

# TABLE OF CONTENTS

## PLASTIC & PACKAGING INDUSTRY

### THERMOCOUPLES

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
A1	MINIATURE ADJUSTABLE BAYONET STYLE THERMOCOUPLE.....	1
A2	ADJUSTABLE BAYONET STYLE THERMOCOUPLE.....	2
A3	¼" DIAMETER ADJUSTABLE BAYONET STYLE THERMOCOUPLE.....	3
B1	FIXED BAYONET STYLE THERMOCOUPLE .....	4
B2	FIXED BAYONET STYLE THERMOCOUPLE 45° BEND.....	5
B3	FIXED BAYONET STYLE THERMOCOUPLE 90° BEND.....	6
C1	TUBE & WIRE GENERAL PURPOSE THERMOCOUPLE .....	7
C2	GENERAL PURPOSE THERMOCOUPLE 45° BEND .....	8
C3	GENERAL PURPOSE THERMOCOUPLE 90° BEND .....	9
C4	METRIC SIZE TUBE & WIRE GENERAL PURPOSE THERMOCOUPLE .....	10
C5	METRIC GENERAL PURPOSE THERMOCOUPLE 45° BEND .....	11
C6	METRIC GENERAL PURPOSE THERMOCOUPLE 90° BEND .....	12
D1	NOZZLE BOLT STYLE THERMOCOUPLE .....	13
E1	RING TERMINAL STYLE THERMOCOUPLE.....	14
F1	SHIM STOCK STYLE THERMOCOUPLE. BRASS SHIM.....	15
F2	SHIM STOCK STYLE THERMOCOUPLE. STAINLESS STEEL SHIM .....	16
G1	PIPE CLAMP STYLE THERMOCOUPLE. ....	17
H1	EUROPEAN ADJUSTABLE BAYONET THERMOCOUPLE .....	18
H2	EUROPEAN ADJUSTABLE BAYONET. EXPOSED BRASS TIP STYLE .....	19
H3	EUROPEAN FIXED ADJUSTABLE BAYONET THERMOCOUPLE.....	20
J1	HOT RUNNER STYLE THERMOCOUPLE.....	21
J2	METRIC HOT RUNNER STYLE THERMOCOUPLE.....	22
K1	MELT BOLT THERMOCOUPLE. MINERAL INSULATED .....	23
K2	RIGID MELT BOLT THERMOCOUPLE. MINERAL INSULATED .....	24
K3	FIXED MELT BOLT THERMOCOUPLE. MINERAL INSULATED .....	25
K4	ADJUSTABLE MELT BOLT THERMOCOUPLE. MINERAL INSULATED.....	26

### RESISTANCE TEMPERATURE DEVICES (RTD's)

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1A	MINIATURE ADJUSTABLE BAYONET STYLE RTD.....	27
2A	ADJUSTABLE BAYONET STYLE RTD.....	28
3A	¼" DIAMETER ADJUSTABLE BAYONET STYLE RTD.....	29
1B	FIXED BAYONET STYLE RTD .....	30
2B	FIXED BAYONET STYLE RTD 45° BEND .....	31
3B	FIXED BAYONET STYLE RTD 90° BEND .....	32
1C	TUBE & WIRE GENERAL PURPOSE RTD .....	33

2C	GENERAL PURPOSE RTD 45° BEND .....	34
3C	GENERAL PURPOSE RTD 90° BEND .....	35
4C	METRIC TUBE & WIRE GENERAL PURPOSE RTD .....	36
5C	METRIC GENERAL PURPOSE RTD 45° BEND .....	37
6C	METRIC GENERAL PURPOSE RTD 90° BEND .....	38
1D	NOZZLE BOLT STYLE RTD .....	39
1E	RING TERMINAL STYLE RTD .....	40
1F	SHIM STOCK STYLE RTD. STAINLESS STEEL SHIM.....	41
1G	PIPE CLAMP STYLE RTD .....	42
1K	MELT BOLT RTD. MINERAL INSULATED .....	43
2K	RIGID MELT BOLT RTD. MINERAL INSULATED .....	44
3K	FIXED MELT BOLT RTD. MINERAL INSULATED.....	45
4K	ADJUSTABLE MELT BOLT RTD .....	46

## MINERAL INSULATED TEMPERATURE SENSORS

### THERMOCOUPLES

MODEL	DESCRIPTION	PAGE
L1	MINERAL INSULATED SENSOR C/W PLASTIC HANDLE .....	47
M1	STRAIGHT BASIC ELEMENTS .....	48
M2	GENERAL PURPOSE, STRAIGHT PROBE.....	49
M3	GENERAL PURPOSE WITH A 45° BEND .....	50
M4	GENERAL PURPOSE WITH A 90° BEND .....	51
M5	METRIC STRAIGHT ELEMENTS .....	52
M6	METRIC GENERAL PURPOSE, STRAIGHT PROBE.....	53
M7	METRIC GENERAL PURPOSE WITH A 45° BEND.....	54
M8	METRIC GENERAL PURPOSE WITH A 90° BEND.....	55
N1 & N2	WELDED ON HEX BUSHING MOUNTING STYLE .....	56
N3	COMPRESSION FITTING MOUNTING STYLE .....	57
N4	HEX NIPPLE MOUNTING STYLE, WELDED & SPRING LOADED.....	58
P1	STANDARD STEPPED THERMOWELL ASSEMBLY .....	59
P2	STANDARD STRAIGHT THERMOWELL ASSEMBLY .....	60
P3	STANDARD TAPERED THERMOWELL ASSEMBLY.....	61
P4	NIPPLE-UNION NIPPLE THERMOWELL ASSEMBLY.....	62

### RESISTANCE TEMPERATURE DEVICES (RTD's)

MODEL	DESCRIPTION	PAGE
1L	MINERAL INSULATED SENSOR C/W PLASTIC HANDLE .....	63
1M	STRAIGHT BASIC ELEMENTS .....	64
2M	GENERAL PURPOSE, STRAIGHT PROBE.....	65
3M	GENERAL PURPOSE WITH A 45° BEND.....	66

4M	GENERAL PURPOSE WITH A 90° BEND.....	67
5M	METRIC STRAIGHT BASIC ELEMENTS .....	68
6M	METRIC GENERAL PURPOSE, STRAIGHT PROBE.....	69
7M	METRIC GENERAL PURPOSE WITH A 45° BEND.....	70
8M	METRIC GENERAL PURPOSE WITH A 90° BEND.....	71
1N & 2N	WELDED ON HEX BUSHING MOUNTING STYLE .....	72
3N	COMPRESSION FITTING MOUNTING STYLE .....	73
4N	HEX NIPPLE MOUNTING STYLE, WELDED & SPRING LOADED.....	74
1P	STANDARD STEPPED THERMOWELL ASSEMBLY .....	75
2P	STANDARD STRAIGHT THERMOWELL ASSEMBLY.....	76
3P	STANDARD TAPERED THERMOWELL ASSEMBLY.....	77
4P	NIPPLE-UNION NIPPLE THERMOWELL ASSEMBLY.....	78

### **INDUSTRIAL THERMOCOUPLES**

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
Q1	BASE METAL BARE THERMOCOUPLE ELEMENTS .....	79
Q2	BASE METAL THERMOCOUPLE ELEMENTS WITH CERAMIC INSULATORS.....	80
Q3	BASE METAL ANGLE THERMOCOUPLE ELEMENTS WITH CERAMIC INSULATORS.....	81
R1	BASE METAL THERMOCOUPLE & METAL PROTECTION TUBE ASSEMBLY .....	82
R2	BASE METAL ANGLE THERMOCOUPLE & METAL PROTECTION TUBE ASSEMBLY .....	83
R3	BASE METAL THERMOCOUPLE & METAL PROTECTION TUBE ASSEMBLY .....	84
S1	BASE METAL THERMOCOUPLE & CERAMIC PROTECTION TUBE ASSEMBLY....	85
S2	BASE METAL THERMOCOUPLE, CERAMIC PROTECTION TUBE & TERMINAL. BLOCK ASSEMBLY .....	86

### **NOBEL METAL THERMOCOUPLES**

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
T1	BARE ELEMENT THERMOCOUPLES.....	87
T2	NOBEL METAL THERMOCOUPLE ELEMENTS WITH CERAMIC INSULATORS.....	88
T3	NOBEL METAL THERMOCOUPLE & METAL PROTECTION TUBE ASSEMBLY .....	89
T4	NOBEL METAL THERMOCOUPLE & CERAMIC PROTECTION TUBE ASSEMBLY .....	90
T5	NOBEL METAL THERMOCOUPLE, CERAMIC PROTECTION TUBE & TERMINAL. BLOCK ASSEMBLY .....	91

### **SPECIAL THERMOCOUPLE ASSEMBLIES**

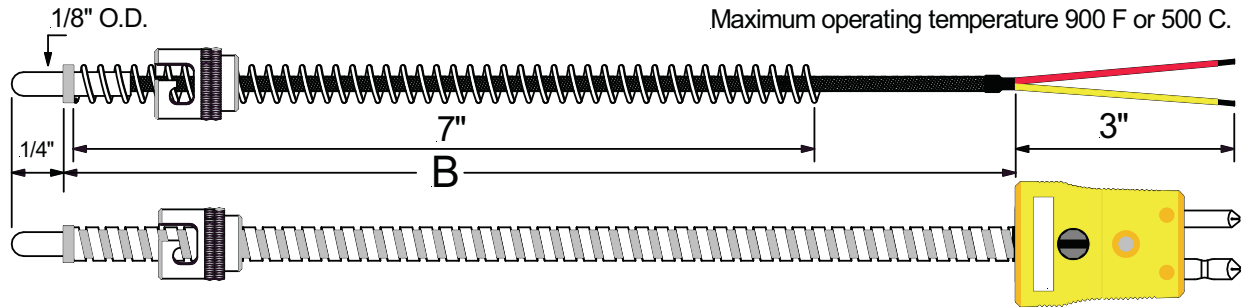
<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
Z1	FLANGED STYLE TUBE & WIRE THERMOCOUPLE PROBE .....	92
Z2	MINERAL INSULATED THERMOCOUPLE & TERMINAL BLOCK ASSEMBLY .....	93
Z3	EPOXY POTTED RTD ASSEMBLY .....	94
Z4	MAGNET MOUNT THERMOCOUPLE .....	95

## ACCESSORIES

<b>MODEL</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
	P-SERIES THERMOWELLS .....	96
X1	THERMOCOUPLE EXTENSION CABLES .....	97
X2	RTD EXTENSION CABLES.....	98
	STANDARD CONNECTORS .....	99
	PANEL JACKS .....	100
	MINI MALE CONNECTORS .....	101
	FEMALE CONNECTORS .....	101
	STANDARD PANEL PLATES.....	102
	BAYONET ADAPTORS .....	103
	METRIC ADAPTORS.....	104
	2-WIRE TRANSMITTERS.....	105
	NYLON BARRIER TERMINAL STRIPS.....	106
	COMPRESSION FITTINGS.....	107
	<b><u>THERMOCOUPLE WIRE:</u></b>	
	PVC INSULATED CABLE, RATED FOR 221°F (105°C) MAX.....	108-109
	SHIELDED PVC INSULATED CABLE, RATED FOR 221°F (105°C).....	110-111
	PFA INSULATED CABLE, RATED FOR 500°F (260°C) MAX.....	112-113
	FIBERGLASS INSULATED CABLE, RATED FOR 950°F (510°C) MAX.....	114-115
	<b><u>DATA:</u></b>	
	COLOR CODES .....	116
	TEMPERATURE AND METRIC CONVERSION DATA.....	117

# Plastic Industry Thermocouples

## Miniature Adjustable Bayonet Style Thermocouple



Bayonet cap runs along spring & armor cable length.

Steps To Follow:

Model No. A1  1.  2.  -  3.  4.  5.  6.

1.	Calibration
J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

4.	Wire Description
S	24 Gage Stranded Stainless Steel Braid
X	0.210" O.D. Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

2.	Junction
G	Grounded
U	Ungrounded

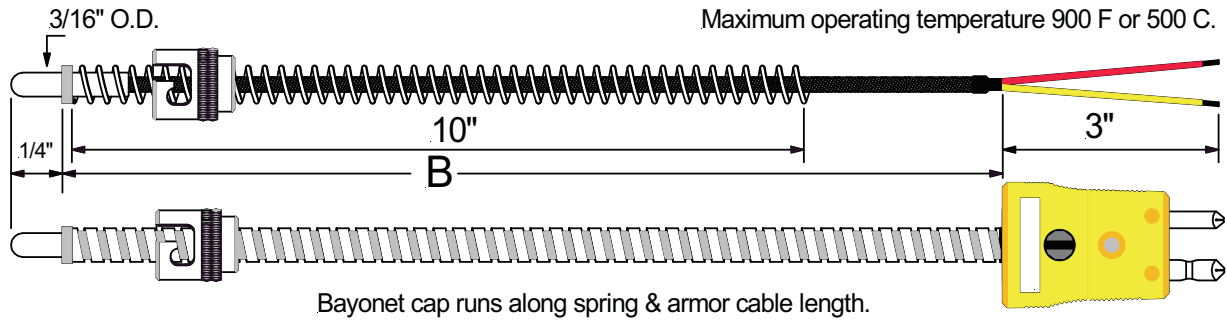
5.	Termination Type
1	3" Split Leads & 1/2" Bare Ends.
2	3" Split Leads & No.10 Spade Lugs.
3	Standard Male Plug
4	Standard Female Jack
5	Mini Male Plug
6	Mini Female Jack

3.	"B" Dimension
"B" = <u>0 4 8</u> "	
Leads Wire Length In Inches	

6.	Accessories
A	None
B	Bx Connector
C	Cable Clamp

# Plastic Industry Thermocouples

## Adjustable Bayonet Style Thermocouple



Steps To Follow:

Model No. A2  1.  2.  -  3.  -  4.  5.  6.  7.

**1. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum
D	Dual J: (+) Iron Vs. (-) Constantan
Y	Dual K: (+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**2. Junction**

G	Grounded
U	Ungrounded

**3. "B" Dimension**

"B" = 0 4 8 "

Leads Wire Length In Inches

**4. Wire Description**

S	20 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	20 Gage Stranded Fiberglass Cable
T	20 Gage Stranded Teflon Cable

**5. Termination Type**

1	3" Split Leads & 1/2" Bare Ends.
2	3" Split Leads & No.10 Spade Lugs.
3	Standard Male Plug
4	Standard Female Jack
5	Mini Male Plug
6	Mini Female Jack

**6. Accessories**

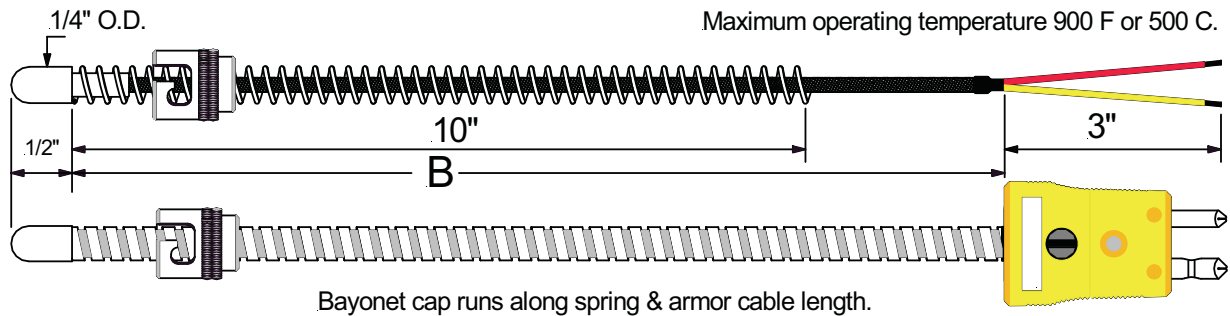
A	None
B	Bx Connector
C	Cable Clamp

**7. Probe Tip Description**

1	Flat Tip
2	Radius Tip
3	Drill Point Tip

# Plastic Industry Thermocouples

## 1/4" Adjustable Bayonet Style Thermocouple



Steps To Follow:

Model No. **A3**  1.  2.  -  3.  -  4.  5.  6.  7.

**1. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum
D	Dual J: (+) Iron Vs. (-) Constantan
Y	Dual K: (+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**2. Junction**

G	Grounded
U	Ungrounded

**3. "B" Dimension**

"B" = <u>0 4 8</u> "
Leads Wire Length In Inches

**4. Wire Description**

S	20 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	20 Gage Stranded Fiberglass Cable
T	20 Gage Stranded Teflon Cable

**5. Termination Type**

1	3" Split Leads & 1/2" Bare Ends.
2	3" Split Leads & No.10 Spade Lugs.
3	Standard Male Plug
4	Standard Female Jack
5	Mini Male Plug
6	Mini Female Jack

**6. Accessories**

A	None
B	Bx Connector
C	Cable Clamp

**7. Probe Tip Description**

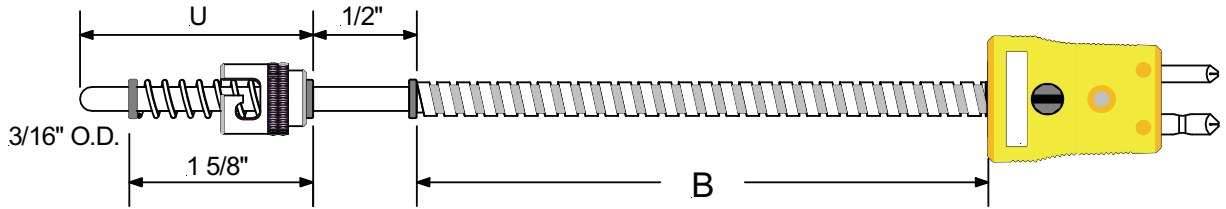
1	Flat Tip
2	Radius Tip
3	Drill Point Tip

# Plastic Industry Thermocouples

## Fixed Bayonet Style Thermocouple

Model Code: **B1**

Maximum operating temperature 900 F or 500 C.



