SC100/SC200 Series
Multi-Function PID Controller

PC CONFIGURATOR SOFTWARE
Model: SCCFG

Users Manual

M-SYSTEM CO., LTD.

5-2-55, Minamitsumori, Nishinari-ku, Osaka 557-0063 JAPAN
Tel: +81-6-6659-8201 Fax: +81-6-6659-8510

http://www.m-system.co.jp/

E-mail: info@m-system.co.jp

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1. INTRODUCTION

Thank you for choosing M-System's SC100/200 Series Multi-Function PID Controllers.

This manual describes software functions of PC Configurator Software model: SCCFG, PC environment and operation methods. Please refer to the relevant hardware users manuals for the detailed information about the terms used in this manual.

The SCCFG makes it easy and smooth to set parameters to the SC100/200 Series. Setting data and short trend data can be exported to CSV file via infrared communication.

LCD firmware version mentioned in the text can be confirmed on the screen of the Controller. Go to: Configuration view > Version > SC_LCD Ver. X.XX.

2. BEFORE GETTING STARTED

2.1 GENERAL DESCRIPTIONS

Uploading and saving setting data	Configuration setting data saved in the Controller is uploaded to a PC via infrared communication and saved in binary or CSV file format.
Downloading setting data	Configuration setting data saved in the PC is downloaded to the Controller via infrared communication. Only binary format file can be transferred.
Creating short trend data files*	Short trend data file received from the Controller via infrared is converted into CSV and saved.

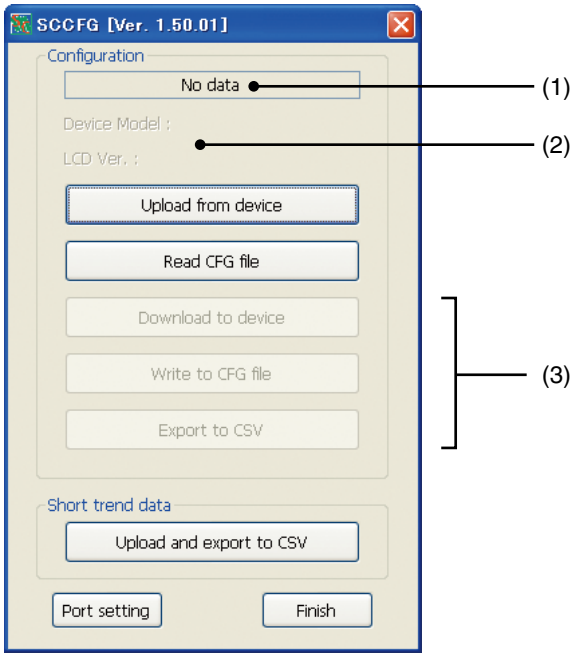
*SC200, SC210, SC200D, SC200W and SC210W only.

2.2 SYSTEM REQUIREMENTS

PC	IBM PC/AT or compatible
OS	Windows XP SP3 or later, Windows Vista, Windows 7 (32-bit / 64-bit), Windows 10 (32-bit / 64-bit) Note: no guarantee for all environments
Resolution	1024 by 768 pixels or higher
Display color	65000 colors (16-bit)
USB Port	Used to communicate with the Controller via Communication Adaptor model: COP-IRDA or COP-US.

3. MAIN DIALOG

Double-clicking SCCFG.exe icon starts the SCCFG to show Main Dialog as shown below.



(1) “Uploaded from device” is indicated when [Upload from device] has been successfully completed.
File name is indicated when [Read CFG file] has been successfully completed.

(2) Device Model and LCD Ver. are indicated when [Upload from device] or [Read CFG file] has been successfully completed. (e.g. LCD Ver. : 1.0x)

(3) The buttons become selectable once [Upload from device] or [Read CFG file] is complete.

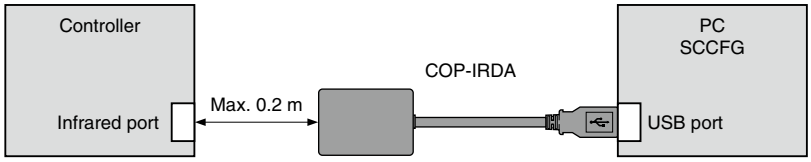
MAIN DIALOG MENU		
Configuration	Upload from device	Setting data is uploaded from the Controller via infrared communication.
	Read CFG file	Setting data is read in from a file.
	Download to device	Setting data is download to the Controller via infrared communication. **New setting is valid only after the power supply is restarted.**
	Write to CFG file	Setting data is saved in a file.
	Export to CSV	Setting data is converted into CSV and saved.
Short trend data	Upload and export to CSV	Short trend data is acquired from the device via infrared and saved as CSV file. Error occurs with models SC100 or SC110.
COM Port		COM port for infrared communication is specified.

