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No. CP-SP-1265E

SDC45/46
Digital Indicating Controller
User's Manual
for
Displays and Settings

Thank you for purchasing the SDC45/46 Digital Indicating Controller.

This manual contains a complete list of SDC45/46 displays and settings. For assistance in correctly setting the SDC45/46, keep this manual nearby for handy reference.

For details about how to change the settings, refer to the installation and configuration manual (CP-SP-1218E) for the SDC45/46.

Yamatake Corporation

RESTRICTIONS ON USE

This product has been designed, developed and manufactured for general-purpose application in machinery and equipment.

Accordingly, when used in applications outlined below, special care should be taken to implement a fail-safe and/or redundant design concept as well as a periodic maintenance program.

- Safety devices for plant worker protection
- Start/stop control devices for transportation and material handling machines
- Aeronautical/aerospace machines
- Control devices for nuclear reactors

Never use this product in applications where human safety may be put at risk.

NOTICE

Be sure that the user receives this manual before the product is used.

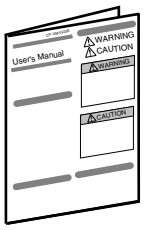
Copying or duplicating this user's manual in part or in whole is forbidden. The information and specifications in this manual are subject to change without notice.

Considerable effort has been made to ensure that this manual is free from inaccuracies and omissions. If you should find an error or omission, please contact Yamatake Corporation.

In no event is Yamatake Corporation liable to anyone for any indirect, special or consequential damages as a result of using this product.

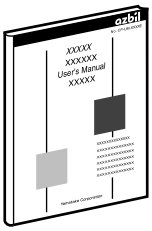
The Role of This Manual

A total of 4 different manuals are available for the SDC45/46. Read them as necessary for your specific requirements. If a manual you require is not available, contact Yamatake Corporation or its dealer.



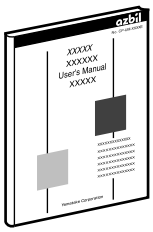
SDC45/46 Digital Indicating Controller Installation Instructions
Manual No. CP-UM-5445E

This manual is supplied with the SDC45/46. Personnel in charge of design and/or manufacture of a system using the SDC45/46 must thoroughly read this manual. This manual describes the safety precautions, installation, wiring, primary specifications, and transitions of key operations and displays. For further information about operation, refer to another manual, Installation and Configuration.



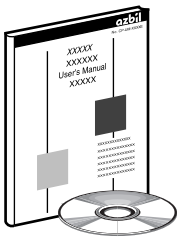
SDC45/46 Digital Indicating Controller User's Manual for Displays and Settings
Manual No. CP-SP-1265E

This manual. The manual is a reference document necessary to set or change data. The manual lists up the displays, setup items, setting ranges, and initial values.



SDC45/46 Digital Indicating Controller User's Manual for Installation and Configuration
Manual No. CP-SP-1218E

Personnel in charge of design, manufacture, operation, and/or maintenance of a system using SDC45/46 must thoroughly read this manual. This manual also describes the installation, wiring, connections for communication, all functions and settings of the SDC45/46, operating procedures, trouble-shooting, and detailed specifications.



SLP-C45 Smart Loader Package for SDC45/46 Digital Indicating Controller
Manual No. CP-UM-5458E

This manual is supplied with the SLP-C45 Smart Loader Package. The manual describes the software used to make various settings for SDC45/46 using a personal computer. Personnel in charge of design or setting of a system using SDC45/46 must thoroughly read this manual. The manual describes installation of the software into a personal computer, operation of the personal computer, various functions, and setup procedures.

Contents

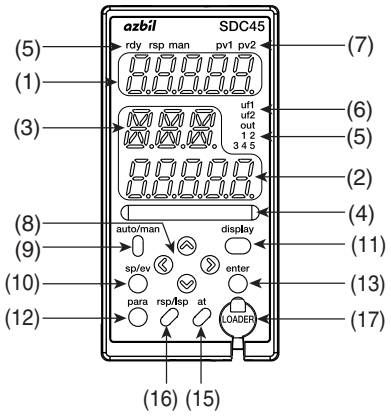
3. SP/EV BANK SETTINGS

4. STANDARD BIT CODES AND STANDARD NUMERICAL CODES

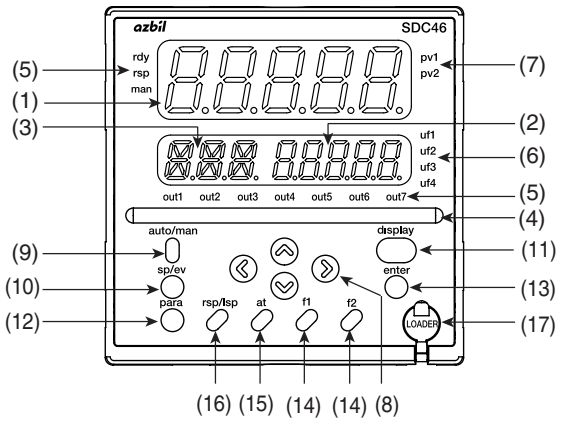
1. PRELIMINARIES

■ Names and function of parts

● Front panel of SDC45



● Front panel of SDC46



● Description

(1) Upper display: Displays PV (present temperature etc.) or setup items.

(2) Lower display: Displays SP (set temperature, etc.) and other parameters.

(3) Auxiliary display: Displays group No., loop* No., and channel No. of setup item.

*: The series of connections from PV input to PID operation through to control output is generically called a loop.

(4) Multi-status indicator:

Indicates MV or DI/DO status.

(5) Mode indicators:

rdy: Lights up in READY mode.

rsp: Lights up in RSP (remote setting input) mode.

man: Lights up in MANUAL mode.

out1-7: Light up when the output is ON (SDC45: out1-5).
Always lit when the output is current or continuous voltage.

(6) User function indicators:

uf1-4: Light under user-assigned conditions (SDC45: uf1, uf2).

(7) Loop number indicators:

pv1, pv2: Light up to indicate which loop has the displayed PV value.

(8) [∧], [∨],[<], [>] keys:
Used to increment/decrement numeric values and shift between digits or settable items.

(9) [auto/man] key: Used to change AUTO/MANUAL mode.

(10) [sp/ev] key: Used to set the SP/EV bank.

(11) [display] key: Used to change the display contents in the operation display mode.

(12) [para] key: Used to set the PARA bank.

(13) [enter] key: Used in initiating setup and to confirm changed values.

(14) [f1], [f2] key: Used for user-assigned functions. (SDC46 only).

(15) [at] key: Used to execute/cancel auto-tuning, or for user-assigned functions.

(16) [rsp/lsp] key: Used to change between remote and local set point, or for user-assigned functions.

(17) Loader jack: Jack for connection of PC loader cable (with cap).

■ Method of key operations

● Key operations when setting PARA bank

(1) Press the [display] key to return to the operation display.

(2) To select a bank, keep the [para] key pressed for 2 s.

(3) To display a bank to be set, press the [para] key, [∧] key, or [∨] key.

(4) When a desired bank is displayed, press the [enter] key.

(5) To display an item to be set, press the [para] key, [∧] key, [∨] key, [＜] key, or [＞] key.

(6) When a desired item is displayed, press the [enter] key.

(7) Change the set value with the [∧] key, [∨] key, [＜] key, or [＞] key.

(8) To set the set value you have changed, press the [enter] key.

(9) To set other items in the same bank, repeat the operation from step (5).
To set desired set data in other bank, continue the operation from step (2).

(10) To exit the setting, press the [display] key.

● Key operations when setting SP/EV bank

(1) Press the [display] key to return to the operation display.

(2) To select a bank, keep the [sp/ev] key pressed for 2 s.

(3) To display a bank to be set, press the [sp/ev] key, [∧] key, or [∨] key.

(4) When a desired bank is displayed, press the [enter] key.

(5) To display an item to be set, press the [sp/ev] key, [∧] key, [∨] key, [＜] key, or [＞] key.

(6) When a desired item is displayed, press the [enter] key.

(7) Change the set value with the [∧] key, [∨] key, [＜] key, or [＞] key.

(8) To set the set value you have changed, press the [enter] key.

(9) To set other items in the same bank, repeat the operation from step (5).
To set desired set data in other bank, continue the operation from step (2).

(10) To exit the setting, press the [display] key.

2. PARA BANK SETTINGS

■ Mode bank (mode)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
r---r	L.1.	RUN/READY	run : RUN mode rdy : READY mode	RUN		
A---M	L.1.	AUTO/MANUAL	AUto : AUTO mode MAn : MANUAL mode	AUTO		
At	L.1.	Auto tuning (AT) stop/start	At.oF : AT stop At.on : AT start	AT.OF		
L---r	L.1.	LSP/RSP	LSP : LSP mode rSP : RSP mode	LSP		
Cb	L.1.	Backup/Through output	LMv : Backup mode (local MV) rMv : Through output mode (remote MV)	LMV		
r---r	L.2.	RUN/READY	run : RUN mode rdy : READY mode	RUN		
A---M	L.2.	AUTO/MANUAL	AUto : AUTO mode MAn : MANUAL mode	AUTO		
At	L.2.	Auto tuning (AT) stop/start	At.oF : AT stop At.on : AT start	AT.OF		
L---r	L.2.	LSP/RSP	LSP : LSP mode rSP : RSP mode	LSP		
Cb	L.2.	(Reserved for future use)		-		Setting is disabled.

■ Loop 1 PID bank (L1.PId)

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-01	L.1.	Proportional band	1	0.1 to 3200.0 %	5.0		
I-01	L.1.	Integral time	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00.)	120		The decimal point position is determined by the decimal point positions for the integral time and derivative time.
d-01	L.1.	Derivative time	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00.)	30		
oL-01	L.1.	Output low limit	1	-10.0 to +110.0 %	0.0		
oH-01	L.1.	Output high limit	1		100.0		
rE-01	L.1.	Manual reset	1		50.0		
P-01C	L.1.	Proportional band for cool side	1	0.1 to 3200.0 %	5.0		
I-01C	L.1.	Integral time for cool side	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00.)	120		The decimal point position is determined by the decimal point positions for the integral time and derivative time.
d-01	L.1.	Derivative time for cool side	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00.)	30		
oL.01C	L.1.	Output low limit for cool side	1	-10.0 to +110.0 %	0.0		
oH.01C	L.1.	Output high limit for cool side	1		100.0		
P-02	L.1.	Proportional band	2	Same as PID1	5.0		Same as PID1
I-02	L.1.	Integral time	2		120		
d-02	L.1.	Derivative time	2		30		
oL-02	L.1.	Output low limit	2		0.0		
oH-02	L.1.	Output high limit	2		100.0		
rE-02	L.1.	Manual reset	2		50.0		
P-02C	L.1.	Proportional band for cool side	2		5.0		
I-02C	L.1.	Integral time for cool side	2		120		
d-02C	L.1.	Derivative time for cool side	2		30		
oL.02C	L.1.	Output low limit for cool side	2		0.0		
oH.02C	L.1.	Output high limit for cool side	2		100.0		
P-03	L.1.	Proportional band	3	Same as PID1	5.0		Same as PID1
I-03	L.1.	Integral time	3		120		
d-03	L.1.	Derivative time	3		30		
oL-03	L.1.	Output low limit	3		0.0		
oH-03	L.1.	Output high limit	3		100.0		
rE-03	L.1.	Manual reset	3		50.0		
P-03C	L.1.	Proportional band for cool side	3		5.0		
I-03C	L.1.	Integral time for cool side	3		120		
d-03C	L.1.	Derivative time for cool side	3		30		
oL.03C	L.1.	Output low limit for cool side	3		0.0		
oH.03C	L.1.	Output high limit for cool side	3		100.0		

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-04	L. 1.	Proportional band	4	Same as PID1	5.0		Same as PID1
I-04	L. 1.	Integral time	4		120		
d-04	L. 1.	Derivative time	4		30		
oL-04	L. 1.	Output low limit	4		0.0		
oH-04	L. 1.	Output high limit	4		100.0		
rE-04	L. 1.	Manual reset	4		50.0		
P-04C	L. 1.	Proportional band for cool side	4		5.0		
I-04C	L. 1.	Integral time for cool side	4		120		
d-04C	L. 1.	Derivative time for cool side	4		30		
oL.04C	L. 1.	Output low limit for cool side	4		0.0		
oH.04C	L. 1.	Output high limit for cool side	4		100.0		
P-05	L. 1.	Proportional band	5	Same as PID1	5.0		Same as PID1
I-05	L. 1.	Integral time	5		120		
d-05	L. 1.	Derivative time	5		30		
oL-05	L. 1.	Output low limit	5		0.0		
oH-05	L. 1.	Output high limit	5		100.0		
rE-05	L. 1.	Manual reset	5		50.0		
P-05C	L. 1.	Proportional band for cool side	5		5.0		
I-05C	L. 1.	Integral time for cool side	5		120		
d-05C	L. 1.	Derivative time for cool side	5		30		
oL.05C	L. 1.	Output low limit for cool side	5		0.0		
oH.05C	L. 1.	Output high limit for cool side	5		100.0		
P-06	L. 1.	Proportional band	6	Same as PID1	5.0		Same as PID1
I-06	L. 1.	Integral time	6		120		
d-06	L. 1.	Derivative time	6		30		
oL-06	L. 1.	Output low limit	6		0.0		
oH-06	L. 1.	Output high limit	6		100.0		
rE-06	L. 1.	Manual reset	6		50.0		
P-06C	L. 1.	Proportional band for cool side	6		5.0		
I-06C	L. 1.	Integral time for cool side	6		120		
d-06C	L. 1.	Derivative time for cool side	6		30		
oL.06C	L. 1.	Output low limit for cool side	6		0.0		
oH.06C	L. 1.	Output high limit for cool side	6		100.0		
P-07	L. 1.	Proportional band	7	Same as PID1	5.0		Same as PID1
I-07	L. 1.	Integral time	7		120		
d-07	L. 1.	Derivative time	7		30		
oL-07	L. 1.	Output low limit	7		0.0		
oH-07	L. 1.	Output high limit	7		100.0		
rE-07	L. 1.	Manual reset	7		50.0		
P-07C	L. 1.	Proportional band for cool side	7		5.0		
I-07C	L. 1.	Integral time for cool side	7		120		
d-07C	L. 1.	Derivative time for cool side	7		30		
oL.07C	L. 1.	Output low limit for cool side	7		0.0		
oH.07C	L. 1.	Output high limit for cool side	7		100.0		
P-08	L. 1.	Proportional band	8	Same as PID1	5.0		Same as PID1
I-08	L. 1.	Integral time	8		120		
d-08	L. 1.	Derivative time	8		30		
oL-08	L. 1.	Output low limit	8		0.0		
oH-08	L. 1.	Output high limit	8		100.0		
rE-08	L. 1.	Manual reset	8		50.0		
P-08C	L. 1.	Proportional band for cool side	8		5.0		
I-08C	L. 1.	Integral time for cool side	8		120		
d-08C	L. 1.	Derivative time for cool side	8		30		
oL.08C	L. 1.	Output low limit for cool side	8		0.0		
oH.08C	L. 1.	Output high limit for cool side	8		100.0		
P-09	L. 1.	Proportional band	9	Same as PID1	5.0		Same as PID1
I-09	L. 1.	Integral time	9		120		
d-09	L. 1.	Derivative time	9		30		
oL-09	L. 1.	Output low limit	9		0.0		
oH-09	L. 1.	Output high limit	9		100.0		
rE-09	L. 1.	Manual reset	9		50.0		
P-09C	L. 1.	Proportional band for cool side	9		5.0		
I-09C	L. 1.	Integral time for cool side	9		120		
d-09C	L. 1.	Derivative time for cool side	9		30		
oL.09C	L. 1.	Output low limit for cool side	9		0.0		
oH.09C	L. 1.	Output high limit for cool side	9		100.0		

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-10	L.1.	Proportional band	10	Same as PID1	5.0		Same as PID1
I-10	L.1.	Integral time	10		120		
d-10	L.1.	Derivative time	10		30		
oL-10	L.1.	Output low limit	10		0.0		
oH-10	L.1.	Output high limit	10		100.0		
rE-10	L.1.	Manual reset	10		50.0		
P-10C	L.1.	Proportional band for cool side	10		5.0		
I-10C	L.1.	Integral time for cool side	10		120		
d-10C	L.1.	Derivative time for cool side	10		30		
oL.10C	L.1.	Output low limit for cool side	10		0.0		
oH.10C	L.1.	Output high limit for cool side	10		100.0		
P-11	L.1.	Proportional band	11	Same as PID1	5.0		Same as PID1
I-11	L.1.	Integral time	11		120		
d-11	L.1.	Derivative time	11		30		
oL-11	L.1.	Output low limit	11		0.0		
oH-11	L.1.	Output high limit	11		100.0		
rE-11	L.1.	Manual reset	11		50.0		
P-11C	L.1.	Proportional band for cool side	11		5.0		
I-11C	L.1.	Integral time for cool side	11		120		
d-11C	L.1.	Derivative time for cool side	11		30		
oL.11C	L.1.	Output low limit for cool side	11		0.0		
oH.11C	L.1.	Output high limit for cool side	11		100.0		
P-12	L.1.	Proportional band	12	Same as PID1	5.0		Same as PID1
I-12	L.1.	Integral time	12		120		
d-12	L.1.	Derivative time	12		30		
oL-12	L.1.	Output low limit	12		0.0		
oH-12	L.1.	Output high limit	12		100.0		
rE-12	L.1.	Manual reset	12		50.0		
P-12C	L.1.	Proportional band for cool side	12		5.0		
I-12C	L.1.	Integral time for cool side	12		120		
d-12C	L.1.	Derivative time for cool side	12		30		
oL.12C	L.1.	Output low limit for cool side	12		0.0		
oH.12C	L.1.	Output high limit for cool side	12		100.0		
P-13	L.1.	Proportional band	13	Same as PID1	5.0		Same as PID1
I-13	L.1.	Integral time	13		120		
d-13	L.1.	Derivative time	13		30		
oL-13	L.1.	Output low limit	13		0.0		
oH-13	L.1.	Output high limit	13		100.0		
rE-13	L.1.	Manual reset	13		50.0		
P-13C	L.1.	Proportional band for cool side	13		5.0		
I-13C	L.1.	Integral time for cool side	13		120		
d-13C	L.1.	Derivative time for cool side	13		30		
oL.13C	L.1.	Output low limit for cool side	13		0.0		
oH.13C	L.1.	Output high limit for cool side	13		100.0		
P-14	L.1.	Proportional band	14	Same as PID1	5.0		Same as PID1
I-14	L.1.	Integral time	14		120		
d-14	L.1.	Derivative time	14		30		
oL-14	L.1.	Output low limit	14		0.0		
oH-14	L.1.	Output high limit	14		100.0		
rE-14	L.1.	Manual reset	14		50.0		
P-14C	L.1.	Proportional band for cool side	14		5.0		
I-14C	L.1.	Integral time for cool side	14		120		
d-14C	L.1.	Derivative time for cool side	14		30		
oL.14C	L.1.	Output low limit for cool side	14		0.0		
oH.14C	L.1.	Output high limit for cool side	14		100.0		
P-15	L.1.	Proportional band	15	Same as PID1	5.0		Same as PID1
I-15	L.1.	Integral time	15		120		
d-15	L.1.	Derivative time	15		30		
oL-15	L.1.	Output low limit	15		0.0		
oH-15	L.1.	Output high limit	15		100.0		
rE-15	L.1.	Manual reset	15		50.0		
P-15C	L.1.	Proportional band for cool side	15		5.0		
I-15C	L.1.	Integral time for cool side	15		120		
d-15C	L.1.	Derivative time for cool side	15		30		
oL.15C	L.1.	Output low limit for cool side	15		0.0		
oH.15C	L.1.	Output high limit for cool side	15		100.0		

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-16	L.1.	Proportional band	16	Same as PID1	5.0		Same as PID1
I-16	L.1.	Integral time	16		120		
d-16	L.1.	Derivative time	16		30		
oL-16	L.1.	Output low limit	16		0.0		
oH-16	L.1.	Output high limit	16		100.0		
rE-16	L.1.	Manual reset	16		50.0		
P-16C	L.1.	Proportional band for cool side	16		5.0		
I-16C	L.1.	Integral time for cool side	16		120		
d-16C	L.1.	Derivative time for cool side	16		30		
oL.16C	L.1.	Output low limit for cool side	16		0.0		
oH.16C	L.1.	Output high limit for cool side	16		100.0		

■ Loop 2 PID bank (L2.PId)

Display	Loop number (Auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-01	L.2.	Proportional band	1	0.1 to 3200.0 %	5.0		
I-01	L.2.	Integral time	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point positions for the integral time and derivative time.
d-01	L.2.	Derivative time	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL-01	L.2.	Output low limit	1	-10.0 to +110.0 %	0.0		
oH-01	L.2.	Output high limit	1		100.0		
rE-01	L.2.	Manual reset	1		50.0		
P-01C	L.2.	Proportional band for cool side	1	0.1 to 3200.0 %	5.0		
I-01C	L.2.	Integral time for cool side	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point positions for the integral time and derivative time.
d-01C	L.2.	Derivative time for cool side	1	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL.01C	L.2.	Output low limit for cool side	1	-10.0 to +110.0 %	0.0		
oH.01C	L.2.	Output high limit for cool side	1		100.0		
P-02	L.2.	Proportional band	2	Same as PID1	5.0		Same as PID1
I-02	L.2.	Integral time	2		120		
d-02	L.2.	Derivative time	2		30		
oL-02	L.2.	Output low limit	2		0.0		
oH-02	L.2.	Output high limit	2		100.0		
rE-02	L.2.	Manual reset	2		50.0		
P-02C	L.2.	Proportional band for cool side	2		5.0		
I-02C	L.2.	Integral time for cool side	2		120		
d-02C	L.2.	Derivative time for cool side	2		30		
oL.02C	L.2.	Output low limit for cool side	2		0.0		
oH.02C	L.2.	Output high limit for cool side	2		100.0		
P-03	L.2.	Proportional band	3	Same as PID1	5.0		Same as PID1
I-03	L.2.	Integral time	3		120		
d-03	L.2.	Derivative time	3		30		
oL-03	L.2.	Output low limit	3		0.0		
oH-03	L.2.	Output high limit	3		100.0		
rE-03	L.2.	Manual reset	3		50.0		
P-03C	L.2.	Proportional band for cool side	3		5.0		
I-03C	L.2.	Integral time for cool side	3		120		
d-03C	L.2.	Derivative time for cool side	3		30		
oL.03C	L.2.	Output low limit for cool side	3		0.0		
oH.03C	L.2.	Output high limit for cool side	3		100.0		
P-04	L.2.	Proportional band	4	Same as PID1	5.0		Same as PID1
I-04	L.2.	Integral time	4		120		
d-04	L.2.	Derivative time	4		30		
oL-04	L.2.	Output low limit	4		0.0		
oH-04	L.2.	Output low limit	4		100.0		
rE-04	L.2.	Manual reset	4		50.0		
P-04C	L.2.	Proportional band for cool side	4		5.0		
I-04C	L.2.	Integral time for cool side	4		120		
d-04C	L.2.	Derivative time for cool side	4		30		
oL.04C	L.2.	Output low limit for cool side	4		0.0		
oH.04C	L.2.	Output high limit for cool side	4		100.0		

