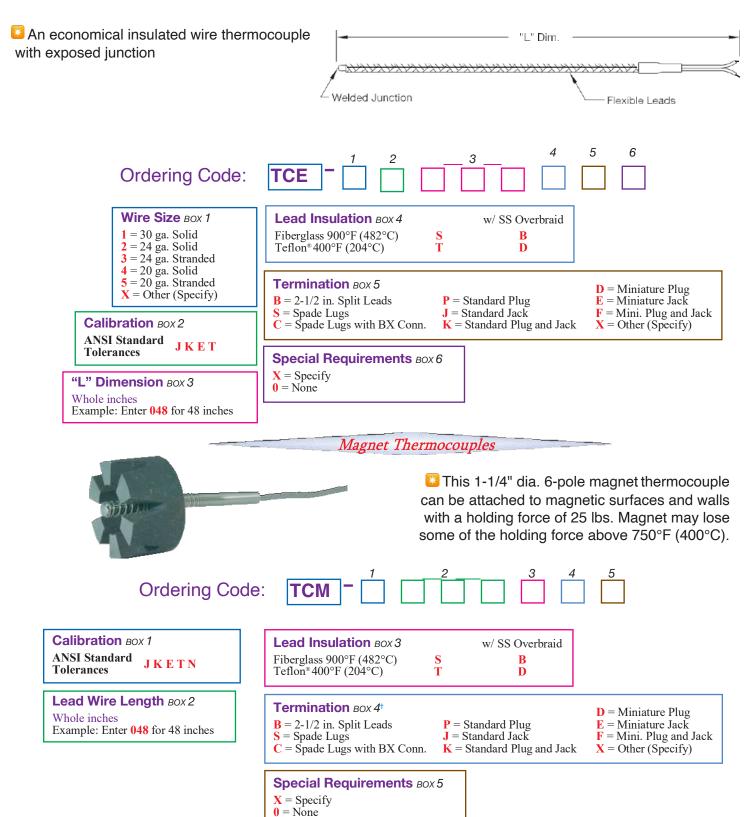


Wire Thermocouples





Ring Lug Thermocouples

2

Design Features:

Ring thermocouples mount on a surface using an existing screw or bolt to measure surface temperature. The T/C wire junction is crimped to ring lug

"L" Dim. Stud Size Flexible Leads

w/ SS Overbraid

B

D

P = Standard Plug

J = Standard Jack

K = Standard Plug and Jack

5

6

3

S T

Ordering Code:

Stud Size BOX 1

- 1 = No. 6 (0.148)
- 2 = No. 8 (0.175)3 = No. 10(0.198)
- 4 = 1/4 (0.266)
- 5 = 3/8 (0.390)

Calibration BOX 2

ANSI Standard Tolerances

JKET

"L" Dimension BOX 3

Whole inches

Example: Enter **048** for 48 inches

Teflon® 400°F (204°C) Termination BOX 5

- $\mathbf{B} = 2-1/2$ in. Split Leads
- S = Spade Lugs

Lead Insulation BOX 4

Fiberglass 900°F (482°C)

C = Spade Lugs with BX Conn.

- **D** = Miniature Plug
- **E** = Miniature Jack
- **F** = Mini. Plug and Jack X = Other (Specify)

Special Requirements BOX 6

X = Specify

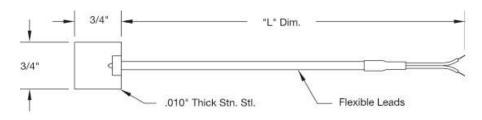
0 = None

TCR

Design Features:

A low-profile sensor that can be placed between two surfaces

Shim Stock Thermocouples



Ordering Code:



Calibration BOX 1

ANSI Standard **Tolerances**

JKETN

"L" Dimension BOX 2

Whole inches

Example: Enter **048** for 48 inches

Lead Insulation BOX 3

Fiberglass 900°F (482°C) Teflon® 400°F (204°C)

Termination BOX 4

S = Spade Lugs

 $\mathbf{B} = 2-1/2$ in. Split Leads

w/ SS Overbraid B

D

P = Standard Plug

J = Standard Jack K = Standard Plug and Jack **D** = Miniature Plug

 $\mathbf{E} = \text{Miniature Jack}$

F = Mini. Plug and Jack X = Other (Specify)

Special Requirements BOX 5

C =Spade Lugs with BX Conn.

