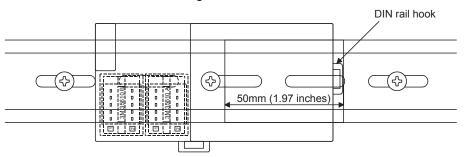
- For a terminal and a screw, avoid adhering to oil.
 Doing so may damage the screw.
- When using two solderless terminals, place them with their backs faced. If not, a screw cannot be full inserted, resulting in damage to the screw.
- Tighten the terminal screw with an applicable driver. Failure to do so may damage the screw.
- (2) A scratch-resistant film is attached on the surface of the module during transportation.

Remove the film before operation.

- (3) Observe the following points when installing a module to a control panel using a DIN rail
 - (a) Applicable DIN rail (compliant with IEC 60715) TH35-7.5Fe TH35-7.5Al
 - (b) Mounting pitch When installing a DIN rail to a control panel, keep mounting pitches 200mm (7.87 inches) or less.
 - (c) Area where screws cannot used for Din rail installation
 When installing the AJ65VBTCE□-16□ and AJ65VBTCE□-32□ to the DIN
 rail horizontally as shown below, tighten a screw so that a certain distance will
 be ensured between the screw and the DIN rail hook on the right side of
 module.

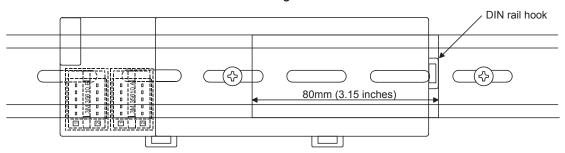
Failure to do so may cause the screw to interfere with the DIN rail hook.

 For AJ65VBTCE□-16□
 Tighten a screw keeping a distance of 50mm (1.97 inches) or more from the DIN rail hook on the right side of module.



2) For AJ65VBTCE□-32□

Tighten a screw keeping a distance of 80mm (3.15 inches) or more from the DIN rail hook on the right side of module.



(4) When mounting the compact remote I/O module to a DIN rail, push in the DIN rail hook located at the bottom of the module until it clicks.

For AJ65SBTB1-8 \square , AJ65SBTB1-16 \square , AJ65SBTC4-16 \square , AJ65SBTC1-32 \square ,

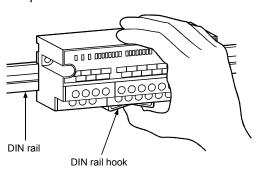
AJ65SBTCF1-32 □, AJ65SBTB2-8 □,

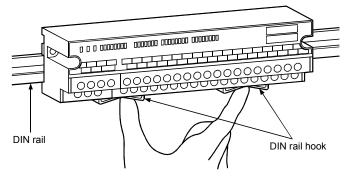
AJ65SBTB2N-8 □, AJ65SBTB32-8 □, AJ65VBTS □ -16□, AJ65VBTCE □ -8 □.

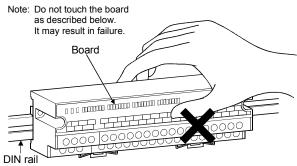
AJ65VBTCE □ -16 □

compact remote I/O modules

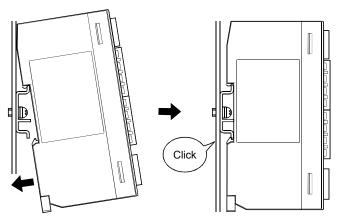
For AJ65SBTB1B-16 □, AJ65SBTB1-32 □, AJ65SBTB2-16 □, AJ65SBTB2N-16□, AJ65SBTB32-16□, AJ65SBTB32-16□, AJ65VBTS□-32□, AJ65VBTCE□-32□ compact remote I/O modules





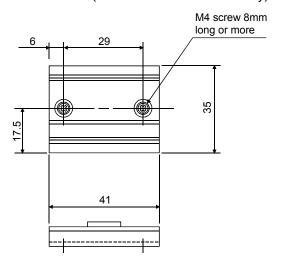


(5) When mounting the compact remote I/O module on the DIN rail, put its upper hook onto the fixing bracket and push the module until it clicks.

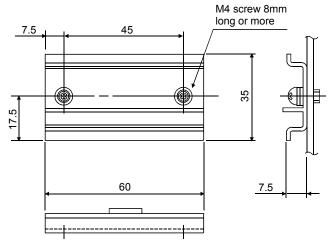


[Mounting dimensions]

(a) A6PLT-J65V1 (For module width 41mm only)

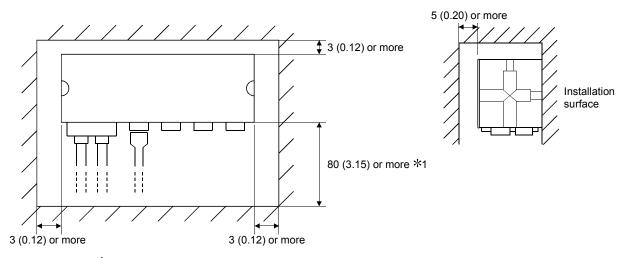


(b) A6PLT-J65V2 (For module width 60mm only)



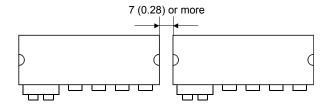
- Unit: mm
- (6) Do not install the compact remote I/O module to the place where:
 - (a) an ambient temperature is outside the range of 0 to 55°C (0 to 45°C for the waterproof remote I/O module),
 - (b) ambient humidity is outside the range of 10 to 99%RH,
 - (c) condensation occurs due to a sudden temperature change,
 - (d) corrosive gas or combustible gas is present,
 - (e) conductive powder (such as dust and iron powder), oil mist, salinity, or organic solvent is filled,
 - (f) the module is exposed to direct sunlight,
 - (g) a strong electric field or strong magnetic field is generated, and
 - (h) the module is subject to vibration or shock.

- (7) When installing the compact remote I/O module into a panel, etc., provide 60mm (2.36 inches) or more of space between the top and bottom of the module and other structures or parts so that good ventilation and ease of operation when exchanging modules can be secured.
- (8) Install the compact remote I/O module on a level surface. If the surface is uneven, unnecessary force is applied to the printed circuit board, causing malfunction.
- (9) When installing the waterproof-type remote I/O module, provide the space shown in the figure below between the top and bottom of the module and other structures or parts so that good ventilation can be secured and that interference and application of load on the waterproof connector can be prevented. When connecting two modules in parallel, secure 5mm (0.2 inches) of space between them.



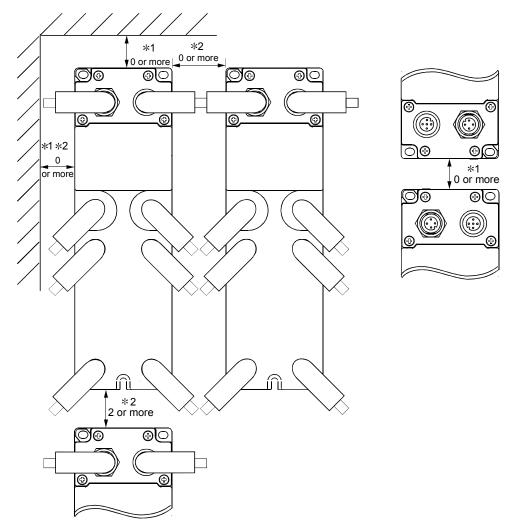
*1 Provide a space so that no load is applied to the cable (the space differs depending on the waterproof connector used).

<When two modules are installed in parallel>



Unit: mm (inch)

(10) If a waterproof cap is being installed on the low profile waterproof type remote I/O module, in order to improve ventilation and also to prevent interference, as well as to prevent a load from bearing on the waterproof connector, all the distances shown in the following figures between the module's side surfaces and the structure or parts.



- *1 If you disconnect and connect the communications adapter, set the operating distance using a screwdriver, etc.
- *2 If you are using a right angle type waterproof plug or Y branch connector, set a distance where no load will be brought to bear on the cable.

(11) When installing the sensor connector (e-CON) type modules in parallel, take intervals between the modules as shown below.

(The interval is required for the size of a DIN rail hook or mounting brackets.)

Installation method of the module	Installation orientation of the module	Interval*3
	Basic, Upside down (vertical installation)	5mm
Using a DIN rail ^{*1}	Basic, Upside down (horizontal installation)	5mm
	Basic, Upside down (vertical installation)	5mm
Using screws ¹²	Basic, Upside down (horizontal installation)	15mm

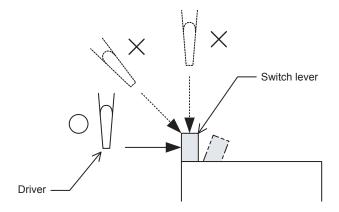
- * 1 This is the case when a DIN rail is installed horizontally. Do not apply this interval to the AJ65VBTCE□-8□.
- * 2 This is the case when mounting brackets are attached on the top and bottom sides of the module. If the brackets are attached on the right and left sides of the module, apply the intervals reversely. (The interval for the vertical installation is 15mm and the interval for the horizontal installation is 5mm.)
- * 3 The interval indicates the distance from the modules that are installed on the either side.
- (12) When handling the DIP switch, observe the following:
 - (a) Use a compact driver.

Do not handle the DIP switch with a mechanical pencil or a sharp, such as a pair of tweezers and a needle.

If the lead or lead powder of a mechanical pencil enters into the switch, a failure may result. Or if it drops into a circuit board, an electrical problem may result.

Using a sharp may damage the switch, resulting in failure.

(b) Slide the switch lever one by one horizontally to the intended direction. If the driver pushes the switch lever at an angle or from the right above, the switch may be damaged or transformed due to the pressing load.



7.2 Wiring Procedures for One-touch Connector Plugs

7.2.1 List of one-touch connector plugs

The following table lists one-touch connector plugs applicable to the CC-Link system compact remote I/O module.

			Specifications				
Product name	Mitsubishi model name	Part model name (manufacturer)	Applicable cable	size (core)	Applicable cable size (diameter)	Maximum rated current	Color of the cover
One-touch connector plug	A6CON-P214	33104-6000FL *5	0.14 to 0.2mm ² (26 to 24 AWG) 0.3 to 0.5mm ² (22 to 20 AWG)		φ1.0 to 1.4mm	- 2A*7	Transparent
*1, *4	A6CON-P220	33104-6100FL *5			φ1.4 to 2.0mm		Yellow
	A6CON-P514	33104-6200FL *5			φ1.0 to 1.4mm	3A*7	Red
	A6CON-P520	33104-6300FL *5			φ1.4 to 2.0mm		Blue
One-touch connector plug for communication	A6CON-L5P	35505-6000- B0M GF*5	Communica 0.5mm² (20 Shielded	AWG)	φ2.2 to 3.0mm		Red
*2, *4 One-touch connector plug for power supply and FG *2, *4, *6	A6CON-PW5P	35505-6080-A00 GF*5	0.5mm² (20 AWG) 0.75mm² (0.66 to 0.98mm²) (18 AWG) Wire diameter: 0.16mm or	φ2.2 to 3.0mm		Gray	
	A6CON-PW5P- SOD	35505-6180-A00 GF*5	more Insulating coating material: PVC (heat-resistant)		φ2.0 to 2.3mm	7A*7	Blue
Online connector for communication *3	A6CON-LJ5P	35720-L200-B00 AK*5	I	_	_	_	_
Online connector for power supply and FG *3	A6CON-PWJ5P	35720-L200-A00 AK*5		_	_	_	_

^{*1} The A6CON-P□□□ (manufactured by Mitsubishi) is available in packs of 20 pieces.

^{*2} The A6CON-□5P (manufactured by Mitsubishi) is available in packs of 10 pieces.

^{*3} The A6CON-□J5P (manufactured by Mitsubishi) is available in packs of 5 pieces.

^{*4} One-touch connector plugs can no longer be used once crimped.

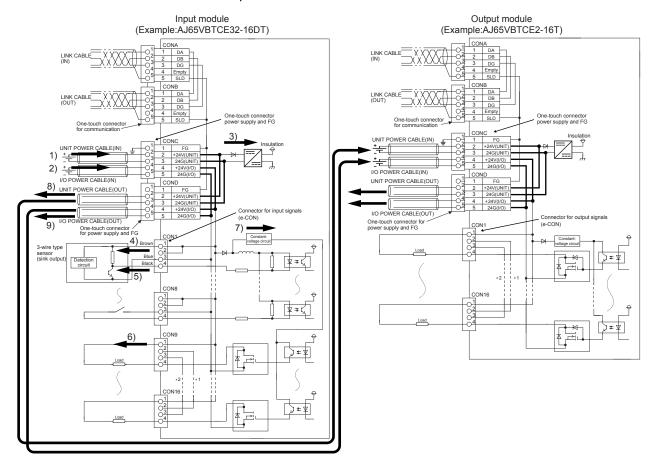
^{*5} The manufacturer is Sumitomo 3M Limited.

^{*6} Check the outside diameter of an applicable cable and select a connector.

^{*7} Keep the current within the allowable range of the connected cable.

7.2.2 Precautions for transition wiring of one-touch connector for power supply and FG

Current flows in the modules when they are transition wired through one-touch connectors for power supply and FG. Design the system so that the current flows in each module equals to or lower than the maximum rated current shown below.



No.	Power port	Connector	Maximum rated current
1)	Module power supply (IN)	One-touch connector for power supply and FG (No.2 and 3 pins of CONC)	7A*1
2)	I/O power supply (IN)	One-touch connector for power supply and FG (No.4 and 5 pins of CONC)	7A*1

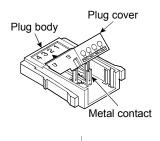
No.	Power supply	Power port (source)	Description	Maximum current consumption	
3)	Module power supply	Module power supply (IN)	Power supply for CC-Link modules	Module power supply	
4)	Power supply for input device		Power supply for input devices connected, such as sensors	Supply current for connected device	
5)	Input current		Input signals from input devices	Rated input current	
6)	External load power supply	I/O power supply (IN)	Power supply that is consumed by the load	Maximum load current	
7)	External power supply for output part		Power supply for output circuits	External power supply for output part current	
8)	Module power supply (OUT)	Module power supply (IN)	I devices connected by transition within		
9)	I/O power supply (OUT)	I/O power supply (IN)	Power supply for the modules and external devices connected by transition wiring	and external devices connected	

^{*1} The value of 1) equals to the sum of 3) and 8). The value of 2) equals to the sum of 4), 5), 6), 7), and 9). Design the system so that each value of 1) and 2) equals to or lower than the maximum rated current (7A).

7 - 10 7 - 10

7.2.3 Wiring procedures for the one-touch connector

This section describes the wiring procedures for the one-touch connector of the one-touch connector type or connector type compact remote I/O module.