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-05	L.2.	Proportional band	5	Same as PID1	5.0		Same as PID1
I-05	L.2.	Integral time	5		120		
d-05	L.2.	Derivative time	5		30		
oL-05	L.2.	Output low limit	5		0.0		
oH-05	L.2.	Output high limit	5		100.0		
rE-05	L.2.	Manual reset	5		50.0		
P-05C	L.2.	Proportional band for cool side	5		5.0		
I-05C	L.2.	Integral time for cool side	5		120		
d-05C	L.2.	Derivative time for cool side	5		30		
oL.05C	L.2.	Output low limit for cool side	5		0.0		
oH.05C	L.2.	Output high limit for cool side	5		100.0		
P-06	L.2.	Proportional band	6	Same as PID1	5.0		Same as PID1
I-06	L.2.	Integral time	6		120		
d-06	L.2.	Derivative time	6		30		
oL-06	L.2.	Output low limit	6		0.0		
oH-06	L.2.	Output high limit	6		100.0		
rE-06	L.2.	Manual reset	6		50.0		
P-06C	L.2.	Proportional band for cool side	6		5.0		
I-06C	L.2.	Integral time for cool side	6		120		
d-06C	L.2.	Derivative time for cool side	6		30		
oL.06C	L.2.	Output low limit for cool side	6		0.0		
oH.06C	L.2.	Output high limit for cool side	6		100.0		
P-07	L.2.	Proportional band	7	Same as PID1	5.0		Same as PID1
I-07	L.2.	Integral time	7		120		
d-07	L.2.	Derivative time	7		30		
oL-07	L.2.	Output low limit	7		0.0		
oH-07	L.2.	Output high limit	7		100.0		
rE-07	L.2.	Manual reset	7		50.0		
P-07C	L.2.	Proportional band for cool side	7		5.0		
I-07C	L.2.	Integral time for cool side	7		120		
d-07C	L.2.	Derivative time for cool side	7		30		
oL.07C	L.2.	Output low limit for cool side	7		0.0		
oH.07C	L.2.	Output high limit for cool side	7		100.0		
P-08	L.2.	Proportional band	8	Same as PID1	5.0		Same as PID1
I-08	L.2.	Integral time	8		120		
d-08	L.2.	Derivative time	8		30		
oL-08	L.2.	Output low limit	8		0.0		
oH-08	L.2.	Output high limit	8		100.0		
rE-08	L.2.	Manual reset	8		50.0		
P-08C	L.2.	Proportional band for cool side	8		5.0		
I-08C	L.2.	Integral time for cool side	8		120		
d-08C	L.2.	Derivative time for cool side	8		30		
oL.08C	L.2.	Output low limit for cool side	8		0.0		
oH.08C	L.2.	Output high limit for cool side	8		100.0		
P-09	L.2.	Proportional band	9	Same as PID1	5.0		Same as PID1
I-09	L.2.	Integral time	9		120		
d-09	L.2.	Derivative time	9		30		
oL-09	L.2.	Output low limit	9		0.0		
oH-09	L.2.	Output high limit	9		100.0		
rE-09	L.2.	Manual reset	9		50.0		
P-09C	L.2.	Proportional band for cool side	9		5.0		
I-09C	L.2.	Integral time for cool side	9		120		
d-09C	L.2.	Derivative time for cool side	9		30		
oL.09C	L.2.	Output low limit for cool side	9		0.0		
oH.09C	L.2.	Output high limit for cool side	9		100.0		
P-10	L.2.	Proportional band	10	Same as PID1	5.0		Same as PID1
I-10	L.2.	Integral time	10		120		
d-10	L.2.	Derivative time	10		30		
oL-10	L.2.	Output low limit	10		0.0		
oH-10	L.2.	Output high limit	10		100.0		
rE-10	L.2.	Manual reset	10		50.0		
P-10C	L.2.	Proportional band for cool side	10		5.0		
I-10C	L.2.	Integral time for cool side	10		120		
d-10C	L.2.	Derivative time for cool side	10		30		
oL.10C	L.2.	Output low limit for cool side	10		0.0		
oH.10C	L.2.	Output high limit for cool side	10		100.0		

Display	Loop number (auxiliary display)	Item	PID value	Settings and descriptions	Initial value	User setting	Remarks
P-11	L.2.	Proportional band	11	Same as PID1	5.0		Same as PID1
I-11	L.2.	Integral time	11		120		
d-11	L.2.	Derivative time	11		30		
oL-11	L.2.	Output low limit	11		0.0		
oH-11	L.2.	Output high limit	11		100.0		
rE-11	L.2.	Manual reset	11		50.0		
P-11C	L.2.	Proportional band for cool side	11		5.0		
I-11C	L.2.	Integral time for cool side	11		120		
d-11C	L.2.	Derivative time for cool side	11		30		
oL.11C	L.2.	Output low limit for cool side	11		0.0		
oH.11C	L.2.	Output high limit for cool side	11		100.0		
P-12	L.2.	Proportional band	12	Same as PID1	5.0		Same as PID1
I-12	L.2.	Integral time	12		120		
d-12	L.2.	Derivative time	12		30		
oL-12	L.2.	Output low limit	12		0.0		
oH-12	L.2.	Output high limit	12		100.0		
rE-12	L.2.	Manual reset	12		50.0		
P-12C	L.2.	Proportional band for cool side	12		5.0		
I-12C	L.2.	Integral time for cool side	12		120		
d-12C	L.2.	Derivative time for cool side	12		30		
oL.12C	L.2.	Output low limit for cool side	12		0.0		
oH.12C	L.2.	Output high limit for cool side	12		100.0		
P-13	L.2.	Proportional band	13	Same as PID1	5.0		Same as PID1
I-13	L.2.	Integral time	13		120		
d-13	L.2.	Derivative time	13		30		
oL-13	L.2.	Output low limit	13		0.0		
oH-13	L.2.	Output high limit	13		100.0		
rE-13	L.2.	Manual reset	13		50.0		
P-13C	L.2.	Proportional band for cool side	13		5.0		
I-13C	L.2.	Integral time for cool side	13		120		
d-13C	L.2.	Derivative time for cool side	13		30		
oL.13C	L.2.	Output low limit for cool side	13		0.0		
oH.13C	L.2.	Output high limit for cool side	13		100.0		
P-14	L.2.	Proportional band	14	Same as PID1	5.0		Same as PID1
I-14	L.2.	Integral time	14		120		
d-14	L.2.	Derivative time	14		30		
oL-14	L.2.	Output low limit	14		0.0		
oH-14	L.2.	Output high limit	14		100.0		
rE-14	L.2.	Manual reset	14		50.0		
P-14C	L.2.	Proportional band for cool side	14		5.0		
I-14C	L.2.	Integral time for cool side	14		120		
d-14C	L.2.	Derivative time for cool side	14		30		
oL.14C	L.2.	Output low limit for cool side	14		0.0		
oH.14C	L.2.	Output high limit for cool side	14		100.0		
P-15	L.2.	Proportional band	15	Same as PID1	5.0		Same as PID1
I-15	L.2.	Integral time	15		120		
d-15	L.2.	Derivative time	15		30		
oL-15	L.2.	Output low limit	15		0.0		
oH-15	L.2.	Output high limit	15		100.0		
rE-15	L.2.	Manual reset	15		50.0		
P-15C	L.2.	Proportional band for cool side	15		5.0		
I-15C	L.2.	Integral time for cool side	15		120		
d-15C	L.2.	Derivative time for cool side	15		30		
oL.15C	L.2.	Output low limit for cool side	15		0.0		
oH.15C	L.2.	Output high limit for cool side	15		100.0		
P-16	L.2.	Proportional band	16	Same as PID1	5.0		Same as PID1
I-16	L.2.	Integral time	16		120		
d-16	L.2.	Derivative time	16		30		
oL-16	L.2.	Output low limit	16		0.0		
oH-16	L.2.	Output high limit	16		100.0		
rE-16	L.2.	Manual reset	16		50.0		
P-16C	L.2.	Proportional band for cool side	16		5.0		
I-16C	L.2.	Integral time for cool side	16		120		
d-16C	L.2.	Derivative time for cool side	16		30		
oL.16C	L.2.	Output low limit for cool side	16		0.0		
oH.16C	L.2.	Output high limit for cool side	16		100.0		

■ SP configuration bank (SPCnF)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
LAL.01	L.1.	SP low limit	-19999 to +32000 U	-1999.9		The decimal point position is
LAL.02	L.1.	SP high limit		3200.0		determined by the decimal point positions for the loop PV/SP.
CSP.01	L.1.	SP ramp unit	0: No decimal point/s 1: No decimal point/min 2: No decimal point/h 3: 0.1/s 4: 0.1/min 5: 0.1/h 6: 0.01/s 7: 0.01/min 8: 0.01/h 9: 0.001/s 10: 0.001/min 11: 0.001/h	0		
CSP.02	L.1.	SP ramp-up for LSP	0 U (no ramp) 1 to 32000 U	0		The decimal point position is
CSP.03	L.1.	SP ramp-down for LSP		0		determined by the SP ramp unit.
CSP.04	L.1.	RSP tracking	0: No tracking 1: Tracking	0		
CSP.05	L.1.	SP ramp-up for RSP	0 U (no ramp) 1 to 32000 U	0		The decimal point position is
CSP.06	L.1.	SP ramp-down for RSP		0		determined by the SP ramp unit.
CSP.07	L.1.	LSP bias	-19999 to +32000U	0		The decimal point position is
CSP.08	L.1.	RSP bias		0		determined by the decimal point positions for the loop PV/SP.
CSP.09	L.1.	PV start for LSP	0: PV start enabled	0		
CSP.10	L.1.	PV start for RSP	1: PV start disabled	0		
CSP.11	L.1.	Digital RSP selection	0: Disabled 1: Enabled	0		SDC45A/46A/45R/46R 0: When disabled, the PV input is used as the RSP. SDC45V/46V 0: When disabled, the RSP assignment is used as the RSP.
CSP.12	L.1.	Digital RSP	SP low limit to SP high limit	0		The decimal point position is determined by the decimal point positions for the loop PV/SP.
rrR.01	L.1.	RSP ratio 1	0.001 to 32.000	1.000		
rrR.02	L.1.	RSP ratio 2				
rrR.03	L.1.	RSP ratio 3				
rrR.04	L.1.	RSP ratio 4				
rrR.05	L.1.	RSP ratio 5				
rrR.06	L.1.	RSP ratio 6				
rrR.07	L.1.	RSP ratio 7				
rrR.08	L.1.	RSP ratio 8				
LAL.01	L.2.	SP low limit	-19999 to +32000 U	-1999.9		The decimal point position is
LAL.02	L.2.	SP high limit		3200.0		determined by the decimal point positions for the loop PV/SP.
CSP.01	L.2.	SP ramp unit	0: No decimal point/s 1: No decimal point/min 2: No decimal point/h 3: 0.1/s 4: 0.1/min 5: 0.1/h 6: 0.01/s 7: 0.01/min 8: 0.01/h 9: 0.001/s 10: 0.001/min 11: 0.001/h	0		
CSP.02	L.2.	SP ramp-up for LSP	0 U (No ramp) 1 to 32000 U	0		The decimal point position is
CSP.03	L.2.	SP ramp-down for LSP		0		determined by the SP ramp unit.
CSP.04	L.2.	RSP tracking	0: No tracking 1: Tracking	0		
CSP.05	L.2.	SP ramp-up for RSP	0 U (No ramp) 1 to 32000 U	0		The decimal point position is
CSP.06	L.2.	SP ramp-down for RSP		0		determined by the SP ramp unit.
CSP.07	L.2.	LSP bias	-19999 to +32000 U	0		The decimal point position is
CSP.08	L.2.	RSP bias		0		determined by the decimal point positions for the loop PV/SP.
CSP.09	L.2.	PV start for LSP	0: PV start enabled	0		
CSP.10	L.2.	PV start for RSP	1: PV start disabled	0		
CSP.11	L.2.	Digital RSP selection	0: Disabled 1: Enabled	0		SDC45A/46A/45R/46R 0: When disabled, the PV input is used as the RSP. SDC45V/46V 0: When disabled, the RSP assignment is used as the RSP.
CSP.12	L.2.	Digital RSP	SP low limit to SP high limit	0		The decimal point position is determined by the decimal point positions for the loop PV/SP.
rrR.01	L.2.	RSP ratio 1	0.001 to 32.000	1.000		
rrR.02	L.2.	RSP ratio 2				
rrR.03	L.2.	RSP ratio 3				
rrR.04	L.2.	RSP ratio 4				
rrR.05	L.2.	RSP ratio 5				
rrR.06	L.2.	RSP ratio 6				
rrR.07	L.2.	RSP ratio 7				
rrR.08	L.2.	RSP ratio 8				

■ Event configuraiton bank (EvCnF)

Display	Event number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
EP-01	01.	Operation type	0: No event 1: PV high limit 2: PV low limit 3: PV high/low limit 4: Deviation high limit 5: Deviation low limit 6: Deviation high/low limit 7: Deviation high limit (final SP reference) 8: Deviation low limit (final SP reference) 9: Deviation high/low limit (final SP reference) 10: SP high limit 11:SP low limit 12: SP high/low limit 13: MV high limit 14: MV low limit 15: MV high/low limit 16: MFB high/low limit 17 to 25: Undefined 26: Standard numerical bit high limit 27: Standard numerical bit low limit 28: Standard numerical bit high/low limit 29 to 60: Undefined 61: Alarm (status) 62: READY (status) 63: MANUAL(status) 64: RSP (status) 65: AT start (status) 66: During SP ramp (status) 67: Control direct action (status) 68: Through output (status) 69: Undefined 70: Timer (status)	0		Setting range is 0 to 255. Refer to ■ Event operation types, polarity, hysteresis, main settings and sub settings (page 6-5) in the installation and configuration manual.
EP-02	01.	Loop/channel definition	1:Loop 1 2:Loop 2	1		Setting range is 0 to 99.
EP-03	01.	Direct/reverse	0:Direct 1: Reverse	0		
EP-04	01.	Standby	0: None 1: Standby 2: Standby + Standby at SP change	0		
EP-05	01.	EVENT state at READY	0: Continued 1: Forced OFF	0		
EP-06	01.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	0		
EP-07	01.	Hysteresis	0 to 32000U	5		The decimal point position is determined by the decimal point position for event configuration.
EP-08	01.	ON delay	0.0 to 3200.0s	0.0		
EP-09	01.	OFF delay		0.0		
EP-01	02.	Operation type	Same as event 1	0		Same as event 1
EP-02	02.	Loop/channel definition		1		
EP-03	02.	Direct/reverse		0		
EP-04	02.	Standby		0		
EP-05	02.	EVENT state at READY		0		
EP-06	02.	Decimal point position		0		
EP-07	02.	Hysteresis		5		
EP-08	02.	ON delay		0.0		
EP-09	02.	OFF delay		0.0		
EP-01	03.	Operation type	Same as event 1	0		Same as event 1
EP-02	03.	Loop/channel definition		1		
EP-03	03.	Direct/reverse		0		
EP-04	03.	Standby		0		
EP-05	03.	EVENT state at READY		0		
EP-06	03.	Decimal point position		0		
EP-07	03.	Hysteresis		5		
EP-08	03.	ON delay		0.0		
EP-09	03.	OFF delay		0.0		
EP-01	04.	Operation type	Same as event 1	0		Same as event 1
EP-02	04.	Loop/channel definition		1		
EP-03	04.	Direct/reverse		0		
EP-04	04.	Standby		0		
EP-05	04.	EVENT state at READY		0		
EP-06	04.	Decimal point position		0		
EP-07	04.	Hysteresis		5		
EP-08	04.	ON delay		0.0		
EP-09	04.	OFF delay		0.0		
EP-01	05.	Operation type	Same as event 1	0		Same as event 1
EP-02	05.	Loop/channel definition		1		
EP-03	05.	Direct/reverse		0		
EP-04	05.	Standby		0		
EP-05	05.	EVENT state at READY		0		
EP-06	05.	Decimal point position		0		
EP-07	05.	Hysteresis		5		
EP-08	05.	ON delay		0.0		
EP-09	05.	OFF delay		0.0		

Display	Event number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
EP-01	06.	Operation type	Same as event 1	0		Same as event 1
EP-02	06.	Loop/channel definition		1		
EP-03	06.	Direct/reverse		0		
EP-04	06.	Standby		0		
EP-05	06.	EVENT state at READY		0		
EP-06	06.	Decimal point position		0		
EP-07	06.	Hysteresis		5		
EP-08	06.	ON delay		0.0		
EP-09	06.	OFF delay		0.0		
EP-01	07.	Operation type	Same as event 1	0		Same as event 1
EP-02	07.	Loop/channel definition		1		
EP-03	07.	Direct/reverse		0		
EP-04	07.	Standby		0		
EP-05	07.	EVENT state at READY		0		
EP-06	07.	Decimal point position		0		
EP-07	07.	Hysteresis		5		
EP-08	07.	ON delay		0.0		
EP-09	07.	OFF delay		0.0		
EP-01	08.	Operation type	Same as event 1	0		Same as event 1
EP-02	08.	Loop/channel definition		1		
EP-03	08.	Direct/reverse		0		
EP-04	08.	Standby		0		
EP-05	08.	EVENT state at READY		0		
EP-06	08.	Decimal point position		0		
EP-07	08.	Hysteresis		5		
EP-08	08.	ON delay		0.0		
EP-09	08.	OFF delay		0.0		
EP-01	09.	Operation type	Same as event 1	0		Same as event 1
EP-02	09.	Loop/channel definition		1		
EP-03	09.	Direct/reverse		0		
EP-04	09.	Standby		0		
EP-05	09.	EVENT state at READY		0		
EP-06	09.	Decimal point position		0		
EP-07	09.	Hysteresis		5		
EP-08	09.	ON delay		0.0		
EP-09	09.	OFF delay		0.0		
EP-01	10.	Operation type	Same as event 1	0		Same as event 1
EP-02	10.	Loop/channel definition		1		
EP-03	10.	Direct/reverse		0		
EP-04	10.	Standby		0		
EP-05	10.	EVENT state at READY		0		
EP-06	10.	Decimal point position		0		
EP-07	10.	Hysteresis		5		
EP-08	10.	ON delay		0.0		
EP-09	10.	OFF delay		0.0		
EP-01	11.	Operation type	Same as event 1	0		Same as event 1
EP-02	11.	Loop/channel definition		1		
EP-03	11.	Direct/reverse		0		
EP-04	11.	Standby		0		
EP-05	11.	EVENT state at READY		0		
EP-06	11.	Decimal point position		0		
EP-07	11.	Hysteresis		5		
EP-08	11.	ON delay		0.0		
EP-09	11.	OFF delay		0.0		
EP-01	12.	Operation type	Same as event 1	0		Same as event 1
EP-02	12.	Loop/channel definition		1		
EP-03	12.	Direct/reverse		0		
EP-04	12.	Standby		0		
EP-05	12.	EVENT state at READY		0		
EP-06	12.	Decimal point position		0		
EP-07	12.	Hysteresis		5		
EP-08	12.	ON delay		0.0		
EP-09	12.	OFF delay		0.0		
EP-01	13.	Operation type	Same as event 1	0		Same as event 1
EP-02	13.	Loop/channel definition		1		
EP-03	13.	Direct/reverse		0		
EP-04	13.	Standby		0		
EP-05	13.	EVENT state at READY		0		

Display	Event number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
EP-06	13.	Decimal point position	Same as event 1	0		Same as event 1
EP-07	13.	Hysteresis		5		
EP-08	13.	ON delay		0.0		
EP-09	13.	OFF delay		0.0		
EP-01	14.	Operation type	Same as event 1	0		Same as event 1
EP-02	14.	Loop/channel definition		1		
EP-03	14.	Direct/reverse		0		
EP-04	14.	Standby		0		
EP-05	14.	EVENT state at READY		0		
EP-06	14.	Decimal point position		0		
EP-07	14.	Hysteresis		5		
EP-08	14.	ON delay		0.0		
EP-09	14.	OFF delay		0.0		
EP-01	15.	Operation type	Same as event 1	0		Same as event 1
EP-02	15.	Loop/channel definition		1		
EP-03	15.	Direct/reverse		0		
EP-04	15.	Standby		0		
EP-05	15.	EVENT state at READY		0		
EP-06	15.	Decimal point position		0		
EP-07	15.	Hysteresis		5		
EP-08	15.	ON delay		0.0		
EP-09	15.	OFF delay		0.0		
EP-01	16.	Operation type	Same as event 1	0		Same as event 1
EP-02	16.	Loop/channel definition		1		
EP-03	16.	Direct/reverse		0		
EP-04	16.	Standby		0		
EP-05	16.	EVENT state at READY		0		
EP-06	16.	Decimal point position		0		
EP-07	16.	Hysteresis		5		
EP-08	16.	ON delay		0.0		
EP-09	16.	OFF delay		0.0		

■ Control bank (CtrL)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
InP.01	L.1.	PV assignment	0: NOP 1: PV1 (input channel) 2: PV2/21 (input channel) 3: PV22 (input channel)	1		Settins range is 0 to 3071. For more details on the 2048 to 3071 range, see the Standard numerical codes ilst (page 4-2). Cannot be set on the SDC45A/ 46A/45R/46R.
InP.02	L.1.	RSP assignment	4: Results of input computation 5: Flowrate (corrected for temperature and pressure)	0		
InP.03	L.1.	RMV assignment	Others	0		
Cnt.01	L.1.	Loop PV/SP decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Cnt.03	L.1.	Control action	0: Reverse (heat) 1: Direct (cool) 2: Heat/cool	0		
Cnt.04	L.1.	Control algorithm	0: PID-A (deviation derivative) 1: Ra-PID 2: PID-B (PV derivative)	0		
Cnt.05	L.1.	Control range low limit	-19999 to +32000 U	0		The decimal point position is determined by the decimal point positions for the loop PV/SP.
Cnt.06	L.1.	Control range high limit		1000		
Cnt.07	L.1.	AT type	0: Normal (regular control characteristics) 1: Immediate response (control characteristics for fast response to external disturbance) 2: Stable (control characteristics that minimize up/down PV fluctuation)	0		
Cnt.08	L.1.	Heat/cool control dead zone	-100.0 to +100.0 %	0.0		
Cnt.09	L.1.	Initial output of PID control	-10.0 to +110.0 %	0.0		
Cnt.10	L.1.	Abnormal PV definition	0: If a PV alarm (AL01 to AL06) occurs 1: If a PV1 alarm (AL01 or AL02) occurs 2: If a PV2/21 alarm (AL03 or AL04) occurs 3: If a PV22 alarm (AL05 or AL06) occurs	0		Cannot be set on the SDC45A/ 46A/45R/46R.
Etd.01	L.1.	PID control initialization	0: Auto 1: Not initialized 2: Initialized (if SP value different from the current value is input)	0		
Etd.02	L.1.	Integral time/derivative time decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point	0		Affected by the decimal point positions for integral time and derivative time.
Etd.03	L.1.	Output after AUTO • MANUAL change	0: Bumpless transfer 1: Preset	0		
Etd.04	L.1.	Preset MANUAL value	-10.0 to +110.0 %	0.0		When the power is turned ON, if the operation mode is MANUAL, the MV is preset MANUAL value.
Etd.05	L.1.	MV increase change limit	0.00: No limit	0.00		
Etd.06	L.1.	MV decrease change limit	0.01 to 320.00 %/s	0.00		
Etd.07	L.1.	Heat/cool selection	0: Normal 1: Energy saving	0		
Etd.08	L.1.	MV low limit at AT	-10.0 to +110.0 %	0.0		
Etd.09	L.1.	MV high limit at AT		100.0		
Etd.12	L.1.	Zone operation	0: Changed by SP value 1: Changed by PV value	0		When zone PID is used, set the PID group selection priority to "Zone PID function".
Etd.13	L.1.	Zone 1	-19999 to +32000 U	3200.0		The decimal point position is determined by the decimal point positions for the loop PV/SP.
Etd.14	L.1.	Zone 2				
Etd.15	L.1.	Zone 3				
Etd.16	L.1.	Zone 4				
Etd.17	L.1.	Zone 5				
Etd.18	L.1.	Zone 6				
Etd.19	L.1.	Zone 7				
Etd.20	L.1.	Zone hysteresis	0 to 32000 U	5.0		
InP.01	L.1.	PV assignment	0: NOP 1: PV1 (input channel) 2: PV2/21 (input channel) 3: PV22 (input channel)	1		Settins range is 0 to 3071. For more details on the 2048 to 3071 range, see the Standard numerical codes ilst (page 4-2). Cannot be set on the SDC45A/ 46A/45R/46R.
InP.02	L.1.	RSP assignment	4: Results of input computation 5: Flowrate (corrected for temperature and pressure)	0		
InP.03	L.1.	RMV assignment	Others	0		
Cnt.01	L.2.	Loop PV/SP decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
Cnt.03	L.2.	Control action	0: Reverse (heat) 1: Direct (cool) 2: Heat/cool	0		
Cnt.04	L.2.	Control algorithm	0: PID-A (deviation derivative) 1: Ra-PID 2: PID-B (PV derivative)	0		
Cnt.05	L.2.	Control range low limit	-19999 to +32000 U	0		The decimal point position is determined by the decimal point positions for the loop PV/SV.
Cnt.06	L.2.	Control range high limit		1000		
Cnt.07	L.2.	AT type	0: Normal (regular control characteristics) 1: Immediate response (control characteristics for fast response to external disturbance) 2: Stable (control characteristics that minimize up/down PV fluctuation)	0		
Cnt.08	L.2.	Heat/cool control dead zone	-100.0 to +100.0 %	0.0		
Cnt.09	L.2.	Initial output of PID control	-10.0 to +110.0 %	0.0		
Cnt.10	L.2.	Abnormal PV definition	0: If a PV alarm (AL01 to AL06) occurs 1: If a PV1 alarm (AL01 or AL02) occurs 2: If a PV2/21 alarm (AL03 or AL04) occurs 3: If a PV22 alarm (AL05 or AL06) occurs	0		Cannot be set on the SDC45A/46A/45R/46R.
Etd.01	L.2.	PID control initialization	0: Auto 1: Not initialized 2: Initialized (if SP value different from the current value is input)	0		
Etd.02	L.2.	Integration time/derivative time decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point	0		Affected by the decimal point positions for integral time and derivative time.
Etd.03	L.2.	Output after AUTO • MANUAL change	0: Bumpless transfer 1: Preset	0		
Etd.04	L.2.	Preset MANUAL value	-10.0 to +110.0 %	0.0		When the power is turned ON, if the operation mode is MANUAL, the MV is the preset MANUAL value.
Etd.05	L.2.	MV increase change limit	0.00: No limit	0.00		
Etd.06	L.2.	MV decrease change limit	0.01 to 320.00 %/s	0.00		
Etd.07	L.2.	Heat/cool selection	0: Normal 1: Energy saving	0		
Etd.08	L.2.	MV low limit at AT	-10.0 to +110.0 %	0.0		
Etd.09	L.2.	MV high limit at AT		100.0		
Etd.12	L.2.	Zone operation	0: Changed by SP value 1: Changed by PV value	0		When zone PID is used, set the PID group selection priority to "Zone PID function".
Etd.13	L.2.	Zone 1	-19999 to +32000 U	3200.0		The decimal position is determined by the decimal point positions for the loop PV/SP.
Etd.14	L.2.	Zone 2				
Etd.15	L.2.	Zone 3				
Etd.16	L.2.	Zone 4				
Etd.17	L.2.	Zone 5				
Etd.18	L.2.	Zone 6				
Etd.19	L.2.	Zone 7				
Etd.20	L.2.	Zone hysteresis	0 to 32000 U	5.0		

