

**PLASTICS/PACKAGING INDUSTRY
(TUBE & WIRE) SENSORS INDEX**

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General Information, Plastics/Packaging Industry Thermocouples and RTD's

SensorTec's high quality sensors for the plastics, packaging and rubber industries provide an economical means of temperature sensing and are available in several standard thermocouple and RTD configurations.

Sensor styles shown in this catalog section represent some of the standard constructions available. We have several other styles, sheath sizes and materials, leadwire types and thread sizes available. We also manufacture retrofit sensors for European equipment and offer a complete selection of metric sheath sizes and thread types. Contact our Technical Assistance Team for aid in selecting a sensor for your specific requirement.

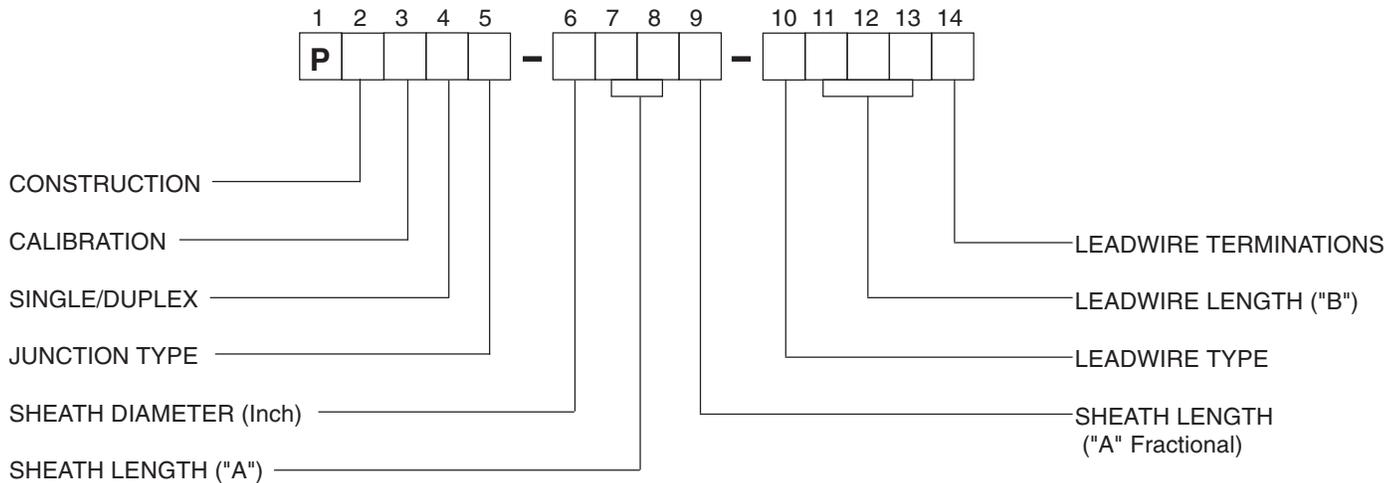
All sheaths and tips are constructed from 316 stainless steel for superior resistance to corrosion, abrasion and deterioration. All sensor junctions are GTAW (TIG) or plasma welded. Brazing or silver soldering of sensor junction is not utilized due to the potential for flux contamination or deterioration.

RTD's shown in this section are available in two different temperature ranges and leadwire types, the "L" Series and the "M" series. Corresponding specifications are listed on each page for the two different RTD ranges. All sheaths and tips are constructed from 316 stainless steel for superior resistance to corrosion, abrasion and deterioration. For specific information regarding RTD elements specification and standards, wiring configurations and color coding, see the RTD general information section of this catalog.

Applications:

- Plastic injection molding machinery
- Adhesive systems
- Pipe tracing control
- Industrial heat treating
- Packaging equipment
- Oven temperature control
- Cooling fluid systems

PART NUMBERING EXAMPLES FOR PLASTICS/PACKAGING



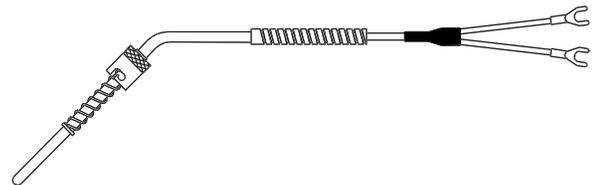
PAJ0G-I00G-F060B

T/C - Type "J", 8" Spring, Grounded, 3/16" Dia. Tip, 1/4" Long, Stranded Fiberglass with SS Overbraid, 5 Ft. Long, 2-1/2 Split Leads. Refer to page P-4.



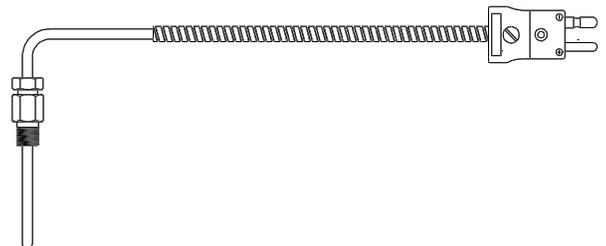
PEK0U-I03L-E072C

T/C - Type "K", Fixed Bayonet with a 45° Bend, Ungrounded, 3/16" Dia. Sheath 3-1/2" Long, Stranded Fiberglass with SS Flex Armor, 6 Ft. Long, Split Leads with #8 Spade Lugs. Refer to page P-6.



PIE0G-I04A-E024K-3A

T/C - Type "E", Rigid Tube with a 90° Bend, Grounded, 3/16" Dia. Sheath 4" Long, Stranded Fiberglass with SS Flex Armor, Standard Male Plug, Re-Adjustable SS Compression Fitting 1/8" NPT. Refer to page P-7.

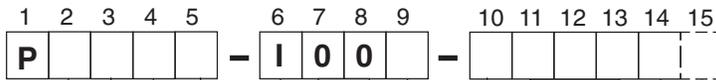
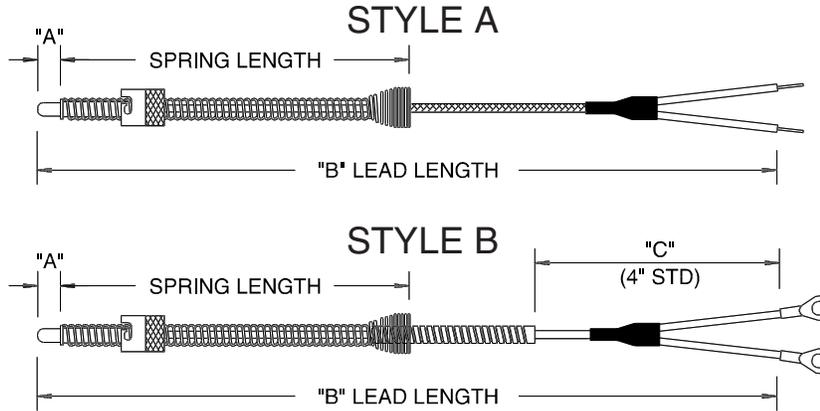


JOEXT-K-C060M

T/C - Extension Type "J", Standard Plug, Solid Fiberglass with SS Overbraid, 5 Ft. Long, Standard Jack. Refer to page P-22.