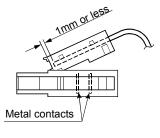


1) Check the connector.

Check that a plug cover is attached to the plug.

Note: Do not press the plug cover firmly into the plug before a cable is inserted.

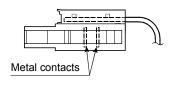
Once crimped, the plug can no longer be used.



2) Insert a cable. (*1)

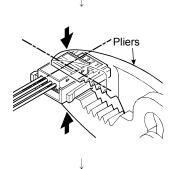
Lift the end of the plug cover and insert a cable until it reaches the other end of the cover (within 1mm from the other end). Failure to do so may cause an improper crimping.

Note: When inserting the cable, prevent the cable from sticking out from the plug cover end.



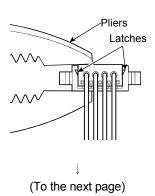
3) Set the plug cover.

After the cable is inserted, put down the plug cover and set it to the position where the metal contacts fit into the cover.



4) Crimp the plug cover into the plug.

Hold the center of the plug cover with pliers and press it vertically into the plug.

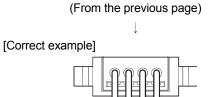


5) Press the latches into the plug.

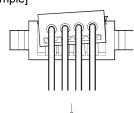
After crimping, press the latches located at both ends of the plug cover into the plug.

Check that the cover is fixed to the plug with the latches.

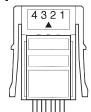
7 - 11 7 - 11



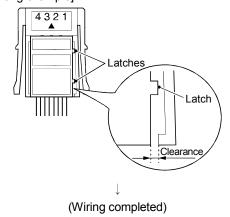
[Wrong example]



[Correct example]



[Wrong example]



Check that the plug cover is horizontally-embedded to the plug.
 Check also that the cover is not floating.

Note: As shown in the wrong example on the left, if the cover is not horizontally-embedded or the cover is floating, it may result in improper crimping.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

Check the crimped state from the top.
 Check that there is no clearance between the plug and the cover.

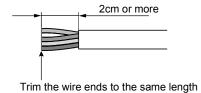
Note: As shown in the wrong example on the left, if the latch is not securely engaged, clearance occurs between the plug and the cover.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

*1 When a cabtyre cable is used:

Strip the cable jacket 2cm or more.

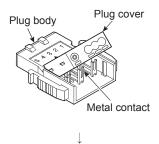
If the wire lengths are not even, trim their ends with nippers to the same length.



7 - 12 7 - 12

7.2.4 Wiring procedures for the one-touch connector for communication

This section describes the wiring procedures for the one-touch connector for communication used for the connector type compact I/O module.



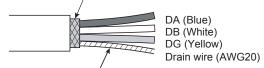
1) Check the connector.

Check that a plug cover is attached to the plug.

Note: Do not press the plug cover firmly into the plug before a cable is inserted.

Once crimped, the plug can no longer be used.

Cut the shield wire, aluminum tape and braid.

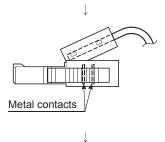


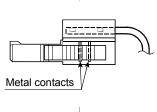
Stretch the drain wire and twist it from the base. (3cm in length, 7 times or more)

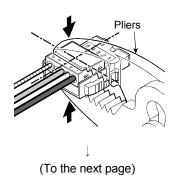
2) Prepare a communication cable for connection.

Strip the cable jacket 3cm or more and perform the processing described on the left.

If the wire lengths are not even, trim their ends with nippers to the same length.







3) Insert a cable.

Lift the end of the plug cover and insert a cable until it reaches the other end of the cover (within 1mm from the other end). Failure to do so may cause an improper crimping.

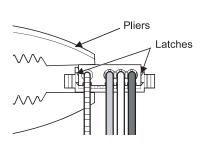
4) Set the plug cover.

After the cable is inserted, put down the plug cover and set it to the position where the metal contacts fit into the cover.

 Crimp the plug cover into the plug.
 Hold the center of the plug cover with pliers and press it vertically into the plug.

7 - 13 7 - 13

(From the previous page)

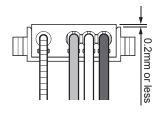


6) Press the latches into the plug.

After crimping, press the latches located at both ends of the plug cover into the plug.

Check that the cover is fixed to the plug with the latches.

[Correct example]



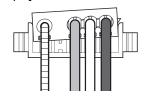
7) Check the crimped state from the side.

Check that the plug cover is horizontally-embedded to the plug. Check also that the floating part of the cover is within 0.2mm.

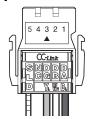
Note: As shown in the wrong example on the left, if the cover is not horizontally-embedded or the floating part is 0.2mm or more, it may result in improper crimping.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

[Wrong example]



[Correct example]



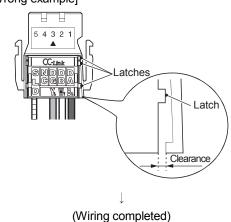
8) Check the crimped state from the top.

Check that there is no clearance between the plug and the cover

Note: As shown in the wrong example on the left, if the latch is not securely engaged, clearance occurs between the plug and the cover.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

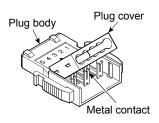
[Wrong example]

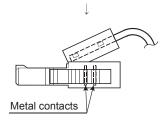


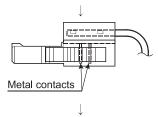
7 - 14 7 - 14

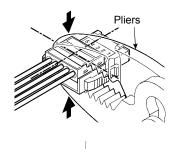
7.2.5 Wiring procedures for the one-touch connector for power supply and FG

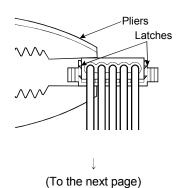
This section describes the wiring procedures for the one-touch connector used for power supply and FG of the connector type compact I/O module.











1) Check the connector.

Check that a plug cover is attached to the plug.

Note: Do not press the plug cover firmly into the plug before a cable is inserted.

Once crimped, the plug can no longer be used.

2) Insert a cable. (*1)

Lift the end of the plug cover and insert a cable until it reaches the other end of the cover (within 1mm from the other end). Failure to do so may cause an improper crimping.

Note: Use cables applicable to the module.

3) Set the plug cover.

After the cable is inserted, put down the plug cover and set it to the position where the metal contacts fit into the cover.

 Crimp the plug cover into the plug.
 Hold the center of the plug cover with pliers and press it vertically into the plug.

5) Press the latches into the plug.

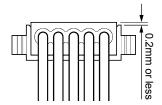
After crimping, press the latches located at both ends of the plug cover into the plug.

Check that the cover is fixed to the plug with the latches.

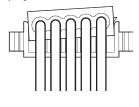
7 - 15 7 - 15



[Correct example]



[Wrong example]



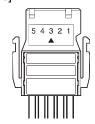
6) Check the crimped state from the side.

Check that the plug cover is horizontally-embedded to the plug. Check also that the floating part of the cover is within 0.2mm.

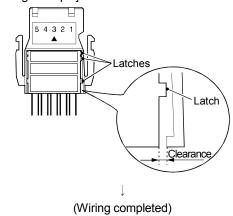
Note: As shown in the wrong example on the left, if the cover is not horizontally-embedded or the floating part is 0.2mm or more, it may result in improper crimping.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

[Correct example]



[Wrong example]



7) Check the crimped state from the top.

Check that there is no clearance between the plug and the cover.

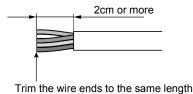
Note: As shown in the wrong example on the left, if the latch is not securely engaged, clearance occurs between the plug and the cover.

Press the plug cover firmly into the plug with pliers. (Refer to the correct example.)

*1 When a cabtyre cable is used:

Strip the cable jacket 2cm or more.

If the wire lengths are not even, trim their ends with nippers to the same length.



7.3 Handling of the Waterproof-type Remote I/O Module

7.3.1 List of dustproof and waterproof caps

The following table lists the model names of dustproof cap and waterproof cap applicable to the CC-Link system waterproof-type remote I/O module.

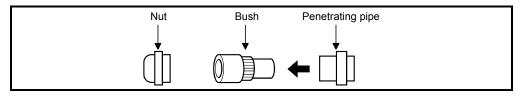
	Mitsubishi model name	Specifications
Dustproof cap *1	A6CAP-DC1	_
Waterproof cap *1	A6CAP-WP1	Protection of degree IP67

^{*1} A pack of A6CAP- □□1 (manufactured by Mitsubishi) includes 20 pieces.

7.3.2 Waterproof plug attachment procedure

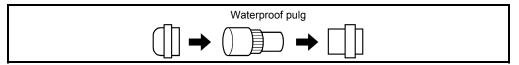
The attachment procedure for the waterproof plug supplied with the AJ65SBTW4-16 \square is shown below. In order to prevent water leakage, attach a waterproof plug to the penetrating pipe for the transmission and module power-supply lines in the following way.

1) Remove the nut and bushing from the penetrating pipe attached to the module.



2) Insert the waterproof plug into the penetrating pipe and secure it by tightening the nut.

Tightening torque: 0.99 to 1.48N·m

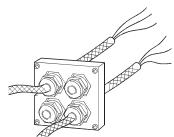


7 - 17 7 - 17

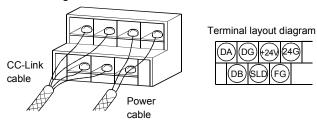
7.3.3 Wiring procedure for the terminal block

This section describes the wiring procedure of a terminal block to the waterproof-type remote I/O module.

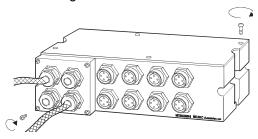
1) Remove the module front cover, and pass the cables through the through pipe for the transmission and module power-supply lines.



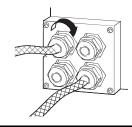
2) Open the module top cover and remove the terminal block, then perform wiring to the terminal block.



3) Secure the terminal block using screws, then fasten the module front and top covers using screws.



4) Tighten the nut* on the through pipe for the transmission and module power-supply lines.



POINT

- Always install a waterproof plug to the unused through pipe for the transmission and module power-supply lines. (Refer to Section 7.3.2.)
- When wiring the transmission and module power-supply lines, please take care not to apply force in excess of 0.39N·m excessive force to the wiring at the inlet.
- In the event of the ambient temperature exceeding 56 °C after wiring the unit, make sure to re-tighten the nuts.

7 - 18 7 - 18

7.4 Handling of the Low Profile Waterproof Type Remote I/O Module

7.4.1 List of waterproof caps

The model name of the waterproof cap applicable to the CC-Link system low profile waterproof type remote I/O module (AJ65FBTA \Box -16 \Box) is shown below. The following table lists the model names of waterproof cap applicable to the CC-Link system low profile waterproof type remote I/O module (AJ65FBTA \Box -16 \Box).

	Mitsubishi Product Model Name	Use
Waterproof cap (20 pieces, Sold separately)	A6CAP-WP2	For LINK OUT connector and I/O connector

POINT	
The waterpro	oof cap (A6CAP-WP1) cannot be used.

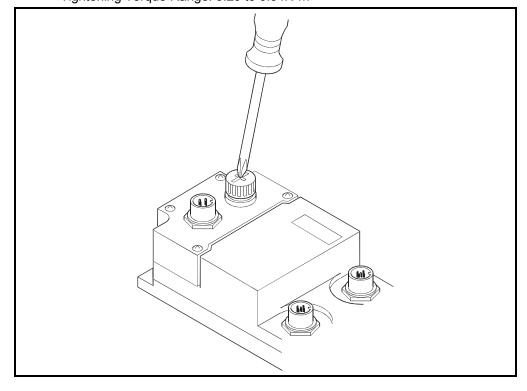
7.4.2 Waterproof cap installation method

The installation method for the waterproof caps packed with the product is shown below.

In order to prevent water penetration, install the waterproof caps on the unused Link Out side connectors and I/O connectors using the following method.

1) Insert the waterproof cap in the empty connector on the main module, then tighten it.

Tightening Torque Range: 0.29 to 0.34N·m



7 - 19 7 - 19

7.5 Connectors and Tools Used for Connecting the FCN Connector Cables

• When connecting the connector cables by crimp-contact, pressure-displacement or soldering, make sure to use the tools listed in the table below. Attach the connectors securely to the module.

> Three types of 40-pin connectors are available for the AJ65□BTCF1-32□ and the AJ65 BTCF1J-32 ; they are soldering type, pressure-displacement type and crimpcontact type.

> Please purchase the required 40-pin connector, and either pressure-displacement or crimp-contact type tool according to the listing below.

(1) Connector types

Туре	Model name
Soldering type connector (Straight-out type)	A6CON1
Crimp-contact type connector (Straight-out type)	A6CON2
Pressure-displacement type connector (Flat cable type)	A6CON3
Soldering type connector (Straight-out/diagonal-out type)	A6CON4

(2) Crimp-contact and pressure-displacement type tools

Туре	Model name	Cable size	Manufacturer
Crimp-contact tool	FCN-363T-T005/H	28 to 24 AWG	
	FCN-367T-T012/H		
	(locator plate)	28 AWG	FUJITSU COMPONENT
Pressure-	FCN-707T-T001/H	(strand cable)	LIMITED
displacement tool	(cable cutter)	30 AWG	LIMITED
	FCN-707T-T101/H (hand press)	(single cable)	

7 - 20 7 - 20

7.6 Attaching and Removing the Protective Cover for the Compact Remote I/O Module

Covering the front of CC-Link system compact remote I/O module with a protective cover can prevent the following accidents:

- Improper contact to the terminal block or connector.
- · Module malfunction resulted from connector drop.

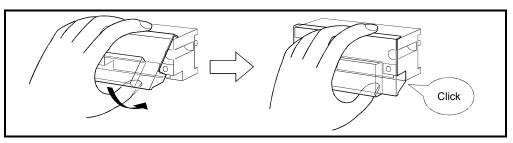
For the model name of the protective cover for the compact remote I/O module, see Section 1.5.

Follow the procedure illustrated below to mount the protective cover on the module.

(1) In the case of A6CVR-8/16/32

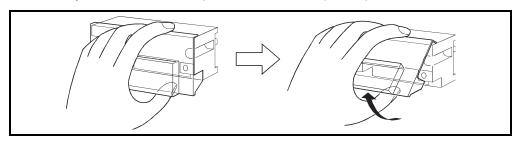
<How to mount>

Hook the top of the protective cover onto the top of the remote I/O module, then push the lower part of the cover toward the module until you hear a click sound.



<How to remove>

Place your thumb under the protective cover and pull it upwards.