■ MV bank (mv)

Display	Loop number (Auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
mv-01	L.1.	Output at READY	-10.0 to +110.0 %	0.0		
mv-02	L.1.	Output at READY (heat)		0.0		
mv-03	L.1.	Output at READY (cool)		0.0		
mv-04	L.1.	Output operation at PV alarm	0: Control calculations continue 1: MV is output if PV is abnormal	0		
mv-05	L.1.	Output at PV alarm	-10.0 to +110.0 %	0.0		
mv-06	L.1.	Fixed value output 1	-10.0 to +110.0 %	0.0		
mv-07	L.1.	Fixed value output 2				
mv-08	L.1.	Fixed value output 3				
mv-09	L.1.	Fixed value output 4				
mv-10	L.1.	Fixed value output 5				
mv-11	L.1.	Fixed value output 6				
mv-12	L.1.	Fixed value output 7				
mv-13	L.1.	Fixed value output 8				
CAS.01	L.1.	Scaling system	0: Fixed 1: SP reference 2: PV reference	0		
CAS.02	L.1.	Scaling low limit	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point positions for the loop PV/SP.
CAS.03	L.1.	Scaling high limit		1000.0		
CAS.04	L.1.	Tracking mode	1024: OFF 1025:ON 1152: DI-C1 1153: DI-C2 1154: DI-C3 1155: DI-C4 1156: DI-C5 1157: DI-C6 1158:DI-C7 1159: DI-C8 1176: DI-F1 1177: DI-F2 Others	1024		Setting range is 1024 to 2047 For details, refer to: Standard bit codes (page 4-1).
CAS.05	L.1.	SP output filter	0.00: No filter 0.01 to 120.00 s	0.00		
CAS.06	L.1.	SP tracking signal	2048 to 3071	2048		Cannot be on the SDC45A/46A/45R/46R. For the SDC45V/46V, see the Standard numerical codes list (page 4-2).
tr-01	L.1.	MV tracking selection	0: OFF 1: Output of input computation F7 2: Output of output computation F7 Others	0		Setting range is 0 to 2047. For more details on the 1024 to 2047 range, see the: Standard bit codes list (page 4-1).
tr-02	L.1.	Reverse MV tracking signal	0: Direct 1: Reverse	0		
tr-03	L.1.	MV tracking signal	0: 0% fixed 1: Output of input computation F7 2: Output of output computation F7 Others	0		Setting range is 0 to 3071. For more details on the 2048 to 3071 range, see the: Standard numerical codes list (page 4-2).
mv-01	L.2.	Output at READY	-10.0 to +110.0 %	0.0		
mv-02	L.2.	Output at READY (heat)		0.0		
mv-03	L.2.	Output at READY (cool)		0.0		
mv-04	L.2.	Output operation at PV alarm	0: Control calculations continue 1: MV is output if PV is abnormal	0		
mv-05	L.2.	Output at PV alarm	-10.0 to +110.0 %	0.0		
mv-06	L.2.	Fixed value output 1	-10.0 to +110.0 %	0.0		
mv-07	L.2.	Fixed value output 2				
mv-08	L.2.	Fixed value output 3				
mv-09	L.2.	Fixed value output 4				
mv-10	L.2.	Fixed value output 5				
mv-11	L.2.	Fixed value output 6				
mv-12	L.2.	Fixed value output 7				
mv-13	L.2.	Fixed value output 8				
CAS.01	L.2.	Scaling system		-		Cannot be set.
CAS.02	L.2.	Scaling low limit		-		
CAS.03	L.2.	Scaling high limit		-		
CAS.04	L.2.	Tracking mode		-		
CAS.05	L.2.	SP output filter		-		
CAS.06	L.2.	SP tracking signal		-		
tr-01	L.2.	MV tracking selection	0: OFF 1: Output of input computation F7 2: Output of output computation F7 Others	0		Setting range is 0 to 2047. For more details on the 1024 to 2047 range, see the: Standard bit codes list (page 4-1).
tr-02	L.2.	Reverse MV tracking signal	0: Direct 1: Reverse	0		
tr-03	L.1.	MV tracking signal	0: 0% fixed 1: Output of input computation F7 2: Output of output computation F7 Others	0		Setting range is 0 to 3071. For more details on the 2048 to 3071 range, see the: Standard numerical codes list (page 4-2).

■ Setup bank (SETUP)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
C-001	-	Loop type	0: 1 loop 1: 2 loops (independent) 2: 1 loop (RSP) 3: 1 loop (computer backup) 4: 1 loop (internal cascade) 5: 2 loops (with RSP on one side of 1 loop) 6: 1 loop (computer backup with RSP) 7: 1 loop (internal cascade with RSP)	1 input model 0, 2, 3 inputs model 1		
C-002	-	Computer backup type	0: Computer backup type 1 1: Computer backup type 2 2: Computer backup type 3	0		Cannot be set on a one-input model.
C-003	-	Release all latches	0: Latch is continued 1: Latch is released	0		If the "Release all latches" function is used, set its priority setting to "Preset value."
C-009	-	SP change in operation mode	0: Change disabled 1: LSP value change disabled 2: SP group (recipe group) change enabled	0		
C-010	-	Use of recipe	0: Multi SP 1: Recipe	0		
C-011	-	SP system group	1 to 16	1		
C-012	-	Sampling cycle	0: 25 ms 1: 50 ms 2: 100 ms 3: 300 ms	2		Cannot be set on the SDC45V/46V/45R/46R.
C-013	-	Start delay at power ON	0 to 60 s	0		
C-014	-	Operation display mode screen specification	0: No change 1 to 9: Screen number of operation display 10 to 255: No change	0		Cannot be set if the operation display change setting (Pr-03) in the priority bank is other than 1.
C-015	-	Preset operation display screen return delay	0 to 300s	10		Cannot be set if the operation display change setting (Pr-03) inthe priority bank is 0.
C-016	-	Power frequency	0: 50Hz 1: 60Hz	0		Not available on AC power models (frequency is automatically detected). On DC power models, sets the AC power frequency for peripheral devices.
C-017	-	Start up system	0: Cold start 1: Hot start	0		Cannot be set on the SDC45A/46A/45R/46R.
C-018	-	Maximum power failure time for hot start	5 to 32000s	5		
C-019	-	Power failure detection	SDC45A/46A/45R/46R 0: No power interruption 1: Power interrupted SDC45V/46V 0: No power interruption 1: Power interrupted (in excess of power failure upper limit time for cold start or hot start). 2: Power interrupted (for less than the hot start power failure upper limit time).	1		Selection is fixed as "0".
C-021	-	Advanced function display password 1	00000 to 0FFFF (hexadecimal value)	00000		A setting for special functions. Normally set at 00000.
C-022	-	Advanced function display password 2				
C-023	-	Advanced function display password 3				
C-024	-	Advanced function display password 4				
C-025	-	Advanced function display password 5				
C-026	-	Advanced function display password 6				
C-027	-	Advanced function display password 7				
C-028	-	Advanced function display password 8				
C-029	-	Advanced function display password 9				
C-030	-	Advanced function display password 10				
C-031	-	Advanced function display password 11				
C-032	-	Advanced function display password 12				
C-033	-	Advanced function display password 13				
C-034	-	Advanced function display password 14				
C-035	-	Advanced function display password 15				
C-036	-	Advanced function display password 16				
C-037	-	Year				Cannot be set on the SDC45A/46A/45R/46R.
C-038	-	Month, day				
C-039	-	Hour, minute				
C-040	-	Display brightness	0: Standard 1: Slightly dark 2: Dark	0		

■ Priority bank (Prior)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
LPr.01	1.	SP group selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.02	1.	PID group selection	0: Setting value priority 1: Internal contact input priority 2: Zone PID function priority	0		
LPr.03	1.	RUN/READY mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.04	1.	AUTO/MANUAL mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.05	1.	LSP/RSP mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.06	1.	Backup/through output mode selection	0: Setting value priority 1: Internal contact input priority	0		
Pr-01	1.	Release all latches	0: Setting value priority 1: Internal contact input priority	0		
Pr-02	1.	OUT linearization table use group	0: Setting value priority 1: Internal contact input priority	0		
Pr-03	1.	Operation display change	0: [display] key 1: Setting value + [display] key 2: Internal contact input + [display] key	0		
Pr-04	1.	Linearization table group used for position proportional control	Setting value priority 1: Internal contact input priority	0		
LPr.01	2.	SP group selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.02	2.	PID group selection	0: Setting value priority 1: Internal contact input priority 2: Zone PID function priority	0		
LPr.03	2.	RUN/READY mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.04	2.	AUTO/MANUAL mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.05	2.	LSP/RSP mode selection	0: Setting value priority 1: Internal contact input priority	0		
LPr.06	2.	Backup/through output mode selection	0: Setting value priority 1: Internal contact input priority	0		Cannot be set.

■ PV bank (Pu)

Display	PV input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
Pu-01	1.	Range type	0: Not used 1: K 2: E 3: J 4: T 5: B 6: R 7: S 8: WRe5-26 9: PR40-20 10: Ni-NiMo 11: N 12:PLII 13: DIN U 14: DIN L 15: Au-Fe 21: Pt100 -200 to +850 °C 22: Pt100 -200 to +300 °C 31: JPt100 -200 to +640 °C 32: JPt100 -200 to +300 °C 41: 4 to 20 mA 42: 0 to 20 mA 43: 0 to 10 mV 44: -10 to +10 mV 45: 0 to 100 mV 46: -100 to +100 mV 47: 0 to 1 V 48: -1 to +1 V 49: 1 to 5 V 50: 0 to 5 V 51: 0 to 10 V	51		For details, refer to the PV input range table in the SDC45/46 Installation Instructions (No. CP-UM-5445E). Be sure not to set a range type number that is not supported.
Pu-02	1.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Pu-03	1.	Temperature unit	0: Celsius (°C) 1: Fahrenheit (°F) 2: Kelvin (K)	0		
Pu-04	1.	Range low limit	-19999 to +32000 U	-1999.9		The decimal point position is determined by the decimal point position for the PV.
Pu-05	1.	Range high limit		3200.0		
Pu-06	1.	Cold junction compensation	0: Performed (internal) 1: Not performed (external) 2: Terminal temperature compensation is done by a sensor on another channel.	0		
Pu-07	1.	Zener barrier adjustment	-20.00 to +20.00 Ω	0.00		Set by means of the adjustment procedure. Cannot be set by direct input of a numerical value using the keys.
Pu-09	1.	Linear scaling low limit	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the PV.
Pu-10	1.	Linear scaling high limit		1000.0		
Pu-11	1.	Square root extraction dropout	0.0: Square root extraction is not performed 0.1 to 10.0 %	0.0		
Pu-12	1.	Filter	0.00: No filter 0.01 to 120.00 s	0.00		
Pu-13	1.	Bias	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the PV.
Pu-14	1.	Ratio	0.001 to 32.000	1.000		
Pu-16	1.	Thermocouple mV input burnout	0: Upscale at burnout 1: No burnout detection	0		
Pu-20	1.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	0		
Pu-01	2.	Range type	0: Not used 1: K 2: E 3: J 4: T 5: B 6: R 7: S 8: WRe5-26 9: PR40-20 10: Ni-NiMo 11: N 12: PLII 13: DIN U 14: DIN L 15: Au-Fe 21: P t100 -200 to +850 °C 22: Pt100 -200 to +300 °C 31: JPt100 -200 to +640 °C 32: JPt100 -200 to +300 °C 41: 4 to 20 mA 42: 0 to 20 mA 43: 0 to 10 mV 44: -10 to +10 mV 45: 0 to 100 mV 46: -100 to +100 mV 47:0 to 1 V 48: -1 to +1 V 49:1 to 5 V 50: 0 to 5 V 51:0 to 10 V	51		For details, refer to the PV input range table in the SDC45/46 Installation Instructions (No. CP-5445E). Be sure not to set a range type number that is not supported.
Pu-02	2.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Pu-03	2.	Temperature unit	0: Celsius (°C) 1: Fahrenheit (°F) 2: Kelvin (K)	0		
Pu-04	2.	Range low limit	-19999 to +32000 U	-1999.9		The decimal point position is determined by the decimal point position for the PV.
Pu-05	2.	Range high limit		3200.0		
Pu-06	2.	Cold junction compensation	0: Performed (internal) 1: Not performed (external) 2: Terminal temperature compensation is done by a sensor on another channel.	0		

Display	PV input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
Pu-07	2.	Zener barrier adjustment	-20.00 to +20.00 Ω	0.00		Set by means of the adjustment procedure. Cannot be set by direct input of a numerical value using the keys.
Pu-09	2.	Linear scaling low limit	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the PV.
Pu-10	2.	Linear scaling high limit		1000.0		
Pu-11	2.	Square root extraction dropout	0.0: Square root extraction is not performed 0.1 to 10.0 %	0.0		
Pu-12	2.	Filter	0.00: No filter 0.01 to 120.00 s	0.00		
Pu-13	2.	Bias	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point for the PV.
Pu-14	2.	Ratio	0.001 to 32.000	1.000		
Pu-16	2.	Thermocouple mV input burnout	0: Upscale at burnout 1: No burnout detection	0		
Pu-20	2.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	0		
Pu-01	3.	Range type	0: Not used 49: 1 to 5 V 50: 0 to 5 V 51: 0 to 10 V	51		For details, refer to the PV input range table in the SDC45/46 Installation Instructions (No. CP-UM-5445E). Be sure not to set a range type number that is not supported.
Pu-02	3.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Pu-03	3.	Temperature unit	-	-		
Pu-04	3.	Range low limit	-19999 to +32000 U	-1999.9		The decimal point position is determined by the decimal point position for the PV.
Pu-05	3.	Range high limit		3200.0		
Pu-06	3.	Cold junction compensation	-	-		
Pu-07	3.	Zener barrier adjustment	-	-		Set by means of the adjustment procedure. Cannot be set by direct input of a numerical value using the keys.
Pu-09	3.	Linear scaling low limit	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the PV.
Pu-10	3.	Linear scaling high limit		1000.0		
Pu-11	3.	Square root extraction dropout	0.0: Square root extraction is not performed 0.1 to 10.0 %	0.0		
Pu-12	3.	Filter	0.00: No filter 0.01 to 120.00 s	0.00		
Pu-13	3.	Bias	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the PV.
Pu-14	3.	Ratio	0.001 to 32.000	1.000		
Pu-16	3.	Thermocouple mV input burnout	-	-		
Pu-20	3.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	0		

■ Output bank (oUt)

Display	Output number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
Co-01	3.	Output range	Current output 0: 4 to 20 mA 1: 0 to 20 mA Continuous voltage output 0: 1 to 5 V 1: 0 to 5 V 2: 0 to 10 V	0		
Co-02	3.	Output type	0: 0% fixed 1: MV 2: Heat-side MV (for heat/cool control) 3: Cool-side MV (for heat/cool control) 4: PV (loop) 5: SP 6: Deviation (PV-SP) 7: PV (input channel) Others	1		Setting range is 0 to 3071, but 8 to 2047 are undefined. For more details on the 2048 to 3071 range, see the: Standard numerical codes list (page 4-2).
Co-03	3.	Loop/channel definition	0: Invalid 1: Loop 1/channel 1 2: Loop 2/channel 2	1		Setting range is 0 to 99.
Co-04	3.	Output decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Co-05	3.	Output scaling low limit	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point for the output.
Co-06	3.	Output scaling high limit		100.0		
Co-07	3.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	0		
Co-08	3.	Power voltage correction selection	0: Disabled 1: Corrected by AC1 input 2: Corrected by AC2 input	0		Selectable on the SDC45R/46R only.
Co-01	4.	Output range	Same as output 3	0		Same as output 3
Co-02	4.	Output type		0		
Co-03	4.	Loop/channel definition		1		
Co-04	4.	Output decimal point position		1		
Co-05	4.	Output scaling low limit		0.0		
Co-06	4.	Output scaling high limit		100.0		
Co-07	4.	Linearization table group definition		0		
Co-08	4.	Power voltage correction selection		0		
Co-01	5.	Output range	Same as output 3	0		Same as output 3
Co-02	5.	Output type		0		
Co-03	5.	Loop/channel definition		1		
Co-04	5.	Output decimal point position		1		
Co-05	5.	Output scaling low limit		0.0		
Co-06	5.	Output scaling high limit		100.0		
Co-07	5.	Linearization table group definition		0		
Co-08	5.	Power voltage correction selection		0		
Co-01	6.	Output range	Same as output 3	0		Same as output 3
Co-02	6.	Output type		0		
Co-03	6.	Loop/channel definition		1		
Co-04	6.	Output decimal point position		1		
Co-05	6.	Output scaling low limit		0.0		
Co-06	6.	Output scaling high limit		100.0		
Co-07	6.	Linearization table group definition		0		
Co-08	6.	Power voltage correction selection		0		
Co-01	7.	Output range	Same as output 3	0		Same as output 3
Co-02	7.	Output type		0		
Co-03	7.	Loop/channel definition		1		
Co-04	7.	Output decimal point position		1		
Co-05	7.	Output scaling low limit		0.0		
Co-06	7.	Output scaling high limit		100.0		
Co-07	7.	Linearization table group definition		0		
Co-08	7.	Power voltage correction selection		0		
bPo.01	1.	Output type	0: OFF 1: Loop 1 MV 2: Loop 1 Heat-side MV (for heat/cool control) 3: Loop 1 Cool-side MV (for heat/cool control) 4: Loop 2 MV 5: Loop 2 Heat-side MV (for heat/cool control) 6: Loop 2 Cool-side MV (for heat/cool control) Others	0		Setting range is 0 to 2047, but 7 to 1023 are undefined. For more details on the 1024 to 2047 range, see the Standard bit codes list (page 4-1).
bPo.02	1.	Latch	0: None 1: Latch at ON 2: Latch at OFF (except for initialization at OFF)	0		
bPo.03	1.	Time proportional cycle mode	0: Priority is controllability 1: Priority is actuator service life	0		

Display	Output number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
tPo.04	1.	Minimum ON/OFF time	0 to 300 ms	Relay 250, other 1		When set under 50, relay output is 50 ms min. When set at 0, time is 1 ms min. (except relay output).
tPo.05	1.	Time proportional cycle	5.0 to 120.0 s for relay output 0.1 to 120.0 s for voltage pulse output	Relay 10.0, other 2.0		
tPo.06	1.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4: Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	0		
tPo.08	1.	Power voltage correction selection	0: Disabled 1: Corrected by AC1 input 2: Corrected by AC2 input	0		Selectable on the SDC45R/46R only.
tPo.01	2.	Output type	Same as output 1	0		Same as output 1
tPo.02	2.	Latch		0		
tPo.03	2.	Time proportional cycle mode		0		
tPo.04	2.	Minimum ON/OFF time		Relay 250, other 1		
tPo.05	2.	Time proportional cycle		Relay 10.0, other 2.0		
tPo.06	2.	Linearization table group definition		0		
tPo.08	2.	Power voltage correction selection		0		
tPo.01	3.	Output type	Same as output 1	1		Same as output 1
tPo.02	3.	Latch		0		
tPo.03	3.	Time proportional cycle mode		0		
tPo.04	3.	Minimum ON/OFF time		Relay 250, other 1		
tPo.05	3.	Time proportional cycle		Relay 10.0, other 2.0		
tPo.06	3.	Linearization table group definition		0		
tPo.08	3.	Power voltage correction selection		0		
tPo.01	4.	Output type	Same as output 1	0		Same as output 1
tPo.02	4.	Latch		0		
tPo.03	4.	Time proportional cycle mode		0		
tPo.04	4.	Minimum ON/OFF time		Relay 250, other 1		
tPo.05	4.	Time proportional cycle		Relay 10.0, other 2.0		
tPo.06	4.	Linearization table group definition		0		
tPo.08	4.	Power voltage correction selection		0		
tPo.01	5.	Output type	Same as output 1	0		Same as output 1
tPo.02	5.	Latch		0		
tPo.03	5.	Time proportional cycle mode		0		
tPo.04	5.	Minimum ON/OFF time		Relay 250, other 1		
tPo.05	5.	Time proportional cycle		Relay 10.0, other 2.0		
tPo.06	5.	Linearization table group definition		0		
tPo.08	5.	Power voltage correction selection		0		

■ Position proportional bank (PP)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
PP-01	1.	Output type	0: Position proportional control stop 1: MV of loop 1 2: Heat MV of loop 1 3: Cool MV of loop 1 4: MV of loop 2 5: Heat MV of loop 2 6: Cool MV of loop 2 2048 to 3071: According to the Standard numerical codes list.	0		Settins range is 0 to 3071. For more details on the 2048 to 3071 range, see the Standard numerical codes list (page 4-2).
PP-02	1.	Control type	0: MFB control + estimated position control 1: MFB control + close at burnout 2: Estimated position control 3: Estimated position control+positioning at power supply ON	-		
PP-03	1.	Dead zone	0.5 to 25.0 %	-		
PP-04	1.	Motor long life mode	0: Aiming at controllability 1: Aiming at life	-		
PP-05	1.	Motor auto ajust	0: Stop 1: Start	-		
PP-06	1.	Input with motor fully closed	0 to 8000	-		
PP-07	1.	Input with motor fully open	0 to 8000	-		
PP-08	1.	Motor full close-full open time	5.0 to 240.0 s	-		
PP-09	1.	Loop	1: Loop 1 2: Loop 2	-		
PP-10	1.	Linearization table group definition	0: Disabled 1: Group 1 2: Group 2 3: Group 3 4:Group 4 5: Group 5 6: Group 6 7: Group 7 8: Group 8	-		

■ CT input bank (Ct)

Display	CT input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
Ct-01	1.	CT operation type	0: Continuous current measurement 1: Heater burnout detection of OUT1 2: Heater burnout detection of OUT2 3: Heater burnout detection of OUT3 4: Heater burnout detection of OUT4 5: Heater burnout detection of OUT5	0		
Ct-02	1.	CT measurement wait time	30 to 300 ms	30		
Ct-03	1.	Number of CT turns	100 to 4000 turns	800		
Ct-04	1.	Number of CT power wire loops	1 to 6 times	1		
Ct-05	1.	Heater burnout detection current value	0.0 to 350.0 A	0.0		
Ct-06	1.	Over-current detection current value	0.0 to 350.0 A	0.0		
Ct-07	1.	Short-circuit detection value	0.0 to 350.0A	0.0		
Ct-08	1.	Hysteresis	0.0 to 350.0A	0.0		
Ct-09	1.	Delay time	0.0 to 3200.0s	0.0		
Ct-10	1.	Condition for restoration of unmeasured value	1024 to 2047(standard bit codes)	1024		
Ct-01	2.	CT operation type	Same as output CT input 1	0		
Ct-02	2.	CT measurement wait time		30		
Ct-03	2.	Number of CT turns		800		
Ct-04	2.	Number of CT power wire loops		1		
Ct-05	2.	Heater burnout detection current value		0.0		
Ct-06	2.	Over-current detection current value		0.0		
Ct-07	2.	Short-circuit detection value		0.0		
Ct-08	2.	Hysteresis		0.0		
Ct-09	2.	Delay time		0.0		
Ct-10	2.	Condition for restoration of unmeasured value		1024		

■ AC input bank (AC)

Display	AC input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
AC-01	1.	Reference voltage	4.00 to 11.00 V	10.00		
AC-02	1.	Filter	0.00: No filter 0.01 to 120.00 s	0.00		
AC-01	2.	Reference voltage	Same as output AC input 1	10.00		
AC-02	2.	Filter		0.00		

■ Linearization table bank (tbL)