SPRING ADJUSTABLE DEPTH THERMOCOUPLES



CONSTRUCTION

A = 8" Spring
B = 12" Spring

CALIBRATION

J = Type "J"
K = Type "K"
E = Type "E"
T = Type "T"

SINGLE/DUPLEX

0 = Single (2 wire)
4 = Duplex (4 wire)

JUNCTION TYPE

G = Grounded, Round Tip
U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

I = 3/16 (.188)

SHEATH LENGTH ("A")

Whole Inches: Example 00 = None

SHEATH LENGTH ("A" Fractional)

A = None	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

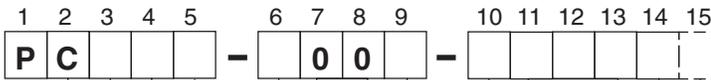
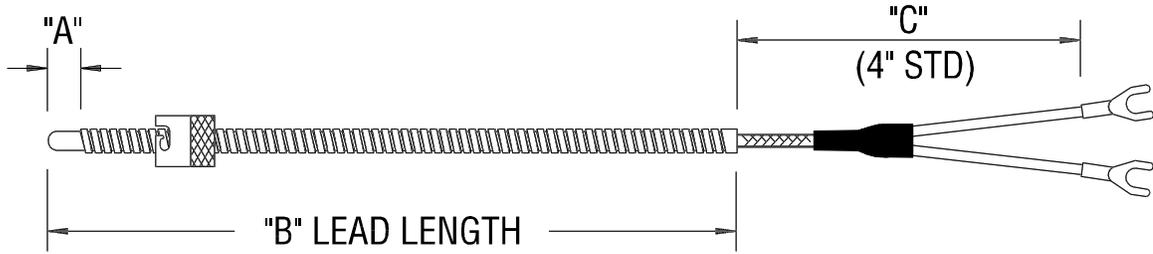
LEADWIRE TYPE

B = Solid Fiberglass with SS Flex Armor
C = Solid Fiberglass with SS Overbraid
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
8 = Stranded Fiberglass with SS Overbraid & Flex Armor

NOTES: Duplex and 1/8" OD sensors are generally constructed with 24 ga. wire. All others are generally constructed with 20 ga. wire.

FLEX ARMOR ADJUSTABLE DEPTH THERMOCOUPLES

STYLE C



CONSTRUCTION

C = Flex Armor

CALIBRATION

J = Type "J"
K = Type "K"
E = Type "E"
T = Type "T"

SINGLE/DUPLEX

0 = Single (2 wire)
4 = Duplex (4 wire)

JUNCTION TYPE

G = Grounded, Round Tip
U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

I = 3/16 (.188)
.280" OD Flex Armor

SHEATH LENGTH ("A")

Whole Inches: Example 00 = None

SHEATH LENGTH ("A" Fractional)

A = None	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

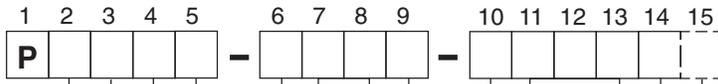
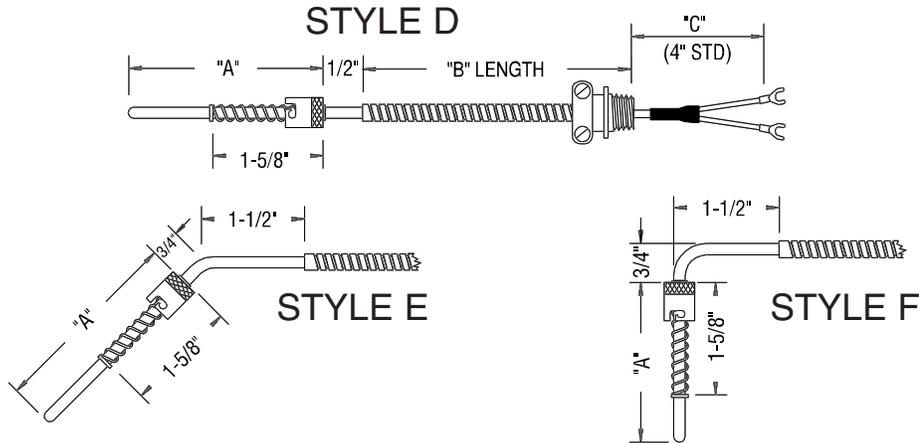
NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

LEADWIRE TYPE

B = Solid Fiberglass with SS Flex Armor
E = Stranded Fiberglass with SS Flex Armor
8 = Stranded Fiberglass with SS Overbraid & Flex Armor

NOTES: Duplex and 1/8" OD sensors are generally constructed with 24 ga. wire. All others are generally constructed with 20 ga. wire.

FIXED BAYONET THERMOCOUPLES



CONSTRUCTION

D = Straight
E = Bent 45°
F = Bent 90°

CALIBRATION

J = Type "J"
K = Type "K"
E = Type "E"
T = Type "T"

SINGLE/DUPLEX

0 = Single (2 wire)
4 = Duplex (4 wire)

JUNCTION TYPE

G = Grounded, Round Tip
U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

G = 1/8 (.125)
I = 3/16 (.188)
K = 1/4 (.250)

SHEATH LENGTH ("A")¹

Whole Inches: Example 02 = 2 inches

SHEATH LENGTH ("A" Fractional)

A = None	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp/Tube Adapter on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

LEADWIRE TYPE

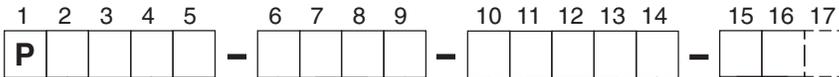
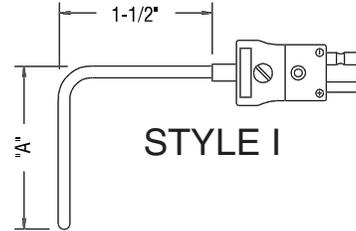
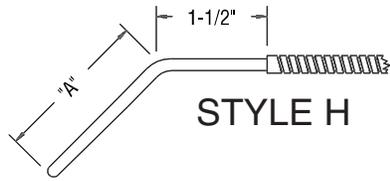
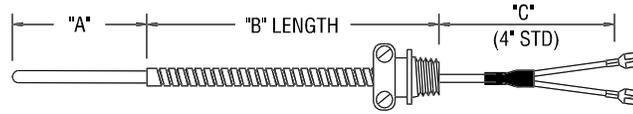
A = Solid Fiberglass
B = Solid Fiberglass with SS Flex Armor
C = Solid Fiberglass with SS Overbraid
D = Stranded Fiberglass
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid

NOTES: Duplex and 1/8" OD sensors are generally constructed with 24 ga. wire. All others are generally constructed with 20 ga. wire.

¹Refer to Table A on page P-21 for immersion depth calculations

RIGID TUBE THERMOCOUPLES

STYLE G



CONSTRUCTION

- G = Straight
- H = Bent 45°
- I = Bent 90°

CALIBRATION

- J = Type "J"
- K = Type "K"
- E = Type "E"
- T = Type "T"

SINGLE/DUPLEX

- 0 = Single (2 wire)
- 4 = Duplex (4 wire)

JUNCTION TYPE

- G = Grounded, Round Tip
- U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

- G = 1/8 (.125)
- I = 3/16 (.188)
- K = 1/4 (.250)

SHEATH LENGTH ("A")

Whole Inches: Example 02 = 2 inches

SHEATH LENGTH ("A" Fractional)

- | | |
|----------|---------|
| A = None | J = 3/8 |
| B = 1/16 | L = 1/2 |
| C = 1/8 | N = 5/8 |
| E = 3/16 | Q = 3/4 |
| G = 1/4 | S = 7/8 |

LEADWIRE TYPE

- A = Solid Fiberglass
- B = Solid Fiberglass with SS Flex Armor
- C = Solid Fiberglass with SS Overbraid
- D = Stranded Fiberglass
- E = Stranded Fiberglass with SS Flex Armor
- F = Stranded Fiberglass with SS Overbraid

SPECIAL OPTIONS

- C = Cable Clamp/Tube Adapter on Connector
- F = BX Connector on Leads

SHEATH MOUNTING FITTINGS

- 1A = Adjustable SS Compression Fitting, 1/8" NPT
- 2A = Adjustable Brass Compression Fitting, 1/8" NPT
- 2B = Adjustable Brass Compression Fitting, 1/4" NPT
- 3A = Re-Adjustable SS Compression Fitting, 1/8" NPT
- 25 = Mounting Flange with Brass Compression Fitting
- 28 = Adjustable Bayonet Fitting (1/8" OD Sheath Only)
- 00 = None