**B1**

A	B	C	D	E	F	G	H	I	J	K
---	---	---	---	---	---	---	---	---	---	---

A	Outside Diameter
A	1/8"
B	3/16"
C	1/4"

B	"U" Dimension
Specify "U" Length In Inches <u>0 6</u>	

Example "U" is 6" = 06

C	"U" Length Fractional
A	0"
B	1/8"
C	3/16"
D	1/4"
E	1/2"
F	5/8"
G	3/4"
H	7/8"

D	"B" Dimension
Specify "B" Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

E	Calibration	
	+	-
J	White	Red
K	Yellow	Red
T	Blue	Red

F	Junction Styles			
Element Description	Grounded		Ungrounded	
	Common	Common	Isolated	
Single	G		U	
Duplex	D	C	I	

G	Cable Conductor Description
1	24 Gage, Solid Conductor
2	24 Gage, 7 Stranded Conductors
3	20 Gage, Solid Conductor
4	20 Gage, 7 Stranded Conductors

H	Cable Insulation Description
A	Fiberglass Insulation: 950F / 510C
B	Teflon Insulation: 500F / 260C
C	P.V. C. Insulation: 221F / 105C
D	Teflon, Shielded + Drain Wire
E	P.V.C., Shielded + Drain Wire

I	Outer Jacket Protection
1	None
2	Stainless Steel Braid
3	Armor Flexible Cable: 0.280" Outside Diameter
4	Armor Flexible Cable 0.210" Outside Diameter

Metal Braid Protection not available on P.V.C insulation cable.

J	Termination
A	3 1/2" Split leads & bare ends
B	3 1/2" Split leads & No.10 spade lugs.
C	Standard Male Plug (350 F)
D	Standard Female Jack (350 F)
E	Mini Male Plug (350 F)
F	Mini Female Jack (350 F)

K	Termination Options
1	None
2	Bx Connector
3	Cable Clamp

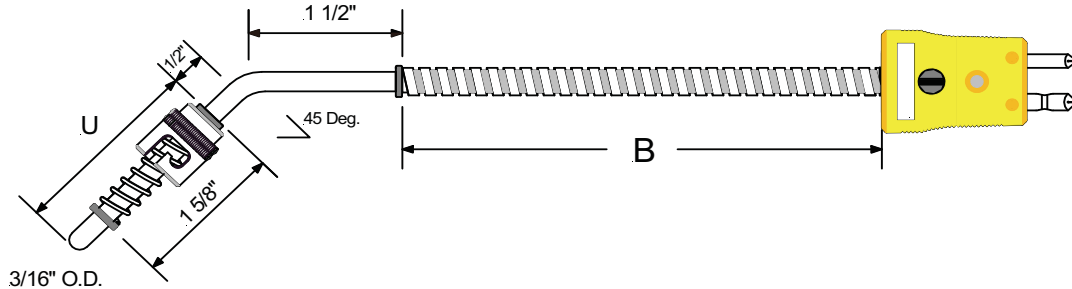


# Plastic Industry Thermocouples

## Fixed Bayonet Style Thermocouple. 45° Bend.

Model Code: **B2**

Maximum operating temperature 900 F or 500 C.

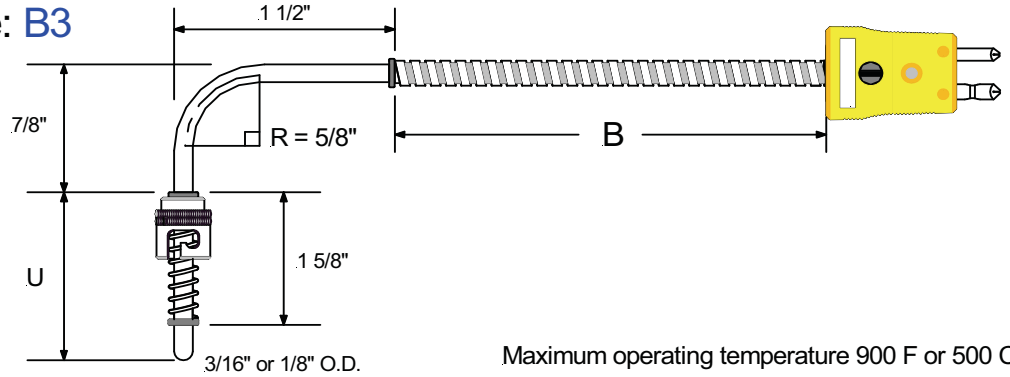


A	B	C	D	E	F	G	H	I	J	K																																																																																																																																																									
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# Plastic Industry Thermocouples

## Fixed Bayonet Style Thermocouple. 90° Bend.

Model Code: **B3**



Maximum operating temperature 900 F or 500 C.

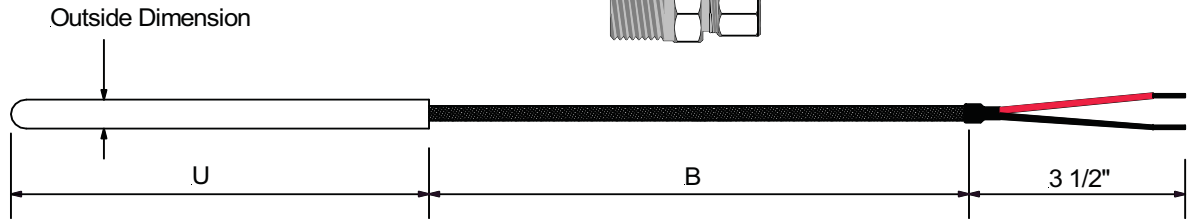
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# Plastic Industry Thermocouples

## Tube & Wire General Purpose Thermocouple

Model Code: **C1**

Compression Fitting ( Optional). Item purchased separately



Maximum operating temperature: 900F or 500C

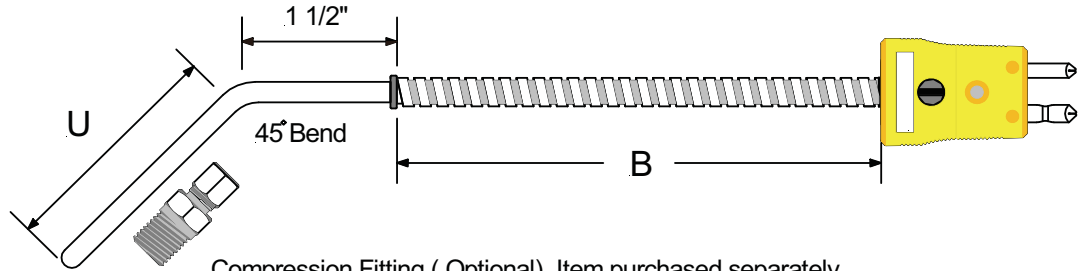
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# Plastic Industry Thermocouple

## General Purpose Thermocouple-45° Bend

Model Code: **C2**

Maximum operating temperature: 900F or 500C



**C2**                                                

A Outside Diameter	
A	1/8"
B	3/16"
C	1/4"
D	5/16"

B "U" Dimension	
Specify " U " Length In Inches <u>0 6</u>	

Example "U" is 6" = 06

C "U" Length Fractional	
A	0"
B	1/8"
C	3/16"
D	1/4"
E	1/2"
F	5/8"
G	3/4"
H	7/8"

D "B" Dimension	
Specify " B " Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

E Calibration		
	+	-
J	White	Red
K	Yellow	Red
T	Blue	Red

F Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	C	I

G Cable Conductor Description	
1	24 Gage, Solid Conductor
2	24 Gage, 7 Stranded Conductors
3	20 Gage, Solid Conductor
4	20 Gage, 7 Stranded Conductors

H Cable Insulation Description	
A	Fiberglass Insulation: 950F / 510C
B	Teflon Insulation: 500F / 260C
C	P.V. C. Insulation: 221F / 105C
D	Teflon, Shielded + Drain Wire
E	P.V.C., Shided + Drain Wire

I Outer Jacket Protection	
1	None
2	Stainless Steel Braid
3	Armor Flexible Cable: 0.280" Outside Diameter
4	Armor Flexible Cable 0.210" Outside Diameter

Metal Braid Protection not available on P.V.C insulation cable.

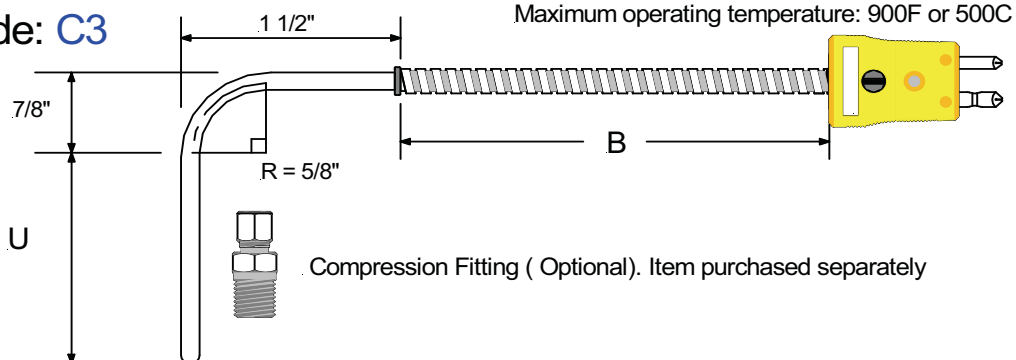
J Termination	
A	3 1/2" Split leads & bare ends
B	3 1/2" Split leads & No.10 spade lugs.
C	Standard Male Plug (350 F)
D	Standard Female Jack (350 F)
E	Mini Male Plug ( 350 F )
F	Mini Female Jack (350 F)

K Termination Options	
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry Thermocouple

## General Purpose Thermocouple-90° Bend

Model Code: **C3**



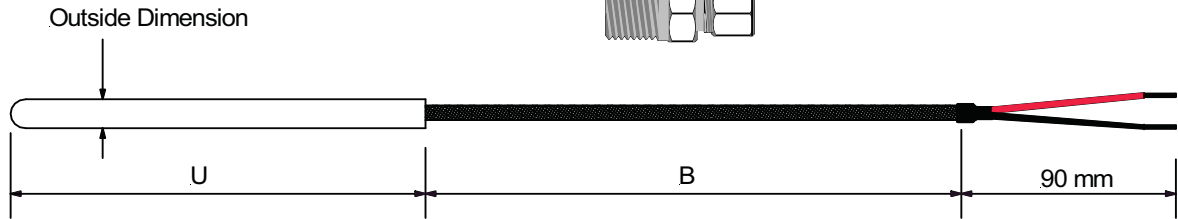
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# Plastic Industry Thermocouples

## Metric Size Tube & Wire General Purpose Thermocouple

Model Code: **C4**

Compression Fitting ( Optional). Item purchased separately



Maximum operating temperature: 500C

**C4**     -  -    -

A Outside Diameter	
A	2mm
B	3mm
C	4mm
D	5mm
E	6mm

B "U" Dimension	
Specify " U " Length In mm <u>150</u>	
Example "U" , is 150mm = 150	

C Calibration		
	+	-
J	White	Red
K	Yellow	Red
T	Blue	Red

E "B" Dimension	
Specify " B " Length In Meters <u>0.3</u>	
Example "B" is 3 M = 03	

F Cable Conductor Description	
1	24 Gage, Solid Conductor
2	24 Gage, 7 Stranded Conductors
3	20 Gage, Solid Conductor
4	20 Gage, 7 Stranded Conductors

H Outer Jacket Protection	
1	None
2	Stainless Steel Braid
3	Armor Flexible Cable: 7.11mm Outside Diameter
4	Armor Flexible Cable 5.33mm Outside Diameter

Metal Braid Protection not available on P.V.C insulation cable.

I Termination	
A	90mm Split leads & bare ends
B	90mm Split leads & No.10 spade lugs.
C	Standard Male Plug ( 218 C )
D	Standard Female Jack ( 218 C )
E	Mini Male Plug ( 218 C )
F	Mini Female Jack ( 218 C )

D Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	C	I

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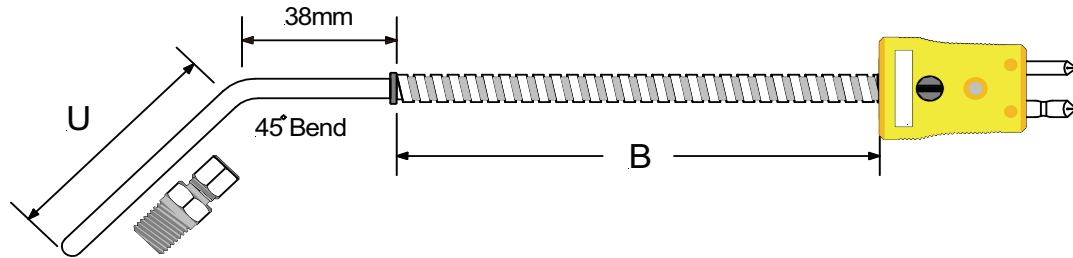
J Termination Options	
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry Thermocouple

## Metric General Purpose Thermocouple-45° Bend

Model Code: **C5**

Maximum operating temperature: 500C



Compression Fitting ( Optional). Item purchased separately

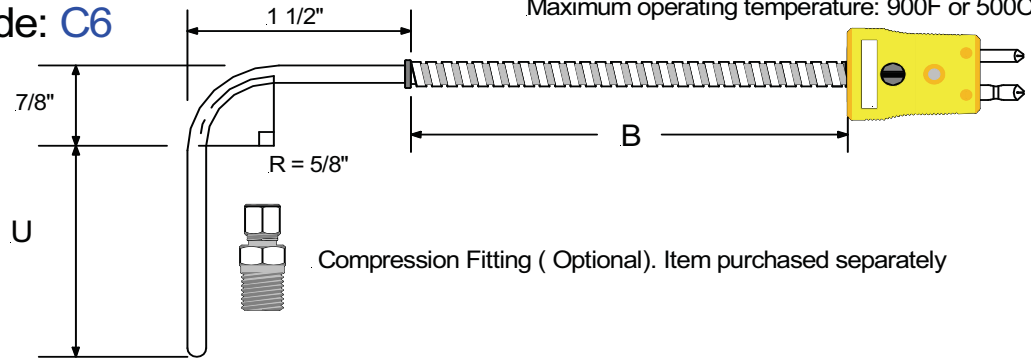
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2	Bx Connector																																																								
3	Cable Clamp																																																								

# Plastic Industry Thermocouple

## Metric General Purpose Thermocouple-90° Bend

Model Code: **C6**

Maximum operating temperature: 900F or 500C



<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>
<b>C6</b>									

<b>A</b>	<b>Outside Diameter</b>
A	2mm
B	3mm
C	4mm
D	5mm
E	6mm

<b>B</b>	<b>"U" Dimension</b>
Specify " U " Length In mm <u>150</u>	
Example "U" is 150mm = 150	

<b>C</b>	<b>Calibration</b>
	<b>+</b> <b>-</b>
J	White    Red
K	Yellow   Red
T	Blue     Red

<b>D</b>	<b>Junction Styles</b>		
Element Description	Grounded	Ungrounded	
	Common	Common	Isolated
Single	G		U
Duplex	D	C	I

<b>E</b>	<b>"B" Dimension</b>
Specify " B " Length In Meters <u>0.3</u>	
Example "B" is 3 M = 03	

<b>F</b>	<b>Cable Conductor Description</b>
1	24 Gage, Solid Conductor
2	24 Gage, 7 Stranded Conductors
3	20 Gage, Solid Conductor
4	20 Gage, 7 Stranded Conductors

<b>G</b>	<b>Cable Insulation Description</b>
A	Fiberglass Insulation: 950F / 510C
B	Teflon Insulation: 500F / 260C
C	P.V. C. Insulation: 221F / 105C
D	Teflon, Shielded + Drain Wire
E	P.V.C., Shilded + Drain Wire

<b>H</b>	<b>Outer Jacket Protection</b>
1	None
2	Stainless Steel Braid
3	Armor Flexible Cable: 7.11mm Outside Diameter
4	Armor Flexible Cable 5.33mm Outside Diameter
Metal Braid Protection not available on P.V.C insulation cable.	

<b>I</b>	<b>Termination</b>
A	90mm Split leads & bare ends
B	90mm Split leads & No.10 spade lugs.
C	Standard Male Plug ( 218 C )
D	Standard Female Jack ( 218 C )
E	Mini Male Plug ( 218 C )
F	Mini Female Jack ( 218 C )

<b>J</b>	<b>Termination Options</b>
1	None
2	Bx Connector
3	Cable Clamp

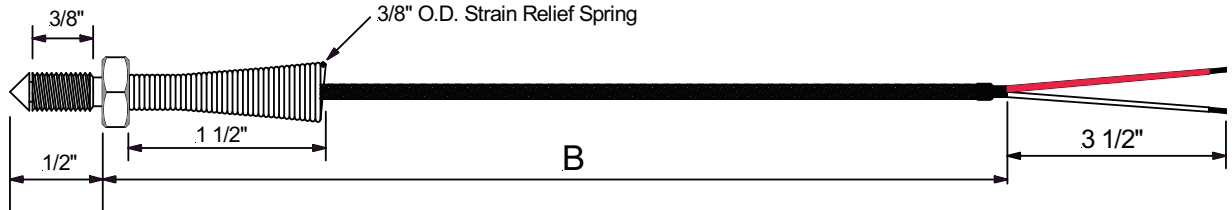


# Plastic Industry Thermocouples

## Nozzle Bolt Style Thermocouple

Model Code: **D1**

Maximum operating temperature: 900F or 500C



Steps:

Model: **D1**  1.  2.  3.  4.  -  5.  -  6.  7.

