Temperature Controller
SC-F71 Parameter List

Thank you for purchasing this product. In order to achieve maximum performance and ensure proper operation of the instrument, carefully read all the instructions in this manual. This manual describes the parameter of the SC-F71 controllers.

> For detailed handling procedures and key operations, refer to the **SC-F71 Instruction Manual**.

About this document

- SC-F71 is available in two types: single input type and dual input type. The dual input type is further categorized into two types: Dual PV type and PV + Remote setting type.
  Dual PV type and PV + Remote setting type.
  For a dual input model, the same parameter may exist in both Input 1 and Input 2. "**1.**" or "**2.**" is added to the top of the parameters for identification.

Display example of the dual input type:

Input 1_Set value (SV)	Input 2_Set value (SV)
1. 5	2. 5

"**1.**" is not added to the top of the parameters list for the single input type.

Display example of a single input type:

Set value (SV)

5

This manual uses the dual inputs for explanation. For other types such as a single input type, ignore the first character "**1.**" at the top of the parameter.

[Notation in this manual]

This part is not displayed in the screen → (1.) 5

- Parameters with ♣ in the No. column will be displayed only when all the display conditions are satisfied.
- Parameters marked with ★ in the No. column are included in the memory area function.
- The numbers in the No. field means Screen number and is used when the screen is registered with the Parameter select function.

A. Monitor & SV setting mode   [MONI or (SET)]

No.	Symbol	Name	Data range	Factory set value
1	—	Input 1_Measured value (PV)/ Input 1_Set value (SV)	PV display unit: Input 1_Input range low - (Input 1_5% of input span) to Input 1_Input range high + (Input 1_5% of input span) [Varies with the setting of the Decimal point position.] SV display unit: • Input 1_Set value (SV) (Auto mode: at RUN) • STOP display • Remote setting input value (at Remote mode) • Input 1_Manual manipulated output value (at Manual mode)	—
1 ♣	—	PV select Measured value (PV)/ Input 1_Set value (SV)	PV display unit: When controlling with Input 1: Input 1_Input range low - (Input 1_5% of input span) to Input 1_Input range high + (Input 1_5% of input span) When controlling with Input 2: Input 2_Input range low - (Input 2_5% of input span) to Input 2_Input range high + (Input 2_5% of input span) [Varies with the setting of the Decimal point position.] SV display unit: • Input 1_Set value (SV) (Auto mode: at RUN) • STOP display • Input 1_Manual manipulated output value (at Manual mode)	—
2 ♣	—	Input 2_Measured value (PV)/ Input 2_Set value (SV)	PV display unit: Input 2_Input range low - (Input 2_5% of input span) to Input 2_Input range high + (Input 2_5% of input span) [Varies with the setting of the Decimal point position.] SV display unit: • Input 2_Set value (SV) (Auto mode: at RUN) • STOP display • Input 2_Manual manipulated output value (at Manual mode)	—
3 ♣	—	Measured value (PV) of differential temperature input/Set value (SV) of differential temperature input	PV display unit: -19999 to +99999* or -1999 to +9999** *In case of Input data type 0 **In case of Input data type 1 [Varies with the setting of the Decimal point position.] SV display unit: -(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.]	—
4 ♣	—	Input 1_Measured value (PV)/ Input 2_Measured value (PV)	Input 1_Input range low - (Input 1_5% of input span) to Input 1_Input range high + (Input 1_5% of input span) [Varies with the setting of the Decimal point position.] Input 2_Input range low - (Input 2_5% of input span) to Input 2_Input range high + (Input 2_5% of input span) [Varies with the setting of the Decimal point position.]	—
24 ♣★	1. SV	Input 1_Set value (SV)	Input 1_Setting limiter low to Input 1_Setting limiter high [Varies with the setting of the Decimal point position.]	0
25 ♣★	2. SV	Input 2_Set value (SV)	Input 2_Setting limiter low to Input 2_Setting limiter high [Varies with the setting of the Decimal point position.]	0
26 ♣★	dSV	Set value (SV) of differential temperature input	-(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.]	0
5 ♣	SVR	Remote setting input value monitor	Input 1_Setting limiter low to Input 1_Setting limiter high [Varies with the setting of the Decimal point position.]	—
6 ♣	1. MV	Input 1_Manipulated output value monitor [heat side]	-5.0 to +105.0%	—
7 ♣	1. MVc	Input 1_Manipulated output value monitor [cool side]	-5.0 to +105.0%	—
8 ♣	2. MV	Input 2_Manipulated output value monitor	-5.0 to +105.0%	—
9	EVENT	Comprehensive event state	When an event occurs, the character of the occurring event is displayed on the Set value (SV) display unit. If two or more events occur at the same time, the relevant characters are displayed alternately every 0.5 seconds. EV1: Event 1 EV2: Event 2 EV3: Event 3 EV4: Event 4 In1. UP: Input 1_Input error high In1. dn: Input 1_Input error low In2. UP: Input 2_Input error high In2. dn: Input 2_Input error low	—
10	APT	Memory area Soak time monitor	0 hours 00 minutes 00 seconds to 9 hours 59 minutes 59 seconds 0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soak time unit.]	—
11 ♣	1. SoFT	Input 1_Soft start remaining time	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soft start time unit.]	—
12 ♣	2. SoFT	Input 2_Soft start remaining time	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soft start time unit.]	—
13	1. LR	Interlock release	oFF: Interlock release on: Interlock state	oFF

B. Parameter Select Mode   [<MODE + ▽]

Up to 16 user specified screens can be displayed.
Refer to How to use Parameter select function (P. 4).

C. Operation Transfer Mode   [<MODE (2 sec)]

No.	Symbol	Name	Data range	Factory set value
15	R/S	RUN/STOP transfer	rUn: RUN (Control start) SToP: STOP (Control stop)	SToP
16 ♣	1. ATU	Input 1_Autotuning (AT)	oFF: PID control on: Start Autotuning When the AT is finished, the control will automatically return to oFF.	oFF
17 ♣	2. ATU	Input 2_Autotuning (AT)	oFF: PID control on: Start Autotuning When the AT is finished, the control will automatically return to oFF.	oFF
18 ♣	1. STU	Input 1_Startup tuning (ST)	oFF: ST unused on 1: Execute once* on2: Execute always *When the ST is finished, the control will automatically return to oFF.	oFF
19 ♣	2. STU	Input 2_Startup tuning (ST)	oFF: ST unused on 1: Execute once * on2: Execute always *When the ST is finished, the control will automatically return to oFF.	oFF
20 ♣	1. A/M	Input 1_Auto/Manual transfer	AUTo: Auto mode MAn: Manual mode	AUTo
21 ♣	2. A/M	Input 2_Auto/Manual transfer	AUTo: Auto mode MAn: Manual mode	AUTo
22	R/L	Remote/Local transfer	• When "Remote setting input" is selected at Select function for Input 2 LoC: Local mode rEM: Remote mode • When "Cascade control" is selected at Select function for input 2 SnGL: Single control CAS: Cascade control • When "Control with PV select" is selected at Select function for input 2 InP1: Input 1 InP2: Input 2 • When "2-loop control/ Differential temperature control" is selected at Select function for input 2 2LooP: 2-loop control diFF: Differential temperature control	LoC / 1nP1 / 2LooP
23 ♣	L/E	Control area Local/External transfer	LoC: Local mode EY: External mode	LoC

D. Setting Lock Mode   [(SET) (4 sec)]

No.	Symbol	Name	Data range	Factory set value
—	LoCK	Set data unlock/lock transfer	oFF: Unlock state on: Lock state	oFF
—	LCK. LV	Set lock level	0: Unlock 1: Lock 00000 ←SV display unit SV setting mode* + Parameter select mode * Set value (SV) and Interlock release Operation transfer mode Parameter setting mode Setup mode Engineering mode	00000
—	ARE. LK	Area lock	0: Memory area is adjustable when the setting data is locked. 1: Memory area is not adjustable when the setting data is locked.	0
—	bLi Nd	Select Blind function	oFF: Function OFF on: Function ON	oFF
—	PSL. d	Parameter select direct registration	oFF: Parameter select direct registration OFF on: Parameter select direct registration ON	oFF
—	PSL 01 : PSL 16	Parameter select setting 1 to 16	1 to 351 (Screen No.) 0: No registration	0

E. Memory Area Transfer Mode   [AREA]

No.	Symbol	Name	Data range	Factory set value
14 ♣	AREA	Memory area transfer	1 to 16	1