4. COMMUNICATION

4.1 COP-IRDA COMMUNICATION ADAPTOR

Use M-System's Model COP-IRDA or COP-US to communicate with the Controller via infrared rays. Before using the COP-IRDA, install its driver in your PC. Refer to the instruction manual for the COP-IRDA for more information.

When the driver is installed correctly, the COP-IRDA is assigned to a COM port.



4.2 SETTING ON THE CONTROLLER

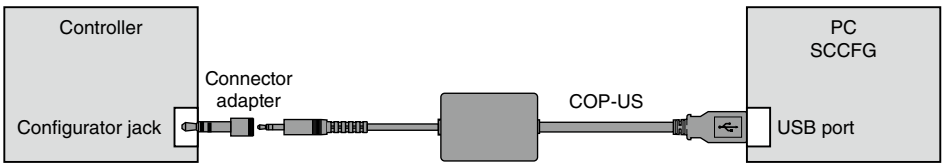
Set only one Controller module to infrared communication mode at once when multiple devices line up side by side.

Refer to the users manual for the Controller for more information to operate the Controller to activate the communication mode.

4.3 COP-US COMMUNICATION ADAPTOR

Use M-System's Model COP-US to communicate with the Controller with wired communication. Before using the COP-US, install its driver in your PC. Refer to the instruction manual for the COP-US for more information.

When the driver is installed correctly, the COP-US is assigned to a COM port.

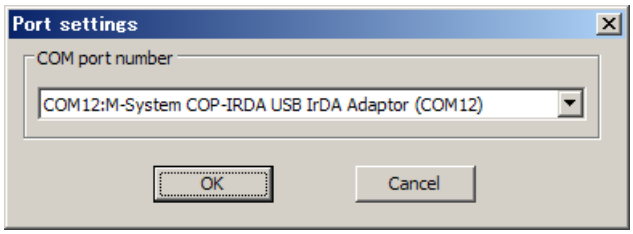


4.4 SETTING ON THE CONTROLLER

Refer to the users manual for the Controller for more information to operate the Controller to activate the communication mode.

5. COM PORT SETTING

Select COM No. assigned to the COP-IRDA or COP-US among COM1 to COM20.



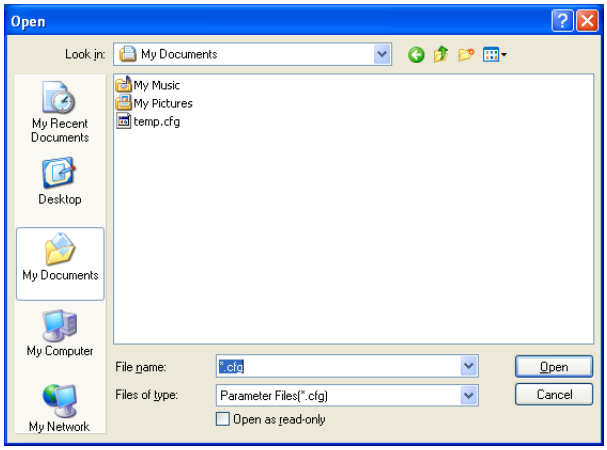
6. CONFIGURATION

6.1 UPLOAD FROM DEVICE

Click on [Upload from Device] button to call up the setting data saved in the Controller.

6.2 READ CFG FILE

Click on [Read CFG file]. The folder directory appears on the screen. Select a configuration file and click on [Open].



6.3 DOWNLOAD TO DEVICE

Click on [Download to device] button to write the setting data presently on the screen. All data except for the port setting is downloaded.

The table below shows relevant parameters.

PARAMETER	Write (X)
Back light brightness	X
Screen saver (time)	X
MV-0/100% symbol	X
Loop display (MV, OP)	X
Loop variables	X
Graph scale divisions	X
Decimals (% display)	X
Alarm blinking	X
Bargraph color	X
Digital display color	X
Trend recording	X
Storing interval	X
Trend channel	X
Trend graph color	X
Selected loop color	X
Touch tone	X
Home	X
Select operation view	X
Select unit mode	X
Modbus-RTU	No
Modbus/TCP	No
Language	X
Parameter setting*1	X
PRG mode indicator*2	X
Numerical key control*2	X

*1. For Range Hi limit, Range Lo limit and Decimal place, LCD firmware version 1.5x or later

*2. LCD firmware version 1.5x or later

6.3.1 WRITE TO DEVICE WITH DIFFERENT LCD FIRMWARE VERSION

When the LCD firmware version of setting data, which is created by “READ CFG FILE” or “DOWNLOAD TO DEVICE”, is different from the LCD firmware version of destination device, the data may change to factory setting value depending on configuration item. Except following configuration items, the data can be handed over even LCD firmware is different.

- When reading configuration of LCD firmware version 1.3x or 1.4x and writing to the device with LCD firmware version 1.5x or later.

