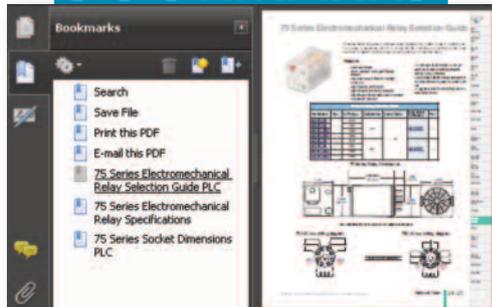


## proense® Temperature Sensors



### BOOKMARKS



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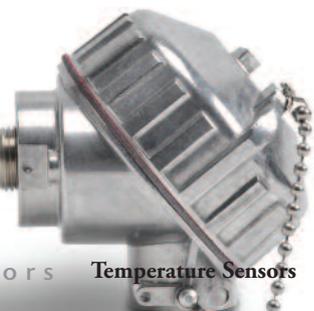
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# Reliable process measurement for less - Temperature Sensors, Switches, Transmitters and Thermometers



## TSD25 Series Temperature Switches all models \$89.75

- Compact temperature switch with simple setup using mechanical adjustment dials
- Temperature setting range: -4 to 284°F (-20 to 140°C)
- Extremely durable housing with 316 stainless steel wetted parts
- LEDs indicate power and function status
- Two DC switching outputs
- cULus, CE, RoHS



## TTD25 Series Temperature Transmitters all models \$126.00

- High-accuracy 2-wire temperature transmitter
- Integral 1000 ohm, Class A platinum RTD sensing element
- 4-20mA analog output signal
- Probes made of durable 316 stainless steel
- Temperature ranges of 0-100°C or 0-300°F
- cULus, CE, RoHS
- Available in two form factors

proense®



## XTD Series DIN Rail Mounted Temperature Transmitters starting at \$89.00

### Non-programmable models

- Models for thermocouple Types J, K, or T
- Models for RTD Type Pt100 3-wire
- Select from a variety of pre-configured measuring ranges
- 4-20mA analog output signal
- 2 kVAC isolation
- cULus, CE, RoHS

### Programmable models

- Thermocouple Types J, K, T, E, N, R, S, U, B, C, D, L
- RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni500, Ni1000, Cu50, Cu100 (2, 3 or 4-wire)
- 4-20mA analog output signal
- 2 kVAC isolation
- cULus, CE, RoHS

Programmable models have quick and easy configuration with **FREE XT-SOFT software** (download) and **XT-USB cable** (purchased separately)

## XTH Series Head Mounted Temperature Transmitters starting at \$89.00

### Non-programmable models

- Models for thermocouple Types J, K, or T
- Models for RTD Type Pt100 3-wire
- Select from a variety of pre-configured measuring ranges
- 4-20mA analog output signal
- 2 kVAC isolation
- cULus, CE, RoHS

### Programmable models

- Thermocouple Types J, K, T, E, N, R, S, U, B, C, D, L
- RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni500, Ni1000, Cu50, Cu100 (2, 3 or 4-wire)
- 4-20mA analog output signal
- 2 kVAC isolation
- cULus, CE, RoHS

## Thermocouples starting at \$15.25

All thermocouples are pre-built stock items. Probes are available with type J, K or T thermocouple elements to meet many temperature sensing applications. Models available include:

- Probes with connection head up to 2,100 F
- Probes spring-loaded with connection head
- Probes with hex nipple
- Probes spring-loaded with hex nipple
- Probes with attached plug
- Probes with lead wire transition
- Adjustable immersion sensors
- Bolt-on ring sensors
- Room temperature sensors
- Made in the USA
- RoHS



### RTD sensors starting at \$29.00

Most RTD sensors are pre-built stock items. RTD sensors and probes are 100 ohm platinum in 3- or 4-wire styles. Models available include:

- Probes with connection head
- Spring-loaded probes with connection head
- Probes with hex nipple
- Spring-loaded probes with hex nipple
- Probes with attached plug
- Probes with lead wire transition
- Adjustable immersion sensors
- Bolt-on ring sensors
- Probes with M12 cable connector
- Sanitary clean-in-place (CIP) probes
- Room temperature sensors
- Class A accuracy (most models)

### Thermowells starting at \$23.50

All thermowells are pre-built stock items. Models available include:

- Thermowells for RTD probes with M12 cable connector
- **NEW!** Thermowells for spring-loaded thermocouple and RTD probes or thermometers

### Bi-Metal Thermometers

- Bi-metallic sensing element for reliable readings
- 3 and 5-inch dials
- Back or adjustable angle connection
- 304 stainless steel
- ±1% accuracy
- 5 year warranty



### Extension Wire

Extension wire is available in 50, 100 and 200 ft. lengths.

- Thermocouple extension wire for Types J, K and T with standard ASTM/ANSI color coding
- RTD extension wire specially constructed to offer superior performance compared to "off-the-shelf" cable



### Accessories

- Compression mounting fittings for temperature probes
- Bayonet mounting adapter for temperature sensors
- Thermocouple and RTD connectors and panel Jacks

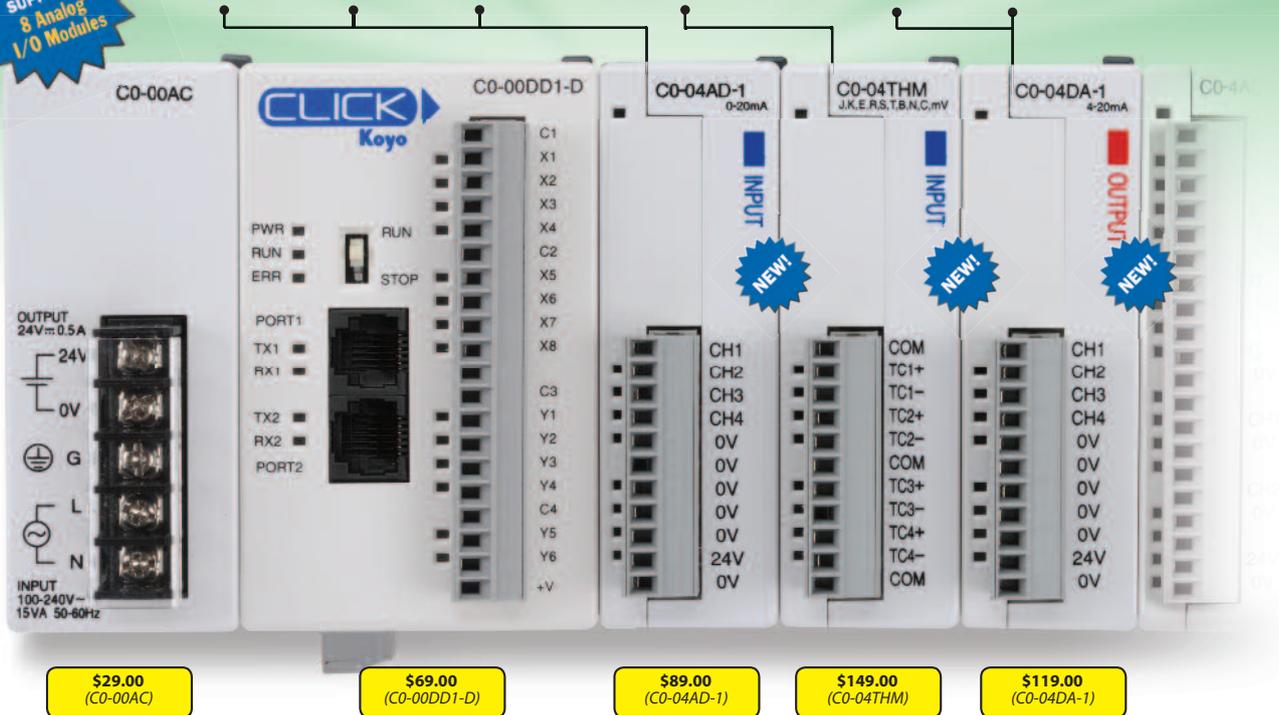
# Now simply **CLICK** for analog

The best little PLC just got better



**NOW SUPPORTS 8 Analog I/O Modules**

Shown slightly smaller than actual size



**\$29.00**  
(C0-00AC)

**\$69.00**  
(C0-00DD1-D)

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(C0-04AD-1)

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**\$119.00**  
(C0-04DA-1)

## Connect to lots of process devices with analog I/O modules for the **CLICK PLC**

The CLICK PLC now has more ways to help you with simple control applications. Monitor pressure, level, current, even thermocouples and RTDs directly. Perform simple variable control\* with analog outputs connected to devices such as drives. These high-resolution modules offer fast setup (no DIP switches) with software scaling to make your life (and program) easier. Choose from:

- 4-channel, current or voltage in (13-bit) **\$89 each**
- 4-channel, thermocouple or RTD in (16-bit) **\$149 each**
- 4-channel, current or voltage out (12-bit) **\$119 each**
- Combo 4-channel in / 2-channel out, current or voltage **\$149 each**

\* no PID

## Mighty as a stand-alone unit, or expand to 142 total I/O

With CLICK PLCs, you get a lot of application control in a small package. You can replace even just a few relays cost-effectively, but do a whole lot more with the easy-to-understand instruction set.

An 8-input / 6-output base unit with built-in serial ports can stand alone (starting at just \$69), or add any combination of up to 8 discrete and analog I/O modules. Simple!



And with FREE programming software, we've made it even easier to give CLICK a try.

*Download the free software so you can see just how simple control can be.*

Configure, price, and buy at:

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Free standard shipping is available for orders totaling over \$49 U.S. (except for orders which require LTL shipping, see Web site for details). Also, save on brokerage fees when shipping standard ground to Canada - allow AutomationDirect to choose the broker.

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1-800-633-0405 the #1 value in automation

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# proSense® TSD25 Series Temperature Switches



## Features

- Compact temperature switch with simple setup using mechanical adjustment dials
- Extremely durable housing with 316 stainless steel wetted parts
- No internal moving parts ensure long-term stability without setpoint drift
- LEDs indicate switching and operating status
- Two normally open or complementary normally open/normally closed PNP DC switching outputs
- Optional plastic protective cover: PSD-CV

## Agency Approvals

- cULus, File number E324411
- CE
- RoHS



ProSense Series Temperature Sensors					
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Use With
TSD25N-OP-0284-H	Temperature switch, two PNP complementary (1NO/1NC) switching DC outputs adjusted by setting dials. 1/4 inch NPT male port, 4-pin micro M12 DC plug, Set point scale: 3 to 284°F (-16 to 140°C). Probe length: 35 mm [1.38 inches]	1	0.25	\$89.75	PSD-CV
TSD25N-AP-0284-H	Temperature switch, two PNP (NO) switching DC outputs adjusted separately by setting dials with a fixed 9°F hysteresis. 1/4 inch NPT male port, 4-pin micro M12 DC plug, Set point scale: -4 to 284°F (-20 to 140°C). Probe length: 35 mm [1.38 inches]	1	0.25	\$89.75	PSD-CV

*Note: Purchase cable separately*



ProSense TSD25 Series Technical Specifications		
	TSD25N-AP-0284-H	TSD25N-OP-0284-H
Operating Voltage	9.6 to 32 VDC	
Process Connection	1/4" MNPT	
Electrical Connection	M12 connector; gold-plated contacts	
Outputs	Two PNP N.O. switching DC outputs	Two complementary PNP (1-N.O./1-N.C.) switching DC outputs
Current Rating	500 mA each output	
Current Consumption	< 30 mA	
Short-Circuit Protection	Yes (non-latching)	
Reverse Polarity Protection	Yes	
Overload Protection	Yes	
Voltage Drop	< 2 VDC	
Pressure Rating	4350 psi (300 bar)	
Set point scale	-4 to 284°F (-20 to 140°C)	3 to 284°F (-16 to 140°C)
Reset point scale	Fixed 5°C below setpoint	-4 to 277°F (-20 to 136°C)
Adjustment of the Switch Point	Setting dials	
Setting Accuracy	± 3°C	
Repeatability	± 0.1% of full range in °C	
Temperature Drift	± 0.1%, of full temperature range/10°C; 32 to 176°F (0 to 80°C).	
Power-on Delay Time	0.5 seconds	
Measuring Element	1 x Pt 1000, to DIN EN 60751, class B	
Dynamic Response (DIN EN 60751)	*to.5 = 1 sec/ to.9 = 3 sec	
Minimum Installation Depth	0.6 in (15 mm)	
Housing Material	PBT (Pocan); PC (Makrolon); FPM (Viton); stainless steel (316S12)	
Materials (wetted parts)	Stainless steel (316S12)	
Display	Switching Status: 2 LEDs: yellow	Power: LED - green - Switching Status: LED - yellow
Ambient Temperature	-13 to 158°F (-25 to 70°C)	
Medium Temperature	-13 to 257°F (-25 to 125°C) continuous, 258 to 293°F (126 to 145°C) 1 hour max	
Storage Temperature	-40 to 212°F (-40 to 100°C)	
Protection	IP 67, Class III	
Insulation Resistance	> 100 MΩ (500 VDC)	
Shock Resistance	50g (DIN / IEC 68-2-27, 11ms)	
Vibration Resistance	20g (DIN / EN 68-2-6, (10 to 2000 Hz)	
<b>EMC</b>		
EN 61000-4-2 ESD	4 kV CD/8 kV AD	
EN 61000-4-3 HF Radiated	10 V/m	
EN 61000-4-4 Burst	2 kV	
EN 61000-4-6 HF Conducted	10 V	

\* to.5 = a 50% of full scale change in output when immersed in water at 0.4m/s, to.9 = a 90% FS change.

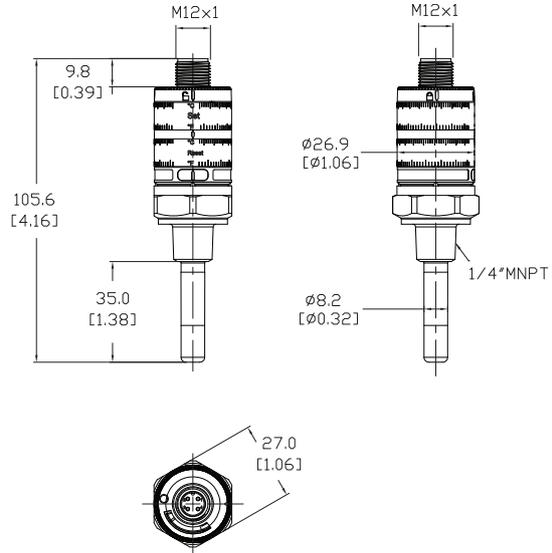
**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**  
[www.automationdirect.com/static/specs/prosensechemresistance.pdf](http://www.automationdirect.com/static/specs/prosensechemresistance.pdf)

- Company Information
- Drives
- Soft Starters
- Motors
- Power Transmission
- Motion: Servos and Steppers
- Motor Controls
- Sensors: Proximity
- Sensors: Photoelectric
- Sensors: Encoders
- Sensors: Limit Switches
- Sensors: Current
- Sensors: Pressure
- Sensors: Temperature
- Sensors: Level
- Sensors: Flow Switches
- Pushbuttons and Lights
- Stacklights
- Signal Devices
- Process
- Relays and Timers
- Pneumatics: Air Prep
- Pneumatics: Directional Control Valves
- Pneumatics: Cylinders
- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# pro<sup>sense</sup> TSD25 Series Temperature Switches

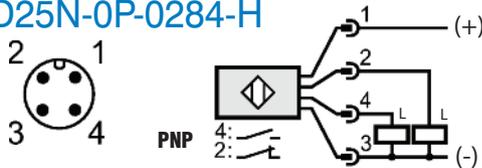
## TSD25N Series Dimensions

mm [inches]



## Wiring

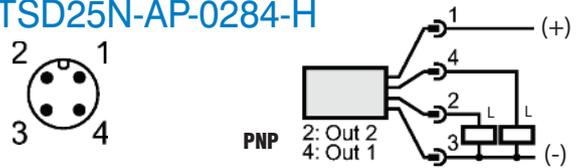
### TSD25N-0P-0284-H



Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.

**Cable Assembly Wiring Colors:**  
**Pin 1 - Brown**  
**Pin 2 - White**  
**Pin 3 - Blue**  
**Pin 4 - Black**

### TSD25N-AP-0284-H

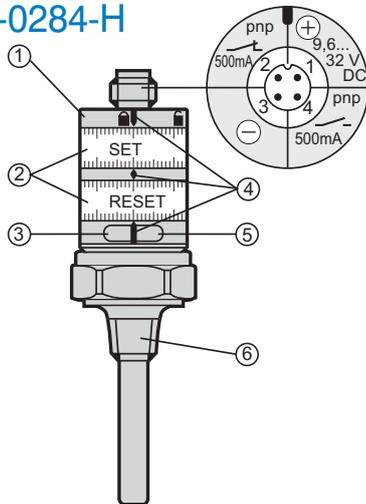


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Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.

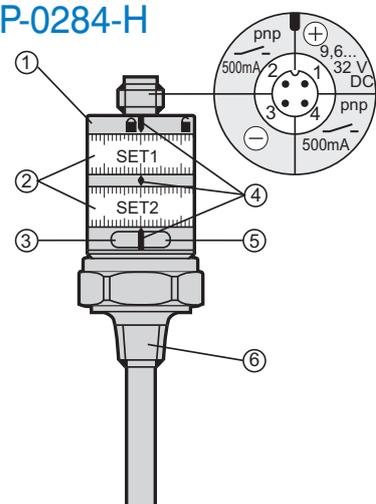
## Setting and Operation

### TSD25N-0P-0284-H



- 1: locking ring
  - 2: setting rings (manually adjustable after unlocking)
  - 3: LED green: supply voltage O.K.
  - 4: setting marks
  - 5: LED yellow: value [SET] reached, OUT1 = ON / OUT2 = OFF
  - 6: process connection 1/4" NPT  
pin 4 = OUT1 / pin 2 = OUT2
- Minimum distance between [SET] and [RESET] = 3°C.  
 To obtain the setting accuracy: Set both rings to the minimum value, then set the requested values.

### TSD25N-AP-0284-H



- 1: locking ring
  - 2: setting rings (manually adjustable after unlocking)
  - 3: LED yellow: lights if OUT1 = ON, temperature ≥ [SET1]
  - 4: setting marks
  - 5: LED yellow: lights if OUT2 = ON, temperature ≥ [SET2]
  - 6: process connection 1/4" NPT  
Pin 4 = OUT1 / Pin 2 = OUT2
- To obtain the setting accuracy: Set both rings to the minimum value, then set the requested values.

# prosense® TTD25 Series Temperature Transmitter

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions



TTD25N

TTD25C

## Features

- High accuracy 2-wire temperature transmitter
- 1000 ohm, Class A platinum RTD sensing element
- 4-20mA analog output signal
- Probes made of durable 316 stainless steel
- Temperature ranges of 0-100°C or 0-300°F

## Agency Approvals

- cULus File number E 324411
- CE
- RoHS



ProSense Temperature Transmitter Series						
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Use With	Cable Assemblies
TTD25N-20-0100C-H	4-20 mA output, 8.3 mm (0.3") dia. probe, 1/4" NPT male port, 4-pin micro M12 plug. Temperature range: 0 to 100°C.	1	0.30	\$126.00	N/A	CD12L-0B-020-A0 CD12L-0B-020-C0 CD12M-0B-070-A1 CD12M-0B-070-C1 CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB (order separately - See Proximity Sensor section for cable specs)
TTD25N-20-0300F-H	4-20 mA output, 8.3 mm (0.3") dia. probe, 1/4" NPT male port, 4-pin micro M12 plug. Temperature range: 0 to 300°F.	1	0.30	\$126.00	N/A	
TTD25C-20-0100C-H	4-20 mA output, 6 mm (0.24") dia. probe, 4-pin micro M12 plug. Temperature range: 0 to 100°C.	1	0.30	\$126.00	CF06-25N	
TTD25C-20-0300F-H	4-20 mA output, 6 mm (0.24") dia. probe, 4-pin micro M12 plug. Temperature range: 0 to 300°F.	1	0.32	\$126.00	CF06-25N	

ProSense TTD25 Series Technical Specifications				
	TTD25N-20-0100C-H	TTD25N-20-0300F-H	TTD25C-20-0100C-H	TTD25C-20-0300F-H
<b>Operating Voltage</b>	10 to 30 VDC			
<b>Electrical Connection</b>	M12 connector; gold-plated contacts			
<b>Process connection</b>	1/4" MNPT		Use CF06-25N	
<b>Short-Circuit Protection</b>	Yes (non-latching)			
<b>Overload Protection</b>	Yes			
<b>Reverse Polarity Protection</b>	Yes			
<b>Analog Output</b>	4 to 20 mA (min/max 3.85 to 22 mA)			
<b>Maximum Load</b>	720Ω at 24 VDC; R <sub>max</sub> = (Supply voltage - 9.6)*50			
<b>Pressure Rating</b>	4350 psi (300 bar)		725 psi (50 bar) (This value applies to the sensor only. For installation in adapters, use the adapter data sheet indications)	
<b>Accuracy</b>	± 0.3°C	± 0.4°C	± 0.3°C	± 0.4°C
<b>Resolution</b>	<0.02°C			
<b>Measuring Element</b>	1 x Pt 1000, to DIN EN 60751, class A			
<b>Measuring Range</b>	32 to 212°F (0 to 100°C)	0 to 300°F (-17.8 to 148.9°C)	32 to 212°F (0 to 100°C)	0 to 300°F (-17.8 to 148.9°C)
<b>Dynamic Response (DIN EN 60751)</b>	*t <sub>0.5</sub> = 1 sec/ t <sub>0.9</sub> = 3 sec		*t <sub>0.5</sub> = 1 sec/ t <sub>0.9</sub> = 3 sec	
<b>Minimum Installation Depth</b>	N/A		0.6 in (15 mm)	
<b>Housing Material</b>	Stainless steel (316S12); stainless steel (304S15); stainless steel (303S22); PA			
<b>Materials (wetted parts)</b>	Stainless steel (316S12)			
<b>Ambient Temperature</b>	-13 to 158°F (-25 to 70°C)			
<b>Storage Temperature</b>	-40 to 212°F (-40 to 100°C)			
<b>Protection</b>	IP 68 / IP 69K, Class III			
<b>Insulation Resistance</b>	> 100 MΩ (500 VDC)			
<b>Shock Resistance</b>	50g (DIN / IEC 68-2-27, 11ms)			
<b>Vibration Resistance</b>	20g (DIN / EN 68-2-6, (10 to 2000 Hz)			
<b>EMC</b>				
<b>EN 61000-4-2 ESD</b>	4 kV CD/8 kV AD			
<b>EN 61000-4-3 HF Radiated</b>	10 V/m			
<b>EN 61000-4-4 Burst</b>	2 kV			
<b>EN 61000-4-5 Surge</b>	1 kV			
<b>EN 61000-4-6 HF Conducted</b>	10 V			

\* t<sub>0.5</sub> = a 50% of full scale change in output when immersed in water at 0.4m/s, t<sub>0.9</sub> = a 90% FS change.



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

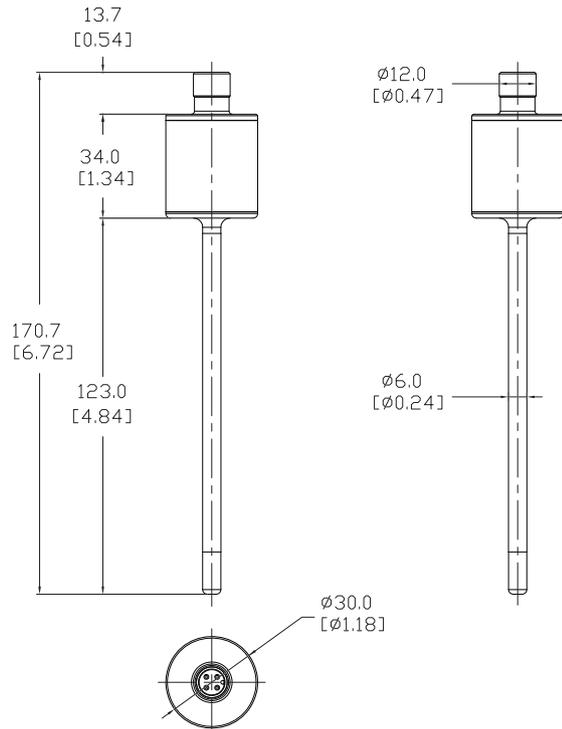
[www.automationdirect.com/static/specs/prosensechemresistance.pdf](http://www.automationdirect.com/static/specs/prosensechemresistance.pdf)

TTD25C series may be used with RTDTW-10-010-50N Thermowell & CF06-25N fitting when isolation is required. Please refer to "Thermowells for RTD Probes with M12 Cable Connector" pages for further information.

# pro<sup>sense</sup>® TTD25 Temperature Transmitters

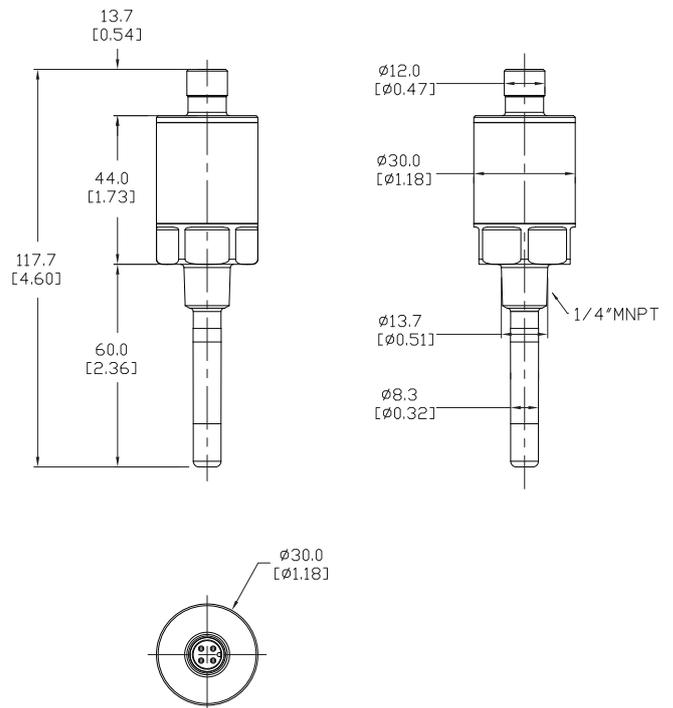
## TTD25C Series Dimensions

mm [inches]



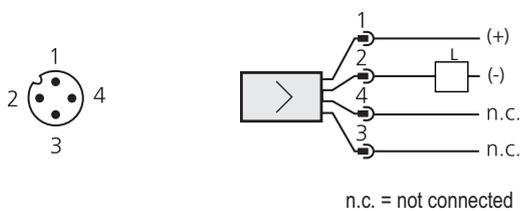
## TTD25N Series Dimensions

mm [inches]



**NOTE: USE PROSENSE COMPRESSION FITTING CF06-25N TO MOUNT TTD25C SERIES TEMPERATURE TRANSMITTER.**

## Wiring Diagram



### Cable Assembly Wiring Colors:

**Pin 1 - Brown**

**Pin 2 - White**

**Pin 3 - Blue**

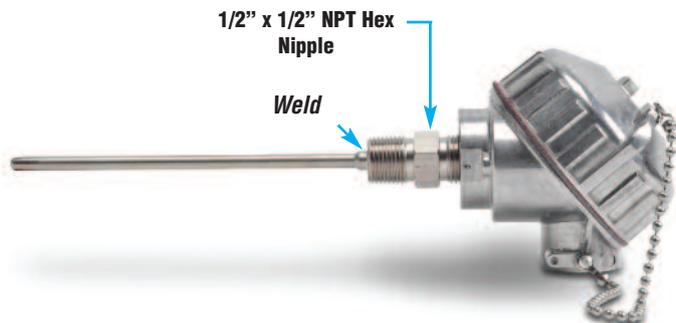
**Pin 4 - Black**

*Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.*

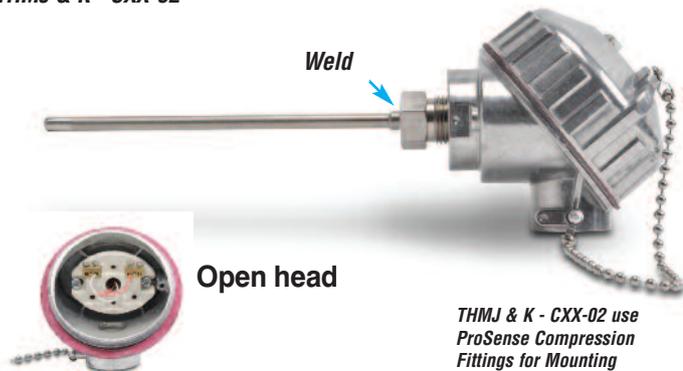
# pro<sup>sense</sup> Thermocouple Probes with Connection Head

## Overview

THMJ & K - CXX-01 & 04



THMJ & K - CXX-02



THMJ & K - CXX-02 use ProSense Compression Fittings for Mounting

- All temperature sensors are pre-built stock items
- Probe
  - Type J or K thermocouple elements to meet many temperature sensing applications
  - 1/4" diameter, 316 SS or Inconel Alloy 600 sealed sheath to protect against harsh environments
  - Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
  - Bendable to adapt to installation requirements
  - 6", 12" or 18" probe length
- Connection Head
  - Cast aluminum NEMA 4X, IP66 screw cover head with captive gasket
  - One turn cover removal & installation eliminates cross threading and saves time
  - 3/4" NPT conduit opening with internal stop to prevent overtightening and installation damage
  - Gripping ribs on cover edge
  - Stainless steel cover chain
- Wiring
  - Ceramic terminal base
  - Brass terminals with stainless steel screws eliminate the need to wrap connections around screws
  - Elevated terminal block for easy wire termination
- Made in the USA



Thermocouple Probes with Connection Head - Types J and K									
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Probe Material	Temperature Sensing Range	Mounting
THMJ-C06-01	1	1.3	\$47.25	J	1/4"	6"	316 stainless steel	0 to 720°C (32 to 1330°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMJ-C12-01			\$49.75	J		12"			
THMJ-C18-01			\$53.00	J		18"			
THMK-C06-01			\$47.25	K		6"			
THMK-C12-01			\$49.75	K		12"			
THMK-C18-01			\$53.00	K		18"			
THMJ-C06-02			\$45.25	J		6"	ProSense compression fitting (see accessories - purchased separately)		
THMJ-C12-02			\$44.75	J		12"			
THMJ-C18-02			\$37.50	J		18"			
THMK-C06-02			\$42.25	K		6"			
THMK-C12-02			\$44.75	K		12"			
THMK-C18-02			\$37.50	K		18"			
THMK-C06-04			\$51.25	K		6"	Inconel Alloy 600	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS	
THMK-C12-04			\$57.75	K		12"			
THMK-C18-04			\$64.00	K		18"			

Technical Specifications	
Junction Type	Ungrounded
ASTM E230 Standard Limits of Error	±2.2°C (±4.0°F) or 0.75%, whichever is greater
Probe	ø1/4", 316 stainless steel or Inconel Alloy 600 sheath, single thermocouple element is embedded in MgO powder
Probe Minimum Bend Radius	2 x sheath diameter
Minimum Installation Depth	3" (76 mm)
Connection Head	Die-cast aluminum, screw cover with stainless steel chain, compressed graphite gasket, NEMA 4X, IP66, 3/4" NPT conduit opening, max temp. 400°F (204°C)
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	Ceramic terminal base with brass terminals and stainless steel screws (Recommended tightening torque 3-4 lb-in)

