

# Temperature Controller E5C2

## 1/16 DIN Sized, Analog-Set Controller Features Dual Scale Dial

- Proportional control (P) or ON/OFF control models.
- Front panel offset adjustment on P controllers.
- Choose contact or voltage outputs.
- Type J or K thermocouples, platinum RTD and thermistor input models.
- Panel mounting hardware included.
- Sockets, protective cover, and other accessories may be ordered separately.



## Ordering Information

### ■ Temperature Controllers

#### Type K Thermocouple Input

**Stock Note:** Shaded models are normally stocked.

Control type	Input type	Output type	Temperature range	Model
ON/OFF	Type K	Relay	32°F - 1112°F	E5C2-R20K-32/1112F-AC120
				E5C2-R20K-32/1112F-AC240
		Voltage	32°F - 1112°F	E5C2-Q20K-32/1112F-AC120
				E5C2-Q20K-32/1112F-AC240
Proportional	Type K	Relay	32°F - 1112°F	E5C2-R40K-32/1112F-AC120
				E5C2-R40K-32/1112F-AC240
		Voltage	32°F - 1112°F	E5C2-Q40K-32/1112F-AC120
				E5C2-Q40K-32/1112F-AC240

**Note:** Other temperature ranges and scales available.

#### Type J Thermocouple Input

**Stock Note:** Shaded models are normally stocked.

Control type	Input type	Output type	Temperature range	Model
ON/OFF	Type J	Relay	0°C - 200°C and 32°F - 392°F	E5C2-R20J-0200C/32392F-AC120
			E5C2-R20J-0200C/32392F-AC240	
		Voltage	0°C - 400°C and 32°F - 752°F	E5C2-R20J-0400C/32752F-AC120
			E5C2-R20J-0400C/32752F-AC240	
Proportional	Type J	Voltage	32°F - 752°F	E5C2-Q20J-32/752F-AC120
				E5C2-Q20J-32/752F-AC240
		Relay	32°F - 572°F	E5C2-R40J-32/572F-AC120
				E5C2-R40J-32/572F-AC240
Voltage	32°F - 572°F	E5C2-Q40J-32/572F-AC120		
		E5C2-Q40J-32/572F-AC240		

**Note:** Other temperature ranges and scales available.

## RTD Input

**Stock Note:** Shaded models are normally stocked.

Control type	Input type	Output type	Temperature range	Model
ON/OFF	RTD	Relay	32°F - 572°F	E5C2-R20P-32/572F-AC120
				E5C2-R20P-32/572F-AC240
		Voltage	32°F - 212°F	E5C2-Q20P-32/212F-AC240
				E5C2-Q20P-32/212F-AC120

**Note:** Other temperature ranges and scales available.

## Thermistor Input

**Stock Note:** Shaded models are normally stocked.

Control type	Input type	Output type	Temperature range	Model
ON/OFF	Thermistor	Relay	32°F - 212°F	E5C2-R20G-32/212F-AC120
				E5C2-R20G-32/212F-AC240
		Voltage	32°F - 212°F	E5C2-Q20G-32/212F-AC120
				E5C2-Q20G-32/212F-AC240

**Note:** Other temperature ranges and scales available.

## Accessories

**Stock Note:** Shaded models are normally stocked.

Description		Model
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	Hard plastic cover protects against accidental resetting	Y92A-48B
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