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
tb.dP	1.	Breakpoint decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
tb.A.01	1.	Breakpoint A1	-19999 to +32000 U	-1999.9		The decimal point position is determined by the decimal point position for breakpoint.
tb.A.02	1.	Breakpoint A2		3200.0		
tb.A.03	1.	Breakpoint A3		0.0		
tb.A.04	1.	Breakpoint A4				
tb.A.05	1.	Breakpoint A5				
tb.A.06	1.	Breakpoint A6				
tb.A.07	1.	Breakpoint A7				
tb.A.08	1.	Breakpoint A8				
tb.A.09	1.	Breakpoint A9				
tb.A.10	1.	Breakpoint A10				
tb.A.11	1.	Breakpoint A11				
tb.A.12	1.	Breakpoint A12				
tb.A.13	1.	Breakpoint A13				
tb.A.14	1.	Breakpoint A14				
tb.A.15	1.	Breakpoint A15				
tb.A.16	1.	Breakpoint A16				
tb.A.17	1.	Breakpoint A17				
tb.A.18	1.	Breakpoint A18				
tb.A.19	1.	Breakpoint A19				
tb.A.20	1.	Breakpoint A20				
tb.b.01	1.	Breakpoint B1		-1999.9		
tb.b.02	1.	Breakpoint B2		3200.0		
tb.b.03	1.	Breakpoint B3		0.0		
tb.b.04	1.	Breakpoint B4				
tb.b.05	1.	Breakpoint B5				
tb.b.06	1.	Breakpoint B6				
tb.b.07	1.	Breakpoint B7				
tb.b.08	1.	Breakpoint B8				
tb.b.09	1.	Breakpoint B9				
tb.b.10	1.	Breakpoint B10				
tb.b.11	1.	Breakpoint B11				
tb.b.12	1.	Breakpoint B12				
tb.b.13	1.	Breakpoint B13				
tb.b.14	1.	Breakpoint B14				
tb.b.15	1.	Breakpoint B15				
tb.b.16	1.	Breakpoint B16				
tb.b.17	1.	Breakpoint B17				
tb.b.18	1.	Breakpoint B18				
tb.b.19	1.	Breakpoint B19				
tb.b.20	1.	Breakpoint B20				
tb.dP	2.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
tb.A.01	2.	Breakpoint A1		-1999.9		
tb.A.02	2.	Breakpoint A2		3200.0		
tb.A.03	2.	Breakpoint A3		0.0		
tb.A.04	2.	Breakpoint A4				
tb.A.05	2.	Breakpoint A5				
tb.A.06	2.	Breakpoint A6				
tb.A.07	2.	Breakpoint A7				
tb.A.08	2.	Breakpoint A8				
tb.A.09	2.	Breakpoint A9				
tb.A.10	2.	Breakpoint A10				
tb.A.11	2.	Breakpoint A11				
tb.A.12	2.	Breakpoint A12				
tb.A.13	2.	Breakpoint A13				
tb.A.14	2.	Breakpoint A14				
tb.A.15	2.	Breakpoint A15				
tb.A.16	2.	Breakpoint A16				
tb.A.17	2.	Breakpoint A17				
tb.A.18	2.	Breakpoint A18				
tb.A.19	2.	Breakpoint A19				
tb.A.20	2.	Breakpoint A20				

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bb.b.01	2.	Breakpoint B1	Same as linearization 1	-1999.9		Same as linearization 1
bb.b.02	2.	Breakpoint B2		3200.0		
bb.b.03	2.	Breakpoint B3		0.0		
bb.b.04	2.	Breakpoint B4				
bb.b.05	2.	Breakpoint B5				
bb.b.06	2.	Breakpoint B6				
bb.b.07	2.	Breakpoint B7				
bb.b.08	2.	Breakpoint B8				
bb.b.09	2.	Breakpoint B9				
bb.b.10	2.	Breakpoint B10				
bb.b.11	2.	Breakpoint B11				
bb.b.12	2.	Breakpoint B12				
bb.b.13	2.	Breakpoint B13				
bb.b.14	2.	Breakpoint B14				
bb.b.15	2.	Breakpoint B15				
bb.b.16	2.	Breakpoint B16				
bb.b.17	2.	Breakpoint B17				
bb.b.18	2.	Breakpoint B18				
bb.b.19	2.	Breakpoint B19				
bb.b.20	2.	Breakpoint B20				
bb.dP	3.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
bb.A.01	3.	Breakpoint A1		-1999.9		
bb.A.02	3.	Breakpoint A2		3200.0		
bb.A.03	3.	Breakpoint A3		0.0		
bb.A.04	3.	Breakpoint A4				
bb.A.05	3.	Breakpoint A5				
bb.A.06	3.	Breakpoint A6				
bb.A.07	3.	Breakpoint A7				
bb.A.08	3.	Breakpoint A8				
bb.A.09	3.	Breakpoint A9				
bb.A.10	3.	Breakpoint A10				
bb.A.11	3.	Breakpoint A11				
bb.A.12	3.	Breakpoint A12				
bb.A.13	3.	Breakpoint A13				
bb.A.14	3.	Breakpoint A14				
bb.A.15	3.	Breakpoint A15				
bb.A.16	3.	Breakpoint A16				
bb.A.17	3.	Breakpoint A17				
bb.A.18	3.	Breakpoint A18				
bb.A.19	3.	Breakpoint A19				
bb.A.20	3.	Breakpoint A20				
bb.b.01	3.	Breakpoint B1		-1999.9		
bb.b.02	3.	Breakpoint B2		3200.0		
bb.b.03	3.	Breakpoint B3		0.0		
bb.b.04	3.	Breakpoint B4				
bb.b.05	3.	Breakpoint B5				
bb.b.06	3.	Breakpoint B6				
bb.b.07	3.	Breakpoint B7				
bb.b.08	3.	Breakpoint B8				
bb.b.09	3.	Breakpoint B9				
bb.b.10	3.	Breakpoint B10				
bb.b.11	3.	Breakpoint B11				
bb.b.12	3.	Breakpoint B12				
bb.b.13	3.	Breakpoint B13				
bb.b.14	3.	Breakpoint B14				
bb.b.15	3.	Breakpoint B15				
bb.b.16	3.	Breakpoint B16				
bb.b.17	3.	Breakpoint B17				
bb.b.18	3.	Breakpoint B18				
bb.b.19	3.	Breakpoint B19				
bb.b.20	3.	Breakpoint B20				

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
tb.dP	4.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
tb.A.01	4.	Breakpoint A1		-1999.9		
tb.A.02	4.	Breakpoint A2		3200.0		
tb.A.03	4.	Breakpoint A3		0.0		
tb.A.04	4.	Breakpoint A4				
tb.A.05	4.	Breakpoint A5				
tb.A.06	4.	Breakpoint A6				
tb.A.07	4.	Breakpoint A7				
tb.A.08	4.	Breakpoint A8				
tb.A.09	4.	Breakpoint A9				
tb.A.10	4.	Breakpoint A10				
tb.A.11	4.	Breakpoint A11				
tb.A.12	4.	Breakpoint A12				
tb.A.13	4.	Breakpoint A13				
tb.A.14	4.	Breakpoint A14				
tb.A.15	4.	Breakpoint A15				
tb.A.16	4.	Breakpoint A16				
tb.A.17	4.	Breakpoint A17				
tb.A.18	4.	Breakpoint A18				
tb.A.19	4.	Breakpoint A19				
tb.A.20	4.	Breakpoint A20				
tb.b.01	4.	Breakpoint B1		-1999.9		
tb.b.02	4.	Breakpoint B2		3200.0		
tb.b.03	4.	Breakpoint B3		0.0		
tb.b.04	4.	Breakpoint B4				
tb.b.05	4.	Breakpoint B5				
tb.b.06	4.	Breakpoint B6				
tb.b.07	4.	Breakpoint B7				
tb.b.08	4.	Breakpoint B8				
tb.b.09	4.	Breakpoint B9				
tb.b.10	4.	Breakpoint B10				
tb.b.11	4.	Breakpoint B11				
tb.b.12	4.	Breakpoint B12				
tb.b.13	4.	Breakpoint B13				
tb.b.14	4.	Breakpoint B14				
tb.b.15	4.	Breakpoint B15				
tb.b.16	4.	Breakpoint B16				
tb.b.17	4.	Breakpoint B17				
tb.b.18	4.	Breakpoint B18				
tb.b.19	4.	Breakpoint B19				
tb.b.20	4.	Breakpoint B20				
tb.dP	5.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
tb.A.01	5.	Breakpoint A1		-1999.9		
tb.A.02	5.	Breakpoint A2		3200.0		
tb.A.03	5.	Breakpoint A3		0.0		
tb.A.04	5.	Breakpoint A4				
tb.A.05	5.	Breakpoint A5				
tb.A.06	5.	Breakpoint A6				
tb.A.07	5.	Breakpoint A7				
tb.A.08	5.	Breakpoint A8				
tb.A.09	5.	Breakpoint A9				
tb.A.10	5.	Breakpoint A10				
tb.A.11	5.	Breakpoint A11				
tb.A.12	5.	Breakpoint A12				
tb.A.13	5.	Breakpoint A13				
tb.A.14	5.	Breakpoint A14				
tb.A.15	5.	Breakpoint A15				
tb.A.16	5.	Breakpoint A16				
tb.A.17	5.	Breakpoint A17				
tb.A.18	5.	Breakpoint A18				
tb.A.19	5.	Breakpoint A19				
tb.A.20	5.	Breakpoint A20				

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
tb.b.01	5.	Breakpoint B1	Same as linearization 1	-1999.9		Same as linearization 1
tb.b.02	5.	Breakpoint B2		3200.0		
tb.b.03	5.	Breakpoint B3		0.0		
tb.b.04	5.	Breakpoint B4				
tb.b.05	5.	Breakpoint B5				
tb.b.06	5.	Breakpoint B6				
tb.b.07	5.	Breakpoint B7				
tb.b.08	5.	Breakpoint B8				
tb.b.09	5.	Breakpoint B9				
tb.b.10	5.	Breakpoint B10				
tb.b.11	5.	Breakpoint B11				
tb.b.12	5.	Breakpoint B12				
tb.b.13	5.	Breakpoint B13				
tb.b.14	5.	Breakpoint B14				
tb.b.15	5.	Breakpoint B15				
tb.b.16	5.	Breakpoint B16				
tb.b.17	5.	Breakpoint B17				
tb.b.18	5.	Breakpoint B18				
tb.b.19	5.	Breakpoint B19				
tb.b.20	5.	Breakpoint B20				
tb.dP	6.	Linearization decimal point position	Same as initialization 1	1		Same as initialization 1
tb.A.01	6.	Breakpoint A1		-1999.9		
tb.A.02	6.	Breakpoint A2		3200.0		
tb.A.03	6.	Breakpoint A3		0.0		
tb.A.04	6.	Breakpoint A4				
tb.A.05	6.	Breakpoint A5				
tb.A.06	6.	Breakpoint A6				
tb.A.07	6.	Breakpoint A7				
tb.A.08	6.	Breakpoint A8				
tb.A.09	6.	Breakpoint A9				
tb.A.10	6.	Breakpoint A10				
tb.A.11	6.	Breakpoint A11				
tb.A.12	6.	Breakpoint A12				
tb.A.13	6.	Breakpoint A13				
tb.A.14	6.	Breakpoint A14				
tb.A.15	6.	Breakpoint A15				
tb.A.16	6.	Breakpoint A16				
tb.A.17	6.	Breakpoint A17				
tb.A.18	6.	Breakpoint A18				
tb.A.19	6.	Breakpoint A19				
tb.A.20	6.	Breakpoint A20				
tb.b.01	6.	Breakpoint B1		-1999.9		
tb.b.02	6.	Breakpoint B2		3200.0		
tb.b.03	6.	Breakpoint B3		0.0		
tb.b.04	6.	Breakpoint B4				
tb.b.05	6.	Breakpoint B5				
tb.b.06	6.	Breakpoint B6				
tb.b.07	6.	Breakpoint B7				
tb.b.08	6.	Breakpoint B8				
tb.b.09	6.	Breakpoint B9				
tb.b.10	6.	Breakpoint B10				
tb.b.11	6.	Breakpoint B11				
tb.b.12	6.	Breakpoint B12				
tb.b.13	6.	Breakpoint B13				
tb.b.14	6.	Breakpoint B14				
tb.b.15	6.	Breakpoint B15				
tb.b.16	6.	Breakpoint B16				
tb.b.17	6.	Breakpoint B17				
tb.b.18	6.	Breakpoint B18				
tb.b.19	6.	Breakpoint B19				
tb.b.20	6.	Breakpoint B20				

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
tb.dP	7.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
tb.A.01	7.	Breakpoint A1		-1999.9		
tb.A.02	7.	Breakpoint A2		3200.0		
tb.A.03	7.	Breakpoint A3		0.0		
tb.A.04	7.	Breakpoint A4				
tb.A.05	7.	Breakpoint A5				
tb.A.06	7.	Breakpoint A6				
tb.A.07	7.	Breakpoint A7				
tb.A.08	7.	Breakpoint A8				
tb.A.09	7.	Breakpoint A9				
tb.A.10	7.	Breakpoint A10				
tb.A.11	7.	Breakpoint A11				
tb.A.12	7.	Breakpoint A12				
tb.A.13	7.	Breakpoint A13				
tb.A.14	7.	Breakpoint A14				
tb.A.15	7.	Breakpoint A15				
tb.A.16	7.	Breakpoint A16				
tb.A.17	7.	Breakpoint A17				
tb.A.18	7.	Breakpoint A18				
tb.A.19	7.	Breakpoint A19				
tb.A.20	7.	Breakpoint A20				
tb.b.01	7.	Breakpoint B1		-1999.9		
tb.b.02	7.	Breakpoint B2		3200.0		
tb.b.03	7.	Breakpoint B3		0.0		
tb.b.04	7.	Breakpoint B4				
tb.b.05	7.	Breakpoint B5				
tb.b.06	7.	Breakpoint B6				
tb.b.07	7.	Breakpoint B7				
tb.b.08	7.	Breakpoint B8				
tb.b.09	7.	Breakpoint B9				
tb.b.10	7.	Breakpoint B10				
tb.b.11	7.	Breakpoint B11				
tb.b.12	7.	Breakpoint B12				
tb.b.13	7.	Breakpoint B13				
tb.b.14	7.	Breakpoint B14				
tb.b.15	7.	Breakpoint B15				
tb.b.16	7.	Breakpoint B16				
tb.b.17	7.	Breakpoint B17				
tb.b.18	7.	Breakpoint B18				
tb.b.19	7.	Breakpoint B19				
tb.b.20	7.	Breakpoint B20				
tb.dP	8.	Breakpoint decimal point position	Same as linearization 1	1		Same as linearization 1
tb.A.01	8.	Breakpoint A1		-1999.9		
tb.A.02	8.	Breakpoint A2		3200.0		
tb.A.03	8.	Breakpoint A3		0.0		
tb.A.04	8.	Breakpoint A4				
tb.A.05	8.	Breakpoint A5				
tb.A.06	8.	Breakpoint A6				
tb.A.07	8.	Breakpoint A7				
tb.A.08	8.	Breakpoint A8				
tb.A.09	8.	Breakpoint A9				
tb.A.10	8.	Breakpoint A10				
tb.A.11	8.	Breakpoint A11				
tb.A.12	8.	Breakpoint A12				
tb.A.13	8.	Breakpoint A13				
tb.A.14	8.	Breakpoint A14				
tb.A.15	8.	Breakpoint A15				
tb.A.16	8.	Breakpoint A16				
tb.A.17	8.	Breakpoint A17				
tb.A.18	8.	Breakpoint A18				
tb.A.19	8.	Breakpoint A19				
tb.A.20	8.	Breakpoint A20				

Display	Linearization group number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bb.b.01	8.	Breakpoint B1	Same as linearization 1	-1999.9		Same as linearization 1
bb.b.02	8.	Breakpoint B2		3200.0		
bb.b.03	8.	Breakpoint B3		0.0		
bb.b.04	8.	Breakpoint B4				
bb.b.05	8.	Breakpoint B5				
bb.b.06	8.	Breakpoint B6				
bb.b.07	8.	Breakpoint B7				
bb.b.08	8.	Breakpoint B8				
bb.b.09	8.	Breakpoint B9				
bb.b.10	8.	Breakpoint B10				
bb.b.11	8.	Breakpoint B11				
bb.b.12	8.	Breakpoint B12				
bb.b.13	8.	Breakpoint B13				
bb.b.14	8.	Breakpoint B14				
bb.b.15	8.	Breakpoint B15				
bb.b.16	8.	Breakpoint B16				
bb.b.17	8.	Breakpoint B17				
bb.b.18	8.	Breakpoint B18				
bb.b.19	8.	Breakpoint B19				
bb.b.20	8.	Breakpoint B20				

■ Internal contact input bank (bC)

Display	Internal contact input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bC-01	01.	Operation type	0: No function 1: SP group selection 2: PID group selection 3: Fixed value output selection 4: Multi ratio selection 5: Linearization use group selection (for output) 21: RUN/READY selection 22: AUTO/MANUAL selection 23: LSP/RSP selection 24: AT Stop/Start selection 25: Backup/through output selection 41: Control action direct/reverse selection 42: SP ramp enabled/disabled selection 43: Operation display selection 46: Timer Stop/Start selection 47: Release all latches	0		
bC-02	01.	Input type	1024: OFF 1025: ON 1152: DI-C1 1153: DI-C2 1154: DI-C3 1155: DI-C4 1156: DI-C5 1157: DI-C6 1158: DI-C7 1159: DI-C8 1176: DI-F1 1177: DI-F2 Others	1152		Setting range is 1024 to 2047. For details, refer to Standard bit codes (page 4-1).
bC-03	01.	Loop/channel definition	0: All loops 1: Loop 1 2: Loop 2 (the meaning is different depending on the operation type)	1		Setting range is 0 to 127. For details, refer to ■ Operation type (page 6-11) in the installation and configuration manual.
bC-04	01.	Weight	0 to 127	1		
bC-01	02.	Operation type	Same as internal contact 1 input	0		Same as internal contact 1 input
bC-02	02.	Input type		1153		
bC-03	02.	Loop/channel definition		1		
bC-04	02.	Weight		1		
bC-01	03.	Operation type	Same as internal contact 1 input	0		Same as internal contact 1 input
bC-02	03.	Input type		1154		
bC-03	03.	Loop/channel definition		1		
bC-04	03.	Weight		1		
bC-01	04.	Operation type	Same as internal contact 1 input	0		Same as internal contact 1 input
bC-02	04.	Input type		1155		
bC-03	04.	Loop/channel definition		1		
bC-04	04.	Weight		1		
bC-01	05.	Operation type	Same as internal contact 1 input	0		Same as internal contact 1 input
bC-02	05.	Input type		1156		
bC-03	05.	Loop/channel definition		1		
bC-04	05.	Weight		1		

Display	Internal contact input number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
IC-01	06.	Operation type	Same as internal contact 1 input	0		Same as internal contact 1 input
IC-02	06.	Input type		1157		
IC-03	06.	Loop/channel definition		1		
IC-04	06.	Weight		1		
IC-01	07.	Operation type		0		
IC-02	07.	Input type		1158		
IC-03	07.	Loop/channel definition		1		
IC-04	07.	Weight		1		
IC-01	08.	Operation type		0		
IC-02	08.	Input type		1159		
IC-03	08.	Loop/channel definition		1		
IC-04	08.	Weight		1		
IC-01	09.	Operation type		0		
IC-02	09.	Input type		1160		
IC-03	09.	Loop/channel definition		1		
IC-04	09.	Weight		1		
IC-01	10.	Operation type		0		
IC-02	10.	Input type		1161		
IC-03	10.	Loop/channel definition		1		
IC-04	10.	Weight		1		
IC-01	11.	Operation type		0		
IC-02	11.	Input type		1162		
IC-03	11.	Loop/channel definition		1		
IC-04	11.	Weight		1		
IC-01	12.	Operation type		0		
IC-02	12.	Input type		1163		
IC-03	12.	Loop/channel definition		1		
IC-04	12.	Weight		1		
IC-01	13.	Operation type		0		
IC-02	13.	Input type		1164		
IC-03	13.	Loop/channel definition		1		
IC-04	13.	Weight		1		
IC-01	14.	Operation type		0		
IC-02	14.	Input type		1165		
IC-03	14.	Loop/channel definition		1		
IC-04	14.	Weight		1		
IC-01	15.	Operation type		0		
IC-02	15.	Input type		1166		
IC-03	15.	Loop/channel definition		1		
IC-04	15.	Weight		1		
IC-01	16.	Operation type		0		
IC-02	16.	Input type		1167		
IC-03	16.	Loop/channel definition		1		
IC-04	16.	Weight		1		
IC-01	17.	Operation type		0		
IC-02	17.	Input type		1168		
IC-03	17.	Loop/channel definition		1		
IC-04	17.	Weight		1		
IC-01	18.	Operation type		0		
IC-02	18.	Input type		1169		
IC-03	18.	Loop/channel definition		1		
IC-04	18.	Weight		1		
IC-01	19.	Operation type		0		
IC-02	19.	Input type		1170		
IC-03	19.	Loop/channel definition		1		
IC-04	19.	Weight		1		
IC-01	20.	Operation type		0		
IC-02	20.	Input type		1171		
IC-03	20.	Loop/channel definition		1		
IC-04	20.	Weight		1		

■ Digital output bank (do)

Display	Digital output number (auxiliary display)	Item	Digital output column	Settings and descriptions	Initial value	User setting	Remarks
do.C.01	1.	Output type	Column C	1024: OFF 1025: ON 1088: Event 1 1089: Event 2 1090: Event 3 1091: Event 4 1092: Event 5 1093: Event 6 1094: Event 7 1095: Event 8 1096: Event 9 1097: Event 10 1098: Event 11 1099: Event 12 1100: Event 13 1101: Event 14 1102: Event 15 1103: Event 16 Others	1090		Setting range is 1024 to 2047. For details, refer to: Standard bit codes list (page 4-1).
do.C.02	1.	Latch	Column C	0: None 1: Latch at ON 2: Latch at OFF (except for initialization at OFF)	0		
do.C.01	2.	Output type	Column C	Same as digital output column C 1	1091		Same as digital output column C 1
do.C.02	2.	Latch	Column C		0		
do.C.01	3.	Output type	Column C	Same as digital output column C 1	1092		Same as digital output column C 1
do.C.02	3.	Latch	Column C		0		
do.C.01	4.	Output type	Column C	Same as digital output column C 1	1093		Same as digital output column C 1
do.C.02	4.	Latch	Column C		0		
do.C.01	5.	Output type	Column C	Same as digital output column C 1	1094		Same as digital output column C 1
do.C.02	5.	Latch	Column C		0		
do.C.01	6.	Output type	Column C	Same as digital output column C 1	1095		Same as digital output column C 1
do.C.02	6.	Latch	Column C		0		
do.C.01	7.	Output type	Column C	Same as digital output column C 1	1096		Same as digital output column C 1
do.C.02	7.	Latch	Column C		0		
do.C.01	8.	Output type	Column C	Same as digital output column C 1	1097		Same as digital output column C 1
do.C.02	8.	Latch	Column C		0		
do.E.01	1.	Output type	Column E	1024: OFF 1025: ON 1088: Event 1 1089: Event 2 1090: Event 3 1091: Event 4 1092: Event 5 1093: Event 6 1094: Event 7 1095: Event 8 1096: Event 9 1097: Event 10 1098: Event 11 1099: Event 12 1100: Event 13 1101: Event 14 1102: Event 15 1103: Event 16 Others	1106		Setting range is 1024 to 2047. For details, refer to: Standard bit codes list (page 4-1).
do.E.02	1.	Latch	Column E	0: None 1: Latch at ON 2: Latch at OFF (except for initialization at OFF)	0		
do.E.01	2.	Output type	Column E	Same as digital output column E 1	1107		Same as digital output column E 1
do.E.02	2.	Latch	Column E		0		
do.E.01	3.	Output type	Column E	Same as digital output column E 1	1108		Same as digital output column E 1
do.E.02	3.	Latch	Column E		0		
do.E.01	4.	Output type	Column E	Same as digital output column E 1	1109		Same as digital output column E 1
do.E.02	4.	Latch	Column E		0		
do.E.01	5.	Output type	Column E	Same as digital output column E 1	1110		Same as digital output column E 1
do.E.02	5.	Latch	Column E		0		
do.E.01	6.	Output type	Column E	Same as digital output column E 1	1111		Same as digital output column E 1
do.E.02	6.	Latch	Column E		0		
do.E.01	7.	Output type	Column E	Same as digital output column E 1	1112		Same as digital output column E 1
do.E.02	7.	Latch	Column E		0		
do.E.01	8.	Output type	Column E	Same as digital output column E 1	1113		Same as digital output column E 1
do.E.02	8.	Latch	Column E		0		

■ Logical operation bank (bF)

Display	Logical operation number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bF-01	01.	Operation type	1: Operation 1 (A and B) or (C and D) 2: Operation 2 (A or B) and (C or D) 3: Operation 3 (A or B or C or D) 4: Operation 4 (A and B and C and D)	1		
bF-02	01.	Input assignment A	1024 to 2047	1024		For details, refer to: Standard bit codes list (page 4-1).
bF-03	01.	Input assignment B				
bF-04	01.	Input assignment C				
bF-05	01.	Input assignment D				
bF-06	01.	Input bit polarity A	0: Direct 1: Reverse	0		
bF-07	01.	Input bit polarity B				
bF-08	01.	Input bit polarity C				
bF-09	01.	Input bit polarity D				
bF-10	01.	ON delay time	0.0 to 3200.0 s	0.0		
bF-11	01.	OFF delay time				
bF-12	01.	Polarity	0: Direct 1: Reverse	0		
bF-13	01.	Latch	0: None 1: Latch at ON 2: Latch at OFF (except for initialization at OFF)	0		
bF-01	02.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	02.	Input assignment A		1024		
bF-03	02.	Input assignment B				
bF-04	02.	Input assignment C				
bF-05	02.	Input assignment D				
bF-06	02.	Input bit polarity A		0		
bF-07	02.	Input bit polarity B				
bF-08	02.	Input bit polarity C				
bF-09	02.	Input bit polarity D				
bF-10	02.	ON delay time		0.0		
bF-11	02.	OFF delay time				
bF-12	02.	Polarity		0		
bF-13	02.	Latch		0		
bF-01	03.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	03.	Input assignment A		1024		
bF-03	03.	Input assignment B				
bF-04	03.	Input assignment C				
bF-05	03.	Input assignment D				
bF-06	03.	Input bit polarity A		0		
bF-07	03.	Input bit polarity B				
bF-08	03.	Input bit polarity C				
bF-09	03.	Input bit polarity D				
bF-10	03.	ON delay time		0.0		
bF-11	03.	OFF delay time				
bF-12	03.	Polarity		0		
bF-13	03.	Latch		0		
bF-01	04.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	04.	Input assignment A		1024		
bF-03	04.	Input assignment B				
bF-04	04.	Input assignment C				
bF-05	04.	Input assignment D				
bF-06	04.	Input bit polarity A		0		
bF-07	04.	Input bit polarity B				
bF-08	04.	Input bit polarity C				
bF-09	04.	Input bit polarity D				
bF-10	04.	ON delay time		0.0		
bF-11	04.	OFF delay time				
bF-12	04.	Polarity		0		
bF-13	04.	Latch		0		