**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Not designed for use in a thermowell. Use spring-loaded probe when installing in a thermowell.**

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# proense® Thermocouple Probes with Connection Head

## Dimensions

inches [mm]

**THMJ & K - CXX-01 & 04**

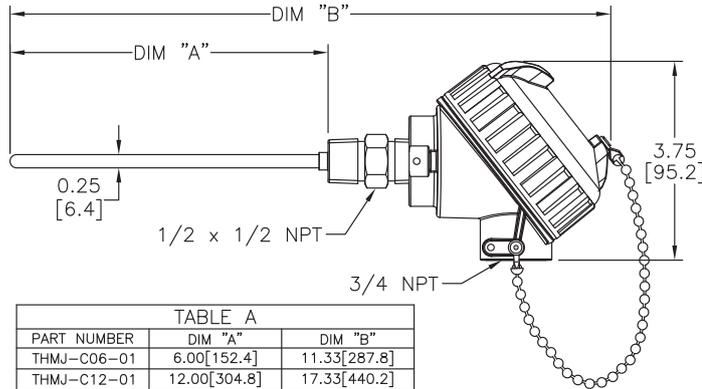
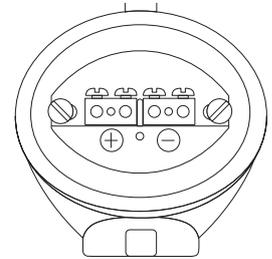


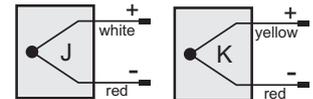
TABLE A		
PART NUMBER	DIM "A"	DIM "B"
THMJ-C06-01	6.00[152.4]	11.33[287.8]
THMJ-C12-01	12.00[304.8]	17.33[440.2]
THMJ-C18-01	18.00[457.2]	23.33[592.6]
THMK-C06-01	6.00[152.4]	11.33[287.8]
THMK-C12-01	12.00[304.8]	17.33[440.2]
THMK-C18-01	18.00[457.2]	23.33[592.6]
THMK-C06-04	6.00[152.4]	11.33[287.8]
THMK-C12-04	12.00[304.8]	17.33[440.2]
THMK-C18-04	18.00[457.2]	23.33[592.6]

## Wiring Information



**Type J: (+) white (-) red**  
**Type K: (+) yellow (-) red**

- Must use thermocouple extension lead wire, see end of this section
- Observe polarity when making connections
- Do not use standard wire nuts
- Recommended screw terminal tightening torque 3-4 lb-in



**THMJ & K - CXX-02**

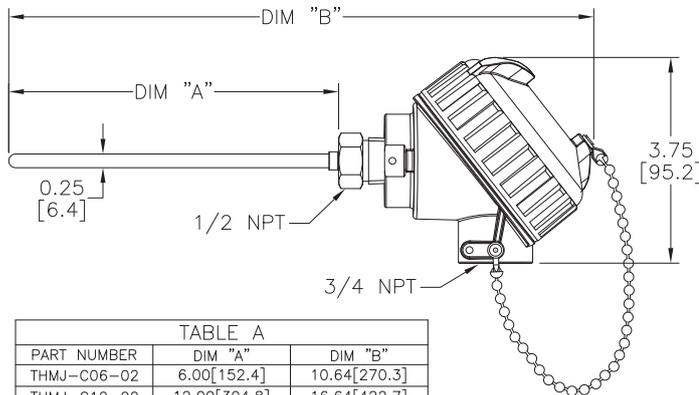


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
THMJ-C06-02	6.00[152.4]	10.64[270.3]
THMJ-C12-02	12.00[304.8]	16.64[422.7]
THMJ-C18-02	18.00[457.2]	22.64[575.1]
THMK-C06-02	6.00[152.4]	10.64[270.3]
THMK-C12-02	12.00[304.8]	16.64[422.7]
THMK-C18-02	18.00[457.2]	22.64[575.1]

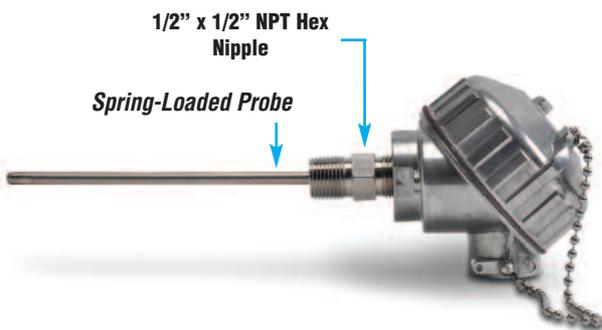
## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch male thread	1	\$2.50
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch male thread	1	\$3.00
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch male thread	1	\$4.50
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch male thread	1	\$6.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch male thread	1	\$7.25
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch male thread	1	\$10.75
<b>CFTF-14</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/4 inch diameter temperature probes	5	\$6.50

**Note: Thermocouple extension lead wire and full listing of accessories available at the end of this section.**

# pro<sup>o</sup>sense® Thermocouple Spring-Loaded Probes with Connection Head

THMJ & K - CXX-03



THMJ & K - CXXR-03  
Replacement Probe



Open head



## Overview

- All temperature sensors are pre-built stock items
- Probe
  - Spring-loaded for positive tip contact in thermowells
  - Type J or K thermocouple elements to meet many temperature sensing applications
  - 1/4" diameter, 316 SS sheath to protect against harsh environments
  - Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
  - 4", 6" or 12" probe length
- Connection Head
  - Cast aluminum NEMA 4X, IP66 screw cover head with captive gasket
  - One turn cover removal & installation eliminates cross threading and saves time
  - 3/4 NPT conduit opening with internal stop to prevent overtightening and installation damage
  - Gripping ribs on cover edge
  - Stainless steel cover chain
- Wiring
  - Ceramic terminal base
  - Brass terminals with stainless steel screws eliminate the need to wrap connections around screws
  - Elevated terminal block for easy wire termination
- Made in the USA



Thermocouple Spring-Loaded Probes with Connection Head - Types J and K								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
THMJ-C04-03	1	1.3	\$51.00	J	1/4"	4"	0 to 720°C (32 to 1330°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS, Mount in thermowell (see accessories, purchased separately)
THMJ-C06-03			\$53.50	J		6"		
THMJ-C12-03			\$56.75	J		12"		
THMK-C04-03			\$51.00	K		4"	0 to 927°C (32 to 1700°F)	
THMK-C06-03			\$53.50	K		6"		
THMK-C12-03			\$57.00	K		12"		

Thermocouple Spring-Loaded Replacement Probes - Types J and K								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Fits Probe Length	Temperature Sensing Range	For Use With
THMJ-C04R-03	1	0.2	\$25.00	J	1/4"	4"	0 to 720°C (32 to 1330°F)	THMJ-C04-03
THMJ-C06R-03			\$26.50	J		6"		THMJ-C06-03
THMJ-C12R-03			\$28.50	J		12"		THMJ-C12-03
THMK-C04R-03			\$25.00	K		4"	0 to 927°C (32 to 1700°F)	THMK-C04-03
THMK-C06R-03			\$26.50	K		6"		THMK-C06-03
THMK-C12R-03			\$28.50	K		12"		THMK-C12-03

# pro<sup>sense</sup> Thermocouple Spring-Loaded Probes with Connection Head

Technical Specifications	
<b>Junction Type</b>	Ungrounded
<b>ASTM E230 Standard Limits of Error</b>	±2.2°C (±4.0°F) or 0.75%, whichever is greater
<b>Probe</b>	ø1/4", 316 stainless steel sheath, single thermocouple element is embedded in MgO powder
<b>Connection Head</b>	Die-cast aluminum, screw cover with stainless steel chain, compressed graphite gasket, NEMA 4X, IP66, 3/4" NPT conduit opening, max temp. 400°F (204°C)
<b>Response Time</b>	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
<b>Wiring</b>	Ceramic terminal base with brass terminals and stainless steel screws (Recommended tightening torque 3-4 lb-in)

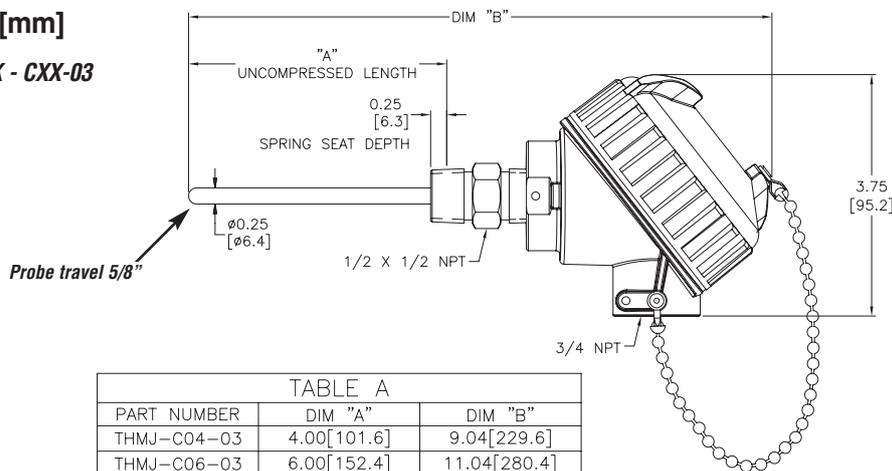


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

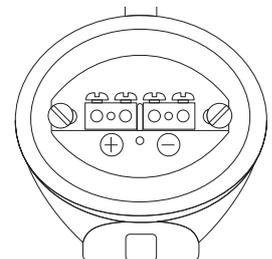
inches [mm]

THMJ & K - CXX-03



PART NUMBER	DIM "A"	DIM "B"
THMJ-C04-03	4.00 [101.6]	9.04 [229.6]
THMJ-C06-03	6.00 [152.4]	11.04 [280.4]
THMJ-C12-03	12.00 [304.8]	17.04 [432.8]
THMK-C04-03	4.00 [101.6]	9.04 [229.6]
THMK-C06-03	6.00 [152.4]	11.04 [280.4]
THMK-C12-03	12.00 [304.8]	17.04 [432.8]

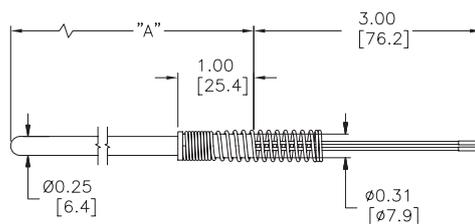
## Wiring Information



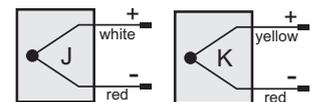
**Type J: (+) white (-) red**  
**Type K: (+) yellow (-) red**

- Must use thermocouple extension lead wire, see end of this section
- Observe polarity when making connections
- Do not use standard wire nuts
- Recommended screw terminal tightening torque 3-4 lb-in

THMJ & K - CXXR-03  
 (Replacement Probes)



PART NUMBER	DIM "A"
THMJ-C04R-03	5.00 [127.0]
THMJ-C06R-03	7.00 [177.8]
THMJ-C12R-03	13.00 [330.2]
THMK-C04R-03	5.00 [127.0]
THMK-C06R-03	7.00 [177.8]
THMK-C12R-03	13.00 [330.2]



## Probe Replacement

1. Open top cover.
2. Disconnect wires and remove terminal block.
3. Remove snap ring at bottom of head (snap ring pliers recommended).
4. Slide out old probe and slide new probe in place.
5. While compressing spring, replace snap ring.
6. Replace terminal block and connect probe wires.

# pro<sup>ense</sup>® Thermocouple Spring-Loaded Probes with Connection Head - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
TW04-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter, for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$23.50
TW04-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$23.50
TW04-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$29.50
TW04-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$29.50
TW06-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$31.00
TW06-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$31.00
TW06-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$39.00
TW06-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$39.00
TW12-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$53.00
TW12-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$53.00
TW12-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$66.00
TW12-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$66.00

**Note:** Thermocouple extension lead wire and full listing of accessories and dimension information available at the end of this section.

## Spring-Loaded Thermocouple Probe and Thermowell Assembly Example



**-Spring-loaded probe design ensures positive tip contact with the bottom of the thermowell.**

**-Integral probe hex nipple threads directly into thermowell. No additional probe mounting fittings are required.**

# pro<sup>sense</sup> Thermocouple Probes with Hex Nipple

THMJ & K - HXXL01-01 & 03



CHSC-AL-1



CHTB-2

Accessories

## Overview

- All temperature sensors are pre-built stock items
- Type J or K thermocouple elements to meet many temperature sensing applications
- 1/4" diameter, 316 SS or Inconel Alloy 600 sealed sheath to protect from harsh sensing applications
- Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
- 6", 12" or 18" probe length
- Bendable probe to adapt to installation requirements

- 316SS, 1/2 x 1/2 NPT hex nipple allows easy replacement of existing probes and connection to a wiring junction box
- Made in the USA



### Thermocouple Probes with Hex Nipple - Types J and K

Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Probe Material	Temperature Sensing Range	Mounting
THMJ-H06L01-01	1	0.5	\$34.00	J	1/4"	6"	316 stainless steel	0 to 720°C (32 to 1330°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMJ-H12L01-01			\$36.00	J		12"			
THMJ-H18L01-01			\$27.50	J		18"			
THMK-H06L01-01			\$34.00	K		6"	Inconel Alloy 600	0 to 927°C (32 to 1700°F)	
THMK-H12L01-01			\$36.00	K		12"			
THMK-H18L01-01			\$39.75	K		18"			
THMK-H06L01-03			\$35.00	K		6"	Inconel Alloy 600	0 to 1149°C (32 to 2100°F)	
THMK-H12L01-03			\$41.00	K		12"			
THMK-H18L01-03			\$47.00	K		18"			

### Technical Specifications

Junction Type	Ungrounded
ASTM E230 Standard Limits of Error	±2.2°C (±4.0°F) or 0.75%, whichever is greater
Probe	ø1/4", 316 stainless steel or Inconel Alloy 600 sheath, single thermocouple element is embedded in MgO powder
Probe Minimum Bend Radius	2 x sheath diameter
Minimum Installation Depth	3" (76 mm)
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	3 inch Teflon insulation wire leads with terminal pins



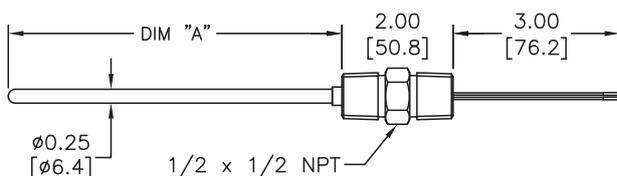
**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Not designed for use in a thermowell. Use spring-loaded probe when installing in a thermowell.**

# proSense® Thermocouple Probes with Hex Nipple

## Dimensions

inches [mm]

THMJ & K - HXXL01-01 & 03

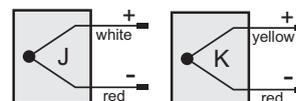


PART NUMBER	DIM "A"
THMJ-H06L01-01	6.00[152.4]
THMJ-H12L01-01	12.00[304.8]
THMJ-H18L01-01	18.00[457.2]
THMK-H06L01-01	6.00[152.4]
THMK-H12L01-01	12.00[304.8]
THMK-H18L01-01	18.00[457.2]
THMK-H06L01-03	6.00[152.4]
THMK-H12L01-03	12.00[304.8]
THMK-H18L01-03	18.00[457.2]

## Wiring Information

Type J: (+) white (-) red  
Type K: (+) yellow (-) red

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



## Accessories

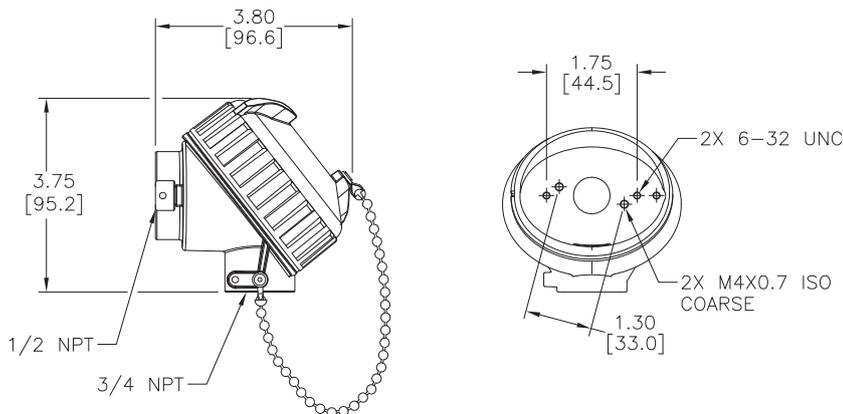
Part No.	Description	Pcs/Pkg	Price
<b>CHSC-AL-1</b>	ProSense general purpose screw cover connection head for temperature probes, die-cast aluminum, 1/2 inch NPT process opening, 3/4 inch NPT conduit opening, NEMA 4X, IP66 rated, graphite gasket, maximum temperature rating of 825°F (440°C). Order probe and terminal base separately.	1	\$14.00
<b>CHTB-2</b>	ProSense ceramic terminal base, two brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	\$3.75

Note: Thermocouple extension lead wire and full listing of accessories available at the end of this section.

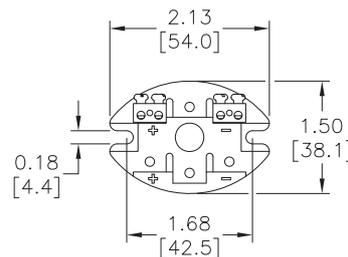
## Dimensions

inches [mm]

CHSC-AL-1



CHTB-2



# pro<sup>ense</sup>® Thermocouple Spring-Loaded Probes with Hex Nipple

THMJ & K - HXXL01-02

## Overview

- All temperature sensors are pre-built stock items
- Spring-loaded for positive tip contact in thermowells
- Type J or K thermocouple elements to meet many temperature sensing applications
- 1/4" diameter, 316 SS sheath to protect against harsh environments
- Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
- 4", 6" or 12" probe length

- 316 SS, 1/2 x 1/2 NPT hex nipple allows easy replacement of existing probes and connection to a wiring junction box
- Made in the USA



CHSC-AL-1



CHTB-2

Accessories

## Thermocouple Spring-Loaded Probes with Hex Nipple - Types J and K

Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
THMJ-H04L01-02	1	0.5	\$37.75	J	1/4"	4"	0 to 720°C (32 to 1330°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMJ-H06L01-02			\$40.25	J		6"		
THMJ-H12L01-02			\$43.50	J		12"		
THMK-H04L01-02			\$37.75	K		4"	0 to 927°C (32 to 1700°F)	
THMK-H06L01-02			\$40.25	K		6"		
THMK-H12L01-02			\$43.50	K		12"		

## Technical Specifications

Junction Type	Ungrounded
ASTM E230 Standard Limits of Error	±2.2°C (±4.0°F) or 0.75%, whichever is greater
Probe	ø1/4", 316 stainless steel sheath, single thermocouple element is embedded in MgO powder
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	3 inch Teflon insulation wire leads with terminal pins

Note: See end of section for thermowells to fit these units.



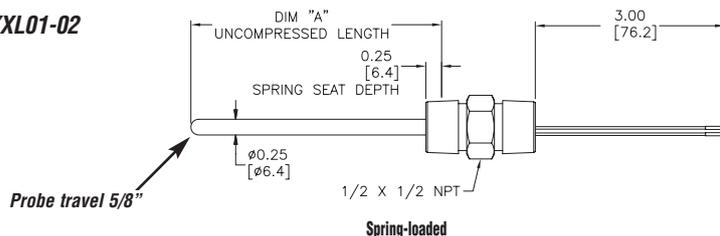
**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

# pro<sup>sense</sup> Thermocouple Spring-Loaded Probes with Hex Nipple

## Dimensions

inches [mm]

THMJ & K - HXXL01-02

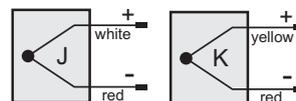


PART NUMBER	DIM "A"
THMJ-H04L01-02	4.00[101.6]
THMJ-H06L01-02	6.00[152.4]
THMJ-H12L01-02	12.00[304.8]
THMK-H04L01-02	4.00[101.6]
THMK-H06L01-02	6.00[152.4]
THMK-H12L01-02	12.00[304.8]

## Wiring Information

Type J: (+) white (-) red  
 Type K: (+) yellow (-) red

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



## Accessories

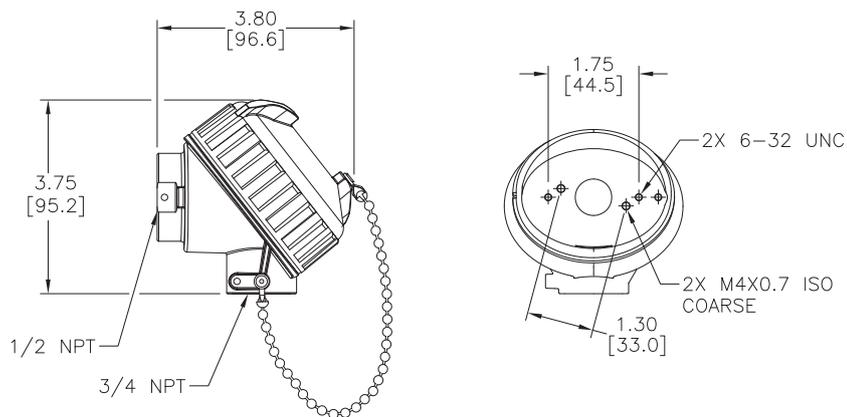
Part No.	Description	Pcs/Pkg	Price
<b>CHSC-AL-1</b>	ProSense general purpose screw cover connection head for temperature probes, die-cast aluminum, 1/2 inch NPT process opening, 3/4 inch NPT conduit opening, NEMA 4X, IP66 rated, graphite gasket, maximum temperature rating of 825°F (440°C). Order probe and terminal base separately.	1	\$14.00
<b>CHTB-2</b>	ProSense ceramic terminal base, two brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	\$3.75

Note: Thermocouple extension lead wire and full listing of accessories available at the end of this section.

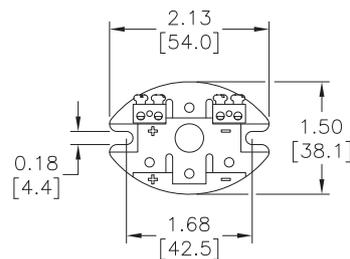
## Dimensions

inches [mm]

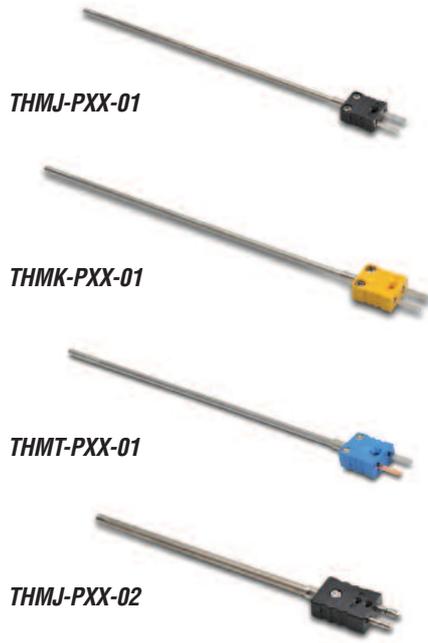
CHSC-AL-1



CHTB-2



# proSense® Thermocouple Probes with Attached Plug



## Overview

- All temperature sensors are pre-built stock items
- Type J, K, or T thermocouple elements to meet many temperature sensing applications
- 1/8" or 1/4" diameter, 316 SS sheath to protect against harsh environments
- Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
- 6", 12" or 18" probe length
- Bendable probe to adapt to installation requirements
- Attached plug for quick and easy wiring connections
- Made in the USA



Probe shown with optional CF18-BC adjustable bayonet cap compression mounting fitting



Thermocouple Probes with Attached Plug - Types J, K & T											
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting	Attached Plug Size	Mating Jack (see accessories-purchased separately)	
THMJ-P06-01	1	0.2	\$17.25	J	1/8"	6"	0 to 521°C (32 to 970°F) plug rated to 400 °F (204 °C)	ProSense compression fitting (see accessories purchased separately)	Miniature	THMJ-MJ	
THMJ-P12-01			\$18.50	J		12"					
THMJ-P18-01			\$21.00	J		18"					
THMK-P06-01			\$17.25	K		6"	0 to 927°C (32 to 1700°F) plug rated to 400 °F (204 °C)				
THMK-P12-01			\$18.50	K		12"					
THMK-P18-01			\$21.00	K		18"					
THMT-P06-01			\$17.25	T		6"	-200 to 371°C (-328 to 700°F) plug rated to 400 °F (204 °C)			Standard	THMT-MJ
THMT-P12-01			\$18.50	T		12"					
THMT-P18-01			\$21.00	T		18"					
THMJ-P06-02			\$21.00	J	6"	1/4"	6"		0 to 720°C (32 to 1330°F) plug rated to 400 °F (204 °C)	Standard	THMJ-SJ
THMJ-P12-02			\$23.00	J	12"						
THMJ-P18-02			\$26.50	J	18"						
THMK-P06-02			\$21.00	K	6"		0 to 927°C (32 to 1700°F) plug rated to 400 °F (204 °C)				
THMK-P12-02			\$23.00	K	12"						
THMK-P18-02			\$26.50	K	18"						

Technical Specifications	
Junction Type	Ungrounded
ASTM E230 Standard Limits of Error	±2.2°C (±4.0°F) or 0.75% whichever is greater
Probe	ø1/8" or ø1/4", 316 stainless steel sheath, single thermocouple element is embedded in MgO powder
Probe Minimum Bend Radius	2 x sheath diameter
Minimum Installation Depth	1/8" O.D.: 1.75" (44.5 mm), 1/4" O.D.: 3" (76 mm)
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	Attached plug, mating jack sold separately. See accessories.

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

# pro<sup>o</sup>sense® Thermocouple Probes with Attached Plug

## Dimensions

inches [mm]

THMJ, K & T - PXX-01

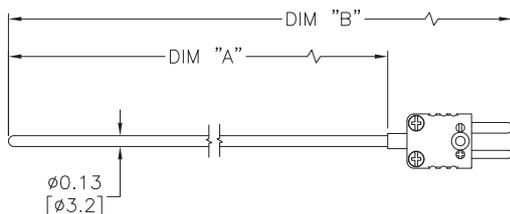


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
THMJ-P06-01	6.00[152.4]	7.61[193.3]
THMJ-P12-01	12.00[304.8]	13.61[345.7]
THMJ-P18-01	18.00[457.2]	19.61[498.1]
THMK-P06-01	6.00[152.4]	7.61[193.3]
THMK-P12-01	12.00[304.8]	13.61[345.7]
THMK-P18-01	18.00[457.2]	19.61[498.1]
THMT-P06-01	6.00[152.4]	7.61[193.3]
THMT-P12-01	12.00[304.8]	13.61[345.7]
THMT-P18-01	18.00[457.2]	19.61[498.1]

## Wiring Information

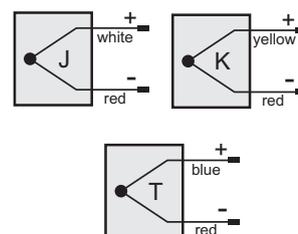
Type J: black plug

Type K: yellow plug

Type T: blue plug

Pins labeled + and -

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



## Dimensions

inches [mm]

THMJ & K - PXX-02

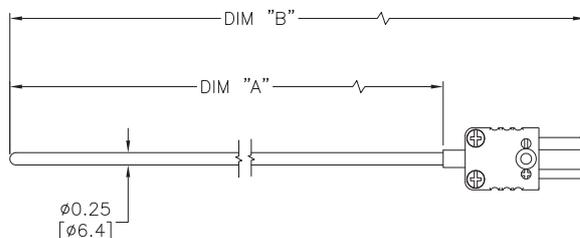


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
THMJ-P06-02	6.00[152.4]	8.36[212.3]
THMJ-P12-02	12.00[304.8]	14.36[364.7]
THMJ-P18-02	18.00[457.2]	20.39[517.14]
THMK-P06-02	6.00[152.4]	8.36[212.3]
THMK-P12-02	12.00[304.8]	14.36[364.7]
THMK-P18-02	18.00[457.2]	20.39[517.14]

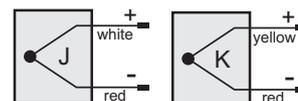
## Wiring Information

Type J: black plug

Type K: yellow plug

Pins labeled + and -

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



# proense® Thermocouple Probes with Attached Plug - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF18-125N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF18-25N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF18-50N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>CF18-125N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF18-25N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF18-50N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CFTF-18</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/8 inch diameter temperature probes	5	\$6.00
<b>CFTF-14</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/4 inch diameter temperature probes	5	\$6.50
<b>CF18-BC</b>	Adjustable bayonet cap compression fitting for 1/8 inch diameter probe sheaths	1	\$8.00
<b>THMJ-SJ</b>	Thermocouple connector, Type J, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.25
<b>THMK-SJ</b>	Thermocouple connector, Type K, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.50
<b>THMT-SJ</b>	Thermocouple connector, Type T, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$4.75
<b>THMJ-MJ</b>	Thermocouple connector, Type J, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.50
<b>THMK-MJ</b>	Thermocouple connector, Type K, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.50
<b>THMT-MJ</b>	Thermocouple connector, Type T, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 20 AWG (0.8 mm) maximum wire size	1	\$3.75
<b>THMJ-SPJ</b>	Thermocouple connector, Type J, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.75
<b>THMK-SPJ</b>	Thermocouple connector, Type K, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>THMT-SPJ</b>	Thermocouple connector, Type T, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>THMJ-MPJ</b>	Thermocouple connector, Type J, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.00
<b>THMK-MPJ</b>	Thermocouple connector, Type K, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.50
<b>THMT-MPJ</b>	Thermocouple connector, Type T, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.75
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00
<b>WCB-M</b>	Wire / cable clamp bracket for use with miniature thermocouple connectors.	4	\$5.00

Note: Thermocouple extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.

