**Temperature Controllers**

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

**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

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**With Process Temperature Deviation Meter!**

**With Deviation Meter**

**Hardware Code:** TEC-402-

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-

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.*

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**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  C = 50 to 550°F
6 = 0 to 600°C  E = 50 to 850°F

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

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

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

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

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View Product Inventory @ www.tempco.com
Temperature Controllers

**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

**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)

**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)

**Rear Terminal Connections**

**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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</thead>
<tbody>
<tr>
<td>TEC57201</td>
<td>J tc</td>
<td>50-850°F</td>
<td>relay</td>
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<tr>
<td>TEC57202</td>
<td>J tc</td>
<td>50-550°F</td>
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<td>TEC57203</td>
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<td>50-850°F</td>
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<tr>
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<td>K tc</td>
<td>50-550°F</td>
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<td>none</td>
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<tr>
<td>TEC57205</td>
<td>RTD</td>
<td>50-550°F</td>
<td>relay</td>
<td>none</td>
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<tr>
<td>TEC57206</td>
<td>J tc</td>
<td>0-300°C</td>
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<tr>
<td>TEC57207</td>
<td>J tc</td>
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<tr>
<td>TEC57208</td>
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<td>TEC57209</td>
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**Non-Indicating**

<table>
<thead>
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<th>Part Number</th>
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<th>Output</th>
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<tr>
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<tr>
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<td>50-550°F</td>
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<td>relay</td>
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<tr>
<td>TEC57107</td>
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<tr>
<td>TEC57109</td>
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<td>relay</td>
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