Temperature Controllers

Model TEC-6400 DIN Rail Mount

Model TEC-6400 DIN Rail Mount Temperature Controller

Design Features

✴ DIN Rail Mount, 35 mm
✴ Fuzzy Logic PID Autotune heat and cool control
✴ Universal input, field configurable (Type J T/C default, PT100, mA, V) with high accuracy 18-bit D-A
✴ Countdown display
✴ RS - 485 and Analog Retransmission Available
✴ Micro USB Programming Port
✴ Fast sampling rate (200 msec)
✴ Manual control & auto-tune function
✴ Wide range of alarm mode selection
✴ Lockout protection
✴ Bumpless transfer during failure mode
✴ Soft-start ramp & dwell timer
✴ Bright LCD display using NFPA/IEC standard colors
✴ High performance with low cost

Hardware Code: TEC-6400

Agency Approvals:
RoHS, REACH, WEEE

Power Input

| BOX 1 | 4 = 90-250 VAC | 5 = 11-40 VDC / 20-28 VAC |

Output 1

| BOX 2 | 1 = Relay: 2A / 240 VAC | 2 = Pulse DC for SSR drive: 5 VD (30 mA max) | 3 = Isolated, 4-20 mA (default), 0-20 mA | 5 = Isolated VDC, 0-10 scalable | C = Pulse DC for SSR drive: 14 VDC (40mA max) |

Output 2 / Alarm 1

| BOX 3 | 0 = None | 1 = Pulse DC for SSR drive: 5 VDC (30 mA max) | 2 = Isolated, 4-20 mA (default), 0-20 mA | 3 = Isolated, VDC, 0-10 scalable | 5 = Pulse DC for SSR drive: 14 VDC (40mA max) |

Option 1

| BOX 4 | 0 = None | 1 = RS-485 Interface | 2 = 1 Event Input EI 1 | 3 = 1 CT Input (CT 1) |

Option 2

| BOX 5 | 0 = None | 1 = Retransmit: 4-20mA / 0-20mA | 2 = Retransmit: 0-10 VDC | 3 = Alarm 2 Relay: 2A / 240 VAC | 4 = 1 Event Input EI 2 | 5 = 1 CT Input (CT 2) |

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.

Transformer for Heater Break Alarm

(0-50 Amp current)

Part Number: TEC99998

Specifications on page 13-47

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Temperature Controllers

Model TEC-6400 Specifications (DIN Rail)

Power Input
- Standard: 90-250 VAC, 47-63 Hz, 8VA, 4W maximum
- Optional: 11-40 VDC / 20-8 VAC, 47-63 Hz, 8VA, 4W maximum

Signal Input
- Resolution: 18 Bits
- Sampling Rate: 5 Times / Second (200msec)
- Maximum Rating: -2VDC minimum, 12VDC maximum
- Sensor Break Detection: Sensor open for thermocouple and RTD inputs, sensor short for RTD input, below 1mA for 4-20mA input, below 0.25V for 1-5V input, not available for other inputs
- Sensor break responding time: Within 4 seconds for thermocouple and RTD inputs, 0.1 second for 4-20mA and 1-5V inputs

Event Input
- Number of Event Inputs: 1
- Logic Low: -10V minimum, 0.8V maximum
- Logic High: 2V minimum, 10V maximum

CT Input
- CT type: TEC99998
- Accuracy: ±2% of full scale reading, ± 1 digit maximum
- Input Impedance: 294Ω
- Measurement Range: 0-50A AC
- Output of CT: 0-5V DC
- CT Mounting: Wall (Screw) mount
- Sampling Rate: 1 time/second

Output 1 / Output 2
- Type: Relay, pulsed voltage, linear voltage and linear current
- Relay Rating: 2A, 240V AC, 200000 life cycles for resistive load
- Pulsed Voltage: Source voltage 5V, Current limiting resistance 66Ω
- Linear Output Resolution: 15 Bits
- Isolation Breakdown Voltage: 1000 V AC
- Load Capacity of Linear Output: Linear current: 500Ω maximum, Linear voltage: 10KΩ minimum

Alarm
- Relay Type: Form A
- Maximum Rating: 2A, 240VAC, 200000 life cycles for resistive load
- Alarm Functions: Dwell timer, Deviation low, Deviation high, Deviation band low, Deviation band high, Process high, Process low
- Alarm Mode: Latching, Hold, Normal, Latching/Hold
- Alarm Timer: 0.1-4533.6 minutes

Data Communications
- Interface: RS-485
- Protocol: Modbus RTU
- Address: 1-247
- Parity Bit: None, Even or Odd
- Stop Bit: 1 or 2 Bits
- Data Length: 7 or 8 Bits
- Communication Buffer: 160 bytes

Rear Terminal Connections

Stock and Common Part Numbers
(Defaut Type "J" Thermocouple Input)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Output 1</th>
<th>Out 2/Alm 1</th>
<th>Option 2</th>
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<td>Relay</td>
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