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US08

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Temperature Controller

E5C4

1/16 DIN Sized, Digital-Set Controller
Features Easy-to-Read LED Display

- Proportional-derivative (PD) control or ON/OFF control models
- Front panel offset adjustment on PD controllers
- Choose contact or voltage outputs
- Type J or K thermocouples, or platinum RTD input models
- Fits standard 8-pin round sockets
- Panel mounting hardware included
- Sockets, protective cover, and other accessories may be ordered separately



Ordering Information

■ TEMPERATURE CONTROLLERS

Add the temperature range and supply voltage to the part number when you order. The minimum scale division is in parentheses.

For example, **E5C4-R20K-32° to 999°F-AC120**.

Control type	Output type	Input type (specify temperature range from choices below)		
		Thermocouple type K	Thermocouple type J	Platinum RTD
ON/OFF	Contact	E5C4-R20K	E5C4-R20J	E5C4-R20P-DIN
	Voltage	E5C4-Q20K	E5C4-Q20J	E5C4-Q20P-DIN
PD	Contact	E5C4-R40K	E5C4-R40J	E5C4-R40P-DIN
	Voltage	E5C4-Q40K	E5C4-Q40J	E5C4-Q40P-DIN
Temperature ranges		0° to 399°C (1) 0° to 999°C (1) 32° to 999°F (1)	0° to 399°C (1) 32° to 999°F (1)	0° to 99.9°C (0.1) 32° to 199°F (1)
Supply voltages		110/120 VAC, 50/60 Hz or 220/240 VAC, 50/60 Hz		

■ ACCESSORIES

Description		Part number
Sockets	Bottom surface or track mounting, top screw terminals	P2CF-08
	Back mounting, for use with Y92F-30 mounting adapter supplied, bottom screw terminals	P3G-08
	Back mounting plug type, for use with Y92F-30 mounting adapter supplied	US08
Protective cover	Soft plastic cover protects front panel against dirt and water.	Y92A-48D
Mounting track	DIN rail, 50 cm (1.64 ft) length	PFP-50N
	DIN rail, 1 m (3.28 ft) length	PFP-100N
	End plate	PFP-M
	Spacer	PFP-S

■ REPLACEMENT PART

Description	Part number
Panel mounting bracket; one supplied with each controller	Y92F-30

Specifications

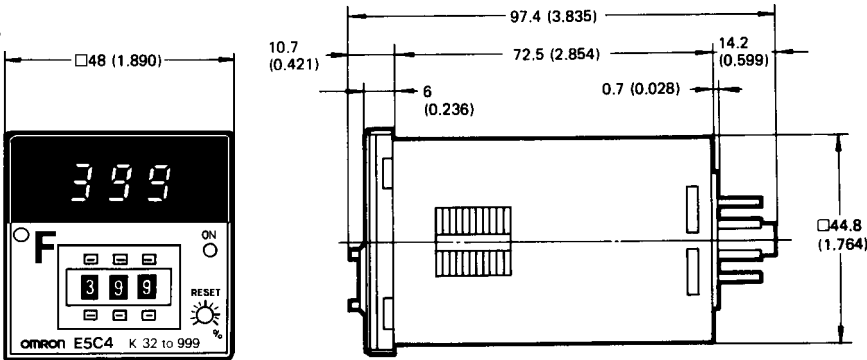
Part number			E5C4-□□□K	E5C4-□□□J	E5C4-□□□P-DIN
Sensor input types			Thermocouple type K	Thermocouple type J	Platinum RTD
Supply voltage			100/120 VAC, 50/60 Hz or 220/240 VAC, 50/60 Hz		
Operating voltage			90 to 110% of rated supply voltage		
Power consumption			Approx. 2 VA		
Control output	Number		One output, built in		
	Type	Relay	SPDT, 3 A, 250 VAC (resistive load), switching capacity of 330 VA		
		Voltage	5 VDC, 10 mA with short-circuit protection		
	Hysteresis		0.2% of full scale (fixed)		
	Service life		100,000 electrical operations minimum for relay output 10 million mechanical operations minimum for relay output		
Alarm output			Not available		
Indication accuracy			±2% maximum of full scale		
Setting accuracy			Set value coincides with the indicated value, since no relative error exists between both values		
Control modes	Type		ON/OFF (E5C4-□20□) or PD (E5C4-□40□)		
	Proportional band		3% of full scale (fixed)		
	Reset		3% minimum of full scale (variable); front panel potentiometer adjustment		
	Control period	Contact	Approx. 20 seconds, where ratio of ON to OFF is 1:1		
		Voltage	Approx. 2 seconds, where ratio of ON to OFF is 1:1		
Memory protection			Not available		
Indicators			Temperature Indication (3-digit red LED), Operation Indicator (red LED)		
Materials			Plastic case		
Mounting			Fits 1/16 DIN panel cutouts; includes panel mounting adapter Y92F-30		
Connections			Terminals for standard 8-pin round connectors		
Weight			Approx. 200 g (7 oz.) including panel mounting adapter		
Enclosure ratings			Front panel	IEC IP40, NEMA 4 with optional cover Y92A-48N	
			Housing	IEC IP20	
			Terminals	IEC IP00	
Approvals	UL	Recognized, File No. E68481, approved control output rating 1.5 A, 250 VAC			
	CSA	Certified, File No. LR59623, approved control output rating 1.5 A, 250 VAC			
	Other	SEV, File No. D4.11/634			
Ambient temperature	Use	-10° to 55°C (14° to 131°F)			
	Storage	-25° to 65°C (-13° to 149°F)			
Humidity			35 to 85% RH		
Insulation resistance			20 MΩ minimum at 500 VDC		
Dielectric strength			2,000 VAC, 50/60 Hz for 1 minute		
Vibration			Mechanical durability: 10 to 55 Hz 0.75 mm (0.03 in) in X, Y, and Z directions for 2 hours each Malfunction durability: 2 to 55 Hz, 2 G, in X, Y, and Z directions for 10 minutes each		
Shock			Mechanical durability: 300 m/s ² in 6 directions, 3 times each Malfunction durability: 200 m/s ² in 6 directions, 3 times each		