LEADWIRE TERMINATIONS

- A = None
- B = 2-1/2" Split Leads
- C = 2-1/2" Split Leads w/#8 Spade Lugs
- D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
- E = 2-1/2" Split Leads w/1/4" Push-on Connectors
- K = Standard Male Plug (200°C)
- L = Standard Plug with Mating Jack (200°C)
- M = Standard Female Jack (200°C)
- Q = Miniature Male Plug (200°C)
- R = Miniature Plug Mating Jack (200°C)
- S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

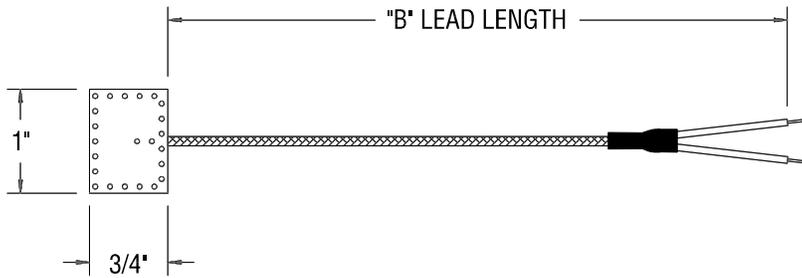
Whole Inches: Example: 048 = 48 Inches

NOTES: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012)

Duplex and 1/8" OD sensors are generally constructed with 24 ga. wire. All others are generally constructed with 20 ga. wire.

SPADE THERMOCOUPLES

STYLE J



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
P J **0 G** - **X X X** -

CONSTRUCTION

J = Spade T/C

CALIBRATION

J = Type "J"
 K = Type "K"
 E = Type "E"
 T = Type "T"

SINGLE

0 = Single (2 wire)

JUNCTION TYPE

G = Grounded

SPADE MATERIAL

B = Brass
 S = Stainless Steel

X

X

X

LEADWIRE TYPE

A = Solid Fiberglass
 C = Solid Fiberglass with SS Overbraid
 D = Stranded Fiberglass
 F = Stranded Fiberglass with SS Overbraid

SPECIAL OPTIONS

C = Cable Clamp on Connector
 F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
 B = 2-1/2" Split Leads
 C = 2-1/2" Split Leads w/#8 Spade Lugs
 D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
 E = 2-1/2" Split Leads w/1/4" Push-on Connectors
 K = Standard Male Plug (200°C)
 L = Standard Plug with Mating Jack (200°C)
 M = Standard Female Jack (200°C)
 Q = Miniature Male Plug (200°C)
 R = Miniature Plug Mating Jack (200°C)
 S = Miniature Female Jack (200°C)

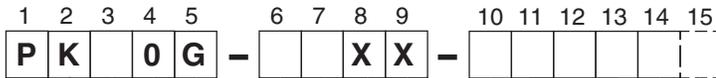
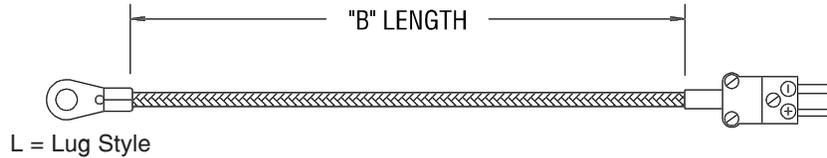
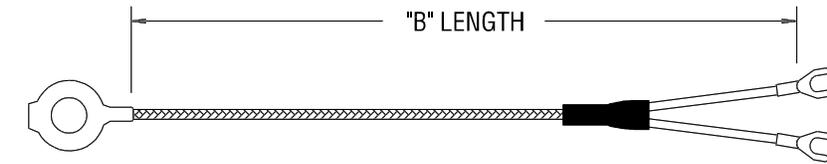
LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

NOTES: These assemblies are generally constructed with 20 ga. wire.

WASHER/LUG THERMOCOUPLES

STYLE K



CONSTRUCTION

K = Washer/Lug T/C

CALIBRATION

J = Type "J"
 K = Type "K"
 E = Type "E"
 T = Type "T"

SINGLE

0 = Single

JUNCTION TYPE¹

G = Grounded

RING TYPE

D = Double Cupped Washer
 L = Electrical Lug

BOLT/STUD SIZE

Code	Washer ID	Lug ID
1=#6	.187"	.144"
2=#8	.187"	.144"
3=#10	.203"	.196"
4=1/4"	.328"	.266"
5=5/16"	.328"	.328"
6=3/8"	.406"	.390"

X

X

LEADWIRE TYPE

A = Solid Fiberglass
 C = Solid Fiberglass with SS Overbraid
 D = Stranded Fiberglass

SPECIAL OPTIONS

C = Cable Clamp on Connector
 F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
 B = 2-1/2" Split Leads
 C = 2-1/2" Split Leads w/#8 Spade Lugs
 D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
 E = 2-1/2" Split Leads w/1/4" Push-on Connectors
 K = Standard Male Plug (200°C)
 L = Standard Plug with Mating Jack (200°C)
 M = Standard Female Jack (200°C)
 Q = Miniature Male Plug (200°C)
 R = Miniature Plug Mating Jack (200°C)
 S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

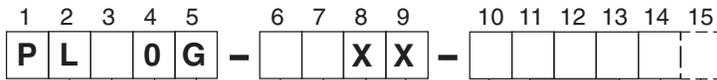
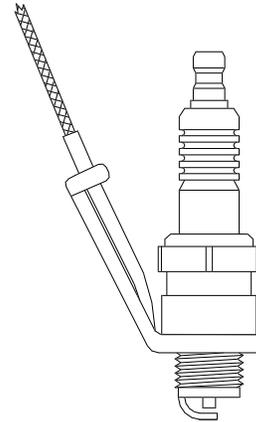
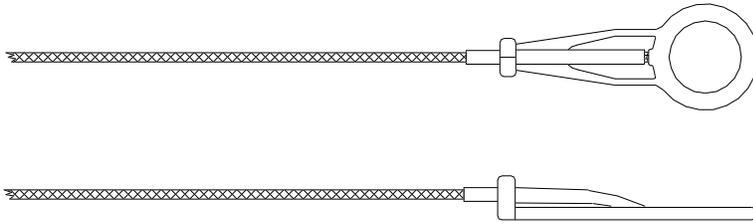
Whole Inches: Example: 048 = 48 Inches

NOTES: These assemblies are generally constructed with 20 ga. wire.

¹Ungrounded t/c available only in Electrical Lug style. Consult sales for availability.

SPARK PLUG GASKET THERMOCOUPLES

STYLE L



CONSTRUCTION

L = Gasket T/C

CALIBRATION

J = Type "J"
 K = Type "K"
 E = Type "E"
 T = Type "T"

SINGLE

0 = Single (2 wire)

JUNCTION TYPE

G = Grounded

GASKET SIZE

J = 10mm (.39"ID)
 L = 12mm (.47"ID)
 M = 14mm (.55"ID)

FORK STYLE

S = Straight
 B = Bent 70°

X

X

LEADWIRE TYPE

C = Solid Fiberglass with SS Overbraid
 F = Stranded Fiberglass with SS Overbraid
 6 = Solid Teflon with SS Overbraid (500°F)
 4 = Solid Teflon (500°F)

SPECIAL OPTIONS

C = Cable Clamp on Connector
 F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
 B = 2-1/2" Split Leads
 C = 2-1/2" Split Leads w/#8 Spade Lugs
 D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
 E = 2-1/2" Split Leads w/1/4" Push-on Connectors
 K = Standard Male Plug (200°C)
 L = Standard Plug with Mating Jack (200°C)
 M = Standard Female Jack (200°C)
 Q = Miniature Male Plug (200°C)
 R = Miniature Plug Mating Jack (200°C)
 S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

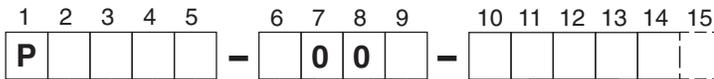
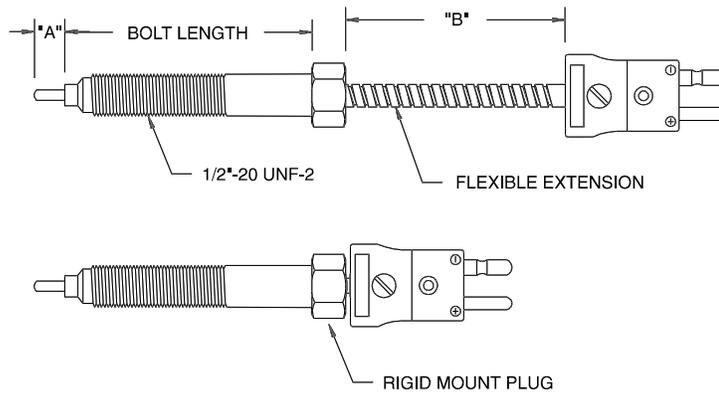
NOTES: These assemblies are generally constructed with 24 ga. wire.

