

# prosense® Thermocouple Spring-Loaded Probes with Hex Nipple

THMJ &amp; K - HXXL01-02

## Overview



CHSC-AL-1



CHTB-2

Accessories

- 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

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

| 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                                       |
| <a href="#">THMJ-H04L01-02</a>                                    | 1       | 0.5     | \$55.00 | J    | 1/4"                  | 4"           | 0 to 720°C<br>(32 to 1330°F) | Integral 1/2" x 1/2" NPT<br>Hex Nipple, 316 SS |
| <a href="#">THMJ-H06L01-02</a>                                    |         |         | \$60.00 | J    |                       | 6"           |                              |                                                |
| <a href="#">THMJ-H12L01-02</a>                                    |         |         | \$63.00 | J    |                       | 12"          |                              |                                                |
| <a href="#">THMK-H04L01-02</a>                                    |         |         | \$55.00 | K    |                       | 4"           | 0 to 927°C<br>(32 to 1700°F) |                                                |
| <a href="#">THMK-H06L01-02</a>                                    |         |         | \$60.00 | K    |                       | 6"           |                              |                                                |
| <a href="#">THMK-H12L01-02</a>                                    |         |         | \$63.00 | K    |                       | 12"          |                              |                                                |

## 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>Response Time</b>                      | 2.9 seconds, 63.2% of a 25-77°C step change per method ASTM E839                         |
| <b>Wiring</b>                             | 3 inch stranded 24 AWG wire leads with terminal pins, Teflon insulation                  |

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



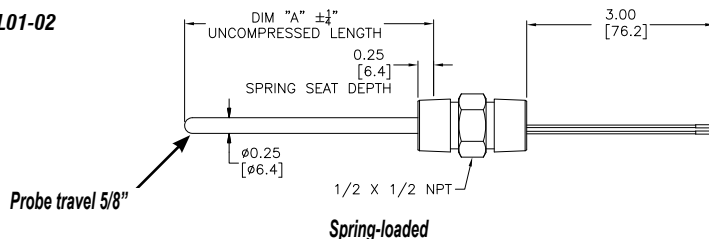
Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

# prosense® Thermocouple Spring-Loaded Probes with Hex Nipple

## Dimensions

inches [mm]

THMJ & K - HXXL01-02



Spring-loaded

TABLE A

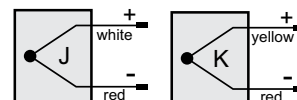
| PART NUMBER    | DIM "A"      |
|----------------|--------------|
| THMJ-H04L01-02 | 4.00[101.6]  |
| THMJ-H06L01-02 | 6.00[152.4]  |
| THMJ-H12L01-02 | 12.00[304.8] |
| THMK-H04L01-02 | 4.00[101.6]  |
| THMK-H06L01-02 | 6.00[152.4]  |
| THMK-H12L01-02 | 12.00[304.8] |

## Wiring Information

Type J: (+) white (-) red

Type K: (+) yellow (-) red

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



## Accessories

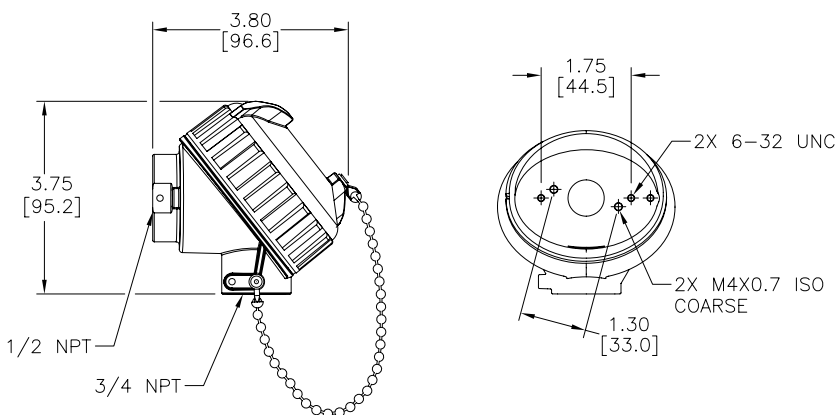
| Part No.         | Description                                                                                                                                                                                                                                                                              | 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       | \$24.50 |
| <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       | \$6.50  |

Note: Full listing of accessories at the end of this section. Thermocouple extension lead wire available at [www.automationdirect.com](http://www.automationdirect.com).