Dimensions

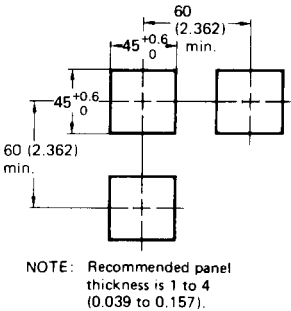
Unit: mm (inch)

■ TEMPERATURE CONTROLLER

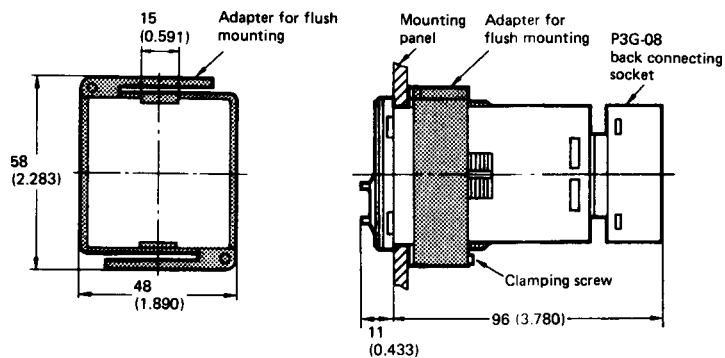
E5C4



Panel cutout

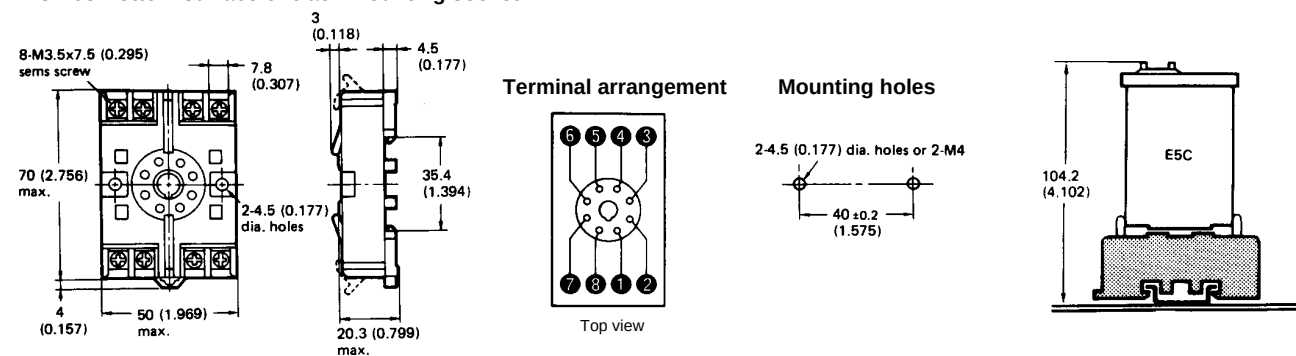


E5C4 Temperature Controller Mounted in Y92F-30 Panel Mounting Adapter (supplied)