### Brass Compression Fittings



### BCF14-25N



### BCF18-125N



## Thermocouple Connectors

### THMJ-SJ



### THMJ-SP



### THMJ-SPJ



## S.S. Compression Fittings

### CF18-125N



### CF14-125N



### CF14-25N



### CFTF-14



# pro<sup>o</sup>sense® Thermocouple Probes with Lead Wire Transition

THMJ, K & T - TXXL06-01, 02 & 03



Probe shown with optional CF18-BC adjustable bayonet cap compression mounting fitting



## Overview

- All temperature sensors are pre-built stock items
- Type J, K or T thermocouple elements to meet many temperature sensing applications
- 1/8" or 1/4" Diameter, 316 stainless steel or Inconel Alloy 600 sheath to protect against harsh environments
- Magnesium Oxide (MgO) insulation provides vibration dampening and protection against thermal shock
- 6", 12" or 18" probe length
- Bendable probe to adapt to installation requirements
- Heavy duty lead wire transition with relief spring
- 6-foot lead wires with stainless steel overbraid
- Made in the USA



Thermocouple Probes with Lead Wire Transition - Types J, K and T

Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D)	Probe Length	Probe Material	Temperature Sensing Range	Mounting			
THMJ-T06L06-01	1	0.4	\$28.50	J	1/8"	6"	316 stainless steel	0 to 521°C (32 to 970°F), lead wire transition rated to 400 °F (204 °C)	ProSense compression fitting (see accessories purchased separately)			
THMJ-T12L06-01			\$29.50	J		12"						
THMJ-T18L06-01			\$31.00	J		18"						
THMK-T06L06-01		0.6	\$28.50	K		6"						
THMK-T12L06-01			\$29.50	K		12"						
THMK-T18L06-01			\$31.00	K		18"						
THMT-T06L06-01		0.4	\$28.25	T		1/4"				6"	Inconel Alloy 600	-200 to 371°C (-328 to 700°F), lead wire transition rated to 400 °F (204 °C)
THMT-T12L06-01			\$29.25	T						12"		
THMT-T18L06-01			\$31.00	T						18"		
THMJ-T06L06-02		0.4	\$31.00	J	1/4"		6"	316 stainless steel		0 to 720°C (32 to 1330°F), lead wire transition rated to 400 °F (204 °C)		
THMJ-T12L06-02			\$33.00	J			12"					
THMJ-T18L06-02			\$35.50	J			18"					
THMK-T06L06-02		0.6	\$31.00	K			6"					
THMK-T12L06-02			\$33.00	K			12"					
THMK-T18L06-02			\$35.50	K			18"					
THMK-T06L06-03		0.4	\$33.25	K		1/4"	6"				Inconel Alloy 600	0 to 1149°C (32 to 2100°F), lead wire transition rated to 400 °F (204 °C)
THMK-T12L06-03			\$39.50	K			12"					
THMK-T18L06-03			\$46.00	K			18"					

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>sense</sup>® Thermocouple Probes with Lead Wire Transition

Technical Specifications	
<b>Junction Type</b>	Ungrounded
<b>ASTM E230 Standard Limits of Error</b>	±2.2°C (±4.0°F) or 0.75%, whichever is greater
<b>Probe</b>	ø1/8" or ø1/4", 316 stainless steel or Inconel Alloy 600 sheath, single thermocouple element is embedded in MgO powder
<b>Probe Minimum Bend Radius</b>	2 x sheath diameter
<b>Minimum Installation Depth</b>	1/8" O.D.: 1.75" (44.5 mm), 1/4" O.D.: 3" (76 mm)
<b>Response Time</b>	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
<b>Wiring</b>	6 foot stranded conductor lead wires with stripped ends, fiberglass insulation and stainless steel overbraid

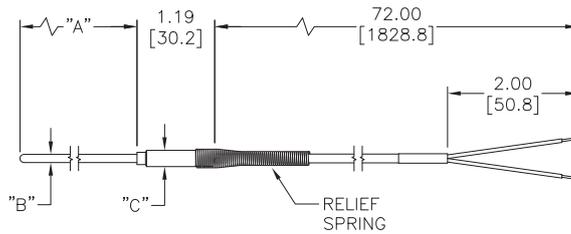


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

inches [mm]

THMJ, K & T - TXXL06-01, 02 & 03

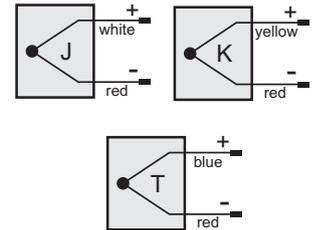


## Wiring Information

**Type J: (+) white (-) red**  
**Type K: (+) yellow (-) red**  
**Type T: (+) blue (-) red**

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

PART NUMBER	DIM "A"	DIM "B"	DIM "C"
THMJ-T06L06-01	6.00[152.4]	0.13[3.3]	0.25[6.35]
THMJ-T12L06-01	12.00[304.8]	0.13[3.3]	0.25[6.35]
THMJ-T18L06-01	18.00[457.2]	0.13[3.3]	0.25[6.35]
THMT-T06L06-01	6.00[152.4]	0.13[3.3]	0.25[6.35]
THMT-T12L06-01	12.00[304.8]	0.13[3.3]	0.25[6.35]
THMT-T18L06-01	18.00[457.2]	0.13[3.3]	0.25[6.35]
THMK-T06L06-01	6.00[152.4]	0.13[3.3]	0.25[6.35]
THMK-T12L06-01	12.00[304.8]	0.13[3.3]	0.25[6.35]
THMK-T18L06-01	18.00[457.2]	0.13[3.3]	0.25[6.35]
THMJ-T06L06-02	6.00[152.4]	0.25[6.35]	0.38[9.67]
THMJ-T12L06-02	12.00[304.8]	0.25[6.35]	0.38[9.67]
THMJ-T18L06-02	18.00[457.2]	0.25[6.35]	0.38[9.67]
THMK-T06L06-02	6.00[152.4]	0.25[6.35]	0.38[9.67]
THMK-T12L06-02	12.00[304.8]	0.25[6.35]	0.38[9.67]
THMK-T18L06-02	18.00[457.2]	0.25[6.35]	0.38[9.67]
THMK-T06L06-03	6.00[152.4]	0.25[6.35]	0.38[9.67]
THMK-T12L06-03	12.00[304.8]	0.25[6.35]	0.38[9.67]
THMK-T18L06-03	18.00[457.2]	0.25[6.35]	0.38[9.67]



# pro<sup>o</sup>sense<sup>®</sup> Thermocouple Probes with Lead Wire Transition

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF18-125N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF18-25N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF18-50N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>CF18-125N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF18-25N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF18-50N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CFTF-18</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/8 diameter temperature probes	5	\$6.00
<b>CFTF-14</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$6.50
<b>CF18-BC</b>	Bayonet adapter, 7/8 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$8.00
<b>THMJ-SP</b>	Thermocouple connector, Type J, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.25
<b>THMJ-SJ</b>	Thermocouple connector, Type J, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.25
<b>THMK-SP</b>	Thermocouple connector, Type K, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.75
<b>THMK-SJ</b>	Thermocouple connector, Type K, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.50
<b>THMK-HSP</b>	Thermocouple connector, Type K, high-temperature standard round pin plug, maximum continuous temperature 662 F (350 C), thermoset brown body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$8.50
<b>THMK-HSJ</b>	Thermocouple connector, Type K, high-temperature standard round pin jack, maximum continuous temperature 662 F (350 C), thermoset brown body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$10.00
<b>THMT-SP</b>	Thermocouple connector, Type T, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$3.50
<b>THMT-SJ</b>	Thermocouple connector, Type T, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$4.75
<b>THMJ-MP</b>	Thermocouple connector, Type J, miniature flat pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.00
<b>THMJ-MJ</b>	Thermocouple connector, Type J, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.50
<b>THMK-MP</b>	Thermocouple connector, Type K, miniature flat pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.25
<b>THMK-MJ</b>	Thermocouple connector, Type K, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 20 AWG maximum (0.8 mm) wire size	1	\$3.50
<b>THMT-MP</b>	Thermocouple connector, Type T, miniature flat pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 20 AWG (0.8 mm) maximum wire size	1	\$3.25
<b>THMT-MJ</b>	Thermocouple connector, Type T, miniature flat pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 20 AWG (0.8 mm) maximum wire size	1	\$3.75
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00
<b>WCB-M</b>	Wire / cable clamp bracket for use with miniature thermocouple connectors.	4	\$5.00
<b>THMJ-SPJ</b>	Thermocouple connector, Type J, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.75
<b>THMK-SPJ</b>	Thermocouple connector, Type K, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>THMT-SPJ</b>	Thermocouple connector, Type T, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>THMJ-MPJ</b>	Thermocouple connector, Type J, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.00
<b>THMK-MPJ</b>	Thermocouple connector, Type K, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.50
<b>THMT-MPJ</b>	Thermocouple connector, Type T, miniature flat pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic blue body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$5.75

Note: Thermocouple 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

**THMJ-SPJ**



**CF14-25N**



**BCF18-125N**



# pro<sup>o</sup> sense<sup>®</sup> Thermocouple Adjustable Immersion Sensors

THMJ & K - D08LXX-01 & 02

THMJ & K - A01LXX-01 & 02

## Overview

- All temperature sensors are pre-built stock items
- Ideal thermocouple sensors for the plastics processing industry
- Type J or K thermocouple elements to meet many temperature sensing applications
- Spring adjustable and armor adjustable styles allow for variable immersion depths
- Integral bayonet cap makes installation and removal quick and easy when used with a bayonet adaptor or pipe clamp adapter
- Made in the USA



Spring Adjustable



Armor Adjustable



Shown with optional PCA pipe clamp adapter

Thermocouple Spring Adjustable Immersion Sensors - Types J and K									
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Junction Type	Sensor Dimensions	Lead Wire Length (ft)	Temperature Sensing Range	Mounting
THMJ-D08L04-01	1	0.6	\$16.00	J	Grounded	1/4" length x 3/16" O.D. sensing tip 8" length x 0.263" diameter spring.	4	0 to 482°C (32 to 900°F)	Bayonet fitting cap 7/16" inside diameter, single slot. Mount with ProSense bayonet fitting adapter or pipe clamp adapter (purchased separately - see accessories)
THMJ-D08L06-01			\$18.00	J			6		
THMJ-D08L10-01			\$22.00	J			10		
THMK-D08L04-01			\$16.00	K			4		
THMK-D08L06-01			\$18.00	K			6		
THMK-D08L10-01			\$22.00	K			10		
THMJ-D08L10-02			\$22.50	J	10		Ungrounded		
THMK-D08L10-02			\$22.50	K	10				

Thermocouple Armor Adjustable Immersion Sensors - Types J and K									
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Junction Type	Sensor Dimensions	Lead Wire Length (ft)	Temperature Sensing Range	Mounting
THMJ-A01L04-01	1	0.6	\$17.25	J	Grounded	1/4" length x 3/16" O.D. sensing tip 0.275" O.D. flexible armor	4	0 to 482°C (32 to 900°F)	Bayonet fitting cap 7/16" inside diameter, single slot. Mount with ProSense bayonet fitting adapter or pipe clamp adapter (purchased separately - see accessories)
THMJ-A01L06-01			\$19.75	J			6		
THMJ-A01L10-01			\$25.75	J			10		
THMK-A01L04-01			\$17.25	K			4		
THMK-A01L06-01			\$19.75	K			6		
THMK-A01L10-01			\$26.00	K			10		
THMJ-A01L10-02			\$26.25	J	10		Ungrounded		
THMK-A01L10-02			\$26.50	K	10				

Technical Specifications	
ASTM E320 Standard Limits of Error	±2.2°C (±4.0°F) or 0.75%, whichever is greater
Probe	1/4" length x 3/16" O.D. sensing tip, 316 stainless steel sheath, single thermocouple element
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	Spring adjustable: stranded conductor lead wires with stripped ends, fiberglass insulation and stainless steel overbraid Armor adjustable: stranded conductor lead wires with stripped ends, fiberglass insulation and flexible armor



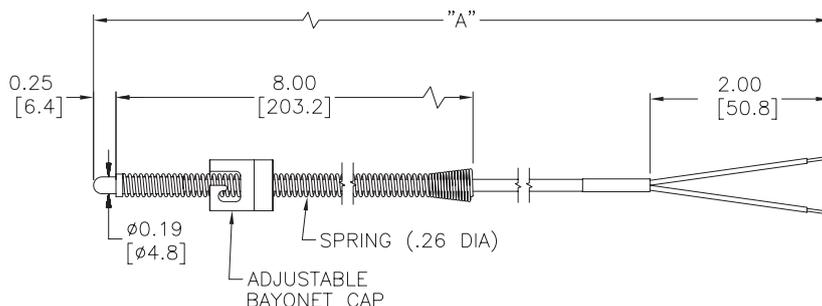
**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

# pro<sup>o</sup>ense<sup>®</sup> Thermocouple Adjustable Immersion Sensors

## Dimensions

inches [mm]

THMJ & K - D08LXX-01 & 02

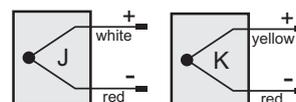


PART NUMBER	DIM "A"
THMJ-D08L04-01	48.00[1219.2]
THMJ-D08L06-01	72.00[1828.8]
THMJ-D08L10-01	120.00[3048.0]
THMK-D08L04-01	48.00[1219.2]
THMK-D08L06-01	72.00[1828.8]
THMK-D08L10-01	120.00[3048.0]
THMJ-D08L10-02	120.00[3048.0]
THMK-D08L10-02	120.00[3048.0]

## Wiring Information

Type J: (+) white (-) red  
Type K: (+) yellow (-) red

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



Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

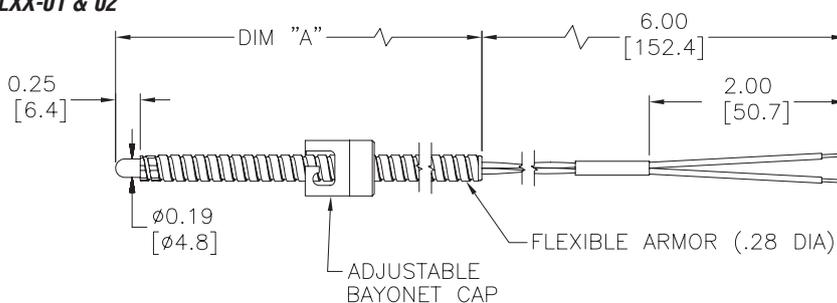
Appendix Book 2

Terms and Conditions

## Dimensions

inches [mm]

THMJ & K - A01LXX-01 & 02

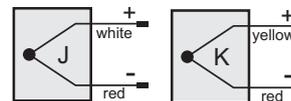


PART NUMBER	DIM "A"
THMJ-A01L04-01	48.00[1219.2]
THMJ-A01L06-01	72.00[1828.8]
THMJ-A01L10-01	120.00[3048.0]
THMK-A01L04-01	48.00[1219.2]
THMK-A01L06-01	72.00[1828.8]
THMK-A01L10-01	120.00[3048.0]
THMJ-A01L10-02	120.00[3048.0]
THMK-A01L10-02	120.00[3048.0]

## Wiring Information

Type J: (+) white (-) red  
Type K: (+) yellow (-) red

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



# pro<sup>o</sup>sense<sup>®</sup> Thermocouple Adjustable Immersion Sensors - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BA-078</b>	Bayonet adapter, 7/8 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.25
<b>BA-100</b>	Bayonet adapter, 1 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.25
<b>BA-114</b>	Bayonet adapter, 1-1/4 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.50
<b>BA-112</b>	Bayonet adapter, 1-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.75
<b>BA-200</b>	Bayonet adapter, 2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.00
<b>BA-212</b>	Bayonet adapter, 2-1/2 long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.25
<b>BA-300</b>	Bayonet adapter, 3 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.50
<b>BA-312</b>	Bayonet adapter, 3-1/2 long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.75
<b>PCA-125</b>	Pipe clamp adapter, 1-1/16 to 1-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$13.75
<b>PCA-200</b>	Pipe clamp adapter with 1-1/16 to 2 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$11.50
<b>PCA-300</b>	Pipe clamp adapter with 2-1/16 to 3 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$15.00
<b>PCA-425</b>	Pipe clamp adapter with 3-5/16 to 4-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$16.50
<b>PCA-500</b>	Pipe clamp adapter with 4-1/8 to 7 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$16.50
<b>THMJ-SP</b>	Thermocouple connector, Type J, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.25
<b>THMJ-SJ</b>	Thermocouple connector, Type J, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.25
<b>THMK-SP</b>	Thermocouple connector, Type K, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.75
<b>THMK-SJ</b>	Thermocouple connector, Type K, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.50
<b>THMJ-SPJ</b>	Thermocouple connector, Type J, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.75
<b>THMK-SPJ</b>	Thermocouple connector, Type K, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00

**Note: Thermocouple extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.**

**BA-078**



**THMJ-SJ**



**PCA-XXX**



**BA-114**



**THMJ-SP**



**Pipe Clamp Adapter**

**BA-300**



**THMJ-SPJ**



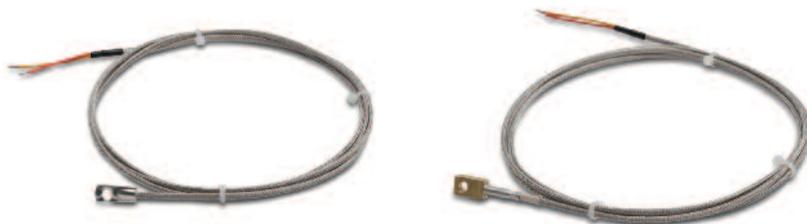
**Bayonet Mounting Adapters**

**Thermocouple Connectors**

# pro<sup>sense</sup> Thermocouple Bolt-On Ring Sensors

THMJ & K - B01L06-01

THMJ & K - B01L06-02



## Overview

- All temperature sensors are pre-built stock items
- Ideal thermocouple sensor for nozzles, extruder barrels, die heads, molds and many other surface sensing applications
- Type J or K thermocouple elements to meet many temperature sensing applications
- 316 SS or brass construction
- Grounded or ungrounded junctions
- 6 foot lead wires with stainless steel overbraid
- Made in the USA



Thermocouple Bolt-On Ring Sensors - Types J and K								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Junction Type	Ring Material	Temperature Sensing Range	Mounting
THMJ-B01L06-01	1	0.4	\$15.25	J	Grounded	316 SS	0° to 482°C (32° to 900°F)	#6-#10 (4mm-5mm) screw or bolt size
THMK-B01L06-01			\$15.25	K				
THMJ-B01L06-02			\$23.75	J	Ungrounded	Brass		
THMK-B01L06-02			\$25.50	K				
THMJ-B02L06-01			\$16.00	J	Grounded	316 SS		#12, 1/4 to 5/16 inch (5mm - 8mm) screw or bolt size
THMK-B02L06-01			\$16.00	K				
THMJ-B02L06-02			\$24.50	J	Ungrounded	Brass		
THMK-B02L06-02			\$26.00	K				

Technical Specifications	
ASTM E230 Standard limits of Error	±2.2°C (±4.0°F) or 0.75%, whichever is greater
Response Time	2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839
Wiring	6 foot stranded conductor lead wires with stripped ends, fiberglass insulation and stainless steel overbraid

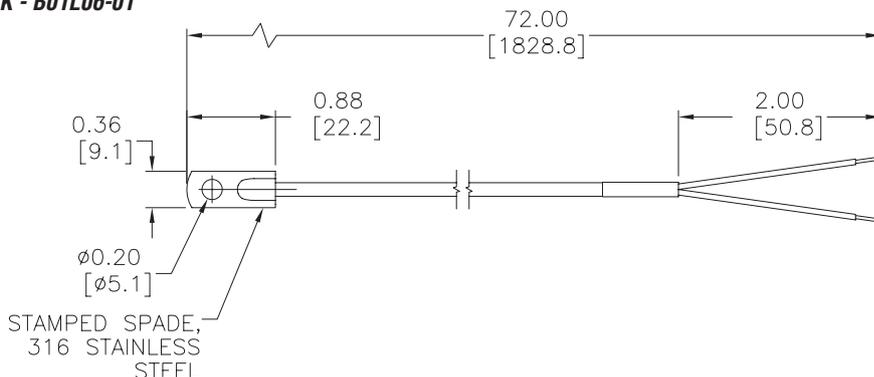


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

inches [mm]

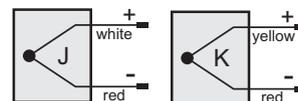
THMJ & K - B01L06-01



## Wiring Information

Type J: (+) white (-) red  
Type K: (+) yellow (-) red

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

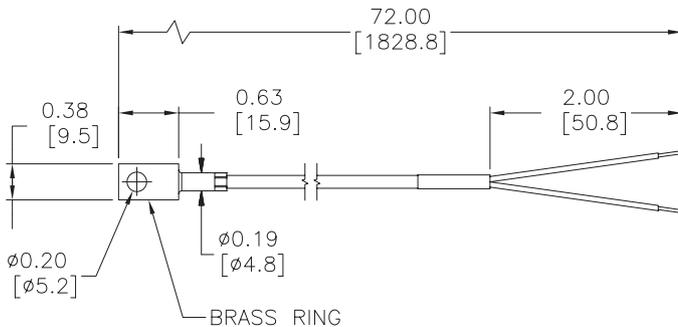


# proense® Thermocouple Bolt-On Ring Sensors

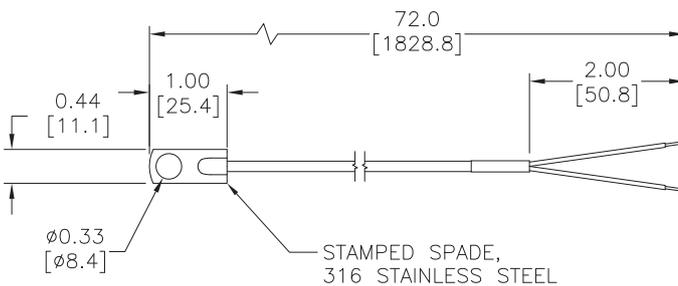
## Dimensions

inches [mm]

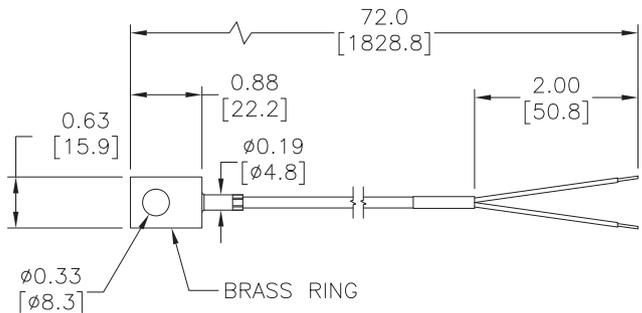
**THMJ & K - B01L06-02**



**THMJ & K - B02L06-01**



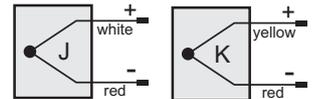
**THMJ & K - B02L06-02**



## Wiring Information

**Type J: (+) white (-) red**  
**Type K: (+) yellow (-) red**

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



## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>THMJ-SP</b>	Thermocouple connector, Type J, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.25
<b>THMJ-SJ</b>	Thermocouple connector, Type J, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.25
<b>THMK-SP</b>	Thermocouple connector, Type K, standard round pin plug, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$3.75
<b>THMK-SJ</b>	Thermocouple connector, Type K, standard round pin jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG maximum (2.0 mm) wire size	1	\$4.50
<b>THMJ-SPJ</b>	Thermocouple connector, Type J, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic black body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.75
<b>THMK-SPJ</b>	Thermocouple connector, Type K, standard round pin panel jack, maximum continuous temperature 400 F (200 C), glass filled thermoplastic yellow body, thermocouple material pins, 14 AWG (2.0 mm) maximum wire size	1	\$7.50
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00

**Note:** Thermocouple extension lead wire available at the end of this section.  
 See end of section for full listing of accessories and dimension information.

**THMJ-SJ**



**THMJ-SP**



**THMJ-SPJ**



**Thermocouple Connectors**

# pro<sup>sense</sup>® 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
<b>THMJ-R01-01</b>	1	0.3	\$25.00	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
<b>RTD1-R01-01</b>	1	0.3	\$25.00	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

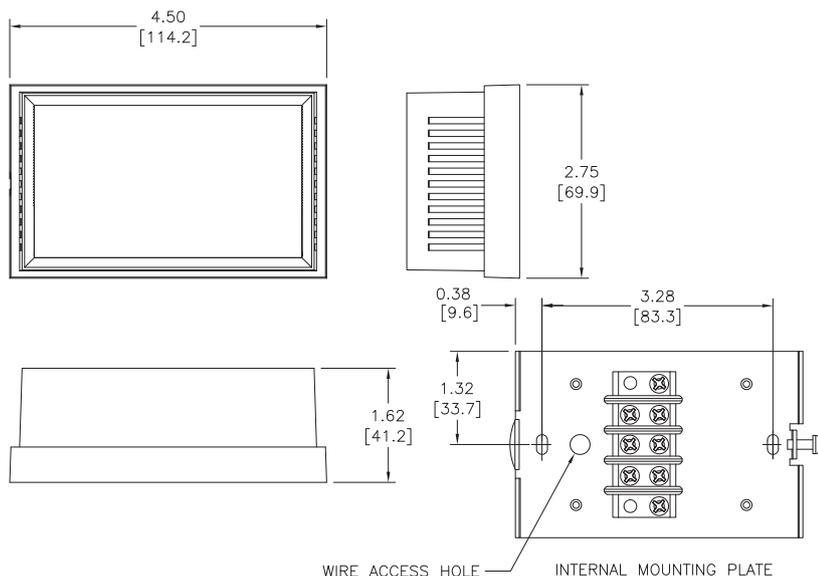
### ProSense Thermocouple Room Sensor Technical Specifications

Part Number	Sensing Element	Limits of Error	Initial Accuracy	Housing	Response Time	Wiring
<b>THMJ-R01-01</b>	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
<b>RTD1-R01-01</b>	PT 100, Class B, 3-wire	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**

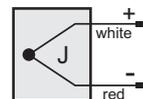


## Wiring Information

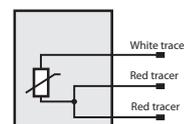
**THMJ-R01-01**

**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**

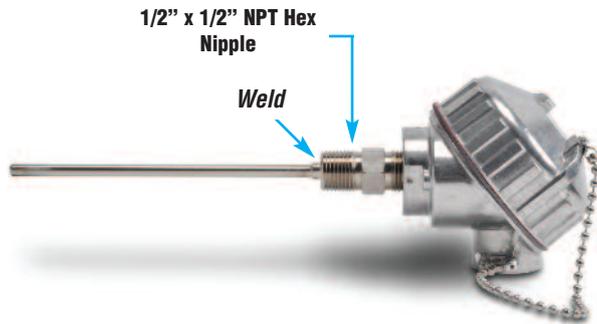


- Company Information
- Drives
- Soft Starters
- Motors
- Power Transmission
- Motion: Servos and Steppers
- Motor Controls
- Sensors: Proximity
- Sensors: Photoelectric
- Sensors: Encoders
- Sensors: Limit Switches
- Sensors: Current
- Sensors: Pressure
- Sensors: Temperature

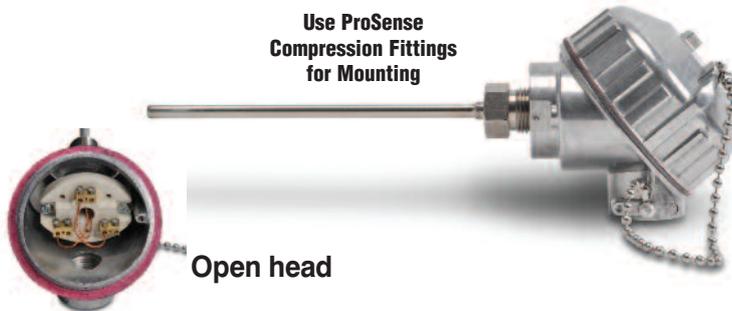
- Sensors: Level
- Sensors: Flow Switches
- Pushbuttons and Lights
- Stacklights
- Signal Devices
- Process
- Relays and Timers
- Pneumatics: Air Prep
- Pneumatics: Directional Control Valves
- Pneumatics: Cylinders
- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# prosense® RTD Probes with Connection Head

**RTD1-CXX-01**



**RTD1-CXX-02**



## Overview

- All temperature sensors are pre-built stock items
  - 100 ohm platinum RTD 3-wire element
  - Class A accuracy
  - 1/4" diameter, 316 SS sealed 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
- Connection Head
  - Cast aluminum NEMA 4X, IP66 screw cover head with gasket
  - One turn cover removal & installation eliminates cross threading and saves time
  - 3/4" NPT conduit opening with internal stop to prevent overtightening and installation damage
  - Gripping ribs on cover edge
  - Stainless steel cover chain
- Wiring
  - Ceramic terminal base
  - Brass terminals with stainless steel screws eliminate the need to wrap connections around screws
  - Elevated terminal block for easy wire termination
- Made in the USA



RTD Probes with Connection Head								
Part Number	Pcs/Pkg	Wt (lb)	Price	RTD Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
RTD1-C06-01	1	1.3	\$67.75	PT 100, 3-wire	1/4"	6"	-50 to 300°C (-58 to 572°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
RTD1-C12-01			\$70.00			12"		
RTD1-C18-01			\$73.50			18"		
RTD1-C06-02			\$63.00			6"		ProSense compression fitting (see accessories - purchased separately)
RTD1-C12-02			\$65.00			12"		
RTD1-C18-02			\$68.50			18"		

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[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>Connection Head</b>	Die-cast aluminum, screw cover with stainless steel chain, compressed graphite gasket, NEMA 4X, IP66, 3/4" NPT conduit opening, max temp. 400°F (204°C)
<b>Response Time</b>	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	Ceramic terminal base with brass terminals and stainless steel screws (recommended tightening torque 3-4 lb-in)



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

# proense® RTD Probes with Connection Head

## Dimensions

inches [mm]

**RTD1-CXX-01**

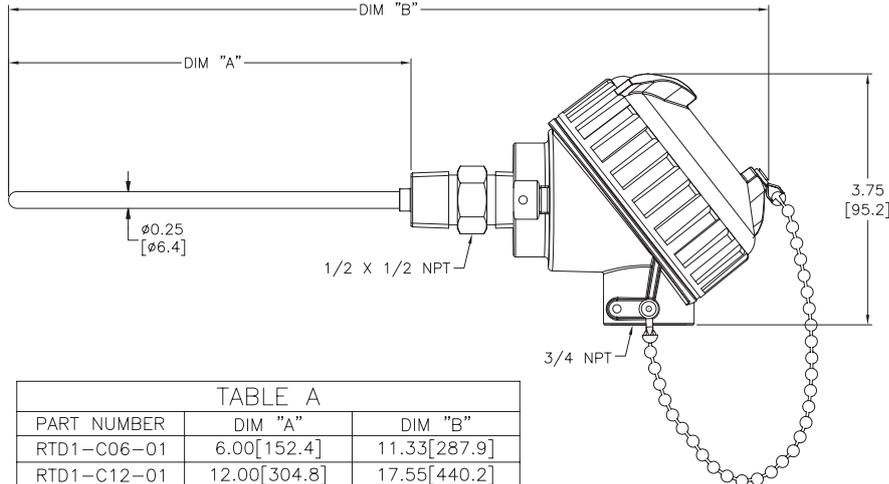


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
RTD1-C06-01	6.00[152.4]	11.33[287.9]
RTD1-C12-01	12.00[304.8]	17.55[440.2]
RTD1-C18-01	18.00[457.2]	23.33[592.6]