<b>1.</b>	<b>Nozzle Bolt Thread Size</b>
1	1/4" x 28 UNF
2	M6 x 1mm
3	M8 x 1mm
4	M8 x 1.25mm

<b>5.</b>	<b>"B" Dimension</b>
<b>"B" = <u>0 4 8</u> "</b> Leads Wire Length In Inches	

<b>2.</b>	<b>Wire Description</b>
S	20 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	20 Gage Stranded Fiberglass Cable
T	20 Gage Stranded Teflon Cable

<b>6.</b>	<b>Termination Type</b>
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & No. 10 Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

<b>3.</b>	<b>Calibration</b>
J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

<b>7.</b>	<b>Accessories</b>
1	None
2	Bx Connector
3	Cable Clamp

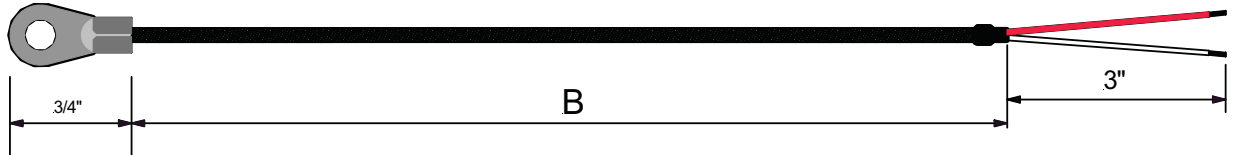
<b>4.</b>	<b>Junction</b>
G	Grounded
U	Ungrounded

# Plastic Industry Thermocouples

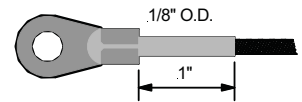
## Ring Terminal Style Thermocouple

Model Code: **E1**

Maximum operating temperature: 900F or 500C



### Unground Style Configuration



Steps:

Model: **E1**  1.  2.  3.  4.  -  5.  -  6.  7.

1.	Ring Terminal Hole Size
1	No. 8 Ring Terminal
2	No. 10 Ring Terminal
3	1/4" I.D. Hole Ring Terminal
4	1/2" I.D. Hole Ring Terminal

5.	"B" Dimension
	"B" = <u>0 4 8</u> "
	Leads Wire Length In Inches

2.	Wire Description
S	20 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	20 Gage Stranded Fiberglass Cable
T	20 Gage Stranded Teflon Cable

6.	Termination Type
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & No.10 Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

3.	Calibration
J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum
T	(+) Copper Vs. (-) Copper-Nickel

7.	Accessories
1	None
2	Bx Connector
3	Cable Clamp

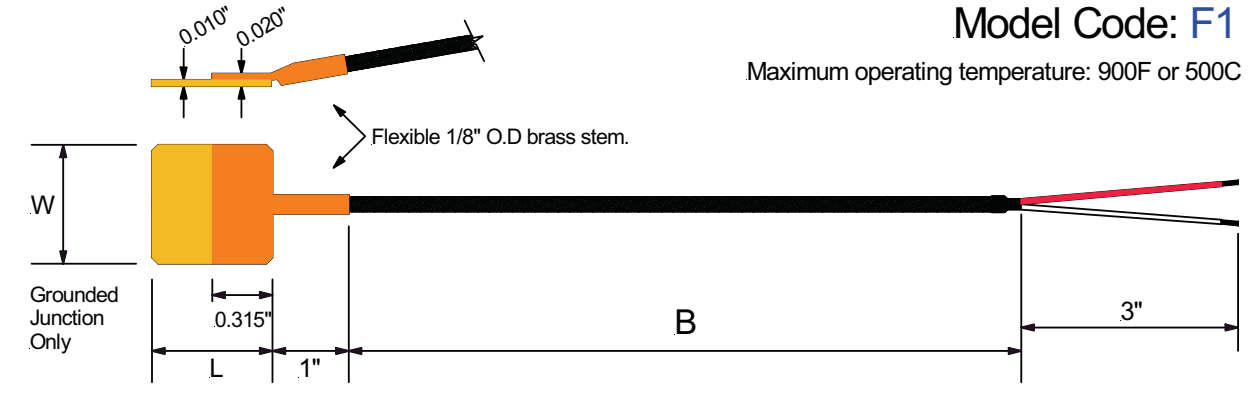
4.	Junction
G	Grounded
U	Ungrounded

# Plastic Industry Thermocouples

## Shim Stock Style Thermocouple. Brass Shim

Model Code: **F1**

Maximum operating temperature: 900F or 500C



Steps:

Model: **F1**  1.  2.  3.  4.  5.  6.

1.	Shim Size: Width x Length
1	1/2" x 1/2"
2	3/4" x 3/4"
3	3/4" x 7/8"
4	1" x 1"

4.	"B" Dimension
	<b>"B" = <u>0 4 8</u> "</b>
	Leads Wire Length In Inches

2.	Wire Description
S	20 Gage, Stranded, Stainless Steel Braid
F	20 Gage, Stranded, Fiberglass Cable

5.	Termination Type
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & No. 10 Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

3.	Calibration
J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

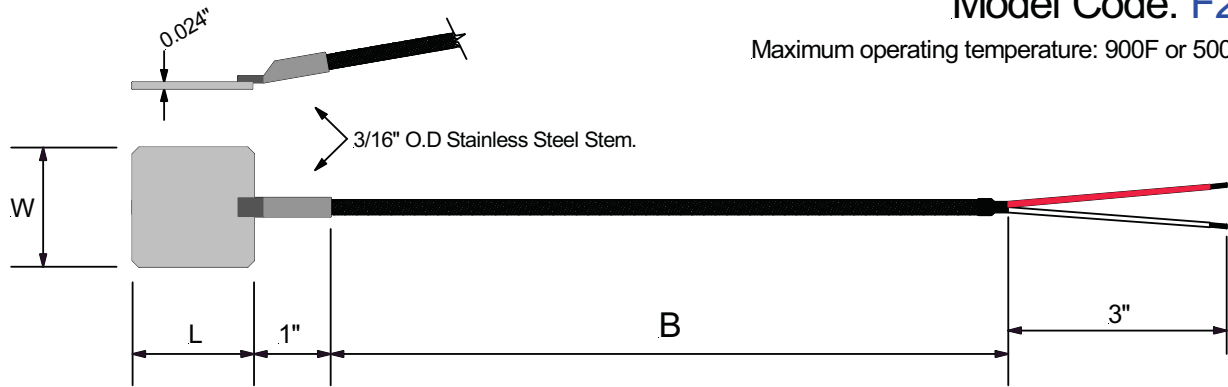
6.	Accessories
1	None
2	Cable Clamp

# Plastic Industry Thermocouples

## Shim Stock Style Thermocouple. Stainless Steel Shim

Model Code: **F2**

Maximum operating temperature: 900F or 500C



Steps: 1.  2.  3.  4.  5.  6.  7.

Model: **F2**    -  -

**1. Shim Size: Width x Length**

1	1/2" x 1/2"
2	3/4" x 3/4"
3	3/4" x 7/8"
4	1" x 1"

**2. Wire Description**

S	20 Gage, Stranded, Stainless Steel Braid
F	20 Gage, Stranded, Fiberglass Cable
X	Flexible Armor Cable

**3. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**4. "B" Dimension**

<b>"B" = 0 4 8 "</b>
Leads Wire Length In Inches

**5. Junction**

G	Grounded
U	Ungrounded

**6. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & No.10 Spade Lugs
2	Standard Male Plug
3	Standard Female Jack
4	Mini Male Plug
5	Mini Female Jack

**7. Accessories**

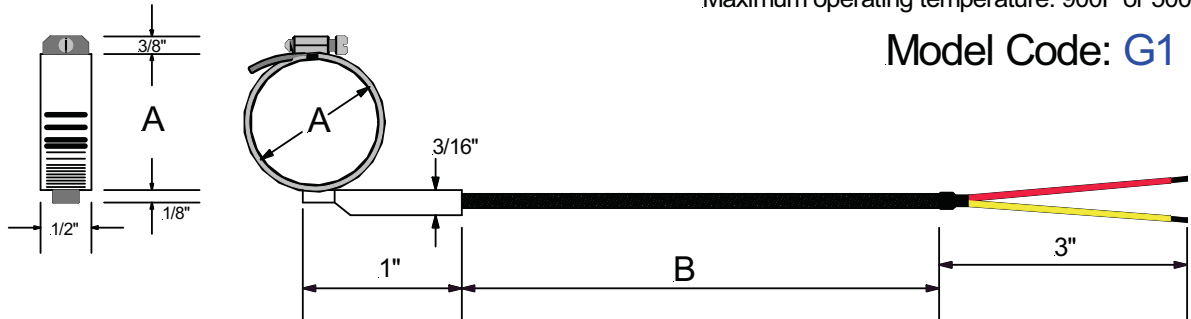
A	None
B	Bx Connector
C	Cable Clamp

# Plastic Industry Thermocouples

## Pipe Clamp Style Thermocouple

Maximum operating temperature: 900F or 500C

Model Code: **G1**



Steps To Follow:

Model No. **G1**  1.  2.  3.  4.  5.  6.

**1. Pipe Clamp Description**  
A= Diameter Range

	Minimum	Maximum
1	1 1/16"	2"
2	1 13/16"	2 3/4"
3	2 9/16"	3 1/2"
4	3"	5"
5	5"	7"

**4. "B" Dimension**

"B"= 0 4 8 "

Leads Wire Length In Inches

**2. Wire Description**

S	20 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	20 Gage Stranded Fiberglass Cable

**5. Termination Type**

A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

**3. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**6. Accessories**

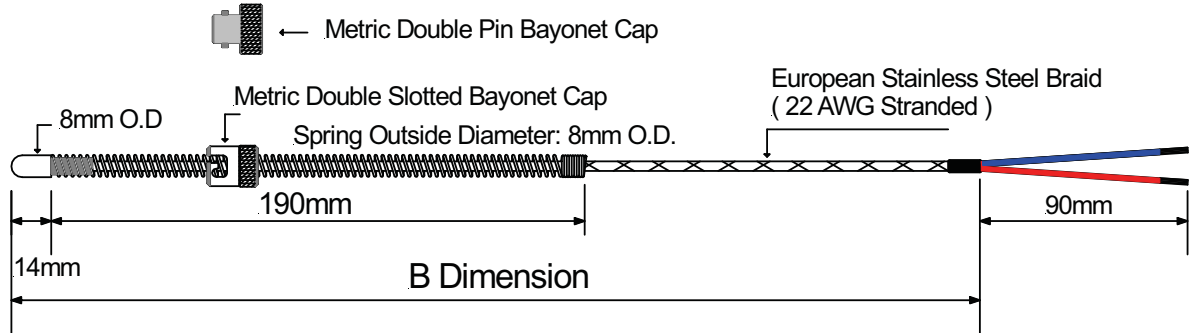
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry Thermocouples

## European Adjustable Bayonet

Model Code: **H1**

Maximum operating temperature: 900F or 500C



Steps To Follow:

Model: **H1**    -  -

**1. Probe Tip Description**

R	Radius Tip Style
F	Flat Tip Style

**4. "B" Dimension**

"B" = <u>0 4 8</u> "	OR	"B" = <u>3 M</u>
Length In Inches		Length In Meters

**2. Bayonet Cap Option**

1	M12 Bayonet Cap
2	M14 Bayonet Cap
3	M16 Bayonet Cap
4	Double Pin Bayonet Cap

**5. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**3. Termination Type**

A	3 1/2" Split Leads & 1/2" Bare Ends.
B	3 1/2" Split Leads & Pin Connectors
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

**6. Junction Styles**

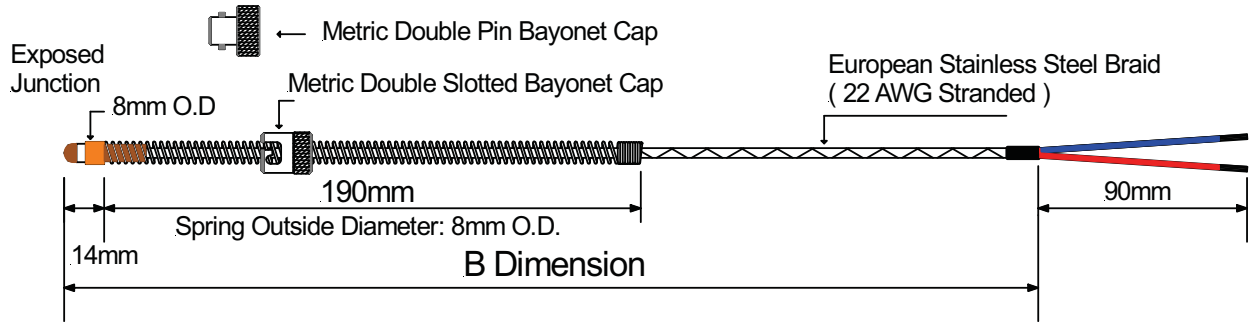
	Grounded	Ungrounded
Single	G	U
Dual	D	Y

# Plastic Industry Thermocouples

## European Adjustable Bayonet , Exposed Brass Tip Style

Model Code: **H2**

Maximum operating temperature: 900F or 500C



Steps To Follow:

Model: **H2**  <sup>1.</sup>  <sup>2.</sup>  -  <sup>3.</sup>  -  <sup>4.</sup>

1.	Bayonet Cap Option
1	M12 Bayonet Cap
2	M14 Bayonet Cap
3	M16 Bayonet Cap
4	Double Pin Bayonet Cap

3.	"B" Dimension
"B" = <u>0 4 8</u> "	OR "B" = <u>3 M</u>
Length In Inches	Length In Meters

2.	Termination Type
A	3 1/2" Split Leads & 1/2" Bare Ends.
B	3 1/2" Split Leads & Pin Connectors
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

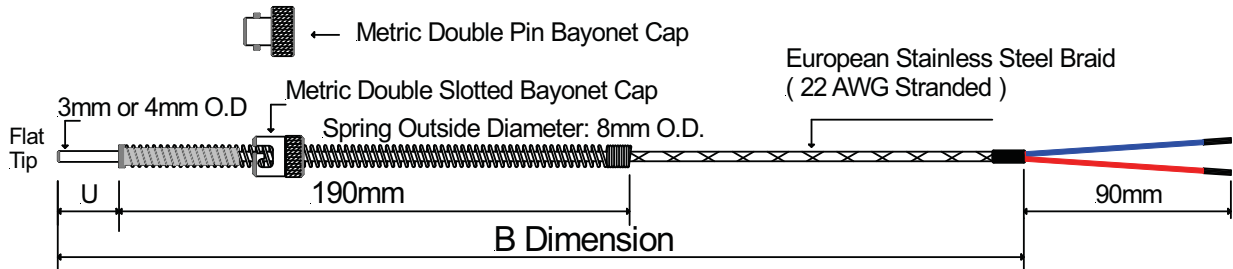
4.	Calibration
J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

# Plastic Industry Thermocouples

## European Fixed Adjustable Bayonet

Model Code: **H3**

Maximum operating temperature: 900F or 500C



Steps To Follow:

Model: **H3**  <sup>1.</sup>  <sup>2.</sup>  <sup>3.</sup>  <sup>4.</sup>  <sup>5.</sup>  <sup>6.</sup>  <sup>7.</sup>

**1. Probe Tip Diameter**

A	3mm Outside Diameter
B	4mm Outside Diameter

**2. "U" Dimension**

"U" = 25 mm  
Length In MM

**3. Bayonet Cap Option**

A	M12 Bayonet Cap
B	M14 Bayonet Cap
C	M16 Bayonet Cap
D	Double Pin Bayonet Cap

**4. "B" Dimension**

"B" = 048" OR "B" = 3M  
Length In Inches OR Length In Meters

**5. Termination Type**

A	3 1/2" Split Leads & 1/2" Bare Ends.
B	3 1/2" Split Leads & Pin Connectors
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

**6. Calibration**

J	(+) Iron Vs. (-) Constantan
K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum

**7. Junction Styles**

	Grounded	Ungrounded
Single	G	U
Dual	D	Y

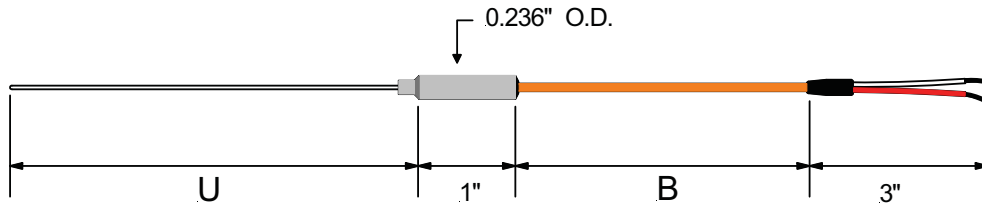


# Mineral Insulated Thermocouple

## Hot Runner Style Thermocouple

Model Code: **J1**

Maximum operating temperature: 900F or 500C



Compression fittings are sold separately. See accessory section.