Display	Logical operation number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bF-01	05.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	05.	Input assignment A		1024		
bF-03	05.	Input assignment B				
bF-04	05.	Input assignment C				
bF-05	05.	Input assignment D				
bF-06	05.	Input bit polarity A		0		
bF-07	05.	Input bit polarity B				
bF-08	05.	Input bit polarity C				
bF-09	05.	Input bit polarity D				
bF-10	05.	ON delay time		0.0		
bF-11	05.	OFF delay time				
bF-12	05.	Polarity		0		
bF-13	05.	Latch		0		
bF-01	06.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	06.	Input assignment A		1024		
bF-03	06.	Input assignment B				
bF-04	06.	Input assignment C				
bF-05	06.	Input assignment D				
bF-06	06.	Input bit polarity A		0		
bF-07	06.	Input bit polarity B				
bF-08	06.	Input bit polarity C				
bF-09	06.	Input bit polarity D				
bF-10	06.	ON delay time		0.0		
bF-11	06.	OFF delay time				
bF-12	06.	Polarity		0		
bF-13	06.	Latch		0		
bF-01	07.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	07.	Input assignment A		1024		
bF-03	07.	Input assignment B				
bF-04	07.	Input assignment C				
bF-05	07.	Input assignment D				
bF-06	07.	Input bit polarity A		0		
bF-07	07.	Input bit polarity B				
bF-08	07.	Input bit polarity C				
bF-09	07.	Input bit polarity D				
bF-10	07.	ON delay time		0.0		
bF-11	07.	OFF delay time				
bF-12	07.	Polarity		0		
bF-13	07.	Latch		0		
bF-01	08.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	08.	Input assignment A		1024		
bF-03	08.	Input assignment B				
bF-04	08.	Input assignment C				
bF-05	08.	Input assignment D				
bF-06	08.	Input bit polarity A		0		
bF-07	08.	Input bit polarity B				
bF-08	08.	Input bit polarity C				
bF-09	08.	Input bit polarity D				
bF-10	08.	ON delay time		0.0		
bF-11	08.	OFF delay time				
bF-12	08.	Polarity		0		
bF-13	08.	Latch		0		
bF-01	09.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	09.	Input assignment A		1024		
bF-03	09.	Input assignment B				
bF-04	09.	Input assignment C				
bF-05	09.	Input assignment D				
bF-06	09.	Input bit polarity A		0		
bF-07	09.	Input bit polarity B				
bF-08	09.	Input bit polarity C				
bF-09	09.	Input bit polarity D				
bF-10	09.	ON delay time		0.0		
bF-11	09.	OFF delay time				
bF-12	09.	Polarity		0		
bF-13	09.	Latch		0		

Display	Logical operation number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bF-01	10.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	10.	Input assignment A		1024		
bF-03	10.	Input assignment B				
bF-04	10.	Input assignment C				
bF-05	10.	Input assignment D				
bF-06	10.	Input bit polarity A		0		
bF-07	10.	Input bit polarity B				
bF-08	10.	Input bit polarity C				
bF-09	10.	Input bit polarity D				
bF-10	10.	ON delay time		0.0		
bF-11	10.	OFF delay time				
bF-12	10.	Polarity		0		
bF-13	10.	Latch		0		
bF-01	11.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	11.	Input assignment A		1024		
bF-03	11.	Input assignment B				
bF-04	11.	Input assignment C				
bF-05	11.	Input assignment D				
bF-06	11.	Input bit polarity A		0		
bF-07	11.	Input bit polarity B				
bF-08	11.	Input bit polarity C				
bF-09	11.	Input bit polarity D				
bF-10	11.	ON delay time		0.0		
bF-11	11.	OFF delay time				
bF-12	11.	Polarity		0		
bF-13	11.	Latch		0		
bF-01	12.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	12.	Input assignment A		1024		
bF-03	12.	Input assignment B				
bF-04	12.	Input assignment C				
bF-05	12.	Input assignment D				
bF-06	12.	Input bit polarity A		0		
bF-07	12.	Input bit polarity B				
bF-08	12.	Input bit polarity C				
bF-09	12.	Input bit polarity D				
bF-10	12.	ON delay time		0.0		
bF-11	12.	OFF delay time				
bF-12	12.	Polarity		0		
bF-13	12.	Latch		0		
bF-01	13.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	13.	Input assignment A		1024		
bF-03	13.	Input assignment B				
bF-04	13.	Input assignment C				
bF-05	13.	Input assignment D				
bF-06	13.	Input bit polarity A		0		
bF-07	13.	Input bit polarity B				
bF-08	13.	Input bit polarity C				
bF-09	13.	Input bit polarity D				
bF-10	13.	ON delay time		0.0		
bF-11	13.	OFF delay time				
bF-12	13.	Polarity		0		
bF-13	13.	Latch		0		
bF-01	14.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	14.	Input assignment A		1024		
bF-03	14.	Input assignment B				
bF-04	14.	Input assignment C				
bF-05	14.	Input assignment D				
bF-06	14.	Input bit polarity A		0		
bF-07	14.	Input bit polarity B				
bF-08	14.	Input bit polarity C				
bF-09	14.	Input bit polarity D				
bF-10	14.	ON delay time		0.0		
bF-11	14.	OFF delay time				
bF-12	14.	Polarity		0		
bF-13	14.	Latch		0		

Display	Logical operation number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
bF-01	15.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	15.	Input assignment A		1024		
bF-03	15.	Input assignment B				
bF-04	15.	Input assignment C				
bF-05	15.	Input assignment D				
bF-06	15.	Input bit polarity A		0		
bF-07	15.	Input bit polarity B				
bF-08	15.	Input bit polarity C				
bF-09	15.	Input bit polarity D				
bF-10	15.	ON delay time		0.0		
bF-11	15.	OFF delay time				
bF-12	15.	Polarity		0		
bF-13	15.	Latch		0		
bF-01	16.	Operation type	Same as logical operation 1	1		Same as logical operation 1
bF-02	16.	Input assignment A		1024		
bF-03	16.	Input assignment B				
bF-04	16.	Input assignment C				
bF-05	16.	Input assignment D				
bF-06	16.	Input bit polarity A		0		
bF-07	16.	Input bit polarity B				
bF-08	16.	Input bit polarity C				
bF-09	16.	Input bit polarity D				
bF-10	16.	ON delay time		0.0		
bF-11	16.	OFF delay time				
bF-12	16.	Polarity		0		
bF-13	16.	Latch		0		

■ User-defined bank (Udb)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
Udb.AL	-	User-defined bits 1 to 8	00000 to 000FF (hexadecimal value)	00000		User-defined bits 1 to 8 are set at one time.
Udb.01	-	User-defined bit 1	on: ON oFF: OFF	OFF		
Udb.02	-	User-defined bit 2	on: ON oFF: OFF	OFF		
Udb.03	-	User-defined bit 3	on: ON oFF: OFF	OFF		
Udb.04	-	User-defined bit 4	on: ON oFF: OFF	OFF		
Udb.05	-	User-defined bit 5	on: ON oFF: OFF	OFF		
Udb.06	-	User-defined bit 6	on: ON oFF: OFF	OFF		
Udb.07	-	User-defined bit 7	on: ON oFF: OFF	OFF		
Udb.08	-	User-defined bit 8	on: ON oFF: OFF	OFF		

■ Temperature and pressure compensation bank (Pu.CAP)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
Pu.C.01		Compensation method	0: No compensation 1: Temperature compensation 2: Pressure compensation 3: Temperature and pressure compensation	0		
Pu.C.02		Unit for temperature correction	0: Celsius (°C) 1: Fahrenheit (°F) 2: Kelvin (K)	0		Setting cannot be changed if PV 1 is a thermocouple or RTD.
Pu.C.03		Design temperature for temperature correction	-1999.9 to +3200.0	0.0		
Pu.C.04		Unit for pressure correction	0: MPa 1: kPa 2: Pa 3: kg/cm^2 4: mmH_20	0		
Pu.C.05		Design pressure for pressure correction	-1999.9 to +3200.0	0.0		
Pu.C.06		Decimal point position (for flow rate setting)	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
Pu.C.07		Flow rate scaling low limit	-19999 to +32000	0.0		The decimal point position is determined by the decimal.
Pu.C.08		Flow rate scaling high limit		100.0		
Pu.C.09		Square root extraction dropout	0.0: Square root extraction is not performed 0.1 to 10.0 %	0.0		
Pu.C.10		Filter	0.00: No filter 0.01 to 120.00 s	0.0		
Pu.C.11		Bias	-19999 to +32000	0.0		
Pu.C.12		Ratio	0.001 to 32.000	1.000		
Pu.C.13		Linearization table group definition	0: Disabled 1: Grpup 1 2: Grpup 2 3: Grpup 3 4:Grpup 4 5: Grpup 5 6: Grpup 6 7: Grpup 7 8: Grpup 8	0		

■ Input computation bank (InFnC)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
dP	F01.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
In.01	F01.	Input 1	2048 to 3071	2048		For more details on the 2048 to 3071 range, see the Standard numerical codes list (page 4-2).
In.02	F01.	Input 2		2048		
tYPE	F01.	Mathematical/logical operations	0:NOP No operation 1:FLT First-order lag filter 2:R/B Ratio/bias 3:HLL High/low limiter 4:DRL Change rate limiter 5:LED Differentiation 6:L/L Advance/delay 7:ABS Absolute value 8:TBL Linearization table 9:MAX Maximum value hold 10:MIN Minimum value hold 11:HLD Hold 12:PRS Preset value 13:SPR Soft preset value	0		
PR-01	F01.	Setting 1	-19999 to +32000 U	0.0		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
PR-02	F01.	Setting 2		0.0		
PR-03	F01.	Setting 3	0 to 255	0		
di.SEL	F01.	Contact input	1024 to 2047	1024		For more details on the 1024 to 2047 range, see the Standard bit codes list (page 4-1).
di	F01.	Contact input monitor	0: OFF 1: ON	-		
do	F01.	Contact output monitor		-		
oUt	F01.	Computation unit output check point value	-19999 to +32000 U	-		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
tYPE	F02.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F02.	Setting 1		0.0		
PR-02	F02.	Setting 2		0.0		
PR-03	F02.	Setting 3		0		
di.SEL	F02.	Contact input		1024		
di	F02.	Contact input monitor		-		
do	F02.	Contact output monitor		-		
oUt	F02.	Computation unit output check point value		-		
tYPE	F03.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F03.	Setting 1		0.0		
PR-02	F03.	Setting 2		0.0		
PR-03	F03.	Setting 3		0		
di.SEL	F03.	Contact input		1024		
di	F03.	Contact input monitor		-		
do	F03.	Contact output monitor		-		
oUt	F03.	Computation unit output check point value		-		
tYPE	F04.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F04.	Setting 1		0.0		
PR-02	F04.	Setting 2		0.0		
PR-03	F04.	Setting 3		0		
di.SEL	F04.	Contact input		1024		
di	F04.	Contact input monitor		-		
do	F04.	Contact output monitor		-		
oUt	F04.	Computation unit output check point value		-		
tYPE	F05.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F05.	Setting 1		0.0		
PR-02	F05.	Setting 2		0.0		
PR-03	F05.	Setting 3		0		
di.SEL	F05.	Contact input		1024		
di	F05.	Contact input monitor		-		
do	F05.	Contact input monitor		-		

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
oUt	F05.	Computation unit output check point value	Same as for F01.	-		Same as for F01.
tYPE	F06.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PA-01	F06.	Setting 1		0.0		
PA-02	F06.	Setting 2		0.0		
PA-03	F06.	Setting 3		0		
di.SEL	F06.	Contact input		1024		
di	F06.	Contact input monitor		-		
do	F06.	Contact output monitor		-		
oUt	F06.	Computation unit output check point value		-		
tYPE	F07.	Mathematical/logical operations	0:NOP No operation 1:FLT First-order lag filter 2:R/B Ratio/bias 3:HLL High/low limiter 4:DRL Change rate limiter 5:LED Differentiation 6:L/L Advance/delay 7:ABS Absolute value 8:TBL Linearization table 9:MAX Maximum value hold 10:MIN Minimum value hold 11:HLD Hold 12:PRS Preset value 13:SPR Soft preset value 14 to 30: No operation 31:ADD Addition/subtraction 32:MUL Multiplication 33:DIV Division 34:HSE High selector 35:LSE Low selector 36:SWS Switch selector 37:CPS Change point selector 38:SSS Soft switching selector	0		14 to 38 can be set with computation unit 07 only.
PA-01	F07.	Setting 1	-19999 to +32000 U	0.0		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
PA-02	F07.	Setting 2		0.0		
PA-03	F07.	Setting 3	0 to 255	0		
di.SEL	F07.	Contact input	1024 to 2047	1024		For more details on the 1024 to2047 range, see the Standard bit codes list (page 4-1).
di	F07.	Contact input monitor	0: OFF 1: ON	-		
do	F07.	Contact output monitor		-		
oUt	F07.	Computation unit output check point value	-19999 to +32000 U	-		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
tYPE	F08.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PA-01	F08.	Setting 1		0.0		
PA-02	F08.	Setting 2		0.0		
PA-03	F08.	Setting 3		0		
di.SEL	F08.	Contact input		1024		
di	F08.	Contact input monitor		-		
do	F08.	Contact output monitor		-		
oUt	F08.	Computation unit output check point value		-		
tYPE	F09.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PA-01	F09.	Setting 1		0.0		
PA-02	F09.	Setting 2		0.0		
PA-03	F09.	Setting 3		0		
di.SEL	F09.	Contact input		1024		
di	F09.	Contact input monitor		-		
do	F09.	Contact output monitor		-		
oUt	F09.	Computation unit output check point value		-		
tYPE	F 10.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PA-01	F 10.	Setting 1		0.0		
PA-02	F 10.	Setting 2		0.0		
PA-03	F 10.	Setting 3		0		
di.SEL	F 10.	Contact input		1024		
di	F 10.	Contact input monitor		-		
do	F 10.	Contact output monitor		-		
oUt	F 10.	Computation unit output check point value		-		

■ Output computation bank (oE.FnC)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
dP	F01.	Decimal point position	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
In.01	F01.	Input 1	2048 to 3071	2048		For more details on the 2048 to 3071 range, see the Standard numerical codes list (page 4-2).
In.02	F01.	Input 2		2048		
tYPE	F01.	Mathematical/logical operations	0:NOP No operation 1:FLT First-order lag filter 2:R/B Ratio/bias 3:HLL High/low limiter 4:DRL Change rate limiter 5:LED Differentiation 6:L/L Advance/delay 7:ABS Absolute value 8:TBL Linearization table 9:MAX Maximum value hold 10:MIN Minimum value hold 11:HLD Hold 12:PRS Preset value 13:SPR Soft preset value	0		
PR-01	F01.	Setting 1	-19999 to +32000 U	0.0		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
PR-02	F01.	Setting 2		0.0		
PR-03	F01.	Setting 3	0 to 255	0		
di.SEL	F01.	Contact input	1024 to 2047	1024		For more details on the 1024 to 2047 range, see the Standard bit codes list (page 4-1).
di	F01.	Contact input monitor	0: OFF 1: ON	-		
do	F01.	Contact output monitor		-		
oUt	F01.	Computation unit output check point value	-19999 to +32000 U	-		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
tYPE	F02.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F02.	Setting 1		0.0		
PR-02	F02.	Setting 2		0.0		
PR-03	F02.	Setting 3		0		
di.SEL	F02.	Contact input		1024		
di	F02.	Contact input monitor		-		
do	F02.	Contact output monitor		-		
oUt	F02.	Computation unit output check point value		-		
tYPE	F03.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F03.	Setting 1		0.0		
PR-02	F03.	Setting 2		0.0		
PR-03	F03.	Setting 3		0		
di.SEL	F03.	Contact input		1024		
di	F03.	Contact input monitor		-		
do	F03.	Contact output monitor		-		
oUt	F03.	Computation unit output check point value		-		
tYPE	F04.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F04.	Setting 1		0.0		
PR-02	F04.	Setting 2		0.0		
PR-03	F04.	Setting 3		0		
di.SEL	F04.	Contact input		1024		
di	F04.	Contact input monitor		-		
do	F04.	Contact output monitor		-		
oUt	F04.	Computation unit output check point value		-		
tYPE	F05.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F05.	Setting 1		0.0		
PR-02	F05.	Setting 2		0.0		
PR-03	F05.	Setting 3		0		
di.SEL	F05.	Contact input		1024		
di	F05.	Contact input monitor		-		
do	F05.	Contact output monitor		-		
oUt	F05.	Computation unit output check point value		-		

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
TYPE	F06.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F06.	Setting 1		0.0		
PR-02	F06.	Setting 2		0.0		
PR-03	F06.	Setting 3		0		
di.SEL	F06.	Contact input		1024		
di	F06.	Contact input monitor		-		
do	F06.	Contact output monitor		-		
oUt	F06.	Computation unit output check point value		-		
TYPE	F07.	Mathematical/logical operations	0:NOP No operation 1:FLT First-order lag filter 2:R/B Ratio/bias 3:HLL High/low limiter 4:DRL Change rate limiter 5:LED Differentiation 6:L/L Advance/delay 7:ABS Absolute value 8:TBL Linearization table 9:MAX Maximum value hold 10:MIN Minimum value hold 11:HLD Hold 12:PRS Preset value 13:SPR Soft preset value 14 to 30: No operation 31:ADD Addition/subtraction 32:MUL Multiplication 33:DIV Division 34:HSE High selector 35:LSE Low selector 36:SWS Switch selector 37:CPS Change point selector 38:SSS Soft switching selector	0		14 to 38 can be set with computation unit 07 only.
PR-01	F07.	Setting 1	-19999 to +32000 U	0.0		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
PR-02	F07.	Setting 2		0.0		
PR-03	F07.	Setting 3	0 to 255	0		
di.SEL	F07.	Contact input	1024 to 2047	1024		For more details on the 1024 to 2047 range, see the Standard bit codes list (page 4-1).
di	F07.	Contact input monitor	0: OFF 1: ON	-		
do	F07.	Contact output monitor		-		
oUt	F07.	Computation unit output check point value	-19999 to +32000 U	-		The decimal point position is determined by the setting for the decimal point position in the input computation bank.
TYPE	F08.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F08.	Setting 1		0.0		
PR-02	F08.	Setting 2		0.0		
PR-03	F08.	Setting 3		0		
di.SEL	F08.	Contact input		1024		
di	F08.	Contact input monitor		-		
do	F08.	Contact output monitor		-		
oUt	F08.	Computation unit output check point value		-		
TYPE	F09.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F09.	Setting 1		0.0		
PR-02	F09.	Setting 2		0.0		
PR-03	F09.	Setting 3		0		
di.SEL	F09.	Contact input		1024		
di	F09.	Contact input monitor		-		
do	F09.	Contact output monitor		-		
oUt	F09.	Computation unit output check point value		-		
TYPE	F10.	Mathematical/logical operations	Same as for F01.	0		Same as for F01.
PR-01	F10.	Setting 1		0.0		
PR-02	F10.	Setting 2		0.0		
PR-03	F10.	Setting 3		0		
di.SEL	F10.	Contact input		1024		
di	F10.	Contact input monitor		-		
do	F10.	Contact output monitor		-		
oUt	F10.	Computation unit output check point value		-		

■ Display/key bank (KB1)

Display	MS display Status number/ F key number/ UF LED number (auxiliary display)	Item	Meaning of Auxiliary display	Settings and descriptions	Initial value	User setting	Remarks
MS-01	1.	Multi-status (MS) display, Status	Top priority	1024 to 2047	1568		Setting range is 1024 to 2047. For details, see the Standard bit codes list (page 4-1).
MS-02	1.	Multi-status (MS) display, Condition	Top priority	0: Lit 1: Slow flashing 2: Double flashes 3: Fast flashing 4: Left to right 5: Right to left 6: Reciprocating between left and right 7: Deviation OK (loop 1) 8: Deviation OK (loop 2) 11: Deviation graph (loop 1) 12: Deviation graph (loop 2) 15: MV graph (loop 1) 16: MV graph (loop 2) 19: Heat-side MV graph (loop 1) 20: Heat-side MV graph (loop 2) 23: Cool-side MV graph (loop 1) 24: Cool-side MV graph (loop 2) 29: DI/DO monitor (columns C+F) 30: DI/DO monitor (column D) 31: DI/DO monitor (column E) 32: Event status monitoring Others	1		Setting range is 0 to 3071.
MS-03	1.	Multi-status (MS) display, Decimal point position	Top priority	0: No decimal point 1: 1 digit after decimal point 2: 2 digits after decimal point 3: 3 digits after decimal point 4: 4 digits after decimal point	1		
MS-04	1.	Multi-status (MS) display, scaling low limit	Top priority	-19999 to +32000 U	0.0		The decimal point position is determined by the decimal point position for the MS display.
MS-05	1.	Multi-status (MS) display, scaling high limit	Top priority		100.0		
MS-01	2.	Multi-status (MS) display, Status	Second priority	Same as multi-status (MS) display, Status (top priority)	1792		Same as multi-status (MS) display, Status (top priority)
MS-02	2.	Multi-status (MS) display, Condition	Second priority		6		
MS-03	2.	Multi-status (MS) display, Decimal point position	Second priority		1		
MS-04	2.	Multi-status (MS) display, scaling low limit	Second priority		0.0		
MS-05	2.	Multi-status (MS) display, scaling high limit	Second priority		100.0		
MS-01	3.	Multi-status (MS) display, Status	Third priority	Same as multi-status (MS) display, Status (top priority)	1025		Same as multi-status (MS) display, Status (top priority)
MS-02	3.	Multi-status (MS) display, Condition	Third priority		15		
MS-03	3.	Multi-status (MS) display, Decimal point position	Third priority		1		
MS-04	3.	Multi-status (MS) display, scaling low limit	Third priority		0.0		
MS-05	3.	Multi-status (MS) display, scaling high limit	Third priority		100.0		
FK-01	1.	F key basic registration	rsp/lsp key	0: No registration 1: Item setting 2: RUN/READY selection 4: AT Start/Stop selection 5: LSP/RSP selection 6: Backup/through output selection 7: User-defined bit 1 selection 8: User-defined bit 2 selection 9: User-defined bit 3 selection 10: User-defined bit 4 selection 11: User-defined bit 5 selection 12: User-defined bit 6 selection 13: User-defined bit 7 selection 14: User-defined bit 8 selection	5		Setting range is 0 to 255
FK-02	1.	F key assignment item 1	rsp/lsp key	00000: Invalid	00000		Setting range is 00000 to 0FFFF
FK-03	1.	F key assignment item 2	rsp/lsp key	Communication address (for RAM) is set			
FK-04	1.	F key assignment item 3	rsp/lsp key	by hexadecimal value.			
FK-05	1.	F key assignment item 4	rsp/lsp key				
FK-06	1.	F key assignment item 5	rsp/lsp key				
FK-07	1.	F key assignment item 6	rsp/lsp key				
FK-08	1.	F key assignment item 7	rsp/lsp key				
FK-09	1.	F key assignment item 8	rsp/lsp key				

Display	MS display Status number/ F key number/ UF LED number (auxiliary display)	Item	Meaning of Auxiliary display	Settings and descriptions	Initial value	User setting	Remarks
FK-01	2.	F key basic registration	at key	Same as F key rsp/lsp key	4		Same as F key rsp/lsp key
FK-02	2.	F key assignment item 1	at key		00000		
FK-03	2.	F key assignment item 2	at key				
FK-04	2.	F key assignment item 3	at key				
FK-05	2.	F key assignment item 4	at key				
FK-06	2.	F key assignment item 5	at key				
FK-07	2.	F key assignment item 6	at key				
FK-08	2.	F key assignment item 7	at key				
FK-09	2.	F key assignment item 8	at key				
FK-01	3.	F key basic registration	f1 key	Same as F key rsp/lsp key	0		Same as F key rsp/lsp key
FK-02	3.	F key assignment item 1	f1 key		00000		
FK-03	3.	F key assignment item 2	f1 key				
FK-04	3.	F key assignment item 3	f1 key				
FK-05	3.	F key assignment item 4	f1 key				
FK-06	3.	F key assignment item 5	f1 key				
FK-07	3.	F key assignment item 6	f1 key				
FK-08	3.	F key assignment item 7	f1 key				
FK-09	3.	F key assignment item 8	f1 key				
FK-01	4.	F key basic registration	f2 key	Same as F key rsp/lsp key	0		Same as F key rsp/lsp key
FK-02	4.	F key assignment item 1	f2 key		00000		
FK-03	4.	F key assignment item 2	f2 key				
FK-04	4.	F key assignment item 3	f2 key				
FK-05	4.	F key assignment item 4	f2 key				
FK-06	4.	F key assignment item 5	f2 key				
FK-07	4.	F key assignment item 6	f2 key				
FK-08	4.	F key assignment item 7	f2 key				
FK-09	4.	F key assignment item 8	f2 key				
UFL.01	1.	UF LED, condition	uf1 LED	1024 to 2047	1600		Setting range is 1024 to 2047. For details, see the Standard bit codes list (page 4-1).
UFL.02	1.	UF LED, status	uf1 LED	0: Standard (lit when condition is ON) 1: Reverse (lit when condition is OFF) 2: Standard flashing (when condition is ON) 3: Reverse flashing (when condition is OFF)	2		
UFL.01	2.	UF LED, condition	uf2 LED	Same as uf1 LED	1547		Same as uf1 LED
UFL.02	2.	UF LED, status	uf2 LED		0		
UFL.01	3.	UF LED, condition	uf3 LED	Same as uf1 LED	1024		Same as uf1 LED
UFL.02	3.	UF LED, status	uf3 LED		0		
UFL.01	4.	UF LED, condition	uf4 LED	Same as uf1 LED	1024		Same as uf1 LED
UFL.02	4.	UF LED, status	uf4 LED		0		

■ RS-485 communication bank (r-5485)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
Con.01	-	CPL/MODBUS	0: CPL 1: MODBUS ASCII format 2: MODBUS RTU format	0		
Con.02	-	Station address	0: Disabled 1 to 127	0		
Con.03	-	Transmission speed	0: 4800 bps 1: 9600 bps 2: 19200 bps 3: 38400 bps	2		
Con.04	-	Data format (data length)	0:7 bits 1: 8 bits	1		
Con.05	-	Data format (parity)	0: Even parity 1: Odd parity 2: No parity	0		
Con.06	-	Data format (stop bit)	0: 1 bit 1: 2 bits	0		
Con.07	-	Response time-out	1 to 250 ms	3		

■ Lock bank (LoCK)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
K.LoC1	-	Key lock (setting change)	0: Not locked 1: Lock level 1 2: Lock level 2 3: Lock level 3	0		Refer to: next page.
K.LoC2	-	Key lock (display)	0: Not locked 1: Lock level 1 2: Lock level 2	0		
C.LoC1	-	RS-485 communication lock (Read)	0: Not locked 1: Locked	0		
C.LoC2	-	RS-485 communication lock (Write)		0		
L.LoC1	-	Loader communication lock (Read)		0		
L.LoC2	-	Loader communication lock (Write)		0		
PASS	-	Password display	0 to 15	0		Use the "0".

