

## Product Discontinuation Notice

Issue Date  
March, 2023

### Product Discontinuation

Digital Temperature Controller



**E5CSV series**



### Recommended Replacement

Digital Temperature Controller

**E5CC series**

#### [ Final order entry date ]

The end of March, 2025

#### [ Date of The Last Shipping ]

The end of June, 2025

#### [ Caution on recommended replacement ]

- The universal input is used as the input of the recommended replacement product. There is no distinction between input types by model.
- Only 0, 2 or 3 auxiliary outputs (alarm outputs) are available for the recommended replacement product.
- Only black color is available for the case of the recommended replacement product.

#### [ Difference from discontinued product ]

Recommended replacement model	Body color	Dimensions	Wire connection	Mounting dimensions	Characteristics	Operation ratings	Operation methods
E5CC series	--	*	*	**	*	*	*

\*\* : Compatible

\* : The change is a little/Almost compatible



-- : Not compatible

- : No corresponding specification

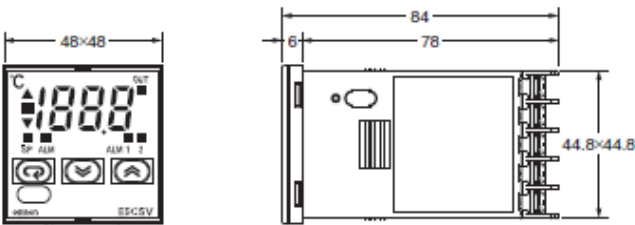
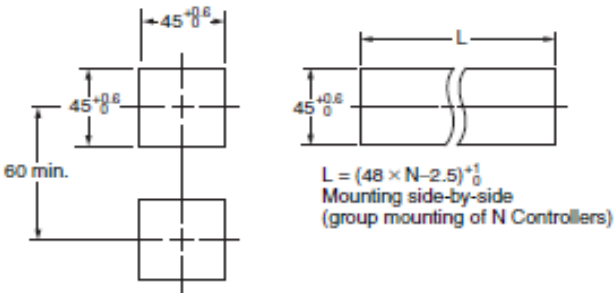
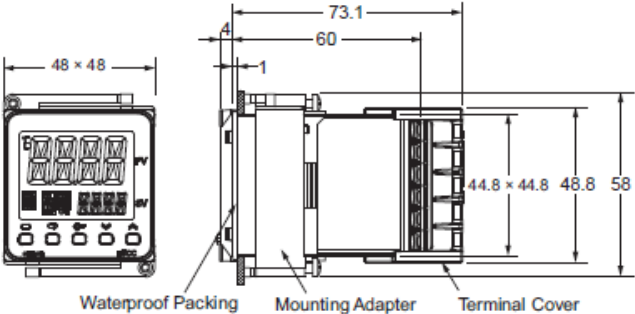
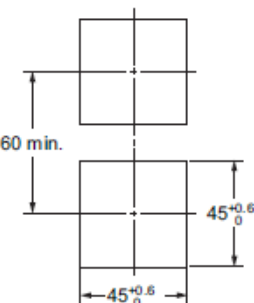

**[ Product Discontinuation and recommended replacement ]**

<b>Product discontinuation</b>	<b>Recommended replacement</b>
E5CSV-Q1KJ-W 100-240 VAC	E5CC-QX2ASM-000
E5CSV-Q1P-W 100-240 VAC	E5CC-QX2ASM-000
E5CSV-Q1T 100-240 VAC	E5CC-QX2ASM-000
E5CSV-Q1TD 24 VAC/VDC	E5CC-QX2DSM-000
E5CSV-Q2T 100-240 VAC	E5CC-QX2ASM-000
E5CSV-Q2TD 24 VAC/VDC	E5CC-QX2DSM-000
E5CSV-QT 100-240 VAC	E5CC-QX0ASM-000
E5CSV-QTD 24 VAC/VDC	E5CC-QX0DSM-000
E5CSV-R1KJ-W 100-240 VAC	E5CC-RX2ASM-000
E5CSV-R1KJD-W 24 VAC/VDC	E5CC-RX2DSM-000
E5CSV-R1P-W 100-240 VAC	E5CC-RX2ASM-000
E5CSV-R1T 100-240 VAC	E5CC-RX2ASM-000
E5CSV-R1TD 24 VAC/VDC	E5CC-RX2DSM-000
E5CSV-R2T 100-240 VAC	E5CC-RX2ASM-000
E5CSV-R2TD 24 VAC/VDC	E5CC-RX2DSM-000
E5CSV-RT 100-240 VAC	E5CC-RX0ASM-000
E5CSV-RTD 24 VAC/VDC	E5CC-RX0DSM-000