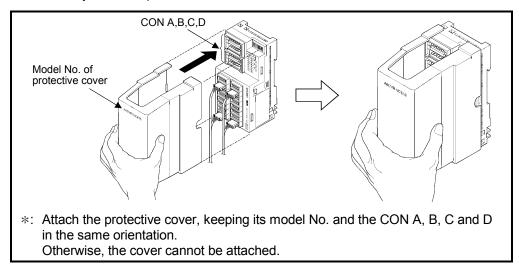


7 - 21 7 - 21

(2) In the case of A6CVR-VCE8/16

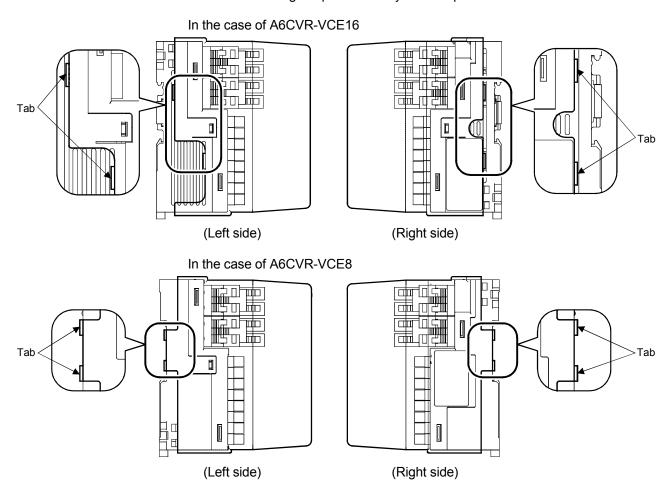
<How to mount>

Confirm the orientation of the protective cover as shown in the diagram below. Then, attach the cover straight to the module as shown by the arrow and push in securely until it stops.



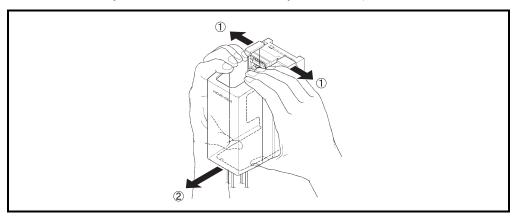
Securely fix tabs of the protective cover to the groove of the module as shown below.

Note that the fixing tab positions vary with the protective cover used.



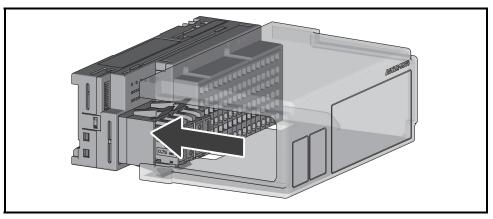
<How to remove>

Extend the width of protective cover slightly as shown by the arrow 1). Then, pull it out vertically from the module as shown by the arrow 2).



(3) In the case of A6CVR-VS16 <How to mount>

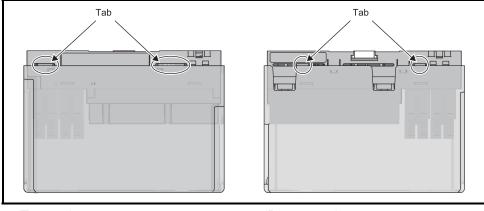
Attach the protective cover as shown below.



Attach the protective cover so that the online connector for communication on the module is opposite to the model name of the protective cover. Do not attach the cover in the direction other than that shown above.

Securely engage tabs of the protective cover with the grooves on the module as shown below.

Note that the locations of tabs vary depending on the protective cover used.

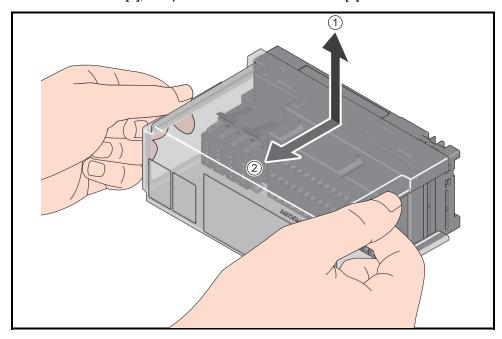


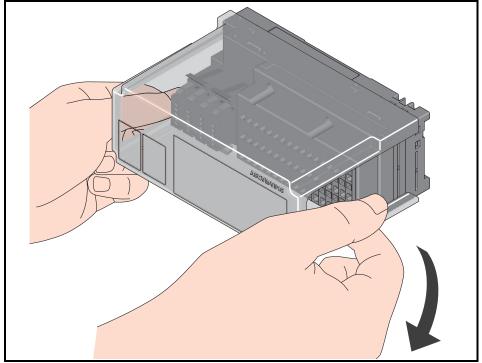
(Top part) (Bottom part)

7 - 24 7 - 24

<How to remove>

Hold the both ends of the protective cover (top part) as shown below. To disengage the tabs from the module, lift up the protective cover in the direction of arrow [1], and pull it in the direction of arrow [2].



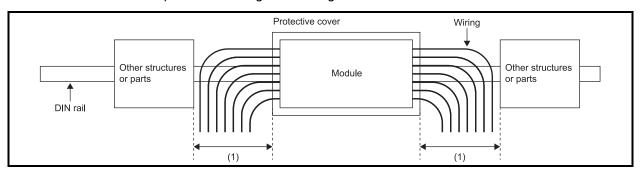


Hold the both ends of the protective cover (bottom part), slightly push it down, and pull it in the direction of arrow [2] as you did for the top part of the cover.

7 - 25 7 - 25

<Pre><Pre>cautions for installing the module>

Using the module with the A6CVR-VS16 (protective cover) attached requires a configuration where cables come out from both sides of the module. Therefore, in such a case, have enough spaces between the module and other structures or parts considering the bending radius of the cables used.

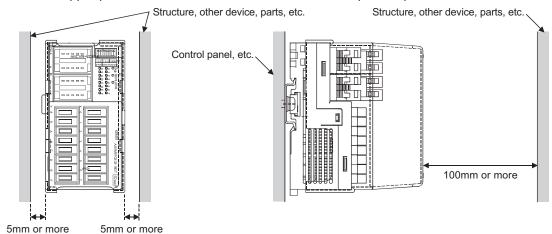


(1) Distance determined considering the bending radius of the cables

7 - 26 7 - 26

POINT

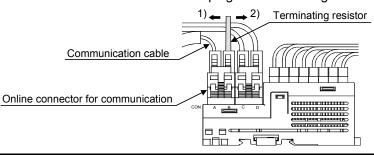
(1) When attaching the protective cover, ensure the space of 50mm or more between the target module and the modules on the right and left sides. Also, ensure the space of 100mm or more over the upper part of the module, so that the cover can be pulled upward.



- (2) Fix the wiring with a clamp or similar parts. Failure to do so may apply force to the protective cover, resulting in it falling from the module. In addition, the wiring cable may be damaged.
- (3) When attaching a one-touch connector plug with terminating resistor (A6CON-TR11(N)) together with an online connector for communication (A6CON-LJ5P), follow the procedure provided below.

Failure to do so may cause the terminating resistor, protective cover and communication cable to interfere with each other.

- Tilt the terminating resistor toward 1) or 2) as shown in the diagram below, and then attach the protective cover.
- · Connect the one-touch connector plug with terminating resistor to CON B.



7 - 27 7 - 27

7.7 Connection Method of CC-Link Dedicated Cable

This section describes how to connect the compact remote I/O module to the master module using CC-Link dedicated cables.

- Shut off the external power supply (all phases) used in the system before wiring. Failure to do so may result in electric shock or damage to the product.
 - After wiring, attach the included terminal cover to the module before turning it on for operation.

Failure to do so may result in electric shock.

• Shut off the external power supply (all phases) used in the system before cleaning the module or retightening the terminal block screw. Failure to do so may cause the module to fail or malfunction.

♠ CAUTION

• Do not install the control lines or communication cables together with the main circuit lines or power cables.

Keep a distance of 100mm (3.9 inches) or more between them.

Failure to do so may result in malfunction due to noise.

• Individually ground the FG terminal of the programmable controller with a ground resistance of 100Ω or less.

Failure to do so may result in electric shock or malfunction.

• Tighten any unused terminal screws within the specified torque range (0.42 to 0.50N·m).

Failure to do so may cause a short circuit due to contact with a solderless terminal.

- Use applicable solderless terminals and tighten them within the specified torque range. If any solderless spade terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
- Check the rated voltage and terminal layout before wiring to the module, and connect the cables correctly.

Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or failure.

• Securely connect the cable connectors.

Poor contact may cause malfunction.

• Place the cables in a duct or clamp them.

If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or malfunction due to poor contact.

• Do not install the control lines or communication cables together with the main circuit lines or power cables.

Failure to do so may result in malfunction due to noise.

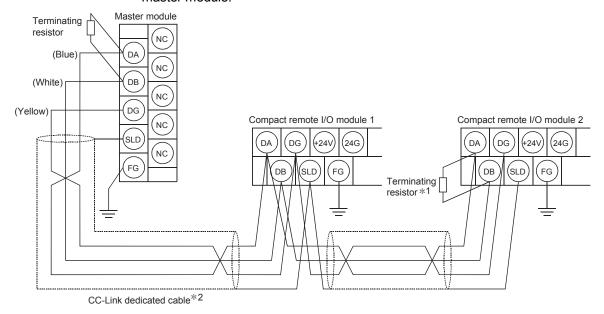
 When disconnecting the cable from the module, do not pull the cable by the cable part.

For the cable with connector, hold the connector part of the cable.

For the cable without connector, loosen the screw first and remove it.

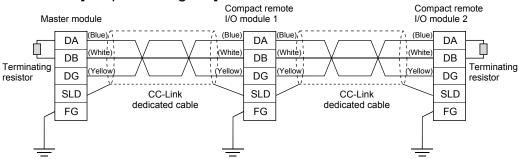
Pulling the cable connected to the module may result in malfunction or damage to the module or cable.

7 - 28 7 - 28

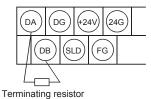


(1) The following figure shows how to connect compact remote I/O modules to a master module.

[Simplified diagram]



*1 Connect a terminating resistor to the compact type remote I/O module used as a terminal station as shown below. (Terminating resistors are provided with a master module.)



*2 Use CC-Link dedicated cables in the CC-Link system.

Performance of the CC-Link system cannot be guaranteed if any cables other than the CC-Link dedicated cables are used.

For the specifications and any inquiries on the CC-Link dedicated cables, refer to the following:

CC-Link Partner Association Website: www.cc-link.org

POINT

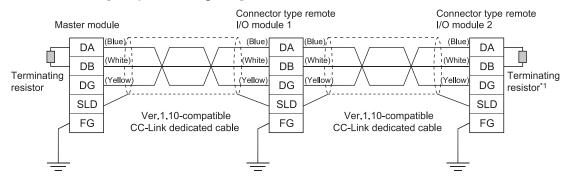
Compact remote I/O modules with an input response of 0.2ms are more susceptible to noise interference than other modules. Keep the wiring of the I/O module away from power cables as much as possible.

Master module Terminating 1 DA 1 DA resistor*1 (NC 2 DB 2 DB (DA (Blue (NC) 4 NC 4 NC (DB (White) (NC CONB (Yellow) 1 DA 1 DA 2 DB 3 DG 3 DG 4 NC 4 NC <u>0</u>5 Terminating resistor*1

(2) The following figure shows how to connect connector type remote I/O modules to a master module.

[Simplified diagram]

Ver.1.10-compatible CC-Link dedicated cable*2



- *1 When a connector type remote I/O module is used as a terminal station, connect a one-touch connector plug with terminating resistor (A6CON-TR11(N)).
- *2 Use CC-Link dedicated cables in the CC-Link system.

Performance of the CC-Link system cannot be guaranteed if any cables other than the CC-Link dedicated cables are used.

For the specifications and any inquiries on the CC-Link dedicated cables, refer to the following:

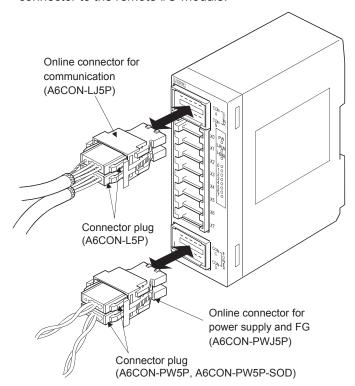
CC-Link Partner Association Website: www.cc-link.org

POINT

Compact remote I/O modules with an input response of 0.2ms are more susceptible to noise interference than other modules. Keep the wiring of the I/O module away from power cables as much as possible.

7 - 30 7 - 30

(3) The following figure shows how to connect a one-touch connector and online connector to the remote I/O module.

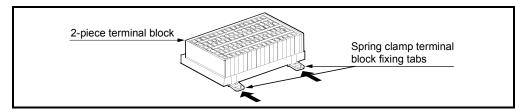


POINT

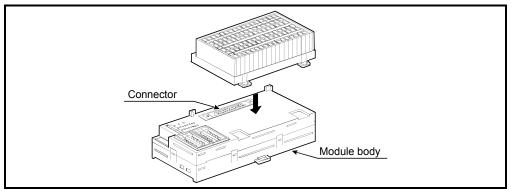
- For a one-touch connector for communication, use Ver.1.10-compatible CC-Link dedicated cables (FANC-110SBH, FA-CBL200PSBH, or CS-110).
 Ver.1.10-compatible CC-Link dedicated cables other than those above, CC-Link dedicated cables, and CC-Link dedicated high-performance cables are not
- To connect or remove a one-touch connector to/from an online connector, refer to the manual included with the online connector.

7 - 31 7 - 31

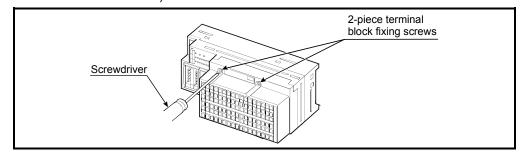
- 7.8 Handling of Spring Clamp Terminal Block Type Remote I/O Module
- 7.8.1 Installation and removal of the spring clamp terminal block
 - (1) Installing the spring clamp terminal block How to install a 2-piece spring clamp terminal block is shown below. Secure the terminal block part using the following method. Incomplete installation may cause fall, short circuit or malfunction.
 - 1) Push the spring clamp terminal block fixing tabs of the 2-piece terminal block in the arrow direction until a click can be heard.



2) Connect the connector (female) of the 2-piece terminal block to the connector (male) of the module body and press it until a click can be heard. Check that both of two fixing tabs are inserted completely.



3) Tighten the 2-piece terminal block fixing screws. (Tightening torque range: 0.34 to $0.46N \cdot m$)



(2) Removing the spring clamp terminal block

Remove the spring clamp terminal block in reverse order of the above installation procedure.

