Model TEC-805 1/8 DIN Temperature Controller

**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

**Simple Setpoint and Display!**

**Hardware Code:** TEC-805-

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

View Product Inventory @ www.tempco.com
Power Input
Standard: 90 - 264 VAC, 50/60 Hz, 5VA

Signal Input
Accuracy: ±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: ±0.1°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: 500Ω
Voltage: 0 - 10 VDC, minimum load 500KΩ

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: ±1% of span
Repeatability of Setpoint: ± 1 Least Significant Digit

Alarm
Type: Deviation ± 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 × 1-7/8 × 3-1/8" (96 × 48 × 80 mm) H×W×D
Depth behind panel: 2-9/16" (65 mm)
Panel Cutout: 3-5/8" × 1-25/32" (92 × 45 mm) H×W
Weight: 0.42 lb. (190 grams)

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

<table>
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<tr>
<th>Part Number</th>
<th>Signal Input</th>
<th>Range</th>
<th>Output</th>
<th>Alarm</th>
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