F. Parameter Setting Mode   [(SET) (2 sec)]

No.	Symbol	Name	Data range	Factory set value
—	Pn00	Parameter group No. 00	This is the first parameter symbol of Parameter group No. 00.	—
24 ★	1. SV	Input 1_Set value (SV)	Input 1_Setting limiter low to Input 1_Setting limiter high [Varies with the setting of the Decimal point position.]	0
25 ♣★	2. SV	Input 2_Set value (SV)	Input 2_Setting limiter low to Input 2_Setting limiter high [Varies with the setting of the Decimal point position.]	0
26 ♣★	dSV	Set value (SV) of differential temperature input	-(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.]	0
— ♣	Pn40	Parameter group No. 40	This is the first parameter symbol of Parameter group No. 40.	—
27 ♣★	EV1	Event 1 set value (EV1) Event 1 set value (EV1) [high]	Deviation: • When assigned to Input_1 or Differential temperature input -(Input 1_Input span) to +(Input 1_Input span) • When assigned to Input 2 -(Input 2_Input span) to +(Input 2_Input span) • When "Control with PV select" is selected at Select function for input 2 -(PV select input span) to +(PV select input span) [Varies with the setting of the Decimal point position.] Input value or Set value: • When assigned to Input 1 Input 1_Input range low to Input 1_Input range high • When assigned to Input 2 Input 2_Input range low to Input 2_Input range high • When assigned to Differential temperature input -(Input 1_Input span) to +(Input 1_Input span) • When "Control with PV select" is selected at Select function for input 2 PV select input range low to PV select input range high [Varies with the setting of the Decimal point position.] Manipulated output value: -5.0 to +105.0 %	High action, high/low action: max. Low action, process action: min
28 ♣★	EV1'	Event 1 set value (EV1') [low]	Deviation: • When assigned to Input_1 or Differential temperature input -(Input 1_Input span) to +(Input 1_Input span) • When assigned to Input 2 -(Input 2_Input span) to +(Input 2_Input span) • When "Control with PV select" is selected at Select function for input 2 -(PV select input span) to +(PV select input span) Input value or Set value: • When assigned to Input 1 Input 1_Input range low to Input 1_Input range high • When assigned to Input 2 Input 2_Input range low to Input 2_Input range high • When assigned to Differential temperature input -(Input 1_Input span) to +(Input 1_Input span) • When "Control with PV select" is selected at Select function for input 2 PV select input range low to PV select input range high [Varies with the setting of the Decimal point position.]	High/low action: min. Process action: max.
29 ♣★	EV2	Event 2 set value (EV2) Event 2 set value (EV2) [high]	Same as Event 1 set value (EV1)/Event 1 set value (EV1) [high]	
30 ♣★	EV2'	Event 2 set value (EV2') [low]	Same as Event 1 set value (EV1') [low]	
31 ♣★	EV3	Event 3 set value (EV3) Event 3 set value (EV3) [high]	Same as Event 1 set value (EV1)/Event 1 set value (EV1) [high]	
32 ♣★	EV3'	Event 3 set value (EV3') [low]	Same as Event 1 set value (EV1') [low]	
33 ♣★	EV4	Event 4 set value (EV4) Event 4 set value (EV4) [high]	Same as Event 1 set value (EV1)/Event 1 set value (EV1) [high]	
34 ♣★	EV4'	Event 4 set value (EV4') [low]	Same as Event 1 set value (EV1') [low]	
—	Pn51	Parameter group No. 51	This is the first parameter symbol of Parameter group No. 51.	—
35 ♣★	1. P	Input 1_Proportional band [heat-side]	TC/RTD inputs: 0 (0.0, 0.00) to Input 1_Input span (Unit: °C [°F]) (When Control with PV select: 0 to PV select input span) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 1000.0% of Input 1_Input span (When Control with PV select: 0.0 to 1000.0% of PV select input span) 0 (0.0, 0.00): ON/OFF action NOTE: 0 (0.0, 0.00) cannot be set when temperature control operation [MC-(V)COS(R)] is selected for Input 1_Control action.	TC/RTD inputs: 30 V/I inputs: 3.0
36 ♣★	1. I	Input 1_Integral time [heat-side]	PID control or Heating/Cooling PID control: 0 to 3600 seconds, 0.0 to 3600.0 seconds or 0.00 to 360.00 seconds 0 (0.0, 0.00): PD action [Varies with the setting of the Integral/Derivative time decimal point position.]	240
37 ♣★	1. d	Input 1_Derivative time [heat-side]	1 to 3600 seconds, 0.0 to 3600.0 seconds or 0.00 to 360.00 seconds 0 (0.0, 0.00): PI action [Varies with the setting of the Integral/Derivative time decimal point position.]	60
38 ♣	1. oHH	Input 1_ON/OFF action differential gap (upper)	TC/RTD inputs: 0 (0.0, 0.00) to Input 1_Input span (Unit: °C [°F]) (When Control with PV select: 0 to PV select input span) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 100.0% of Input 1_Input span (When Control with PV select: 0.0 to 100.0% of PV select input span) 0 (0.0, 0.00): ON/OFF action	TC/RTD inputs: 1 V/I inputs: 0.1
39 ♣	1. oHL	Input 1_ON/OFF action differential gap (lower)	Same as Input 1_ON/OFF action differential gap (upper)	
40 ♣★	1. RPT	Input 1_Control response parameter	0: Slow 1: Medium 2: Fast [When the P or PD action is selected, this setting will be unavailable.]	PID control: 0 Heating/Cooling PID control: 2
41 ★	1. PACT	Input 1_Proactive intensity	0 to 4 0: No function	2
42 ♣★	1. MR	Input 1_Manual reset	-100.0 to +100.0%	0.0
43 ♣★	1. FF	Input 1_FF amount	-100.0 to +100.0%	0.0
44 ★	1. oLH	Input 1_Output limiter high [heat-side]	Input 1_Output limiter low [heat-side] to 105.0%	105.0
45 ★	1. oLL	Input 1_Output limiter low [heat-side]	-5.0% to Input 1_Output limiter high [heat-side]	-5.0
46 ♣★	1. MCdb	Input 1_Dead zone	0 to 10% of Input 1_Input span [Decimal point position depends on the setting for Input 1_Valve coefficient F.]	See Table 1
—	Pn52	Parameter group No. 52	This is the first parameter symbol of Parameter group No. 52.	—
47 ♣★	2. P	Input 2_Proportional band	TC/RTD inputs: 0 (0.0, 0.00) to Input 2_Input span (Unit: °C [°F]) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 1000.0% of Input 2_Input span 0 (0.0, 0.00): ON/OFF action NOTE: 0 (0.0, 0.00) cannot be set when Temperature control operation [MC-(V)COS(R)] is selected in Input 2_Control action.	TC/RTD inputs: 30 V/I inputs: 3.0
48 ♣★	2. I	Input 2_Integral time	0 to 3600 seconds, 0.0 to 3600.0 seconds or 0.00 to 360.00 seconds 0 (0.0, 0.00): PD action [Varies with the setting of the Integral/Derivative time decimal point position.]	240
49 ♣★	2. d	Input 2_Derivative time	Same as Input 1_Derivative time	
50 ♣★	2. oHH	Input 2_ON/OFF action differential gap (upper)	TC/RTD inputs: 0 (0.0, 0.00) to Input 2_Input span (Unit: °C [°F]) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 100.0% of Input 2_Input span	TC/RTD inputs: 1 V/I inputs: 0.1
51 ♣	2. oHL	Input 2_ON/OFF action differential gap (upper)	Same as Input 2_ON/OFF action differential gap (upper)	
52 ♣★	2. RPT	Input 2_Control response parameter	0: Slow 1: Medium 2: Fast [When the P or PD action is selected, this setting will be unavailable.]	0
53 ♣★	2. PACT	Input 2_Proactive intensity	0 to 4 0: No function	2
54 ♣★	2. MR	Input 2_Manual reset	-100.0 to +100.0%	0.0
55 ♣★	2. FF	Input 2_FF amount	-100.0 to +100.0%	0.0
56 ♣★	2. oLH	Input 2_Output limiter high	Input 2_Output limiter low to 105.0%	105.0
57 ♣★	2. oLL	Input 2_Output limiter low	-5.0% to Input 2_Output limiter high	-5.0
58 ♣★	2. MCdb	Input 2_Dead zone	0 to 10% of input_2 span [Decimal point position depends on the setting for Input 2_Valve coefficient F.]	See Table 1
— ♣	Pn56	Parameter group No. 56	This is the first parameter symbol of Parameter group No. 56.	—
59 ♣★	1. Pc	Input 1_Proportional band [cool-side]	TC/RTD inputs: 1 (0.1, 0.01) to Input 1_Input span (Unit: °C [°F]) (When Control with PV select: 1 to PV select input span) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 1000.0 % of Input 1_Input span (When Control with PV select: 0.1 to 1000.0% of PV select input span)	TC/RTD inputs: 30 V/I inputs: 3.0
60 ♣★	1. Ic	Input 1_Integral time [cool-side]	Same as Input 2_Integral time	
61 ♣★	1. dc	Input 1_Derivative time [cool-side]	Same as Input 1_Derivative time [heat-side]	
62 ♣★	1. db	Input 1_Overlap/ Deadband	TC/RTD inputs: -(Input 1_Input span) to +(Input 1_Input span) (When Control with PV select: -(PV select input span) to +(PV select input span)) (Unit: °C [°F]) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: -100.0 to +100.0% of Input 1_Input span (When Control with PV select: -100.0 to +100.0% of PV select input span) Minus (-) setting results in Overlap. However, the overlapping range is within the proportional range.	TC/RTD inputs: 0.0 V/I inputs: 0.0
63 ♣★	1. oLHc	Input 1_Output limiter high [cool-side]	Input 1_Output limiter low [cool-side] to 105.0%	105.0
64 ♣★	1. oLLc	Input 1_Output limiter low [cool-side]	-5.0% to Input 1_Output limiter high [cool-side]	-5.0

Table 1 Dead zone initial values

Control action	Valve coefficient F (pressure unit)									
	0	1	2	3	4	10	11	12	13	14
3	0.03	0.03	0.4	3	0.003	—	—	—	—	—
4	0.04	0.04	0.4	4	0.004	—	—	—	—	—
5	0.10	0.10	1.5	10	0.010	—	—	—	—	—
6	0.10	0.10	1.5	10	0.010	—	—	—	—	—
7	—	—	—	—	—	7	10	0.3	0.14	1

No.	Symbol	Name	Data range	Factory set value
—	Pn70	Parameter group No. 70	This is the first parameter symbol of Parameter group No. 70.	—
65 ★	CRGA	Select Trigger type for Memory area transfer	0 to 63 0: No assignment +1: Event 1 +2: Event 2 +4: Event 3 +8: Event 4 +16: Digital input 1 (DI1) Close edge +32: Digital input 1 (DI1) Open edge To select two or more functions, sum each value.	0
66 ★	ASC	Area soak time	0 hours 00 minutes 00 seconds to 9 hours 59 minutes 59 seconds 0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soak time unit.]	0:00 (0 minutes 00 seconds)
67 ★	LNKA	Link area number	0 to 16 0: No links	0
68 ♣★	1.SFTU	Input 1_Soft start time (up)	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soft start time unit.]	0:00 (0 minutes 00 seconds)
69 ♣★	1.SFTd	Input 1_Soft start Time (down)	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Data range of Area soak time can be selected on the Soft start time unit.]	0:00 (0 minutes 00 seconds)
70 ♣★	1.SVRU	Input 1_Setting change rate limiter (up)	0 to Input 1_Input span (When Control with PV select: 0 to PV select input span) 0: No function [Varies with the setting of the Decimal point position.]	0
71 ♣★	1.SVRd	Input 1_Setting change rate limiter (down)	Same as Input 1_Setting change rate limiter (up)	0
72 ♣★	1.A/M.A	Input 1_Auto/Manual transfer selection (When transferring area)	0: No transfer 1: Auto mode (bumpless) 2: Auto mode (bump) 3: Manual mode (bumpless) 4: Manual mode (bump)	0
73 ♣★	1.MV.A	Input 1_Manipulated output value (When transferring area)	PID control: -5.0 to +105.0% Heating/Cooling PID control: -105.0 to +105.0% [When settings either 2: Auto mode (bump) or 4: Manual mode (bump) is selected in Input 1_Auto/Manual transfer selection (Area)]	Heating/Cooling PID control: 0.0 Other control: -5.0
74 ♣★	2.SFTU	Input 2 Soft start time increase	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Time unit depends on the Soft start time unit setting.]	0:00 (0 minutes 00 seconds)
75 ♣★	2.SFTd	Input 2 Soft start time decrease	0 hours 00 minutes to 99 hours 59 minutes 0 minutes 00 seconds to 199 minutes 59 seconds [Time unit depends on the Soft start time unit setting.]	0:00 (0 minutes 00 seconds)
76 ♣★	2.SVRU	Input 2_Setting change rate limiter (up)	0 to Input 2_Input span 0: No function [Varies with the setting of the Decimal point position.]	0
77 ♣★	2.SVRd	Input 2_Setting change rate limiter (down)	Same as Input 2_Setting change rate limiter (up)	0
78 ♣★	2.A/M.A	Input 2_Auto/Manual transfer selection (Area)	0: No transfer 1: Auto mode (bumpless) 2: Auto mode (bump) 3: Manual mode (bumpless) 4: Manual mode (bump)	0
79 ♣★	2.MV.A	Input 2_Manipulated output value (Area)	-5.0 to +105.0% [When settings either 2: Auto mode (bump) or 4: Manual mode (bump) is selected in Input 2_Auto/Manual transfer selection (Area)]	-5.0
80 ♣★	R/L.A	Remote/Local transfer selection (Area)	• When "Remote setting input" is selected at Select function for Input 2 0: No transfer 1: Local mode 2: Remote mode • When "Cascade control" is selected at Select function for input 2 0: No transfer 1: Single control 2: Cascade control • When "Control with PV select" is selected at Select function for input 2 0: No transfer 1: Input 1 2: Input 2 • When "2-loop control/Differential temperature control" is selected at Select function for input 2 0: No transfer 1: 2-loop control 2: Differential temperature control	0

