

# pro<sup>sense</sup>® Room Temperature Sensors - Thermistor, Thermocouple, and RTD Types

**RTD1-R01-01****RTD1-R01-02****NTC10K3-R02-01**

## Overview

- ABS Plastic ventilated cover
- Available in thermistor, thermocouple, and RTD versions
- Internal terminal strip for wiring connections
- Can be mounted horizontally or vertically

ProSense Room Temperature Sensors							
Part Number	Pcs/Pkg	Wt (lb)	Price	Drawing Link	Type	Temperature Sensing Range	Mounting
<b><u>NTC10K3-R02-01</u></b>	1	0.14		<a href="#">PDF</a>	10K-AN Type 3 Thermistor	-40 to 185°F (-40 to 85°C)	Single element, plastic ventilated housing, plastic wall mounting subplate, terminal strip for wiring connections.
<b><u>THMJ-R01-01</u></b>	1	0.3		<a href="#">PDF</a>	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 (-02 model does not have metal wall mounting subplate)
<b><u>THMJ-R01-02</u></b>	1	0.3		<a href="#">PDF</a>			
<b><u>RTD1-R01-01</u></b>	1	0.3		<a href="#">PDF</a>	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 (-02 model does not have metal wall mounting subplate)
<b><u>RTD1-R01-02</u></b>	1	0.3		<a href="#">PDF</a>			

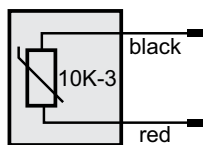
# prosense® Room Temperature Sensors - Thermistor, Thermocouple, and RTD Types

ProSense Room Sensor Technical Specifications						
Part Number	Sensing Element	Limits of Error	Initial Accuracy	Housing	Response Time	Wiring
<a href="#"><u>NTC10K3-R02-01</u></a>	Epoxy Coated NTC Thermistor 10kΩ at 25°C r	N/A	$\pm 0.2^{\circ}\text{C}$ from 0°C to 70°C	ABS	Approximately 10 seconds*	Screw terminal strip
<a href="#"><u>THMJ-R01-01</u></a> <a href="#"><u>THMJ-R01-02</u></a>	Type J thermocouple	$\pm 2.2^{\circ}\text{C}$ ( $\pm 4.0^{\circ}\text{F}$ ) or 0.75%, whichever is greater	N/A		2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839	
<a href="#"><u>RTD1-R01-01</u></a> <a href="#"><u>RTD1-R01-02</u></a>	PT 100, Class B, 3-wire, TCR = 0.00385 ohm/ohm/°C	N/A	Class B		7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)	

\*The sensing element has an approximate response time of 10 seconds in still air. Different constructions will have different thermal responses.

## Wiring Information

### [NTC10K3-R02-01](#)

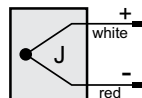


- No polarity

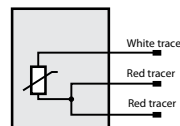
### [THMJ-R01-01](#)

#### Type J: (+) white (-) red

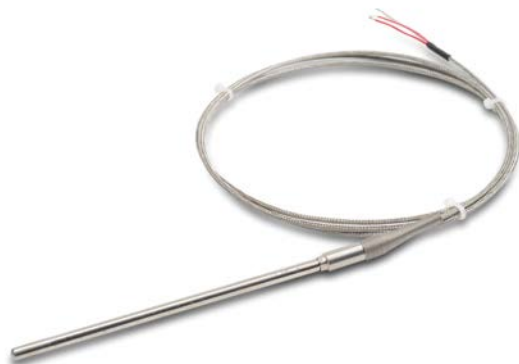
- Must use thermocouple extension lead wire
- Observe polarity when making connections
- Do not use standard wire nuts



### [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
<a href="#">RTD1-T06L06-01</a>	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)
<a href="#">RTD1-T12L06-01</a>						12"		
<a href="#">RTD1-T18L06-01</a>						18"		

## Technical Specifications

<b>Sensing Element</b>	Single 100Ω platinum (Pt 100), 3-wire; TCR = 0.00385 Ω/Ω/°C
<b>Initial Accuracy</b>	Class A $\pm[0.15 + 0.002  t ]$ °C
<b>Probe</b>	ø1/4", 316 stainless steel sheath, single RTD is embedded in alumina powder
<b>Minimum Installation Depth</b>	3" (76 mm)
<b>Response Time</b>	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	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

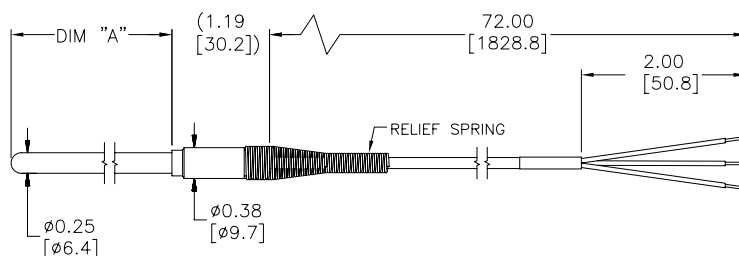
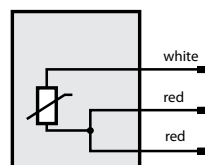


TABLE A

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
<b><u>BCF14-125N</u></b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	
<b><u>BCF14-25N</u></b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	
<b><u>BCF14-50N</u></b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	
<b><u>CF14-125N</u></b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	
<b><u>CF14-25N</u></b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	
<b><u>CF14-50N</u></b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	
<b><u>CFTF-14</u></b>	Teflon™ ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	
<b><u>RTD-SP</u></b>	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	
<b><u>RTD-SJ</u></b>	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	
<b><u>WCB-S</u></b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors	4	

Note: RTD extension lead wire available at [www.automationdirect.com](http://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**