**RTD1-CXX-02**

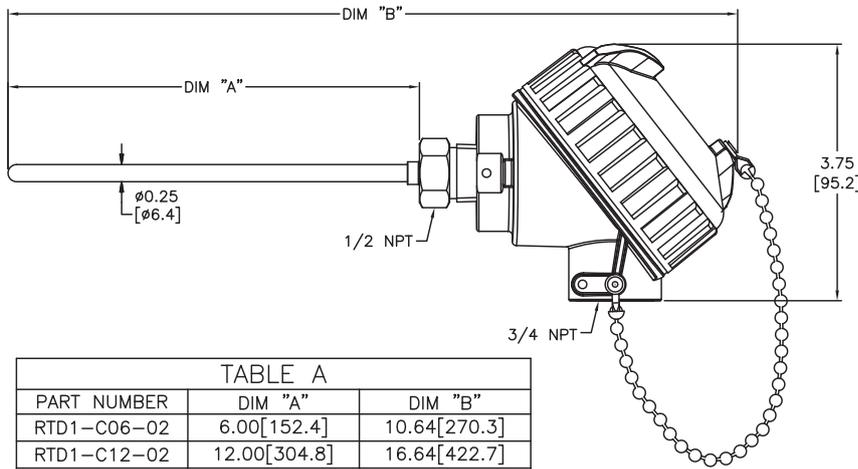
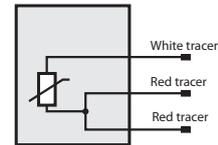
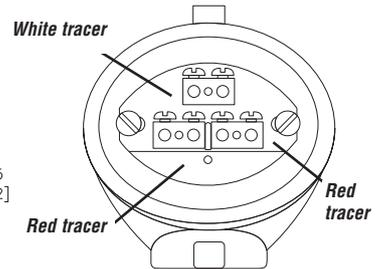


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
RTD1-C06-02	6.00[152.4]	10.64[270.3]
RTD1-C12-02	12.00[304.8]	16.64[422.7]
RTD1-C18-02	18.00[457.2]	22.64[575.1]

## Wiring Information



- Ignore polarity marks on terminal base
- Recommended screw terminal tightening torque 3-4 lb-in

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CTTF-14</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$6.50

**Note:** RTD extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

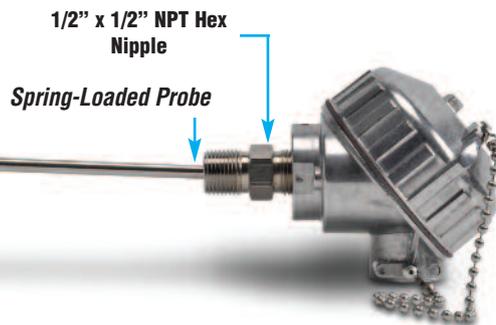
Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>o</sup>sense® RTD Spring-Loaded Probes with Connection Head

**RTD1-CXX-03**



**RTD1-CXX-R03  
Replacement Probe**



## Overview

- All temperature sensors are pre-built stock items
- Probe
  - Spring-loaded for positive tip contact in thermowells
  - 100 ohm platinum RTD 3-wire element
  - Class A accuracy
  - 1/4" diameter, 316 SS 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
- Connection Head
  - Cast aluminum NEMA 4X, IP66 screw cover head with captive gasket
  - One turn cover removal & installation eliminates cross threading and saves time
  - 3/4" NPT conduit opening with internal stop to prevent over-tightening and installation damage
  - Gripping ribs on cover edge
  - Stainless steel cover chain
- Wiring
  - Ceramic terminal base
  - Brass terminals with stainless steel screws eliminate the need to wrap connections around screws
  - Elevated terminal block for easy wire termination
- Made in the USA



RTD Spring-Loaded Probes with Connection Head								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
RTD1-C04-03	1	1.3	\$71.50	PT 100, 3-wire	1/4"	4"	-50 to 300°C (-58 to 572°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS. Mount in thermowell (see accessories, purchased separately)
RTD1-C06-03			\$74.00			6"		
RTD1-C12-03			\$77.00			12"		

RTD Spring-Loaded Replacement Probes								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Fits Probe Length	Temperature Sensing Range	For Use With
RTD1-C04R-03	1	0.2	\$36.25	PT 100, 3-wire	1/4"	4"	-50 to 300°C (-58 to 572°F)	RTD1-C04-03
RTD1-C06R-03			\$37.25			6"		RTD1-C06-03
RTD1-C12R-03			\$39.25			12"		RTD1-C12-03

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[0.15 +0.002  t ] °C
<b>Probe</b>	ø1/4", 316 stainless steel sheath, single RTD is embedded in alumina powder
<b>Connection Head</b>	Die-cast aluminum, screw cover with stainless steel chain, compressed graphite gasket, NEMA 4X, IP66, 3/4" NPT conduit opening, Max Temp. 400°F (204°C)
<b>Response Time</b>	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	Ceramic terminal base with brass terminals and stainless steel screws (Recommended tightening torque 3-4 lb-in)



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

# pro<sup>ense</sup>® RTD Spring-Loaded Probes with Connection Head

## Dimensions

inches [mm]

RTD1-CXX-03

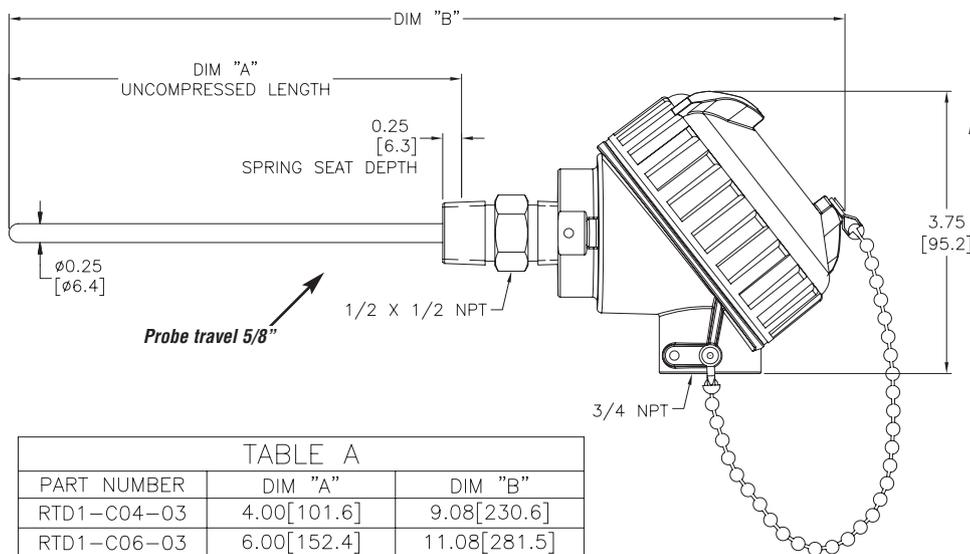
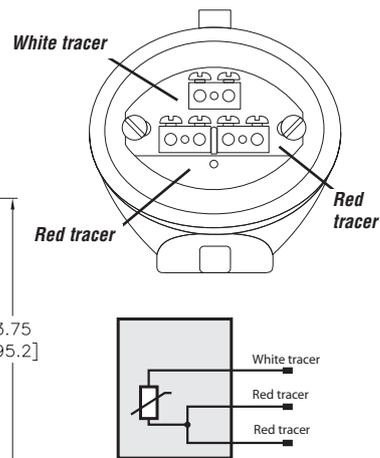


TABLE A		
PART NUMBER	DIM "A"	DIM "B"
RTD1-C04-03	4.00[101.6]	9.08[230.6]
RTD1-C06-03	6.00[152.4]	11.08[281.5]
RTD1-C12-03	12.00[304.8]	17.08[433.8]

## Wiring Information



- Ignore polarity marks on terminal base
- Recommended screw terminal tightening torque 3-4 lb-in

## Dimensions

inches [mm]

RTD1-CXXR-03  
(Replacement Probes)

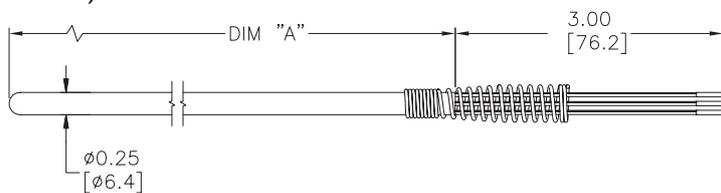


TABLE A	
PART NUMBER	DIM "A"
RTD1-C04R-03	5.00[127.0]
RTD1-C06R-03	7.00[177.8]
RTD1-C12R-03	13.00[330.2]

Note: RTD extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.

## Probe Replacement

1. Open top cover.
2. Disconnect wires and remove terminal block.
3. Remove snap ring at bottom of head (snap ring pliers recommended).
4. Slide out old probe and slide new probe in place.
5. While compressing spring, replace snap ring.
6. Replace terminal block and connect probe wires.

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>o</sup>sense® RTD Spring-Loaded Probes with Connection Head - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
TW04-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter, for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$23.50
TW04-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$23.50
TW04-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$29.50
TW04-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 4-1/4 inch overall length with 0.260 inch bore diameter for use with 4-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 2-1/2 inch insertion length	1	\$29.50
TW06-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$31.00
TW06-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$31.00
TW06-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$39.00
TW06-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 6-1/4 inch overall length with 0.260 inch bore diameter for use with 6-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 4-1/2 inch insertion length	1	\$39.00
TW12-01	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 304 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$53.00
TW12-02	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 304 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$53.00
TW12-03	Standard duty threaded thermowell with 1/2 inch NPT male process threads, 316 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$66.00
TW12-04	Standard duty threaded thermowell with 3/4 inch NPT male process threads, 316 stainless steel, 12-1/4 inch overall length with 0.260 inch bore diameter for use with 12-inch long, 1/4 inch diameter spring loaded probes with 1/2 inch NPT threaded fitting, 10-1/2 inch insertion length	1	\$66.00

**Note: RTD extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.**

## Spring-Loaded RTD Probe and Thermowell Assembly Example



**-Spring-loaded probe design ensures positive tip contact with the bottom of the thermowell.**

**-Integral probe hex nipple threads directly into thermowell. No additional probe mounting fittings are required.**

# pro<sup>o</sup>sense® RTD Probes with Hex Nipple

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

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Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

RTD1-HXXL01-01



CHSC-AL-1

CHTB-3

Accessories

## Overview

- All temperature sensors are pre-built stock items
- 100 ohm platinum RTD 3-wire element
- Class A accuracy
- 1/4" diameter, 316 sealed 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
- 1/2" x 1/2" NPT hex nipple allows easy replacement of existing probes and connection to a wiring junction box
- Made in the USA



RTD Probes with Hex Nipple								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
RTD1-H06L01-01	1	0.5	\$54.00	PT 100, 3-wire	1/4"	6"	-50 to 300°C (-58 to 572°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
RTD1-H12L01-01			\$57.00			12"		
RTD1-H18L01-01			\$60.00			18"		

Technical Specifications	
Sensing Element	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°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	3-inch Kapton insulated wire leads with terminal pins

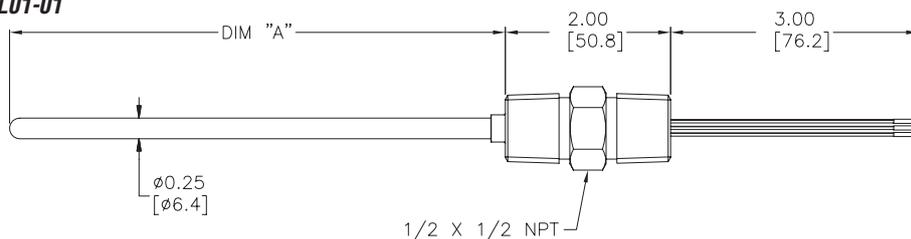


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

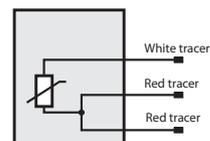
inches [mm]

RTD1-HXXL01-01



PART NUMBER	DIM "A"
RTD1-H06L01-01	6.00[152.4]
RTD1-H12L01-01	12.00[304.8]
RTD1-H18L01-01	18.00[457.2]

## Wiring Information



# ProSense® RTD Probes with Hex Nipple

## Accessories

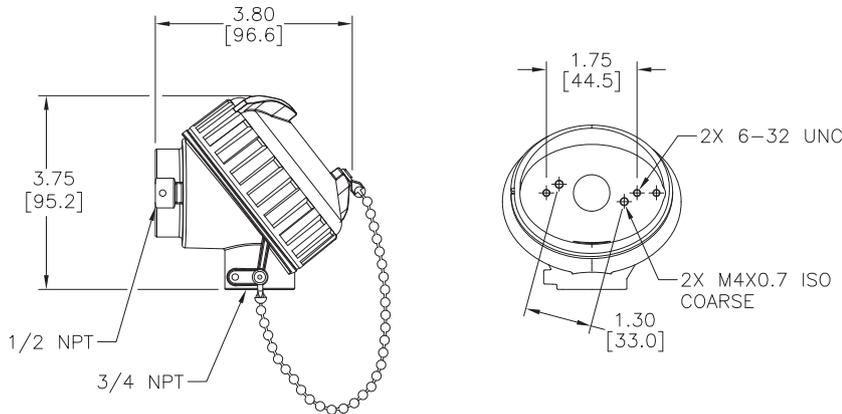
Part No.	Description	Pcs/Pkg	Price
<b>CHSC-AL-1</b>	ProSense general purpose screw cover connection head for temperature probes, die-cast aluminum, 1/2 inch NPT process opening, 3/4 inch NPT conduit opening, NEMA 4X, IP66 rated, graphite gasket, maximum temperature rating of 825°F (440°C). Order probe and terminal base separately.	1	\$14.00
<b>CHTB-3</b>	ProSense ceramic terminal base, three brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	\$4.50

**Note:** Thermocouple extension lead wire and full listing of accessories available at the end of this section.

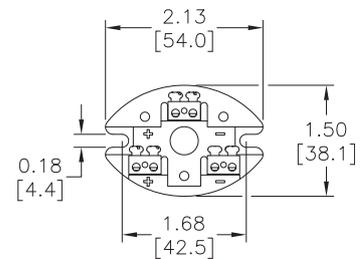
## Dimensions

inches [mm]

**CHSC-AL-1**



**CHTB-3**



# pro<sup>sense</sup> RTD Spring-Loaded Probes with Hex Nipple



Spring-Loaded Probe



CHSC-AL-1



CHTB-3

Accessories

## Overview

- All temperature sensors are pre-built stock items
- Spring-loaded for positive tip contact in thermowells
- 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
- 4", 6", or 12" probe length
- 1/2" x 1/2" NPT hex nipple allows easy replacement of existing probes and connection to a wiring junction box
- Made in the USA



RTD Spring-Loaded Probes with Hex Nipple								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting
RTD1-H04L01-02	1	0.5	\$58.00	PT 100, 3-wire	1/4"	4"	-50 to 300°C (-58 to 572°F)	Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
RTD1-H06L01-02			\$60.75			6"		
RTD1-H12L01-02			\$64.00			12"		

Technical Specifications	
Sensing Element	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°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
Response Time	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
Wiring	3-inch Kapton insulated wire leads with terminal pins

Note: See end of section for thermowells to fit these unit..

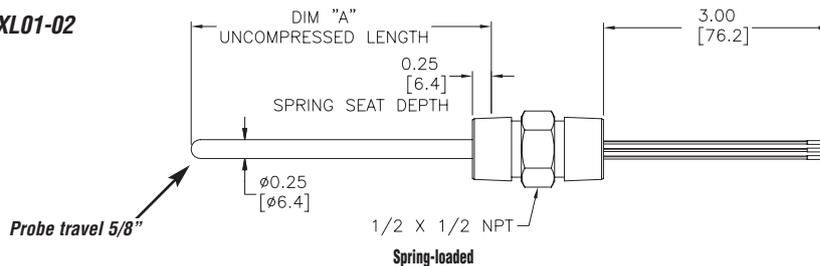


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

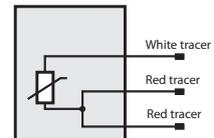
## Dimensions

inches [mm]

RTD1-HXXL01-02



## Wiring Information



PART NUMBER	DIM "A"
RTD1-H04L01-02	4.00[101.6]
RTD1-H06L01-02	6.00[152.4]
RTD1-H12L01-02	12.00[304.8]

# pro<sup>sense</sup> RTD Spring-Loaded Probes with Hex Nipple

## Accessories

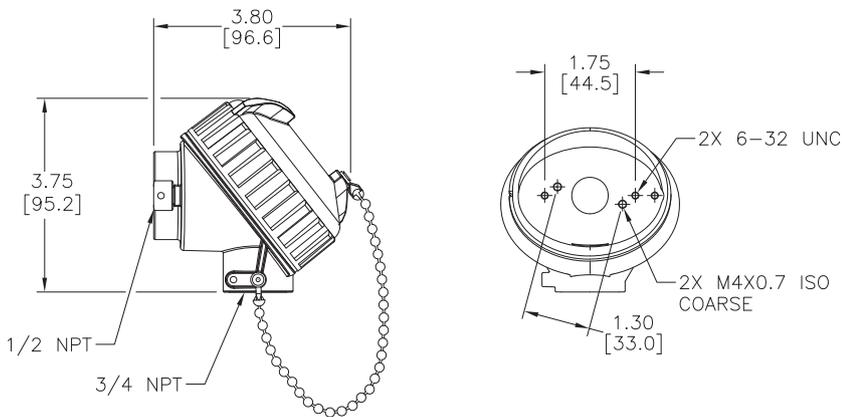
Part No.	Description	Pcs/Pkg	Price
<b>CHSC-AL-1</b>	ProSense general purpose screw cover connection head for temperature probes, die-cast aluminum, 1/2 inch NPT process opening, 3/4 inch NPT conduit opening, NEMA 4X, IP66 rated, graphite gasket, maximum temperature rating of 825°F (440°C). Order probe and terminal base separately.	1	\$14.00
<b>CHTB-3</b>	ProSense ceramic terminal base, three brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	\$4.50

*Note: Thermocouple extension lead wire and full listing of accessories available at the end of this section.*

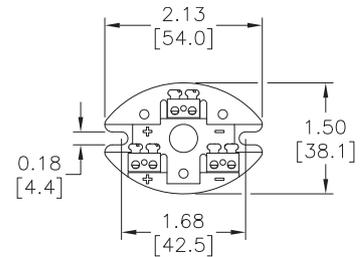
## Dimensions

inches [mm]

**CHSC-AL-1**



**CHTB-3**



# proSense® RTD Probes with Attached Plug

RTD1-PXX-01



## 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
- Attached 3-pin plug for quick and easy wiring connections
- Made in the USA



RTD Probes with Attached Plug										
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Length	Temperature Sensing Range	Mounting	Attached Plug Size	Mating Jack
RTD1-P06-01	1	0.3	\$42.00	PT 100, 3-wire	1/4"	6"	-50 to 300°C (-58 to 572°F) Plug rated to 400°F (204°C)	ProSense compression fitting (see accessories, purchased separately)	Standard size, 3-pin	RTD-SJ (see accessories, sold separately)
RTD1-P12-01			\$45.00			12"				
RTD1-P18-01			\$38.25			18"				

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100). 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[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>	Attached 3-pin standard size plug (mating jack sold separately, see accessories)

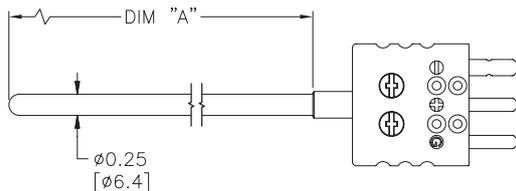


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

inches [mm]

RTD1-PXX-01

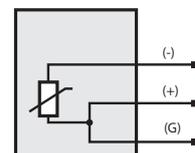


PART NUMBER	DIM "A"
RTD1-P06-01	6.00[152.4]
RTD1-P12-01	12.00[304.8]
RTD1-P18-01	18.00[457.2]

## Wiring Information

PT100: white plug

Pins labeled +, - and G



# pro<sup>o</sup>ense<sup>®</sup> RTD Probes with Attached Plug - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CFTF-14</b>	Teflon™ ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$6.50
<b>RTD-SJ</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	\$8.50
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00

*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*

**CF14-50N**

**CF14-25N**

**CF14-125N**



**S.S. Compression Fittings**

**BCF14-50N**

**BCF14-25N**

**BCF14-125N**



**Brass Compression Fittings**

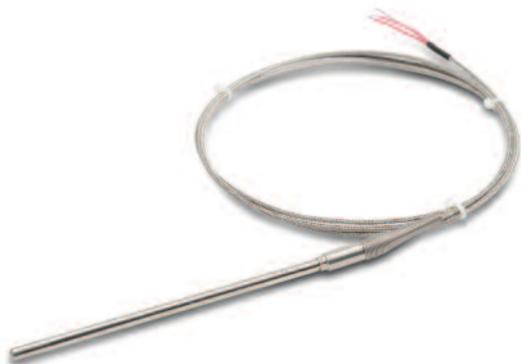
**RTD-SJ**

**RTD-SP**



**RTD Connectors**

# pro<sup>sense</sup> 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	\$49.50	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			\$52.00			12"		
RTD1-T18L06-01			\$55.75			18"		

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A $\pm[0.15 + 0.002  t ]$ °C
<b>Probe</b>	$\phi 1/4"$ , 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 conductor lead wires with stripped ends, Kapton insulation and stainless steel overbraid

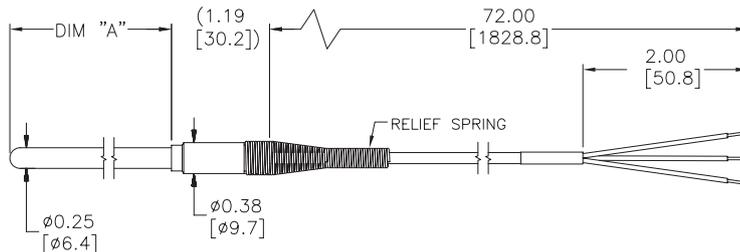


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

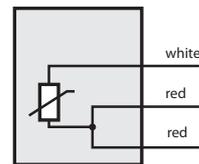
inches [mm]

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



Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>o</sup>sense<sup>®</sup> RTD Probes with Lead Wire Transition - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$2.50
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$3.00
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$4.50
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$6.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$7.25
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$10.75
<b>CFTF-14</b>	Teflon™ ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$6.50
<b>RTD-SP</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	\$6.50
<b>RTD-SJ</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	\$8.50
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00

**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**

# pro<sup>sense</sup>® RTD Adjustable Immersion Sensor

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

## Overview

- All temperature sensors are pre-built stock items
- 100 ohm platinum RTD 3-wire element
- Class A accuracy
- Spring adjustable allows for variable immersion depths
- Integral bayonet cap makes installation quick and easy when used with a bayonet adapter or pipe clamp adapter
- Made in the USA



Shown with optional PCA pipe clamp adapter



RTD Probes with Spring Adjustable Immersion								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Sensor Dimensions	Lead Wire Length (ft)	Temperature Sensing Range	Mounting
RTD1-D08L10-01	1	0.3	\$43.50	PT 100, Class A, 3-wire	1/4" length x 3/16" O.D. sensing tip 8" length x 0.263" diameter spring.	10	-50 to 300°C (-58 to 572°F), lead wire transition rated to 400°F (204°C)	Bayonet fitting cap 7/16" inside diameter, single slot. Mount with ProSense bayonet fitting adapter or pipe clamp adapter (purchased separately - see accessories)

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[0.15 +0.002  t ] °C
<b>Probe</b>	1/4" length x 3/16" O.D. sensing tip, 316 stainless steel sheath
<b>Response Time</b>	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	Stranded conductor lead wires with stripped ends, fiberglass insulation and stainless steel overbraid

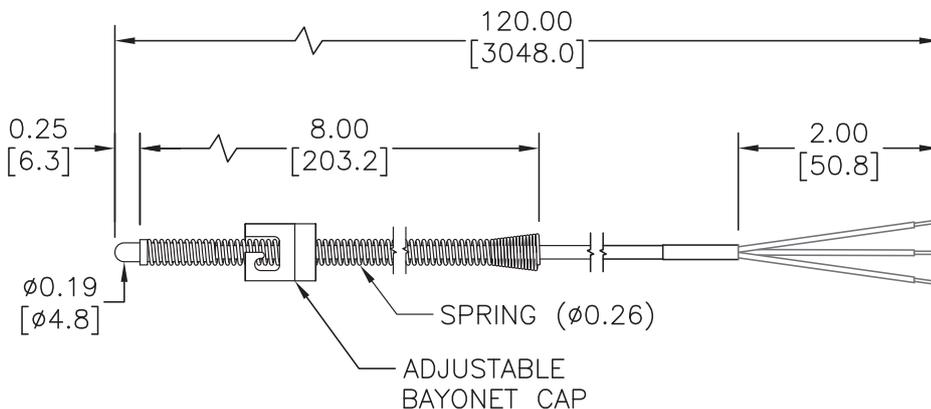


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

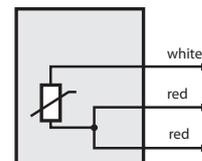
## Dimensions

inches [mm]

RTD1-D08L10-01



## Wiring Information



# pro<sup>sense</sup> RTD Adjustable Immersion Sensor - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<b>RTD-SP</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	\$6.50
<b>RTD-SJ</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	\$8.50
<b>WCB-S</b>	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00
<b>BA-078</b>	Bayonet adapter, 7/8 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.25
<b>BA-100</b>	Bayonet adapter, 1 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.25
<b>BA-114</b>	Bayonet adapter, 1-1/4 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.50
<b>BA-112</b>	Bayonet adapter, 1-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$1.75
<b>BA-200</b>	Bayonet adapter, 2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.00
<b>BA-212</b>	Bayonet adapter, 2-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.25
<b>BA-300</b>	Bayonet adapter, 3 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.50
<b>BA-312</b>	Bayonet adapter, 3-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$2.75
<b>PCA-125</b>	Pipe clamp adapter, 1-1/16 to 1-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$13.75
<b>PCA-200</b>	Pipe clamp adapter with 1-1/16 to 2 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$11.50
<b>PCA-300</b>	Pipe clamp adapter with 2-1/16 to 3 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$15.00
<b>PCA-425</b>	Pipe clamp adapter with 3-5/16 to 4-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$16.50
<b>PCA-500</b>	Pipe clamp adapter with 4-1/8 to 7 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with Prosense adjustable immersion sensors.	1	\$16.50

**Note: RTD extension lead wire available at the end of this section.  
See end of section for full listing of accessories and dimension information.**

**BA-078**



**RTD-SJ**



**RTD-SP**



**BA-114**

**RTD Connectors**



**PCA-300**

**BA-300**



**Pipe Clamp Adapter**

**Bayonet Mounting Adapters**

# proense® RTD Probes with M12 Cable Connector



## Overview

- All temperature sensors are pre-built stock items
- 100 ohm platinum RTD element
- Class A accuracy
- 316 stainless steel sheath to protect from harsh sensing applications
- 6 mm (0.24") diameter 3-wire or 10 mm (0.4") diameter 4-wire probes
- Probe lengths of 160 mm, 260 mm, 360 mm, and 560 mm
- 4-pin M12 cable connector plug for simplified wiring
- 3-year warranty



RTD Probes With M12 Cable Connector									
Part Number	Pcs/Pkg	Wt(lb)	Price	Type	Diameter	Length	Temperature Sensing Range	Mounting Fitting	Thermowell
RTD0100-06-010-H	1	0.10	\$29.00	PT 100, 3-wire	0.24 inch (6 mm)	6.3 inch (160 mm)	-40 to 302°F (-40 to 150°C). Wiring connection limited to -13 to 176°F (-25 to 80°C)	CF06-25N	RTDTW-06-010-50N CF06-25N
RTD0100-06-020-H	1	0.20	\$30.00	PT 100 3-wire	0.24 inch (6 mm)	10.2 inch (260 mm)		CF06-25N	RTDTW-06-020-50N CF06-25N
RTD0100-06-030-H	1	0.30	\$33.25	PT 100 3-wire	0.24 inch (6 mm)	14.2 inch (360 mm)		CF06-25N	RTDTW-06-030-50N CF06-25N
RTD0100-10-010-H	1	0.10	\$29.00	PT 100 4-wire	10 mm (0.4 inch)	160 mm (6.3 inch)		CF10-50N	RTDTW-10-010-50N CF10-50N
RTD0100-10-020-H	1	0.15	\$30.00	PT 100 4-wire	10 mm (0.4 inch)	260 mm (10.2 inch)		CF10-50N	RTDTW-10-020-50N CF10-50N
RTD0100-10-030-H	1	0.22	\$33.25	PT 100 4-wire	10 mm (0.4 inch)	360 mm (14.2 inch)		CF10-50N	RTDTW-10-030-50N CF10-50N
RTD0100-10-050-H	1	0.33	\$39.25	PT 100 4-wire	10 mm (0.4 inch)	560 mm (22.0 inch)		CF10-50N	RTDTW-10-050-50N CF10-50N

RTD Probes With M12 Cable Connector Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt100), TCR = 0.00385 Ω/Ω/° C
<b>Initial Accuracy</b>	DIN EN 60751, Class A, ± (0.15 + 0.002(t))°C
<b>Probe</b>	6 mm (0.24") or 10 mm (0.4"), 316 stainless steel sheath with single RTD element, 316 stainless steel wiring connection
<b>Minimum Installation Depth</b>	0.6" (15 mm)
<b>Response Time</b>	*t0.5 = 1 sec/ t0.9 = 3 sec (DIN EN 60751)
<b>Wiring</b>	M12 connector; gold-plated contacts, IP 68 / IP 69K, Class III

\* t0.5 = a 50% of full scale change in output when immersed in water at 0.4m/s, t0.9 = a 90% FS change.



NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.  
[www.automationdirect.com/static/specs/prosensechemresistance.pdf](http://www.automationdirect.com/static/specs/prosensechemresistance.pdf)

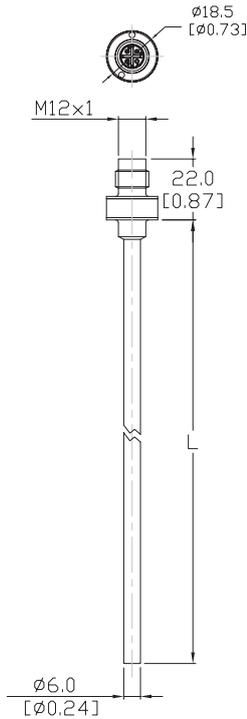
- Company Information
- Drives
- Soft Starters
- Motors
- Power Transmission
- Motion: Servos and Steppers
- Motor Controls
- Sensors: Proximity
- Sensors: Photoelectric
- Sensors: Encoders
- Sensors: Limit Switches
- Sensors: Current
- Sensors: Pressure
- Sensors: Temperature
- Sensors: Level
- Sensors: Flow Switches
- Pushbuttons and Lights
- Stacklights
- Signal Devices
- Process
- Relays and Timers
- Pneumatics: Air Prep
- Pneumatics: Directional Control Valves
- Pneumatics: Cylinders
- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# prosense® RTD Probes with M12 Cable Connector

## Dimensions

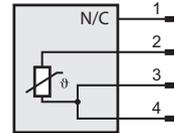
mm [inches]

### RTD0100-06 Series



Part Number	Length	L
RTD0100-06-010-H	160 mm	[6.3]
RTD0100-06-020-H	260 mm	[10.2]
RTD0100-06-030-H	360 mm	[14.2]

## Wiring Information



### Cable Assembly Wiring Colors:

- Pin 1 - Brown
- Pin 2 - White
- Pin 3 - Blue
- Pin 4 - Black

Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.