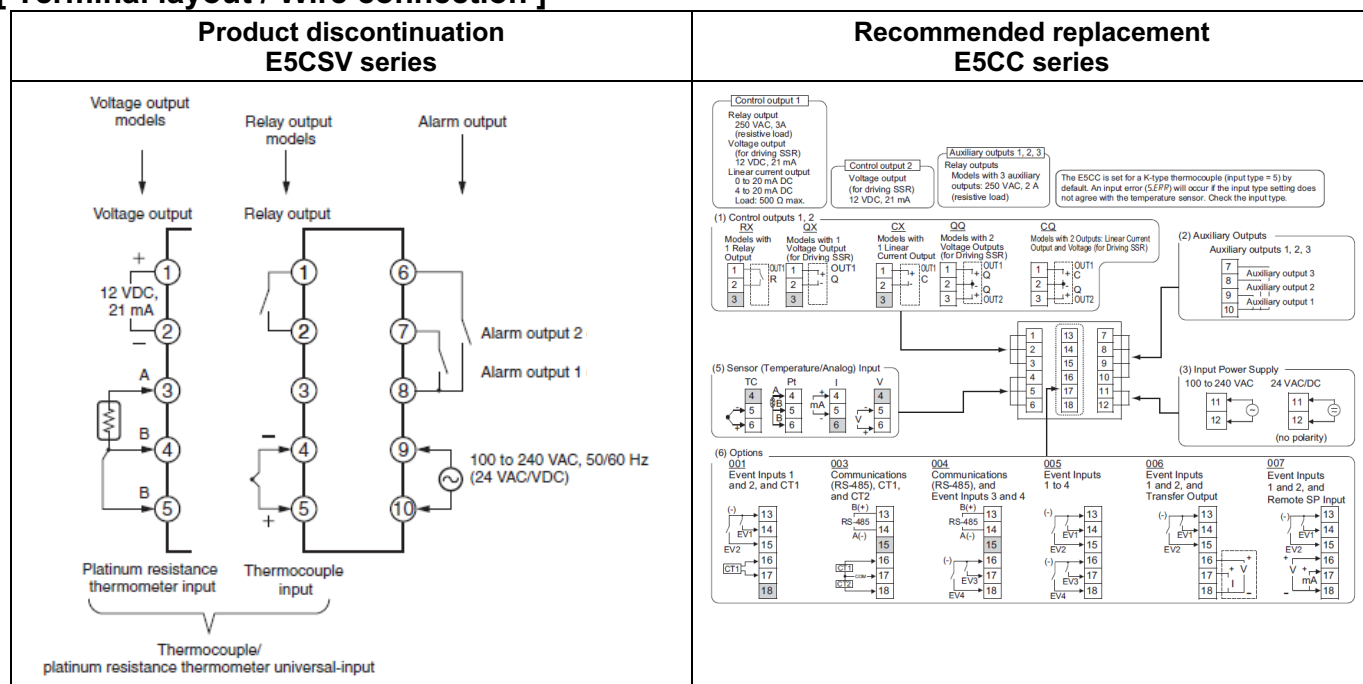
[ Body color ]

Product discontinuation E5CSV series	Recommended replacement E5CC series
Case color Light gray, Black  	Case color Black  

[ Dimensions ]

Product discontinuation E5CSV series	Recommended replacement E5CC series
  <p> <math>L = (48 \times N - 2.5) +1/0</math>            Mounting side-by-side            (group mounting of N Controllers)         </p>	 <div style="display: flex; justify-content: space-around;"> <div> <p>Mounted Separately</p>  </div> <div> <p>Group Mounted  <math>(48 \times \text{number of units} - 2.5) +1/0</math></p>  </div> </div>

### [ Terminal layout / Wire connection ]



[ Ratings ]

Item		Product discontinuation E5CSV series	Recommended replacement E5CC series
Supply voltage		100 to 240 VAC, 50/60 Hz 24 VAC, 50/60 Hz; 24 VDC	Same as on the left
Operating voltage range		85% to 110% of rated supply voltage	Same as on the left
Power consumption		100 to 240 VAC: 5 VA 24 VAC: 3 VA, 24 VDC: 2 W	5.2 VA max. at 100 to 240 VAC 3.1 VA max. at 24 VAC 1.6 W max. at 24 VDC
Sensor input		Thermocouple: K, J, L Platinum resistance thermometer: Pt100, JPt100 Universal-input (thermocouple/platinum resistance thermometer): K, J, L, T, U, N, R, Pt100, JPt100	Thermocouple: K, J, T, E, L, U, N, R, S, B, C/W, PL II Platinum resistance thermometer: Pt100, JPt100 Infrared temperature sensor (ES1B): 10 to 70°C, 60 to 120°C, 115 to 165°C, 140 to 260°C Analog input Current input: 4 to 20 mA, 0 to 20 mA Voltage input: 1 to 5 V, 0 to 5 V, 0 to 10 V
Input impedance		N/A	Current input: 150 Ω max. Voltage input: 1 MΩ min. (Use a 1:1 connection when connecting the ES2-HB-N/THB-N.)
Control output	Relay output	SPST-NO, 250 VAC, 3A (resistive load)	Same as on the left
	Voltage output (for driving the SSR)	12 VDC, 21 mA	12 VDC ±20%, 21mA
	Linear current output	N/A	4 to 20 mA DC/0 to 20 mA DC Load: 500 Ω max. Resolution: approx. 10,000
Alarm output (auxiliary output)	Relay output	SPST-NO, 250 VAC, 1A (resistive load) 1a	SPST-NO, 250 VAC, 3 A (resistive load) 1a



