

Miniature RTD Transmitters

Small size, low cost



TT111

Overview

- TT111 is UL recognized component for Canada and United States.
- Optional match calibration to Minco RTDs for improved accuracy.

Specifications

Design kit part number: TT111PD1C.

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

Calibration accuracy: $\pm 0.1\%$ of span.

Linearity: Referenced to actual sensor temperature.

Platinum RTD input: $\pm 0.1\%$ of span.

Nickel and nickel-iron RTD input:

$\pm 0.25\%$ of span for spans less than 100°C.

$\pm 0.25\%$ of span per 100°C of span for spans greater than 100°C.

Adjustments: Zero and span, $\pm 5\%$ of span. Factory set.

Ambient temperature: 0 to 50°C (32 to 122°F).

Storage: -55 to 100°C (-67 to 212°F).

Ambient temperature effects:

$\pm 0.013\%$ of span per °C.

$\pm 0.025\%$ of span per °C for spans less than 55°C.

Warmup drift: $\pm 0.1\%$ of span max., with

$V_{supply} = 24$ VDC and $R_{loop} = 250 \Omega$.

Stable within 30 minutes.

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

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

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

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.

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

Physical: Polycarbonate case, epoxy potted for moisture resistance.

Weight: 1.1 oz. (30 g).

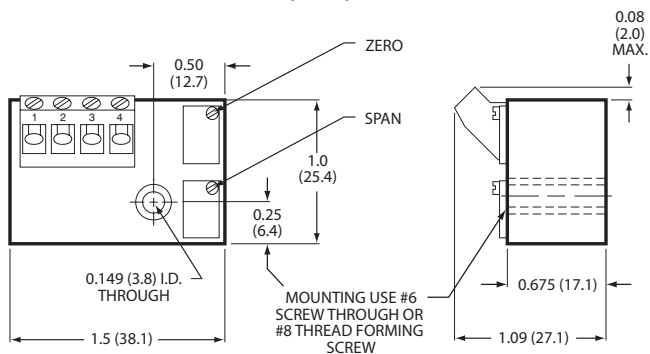
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Available RTD input types

2-wire resistance thermometer:

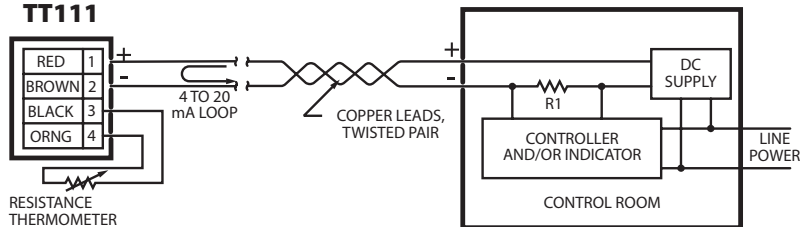
Element		Code
Platinum 392,	100 Ω at 0°C	PA
Platinum 391,	100 Ω at 0°C	PB
Platinum 385,	100 Ω at 0°C	PD, PE
Platinum 385,	1000 Ω at 0°C	PF
Platinum 375,	1000 Ω at 0°C	PW
Nickel-iron,	604 Ω at 0°C	FA
Nickel-iron,	1000 Ω at 70°F	FB
Nickel-iron,	2000 Ω at 70°F	FC
Nickel,	120 Ω at 0°C	NA

Dimensions in inches (mm)



Wiring Diagram

TT110, TT111, TT111



Specification options

TT111	Model number
PD	RTD element code from table
1	Output: 4 to 20 mA DC
C	Temperature range code [Ex: C = 0 to 100°C (32 to 212°F)]
TT111PD1C = Sample part number	

Special high-accuracy specification options

Standard model	Special calibration
TT111	TT151

Specifications for special calibration units are identical to their standard counterparts. Contact Minco at 1.763.571.3131 for more information about high-accuracy calibration.