G. Setup Setting Mode [SET] + <MODE>

No.	Symbol	Name	Data range	Factory set value
—	Sn10	Setting group No. 10	This is the first parameter symbol of Setting group No. 10.	—
81 ♣	PVCY	Display update cycle	1: 50 ms* 6: 300 ms 2: 100 ms 7: 350 ms 3: 150 ms 8: 400 ms 4: 200 ms 9: 450 ms 5: 250 ms 10:500 ms * When "Cascade control" or "2-loop control/Differential temperature control" is selected, Display update cycle is 100 ms even when "1" is selected.	1
—	Sn21	Setting group No. 21	This is the first parameter symbol of Setting group No. 21.	—
82 ♣	1.Pb	Input 1_PV bias	-(Input 1_Input span) to +(Input 1_Input span) (When Control with PV select: -(PV select input span) to +(PV select input span)) [Varies with the setting of the Decimal point position.]	0
83 ♣	1.dF	Input 1_PV digital filter	0.0 to 100.0 seconds 0.0: No function	0.0
84 ♣	1.PR	Input 1_PV ratio	0.500 to 1.500	1.000
85 ♣	1.PLC	Input 1_PV low input cut-off	0.00 to 25.00% of Input 1_Input span (When Control with PV select: 0.00 to 25.00% of PV select input span)	0.00
—	Sn22	Setting group No. 22	This is the first parameter symbol of Setting group No. 22.	—
86 ♣	2.Pb	Input 2_PV bias (RS bias)	Input 2_PV bias: -(Input 2_Input span) to +(Input 1_Input span) RS bias: -(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.]	0
87 ♣	2.dF	Input 2_PV digital filter (RS digital filter)	0.0 to 100.0 seconds 0.0: No function	0.0
88 ♣	2.PR	Input 2_PV ratio (RS ratio)	Input 2_PV ratio: 0.500 to 1.500 RS ratio: 0.001 to 9.999	1.000
89 ♣	2.PLC	Input 2_PV low input cut-off	Input 2_Input span 0.00 to 25.00% (When Control with PV select: 0.00 to 25.00% of PV select input span)	0.00
—	Sn30	Setting group No. 30	This is the first parameter symbol of Setting group No. 30.	—
90 ♣	F3	OUT3 proportional cycle time	0.1 to 100.0 seconds	2.0
91 ♣	MF3	OUT3 minimum ON/OFF time of proportional cycle	0 to 1000 ms	0
—	Sn51	Setting group No. 51	This is the first parameter symbol of Setting group No. 51.	—
92 ♣	1.M.MV	Input 1_Manual manipulated output value	Except Heating/Cooling PID control: Input 1_Output limiter low to Input 1_Output limiter high [heat-side] Heating/Cooling PID control: -(Input 1_Output limiter high [cool-side]) to +(Input 1_Output limiter high [heat-side] MC-(V)COS(R) pressure/temperature control: Input 1_Output limiter low [heat-side] to whichever the smaller value of either "calculated value from Input 1_Pressure (temperature) limiter" or "Input 1_Output limiter high [heat-side]. When STOP is set, Input 1_Output limiter low [heat-side] to Input 1_Output limiter high [heat-side]	PID control: -5.0 Heating/Cooling PID control: 0.0
93 ♣	1.LEV1	Input 1_Level PID setting 1	Input 1_Input range low to Input 1_Input range high (When Control with PV select:PV select input range low to PV select input range high) [Varies with the setting of the Decimal point position.]	Input 1_Input range high (Control with PV select: PV select input range high)
94 ♣	1.LEV2	Input 1_Level PID setting 2	Same as Input 1_Level PID setting 1	
95 ♣	1.LEV3	Input 1_Level PID setting 3	Same as Input 1_Level PID setting 1	
96 ♣	1.LEV4	Input 1_Level PID setting 4	Same as Input 1_Level PID setting 1	
97 ♣	1.LEV5	Input 1_Level PID setting 5	Same as Input 1_Level PID setting 1	
98 ♣	1.LEV6	Input 1_Level PID setting 6	Same as Input 1_Level PID setting 1	
99 ♣	1.LEV7	Input 1_Level PID setting 7	Same as Input 1_Level PID setting 1	
—	Sn52	Setting group No. 52	This is the first parameter symbol of Setting group No. 52.	
100 ♣	2.M.MV	Input 2_Manual manipulated output value	Input 2_Output limiter low to Input 2_Output limiter high Pressure/temperature operation [MC-(V)COS(R)]: Input 2_Output limiter low to whichever the smaller value of either "calculated value from Input 2_Pressure (temperature) limiter" or "Input 2_Output limiter high [heat-side]. When STOP is set, Input 2_Output limiter low [heat-side] to Input 2_Output limiter high [heat-side]	-5.0
101 ♣	2.LEV1	Input 2_Level PID setting 1	Input 2_Input range low to Input 2_Input range high [Varies with the setting of the Decimal point position.]	Input 2_Input range high
102 ♣	2.LEV2	Input 2_Level PID setting 2	Same as Input 2_Level PID setting 1	
103 ♣	2.LEV3	Input 2_Level PID setting 3	Same as Input 2_Level PID setting 1	
104 ♣	2.LEV4	Input 2_Level PID setting 4	Same as Input 2_Level PID setting 1	
105 ♣	2.LEV5	Input 2_Level PID setting 5	Same as Input 2_Level PID setting 1	
106 ♣	2.LEV6	Input 2_Level PID setting 6	Same as Input 2_Level PID setting 1	
107 ♣	2.LEV7	Input 2_Level PID setting 7	Same as Input 2_Level PID setting 1	
—	Sn53	Setting group No. 53	This is the first parameter symbol of Setting group No. 53.	
108 ♣	1.ARb	Input 1_AT bias	-(Input 1_Input span) to +(Input 1_Input span) (When Control with PV select: -(PV select input span) to +(PV select input span)) [Varies with the setting of the Decimal point position.]	0
109 ♣	1.ARTM	Input 1_AT remaining time monitor	0 hours 00 minutes to 48 hours 00 minutes	—
110 ♣	1.TUNE	Input 1_AT/ST status monitor	0: AT/ST complete 1: AT running now 2: ST running now -1: Aborted. Setting changed. -2: Aborted. Abnormal input. -3: Aborted. Timeout. -4: Aborted. Abnormal calculated values.	—
—	Sn54	Setting group No. 54	This is the first parameter symbol of Setting group No. 54.	—
111 ♣	2.ARb	Input 2_AT bias	-(Input 2_Input span) to +(Input 2_Input span) [Varies with the setting of the Decimal point position.]	0
112 ♣	2.ARTM	Input 2_AT remaining time monitor	0 hours 00 minutes to 48 hours 00 minutes	—
113 ♣	2.TUNE	Input 2_AT/ST status monitor	0: AT/ST complete 1: AT running now 2: ST running now -1: Aborted. Setting changed. -2: Aborted. Abnormal input. -3: Aborted. Timeout. -4: Aborted. Abnormal calculated values.	—
—	Sn57	Setting group No. 57	This is the first parameter symbol of Setting group No. 57.	—
114 ♣	FFSL	FF amount learning	0 to 3 0: No learning +1: Learn Input 1 +2: Learn Input 2 To select two or more functions, sum each value.	0
115 ♣	1.ExdJ	Input 1_Determination point of external disturbance	-(Input 1_Input span) to +(Input 1_Input span) (When Control with PV select: -(PV select input span) to +(PV select input span)) [Varies with the setting of the Decimal point position.]	-1
116 ♣	2.ExdJ	Input 2_Determination point of external disturbance	-(Input 2_Input span) to +(Input 2_Input span) [Varies with the setting of the Decimal point position.]	-1
—	Sn58	Setting group No. 58	This is the first parameter symbol of Setting group No. 58.	—
117 ♣	MAS.P	Cascade_Proportional band (master-side)	TC/RTD inputs: 1 (0.1, 0.01) to Input 1_Input span (Unit: °C [°F]) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.0 to 1000.0% of Input 1_Input span	TC/RTD inputs: 30 V/I inputs: 3.0
118 ♣	MAS.I	Cascade_Integral time (master-side)	1 to 3600 seconds,0.1 to 3600.0 seconds or 0.01 to 360.00 seconds [Varies with the setting of the Integral/Derivative time decimal point position.]	240
119 ♣	MAS.d	Cascade_Derivative time (master-side)	0 to 3600 seconds,0.1 to 3600.0 seconds or 0.01 to 360.00 seconds 0 (0.0, 0.00): PI action [Varies with the setting of the Integral/Derivative time decimal point position.]	60
120 ♣	SLV.P	Cascade_Proportional band (slave-side)	TC/RTD inputs: 1 (0.1, 0.01) to Input 2_Input span (Unit: °C [°F]) [Varies with the setting of the Decimal point position.] Voltage (V)/Current (I) inputs: 0.1 to 1000.0% of Input 2_Input span	TC/RTD inputs: 30 V/I inputs: 3.0
121 ♣	SLV.I	Cascade_Integral time (slave-side)	Same as Cascade _Integral time (master-side)	
122 ♣	SLV.d	Cascade_Derivative time (slave-side)	Same as Cascade _Derivative time (master-side)	
123 ♣	C.dF	Cascade_Digital filter	0.0 to 100.0 seconds 0.0: No function	10.0
124 ♣	C.SCH	Cascade_Scale high	Cascade _Scale low to Input 2_Setting limiter high [Varies with the setting of the Decimal point position.]	Input 2_Setting limiter high
125 ♣	C.SCL	Cascade_scale low	Input 2_Setting limiter low to Cascade_Scale high [Varies with the setting of the Decimal point position.]	Input 2_Setting limiter low
126 ♣	2PV.LV	PV select transfer level	Input 1_Input range low to Input 1_Input range high [Varies with the setting of the Decimal point position.]	Input 1_Input range high
127 ♣	2PV.TM	PV select transfer time	0.0 to 100.0 seconds	0.0
—	Sn59	Setting group No. 59	This is the first parameter symbol of Setting group No. 59.	—
128 ♣	1.oSP	Input 1_Overshoot prevention feature	0: No 1: Yes	0
—	Sn60	Setting group No. 60	This is the first parameter symbol of Setting group No. 60.	—
129 ♣	2.oSP	Input 2_Overshoot prevention feature	0: No 1: Yes	0
—	Sn91	Setting group No. 91	This is the first parameter symbol of Setting group No. 91.	—
130 ♣	1.PHLd	Input 1_Peak hold monitor	Input 1_Input range low -(Input 1_5% of input span) to Input 1_Input range high +(Input 1_5% of input span) [Varies with the setting of the Decimal point position.]	
131 ♣	1.bHLd	Input 1_Bottom hold monitor	Same as Input 1_Peak hold monitor	
132 ♣	1.HLdR	Input 1_Hold reset	Hold: Hold RESET: Reset Returns to Hold state automatically after reset.	Hold
133 ♣	2.PHLd	Input 2_Peak hold monitor	Input 2_Input range low -(Input 2_5% of input span) to Input 2_Input range high +(Input 2_5% of input span) [Varies with the setting of the Decimal point position.]	
134 ♣	2.bHLd	Input 2_Bottom hold monitor	Same as Input 2_Peak hold monitor	
135 ♣	2.HLdR	Input 2_Hold reset	Same as Input 1_Hold reset	