X = Specify

0 = None

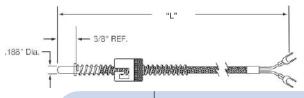


Stock Bayonet Style Thermocouples — Type J(also available in Type K*)

Design Features 🐸 Standard—ANSI Type J Grounded Junction

- Standard Probe Material - 304 Stainless Steel
- 💴 Standard Probe Diameter 3/16" (1/8" optional)
- For use up to 900°F (482°C)

Style 1—Spring Adjustable Bayonet Thermocouple



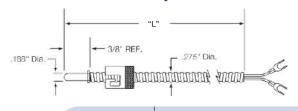
Design Features

- Insertion length adjustable from 1" to 10".
- 💴 Forms easily to any angle.
- One style can replace several fixed length thermocouples.

∠All Items Available from Stock >

	Part Number						
Termination	36"	48"	60"	72"	96"	120"	144"
Spade Lugs	TCP10131	TCP10001	TCP10140	TCP10079	TCP10086	TCP10095	TCP10096
Std. Plug	TCP10153	TCP10003	TCP10145	TCP10060	TCP10071	TCP10058	TCP10108
2½" Split Leads	TCP10156	TCP10005	TCP10141	TCP10012	TCP10011	TCP10020	TCP10059

Style 2—Armor Cable Adjustable Bayonet Thermocouple



Design Features

- Insertion length adjustable over length of armor cable.
- 💴 Forms easily to any angle.
- One style can replace several fixed length thermocouples.

All Items Available from Stock >

	Part Number						
Termination	36"	48"	60"	72"	96"	120"	144"
Spade Lugs Std. Plug 2½" Split Leads	TCP20084 TCP20086 TCP20025	TCP20001 TCP20003 TCP20005	TCP20041 TCP20011 TCP20050	TCP20040 TCP20006 TCP20026	TCP20031 TCP20008 TCP20060	TCP20053 TCP20018 TCP20007	TCP20085 TCP20010 TCP20093

Custom Made TCP Thermocouples (Adjustable Bayonet Style)

Ordering Code:

TCP

Style BOX 1

- 1 = Spring Adjustable
- 2 = Armor Cable Adjustable

Calibration BOX 2

ANSI Standard **Tolerances**

JKETN

Junction BOX 3

Grounded Ungrounded Single Element Dual Element

"L" Dimension BOX 4

Whole inches 012 to 999

Lead Insulation BOX 5

w/ SS Overbraid w/ SS Armor Cable (Style 1 only) (Style 1 only) (Style 2 only) Fiberglass 900°F (482°C) Teflon® 400°F (204°C) D

K = Standard Plug and Jack

D = Miniature Plug

E = Miniature Jack

Termination BOX 6 †

- $\mathbf{B} = 2-1/2$ in. Split Leads
- S = Spade Lugs
- P = Standard Plug

- C =Spade Lugs with BX Conn.
- J = Standard Jack
- $\mathbf{F} = \mathbf{Mini}$. Plug and Jack X = Other (Specify)

Special Requirements BOX 8

Tip Style BOX 7 $\mathbf{R} = \text{Round}$

- = Flat D = Drill Point
- $\mathbf{A} = .125 \text{ dia. Tip}$ X = Other (Specify)
- 0 = None

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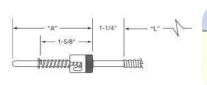
Bayonet Styles

Style 3-Rigid Straight Bayonet Thermocouple

Design Features

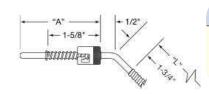
- Standard—ANSI Type J Grounded Junction
- Standard Probe Material—
 304 Stainless Steel
- Standard Probe Diameter—
 3/16" (1/8" optional)
- For use up to 900°F (482°C)

Stock Items Are Shown In RED



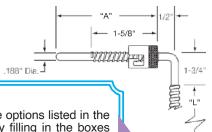
Part Number	Termination Style [†]	"A" Dim. (in)	"L" Dim. (in)
TCB30001	S	4	48
TCB30002	C	4	48
TCB30003	P	4	48
TCB30004	J	4	48
TCB30005	В	4	48

Style 4—Rigid 45° Bend Bayonet Thermocouple



Part Number	Termination Style [†]	"A" Dim. (in)	"L" Dim. (in)	1
TCB40001	S	4	48	
TCB40002	C	4	48	
TCB40003	P	4	48	
TCB40004	J	4	48	
TCB40005	В	4	48	

Style 5—Rigid 90° Bend Bayonet Thermocouple



Part Number	Termination Style [†]	"A" Dim. (in)	"L" Dim. (in)
TCB50001	S	4	48
TCB50002	C	4	48
TCB50003	P	4	48
TCB50004	J	4	48
TCB50005	В	4	48

Ordering Information

TCB Thermocouples are offered with the options listed in the worksheets. Create an ordering code by filling in the boxes with the appropriate number and/or letter designation for your requirements, and a part number will be assigned.