Consult sales for other gasket sizes.

The Spark Plug Gasket Thermocouple is a simple effective method to monitor the cylinder head temperature on a variety of single and multiple cylinder engines. The spark plug is inserted through the sensor and then torqued into the head as usual. SensorTec's unique one piece design allows the use of the standard spark plug and eliminates the need for machining of the cylinder head.

MELT BOLT THERMOCOUPLES

STYLE M, N, & O



CONSTRUCTION

M = 3" Melt Bolt
N = 4" Melt Bolt
O = 6" Melt Bolt

CALIBRATION

J = Type "J"
K = Type "K"
E = Type "E"
T = Type "T"

SINGLE/DUPLEX

0 = Single (2 wire)
4 = Duplex (4 wire)

JUNCTION TYPE

G = Grounded, Round Tip
U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

G = 1/8 (.125)
I = 3/16 (.188)

SHEATH LENGTH ("A")

Whole Inches: Example 00 = None

SHEATH LENGTH ("A" Fractional)

A = Flush	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")¹

Whole Inches: Example: 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

LEADWIRE TYPE

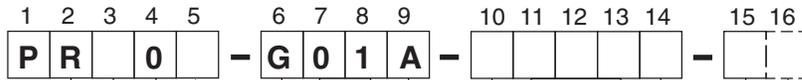
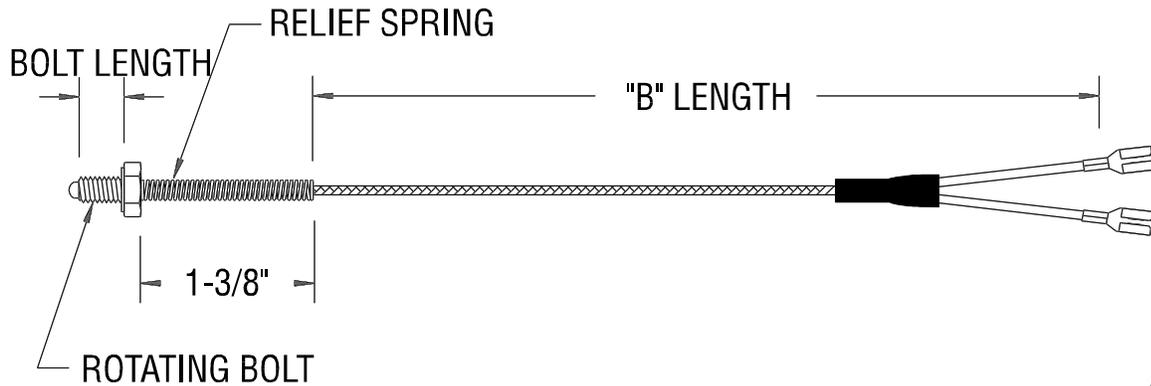
B = Solid Fiberglass with SS Flex Armor
C = Solid Fiberglass with SS Overbraid
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid

NOTES: Duplex and 1/8" OD sensors are generally constructed with 24 ga. wire. All others are generally constructed with 20 ga. wire.

¹For rigid mount connector, insert 000

THREADED NOZZLE BOLT THERMOCOUPLES

STYLE R



CONSTRUCTION

R = Threaded Nozzle T/C

CALIBRATION

J = Type "J"
K = Type "K"
E = Type "E"
T = Type "T"

SINGLE

0 = Single (2 wire)

JUNCTION TYPE

G = Grounded, Round Tip
U = Ungrounded, Round Tip

SHEATH DIAMETER (Inch)

G = 1/8 (.125)

SHEATH LENGTH ("A")

Whole Inches: Example 01=1"

SHEATH LENGTH (Fractional)

A = None

LEADWIRE TYPE

A = Solid Fiberglass
B = Solid Fiberglass with SS Flex Armor
C = Solid Fiberglass with SS Overbraid
D = Stranded Fiberglass
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

BOLT SIZES

1 = 1/4"-20 X 3/8" Long
2 = 1/4"-28 X 3/8" Long
3 = M6 X 1.00 X 12
4 = M8 X 1.25 X 12

Consult factory for other bolt sizes

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

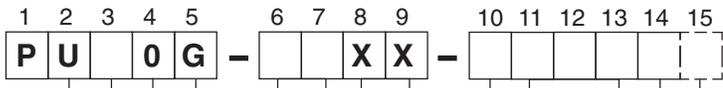
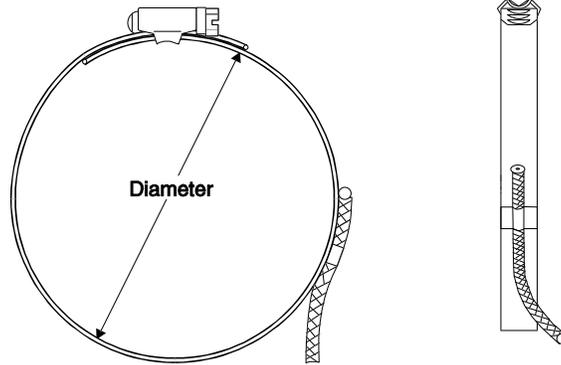
Whole Inches: Example: 048 = 48 Inches

NOTES: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012).

These assemblies are generally constructed with 24 ga. wire.

PIPE CLAMP THERMOCOUPLES

STYLE U



CONSTRUCTION

U = Pipe Clamp

CALIBRATION

- J = Type "J"
- K = Type "K"
- E = Type "E"
- T = Type "T"

SINGLE

0 = Single (2 wire)

JUNCTION TYPE¹

G = Grounded

CLAMP DIAMETER RANGE

Code	Diameter	IPS Size
12	11/16 to 1-1/4"	1/2 & 3/4"
24	1-1/16 to 2"	1 & 1-1/2"
44	2 to 3-1/4"	2 & 2-1/2"
60	3 to 4-1/4"	3 & 3-1/2"
88	4-3/4 to 6"	4"
96	5-1/4 to 6-1/2"	5"
98	5-3/4 to 7"	6"

X

LEADWIRE TYPE

- C = Solid Fiberglass with SS Overbraid
- F = Stranded Fiberglass with SS Overbraid

SPECIAL OPTIONS

- C = Cable Clamp on Connector
- F = BX Connector on Leads

LEADWIRE TERMINATIONS

- A = None
- B = 2-1/2" Split Leads
- C = 2-1/2" Split Leads w/#8 Spade Lugs
- D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
- E = 2-1/2" Split Leads w/1/4" Push-on Connectors
- K = Standard Male Plug (200°C)
- L = Standard Plug with Mating Jack (200°C)
- M = Standard Female Jack (200°C)
- Q = Miniature Male Plug (200°C)
- R = Miniature Plug Mating Jack (200°C)
- S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

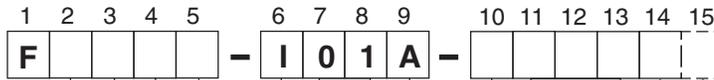
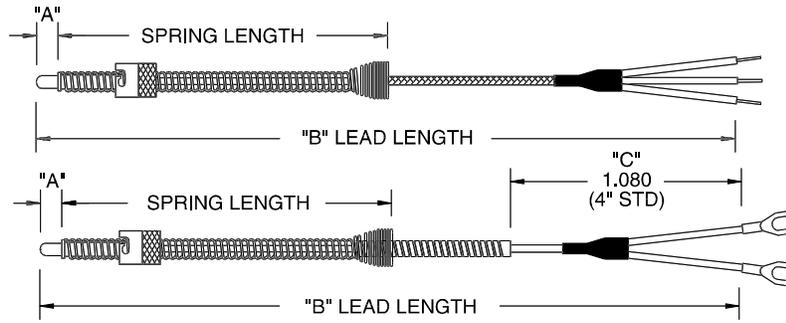
NOTES: These assemblies are generally constructed with 20 ga. wire.