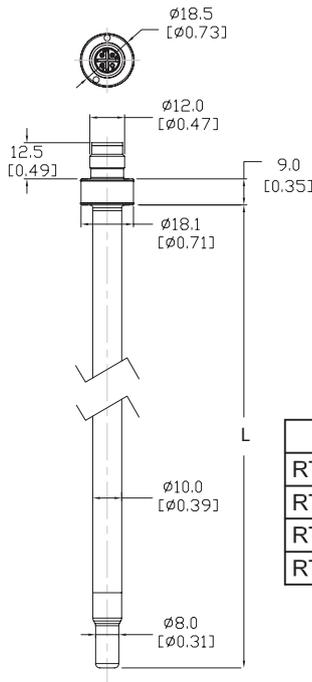


NOTE: MOUNT 0.24 (6 MM) INCH DIAMETER RTDs BY USING PROSENSE RTDTW SERIES THERMOWELLS AND / OR CF06-25N COMPRESSION FITTING.

## Dimensions

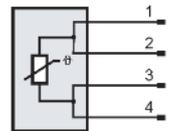
mm [inches]

### RTD0100-10 Series



Part Number	Length	L
RTD0100-10-010-H	160 mm	[6.3]
RTD0100-10-020-H	260 mm	[10.2]
RTD0100-10-030-H	360 mm	[14.2]
RTD0100-10-050-H	560 mm	[22.0]

## Wiring Information



### Cable Assembly Wiring Colors:

- Pin 1 - Brown
- Pin 2 - White
- Pin 3 - Blue
- Pin 4 - Black

Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.



NOTE: MOUNT 10MM DIAMETER RTDs BY USING PROSENSE RTDTW SERIES THERMOWELLS AND / OR CF10-50N COMPRESSION FITTING.

# proSense® TTD Series Temperature Transmitters

## Overview



- Converts ProSense RTD0100 Series RTD temperature probe output to 4-20mA signal
- High accuracy 2-wire or 3-wire 4-20mA temperature transmitter
- M12 quick-disconnect for fast mounting
- 3 available temperature ranges
- 3-year warranty
- LED indication of loop current



Note: Above photo shows assembled unit with TTD Transmitter and RTD0100 Probe

ProSense Temperature Transmitter TTD Series					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Cable Assemblies*
TTD-20-N40160F-H	Temperature transmitter, 4-20mA output, over temperature range of -40°F to 160°F (-40°C to 71.1°C)	1	0.25	\$65.00	CD12L-0B-020-A0 CD12L-0B-020-C0
TTD-20-N40300F-H	Temperature transmitter, 4-20mA output, over temperature range of -40°F to 300°F (-40°C to 148.8°C)	1	0.25	\$65.00	CD12M-0B-070-A1 CD12M-0B-070-C1
TTD-20-30300F-H	Temperature transmitter, 4-20mA output, over temperature range of 30°F to 300°F (-1.1°C to 148.8°C)	1	0.25	\$49.50	CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB

\* Order separately - See proximity sensor section for cable specs.

ProSense TTD Series Technical Specifications			
	TTD-20-N40160F-H	TTD-20-N40300F-H	TTD-20-30300F-H
Operating Voltage	20 to 32 VDC		
Electrical Connection	M12 connector; gold-plated contacts (torque 5 to 13 in/lbs)		
Short-Circuit Protection	Yes (non-latching)		
Overload Protection	Yes		
Reverse Polarity Protection	Yes		
Analog Output	4 to 20 mA (min/max 3.85 to 22 mA)		
Maximum Load	Rmax: 300 Ω		
Accuracy	± 0.3°C + (± 0.1 % span)		
Resolution	± 0.3°C + (± 0.1 % span)		
Measuring - Display [ms] / Cycle [ms]	100		
Scaled Range	-40°F to 160°F (-40°C to 71.1°C)	-40°F to 300°F (-40°C to 148.8°C)	30°F to 300°F (-1.1°C to 148.8°C)
Dynamic Response (DIN EN 60751)	*t0.5 + 1 sec. / t0.9 = 3 sec.		
Housing Material	Polyamide PACM 12 (TROGAMID); PED; sealing:FPM (Viton); nut: stainless steel 316L / 1.4404; connector: TPU (urethane)		
Ambient Temperature	-13°F to 158°F (-25°C to 70°C)		
Storage Temperature	-40°F to 185°F (-40°C to 85°C)		
Protection	IP 67		
Insulation Resistance	> 100MΩ / 500 VDC		
Shock Resistance	50g (DIN / IEC 68-2-27, 11ms)		
Vibration Resistance	20g (DIN / EN 68-2-6, (10 to 2000 Hz)		
EMC	EN 61326		
EN 61000-4-2 ESD	4 kV CD / 8 kV AD		
EN 61000-4-3 HF Radiated	10 V/m		
EN 61000-4-4 Burst	2 kV		
EN 61000-4-5 Surge	1 kV		
EN 61000-4-6 HF Conducted	10 V		
Power-On Delay Time	1 sec.		
Agency Approvals	UL 508 listed, File # E324411, CE, RoHS		

Company  
Information

Drives

Soft Starters

Motors

Power  
TransmissionMotion: Servos  
and Steppers

Motor Controls

Sensors:  
ProximitySensors:  
PhotoelectricSensors:  
EncodersSensors:  
Limit SwitchesSensors:  
CurrentSensors:  
PressureSensors:  
TemperatureSensors:  
LevelSensors:  
Flow SwitchesPushbuttons  
and Lights

Stacklights

Signal  
Devices

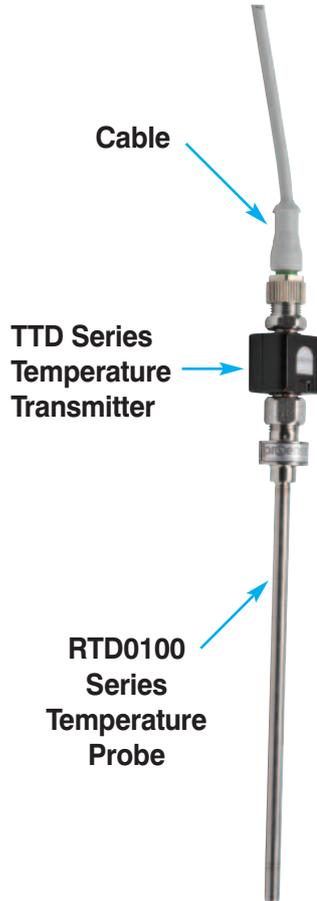
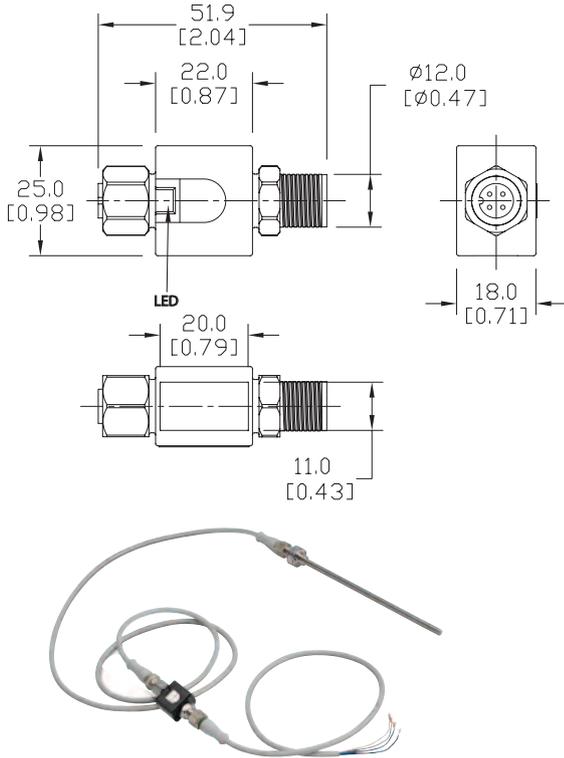
Process

Relays and  
TimersPneumatics:  
Air PrepPneumatics:  
Directional Control  
ValvesPneumatics:  
CylindersPneumatics:  
TubingPneumatics:  
Air FittingsAppendix  
Book 2Terms and  
Conditions

# prosense® TTD Series Temperature Transmitter

## Dimensions

mm [inches]



**Note:** The TTD transmitter can be located remotely from the RTD0100 probe by using an additional patch cable.

## Wiring

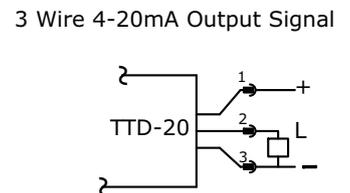
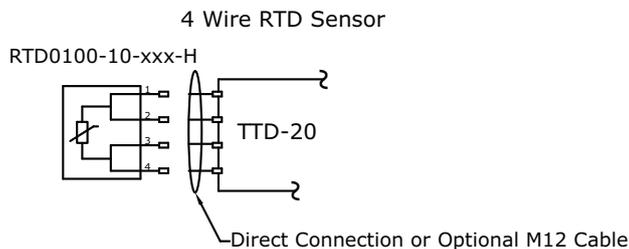
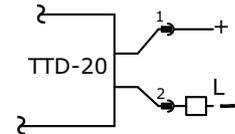
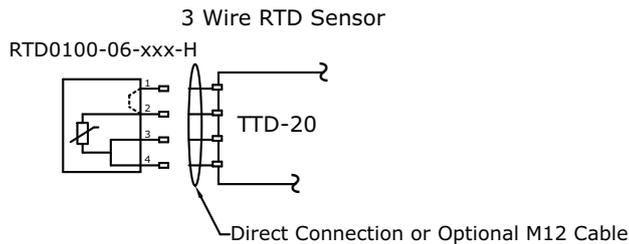
### INPUT SENSOR CONNECTION

### OUTPUT SIGNAL CONNECTION

Cable Assembly Wiring Colors:

- Pin 1 - Brown
- Pin 2 - White
- Pin 3 - Blue
- Pin 4 - Black

Note: Wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.



# pro<sup>o</sup>ense<sup>®</sup> RTD Bolt-On Ring Sensors



## Overview

- All temperature sensors are pre-built stock items
- Ideal for many surface mount sensing applications
- 100 ohm platinum RTD 3-wire element
- Class A accuracy
- Brass ring construction
- 6-foot lead wires with Kapton insulation and stainless steel overbraid
- Made in the USA



RTD Probes with Leadwire Transition							
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Ring Material	Temperature Sensing Range	Mounting
RTD1-B01L06-01	1	0.4	\$54.00	PT 100, 3-wire	Brass	-50 to 300°C (-58 to 572°F)	Bolt on #6-#10 (4mm-5mm) screw or bolt size
RTD1-B02L06-01	1	0.4	\$56.50	PT 100, 3-wire	Brass	-50 to 300°C (-58 to 572°F)	Bolt on #12, 1/4 to 5/16 inch (5mm - 8mm) screw or bolt size

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[0.15 +0.002  t ] °C
<b>Response Time</b>	7 seconds, 63% of a 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	6 foot stranded conductor lead wires with stripped ends, Kapton insulation and stainless steel overbraid

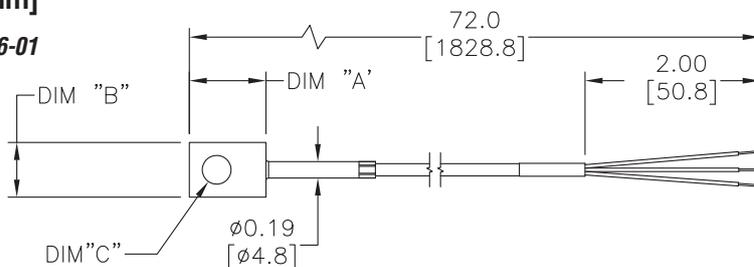


**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**

## Dimensions

inches [mm]

RTD1-BOXL06-01



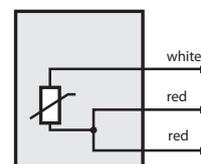
PART NUMBER	DIM "A"	DIM "B"	DIM "C"
RTD1-B01L06-01	0.63[15.9]	0.38[9.5]	0.20[5.2]
RTD1-B02L06-01	0.88[22.2]	0.63[15.9]	0.33[8.3]

## Accessories

Part No.	Description	Pcs/Pkg	Price
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	\$6.50
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	\$8.50
WCB-S	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.	4	\$5.00

Note: RTD extension lead wire and full listing of accessories and dimension information available at the end of this section.

## Wiring Information



Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

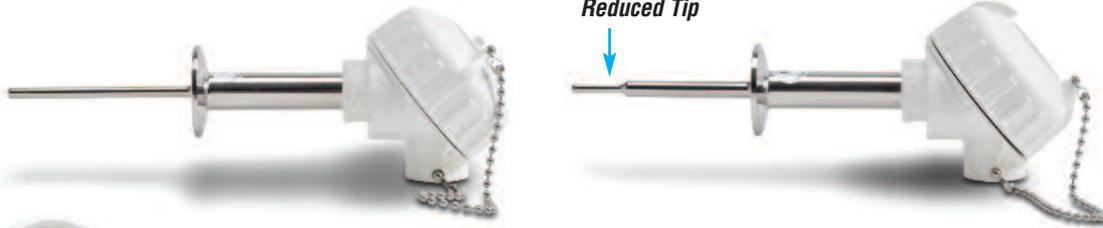
Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>sense</sup>® RTD Sanitary Clean-in-Place (CIP) Probes

RTD1-S04-XX



Open head

## Overview

- All temperature sensors are pre-built stock items
- Designed to meet the stringent requirements of HTST pasteurization systems
- Probe
  - 100 ohm platinum RTD 3-wire element
  - Class A accuracy
  - Clean-in-place (CIP) sanitary 316 SS connectors for use in processing applications where sensor corrosion and product contamination are critical factors
  - Certified to meet or exceed 3A Sanitary Council Standard surface finish specifications
  - 316 SS sheaths available in standard 1/4" diameter, or 3/8" diameter with 3/16" diameter reduced tip for greater durability in high viscosity applications
  - Commonly used 4" probe insertion length

- Connection head
  - FDA compliant white thermoplastic screw cover head with captive o-ring seal provides excellent washdown protection
  - One turn cover removal & installation eliminates cross threading and saves time
  - 3/4" NPT conduit opening with internal stop to prevent overtightening and installation damage
  - Gripping ribs on cover edge
  - Stainless steel cover chain
- Wiring
  - Ceramic terminal base
  - Brass terminals with stainless steel screws eliminate the need to wrap connections around screws
  - Elevated terminal block for easy wire termination
- Made in the USA



RTD Probes with Leadwire Transition								
Part Number	Pcs/Pkg	Wt (lb)	Price	Type	Probe Diameter (O.D.)	Probe Insertion Length	Temperature Sensing Range	Mounting
RTD1-S04-01	1	1.0	\$89.75	PT 100, 3-wire	1/4"	4"	-50 to 204°C (-58 to 400°F)	1" or 1-1/2" tri-clamp
RTD1-S04-02			\$93.00					2" tri-clamp
RTD1-S04-03			\$89.50		3/8" O.D. reduced to 3/16" O.D.			1" or 1-1/2" tri-clamp
RTD1-S04-04			\$115.00		1-1/4" long tip			2" tri-clamp

Technical Specifications	
<b>Sensing Element</b>	Single 100 ohm platinum (Pt 100), 3-wire; TCR = 0.00385 ohm/ohm/°C
<b>Initial Accuracy</b>	Class A ±[0.15+0.002  t ]°C
<b>Probe &amp; Process Connection</b>	316 stainless steel sheath and 316 stainless steel sanitary CIP tri-clamp connection with a minimum 32 micro-inch Ra food grade surface finish. Meets or exceeds 3A Sanitary Council Standard specifications
<b>Connection Head</b>	FDA compliant white polypropylene screw cover with stainless steel chain, BUJNA-N o-ring seal, NEMA 4X, 3/4" NPT conduit opening max. temp. 250°F (121°C)
<b>Response Time</b>	<4 seconds, 63% of 25 to 77°C step change (ASTM E1137)
<b>Wiring</b>	Ceramic terminal base with brass terminals and stainless steel screws (Recommended tightening torque 3-4 lb-in)



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

# proense® RTD Sanitary Clean-in-Place (CIP) Probes

## Dimensions

inches [mm]

**RTD1-S04-01 and 02**

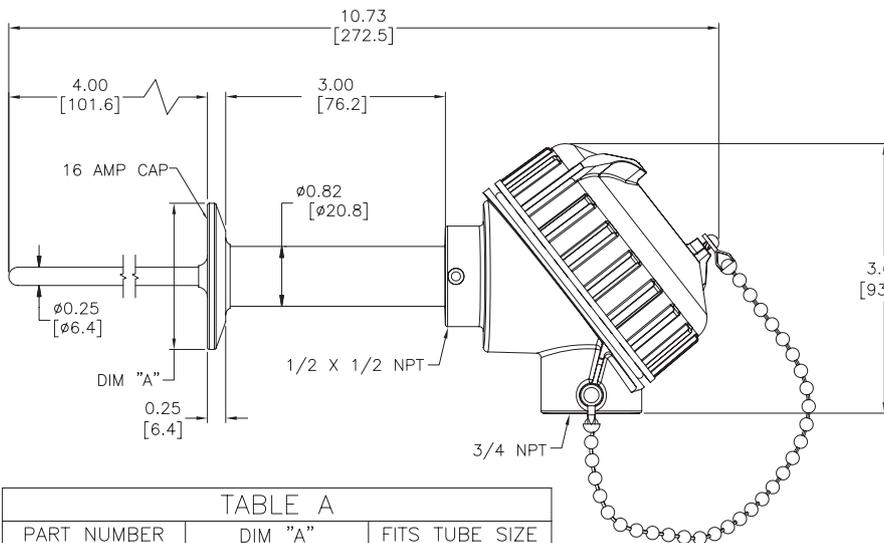


TABLE A		
PART NUMBER	DIM "A"	FITS TUBE SIZE
RTD1-S04-01	1.98[50.3]	1" OR 1-1/2"
RTD1-S04-02	2.51[63.8]	2"

**RTD1-S04-03 and 04**

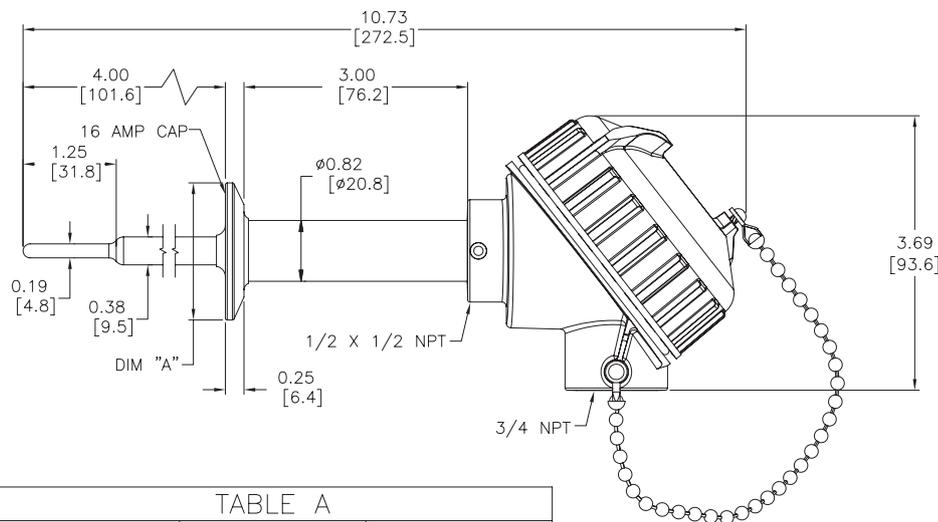
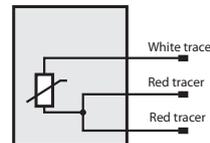
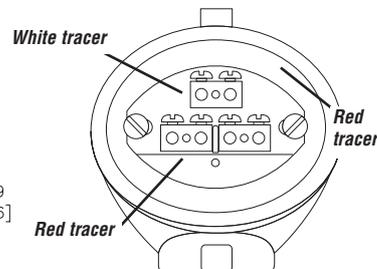


TABLE A		
PART NUMBER	DIM "A"	FITS TUBE SIZE
RTD1-S04-03	1.98[50.3]	1" OR 1-1/2"
RTD1-S04-04	2.51[63.8]	2"

## Accessories

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

## Wiring Information



- Ignore polarity marks on terminal base
- Recommended screw terminal tightening torque 3-4 lb-in
- After wiring connections are made, terminals should be protected by applying a coating of moisture-proof sealant such as a silicone caulking

Company Information

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Motion: Servos and Steppers

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Sensors: Photoelectric

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Pneumatics: Air Prep

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Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# ProSense® Temperature Transmitters - Head Mounted



XTH

## Features - Non-programmable Models

**Sensor Types:**

- Models for thermocouple Types J, K, or T
- Models for RTD Type Pt100 3-wire
- Select from a variety of pre-configured measuring ranges
- Internal cold junction compensation for thermocouple input models
- Transmitter is powered by 8-35 VDC and is reverse-polarity protected
- Output is linearized 2-wire 4-20mA current loop
- Up scale signal for sensor lead break or short circuit detection (NAMUR NE 43 fault response)
- Mounts in ProSense connection head or any DIN Form B sensor head
- 2 kVAC isolation between input and output



ProSense Head Mounted Temperature Transmitters					
Part Number	Input Type	Fixed Measuring Range	Pcs/Pkg	Wt(lb)	Price
XTH-N40140F-PT1	Pt100 RTD (to IEC 751) ( $\alpha=0.00385$ )	-40 to 140°F (-40 to 60°C)	1	0.09	\$69.00
XTH-0100F-PT1		0 to 100°F (-17.8 to 37.8°C)	1	0.09	\$69.00
XTH-0200F-PT1		0 to 200°F (-17.8 to 93.3°C)	1	0.09	\$69.00
XTH-0300F-PT1		0 to 300°F (-17.8 to 148.9°C)	1	0.09	\$69.00
XTH-0500F-PT1		0 to 500°F (-17.8 to 260°C)	1	0.09	\$69.00
XTH-0100F-J	Type J thermocouple (to NIST Monograph 175, IEC584)	0 to 100°F (-17.8 to 37.8°C)	1	0.09	\$69.00
XTH-0200F-J		0 to 200°F (-17.8 to 93.3°C)	1	0.09	\$69.00
XTH-0300F-J		0 to 300°F (-17.8 to 148.9°C)	1	0.09	\$69.00
XTH-0500F-J		0 to 500°F (-17.8 to 260°C)	1	0.09	\$69.00
XTH-0800F-J		0 to 800°F (-17.8 to 426.7°C)	1	0.09	\$69.00
XTH-01000F-J	0 to 1000°F (-17.8 to 537.8°C)	1	0.09	\$69.00	
XTH-0100F-K	Type K thermocouple (to NIST Monograph 175, IEC584)	0 to 100°F (-17.8 to 37.8°C)	1	0.09	\$69.00
XTH-0200F-K		0 to 200°F (-17.8 to 93.3°C)	1	0.09	\$69.00
XTH-0300F-K		0 to 300°F (-17.8 to 148.9°C)	1	0.09	\$69.00
XTH-0500F-K		0 to 500°F (-17.8 to 260°C)	1	0.09	\$69.00
XTH-0800F-K		0 to 800°F (-17.8 to 426.7°C)	1	0.09	\$69.00
XTH-01000F-K		0 to 1000°F (-17.8 to 537.8°C)	1	0.09	\$69.00
XTH-01500F-K		0 to 1500°F (-17.8 to 815.5°C)	1	0.09	\$69.00
XTH-02000F-K	0 to 2000°F (-17.8 to 1093.3°C)	1	0.09	\$69.00	
XTH-N2000F-T	Type T thermocouple (to NIST Monograph 175, IEC584)	-200 to 0°F (-128.9 to -17.8°C)	1	0.09	\$69.00
XTH-N100100F-T		-100 to 100°F (-73.3 to 37.8°C)	1	0.09	\$69.00
XTH-0200F-T		0 to 200°F (-17.8 to 93.3°C)	1	0.09	\$69.00

# ProSense® Temperature Transmitters - Head Mounted



**XTH-0-UNV**

## Features - Programmable Models

**Sensor Types:**

- Thermocouple Types J, K, T, E, N, R, S, U, B, C, D, L
- RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni500, Ni1000, Cu50, Cu100 (2, 3 or 4-wire)
- Linear Resistance 10 to 400 Ohms, 10 to 2000 Ohms (2, 3 or 4-wire)
- Millivolts -10 to 100 mV
- Measuring range configurable within the full range of the sensor type selected
- Selectable units of °F or °C
- Choose from internal or external cold junction compensation for thermocouple inputs
- Wire resistance compensation for 2-wire RTDs
- Transmitter is powered by 8-35 VDC and is reverse-polarity protected

- Output is linearized 2-wire current loop and can be configured for 4-20mA or 20-4mA
- Selectable up scale or down scale signal for sensor lead break or short circuit detection (NAMUR NE 43 fault response)
- Adjustable digital filter time constant to compensate for undesirable input fluctuations
- Mounts in ProSense connection head probes or any DIN Form B sensor head
- 2 kVAC isolation between input and output
- Quick and easy configuration with Free XT-SOFT software and XT-USB cable (purchased separately) – NO decade box, meters, or signal generators needed!



ProSense Head Mounted Temperature Transmitters									
Part Number	Input Type	Programmable Measuring Range Limits	Min. Span	Pcs/Pkg	Wt(lb)	Price			
<b>XTH-0-UNV</b>	Pt100 RTD Pt500 RTD Pt1000 RTD (to IEC 751) (α=0.00385)	-328 to 1562°F (-200 to 850°C) -328 to 482°F (-200 to 250°C) -328 to 482°F (-200 to 250°C)	18°F (10°C) 18°F (10°C) 18°F (10°C)	1	0.09	\$89.00			
	Ni100 RTD Ni500 RTD Ni1000 RTD (to DIN 43760) (α=0.006180)	-76 to 356°F (-60 to 180°C) -76 to 302°F (-60 to 150°C) -76 to 302°F (-60 to 150°C)	18°F (10°C) 18°F (10°C) 18°F (10°C)						
	Pt50 RTD Pt100 RTD (to GOST) (α=0.003911)	-328 to 2012°F (-200 to 1100°C) -328 to 1562°F (-200 to 850°C)	18°F (10°C) 18°F (10°C)						
	Cu50 RTD Cu100 RTD (to GOST) (α=0.004278)	-328 to 392°F (-200 to 200°C) -328 to 392°F (-200 to 200°C)	18°F (10°C) 18°F (10°C)						
	RTDs: • Connection type: 2-, 3-, or 4-wire connection • Software compensation of cable resistance possible in the 2 wire system (0-20Ω) • Sensor cable resistance max. 11Ω per cable in the 3 and 4 wire system • Sensor current: ≤0.6mA								
	Resistance Ω	10 to 400 Ω 10 to 2000 Ω	10 Ω 100 Ω						
	Thermocouples: Type B Type E Type J Type K Type N Type R Type S Type T (to NIST Monograph 175, IEC 584)	32 to 3308°F (0 to +1820°C) -328 to 1679°F (-200 to +915°C) -328 to 2192°F (-200 to +1200°C) -328 to 2501°F (-200 to +1372°C) -454 to 2372°F (-270 to +1300°C) 32 to 3214°F (0 to +1768°C) 32 to 3214°F (0 to +1768°C) -328 to 752°F (-200 to +400°C)	900°F (500°C) 90°F (50°C) 90°F (50°C) 90°F (50°C) 90°F (50°C) 900°F (500°C) 900°F (500°C) 90°F (50°C)						
	Thermocouples: Type C Type D (to ASTM E988)	32 to 4208°F (0 to +2320°C) 32 to 4523°F (0 to +2495°C)	900°F (500°C) 900°F (500°C)						
	Thermocouples: Type L Type U (to DIN 43710)	-328 to 1652°F (-200 to +900°C) -328 to 1112° (-200 to +600°C)	90°F (50°C) 90°F (50°C)						
	Thermocouples: • Internal cold junction (Pt100) or external programmable fixed value, 32 to 176°F (0 to 80°C) • Accuracy of cold junction: ± 1.8°F (1°C) • Sensor current: 30nA								
Millivolt (mV)	-10 to 100 mV	5 mV							

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- Pneumatics: Directional Control Valves
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- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# pro<sup>sense</sup>® Temperature Transmitters - Head Mounted

ProSense Head Mounted Temperature Transmitters General Specifications						
		XTH (PT1 Series)	XTH (J Series)	XTH (K Series)	XTH (T Series)	XTH-0-UNV
Output	Output Signal	4-20 mA				4-20 mA, 20-4 mA programmable
	Signal Transmission	Output linear to temperature				
	Fault Signal	Under ranging / Standard / 3.8 mA Over ranging / Standard / 20.5 mA Sensor break; sensor short circuit down scale / To NAMUR NE 43 / ≤3.6 mA (only applicable to XTH-0-UNV) Sensor break; sensor short circuit up scale / To NAMUR NE 43 / ≥21.0 mA				
	Max. Load Impedance	$(V_{\text{powersupply}} - 8V) / 0.025 \text{ A}$ e.g. (24V-8V)/0.025A=640 Ω				
	Galvanic Isolation	2 kV AC (input/output)				
	Input Current Requirement	≤ 3.5 mA				
	Current Limit	≤ 25 mA				
	Switch on Delay	4 seconds (during power up output current = 3.8 mA)				
	Response Time	1 second				
	Digital Filter	N/A				0 to 8 seconds (programmable)
	Power Supply	8 to 35 VDC, polarity protected				
Allowable Ripple	≤ 5 V with power supply ≥ 13; Max. frequency = 1 kHz					
Accuracy	Reference Conditions	Calibration temperature 73.4°F ± 9°F (23°C ± 5°C)				
	Maximum Measuring Error	0.36°F (0.2°C) or 0.08%	0.9°F (0.5°C) or 0.08%			See Table 1
	Influence of Power Supply	≤ ± 0.01%/V deviation from 24 V				
	Load Influence	≤ ± 0.02%/100 Ω				
	Long Term Stability	≤ 0.1 K / Year or ≤ 0.05% / Year				
Installation	Orientation	No restrictions				
	Location	Connection head according to DIN 43 729 Form B				
Environmental	Ambient	-40 to 185°F (-40 to 85°C)				
	Storage	-40 to 212°F (-40 to 100°C)				
	Climate Class	As per IEC 60 654-1, class C				
	Ingress Protection	IP00 / IP66 installed in appropriate housing				
	Shock and Vibration	4g / 2 to 150 Hz as per IEC 60 068-2-6				
	EMC Immunity	See Table 2				
	Moisture Condensation	Allowable				
Construction	Materials	Housing: Polycarbonate; Potting: Polyurethane				
	Terminals	Cable up to max. 1.75 mm <sup>2</sup> (16 AWG), secure screws				
Approvals	CE, UL recognized (UL 3111-1), File # E311366, RoHS					

Table 1 - Maximum Measuring Error XTH-0-UNV		
	Type	Measurement Accuracy*
Resistance Thermometer (RTD)	Pt100, Ni100	0.36°F (0.2°C) or 0.08%
	Pt500, Ni500	0.9°F (0.5°C) or 0.20%
	Pt1000, Ni1000	0.54°F (0.3°C) or 0.12%
Thermocouple TC	K, J, T, E, L, U	typ. 0.9°F (0.5°C) or 0.08%
	N, C, D	typ. 1.8°F (1.0°C) or 0.08%
	S, B, R	typ. 3.6°F (2.0°C) or 0.08%
	Measurement Range	Measurement Accuracy*
Resistance Transmitter (Ω)	10 to 400 Ω	± 0.1 Ω or 0.08%
	10 to 2000 Ω	± 1.5 Ω or 0.12%
Voltage Transmitters (mV)	-10 to 100 mV	± 20 μV or 0.08%

Table 2 - IEC Immunity			
Discharge of Static Electricity	IEC 61000-4-2	6 kV cont., 8 kV air	N/A
Electromagnetic Fields	IEC 61000-4-3	80 to 1000 Hz	10 V/m
Burst (Signal)	IEC 61000-4-4	1 kV; 2 kV (B)**	N/A
Transient Voltage	IEC 61000-4-5	1 kV unsym. / 0.5 kV sym.	N/A
HF Coupling	IEC 61000-4-6	0.15 to 80 MHz	10V

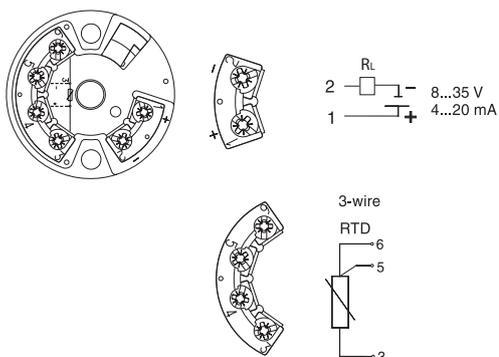
\*\* self recovery

\* % is related to the adjusted measurement range. The value to be applied is the greater.

