ETR-9090, ETR-8120, ETR-8130, ETR-4120 and ETR-4130 CONTROL SPECIFICATIONS

**INPUT**
Display in temperature or engineering units
Thermocouple: Type J, K, T, E, B, R, S, N (selectable)
RTD: PT100 ohm DIN or JIS, 2 or 3 wire
Linear: -10 - 60mV (given span)

**CONTROL FEATURES**
Temperature Range: Selectable
Set Point: Full range adjustable
Secondary Output(s) Set Point: Full range adjustable
Control Modes: Selectable control modes:
  • On/off • Proportional (P) • Proportional with manual reset • Proportional/Integral (PI)
  • Proportional/Derivative (PD)
  • Proportional/Integral/Derivative (PID)
Heating and Cooling Proportional Band: 0 - 360°F/0 - 200°C
Manual Reset: 0 - 100%
Integral (Reset): 0 - 3600 seconds
Derivative (Rate): 0 - 1000 seconds
Ramp Rate: 0 - 360°F (0 - 200°C)/minute
Dwell: 0 - 3600 minutes
Anti-reset (Wind-up): Inhibits integral action outside of proportional band
Cooling (ETR-8130 and ETR-4130): Adjustable dead band from -100 to +100% of span
On/Off: Adjustable Hysteresis from 0 - 20.0% of span
Manual Mode: Configurable as open loop control should sensor no longer function
Cycle Time: 0 - 120 seconds
Sensor Break Protection: Configurable status of control output and secondary outputs
Control Action: Selectable – Direct action for cooling; Reverse action for heating

**OUTPUTS**
ETR-9090: Single output with optional independent secondary output
ETR-8120 and ETR-4120: Single output with 2 optional independent secondary outputs
ETR-8130 and ETR-4130: Heating and cooling outputs with 2 optional independent secondary outputs
Relay: 3A/240V maximum resistive load
Pulsed Voltage: 24VDC, 20mA, maximum
Current: 4 - 20 mA, maximum load 500 ohms
Voltage: 0 - 10V isolated, minimum impedance 500K ohms
Secondary Output(s): 14 selectable modes including process, deviation and band alarms. 2A, 240V maximum resistive load with adjustable hysteresis

**INDICATION**
ETR-9090: Process .4” red LED, Set point .3” green LED
ETR-8120 and ETR-8130: Process .4” red LED, Set point .3” green LED
ETR-4120 and ETR-4130: Process .5” red LED, Set point .3” green LED
Selectable Decimal Placement: For normal or high resolution display. Example: 0000; 000.0; 00.00; 0.000
°F/°C: Selectable with LED indicators (except ETR-9090)
Status Indicators: 2 LED’s - Primary Output(s) green, Secondary output(s) red
Sample Rate: 4 samples/second

**POWER**
Supply Voltage: 90 - 264VAC, 50/60Hz; 20-32VAC/VDC optional
Consumption: Less than 5VA
Data Retention: 10 years (EEPROM)

**SPECIFICATIONS**
Accuracy: ± 0.2% of span
Control Stability: ± 0.15% (typical) of full scale
Cold Junction Compensation: 0.1°C/°C ambient
External Resistance: 100 ohms, maximum
Normal Mode Rejection: 60dB
Common Mode Rejection: 120dB
Operating Temperature for Rated Accuracy: 14 - 122°F (-10 - 50°C)
Humidity: 0 - 90% RH (non-condensing)
Insulation: 20M ohm minimum (500VDC)
Breakdown: 2000VAC, 50/60Hz, 1 minute
Vibration: 10 - 55 Hz, amplitude 1mm
Shock: 200m/s²
ETR-9090 Dimensions:
  H – 1⅛” (48mm)
  W – 1⅜” (48mm)
  D – 3⅛” (96mm)
  Depth behind panel – 3⅛” (86mm)
  Panel cutout – 1⅝” x 1⅝” (45mm x 45mm)
  Weight – 6 oz. (170 grams)
ETR-8120 and ETR-8130 Dimensions:
  H – 3⅛” (96mm)
  W – 1⅜” (48mm)
  D – 3⅛” (79mm)
  Depth behind panel – 2⅛” (64mm)
  Panel Cutout – 1⅝” x 3⅛” (45mm x 92mm)
  Weight – 8 oz. (227 grams)
ETR-4120 and ETR-4130 Dimensions:
  H – 3⅛” (96mm)
  W – 3⅛” (96mm)
  D – 2⅝” (65mm)
  Depth behind panel – 2” (51mm)
  Panel Cutout – 3⅝” x 3⅛” (92mm x 92mm)
  Weight – 10 oz. (284 grams)