**Stock Note:** Shaded models are normally stocked.

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

# Specifications

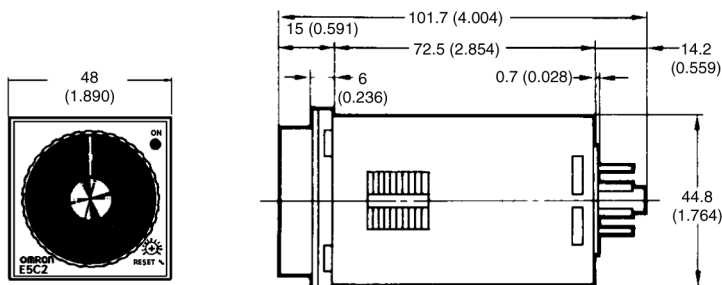
<b>Model</b>		E5C2-□□□K	E5C2-□□□J	E5C2-□□□P-DIN	E5C2-□□□G
<b>Sensor input types</b>		Thermocouple type K	Thermocouple type J	Platinum RTD	Thermistor
<b>Supply voltage</b>		100/120 VAC, 50/60 Hz or 220/240 VAC, 50/60 Hz			
<b>Operating voltage</b>		90% to 110% of rated supply voltage			
<b>Power consumption</b>		Approx. 2 VA			
<b>Control</b>	<b>Number</b>	One output, built-in			
	<b>Type</b>	<b>Relay</b>	SPDT, 3 A, 250 VAC (resistive load), switching capacity of 330 VA		
		<b>Voltage</b>	5 VDC, 10 mA with short-circuit protection		
	<b>Hysteresis</b>	0.5% max. of full scale (fixed)			
	<b>Service life</b>	100,000 electrical operations minimum for relay output 10 million mechanical operations minimum for relay output			
<b>Alarm output</b>		Not available			
<b>Setting accuracy</b>		±2% maximum of full scale			
<b>Control modes</b>	<b>Type</b>	ON/OFF (E5C2-□20□) or P (E5C2-□40□)			
	<b>Proportional band</b>	3% of full scale (fixed)			
	<b>Reset</b>	3% minimum of full scale (variable); front panel potentiometer adjustment			
	<b>Control period</b>	Approx. 20 seconds, where ratio of ON to OFF is 1:1			
<b>Memory protection</b>		Not available			
<b>Indicators</b>		Operation indicator (red LED)			
<b>Materials</b>		Plastic case			
<b>Mounting</b>		Fits 1/16 DIN panel cutouts; includes panel mounting adapter Y92F-30			
<b>Connections</b>		Terminals for standard 8-pin round connectors			
<b>Weight</b>		Approx. 200 f (7 oz.)			
<b>Enclosure ratings</b>		Front panel: IEC IP40, NEMA 4 with optional cover Y92A-48N Housing: IEC IP20 Terminals: IEC IP00			
<b>Approvals</b>	<b>UL</b>	Recognized, File No. E200593, approved control output rating 1.5 A, 250 VAC			
	<b>CSA</b>	Certified, File No. LR59623, approved control output rating 1.5 A, 250 VAC			
<b>Ambient temperature</b>	<b>Use</b>	-10° to 55°C (14° to 131°F)			
	<b>Other</b>	-25° to 65°C (-13° to 149°F)			
<b>Humidity</b>		35 to 85% RH			
<b>Insulation resistance</b>		20 M minimum at 500 VDC			
<b>Dielectric strength</b>		2,000 VAC, 50/60 Hz for 1 minute			
<b>Vibration</b>	<b>Mechanical</b>	10 to 55 Hz 0.75 mm (0.03 in) in X, Y, and Z directions for 2 hours each			
	<b>Malfunction</b>	2 to 55 Hz, 2 G, in X, Y, and Z directions for 10 minutes each			
<b>Shock</b>	<b>Mechanical</b>	300 m/s <sup>2</sup> in 6 directions, 3 times each			
	<b>Malfunction</b>	200 m/s <sup>2</sup> in 6 directions, 3 times each			

# Dimensions

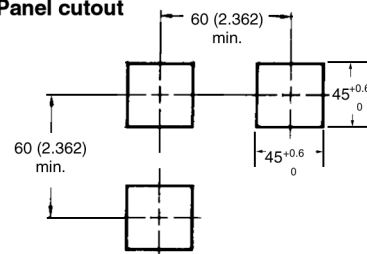
Unit: mm (inch)