Pipe clamps are made of stainless steel.

¹Consult sales for ungrounded style thermocouple availability.

SPRING ADJUSTABLE DEPTH RTD'S

STYLE A & B



CONSTRUCTION

A = 8" Spring
B = 12" Spring

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C L
Note: Requires Leadwire Type M or N.
-50 to +450° C M
Note: Requires Leadwire Type D, E, or F.

SHEATH DIAMETER (Inch)

I = 3/16 (.188)

SHEATH LENGTH ("A")

Whole Inches: Example 01 = 1 inch

SHEATH LENGTH ("A" Fractional)

A = None

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

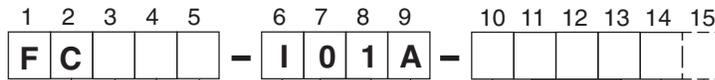
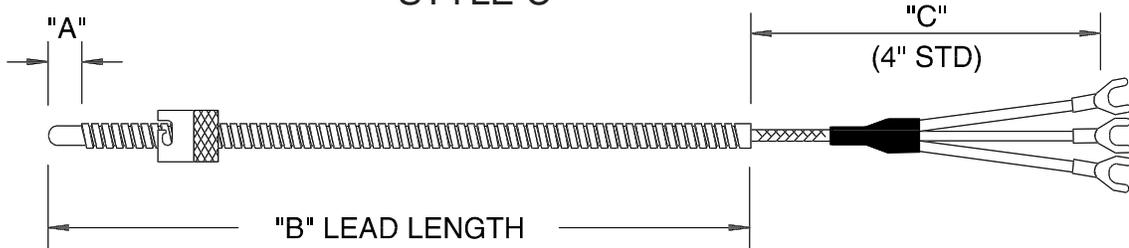
NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

LEADWIRE TYPE

D = Stranded Fiberglass (450°C)
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
M = Stranded Teflon (200°C)
N = Stranded Teflon with SS Flex Armor
O = Stranded Teflon with SS Overbraid

FLEX ARMOR ADJUSTABLE DEPTH RTD'S

STYLE C



CONSTRUCTION

C = Flex Armor

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C	L
Note: Requires Leadwire Type M or N.	
-50 to +450° C	M
Note: Requires Leadwire Type D, E, or F.	

SHEATH DIAMETER (Inch)

I = 3/16 (.188)

SHEATH LENGTH ("A")

Whole Inches: Example 01 = 1 inch

SHEATH LENGTH ("A" Fractional)

A = None

SPECIAL OPTIONS

C = Cable Clamp on Connector
 F = BX Connector on Leads

LEADWIRE TERMINATIONS

- A = None
- B = 2-1/2" Split Leads
- C = 2-1/2" Split Leads w/#8 Spade Lugs
- D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
- E = 2-1/2" Split Leads w/1/4" Push-on Connectors
- K = Standard Male Plug (200°C)
- L = Standard Plug with Mating Jack (200°C)
- M = Standard Female Jack (200°C)
- Q = Miniature Male Plug (200°C)
- R = Miniature Plug Mating Jack (200°C)
- S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

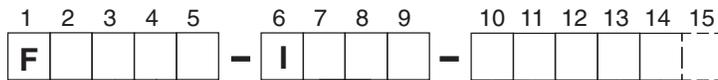
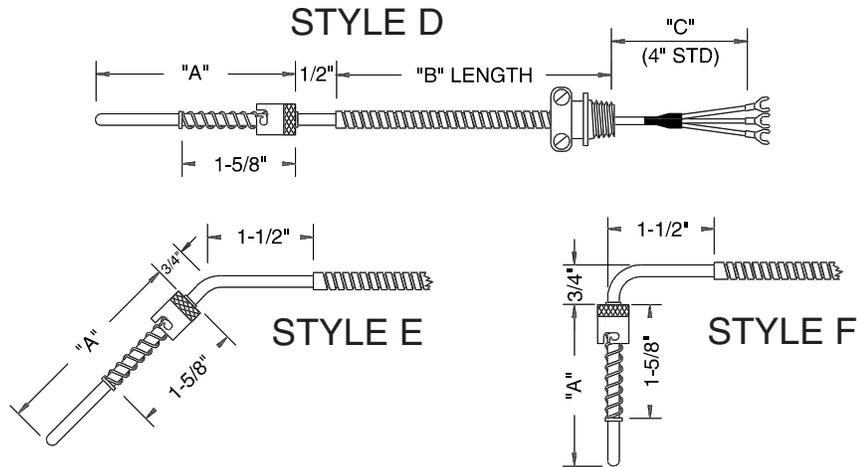
Whole Inches: Example: 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length.
 Example 048 (012)

LEADWIRE TYPE

- D = Stranded Fiberglass (450°C)
- E = Stranded Fiberglass with SS Flex Armor
- F = Stranded Fiberglass with SS Overbraid
- M = Stranded Teflon (200°C)
- N = Stranded Teflon with SS Flex Armor

FIXED BAYONET RTD'S



CONSTRUCTION

D = Straight
E = Bent 45°
F = Bent 90°

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C L
Note: Requires Leadwire Type M or N.
-50 to +450° C M
Note: Requires Leadwire Type D, E, or F.

SHEATH DIAMETER (Inch)

I = 3/16 (.188)
K = 1/4 (.250)

SHEATH LENGTH ("A")¹

Whole Inches: Example 03 = 3 inches

SHEATH LENGTH ("A" Fractional)

A = None	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp/Tube Adapter on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

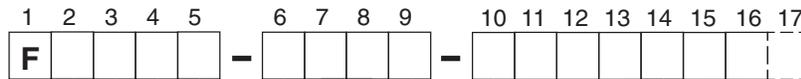
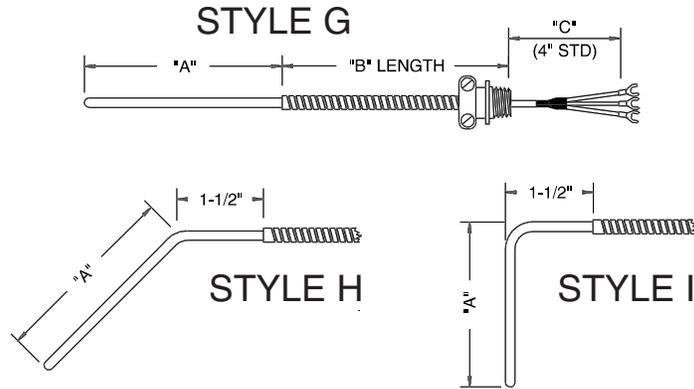
NOTE: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012)

LEADWIRE TYPE

D = Stranded Fiberglass (450°C)
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
M = Stranded Teflon (200°C)
N = Stranded Teflon with SS Flex Armor
O = Stranded Teflon with SS Overbraid

¹Refer to Table A on page P-21 for immersion depth calculations

RIGID TUBE RTD'S



CONSTRUCTION

G = Straight
H = Bent 45°
I = Bent 90°

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C L
Note: Requires Leadwire Type M or N.

-50 to +450° C M
Note: Requires Leadwire Type D, E, or F.