H. Engineering Mode [SET] + <MODE (2 sec)]

No.	Symbol	Name	Data range	Factory set value
—	Fn10	Function block No. 10	This is the first parameter symbol of Function block No. 10.	—
136	SPCH	STOP display selection	0: Stop on PV display 1: Stop on SV display 2: Stop on MV display	1
137	ALC	ALM lamp lighting condition	0 to 255 0: OFF +1: Event 1 +2: Event 2 +4: Event 3 +8: Event 4 +16: Input 1_Input error high +32: Input 1_Input error low +64: Input 2_Input error high +128: Input 2_Input error low To select two or more functions, sum each value.	15
138	dSoP	PV flashing display at input error	0: Flashing display 1: Non-flashing display	1
139	1.dS.SV	Show/Hide Input 2_SV	0: Hide Input 2_SV 1: Show Input 2_SV	1
140	2.dS.SV	Show/Hide Input 2_SV	0: Hide Input 2_SV 1: Show Input 2_SV	1
141	1.dS.MV	Show/Hide Input 1_MV	0: Hide Input 2_SV 1: Show Input 1_Manipulated output value (MV) 2: Show Memory area soak time 3: Show Soft start time	1
142	2.dS.MV	Show/Hide Input 2_MV	0: Hide Input 2_SV 1: Show Input 2_Manipulated output value (MV) 2: Show Memory area soak time 3: Show Soft start time	1
143	dS.MoN	Select hidden items in Monitor mode	0 to 31 0:Show all +1: Remote setting input value monitor +2: Manipulated output value (MV) monitor +4: Comprehensive event state +8: Memory area soak time +16: Soft start time To select two or more functions, sum each value.	0
144	dS.Mod	Select hidden items in Operation transfer mode	0 to 63 0: Show all +1: RUN/STOP transfer +2: Autotuning (AT) +4: Startup tuning (ST) +8: Auto/Manual transfer +16: Remote/Local transfer (Including Cascade mode transfer, PV select transfer, 2-loop control/Differential temperature control transfer) +32: Control area Local/External transfer To select two or more functions, sum each value.	0
—	Fn11	Function block No. 11	This is the first parameter symbol of Function block No. 11.	—
145	SET.KY	Data registration	0: SET key method 1: Direct registration	0
146	Fn.KY	FUNC key assignment	0: Unused 1: RUN/STOP transfer 2: Autotuning (AT) (Common to Input 1 and 2) 3: Input 1_Autotuning (AT) 4: Input 2_Autotuning (AT) 5: Auto/Manual transfer (Common to Input 1 and 2) 6: Input 1_Auto/Manual transfer 7: Input 2_Auto/Manual transfer 8: Remote/Local transfer (Including Cascade mode transfer, PV select transfer, 2-loop control/Differential temperature control transfer) 9: Control area Local/External transfer 10: Interlock release 11: Hold reset (Common to Input 1 and 2) 12: Input 1_Hold reset 13: Input 2_Hold reset 14: Set data unlock/lock transfer 15: Area jump 16: Parameter setting mode display switching	1
147	Fn.TYP	FUNC key operation selection	0: Press once 1: Press and hold	0
—	Fn21	Function block No. 21	This is the first parameter symbol of Setting group No. 21.	—
148 ♣	1.INP	Input 1_Input type	0: TC input K 1: TC input J 2: TC input R 3: TC input S 4: TC input B 5: TC input E 6: TC input N 7: TC input T 8: TC input W5Re/W26Re 9: TC input PLII 10: TC input U 11: TC input L 12: TC input PR40-20 13: RTD input Pt100 14: RTD input JPt100 15: Current 0 to 20 mA DC 16: Current 4 to 20 mA DC 17: Voltage 0 to 10 V DC 18: Voltage 0 to 5 V DC 19: Voltage 1 to 5 V DC 20: Voltage 0 to 1 V DC 21: Voltage input -10 to +10 V DC 22: Voltage input -5 to +5 V DC 23: Voltage 0 to 100 mV DC 24: Voltage input 0 to 10 mV DC · When MC-(V)COS(R) pressure control is selected for Input 1_Control action: 15 to 24	Product identification code specified at the time of order.
149 ♣	1.UNI	Input 1_Display unit	0: °C 1: °F	Product identification code specified at the time of order.
150 ♣	1.PGdP	Input 1_Decimal point position	0: No decimal place 1: One decimal place 2: Two decimal places 3: Three decimal places 4: Four decimal places TC input: W5Re/W26Re, PR40-20: 0 (fixed) Thermocouples other than those shown above: 0 to 1 RTD input: 0 to 2 Voltage (V)/Current (I) input: (When Control with PV select: Decimal point position setting of Input 1 and Input 2 is compared and the smaller will be used.)	Product identification code specified at the time of order. For V/I inputs: 1
151 ♣	1.PGSH	Input 1_Input range high	(Input 1_Input range low + 1 digit) to Input 1_Maximum value of input range [Varies with the setting of the Decimal point position. When 3 to 7 (pressure control operation [MC-(V)COS(R)]) is set to Input 1_Control action, the set value for the parameter should be entered with the same pressure unit selected for Input 1_Valve coefficient F.	Product identification code specified at the time of order. For V/I inputs: 100.0
152 ♣	1.PGSL	Input 1_Input range low	Input 1_Minimum value of input range to (Input 1_Input range high - 1 digit) [Varies with the setting of the Decimal point position. When 3 to 7 (pressure control operation [MC-(V)COS(R)]) is set to Input 1_Control action, the set value for the parameter should be entered with the same pressure unit selected for Input 1_Valve coefficient F.	Product identification code specified at the time of order. For V/I inputs: 0.0
153 ♣	1.PoV	Input 1_Input error determination point (high)	Input 1_Input range low to Input 1_Input range high +(Input 1_5% of input span) [Varies with the setting of the Decimal point position.]	Input 1_Input range high +(Input 1_5 % of input span)
154 ♣	1.PUN	Input 1_Input error determination point (low)	Input 1_Input range low -(Input 1_5% of input span) to Input 1_Input range high [Varies with the setting of the Decimal point position.] *When Input type of Input 1 is set to RTD, low limit range is about 2 Ohms. (Pt100: -245.5 °C [-409.8 °F], JPt100: -237.6 °C [-395.7 °F])	Input 1_Input range low -(Input 1_5% of input span)
155 ♣	1.TCJC	Input 1_Temperature compensation calculation	0: No temperature compensation calculation 1: With temperature compensation calculation	1