<b>Event input</b>	N/A	2 or 4 inputs (depends on model) Contact input: ON: 1 k $\Omega$ max., OFF: 100 k $\Omega$ min. Non-contact input: ON: Residual voltage: 1.5 V max., OFF: Leakage current: 0.1 mA max. Current flow: Approx. 7 mA per contact
<b>Transfer output</b>	N/A	1 output Current output: 4 to 20 mA DC Load: 500 $\Omega$ max. Resolution: approx. 10,000 Linear voltage output: 1 to 5 VDC Load: 1 k $\Omega$ min. Resolution: Approx. 10,000
<b>Control method</b>	ON/OFF or 2-PID	Same as on the left
<b>Setting method</b>	Digital setting using front panel keys	Same as on the left
<b>Remote SP input</b>	N/A	Current input: 4 to 20 mA DC or 0 to 20 mA DC (input impedance: 150 $\Omega$ max.) Voltage input: 1 to 5 VDC, 0 to 5 VDC, or 0 to 10 VDC (input impedance: 1 M $\Omega$ min.)
<b>Indication method</b>	7-segment digital display (character height: 13.5 mm) and deviation indicators	11-segment digital display and individual indicators Character height: PV: 15.2 mm, SV: 7.1 mm
<b>Multi SP</b>	N/A	Up to eight set points (SP0 to SP7) can be saved and selected using the event inputs, key operations, or serial communications.
<b>Ambient operating temperature</b>	-10 to 55°C With 3-year guarantee: -10 to 50°C	Same as on the left
<b>Ambient operating humidity</b>	25% to 85%	Same as on the left

## [ Characteristics ]

Item	Product discontinuation E5CSV series	Recommended replacement E5CC series
<b>Indication accuracy</b>	Thermocouple: ( $\pm 0.5\%$ of indication value or $\pm 1^\circ\text{C}$ , whichever is greater) $\pm 1$ digit max. U, L: $\pm 2^\circ\text{C} \pm 1$ digit max. R: $\pm 3^\circ\text{C} \pm 1$ digit max. at $200^\circ\text{C}$ or less	Thermocouple: ( $\pm 0.3\%$ of indication value or $\pm 1^\circ\text{C}$ , whichever is greater) $\pm 1$ digit max. K (in the $-200$ to $1,300^\circ\text{C}$ range), T and N at $-100^\circ\text{C}$ max., and U and L at any temperatures: $\pm 2^\circ\text{C} \pm 1$ digit max. B at $400^\circ\text{C}$ max.: not specified B at $400$ to $800^\circ\text{C}$ : $\pm 3^\circ\text{C}$ max. R and S at $200^\circ\text{C}$ max.: $\pm 3^\circ\text{C} \pm 1$ digit max. C/W: ( $\pm 0.3\%$ of PV or $\pm 3^\circ\text{C}$ , whichever is greater) $\pm 1$ digit max. PL II: ( $\pm 0.3\%$ of PV or $\pm 2^\circ\text{C}$ , whichever is greater) $\pm 1$ digit max.

