

proSense® 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

- 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	\$40.50	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		0.6	\$43.00	J		12"				0 to 927°C (32 to 1700°F), lead wire transition rated to 400 °F (204 °C)
THMJ-T18L06-01			J	18"						
THMK-T06L06-01		0.4	\$40.50	K		6"		0 to 927°C (32 to 1700°F), lead wire transition rated to 400 °F (204 °C)		
THMK-T12L06-01		0.6	\$43.00	K		12"				
THMK-T18L06-01			K	18"						
THMT-T06L06-01		0.4	\$38.00	T		6"		-200 to 371°C (-328 to 700°F), lead wire transition rated to 400 °F (204 °C)		
THMT-T12L06-01		0.6	\$39.00	T		12"				
THMT-T18L06-01			T	18"						
THMJ-T06L06-02		0.4	\$44.50	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		0.6	\$46.50	J		12"				
THMJ-T18L06-02			J	18"						
THMK-T06L06-02		0.4	\$44.50	K		6"		0 to 927°C (32 to 1700°F), lead wire transition rated to 400 °F (204 °C)		
THMK-T12L06-02		0.6	\$46.50	K		12"				
THMK-T18L06-02			K	18"						
THMK-T06L06-03		0.4	\$45.00	K	6"	Inconel Alloy 600	0 to 1149°C (32 to 2100°F), lead wire transition rated to 400 °F (204 °C)			
THMK-T12L06-03		0.6	\$52.50	K	12"					
THMK-T18L06-03			K	18"						

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Technical Specifications	
Junction Type	Ungrounded
ASTM E230 Standard Limits of Error	Types J, K: $\pm 2.2^{\circ}\text{C}$ ($\pm 4.0^{\circ}\text{F}$); Type T: $\pm 1^{\circ}\text{C}$ ($\pm 1.8^{\circ}\text{F}$); or 0.75% whichever is greater
Probe	$\phi 1/8"$ or $\phi 1/4"$, 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	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	6 foot stranded 20 AWG wire leads with stripped ends, fiberglass insulation and stainless steel overbraid

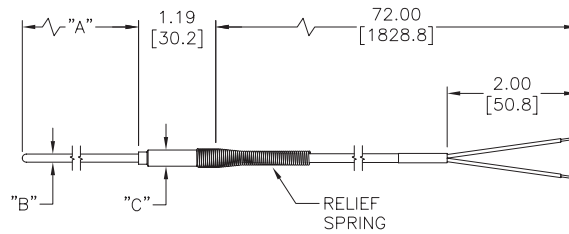


Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

Dimensions

inches [mm]

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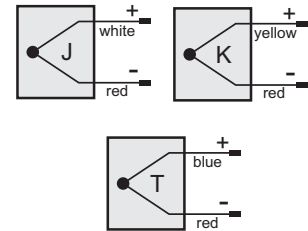


PART NUMBER	DIM "A"	DIM "B"	DIM "C"
THMJ-T06L06-01	6.00[152.4]	0.13[3.3]	0.25[6.35]
THMJ-T12L06-01	12.00[304.8]	0.13[3.3]	0.25[6.35]
THMJ-T18L06-01	18.00[457.2]	0.13[3.3]	0.25[6.35]
THMT-T06L06-01	6.00[152.4]	0.13[3.3]	0.25[6.35]
THMT-T12L06-01	12.00[304.8]	0.13[3.3]	0.25[6.35]
THMT-T18L06-01	18.00[457.2]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

Wiring Information

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

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



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Accessories

Part No.	Description	Pcs/Pkg	Price
BCF18-125N	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$3.25
BCF14-125N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$3.25
BCF18-25N	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$4.25
BCF14-25N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$4.25
BCF18-50N	Compression fitting, brass, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$6.00
BCF14-50N	Compression fitting, brass, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$6.50
CF18-125N	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$8.00
CF14-125N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/8 inch NPT male thread	1	\$8.00
CF18-25N	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$9.25
CF14-25N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/4 inch NPT male thread	1	\$9.25
CF18-50N	Compression fitting, 316 stainless steel, for 1/8 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$13.50
CF14-50N	Compression fitting, 316 stainless steel, for 1/4 inch diameter temperature probes, 1/2 inch NPT male thread	1	\$14.00
CFTF-18	Teflon ferrule for brass or stainless steel compression fittings and 1/8 diameter temperature probes	5	\$7.25
CFTF-14	Teflon ferrule for brass or stainless steel compression fittings and 1/4 diameter temperature probes	5	\$7.75
CF18-BC	Bayonet adapter, 7/8 inch long, 7/16 inch outside diameter, 9/32 inch inside diameter, 1/8 inch MNPT	1	\$10.00
THMJ-SP	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	\$4.00
THMJ-SJ	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	\$5.25
THMK-SP	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	\$4.50
THMK-SJ	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	\$5.50
THMK-HSP	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	\$13.00
THMK-HSJ	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	\$15.00
THMT-SP	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	\$4.25
THMT-SJ	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	\$5.75
THMJ-MP	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	\$3.75
THMJ-MJ	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	\$4.25
THMK-MP	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	\$4.00
THMK-MJ	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	\$4.25
THMT-MP	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	\$4.00
THMT-MJ	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	\$4.50
WCB-S	Wire / cable clamp bracket for use with standard thermocouple and RTD connectors	4	\$12.00
WCB-M	Wire / cable clamp bracket for use with miniature thermocouple connectors	4	\$12.00
THMJ-SPJ	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	\$10.00
THMK-SPJ	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	\$10.00
THMT-SPJ	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	\$9.50
THMJ-MPJ	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	\$6.75
THMK-MPJ	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	\$7.50
THMT-MPJ	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	\$8.00

Note: Thermocouple extension lead wire available at

www.automationdirect.com.

See end of section for full listing of accessories and dimension information.

*Working pressure of compression fitting should not exceed 500 psi.

However we recommend any pressure application use a thermowell

[THMJ-SPJ](#)



[CF14-25N](#)



[BCF18-125N](#)