No.	Symbol	Name	Data range	Factory set value
156	1. bo5	Input 1_Burnout direction	0: Upscale 1: Downscale	0
157	1. 5QR	Input 1_Square root extraction	0: Unused 1: Used	0
158	1. I NV	Input 1_Inverting input	0: Unused 1: Used	0
—	Fn22	Function block No. 22	This is the first parameter symbol of Function block No. 22.	—
159	2. I NP	Input 2_Input type	0: TC input K 1: TC input J 2: TC input R 3: TC input S 4: TC input B 5: TC input E 6: TC input N 7: TC input T 8: TC input W5Re/W26Re 9: TC input PLII 10: TC input U 11: TC input L 12: TC input PR40-20 13: RTD input Pt100 14: RTD input JPt100 15: Current 0 to 20 mA DC 16: Current 4 to 20 mA DC 17: Voltage 0 to 10 V DC 18: Voltage 0 to 5 V DC 19: Voltage 1 to 5 V DC 20: Voltage 0 to 1 V DC 21: Voltage input -10 to +10 V DC 22: Voltage -5 to +5 V DC 23: Voltage 0 to 100 mV DC 24: Voltage 0 to 10 mV DC · When Remote setting input is selected and MC-(V)COS(R) pressure control is selected for Input 1_Control action: 15 to 24 · When Measured input 2 is selected and MC-(V)COS(R) pressure control is selected for Input 2_Control action: 15 to 24	16
160	2. UNI r	Input 2_Display unit	Same as Input 1_Display unit	
161	2. PGdP	Input 2_Decimal point position	0: No decimal place 1: One decimal place 2: Two decimal places 3: Three decimal places 4: Four decimal places TC input: W5Re/W26Re, PR40-20: 0 (fixed) Thermocouples other than those shown above: 0 to 1 RTD input: 0 to 2 Voltage (V)/Current (I) Input: 0 to 4	Same as Input 1_Decimal point position setting
162	2. PG5H	Input 2_Input range high	TC/RTD input and Voltage (V)/Current (I) input (For other than Remote setting input): (Input 2_Input range low + 1 digit) to Input 2_Maximum value of input range Voltage (V)/Current (I) input (Remote setting input): (Input 2_Input range low + 1 digit) to Input 1_Maximum value of input range [Varies with the setting of the Decimal point position.]	Same as Input 1_Input range high
163	2. PG5L	Input 2_Input range low	TC/RTD input and Voltage (V)/Current (I) input (For other than Remote setting input): Input 2_Minimum value of input range to (Input 2_Input range high - 1 digit) Voltage (V)/Current (I) input (Remote setting input): Input 1_Minimum value of input range to (Input 2_Input range high - 1 digit) [Varies with the setting of the Decimal point position.]	Same as Input 1_Input range low
164	2. PoV	Input 2_Input error determination point (high)	Input 2_Input determination point (low) to Input 2_Input range high + (Input 2_5% of input span) [Varies with the setting of the Decimal point position.]	Input 2_Input range high - (Input 2_5% of input span)
165	2. PUN	Input 2_Input error determination point (low)	Input 2_Input range low - (Input 2_5% of input span) to Input 2_Input error determination point (high) [Varies with the setting of the Decimal point position.] *When Input type of Input 2 is RTD, low limit value is about 2 Ohms. (Pt100: -245.5 °C [-409.8 °F], JPt100: -237.6 °C [-395.7 °F])	Input 2_Input range low - (Input 2_5% of input span)
166	2. rCJC	Input 2_Temperature compensation calculation	0: No temperature compensation calculation 1: With temperature compensation calculation	1
167	2. bo5	Input 2_Burnout direction	0: Upscale 1: Downscale	0
168	2. 5QR	Input 2_Square root extraction	0: Unused 1: Used	0
169	2. I NV	Input 2_Inverting input	0: Unused 1: Used	0
—	Fn23	Function block No. 23	This is the first parameter symbol of Function block No. 23.	—
170	dI 5L I	DI1 function selection	0: Unused 1: RUN/STOP transfer 2: Auto/Manual transfer (Common to Input 1 and 2) 3: Input 1_Auto/Manual transfer 4: Input 2_Auto/Manual transfer 5: Remote/Local transfer (Cascade mode transfer, PV select transfer, 2-loop control/ 2-loop control/Differential temperature control transfer) 6: Interlock release 7: Hold reset (Common to Input 1 and 2) 8: Input 1_Hold reset 9: Input 2_Hold reset 10: Autotuning (AT) (Common to Input 1 and 2) 11: Input 1_Autotuning (AT) 12: Input 2_Autotuning (AT) 13: Set data unlock/lock transfer 14: Direct/Reverse action transfer 15: Memory area transfer (2 points, Without area set signal) 16: Memory area transfer (8 points, Without area set signal) 17: Memory area transfer (8 points, With area set signal) 18: Memory area transfer (16points, Without area set signal) 19: Memory area transfer (16 points, With area set signal) 20: Area jump	0
171	dI 5L2	DI2 function selection	0 to 14 Same as DI1 function selection (0 to 14)	0
172	dI 5L3	DI3 function selection	0 to 14 Same as DI1 function selection (0 to 14)	0
173	dI 5L4	DI4 function selection	0 to 14 Same as DI1 function selection (0 to 14)	0
174	dI 5L5	DI5 function selection	0 to 14 Same as DI1 function selection (0 to 14)	0
175	dI 5L6	DI6 function selection	0 to 14 Same as DI1 function selection (0 to 14)	0
176	dI I NV	DI logic invert	0 to 31 0:No logic invert +1: RUN/STOP transfer +2: Auto/Manual transfer +4: Remote/Local transfer (Cascade mode transfer, PV2 PV select transfer, 2-loop control/Differential temperature control transfer) +8: Set data unlock/lock transfer +16: Direct/Reverse action transfer To select two or more functions, sum each value.	0
177	dI rI M	Area switching time (Without area set signal)	1 to 5 seconds	2
—	Fn30	Function block No. 30	This is the first parameter symbol of Function block No. 30.	—
178	o5L I	OUT1 function selection	0: No assignment 1: Input 1_Control output [heat-side] or [open-side] 2: Input 1_Control output [cool-side] or [close-side] 3: Input 2_Control output 4: Retransmission output 5: Logic calculation output (Event, Input error) 6: RUN state output 7: Input 1_Manual mode state output 8: Input 2_Manual mode state output 9: Remote mode state output (Cascade control state output, Output of differential temperature, control state, Input 2 state output of Control with PV select) 10: Input 1_Autotuning (AT) state output 11: Input 2_Autotuning (AT) state output 12: Output while Set value of Input 1 is changing 13: Output while Set value of Input 2 is changing 14: Output of the communication monitoring result 15: FAIL output	1
179	o5L2	OUT2 function selection	Same as OUT1 function selection	4
180	o5L3	OUT3 function selection	Same as OUT1 function selection	4
181	oLG I	OUT1 logic calculation selection	0 to 255 0: OFF +1: Event 1 +2: Event 2 +4: Event 3 +8: Event 4 +16: Input 1_Input error high +32: Input 1_Input error low +64: Input 2_Input error high +128: Input 2_Input error low To select two or more functions, sum each value.	0
182	oLG2	OUT2 logic calculation selection	Same as OUT1 logic calculation selection	0
183	oLG3	OUT3 logic calculation selection	Same as OUT1 logic calculation selection	0
184	ErC	Energized/De-energized selection	0 to 127 0: All outputs are energized +1: OUT1 de-energized +2: OUT2 de-energized +4: OUT3 de-energized +8: DO1 de-energized +16: DO2 de-energized +32: DO3 de-energized +64: DO4 de-energized To select two or more functions, sum each value.	0
185	I L5	Interlock selection	0 to 255 0: OFF +1: Event 1 +2: Event 2 +4: Event 3 +8: Event 4 +16: Input 1_Input error high +32: Input 1_Input error low +64: Input 2_Input error high +128: Input 2_Input error low To select two or more functions, sum each value.	0
186	55	Output action at control stop	0 to 7 0: OFF +1: Logic calculation output: Action continues +2: Retransmission output: Action continues +4: Instrument status output: Action continues To select two or more functions, sum each value.	0
187	MM5	Event action during MAN mode	0: Yes 1: No	0
188	oUr I	OUT1 type selection	0: Continuous voltage output (4 to 20 mA) 1: Continuous voltage output (0 to 20 mA)	0
189	oUr2	OUT2 type selection	0: Continuous voltage output (4 to 20 mA) 1: Continuous voltage output (0 to 20 mA)	0
190	UNI o	Universal output type selection (OUT3)	0: Voltage pulse output 1: Current output (4 to 20 mA) 2: Current output (0 to 20 mA)	1
—	Fn31	Function block No. 31	This is the first parameter symbol of Function block No. 31.	—
191	Ro I	Retransmission output 1 type	0: No retransmission output 1: Input 1_Measured value (PV) 2: Input 1_Local SV 3: Input 1_SV monitor value 4: Input 1_Deviation 5: Input 1_Manipulated output value monitor [heat side] 6: Input 1_Manipulated output value [cool-side] 7: Input 2_Measured value (PV) 8: Input 2_Local SV 9: Input 2_SV monitor value 10: Input 2_Deviation 11: Input 2_Manipulated output value 12: Remote setting input value 13: Measured value (PV) of differential temperature input	0
192	RH5 I	Retransmission output 1 Scale high	No retransmission output, Input 1_Measured value (PV), Input 1_Local SV, Input 1_SV monitor value, and Remote setting input value: Input 1_Input range low to Input 1_Input range high [When Control with PV select: PV select input range low to PV select input range high] [Varies with the setting of the Decimal point position.] Input 1_Deviation: -(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.] Input 2_Measured value (PV), Input 2_Local SV, and Input 2_SV monitor value: Input 2_Input range low to Input 2_Input range high [Varies with the setting of the Decimal point position.] Input 2_Deviation: -(Input 2_Input span) to +(Input 2_Input span) [Varies with the setting of the Decimal point position.] Manipulated output value: -5.0 to +105.0% Measured value (PV) of differential temperature input: -(Input 1_Input span) to +(Input 1_Input span) [Varies with the setting of the Decimal point position.]	No retransmission output, Input 1_Measured value (PV), Input 1_Local SV, Input 1_SV monitor value, and Remote setting input value: Input 1_Input range high Input 1_Deviation: +(Input 1_Input span) Input 2_Measured value (PV), Input 2_Local SV, and Input 2_SV monitor value: Input 2_Input range high Input 2_Deviation: +(Input 2_Input span) Manipulated output value: 100.0 Measured value (PV) of differential temperature input: 100
193	RL5 I	Retransmission output 1 scale low	Data range is the same as Retransmission output 1 scale high. [Factory set value] •No retransmission output, Input 1_Measured value (PV), Input 1_Local SV, Input 1_SV monitor value, and Remote setting input value: Input 1_Input range low (Control with PV select: PV select input range low) •Input 1_Deviation: -(Input 1_Input span) •Input 2_Measured value (PV), Input 2_Local SV, and Input 2_SV monitor value: Input 2_Input range low •Input 2_Deviation: -(Input 2_Input span) •Manipulated output value: 0.0 •Measured value (PV) of differential temperature input: -100	
—	Fn32	Function block No. 32	This is the first parameter symbol of Function block No. 32.	—
194	Ro2	Retransmission output 2 type	Same as Retransmission output 1 type	0
195	RH52	Retransmission output 2 scale high	Same as Retransmission output 1 scale high	
196	RL52	Retransmission output 2 scale low	Same as Retransmission output 1 scale low	
—	Fn33	Function block No. 33	This is the first parameter symbol of Function block No. 33.	—
197	Ro3	Retransmission output 3 type	Same as Retransmission output 1 type	1
198	RH53	Retransmission output 3 scale high	Same as Retransmission output 1 scale high	
199	RL53	Retransmission output 3 scale low	Same as Retransmission output 1 scale low	
—	Fn34	Function block No. 34	This is the first parameter symbol of Function block No. 34.	—
200	do5L I	DO1 function selection	0: No assignment 1: Logic calculation output (Event, Input error) 2: RUN state output 3: Input 1_Manual mode state output 4: Input 2_Manual mode state output 5: Remote mode state output (Cascade control state output, Output of differential temperature, control state, Input 2 state output of Control with PV select) 6: Input 1_Autotuning (AT) state output 7: Input 2_Autotuning (AT) state output 8: Output while Set value of Input 1 is changing 9: Output while Set value of Input 2 is changing 10: Output of the communication monitoring result 11: FAIL output 12: Input 1_Control error state output* 13: Input 2_Control error state output * * 12 and 13 are displayed only when pressure is controlled by MC-COS(R)/MC-VCOS(R).	0
201	do5L2	DO2 function selection	Same as DO1 function selection	0
202	do5L3	DO3 function selection	Same as DO1 function selection	0
203	do5L4	DO4 function selection	Same as DO1 function selection	0
204	doLG I	DO1 logic calculation selection	0 to 255 0: OFF +1: Event 1 +2: Event 2 +4: Event 3 +8: Event 4 +16: Input 1_Input error high +32: Input 1_Input error low +64: Input 2_Input error high +128: Input 2_Input error low To select two or more functions, sum each value.	0
205	doLG2	DO2 logic calculation selection	Same as DO1 logic calculation selection	0
206	doLG3	DO3 logic calculation selection	Same as DO1 logic calculation selection	0
207	doLG4	DO4 logic calculation selection	Same as DO1 logic calculation selection	0
—	Fn41	Function block No. 41	This is the first parameter symbol of Function block No. 41.	—
208	EVR I	Event 1 assignment	1: Input 1 2: Input 2 3: Differential temperature input	1
209	E5 I	Event 1 type	0: None 1: Deviation high (Using SV monitor value) [1] 2: Deviation low (Using SV monitor value) [1] 3: Deviation high/low (Using SV monitor value) [1] 4: Band (Using SV monitor value) [1] 5: Deviation high/low (Using SV monitor value) [High/Low individual setting] [1] 6: Band (Using SV monitor value) [High/Low individual setting] [1] 7: SV high (Using SV monitor value) 8: SV low (Using SV monitor value) 9: Process high [2] 10: Process low [2] 11: Deviation high (Using local SV) [1] 12: Deviation low (Using local SV) [1] 13: Deviation high/low (Using local SV) [1] 14: Band (Using local SV) [1] 15: Deviation high/low (Using local SV) [High/Low individual setting] [1] 16: Band (Using local SV) [High/Low individual setting] [1] 17: SV high (Using local SV) 18: SV low (Using local SV) 19: MV high [heat-side] [2] 20: MV low [heat-side] [2] 21: MV high [cool-side] [2] 22: MV low [cool-side] [2] 23: Process high/low [High/Low individual setting] [2] 24: Process band [High/Low individual setting] [2] [1] Event hold and re-hold action is available. [2] Event hold action is available.	1
210	EHo I	Event 1 hold action	0: Hold action OFF 1: Hold action ON 2: Re-hold action Hold action or re-hold action cannot be set for event types for which hold action/re-hold action cannot be selected.	0
211	EH I	Event 1 Differential gap	Deviation, Process and SV: • If event assignment is set to either Input 1 or Differential temperature. 0 to Input 1_Input span (When Control with PV select: 0 to PV select input span) • If event assignment is set to Input 2 0 to Input 2_Input span [Varies with the setting of the Decimal point position.] Manipulated output value: 0.0 to 110.0%	Deviation, Process and SV: TC/RTD inputs: 2 V/I input: 0.2% of Input span MV: 0.2
212	EVr I	Event 1 timer	0.0 to 600.0 seconds	0.0
—	Fn42	Function block No. 42	This is the first parameter symbol of Function block No. 42.	—
213	EVR2	Event 2 assignment	Same as Event 1 assignment	
214	E52	Event 2 type	Same as Event 1 type	
215	EHo2	Event 2 hold action	Same as Event 1 hold action	
216	EH2	Event 2 Differential gap	Same as Event 1 differential gap	
217	EVr2	Event 2 timer	Same as Event 1 timer	
—	Fn43	Function block No. 43	This is the first parameter symbol of Function block No. 43.	—
218	EVR3	Event 3 assignment	Same as Event 1 assignment	
219	E53	Event 3 type	Same as Event 1 type	
220	EHo3	Event 3 hold action	Same as Event 1 hold action	
221	EH3	Event 3 Differential gap	Same as Event 1 differential gap	
222	EVr3	Event 3 timer	Same as Event 1 timer	
—	Fn44	Function block No. 44	This is the first parameter symbol of Function block No. 44.	—
223	EVR4	Event 4 assignment	Same as Event 1 assignment	
224	E54	Event 4 type	Same as Event 1 type	
225	EHo4	Event 4 hold action	Same as Event 1 hold action	
226	EH4	Event 4 Differential gap	Same as Event 1 differential gap	
227	EVr4	Event 4 timer	Same as Event 1 timer	
—	Fn50	Function block No. 50	This is the first parameter symbol of Function block No. 50.	—
228	Pd	Hot/Cold start	0: Hot start 1 1: Hot start 2 2: Cold start 3: STOP start 4: Follow the selected action when power is restored	0
229	rUn5L	RUN/STOP selection when power is restored	0: STOP 1: RUN 2: Operation immediately before power cut	0
230	MRN5L	MAN/AUTO selection when power is restored	0: MAN 1: AUTO 2: Operation immediately before power cut	0
231	REM5L	LOC/REM selection when power is restored	0: LOCAL 1: REMOTE 2: Operation immediately before power cut	0
232	Er5L	LOC/EXT selection when power is restored	0: LOC 1: EXT 2: Operation immediately before power cut	0

