

# TEMPERATURE TRANSMITTER

## 2-WIRE, LOOP POWER, 4-20mA

**PERFORMANCE SPECIFICATIONS**

<b>Input Accuracy.</b>	RTD: ±0.04% @ 77°F Thermocouple, Type E: ±0.022% of Conformance Range Thermocouple, Type J: ±0.03% of Conformance Range Thermocouple, Type K: ±0.02% of Conformance Range	<u>Conformance Range</u> -328°F to +1562°F -274°F to +1832°F -292°F to +1418°F -238°F to +2502°F
<b>Output Accuracy.</b>	RTD and Single Point Thermocouples: ±0.03% of Input Span Setting + Input Accuracy Multi-Point Thermocouples: ±0.03% of Input Span + Input Accuracy + Averaging Circuit Accuracy Averaging Circuit Accuracy (%): $\frac{.02 \times (\text{Temp Gradient } ^\circ\text{F})}{(\text{Transmitter Span } ^\circ\text{F})} \times 100$	
<b>Cold Junction Reference Accuracy.</b>	±0.045%	
<b>Isolation.</b>	1500 Vrms input to output to case (Isolated Model only).	
<b>Linearity.</b>	0.1% of span, within rated ranges.	
<b>Over-Voltage Protection.</b>	4V max (Input), 48V max (Output and Reverse Polarity protection on Output).	
<b>Load Capability.</b>	500Ω @ 24V, typical. Non-Isolated Model: $\frac{\text{Supply Voltage} - 7V}{.024A} = \Omega$ Isolated Model: $\frac{\text{Supply Voltage} - 10V}{.024A} = \Omega$	
<b>Burnout Protection.</b>	Total Sensor Diagnostics user-selected via Windows configuration software; upscale to 24mA (std) or downscale to 3.6mA. Applies when all sensors in the temperature probe are burned out.	
<b>Output Current Limiting.</b>	21.4mA for input over-range; 23.6mA for sensor failure or broken wire.	
<b>RTD Lead Wire Resistance Maximum.</b>	RTD Resistance + 2 times the lead wire resistance must be less than 4000Ω. Recommend <35Ω per wire for 3-wire RTD inputs.	

**AMBIENT CONDITIONS**

<b>Operating and Storage Range.</b>	-40°F to +185°F
<b>Relative Humidity.</b>	0-95%, non-condensing.
<b>Effect of Ambient Temp on Accuracy.</b>	±0.015% of span per °F change, max. (+0.001% of Ω reading for RTD inputs).
<b>Effect of Ambient Temp on Cold Junction Compensation.</b>	±0.015°F per °F change.

**ADJUSTMENTS**

All settings made using Windows based configuration program, then stored in non-volatile FRAM memory. Cable, software disk and instruction manual included with each transmitter.

**OPTIONS**

**Transmitter Type.**     Non-Isolated (standard)     Optically Isolated