- 1) Loosen the 2-piece terminal block fixing screws.
- 2) Pull out the spring clamp terminal block fixing tabs.
- 3) Lift the 2-piece terminal block to remove it from the main body.

7.8.2 Procedure for wiring the spring clamp terminal block

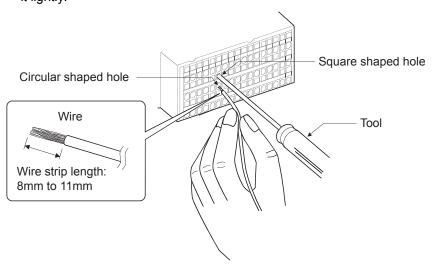
This section describes the procedure for connecting a cable to the spring clamp terminal block remote I/O module.

(1) Precaution for connecting or disconnecting cables

- (a) When inserting two wires into the circular shaped hole of the spring clamp terminal block, use the TGWV TC1.25-T9 (manufactured by NICHIFU Co., Ltd.). Inserting two or more wires without using the TGWV TC1.25-T9 may result in a poor contact to the spring clamp terminal part.
- (b) Strip the wire according to the specification. If the wire strip length is too long, the exposed conductive part may cause electric shock or short circuit. If the wire strip length is too short, it may result in a poor contact to the spring clamp terminal part.
- (c) When using a spring clamp terminal block tool, follow the instruction below. Failure to do so may cause damage of the spring clamp terminal part or the terminal block resin part.
 - Use a dedicated tool for a spring clamp terminal block.
 - Do not insert the wire or the bar solderless terminal before inserting the tool into the square shaped hole.
 - Insert the tool vertically into the hole.

(2) Connecting a cable

- (a) Insert the tool vertically all the way inside the square shaped hole of the remote I/O module.
- (b) Insert the wire or the bar solderless terminal into the circular shaped hole, and remove the tool from the hole.
- (c) Check that the wire or the bar solderless terminal is firmly clamped by pulling it lightly.



(3) Disconnecting a cable

- (a) Insert the tool vertically all the way inside the square shaped hole of the remote I/O module.
- (b) Pull the wire or the bar solderless terminal out of the hole.

7 - 33 7 - 33

(4) Recommended product list

Product name	Model name	Applicable wire size	Contact
Tool (dedicated to spring clamp terminal block)	KD-5339	_	Mitsubishi Electric System Service Co., Ltd.
Bar solderless terminal *1	TGV TC1.25-9T	0.3 to 1.65mm ²	
Dedicated bar solderless terminal tool	TGWV TC1.25-T9*2 NH65A	_	NICHIFU Co., Ltd.
	TE 0.5	0.5mm ²	
Dan aaldadaaa tamainal W4	TE 0.75	0.75mm ²	
Bar solderless terminal *1	TE 1	0.9 to 1.0mm ²	NICHELLO LA
	TE 1.5	1.25 to 1.5mm ²	NICHIFU Co., Ltd.
Dedicated bar solderless terminal tool	NH79	_	

^{*1} Use this product when doing the terminal treatment of the wire and inserting it into the spring clamp terminal block.

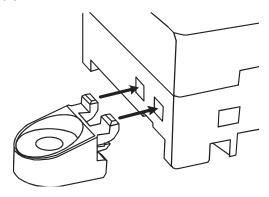
^{*2} Use this product when inserting two wires to one terminal.

7.9 Attaching Mounting Brackets to the Module

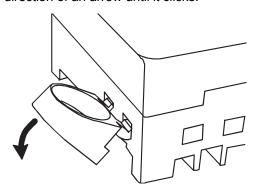
7.9.1 Attachment of mounting brackets

This section describes the procedures for directly installing the AJ65VBTS_-___ or AJ65VBTCE_-__ to a control panel using mounting brackets and screws. If the module is not fixed securely, it can cause drop of the module, short circuit, or malfunction.

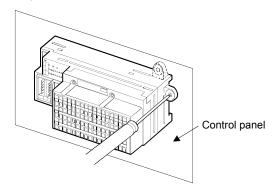
(1) Align the projections of a mounting bracket with the corresponding slots of the module



(2) Obliquely insert the projections to the slots, and press down the mounting bracket in the direction of an arrow until it clicks.



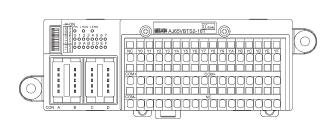
(3) Screw the mounting bracket to a control panel. (Tightening torque range: 0.82 to 1.11N·m)

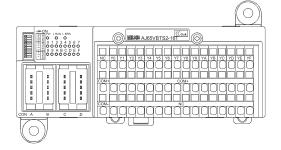


7.9.2 Precautions for attaching mounting brackets

The mounting brackets can be attached differently depending on the modules. Attach them to two positions.

(1) AJ65VBTS \Box -16 \Box The mounting brackets can be attached as shown below (two different ways).

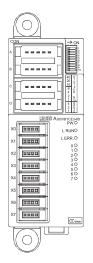


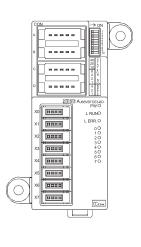


(2) AJ65VBTS \square -32 \square The mounting brackets can be attached as shown below (only one way).



(3) AJ65VBTCE□-8□ The mounting brackets can be attached as shown below (two different ways).

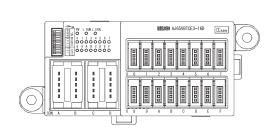


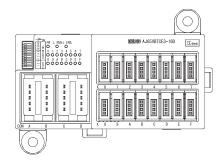


7 - 36 7 - 36

(4) AJ65VBTCE \square -16 \square , AJ65VBTCE \square -32 \square

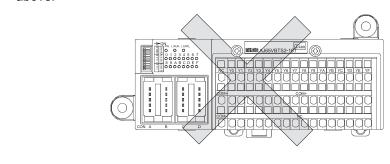
The mounting brackets can be attached as shown below (two different ways).





POINT

• Do not attach the mounting brackets in any ways other than those described above.



7.10 Mounting the DIN Rail Adapter

7.10.1 Specifications

The following table shows the specifications of the DIN rail adapter.

Model	A6DIN1C
Mountable module	AJ65DBTB1-32D, AJ65DBTB1-32T1, AJ65DBTB1-32R, AJ65DBTB1-32DT1, AJ65DBTB1-32DR
External dimensions	174mm (6.85 inches) × 68mm (2.68 inches) × 10mm (0.39 inches)
Weight	0.05kg
Applicable DIN rail type (conforms to IEC 60715)	TH35-7.5Fe, TH35-7.5Al, TH35-15Fe

7.10.2 Handling precautions

(1) The DIN rail adapter is made from resin. Do not drop or apply strong shock to the adapter.

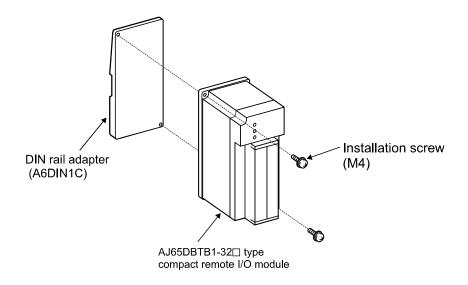
(2) Mounting pitch

When installing a DIN rail to a control panel, keep mounting pitches 200mm (7.87 inches) or less.

7.10.3 Attaching the DIN rail adapter to the module

Use two M4 screws (length: 10mm (0.39 inches)) to attach the DIN rail adapter to the AJ65DBTB1-32 \square type compact remote I/O module.

The tightening torque range is 0.78 to 1.18N•m.



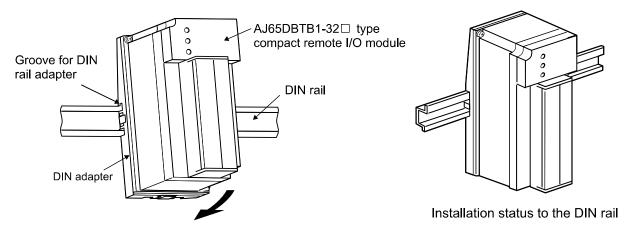
7.10.4 Mounting the module to a DIN rail

This section describes how to mount/remove the module to/from a DIN rail.

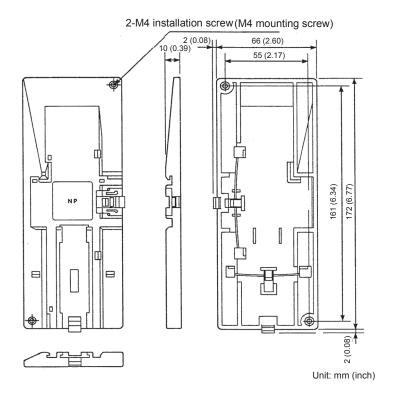
(1) Mounting to a DIN rail

Mount the module with the DIN rail adapter attached to a DIN rail as follows.

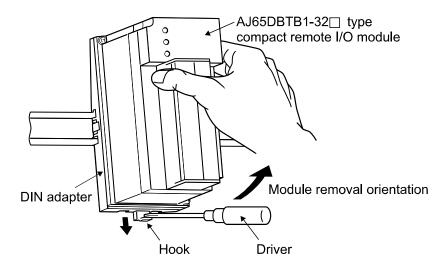
- (a) Insert the groove for DIN rail adapter into the topside of the DIN rail.
- (b) Fix the module by pressing it against the DIN rail.



(c) When multiple DIN rail adapters are installed on the DIN rail, even though the gaps among DIN rail adapters are filled, the spaces of 4mm (0.16 inches) are left among the modules.

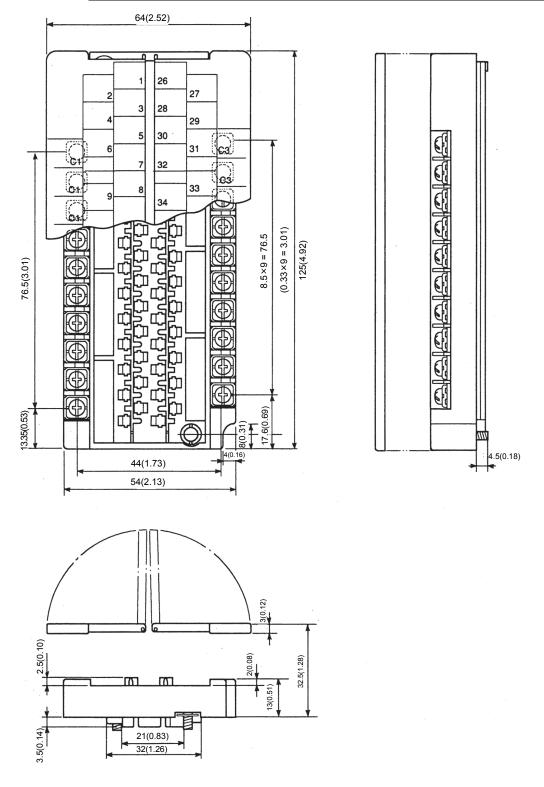


- (2) Removing the module from a DIN rail
 - Remove the module from a DIN rail as follows.
 - (a) Pull the hook at the bottom of the DIN adapter downward with flathead screwdriver (6 \times 100).
 - (b) With the hook pulled out, pull the module forward and remove the module from the DIN rail.



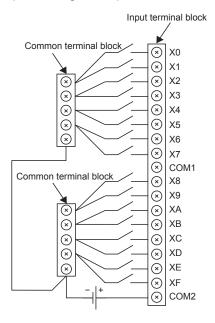
7.11 Common Terminal Block

Model Item	A2CCOM-TB
Mountable module	AJ65DBTB1-32D, AJ65DBTB1-32T1, AJ65DBTB1-32R, AJ65DBTB1-32DT1, AJ65DBTB1-32DR
External dimensions	125mm (4.92 inches) × 64mm (2.52 inches) × 13mm (0.51 inches)
Weight	0.12kg

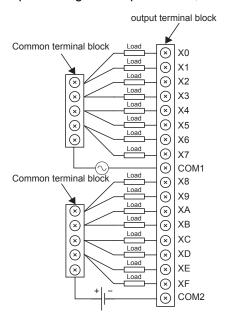


7 - 41 7 - 41

- (1) Usage example of common terminal block
 - (a) Example of usage for input module, AJ65DBTB1-32D



(b) Example of usage for output module, AJ65DBTB1-32R

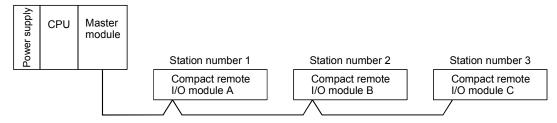


7 - 42 7 - 42

8 TROUBLESHOOTING

8.1 Verifying Errors from LED Status

The following table lists causes and corrective actions for errors indicated by LEDs on the compact remote I/O module when the SW, M/S and PRM LEDs are all off (i.e. the master module is set properly) in the system configuration example shown below.



	L	.ED	status					
Master		Rer	note I/O	mo	dule		Cause	Corrective action
module	Α		В		С			
	PW	•	PW	•	PW	•		
	L RUN		L RUN		L RUN		Normal	_
	L ERR.	\circ	L ERR.	\circ	L ERR.	0		
	PW	0	PW	•	PW	•	Since the LEDs on the compact remote	Check the voltage of the 24V power supply, and
	L RUN	\circ	L RUN		L RUN		I/O module A are all off, the 24V power	supply the proper power to the compact remote
	L ERR.	0	L ERR.	0	L ERR.	\circ	is not supplied or voltage is low.	I/O module.
	PW	*	PW		PW		The compact remote I/O module A is	Exchange the compact remote I/O module.
	L RUN	*	L RUN		L RUN		malfunctioning and the LEDs are	
	L ERR.	*	L ERR.	\circ	L ERR.	\circ	unstable (all lights are off, in many	
							cases).	
TIME O	PW		PW		PW		The L RUN lights on the compact	Identify the disconnected point by referring to
LINE O	L RUN		L RUN	\circ	L RUN	\circ	remote I/O module B and beyond are	the LED status, and correct it.
or	L ERR.	0	L ERR.	0	L ERR.	0	off, indicating the transmission cable	
TIME •							between the compact remote I/O	
LINE •							module A and B has been disconnected	
				_		_	or removed from the terminal block.	
	PW	•	PW	•	PW	•	The transmission cable is shorted.	Find the shorted cable among the three
	L RUN		L RUN		L RUN			transmission cables and repair it.
	L ERR.	0	L ERR.	0	L ERR.	0		
	PW		PW		PW		The transmission cable is wired	Verify wiring in the terminal box of the compact
	L RUN		L RUN		L RUN		incorrectly.	remote I/O module and correct.
	L ERR.		L ERR.	*	L ERR.	*		
	PW	•	PW		PW		The L RUN lights on the compact	Restart the power supply after the overlapped
	L RUN		L RUN		L RUN		remote I/O modules A and C are off,	station numbers for the compact remote I/O
	L ERR.	\cup	L ERR.	\cup	L ERR.	\cup		modules are corrected.
							C are overlapping.	