No.	Symbol	Name	Data range	Factory set value
233	MVSL	Output value selection when power is restored	0: 0%; 1: Output limiter low; 2: Status immediately before power cut	0
234	MVTS	Manual manipulated output value selection	0: The last manipulated output value (Balanceless-bumpless function); 1: Manual manipulated output value	0
235	TRK	SV tracking	0 to 3; 0: No SV tracking function; +1: SV tracking at Remote/Local transfer*; +2: SV tracking at Auto/Manual transfer; *Including Cascade mode transfer, 2-loop control/Differential temperature control transfer; To select two or more functions, add each value.	1
236	I ddP	Integral/derivative time decimal point position	0: No decimal place; 1: One decimal place; 2: Two decimal places	0
237	STS	Startup tuning (ST) activation conditions	0: Activate the Startup tuning (ST) function when the power is turned on; when transferred from STOP to RUN; or when the Set value (SV) is changed. 1: Activate the Startup tuning (ST) function when the power is turned on; or when transferred from STOP to RUN. 2: Activate the Startup tuning (ST) function when the Set value (SV) is changed.	0
—	Fn51	Function block No. 51	This is the first parameter symbol of Function block No. 51.	—
238	1. oS	Input 1_Control action	0: PID control (direct action); 1: PID control (reverse action); 2: Heating/Cooling PID control [Cooling linear type]; 3: Pressure control operation [MC-COS(R)-3]; 4: Pressure control operation [MC-COS(R)-16, 15 to 50 mm]; 5: Pressure control operation [MC-COS(R)-16, 65 to 150 mm]; 6: Pressure control operation [MC-COS(R)-21]; 7: Pressure control operation [MC-VCOS(R)]; 8: Temperature control operation [MC-COS(R)-16]; 9: Temperature control operation [MC-VCOS(R)]; For cascade control, only 0 or 1 is selectable. For PV select, only 0 to 2 are selectable. In the case of Control with PV select, only "0 to 2" are selectable.	Depends on the control type specified when ordering
239	1. oRU	Input 1_Setting change rate limiter (up) [heat-side]	0.0 to 1000.0%/seconds of manipulated output; 0.0: No function	0.0
240	1. oRd	Input 1_Output change rate limiter (down) [heat-side]	0.0 to 1000.0%/seconds of manipulated output; 0.0: No function	0.0
241	1. AoVE	Input 1_Input error high Action selection	0: Control continues (with the latest output); 1: Manipulated output value at input error (Manual mode); 2: Manipulated output value at input error (Auto mode)	2
242	1. AUNE	Input 1_Input error low Action selection	Same as Input 1_Action (high) input error	2
243	1. PSM	Input 1_Manipulated output value at input error	Heating/Cooling PID control: -5.0 to +105.0%; Other control: -105.0 to +105.0%	Heat/cool PID control: 0.0; Other control: -5.0
244	1. RMV	Input 1_Manipulated output value at STOP [heat-side]	-5.0 to +105.0%	-5.0
245	1. PdA	Input 1_Start determination point	0 to Input 1_Input span (When Control with PV select: 0 to PV select input span); 0: Operation starts from any start state selected by Hot/Cold start [Varies with the setting of the Decimal point position.]	3% of Input 1_input span (Control with PV select: 3% of PV select input span)
246	1. LPId	Input 1_Level PID action selection	0: Switching by Memory area number; 1: Switching by Set value (SV) (Level PID action); 2: Switching by Measured value (PV) (Level PID action)	0
247	1. LHS	Input 1_Level PID Differential gap	0 to Input 1_Input span (When Control with PV select: 0 to PV select input span) [Varies with the setting of the Decimal point position.]	TC/RTD inputs: 2; V/I inputs: 0.2
—	Fn52	Function block No. 52	This is the first parameter symbol of Function block No. 52.	—
248	2. oS	Input 2_Control action	0: PID control (direct action); 1: PID control (reverse action); 3: Pressure control operation [MC-COS(R)-3]; 4: Pressure control operation [MC-COS(R)-16, 15 to 50 mm]; 5: Pressure control operation [MC-COS(R)-16, 65 to 150 mm]; 6: Pressure control operation [MC-COS(R)-21]; 7: Pressure control operation [MC-VCOS(R)]; 8: Temperature control operation [MC-COS(R)-16]; 9: Temperature control operation [MC-VCOS(R)]; In the case of Cascade control, only "0" or "1" is selectable.	1
249	2. oRU	Input 2_Output change rate limiter (up)	0.0 to 1000.0%/seconds of manipulated output; 0.0: No function	0.0
250	2. oRd	Input 2_Output change rate limiter (down)	0.0 to 1000.0%/seconds of manipulated output; 0.0: No function	0.0
251	2. AoVE	Input 2_Input error high Action selection	Same as Input 1_Action (high) input error	2
252	2. AUNE	Input 2_Input error low Action selection	Same as Input 1_Action (high) input error	2
253	2. PSM	Input 2_Manipulated output value at input error	-5.0 to +105.0%	-5.0
254	2. RMV	Input 2_Manipulated output value at STOP	-5.0 to +105.0%	-5.0
255	2. PdA	Input 2_Start determination point	0 to Input 2_Input span; 0: Operation starts from any start state selected by Hot/Cold start [Varies with the setting of the Decimal point position.]	0
256	2. LPId	Input 2_Level PID action selection	0: Switching by Memory area number; 1: Switching by Set value (SV) (Level PID action); 2: Switching by Measured value (PV) (Level PID action)	0
257	2. LHS	Input 2_Level PID Differential gap	0 to Input 2_Input span [Varies with the setting of the Decimal point position.]	TC/RTD inputs: 2; V/I inputs: 0.2
—	Fn53	Function block No. 53	This is the first parameter symbol of Function block No. 53.	—
258	1. A	Input 1_valve coefficient A	-1999 to 9999	0
259	1. b	Input 1_valve coefficient b	-1999 to 9999	0
260	1. C	Input 1_valve coefficient C	-1999 to 9999	0
261	1. d	Input 1_valve coefficient d	-1999 to 9999	0
262	1. E	Input 1_valve coefficient E	-1999 to 9999	0
263	1. F	Input 1_valve coefficient F	When Input 1_Control action is set to 3 to 6 or 8: 0: kg/cm2G; 1: barg; 2: psig; 3: kPaG; 4: MPaG; When Input 1_Control action is set to 7 or 9: 10: mmHg/Torr; 11: mbar; 12: inHg; 13: psi; 14: kPa; NOTE: The pressure unit to be entered for the pressure value is defined by the valve coefficient F. To use a pressure unit other than the F value pressure unit indicated on the valve coefficient plate, convert the valve coefficient by referring to the instruction manual as well as "Note 1: Valve coefficient F".	Product identification code specified at the time of order
264	1. GSL	Input 1_valve coefficient F pressure standard	0: Atmospheric (gauge) pressure standard; 1: Absolute pressure standard	Product identification code specified at the time of order
265	1. VSL	Input 1_Control valve selection	0: MC-VCOS(R); 1: PC-VCOS(R)	0
266	1. PrL	Input 1_Pressure (Temp) Limiter	When Input 1_Control action is set to 3 to 7: Input 1_Input range low to Input 1_Input range high; When Input 1_Control action is set to 8: Valve coefficient: Coefficient F = 0 (kg/cm2): 0.00 to 99.99; Coefficient F = 1 (barg): 0.00 to 99.99; Coefficient F = 2 (psig): 0.0 to 999.9; Coefficient F = 3 (kPaG): 0 to 9999; Coefficient F = 4 (MPaG): 0.000 to 9.999; When Input 1_Control action is 9: 0.0 to whichever the smaller value of either Input 1_range high or 140.0 °C (280.0 °F); Select the temperature unit according to the following conditions: When Input type is set to Temperature input: Input 1_Display unit; When Input type is set to V/I input: Input 1_Temperature limiter unit; Pressure (temperature) limiter function is OFF when 0 (0.0, 0.00, 0.000) is set [Varies with the setting of the Decimal point position, when a setting is other than 8 for Input 1_Control action.]	When a setting other than "7" is selected in Input 1_Control action: 0; When a setting is other than "7" is selected in Input 1_Control action: Input range high
267	1. Prun	Input 1_Temperature Limiter unit	Displayed when "Current/Voltage input" is set to Input type in Temperature control operation [MC-VCOS]; 0: °C; 1: °F	Follows the unit specified at the time of order
268	1. ob	Input 1_Regression equation bias	-50.0 to +50%	0.0
269	1. EMF	Input 1_Response speed self-learning selection	0: Yes; 1: No	0
270	1. t1	Input 1_Response speed learning parameter t1 0 up	0 to 9999 seconds	6
271	1. t2	Input 1_Response speed learning parameter t2 0 down	0 to 9999 seconds	6
272	1. t3	Input 1_Response speed learning parameter t3 set up	0 to 9999 seconds	6
273	1. t4	Input 1_Response speed learning parameter t4 set down	0 to 9999 seconds	6
274	1. L1	Input 1_Response speed learning parameter L1 0 up	0 to 9999 seconds	2
275	1. L2	Input 1_Response speed learning parameter L2 0 down	0 to 9999 seconds	2
276	1. L3	Input 1_Response speed learning parameter L3	0 to 9999 seconds	2
277	1. L4	Input 1_Response speed learning parameter L4 set down	0 to 9999 seconds	2
278	1. S1	Input 1_Response speed learning parameter S1 0 up	0 to 9999 seconds	2
279	1. S2	Input 1_Response speed learning parameter S2 0 down	0 to 9999 seconds	2
280	1. S3	Input 1_Response speed learning parameter S3 set up	0 to 9999 seconds	2
281	1. S4	Input 1_Response speed learning parameter S4 set down	0 to 9999 seconds	2
282	1. Pc	Input 1_No. of corrective actions	0 to 99 times (99: unlimited times)	99
283	1. Pc2	Input 1_Corrective action repeat	0: Yes; 1: No	1
284	1. Pc3	Input 1_Corrective actions for ramp control	0: Yes; 1: No	0
285	1. oLb	Input 1_Lower range of corrective action amount	0.0 to 105.0%	20.0
286	1. oHb	Input 1_Upper range of corrective action amount	0.0 to 105.0%	20.0
—	Fn54	Function block No. 54	This is the first parameter symbol of Function block No. 54.	—
287	2. A	Input 2_Valve coefficient A	Same as Input 1_Valve coefficient A	0
288	2. b	Input 2_Valve coefficient b	Same as Input 1_Valve coefficient b	0
289	2. C	Input 2_Valve coefficient C	Same as Input 1_Valve coefficient C	0
290	2. d	Input 2_Valve coefficient d	Same as Input 1_Valve coefficient d	0
291	2. E	Input 2_Valve coefficient E	Same as Input 1_Valve coefficient E	0
292	2. F	Input 2_Valve coefficient F	When Input 1_Control action is set to 3 to 6 or 8: 0: kg/cm2; 1: barg; 2: psig; 3: kPaG; 4: MPaG; When Input 1_Control action is 7 or 9: 10: mmHg/Torr; 11: mbar; 12: inHg; 13: psi; 14: kPa; Refer to "Note 1: Valve coefficient F".	Same as Input 1_Valve coefficient F (pressure unit)
293	2. GSL	Input 2_Pressure standard for Valve coefficient F	0: Atmospheric pressure standard; 1: Absolute pressure standard	Same as pressure standard for Input 1_Valve coefficient F
294	2. VSL	Input 2_Control valve selection	0: MC-VCOS(R); 1: PC-VCOS(R)	0
295	2. PrL	Input 2_Pressure (Temp) Limiter	When Input 2_Control action is set to 3 to 7: Input 2_Input range low to Input 2_Input range high; When Input 2_Control action is set to 8: Valve coefficient: Coefficient F = 0 (kg/cm2G): 0.00 to 99.99; Coefficient F = 1 (barg): 0.00 to 99.99; Coefficient F = 2 (psig): 0.0 to 999.9; Coefficient F = 3 (kPaG): 0 to 9999; Coefficient F = 4 (MPaG): 0.000 to 9.999; When Input 2_Control action is 9: 0.0 to Whichever the smaller value of either Input 2_range high or 140.0 °C (280.0 °F); Select the temperature unit according to the following conditions: When Input type is set to Temperature input: Input 2_Display unit; When Input type is set to V/I input: Input 2_Temperature limiter unit; Pressure (temperature) limiter function is OFF when 0 (0.0, 0.00, 0.000) is set [Varies with the setting of the Decimal point position, when a setting is other than 8 for Input 1_Control action.]	When a setting other than "7" is selected in Input 2_Control action: 0; When "7" is selected in Input 2_Control action: Input 2_Input range high
296	2. Prun	Input 2_Temperature limiter unit	Displayed when "Voltage/Current input" is selected in Temperature control operation [MC-VCOS]; 0: °C; 1: °F	Same as Input 1_Pressure (Temp) limiter unit
297	2. ob	Input 2_Regression equation bias	-50.0 to +50.0%	0.0
298	2. EMF	Input 2_Response speed self-learning selection	0: Yes; 1: No	0
299	2. t1	Input 2_Response speed learning parameter t1 0 up	0 to 9999 seconds	6
300	2. t2	Input 2_Response speed learning parameter t2 0 down	0 to 9999 seconds	6
301	2. t3	Input 2_Response speed learning parameter t3 set up	0 to 9999 seconds	6
302	2. t4	Input 2_Response speed learning parameter t4 set down	0 to 9999 seconds	6
303	2. L1	Input 2_Response speed learning parameter L1 0 up	0 to 9999 seconds	2
304	2. L2	Input 2_Response speed learning parameter L2 0 down	0 to 9999 seconds	2
305	2. L3	Input 2_Response speed learning parameter L3 set up	0 to 9999 seconds	2
306	2. L4	Input 2_Response speed learning parameter L4 set down	0 to 9999 seconds	2
307	2. S1	Input 2_Response speed learning parameter S1 0 up	0 to 9999 seconds	2
308	2. S2	Input 2_Response speed learning parameter S2 0 down	0 to 9999 seconds	2
309	2. S3	Input 2_Response speed learning parameter S3 set up	0 to 9999 seconds	2
310	2. S4	Input 2_Response speed learning parameter S4 set down	0 to 9999 seconds	2
311	2. Pc	Input 2_No. of corrective actions	0 to 99 times (99: unlimited times)	99
312	2. Pc2	Input 2_Corrective action repeat	0: Yes; 1: No	1
313	2. Pc3	Input 2_Corrective actions for ramp control	0: Yes; 1: No	0
314	2. oLb	Input 2_Lower range of corrective action amount	0.0 to 105.0%	20.0
315	2. oHb	Input 2_Upper range of corrective action amount	0.0 to 105.0%	20.0
—	Fn56	Function block No. 56	This is the first parameter symbol of Function block No. 56.	—
316	1. oRUc	Input 1_Output change rate limiter (up) [heating side]	0.0 to 1000.0%/seconds of manipulated output; 0.0: No function	0.0
317	1. oRdc	Input 1_Output change rate limiter (down) [cool-side]	0.0 to 1000.0 %/seconds of manipulated output; 0.0: No function	0.0
318	1. RMVc	Input 1_Manipulated output value at STOP [cool-side]	-5.0 to +105.0 %	-5.0
319	US	Undershoot suppression factor	0.000 to 1.000	1.000
320	dbPA	Overlap/Deadband reference point	0.0 to 1.0	0.0
—	Fn57	Function block No. 57	This is the first parameter symbol of Function block No. 57.	—
321	bFMSP	Bottom suppression function	0: Unused; 1: FF amount is added by level; 2: FF amount is forcibly added	0
—	Fn58	Function block No. 58	This is the first parameter symbol of Function block No. 58.	—