● Key lock (setting change) [display: KLoC1]

● Key lock (display) [display: KLoC2]

The relation between lock level and data or settings is as shown below.

❍: display or setting change is enabled.

×: display or setting change is disabled.

Items	Lock level			
	1	2	3	4
• Data registered to function key • MV in manual mode (MV) • Lock bank	❍	❍	❍	❍
• Multiple SP bank • Recipe bank	❍	❍	❍	×
• Event setting bank • Mode bank	❍	❍	×	×
Other than above (setup bank, PV bank, output bank, PID bank, etc.)	❍	×	×	×

■ Monitor bank (mon)

Display	Loop group (auxiliary display)	Item	Remarks
AL	1.	Alarm information 1	Hexadecimal value (Note 1)
AL	2.	Alarm information 2	
AL	3.	Alarm information 3	
AL	4.	Alarm information 4	
Pv.LP	1.	PV (loop 1)	
Pv.LP	2.	PV (loop 2)	
SP	1.	SP (loop 1)	
SP	2.	SP (loop 2)	
mv	1.	MV (loop 1)	
mv	2.	MV (loop 2)	
mv.Ht	1.	Heat-side MV (loop 1)	
mv.Ht	2.	Heat-side MV (loop 2)	
mv.CL	1.	Cool-side MV (loop 1)	
mv.CL	2.	Cool-side MV (loop 2)	
Atn	1.	AT progress (loop 1)	
Atn	2.	AT progress (loop 2)	
SPno	1.	SP group selection (loop 1)	
SPno	2.	SP group selection (loop 2)	
Pidno	1.	PID group selection (loop 1)	
Pidno	2.	PID group selection (loop 2)	
Pv	1.	PV 1	
Pv	2.	PV 2/PV21	
Pv	3.	PV 22	
mFb	1.	MFB 1 (including estimation)	
Ct-on	1.	CT1 value Current at output ON	
Ct-on	2.	CT2 value Current at output ON	
Ct-oFF	1.	CT1 value Current at output OFF	
Ct-oFF	2.	CT2 value Current at output OFF	
AC.v	1.	AC1 value Measurement voltage	
AC.v	2.	AC2 value Measurement voltage	
AC.P	1.	AC1 value Percent data	
AC.P	2.	AC2 value Percent data	
Frq	1.	Source frequency	Unit: Hz
oUt.P	1.	Continuous output percent (output 1)	Enabled for current output or continuous voltage output
oUt.P	2.	Continuous output percent (output 2)	
oUt.P	3.	Continuous output percent (output 3)	
oUt.P	4.	Continuous output percent (output 4)	
oUt.P	5.	Continuous output percent (output 5)	
oUt.P	6.	Continuous output percent (output 6)	
oUt.P	7.	Continuous output percent (output 7)	
oUt.b	1.	Output ON/OFF (output 1)	Enabled for relay output or voltage pulse output
oUt.b	2.	Output ON/OFF (output 2)	
oUt.b	3.	Output ON/OFF (output 3)	
oUt.b	4.	Output ON/OFF (output 4)	
oUt.b	5.	Output ON/OFF (output 5)	
oUt.b	6.	Output ON/OFF (output 6)	
oUt.b	7.	Output ON/OFF (output 7)	
di	1.	Digital input information	Hexadecimal value (Note 2)
di	2.	Digital input information	
di	3.	Digital input information	
di	4.	Digital input information	
di	5.	Digital input information	
di	6.	Digital input information	
di	7.	Digital input information	
do	1.	Digital output information	Hexadecimal value (Note 3)
do	2.	Digital output information	
do	3.	Digital output information	
do	4.	Digital output information	
do	5.	Digital output information	
do	6.	Digital output information	

Display	Loop group (auxiliary display)	Item	Remarks
dLY.01	1.	Event delay remaining time (event 1)	Unit: s
dLY.02	2.	Event delay remaining time (event 2)	
dLY.03	3.	Event delay remaining time (event 3)	
dLY.04	4.	Event delay remaining time (event 4)	
dLY.05	5.	Event delay remaining time (event 5)	
dLY.06	6.	Event delay remaining time (event 6)	
dLY.07	7.	Event delay remaining time (event 7)	
dLY.08	8.	Event delay remaining time (event 8)	
dLY.09	1.	Event delay remaining time (event 9)	
dLY.10	2.	Event delay remaining time (event 10)	
dLY.11	3.	Event delay remaining time (event 11)	
dLY.12	4.	Event delay remaining time (event 12)	
dLY.13	5.	Event delay remaining time (event 13)	
dLY.14	6.	Event delay remaining time (event 14)	
dLY.15	7.	Event delay remaining time (event 15)	
dLY.16	8.	Event delay remaining time (event 16)	
t-rUn	1.	Number of days continuously energized	1 = the equivalent of one day (time less than 6 continuous hours is not included)
t-EEP	1.	EEPROM write cycles	1 = the equivalent of 100 cycles
t-rLY	1. to 8.	(Reserved for future use)	
t-KEY	1. to 8.	(Reserved for future use)	
CAL.01	1.	For manufacturer service	
CAL.02	2.	For manufacturer service	
CAL.03	3.	For manufacturer service	
CAL.04	4.	For manufacturer service	
CAL.05	5.	For manufacturer service	
CAL.06	6.	For manufacturer service	
CAL.07	7.	For manufacturer service	
CAL.08	8.	For manufacturer service	
CAL.09	1.	For manufacturer service	
CAL.10	2.	For manufacturer service	
CAL.11	3.	For manufacturer service	
CAL.12	4.	For manufacturer service	
CAL.13	5.	For manufacturer service	
CAL.14	6.	For manufacturer service	
CAL.15	7.	For manufacturer service	
CAL.16	8.	For manufacturer service	
CAL.17	1.	For manufacturer service	
CAL.18	2.	For manufacturer service	
CAL.19	3.	For manufacturer service	
CAL.20	4.	For manufacturer service	
CAL.21	5.	For manufacturer service	
CAL.22	6.	For manufacturer service	
CAL.23	7.	For manufacturer service	
CAL.24	8.	For manufacturer service	
CAL.25	1.	For manufacturer service	
CAL.26	2.	For manufacturer service	
CAL.27	3.	For manufacturer service	
CAL.28	4.	For manufacturer service	
CAL.29	5.	For manufacturer service	
CAL.30	6.	For manufacturer service	
CAL.31	7.	For manufacturer service	
CAL.32	8.	For manufacturer service	
CAL.33	1.	For manufacturer service	
CAL.34	2.	For manufacturer service	
CAL.35	3.	For manufacturer service	
CAL.36	4.	For manufacturer service	
CAL.37	5.	For manufacturer service	
CAL.38	6.	For manufacturer service	
CAL.39	7.	For manufacturer service	
CAL.40	8.	For manufacturer service	

Display	Loop group (auxiliary display)	Item	Remarks
CAL.41	1.	For manufacturer service	
CAL.42	2.	For manufacturer service	
CAL.43	3.	For manufacturer service	
CAL.44	4.	For manufacturer service	
CAL.45	5.	For manufacturer service	
CAL.46	6.	For manufacturer service	
CAL.47	7.	For manufacturer service	
CAL.48	8.	For manufacturer service	
CAL.49	1.	For manufacturer service	
CAL.50	2.	For manufacturer service	
CAL.51	3.	For manufacturer service	
CAL.52	4.	For manufacturer service	
CAL.53	5.	For manufacturer service	
CAL.54	6.	For manufacturer service	
CAL.55	7.	For manufacturer service	
CAL.56	8.	For manufacturer service	
CAL.57	1.	For manufacturer service	
CAL.58	2.	For manufacturer service	
CAL.59	3.	For manufacturer service	
CAL.60	4.	For manufacturer service	
CAL.61	5.	For manufacturer service	
CAL.62	6.	For manufacturer service	
CAL.63	7.	For manufacturer service	
CAL.64	8.	For manufacturer service	

● **Note 1**

For AL1 to AL4 (alarm information), ON/OFF for 16 bits is expressed in hexadecimal format (00000 to 0FFFF). The bit structure of each is shown below.

- Alarm information 1
  Bit 0: AL01 PV1 input over-range
  Bit 1: AL02 PV1 input under-range
  Bit 2: AL03 PV2/PV21 input over-range
  Bit 3: AL04 PV2/PV21 input under-range
  Bit 4: AL05 PV22 input over-range
  Bit 5: AL06 PV22 input under-range
  Bit 6 to 15: Undefined
- Alarm information 2
  Bit 0: AL21 MFB input failure
  Bit 1: AL22 Motor adjustment failure
  Bit 4: AL25 CT1 input failure
  Bit 5: AL26 CT2 input failure
  Bit 2, 3, 6 to 15: Undefined
- Alarm information 3
  Bits 0 to 15: Undefined
- Alarm information 4
  Bit 0: AL71 PV1 cold junction compensation failure
  Bit 1: AL72 PV2 cold junction compensation failure
  Bit 4: AL81 Battery low
  Bit 5: AL82 Internal clock failure
  Bit 6: AL83 Board configuration problem
  Bit 12: AL96 Main board failure
  Bit 13: AL97 parameter failure
  Bit 14: AL98 adjustment data failure
  Bit 15: AL99 ROM failure
  Bit 2, 3, 7 to 11: Undefined

● **Note 2**

For di1 to di7 (digital input information), ON/OFF for 16 bits is expressed in hexadecimal format (00000 to 0FFFF). The bit structure of each is shown below.

- Digital input information 1
  Bit 12: DI-C4, bit 8: DI-C3, bit 4: DI-C2, bit 0: DI-C1, other bits are undefined
- Digital input information 2
  Bit 12: DI-C8, bit 8: DI-C7, bit 4: DI-C6, bit 0: DI-C5, other bits are undefined
- Digital input information 3
  Bit 12: DI-D4, bit 8: DI-D3, bit 4: DI-D2, bit 0: DI-D1, other bits are undefined
- Digital input information 4
  Bit 12: DI-D8, bit 8: DI-D7, bit 4: DI-D6, bit 0: DI-D5, other bits are undefined
- Digital input information 5
  Bits 0 to 15: Undefined
- Digital input information 6
  Bits 0 to 15: Undefined
- Digital input information 7
  Bit 12: Undefined, bit 8: Undefined, bit 4: DI-F2, bit 0: DI-F1, other bits are undefined

● **Note 3**

For do1 to do6 (digital output information), ON/OFF for 16 bits is expressed in hexadecimal format (00000 to 0FFFF). The bit structure of each is shown below.

- Digital output information 1
  Bit 12: DO-C4, bit 8: DO-C3, bit 4: DO-C2, bit 0: DO-C1, other bits are undefined
- Digital output information 2
  Bit 12: DO-C8, bit 8: DO-C7, bit 4: DO-C6, bit 0: DO-C5, other bits are undefined
- Digital output information 3
  Bits 0 to 15: Undefined
- Digital output information 4
  Bits 0 to 15: Undefined
- Digital output information 5
  Bit 12: DO-E4, bit 8: DO-E3, bit 4: DO-E2, bit 0: DO-E1, other bits are undefined
- Digital output information 6
  Bit 12: DO-E8, bit 8: DO-E7, bit 4: DO-E6, bit 0: DO-E5, other bits are undefined

■ Instrument information bank (id)

Display	Auxiliary display	Item	Settings and descriptions	Initial value	User setting	Remarks
id-01	-	F/W information (1) (ROM ID)		-		
id-02	-	F/W information (2) (ROM version 1)		-		
id-03	-	F/W information (3) (ROM version 2)		-		
id-04	-	F/W information (4) (SLP loader information)		-		
id-05	-	F/W information (5) (EST information)		-		
id-06	-	Manufacturing date code (year)		-		
id-07	-	Manufacturing date code (month, day)		-		
id-08	-	Serial number		-		
id-09	-	For manufacturer service		-		
id-10	-	For manufacturer service		-		
id-11	-	For manufacturer service		-		
id-12	-	For manufacturer service		-		
id-13	-	For manufacturer service		-		
id-14	-	For manufacturer service		-		
id-15	-	For manufacturer service		-		
id-16	-	For manufacturer service		-		
id-17	-	For manufacturer service		-		
id-18	-	For manufacturer service		-		
id-19	-	For manufacturer service		-		
id-20	-	For manufacturer service		-		
id-21	-	For manufacturer service		-		
id-22	-	For manufacturer service		-		
id-23	-	For manufacturer service		-		
id-24	-	For manufacturer service		-		
id-25	-	For manufacturer service		-		
id-26	-	For manufacturer service		-		
id-27	-	For manufacturer service		-		
id-28	-	For manufacturer service		-		
id-29	-	For manufacturer service		-		
id-30	-	For manufacturer service		-		
id-31	-	For manufacturer service		-		
id-32	-	For manufacturer service		-		
id-33	-	For manufacturer service		-		

3. SP/EV BANK SETTINGS

■ SP group selection bank (SPno)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SPno	L.1.	Loop 1 SP group	1 to SP system group (max. 16)	1		When SP group selection is used, set the SP group selection priority to "setting value".
SPno	L.2.	Loop 2 SP group	1 to SP system group (max. 16)	1		

■ Loop 1 multi-SP bank (L.1.LSP)

Display	Loop number (auxiliary display)	Item	SP group	Settings and descriptions	Initial value	User setting	Remarks
LSP.01	L.1.	LSP	1	SP low limit to SP high limit	0.0		The decimal point position is determined by the decimal point position for the loop PV/SP.
PId.01	L.1.	PID group definition	1	1 to 16	1		
LSP.02	L.1.	LSP	2	Same as SP group 1	0.0		Same as SP group 1
PId.02	L.1.	PID group definition	2		1		
LSP.03	L.1.	LSP	3		0.0		
PId.03	L.1.	PID group definition	3		1		
LSP.04	L.1.	LSP	4		0.0		
PId.04	L.1.	PID group definition	4		1		
LSP.05	L.1.	LSP	5		0.0		
PId.05	L.1.	PID group definition	5		1		
LSP.06	L.1.	LSP	6		0.0		
PId.06	L.1.	PID group definition	6		1		
LSP.07	L.1.	LSP	7		0.0		
PId.07	L.1.	PID group definition	7		1		
LSP.08	L.1.	LSP	8		0.0		
PId.08	L.1.	PID group definition	8		1		
LSP.09	L.1.	LSP	9		0.0		
PId.09	L.1.	PID group definition	9		1		
LSP.10	L.1.	LSP	10		0.0		
PId.10	L.1.	PID group definition	10		1		
LSP.11	L.1.	LSP	11		0.0		
PId.11	L.1.	PID group definition	11		1		
LSP.12	L.1.	LSP	12		0.0		
PId.12	L.1.	PID group definition	12		1		
LSP.13	L.1.	LSP	13		0.0		
PId.13	L.1.	PID group definition	13		1		
LSP.14	L.1.	LSP	14		0.0		
PId.14	L.1.	PID group definition	14		1		
LSP.15	L.1.	LSP	15		0.0		
PId.15	L.1.	PID group definition	15		1		
LSP.16	L.1.	LSP	16		0.0		
PId.16	L.1.	PID group definition	16		1		

■ Loop 2 multi-SP bank (L2.LSP)

Display	Loop number (auxiliary display)	Item	SP group	Settings and descriptions	Initial value	User setting	Remarks
LSP.01	L.2.	LSP	1	SP low limit to SP high limit	0.0		The decimal point position is determined by the decimal point position for the loop PV/SP.
PId.01	L.2.	PID group definition	1	1 to 16	1		
LSP.02	L.2.	LSP	2	Same as SP group 1	0.0		Same as SP group 1
PId.02	L.2.	PID group definition	2		1		
LSP.03	L.2.	LSP	3		0.0		
PId.03	L.2.	PID group definition	3		1		
LSP.04	L.2.	LSP	4		0.0		
PId.04	L.2.	PID group definition	4		1		
LSP.05	L.2.	LSP	5		0.0		
PId.05	L.2.	PID group definition	5		1		
LSP.06	L.2.	LSP	6		0.0		
PId.06	L.2.	PID group definition	6		1		
LSP.07	L.2.	LSP	7		0.0		
PId.07	L.2.	PID group definition	7		1		
LSP.08	L.2.	LSP	8		0.0		
PId.08	L.2.	PID group definition	8		1		
LSP.09	L.2.	LSP	9		0.0		
PId.09	L.2.	PID group definition	9		1		
LSP.10	L.2.	LSP	10		0.0		
PId.10	L.2.	PID group definition	10		1		
LSP.11	L.2.	LSP	11		0.0		
PId.11	L.2.	PID group definition	11		1		
LSP.12	L.2.	LSP	12		0.0		
PId.12	L.2.	PID group definition	12		1		
LSP.13	L.2.	LSP	13		0.0		
PId.13	L.2.	PID group definition	13		1		
LSP.14	L.2.	LSP	14		0.0		
PId.14	L.2.	PID group definition	14		1		
LSP.15	L.2.	LSP	15		0.0		
PId.15	L.2.	PID group definition	15		1		
LSP.16	L.2.	LSP	16		0.0		
PId.16	L.2.	PID group definition	16		1		

■ Loop 1 recipe bank (L 1.rEC)