	Platinum resistance thermometer: ( $\pm 0.5\%$ of indication value Indication accuracy or $\pm 1^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Input set values 0, 1, 2, 3: 0.5% FS $\pm 1$ digit max.	Platinum resistance thermometer: ( $\pm 0.2\%$ of indication value or $\pm 0.8^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Analog input: $\pm 0.2\%$ FS $\pm 1$ digit max. CT input: $\pm 5\%$ FS $\pm 1$ digit max.
<b>Transfer output accuracy</b>	N/A	$\pm 0.3\%$ FS max.
<b>Simple transfer output accuracy</b>	N/A	$\pm 0.3\%$ FS max. Precision between 0 and 4 mA for a 0 to 20 mA output is $\pm 1\%$ FS max.
<b>Remote SP Input Type</b>	N/A	$\pm 0.2\%$ FS $\pm 1$ digit max.
<b>Influence of temperature</b>	R thermocouple inputs: ( $\pm 1\%$ of PV or $\pm 10^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Other thermocouple inputs: ( $\pm 1\%$ of PV or $\pm 4^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Platinum resistance thermometer inputs: ( $\pm 1\%$ of PV or $\pm 2^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max.	Thermocouple input (R, S, B, C/W, PL II): ( $\pm 1\%$ of indication value or $\pm 10^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Other thermocouple input: ( $\pm 1\%$ of indication value or $\pm 4^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. K at $-100^{\circ}\text{C}$ max.: $\pm 10^{\circ}\text{C}$ max. Platinum resistance thermometer: ( $\pm 1\%$ of indication value or $\pm 2^{\circ}\text{C}$ , whichever is greater) $\pm 1$ digit max. Analog input: $\pm 1\%$ FS $\pm 1$ digit max. CT input: $\pm 5\%$ FS $\pm 1$ digit max. Remote SP input: $\pm 1\%$ FS $\pm 1$ digit max.
<b>Influence of voltage</b>		
<b>Influence of EMS. (at EN 61326-1)</b>		
<b>Hysteresis</b>	0.2% FS (0.1% FS for universal-input (thermocouple/platinum resistance thermometer) models) (for ON/OFF control)	Temperature input: 0.1 to 999.9°C or °F (in units of 0.1°C or °F) Analog input: 0.01% to 99.99% FS (in units of 0.01% FS)
<b>Input sampling period</b>	500 ms	50 ms
<b>Proportional band (P)</b>	1 to 999°C (automatic adjustment using auto-tuning/self-tuning)	Temperature input: 0.1 to 999.9°C or °F (in units of 0.1°C or °F) Analog input: 0.1% to 999.9% FS (in units of 0.1% FS)
<b>Integral time (I)</b>	1 to 1999 s (automatic adjustment using auto-tuning/self-tuning)	0 to 9999 s (in units of 1 s) 0.0 to 999.9 s (in units of 0.1 s)
<b>Derivative time (D)</b>	1 to 1999 s (automatic adjustment using auto-tuning/self-tuning)	0 to 9999 s (in units of 1 s) 0.0 to 999.9 s (in units of 0.1 s)
<b>Proportional band (P) for cooling</b>	N/A	Temperature input: 0.1 to 999.9°C or °F (in units of 0.1°C or °F) Analog input: 0.1% to 999.9% FS (in units of 0.1% FS)
<b>Integral time (I) for cooling</b>	N/A	0 to 9999 s (in units of 1 s) 0.0 to 999.9 s (in units of 0.1 s)
<b>Derivative time (D) for cooling</b>	N/A	0 to 9999 s (in units of 1 s) 0.0 to 999.9 s (in units of 0.1 s)
<b>Control period</b>	2/20 s	0.1, 0.2, 0.5, 1 to 99 s (in units of 1 s)
<b>Manual reset value</b>	N/A	0.0 to 100.0% (in units of 0.1%)

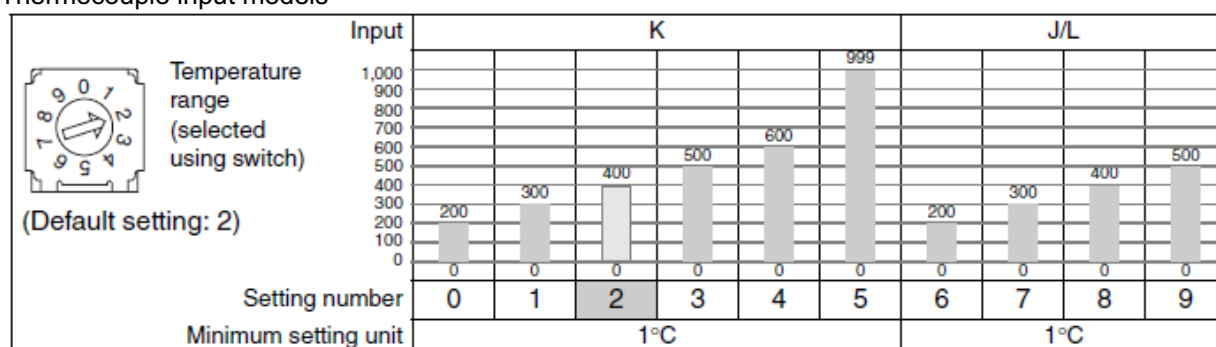
<b>Alarm output range</b>		Absolute-value alarm: Same as the control range Other: 0 to input setting range full scale (°C or °F) Alarm hysteresis: 0.2°C or °F (fixed)	-1999 to 9999 (decimal point position depends on input type)
<b>Insulation resistance</b>		20 MΩ min. (at 500 VDC)	Same as on the left
<b>Dielectric strength</b>		2,000 VAC, 50/60 Hz for 1 min (between current-carrying terminals of different polarity)	3,000 VAC, 50/60 Hz for 1 min (between current-carrying terminals of different polarity)
<b>Vibration resistance</b>	<b>Malfunction</b>	10 to 55 Hz, 20 m/s <sup>2</sup> for 10 min each in X, Y, and Z directions	Same as on the left
	<b>Destruction</b>	10 to 55 Hz, 0.75-mm single amplitude for 2 hrs each in X, Y, and Z directions	10 to 55 Hz, 20 m/s <sup>2</sup> for 2 hrs each in X, Y, and Z directions
<b>Shock resistance</b>	<b>Malfunction</b>	100 m/s <sup>2</sup> min., 3 times each in six directions	100 m/s <sup>2</sup> , 3 times each in X, Y, and Z directions
	<b>Destruction</b>	300 m/s <sup>2</sup> min., 3 times each in six directions	300 m/s <sup>2</sup> , 3 times each in X, Y, and Z directions
<b>Life expectancy (relay output)</b>	<b>Electrical</b>	100,000 operations min.	Same as on the left
<b>Memory protection</b>		EEPROM (non-volatile memory) (number of writes: 1,000,000)	Same as on the left
<b>Weight</b>		Approx. 120 g (Controller only)	Controller: Approx. 120 g, Mounting Adapter: Approx. 10 g
<b>Degree of protection</b>		Front panel: IP66; Rear case: IP20; Terminals: IP00	Same as on the left
<b>Standards</b>	<b>Approved standards</b>	UL 61010-1 (listing) CSA C22.2 No.1010-1	cULus: UL 61010-1/CSA C22.2 No.61010-1, KOSHA (S Mark) certification (Some models only), Korean wireless regulations (Radio law: KC Mark) (Some models only), Lloyd's standards, EAC
	<b>Conformed standards</b>	EN61326-1, EN 61010-1 (IEC 61010-1)	EN61326-1, EN 61010-1 (IEC 61010-1), RCM
<b>EMC</b>		EMI Radiated: EN 55011 Group 1 Class A EMI Conducted: EN 55011 Group 1 Class A ESD Immunity: EN 61000-4-2 Radiated Electromagnetic Field Immunity: EN 61000-4-3 Conducted Disturbance Immunity: EN 61000-4-6 Noise Immunity (First Transient Burst Noise): EN 61000-4-4 Surge Immunity: EN 61000-4-5 Voltage Dip/Interrupting Immunity: EN 61000-4-11	Same as on the left