SHEATH DIAMETER (Inch)

I = 3/16 (.188)
K = 1/4 (.250)

SHEATH LENGTH ("A")

Whole Inches: Example 06 = 6 Inches

SHEATH LENGTH ("A" Fractional)

A = None	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp/Tube Adapter on Connector
F = BX Connector on Leads

SHEATH MOUNTING FITTINGS

1A = Adjustable SS Compression Fitting, 1/8" NPT
2A = Adjustable Brass Compr. Fitting, 1/8" NPT
2B = Adjustable Brass Compr. Fitting, 1/4" NPT
3A = Re-Adjustable SS Compr. Fitting, 1/8" NPT
25 = Mounting Flange with Brass Compr. Fitting
00 = None

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

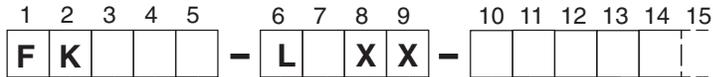
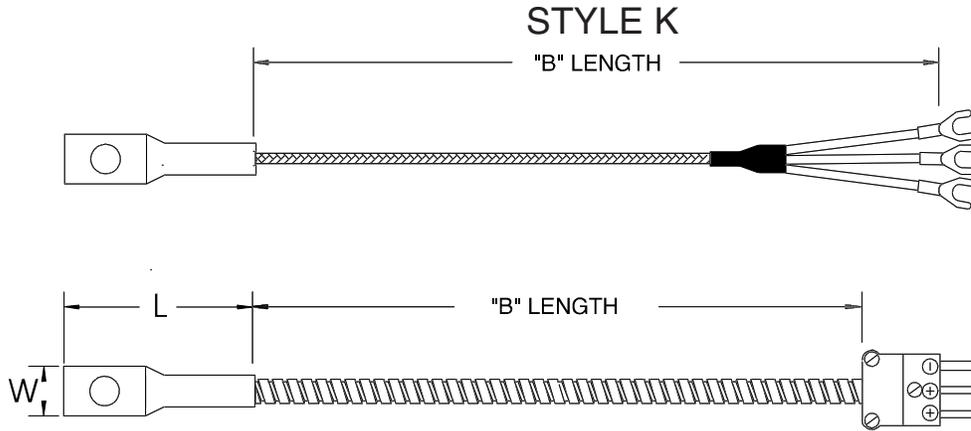
Whole Inches: Example: 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012)

LEADWIRE TYPE

D = Stranded Fiberglass (450°C)
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
M = Stranded Teflon (200°C)
N = Stranded Teflon with SS Flex Armor
O = Stranded Teflon with SS Overbraid

LUG STYLE SURFACE MOUNT RTD'S



CONSTRUCTION

K = Lug Style RTD

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C	L
-50 to +450° C	M

LUG TYPE

L = Heavy Duty Lug

BOLT/STUD SIZE

Code	Lug ID	"W"	"L"
3=#10	.196"	.50	1.80
4=1/4"	.266"	.50	1.80
5=5/16"	.328"	.59	1.95

X
X

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads w/1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

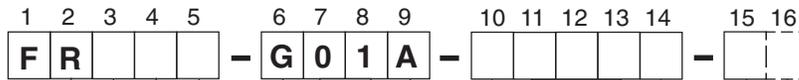
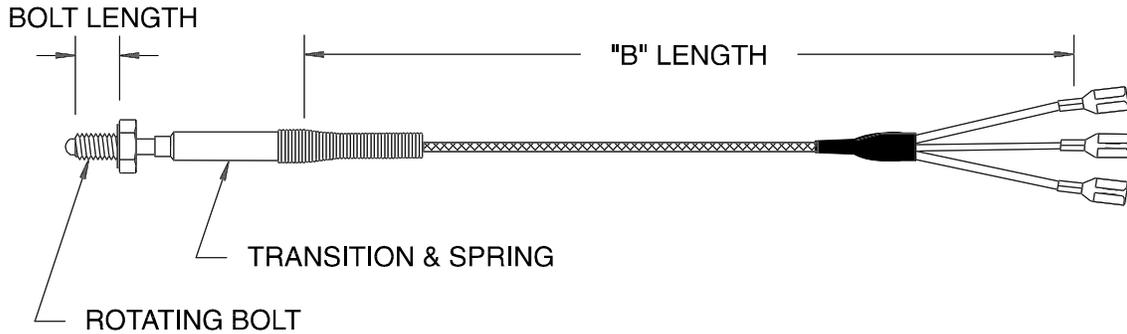
NOTE: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012)

LEADWIRE TYPE

E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
M = Stranded Teflon (200°C)
N = Stranded Teflon with SS Flex Armor
O = Stranded Teflon with SS Overbraid

THREADED NOZZLE BOLT RTD'S

STYLE R



CONSTRUCTION

R = Threaded Nozzle RTD

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C	L
-50 to +450° C	M

SHEATH DIAMETER (Inch)

G = 1/8 (.125)

SHEATH LENGTH ("A")

Whole Inches: 01 = 1 "

SHEATH LENGTH ("A" Fractional)

A = None

SPECIAL OPTIONS

C = Cable Clamp on Connector
F = BX Connector on Leads

BOLT SIZES

1 = 1/4" - 20 X 3/8" Long
2 = 1/4" - 28 X 3/8" Long
3 = M6 X 1.00 X 12
4 = M8 X 1.25 X 12

LEADWIRE TERMINATIONS

A = None
B = 2-1/2" Split Leads
C = 2-1/2" Split Leads w/#8 Spade Lugs
D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
E = 2-1/2" Split Leads with 1/4" Push-on Connectors
K = Standard Male Plug (200°C)
L = Standard Plug with Mating Jack (200°C)
M = Standard Female Jack (200°C)
Q = Miniature Male Plug (200°C)
R = Miniature Plug with Mating Jack (200°C)
S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

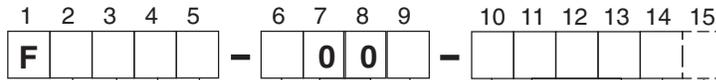
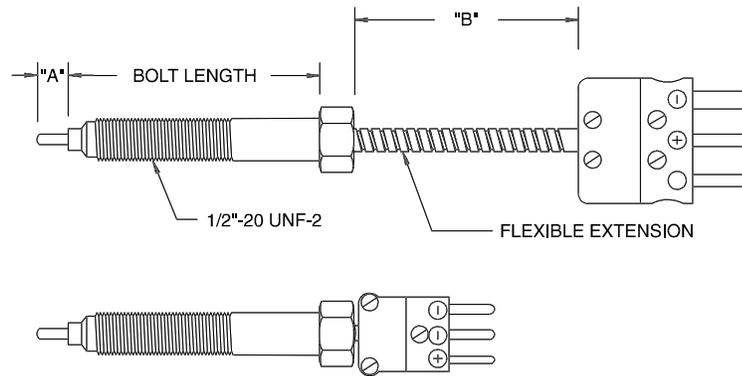
NOTE: For leads beyond flex armor ("C" length), include length after "B" length. Example 048 (012)

LEADWIRE TYPE

D = Stranded Fiberglass (450°C)
E = Stranded Fiberglass with SS Flex Armor
F = Stranded Fiberglass with SS Overbraid
M = Stranded Teflon (200°C)
N = Stranded Teflon with SS Flex Armor
O = Stranded Teflon with SS Overbraid

MELT BOLT RTD'S

STYLE M, N, & O



CONSTRUCTION

M = 3" Melt Bolt
 N = 4" Melt Bolt
 O = 6" Melt Bolt

ELEMENT TYPE

Resistance @ 0°C	2 Wire	3 Wire
Platinum 100Ω Single	A	B
Platinum 100Ω Dual	D	E

ACCURACY & TEMPERATURE COEFFICIENT

Accuracy @ 0°C	Din.00385	Jis.00392
Class B (.12%)	G	H
Class A (.06%)	J	K

TEMPERATURE RANGE

-50 to +200° C L
 -50 to +450° C M

SHEATH DIAMETER (Inch)