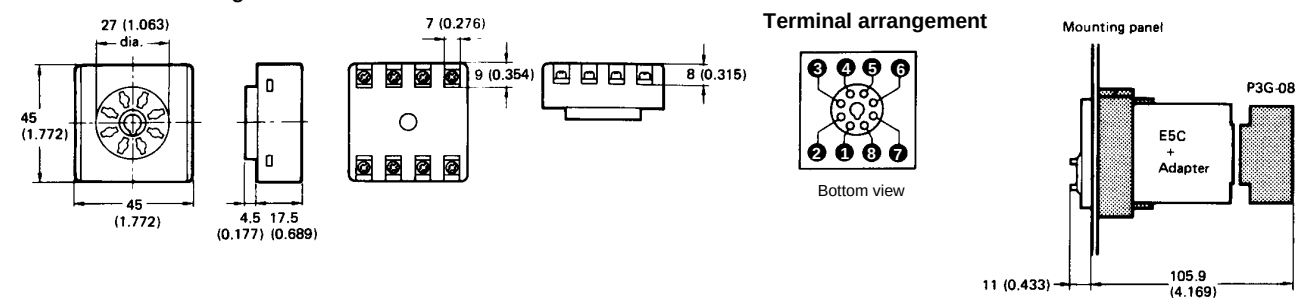


■ SOCKETS

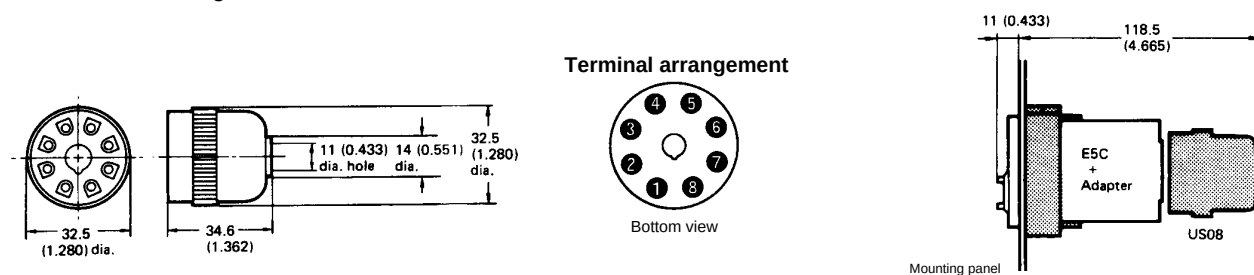
P2CF-08 Bottom surface or track mounting socket



P3G-08 Back mounting socket

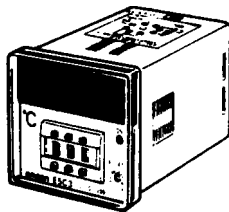


US08 Back-mounting socket



PROTECTIVE COVER

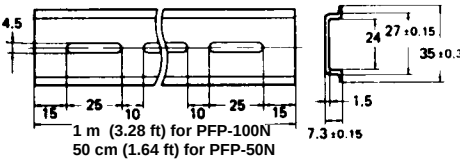
Y92A-48D



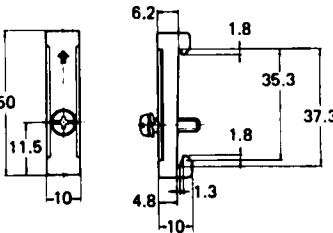
Soft plastic cover Y92A-48D fits snugly over the front and allows settings to be changed. It shields the front panel from dirt and water. The cover is intended for use in areas where unusual service conditions do not exist.

MOUNTING TRACK AND ACCESSORIES

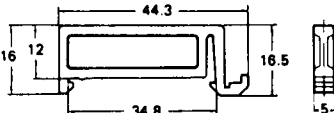
PFP-100N/PFP-50N DIN Rail



PFP-M End Plate

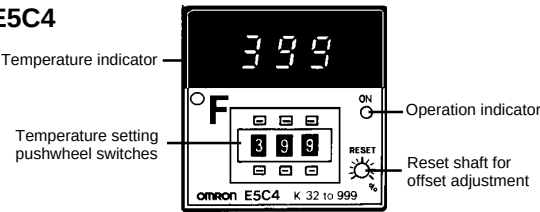


PFP-S Spacer



Nomenclature

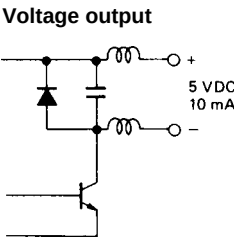
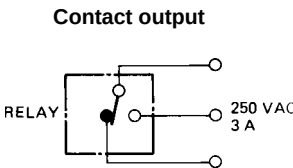
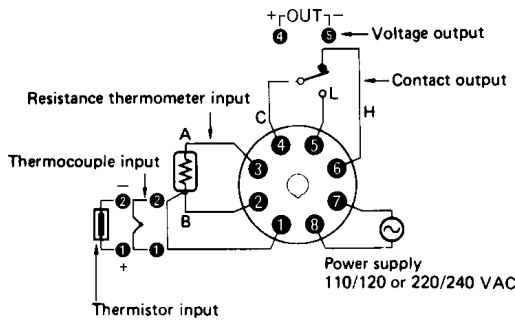
E5C4



Note:
Depending on the scale range, the leftmost digit cannot be set to any digits other than those shown below. A stopper mechanism is built in to prevent impossible settings.

Scale range	Permissible digits
0° to 399°C	0, 1, 2 and 3
32° to 199°F	0 and 1

Connections



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