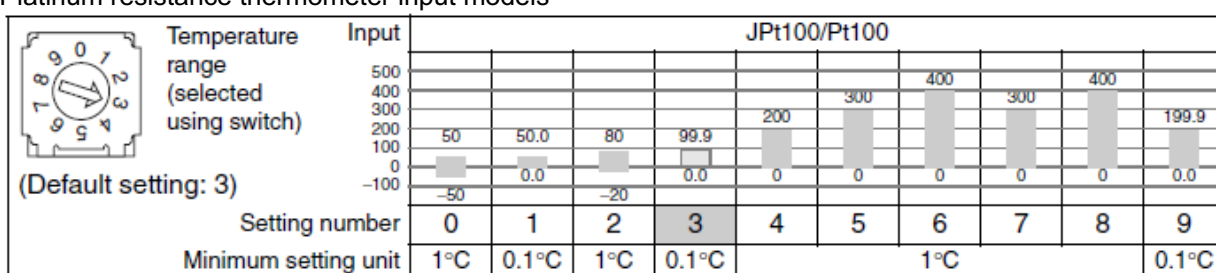
[ Operation characteristics ]

Product discontinuation  
E5CSV series

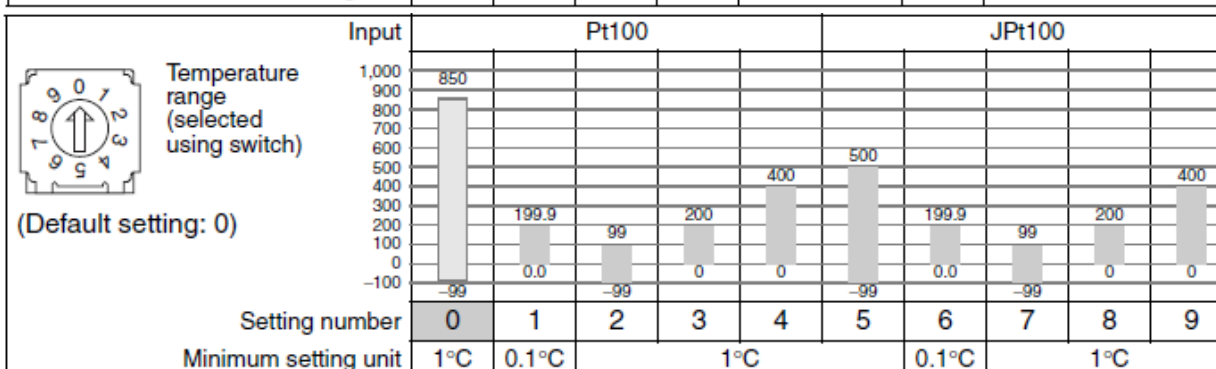
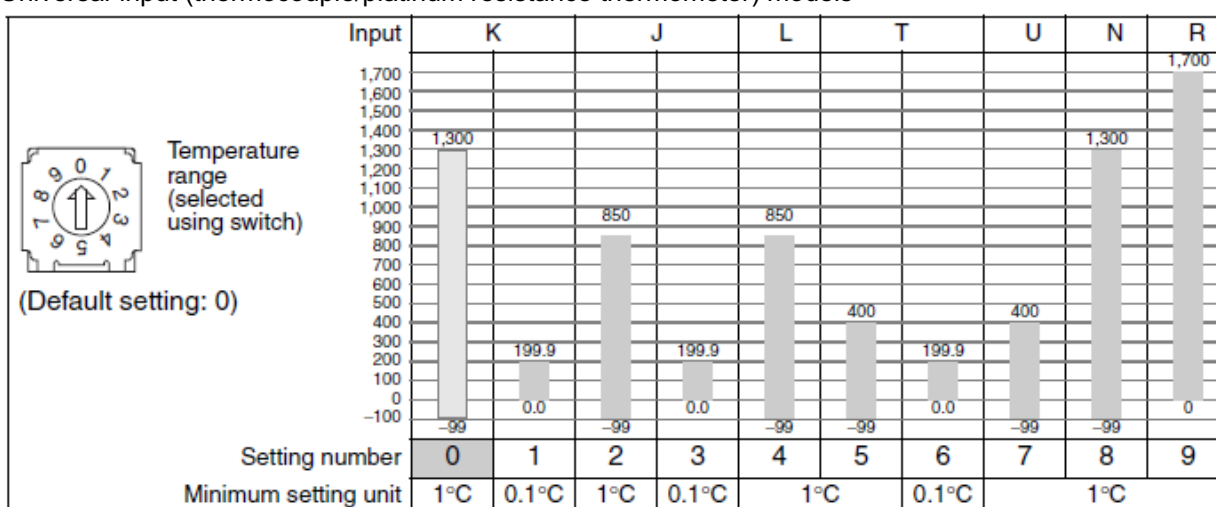
Temperature range  
Thermocouple input models