 \bullet : lit, \bigcirc : unlit, \circledcirc : flashing, * : lit, flashing or unlit

_

	LED	status				
Master	Rei	mote I/O m	odule		Cause	Corrective action
module	Α	В	С			
	PW • L RUN • L ERR. ○	PW L RUN C L ERR. C	PW L RUN L ERR		The L RUN light on the compact remote I/O module B is off, indicating the transmission speed setting for module B is invalid within the setting range (0 to 4).	Restart the power supply after the transmission speed is set correctly.
TIME O LINE O or TIME •	PW • L RUN • L ERR. ○	PW L RUN L ERR.	PW L RUN L ERR		The L ERR. of the compact remote I/O module C is flashing at fixed intervals, indicating the setting switch for module C has been changed during normal operation.	Return the setting switch of the compact remote I/O module to the original position.
LINE O	PW • L RUN ○ L ERR. •	PW L RUN L ERR.	PW L RUN L ERR		The L RUN of the compact remote I/O module A is off and L ERR. of the same module is lit, indicating the setting switch for module A is set out of range (transmission speed: 5 to 9, station number: 65 or greater).	Correct the setting switch of the compact remote I/O module, and restart the power supply.
TIME •	PW • L RUN • L ERR. ○	PW L RUN L ERR.	PW L RUN L ERR		The L ERR. of the compact remote I/O module B is lit, indicating that module B is being affected by noise. (L RUN may be off.)	Correctly perform grounding of the FGs for the master module and all compact remote I/O modules.
TIME • LINE • or TIME ○ LINE •	PW • L RUN • L ERR. • PW • L RUN • L ERR. •	PW L RUN DE	PW L RUN L ERR PW L RUN L ERR	•	The L ERR. lights on the compact remote I/O module B and beyond are lit, indicating the transmission cable is affected by noise in the area between modules A and B. (L RUN may be off.) A terminal resistor is not attached. (L RUN may be off.)	Verify the grounding of the SLD of the transmission cable. Separate the wire from the power cable as much as possible (100mm (3.94 inches) or more). Check if a terminal resistor is attached.

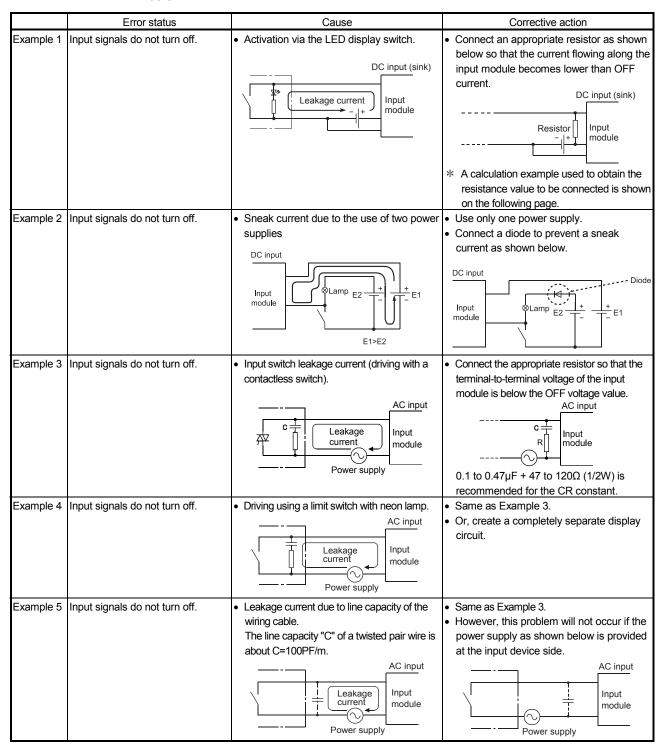
 $[\]bullet :$ lit, $\bigcirc :$ unlit, $\circledcirc :$ flashing, * : lit, flashing or unlit

8.2 Examples of Errors for Compact Remote I/O Modules

This section explains examples of errors that occur in the input circuit, and the appropriate corrective actions.

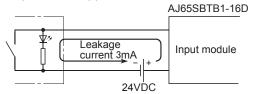
8.2.1 Errors occurring in the input circuit and corrective actions

Examples of errors that occur in the input circuit and corrective actions are explained below:

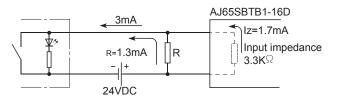


<Sample calculation for Example 1>

When a switch with LED indicator, giving leakage current of 3mA at maximum when 24VDC power is supplied to the AJ65SBTB1-16D



(1) 1.7mA or less OFF current of the AJ65SBTB1-16D is not satisfied. Hence, connect a resistor as shown below.



(2) Calculate the resistance value R as shown below.

To satisfy 1.7mA or less OFF current of the AJ65SBTB1-16D, connect a resistor which flows 1.3mA or more.

IR: Iz=Z (Input impedance): R

$$R \le \frac{|z|}{|z|} \times Z$$
 (Input impedance) = $\frac{1.7}{1.3} \times 3.3 = 4.31 [k \Omega]$

Supposing that the resistance R is $3.9k\Omega$, the power capacity W of resistor R is: W = (Input voltage) $2 \div R = 26.42 \div 3900 = 0.179$ (W)

- (3) Connect a resistor of 3.9 ($k\Omega$) and 1 to 2 (W) to a terminal which may cause an error, since the power capacity of a resistor is selected so that it will be 3 to 5 times greater than the actual power consumption.
- (4) Also, OFF voltage when resistor R is connected will be as follows.

$$\frac{1}{\frac{1}{3.9[k\Omega]} + \frac{1}{3.3[k\Omega]}} \times 3[mA] = 5.36[V]$$

This satisfies 6V or less OFF voltage of AJ65SBTB1-16D.

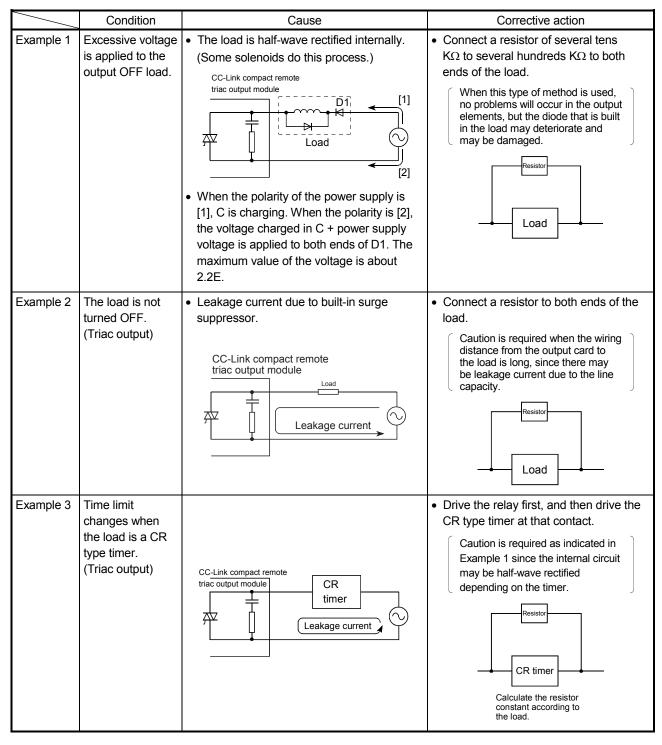
8.2.2 Errors occurring in the output circuit and corrective action

Examples of errors that may occur in the output circuit and the respective corrective action are described below.

(1) When AJ65SBTB1-16T or AJ65SBTB1-32T is used

Example 1 When an LED is connected as a load, sometimes the LED dimly lights up even when the output module is turned off. (Example) LED push button by Izumi Electric, Co.: ALFN22211DNR CC-Link compact-type remote output module as a load, the display contents sometimes become incorrect. (Example) M7E digital display unit (ineight of character 14mm) by Omron, Co.: M7E-01DBN2 CC-Link compact-type remote output module bisted below, the output modules listed below, the output module specification and the leak current specification value during OFF is specification value during OFF is specification and PET transistor output are used.)
power supply

(2) When AJ65SBTB2(N)-8S or AJ65SBTB2(N)-16S is used



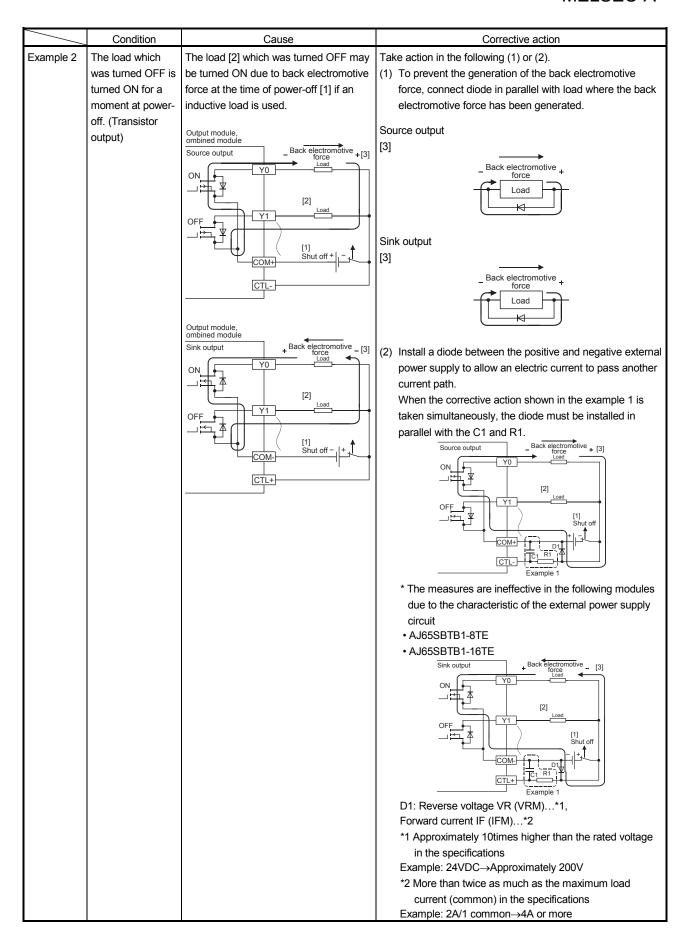
	Condition	Cause	Corrective action
Example 4	The load is not turned OFF. (Triac output)	If the load current is insufficient (lower than 25mA), the triac does not operate, causing the load current to flow into a phototriac as shown below. If an inductive load is connected in this condition, the load may not turn off because surge at the time of off is applied to the phototriac. CC-Link compact remote triac output module Phototriac Triac	Connect a resistor to both ends of a load so that the load current is higher than the minimum load current. Resistor Load

(3) When AJ65AJ65SBTB1-8T, AJ65SBTB2-8T, AJ65SBTB1-16T, AJ65SBTB2-16T, AJ65SBTB1-32T, AJ65SBTC1-32T, AJ65SBTB32-8DT, AJ65SBTB1-16DT, AJ65SBTB1-16DT1, AJ65SBTB32-16DT, AJ65SBTB1-32DT, AJ65SBTB1-32DT1, AJ65SBTC4-16DT, AJ65SBTC1-32DT, AJ65SBTC1-32DT1, or AJ65SBTW4-16DT is used

	Condition	Cause	Corrective action
Example 1	The load does not turn Off.	When the load built into the capacitor is connected to the external load, a resonance may occur due to the inductor of the wiring and the load of the capacitor. This may lead to reverse current in output transistor. Due to the reverse current, the protection circuit for output transistor might operate, and the outputs might not be turned on. Note: Such as SSR (Solid state relay) may incorporate a capacitor for countermeasures against noise, etc. When the situation above occurs, confirm if a capacitor is incorporated to the manufacturer.	Install fast recovery diode (1A, 100V or more) in series with the external load.
		24VDC 24VDC + + COM+ D Constant-voltage circuit	

(4) When output module, combined module is used

	Condition	Cause	Corrective action
Example 1	Condition When the external power supply turns on, the load turns on for a moment.	Erroneous output due to the stray capacitance (C) between collector and emitter of photocoupler. There is no erroneous output may occur at high sensitivity load (such as solid state relay) Output module, Combined module Photocoupler Output module, Combined module Photocoupler Output module, Combined module Photocoupler Output module, Combined module Photocoupler (C) between collector and emitter of photocoupler. (C) between collector and emitter of photocoupler. (2) Ic current flows to the next stage of transister Tr1 gate and Y0 output turns on by 100µs SW: External power supply (24V) at On	(1) When the external power turns ON/OFF, check that the external power supply rising edge must be 10ms or more, and switch the SW1 to the primary side of external power supply. Primary side Secondary side programmable controller (2) When switching to the secondary side of the external power supply is required, the external power supply rising edge connected a condenser must be slow, and measured 10ms or more. Sink output
			* The measures are ineffective in the following modules due to the characteristic of the external power supply circuit • AJ65SBTB1-8TE • AJ65SBTB1-16TE R1: Several tens of ohms Power capacity ≧ (external power supply current*1)² × resistance value ×(3 to 5)²² C1: several hundreds of microfarads 50V *1 Refer to consumption current of the external power supply for modules used in this manual. *2 Select the power capacity of resistance to be 3 to 5 times lager than the actual power consumption. (Example) R1=40 Ω, C1=300 μF Use the below expression to calculated a time constant C1×R1=300×10-6×40 =12×10-3s =12ms



	Condition	Cause	Corrective action	
Example 3	The load operates due to powering on the external power supply. (transistor output)	The polarity of the external power supply is connected in reverse. Transistor output module Load Incorrect Correct External power supply incorrect Correct External power supply incorrect Correct in power supply incorrect upply in power supply in powe	Connect the polarity correctly.	
Example 4	When an output is turned on, a load connected to the other output is also turned on. (transistor output (source type))	If the wire connecting 0V of an external power supply and a common of a load is cut off or disconnected, the load connected to Y1 is also turned on due to a parasitic circuit of the output element that is off. Transistor output source output ON Output Output output element If a current keeps flowing under the above condition, a failure may occur.	Connect the external power supply and loads correctly. To prevent the condition described on the left, connect a diode to each output terminal as shown below. Source output Y0 Load COM + - 24V 0V	

