Models TEC-905 & TEC-900 1/16 DIN

Temperature Controllers

Model TEC-905 1/16 DIN Controller & Model TEC-900 1/16 DIN Indicator Only

Design Features
✴ 1/16 DIN size – 48 mm × 48 mm
✴ Short panel depth – only 3-3/8” (86 mm) required
✴ Laser trimmed ASIC components
✴ On-off or time proportional selections
✴ Wide selection of output options
✴ Universal power input, 90-264 VAC
✴ Sensor break protection
✴ Good performance at a very low price
✴ Model TEC-905 control with pushwheel setpoint
✴ Model TEC-900 indicator only

Simple Setpoint and Display!

Display only!

Temperature Controller

Hardware Code: TEC-905-

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.

Temperature Indicator

Hardware Code: TEC-900-

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.

Control Mode

(TEC-905 only)
1 = On - Off (used for valves & solenoids)
2 = Proportional (common for electric heaters)

Output 1

(TEC-905 only)
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

Alarm

Communication

0 = Not Available

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

(TEC-905 only)
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.

Range code

(TEC-900 only)
BOX 3

Thermocouple
A = 0 to 1200°F – Type J
B = 0 to 600°C – Type J
C = 0 to 2000°F – Type K
D = 0 to 1100°C – Type K
RTD
E = -32 to 752°F
F = 0 to 400°C

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 / 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 1 (for TEC-905 only)
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 (for TEC-905 only)
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

Adjustment (for TEC-905 only)
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

Display
Process Indicator: 3-1/2 digit, 0.4” / 10 mm red LED display
Output Status Indicator: Red LED lamp (for TEC-905 only)

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 1mm
Shock: 200 m/s² (20g)
Dimensions: 1-7/8” × 1-7/8” × 3-3/4” (48 × 48 × 94 mm) H×W×D
Depth behind panel: 3-3/8” (86 mm)
Panel Cutout: 1-25/32” × 1-25/32” (45 × 45 mm) H×W
Weight: 0.42 lb. (190 grams)

TEC-905 Stock and Common Part Numbers
(Power Input: 90-264 VAC, Proportional Mode)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Signal Input</th>
<th>Range</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC17511</td>
<td>J tc</td>
<td>0-999°F</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17512</td>
<td>J tc</td>
<td>0-999°F</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17513</td>
<td>K tc</td>
<td>0-1999°F</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17514</td>
<td>K tc</td>
<td>0-999°F</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17515</td>
<td>J tc</td>
<td>0-999°C</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17516</td>
<td>J tc</td>
<td>0-299°C</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17517</td>
<td>K tc</td>
<td>0-999°C</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17518</td>
<td>K tc</td>
<td>0-299°C</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17519</td>
<td>RTD</td>
<td>0-999°F</td>
<td>relay</td>
</tr>
<tr>
<td>TEC17520</td>
<td>RTD</td>
<td>0-999°C</td>
<td>relay</td>
</tr>
</tbody>
</table>

TEC-900 Stock and Common Part Numbers
(Power Input: 90-264 VAC, Indicator Only)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Signal Input</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEC17021</td>
<td>J tc</td>
<td>0-1200°F</td>
</tr>
<tr>
<td>TEC17022</td>
<td>K tc</td>
<td>0-2000°F</td>
</tr>
<tr>
<td>TEC17023</td>
<td>J tc</td>
<td>0-600°C</td>
</tr>
<tr>
<td>TEC17024</td>
<td>K tc</td>
<td>0-1100°C</td>
</tr>
<tr>
<td>TEC17025</td>
<td>RTD</td>
<td>32-752°F</td>
</tr>
<tr>
<td>TEC17026</td>
<td>RTD</td>
<td>0-400°C</td>
</tr>
</tbody>
</table>

Rear Terminal Connections

NOTE: Terminals 8, 9 and 10 are not used for Model TEC-900.