Model: **J1**

A	Outside Diameter
1	0.020" = 0.5mm
2	0.032"
3	0.040" = 1mm
4	0.059" = 1.5mm
5	0.063"

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	Inconel 600

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E	Calibration	
	Standard Limits of Error	Special Limits of Error
1	J	6 J
2	K	7 K
3	T	8 T
4	E	9 E
5	N	10 N

F	Junction Styles		
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	F	H

G	"B" Dimension
Specify "B" Length In Inches <u>0 4 8</u>	
Example "B" is 48" = 048	

H	Cable Insulation Description
A	24 Gage, Stranded, Kapton
B	24 Gage, Solid, Kapton
C	24 Gage, Stranded, Teflon
D	24 Gage, Solid, Teflon
E	24 Gage, Stranded, Fiberglass
F	24 Gage, Solid, Fiberglass

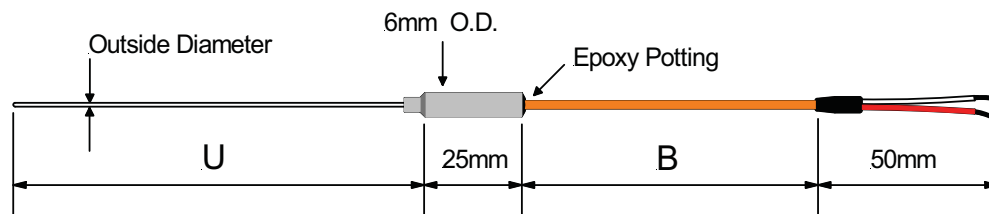
I	Termination
1	3" Split Leads & 1/2" bare ends.
2	3" Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

## Metric Hot Runner Style Thermocouple

**Model Code: J2**

Maximum operating temperature: 500F or 260C



Compression fittings are sold separately. See accessory section.

Model: **J2**    **A**    **B**    **C**    **D**    **E**    **F**    **G**    **H**

A Outside Diameter	
1	0.5mm
2	1mm
3	1.5mm

B Sheath Material	
A	304 Stainless
B	316 Stainless
C	Inconel 600

C "U" Dimension	
Specify "U" Length In mm <u>150</u>	

Example "U" is 150mm = 150

D Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

E Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	F	H

F "B" Dimension	
Specify "B" Length In Meters <u>0.2</u>	

Example "B" is 2M = 02

G Cable Insulation Description	
A	24 Gage, Stranded, Kapton
B	24 Gage, Solid, Kapton
C	24 Gage, Stranded, Teflon
D	24 Gage, Solid, Teflon
E	24 Gage, Stranded, Fiberglass
F	24 Gage, Solid, Fiberglass

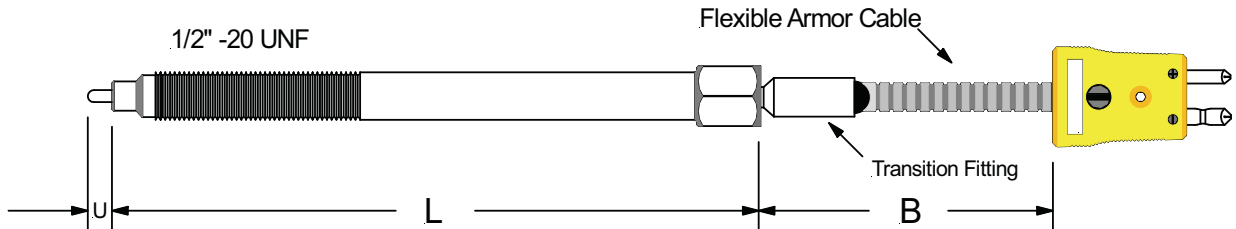
H Termination	
1	50mm Split Leads, 15mm bare ends.
2	50mm Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Plastic Industry Thermocouples

## Melt Bolt Thermocouple. Mineral Insulated

Model Code: **K1**

Operating Temperature: -200 C to +500 C



Steps:

Model **K1**    -   -

A	Melt Bolt Length "L"
3	3"
4	4"
6	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.125"
B	0.188"
C	0.250"

C	Insertion Depth "U"
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	Calibration			
	Standard Limits of Error		Special Limits of Error	
1	J	6	J	
2	K	7	K	
3	T	8	T	
4	E	9	E	
5	N	10	N	

E	Junction Styles			
Element Description	Grounded		Ungrounded	
	Common	Common	Isolated	
Single	G		U	
Duplex	D	F	H	

F	"B" Dimension
	Specify "B" Length In Inches <u>0 4 8</u>
	Example "B" is 048 =48"

G	Termination
A	3" Split leads, 1/2" bare ends.
B	3" Split leads & No. 10 spade lugs.
C	Standard Male Plug (350 F)
D	Standard Female Jack (350 F)
E	Mini Male Plug ( 350 F )
F	Mini Female Jack (350 F)

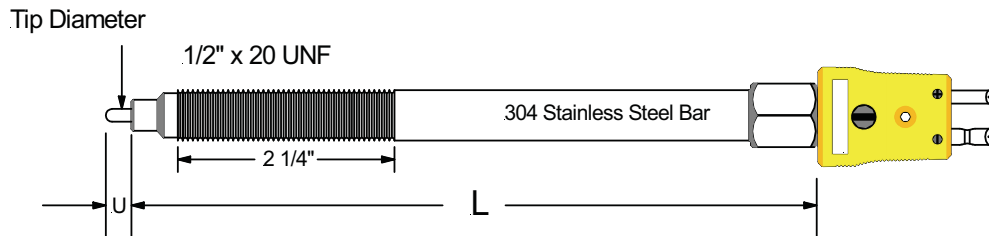
H	Termination Options
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry Thermocouples

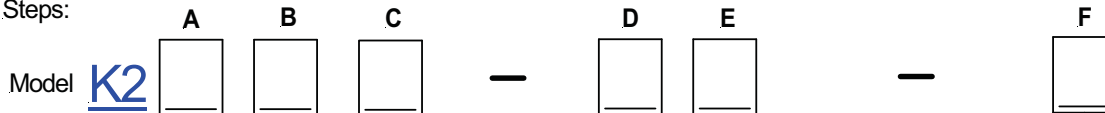
## Rigid Melt Bolt Thermocouple. Mineral Insulated

Model Code: **K2**

Operating Temperature: -200 C to +500 C



Steps:



A	Melt Bolt Length " L "
3	3"
4	4"
6	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.125"
B	0.188"
C	0.250"

C	Insertion Depth " U "
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	Calibration			
Standard Limits of Error		Special Limits of Error		
1	J	6	J	
2	K	7	K	
3	T	8	T	
4	E	9	E	
5	N	10	N	

E	Junction Styles			
Element Description	Grounded		Ungrounded	
	Common	Common	Common	Isolated
Single	G			U
Duplex	D	F		H

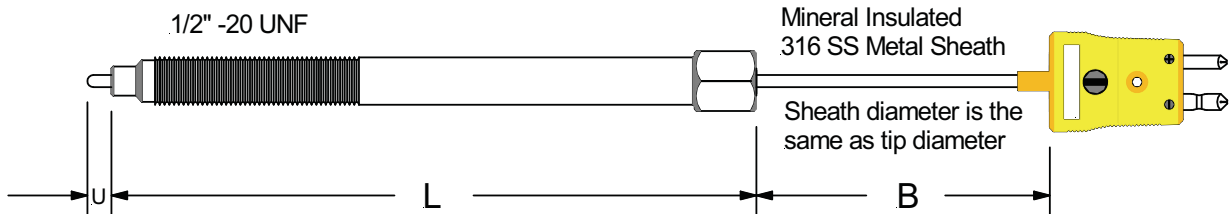
F	Termination	
1	Standard Male Plug (350 F)	
2	Standard Female Jack (350 F)	
3	Mini Male Plug ( 350 F )	
4	Mini Female Jack (350 F)	

# Plastic Industry Thermocouples

## Fixed Melt Bolt Thermocouple. Mineral Insulated

Model Code: **K3**

Operating Temperature: -200 C to +500 C



Steps:

Model **K3**    —   —

A	Melt Bolt Length "L"
3	3"
4	4"
6	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.125"
B	0.188"
C	0.250"

C	Insertion Depth "U"
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	Calibration	
	Standard Limits of Error	Special Limits of Error
1	J	6 J
2	K	7 K
3	T	8 T
4	E	9 E
5	N	10 N

E	Junction Styles		
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	F	M

F	"B" Dimension
	Specify "B" Length In Inches <u>0 4</u>

Example "B" is 04 = 4"

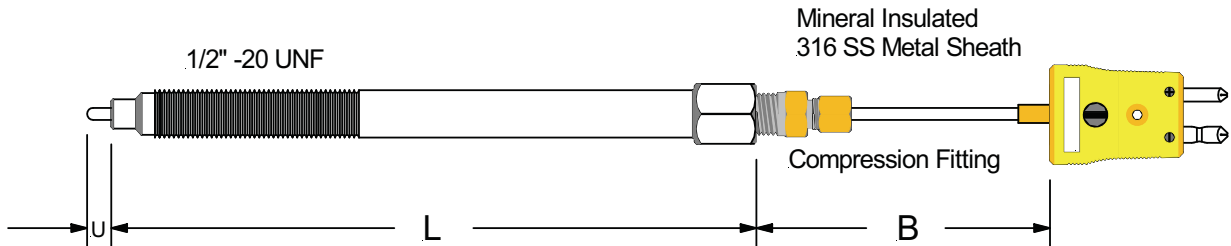
G	Termination
A	Standard Male Plug.
B	Standard Female Jack.
C	Mini Male Plug.
D	Mini Female Jack.

# Plastic Industry Thermocouples

## Adjustable Melt Bolt Thermocouple. Mineral Insulated

Model Code: **K4**

Operating Temperature: -200 C to +500 C



Steps:

Model **K4**    —   —

A	Melt Bolt Length "L"
3	3"
4	4"
6	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.125"
B	0.188"
C	0.250"

C	Insertion Depth "U"
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	Calibration	
	Standard Limits of Error	Special Limits of Error
1	J	6 J
2	K	7 K
3	T	8 T
4	E	9 E
5	N	10 N

E	Junction Styles		
Element Description	Grounded	Ungrounded	
	Common	Common	Isolated
Single	G		U
Duplex	D	F	H

F	"B" Dimension
	Specify "B" Length In Inches <u>0.4</u>
	Example "B" is 04" = 4"

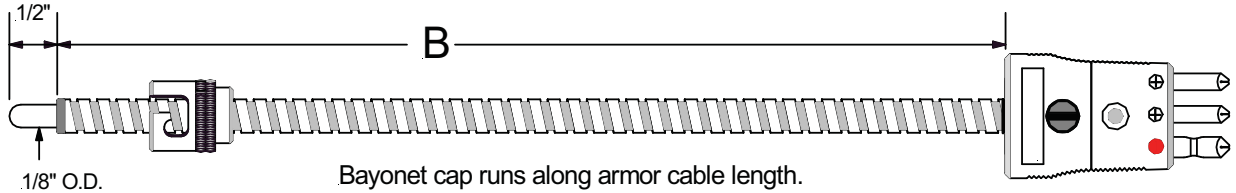
G	Termination
A	Standard Male Plug.
B	Standard Female Jack.
C	Mini Male Plug.
D	Mini Female Jack.

# Plastic Industry RTD's

## Miniature Adjustable Bayonet Style RTD

Armor cable outside diameter: 0.210"

Operating Temperature: -200 C to +250 C



Steps To Follow:

Model: 1A  1.  2.  3.  4.  5.

1. **Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

4. **RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

2. **Accessories**

N	None
X	Bx Connector
C	Cable Clamp

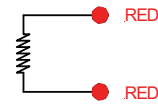
5. **RTD Wire Connection**

2	2 Wire Configuration
3	3 Wire Configuration
4	4 Wire Configuration

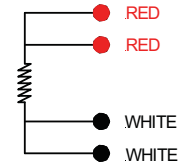
3. **"B" Dimension**

"B" = <u>0 4 8</u> "
Leads Wire Length In Inches

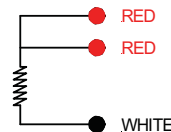
**2 Wire Configuration**



**4 Wire Configuration**



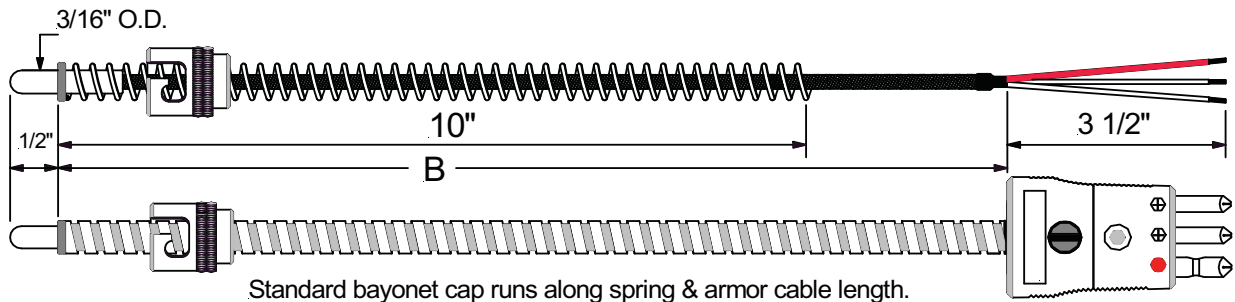
**3 Wire Configuration**



# Plastic Industry RTD's

## Adjustable Bayonet Style RTD

Low temperature application



Operating Temperature: -200 C to +250 C

**2A**  1.  2.  3.  -  4.  -  5.  6.

**1. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**4. "B" Dimension**

"B" = <u>0 4 8</u> "
Leads Wire Length In Inches

**2. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

**5. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

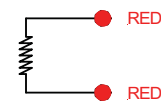
**3. Accessories**

N	None
X	Bx Connector
C	Cable Clamp

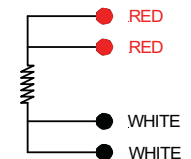
**6. RTD Wire Connection**

2	2 Wire Configuration
3	3 Wire Configuration
4	4 Wire Configuration

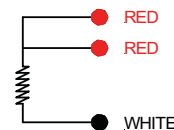
**2 Wire Configuration**



**4 Wire Configuration**



**3 Wire Configuration**

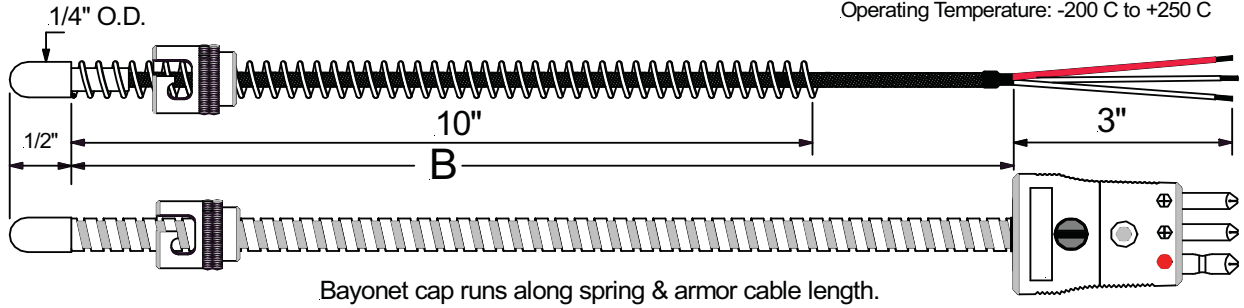




# Plastic Industry RTD's

## 1/4" Diameter Adjustable Bayonet Style RTD

Operating Temperature: -200 C to +250 C



Steps To Follow:

Model: **3A**  1.  2.  3.  -  4. -  5.  6.