## Temperature Controller

### E5C2

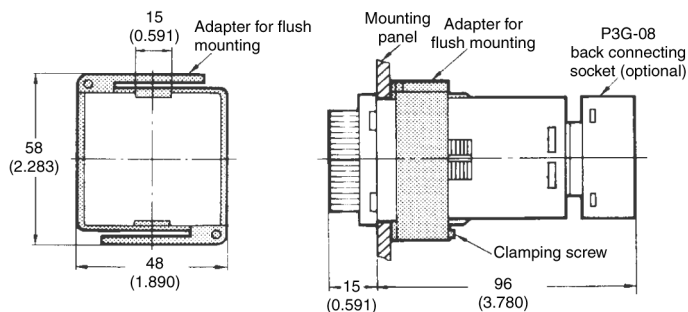


Panel cutout



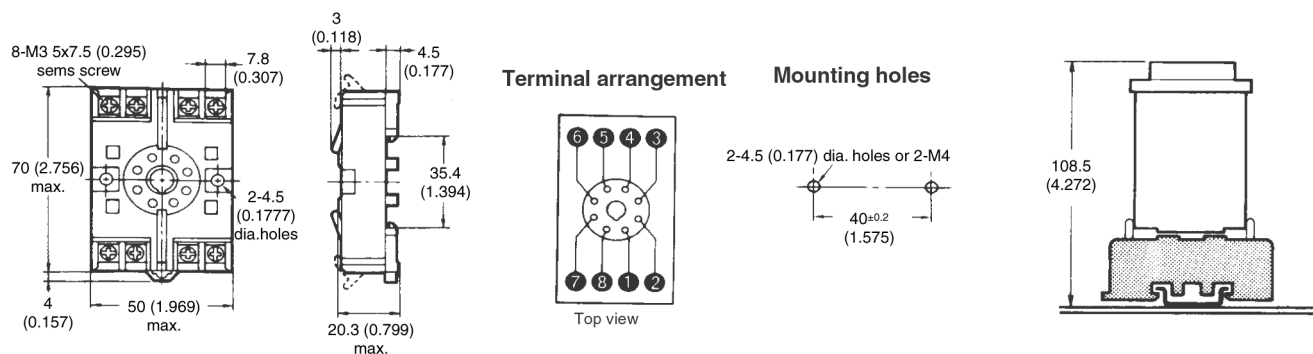
Note: Recommended panel thickness is 1 mm to 4 mm (0.039 to 0.157).