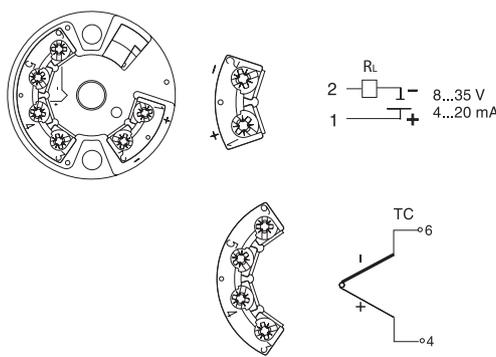
# pro<sup>sense</sup>® Temperature Transmitters - Head Mounted

## Wiring

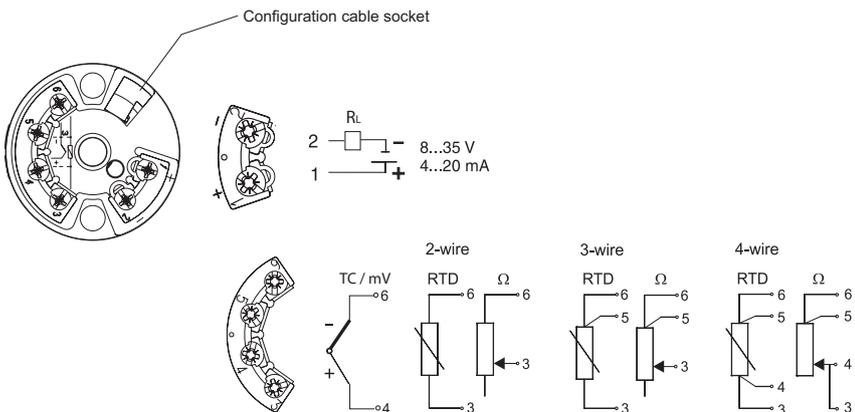
### XTH PT1 - RTD Input



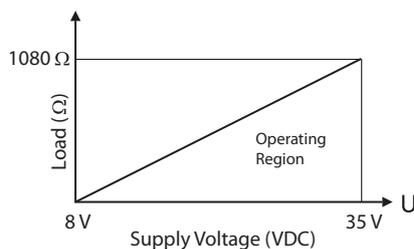
### XTH J, K & T - Thermocouple Input



### XTH-0-UNV



## Load Impedance

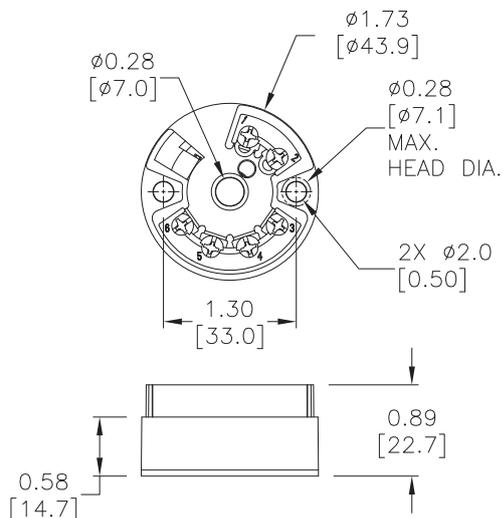


$$RL_{max} = (V_{powersupply} - 8V) / 0.025A \text{ (current output)}$$

e.g.  $(24V - 8V) / 0.025A = 640 \Omega$

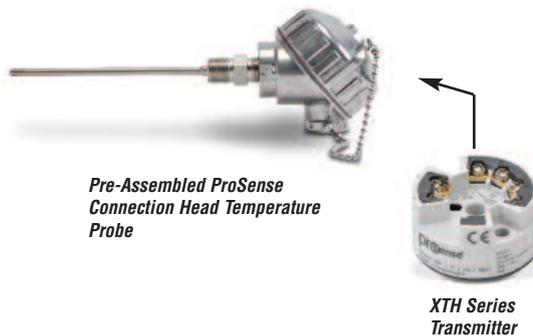
## Dimensions

inches [mm]



## Application

ProSense head mounted transmitters can be easily added in the field to a ProSense connection head probe. Just order a pre-assembled ProSense connection head probe and replace the internal terminal block with an XTH series transmitter and included mounting hardware.



# proSense® Temperature Transmitters - DIN Rail Mounted



XTD

## Features - Non-programmable Models

### Sensor Types:

- Models for thermocouple Types J, K, or T
- Models for RTD Type Pt100 3-wire
- Select from a variety of pre-configured measuring ranges
- Internal cold junction compensation for thermocouple input models
- Transmitter is powered by 12-35 VDC and is reverse-polarity protected
- Output is linearized 2-wire 4-20mA current loop

- Up scale signal for sensor lead break or short circuit detection (NAMUR NE 43 fault response)
- Mounts on 35mm DIN rail in a control panel
- 2 kVAC isolation between input and output



ProSense DIN Rail Mounted Temperature Transmitter Series					
Part Number	Input Type	Range	Pcs/Pkg	Wt(lb)	Price
<b>XTD-N40140F-PT1</b>	Pt100 RTD (to IEC 751) ( $\alpha=0.00385$ )	-40 to 140°F (-40 to 60°C)	1	0.2	\$89.00
<b>XTD-0100F-PT1</b>		0 to 100°F (-17.8 to 37.8°C)	1	0.2	\$89.00
<b>XTD-0200F-PT1</b>		0 to 200°F (-17.8 to 93.3°C)	1	0.2	\$89.00
<b>XTD-0300F-PT1</b>		0 to 300°F (-17.8 to 148.9°C)	1	0.2	\$89.00
<b>XTD-0500F-PT1</b>		0 to 500°F (-17.8 to 260°C)	1	0.2	\$89.00
<b>XTD-0100F-J</b>	J thermocouple (to NIST Monograph 175, IEC584)	0 to 100°F (-17.8 to 37.8°C)	1	0.2	\$89.00
<b>XTD-0200F-J</b>		0 to 200°F (-17.8 to 93.3°C)	1	0.2	\$89.00
<b>XTD-0300F-J</b>		0 to 300°F (-17.8 to 148.9°C)	1	0.2	\$89.00
<b>XTD-0500F-J</b>		0 to 500°F (-17.8 to 260°C)	1	0.2	\$89.00
<b>XTD-0800F-J</b>		0 to 800°F (-17.8 to 426.7°C)	1	0.2	\$89.00
<b>XTD-01000F-J</b>	0 to 1000°F (-17.8 to 537.8°C)	1	0.2	\$89.00	
<b>XTD-0100F-K</b>	K thermocouple (to NIST Monograph 175, IEC584)	0 to 100°F (-17.8 to 37.8°C)	1	0.2	\$89.00
<b>XTD-0200F-K</b>		0 to 200°F (-17.8 to 93.3°C)	1	0.2	\$89.00
<b>XTD-0300F-K</b>		0 to 300°F (-17.8 to 148.9°C)	1	0.2	\$89.00
<b>XTD-0500F-K</b>		0 to 500°F (-17.8 to 260°C)	1	0.2	\$89.00
<b>XTD-0800F-K</b>		0 to 800°F (-17.8 to 426.7°C)	1	0.2	\$89.00
<b>XTD-01000F-K</b>		0 to 1000°F (-17.8 to 537.8°C)	1	0.2	\$89.00
<b>XTD-01500F-K</b>		0 to 1500°F (-17.8 to 815.5°C)	1	0.2	\$89.00
<b>XTD-02000F-K</b>	0 to 2000°F (-17.8 to 1093.3°C)	1	0.2	\$89.00	
<b>XTD-N2000F-T</b>	T thermocouple (to NIST Monograph 175, IEC584)	-200 to 0°F (-128.9 to -17.8°C)	1	0.2	\$89.00
<b>XTD-N100100F-T</b>		-100 to 100°F (-73.3 to 37.8°C)	1	0.2	\$89.00
<b>XTD-0200F-T</b>		0 to 200°F (-17.8 to 93.3°C)	1	0.2	\$89.00

# proSense® Temperature Transmitters - DIN Rail Mounted



**XTD-0-UNV**

## Features - Programmable Models

**Sensor Types:**

- Thermocouple Types J, K, T, E, N, R, S, U, B, C, D, L
- RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni120, Ni500, Ni1000 (2, 3 or 4-wire)
- Linear Resistance 10 to 400 Ohms, 10 to 2000 Ohms (2, 3 or 4-wire)
- Millivolts -10 to 100 mV
- Measuring range configurable within the full range of the sensor type selected
- Selectable units of °F or °C
- Choose from internal or external cold junction compensation for TC inputs
- Wire resistance compensation for 2-wire RTDs
- Transmitter is powered by 12-35 VDC and is reverse-polarity protected

- Output is linearized 2-wire current loop and can be configured for 4-20mA or 20-4mA
- Selectable up scale or down scale signal for sensor lead break or short circuit detection (NAMUR NE43 fault response)
- Adjustable digital filter time constant to compensate for undesirable input fluctuations
- Mounts on 35mm DIN rail in a control panel
- 2 kVAC isolation between input and output
- Quick and easy configuration with Free XT-SOFT software and XT-USB cable (purchased separately) – NO decade box, meters, or signal generators needed!



ProSense DIN Rail Mounted Temperature Transmitters						
XTD-0-UNV	Input Type	Programmable Measuring Range limits	Min. Span	Pcs/Pkg	Wt(lb)	Price
	Pt100 RTD Pt500 RTD Pt1000 RTD (to IEC 751) ( $\alpha=0.00385$ )	-328 to 1562°F (-200 to 850°C) -328 to 482°F (-200 to 250°C) -328 to 482°F (-200 to 250°C)	18°F (10°C) 18°F (10°C) 18°F (10°C)			
	Ni100 RTD Ni120 RTD Ni500 RTD Ni1000 RTD (to DIN 43760) ( $\alpha=0.006180$ )	-76 to 356°F (-60 to 180°C) -94 to 518°F (-70 to 270°C) -76 to 302°F (-60 to 150°C) -76 to 302°F (-60 to 150°C)	18°F (10°C) 18°F (10°C) 18°F (10°C) 18°F (10°C)			
	Pt50 RTD Pt100 RTD (to GOST) ( $\alpha=0.003911$ )	-328 to 2012°F (-200 to 1100°C) -328 to 1562°F (-200 to 850°C)	18°F (10°C) 18°F (10°C)			
	<b>RTDs:</b> <ul style="list-style-type: none"> <li>• Connection type: 2-, 3-, or 4-wire connection</li> <li>• Software compensation of cable resistance possible in the 2 wire system (0-20Ω)</li> <li>• Sensor cable resistance max. 11Ω per cable in the 3 and 4 wire system</li> <li>• Sensor current: ≤0.6mA</li> </ul>					
	Resistance Ω	10 to 400 Ω 10 to 2000 Ω	10 Ω 100 Ω	1	0.2	\$109.00
	Thermocouples: Type B Type E Type J Type K Type N Type R Type S Type T (to NIST Monograph 175, IEC 584)	32 to 3308°F (0 to +1820°C) -328 to 1679°F (-200 to +915°C) -328 to 2192°F (-200 to +1200°C) -328 to 2501°F (-200 to +1372°C) -454 to 2372°F (-270 to +1300°C) 32 to 3214°F (0 to +1768°C) 32 to 3214°F (0 to +1768°C) -328 to 752°F (-200 to +400°C)	900°F (500°C) 90°F (50°C) 90°F (50°C) 90°F (50°C) 90°F (50°C) 900°F (500°C) 900°F (500°C) 90°F (50°C)			
	Thermocouples: Type C Type D (to ASTM E988)	32 to 4208°F (0 to +2320°C) 32 to 4523°F (0 to +2495°C)	900°F (500°C) 900°F (500°C)			
	Thermocouples: Type L Type U (to DIN 43710)	-328 to 1652°F (-200 to +900°C) -328 to 1112° (-200 to +600°C)	90°F (50°C) 90°F (50°C)			
	<b>Thermocouples:</b> <ul style="list-style-type: none"> <li>• Internal cold junction (Pt100) or external programming fixed value, 32 to 176°F (0 to 80°C)</li> <li>• Accuracy of cold junction: ± 1.8°F (1°C)</li> <li>• Sensor current: 30nA</li> </ul>					
	Millivolt (mV)	-10 to 100 mV	5 mV			

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# pro<sup>sense</sup>® Temperature Transmitters - DIN Rail Mounted

ProSense DIN Rail Mounted Temperature Transmitters General Specifications							
		XTD (PT1 Series)	XTD (J Series)	XTD (K Series)	XTD (T Series)	XTD-0-UNV	
Output	Output Signal	4-20 mA				4-20 mA, 20-4 mA programmable	
	Signal Transmission	Output linear to temperature					
	Fault Signal	Under ranging / Standard / 3.8 mA Over ranging / Standard / 20.5 mA Sensor break; sensor short circuit down scale / To NAMUR NE 43 / ≤3.6 mA (only applicable to XTD-0-UNV) Sensor break; sensor short circuit up scale / To NAMUR NE 43 / ≥21.0 mA					
	Max. Load Impedance	$(V_{\text{powersupply}} - 12 \text{ V}) / 0.022 \text{ A}$ e.g. (24V-12V)/0.023A=521.74Ω					
	Galvanic Isolation	2 kV AC (input/output)					
	Input Current Requirement	≤ 3.5 mA					
	Current Limit	≤ 23 mA					
	Switch on Delay	4 seconds (during power up output current = 3.8 mA)					
	Response Time	1 second					
	Digital Filter	N/A				0 to 8 seconds (programmable)	
	Power Supply	12 to 35 VDC, polarity protected					
	Allowable Ripple	≤ 3 V with power supply ≥ 15, Max. frequency = 1 kHz					
Accuracy	Reference Conditions	Calibration temperature 73.4°F ± 9°F (23°C ± 5°C)					
	Maximum Measuring Error	0.36°F (0.2°C) or 0.08%	0.8°F (0.5°C) or 0.08%			See Table 1	
	Influence of Power Supply	≤ ± 0.01%/V deviation from 24 V					
	Load Influence	≤ ± 0.02%/100 Ω					
	Long Term Stability	≤ 0.1 K / Year or ≤ 0.05% / Year					
Installation	Orientation	No restrictions					
Environmental	Ambient	-40 to 185°F (-40 to 85°C)					
	Storage	-40 to 212°F (-40 to 100°C)					
	Climate Class	As per IEC 60 654-1, class C					
	Ingress Protection	IP20					
	Shock and Vibration	4g / 2 to 150 Hz as per IEC 60 068-2-6					
	EMC Immunity	See Table 2					
	Moisture Condensation	Allowable					
Construction	Materials	Housing: Polycarbonate/ABS, UL94V-0					
	Terminals	Pluggable screw terminal, max. 2.5 mm <sup>2</sup> (14 AWG) solid, or strand with wire end sleeve, recommended torque 0.5-0.7Nm (4.5-6.2lb.in)					
Human Interface	Display	Illuminated yellow LED (2 mm, 0.08 in) signals device operation					
Approvals	CE, UL recognized (UL 3111-1), File # E311366, RoHS						

Table 1 - Maximum Measuring Error XTD-0-UNV		
	Type	Measurement Accuracy*
Resistance Thermometer (RTD)	Pt100, Ni100, Ni120	0.36°F (0.2°C) or 0.08%
	Pt500, Ni500	0.9°F (0.5°C) or 0.20%
	Pt1000, Ni1000	0.54°F (0.3°C) or 0.12%
Thermocouple (TC)	K, J, T, E, L, U	typ. 0.9°F (0.5°C) or 0.08%
	N, C, D	typ. 1.8°F (1.0°C) or 0.08%
	S, B, R	typ. 3.6°F (2.0°C) or 0.08%
	Measurement Range	Measurement Accuracy*
Resistance Transmitter (Ω)	10 to 400 Ω	± 0.1 Ω or 0.08%
	10 to 2000 Ω	± 1.5 Ω or 0.12%
Voltage Transmitters (mV)	-10 to 100 mV	± 20 μV or 0.08%

\* % is related to the adjusted measurement range. The value to be applied is the greater.

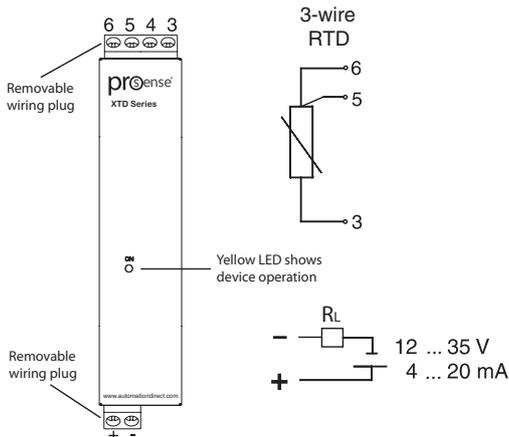
Table 2 - IEC Immunity			
Discharge of Static Electricity	IEC 61000-4-2	6 kV cont., 8 kV air	N/A
Electromagnetic Fields	IEC 61000-4-3	80 to 1000 Hz	10 V/m
Burst (Signal)	IEC 61000-4-4	1 kV; 2 kV (B)**	N/A
Transient Voltage	IEC 61000-4-5	1 kV unsym. / 0.5 kV sym.	N/A
HF Coupling	IEC 61000-4-6	0.15 to 80 MHz	10V

\*\* self recovery

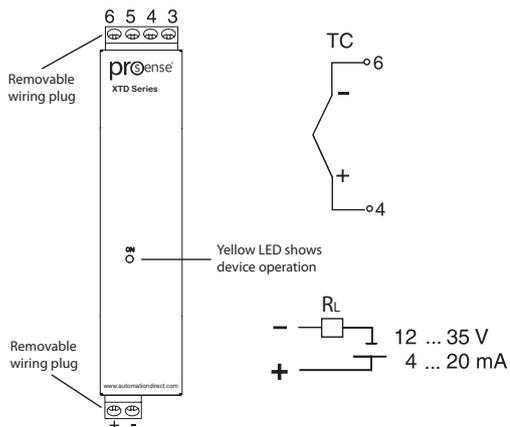
# pro<sup>sense</sup>® Temperature Transmitters - DIN Rail Mounted

## Wiring

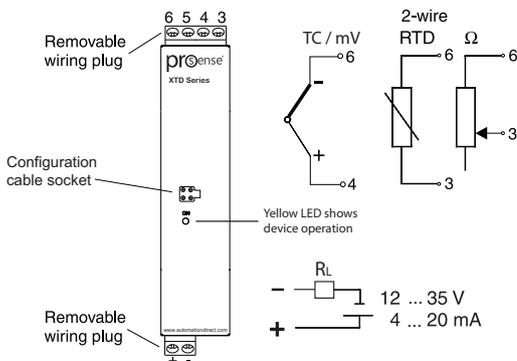
### XTD PT1



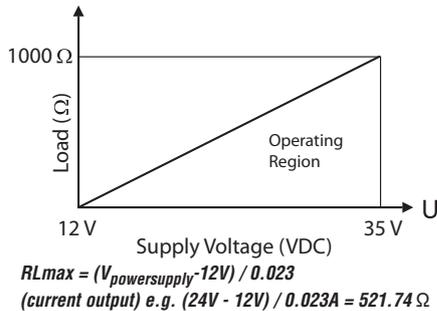
### XTD J, K, & T



### XTD-0-UNV

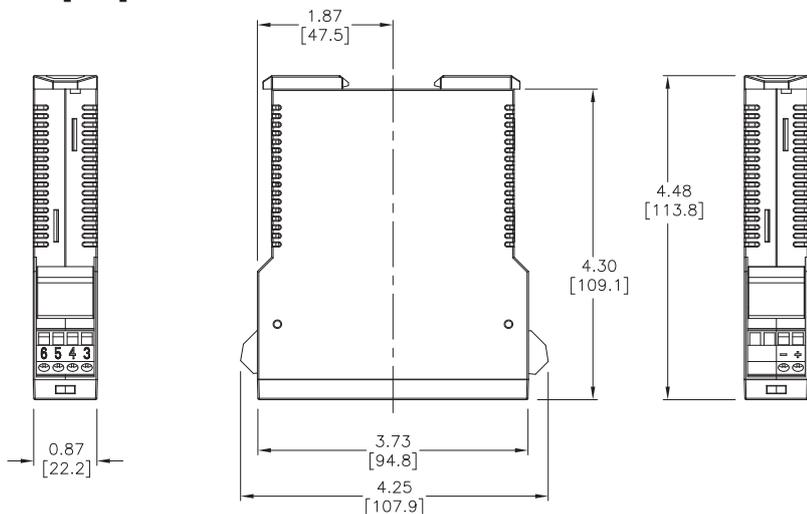


## Load Impedance



## Dimensions

inches [mm]



# pro<sup>sense</sup> Temperature Transmitter Configuration Software and Cable

**Quick and easy configuration with Free XT-SOFT software and XT-USB cable (purchased separately) – NO decade box, meters, or signal generators needed!**

## Overview

XT-SOFT PC software is a utility program that allows users to easily configure ProSense XTH-0-UNV and XTD-0-UNV temperature transmitters. Download your free copy of XT-SOFT at [www.AutomationDirect.com](http://www.AutomationDirect.com) and connect your transmitter to the PC through an XT-USB configuration cable (purchased separately).

System Requirements:

- Windows XP (32 Bit)
- Windows Vista, Windows 7 (32 and 64 Bit)
- 1 USB 2.0 Port
- 128 MB hard disk space

## Configuration Parameters:

Sensor Type:

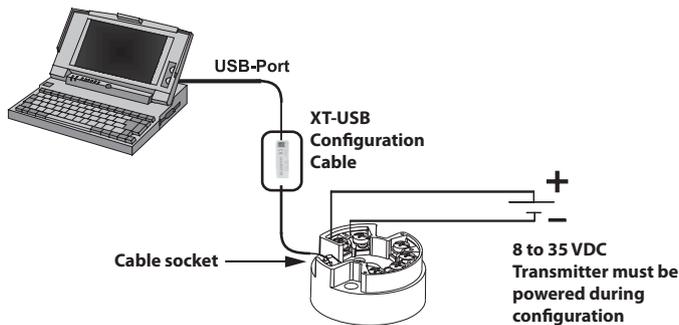
- Thermocouple Types J, K, T, E, N, R, S, U, B, C, D, L
- RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni120, Ni500, Ni1000
- Linear Resistance 10 to 400 Ohms, 10 to 2000 Ohms
- Millivolts -10 to 100 mV
- Wiring connection 2, 3, or 4-wire (RTD or Linear Resistance only)
- Measuring range start and end points
- Selectable units of °F or °C
- Choose from internal or external cold junction compensation (TC only)
- Wire resistance compensation (2-wire RTD or Linear Resistance only)
- Output action of 4-20mA or 20-4mA
- Selectable up scale or down scale signal for sensor lead break or short circuit detection (NAMUR NE43 fault response)
- Adjustable digital filter time constant to compensate for undesirable input fluctuations
- Zero point correction offset factor in °F or °C

Part No.	Description	Pcs/Pkg	Wt(lb)	Price
<b>XT-USB</b>	Configuration cable for use with ProSense temperature transmitter models XTH-0-UNV and XTD-0-UNV. USB connector to keyed 4-pin male connector, 7.9-foot (2.4m) overall cable length. Use with XT-SOFT configuration software, available as a free download from the AutomationDirect Web site	1	0.4	\$89.00
<b>XT-SOFT</b>	Configuration software CD for ProSense temperature transmitter models XTH-0-UNV and XTD-0-UNV (available as a free download from the AutomationDirect web site). Requires an XT-USB configuration cable (purchased separately).	1	0.1	\$9.00

## Connection Examples

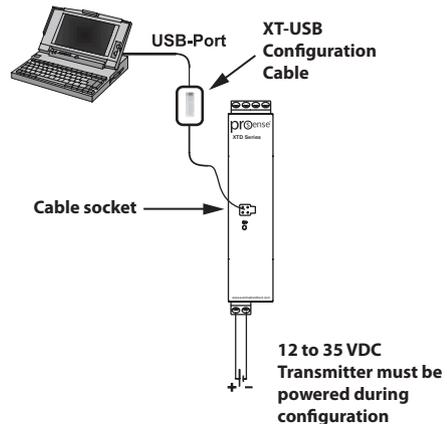
### XTH-0-UNV Connection

XT-SOFT PC configuration software



### XTD-0-UNV Connection

XT-SOFT PC configuration software



# pro<sup>sense</sup> Thermowells for RTD Probes with M12 Cable Connector



## Overview

- All thermowells are pre-built stock items
- Thermowells for ProSense RTD probes with M12 cable connector
- All wetted parts are 316 stainless steel
- 600°F (315°C) temperature and 232 psi (16 bar) pressure rating
- CF06-25N or CF10-50N fitting required to mount RTD probes in thermowell
- 3-year warranty

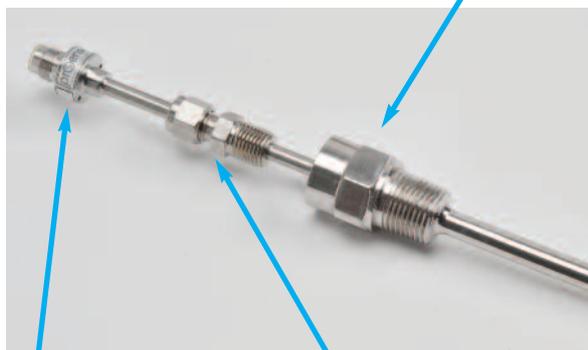


Thermowells for RTD Probes with M12 Cable Connector												
Part Number	Pcs/Pkg	Wt(lb)	Price	I.D.	Overall Length	Male Process Threads	Female Probe Threads	Wetted Material	Temperature/Pressure Rating	Use With		
RTDTW-06-010-50N	1	0.10	\$28.00	7 mm (0.28")	113 mm (4.4")	1/2" NPT	1/4" NPT	316 SS	600°F (315°C) max; 232 psi (16 bar) max	RTD0100-06-010-H CF06-25N		
RTDTW-06-020-50N	1	0.20	\$30.00		213 mm (8.4")					RTD0100-06-020-H CF06-25N		
RTDTW-06-030-50N	1	0.30	\$33.25		313 mm (12.3")					RTD0100-06-030-H CF06-25N		
RTDTW-10-010-50N	1	0.10	\$36.00	11 mm (0.43")	92 mm (3.62")		1/2" NPT			316 SS	600°F (315°C) max; 232 psi (16 bar) max	RTD0100-10-010-H CF10-50N
RTDTW-10-020-50N	1	0.15	\$30.00		192 mm (7.55")							RTD0100-10-020-H CF10-50N
RTDTW-10-030-50N	1	0.22	\$33.25		292 mm (11.48")							RTD0100-10-030-H CF10-50N
RTDTW-10-050-50N	1	0.10	\$36.00		492 mm (19.37")							RTD0100-10-050-H CF10-50N

**NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE THERMOWELL'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.**  
[www.automationdirect.com/static/specs/prosensechemresistance.pdf](http://www.automationdirect.com/static/specs/prosensechemresistance.pdf)

**NOTE: RESPONSE TIME IS REDUCED WHEN INSTALLED IN A THERMOWELL. BE SURE TO INSTALL THE PROBE SO THAT IT CONTACTS THE END OF THE THERMOWELL FOR FASTER RESPONSE.. THERMAL COMPOUND MAY BE USED DEPENDING ON APPLICATION**

## RTD & Thermowell Assembly Example



RTD0100 Series Probe

CF06-25N or CF10-50N Compression Fitting

*Note: Once tightened compression fitting cannot be re-adjusted*

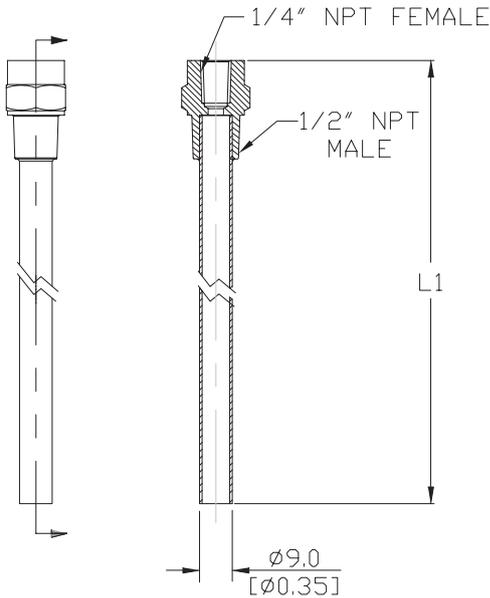
- Company Information
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- Sensors: Limit Switches
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- Appendix Book 2
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# pro<sup>sense</sup>® Thermowells for RTD Probes with M12 Cable Connector

## Dimensions

inches [mm]

### RTDTW-06 Series



Part Number	L1
RTDTW-06-010-50N	113 mm [ 4.4]
RTDTW-06-020-50N	213 mm [ 8.4]
RTDTW-06-030-50N	313 mm [12.3]

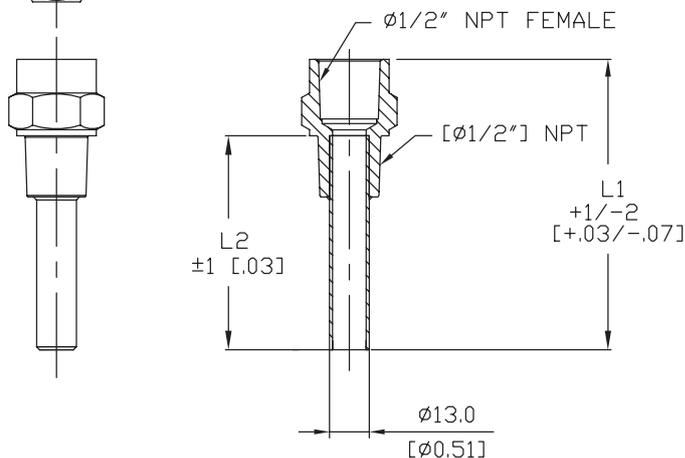
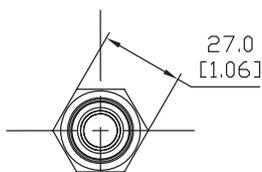
*Torque threads to 40 lb-ft [54.23 Nm]\**