LCD firmware version of read data:

Ver. 1.3x (SC100, SC110, SC200, SC210)

Ver. 1.4x (SC100, SC110, SC200, SC210)

LCD firmware version of destination device:

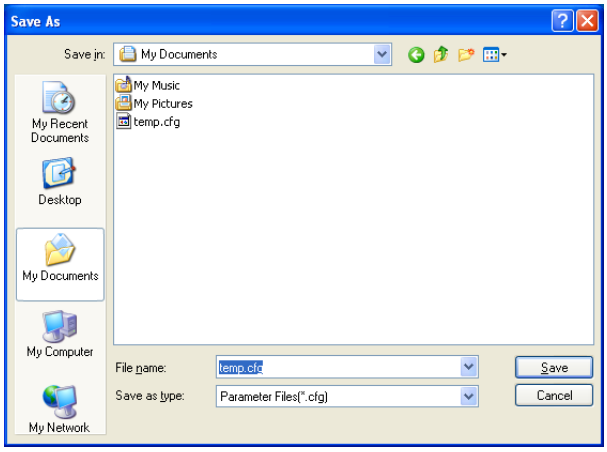
Ver. 1.5x or later

CONFIGURATION ITEM	DATA
User’s parameter table item (Range Hi limit, Range Lo limit and Decimal place)	Factory setting*
PRG mode indicator	Factory setting*
Numerical key control	Factory setting*

*Refer to 6.7 CONFIGURATION ITEM LIST

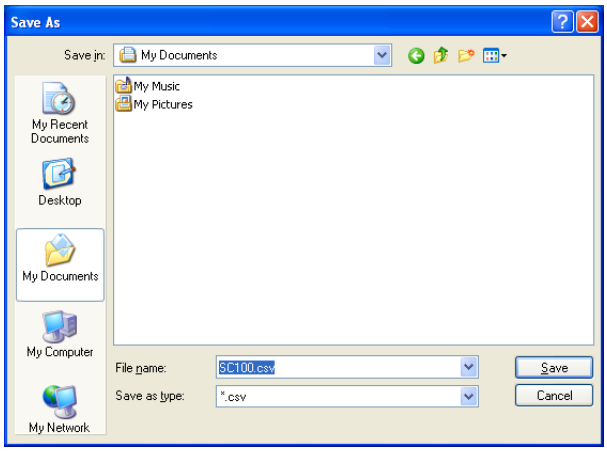
6.4 WRITE TO CFG FILE

Click on [Write to CFG file]. The folder directory appears on the screen. Type the name and click on [Save].



6.5 EXPORT TO CSV

Click on [Export to CSV]. The folder directory appears on the screen. Type the name and click on [Save].



6.6 CONFIGURATION DATA IN CSV FORMAT

For LCD firmware version 1.3x, 1.4x (SC100, SC110, SC200, SC210)

SC210 Configuration	LCD Ver. 1.3x, 1.4x		
Group	Item	Data	
Back light brightness		5	
Screen saver (time)		0	min (0=OFF)
MV 0/100% symbol	MV1 100% symbol	OP	
	MV1 0% symbol	CL	
	MV2 100% symbol	OP	
	MV2 0% symbol	CL	
Loop display (MV/OP)	LP1 display (MV)	1	
	LP2 display (MV)	2	
Loop variables		PV/SP/MV	
Graph scale divisions		10	
Decimals (% display)		1	
Alarm blinking		Enable	
Bargraph color	PV1 Normal	5	
	PV1 Hi limit	1	
	PV1 Lo limit	4	
	PV2 Normal	5	
	PV2 Hi limit	1	
	PV2 Lo limit	4	
	SP1 Normal	8	
	SP2 Normal	8	
	MV1 Normal	13	
	MV1 Hi limit	12	
	MV1 Lo limit	14	
	MV2 Normal	13	
	MV2 Hi limit	12	
	MV2 Lo limit	14	
Digital display color	PV1	16	
	PV2	16	
	SP1	16	
	SP2	16	
	MV1	16	
	MV2	16	
	FN1	16	
	FN2	16	
	FN3	16	
	FN4	16	
Trend recording		Start	
Storing interval		10 sec	
Trend channel	LP1 CH1	PV1	
	LP1 CH2	SP1	
	LP1 CH3	MV1	
	LP1 CH4	None	
	LP2 CH1	PV2	
	LP2 CH2	SP2	
	LP2 CH3	MV2	
	LP2 CH4	None	
Trend graph color	LP1 CH1	1	
	LP1 CH2	4	
	LP1 CH3	5	
	LP1 CH4	8	
	LP2 CH1	1	
	LP2 CH2	4	
	LP2 CH3	5	
	LP2 CH4	8	
Selected loop color		7	
Touch tone		Enable	
Home	Registered view	Digital	
	Registered loop number	1	
Select operation view	Digital	Enable	
	Bargraph	Enable	
	Dual-loop bargraph	Enable	
	Short trend	Enable	
Select unit mode	Digital	Selectable	
	Bargraph	Selectable	

Items under Bargraph color and Digital display color, and Data under Trend channel depends upon Loop variables setting.