1. **Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

4. **"B" Dimension**

"B" =	<u>0 4 8</u>	"
Leads Wire Length In Inches		

2. **Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

5. **RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

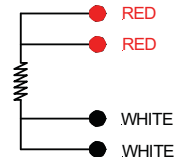
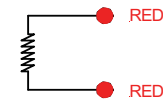
3. **Accessories**

N	None
X	Bx Connector
C	Cable Clamp

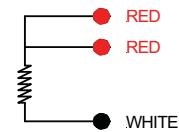
6. **RTD Wire Connection**

2	2 Wire Configuration
3	3 Wire Configuration
4	4 Wire Configuration

**2 Wire Configuration**



**3 Wire Configuration**

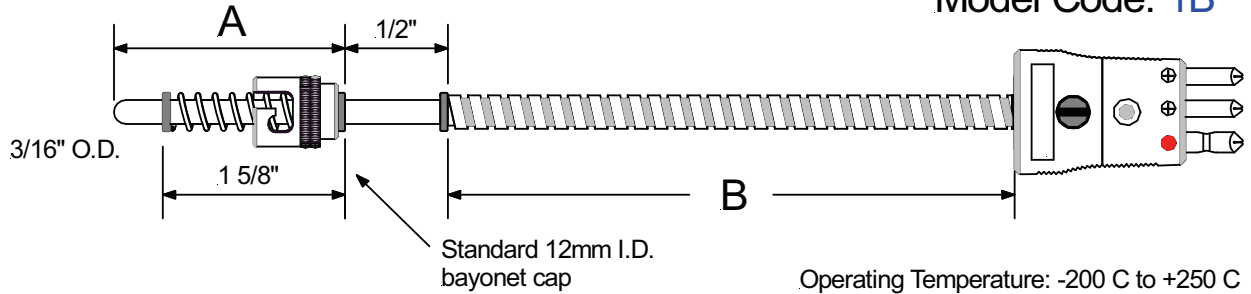


# Plastic Industry RTD's

## Fixed Bayonet Style RTD.

Low temperature application

Model Code: **1B**



Steps To Follow:

Model: **1B**   -    -  -

1. **"A" Dimension**

"A" = 02 "

Insertion Length In Inches

2. **RTD Element Type**

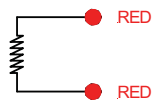
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

3. **RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

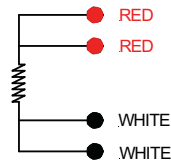
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



4. **Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

5. **"B" Dimension**

"B" = 048 "

Leads Wire Length In Inches

6. **Termination Type**

A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

7. **Accessories**

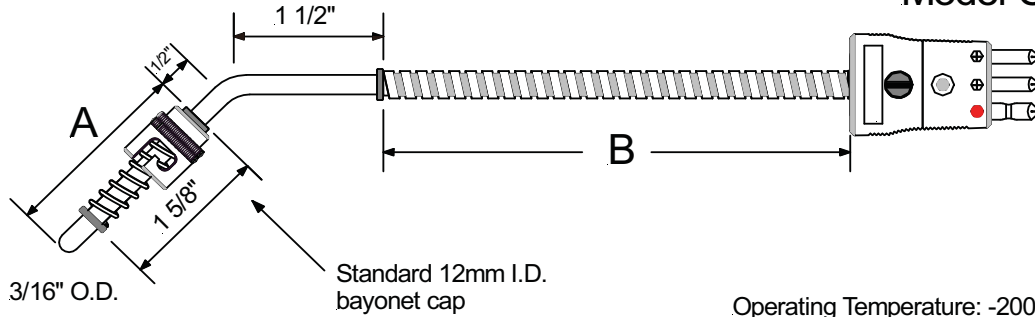
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## Fixed Bayonet Style RTD. 45° Bend

Low temperature application

Model Code: **2B**



Steps To Follow:

Model: **2B**  -    -  -

**1. "A" Dimension**

**"A" = 0 2 "**

Insertion Length In Inches

**2. RTD Element Type**

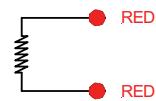
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

**3. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

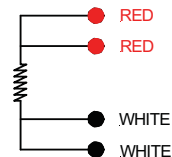
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**4. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**5. "B" Dimension**

**"B" = 0 4 8 "**

Leads Wire Length In Inches

**6. Termination Type**

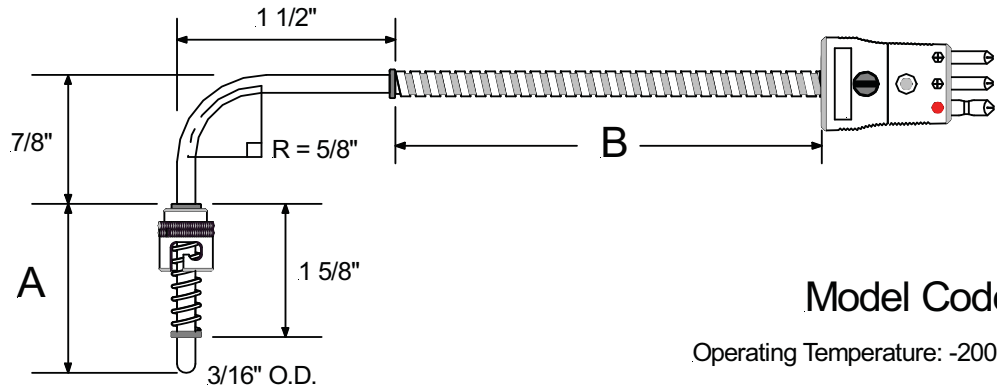
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**7. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## Fixed Bayonet Style RTD, 90° Bend Low temperature application



**Model Code: 3B**

Operating Temperature: -200 C to +250 C

Steps To Follow:

Model: **3B** 1. 2. 3. 4. - 5. - 6. 7.

**1. "A" Dimension**

"A" = 02 "

Insertion Length In Inches

**2. RTD Element Type**

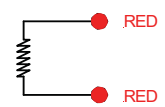
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

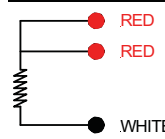
**3. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

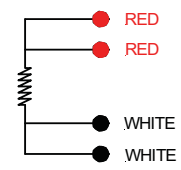
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**4. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**5. "B" Dimension**

"B" = 048 "

Leads Wire Length In Inches

**6. Termination Type**

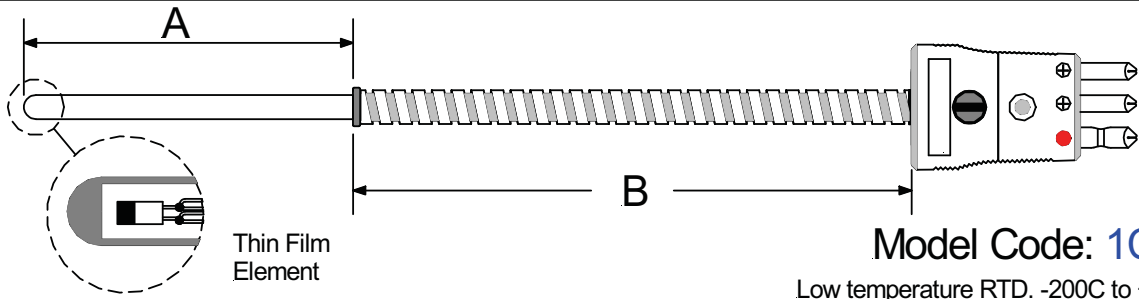
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug <small>(2 &amp; 3 Wire config. only)</small>
D	Standard Female Jack <small>(2 &amp; 3 Wire config. only)</small>
E	Mini Male Plug <small>(2 &amp; 3 Wire config. only)</small>
F	Mini Female Jack <small>(2 &amp; 3 Wire config. only)</small>

**7. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## Tube & Wire General Purpose RTD.



Model: 1C   -

**1. Outside Diameter**

A	1/8"
B	3/16"
C	1/4"

**2. "A" Dimension**

"A" = 0 2 "

Insertion Length In Inches

**3. RTD Element Type**

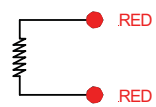
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

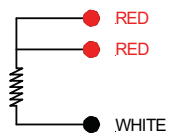
**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

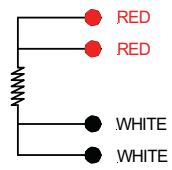
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

"B" = 0 4 8 "

Leads Wire Length In Inches

**7. Termination Type**

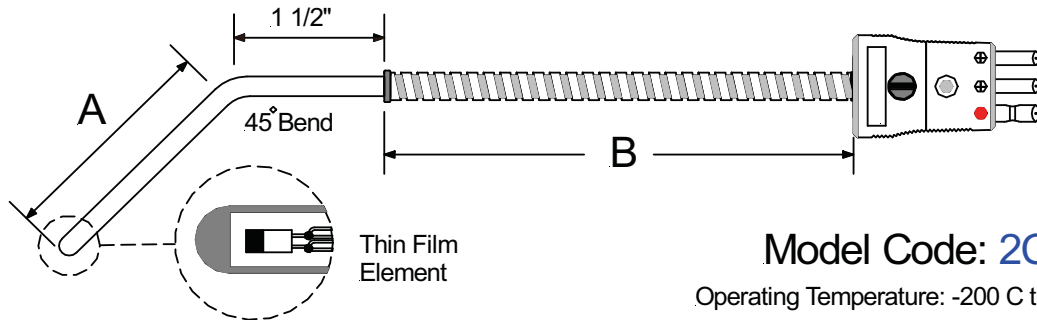
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**8. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## General Purpose RTD. 45° Bend



Model: 2C   -

**1. Outside Diameter**

A	1/8"
B	3/16"
C	1/4"

**2. "A" Dimension**

"A" = 02 "

Insertion Length In Inches

**3. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

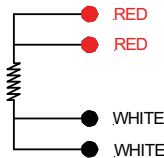
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

"B" = 048 "

Leads Wire Length In Inches

**7. Termination Type**

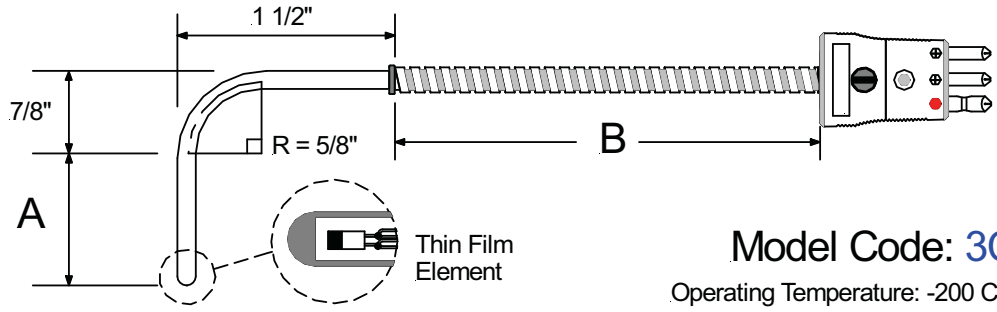
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**8. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## General Purpose RTD. 90° Bend



**Model Code: 3C**  
Operating Temperature: -200 C to +250 C

Model: **3C**  1.  2.  -  3.  4.  5.  6.  7.  8.

**1. Outside Diameter**

A	1/8"
B	3/16"
C	1/4"

**2. "A" Dimension**

"A" = 0 2 "

Insertion Length In Inches

**3. RTD Element Type**

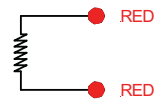
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

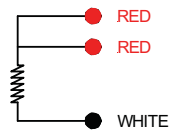
**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

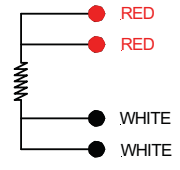
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

"B" = 0 4 8 "

Leads Wire Length In Inches

**7. Termination Type**

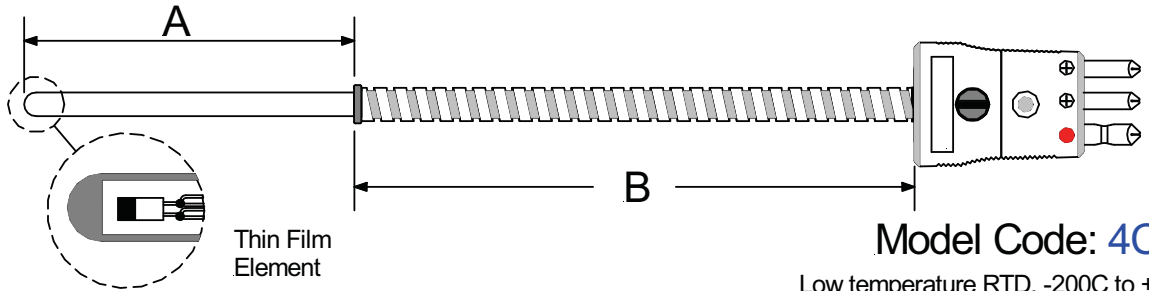
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**8. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## Metric Size Tube & Wire General Purpose RTD



Model: **4C**   -

**1. Outside Diameter**

A	3mm
B	4mm
C	5mm
D	6mm

**2. "A" Dimension**

**"A" = 150 "**

Insertion Length In mm

**3. RTD Element Type**

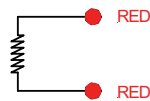
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

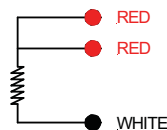
**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

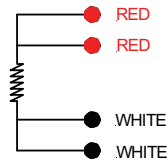
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

**"B" = 01 "**

Leads Wire Length In Meters

**7. Termination Type**

A	90mm Split Leads & Bare Ends.
B	90mm Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

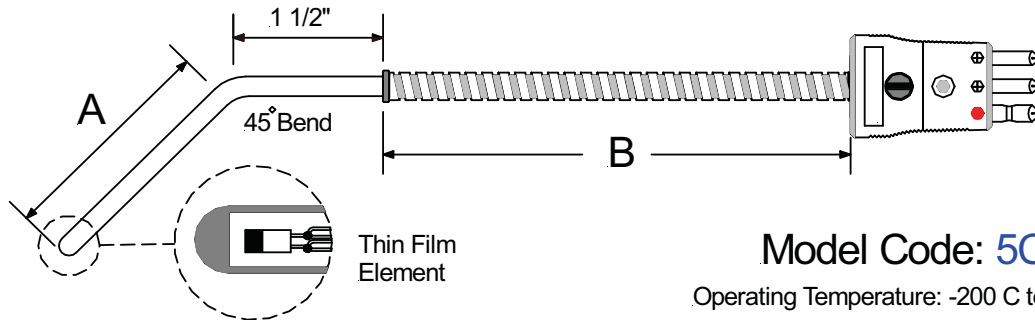
**8. Accessories**

1	None
2	Bx Connector
3	Cable Clamp



# Plastic Industry RTD's

## Metric Size General Purpose RTD. 45 Bend



Model: **5C**   -

**1. Outside Diameter**

A	3mm
B	4mm
C	5mm
D	6mm

**2. "A" Dimension**

**"A" = 150 "**

Insertion Length In mm

**3. RTD Element Type**

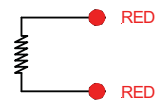
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

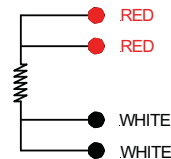
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

**"B" = 01 "**

Leads Wire Length In Meters

**7. Termination Type**

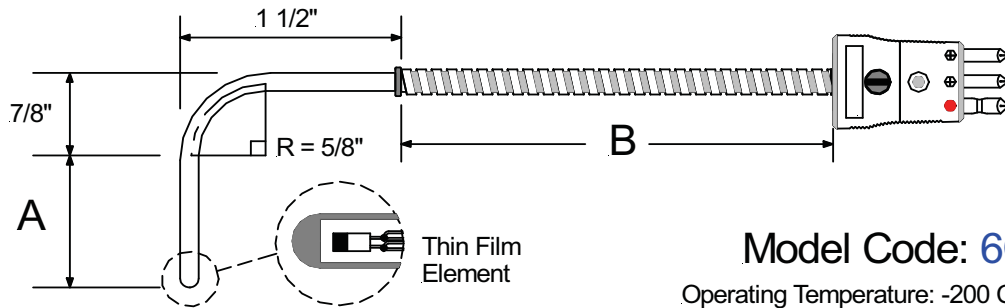
A	90mm Split Leads & Bare Ends.
B	90mm Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**8. Accessories**

1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## General Purpose RTD. 90° Bend



**Model Code: 6C**

Operating Temperature: -200 C to +250 C

6C  1.  2.  -  3.  4.  5.  6.  7.  8.

**1. Outside Diameter**

A	3mm
B	4mm
C	5mm
D	6mm

**2. "A" Dimension**

**"A" = 1 5 0 "**

Insertion Length In mm

**3. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

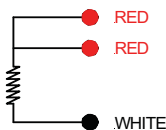
**4. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

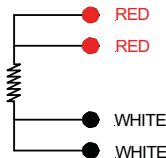
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**5. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
X	Flexible Armor Cable
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**6. "B" Dimension**

**"B" = 0 1 "**

Leads Wire Length In Meters

**7. Termination Type**

A	90mm Split Leads & Bare Ends.
B	90mm Slip Leads & Spade Lugs
C	Standard Male Plug (2 & 3 Wire config. only)
D	Standard Female Jack (2 & 3 Wire config. only)
E	Mini Male Plug (2 & 3 Wire config. only)
F	Mini Female Jack (2 & 3 Wire config. only)

**8. Accessories**

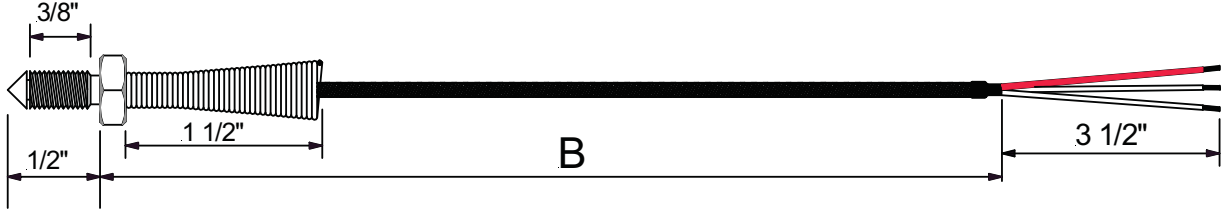
1	None
2	Bx Connector
3	Cable Clamp

# Plastic Industry RTD's

## Nozzle Bolt Style RTD

Model Code: **1D**

Operating Temperature: -200 C to +250 C



Model: **1D**      -

**1. Nozzle Bolt Thread Size**

1	1/4" x 28 UNF
2	M6 x 1mm
3	M6 x 1.25mm
4	M8 x 1mm
5	M8 x 1.25mm

**2. Wire Description**

S	26 Gage, Stranded, Stainless Steel Braid
T	26 Gage, Stranded, Teflon
X	0.210 O.D., Flexible Armor, Teflon Wire
F	26 Gage, Stranded, Fiberglass Cable
C	0.210 O.D., Flexible Armor, Fiberglass Wire

**3. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

**4. Accessories**

A	None
B	Bx Connector
C	Cable Clamp

**5. "B" Dimension**

"B" = 0 4 8 "

Leads Wire Length In Inches

**6. RTD Element Type**

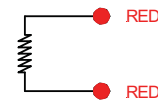
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

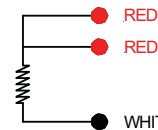
**7. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

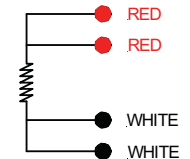
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**

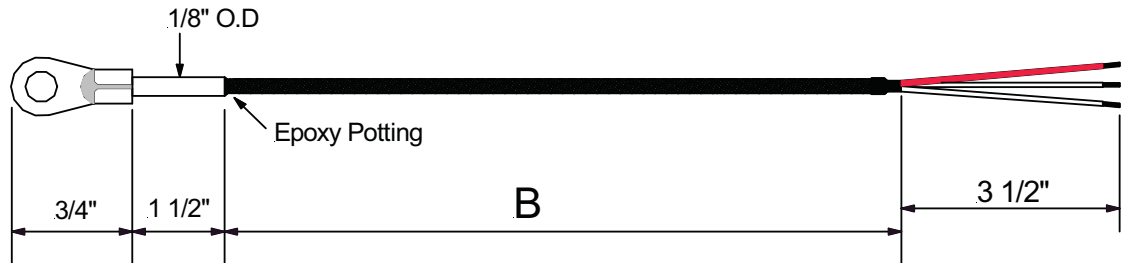


# Plastic Industry RTD's

## Ring Terminal Style RTD.

Model Code: **1E**

Operating Temperature: -200 C to +250 C



Model: **1E**  1.  2.  3.  4.  5.  -  6.  7.

