

Temperature Controllers

Model TEC-805 1/8 DIN



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Simple Setpoint and Display!

Agency Approvals



Design Features

- * 1/8 DIN size – 48 mm × 96 mm
- * Short panel depth – only 2-9/16" (65 mm) required
- * Laser trimmed ASIC components
- * On-off or time proportional selection
- * Digital input by pushwheel switch
- * Digital display on 0.4" (10 mm)
- * Wide selection of output options
- * Universal power input, 90-264 VAC
- * Sensor break protection
- * Good performance at a very low price

Hardware Code: TEC-805-

1	2	3	4	5	6	7	8
					0		0

A Part Number based on the hardware code and any software pre-programming will be issued at time of order.

Standard lead time is stock to 2 weeks.

Power Input BOX 1

4 = 90-264 VAC 50/60 Hz

Signal Input BOX 2

- 1** = Thermocouple: Type J
- 2** = Thermocouple: Type K
- 3** = RTD: 100 ohm PT, DIN 0.00385
- 4** = RTD: 100 ohm PT, JIS 0.00392
- 9** = Other

Range code BOX 3

X = 0 to 499°F **C** = 0 to 299°C
V = 0 to 999°F **E** = 0 to 499°C
W = 0 to 1999°F **H** = 0 to 999°C
Other ranges are available for large volume orders. Consult Tempco for more information.

Control Mode BOX 4

- 1** = On - Off (used for valves & solenoids)
- 2** = Proportional (common for electric heaters)

Output 1 BOX 5

- 1** = Relay: 5A / 240 VAC
- 2** = Pulse DC for SSR drive: 20 VDC (20 mA max)
- 3** = 4-20 mA, linear (max load 500 ohms)
- 4** = 0-20 mA, linear (max load 500 ohms)
- 5** = 0-10 VDC, linear (min. impedance 500K ohms)
- 9** = Other

Output 2 BOX 6

0 = Not Available

Alarm BOX 7

- 0** = None
- 1** = Relay: 2A / 240 VAC Deviation alarm

Communication BOX 8

0 = Not Available

Power Input

Standard: 90 - 264 VAC, 50/60 Hz, 5VA

Signal Input

Accuracy: $\pm 1.0\%$ of full scale at 77°F/25°C

Thermocouple: Type J or K

RTD: 3-wire Pt100 DIN or JIS

Sampling Rate: 3 samples per second

Cold Junction Compensation: $\pm 0.1^\circ\text{C}$ / 1°C

Common Mode Rejection Ratio (CMRR): 120 dB

Normal Mode Rejection Ratio (NMRR): 60 dB

Sensor Break Protection: Upscale

Output

Relay Rating: 240 VAC, 5 Amp

SSR drive: Pulsed DC, 20 V at 20 mA maximum

Current: 4 - 20 mA, 0 - 20 mA, maximum load: 500 Ω

Voltage: 0 - 10 VDC, minimum load 500K Ω

Control

Proportional Band: 2.2% of span

ON-OFF Hysteresis: 1% of span

Cycle time: 20 seconds for relay output, 1 second for pulsed voltage output, 0.02 second for linear current or voltage output

Control Action: Reverse Action

Approval Standards

Safety Standard: UL3121-1

Protective Class: Front panel: IP 30

Housing and Terminals: IP 20

EMC: EN61326

Adjustment

Setpoint: 3-digit or 4-digit pushwheel switch

Manual Reset: Adjustable up to 2.6% of span

Setpoint Resolution: ± 1 Least Significant Digit

Accuracy of Setpoint: $\pm 1\%$ of span

Repeatability of Setpoint: ± 1 Least Significant Digit

Alarm

Type: Deviation $\pm 10\%$ of span **Relay:** 2A / 240 VAC

Display

Process Indicator: 3-1/2 digit, 0.4" / 10 mm red LED display

Output Status Indicator: Red LED lamp

Alarm Status Indicator: Red LED lamp

Environmental and Physical

Operating Temperature: 32 to 122°F (0 to 50°C)

Humidity: 0 to 90% RH, non-condensing

Dielectric Strength: 2000 VAC, 50/60 Hz for 1 minute

Vibration: 10 - 55 Hz, amplitude 1 mm

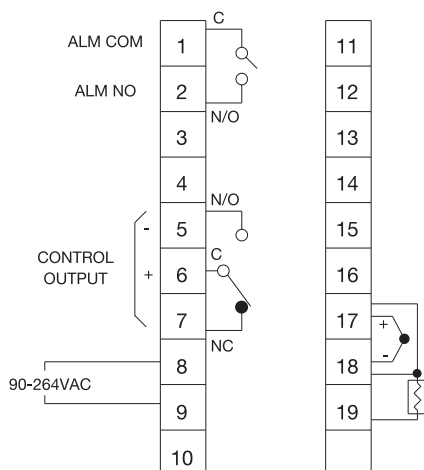
Shock: 200 m/s² (20g)

Dimensions: 3-3/4 \times 1-7/8 \times 3-1/8" (96 \times 48 \times 80 mm) H \times W \times D
Depth behind panel: 2-9/16" (65 mm)

Panel Cutout: 3-5/8" \times 1-25/32" (92 \times 45 mm) H \times W

Weight: 0.42 lb. (190 grams)

Rear Terminal Connections



Stock and Common Part Numbers (Power Input: 90-264 VAC, Proportional Mode)

Part Number	Signal Input	Range	Output	Alarm
TEC35521	J tc	0-999°F	relay	none
TEC35522	J tc	0-499°F	relay	none
TEC35523	K tc	0-1999°F	relay	none
TEC35524	K tc	0-999°F	relay	none
TEC35525	J tc	0-499°C	relay	none
TEC35526	J tc	0-299°C	relay	none
TEC35527	K tc	0-999°C	relay	none
TEC35528	K tc	0-499°C	relay	none
TEC35529	RTD	0-999°F	relay	none
TEC35530	RTD	0-499°C	relay	none