

TR102-M12A Series

RTD Sensor, Top Exit 4 Pin M12 Connector, 100 mV/g, $\pm 10\%$



Product Features

Base Mounted PT100 RTD Temperature Sensor with Acceleration Output

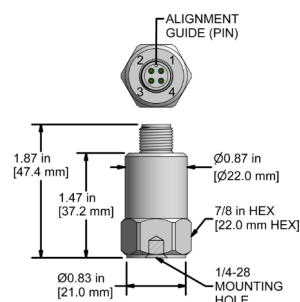
View [2 Wire vs. 4 Wire RTD Systems Explained](#)

- ▶ Compatible with CTC M4TR4 (Polycarbonate), M4RTR4 (PPS) and MV4R4 (Viton Boot) Connectors for 4 Wire RTD Systems
- ▶ Compatible with CTC M4TR2 (Polycarbonate), M4RTR2 (PPS), and MV4R2 (Viton Boot) Connectors for 2 Wire RTD Systems
- ▶ CTC recommends 4-wire RTD systems for highest temperature measurement accuracy, where supported by the measurement system

TR102-M12A

4 Pin Connector

Connector Pin	Polarity
1	(+) Signal/Power
2	(-) Common
3	(+) RTD
4	(-) RTD



Stock Product

Specifications	Standard	Metric	Specifications	Standard	Metric
Part Number	TR102-M12A	M/ or M8/TR102-M12A	Environmental		
Sensitivity ($\pm 10\%$)	100 mV/g		Operating Temperature Range	-40 to 250 °F	-40 to 121 °C
Frequency Response ($\pm 3\text{dB}$)	30-810,000 CPM	0.5-13500 Hz	Maximum Shock Protection	5,000 g, peak	
Dynamic Range	± 80 g, peak *Vsource $\geq 22\text{V}$, 12V Bias		Electromagnetic Sensitivity	CE	
Temperature Measurement Range	-40 to 250 °F	-40 to 121 °C	Sealing	Welded, Hermetic	
Temperature Sensor	PT100 RTD		Physical		
Transverse Sensitivity	$\leq 5\%$		Sensing Element	PZT Ceramic	
Electrical			Sensing Structure	Shear Mode	
Settling Time	< 2.5 Seconds		Weight	3.2 oz	90 grams
Voltage Source	18-30 VDC		Case Material	316L Stainless Steel	
Constant Current Excitation	2-10 mA		Mounting Thread	1/4-28 Blind Tapped Hole	
Spectral Noise @ 10 Hz	8 $\mu\text{g}/\sqrt{\text{Hz}}$		Connector (Non-Integral)	4 Pin M12	
Spectral Noise @ 100 Hz	0.82 $\mu\text{g}/\sqrt{\text{Hz}}$		Resonant Frequency	1,380,000 CPM	23 kHz
Spectral Noise @ 1000 Hz	0.3 $\mu\text{g}/\sqrt{\text{Hz}}$		Mounting Torque	2 to 5 ft.-lbs.	2.7 to 6.8 Nm
Output Impedance	< 100 ohm		Mounting Hardware Supplied	1/4-28 Stud	M6x1 or M8x1.25 Adapter Stud
Bias Output Voltage	10-14 VDC		Calibration Certificate	CA10	
Case Isolation	> 10^8 ohm				

Typical Frequency Response