**1. Ring Terminal Hole Size**

1	No. 8 Screw
2	No. 10 Screw
3	1/4" Hole
4	1/2" Hole

**2. Wire Description**

S	26 Gage, Stranded, Stainless Steel Braid
T	26 Gage, Stranded, Teflon
X	0.210 O.D., Flexible Armor, Teflon Wire
F	26 Gage, Stranded, Fiberglass Cable
C	0.210 O.D., Flexible Armor, Fiberglass Wire

**3. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

**4. Accessories**

A	None
B	Bx Connector
C	Cable Clamp

**5. "B" Dimension**

"B" = 0 4 8 "

Leads Wire Length In Inches

**6. RTD Element Type**

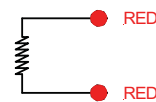
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

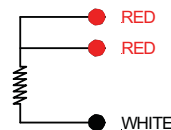
**7. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

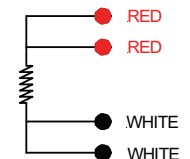
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**

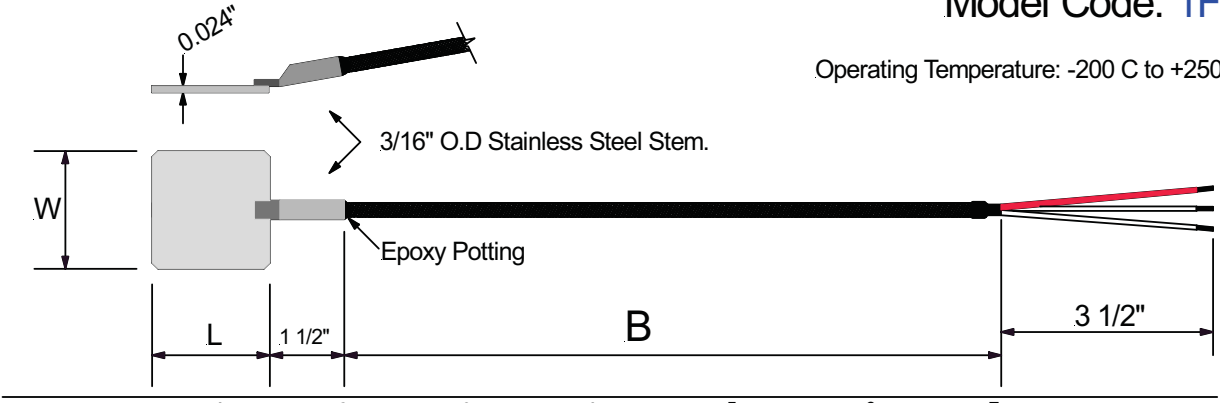


# Plastic Industry RTD's

## Shim Stock Style RTD. Stainless Steel Shim

Model Code: **1F**

Operating Temperature: -200 C to +250 C



Model: **1F**  1.  2.  3.  4.  5.  -  6.  7.

**1. Shim Size: Width x Length**

1	1/2" x 1/2"
2	3/4" x 3/4"
3	3/4" x 7/8"
4	1" x 1"

**5. "B" Dimension**

**"B" = 0 4 8 "**

Leads Wire Length In Inches

**2. Wire Description**

S	26 Gage, Stranded, Stainless Steel Braid
T	26 Gage, Stranded, Teflon
X	0.210 O.D., Flexible Armor, Teflon Wire
F	26 Gage, Stranded, Fiberglass Cable
C	0.210 O.D., Flexible Armor, Fiberglass Wire

**6. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

**3. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

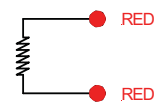
**7. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

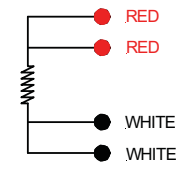
**4. Accessories**

A	None
B	Bx Connector
C	Cable Clamp

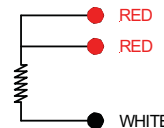
**2 Wire Configuration**



**4 Wire Configuration**



**3 Wire Configuration**

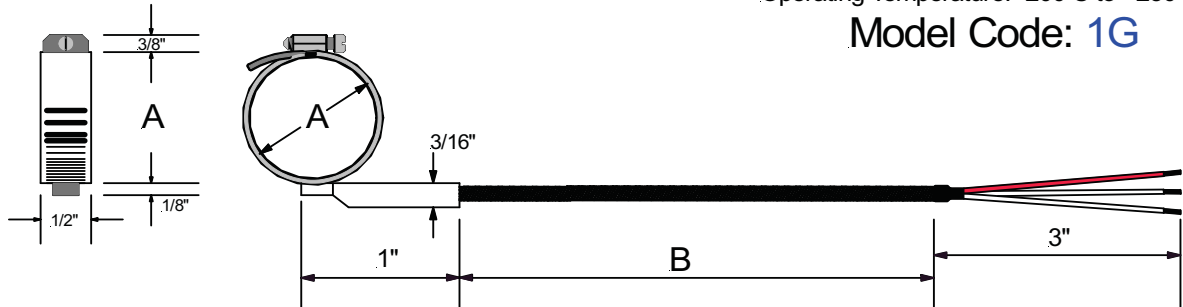


# Plastic Industry RTDs

## Pipe Clamp Style RTD

Operating Temperature: -200 C to +250 C

Model Code: **1G**



Model: **1G**      -

**1. Pipe Clamp Description**  
A = Diameter Range

	Minimum	Maximum
1	1 1/16"	2"
2	1 13/16"	2 3/4"
3	2 9/16"	3 1/2"
4	3"	5"
5	5"	7"

**5. "B" Dimension**

**"B" = 0 4 8 "**

Leads Wire Length In Inches

**2. Wire Description**

S	26 Gage, Stranded, Stainless Steel Braid
T	26 Gage, Stranded, Teflon
X	0.210 O.D., Flexible Armor, Teflon Wire
F	26 Gage, Stranded, Fiberglass Cable
C	0.210 O.D., Flexible Armor, Fiberglass Wire

**6. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

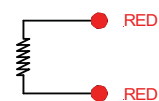
**3. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

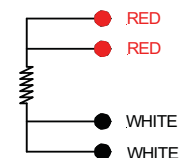
**7. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

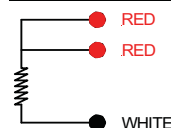
**2 Wire Configuration**



**4 Wire Configuration**



**3 Wire Configuration**



**4. Accessories**

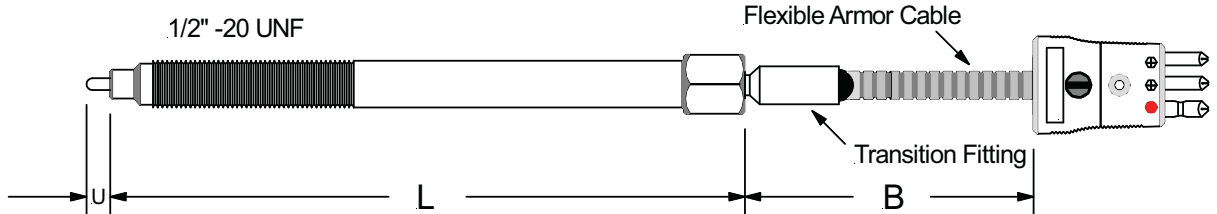
A	None
B	Bx Connector
C	Cable Clamp

# Plastic Industry RTD's

## Melt Bolt RTD. Mineral Insulated

Model Code: **1K**

Operating Temperature: -200 C to +500 C



Mineral insulated 316SS sensor tip.

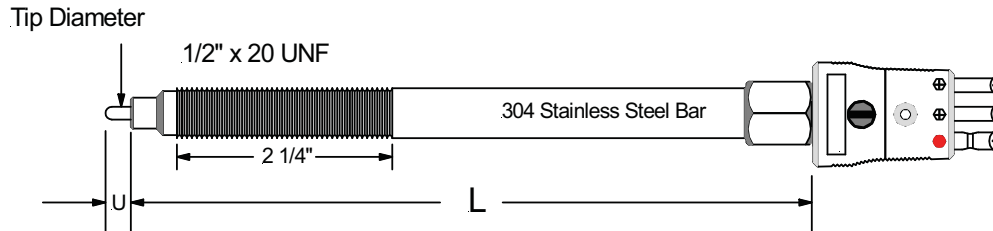
Model	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>																												
	<u>1K</u>																																		
<b>A</b>	<b>Melt Bolt Length "L"</b>		<b>D</b>		<b>F</b>		<b>G</b>																												
	<table border="1"> <tr><td>1</td><td>3"</td></tr> <tr><td>2</td><td>4"</td></tr> <tr><td>3</td><td>6"</td></tr> </table>		1	3"	2	4"	3	6"	<table border="1"> <tr><th colspan="3">RTD Element Type</th></tr> <tr><th>Ohms</th><th>Class A</th><th>Class B</th></tr> <tr><td>1 x Pt100</td><td>1</td><td>2</td></tr> <tr><td>2 x Pt100</td><td>3</td><td>4</td></tr> <tr><td>1 x Pt1000</td><td>5</td><td>6</td></tr> <tr><td>2 x Pt1000</td><td>7</td><td>8</td></tr> </table>		RTD Element Type			Ohms	Class A	Class B	1 x Pt100	1	2	2 x Pt100	3	4	1 x Pt1000	5	6	2 x Pt1000	7	8	<table border="1"> <tr><th colspan="2">"B" Dimension</th></tr> <tr><td>Specify "B" Length In Inches</td><td><u>0 0 4</u></td></tr> </table> <p>Example "B" is 4" = 004</p>		"B" Dimension		Specify "B" Length In Inches	<u>0 0 4</u>	<b>G</b>
1	3"																																		
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1 x Pt100	1	2																																	
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"B" Dimension																																			
Specify "B" Length In Inches	<u>0 0 4</u>																																		
<b>B</b>	<b>"U" Tip Diameter</b>		Temperature Coefficient: 0.00385 Platinum element IEC 751		<b>E</b>		<b>G</b>																												
	<table border="1"> <tr><td>F</td><td>Flush Tip</td></tr> <tr><td>A</td><td>0.188"</td></tr> <tr><td>B</td><td>0.250"</td></tr> </table>		F	Flush Tip	A	0.188"	B	0.250"	<table border="1"> <tr><th colspan="2">RTD Wire Connection</th></tr> <tr><td>A</td><td>2 Wire Configuration</td></tr> <tr><td>B</td><td>3 Wire Configuration</td></tr> <tr><td>C</td><td>4 Wire Configuration</td></tr> </table>		RTD Wire Connection		A	2 Wire Configuration	B	3 Wire Configuration	C	4 Wire Configuration	<table border="1"> <tr><th colspan="2">Termination Type</th></tr> <tr><td>A</td><td>3" Split Leads &amp; 1/2" Bare Ends.</td></tr> <tr><td>B</td><td>3" Slip Leads &amp; Spade Lugs</td></tr> <tr><td>C</td><td>Standard Male Plug</td></tr> <tr><td>D</td><td>Standard Female Jack</td></tr> <tr><td>E</td><td>Mini Male Plug</td></tr> <tr><td>F</td><td>Mini Female Jack</td></tr> </table>		Termination Type		A	3" Split Leads & 1/2" Bare Ends.	B	3" Slip Leads & Spade Lugs	C	Standard Male Plug	D	Standard Female Jack	E	Mini Male Plug	F	Mini Female Jack	<b>G</b>
F	Flush Tip																																		
A	0.188"																																		
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<b>C</b>	<b>Insertion Depth "U"</b>		<p><b>2 Wire Configuration</b></p>		<p><b>4 Wire Configuration</b></p>		<p>Connectors can only be installed on 2 &amp; 3 wire configuration RTDs.</p>																												
	<table border="1"> <tr><td>1</td><td>Flush</td></tr> <tr><td>2</td><td>0.125"</td></tr> <tr><td>3</td><td>0.250"</td></tr> <tr><td>4</td><td>0.500"</td></tr> <tr><td>5</td><td>0.750"</td></tr> <tr><td>6</td><td>1"</td></tr> </table>		1	Flush	2	0.125"	3	0.250"	4	0.500"	5	0.750"	6	1"	<p><b>3 Wire Configuration</b></p>																				
1	Flush																																		
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# Plastic Industry RTD's

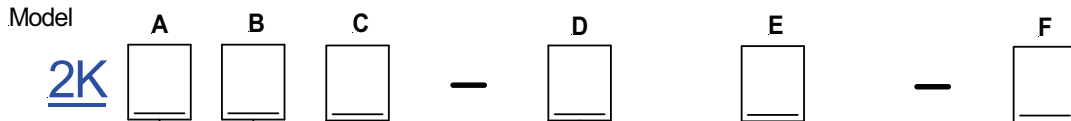
## Rigid Melt Bolt RTD. Mineral Insulated

Model Code: **2K**

Operating Temperature: -200 C to +500 C



Mineral insulated 316SS sensor tip.



A	Melt Bolt Length "L"
1	3"
2	4"
3	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.188"
B	0.250"

C	Insertion Depth "U"
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	RTD Element Type		
	Ohms	Class A	Class B
1	1 x Pt100	1	2
2	2 x Pt100	3	4
3	1 x Pt1000	5	6
4	2 x Pt1000	7	8

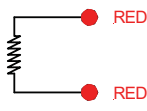
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F	Termination Type
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

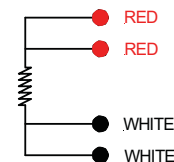
Connectors can only be installed on 2 & 3 wire configuration RTDs.

E	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

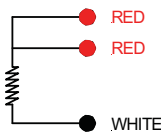
### 2 Wire Configuration



### 4 Wire Configuration



### 3 Wire Configuration



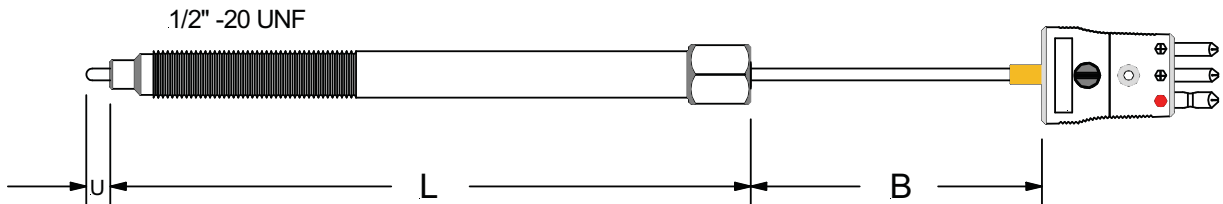


# Plastic Industry RTD's

## Fixed Melt Bolt RTD. Mineral Insulated

Model Code: **3K**

Operating Temperature: -200 C to +500 C



Mineral insulated 316SS sensor tip.

Model **A** **B** **C** **D** **E** **F** **G**

**3K**

A	Melt Bolt Length "L"
1	3"
2	4"
3	6"

B	"U" Tip Diameter
F	Flush Tip
A	0.188"
B	0.250"

C	Insertion Depth "U"
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

D	RTD Element Type		
	Ohms	Class A	Class B
1	1 x Pt100	1	2
2	2 x Pt100	3	4
3	1 x Pt1000	5	6
4	2 x Pt1000	7	8

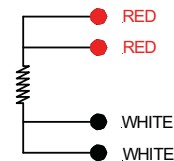
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

E	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

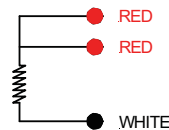
**2 Wire Configuration**



**4 Wire Configuration**



**3 Wire Configuration**



F	"B" Dimension
	Specify "B" Length In Inches <u>0 4</u>

Example "B" is 4" = 04

G	Termination Type
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

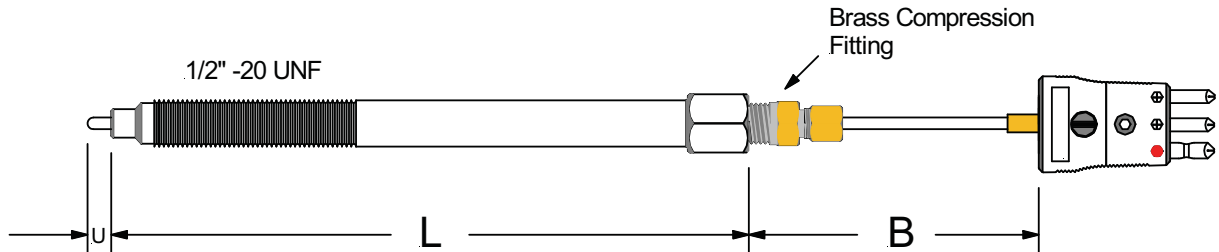
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Plastic Industry RTD's

## Adjustable Melt Bolt RTD.

Model Code: **4K**

Operating Temperature: -200 C to +500 C



Mineral insulated 316SS tip.