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.01.	LSP	SP low limit to SP high limit	0		The decimal point position is determined by the decimal point position for the loop PV/SP.
E01	1.01.	Event 1 main setting	-19999 to +32000 U	0		The decimal point position is determined by the decimal point position for the event configuration.
E01.Sb	1.01.	Event 1 sub setting				
E02	1.01.	Event 2 main setting				
E02.Sb	1.01.	Event 2 sub setting				
E03	1.01.	Event 3 main setting				
E03.Sb	1.01.	Event 3 sub setting				
E04	1.01.	Event 4 main setting				
E04.Sb	1.01.	Event 4 sub setting				
E05	1.01.	Event 5 main setting				
E05.Sb	1.01.	Event 5 sub setting				
E06	1.01.	Event 6 main setting				
E06.Sb	1.01.	Event 6 sub setting				
E07	1.01.	Event 7 main setting				
E07.Sb	1.01.	Event 7 sub setting				
E08	1.01.	Event 8 main setting				
E08.Sb	1.01.	Event 8 sub setting				
P	1.01.	Proportional band	0.1 to 3200.0 %	5.0		
I	1.01.	Integral time	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point position for the control parameter.
d	1.01.	Derivative time	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL	1.01.	Output low limit	-10.0 to +110.0 %	0.0		
oH	1.01.	Output high limit		100.0		
rE	1.01.	Manual reset		50.0		
P-C	1.01.	Proportional band for cool side	0.1 to 3200.0 %	5.0		
I-C	1.01.	Integral time for cool side	0 to 32000s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point position for the control parameter.
d-C	1.01.	Derivative time for cool side	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL	1.01.	Output low limit for cool side	-10.0 to +110.0 %	0.0		
oH	1.01.	Output high limit for cool side		100.0		
oi	1.01.	Initial output of PID control		0.0		
SP	1.02.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.02.	Event 1 main setting		0		
E01.Sb	1.02.	Event 1 sub setting				
E02	1.02.	Event 2 main setting				
E02.Sb	1.02.	Event 2 sub setting				
E03	1.02.	Event 3 main setting				
E03.Sb	1.02.	Event 3 sub setting				
E04	1.02.	Event 4 main setting				
E04.Sb	1.02.	Event 4 sub setting				
E05	1.02.	Event 5 main setting				
E05.Sb	1.02.	Event 5 sub setting				
E06	1.02.	Event 6 main setting				
E06.Sb	1.02.	Event 6 sub setting				
E07	1.02.	Event 7 main setting				
E07.Sb	1.02.	Event 7 sub setting				
E08	1.02.	Event 8 main setting				
E08.Sb	1.02.	Event 8 sub setting				
P	1.02.	Proportional band		5.0		
I	1.02.	Integral time		120		
d	1.02.	Derivative time		30		
oL	1.02.	Output low limit		0.0		
oH	1.02.	Output high limit		100.0		
rE	1.02.	Manual reset		50.0		
P-C	1.02.	Proportional band for cool side		5.0		
I-C	1.02.	Integral time for cool side		120		
d-C	1.02.	Derivative time for cool side		30		
oL.C	1.02.	Output low limit for cool side		0.0		
oH.C	1.02.	Output high limit for cool side		100.0		
oi	1.02.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.03.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.03.	Event 1 main setting		0		
E01.Sb	1.03.	Event 1 sub setting				
E02	1.03.	Event 2 main setting				
E02.Sb	1.03.	Event 2 sub setting				
E03	1.03.	Event 3 main setting				
E03.Sb	1.03.	Event 3 sub setting				
E04	1.03.	Event 4 main setting				
E04.Sb	1.03.	Event 4 sub setting				
E05	1.03.	Event 5 main setting				
E05.Sb	1.03.	Event 5 sub setting				
E06	1.03.	Event 6 main setting				
E06.Sb	1.03.	Event 6 sub setting				
E07	1.03.	Event 7 main setting				
E07.Sb	1.03.	Event 7 sub setting				
E08	1.03.	Event 8 main setting				
E08.Sb	1.03.	Event 8 sub setting				
P	1.03.	Proportional band		5.0		
I	1.03.	Integral time		120		
d	1.03.	Derivative time		30		
oL	1.03.	Output low limit		0.0		
oH	1.03.	Output high limit		100.0		
rE	1.03.	Manual reset		50.0		
P-C	1.03.	Proportional band for cool side		5.0		
I-C	1.03.	Integral time for cool side		120		
d-C	1.03.	Derivative time for cool side		30		
oL.C	1.03.	Output low limit for cool side		0.0		
oH.C	1.03.	Output high limit for cool side		100.0		
oI	1.03.	Initial output of PID control		0.0		
SP	1.04.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.04.	Event 1 main setting		0		
E01.Sb	1.04.	Event 1 sub setting				
E02	1.04.	Event 2 main setting				
E02.Sb	1.04.	Event 2 sub setting				
E03	1.04.	Event 3 main setting				
E03.Sb	1.04.	Event 3 sub setting				
E04	1.04.	Event 4 main setting				
E04.Sb	1.04.	Event 4 sub setting				
E05	1.04.	Event 5 main setting				
E05.Sb	1.04.	Event 5 sub setting				
E06	1.04.	Event 6 main setting				
E06.Sb	1.04.	Event 6 sub setting				
E07	1.04.	Event 7 main setting				
E07.Sb	1.04.	Event 7 sub setting				
E08	1.04.	Event 8 main setting				
E08.Sb	1.04.	Event 8 sub setting				
P	1.04.	Proportional band		5.0		
I	1.04.	Integral time		120		
d	1.04.	Derivative time		30		
oL	1.04.	Output low limit		0.0		
oH	1.04.	Output high limit		100.0		
rE	1.04.	Manual reset		50.0		
P-C	1.04.	Proportional band for cool side		5.0		
I-C	1.04.	Integral time for cool side		120		
d-C	1.04.	Derivative time for cool side		30		
oL.C	1.04.	Output low limit for cool side		0.0		
oH.C	1.04.	Output high limit for cool side		100.0		
oI	1.04.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.05.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.05.	Event 1 main setting		0		
E01.Sb	1.05.	Event 1 sub setting				
E02	1.05.	Event 2 main setting				
E02.Sb	1.05.	Event 2 sub setting				
E03	1.05.	Event 3 main setting				
E03.Sb	1.05.	Event 3 sub setting				
E04	1.05.	Event 4 main setting				
E04.Sb	1.05.	Event 4 sub setting				
E05	1.05.	Event 5 main setting				
E05.Sb	1.05.	Event 5 sub setting				
E06	1.05.	Event 6 main setting				
E06.Sb	1.05.	Event 6 sub setting				
E07	1.05.	Event 7 main setting				
E07.Sb	1.05.	Event 7 sub setting				
E08	1.05.	Event 8 main setting				
E08.Sb	1.05.	Event 8 sub setting				
P	1.05.	Proportional band		5.0		
I	1.05.	Integral time		120		
d	1.05.	Derivative time		30		
oL	1.05.	Output low limit		0.0		
oH	1.05.	Output high limit		100.0		
rE	1.05.	Manual reset		50.0		
P-C	1.05.	Proportional band for cool side		5.0		
I-C	1.05.	Integral time for cool side		120		
d-C	1.05.	Derivative time for cool side		30		
oL.C	1.05.	Output low limit for cool side		0.0		
oH.C	1.05.	Output high limit for cool side		100.0		
oi	1.05.	Initial output of PID control		0.0		
SP	1.06.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.06.	Event 1 main setting		0		
E01.Sb	1.06.	Event 1 sub setting				
E02	1.06.	Event 2 main setting				
E02.Sb	1.06.	Event 2 sub setting				
E03	1.06.	Event 3 main setting				
E03.Sb	1.06.	Event 3 sub setting				
E04	1.06.	Event 4 main setting				
E04.Sb	1.06.	Event 4 sub setting				
E05	1.06.	Event 5 main setting				
E05.Sb	1.06.	Event 5 sub setting				
E06	1.06.	Event 6 main setting				
E06.Sb	1.06.	Event 6 sub setting				
E07	1.06.	Event 7 main setting				
E07.Sb	1.06.	Event 7 sub setting				
E08	1.06.	Event 8 main setting				
E08.Sb	1.06.	Event 8 sub setting				
P	1.06.	Proportional band		5.0		
I	1.06.	Integral time		120		
d	1.06.	Derivative time		30		
oL	1.06.	Output low limit		0.0		
oH	1.06.	Output high limit		100.0		
rE	1.06.	Manual reset		50.0		
P-C	1.06.	Proportional band for cool side		5.0		
I-C	1.06.	Integral time for cool side		120		
d-C	1.06.	Derivative time for cool side		30		
oL.C	1.06.	Output low limit for cool side		0.0		
oH.C	1.06.	Output high limit for cool side		100.0		
oi	1.06.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.01.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.01.	Event 1 main setting		0		
E01.Sb	1.01.	Event 1 sub setting				
E02	1.01.	Event 2 main setting				
E02.Sb	1.01.	Event 2 sub setting				
E03	1.01.	Event 3 main setting				
E03.Sb	1.01.	Event 3 sub setting				
E04	1.01.	Event 4 main setting				
E04.Sb	1.01.	Event 4 sub setting				
E05	1.01.	Event 5 main setting				
E05.Sb	1.01.	Event 5 sub setting				
E06	1.01.	Event 6 main setting				
E06.Sb	1.01.	Event 6 sub setting				
E07	1.01.	Event 7 main setting				
E07.Sb	1.01.	Event 7 sub setting				
E08	1.01.	Event 8 main setting				
E08.Sb	1.01.	Event 8 sub setting				
P	1.01.	Proportional band		5.0		
I	1.01.	Integral time		120		
d	1.01.	Derivative time		30		
oL	1.01.	Output low limit		0.0		
oH	1.01.	Output high limit		100.0		
rE	1.01.	Manual reset		50.0		
P-C	1.01.	Proportional band for cool side		5.0		
I-C	1.01.	Integral time for cool side		120		
d-C	1.01.	Derivative time for cool side		30		
oL.C	1.01.	Output low limit for cool side		0.0		
oH.C	1.01.	Output high limit for cool side		100.0		
oI	1.01.	Initial output of PID control		0.0		
SP	1.08.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.08.	Event 1 main setting		0		
E01.Sb	1.08.	Event 1 sub setting				
E02	1.08.	Event 2 main setting				
E02.Sb	1.08.	Event 2 sub setting				
E03	1.08.	Event 3 main setting				
E03.Sb	1.08.	Event 3 sub setting				
E04	1.08.	Event 4 main setting				
E04.Sb	1.08.	Event 4 sub setting				
E05	1.08.	Event 5 main setting				
E05.Sb	1.08.	Event 5 sub setting				
E06	1.08.	Event 6 main setting				
E06.Sb	1.08.	Event 6 sub setting				
E07	1.08.	Event 7 main setting				
E07.Sb	1.08.	Event 7 sub setting				
E08	1.08.	Event 8 main setting				
E08.Sb	1.08.	Event 8 sub setting				
P	1.08.	Proportional band		5.0		
I	1.08.	Integral time		120		
d	1.08.	Derivative time		30		
oL	1.08.	Output low limit		0.0		
oH	1.08.	Output high limit		100.0		
rE	1.08.	Manual reset		50.0		
P-C	1.08.	Proportional band for cool side		5.0		
I-C	1.08.	Integral time for cool side		120		
d-C	1.08.	Derivative time for cool side		30		
oL.C	1.08.	Output low limit for cool side		0.0		
oH.C	1.08.	Output high limit for cool side		100.0		
oI	1.08.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.09.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.09.	Event 1 main setting		0		
E01.Sb	1.09.	Event 1 sub setting				
E02	1.09.	Event 2 main setting				
E02.Sb	1.09.	Event 2 sub setting				
E03	1.09.	Event 3 main setting				
E03.Sb	1.09.	Event 3 sub setting				
E04	1.09.	Event 4 main setting				
E04.Sb	1.09.	Event 4 sub setting				
E05	1.09.	Event 5 main setting				
E05.Sb	1.09.	Event 5 sub setting				
E06	1.09.	Event 6 main setting				
E06.Sb	1.09.	Event 6 sub setting				
E07	1.09.	Event 7 main setting				
E07.Sb	1.09.	Event 7 sub setting				
E08	1.09.	Event 8 main setting				
E08.Sb	1.09.	Event 8 sub setting				
P	1.09.	Proportional band		5.0		
I	1.09.	Integral time		120		
d	1.09.	Derivative time		30		
oL	1.09.	Output low limit		0.0		
oH	1.09.	Output high limit		100.0		
rE	1.09.	Manual reset		50.0		
P-C	1.09.	Proportional band for cool side		5.0		
I-C	1.09.	Integral time for cool side		120		
d-C	1.09.	Derivative time for cool side		30		
oL.C	1.09.	Output low limit for cool side		0.0		
oH.C	1.09.	Output high limit for cool side		100.0		
oI	1.09.	Initial output of PID control		0.0		
SP	1.10.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.10.	Event 1 main setting		0		
E01.Sb	1.10.	Event 1 sub setting				
E02	1.10.	Event 2 main setting				
E02.Sb	1.10.	Event 2 sub setting				
E03	1.10.	Event 3 main setting				
E03.Sb	1.10.	Event 3 sub setting				
E04	1.10.	Event 4 main setting				
E04.Sb	1.10.	Event 4 sub setting				
E05	1.10.	Event 5 main setting				
E05.Sb	1.10.	Event 5 sub setting				
E06	1.10.	Event 6 main setting				
E06.Sb	1.10.	Event 6 sub setting				
E07	1.10.	Event 7 main setting				
E07.Sb	1.10.	Event 7 sub setting				
E08	1.10.	Event 8 main setting				
E08.Sb	1.10.	Event 8 sub setting				
P	1.10.	Proportional band		5.0		
I	1.10.	Integral time		120		
d	1.10.	Derivative time		30		
oL	1.10.	Output low limit		0.0		
oH	1.10.	Output high limit		100.0		
rE	1.10.	Manual reset		50.0		
P-C	1.10.	Proportional band for cool side		5.0		
I-C	1.10.	Integral time for cool side		120		
d-C	1.10.	Derivative time for cool side		30		
oL.C	1.10.	Output low limit for cool side		0.0		
oH.C	1.10.	Output high limit for cool side		100.0		
oI	1.10.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.11.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.11.	Event 1 main setting		0		
E01.Sb	1.11.	Event 1 sub setting				
E02	1.11.	Event 2 main setting				
E02.Sb	1.11.	Event 2 sub setting				
E03	1.11.	Event 3 main setting				
E03.Sb	1.11.	Event 3 sub setting				
E04	1.11.	Event 4 main setting				
E04.Sb	1.11.	Event 4 sub setting				
E05	1.11.	Event 5 main setting				
E05.Sb	1.11.	Event 5 sub setting				
E06	1.11.	Event 6 main setting				
E06.Sb	1.11.	Event 6 sub setting				
E07	1.11.	Event 7 main setting				
E07.Sb	1.11.	Event 7 sub setting				
E08	1.11.	Event 8 main setting				
E08.Sb	1.11.	Event 8 sub setting				
P	1.11.	Proportional band		5.0		
I	1.11.	Integral time		120		
d	1.11.	Derivative time		30		
oL	1.11.	Output low limit		0.0		
oH	1.11.	Output high limit		100.0		
rE	1.11.	Manual reset		50.0		
P-C	1.11.	Proportional band for cool side		5.0		
I-C	1.11.	Integral time for cool side		120		
d-C	1.11.	Derivative time for cool side		30		
oL.C	1.11.	Output low limit for cool side		0.0		
oH.C	1.11.	Output high limit for cool side		100.0		
oi	1.11.	Initial output of PID control		0.0		
SP	1.12.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.12.	Event 1 main setting		0		
E01.Sb	1.12.	Event 1 sub setting				
E02	1.12.	Event 2 main setting				
E02.Sb	1.12.	Event 2 sub setting				
E03	1.12.	Event 3 main setting				
E03.Sb	1.12.	Event 3 sub setting				
E04	1.12.	Event 4 main setting				
E04.Sb	1.12.	Event 4 sub setting				
E05	1.12.	Event 5 main setting				
E05.Sb	1.12.	Event 5 sub setting				
E06	1.12.	Event 6 main setting				
E06.Sb	1.12.	Event 6 sub setting				
E07	1.12.	Event 7 main setting				
E07.Sb	1.12.	Event 7 sub setting				
E08	1.12.	Event 8 main setting				
E08.Sb	1.12.	Event 8 sub setting				
P	1.12.	Proportional band		5.0		
I	1.12.	Integral time		120		
d	1.12.	Derivative time		30		
oL	1.12.	Output low limit		0.0		
oH	1.12.	Output high limit		100.0		
rE	1.12.	Manual reset		50.0		
P-C	1.12.	Proportional band for cool side		5.0		
I-C	1.12.	Integral time for cool side		120		
d-C	1.12.	Derivative time for cool side		30		
oL.C	1.12.	Output low limit for cool side		0.0		
oH.C	1.12.	Output high limit for cool side		100.0		
oi	1.12.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1.13.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.13.	Event 1 main setting		0		
E01.Sb	1.13.	Event 1 sub setting				
E02	1.13.	Event 2 main setting				
E02.Sb	1.13.	Event 2 sub setting				
E03	1.13.	Event 3 main setting				
E03.Sb	1.13.	Event 3 sub setting				
E04	1.13.	Event 4 main setting				
E04.Sb	1.13.	Event 4 sub setting				
E05	1.13.	Event 5 main setting				
E05.Sb	1.13.	Event 5 sub setting				
E06	1.13.	Event 6 main setting				
E06.Sb	1.13.	Event 6 sub setting				
E07	1.13.	Event 7 main setting				
E07.Sb	1.13.	Event 7 sub setting				
E08	1.13.	Event 8 main setting				
E08.Sb	1.13.	Event 8 sub setting				
P	1.13.	Proportional band		5.0		
I	1.13.	Integral time		120		
d	1.13.	Derivative time		30		
oL	1.13.	Output low limit		0.0		
oH	1.13.	Output high limit		100.0		
rE	1.13.	Manual reset		50.0		
P-C	1.13.	Proportional band for cool side		5.0		
I-C	1.13.	Integral time for cool side		120		
d-C	1.13.	Derivative time for cool side		30		
oL.C	1.13.	Output low limit for cool side		0.0		
oH.C	1.13.	Output high limit for cool side		100.0		
oI	1.13.	Initial output of PID control		0.0		
SP	1.14.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1.14.	Event 1 main setting		0		
E01.Sb	1.14.	Event 1 sub setting				
E02	1.14.	Event 2 main setting				
E02.Sb	1.14.	Event 2 sub setting				
E03	1.14.	Event 3 main setting				
E03.Sb	1.14.	Event 3 sub setting				
E04	1.14.	Event 4 main setting				
E04.Sb	1.14.	Event 4 sub setting				
E05	1.14.	Event 5 main setting				
E05.Sb	1.14.	Event 5 sub setting				
E06	1.14.	Event 6 main setting				
E06.Sb	1.14.	Event 6 sub setting				
E07	1.14.	Event 7 main setting				
E07.Sb	1.14.	Event 7 sub setting				
E08	1.14.	Event 8 main setting				
E08.Sb	1.14.	Event 8 sub setting				
P	1.14.	Proportional band		5.0		
I	1.14.	Integral time		120		
d	1.14.	Derivative time		30		
oL	1.14.	Output low limit		0.0		
oH	1.14.	Output high limit		100.0		
rE	1.14.	Manual reset		50.0		
P-C	1.14.	Proportional band for cool side		5.0		
I-C	1.14.	Integral time for cool side		120		
d-C	1.14.	Derivative time for cool side		30		
oL.C	1.14.	Output low limit for cool side		0.0		
oH.C	1.14.	Output high limit for cool side		100.0		
oI	1.14.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	1. 1S.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1. 1S.	Event 1 main setting		0		
E01.Sb	1. 1S.	Event 1 sub setting				
E02	1. 1S.	Event 2 main setting				
E02.Sb	1. 1S.	Event 2 sub setting				
E03	1. 1S.	Event 3 main setting				
E03.Sb	1. 1S.	Event 3 sub setting				
E04	1. 1S.	Event 4 main setting				
E04.Sb	1. 1S.	Event 4 sub setting				
E05	1. 1S.	Event 5 main setting				
E05.Sb	1. 1S.	Event 5 sub setting				
E06	1. 1S.	Event 6 main setting				
E06.Sb	1. 1S.	Event 6 sub setting				
E07	1. 1S.	Event 7 main setting				
E07.Sb	1. 1S.	Event 7 sub setting				
E08	1. 1S.	Event 8 main setting				
E08.Sb	1. 1S.	Event 8 sub setting				
P	1. 1S.	Proportional band		5.0		
I	1. 1S.	Integral time		120		
d	1. 1S.	Derivative time		30		
oL	1. 1S.	Output low limit		0.0		
oH	1. 1S.	Output high limit		100.0		
rE	1. 1S.	Manual reset		50.0		
P-C	1. 1S.	Proportional band for cool side		5.0		
I-C	1. 1S.	Integral time for cool side		120		
d-C	1. 1S.	Derivative time for cool side		30		
oL.C	1. 1S.	Output low limit for cool side		0.0		
oH.C	1. 1S.	Output high limit for cool side		100.0		
oI	1. 1S.	Initial output of PID control		0.0		
SP	1. 1B.	LSP	Same as SP group 1	0		Same as SP group 1
E01	1. 1B.	Event 1 main setting		0		
E01.Sb	1. 1B.	Event 1 sub setting				
E02	1. 1B.	Event 2 main setting				
E02.Sb	1. 1B.	Event 2 sub setting				
E03	1. 1B.	Event 3 main setting				
E03.Sb	1. 1B.	Event 3 sub setting				
E04	1. 1B.	Event 4 main setting				
E04.Sb	1. 1B.	Event 4 sub setting				
E05	1. 1B.	Event 5 main setting				
E05.Sb	1. 1B.	Event 5 sub setting				
E06	1. 1B.	Event 6 main setting				
E06.Sb	1. 1B.	Event 6 sub setting				
E07	1. 1B.	Event 7 main setting				
E07.Sb	1. 1B.	Event 7 sub setting				
E08	1. 1B.	Event 8 main setting				
E08.Sb	1. 1B.	Event 8 sub setting				
P	1. 1B.	Proportional band		5.0		
I	1. 1B.	Integral time		120		
d	1. 1B.	Derivative time		30		
oL	1. 1B.	Output low limit		0.0		
oH	1. 1B.	Output high limit		100.0		
rE	1. 1B.	Manual reset		50.0		
P-C	1. 1B.	Proportional band for cool side		5.0		
I-C	1. 1B.	Integral time for cool side		120		
d-C	1. 1B.	Derivative time for cool side		30		
oL.C	1. 1B.	Output low limit for cool side		0.0		
oH.C	1. 1B.	Output high limit for cool side		100.0		
oI	1. 1B.	Initial output of PID control		0.0		

■ Loop 2 recipe bank (L2.rEC)

