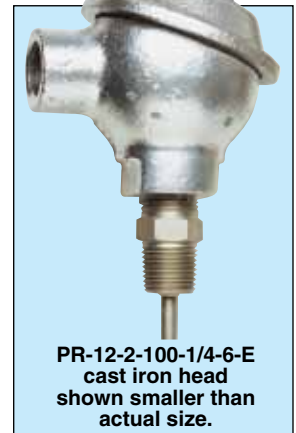


Loop-powered RTD Input In-Head Programmable Transmitter

DISCONTINUED



TX33 shown actual size.



PR-12-2-100-1/4-6-E cast iron head shown smaller than actual size.

- ✓ Multi-Ranges Selectable
- ✓ Temperature Linearized
- ✓ Low Temperature Drift
- ✓ Easy Calibration
- ✓ Competitive Pricing

The TX33 is an analog, non-isolated, 2-wire head-mounted temperature transmitter that converts the RTD input into a proportional, linear, and highly accurate 4 to 20 mA output current in a variety of applications such as process control, automation system, and energy source management. The TX33 performs by means of a 6 dip-switch array for the coarse range setting, and two multi-turn potentiometers (Zero and Span) which are used for the final fine-tuning. The TX33 is housed in a metal enclosure with plastic top cover, fitting into DIN B connection heads providing excellent RFI immunity. The TX33 accepts low level signal from RTD, filtered, amplified, and converter to process current to reduce susceptibility transients and noise operations and allow the same two wires to carry the transmitter power and output current signal simultaneously.

Input Zero Range: -50 to 50°C, (-58 to 122°F) adjustable
Span: 50 to 200°C selectable; see table 1
Fine Adjustment: 5% of ZERO and SPAN
RFI Effect (5W, 470 MHz): < ±10% of span
Response Time (0 to 90%): 200 ms
Housing Material: Polycarbonate, UL94-V0 grade
Connection: M3 Screw, AWG 14-22
Operation Environment: -40 to 85°C, (-40 to 185°F) 5 to 85 % non-condensing
Dimensions: 45 Dia. x 20 mm H (1.77 x 0.79")
Weight: 50 g (1.8 oz)

Measurement Range Table 1: Span Setting

DIP-Switch Setting						SPAN (°C)
S2	S3	S4	S5	S6		
OFF	OFF	OFF	ON	ON	50	
OFF	OFF	ON	OFF	ON	100	
OFF	ON	OFF	ON	OFF	150	
ON	OFF	OFF	OFF	OFF	200	

Note: The DIP-switch is protected by a small tip which has to be moved before setting
 S1=ON, ZERO Range: -50 ~ 0 °C
 S1=OFF, ZERO Range: 0 ~ +50 °C

Specifications

($V_{LOOP} = 24 \text{ Vdc}$, $T_{AMB} = 23 \pm 2^\circ\text{C}$, $R_{LOAD} = 250 \Omega$)

Output: 4 to 20 mA; Upscale < 25 mA; Downscale < 3.0 mA

Loop Power: 10 to 32 Vdc. Reverse polarity protected,

Input RTD: Pt100, 2- or 3-wire DIN. 43760, BS1904 characteristics

Max Sensor Wire Resistance: 30 Ω /wire

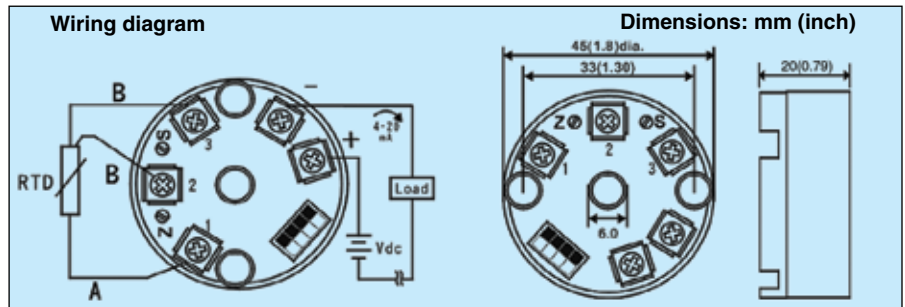
Supply Voltage Effect: ±0.01% of span/Volt

Temperature Coefficient: ±0.01% of span/°C(200°C measurement range)

Linearity Error: ±0.15% of span ±0.1°C

Repeatability: ±0.01 % of span

Load Capability: 50 x (loop power-10) Ω



Note: For 2-wire RTD input, terminal 2 and 3 must be shorted together. When changing the span by DIP-switch settings, the transmitter should be re-calibrated for best accuracy. Unless specified, the TX33 is calibrated 200°C before shipping.

Adjustments

Connect signal source (calibrator) to the unit, power on warm up 5 minutes or more.

- A:** Set the calibrator to the desired low temperature (4 mA point) and adjust the potentiometer ZERO to get lout = 4 mA.
- B:** Set the calibrator to the desired high temperature (20 mA point) and adjust the potentiometer SPAN to get lout = 20 mA.
- C:** Repeats steps A & B once, if necessary for best accuracy

To Order	
Model No.	Description
TX33	Programmable transmitter
PR-12-2-100-1/4-6-E	Cast iron head

Comes complete with operator's manual.

Ordering Example: TX33, programmable transmitter.