Model	A	B	C	D	E	F	G
	<b>4K</b>						

<b>A</b>	<b>Melt Bolt Length "L"</b>
1	3"
2	4"
3	6"

<b>B</b>	<b>"U" Tip Diameter</b>
F	Flush Tip
A	0.188"
B	0.250"

<b>C</b>	<b>Insertion Depth "U"</b>
1	Flush
2	0.125"
3	0.250"
4	0.500"
5	0.750"
6	1"

<b>D</b>	<b>RTD Element Type</b>															
	<table border="1"> <thead> <tr> <th>Ohms</th> <th>Class A</th> <th>Class B</th> </tr> </thead> <tbody> <tr> <td>1 x Pt100</td> <td>1</td> <td>2</td> </tr> <tr> <td>2 x Pt100</td> <td>3</td> <td>4</td> </tr> <tr> <td>1 x Pt1000</td> <td>5</td> <td>6</td> </tr> <tr> <td>2 x Pt1000</td> <td>7</td> <td>8</td> </tr> </tbody> </table>	Ohms	Class A	Class B	1 x Pt100	1	2	2 x Pt100	3	4	1 x Pt1000	5	6	2 x Pt1000	7	8
Ohms	Class A	Class B														
1 x Pt100	1	2														
2 x Pt100	3	4														
1 x Pt1000	5	6														
2 x Pt1000	7	8														
	Temperature Coefficient: 0.00385 Platinum element IEC 751															

<b>E</b>	<b>RTD Wire Connection</b>
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

<b>F</b>	<b>"B" Dimension</b>
	Specify "B" Length In Inches <u>0 4</u>
	Example "B" is 4" = 04

<b>G</b>	<b>Termination Type</b>
A	3" Split Leads & 1/2" Bare Ends.
B	3" Slip Leads & Spade Lugs
C	Standard Male Plug
D	Standard Female Jack
E	Mini Male Plug
F	Mini Female Jack

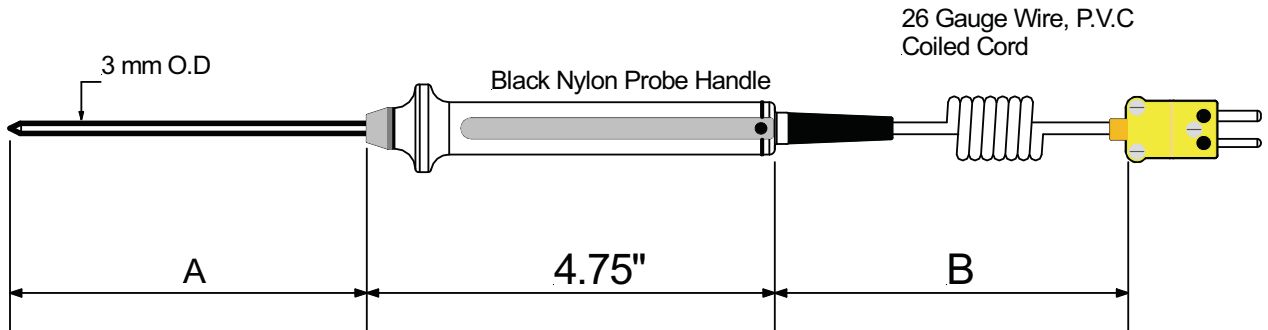
Connectors can only be installed on 2 & 3 wire configuration RTDs.

<b>2 Wire Configuration</b>	<b>4 Wire Configuration</b>
<b>3 Wire Configuration</b>	

# Process Industry Thermocouples

## Mineral Insulated Thermocouple With Plastic Handle



Maximum operating temperature 900 F or 500 C.

Steps To Follow:

Model: **L1**  -  -  -  -  -  -

**1. Probe Tip Option**

R	Radius Tip Style
D	Drill Tip Style

**2. Termination Type**

1	3" Split Leads & 1/2" Bare Ends.
2	Mini Male Plug

**3. "A" Dimension**

"A" = <u>0.4</u> "
Length In Inches

**4. Coiled Cord "B" Dimension**

	Retracted Length	Extended Length
A	12"	48" to 60"
B	24"	120"
C	32"	180"
D	60"	30 ft
E	96"	45 ft

**5. Calibration**

1	J	(+) Iron Vs. (-) Constantan
2	K	(+) Ni.-Chromium Vs. (-) Ni.-Aluminum
3	T	(+) CU. Copper Vs. (-) Cu.-Ni. Nickel

For all other calibrations contact factory for availability.

**6. Junction**

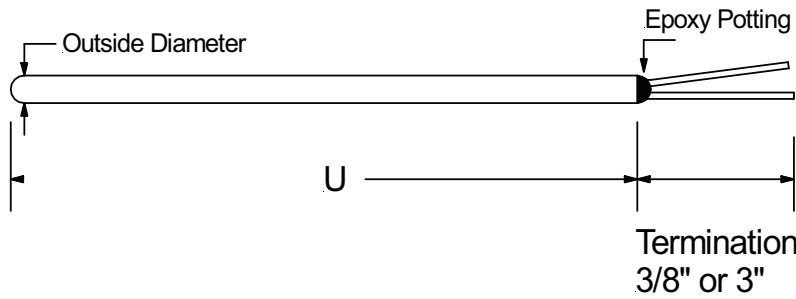
G	Grounded
U	Ungrounded

# Mineral Insulated Thermocouple

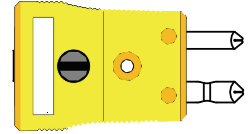
## Straight Thermocouple Elements

Operating Temperature:  
-200 C to +1000 C Max.

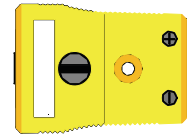
Model Code: **M1**



Optional Male Connector



Optional Female Connector



Model: **M1**    **A**    **B**    **C**    **D**    —    **E**    **F**    —    **G**

<b>A</b>	Outside Diameter
1	0.020"
2	0.040"
3	0.063"
4	0.125"
5	0.188"
6	0.250"
7	0.315"
8	0.375"

<b>B</b>	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

<b>C</b>	"U" Dimension
Specify "U" Length In Inches <u>0</u> <u>0</u> <u>6</u>	

Example "U" is 6" = 006

<b>D</b>	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
J	None

<b>E</b> Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

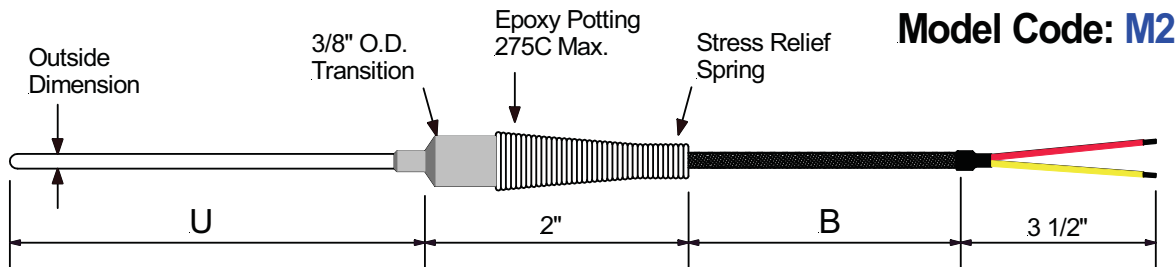
<b>F</b>	Junction Styles				
	Element Description	Grounded	Ungrounded		Exposed
		Common	Common	Isolated	Common
Single	G		U		E
Duplex	D	F	H	J	M
Triplex	T	Q	R	S	V

<b>G</b>	Termination
1	3/8" Split bare leads.
2	3" Split & Color Coded leads.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

## General Purpose Thermocouple

Operating Temperature:  
-200 C to +1000 C Max.



**Model Code: M2**

Compression fittings are sold separately. See accessory section.

Model: **A** **B** **C** **D** **E** **F** **G** **H** **I**

**M2**

<b>A</b>	<b>Outside Diameter</b>
1	0.020"
2	0.040"
3	0.063"
4	0.125"
5	0.188"
6	0.250"
7	0.315"
8	0.375"

<b>B</b>	<b>Sheath Material</b>
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

<b>C</b>	<b>"U" Dimension</b>
Specify "U" Length In Inches <u>0 0 6</u>	

Example "U" is 6" = 006

<b>D</b>	<b>"U" Fractional Dimension</b>
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

<b>E Calibration</b>			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

<b>F Junction Styles</b>						
Element Description	Grounded		Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated	Isolated
Single	G		U		E	
Duplex	D	F	H	J	M	

<b>G</b>	<b>"B" Dimension</b>
Specify "B" Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

<b>H</b>	<b>Cable Insulation Description</b>
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

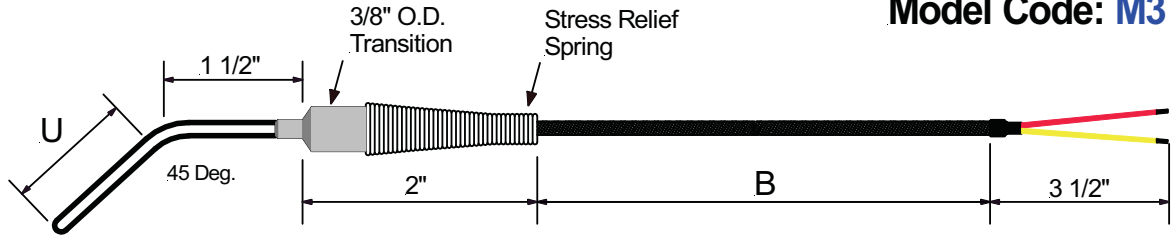
<b>I</b>	<b>Termination</b>
1	3" Split Leads & 1/2" bare ends.
2	3" Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

General Purpose Thermocouple: 45 Deg. Bend

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **M3**



Compression fittings are sold separately. See accessory section.

Model: A B C D E F G H I

**M3**

A	Outside Diameter
1	0.020"
2	0.040"
3	0.063"
4	0.125"
5	0.188"
6	0.250"
7	0.315"
8	0.375"

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	

Example "U" is 6" = 006

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E		Calibration	
Standard Limits of Error	Special Limits of Error		
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

F		Junction Styles			
Element Description	Grounded	Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated
Single	G		U		E
Duplex	D	F	H	I	M

G	"B" Dimension
Specify "B" Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

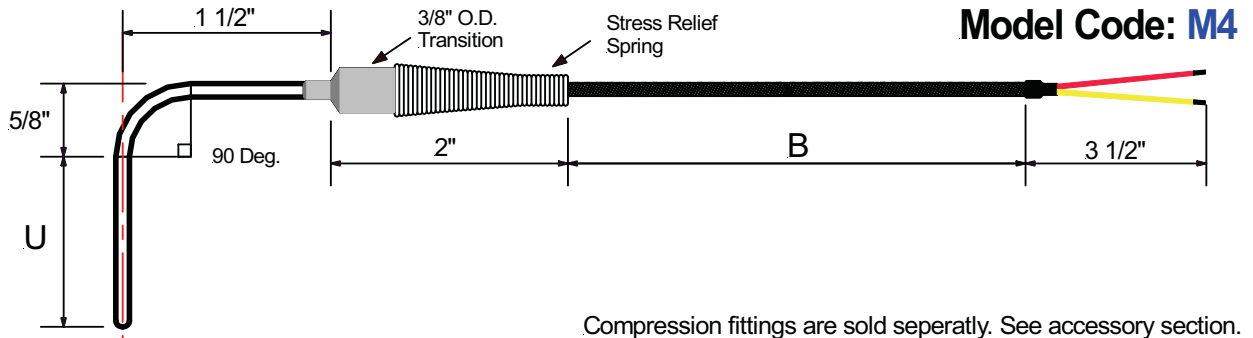
H	Cable Insulation Description
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

I	Termination
1	3" Split Leads & 1/2" bare ends.
2	3" Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

## General Purpose Thermocouple: 90 Deg. Bend

Operating Temperature:  
-200 C to +1000 C Max.



Model: **A** **B** **C** **D** **E** **F** **G** **H** **I**

**M4**

A	Outside Diameter
1	0.020"
2	0.040"
3	0.063"
4	0.125"
5	0.188"
6	0.250"
7	0.315"
8	0.375"

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	

Example "U" is 6" = 006

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E		Calibration	
		Standard Limits of Error	Special Limits of Error
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

F		Junction Styles			
Element Description	Grounded	Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated
Single	G		J		E
Duplex	D	F	H	J	M

G	"B" Dimension
Specify "B" Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

H	Cable Insulation Description
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

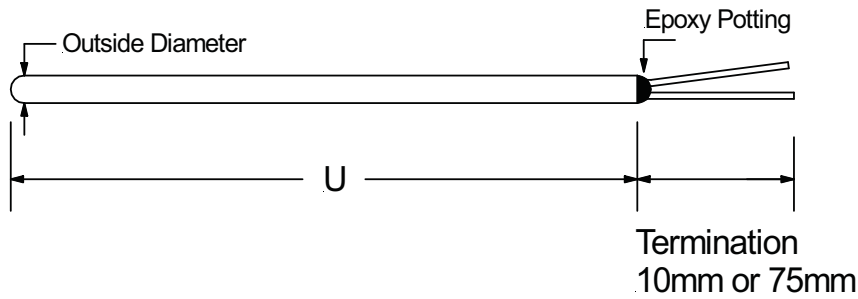
I	Termination
1	3" Split Leads & 1/2" bare ends.
2	3" Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

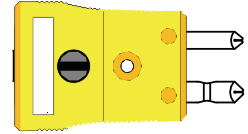
## Metric Straight Thermocouple Elements

Operating Temperature:  
-200 C to +1000 C Max.

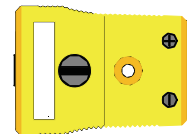
Model Code: **M5**



Optional Male Connector



Optional Female Connector



Model: **A** **B** **C** — **D** **E** — **F**

**M5**    —   —

A	Outside Diameter
1	0.5mm
2	1mm
3	1.5mm
4	2mm
5	3mm
6	4mm
7	5mm
8	6mm
9	8mm

C	"U" Dimension
	Specify "U" Length In MM <u>150</u>

Example "U" is 150mm= 150

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

D	Calibration
	Standard Limits of Error
1	J
2	K
3	T
4	E
5	N
	Special Limits of Error
6	J
7	K
8	T
9	E
10	N

E	Junction Styles				
Element Description	Grounded	Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated
Single	G	U	U	E	E
Duplex	D	F	H	J	M

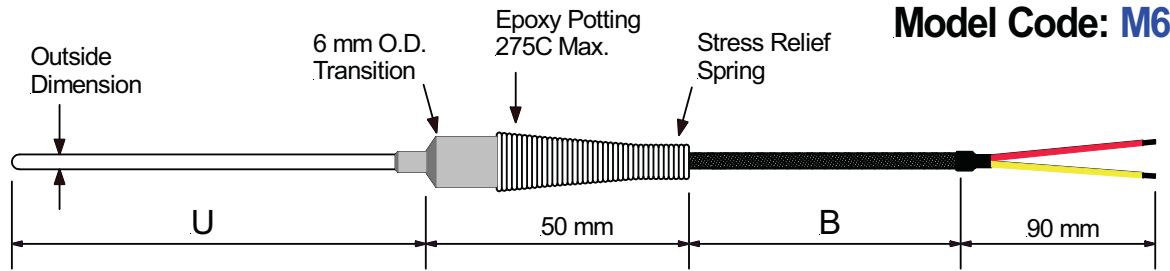
F	Termination
1	10mm Split bare leads.
2	75mm Split & Color Coded leads.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)



# Mineral Insulated Thermocouple

## Metric General Purpose Thermocouple

Operating Temperature:  
-200 C to +1000 C Max.



Compression fittings are sold separately. See accessory section.

Model: **A** **B** **C** **D** **E** **F** **G** **H**

**M6**

A	Outside Diameter
1	0.5 mm
2	1 mm
3	1.5 mm
4	2 mm
5	3 mm
6	4 mm
7	6 mm
8	8 mm

C	"U" Dimension
Specify "U" Length In mm <u>100</u>	

Example "U" is 100 mm = 100

F	"B" Dimension
Specify "B" Length In Meters <u>0.2</u>	

Example "B" is 2 Meters = 02

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

D Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

G	Cable Insulation Description
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

E Junction Styles						
Element Description	Grounded		Ungrounded		Exposed	
	Common	Isolated	Common	Isolated	Common	Isolated
Single	G	U	U	U	E	E
Duplex	D	F	H	J	M	M

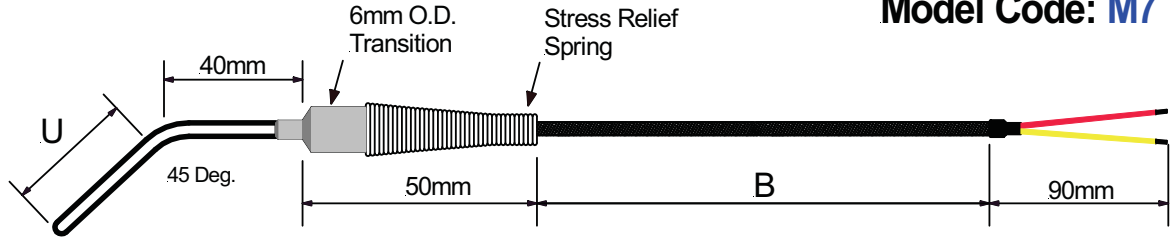
H	Termination
1	75 mm Split Leads & 15 mm bare ends.
2	75 mm Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

Metric General Purpose Thermocouple: 45 Deg. Bend

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **M7**



Compression fittings are sold separately. See accessory section.