Modbus-RTU	Node address	1						
	Transfer rate	38400	bps					
	Data bit (8 bit)	8	bit					
	Parity	Odd						
Modbus/TCP	IP address	192.168.0.1						
	Subnet mask	255.255.255.0						
	Port No. (502 fixed)	502						
	Linger time	180	sec					
Language		English						
User's parameter table	Setting	Parameter	GROUP	ITEM	DATA Hi limit	DATA Lo limit	DATA decimal place	DATA engineering unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit
	Disable	Name	0	0	10000	0	2	Unit

SC200/SC210 only (applies to the Modbus-RTU and Modbus/TCP settings)

For LCD firmware version 1.5x or later (SC100, SC110, SC200, SC210)

SC210 Configuration	LCD Ver. 1.5x		
Group	Item	Data	
Back light brightness		5	
Screen saver (time)		0	min (0=OFF)
MV 0/100% symbol	MV1 100% symbol	OP	
	MV1 0% symbol	CL	
	MV2 100% symbol	OP	
	MV2 0% symbol	CL	
Loop display (MV/OP)	LP1 display (MV)	1	
	LP2 display (MV)	2	
Loop variables		PV/SP/MV	
Graph scale divisions		10	
Decimals (% display)		1	
Alarm blinking		Enable	
Bargraph color	PV1 Normal	5	
	PV1 Hi limit	1	
	PV1 Lo limit	4	
	PV2 Normal	5	
	PV2 Hi limit	1	
	PV2 Lo limit	4	
	SP1 Normal	8	
	SP2 Normal	8	
	MV1 Normal	13	
	MV1 Hi limit	12	
	MV1 Lo limit	14	
	MV2 Normal	13	
	MV2 Hi limit	12	
	MV2 Lo limit	14	
Digital display color	PV1	16	
	PV2	16	
	SP1	16	
	SP2	16	
	MV1	16	
	MV2	16	
	FN1	16	
	FN2	16	
	FN3	16	
	FN4	16	
Trend recording		Start	
Storing interval		10 sec	
Trend channel	LP1 CH1	PV1	
	LP1 CH2	SP1	
	LP1 CH3	MV1	
	LP1 CH4	None	
	LP2 CH1	PV2	
	LP2 CH2	SP2	
	LP2 CH3	MV2	
	LP2 CH4	None	
Trend graph color	LP1 CH1	1	
	LP1 CH2	4	
	LP1 CH3	5	
	LP1 CH4	8	
	LP2 CH1	1	
	LP2 CH2	4	
	LP2 CH3	5	
	LP2 CH4	8	
Selected loop color		7	
Touch tone		Enable	
Home	Registered view	Digital	
	Registered loop number	1	
Select operation view	Digital	Enable	
	Bargraph	Enable	
	Dual-loop bargraph	Enable	
	Short trend	Enable	
	User's parameter table	Enable	
Select unit mode	Digital	Selectable	
	Bargraph	Selectable	

Items under Bargraph color and Digital display color, and Data under Trend channel depends upon Loop variables setting.

PRG mode indicator		ON	
Numerical key control	SP1	Enable	
	MV1	Enable	
	SP2	Enable	
	MV2	Enable	
Modbus-RTU	Node address	1	
	Transfer rate	38400	bps
	Data bit (8 bit)	8	bit
	Parity	Odd	
Modbus/TCP	IP address	192.168.0.1	
	Subnet mask	255.255.255.0	
	Port No. (502 fixed)	502	
	Linger time	180	sec
Language		English	

SC200/SC210 only

User's parameter table	Setting	Parameter	GROUP	ITEM	Range Hi limit	Range Lo limit	Decimal place	Engineering unit	DATA Hi limit	DATA Lo limit	DATA decimal place
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2