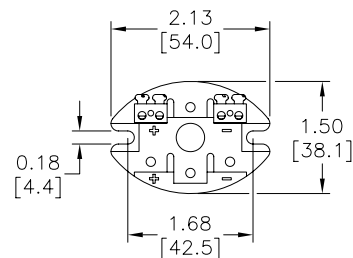
## Dimensions

inches [mm]

CHSC-AL-1



CHTB-2



# prosense® Thermocouple, RTD, and Thermistor 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, RTD, and Thermistor Connectors |          |        |         |             |                                   |                                 |            |                                                |                          |
|----------------------------------------------|----------|--------|---------|-------------|-----------------------------------|---------------------------------|------------|------------------------------------------------|--------------------------|
| Part Number                                  | Pcs/ Pkg | Wt(lb) | Price   | Sensor Type | Connector Type                    | Temperature Rating              | Body Color | Wire Size                                      | Wire Cable Clamp Bracket |
| <a href="#"><u>THMJ-SP</u></a>               | 1        | 0.5    | \$4.50  | J           | Standard round pin plug           | Max continuous<br>400°F (200°C) | Black      | 32 AWG (0.2 mm) to 14 AWG<br>maximum (2.0 mm)  | WCB-S                    |
| <a href="#"><u>THMJ-SJ</u></a>               | 1        | 0.5    | \$5.75  |             | Standard round pin jack           |                                 |            |                                                | —                        |
| <a href="#"><u>THMJ-SPJ</u></a>              | 1        | 0.5    | \$11.00 |             | Standard round direct mount jack  |                                 |            |                                                | —                        |
| <a href="#"><u>THMJ-MP</u></a>               | 1        | 0.5    | \$3.75  |             | Miniature flat pin plug           |                                 |            | 40 AWG (0.08 mm) to 20 AWG<br>maximum (0.8 mm) | WCB-M                    |
| <a href="#"><u>THMJ-MJ</u></a>               | 1        | 0.5    | \$4.25  |             | Miniature flat pin jack           |                                 |            |                                                | —                        |
| <a href="#"><u>THMJ-MPJ</u></a>              | 1        | 0.5    | \$8.25  |             | Miniature round direct mount jack |                                 |            |                                                | —                        |
| <a href="#"><u>THMK-SP</u></a>               | 1        | 0.5    | \$4.50  | K           | Standard round pin plug           |                                 | Yellow     | 32 AWG (0.2 mm) to 14 AWG<br>maximum (2.0 mm)  | WCB-S                    |
| <a href="#"><u>THMK-SJ</u></a>               | 1        | 0.5    | \$5.50  |             | Standard round pin jack           |                                 |            |                                                | —                        |
| <a href="#"><u>THMK-SPJ</u></a>              | 1        | 0.5    | \$10.50 |             | Standard round direct mount jack  |                                 |            |                                                | —                        |
| <a href="#"><u>THMK-MP</u></a>               | 1        | 0.5    | \$4.00  |             | Miniature flat pin plug           |                                 |            | 40 AWG (0.08 mm) to 20 AWG<br>maximum (0.8 mm) | WCB-M                    |
| <a href="#"><u>THMK-MJ</u></a>               | 1        | 0.5    | \$4.25  |             | Miniature flat pin jack           |                                 |            |                                                | —                        |
| <a href="#"><u>THMK-MPJ</u></a>              | 1        | 0.5    | \$9.00  |             | Miniature round direct mount jack |                                 |            |                                                | —                        |
| <a href="#"><u>THMK-HSP</u></a>              | 1        | 0.5    | \$14.00 |             | Standard hi-temp round pin plug   | Max continuous<br>662°F (350°C) | Brown      | 32 AWG (0.2 mm) to 14 AWG<br>maximum (2.0 mm)  | WCB-S                    |
| <a href="#"><u>THMK-HSJ</u></a>              | 1        | 0.5    | \$16.50 |             | Standard hi-temp round pin jack   |                                 |            |                                                |                          |
| <a href="#"><u>THMT-SP</u></a>               | 1        | 0.5    | \$4.75  | T           | Standard round pin plug           | Max continuous<br>400°F (200°C) | Blue       | 32 AWG (0.2 mm) to 14 AWG<br>maximum (2.0 mm)  | —                        |
| <a href="#"><u>THMT-SJ</u></a>               | 1        | 0.5    | \$6.25  |             | Standard round pin jack           |                                 |            |                                                |                          |
| <a href="#"><u>THMT-SPJ</u></a>              | 1        | 0.5    | \$10.50 |             | Standard round direct mount jack  |                                 |            |                                                |                          |
| <a href="#"><u>THMT-MP</u></a>               | 1        | 0.5    | \$4.00  |             | Miniature flat pin plug           |                                 |            | 40 AWG (0.08 mm) to 20 AWG<br>maximum (0.8 mm) | WCB-M                    |
| <a href="#"><u>THMT-MJ</u></a>               | 1        | 0.5    | \$4.50  |             | Miniature flat pin jack           |                                 |            |                                                |                          |
| <a href="#"><u>THMT-MPJ</u></a>              | 1        | 0.5    | \$9.75  |             | Miniature round direct mount jack |                                 |            |                                                |                          |
| <a href="#"><u>RTD-SP</u></a>                | 1        | 0.5    | \$9.25  | RTD         | Standard round pin plug           |                                 | White      | 32 AWG (0.2 mm) to 14 AWG maximum (2.0 mm)     | WCB-S                    |
| <a href="#"><u>RTD-SJ</u></a>                | 1        | 0.5    | \$12.00 |             | Standard round pin jack           |                                 |            |                                                |                          |
| <a href="#"><u>NTC-SJ</u></a>                | 1        | 0.5    | \$6.75  | Thermistor  | Standard round pin jack           |                                 |            |                                                |                          |