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.01.	LSP	SP low limit to SP high limit	0		The decimal point position is determined by the decimal point position for the loop PV/SP.
E09	2.01.	Event 9 main setting	-19999 to +32000 U	0		The decimal point position is determined by the decimal point position for the event configuration.
E09.Sb	2.01.	Event 9 sub setting				
E10	2.01.	Event 10 main setting				
E10.Sb	2.01.	Event 10 sub setting				
E11	2.01.	Event 11 main setting				
E11.Sb	2.01.	Event 11 sub setting				
E12	2.01.	Event 12 main setting				
E12.Sb	2.01.	Event 12 sub setting				
E13	2.01.	Event 13 main setting				
E13.Sb	2.01.	Event 13 sub setting				
E14	2.01.	Event 14 main setting				
E14.Sb	2.01.	Event 14 sub setting				
E15	2.01.	Event 15 main setting				
E15.Sb	2.01.	Event 15 sub setting				
E16	2.01.	Event 16 main setting				
E16.Sb	2.01.	Event 16 sub setting				
P	2.01.	Proportional band	0.1 to 3200.0 %	5.0		
I	2.01.	Integral time	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point position for the control parameter.
d	2.01.	Derivative time	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL	2.01.	Output low limit	-10.0 to +110.0 %	0.0		
oH	2.01.	Output high limit		100.0		
rE	2.01.	Manual reset		50.0		
P-C	2.01.	Proportional band for cool side	0.1 to 3200.0 %	5.0		
I-C	2.01.	Integral time for cool side	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no integral control action when set at 0, 0.0 or 0.00)	120		The decimal point position is determined by the decimal point position for the control parameter.
d-C	2.01.	Derivative time for cool side	0 to 32000 s, 0.0 to 3200.0 s or 0.00 to 320.00 s (no derivative control action when set at 0, 0.0 or 0.00)	30		
oL.C	2.01.	Output low limit for cool side	-10.0 to +110.0 %	0.0		
oH.C	2.01.	Output high limit for cool side		100.0		
oi	2.01.	Initial output of PID control		0.0		
SP	2.02.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.02.	Event 9 main setting		0		
E09.Sb	2.02.	Event 9 sub setting				
E10	2.02.	Event 10 main setting				
E10.Sb	2.02.	Event 10 sub setting				
E11	2.02.	Event 11 main setting				
E11.Sb	2.02.	Event 11 sub setting				
E12	2.02.	Event 12 main setting				
E12.Sb	2.02.	Event 12 sub setting				
E13	2.02.	Event 13 main setting				
E13.Sb	2.02.	Event 13 sub setting				
E14	2.02.	Event 14 main setting				
E14.Sb	2.02.	Event 14 sub setting				
E15	2.02.	Event 15 main setting				
E15.Sb	2.02.	Event 15 sub setting				
E16	2.02.	Event 16 main setting				
E16.Sb	2.02.	Event 16 sub setting				
P	2.02.	Proportional band		5.0		
I	2.02.	Integral time		120		
d	2.02.	Derivative time		30		
oL	2.02.	Output low limit		0.0		
oH	2.02.	Output high limit		100.0		
rE	2.02.	Manual reset		50.0		
P-C	2.02.	Proportional band for cool side		5.0		
I-C	2.02.	Integral time for cool side		120		
d-C	2.02.	Derivative time for cool side		30		
oL.C	2.02.	Output low limit for cool side		0.0		
oH.C	2.02.	Output high limit for cool side		100.0		
oi	2.02.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.03.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.03.	Event 9 main setting		0		
E09.Sb	2.03.	Event 9 sub setting				
E10	2.03.	Event 10 main setting				
E10.Sb	2.03.	Event 10 sub setting				
E11	2.03.	Event 11 main setting				
E11.Sb	2.03.	Event 11 sub setting				
E12	2.03.	Event 12 main setting				
E12.Sb	2.03.	Event 12 sub setting				
E13	2.03.	Event 13 main setting				
E13.Sb	2.03.	Event 13 sub setting				
E14	2.03.	Event 14 main setting				
E14.Sb	2.03.	Event 14 sub setting				
E15	2.03.	Event 15 main setting				
E15.Sb	2.03.	Event 15 sub setting				
E16	2.03.	Event 16 main setting				
E16.Sb	2.03.	Event 16 sub setting				
P	2.03.	Proportional band		5.0		
I	2.03.	Integral time		120		
d	2.03.	Derivative time		30		
oL	2.03.	Output low limit		0.0		
oH	2.03.	Output high limit		100.0		
rE	2.03.	Manual reset		50.0		
P-C	2.03.	Proportional band for cool side		5.0		
I-C	2.03.	Integral time for cool side		120		
d-C	2.03.	Derivative time for cool side		30		
oL.C	2.03.	Output low limit for cool side		0.0		
oH.C	2.03.	Output high limit for cool side		100.0		
oI	2.03.	Initial output of PID control		0.0		
SP	2.04.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.04.	Event 9 main setting		0		
E09.Sb	2.04.	Event 9 sub setting				
E10	2.04.	Event 10 main setting				
E10.Sb	2.04.	Event 10 sub setting				
E11	2.04.	Event 11 main setting				
E11.Sb	2.04.	Event 11 sub setting				
E12	2.04.	Event 12 main setting				
E12.Sb	2.04.	Event 12 sub setting				
E13	2.04.	Event 13 main setting				
E13.Sb	2.04.	Event 13 sub setting				
E14	2.04.	Event 14 main setting				
E14.Sb	2.04.	Event 14 sub setting				
E15	2.04.	Event 15 main setting				
E15.Sb	2.04.	Event 15 sub setting				
E16	2.04.	Event 16 main setting				
E16.Sb	2.04.	Event 16 sub setting				
P	2.04.	Proportional band		5.0		
I	2.04.	Integral time		120		
d	2.04.	Derivative time		30		
oL	2.04.	Output low limit		0.0		
oH	2.04.	Output high limit		100.0		
rE	2.04.	Manual reset		50.0		
P-C	2.04.	Proportional band for cool side		5.0		
I-C	2.04.	Integral time for cool side		120		
d-C	2.04.	Derivative time for cool side		30		
oL.C	2.04.	Output low limit for cool side		0.0		
oH.C	2.04.	Output high limit for cool side		100.0		
oI	2.04.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.05.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.05.	Event 9 main setting		0		
E09.Sb	2.05.	Event 9 sub setting				
E10	2.05.	Event 10 main setting				
E10.Sb	2.05.	Event 10 sub setting				
E11	2.05.	Event 11 main setting				
E11.Sb	2.05.	Event 11 sub setting				
E12	2.05.	Event 12 main setting				
E12.Sb	2.05.	Event 12 sub setting				
E13	2.05.	Event 13 main setting				
E13.Sb	2.05.	Event 13 sub setting				
E14	2.05.	Event 14 main setting				
E14.Sb	2.05.	Event 14 sub setting				
E15	2.05.	Event 15 main setting				
E15.Sb	2.05.	Event 15 sub setting				
E16	2.05.	Event 16 main setting				
E16.Sb	2.05.	Event 16 sub setting				
P	2.05.	Proportional band		5.0		
I	2.05.	Integral time		120		
d	2.05.	Derivative time		30		
oL	2.05.	Output low limit		0.0		
oH	2.05.	Output high limit		100.0		
rE	2.05.	Manual reset		50.0		
P-C	2.05.	Proportional band for cool side		5.0		
I-C	2.05.	Integral time for cool side		120		
d-C	2.05.	Derivative time for cool side		30		
oL.C	2.05.	Output low limit for cool side		0.0		
oH.C	2.05.	Output high limit for cool side		100.0		
oI	2.05.	Initial output of PID control		0.0		
SP	2.06.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.06.	Event 9 main setting		0		
E09.Sb	2.06.	Event 9 sub setting				
E10	2.06.	Event 10 main setting				
E10.Sb	2.06.	Event 10 sub setting				
E11	2.06.	Event 11 main setting				
E11.Sb	2.06.	Event 11 sub setting				
E12	2.06.	Event 12 main setting				
E12.Sb	2.06.	Event 12 sub setting				
E13	2.06.	Event 13 main setting				
E13.Sb	2.06.	Event 13 sub setting				
E14	2.06.	Event 14 main setting				
E14.S	2.06.	Event 14 sub setting				
E15	2.06.	Event 15 main setting				
E15.Sb	2.06.	Event 15 sub setting				
E16	2.06.	Event 16 main setting				
E16.Sb	2.06.	Event 16 sub setting				
P	2.06.	Proportional band		5.0		
I	2.06.	Integral time		120		
d	2.06.	Derivative time		30		
oL	2.06.	Output low limit		0.0		
oH	2.06.	Output high limit		100.0		
rE	2.06.	Manual reset		50.0		
P-C	2.06.	Proportional band for cool side		5.0		
I-C	2.06.	Integral time for cool side		120		
d-C	2.06.	Derivative time for cool side		30		
oL.C	2.06.	Output low limit for cool side		0.0		
oH.C	2.06.	Output high limit for cool side		100.0		
oI	2.06.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.07.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.07.	Event 9 main setting		0		
E09.Sb	2.07.	Event 9 sub setting				
E10	2.07.	Event 10 main setting				
E10.Sb	2.07.	Event 10 sub setting				
E11	2.07.	Event 11 main setting				
E11.Sb	2.07.	Event 11 sub setting				
E12	2.07.	Event 12 main setting				
E12.Sb	2.07.	Event 12 sub setting				
E13	2.07.	Event 13 main setting				
E13.Sb	2.07.	Event 13 sub setting				
E14	2.07.	Event 14 main setting				
E14.Sb	2.07.	Event 14 sub setting				
E15	2.07.	Event 15 main setting				
E15.Sb	2.07.	Event 15 sub setting				
E16	2.07.	Event 16 main setting				
E16.Sb	2.07.	Event 16 sub setting				
P	2.07.	Proportional band		5.0		
I	2.07.	Integral time		120		
d	2.07.	Derivative time		30		
oL	2.07.	Output low limit		0.0		
oH	2.07.	Output high limit		100.0		
rE	2.07.	Manual reset		50.0		
P-C	2.07.	Proportional band for cool side		5.0		
I-C	2.07.	Integral time for cool side		120		
d-C	2.07.	Derivative time for cool side		30		
oL.C	2.07.	Output low limit for cool side		0.0		
oH.C	2.07.	Output high limit for cool side		100.0		
oi	2.07.	Initial output of PID control		0.0		
SP	2.08.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.08.	Event 9 main setting		0		
E09.Sb	2.08.	Event 9 sub setting				
E10	2.08.	Event 10 main setting				
E10.Sb	2.08.	Event 10 sub setting				
E11	2.08.	Event 11 main setting				
E11.Sb	2.08.	Event 11 sub setting				
E12	2.08.	Event 12 main setting				
E12.Sb	2.08.	Event 12 sub setting				
E13	2.08.	Event 13 main setting				
E13.Sb	2.08.	Event 13 sub setting				
E14	2.08.	Event 14 main setting				
E14.Sb	2.08.	Event 14 sub setting				
E15	2.08.	Event 15 main setting				
E15.Sb	2.08.	Event 15 sub setting				
E16	2.08.	Event 16 main setting				
E16.Sb	2.08.	Event 16 sub setting				
P	2.08.	Proportional band		5.0		
I	2.08.	Integral time		120		
d	2.08.	Derivative time		30		
oL	2.08.	Output low limit		0.0		
oH	2.08.	Output high limit		100.0		
rE	2.08.	Manual reset		50.0		
P-C	2.08.	Proportional band for cool side		5.0		
I-C	2.08.	Integral time for cool side		120		
d-C	2.08.	Derivative time for cool side		30		
oL.C	2.08.	Output low limit for cool side		0.0		
oH.C	2.08.	Output high limit for cool side		100.0		
oi	2.08.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.09.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.09.	Event 9 main setting		0		
E09.Sb	2.09.	Event 9 sub setting				
E10	2.09.	Event 10 main setting				
E10.Sb	2.09.	Event 10 sub setting				
E11	2.09.	Event 11 main setting				
E11.Sb	2.09.	Event 11 sub setting				
E12	2.09.	Event 12 main setting				
E12.Sb	2.09.	Event 12 sub setting				
E13	2.09.	Event 13 main setting				
E13.Sb	2.09.	Event 13 sub setting				
E14	2.09.	Event 14 main setting				
E14.Sb	2.09.	Event 14 sub setting				
E15	2.09.	Event 15 main setting				
E15.Sb	2.09.	Event 15 sub setting				
E16	2.09.	Event 16 main setting				
E16.Sb	2.09.	Event 16 sub setting				
P	2.09.	Proportional band		5.0		
I	2.09.	Integral time		120		
d	2.09.	Derivative time		30		
oL	2.09.	Output low limit		0.0		
oH	2.09.	Output high limit		100.0		
rE	2.09.	Manual reset		50.0		
P-C	2.09.	Proportional band for cool side		5.0		
I-C	2.09.	Integral time for cool side		120		
d-C	2.09.	Derivative time for cool side		30		
oL.C	2.09.	Output low limit for cool side		0.0		
oH.C	2.09.	Output high limit for cool side		100.0		
oI	2.09.	Initial output of PID control		0.0		
SP	2.10.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.10.	Event 9 main setting		0		
E09.Sb	2.10.	Event 9 sub setting				
E10	2.10.	Event 10 main setting				
E10.Sb	2.10.	Event 10 sub setting				
E11	2.10.	Event 11 main setting				
E11.Sb	2.10.	Event 11 sub setting				
E12	2.10.	Event 12 main setting				
E12.Sb	2.10.	Event 12 sub setting				
E13	2.10.	Event 13 main setting				
E13.Sb	2.10.	Event 13 sub setting				
E14	2.10.	Event 14 main setting				
E14.Sb	2.10.	Event 14 sub setting				
E15	2.10.	Event 15 main setting				
E15.Sb	2.10.	Event 15 sub setting				
E16	2.10.	Event 16 main setting				
E16.Sb	2.10.	Event 16 sub setting				
P	2.10.	Proportional band		5.0		
I	2.10.	Integral time		120		
d	2.10.	Derivative time		30		
oL	2.10.	Output low limit		0.0		
oH	2.10.	Output high limit		100.0		
rE	2.10.	Manual reset		50.0		
P-C	2.10.	Proportional band for cool side		5.0		
I-C	2.10.	Integral time for cool side		120		
d-C	2.10.	Derivative time for cool side		30		
oL.C	2.10.	Output low limit for cool side		0.0		
oH.C	2.10.	Output high limit for cool side		100.0		
oI	2.10.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.11.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.11.	Event 9 main setting		0		
E09.Sb	2.11.	Event 9 sub setting				
E10	2.11.	Event 10 main setting				
E10.Sb	2.11.	Event 10 sub setting				
E11	2.11.	Event 11 main setting				
E11.Sb	2.11.	Event 11 sub setting				
E12	2.11.	Event 12 main setting				
E12.Sb	2.11.	Event 12 sub setting				
E13	2.11.	Event 13 main setting				
E13.Sb	2.11.	Event 13 sub setting				
E14	2.11.	Event 14 main setting				
E14.Sb	2.11.	Event 14 sub setting				
E15	2.11.	Event 15 main setting				
E15.Sb	2.11.	Event 15 sub setting				
E16	2.11.	Event 16 main setting				
E16.Sb	2.11.	Event 16 sub setting				
P	2.11.	Proportional band		5.0		
I	2.11.	Integral time		120		
d	2.11.	Derivative time		30		
oL	2.11.	Output low limit		0.0		
oH	2.11.	Output high limit		100.0		
rE	2.11.	Manual reset		50.0		
P-C	2.11.	Proportional band for cool side		5.0		
I-C	2.11.	Integral time for cool side		120		
d-C	2.11.	Derivative time for cool side		30		
oL.C	2.11.	Output low limit for cool side		0.0		
oH.C	2.11.	Output high limit for cool side		100.0		
oi	2.11.	Initial output of PID control		0.0		
SP	2.12.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.12.	Event 9 main setting		0		
E09.Sb	2.12.	Event 9 sub setting				
E10	2.12.	Event 10 main setting				
E10.Sb	2.12.	Event 10 sub setting				
E11	2.12.	Event 11 main setting				
E11.Sb	2.12.	Event 11 sub setting				
E12	2.12.	Event 12 main setting				
E12.Sb	2.12.	Event 12 sub setting				
E13	2.12.	Event 13 main setting				
E13.Sb	2.12.	Event 13 sub setting				
E14	2.12.	Event 14 main setting				
E14.Sb	2.12.	Event 14 sub setting				
E15	2.12.	Event 15 main setting				
E15.Sb	2.12.	Event 15 sub setting				
E16	2.12.	Event 16 main setting				
E16.Sb	2.12.	Event 16 sub setting				
P	2.12.	Proportional band		5.0		
I	2.12.	Integral time		120		
d	2.12.	Derivative time		30		
oL	2.12.	Output low limit		0.0		
oH	2.12.	Output high limit		100.0		
rE	2.12.	Manual reset		50.0		
P-C	2.12.	Proportional band for cool side		5.0		
I-C	2.12.	Integral time for cool side		120		
d-C	2.12.	Derivative time for cool side		30		
oL.C	2.12.	Output low limit for cool side		0.0		
oH.C	2.12.	Output high limit for cool side		100.0		
oi	2.12.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.13.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.13.	Event 9 main setting		0		
E09.Sb	2.13.	Event 9 sub setting				
E10	2.13.	Event 10 main setting				
E10.Sb	2.13.	Event 10 sub setting				
E11	2.13.	Event 11 main setting				
E11.Sb	2.13.	Event 11 sub setting				
E12	2.13.	Event 12 main setting				
E12.Sb	2.13.	Event 12 sub setting				
E13	2.13.	Event 13 main setting				
E13.Sb	2.13.	Event 13 sub setting				
E14	2.13.	Event 14 main setting				
E14.Sb	2.13.	Event 14 sub setting				
E15	2.13.	Event 15 main setting				
E15.Sb	2.13.	Event 15 sub setting				
E16	2.13.	Event 16 main setting				
E16.Sb	2.13.	Event 16 sub setting				
P	2.13.	Proportional band		5.0		
I	2.13.	Integral time		120		
d	2.13.	Derivative time		30		
oL	2.13.	Output low limit		0.0		
oH	2.13.	Output high limit		100.0		
rE	2.13.	Manual reset		50.0		
P-C	2.13.	Proportional band for cool side		5.0		
I-C	2.13.	Integral time for cool side		120		
d-C	2.13.	Derivative time for cool side		30		
oL.C	2.13.	Output low limit for cool side		0.0		
oH.C	2.13.	Output high limit for cool side		100.0		
oI	2.13.	Initial output of PID control		0.0		
SP	2.14.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.14.	Event 9 main setting		0		
E09.Sb	2.14.	Event 9 sub setting				
E10	2.14.	Event 10 main setting				
E10.Sb	2.14.	Event 10 sub setting				
E11	2.14.	Event 11 main setting				
E11.Sb	2.14.	Event 11 sub setting				
E12	2.14.	Event 12 main setting				
E12.Sb	2.14.	Event 12 sub setting				
E13	2.14.	Event 13 main setting				
E13.Sb	2.14.	Event 13 sub setting				
E14	2.14.	Event 14 main setting				
E14.Sb	2.14.	Event 14 sub setting				
E15	2.14.	Event 15 main setting				
E15.Sb	2.14.	Event 15 sub setting				
E16	2.14.	Event 16 main setting				
E16.Sb	2.14.	Event 16 sub setting				
P	2.14.	Proportional band		5.0		
I	2.14.	Integral time		120		
d	2.14.	Derivative time		30		
oL	2.14.	Output low limit		0.0		
oH	2.14.	Output high limit		100.0		
rE	2.14.	Manual reset		50.0		
P-C	2.14.	Proportional band for cool side		5.0		
I-C	2.14.	Integral time for cool side		120		
d-C	2.14.	Derivative time for cool side		30		
oL.C	2.14.	Output low limit for cool side		0.0		
oH.C	2.14.	Output high limit for cool side		100.0		
oI	2.14.	Initial output of PID control		0.0		

Display	Loop number and SP group (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
SP	2.15.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.15.	Event 9 main setting		0		
E09.Sb	2.15.	Event 9 sub setting				
E10	2.15.	Event 10 main setting				
E10.Sb	2.15.	Event 10 sub setting				
E11	2.15.	Event 11 main setting				
E11.Sb	2.15.	Event 11 sub setting				
E12	2.15.	Event 12 main setting				
E12.Sb	2.15.	Event 12 sub setting				
E13	2.15.	Event 13 main setting				
E13.Sb	2.15.	Event 13 sub setting				
E14	2.15.	Event 14 main setting				
E14.Sb	2.15.	Event 14 sub setting				
E15	2.15.	Event 15 main setting				
E15.Sb	2.15.	Event 15 sub setting				
E16	2.15.	Event 16 main setting				
E16.Sb	2.15.	Event 16 sub setting				
P	2.15.	Proportional band		5.0		
I	2.15.	Integral time		120		
d	2.15.	Derivative time		30		
oL	2.15.	Output low limit		0.0		
oH	2.15.	Output high limit		100.0		
rE	2.15.	Manual reset		50.0		
P-C	2.15.	Proportional band for cool side		5.0		
I-C	2.15.	Integral time for cool side		120		
d-C	2.15.	Derivative time for cool side		30		
oL.C	2.15.	Output low limit for cool side		0.0		
oH.C	2.15.	Output high limit for cool side		100.0		
oI	2.15.	Initial output of PID control		0.0		
SP	2.16.	LSP	Same as SP group 1	0		Same as SP group 1
E09	2.16.	Event 9 main setting		0		
E09.Sb	2.16.	Event 9 sub setting				
E10	2.16.	Event 10 main setting				
E10.Sb	2.16.	Event 10 sub setting				
E11	2.16.	Event 11 main setting				
E11.Sb	2.16.	Event 11 sub setting				
E12	2.16.	Event 12 main setting				
E12.Sb	2.16.	Event 12 sub setting				
E13	2.16.	Event 13 main setting				
E13.Sb	2.16.	Event 13 sub setting				
E14	2.16.	Event 14 main setting				
E14.Sb	2.16.	Event 14 sub setting				
E15	2.16.	Event 15 main setting				
E15.Sb	2.16.	Event 15 sub setting				
E16	2.16.	Event 16 main setting				
E16.Sb	2.16.	Event 16 sub setting				
P	2.16.	Proportional band		5.0		
I	2.16.	Integral time		120		
d	2.16.	Derivative time		30		
oL	2.16.	Output low limit		0.0		
oH	2.16.	Output high limit		100.0		
rE	2.16.	Manual reset		50.0		
P-C	2.16.	Proportional band for cool side		5.0		
I-C	2.16.	Integral time for cool side		120		
d-C	2.16.	Derivative time for cool side		30		
oL.C	2.16.	Output low limit for cool side		0.0		
oH.C	2.16.	Output high limit for cool side		100.0		
oI	2.16.	Initial output of PID control		0.0		

■ RSP bank (rSP)

Display	Loop number (auxiliary display)	Item	Settings and descriptions	Initial value	User setting	Remarks
rSP	L. 1.	RSP	Display is enabled, and setting is disabled	-		
PId	L. 1.	PID group definition	1 to 16	1		
rSP	L.2.	RSP	Display is enabled, and setting is disabled	-		
PId	L.2.	PID group definition	1 to 16	1		

■ Event setup bank (Ev)

Display	Auxiliary display	Item	Event number	Settings and descriptions	Initial value	User setting	Remarks
E01	-	Event main setting	1	-19999 to +32000 U	0		The decimal point position is determined by the decimal point position for the event configuration.
E01.Sb	-	Event sub setting	1				
E02	-	Event main setting	2				
E02.Sb	-	Event sub setting	2				
E03	-	Event main setting	3				
E03.Sb	-	Event sub setting	3				
E04	-	Event main setting	4				
E04.Sb	-	Event sub setting	4				
E05	-	Event main setting	5				
E05.Sb	-	Event sub setting	5				
E06	-	Event main setting	6				
E06.Sb	-	Event sub setting	6				
E07	-	Event main setting	7				
E07.Sb	-	Event sub setting	7				
E08	-	Event main setting	8				
E08.Sb	-	Event sub setting	8				
E09	-	Event main setting	9				
E09.Sb	-	Event sub setting	9				
E 10	-	Event main setting	10				
E 10.Sb	-	Event sub setting	10				
E 11	-	Event main setting	11				
E 11.Sb	-	Event sub setting	11				
E 12	-	Event main setting	12				
E 12.Sb	-	Event sub setting	12				
E 13	-	Event main setting	13				
E 13.Sb	-	Event sub setting	13				
E 14	-	Event main setting	14				
E 14.Sb	-	Event sub setting	14				
E 15	-	Event main setting	15				
E 15.Sb	-	Event sub setting	15				
E 16	-	Event main setting	16				
E 16.Sb	-	Event sub setting	16				

4. STANDARD BIT CODES AND STANDARD NUMERICAL CODES

■ Standard bit codes

The range of the standard bit codes is 1024 to 2047.

Nos. not stated in the list are undefined. Therefore, do not use such codes.

The standard bit codes are set values common to the following items:

- Output type (EPo.01) of output bank (ON/OFF output)
- Input type (IC-02) of internal contact input bank
- Output type (doC.01, doE.01) of digital output (C/E-column terminal)
- Input assignment A/B/C/D (bF-02 to bF-05) of logical operation
- Lighting conditions (AS-01) for display and key bank (MS display)
- Lighting conditions (UFL-01) for display and key bank (UFLED setting)
- Tracking selection (CAS-04) of MV bank
- MV racking selection (Er-01) of MV bank

Standard bit codes	Meaning of standard bit
1024	OFF (0)
1025	ON (1)
1088	Event 1
1089	Event 2
1090	Event 3
1091	Event 4
1092	Event 5
1093	Event 6
1094	Event 7
1095	Event 8
1096	Event 9
1097	Event 10
1098	Event 11
1099	Event 12
1100	Event 13
1101	Event 14
1102	Event 15
1103	Event 16
1120	CT1 heater burnout detection
1121	CT2 heater burnout detection
1124	CT1 over-current detection
1125	CT2 over-current detection
1128	CT1 short-circuit detection
1129	CT2 short-circuit detection
1152	Terminal status of DI-C1
1153	Terminal status of DI-C2
1154	Terminal status of DI-C3
1155	Terminal status of DI-C4
1156	Terminal status of DI-C5
1157	Terminal status of DI-C6
1158	Terminal status of DI-C7
1159	Terminal status of DI-C8
1160	Terminal status of DI-D1
1161	Terminal status of DI-D2
1162	Terminal status of DI-D3
1163	Terminal status of DI-D4
1164	Terminal status of DI-D5
1165	Terminal status of DI-D6
1166	Terminal status of DI-D7
1167	Terminal status of DI-D8
1176	Terminal status of DI-F1
1177	Terminal status of DI-F2
1216	Terminal status of DO-C1
1217	Terminal status of DO-C2
1218	Terminal status of DO-C3
1219	Terminal status of DO-C4
1220	Terminal status of DO-C5
1221	Terminal status of DO-C6

Standard bit codes	Meaning of standard bit
1222	Terminal status of DO-C7
1223	Terminal status of DO-C8
1232	Terminal status of DO-E1
1233	Terminal status of DO-E2
1234	Terminal status of DO-E3
1235	Terminal status of DO-E4
1236	Terminal status of DO-E5
1237	Terminal status of DO-E6
1238	Terminal status of DO-E7
1239	Terminal status of DO-E8
1280	OUT1 (ON/OFF status)
1281	OUT2 (ON/OFF status)
1282	OUT3 (ON/OFF status)
1283	OUT4 (ON/OFF status)
1284	OUT5 (ON/OFF status)
1285	OUT6 (ON/OFF status)
1286	OUT7 (ON/OFF status)
1408	User defined bit 1
1409	User defined bit 2
1410	User defined bit 3
1411	User defined bit 4
1412	User defined bit 5
1413	User defined bit 6
1414	User defined bit 7
1415	User defined bit 8
1440	Results of logical operation 1
1441	Results of logical operation 2
1442	Results of logical operation 3
1443	Results of logical operation 4
1444	Results of logical operation 5
1445	Results of logical operation 6
1446	Results of logical operation 7
1447	Results of logical operation 8
1448	Results of logical operation 9
1449	Results of logical operation 10
1450	Results of logical operation 11
1451	Results of logical operation 12
1452	Results of logical operation 13
1453	Results of logical operation 14
1454	Results of logical operation 15
1455	Results of logical operation 16
1504	Key status (auto/man)
1505	Key status (sp/ev)
1506	Key status (para)
1507	Key status (rsp/lsp)
1508	Key status (at)
1509	Key status (f1)
1510	Key status (f2)

Standard bit codes	Meaning of standard bit
1511	Key status (up)
1512	Key status (left)
1513	Key status (right)
1514	Key status (down)
1515	Key status (display)
1516	Key status (enter)
1545	Communication status (normal receipt on a byte basis)
1547	Communication status (normal transmission on a byte basis)
1548	Communication status (an error received)
1549	Power failure detection
1550	Hot start detection for loop 1 PID
1551	Hot start detection for loop 2 PID
1568	RUN/READY status of loop 1
1569	RUN/READY status of loop 2
1584	AUTO/MANUAL status of loop 1
1585	AUTO/MANUAL status of loop 2
1600	AT stop /AT status of loop 1
1601	AT stop /AT status of loop 2
1616	LSP/RSP status of loop 1
1617	LSP/RSP status of loop 2
1648	During SP ramp of loop 1 (ramp-up)
1649	During SP ramp of loop 2 (ramp-up)
1664	During SP ramp of loop 1 (ramp-down)
1665	During SP ramp of loop 2 (ramp-down)
1696	Backup/through output status of loop 1
1792	All typical alarms (logical OR of all alarms to be displayed)
1824	PV input high limit alarm (PV1)
1825	PV input high limit alarm (PV2/PV21)
1826	PV input high limit alarm (PV22)
1840	PV input low limit alarm (PV1)
1841	PV input low limit alarm (PV2/PV21)
1842	PV input low limit alarm (PV22)
1856	CJ input alarm (PV1)
1857	CJ input alarm (PV2)
1880	MFB1 input failure
1888	MFB1 estimation in progress
1896	MFB1 adjustment failure
1952	CT1 input alarm
1953	CT2 input alarm
1968	Parameter failure
1969	Adjustment value failure (CPU board)
1970	Adjustment value failure (PV board)
1972	ROM failure (CPU board)
1973	ROM failure (PV board)
1975	Battery voltage alarm
1976	RTC alarm

■ Standard numerical codes

The range of the standard numerical codes is 2048 to 3071.

Nos. not stated in the list are undefined. Therefore, do not use such codes.

The standard numerical codes are set values common to the following items.

- Output type (Co-02) of output bank (continuous output)
- Lighting status (M5-02) of display and key bank (MS display)

Standard numerical codes	Meaning of standard bit
2304	PV1
2305	PV2/PV21
2306	PV22 (3 inputs model only)
2320	PV of loop 1 (used for PID control)
2321	PV of loop 2 (used for PID control)
2336	SP of loop 1 (in use)
2337	SP of loop 2 (in use)
2352	SP of loop 1 (finally attained value)
2353	SP of loop 2 (finally attained value)
2384	SP output of loop 1
2416	MV of loop 1
2417	MV of loop 2
2432	Heat MV of loop 1
2433	Heat MV of loop 2
2448	Cool MV of loop 1
2449	Cool MV of loop 2
2464	MFB1 (Motor opening feedback value 1) (including estimation)
2480	MFB1 (Motor opening feedback value 1) (measurement value)
2496	CT1 current when output ON
2497	CT2 current when output ON
2512	CT1 current when output OFF
2513	CT2 current when output OFF
2528	Deviation of loop 1 (PV-SP)
2529	Deviation of loop 2 (PV-SP)
2544	AC1 measurement voltage
2545	AC2 measurement voltage
2560	AC1 percent
2561	AC2 percent
2592	Flow rate (temprature-pressure correction)
2608	Input computation result
2624	Output computation result
2656	Event 1 delay remaining time
2657	Event 2 delay remaining time
2658	Event 3 delay remaining time
2659	Event 4 delay remaining time
2660	Event 5 delay remaining time
2661	Event 6 delay remaining time
2662	Event 7 delay remaining time
2663	Event 8 delay remaining time
2664	Event 9 delay remaining time
2665	Event 10 delay remaining time
2666	Event 11 delay remaining time
2667	Event 12 delay remaining time
2668	Event 13 delay remaining time
2669	Event 14 delay remaining time
2670	Event 15 delay remaining time
2671	Event 16 delay remaining time
2720	MV used for position propotional control

Revision History

Printed date	Manual Number	Edition	Revised pages	Description
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