For SC200D

SC200D Configuration	LCD Ver. 1.0x		
Group	Item	Data	
Back light brightness		5	
Screen saver (time)		0	min (0=OFF)
MV 0/100% symbol	MV1 100% symbol	OP	
	MV1 0% symbol	CL	
	MV2 100% symbol	OP	
	MV2 0% symbol	CL	
Loop display (MV/OP)	LP1 display (MV)	1	
	LP2 display (MV)	2	
Loop variables		PV/SP/MV	
Graph scale divisions		10	
Decimals (% display)		1	
Alarm blinking		Enable	
Bargraph color	PV1 Normal	5	
	PV1 Hi limit	1	
	PV1 Lo limit	4	
	PV2 Normal	5	
	PV2 Hi limit	1	
	PV2 Lo limit	4	
	SP1 Normal	8	
	SP2 Normal	8	
	MV1 Normal	13	
	MV1 Hi limit	12	
	MV1 Lo limit	14	
	MV2 Normal	13	
	MV2 Hi limit	12	
	MV2 Lo limit	14	
Digital display color	PV1	16	
	PV2	16	
	SP1	16	
	SP2	16	
	MV1	16	
	MV2	16	
	FN1	16	
	FN2	16	
	FN3	16	
	FN4	16	
Trend recording		Start	
Storing interval		10 sec	
Trend channel	LP1 CH1	PV1	
	LP1 CH2	SP1	
	LP1 CH3	MV1	
	LP1 CH4	None	
	LP2 CH1	PV2	
	LP2 CH2	SP2	
	LP2 CH3	MV2	
	LP2 CH4	None	
Trend graph color	LP1 CH1	1	
	LP1 CH2	4	
	LP1 CH3	5	
	LP1 CH4	8	
	LP2 CH1	1	
	LP2 CH2	4	
	LP2 CH3	5	
	LP2 CH4	8	
Selected loop color		7	
Touch tone		Enable	
Home	Registered view	Digital	
	Registered loop number	1	
Select operation view	Digital	Enable	
	Bargraph	Enable	
	Dual-loop bargraph	Enable	
	Short trend	Enable	
	User's parameter table	Enable	
Select unit mode	Digital	Selectable	
	Bargraph	Selectable	

Items under Bargraph color and Digital display color, and Data under Trend channel depends upon Loop variables setting.

PRG mode indicator			ON									
Numerical key control	SP1		Enable									
	MV1		Enable									
	SP2		Enable									
	MV2		Enable									
Modbus-RTU	Node address		1									
	Transfer rate		38400		bps							
	Data bit (8 bit)		8		bit							
	Parity		Odd									
Modbus/TCP	IP address		192.168.0.1									
	Subnet mask		255.255.255.0									
	Port No. (502 fixed)		502									
	Linger time		180		sec							
Language			English									
User's parameter table	Setting	Parameter	GROUP	ITEM	Range Hi limit	Range Lo limit	Decimal place	Engineer-ing unit	DATA Hi limit	DATA Lo limit	DATA deci-mal place
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2

For SC200W, SC210W

SC200W Configuration	LCD Ver. 1.0x		
Group	Item	Data	
Back light brightness		5	
Screen saver (time)		0	min (0=OFF)
MV 0/100% symbol	MV1 100% symbol	OP	
	MV1 0% symbol	CL	
	MV2 100% symbol	OP	
	MV2 0% symbol	CL	
Loop display (MV/OP)	LP1 display (MV)	1	
	LP2 display (MV)	2	
Loop variables		PV/SP/MV	
Graph scale divisions		10	
Decimals (% display)		1	
Alarm blinking		Enable	
Bargraph color	PV1 Normal	5	
	PV1 Hi limit	1	
	PV1 Lo limit	4	
	PV2 Normal	5	
	PV2 Hi limit	1	
	PV2 Lo limit	4	
	SP1 Normal	8	
	SP2 Normal	8	
	MV1 Normal	13	
	MV1 Hi limit	12	
	MV1 Lo limit	14	
	MV2 Normal	13	
	MV2 Hi limit	12	
	MV2 Lo limit	14	
Digital display color	PV1	16	
	PV2	16	
	SP1	16	
	SP2	16	
	MV1	16	
	MV2	16	
	FN1	16	
	FN2	16	
	FN3	16	
	FN4	16	
Trend recording		Start	
Storing interval		10 sec	
Trend channel	LP1 CH1	PV1	
	LP1 CH2	SP1	
	LP1 CH3	MV1	
	LP1 CH4	None	
	LP2 CH1	PV2	
	LP2 CH2	SP2	
	LP2 CH3	MV2	
	LP2 CH4	None	
Trend graph color	LP1 CH1	1	
	LP1 CH2	4	
	LP1 CH3	5	
	LP1 CH4	8	
	LP2 CH1	1	
	LP2 CH2	4	
	LP2 CH3	5	
	LP2 CH4	8	
Selected loop color		7	
Touch tone		Enable	
Home	Registered view	Digital	
	Registered loop number	1	
Select operation view	Digital	Enable	
	Bargraph	Enable	
	Dual-loop bargraph	Enable	
	Short trend	Enable	
	User's parameter table	Enable	
Select unit mode	Digital	Selectable	
	Bargraph	Selectable	

Items under Bargraph color and Digital display color, and Data under Trend channel depends upon Loop variables setting.