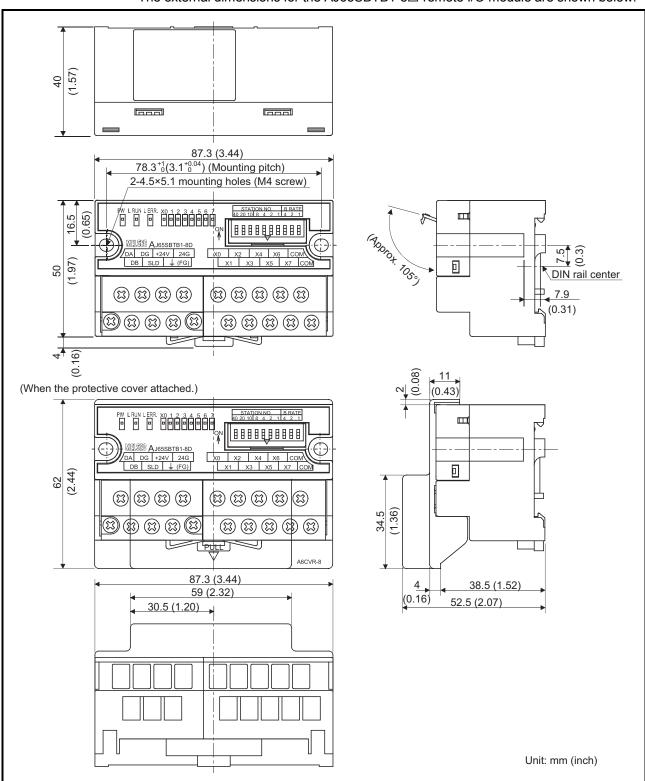
A

APPENDICES

Appendix 1 External Dimensions

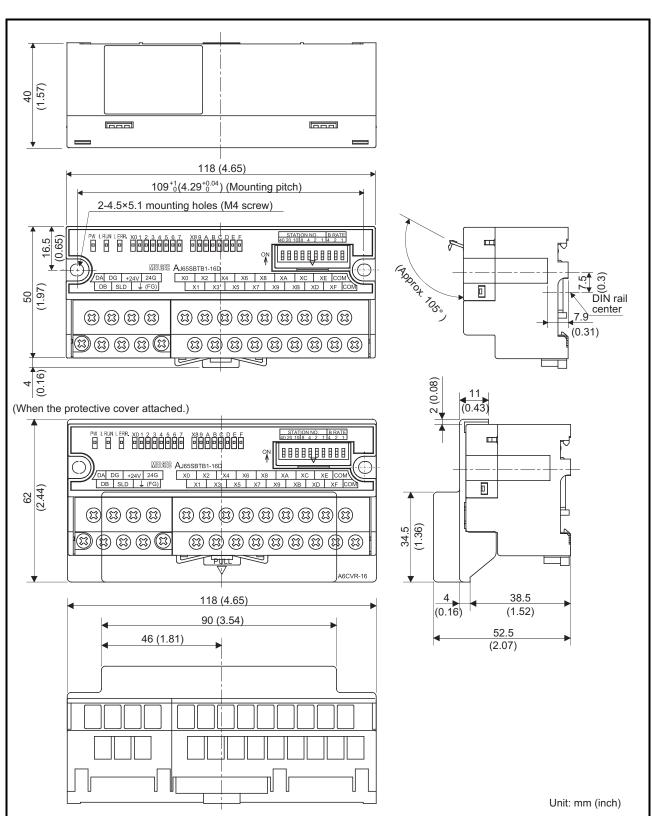
Appendix 1.1 AJ65SBTB1-8□ remote I/O module

The external dimensions for the AJ65SBTB1-8□ remote I/O module are shown below.



Appendix 1.2 AJ65SBTB1-16□ remote I/O module

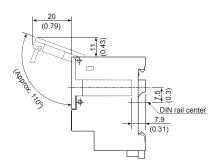
The external dimensions for the AJ65SBTB1-16 \square remote I/O module are shown below.



Α

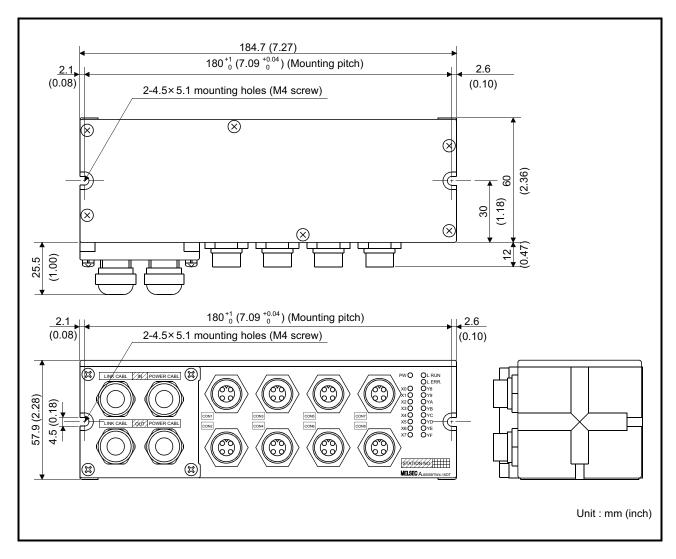
Remark

For AJ65SBTB1-16D, AJ65SBTB1-16T Remote I/O Module of hardware version D or before, side face diagram of the module is as follows.



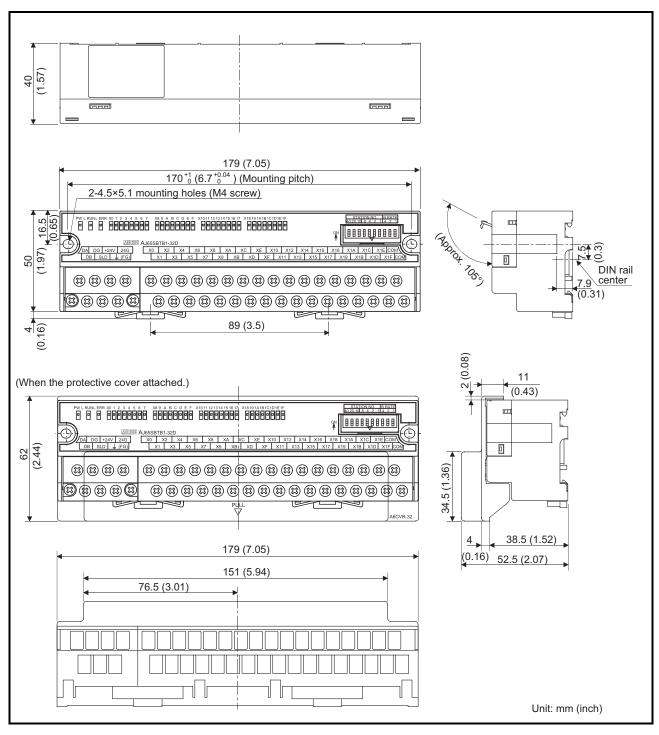
Appendix 1.3 AJ65SBTW4-16□ remote I/O module

The external dimensions for the AJ65SBTW4-16 $\!\square$ remote I/O module are shown below.



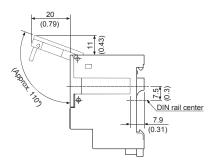
Appendix 1.4 AJ65SBTB1-32□ remote I/O module

The external dimensions for the AJ65SBTB1-32 $\!\Box$ remote I/O module are shown below.



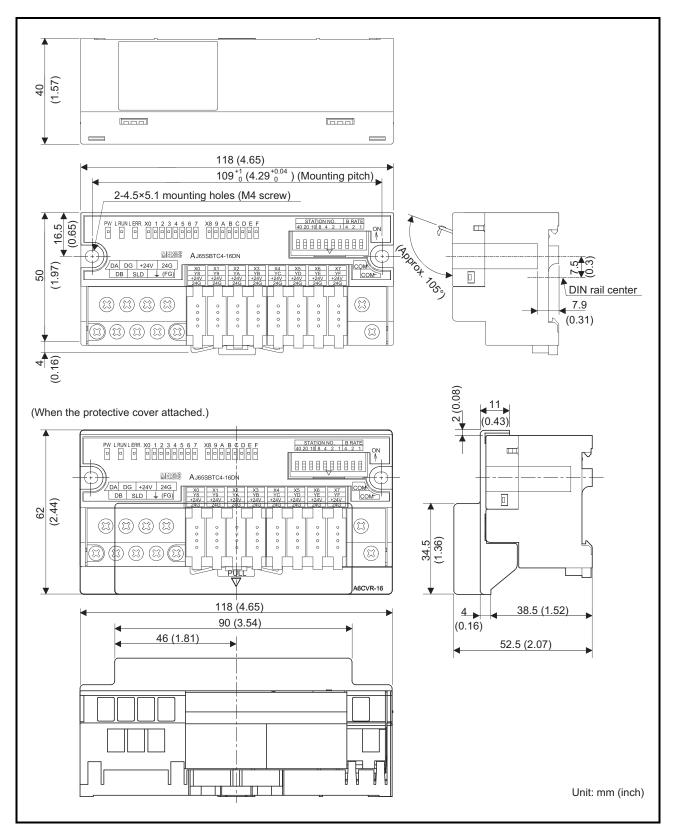
Remark

For AJ65SBTB1-32D, AJ65SBTB1-32T Remote I/O Module of hardware version D or before, side face diagram of the module is as follows.



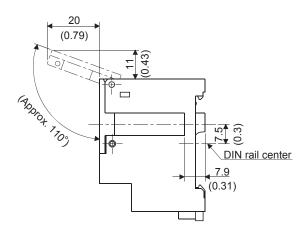
Appendix 1.5 AJ65SBTC1-32□, and AJ65SBTC4-16□ remote I/O module

The external dimensions for the AJ65SBTC1-32 \square , and AJ65SBTC4-16 \square remote I/O modules are shown below.



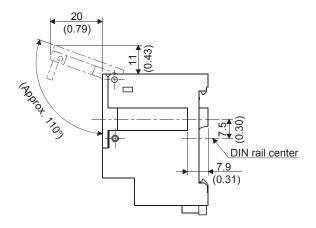
Remark

(1) For the AJ65SBTC4-16D remote I/O module, the side view of the module is shown below.



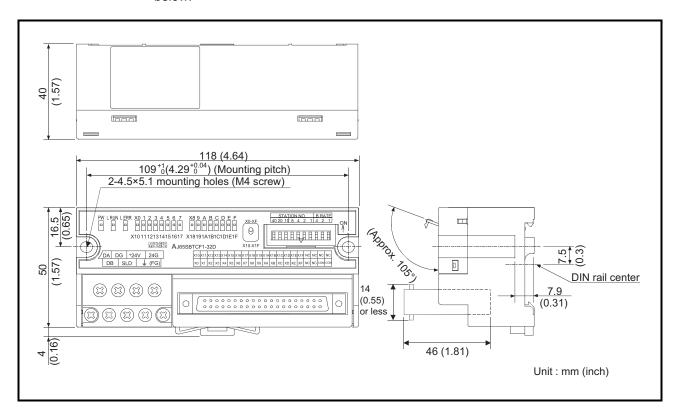
(2) For the modules given in the following table, the side view is shown below.

Model	Hardware Version
AJ65SBTC1-32D	N or before
AJ65SBTC1-32D1	N or before
AJ65SBTC1-32T	Q or before
AJ65SBTC1-32T1	E or before
AJ65SBTC1-32DT	Q or before
AJ65SBTC1-32DT1	Q or before
AJ65SBTC1-32DT2	D or before
AJ65SBTC1-32DT3	D or before
AJ65SBTC4-16DT	J or before
AJ65SBTC4-16DT2	C or before



Appendix 1.6 AJ65SBTCF1-32□ remote I/O module

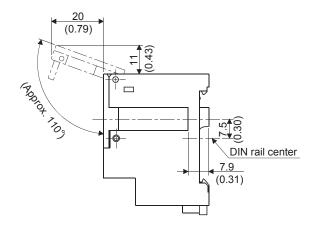
The external dimensions for the AJ65SBTCF1-32 $\!\Box$ remote I/O module are shown below.



Remark

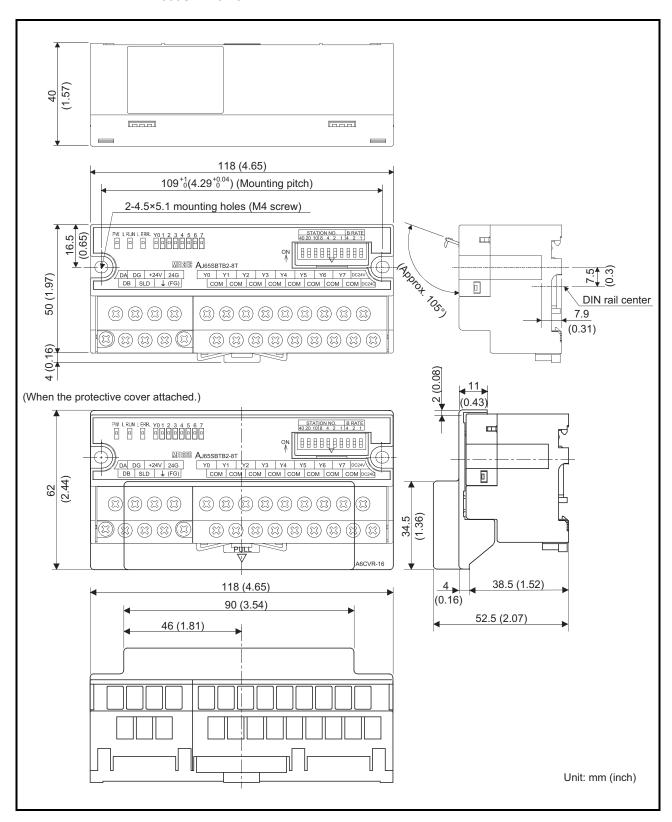
For the modules given in the following table, the side view is shown below.

