

ETR-3200, ETR-9200, ETR-4220 and ETR-4230 CONTROL SPECIFICATIONS

UNIVERSAL INPUT SELECTIONS

Display in temperature or engineering units

Thermocouple: Type J, K, T, E, B, R, S, N

RTD: PT 100 ohm DIN or JIS 2 or 3 wire

Linear: 0 - 10VDC maximum

CONTROL FEATURES

Temperature Range: Selectable

Set Point: Full range adjustable

Control Modes: All models can be configured as:

- 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

Integral (Reset): 0 - 3600 seconds

Derivative (Rate): 0 - 1000 seconds

Ramp Rate: 0 - 99.9°F (0 - 55.55°C)/minute

Dwell: 0 - 9999 minutes

Anti-Reset (Wind-up): Inhibits integral action outside proportional band

Cooling: Adjustable dead band from -199.9 - 199.9°F/-111.0 - 111.0°C

Manual Mode: Configurable as open loop control should sensor no longer function

Heating or Cooling Cycle Time: 0 - 99 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-3200: Single output with 1 optional independent secondary output, or heating and cooling outputs

ETR-9200: Single output with 2 optional independent secondary outputs or heating and cooling outputs with a single secondary output

ETR-4220: Single output with 2 optional independent secondary outputs

ETR-4230: Heating and cooling outputs with 2 optional independent secondary outputs

Relay: SPST relay rated 3A, 240V maximum resistive load, ETR-4220 and ETR-4230 SPDT

Pulsed Voltage: 24VDC, 20mA, maximum

Current: 4 - 20mA, 0 - 20mA, maximum load 500 ohms

Voltage: 0 - 10V, minimum impedance 500K ohms

Secondary Outputs: 36 selectable modes or special functions each. SPST relay(s) rated 2A, 240V maximum resistive load

Communications: Optional RS-485 Serial Communications; 4-20mA analog retransmission of process value

INDICATION

ETR-3200: 4 digit red .4" LED Process Value display

ETR-9200: 4 digit red .4" LED Process Value display; 4 digit green .3" LED Set Value display

ETR-4220 and ETR-4230: 4 digit red 5/8" LED Process Value display; 4 digit green 1/2" LED Set Value display

Selectable Decimal Placement: For normal or high resolution display. Example: 0000; 000.0; 00.00; or 0.000

°F/°C: Selectable with 2 LED indicators

Sample Rate: 5 samples/second

POWER

Supply Voltage: 90 - 264VAC, 50/60Hz; 20 - 32 VAC/VDC optional

Consumption: Less than 20VA

Data Retention: 10 years (EEPROM)

SPECIFICATIONS

Accuracy: ± .1% of span, ± least significant digit

Control Stability: ± 0.15% (typical) of full scale

Cold Junction Compensation: 0.1°C/°C ambient

External Resistance: 100 ohms, maximum

Common Mode Rejection: 120dB

Normal Mode Rejection: 60dB

Input Impedance: 10M ohms

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 - 55Hz, amplitude 1mm

Shock: 200m/s² (20 grams)

ETR-3200 Dimensions:

H – 1⁵/₁₆" (24mm)

W – 1⁷/₈" (48mm)

D – 4⁵/₁₆" (110mm)

Depth behind panel – 3⁷/₈" (99mm)

Panel Cutout – 7⁶/₁₆" x 1²⁵/₃₂" (22 x 45mm)

Weight – 4 oz. (110 grams)

ETR-9200 Dimensions:

H – 1⁷/₈" (48mm)

W – 1⁷/₈" (48mm)

D – 3³/₈" (86mm)

Depth behind panel – 3" (76mm)

Panel Cutout – 1²⁵/₃₂" x 1²⁵/₃₂" (45mm x 45mm)

Weight – 5 oz. (142 grams)

ETR-4220 and ETR-4230 Dimensions:

H – 3³/₄" (96mm)

W – 3³/₄" (96mm)

D – 2⁹/₁₆" (65mm)

Depth behind panel – 2" (51mm)

Panel Cutout – 3⁵/₈" x 3⁵/₈" (92mm x 92mm)

Weight – 10 oz. (284 grams)