Platinum resistance thermometer input models



Universal-input (thermocouple/platinum resistance thermometer) models



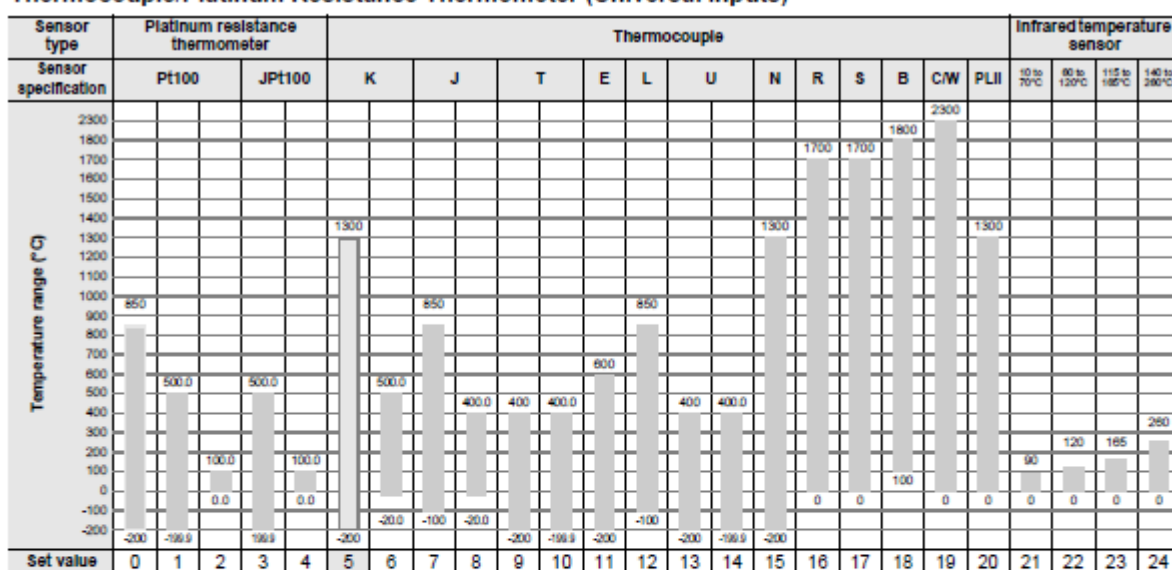
# Alarm mode

Set value	Alarm type	Alarm output operation
0,9	Alarm function OFF	Output OFF
1	Upper- and lower-limit	ON OFF SP X X
2	Upper-limit	ON OFF SP X
3	Lower-limit	ON OFF SP X
4	Upper- and lower-limit range	ON OFF SP X X
5	Upper and lower-limit with standby sequence	ON OFF SP X X
6	Upper limit with standby sequence	ON OFF SP X
7	Lower limit with standby sequence	ON OFF SP X
8	Absolute-value upper-limit	ON OFF O Y

## Recommended replacement E5CC series

### Input ranges

#### Thermocouple/Platinum Resistance Thermometer (Universal inputs)



The applicable standards for the input types are as follows:

K, J, T, E, N, R, S, B: JIS C 1602-2015, IEC 60584-1

L: Fe-CuNi, DIN 43710-1985

U: Cu-CuNi, DIN 43710-1985

C/W: W5Re/W26Re, JIS C 1602-2015, ASTM E988-1990

JPt100: JIS C 1604-1989, JIS C 1606-1989

Pt100: JIS C 1604-1997, IEC 60751

PL II: According to Platinum II electromotive force charts from BASF (previously Engelhard)

