

proSense® Room Temperature Sensors - Thermocouple and RTD Types



RTD1-R01-01

Overview

- ABS Plastic ventilated cover with metal wall mounting subplate
- Available in thermocouple or RTD versions
- Internal terminal strip for wiring connections
- Can be mounted horizontally or vertically

ProSense Thermocouple Room Temperature Sensor

Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Temperature Sensing Range	Mounting
<u>THMJ-R01-01</u>	1	0.3	\$43.50	J	32 to 185°F (0 to 85°C)	Single element, ungrounded junction, plastic ventilated housing with metal wall mounting subplate, internal terminal strip for wiring connections

ProSense RTD Room Temperature Sensor

Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Temperature Sensing Range	Mounting
<u>RTD1-R01-01</u>	1	0.3	\$45.00	PT 100, Class B, 3-wire	-40 to 185°F (-40 to 85°C)	Plastic ventilated housing with metal wall mounting subplate, internal terminal strip for wiring connections

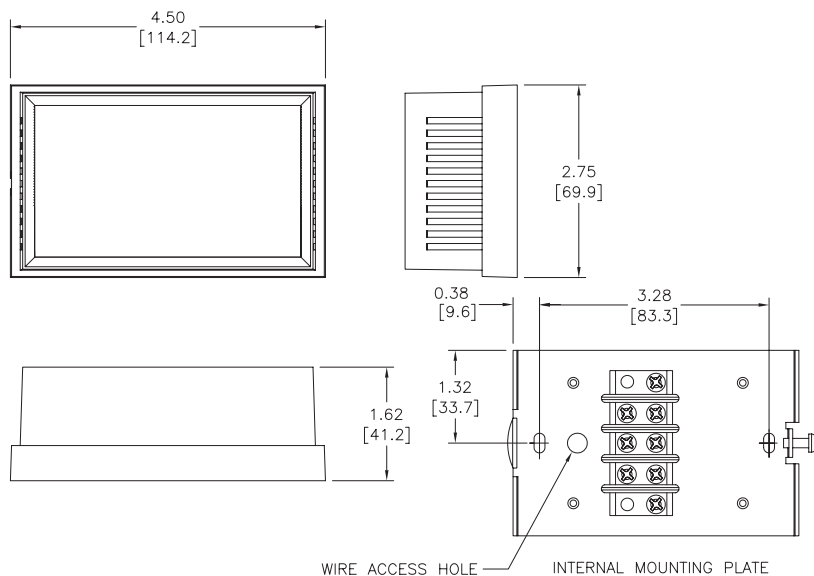
ProSense Thermocouple Room Sensor Technical Specifications

Part Number	Sensing Element	Limits of Error	Initial Accuracy	Housing	Response Time	Wiring
<u>THMJ-R01-01</u>	Type J thermocouple	±2.2°C (±4.0°F) or 0.75%, whichever is greater	N/A	ABS	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839	Screw terminal strip
<u>RTD1-R01-01</u>	PT 100, Class B, 3-wire, TCR = 0.00385 ohm/ohm/°C	N/A	Class A w/[0.15 +0.002 t] °C	ABS	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)	

Dimensions

inches [mm]

THMJ-R01-01 & RTD1-R01-01

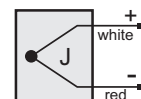


Wiring Information

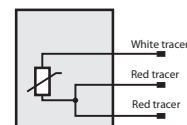
THMJ-R01-01

Type J: (+) white (-) red

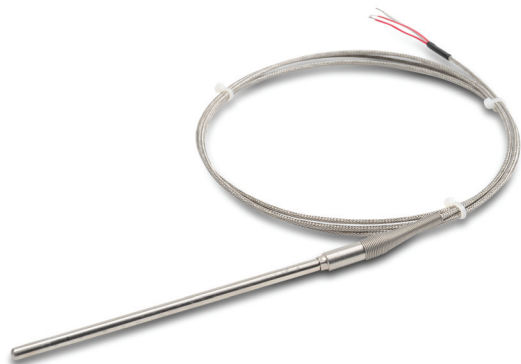
- Must use thermocouple extension lead wire
- Observe polarity when making connections
- Do not use standard wire nuts