### E5C2 Temperature Controller Mounted in Y92F-30 Panel Mounting Adapter (supplied)

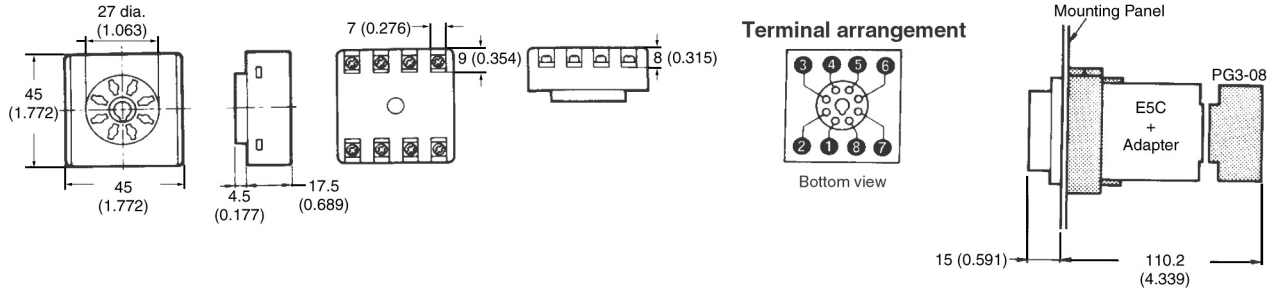


## Sockets

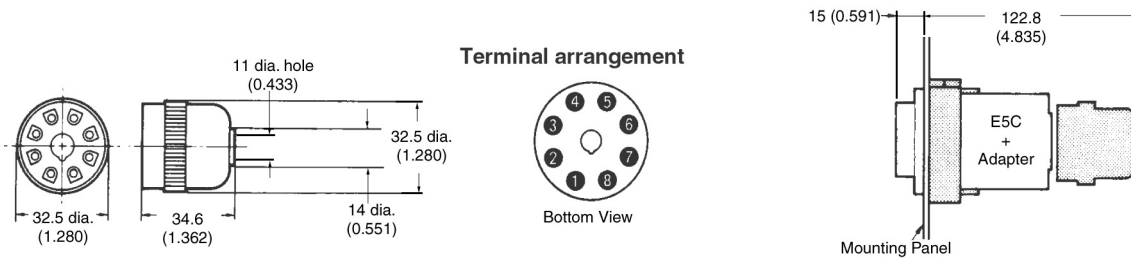
### P2CF-08 Bottom Surface or Track Mounting Socket



## P3G-08 Back Mounting Socket



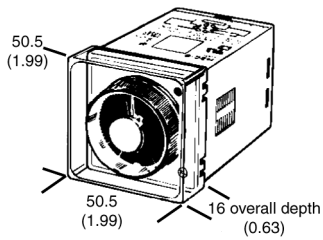
## US08 Back-Mounting Socket



## ■ Protective Cover

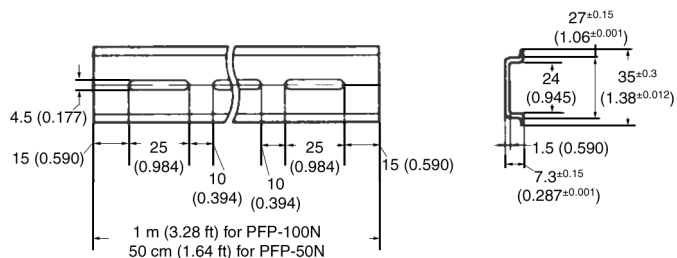
### Y92A-48B

Hard plastic cover Y92A-48B snaps onto the front of the temperature controller to prevent accidental resetting. It also shields the front panel from dirt and water. The cover is intended for use in areas where unusual service conditions do not exist.

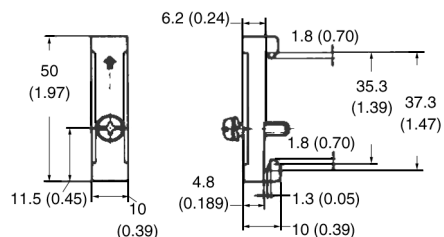


## ■ Mounting Track and Accessories

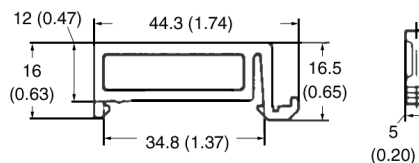
### PFP-100N/PFP-50N DIN Rail



### PFP-M End Plate

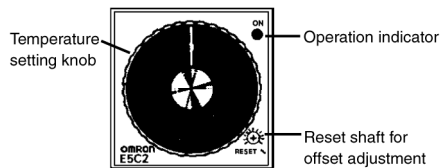


### PFP-S Spacer

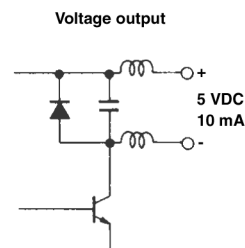
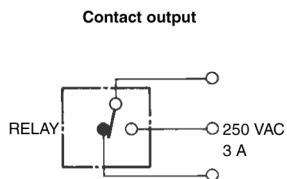
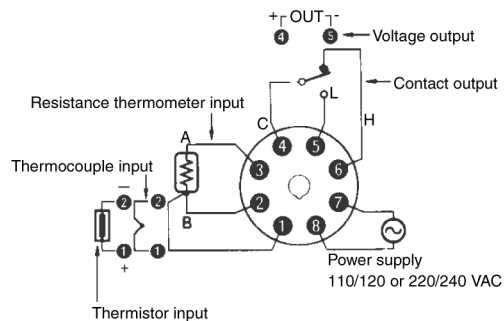


## Nomenclature

### ■ E5C2



## Connections



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To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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