### Analog input

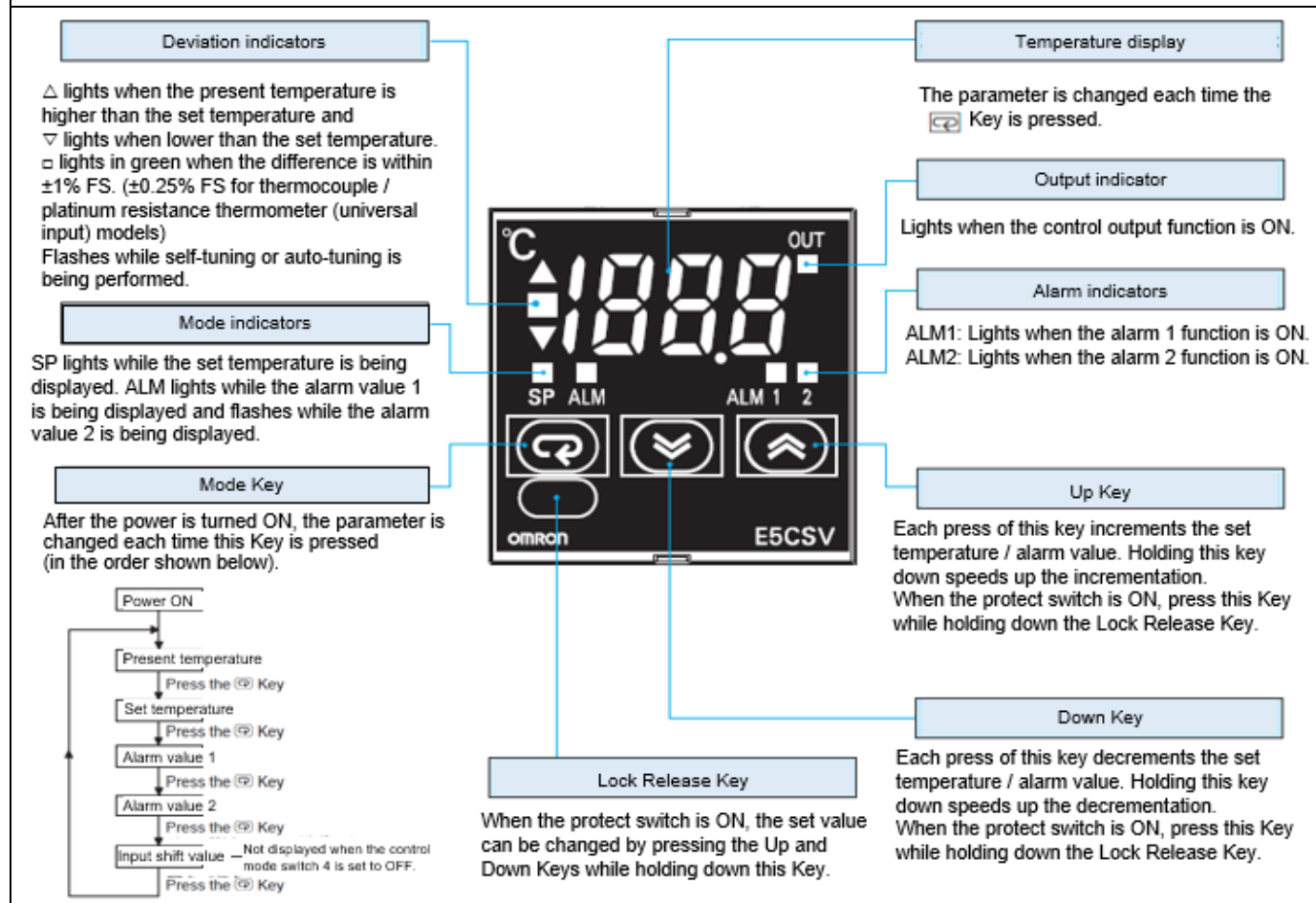
Input type	Current		Voltage			
Input specification	4 to 20 mA	0 to 20 mA	1 to 5 V	0 to 5 V	0 to 10 V	0 to 50 mV*
Setting range	Usable in the following ranges by scaling: -1999 to 9999, -199.9 to 999.9, -19.99 to 99.99 or -1.999 to 9.999					
Set value	25	26	27	28	29	30

