**Power Input**
- Standard: 90-250 VAC, 47-63 Hz, 8VA, 4W maximum
- Optional: 11-40 VDC / 20-8 VAC, 47-63 Hz, 10VA, 5W maximum or 12VA, 6W maximum

**Signal Input**
- Resolution: 18 Bits
- Sampling Rate: 5 Times/Sec. (200msec)
- Maximum Rating: -2VDC minimum, 12VDC maximum
- Normal Mode Rejection Ratio (NMMR): 55dB
- 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

**Remote Set Point Input**
- Type: Linear current, Linear voltage
- Range: -3-27mA, -1.3-11.5V
- Accuracy: ±0.05%
- Resolution: 18 bits
- Sampling Rate: 1.66 times/second
- Maximum Rating: 280mA maximum for current input, 12VDC maximum for voltage input
- Temperature Effect: ±1.5μV / °C for voltage input, ±0.9μV / °C for current input
- Alarm Inputs: 1-247
- Input Impedance: 294Ω
- Accuracy: ±18 bits, ±2% of full scale reading, ±1 digit max.

**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 low, Process high
- Alarm Mode: Latching, Hold, Normal, Latching/Hold
- Dwell Timer: 0.1-4553.6 minutes

**Data Communication**
- Interface: RS-485
- Protocol: Modbus RTU
- Address: 1-247
- Baudrate: 2.8-115.2 KBPS
- Parity Bit: None, Even or Odd
- Stop Bit: 1 or 2 bits
- Data Length: 7 or 8 bits
- Communication Buffer: 160 bytes

**Stock and Common Part Numbers (8400)**
- Model TEC-8400 & -8450 Specifications

**Stock and Common Part Numbers (8450)**

**Analog Retransmission**
- Output signal: 4-20 mA, 0-20 mA, 0-10V
- Resolution: 15 bits
- Accuracy: ±0.05% of span ± 0.0025%/°C
- Load Resistance: 0-500Ω for current output, 10KΩ minimum for voltage output
- Isolation Breakdown: 1000VAC minimum
- Integral Linearity Error: ±0.005% of span
- Linear Output Ranges: 0-2.2mA (0-20mA/4-20mA), 0-5.55mA (0-5V, 1-5V), 0-1.1V (0-10V)

**User Interface**
- Keypad: 4 Keys
- Display Type: 4 digit LCD display
- No. of Display: 3
- Upper Display Size: 0.7” (17.7mm)
- Lower Display Size: 0.4” (11.2mm)

**Programming Port**
- Interface: Micro USB
- PC Communication Function: Automatic Setup, Calibration and Firmware Upgrade

**Control Mode**
- Output 1: Reverse (Heating) or Direct (Cooling) Action
- Output 2: PID control cooling, Cooling P band 50-300% of PB, Dead band -36.0 ~ 36.0 % of PB
- ON-OFF: 0.1-90.0 (°F) hysteresis control (P band = 0)
- P or PD: 0-100.0 % offset adjustment
- PID: Fuzy logic modified Proportional band 0.1 ~ 900.0°F, Integral time 0-3600 seconds, derivative time 0-360.0 seconds
- Cycle Time: 0.1-90.0 Seconds
- Manual Control: Heat (MV1) and cool (MV2)
- Failure Mode: Auto transfer to manual mode while sensor break or A-D Converter damage
- Ramping Control: 0-900.0°F/Minute or 0-900.0°F/Hour Ramp Rate

**Profilers**
- Availability: Option
- No. of Segments/Program: 4 / 8 / 16

**Environmental and Physical Specifications**
- Operating Temp.: -10°C to 50°C
- Storage Temp.: -40°C to 60°C
- Humidity: 0 to 90 % RH (Non-condensing)
- Insulation Resistance: 20MΩ minimum (at 500V DC)
- Dielectric Strength: 2000V AC, 50/60 Hz for 1 minute
- Vibration Resistance: 10-55 Hz, 10m/s² for 2 hours
- Shock Resistance: 200 m/s² (20g)
- Moldings: Flame retardant polycarbonate
- Mounting: Panel

**TEC-8400**
- Dimensions: 3-3/4 × 1-7/8 × 2-3/8”
- Weight: .48 lbs. (220 g)

**TEC-8450**
- Dimensions: 3-3/4 × 1-7/8 × 2-3/8”
- Weight: .48 lbs. (220 g)