Model	Hardware Version		
AJ65SBTCF1-32D	F or before		
AJ65SBTCF1-32T	F or before		
AJ65SBTCF1-32DT	F or before		



Appendix 1.7 AJ65SBTB2-8□, AJ65SBTB3-8□, and AJ65SBTB32-8□ remote I/O module

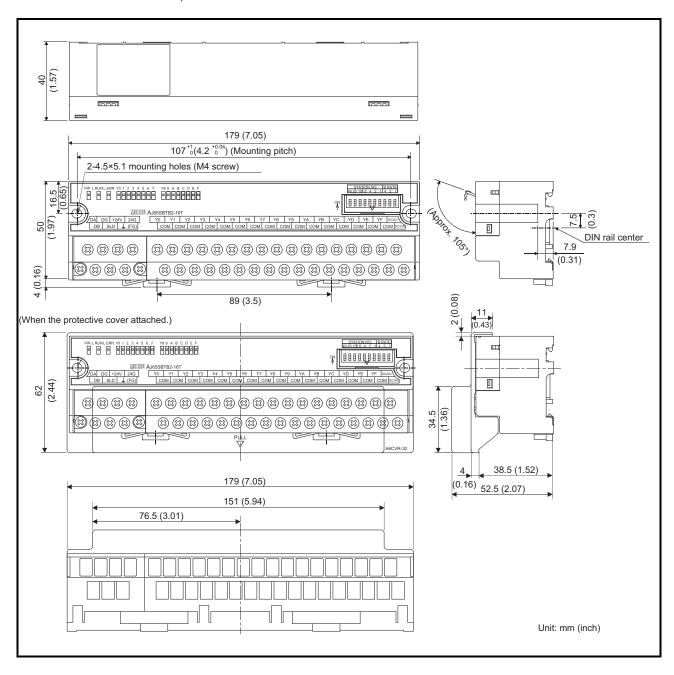
The external dimensions for the AJ65SBTB2-8□, AJ65SBTB3-8□, and AJ65SBTB32-8□ remote I/O modules are shown below.



App - 10 App - 10

Appendix 1.8 AJ65SBTB1B-16□, AJ65SBTB2-16□, AJ65SBTB3-16□, and AJ65SBTB32-16□ remote I/O module

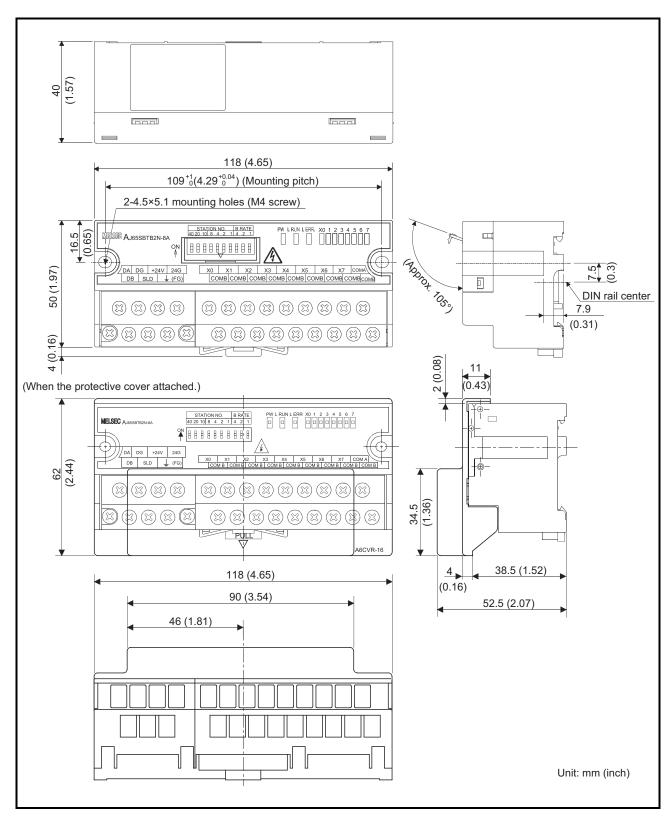
The external dimensions for the AJ65SBTB1B-16 \square , AJ65SBTB2-16 \square , AJ65SBTB3-16 \square , and AJ65SBTB32-16 \square remote I/O modules are shown below.



App - 11 App - 11

Appendix 1.9 AJ65SBTB2N-8□ remote I/O module

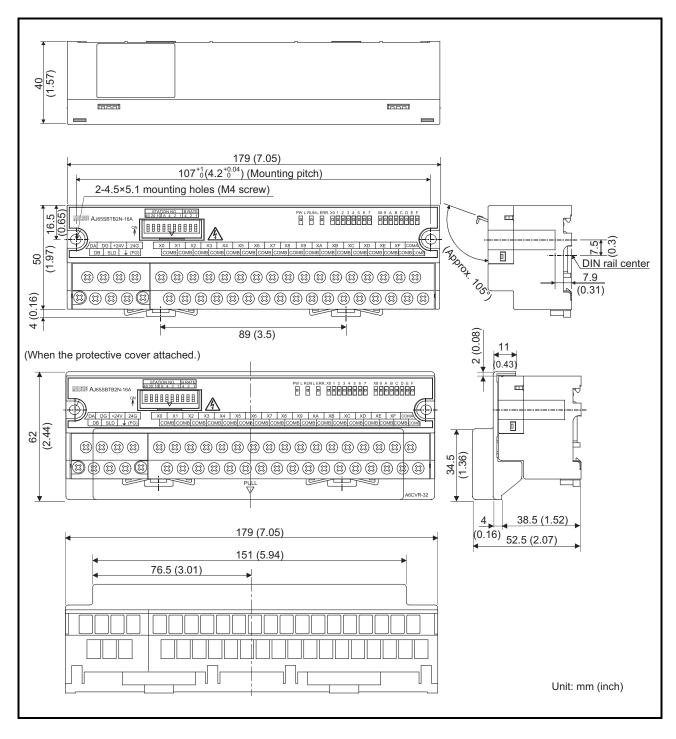
The external dimensions for the AJ65SBTB2N-8 \square remote I/O module are shown below.



App - 12 App - 12

Appendix 1.10 AJ65SBTB2N-16□ remote I/O module

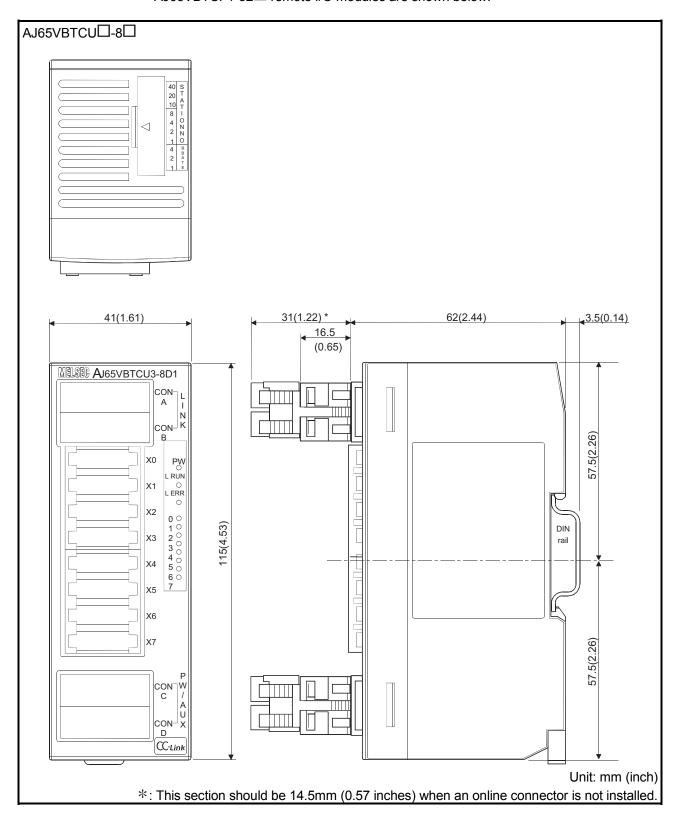
The external dimensions for the AJ65SBTB2N-16 \square remote I/O module are shown below.

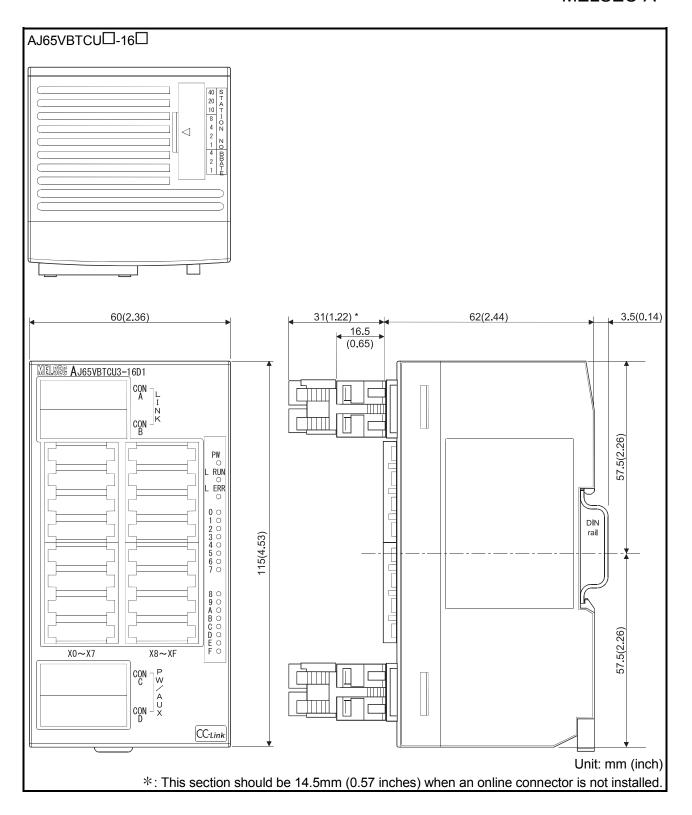


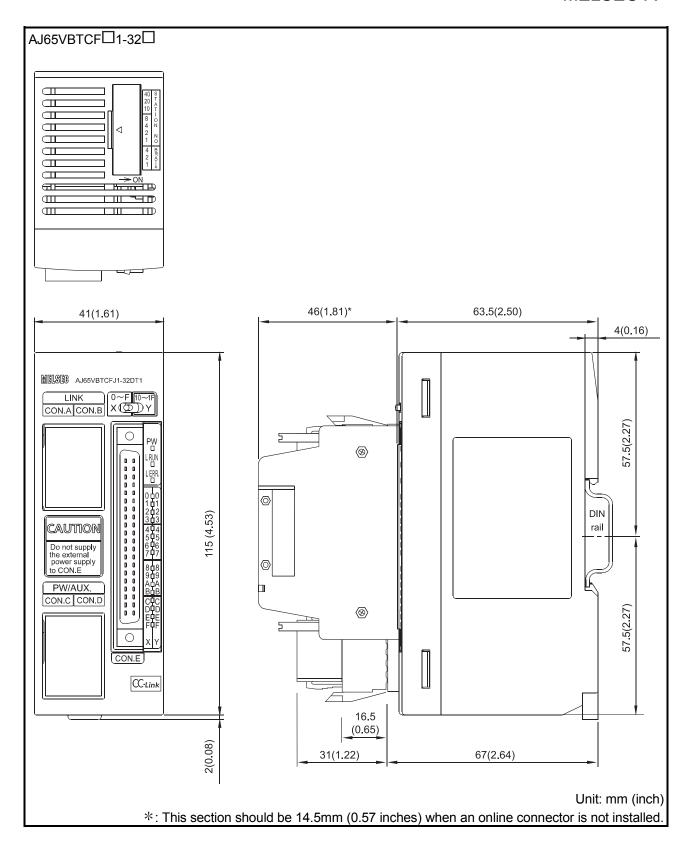
App - 13 App - 13

Appendix 1.11 AJ65VBTCU□-8□, AJ65VBTCU□-16□, and AJ65VBTCF1-32□ remote I/O module

The external dimensions for the AJ65VBTCU \square -8 \square , AJ65VBTCU \square -16 \square , and AJ65VBTCF1-32 \square remote I/O modules are shown below.



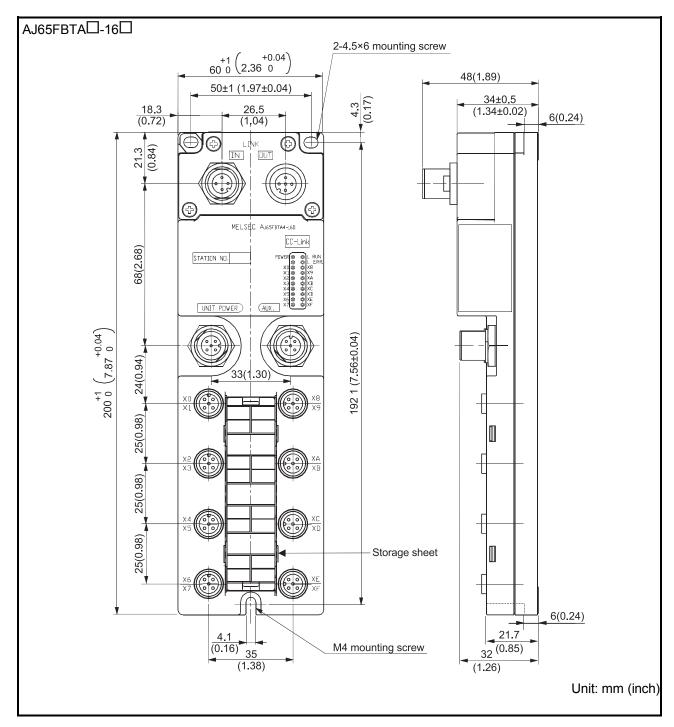




App - 16 App - 16

Appendix 1.12 AJ65FBTA□-16□ remote I/O module

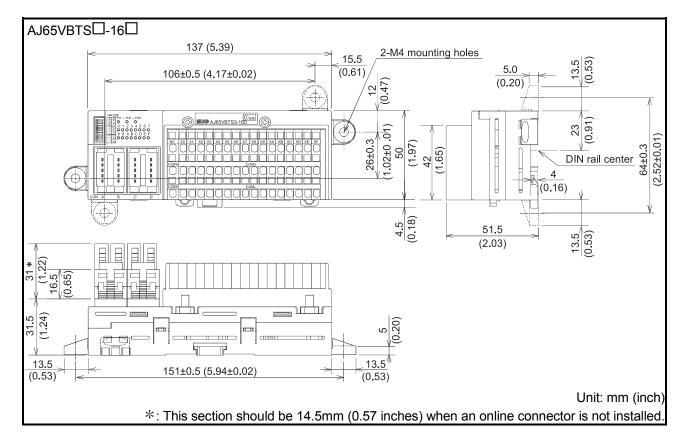
The external dimensions for the AJ65FBTA \Box -16 \Box remote I/O modules are shown below.