# Alarm types

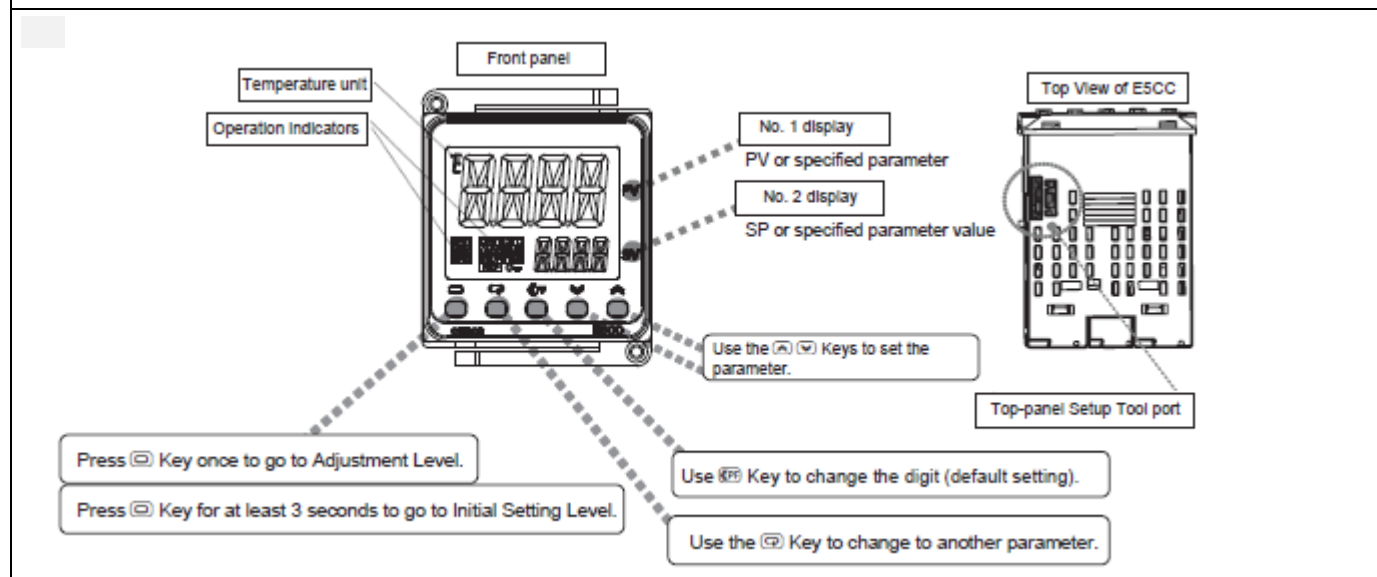
Set value	Alarm type	Alarm output operation		Description of function
		When alarm value X is positive	When alarm value X is negative	
0	Alarm function OFF	Output OFF		No alarm
1	Upper- and lower-limit *1		*2	Set the upward deviation in the set point for the alarm upper limit (H) and the lower deviation in the set point for the alarm lower limit (L). The alarm is ON when the PV is outside this deviation range.
2 (default)	Upper-limit			Set the upward deviation in the set point by setting the alarm value (X). The alarm is ON when the PV is higher than the SP by the deviation or more.
3	Lower-limit			Set the downward deviation in the set point by setting the alarm value (X). The alarm is ON when the PV is lower than the SP by the deviation or more.
4	Upper- and lower-limit range *1		*3	Set the upward deviation in the set point for the alarm upper limit (H) and the lower deviation in the set point for the alarm lower limit (L). The alarm is ON when the PV is inside this deviation range.
5	Upper- and lower-limit with standby sequence *1		*4	A standby sequence is added to the upper- and lower-limit alarm (1). *6
6	Upper-limit with standby sequence			A standby sequence is added to the upper-limit alarm (2). *6
7	Lower-limit with standby sequence			A standby sequence is added to the lower-limit alarm (3). *6
8	Absolute-value upper-limit			The alarm will turn ON if the process value is larger than the alarm value (X) regardless of the set point.
9	Absolute-value lower-limit			The alarm will turn ON if the process value is smaller than the alarm value (X) regardless of the set point.
10	Absolute-value upper-limit with standby sequence			A standby sequence is added to the absolute-value upper-limit alarm (8). *6
11	Absolute-value lower-limit with standby sequence			A standby sequence is added to the absolute-value lower-limit alarm (9). *6
12	LBA (alarm 1 type only)	-		*7
13	PV change rate alarm	-		*8
14	SP absolute-value upper-limit alarm			This alarm type turns ON the alarm when the set point (SP) is higher than the alarm value (X).
15	SP absolute-value lower-limit alarm			This alarm type turns ON the alarm when the set point (SP) is lower than the alarm value (X).
16	MV absolute-value upper-limit alarm *9	Standard Control 	Standard Control 	This alarm type turns ON the alarm when the manipulated variable (MV) is higher than the alarm value (X).
		Heating/Cooling Control (Heating MV) 	Heating/Cooling Control (Heating MV) Always ON	
17	MV absolute-value lower-limit alarm *9	Standard Control 	Standard Control 	This alarm type turns ON the alarm when the manipulated variable (MV) is lower than the alarm value (X).
		Heating/Cooling Control (Cooling MV) 	Heating/Cooling Control (Cooling MV) Always ON	
18	RSP absolute-value upper-limit alarm *10			This alarm type turns ON the alarm when the remote SP (RSP) is higher than the alarm value (X).
19	RSP absolute-value lower-limit alarm *10			This alarm type turns ON the alarm when the remote SP (RSP) is lower than the alarm value (X).

[ Display ]

Product discontinuation  
E5CSV series



Recommended replacement  
E5CC series



Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.