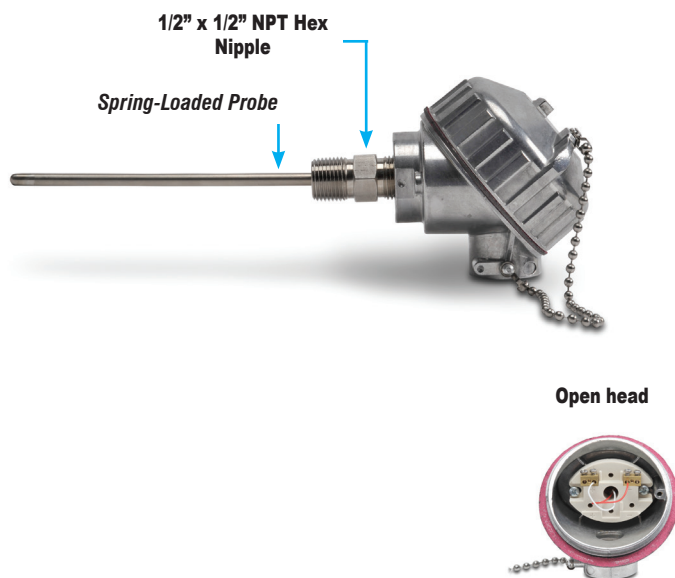


# prosense® Thermocouple Spring-Loaded Probes with Connection Head

THMJ &amp; 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="#">THMJ-C04-03</a>	1	1.3	\$-08jq:	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="#">THMJ-C06-03</a>			\$,-08jt:	J		6"		
<a href="#">THMJ-C12-03</a>			\$-08jv:	J		12"		
<a href="#">THMK-C04-03</a>			\$-08jy:	K		4"	0 to 927°C (32 to 1700°F)	
<a href="#">THMK-C06-03</a>			\$,-08jj]:	K		6"		
<a href="#">THMK-C12-03</a>			\$-08j_:	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>	$\pm 2.2^{\circ}\text{C}$ ( $\pm 4.0^{\circ}\text{F}$ ) or 0.75%, whichever is greater
<b>Probe</b>	$\phi 1/4"$ , 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

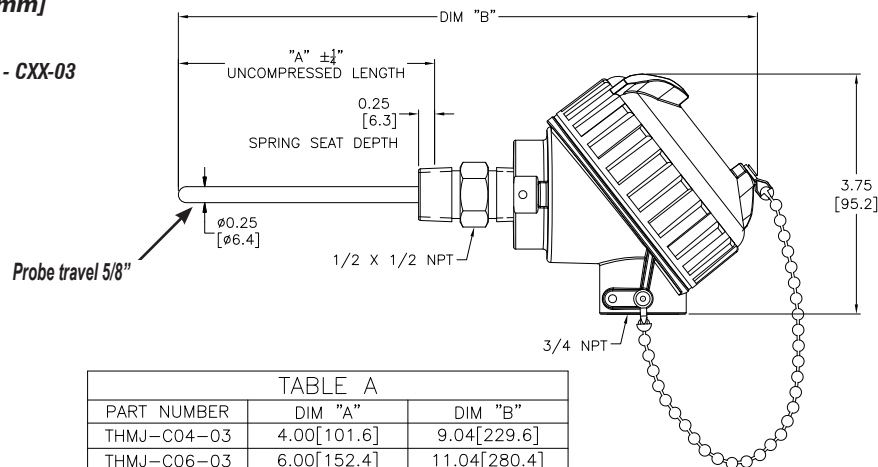
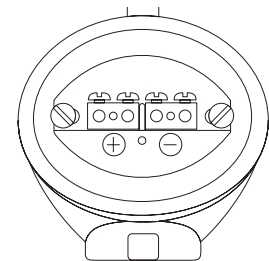


TABLE A

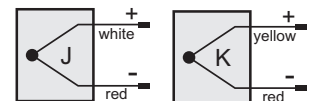
PART NUMBER	DIM "A"	DIM "B"
THMJ-C04-03	4.00[101.6]	9.04[229.6]
THMJ-C06-03	6.00[152.4]	11.04[280.4]
THMJ-C12-03	12.00[304.8]	17.04[432.8]
THMK-C04-03	4.00[101.6]	9.04[229.6]
THMK-C06-03	6.00[152.4]	11.04[280.4]
THMK-C12-03	12.00[304.8]	17.04[432.8]

## 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



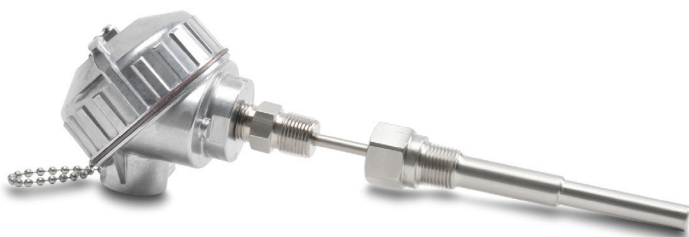
# proSense® Thermocouple Spring-Loaded Probes with Connection Head - Accessories

## Accessories

Part No.	Description	Pcs/Pkg	Price
<a href="#"><u>TW04-01</u></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	\$08g4:
<a href="#"><u>TW04-02</u></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	\$08g5:
<a href="#"><u>TW04-03</u></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	\$08g6:
<a href="#"><u>TW04-04</u></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	\$08g7:
<a href="#"><u>TW06-01</u></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	\$08g8:
<a href="#"><u>TW06-02</u></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	\$08g9:
<a href="#"><u>TW06-03</u></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	\$08ga:
<a href="#"><u>TW06-04</u></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	\$08gb:
<a href="#"><u>TW12-01</u></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	\$08ge:
<a href="#"><u>TW12-02</u></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	\$08gf:
<a href="#"><u>TW12-03</u></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	\$08gg:
<a href="#"><u>TW12-04</u></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	\$08gh:
<a href="#"><u>STW04-01</u></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	\$054k7:
<a href="#"><u>STW06-01</u></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	\$054kc:
<a href="#"><u>STW12-01</u></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	\$054ke:
<a href="#"><u>STW04-02</u></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	\$054k8:
<a href="#"><u>STW06-02</u></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	\$054kd:
<a href="#"><u>STW12-02</u></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	\$054kf:

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.