PRG mode indicator			ON								
Numerical key control	SP1		Enable								
	MV1		Enable								
	SP2		Enable								
	MV2		Enable								
Modbus-RTU	Node address		1								
	Transfer rate		38400		bps						
	Data bit (8 bit)		8		bit						
	Parity		Odd								
Modbus/TCP	IP address		192.168.0.1								
	Subnet mask		255.255.255.0								
	Port No. (502 fixed)		502								
	Linger time		180		sec						
Language			English								
User's parameter table	Setting	Parameter	GROUP	ITEM	Range Hi limit	Range Lo limit	Decimal place	Engineer-ing unit	DATA Hi limit	DATA Lo limit	DATA deci-mal place
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2
	Disable	Name	0	0	10000	0	2	Unit	10000	0	2

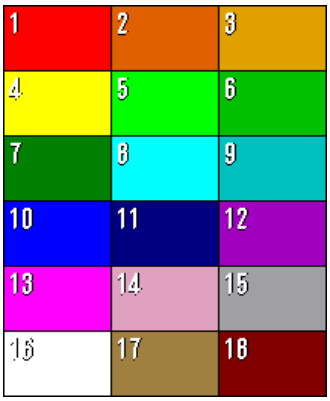
6.7 CONFIGURATION ITEM LIST

ITEM	SUB ITEM	DATA	DEFAULT	CONTENTS
Back light brightness		1, 2, 3, 4, 5	5	Backlight brightness control
Screen saver (time)		0, 1 – 99 minutes	0 (OFF)	Time before the screen turns off when not accessed. Screen saver does not turn on when: - PV high or low alarm is tripped. - ALM1, ALM2, ALM3 or ALM4 is indicated. - The device is in an abnormality. - Engineering view is on the screen.
MV-0/100% symbol	MV1 100% symbol	O, C, OP, CL O, C, OP, CL, HI, LO, 100, 0, MIN, MAX, None	OP	Mv 1 / Mv 2 graph scale 0% and 100% symbols
	MV1 0% symbol		CL	
	MV2 100% symbol		OP	
	MV2 0% symbol		CL	
Loop display (MV/OP)	LP1 display (MV)	1, 2	1	Mv signal assigned to the primary loop view.
	LP2 display (MV)		2	Mv signal assigned to the secondary loop view.
Loop variables		PV/SP/MV, SV/PV/OP	PV/SP/MV	Variables assignment (order) for bargraphs (SV=SP, OP=MV)
Graph scale divisions		2 – 10	10	Number of divisions applied to graphs on Bargraph view
Decimals (% display)		1, 2	1	Number of decimal places applied to % indication (PV1, PV2, SP1, SP2, MV1, MV2)
Alarm blinking		Disable, Enable	Enable	Digital displays can be set to blink during PV and/or MV alarms.
Bargraph color	PV1 norm	18 colors (color chart) *1	5	PV1 bargraph color, normal range
	PV1 Hi		1	PV1 bargraph color, high alarm range
	PV1 Lo		4	PV1 bargraph color, low alarm range
	PV2 norm		5	PV2 bargraph color, normal range
	PV2 Hi		1	PV2 bargraph color, high alarm range
	PV2 Lo		4	PV2 bargraph color, low alarm range
	SP1 norm		8	SP1 bargraph color, normal range
	SP2 norm		8	SP2 bargraph color, normal range
	MV1 norm		13	MV1 bargraph color, normal range
	MV1 Hi		12	MV1 bargraph color, high alarm range
	MV1 Lo		14	MV1 bargraph color, low alarm range
	MV2 norm		13	MV2 bargraph color, normal range
	MV2 Hi		12	MV2 bargraph color, high alarm range
	MV2 Lo		14	MV2 bargraph color, low alarm range
Digital display color	PV1	18 colors (color chart) *1	16	Digital display color (PV1, PV2, MV1, MV2, SP1, SP2, FN1, FN2, FN3, FN4) (High/Low alarm colors specified for bargraphs are applied.)
	PV2			
	SP1			
	SP2			
	MV1			
	MV2			
	FN1			
	FN2			
	FN3			
	FN4			
Trend recording		Start, Stop	Start	Trend recording operation control
Storing interval		1 sec thr. 60 min	10 sec	Short trend storing interval *2 (1, 2, 5, 10, 20, 30 sec, 1, 2, 5, 10, 30, 60 min)
Trend channel	LP1 CH1	None, PV1, PV2, SP1, SP2, MV1, MV2, FN1, FN2, FN3, FN4	PV1	Short trend channel assignment (CH1 thr. CH4)
	LP1 CH2		SP1	
	LP1 CH3		MV1	
	LP1 CH4		None	
	LP2 CH1		PV2	
	LP2 CH2		SP2	
	LP2 CH3		MV2	
	LP2 CH4		None	