G = 1/8 (.125)
 I = 3/16 (.188)

SHEATH LENGTH ("A")

Whole Inches: Example 00 = None

SHEATH LENGTH ("A" Fractional)

A = Flush	J = 3/8
B = 1/16	L = 1/2
C = 1/8	N = 5/8
E = 3/16	Q = 3/4
G = 1/4	S = 7/8

SPECIAL OPTIONS

C = Cable Clamp on Connector
 F = BX Connector on Leads

LEADWIRE TERMINATIONS

A = None
 B = 2-1/2" Split Leads
 C = 2-1/2" Split Leads w/#8 Spade Lugs
 D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
 E = 2-1/2" Split Leads w/1/4" Push-on Connectors
 K = Standard Male Plug (200°C)
 L = Standard Plug with Mating Jack (200°C)
 M = Standard Female Jack (200°C)
 Q = Miniature Male Plug (200°C)
 R = Miniature Plug Mating Jack (200°C)
 S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")¹

Whole Inches: Example: 048 = 48 Inches

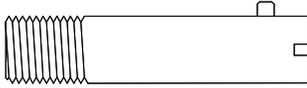
NOTES: For leads beyond flex armor ("C" length), include length after "B" length.
 Example 048 (012)

¹For rigid mount connector, insert 000.

LEADWIRE TYPE

E = Stranded Fiberglass with SS Flex Armor
 F = Stranded Fiberglass with SS Overbraid
 N = Stranded Teflon with SS Flex Armor

ACCESSORIES FOR PLASTICS INDUSTRY SENSORS

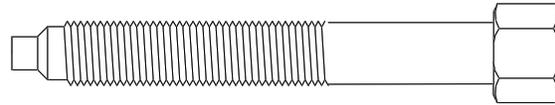


BAYONET ADAPTERS

(See Table A)

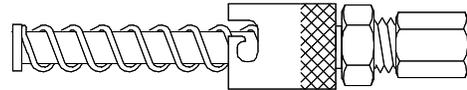
NICKEL PLATED STEEL		
Part #	Length	Thread
441050	7/8"	1/8" NPT
441052	1-1/4"	1/8" NPT
441053	1-1/2"	1/8" NPT
441055	2"	1/8" NPT
441056	2-1/4"	1/8" NPT
441057	2-1/2"	1/8" NPT
441058	3"	1/8" NPT
441059	3-1/2"	1/8" NPT
441060	4"	1/8" NPT
441061	5"	1/8" NPT
441062	6"	1/8" NPT
441065	7/8"	3/8"-24
441066	1-1/2"	3/8"-24
441068	2-1/2"	3/8"-24
441069	3-1/2"	3/8"-24

STAINLESS STEEL		
Part #	Length	Thread
441050S	7/8"	1/8"-27 NPT
441052S	1-1/4"	1/8"-27 NPT
441053S	1-1/2"	1/8"-27 NPT
441055S	2"	1/8"-27 NPT
441056S	2-1/4"	1/8"-27 NPT
441057S	2-1/2"	1/8"-27 NPT
441058S	3"	1/8"-27 NPT
441059S	3-1/2"	1/8"-27 NPT
441060S	4"	1/8"-27 NPT
441061S	5"	1/8"-27 NPT
441062S	6"	1/8"-27 NPT
441065S	7/8"	3/8"-24
441066S	1-1/2"	3/8"-24
441067S	1-3/4"	3/8"-24
441068S	2-1/2"	3/8"-24
441069S	3-1/2"	3/8"-24
441075S	2-1/2"	M10 X 1.5
441076S	2-3/8"	M10 X 1.5



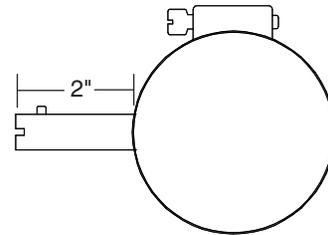
BLANK MELT BOLTS

Part #	Description
45203B	3" Long Blank Bolt
45204B	4" Long Blank Bolt
45206B	6" Long Blank Bolt



ADJUSTABLE BAYONET FITTING

Part #	Description (For 1/8" OD Sheath Only)
441080	Adjustable Bayonet w/Brass Ferrule
441080N	Adjustable Bayonet w/Nylon Ferrule
441080S	Adjustable Bayonet w/SST Ferrule



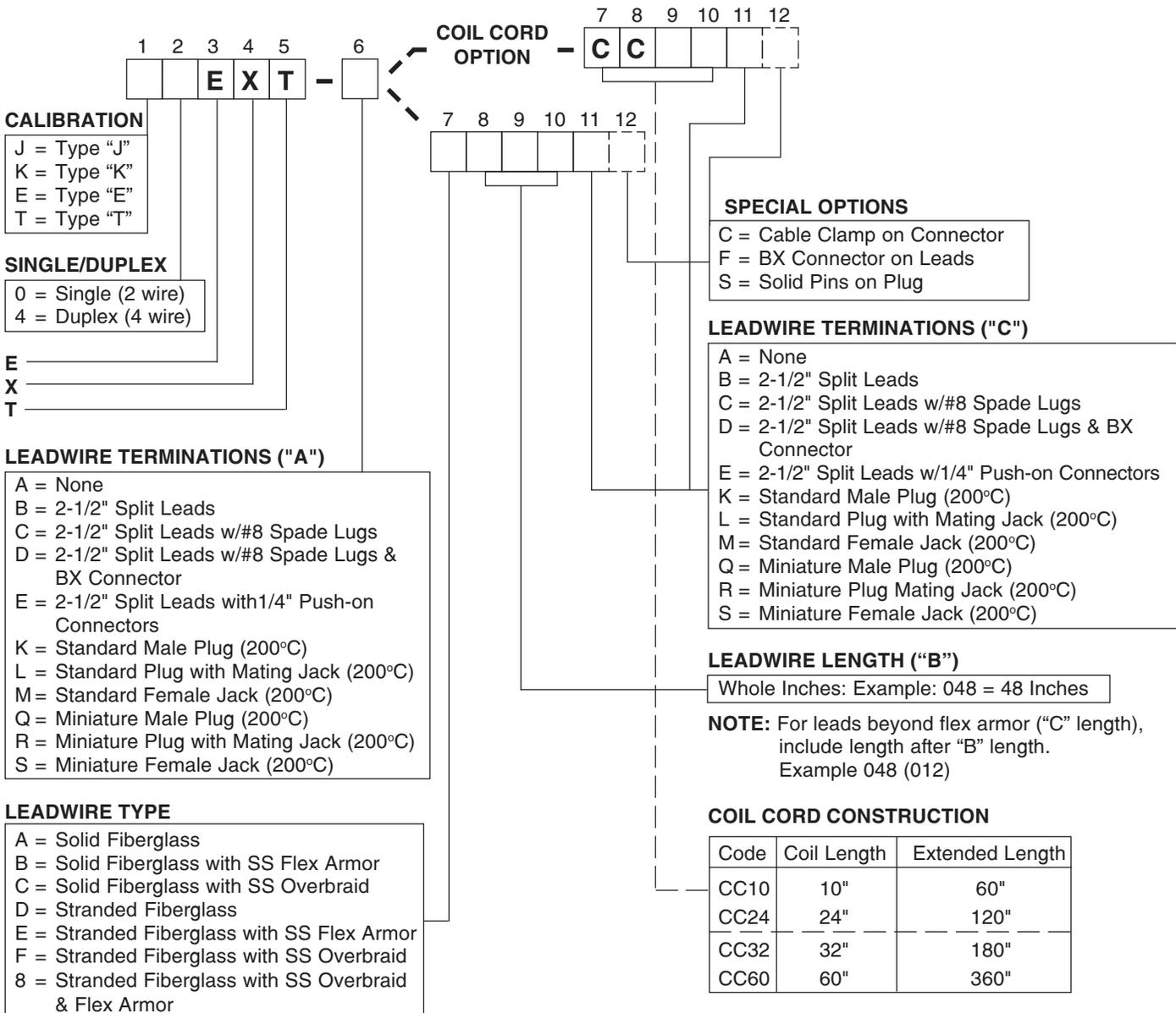
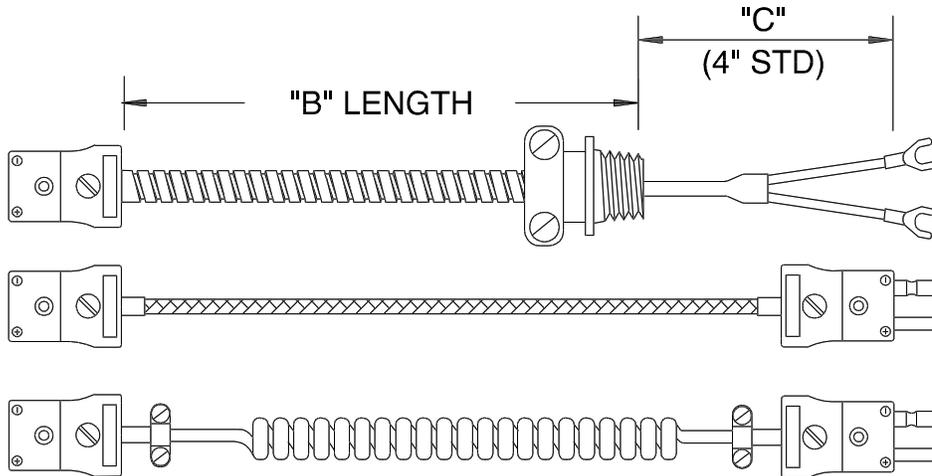
PIPE CLAMP ADAPTERS