No.	Symbol	Name	Data range	Factory set value
322	2PV	Select function for input 2	0: Unused; 1: Remote setting input; 2: 2-loop control/Differential temperature control; 3: Control with PV select; 4: Cascade control (Slave single ↔ Cascade); 5: Cascade control (Master single ↔ Cascade); 6: Input circuit error alarm; Selectable range is limited depending on Input 1_Control action. PID control: 0 to 6; When pressure control operation [MC-(V)COS(R)] is selected: 0 to 2, 6; Heating/Cooling control: 0 to 3, 6	1
323	MAS. AT	Cascade_AUTO mode (master-side)	0: Easy adjustment (AT: one cycle); 1: Load factor adjustment (AT: 2 cycles)	TC/RTD inputs: 0; V/I inputs: 0
324	SLV. AT	Cascade_AUTO mode (slave-side)	0: Easy adjustment (AT: one cycle); 1: Load factor adjustment (AT: 2 cycles)	TC/RTD inputs: 0; V/I inputs: 1
325	2PV. TG	Selection of PV select trigger	0: Switching by level; 1: Switching by signal (Key, DI and Communication)	0
326	1 CA	Input circuit error alarm set value	0 to Input 1_Input span; 0: No function [Varies with the setting of the Decimal point position.]	TC/RTD inputs: 10; V/I inputs: 5% of Input 1_Input span
—	Fn60	Function block No. 60	This is the first parameter symbol of Function block No. 60.	—
327	CMPS	Communication protocol	0: Original communication protocol; 1: Modbus (Order of data transfer: upper word to lower word); 2: Modbus (Order of data transfer: lower word to upper word); 3: PLC communication (MITSUBISHI MELSEC series special protocol QnA-compatible 3C frame [format 4])	0
328	Add	Device address	Original communication protocol: 0 to 99; Modbus: 1 to 99; PLC communication: 0 to 30	Original communication protocol: 0; Modbus: 1; PLC communication: 0
329	bPS	Communication speed	0: 2400 bps; 1: 4800 bps; 2: 9600 bps; 3: 19200 bps; 4: 38400 bps; 5: 57600 bps	3
330	bIT	Data bit Members	0 to 11; Refer to Data bit configuration table	0

331 ♣	$I\ N\Gamma$	Interval time	0 to 250 ms	10

332 ♣	ΓMRM	Communication response monitor	0 to 110F
			1st digit:
			  0: Normal response
			  1: Overrun error
			  2: Parity error
			  4: Framing error
			  8: Receive buffer overflow
			    Flow diagram
			  If two or more errors occur,
			  the error values are summed
			  up. Errors are displayed in
			  the hexadecimal format (0 to
			  F).
			2nd digit: 0 (fixed)
			3rd digit: Reception status
			        monitor *
			4th digit: Transmission status
			        monitor *
			  *Each time signal is sent or
			   received, 0 and 1 are
			   displayed in turns.
			Most significant digit: Lights off
				—

		monitor		

NOTE: Valve coefficient F
The pressure unit to be entered for the pressure value is defined by the valve coefficient F. Parameters to be entered in pressure units, such as measurement input range, target set value, and alarm set value, must be entered in the pressure units defined by the valve coefficient F. If the pressure unit and the parameter do not match, the product will not operate properly.
To use a pressure unit other than the pressure unit indicated on the valve coefficient plate, convert the valve coefficient and change the valve coefficient F together with A, C and E by referring to "Converting valve coefficient" in "8.8 Using with MC-COS/MC-VCOS" in the "Parameters & Function" manual.

