

Standard Models (Power supply: 100-240 VAC)

Input		Indication method	Control method	No indication		
				ON/OFF	Proportional (P)	
Input/ standard scale (°C)	Thermocouple	K (CA) Chromel vs. Alumel	Output	Relay		
						0 to 200°C
			0 to 300°C	-	E5C2-R40K AC100-240 0-300	
			0 to 400°C	E5C2-R20K AC100-240 0-400	E5C2-R40K AC100-240 0-400	
			0 to 600°C	E5C2-R20K AC100-240 0-600	E5C2-R40K AC100-240 0-600	
			0 to 800°C	E5C2-R20K AC100-240 0-800	E5C2-R40K AC100-240 0-800	
			0 to 1000°C	E5C2-R20K AC100-240 0-1000	-	
			0 to 1200°C	E5C2-R20K AC100-240 0-1200	-	
		J (IC) Iron versus Constantan	0 to 200°C	E5C2-R20J AC100-240 0-200	-	
			0 to 300°C	E5C2-R20J AC100-240 0-300	-	
			0 to 400°C	E5C2-R20J AC100-240 0-400	-	
	Resistance thermometer	Platinum resistance thermometer	-50 to 50°C	E5C2-R20P-D AC100-240 -50-50	-	
				0 to 50°C	E5C2-R20P-D AC100-240 0-50	-
				0 to 100°C	E5C2-R20P-D AC100-240 0-100	-
				0 to 200°C	E5C2-R20P-D AC100-240 0-200	-
				0 to 300°C	E5C2-R20P-D AC100-240 0-300	-
				0 to 400°C	E5C2-R20P-D AC100-240 0-400	-
	Thermistor	THE (replaceable element)	0 to 100°C	E5C2-R20G AC100-240 0-100	-	
				100 to 200°C	E5C2-R20G AC100-240 100-200	-
				150 to 300°C	E5C2-R20G AC100-240 150-300	-

■ Accessories (Order Separately)

Sockets

Name	Model
Front Connecting Socket	P2CF-08
Back Connecting Socket	P3G-08
Front Connecting Socket with Finger Protection	P2CF-08-E
Protective Cover (for finger protection)	Y92A-48G

Protective Cover

Type	Model
Hard Protective Cover	Y92A-48B

Specifications

■ Ratings

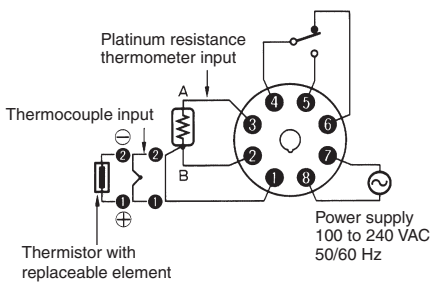
Supply voltage	100 to 240 VAC 50/60 Hz
Operating voltage range	90% to 110% of rated supply voltage
Power consumption	Approx. 3.6 VA
Input	Thermocouple (with sensor burnout detection circuit), platinum resistance thermometer, or thermistor with replaceable element
Control method	ON/OFF or proportional control
Setting method	Analog setting
Indication method	No indication
Control output	Relay output: SPDT, 3 A at 250 VAC, resistive load (switching capacity: 330 VA)
Ambient operating temperature	-10°C to 55°C (with no icing or condensation)
Ambient operating humidity	45% to 85%

Note: 1. Do not use an inverter output as the power supply. (Refer to *Safety Precautions for All Temperature Controllers.*)

■ Connections

Connecting the Input

- Connect a thermocouple, the E52-THE□ Thermistor (replaceable element) or a platinum resistance thermometer to terminals 1 (positive) and 2 (negative) on the E5C2 as shown in the following illustration.



- On the E52-□□1D, the lead wires are thermocouple element wires, making them difficult to solder because solder will not stick to them easily. Remove the crimp terminal and polish the ends before attempting to solder them.

■ Characteristics

Setting accuracy	±2% FS max.
Hysteresis	Approx. 0.5% FS (fixed)
Proportional band	3% FS (fixed)
Control period	Approx. 20 s
Reset range	5 ±1% FS min. (See note 1.)
Insulation resistance	20 MΩ min. (at 500 VDC)
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min between charged terminals and uncharged metallic parts
Vibration resistance	Malfunction: 10 to 55 Hz, 0.15-mm single amplitude for 10 min each in X, Y, and Z directions Destruction: 16.7 Hz, 2-mm double amplitude for 2 hrs each in X, Y, and Z directions
Shock resistance	Malfunction: 147 m/s ² , 3 times each in 6 directions Destruction: 294 m/s ² , 3 times each in 6 directions
Life expectancy	Electrical: 100,000 operations min. (3 A at 110 VAC, resistive load)
Weight	Approx. 100 g (with flush-mounting adapter)
Degree of protection	Front panel: IEC standard IP40 (See note 2.) Terminals: IEC standard IP00
Applicable Socket	P2CF-08 (order separately), P3G-08 (order separately)
Applicable Protective Cover	Y92A-48B (order separately)

- Note: 1.** No reset function is incorporated by any E5C2 model with ON/OFF control.
The reset function is used to correct offset for proportional control. If there is an offset below the set value, turn the reset adjustment clockwise.
- 2.** A special Watertight Cover is used to achieve this degree of protection (IP66, NEMA4). Refer to Y92A-□□N.

Output

- If the load circuit is a heating control system, be sure to connect the load to terminals 4 and 5. If the load circuit is a cooling control system, be sure to connect the load to terminals 4 and 6.
- We recommend using an external relay to extend the electrical life of internal relays when driving a large capacity load. This is particularly important when the output relay is switched frequently (e.g., with proportional control).

Power Supply

- If a single power supply is used for the E5C2 and the load, the supply voltage of the power supply may vary greatly when the load is open or closed if the capacity of the power supply is not large enough. Make sure that the capacity of the power supply is large enough so that the supply voltage range will be always from 90% to 110% of the rated supply voltage.
- The E5C2 operates at either 50 or 60 Hz.