ITEM	SUB ITEM	DATA	DEFAULT	CONTENTS
Trend graph color	LP1 CH1	18 colors (color chart) *1	1	Short trend graph color (CH1 thr. CH4)
	LP1 CH2		4	
	LP1 CH3		5	
	LP1 CH4		8	
	LP2 CH1		1	
	LP2 CH2		4	
	LP2 CH3		5	
	LP2 CH4		8	
Selected loop color		18 colors (color chart)*1	7	Background color of the tag field for the selected loop
Touch tone		Disable, Enable	Enable	Sound at the touch of buttons
Home	Registered view	Digital, Bargraph, Dual-loop bargraph, Short trend	Digital	Default (home) view to return when commanded
	Registered loop number	1, 2	1	Default (home) loop to return when commanded
Select operation view	Digital	Disable, Enable	Enable	Views to be indicated or skipped (digital, bargraph, dual-loop bargraph, short trend)
	Bargraph		Enable	
	Dual-loop bargraph		Enable	
	Short trend		Enable	
	User's parameter table		Enable	
Select unit mode	Digital	Selectable, Eng unit, %	Selectable	Scale setting for PV indicators
	Bargraph	Selectable, Eng unit, %	Selectable	
PRG mode indicator		ON, OFF	ON	ON/OFF the program mode (ITEM 01) of Function Block
Numerical key control	SP1	Disable, Enable	Enable	Disable/Enable the numerical key control for SP and MV in digital display view
	MV1			
	SP2			
	MV2			
Modbus-RTU (SC200, SC210, SC200D, SC200W and SC210W only)	Node address	1 to 247	1	Node address
	Baud rate	4800, 9600, 19200, 38400	38400	Transfer rate
	Data bit (8 bit)	8 (fixed)	8	Data bit (indication only)
	Parity	None, Even, Odd	Odd	Parity bit
Modbus/TCP (SC200, SC210, SC200D, SC200W and SC210W only)	IP address	0.0.0.0 ... 255.255.255.255	192.168.0.1	IP address
	Subnet mask	0.0.0.0 ... 255.255.255.255	255.255.255.0	Subnet mask
	Port No. (502 fixed)	502	502	Port No. (indication only)
	Linger time	0 to 3000	180	Linger time

ITEM	SUB ITEM	DATA	DEFAULT	CONTENTS
Language		Japanese, English	As specified when ordering	Display language
Parameter setting (40 parameters)	Setting	Enable, Disable	Disable	Enable / Disable the parameter in the User's Parameter Table view.
	Parameter	Max. 10 characters	Name	Parameter identification
	GROUP	0 to 99	0	GROUP No. in the Function Block List
	ITEM	0 to 99	0	ITEM No. in the Function Block List
	Range Hi limit*3	±32000	10000	Engineering unit data's upper range value
	Range Lo limit*3	±32000	0	Engineering unit data's lower range value
	Decimal place*3	0 to 5	2	Engineering unit data's decimal point position
	DATA Hi limit	±32000	10000	DATA's upper range value
	DATA Lo limit	±32000	0	DATA's lower range value
	DATA decimal point position	0 to 5	2	DATA's decimal point position
	DATA engineering unit	Max. 8 characters	Unit	DATA's engineering unit

*1. Color chart



*2. Storing interval and timing

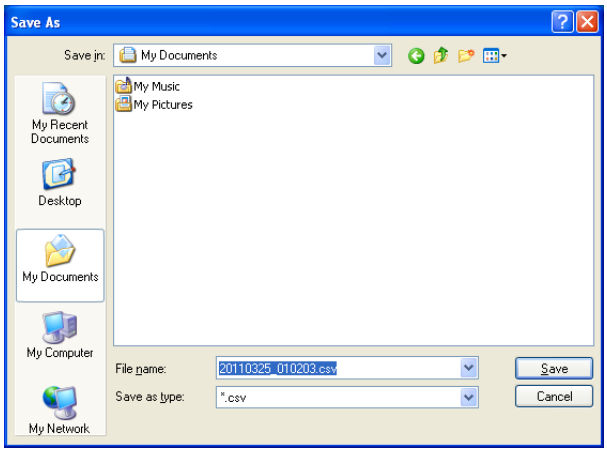
INTERVAL	TIMING	INTERVAL	TIMING
1 sec.	Every sec.	1 min.	Every min. 0 sec.
2 sec.	Even number of sec.	2 min.	Even number of min. 0 sec.
5 sec.	0, 5, 10, ... 55 sec.	5 min.	0, 5, ... 55 min. 0 sec.
10 sec.	0, 10, 20 ... 50 sec.	10 min.	0, 10, ... 50 min. 0 sec.
20 sec.	0, 20, 40 sec.	30 min.	0, 30 min. 0 sec.
30 sec.	0, 30 sec.	60 min.	Every hour, 0 min. 0 sec.

*3. LCD firmware version 1.5x or later

7. SHORT TREND DATA

7.1 UPLOAD AND EXPORT TO CSV

Click on [Upload and export to CSV] to start communicating with the Controller via infrared. Once the communication is established, the folder directory appears on the screen. Enter file name and click on [Save] button to create a CSV file.