*\* Torque values are for reference. Actual torque required for a proper seal of NPT threads is influenced by tolerance, sealant, lubricant, etc.*

## Dimensions

inches [mm]

### RTDTW-10 Series



Part Number	L1	L2
RTDTW-10-010-50N	92 mm [ 3.62]	70 mm [ 2.75]
RTDTW-10-020-50N	192 mm [ 7.55]	170 mm [ 6.69]
RTDTW-10-030-50N	292 mm [11.48]	270 mm [10.6]
RTDTW-10-050-50N	492 mm [19.37]	470 mm [18.47]

*Torque threads to 40 lb-ft [54.23 Nm]\**

# pro<sup>sense</sup>® Thermowells for Spring-Loaded Thermocouples and RTD's or Thermometers

TW06-01



TW06-02



## Overview

- All thermowells are pre-built stock items
- Thermowells designed for use with ProSense spring-loaded thermocouple and RTD probes or ProSense Thermometers eliminate the need for a separate probe mounting fitting or adapter
- Drilled bar stock one piece construction (no welds) from 304 or 316 stainless steel
- 1/2" and 3/4" NPT male process threads available
- Designs and fabrication comply with ASME B31.1 and boiler and pressure vessel codes
- Material complies with NACE MR 0175 / ISO 15156
- CRN registered for all Canadian provinces
- Made in the USA



Thermowells for Spring-Loaded Thermocouples and RTD's or Thermometers										
Part Number	Pcs/Pkg	Wt(lb)	Price	I.D.	Overall Length/"U" Length	Male Process Threads	Female Probe Threads	Wetted Material	Temperature/Pressure Rating	Use With Probe or Thermometer
TW025-01	1	0.4	\$23.00	0.26"	2-3/4" / 1"	1/2" NPT	1/2" NPT	304 SS	304SS: 1000°F max; 3400 psi max	T30-XXXX-25C T50-XXXX-25A
TW025-03	1	0.4	\$26.00			1/2" NPT		316 SS		
TW04-01	1	0.5	\$23.50		4-1/4" / 2-1/2"	1/2" NPT		304 SS	316SS: 1000°F max; 5200 psi max	THMJ-C04-03 THMK-C04-03 THMJ-H04L01-02 THMK-H04L01-02 RTD1-C04-03 RTD1-H04L01-02 T30-XXXX-4C T50-XXXX-4A
TW04-02	1	0.5	\$23.50			3/4" NPT		304 SS		
TW04-03	1	0.5	\$29.50			1/2" NPT		316 SS		
TW04-04	1	0.5	\$29.50			3/4" NPT		316 SS		
TW06-01	1	0.7	\$31.00		6-1/4" / 4-1/2"	1/2" NPT		304 SS	316SS: 1000°F max; 5200 psi max	THMJ-C06-03 THMK-C06-03 THMJ-H06L01-02 THMK-H06L01-02 RTD1-C06-03 RTD1-H06L01-02 T30-XXXX-6C T50-XXXX-6A
TW06-02	1	0.7	\$31.00			3/4" NPT		304 SS		
TW06-03	1	0.7	\$39.00			1/2" NPT		316 SS		
TW06-04	1	0.7	\$39.00			3/4" NPT		316 SS		
TW09-01	1	1.0	\$50.75		9-1/4" / 7-1/2"	1/2" NPT		304 SS	T50-XXXX-9A	
TW09-03	1	1.0	\$57.50			1/2" NPT		316 SS		
TW12-01	1	1.2	\$53.00		12-1/4" / 10-1/2"	1/2" NPT		304 SS	THMJ-C12-03 THMK-C12-03 THMJ-H12L01-02 THMK-H12L01-02 RTD1-C12-03 RTD1-H12L01-02	
TW12-02	1	1.2	\$53.00			3/4" NPT		304 SS		
TW12-03	1	1.2	\$66.00			1/2" NPT		316 SS		
TW12-04	1	1.2	\$66.00			3/4" NPT		316 SS		



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



**NOTE: RESPONSE TIME IS REDUCED WHEN INSTALLED IN A THERMOWELL. BE SURE TO INSTALL THE PROBE SO THAT IT CONTACTS THE END OF THE THERMOWELL FOR FASTER RESPONSE.. THERMAL COMPOUND MAY BE USED DEPENDING ON APPLICATION**

Company Information

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Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>sense</sup> Thermowells for Spring-Loaded Thermocouples and RTD's or Thermometers

## Spring-loaded Thermocouple or RTD and Thermowell Assembly Example

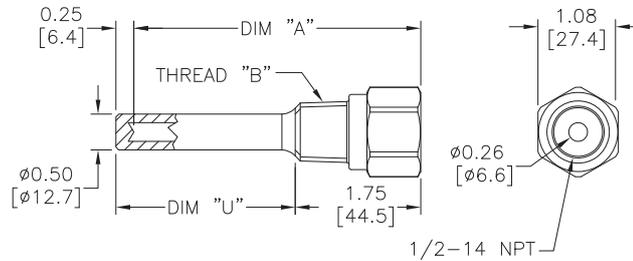


- Using spring-loaded probe design ensures positive tip contact with the bottom of the thermowell.
- Probes with hex nipple thread directly into thermowell. No additional probe mounting fittings are required.

### Dimensions

inches [mm]

TW04-XX & TW025-XX



PART NUMBER	DIM "A"	THREAD "B" NPT	DIM "U"
TW025-01	2.50[63.5]	1/2-14	1.00[25.5]
TW025-03	2.50[63.5]	1/2-14	
TW04-01	4.00[101.6]	1/2-14	2.50[63.5]
TW04-02	4.00[101.6]	3/4-14	
TW04-03	4.00[101.6]	1/2-14	
TW04-04	4.00[101.6]	3/4-14	

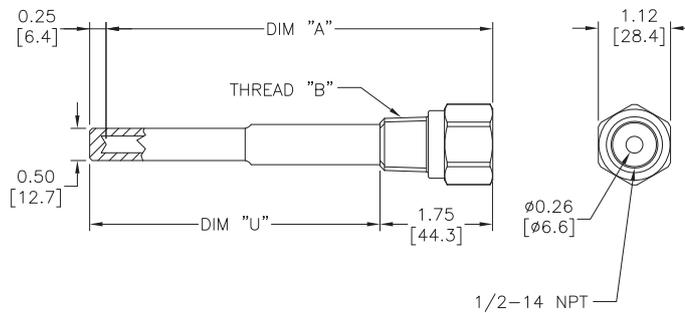
### Dimensions

inches [mm]

TW06-XX

TW09-XX

TW12-XX

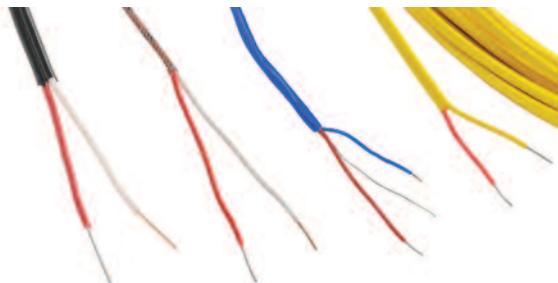


PART NUMBER	DIM "A"	THREAD "B" NPT	DIM "U"
TW06-01	6.00[152.4]	1/2-14	4.50[114.3]
TW06-02	6.00[152.4]	3/4-14	
TW06-03	6.00[152.4]	1/2-14	
TW06-04	6.00[152.4]	3/4-14	
TW09-01	9.00[228.6]	1/2-14	7.50[190.5]
TW09-03	9.00[228.6]	1/2-14	
TW12-01	12.00[304.8]	1/2-14	10.50[266.7]
TW12-02	12.00[304.8]	3/4-14	
TW12-03	12.00[304.8]	1/2-14	
TW12-04	12.00[304.8]	3/4-14	

# pro<sup>sense</sup> Thermocouple Extension Wire

## Overview

- Thermocouple extension wire for Types J, K and T
- Available insulation types include PVC, fiberglass and PVC with aluminum Mylar shield and copper drain wire
- Convenient 50, 100 and 200 foot lengths
- Standard ASTM/ANSI color coding



Thermocouple Extension Wire												
Part Number	Wt (lb)	Price	Length (ft)/Pkg	Gauge, AWG	Conductors	Insulation Type / Color			Limits of Error	Continuous Temperature Range	Nominal Size (inches)	
						Each Conductor	Inner Jacket	Outer Jacket				
<b>THMWJ-50-01</b>	0.7	\$15.00	50	20	2, solid	PVC Red = Negative White = Positive	None	PVC, Black	Standard	-20°F to 221°F (-29°C to 105°C)	0.095x0.158	
<b>THMWJ-100-01</b>	1.3	\$29.50	100									
<b>THMWJ-200-01</b>	2.8	\$59.00	200									
<b>THMWJ-50-02</b>	0.7	\$19.00	50									
<b>THMWJ-100-02</b>	1.3	\$37.50	100									
<b>THMWJ-200-02</b>	2.8	\$74.50	200									
<b>THMWJ-50-03</b>	0.5	\$17.00	50		2, twisted, solid	PVC Red = Negative White = Positive	Aluminum Mylar shield and copper drain wire	PVC, Black		-20°F to 221°F (-29°C to 105°C)	0.170 O.D.	
<b>THMWJ-100-03</b>	0.9	\$33.75	100									
<b>THMWJ-200-03</b>	2.0	\$67.00	200									
<b>THMWK-50-01</b>	0.7	\$24.50	50		2, solid	PVC Red = Negative Yellow = Positive	None	PVC, Yellow		Standard	-20°F to 221°F (-29°C to 105°C)	0.095x0.158
<b>THMWK-100-01</b>	1.3	\$48.25	100									
<b>THMWK-200-01</b>	2.8	\$96.00	200									
<b>THMWK-50-02</b>	0.5	\$32.50	50									
<b>THMWK-100-02</b>	0.9	\$64.00	100									
<b>THMWK-200-02</b>	2.0	\$127.00	200									
<b>THMWK-50-03</b>	0.5	\$34.25	50	2, twisted, solid		PVC Red = Negative Yellow = Positive	Aluminum Mylar shield and copper drain wire	PVC, Yellow	-20°F to 221°F (-29°C to 105°C)		0.170 O.D.	
<b>THMWK-100-03</b>	0.9	\$68.00	100									
<b>THMWK-200-03</b>	2.0	\$135.00	200									



**NOTE: SPECIAL CONNECTORS AND TERMINAL BLOCKS ARE REQUIRED TO CONNECT THERMOCOUPLES TO A CONTROL DEVICE. BOTH ARE AVAILABLE FROM AUTOMATIONDIRECT.COM**



**NOTE: MAXIMUM RECOMMENDED DISTANCE BETWEEN THERMOCOUPLE AND CONTROL DEVICE IS 100 FEET.**

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# pro<sup>sense</sup> Thermocouple Extension Wire

Thermocouple Extension Wire											
Part Number	Wt (lb)	Price	Length (ft)/Pkg	Gauge, AWG	Conductors	Insulation Type / Color			Limits of Error	Continuous Temperature Range	Nominal Size (inches)
						Each Conductor	Inner Jacket	Outer Jacket			
<b>THMWT-50-01</b>	0.5	\$15.75	50	20	2, solid	PVC Red = Negative Blue = Positive	None	PVC, Blue	Standard	-20°F to 221°F (-29°C to 105°C)	0.059 x 0.097
<b>THMWT-100-01</b>	0.7	\$30.25	100								
<b>THMWT-200-01</b>	1.0	\$59.25	200								
<b>THMWT-50-02</b>	0.5	\$35.00	50								
<b>THMWT-100-02</b>	0.7	\$69.00	100		Fiberglass braid Red = Negative Blue = Positive	Fiberglass braid, Brown	-20°F to 221°F (-29°C to 105°C)				
<b>THMWT-200-02</b>	1.0	\$137.00	200								
<b>THMWT-50-03</b>	0.5	\$17.00	50		2, twisted, solid	PVC Red = Negative Blue = Positive	Aluminum Mylar shield and copper drain wire	PVC, Blue	Standard	-20°F to 221°F (-29°C to 105°C)	
<b>THMWT-100-03</b>	0.7	\$34.00	100								
<b>THMWT-200-03</b>	1.0	\$67.50	200								



**NOTE: SPECIAL CONNECTORS AND TERMINAL BLOCKS ARE REQUIRED TO CONNECT THERMOCOUPLES TO A CONTROL DEVICE. BOTH ARE AVAILABLE FROM AUTOMATIONDIRECT.COM**



**NOTE: MAXIMUM RECOMMENDED DISTANCE BETWEEN THERMOCOUPLE AND CONTROL DEVICE IS 100 FEET.**

**THMWJ-XX-01**



**THMWJ-XX-02**



**THMWJ-XX-03**



**THMWK-XX-01**



**THMWK-XX-02**



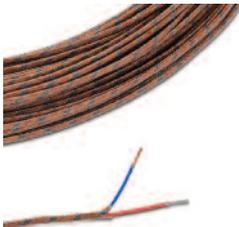
**THMWK-XX-03**



**THMWT-XX-01**



**THMWT-XX-02**

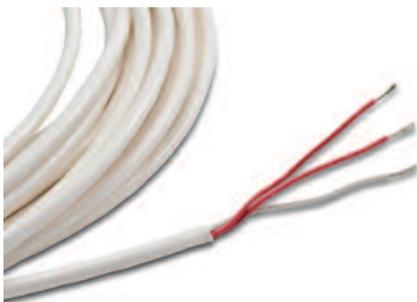


**THMWT-XX-03**

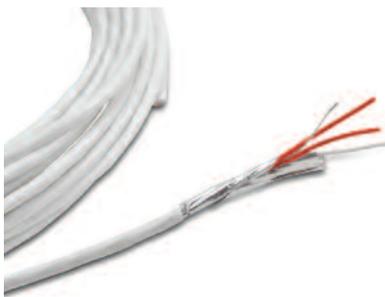


# pro<sup>sense</sup>® RTD Extension Wire

**RTDW-XX-01**



**RTDW-XX-02**



## Overview

- Specialized construction for use as RTD extension wire offers superior performance compared to “off-the-shelf” cable
- Available insulation types include PVC and FEP Teflon with aluminum Mylar shield and copper drain wire
- Convenient 50, 100 and 200 foot lengths



RTD Extension Wire												
Part Number	Wt (lb)	Price	Type	Length (ft)/Pkg	Gauge, AWG	Conductors	Insulation Type / Color			Ohms/Triple Foot@68°F (20°C)	Continuous Temperature Rating	Nominal Size (inches)
							Each Conductor	Inner Jacket	Outer Jacket			
<b>RTDW-50-01</b>	0.9	\$21.00	RTD	50	22	3, stranded tinned copper	PVC, 2 red, 1 white	None	PVC, white	0.044	-20°F to 221°F (-29°C to 105°C)	0.160 O.D.
<b>RTDW-100-01</b>	1.5	\$41.25		100								
<b>RTDW-200-01</b>	3.0	\$82.50		200								
<b>RTDW-50-02</b>	0.9	\$55.00		50	24	3, twisted, stranded tinned copper	FEP Teflon, 2 red, 1 white	Aluminum Mylar shield and copper drain wire	FEP Teflon, white	0.066	-328°F to 400°F (-200°C to 204°C)	0.150 O.D.
<b>RTDW-100-02</b>	1.5	\$109.00		100								
<b>RTDW-200-02</b>	3.0	\$218.00		200								



**NOTE: MAXIMUM RECOMMENDED DISTANCE BETWEEN RTD AND CONTROL DEVICE IS 300 FEET.**

- Company Information
- Drives
- Soft Starters
- Motors
- Power Transmission
- Motion: Servos and Steppers
- Motor Controls
- Sensors: Proximity
- Sensors: Photoelectric
- Sensors: Encoders
- Sensors: Limit Switches
- Sensors: Current
- Sensors: Pressure
- Sensors: Temperature
- Sensors: Level
- Sensors: Flow Switches
- Pushbuttons and Lights
- Stacklights
- Signal Devices
- Process
- Relays and Timers
- Pneumatics: Air Prep
- Pneumatics: Directional Control Valves
- Pneumatics: Cylinders
- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# pro<sup>sense</sup> Connection Head and Ceramic Terminal Bases



## Overview

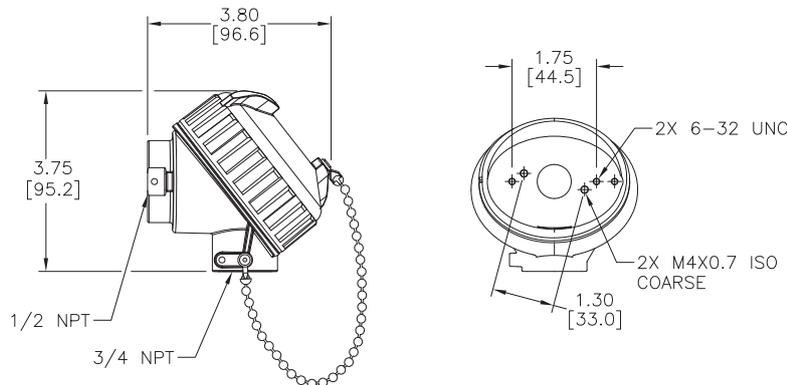
- Cast aluminum NEMA 4X, IP66 screw cover head with captive gasket
- One turn cover removal & installation eliminates cross threading and saves time
- 3/4" NPT conduit opening with internal stop to prevent overtightening and installation damage
- Gripping ribs on cover edge
- Stainless steel cover chain
- Made in the USA

ProSense Aluminum Connection Head				
Part Number	Description	Pcs/ Pkg	Wt(lb)	Price
CHSC-AL-1	ProSense general purpose screw cover connection head for temperature probes, die-cast aluminum, 1/2 NPT process opening, 3/4 NPT conduit opening, NEMA 4X, IP66 rated, graphite gasket, maximum temperature rating of 825°F (440°C)	1	1.0	\$14.00

## Dimensions

inches [mm]

CHSC-AL-1



CHTB-2



CHTB-3

## Overview

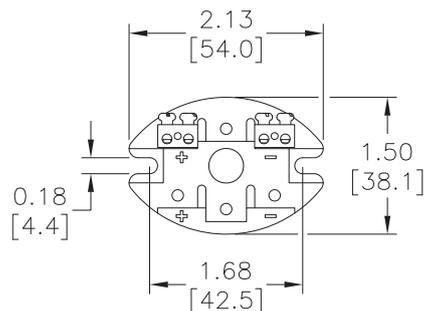
- Available with two terminals for thermocouples or three terminals for RTDs
- Fits CHSC-AL-1 connection heads
- Ceramic base with brass terminals and stainless steel screws
- Accepts up to 12 AWG wire

Terminal Base for Connection Heads				
Part Number	Description	Pcs/ Pkg	Wt(lb)	Price
CHTB-2	ProSense ceramic terminal base, two brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	1.0	\$3.75
CHTB-3	ProSense ceramic terminal base, three brass terminals with stainless steel screws, for use with ProSense temperature probe connection heads, two mounting screws included.	1	1.0	\$4.50

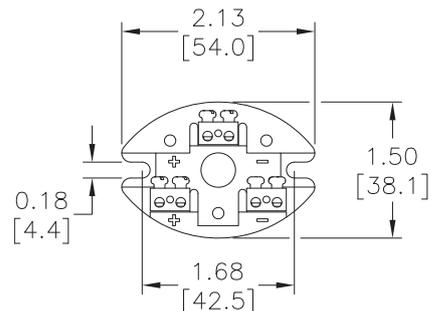
## Dimensions

inches [mm]

CHTB-2



CHTB-3



# proense® Compression Mounting Fittings for Temperature Probes

Compression Mounting Fittings for Temperature Probes				
Part Number	Description	Pcs/Pkg	Wt(lb)	Price
<b>BCF18-125N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	0.5	\$2.50
<b>BCF14-125N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	0.5	\$2.50
<b>BCF18-25N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	0.5	\$3.00
<b>BCF14-25N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	0.5	\$3.00
<b>BCF18-50N</b>	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	0.5	\$4.50
<b>BCF14-50N</b>	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	0.5	\$3.00
<b>CF18-125N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	0.5	\$6.25
<b>CF14-125N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	0.5	\$6.25
<b>CF18-25N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	0.5	\$7.25
<b>CF14-25N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	0.5	\$7.25
<b>CF18-50N</b>	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	0.5	\$10.75
<b>CF14-50N</b>	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	0.5	\$10.75
<b>CFTF-18</b>	Teflon™ ferrule for brass or stainless steel compression fittings and 1/8 diameter temperature probes	5	0.5	\$6.00
<b>CFTF-14</b>	Teflon ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	0.5	\$6.50
<b>CF06-25N</b>	1/4 NPT stainless steel compression fitting for 0.24 inch (6 mm) diameter RTD probe with M12 connector.	1	0.18	\$24.00
<b>CF10-50N</b>	1/2 NPT stainless steel compression fitting for 10 mm (0.4 inch) diameter RTD probe with M12 connector.	1	0.20	\$25.00
<b>CF18-BC</b>	Bayonet compression fitting, for 1/8" diameter probe sheath sensors	1	0.1	\$8.00
<b>BB125N-50N</b>	Reducing bushing, brass, 1/2 MNPT x 1/8 FNPT, hex head	1	0.1	\$4.00

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

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

**CF14-125N**



**CF14-50N**



**CF14-25N**



**CF18-BC**



**CF06-25N**



**CF10-50N**



**BCF18-125N**



**BCF18-25N**



**BCF18-50N**



**BB125N-50N**



**CFTF-14**



**CFTF-18**



# pro<sup>sense</sup>® Compression Mounting Fittings for Temperature Probes

**BCF14-125N**



**BCF14-25N**



**BCF14-50N**



**CF18-25N**



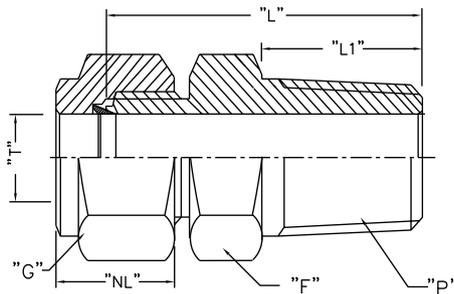
**CF18-50N**



**CF18-125N**



## Dimensions



**Note:** All threaded connections should be hand tightened and then turned 1 to 2 full turns for proper sealing.

Actual torque required for a proper seal of NPT threads is influenced by tolerance, sealant, lubricant, etc.

ProSense Compression Fittings									
Part No.	Weight (lb)	Description	"T" Tube O.D.	"P" NPT(M)	"L" Body Length*	"L1" Thread Length**	"F" Body Hex**	"G" Nut Hex**	"NL" Nut Length**
<b>BCF18-125N/ CF18-125N</b>	0.5	1/8" OD x 1/8" NPT(M)	0.128/0.132	1/8" NPT(M)	0.909"	0.393"	0.5"	0.433"	0.492"
<b>BCF14-125N/ CF14-125N</b>	0.5	1/4" OD x 1/8" NPT(M)	0.253/0.257	1/8" NPT(M)	1.0"	0.393"	0.5"	0.559"	0.5"
<b>BCF18-25N/ CF18-25N</b>	0.5	1/8" OD x 1/4" NPT(M)	0.128/0.132	1/4" NPT(M)	1.114"	0.551"	0.551"	0.433"	0.492"
<b>BCF14-25N/ CF14-25N</b>	0.5	1/4" OD x 1/4" NPT(M)	0.253/0.257	1/4" NPT(M)	1.188"	0.551"	0.551"	0.559"	0.5"
<b>BCF18-50N/ CF18-50N</b>	0.5	1/8" OD x 1/2" NPT(M)	0.128/0.132	1/2" NPT(M)	1.377"	0.748"	0.866"	0.433"	0.492"
<b>BCF14-50N/ CF14-50N</b>	0.5	1/4" OD x 1/2" NPT(M)	0.253/0.257	1/2" NPT(M)	1.437"	0.748"	0.866"	0.559"	0.5"
<b>CF06-25N</b>	0.18	6 mm OD x 1/4" NPT(M)	0.236/0.240	1/4" NPT(M)	1.174"	0.59"	0.67"	0.55"	0.587"
<b>CF10-50N</b>	0.20	10 mm OD x 1/2" NPT(M)	0.394/0.399	1/2" NPT(M)	1.458"	0.55"	1.06"	0.75"	0.608"

**Note:** All dimensions are in inches

\* ± 0.07

\*\* ± 0.03

**Note:** Once the compression fitting has been fully tightened on the probe, the ferrule will be locked onto the probe and cannot be removed or reused.

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

# pro<sup>sense</sup> Bayonet Mounting Adapter for Temperature Sensors

Bayonet Mounting Adapter for Temperature Sensors					
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	
<b>BA-078</b>	Bayonet adapter, 7/8 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$1.25	
<b>BA-100</b>	Bayonet adapter, 1 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$1.25	
<b>BA-114</b>	Bayonet adapter, 1-1/4 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$1.50	
<b>BA-112</b>	Bayonet adapter, 1-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$1.75	
<b>BA-200</b>	Bayonet adapter, 2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$2.00	
<b>BA-212</b>	Bayonet adapter, 2-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$2.25	
<b>BA-300</b>	Bayonet adapter, 3 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$2.50	
<b>BA-312</b>	Bayonet adapter, 3-1/2 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	0.5	\$2.75	
<b>CF18-BC</b>	Adjustable bayonet compression fitting, for 1/8" diameter probe sheath sensors	1	0.1	\$8.00	
<b>BB125N-50N</b>	Reducing bushing, brass, 1/2 MNPT x 1/8 FNPT, hex head	1	0.1	\$4.00	



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

**BA-078**



**BA-100**



**BA-114**



**CF18-BC**



**BA-300**



**BA-112**



**BB125N-50N**



**BA-312**



**BA-200**



**BA-212**



Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# proSense® Pipe Clamp Adapters



PCA-300

## Overview

- For use with ProSense adjustable immersion thermocouple and RTD sensors
- Available in adjustable diameters from 1-1/16 to 7 inches
- Provides an easy means of sensing temperature on the outside of a pipe

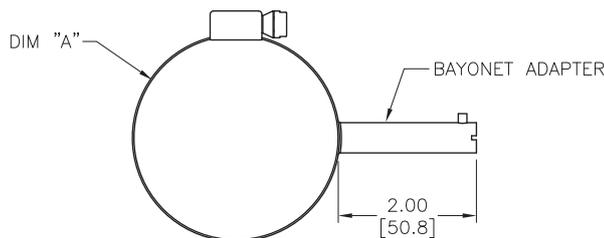


Shown with optional adjustable immersion sensor

Pipe Clamp Adapters for ProSense Adjustable Immersion Sensors				
Part Number	Description	Pcs/Pkg	Wt(lb)	Price
PCA-125	ProSense pipe clamp adapter, 1-1/16 to 1-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with ProSense adjustable immersion sensors.	1	0.1	\$13.75
PCA-200	ProSense pipe clamp adapter with 1-1/16 to 2 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with ProSense adjustable immersion sensors.	1	0.1	\$11.50
PCA-300	ProSense pipe clamp adapter with 2-1/16 to 3 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with ProSense adjustable immersion sensors.	1	0.1	\$15.00
PCA-425	ProSense pipe clamp adapter with 3-5/16 to 4-1/4 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with ProSense adjustable immersion sensors.	1	0.1	\$16.50
PCA-500	ProSense pipe clamp adapter with 4-1/8 to 7 inch adjustable diameter, 2-inch attached bayonet adapter with 7/16 inch outside diameter and 9/32 inch inside diameter. Use with ProSense adjustable immersion sensors.	1	0.1	\$16.50

## Dimensions

inches [mm]



PART NUMBER	DIM "A"	FITS PIPE SIZES
PCA-125	ø0.68-1.25 [ø17.2-31.7]	1/2 TO 3/4 NPS
PCA-200	ø1.06-2.00 [ø26.9-50.8]	1 TO 1-1/2 NPS
PCA-300	ø2.06-3.00 [ø52.3-76.2]	2 TO 2-1/2 NPS
PCA-425	ø3.31-4.25 [ø84.1-108.0]	3 TO 3-1/2 NPS
PCA-500	ø4.12-7.00 [ø104.6-177.8]	4 TO 6 NPS

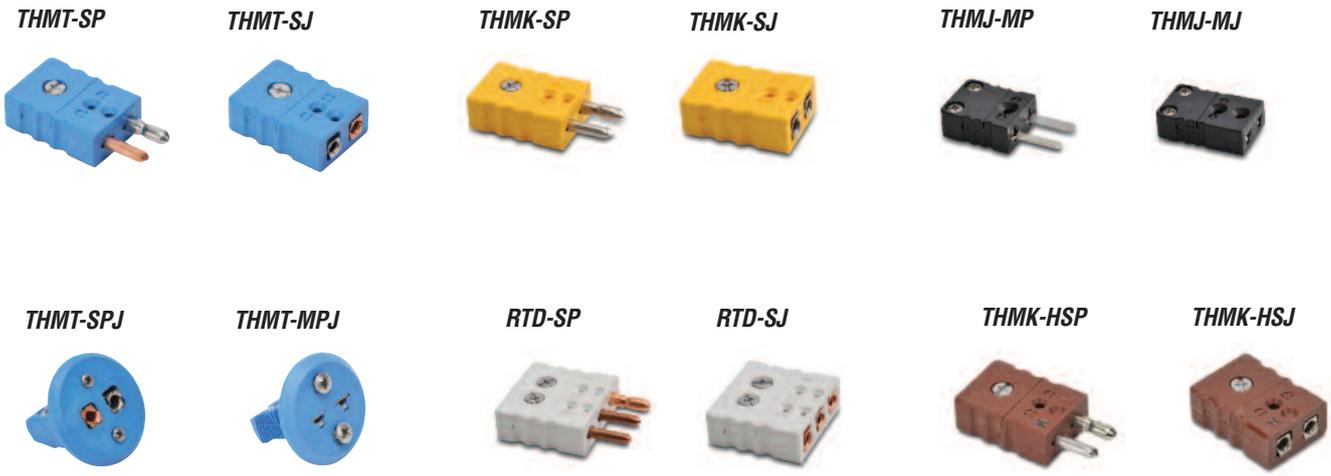
# pro<sup>sense</sup> Thermocouple and RTD Connectors

## Overview

- Glass-filled high quality thermoplastic body with original thermocouple material pins and spring-loaded inserts
- Polarized pins
- Molded barriers prevent short circuit
- Captive central cover screw for easy assembly
- Easy wire connection pressure plate construction
- Stainless steel screws with combination head (Slotted and Phillips)
- 3-pin standard connectors have a third pin for ground or continuous shield, or for 3-wire RTDs