Custom Made TCB Thermocouples (Bayonet Style)

Ordering Code:



Style BOX 1

3 = Straight $4 = 45^{\circ} Bend$ $5 = 90^{\circ} Bend$ Calibration BOX 2

ANSI Standard Tolerances JKETN

Junction BOX 6

Grounded Ungrounded Single Element G U

Dual Element

"L" Dimension BOX 7

Whole inches 000 to 999

F

Sheath Diameter BOX 3

 $\mathbf{F} = .125" \pm .002$

Whole inches

 $G = .188" \pm .002 \text{ (Standard)}$

"A" Dimension BOX 4

01 to **99** (1-3/4" min.)

Lead Insulation BOX 8

w/ SS Overbraid w/ SS Armor Cable

Fiberglass 900°F (482°C) S Teflon® 400°F (204°C) T

Termination BOX 9

(See Termination Style Descriptions)

C = Spade Lugs with BX Conn.

B = 2-1/2 in. Split Leads
S = Spade Lugs

P = Standard Plug
J = Standard Jack

K = Standard Plug and Jack

D = Miniature Plug
E = Miniature Jack
F = Mini. Plug and Jack
X = Other (Specify)

"A" Dimension BOX 5

Fractional inches

0 = 0" 3 = 3/8" 6 = 3/4" 1 = 1/8" 4 = 1/2" 7 = 7/8" 2 = 1/4" 5 = 5/8"

Tip Style BOX 10

 $\mathbf{R} = \text{Round}$ $\mathbf{F} = \text{Flat}$ $\mathbf{D} = \text{Drill Point}$

Special Requirements BOX 11

X = Specify 0 = None

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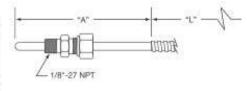
WWW.HKGCO.COM

Tel: +1-989-501-9025



Style 6—Rigid Straight Compression Fitting Thermocouple

	0.0	V		
1	Part Number	Termination Style	"A" Dim. (in)	"L" Dim. (in)
		Style	Diiii. (iii)	()
	TCC60001	S	4	48
	TCC60002	C	4	48
	TCC60003	P	4	48
1	TCC60004	J	4	48
3	TCC60005	В	4	48



Design Features

Standard Calibration —
ANSI Type J Grounded Junction

Standard Probe Material
304 Stainless Steel

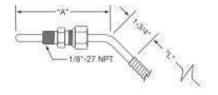
Standard Probe Diameter—3/16"

For use up to 900°F (482°C)

One-Time Adjustable 1/8"-27
NPT Brass Compression Fitting

Style 7—Rigid 45° Bend Compression Fitting Thermocouple

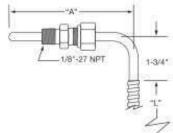
Part Number	Termination Style [†]	"A" Dim. (in)	"L" Dim. (in)
TCC70001	S	4	48
TCC70002	C	4	48
TCC70003	P	4	48
TCC70004	J	4	48
TCC70005	В	4	48



All Items Available from Stock >

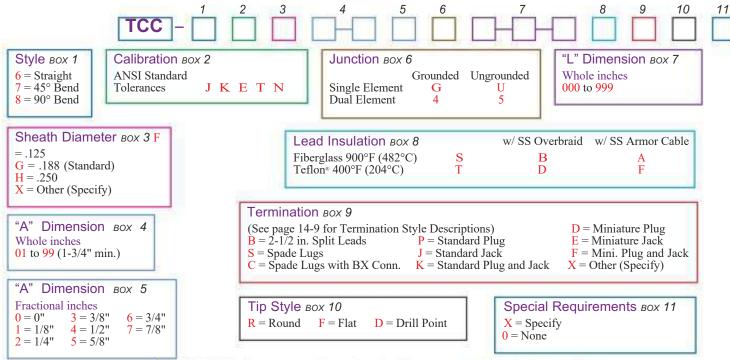
Style 8—Rigid 90° Bend Compression Fitting Thermocouple

Part Number	Termination Style [†]	"A" Dim. (in)	"L" Dim. (in)
TCC80001	S	4	48
TCC80002	C	4	48
TCC80003	P	4	48
TCC80004	J	4	48
TCC80005	В	4	48



Custom Made TCC Thermocouples (Compression Fitting Style)

Ordering Code:



▲ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.