Part #	Clamp Diameter	Pipe Size
PA 12	11/16 to 1-1/4"	1/2 to 3/4"
PA 24	1-1/6 to 2"	1 to 1-1/2"
PA 44	2 to 3-1/4"	2 to 2-1/2"
PA 60	3 to 4-1/4"	3 to 3-1/2"
PA 88	4-3/4 to 6"	4"
PA 96	5-1/4 to 6-1/2"	5"
PA 98	5-3/4 to 7"	6"

TABLE A - IMMERSION DEPTH CALCULATION

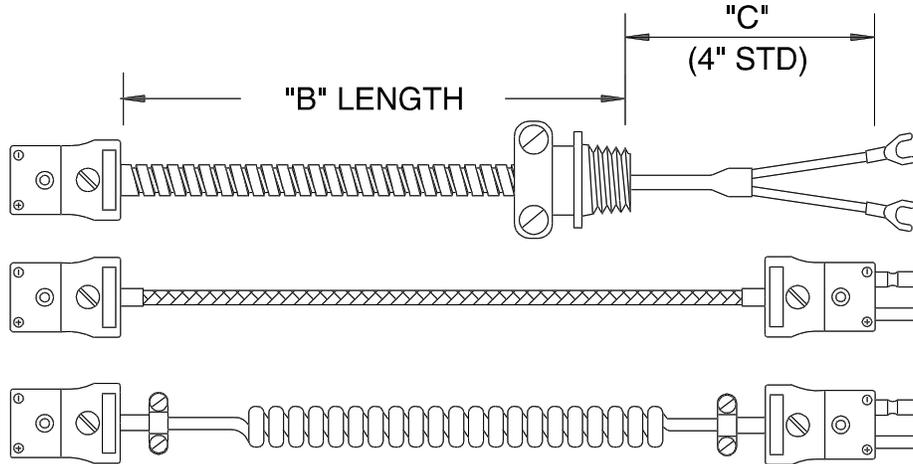
"A" Dimension	Immersion Depth For Various Bayonet Adapter Lengths					
	7/8"	1-1/4"	1-1/2"	2"	2-1/4"	2-1/2"
2"	5/8 to 1-1/8"	1/4 to 3/4"	-----	-----	-----	-----
2-1/2"	1-1/8 to 1-5/8"	3/4 to 1-1/4"	1/2 to 1"	-----	-----	-----
3"	1-5/8 to 2-1/8"	1-1/4 to 1-3/4"	1 to 1-1/2"	1/2 to 1"	1/4 to 3/4"	-----
3-1/2"	2-1/8 to 2-5/8"	1-3/4 to 2-1/4"	1-1/2 to 2"	1 to 1-1/2"	3/4 to 1-1/4"	1/2 to 1"
4"	2-5/8 to 3-1/8"	2-1/4 to 2-3/4"	2 to 2-1/2"	1-1/2 to 2"	1-1/4 to 1-3/4"	1 to 1-1/2"
4-1/2"	3-1/8 to 3-5/8"	2-3/4 to 3-1/4"	2-1/2 to 3"	2 to 2-1/2"	1-3/4 to 2-1/4"	1-1/2 to 2"
5"	3-5/8 to 4-1/8"	3-1/4 to 3-3/4"	3 to 3-1/2"	2-1/2 to 3"	2-1/4 to 2-3/4"	2 to 2-1/2"
5-1/2"	4-1/8 to 4-5/8"	3-3/4 to 4-1/4"	3-1/2 to 4"	3 to 3-1/2"	2-3/4 to 3-1/4"	2-1/2 to 3"
6"	4-5/8 to 5-1/8"	4-1/4 to 4-3/4"	4 to 4-1/2"	3-1/2 to 4"	3-1/4 to 3-3/4"	3 to 3-1/2"

FLEXIBLE THERMOCOUPLE EXTENSIONS



NOTE: 26 Gauge stranded conductors maximum temperature rating, 221°F

FLEXIBLE RTD EXTENSIONS



R = RTD Extension

CONFIGURATIONS

- 2 = 2 wire
- 3 = 3 wire
- 4 = 4 wire
- 6 = 6 wire

E
X
T

LEADWIRE TERMINATIONS ("A")

- A = None
- B = 2-1/2" Split Leads
- C = 2-1/2" Split Leads w/#8 Spade Lugs
- D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
- E = 2-1/2" Split Leads w/1/4" Push-on Connectors
- K = Standard Male Plug (200°C)
- L = Standard Plug with Mating Jack (200°C)
- M = Standard Female Jack (200°C)
- Q = Miniature Male Plug (200°C)
- R = Miniature Plug Mating Jack (200°C)
- S = Miniature Female Jack (200°C)

LEADWIRE TYPE

- D = Stranded Fiberglass (450°C)
- E = Stranded Fiberglass with SS Flex Armor
- F = Stranded Fiberglass with SS Overbraid
- M = Stranded Teflon (200°C)
- N = Stranded Teflon with SS Flex Armor

COIL CORD OPTION

7 8 9 10 11 12

SPECIAL OPTIONS

- C = Cable Clamp on Connector
- F = BX Connector on Leads

LEADWIRE TERMINATIONS ("C")

- A = None
- B = 2-1/2" Split Leads
- C = 2-1/2" Split Leads w/#8 Spade Lugs
- D = 2-1/2" Split Leads w/#8 Spade Lugs & BX Connector
- E = 2-1/2" Split Leads w/1/4" Push-on Connectors
- K = Standard Male Plug (200°C)
- L = Standard Plug with Mating Jack (200°C)
- M = Standard Female Jack (200°C)
- Q = Miniature Male Plug (200°C)
- R = Miniature Plug Mating Jack (200°C)
- S = Miniature Female Jack (200°C)

LEADWIRE LENGTH ("B")

Whole Inches: Example: 048 = 48 Inches

NOTE: For leads beyond flex armor ("C" length), include length after "B" length.
Example 048 (012)

COIL CORD CONSTRUCTION

Code	Coil Length	Extended Length
CC10	10"	60"
CC36	36"	180"

Available in 2 or 3 conductor styles only.

NOTE: 26 Gauge stranded conductors maximum temperature rating, 221°F