Thermocouple and RTD Connectors									
Part Number	Pcs/ Pkg	Wt(lb)	Price	Sensor Type	Connector Type	Temperature Rating	Body Color	Wire Size	Wire Cable Clamp Bracket
THMJ-SP	1	0.5	\$3.25	J	Standard round pin plug	Max continuous 400°F (200°C)	Black	32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)	WCB-S
THMJ-SJ	1	0.5	\$4.25		Standard round pin jack				–
THMJ-SPJ	1	0.5	\$7.75		Standard round direct mount jack				–
THMJ-MP	1	0.5	\$3.00		Miniature flat pin plug			40 AWG (0.08 mm) to 20 AWG maximum (0.8 mm)	WCB-M
THMJ-MJ	1	0.5	\$3.50		Miniature flat pin jack				–
THMJ-MPJ	1	0.5	\$5.00		Miniature round direct mount jack				–
THMK-SP	1	0.5	\$3.75	K	Standard round pin plug	Max continuous 400°F (200°C)	Yellow	32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)	WCB-S
THMK-SJ	1	0.5	\$4.50		Standard round pin jack				–
THMK-SPJ	1	0.5	\$7.50		Standard round direct mount jack				–
THMK-MP	1	0.5	\$3.25		Miniature flat pin plug			40 AWG (0.08 mm) to 20 AWG maximum (0.8 mm)	WCB-M
THMK-MJ	1	0.5	\$3.50		Miniature flat pin jack				–
THMK-MPJ	1	0.5	\$5.50		Miniature round direct mount jack				–
THMK-HSP	1	0.5	\$8.50	K	Standard hi-temp round pin plug	Max continuous 662°F (350°C)	Brown	32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)	WCB-S
THMK-HSJ	1	0.5	\$10.00		Standard hi-temp round pin jack				–
THMT-SP	1	0.5	\$3.50	T	Standard round pin plug	Max continuous 400°F (200°C)	Blue	32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)	WCB-S
THMT-SJ	1	0.5	\$4.75		Standard round pin jack				–
THMT-SPJ	1	0.5	\$7.50		Standard round direct mount jack				–
THMT-MP	1	0.5	\$3.25		Miniature flat pin plug			40 AWG (0.08 mm) to 20 AWG maximum (0.8 mm)	WCB-M
THMT-MJ	1	0.5	\$3.75		Miniature flat pin jack				–
THMT-MPJ	1	0.5	\$5.75		Miniature round direct mount jack				–
RTD-SP	1	0.5	\$6.50	RTD	Standard round pin plug	Max continuous 400°F (200°C)	White	32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)	WCB-S
RTD-SJ	1	0.5	\$8.50		Standard round pin jack				–



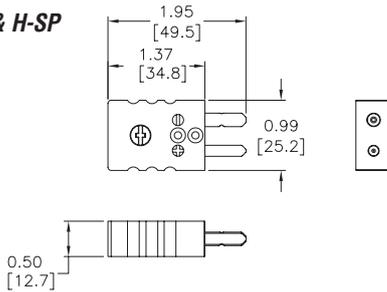
- Company Information
- Drives
- Soft Starters
- Motors
- Power Transmission
- Motion: Servos and Steppers
- Motor Controls
- Sensors: Proximity
- Sensors: Photoelectric
- Sensors: Encoders
- Sensors: Limit Switches
- Sensors: Current
- Sensors: Pressure
- Sensors: Temperature
- Sensors: Level
- Sensors: Flow Switches
- Pushbuttons and Lights
- Stacklights
- Signal Devices
- Process
- Relays and Timers
- Pneumatics: Air Prep
- Pneumatics: Directional Control Valves
- Pneumatics: Cylinders
- Pneumatics: Tubing
- Pneumatics: Air Fittings
- Appendix Book 2
- Terms and Conditions

# pro<sup>ense</sup> Thermocouple and RTD Connectors

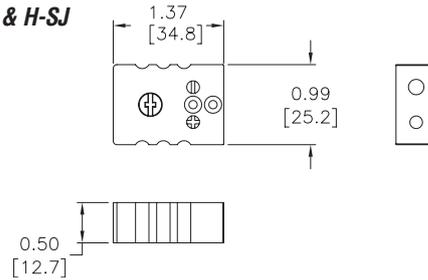
## Dimensions

inches [mm]

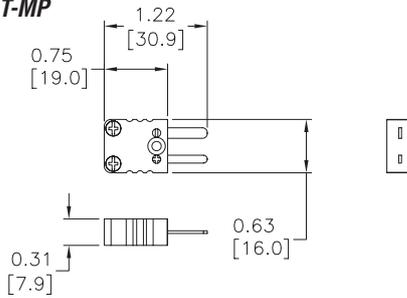
**THMJ, K, T, & H-SP**



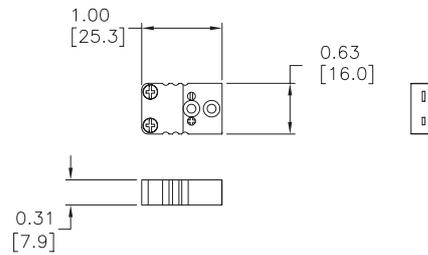
**THMJ, K, T, & H-SJ**



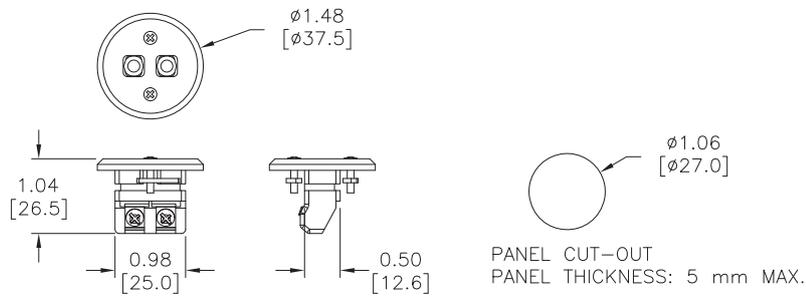
**THMJ, K, & T-MP**



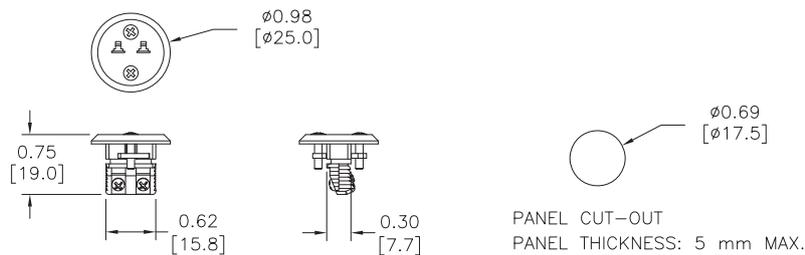
**THMJ, K, & T-MJ**



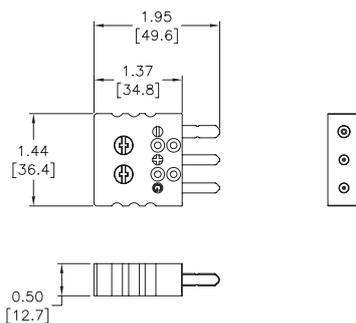
**THMJ, K, & T-SPJ**



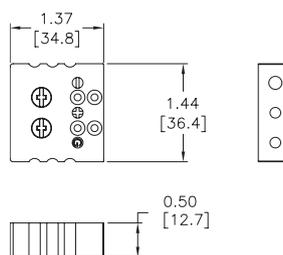
**THMJ, K, & T-MPJ**



**RTD-SP**



**RTD-SJ**



# proense® Thermocouple and RTD Connectors

**WCB-S**



**WCB-M**



**WCB-S Application**



**WCB-M Application**

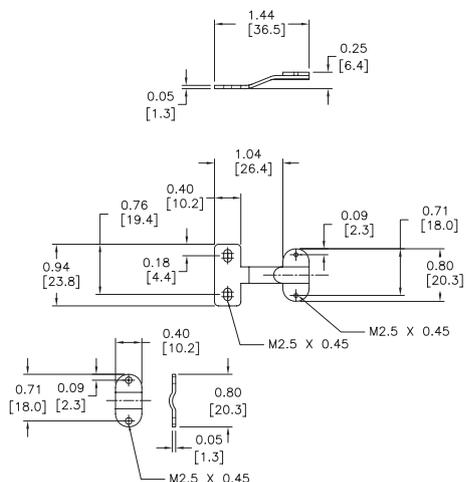


Thermocouple and RTD Connectors Accessories				
Part Number	Pcs/ Pkg	Wt(lb)	Price	Description
<b>WCB-S</b>	4	0.5	\$5.00	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors.
<b>WCB-M</b>	4	0.5	\$5.00	Wire / cable clamp bracket for use with miniature thermocouple connectors.

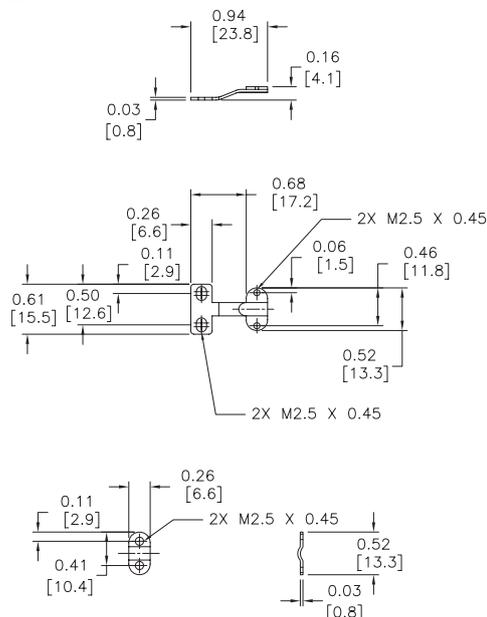
## Dimensions

inches [mm]

**WCB-S**



**WCB-M**



# pro<sup>sense</sup> Thermocouple and RTD Temperature Range

Thermocouple Temperature Range		
THMK-C06-04	32 to 2100°F (0 to 1149°C)	
THMK-C12-04		
THMK-C18-04		
THMK-H06L01-03		
THMK-H12L01-03		
THMK-H18L01-03	32 to 2100°F (0 to 1149°C) lead wire transition rated to 204°C (400°F)	
THMK-T06L06-03		
THMK-T12L06-03		
THMK-T18L06-03		
TTD25C-20-0300F-H		
TTD25N-20-0300F-H	0 to 300°F (-17.8 to 148.9°C)	
THMJ-A01L04-01	32 to 900°F (0 to 482°C)	
THMJ-A01L06-01		
THMJ-A01L10-01		
THMJ-A01L10-02		
THMJ-B01L06-01		
THMJ-B01L06-02		
THMJ-B02L06-01		
THMJ-B02L06-02		
THMJ-D08L04-01		
THMJ-D08L06-01		
THMJ-D08L10-01		
THMJ-D08L10-02		
THMK-A01L04-01		
THMK-A01L06-01		
THMK-A01L10-01		
THMK-A01L10-02		
THMK-B01L06-01		
THMK-B01L06-02		
THMK-D08L04-01		
THMK-D08L06-01		
THMK-D08L10-01		
THMK-D08L10-02		
THMJ-T06L06-01		32 to 970°F (0 to 521°C), lead wire transition rated to 400 °F (204 °C)
THMJ-T12L06-01		32 to 970°F (0 to 521°C), plug rated to 400 °F (204 °C)
THMJ-T18L06-01		
THMJ-P06-01	32 to 970°F (0 to 521°C), plug rated to 400 °F (204 °C)	
THMJ-P12-01		
THMJ-P18-01		
THMJ-C04-03	32 to 1330°F (0 to 720°C)	
THMJ-C04R-03		
THMJ-C06-01		
THMJ-C06-02		
THMJ-C06-03		
THMJ-C06R-03		
THMJ-C12-01		
THMJ-C12-02		
THMJ-C12-03		
THMJ-C12R-03		
THMJ-C18-01		
THMJ-C18-02		
THMJ-H04L01-02		
THMJ-H06L01-01		
THMJ-H06L01-02		
THMJ-H12L01-01		
THMJ-H12L01-02		
THMJ-H18L01-01		

Thermocouple Temperature Range		
THMJ-T06L06-02	32 to 1330°F (0 to 720°C) lead wire transition rated to 400 °F (204 °C)	
THMJ-T12L06-02		
THMJ-T18L06-02	32 to 1330°F (0 to 720°C) plug rated to 400 °F (204 °C)	
THMJ-P06-02		
THMJ-P12-02		
THMJ-P18-02		
THMK-C04-03		
THMK-C04R-03	32 to 1700°F (0 to 927°C)	
THMK-C06-01		
THMK-C06-02		
THMK-C06-03		
THMK-C06R-03		
THMK-C12-01		
THMK-C12-02		
THMK-C12-03		
THMK-C12R-03		
THMK-C18-01		
THMK-C18-02		
THMK-H04L01-02		
THMK-H06L01-01		
THMK-H06L01-02		
THMK-H12L01-01		
THMK-H12L01-02		
THMK-H18L01-01		
THMK-T06L06-01		32 to 1700°F (0 to 927°C) lead wire transition rated to 400 °F (204 °C)
THMK-T06L06-02		
THMK-T12L06-01		
THMK-T12L06-02		32 to 1700°F (0 to 927°C) plug rated to 400 °F (204 °C)
THMK-T18L06-01		
THMK-T18L06-02		
THMK-P06-01		
THMK-P06-02		
THMK-P12-01	32 to 900°F (0 to 482°C)	
THMK-P12-02		
THMK-P18-01	-328 to 700°F (-200 to 371°C) plug rated to 400 °F (204 °C)	
THMK-P18-02		
THMK-B02L06-01		
THMK-B02L06-02	-328 to 700°F (-200 to 371°C), lead wire transition rated to 400 °F (204 °C)	
THMT-P06-01		
THMT-P12-01		
THMT-P18-01	32 to 212°F (0 to 100°C)	
THMT-T06L06-01		
THMT-T12L06-01	-4 to 284°F (-20 to 140°C)	
THMT-T18L06-01		
TTD25C-20-0100C-H		
TTD25N-20-0100C-H		
TSD25N-0P-0284-H		
TSD25N-AP-0284-H		

RTD Temperature Range	
RTD1-R01-01	40 to 185°F (-40 to 85°C)
RTD1-S04-01	-58 to 572°F (-50 to 300°C)
RTD1-S04-02	
RTD1-S04-03	
RTD1-S04-04	
RTD1-B01L06-01	
RTD1-B02L06-01	
RTD1-C04-03	
RTD1-C04R-03	
RTD1-C06-01	
RTD1-C06-03	
RTD1-C06R-03	
RTD1-C12-01	
RTD1-C12-02	
RTD1-C12-03	
RTD1-C12R-03	
RTD1-C18-01	-58 to 572°F (-50 to 300°C) Plug rated to 400°F (204°C)
RTD1-C18-02	
RTD1-H04L01-02	
RTD1-H06L01-01	
RTD1-H06L01-02	
RTD1-H12L01-01	-58 to 572°F (-50 to 300°C), lead wire transition rated to 400°F (204°C)
RTD1-H12L01-02	
RTD1-H18L01-01	
RTD1-P06-01	
RTD1-P12-01	
RTD1-P18-01	
RTD1-D08L10-01	
RTD1-T06L06-01	
RTD1-T12L06-01	
RTD1-T18L06-01	

### J, K, & T Thermocouple Color Code

	White	+
<b>J</b>	Red	-
	Yellow	+
<b>K</b>	Red	-
	Blue	+
<b>T</b>	Red	-

# proense® Bi-Metal Dial Thermometers



## Features

- General purpose 3" and 5" dial, 304 stainless steel thermometer
- Bi-metallic sensing element for reliable readings
- Back or adjustable angle connection
- Welded stem length from 2.5" to 9"
- Dual scale (°F / °C)
- ±1% accuracy
- Anti-parallax dial that reduces operator reading errors
- Re-zero adjustment screws
- Optional thermowells
- 5 year warranty

## Applications

- Industrial process, hot/chilled water lines, boilers, HVAC, food processing and wastewater, OEM

### ProSense 3" Dial Bi-Metal Thermometers

Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Thermowell
<b>T30-N40160-25C</b>	Thermometer, 3 in. dial, 2.5 in. stem, -40 to 160 °F (-40 to 70 °C), center back mount	1	0.50	\$23.00	TW025-01* TW025-03*
<b>T30-0250-25C</b>	Thermometer, 3 in. dial, 2.5 in. stem, 0 to 250 °F (-18 to 120 °C), center back mount	1	0.50	\$23.00	
<b>T30-50500-25C</b>	Thermometer, 3 in. dial, 2.5 in. stem, 50 to 500 °F (10 to 260 °C), center back mount	1	0.50	\$23.00	
<b>T30-150750-25C</b>	Thermometer, 3 in. dial, 2.5 in. stem, 150 to 750 °F (70 to 400 °C), center back mount	1	0.50	\$23.00	
<b>T30-N40160-4C</b>	Thermometer, 3 in. dial, 4 in. stem, -40 to 160 °F (-40 to 70 °C), center back mount	1	0.50	\$23.00	TW04-01* TW04-02* TW04-03* TW04-04*
<b>T30-0250-4C</b>	Thermometer, 3 in. dial, 4 in. stem, 0 to 250 °F (-18 to 120 °C), center back mount	1	0.50	\$23.00	
<b>T30-50500-4C</b>	Thermometer, 3 in. dial, 4 in. stem, 50 to 500 °F (10 to 260 °C), center back mount	1	0.50	\$23.00	
<b>T30-150750-4C</b>	Thermometer, 3 in. dial, 4 in. stem, 150 to 750 °F (70 to 400 °C), center back mount	1	0.50	\$23.00	
<b>T30-N40160-6C</b>	Thermometer, 3 in. dial, 6 in. stem, -40 to 160 °F (-40 to 70 °C), center back mount	1	0.50	\$23.00	TW06-01* TW06-02* TW06-03* TW06-04*
<b>T30-0250-6C</b>	Thermometer, 3 in. dial, 6 in. stem, 0 to 250 °F (18 to 120 °C), center back mount	1	0.50	\$23.00	
<b>T30-50500-6C</b>	Thermometer, 3 in. dial, 6 in. stem, 50 to 500 °F (10 to 260 °C), center back mount	1	0.50	\$23.00	
<b>T30-150750-6C</b>	Thermometer, 3 in. dial, 6 in. stem, 150 to 750 °F (70 to 400 °C), center back mount	1	0.50	\$23.00	

### ProSense 5" Dial Bi-Metal Thermometers

Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Thermowell
<b>T50-N40160-25A</b>	Thermometer, 5 in. dial, 2.5 in. stem, -40 to 160 °F (-40 to 70 °C), adjustable angle mount	1	1.30	\$38.00	TW025-01* TW025-03*
<b>T50-0250-25A</b>	Thermometer, 5 in. dial, 2.5 in. stem, 0 to 250 °F (-18 to 120 °C), adjustable angle mount	1	1.30	\$53.00	
<b>T50-50500-25A</b>	Thermometer, 5 in. dial, 2.5 in. stem, 50 to 500 °F (10 to 260 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-150750-25A</b>	Thermometer, 5 in. dial, 2.5 in. stem, 150 to 750 °F (70 to 400 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-N40160-4A</b>	Thermometer, 5 in. dial, 4 in. stem, -40 to 160 °F (-40 to 70 °C), adjustable angle mount	1	1.30	\$38.00	TW04-01* TW04-02* TW04-03* TW04-04*
<b>T50-0250-4A</b>	Thermometer, 5 in. dial, 4 in. stem, 0 to 250 °F (-18 to 120 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-50500-4A</b>	Thermometer, 5 in. dial, 4 in. stem, 50 to 500 °F (10 to 260 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-150750-4A</b>	Thermometer, 5 in. dial, 4 in. stem, 150 to 750 °F (70 to 400 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-N40160-6A</b>	Thermometer, 5 in. dial, 6 in. stem, -40 to 160 °F (-40 to 70 °C), adjustable angle mount	1	1.30	\$38.00	TW06-01* TW06-02* TW06-03* TW06-04*
<b>T50-0250-6A</b>	Thermometer, 5 in. dial, 6 in. stem, 0 to 250 °F (-18 to 120 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-50500-6A</b>	Thermometer, 5 in. dial, 6 in. stem, 50 to 500 °F (10 to 260 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-150750-6A</b>	Thermometer, 5 in. dial, 6 in. stem, 150 to 750 °F (70 to 400 °C), adjustable angle mount	1	1.30	\$38.00	
<b>T50-N40160-9A</b>	Thermometer, 5 in. dial, 9 in. stem, -40 to 160 °F (-40 to 70 °C), adjustable angle mount	1	1.50	\$38.00	TW09-01* TW09-03*
<b>T50-0250-9A</b>	Thermometer, 5 in. dial, 9 in. stem, 0 to 250 °F (-18 to 120 °C), adjustable angle mount	1	1.50	\$53.00	
<b>T50-50500-9A</b>	Thermometer, 5 in. dial, 9 in. stem, 50 to 500 °F (10 to 260 °C), adjustable angle mount	1	1.50	\$38.00	
<b>T50-150750-9A</b>	Thermometer, 5 in. dial, 9 in. stem, 150 to 750 °F (70 to 400 °C), adjustable angle mount	1	1.50	\$38.00	

\* Catalog pages for these thermowells are located on previous pages in this same section, under the "Thermowells for Spring-Loaded Thermocouples and RTD's, or Thermometers" pages.

Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

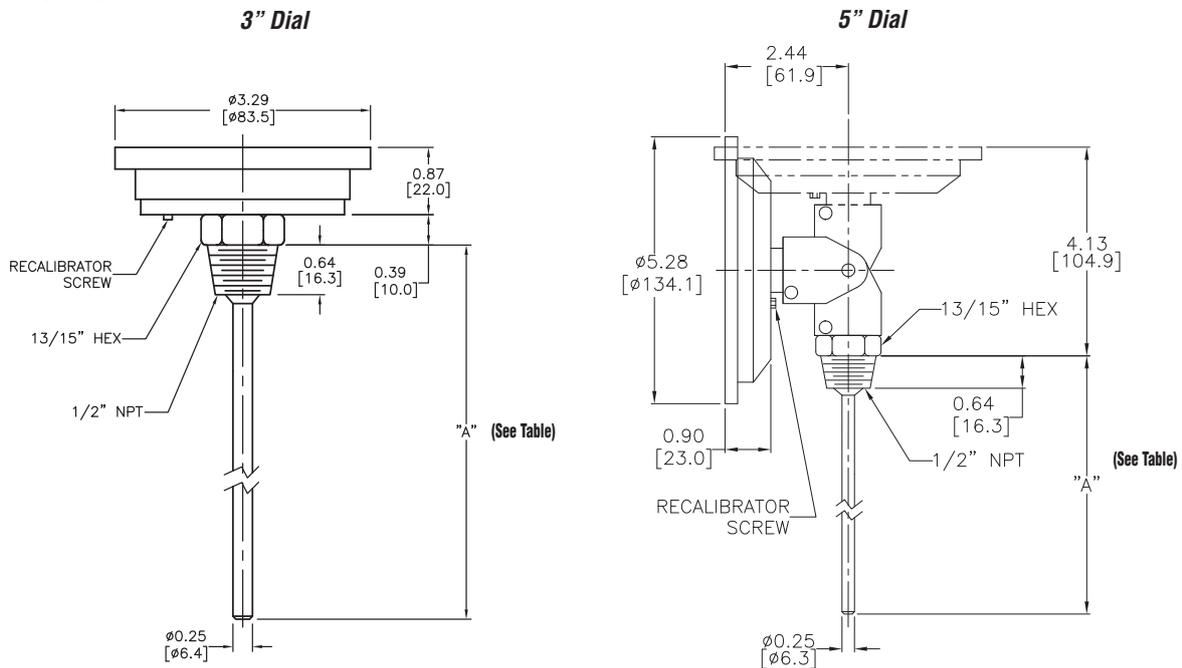
# pro<sup>sense</sup>® Bi-Metal Dial Thermometers

Technical Specifications		
<b>Dial Size</b>	3.0" [76.2 mm]	5.0" [127 mm]
<b>Case</b>	AISI 304 SS	
<b>Stem</b>	AISI 304 SS welded to socket, center back	AISI 304 center back, adjustable angle
<b>Lens</b>	Glass, hermetically sealed	
<b>Ring</b>	AISI 304 SS	
<b>Connection</b>	1/2" NPT	
<b>Sensing Element</b>	Bi-metallic coil	
<b>Pointer</b>	Aluminum, painted black	
<b>Maximum Operating Pressure</b>	125 psi (861 kPa)	
<b>Operating Temperature</b>	75% of full scale value (recommended maximum)	
<b>Ambient Temperatures</b>	-58°F to 248°F (-50°C to 120°C)	
<b>Accuracy</b>	±1%	
<b>Enclosure Rating</b>	IP68	



**NOTE: THE USE OF A THERMOWELL IS RECOMMENDED TO PROTECT THE THERMOMETER IN CORROSIVE OR PRESSURE APPLICATIONS, AS WELL AS TO MAINTAIN A CLOSED SYSTEM DURING ITS REMOVAL FROM THE PROCESS.**

## Dimensions Inches [mm]



Dimension "A" According to Thermometer Model		
Part Number Ending With:	Inches	Millimeters
-25C	2.5"	63.5 mm
-4C	4"	101.6 mm
-6C	6"	152.4 mm
-9C	9"	228.6 mm

# Build your control system for less!

with our everyday low prices on high-quality components

## From cable to wire duct ...

Flexible **multi-conductor control cable** is suitable for wet and dry locations, and is resistant to sunlight, oil and moisture penetration.

- Conductor sizes from 18 to 10 gauge
- 3 to 41 unshielded conductors
- Available in 100, 250, 500 and 1,000-foot reels
- UL and CSA approved, RoHS compliant

Heavy-duty **multi-wire connectors** quickly and reliably connect wiring in applications such as machinery, robots, and control and signal circuits.

- Build custom connectors from components
- 3 to 108-pin configurations
- 3A to 32B sizes
- Bulkhead or surface mount housings with standard or automatic covers

Keep your wiring in order with Iboco rigid or flexible **wire duct** in a choice of styles and colors.

- Standard or thin finger slotted styles, and solid duct for special applications
- Standard duct in gray, blue and black
- Sold per 2-meter piece for convenience or in cost-saving multi-packs

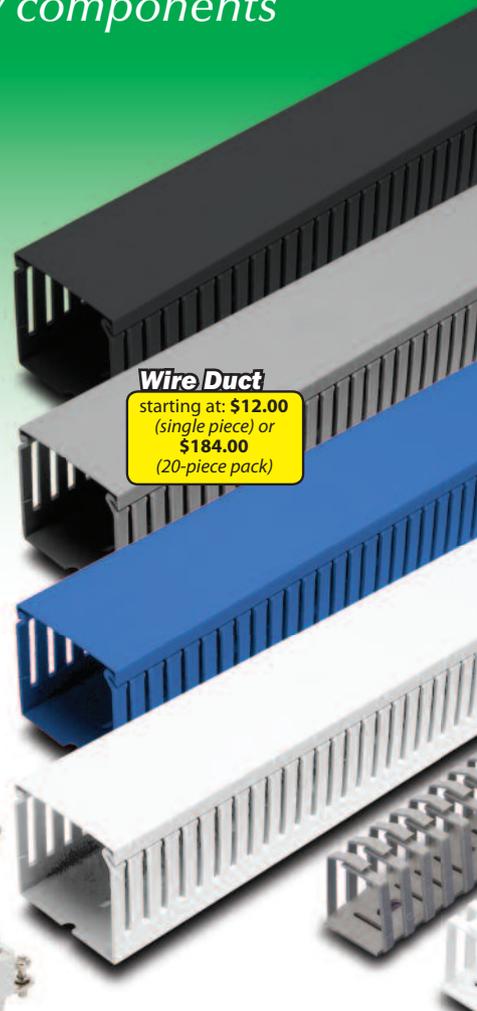
### Multi-Conductor Control Cable

100-foot reels start at: **\$50.00** (V40166-100)



### Wire Duct

starting at: **\$12.00** (single piece) or **\$184.00** (20-piece pack)



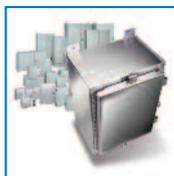
### Multi-Wire Connectors

All components sold separately



## Also Available

Enclosures



Wiring Devices



Terminal Blocks



Tools



Cat5e Cables



Field Wireable Connectors



Cable Ties & Accessories



**Order Today, Ships Today!**

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# C-more<sup>®</sup> around your plant!

Practical, Powerful and Priced Right

## All-new hardware at lower prices!

New C-more EA9 series touch panels in 6" to 15" screen sizes are a practical way to give plant personnel easy access to controls and data.

- **Faster 800MHz processor**
- **Increased project memory, up to 82MB**
- **3 serial ports for more connectivity**
- **Clear TFT 65K color LED displays**



**6" TFT Touch Panel**  
starting at  
**\$499.00** U.S.  
EA9-T6CL-R  
serial communications



Our C-more remote HMI application, for iPad<sup>®</sup>, iPhone<sup>®</sup> or iPod touch<sup>®</sup>, is available on the App Store for \$4.99. It provides remote access and control to a C-more panel for mobile users who have a wi-fi or cellular connection.



Check out the powerful yet easy-to-use configuration software by downloading a demo version at:

<http://support.automationdirect.com/demos.html>

### ALL EA9 SERIES C-MORE PANELS INCLUDE:

- Serial communications interface
- One USB A-type and one USB B-type port
- SD memory card slot for data logging

### FULL-FEATURED MODELS ADD:

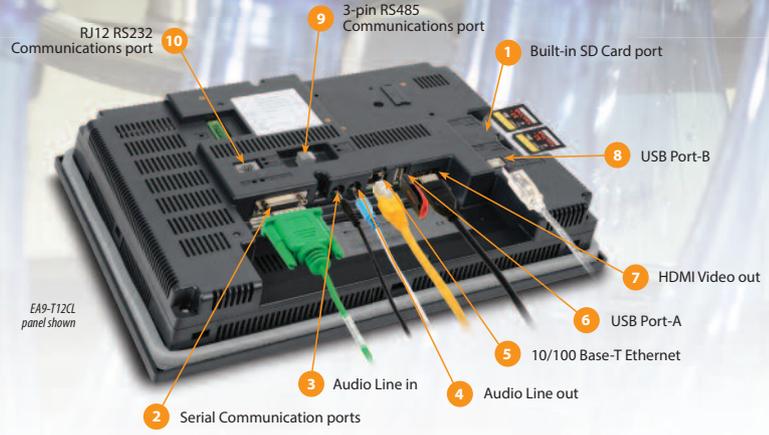
- 10/100Base-T Ethernet communications
- Two additional serial ports
- HDMI output port and additional SD memory card slot on 12- and 15-inch models

### REMOTE ACCESS AND CONTROL BUILT-IN

- The C-more Remote Access feature resides in all panels with Ethernet support, and requires no option modules. Access real-time data or initiate an action on a control system from anywhere, any time.

### CONNECT TO CONTROLLERS WITH DRIVERS FOR:

- All AutomationDirect programmable controllers
- Allen-Bradley - ControlLogix<sup>®</sup>, CompactLogix<sup>®</sup>, MicroLogix<sup>™</sup> Ethernet, SLC Series, FlexLogix, SLC<sup>®</sup> 5/05 Ethernet<sup>™</sup>
- Modbus RTU and TCP/IP Ethernet
- GE SNPX
- Omron Host Link Adapter (C200/C500), FINS Serial and Ethernet
- Selected Mitsubishi FX Series, Q Series
- Siemens S7-200 PPI and S7-200/300 Ethernet (ISO over TCP/IP)



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