Models TEC-402 & TEC-401 1/4 DIN Temperature Controllers

**Design Features**
- 1/4 DIN size – 96 mm × 96 mm
- Model TEC-402 temperature control with deviation meter
- Model TEC-401 non-indicating temperature control
- Laser trimmed ASIC components
- Short panel depth – only 2.0” (51 mm) required
- On-off or time proportional selection
- Wide selection of output options
- Potentiometer setpoint
- Sensor break protection
- Good performance at a very low price

### Agency Approval:

- CE

### With Deviation Meter

**Hardware Code:** TEC-402-

- 1
- 2
- 3
- 4
- 5
- 0
- 7
- 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.**

### Non-Indicating

**Hardware Code:** TEC-401-

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 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**

- 3 = 100-130 VAC, 50/60 Hz or 200-240 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

### Standard Range Code **BOX 3**

- 4 = 0 to 300°C
- 6 = 0 to 600°C
- C = 50 to 550°F
- 6 = 0 to 600°F
- E = 50 to 850°F

**Below available for large volume orders. Consult Tempco for more information.**

- 2 = 0 to 100°C
- 3 = 0 to 200°C
- 5 = 0 to 400°C
- 7 = 0 to 800°C
- 8 = 0 to 1200°C
- 9 = Other
- A = 50 to 200°F
- B = 50 to 400°F
- D = 50 to 750°F
- F = 50 to 1100°F
- G = 50 to 1400°F
- H = 0 to 2200°F

### 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

### Communication **BOX 8**

- 0 = Not Available

### Output 2 **BOX 6**

- 0 = Not Available

### Alarm (TEC-402) only **BOX 7**

- 0 = None
- 1 = Relay: 3A / 240 VAC deviation alarm

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**View Product Inventory @ www.tempco.com**
**Models TEC-402 & TEC-401 Specifications**

**Power Input**
- 100 - 130 VAC, 50/60 Hz, 5VA
- 200 - 240 VAC, 50/60 Hz, 5VA

**Signal Input**
- Thermocouple: Type J or K
- RTD: 3-wire Pt100, DIN or JIS
- Sampling Rate: 3 samples per second
- Accuracy: ±2% of span
- Cold Junction Compensation: ±0.1°C / 1°C
- Common Mode Rejection Ratio (CMRR): 120 dB
- Normal Mode Rejection Ratio (NMRR): 60 dB

**Output 1**
- Relay Rating: 5 Amp, 240 VAC
- SSR drive: Pulsed DC, 20 V at 20 mA maximum
- Current Loop: 4 - 20 mA, 0 - 20 mA, maximum load: 500Ω
- Voltage: 0 - 10 VDC, minimum load 500 KΩ

**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: EN61326
- Protective Class: Front panel: IP 30
- Housing and Terminals: IP 20

**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 × 3-3/4 × 2-9/16" (96 × 96 × 65 mm) H × W × D
- Panel Cutout: 3-5/8 × 3-5/8" (92 × 92 mm) H × W
- Weight: 0.79 lb. (360 grams)

**Adjustment**
- Setpoint: Single turn wirewound potentiometer
- Setpoint Resolution: 0.2% of span
- Accuracy of Setpoint: ±2% of span
- Repeatability of Setpoint: ±0.1% of span

**Display**
- Deviation meter: ±10% of scale (TEC-402)
- Non-Indicating (TEC-401)

**With Deviation Meter**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Signal Input</th>
<th>Range</th>
<th>Output</th>
<th>Alarm</th>
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<tbody>
<tr>
<td>TEC57201</td>
<td>J tc</td>
<td>50-850°F</td>
<td>relay</td>
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**Non-Indicating**

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