

pro^{sense}® 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
THMJ-R01-01	1	0.3		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

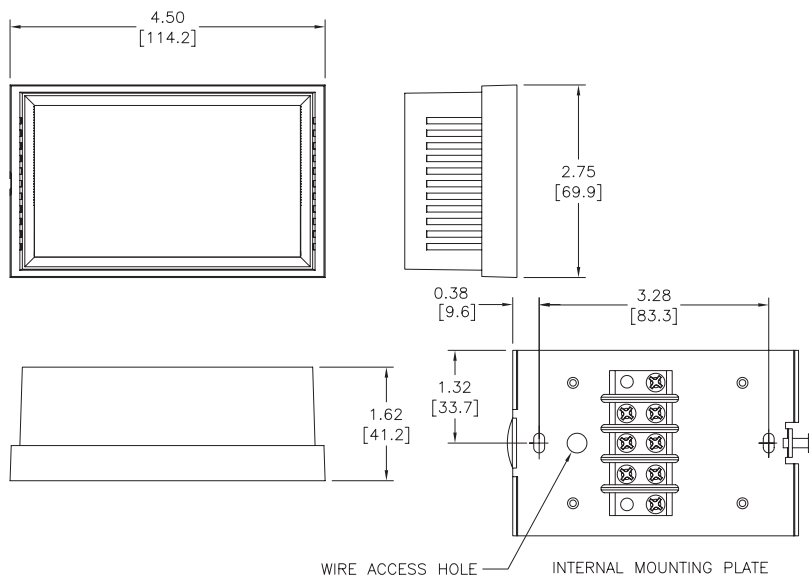
ProSense RTD Room Temperature Sensor						
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Temperature Sensing Range	Mounting
RTD1-R01-01	1	0.3		PT 100, Class B, 3-wire	-40 to 185°F (-40 to 85°C)	Plastic ventilated housing with metal wall mounting subplate, internal terminal strip for wiring connections

ProSense Thermocouple Room Sensor Technical Specifications						
Part Number	Sensing Element	Limits of Error	Initial Accuracy	Housing	Response Time	Wiring
THMJ-R01-01	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
RTD1-R01-01	PT 100, Class B, 3-wire, TCR = 0.00385 ohm/ohm/°C	N/A	Class A ±[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

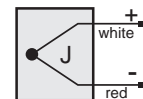


Wiring Information

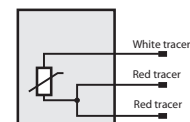
THMJ-R01-01

Type J: (+) white (-) red

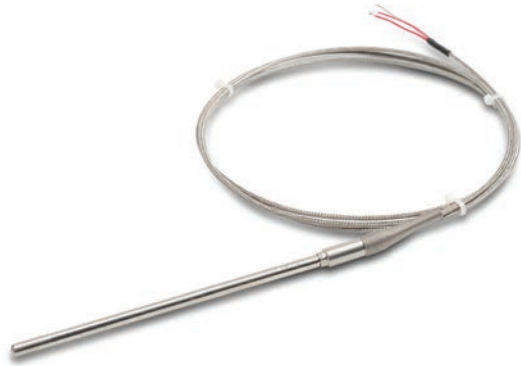
- Must use thermocouple extension lead wire, see end of this section
- Observe polarity when making connections
- Do not use standard wire nuts



RTD1-01-01



pro^{sense}® RTD Probes with Lead Wire Transition



Overview

- All temperature sensors are pre-built stock items
- 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		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						12"		
RTD1-T18L06-01						18"		

Technical Specifications	
Sensing Element	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
Initial Accuracy	Class A $\pm[0.15 + 0.002 t]$ °C
Probe	$\phi 1/4"$, 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

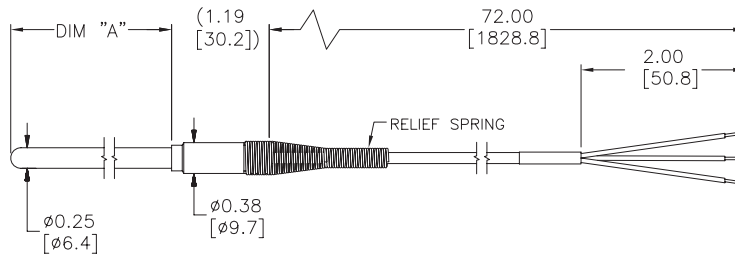


NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.

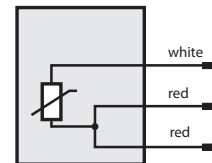
Dimensions

inches [mm]

RTD1-TXXL06-01



Wiring Information



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]

pro^sense[®] RTD Probes with Lead Wire Transition - Accessories

Accessories

Part No.	Description	Pcs/Pkg	Price
BCF14-125N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	
BCF14-25N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	
BCF14-50N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	
CF14-125N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	
CF14-25N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	
CF14-50N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	
CFTF-14	Teflon™ ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	
RTD-SP	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	
RTD-SJ	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	
WCB-S	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	

Note: RTD extension lead wire available at the end of this section.
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