Temperature Controllers

Models TEC-4500 & TEC-9500



Model TEC-4500 1/4 DIN & Model TEC-9500 1/16 DIN Ramp & Soak Temperature Controls



Configurable for 5 **Programmable Outputs**

Configurable for 4 Programmable Outputs

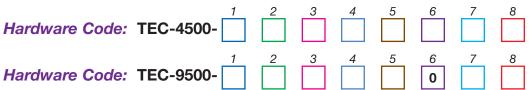
Note: Detailed information on features common to digital microprocessor-based TEC temperature controls and the complete Table of Input Range and Accuracy can be found on page 13-46.

Design Features

- * Ramp & Soak Programmable Control
- * Nine recipes (profiles) available using 64 segments maximum per recipe
- * Event Input one of 8 functions can be chosen: start run mode, hold mode, abort recipe, manual mode, failure transfer, turn off, segment advance, select 2nd set of PID parameters
- * Event Output 3 relays are available. Can be programmed to any segment or end of recipe
- * Analog Retransmission optional mA or VDC transfer of PV or SV values
- * Highly accurate universal input with 18 bit analog to digital converter
- * Bright 0.40" (10mm) red LED process display
- * Fast sample rate 200ms
- * Fuzzy Logic PID Autotune heat and cool control 2 sets of values can be used
- * Optional RS-485 or RS-232 communications interface
- * Programming port available for PC connection allowing quick
- * Lockout protection guards against unauthorized setting changes
- * Bumpless transfer allows continued temperature control if sensor fails
- * Universal input, field configurable (Type J T/C default, PT100, mA.V) with high accuracy 18-bit D-A

A Part Number based on the hardware code and any software

* Short panel depth required



Signal Input — Universal, can be programmed in the field BOX 2

- 1 = Universal input (factory default = TC type J) Thermocouple: J, K, T, E, B, R, S, N, L, C, P RTD: PT100 DIN, PT100 JIS (0 to 60mV)
- = DC Current: 0-20 mA (default), 4-20 mA
- 9 = Other

= Voltage: 0-10V, 0-5V, 1-5V, 0-1V

Output 3 BOX 5

- 0 = None
- 1 = Relay: 2A / 240 VAC
- $\mathbf{2}$ = Pulse DC for SSR drive 5 VDC (30 mA max)

pre-programming will be issued at time of order.

- 6 = Triac-SSR output 1A / 240 VAC
- 7 = Isolated 20V @ 25 mA DC, Output Power Supply 8 = Isolated 12V @ 40 mA DC, Output Power Supply A = Isolated 5V @ 80 mA DC, Output Power Supply

- = Pulsed voltage to drive SSR, 14V/40mA
- 9 = Other

Output 1 BOX 3

1 = Relay: 2A / 240 VAC

Power Input BOX 1 **4** = 90-250 VAC, 50-60 Hz

5 = 11-26 VAC / VDC

- 2 = Pulse DC for SSR drive: 5 VDC (30 mA max)
- 3 = Isolated 4-20mA / 0-20 mA
- 4 = Isolated 1-5V / 0-5V/0-10VDC
- 6 = Triac-SSR output 1A / 240 VAC
- C = Pulse DC for SSR drive: 14 VDC (40 mA max)
- 9 = Other

Output 2 BOX 4

- $\mathbf{0}$ = None
- 1 = Relay: 2A / 240 VAC
- $\mathbf{2}$ = Pulse DC for SSR drive 5 VDC (30 mA max)
- $3 = \text{Isolated } 4-20 \,\text{mA} / 0-20 \,\text{mA}$
- 4 = Isolated 1-5V / 0-5V/0-10V
- 6 = Triac-SSR output 1A / 240 VAC
- **7** = Isolated 20V @ 25 mA DC, Output Power Supply
- 8 = Isolated 12V @ 40 mA DC, Output Power Supply
- A = Isolated 5V @ 80 mA DC, Output Power Supply
- C = Pulsed voltage to drive SSR, 14V/40mA
- 9 = Other

Output 4 BOX 6 (TEC-4500 only)

- 0 = None
- 1 = Relay: 2A / 240 VAC
- 2 = Pulse DC for SSR drive 5 VDC (30 mA max)
- 3 = Retransmission 4-20mA (default), 0-20 mA
- 4 = Retransmission 1-5 VDC (default)/ 0-5VDC, 0-10 VDC
- 6 = Triac-SSR output 1A / 240 VAC
- 7 = Isolated 20V @ 25 mA DC, Output Power Supply 8 = Isolated 12V @ 40 mA DC, Output Power Supply
- A = Isolated 5V @ 80 mA DC, Output Power Supply
- C = Pulsed voltage to drive SSR, 14V/40mA
- 9 = Other