Pipe Clamp Thermocouples

Design Features

- Stainless Steel Worm Drive Clamp 1/2" wide
- 🐸 Ideal for Measuring Pipe Temperatures
- Thermocouple Junction Grounded to Clamp

Ordering Code:



- 1 = 1/2" to 7/8"
- 2 = 7/8" to 1-1/2" 3 = 1-5/16" to 2-1/4"
- 4 = 2-1/4" to 3-5/16"
- 5 = 3-5/16" to 4-1/4"
- 6 = 4-5/16" to 5-1/4"
- 7 = 5-5/8" to 8-1/2" (9/16" Wide)
- X = Other (Specify)

Calibration BOX 2

ANSI Standard Tolerances

JKET

TCPW

"L" Dimension BOX 3

Whole inches

Example: Enter 048 for 48 inches

Ordering Information TCR, TCS, TCPW and TCN Thermocouples are offered with the options listed in the worksheets. Create an ordering code by filling in

the boxes with the appropriate number and/or letter designation for your requirements, and a

Lead Insulation BOX 4

Fiberglass 900°F (482°C) Teflon 400°F (204°C)

w/ SS Overbraid

D

Termination BOX 5 1

- $\mathbf{B} = 2-1/2$ in. Split Leads
- S = Spade Lugs
- C =Spade Lugs with BX Conn.
- P = Standard Plug
- J = Standard Jack
- K = Standard Plug and Jack
- **D** = Miniature Plug
- E = Miniature Jack
- **F** = Mini. Plug and Jack X = Other (Specify)
- Special Requirements BOX 6

X = Specify

 $\mathbf{0} = \hat{\text{None}}$

Nozzle Thermocouples

"L"

Strain Relief Spring (Optional) Rotating Bolt Thread

Design Features

Mounted in a shallow threaded hole on the nozzle surface (there is no direct contact with material flow)

part number will be assigned.

Grounded junction

Ordering Code:

Thread Size BOX 1

- 1 = 1/4-28 UNF
- 2 = 1/4-20 UNC
- $3 = M6 \cdot 1$
- $4 = M8 \cdot 1.25$
- X = Other (Specify)

Calibration BOX 2

ANSI Standard Tolerances

JKETN

"L" Dimension BOX 3

Whole inches

Example: Enter **048** for 48 inches

Lead Insulation BOX 4

Fiberglass 900°F (482°C)

2

w/ SS Overbraid

R

D

3

Termination BOX 5 1

Teflon 400°F (204°C)

- $\mathbf{B} = 2-1/2$ in. Split Leads
- S = Spade Lugs
- $C = \hat{Spade}$ Lugs with BX Conn.
- P = Standard Plug
- J = Standard Jack **K** = Standard Plug and Jack
- **D** = Miniature Plug **E** = Miniature Jack
- **F** = Mini. Plug and Jack X = Other (Specify)

