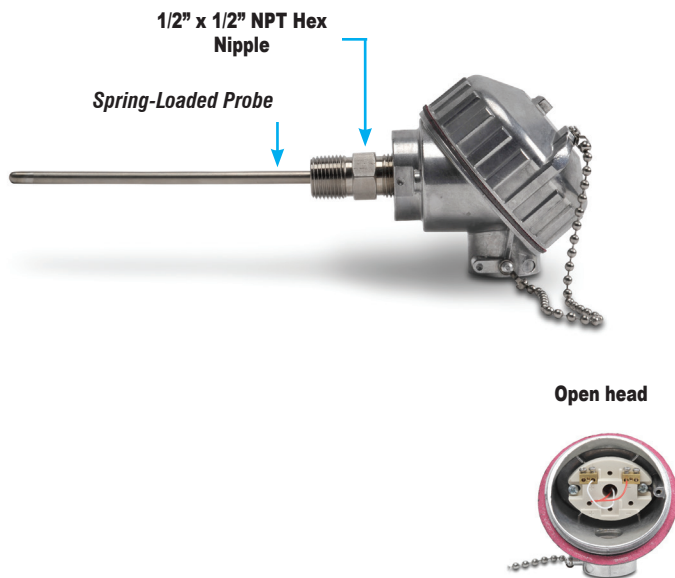


# pro<sup>ense</sup>® Thermocouple Spring-Loaded Probes with Connection Head

THMJ & K - CXX-03



## Overview

- 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
<a href="#"><u>THMJ-C04-03</u></a>	1	1.3	\$76.00	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)
<a href="#"><u>THMJ-C06-03</u></a>			\$80.00	J		6"		
<a href="#"><u>THMJ-C12-03</u></a>			\$84.00	J		12"		
<a href="#"><u>THMK-C04-03</u></a>			\$76.00	K		4"	0 to 927°C (32 to 1700°F)	
<a href="#"><u>THMK-C06-03</u></a>			\$80.00	K		6"		
<a href="#"><u>THMK-C12-03</u></a>			\$84.00	K		12"		

# proSense® 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>	Connection head: Ceramic terminal base with brass terminals and stainless steel screws (Recommended tightening torque 3-4 lb-in) Replacement Probes: 3 inch stranded 24 AWG wire leads

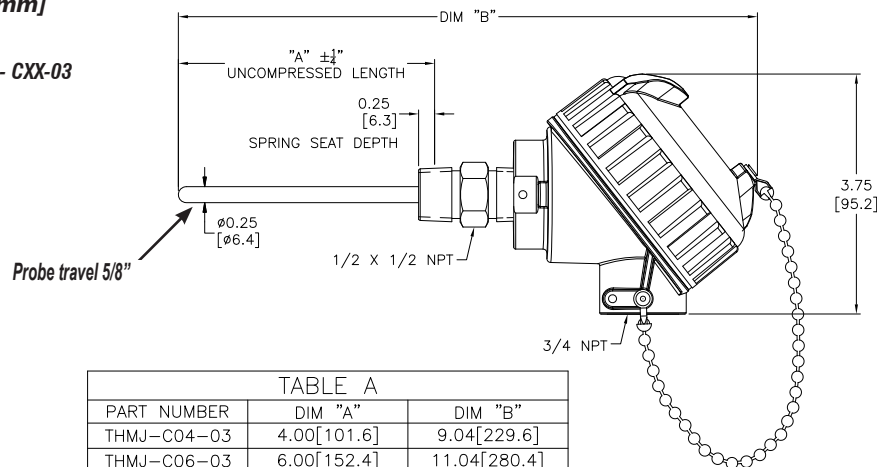


Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

## Dimensions

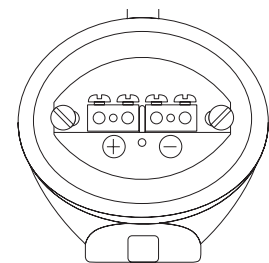
inches [mm]

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
- Observe polarity when making connections
- Do not use standard wire nuts
- Recommended screw terminal tightening torque 3-4 lb-in



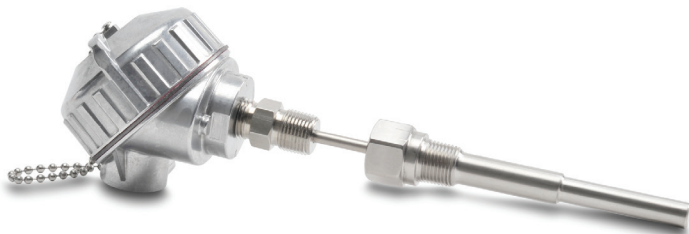
# proSense® Thermocouple Spring-Loaded Probes with Connection Head - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<a href="#">TW04-01</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 304 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$34.00
<a href="#">TW04-02</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 304 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$34.00
<a href="#">TW04-03</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 316 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$42.50
<a href="#">TW04-04</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 316 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$42.50
<a href="#">TW06-01</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 304 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$46.00
<a href="#">TW06-02</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 304 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$46.00
<a href="#">TW06-03</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 316 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$54.00
<a href="#">TW06-04</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 316 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$54.00
<a href="#">TW12-01</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 304 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$74.00
<a href="#">TW12-02</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 304 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$74.00
<a href="#">TW12-03</a>	ProSense thermowell, 1/2in female NPT probe connection, 1/2in male NPT process connection, 316 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$93.00
<a href="#">TW12-04</a>	ProSense thermowell, 1/2in female NPT probe connection, 3/4in male NPT process connection, 316 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$93.00
<a href="#">STW04-01</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 1-1/2in sanitary tri-clamp process connection, 316 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$101.00
<a href="#">STW06-01</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 1-1/2in sanitary tri-clamp process connection, 316 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$108.00
<a href="#">STW12-01</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 1-1/2in sanitary tri-clamp process connection, 316 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$150.00
<a href="#">STW04-02</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 2in sanitary tri-clamp process connection, 316 stainless steel body, 4-1/4in overall length, 0.260in bore.	1	\$112.00
<a href="#">STW06-02</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 2in sanitary tri-clamp process connection, 316 stainless steel body, 6-1/4in overall length, 0.260in bore.	1	\$120.00
<a href="#">STW12-02</a>	ProSense sanitary thermowell, 1/2in female NPT probe connection, 2in sanitary tri-clamp process connection, 316 stainless steel body, 12-1/4in overall length, 0.260in bore.	1	\$156.00

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

## 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.