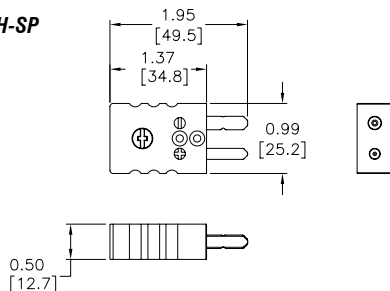
[THMT-SP](#)[THMT-SJ](#)[THMK-SP](#)[THMK-SJ](#)[THMK-MP](#)[THMJ-MJ](#)[THMT-SPJ](#)[THMT-MPJ](#)[RTD-SP](#)[RTD-SJ](#)[THMK-HSP](#)[THMK-HSJ](#)[NTC-SJ](#)

# prosense® Thermocouple, RTD, and Thermistor Connectors

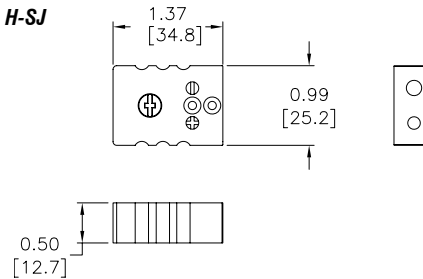
## Dimensions

inches [mm]

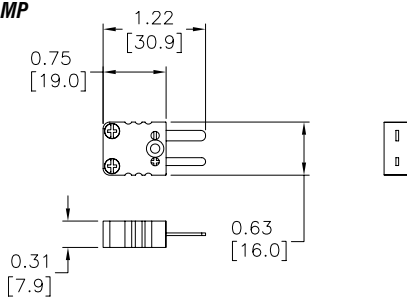
### THMJ, K, T, & H-SP



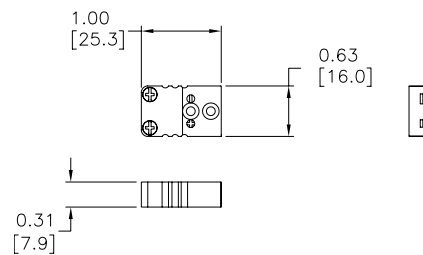
### THMJ, K, T, & H-SJ



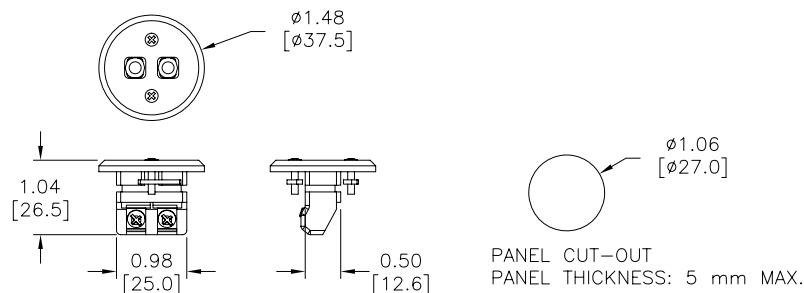
### THMJ, K, & T-MP



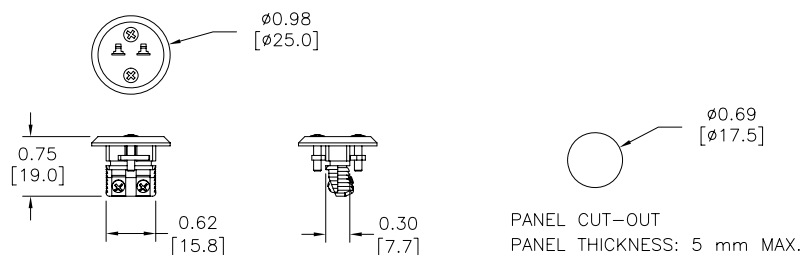
### THMJ, K, & T-MJ



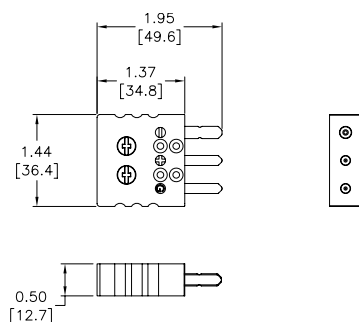
### THMJ, K, & T-SPJ



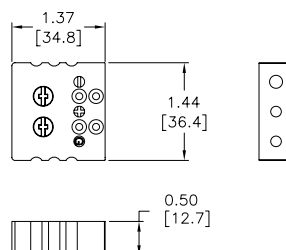
### THMJ, K, & T-MPJ



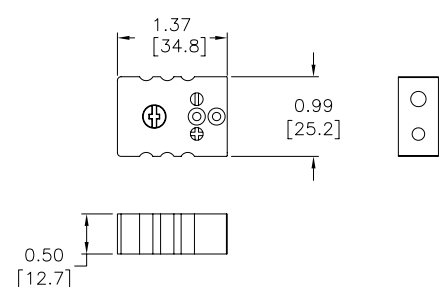
### RTD-SP



### RTD-SJ



### NTC-SJ





# Thermocouple and RTD Connectors

## WCB-S



## WCB-M



## WCB-S Application



## WCB-M Application

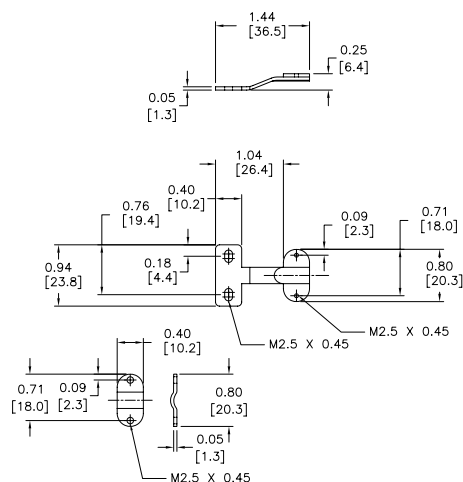


| Thermocouple and RTD Connectors Accessories |          |        |         |                                                                                   |
|---------------------------------------------|----------|--------|---------|-----------------------------------------------------------------------------------|
| Part Number                                 | Pcs/ Pkg | Wt(lb) | Price   | Description                                                                       |
| <u>WCB-S</u>                                | 10       | 0.5    | \$12.00 | Wire / cable clamp bracket for use with standard thermocouple and RTD connectors. |
| <u>WCB-M</u>                                | 10       | 0.5    | \$12.00 | Wire / cable clamp bracket for use with miniature thermocouple connectors.        |

## Dimensions

inches [mm]

### WCB-S



### WCB-M