Clamp Size

Strain Relief Spring BOX 6

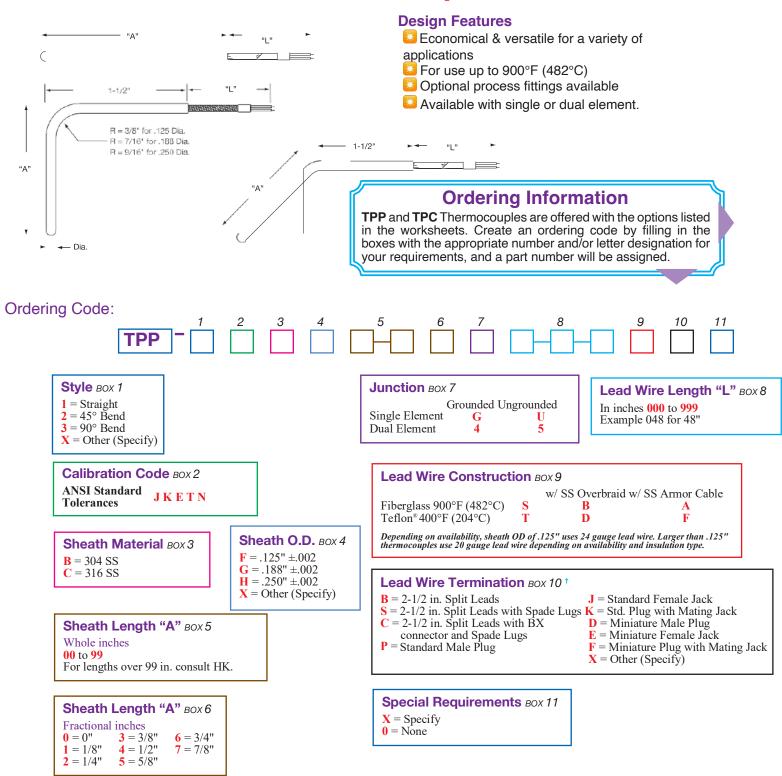
- 0 = Not Required
- $\mathbf{Y} = \text{Required}$

Special Requirements BOX 7

- X = Specify



Tube and Wire Thermocouples







Melt Bolt Thermocouples for Plastic Extruders or Injection Molding Machines

Design Features

Bolt Material
Stainless Steel

Stainless Steel 1/2-20 UNF Thread

Probe Material Stainless Steel

Probe Diameters
Standard 1/8"

Calibration
ANSI Type J
(IronConstantan)

Junction Style
Closed End Grounded

Style A—Adjustable Tip

- Eliminates excess inventory.
- Tip can be field adjusted from flush to 2 inches.
- MgO insulated.
- Can be installed wherever standard melt thermocouples are in use.
- Bolt with Teflon[®] insert at tip has a maximum operating temperature of 500°F (260°C). Without insert 1400°F (760°C).



/		Part Number			
	Thermocouple	Without Teflon® Insert		With Te	
ı	Diameter	L = 3"	L = 6"	L = 3"	L = 6"
	1/8"†	TMB00001	TMB00002	TMB00003	
'	3/16	TMB00005	TMB00006	N/A	N/A

†For 1/8" diameter, it is not recommended to immerse tip more than 1" due to bending and breakage in melt flow.

Style E-Fixed Immersion with Rigid Extension



Part Number MgO Insulation	" A " (in)	"L" (in)	Part Number Fiberglass Insulation
TMB00007	Flush	3	TMB00017
TMB00008	1/4	3	TMB00018
TMB00009	1/2	3	TMB00019
TMB00010	3/4	3	TMB00020
TMB00011	1	3	TMB00021
TMB00012	Flush	6	TMB00022
TMB00013	1/4	6	TMB00023
TMB00014	1/2	6	TMB00024
TMB00015	3/4	6	TMB00025
TMB00016	1	6	TMB00026



Style R-Fixed Immersion with No Extension



Insulation - MgO or Fiberglass

F	Part Number MgO	"A"	"L"	Part Number Fiberglass
	Insulation	(in)	(in)	Insulation
	TMB00027	Flush	3	TMB00037
	TMB00028	1/4	3	TMB00038
	TMB00029	1/2	3 3 3	TMB00039
	TMB00030	3/4	3	TMB00040
	TMB00031	1	3	TMB00041
	TMB00032	Flush	6	TMB00042
	TMB00033	1/4	6	TMB00043
	TMB00034	1/2	6	TMB00044
	TMB00035	3/4	6	TMB00045
	TMB00036	1	6	TMB00046

Style F-Fixed Immersion with Flexible Extension



Insulation - Fiberglass only

"A" (in)	"L" (in)	Part Number Fiberglass Insulation
Flush	3	TMB00047
1/4	3	TMB00048
1/2	3	TMB00049
3/4	3	TMB00050
1	3	TMB00051
Flush	6	TMB00052
1/4	6	TMB00053
1/2	6	TMB00054
3/4	6	TMB00055
1	6	TMB00056

The Blank bolt is used to seal hole if thermocouple is removed from the extruder



Melt Bolt Thermocouples (Custom Engineered/Manufactured)