Data bit configuration table

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2
6	7	None	1
7	7	None	2
8	7	Even	1
9	7	Even	2
10	7	Odd	1
11	7	Odd	2

▒ : Not configurable for Modbus

No.	Symbol	Name	Data range	Factory set value
—	$Fn62$	Function block No. 52	This is the first parameter symbol of Function block No. 62.	—
333 ♣	$MP.\ REG$	Register type	Mitsubishi PLC (MELSEC) 0: D register (data register) 1: R register (file register) 2: W register (link register) 3: ZR register (Method of specifying consecutive numbers when 32767 of R register is exceeded.)	0
334 ♣	$MP.\ SRH$	Register start number (High-order 4-bit)	0 to 15	0
335 ♣	$MP.\ SRL$	Register start number (Low-order 16-bit)	0 to 65535	1000
336 ♣	$MP.\ Mod$	Monitor item register bias	12 to 65535	12
337 ♣	$MP.\ S\Gamma b$	Setting item register bias	0 to 65535	0
338 ♣	$MP.\ L\Gamma M$	Instrument link recognition time	0 to 255 seconds	5
339 ♣	$MP.\ \Gamma Mo$	PLC response waiting time	0 to 3000 ms	255
340 ♣	$MP.\ S\Gamma M$	PLC communication start time	1 to 255 seconds	5
341 ♣	$MP.\ SLb$	Slave register bias	0 to 65535	80
342 ♣	$MP.\ MRd$	Number of recognizable devices	0 to 30	8
—	$Fn70$	Function block No. 70	This is the first parameter symbol of Function block No. 70.	—
343 ♣	$S\nu RS$	Soft start/ setting change rate limiter selection	0: Soft start 1: Setting change rate limiter	0
344 ♣	$S\nu\Gamma S$	Soft start time selection	0: m.s 1: h.m	0
345 ♣	$S\nu SS$	Soft start point selection	0: Measured value (PV) start 1: Zero point start	0
346 ♣	$S\nu R\Gamma$	Setting change rate limiter unit time	1 to 3600 seconds	60
347 ♣	$S\Gamma dP$	Soak time unit	0: 0 hours 00 minutes to 99 hours 59 minutes 1: 0 minutes 00 seconds to 199 minutes 59 seconds 2: 0 hours 0 minutes 0 seconds to 9 hours 59 minutes 59 seconds	1
—	$Fn71$	Function block No. 71	This is the first parameter symbol of Function block No. 71.	—
348	$I.\ SLH$	Input 1_Input range high	Input 1_Setting limiter low to Input 1_Input range high (When Control with PV select: Input 1_Setting limiter low to PV select input range high) [Varies with the setting of the Decimal point position.]	Input 1_ Input range high (Control with PV select: PV select Measured value (PV)/Input range high)
349	$I.\ SLL$	Input 1_ Setting limiter low	Input 1_Input range low to Input 1_Setting limiter high (When Control with PV select: PV select input range low to Input 1_Setting limiter high) [Varies with the setting of the Decimal point position.]	Input 1_ Input range low (Control with PV select: PV select Measured value (PV)/ Input range low)
— ♣	$Fn72$	Function block No. 72	This is the first parameter symbol of Function block No. 72.	—
350 ♣	$2.\ SLH$	Input 2_ Setting limiter high	Input 2_Setting limiter low to Input 2_Input range high [Varies with the setting of the Decimal point position.]	Input 2_ Input range high
351 ♣	$2.\ SLL$	Input 2_ Setting limiter low	Input 2_Input range low to Input 2_Setting limiter high [Varies with the setting of the Decimal point position.]	Input 2_ Input range low
—	$Fn91$	Function block No. 91	This is the first parameter symbol of Function block No. 91.	—
—	dEF	Initialization	1225: Start initialization Other values: Set values are maintained After the initialization, the value automatically returns to zero.	0
—	$W\Gamma$	Integrated operating time	0 to 65535 hours	—
—	$\Gamma\Gamma u$	Peak hold monitor of ambient temperature	-120.0 to +120.0 °C	—
—	RoM	ROM version	The installed ROM version is displayed *	—
—	$SC-F\Gamma$	Product identification code monitor	Product identification code is displayed. Use the UP or DOWN key to scroll the display horizontally (left or right).	—
—	00000	Instrument number	Instrument number is displayed	—

How to use Parameter select function

This instrument has a function that allows a user to specify desired screens to be displayed. This function is called *Parameter select function*. Up to 16 screens can be grouped together.

■ About Parameter select function

The Parameter select function allows grouping necessary screens into a single mode for display. Screens registered in the Setting lock mode are displayed in the Parameter select mode.

The screens displayed in this mode can be operated in the same manner as they are in the original mode.

📖 With the Parameter select function, the Setting lock mode screen and the Function block No. 91 in the Engineering mode cannot be registered.

[How does Parameter select function work?]
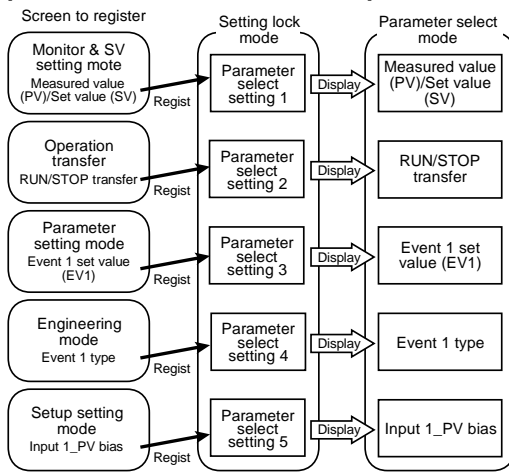
■ How to register screens

There are two ways to register screens.

● Screen number entry

Enter the predefined screen number on the Parameter select setting screen in the Setting lock mode. The registered screens in the Parameter select mode will be displayed. There are 16 Parameter select setting screens and these are freely settable. Unregistered screens, if any, will be skipped and screens are displayed in series in the Parameter select mode.

[To register screens]
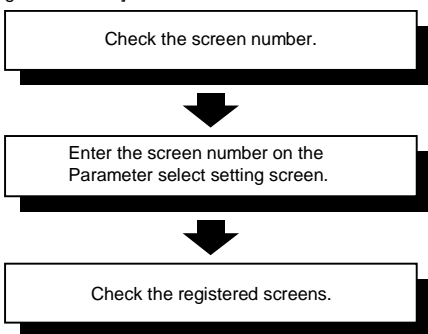
● Direct registration

Activate the direct registration on the Parameter select direct registration screen in the Setting lock mode. Display the screen to register and press the △ and ▽ keys simultaneously. The screen will be registered on the Parameter select setting screen.

📖 Control must be stopped before attempting the direct registration.

📖 When the direct registration is activated on the Parameter select direct registration screen, all modes except for the Setting lock mode will be locked.

[To register screens]
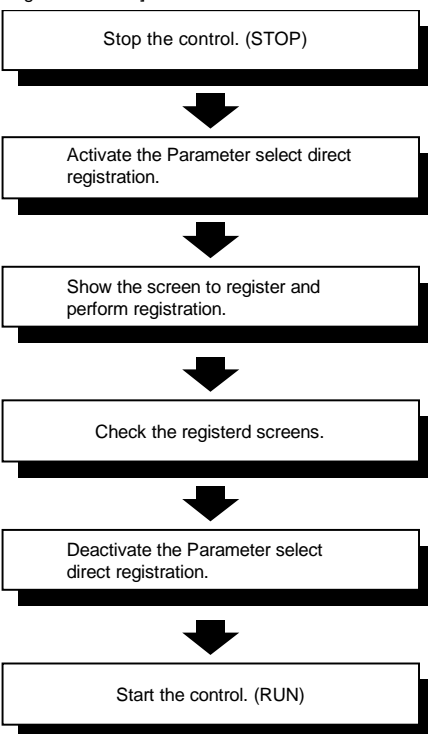
📖 Refer to the SC-F71 Instruction Manual [Parameters/Functions] (172-65710M) for setting example of the direct registration.

[Registration example of screen number entry method]

Register the following screens in the Screen number entry method

- Input 1_Measured value (PV)/Input 1_Set value (SV)
- RUN/STOP transfer
- Event 1 set value (EV1)

It is assumed here that Parameter select setting 1 to 3 will be used.

1. Check the screen number to register. The screen numbers can be found in the table of the list of parameters (this manual).

No.	Symbol	Name	Data range	Factory set value
15	R/S	RUN/STOP transfer	rUn: RUN (Control start) StoP: STOP (Control stop)	StoP

Screen number of examples

- Input 1_Measured value (PV)/Input 1_Set value (SV): 1
- RUN/STOP transfer: 15
- Event 1 set value (EV1): 27

2. Set the screen number on the Parameter select setting screen in the Setting lock mode.

3. Check the registered screens.
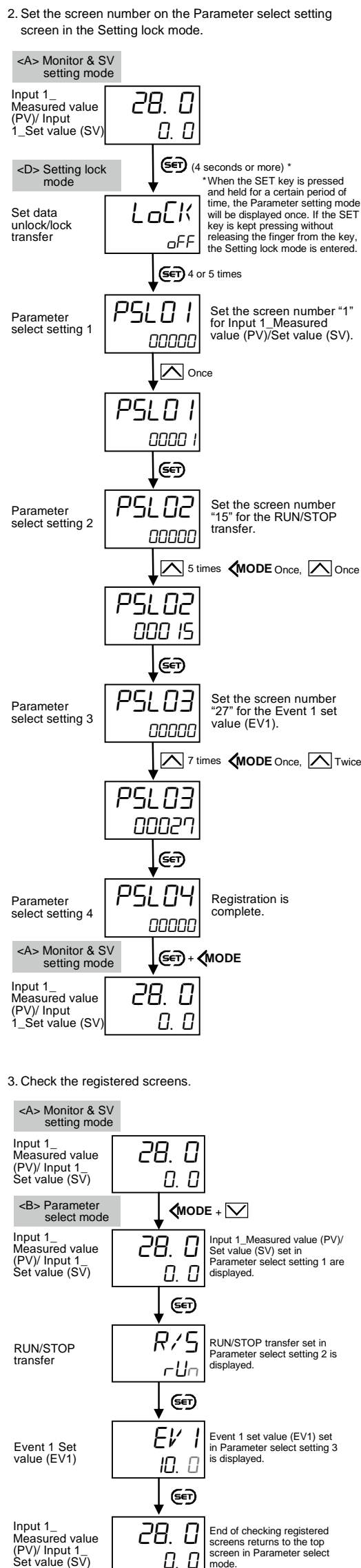
Blind Function

The Blind function is used to hide all screens except Parameter select mode, Setting lock mode, and Measured value (PV)/Set value (SV) monitor.
The Blind function can be set in the Setting lock mode.

📖 When the blind function is activated, the instrument displays the Parameter select mode after displaying the model and the input type/range at the time of power-up.
If all of the necessary screens are placed together in the Parameter select mode, there will be no need of switching screens to other modes.

[Operation flow when the Blind function is activated]

*The PV/SV monitor includes Set value (SV) setting and Manipulated output value (MV) setting.
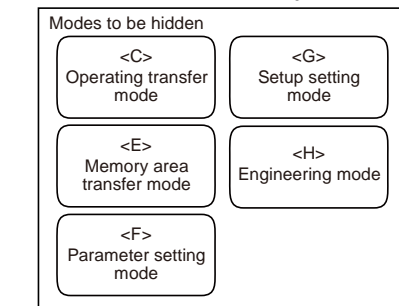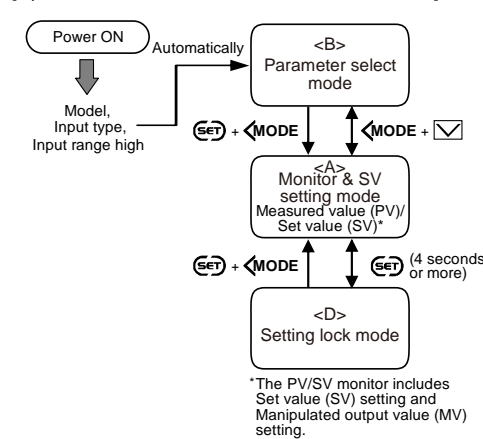
■ Setting of blind function

Example: Event 1 set value (EV1)