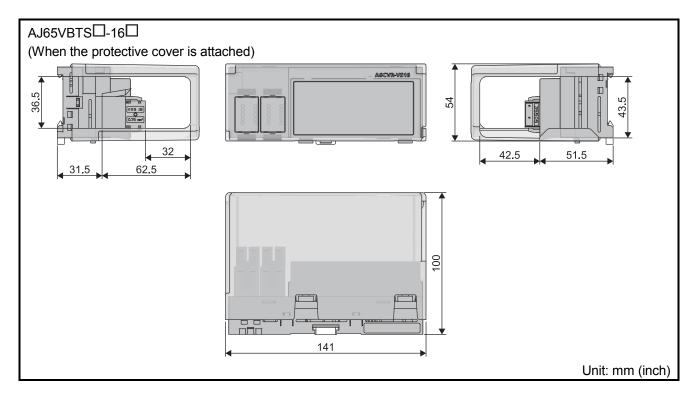
App - 17 App - 17

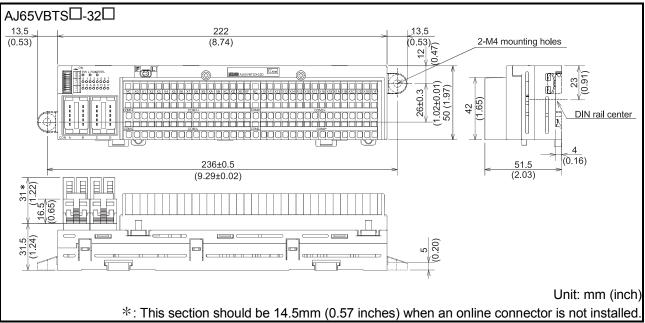
Appendix 1.13 AJ65VBTS□-16□, and AJ65VBTS□-32□ remote I/O module

The external dimensions of the AJ65VBTS□-16□, and AJ65VBTS□-32□ remote I/O modules are shown below.



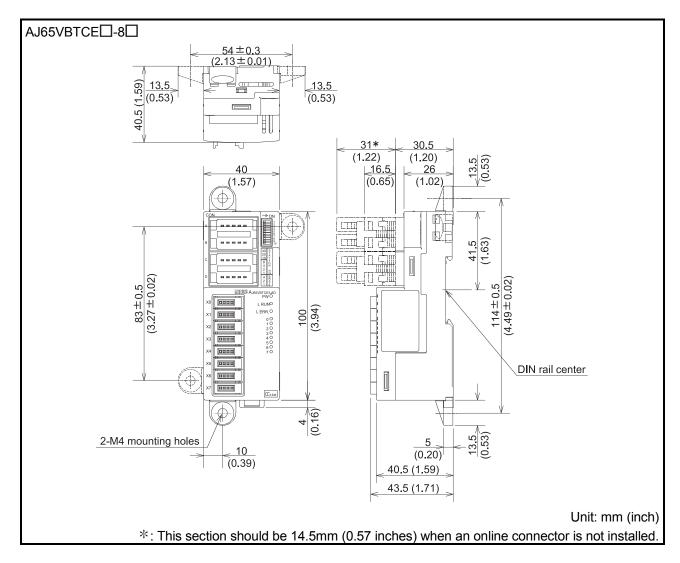
App - 18 App - 18



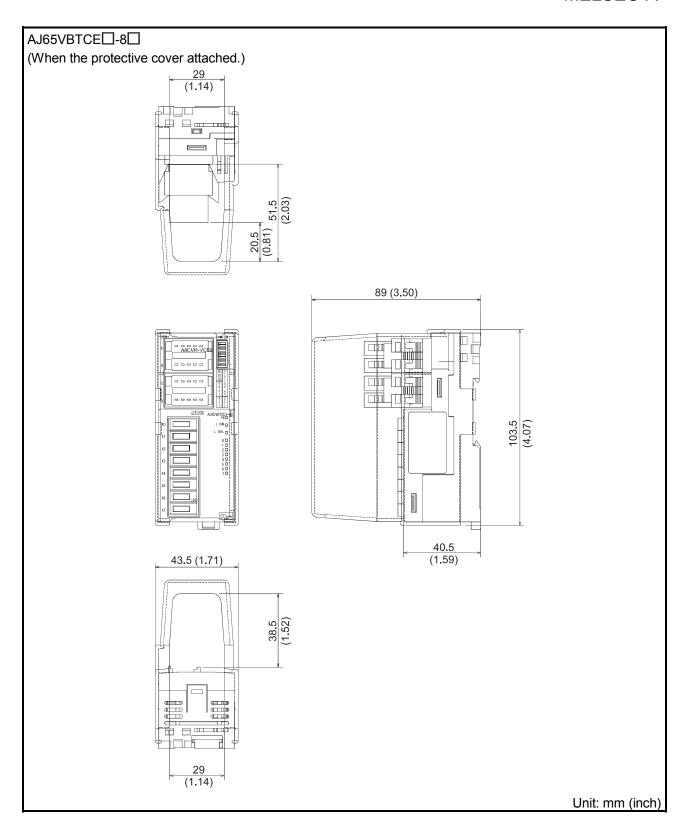


Appendix 1.14 AJ65VBTCE□-8□, AJ65VBTCE□-16□, and AJ65VBTCE□-32□ remote I/O module

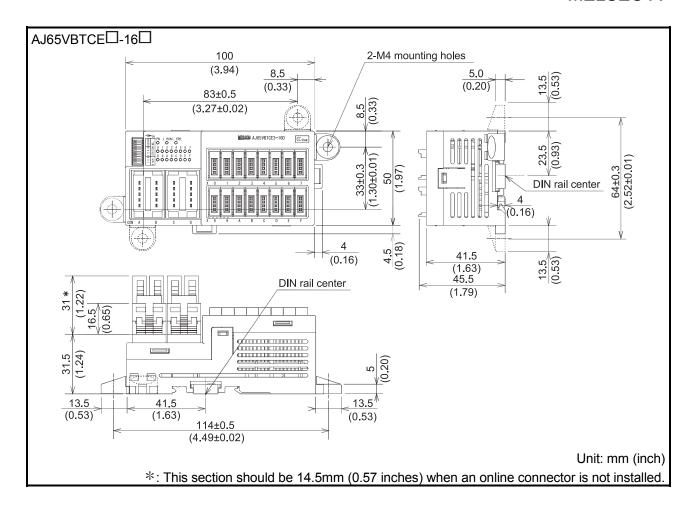
The external dimensions of the AJ65VBTCE \square -8 \square , AJ65VBTCE \square -16 \square , and AJ65VBTCE \square -32 \square remote I/O modules are shown below.

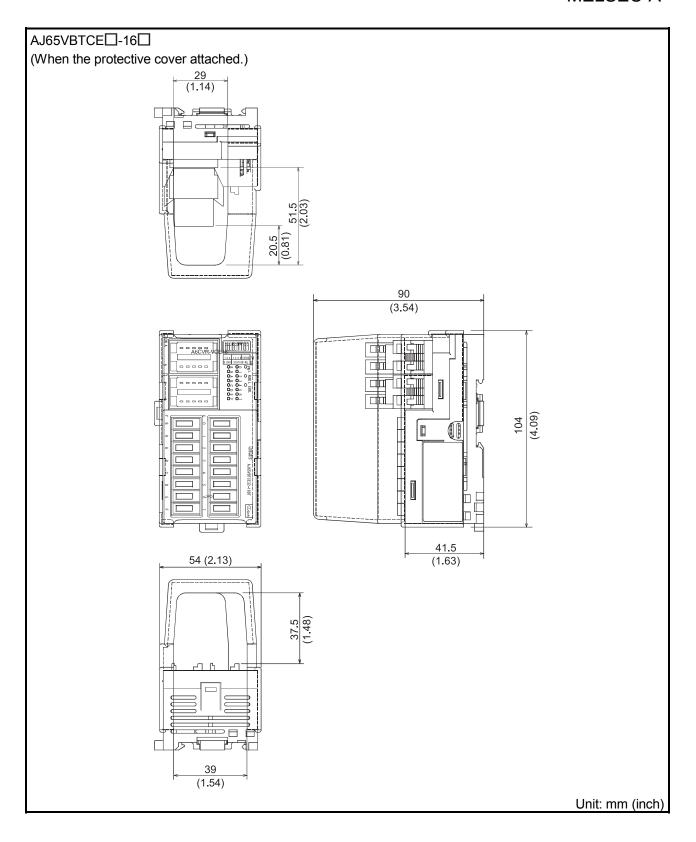


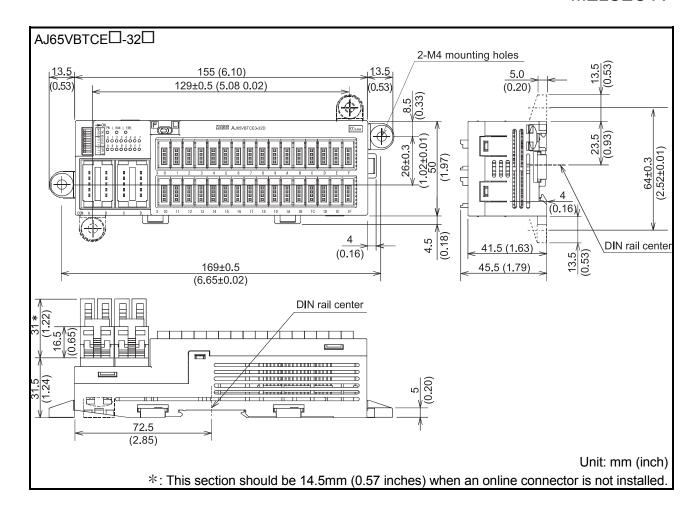
App - 20 App - 20



App - 21 App - 21

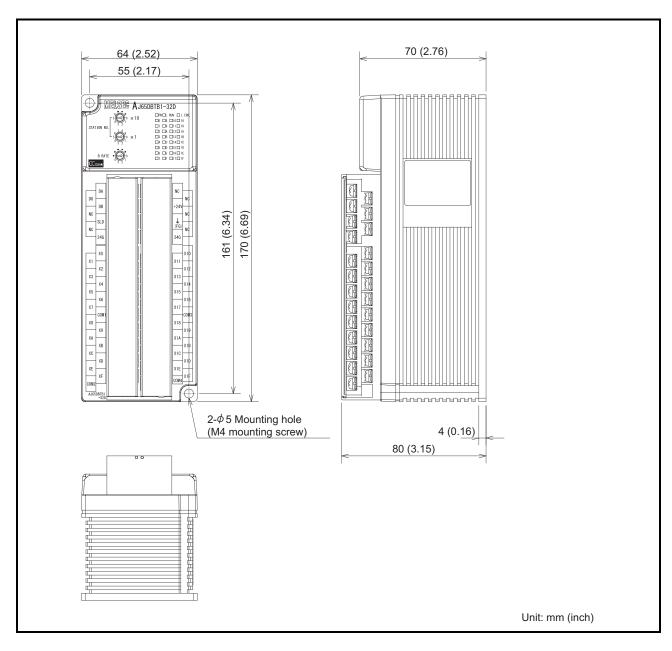






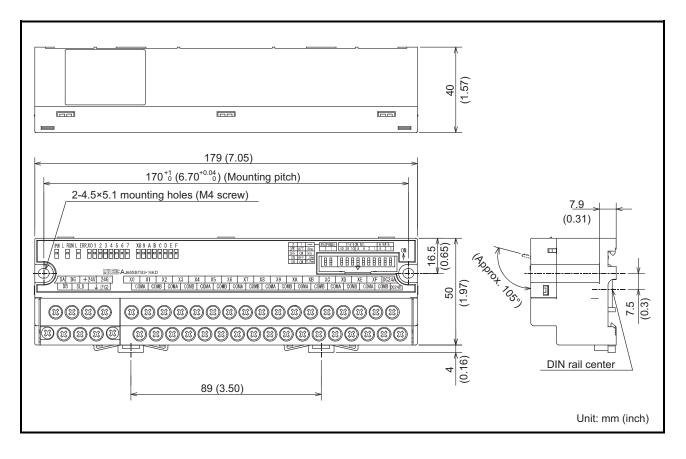
Appendix 1.15 AJ65DBTB1-32 ☐ remote I/O module

The external dimensions of the AJ65DBTB1-32 \square remote I/O modules are shown below.



Appendix 1.16 AJ65SBTB1-32K□, AJ65SBTB3-16KD, and AJ65SBTB32-16K□ remote I/O module

The external dimensions of the AJ65SBTB1-32K \square , AJ65SBTB3-16KD, and AJ65SBTB32-16K \square remote I/O modules are shown below.



App - 26 App - 26

Appendix 2 CC-Link Versions

There are two versions for CC-Link: Ver.1.00 and Ver.1.10.

(1) Difference between Ver.1.00 and Ver.1.10

The original CC-Link version is Ver.1.00 and there are restrictions on the station-to-station cable length. The improved version is Ver.1.10 and there is no restriction on the station-to-station cable length (20cm or longer, in any case). For the maximum overall cable distance of Ver.1.10, refer to the user's manual for the master/local module used.

To enable the station-to-station cable length of 20cm or longer, the following conditions must be met.

- All modules connected in the CC-Link system are Ver.1.10-compatible modules.
- Ver.1.10-compatible CC-Link dedicated cables are used in the entire system.

POINT

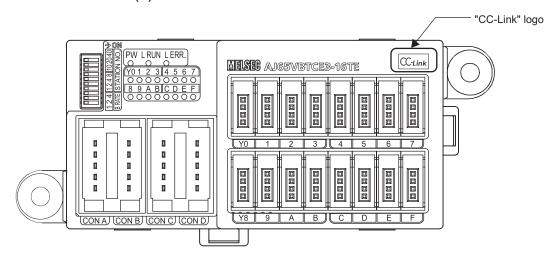
In a system where both Ver.1.00- and Ver.1.10-compatible CC-Link modules are connected, the specifications of Ver.1.00-compatible module are applied for the maximum overall cable distance and station-to-station cable length. For the maximum overall cable distance and station-to-station cable length of Ver.1.00, refer to the user's manual for the master/local module used.

App - 27 App - 27

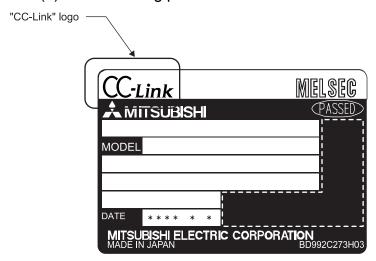
(2) Checking a version

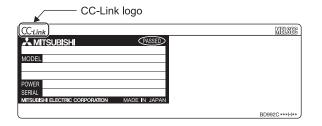
Ver.1.10-compatible modules have a "CC-Link" logo on the front of the module or on the rating plate.

(a) On the front of the module



(b) On the rating plate





WARRANTY

Please confirm 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.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year 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 eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) 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.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 - 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 - 2. Failure caused by unapproved modifications, etc., to the product by the user.
 - 3. 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.
 - 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 - 5. 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.
 - 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 - 7. 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) Product supply (including repair parts) is not available 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.

SH(NA)-4007-AH(1807)MEE

MODEL: CC-LINK-S-I/O-U-E

MODEL CODE: 13JL72

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.

Specifications subject to change without notice.