Overview

- Two models:
  TT111: UL-recognized component for Canada and United States.
  TT211: Wider ambient rating; Factory Mutual (FM) approved intrinsically safe and nonincendive.
- Optional high-accuracy calibration to Minco RTDs for improved accuracy; see next page and page 5-22 for more information.

Specifications

Output: 4 to 20 mA over specified range, linear with temperature.

Calibration accuracy: ±0.1% of span.

Linearity: Referenced to actual sensor temperature.
Platinum RTD input: ±0.1% of span.
Nickel and nickel-iron RTD input:
±0.25% of span for spans less than 100°C. ±0.25% of span per 100°C of span for spans greater than 100°C.

Adjustments: Zero and span, ±5% of span. Factory set.

Ambient temperature:
TT111: 0 to 50°C (32 to 122°F).
TT211: -25 to 85°C (-13 to 185°F).
Storage: -55 to 100°C (-67 to 212°F).

Ambient temperature effects: ±0.013% of span per °C.
±0.025% of span per °C for spans less than 55°C.

Warmup drift: ±0.1% of span max., with
V_supply = 24 VDC and R_loop = 250 Ω. Stable within 30 minutes.

Supply voltage: 8.5 to 35 VDC. Voltage effect ±0.001% of span per volt. Reverse polarity protected.

Maximum load resistance: The maximum allowable resistance of the signal carrying loop is:

$$R_{\text{loop max}} = \frac{V_{\text{supply}} - 8.5}{0.020 \text{ amps}}$$

Example: With supply voltage 24 VDC, maximum loop resistance is 775 Ω.

Minimum span: 27.8°C (50°F).

Hazardous atmospheres: All models may be used with Minco flameproof/explosionproof connection heads. Models TT211 is Factory Mutual approved nonincendive for use in Class I, Division 2 areas and intrinsically safe for Class I, Division 1 areas (requires approved barrier). Transmitter entity parameters:

$$V_{\text{max}} = 35\text{ volts}; I_{\text{max}} = 150\text{ mA}; C_i = 0\ \mu\text{F} \text{ and } L_i = 0\ \text{mH}.$$

Connections: Terminal block for wires AWG 22 to AWG 14.

Physical: Polycarbonate case, epoxy potted for moisture resistance.

Weight: 1.1 oz. (30 g).
Hazardous area requirements

For more information on how to classify a hazardous area, methods of protection, and the various standards and agencies (including FM, CSA, CENELEC and ATEX), visit www.minco.com.