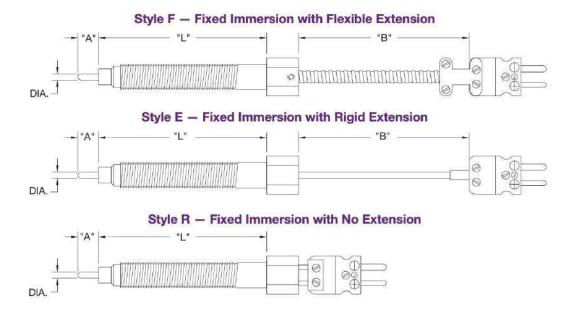
Design Features

- Designed to Measure the Temperature of Plastic Stream of an Extruder or Injection Molding Machine
- 304 Staintess Steel Construction
- 1/2-20 UNF Thread

5 900°F (482°C) Operating Temperature

Ordering Information

TMB Melt Bolt Thermocouples are offered with the options listed in the worksheet below. Create an ordering code by filling in the boxes with the appropriate number and/or letter designation for your requirements, and a part number will be assigned.



Ordering Code:

Style BOX 1

 $\mathbf{F} = \mathbf{w}/$ Flexible Extension

TMB

 $\mathbf{E} = \mathbf{w} / \text{Rigid Extension}$

 $\mathbf{R} = \mathbf{w} / \text{No Extension}$

Tip Diameter BOX 2

 $\mathbf{F} = 0.125$ (Standard)

G = 0.188

X = Other (Specify)

Melt Bolt Length BOX 3

"L" Dim.

09 = 9"**03** = 3"

04 = 4" 10 = 10"

06 = 6" **12** = 12"

Calibration BOX 4

ANSI Standard JKETN **Tolerances**

"A" Dimension BOX 5

Whole inches

0 to 9 (Enter 0 if less than 1)

Junction BOX 7

G = Grounded

U = Ungrounded

"B" Dimension BOX 8

Whole inches

Example: Enter **006** for 6 inches Enter 000 for Style R

Termination BOX 9 1

 $\mathbf{B} = 2-1/2$ in. Split Leads (Style F only)

S = Spade Lugs (Style F only)

C = Spade Lugs with BX Conn. (Style F only)

X = Other (Specify)

P = Standard Plug J = Standard Jack

K = Standard Plug and Jack

8

6 = 3/4"

7 = 7/8"

"A" Dimension BOX 6

3 = 3/8"

4 = 1/2"

5 = 5/8"

Fractional inches

0 = 0"

1 = 1/8"

2 = 1/4"

10

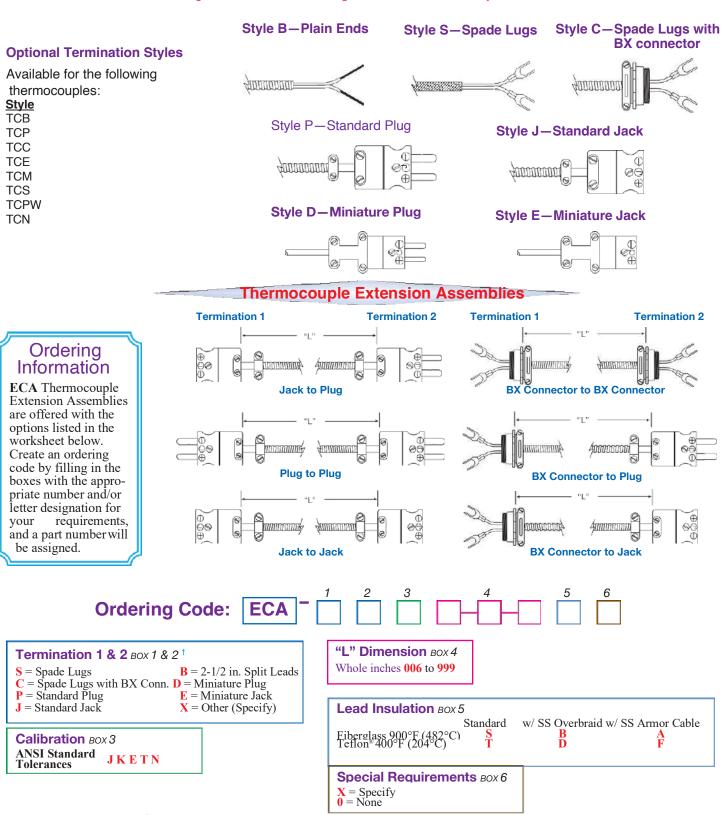
Special Requirements BOX 10

X = Specify

0 = None



Optional Thermocouple Termination Styles



▲ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.