RTD1-R01-01



proSense® RTD Probes with Lead Wire Transition



Overview

- 100 ohm platinum RTD 3-wire element
- Class A accuracy
- 1/4" diameter, 316 stainless steel sheath to protect against harsh environments
- RTD element encased in alumina powder insulation provides excellent vibration dampening and heat transfer
- 6", 12", or 18" probe length
- Heavy duty lead wire transition with relief spring
- 6-foot lead wires with Kapton insulation and stainless steel overbraid
- Made in the USA

RTD Probes with Lead Wire Transition								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
RTD1-T06L06-01	1	0.4	\$66.00	PT 100, 3-wire	1/4"	6"	-50 to 300°C (-58 to 572°F), lead wire transition rated to 400°F (204°C)	ProSense compression fitting (see accessories purchased separately)
RTD1-T12L06-01			\$68.00			12"		
RTD1-T18L06-01			\$75.00			18"		

Technical Specifications	
Sensing Element	Single 100Ω platinum (Pt 100), 3-wire; TCR = 0.00385 Ω/Ω/°C
Initial Accuracy	Class A ±[0.15 +0.002 t] °C
Probe	ø1/4", 316 stainless steel sheath, single RTD is embedded in alumina powder
Minimum Installation Depth	3" (76 mm)
Response Time	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
Wiring	6 foot stranded 24 AWG wire leads with stripped ends, Kapton insulation and stainless steel overbraid

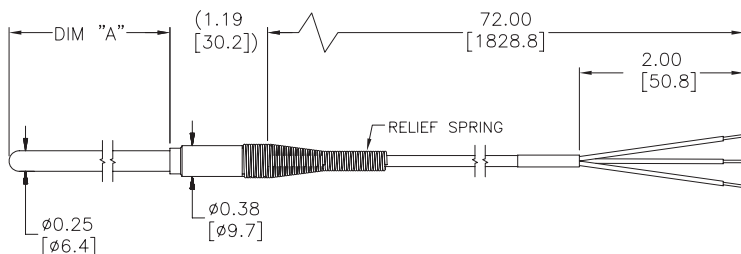


Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

Dimensions

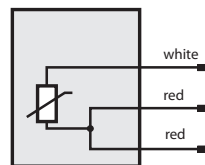
inches [mm]

RTD1-TXXL06-01



PART NUMBER	DIM "A"
RTD1-T06L06-01	6.00[152.4]
RTD1-L12L06-01	12.00[304.8]
RTD1-L18L06-01	18.00[457.2]

Wiring Information



proSense® RTD Probes with Lead Wire Transition - Accessories

Accessories

Part No.	Description	Pcs/Pkg	Price
<u>BCF14-125N</u>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$3.25
<u>BCF14-25N</u>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$4.25
<u>BCF14-50N</u>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$6.50
<u>CF14-125N</u>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$8.00
<u>CF14-25N</u>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$9.25
<u>CF14-50N</u>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$14.00
<u>CFTF-14</u>	Teflon™ ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$7.75
<u>RTD-SP</u>	RTD 3-pin connector, standard round pin plug, maximum continuous temperature 400°F (200°C), white body, copper pins, 14 AWG maximum (2.0 mm) wire size	1	\$9.00
<u>RTD-SJ</u>	RTD 3-pin connector, standard round pin jack, maximum continuous temperature 400°F (200°C), white body, copper pins, 14 AWG maximum (2.0 mm) wire size	1	\$11.50
<u>WCB-S</u>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors	4	\$7.00

Note: RTD extension lead wire available at www.automationdirect.com

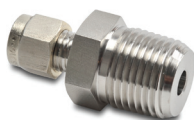
See end of section for full listing of accessories and dimension information.

*Working pressure of compression fitting should not exceed 500 psi. However we recommend any pressure application use a thermowell

[CFTF-14](#)



[CF14-50N](#)



[CF14-25N](#)

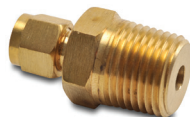


[CF14-125N](#)



S.S. Compression Fittings

[BCF14-50N](#)



[BCF14-25N](#)

[BCF14-125N](#)



Brass Compression Fittings

[RTD-SJ](#)



[RTD-SP](#)



RTD Connectors