7.2 SHORT TREND DATA IN CSV FORMAT

	A	B	C	D	E	F	G	H	I	J
1	SC210 Short trend data									
2										
3	Storing interval	10 sec								
4	Storing periold	2011/10/31	11:15:00	-	2011/10/31	12:21:30				
5	Number of samples	400								
6	Storing status	Storing								
7										
8	Trend channel	Data type	Tag No.	Unit	Lower range	Upper range	Decimal point			
9	LP1 CH1	PV1		m3/sec	0	10000	2			
10	LP1 CH2	SP1		m3/sec	0	10000	2			
11	LP1 CH3	MV1		%	0	10000	1			
12	LP1 CH4	FN1	No.1	%	-10000	0	3			
13	LP2 CH1	PV2		m3/sec	0	10000	2			
14	LP2 CH2	SP2		m3/sec	0	10000	2			
15	LP2 CH3	MV2		%	0	10000	1			
16	LP2 CH4	FN2	No.2	%	-20000	0	3			
17										
18	Date	Time	LP1 CH1	LP1 CH2	LP1 CH3	LP1 CH4	LP2 CH1	LP2 CH2	LP2 CH3	LP2 CH4
19			PV1	SP1	MV1	FN1	PV2	SP2	MV2	FN2
20										No.2
21			m				m3/sec	m3/sec	%	%
22	2011/10/31	11:15:00				0	50.00	50.00	100.0	-1.000
23	2011/10/31	11:15:10	50.00	50.00	405.0	-0.480	70.00	70.00	105.0	-0.800
24	2011/10/31	11:15:20	70.00	70.00	410.0	-0.460	90.00	90.00	110.0	-0.600
25	2011/10/31	11:15:30	90.00	90.00	415.0	-0.440	110.00	110.00	115.0	-0.400
26	2011/10/31	11:15:40	110.00	110.00	420.0	-0.420	130.00	130.00	120.0	-0.200
27	2011/10/31	11:15:50	130.00	130.00	425.0	-0.400	150.00	150.00	125.0	0.000
28	2011/10/31	11:16:00	150.00	150.00	430.0	-0.380	170.00	170.00	130.0	0.200
29	2011/10/31	11:16:10	170.00	170.00					135.0	0.400
30	2011/10/31	11:16:20	190.00	190.00				0	140.0	0.600
31	2011/10/31	11:16:30	210.00	210.00				0	145.0	0.800
32	2011/10/31	11:16:40	230.00	230.00				0	150.0	1.000
33	2011/10/31	11:16:50	250.00	250.00				0	155.0	1.200
34	2011/10/31	11:17:00	270.00	270.00				00	160.0	1.400
35	2011/10/31	11:17:10	290.00	290.00	465.0	-0.240	310.00	310.00	165.0	1.600
36	2011/10/31	11:17:20	310.00	310.00	470.0	-0.220	330.00	330.00	170.0	1.800
37	2011/10/31	11:17:30	330.00	330.00	475.0	-0.200	350.00	350.00	175.0	2.000
38	2011/10/31	11:17:40	350.00	350.00	480.0	-0.180	370.00	370.00	180.0	2.200
39	2011/10/31	11:17:50	370.00	370.00	485.0	-0.160	390.00	390.00	185.0	2.400
40	2011/10/31	11:18:00	390.00	390.00	490.0	-0.140	410.00	410.00	190.0	2.600

Storing interval, Storing period, Number of samples and Storing status

Trend channel, Data type, Tag No., Unit, Lower/Upper range, Decimal point

Tag No. is indicated when Data type is set with FNx.

Sampled data
Values in engineering unit with decimal point at the preset position.

- If a signal type assigned to a trend channel does not exist, the Controller does not plot data on the graph. However, such channel is included in CSV file. All data show the lower range value.
- Trend channels which are not assigned for the Controller's short trend view can be defined. Such channels are not shown on the trend graph of the Controller, but data is exported by the SCCFG. At the maximum of 8 channels are available.

[Example]
PID function block for the primary loop is defined, that for the secondary loop is not used. The secondary loop short trend is not shown on the screen but data can be stored.

TREND CHANNEL	SIGNAL TYPE	DATA STORAGE	GRAPH PLOTTING
LP1 CH1	PV1	Yes	Yes
LP1 CH2	SP2	Yes	
LP1 CH3	MV1	Yes	
LP1 CH4	None	----	
LP2 CH1	FN1	Yes	No
LP2 CH2	FN2	Yes	
LP2 CH3	FN3	Yes	
LP2 CH4	FN4	Yes	

Appx 1. ERROR CODES

ITEM	ERROR TYPE	CODE	MESSAGE
Configuration data	Illegal data	01	Setting data is not supported by the present version of SCCFG. Confirm the SCCFG version.
		02	Setting data is not in the defined format.
	Device error	01	The SCCFG failed in writing setting data to the device.
		02	Setting data is not in the defined format.
		03	Setting data is not supported by the device.
		04	Setting data value is out of defined range.
Short trend data	Illegal data	----	The SCCFG failed in reading illegal trend data.
	Unsupported device	----	The SCCFG tried to read trend data from unsupported device (other than SC200, SC210, SC200D, SC200W or SC210W).