Model: A B C D E F G H

**M7**    —   —

A	Outside Diameter
1	0.5 mm
2	1 mm
3	1.5 mm
4	2 mm
5	3 mm
6	4 mm
7	6 mm
8	8 mm

C	"U" Dimension
Specify "U" Length	
In mm <u>1 0 0</u>	

Example "U" is 100 mm = 100

F	"B" Dimension
Specify "B" Length	
In Meters <u>0 2</u>	

Example "B" is 2 Meters = 02

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

D Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

G	Cable Insulation Description
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

E Junction Styles						
Element Description	Grounded		Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated	Common
Single	G		U		E	
Duplex	D	F	H	J	M	

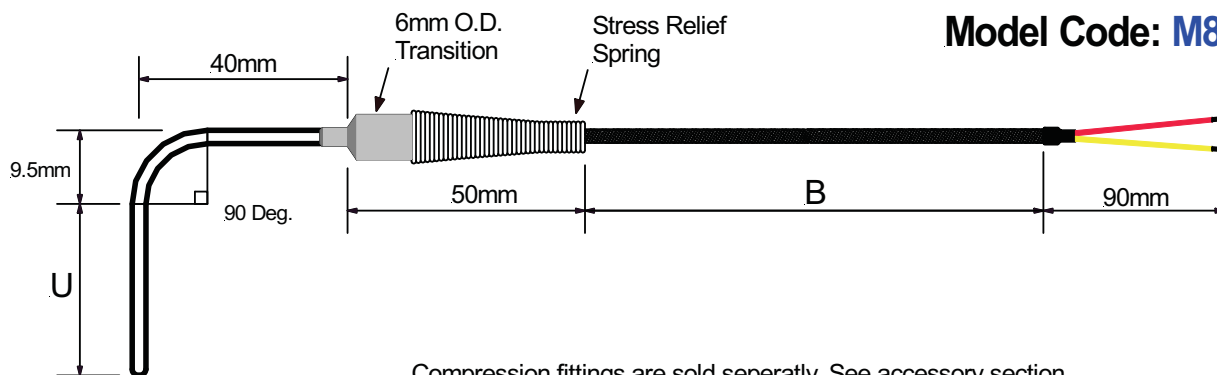
H	Termination
1	75 mm Split Leads & 15 mm bare ends.
2	75 mm Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

Metric General Purpose Thermocouple: 90 Deg. Bend

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **M8**



Model:

**M8**

A	Outside Diameter
1	0.5 mm
2	1 mm
3	1.5 mm
4	2 mm
5	3 mm
6	4 mm
7	6 mm
8	8 mm

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

C	"U" Dimension
Specify "U" Length In mm	
	<u>1 0 0</u>

Example "U" is 100 mm = 100

D Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

E Junction Styles						
Element Description	Grounded		Ungrounded		Exposed	
	Common	Common	Isolated	Common	Isolated	Isolated
Single	G		U		E	
Duplex	D	F	H	J	M	

F	"B" Dimension
Specify "B" Length In Meters	
	<u>0 2</u>

Example "B" is 2 Meters = 02

G	Cable Insulation Description
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

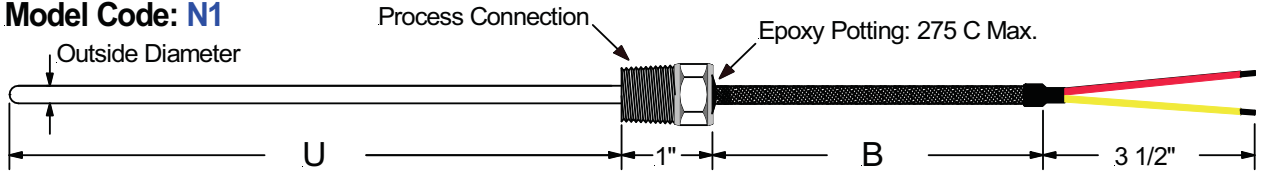
H	Termination
1	75 mm Split Leads & 15 mm bare ends.
2	75 mm Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

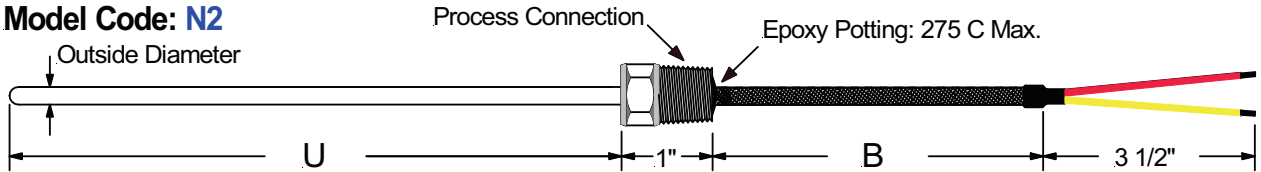
## Hex Bushing Style Thermocouple

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **N1**



Model Code: **N2**



Model:

**N1**

**N2**

	A	B	C	D	E	F	G	H	I	J
	□	□	□	□	□	-	□	-	□	□

<b>A</b>	<b>Outside Diameter</b>
1	0.063"
2	0.125"
3	0.188"
4	0.250"
5	0.315"
6	0.375"
7	0.500"

<b>B</b>	<b>Sheath Material</b>
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

<b>C</b>	<b>"U" Dimension</b>
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

<b>D</b>	<b>"U" Fractional Dimension</b>
A	0.125"
B	0.250"
C	0.375"
D	0.500"
E	0.750"
F	None

<b>E</b>	<b>Process Connection</b>
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

<b>F</b>	<b>Calibration</b>		
Standard Limits of Error	Special Limits of Error		
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

<b>G</b>	<b>Junction Styles</b>			
Element Description	Grounded	Ungrounded	Exposed	
	Common	Common	Isolated	Common
Single	G	U		E
Duplex	D	F	H	M
Triplex	T	Q	R	V

<b>H</b>	<b>"B" Dimension</b>
Specify "B" Length In Inches <u>0 4 8</u>	
Example "B" is 48" = 048	

<b>I</b>	<b>Cable Insulation Description</b>
A	20 Gage, Stranded, Metal Braid
B	20 Gage, Stranded, Fiberglass
C	.281" O.D. Flexible Armor Cable
D	20 Gage, Stranded, Teflon
E	20 Gage, Stranded, PVC
F	.210" O.D. Flexible Armor Cable

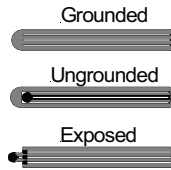
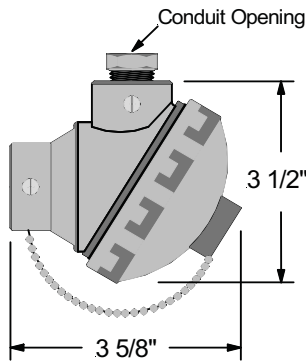
<b>J</b>	<b>Termination</b>
1	3" Split Leads & 1/2" bare ends.
2	3" Split Leads & Spade Lugs.
3	Standard Male Plug (425 F)
4	Standard Female Jack (425 F)
5	Mini Male Plug (425 F)
6	Mini Female Jack (425 F)
7	Hi Temp. Male Plug (800 F)
8	Hi Temp. Female Jack (800 F)

# Mineral Insulated Thermocouple

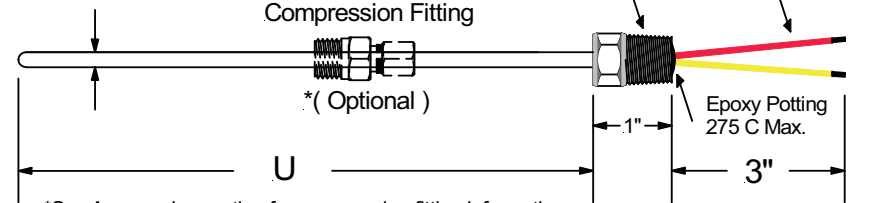
## Compression Fitting Mounting Style

Operating Temperature:  
-200 C to +1000 C Max.

### Connection Head



Outside Diameter



\*See Accessories section for compression fitting information.

**Model Code: N3**

Model:

A     B     C     D     E     F     G     H     I     J

**N3**

A	Outside Diameter
1	0.063"
2	0.125"
3	0.188"
4	0.250"
5	0.315"
6	0.375"
7	0.500"

B	Sheath Material
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
J	None

E Calibration			
Standard limits of error		Special limits of error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

F	Junction Styles				
	Element Description	Grounded Common	Ungrounded Common	Ungrounded Isolated	Exposed Common
Single	G		U		E
Duplex	D	F	H	I	M
Triplex	T	Q	R	S	V

G	Head Connection
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

H	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

I	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

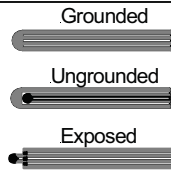
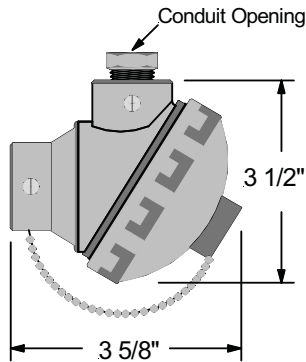
J	Connection Head Options
N	None
T	4-20mA Transmitter
X	No Terminal Block

# Mineral Insulated Thermocouple

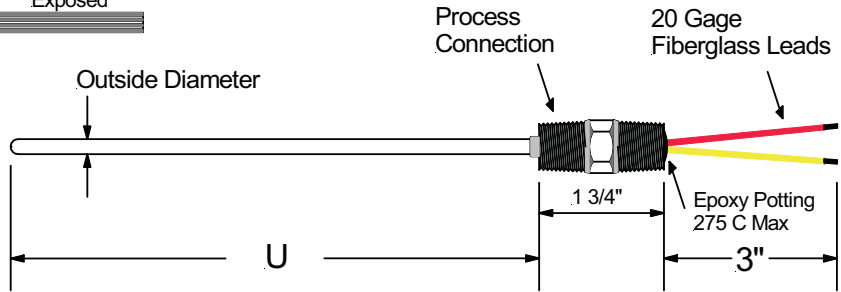
## Hex Nipple Style

Operating Temperature:  
-200 C to +1000 C Max.

### Connection Head



Model Code: **N4**



Model:

**N4**

A     B     C     D     E     F     G     H     I     J

A Outside Diameter	
1	0.063"
2	0.125"
3	0.188"
4	0.250"
5	0.315"
6	0.375"
7	0.500"

B Sheath Material	
A	304 Stainless
B	316 Stainless
C	310 Stainless
D	Inconel 600

C "U" Dimension	
Specify "U" Length In Inches <u>0 0 6</u>	

Example "U" is 6" = 006

D "U" Fractional Dimension	
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
J	None

E Calibration			
Standard limits of error		Special limits of error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

F Junction Styles					
Element Description	Grounded		Ungrounded		Exposed
	Common	Common	Isolated	Common	Isolated
Single	G		U		E
Duplex	D	F	H	J	M
Triplex	T	Q	R	S	V

G Process Connection	
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

H Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

I Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

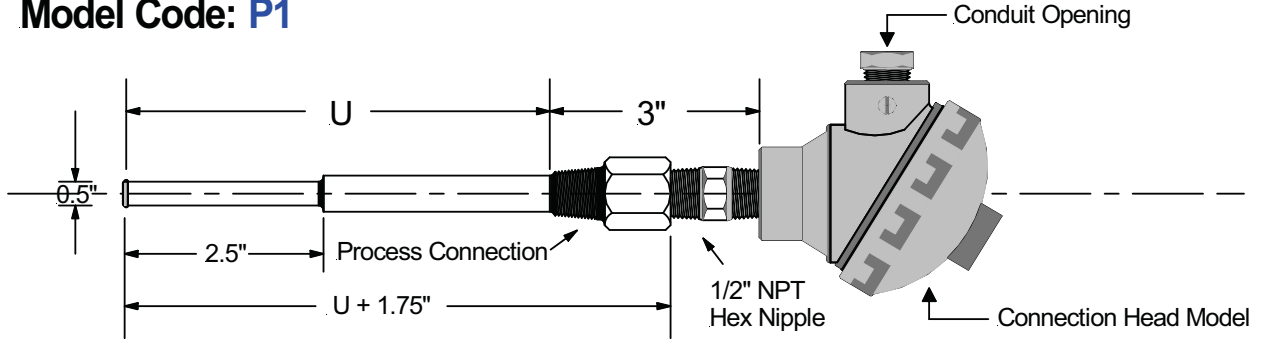
J Connection Head Options	
N	None
B	No Terminal Block
S	Spring Loaded
T	4-20mA Transmitter
R	Options S & T
Q	Options S & B

# Mineral Insulated Thermocouple & Thermowell Assembly

## Standard Stepped Threaded Thermowell

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **P1**



All Thermowell Assemblies Are Spring Loaded.

Model:

**P1**

A

B

C

D

E

F

G

H

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

C Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

E Process Connection	
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Inconel 600
4	Carbon Steel
5	Solid Teflon

For all other materials contact factory for availability.

D Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G	U	
Duplex	D	F	H
Triplex	T	Q	R

G Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

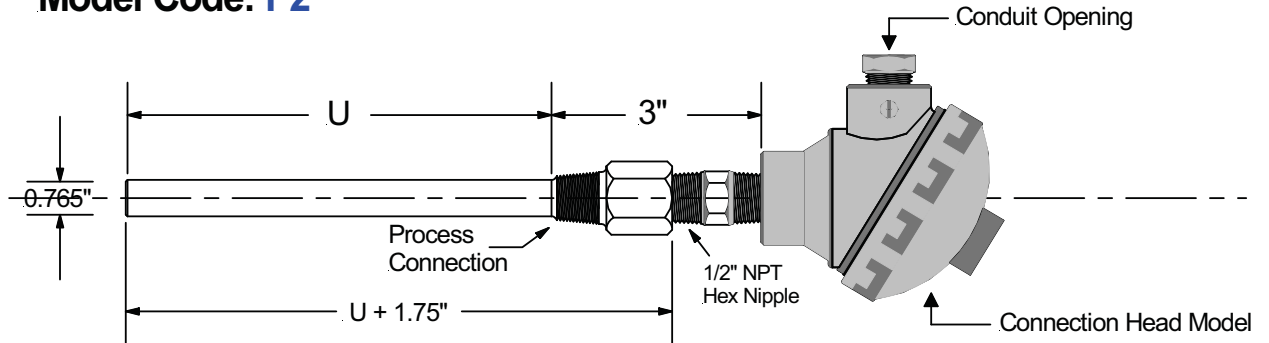
H Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter

# Mineral Insulated Thermocouple & Thermowell Assembly

## Standard Straight Threaded Thermowell

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **P2**



All Thermowell Assemblies Are Spring Loaded.

Model: **P2**    **A**  **B**     **C**  **D**     **E**  **F**  **G**  **H**

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Inconel 600
4	Carbon Steel
5	Solid Teflon

For all other materials contact factory for availability.

C Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

D Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G		U
Duplex	D	F	H
Triplex	T	Q	R

E Process Connection	
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

G Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

H Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter

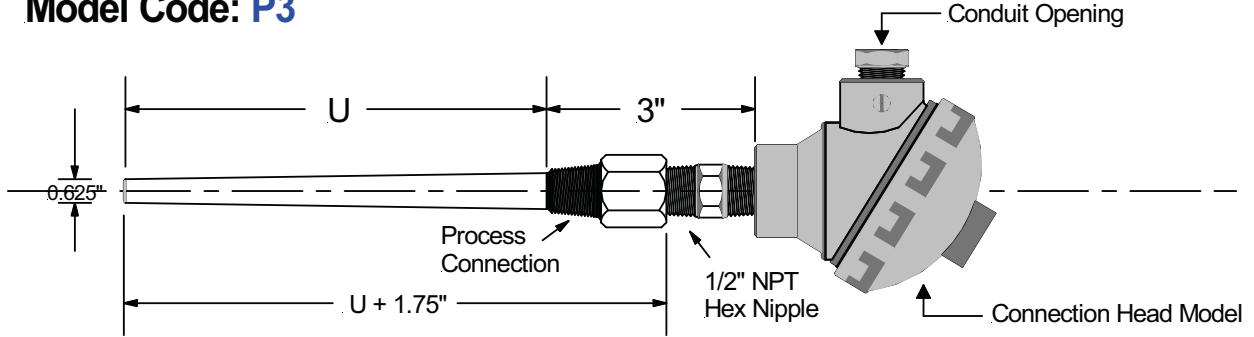


# Mineral Insulated Thermocouple & Thermowell Assembly

## Standard Tapered Threaded Thermowell

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **P3**



All Thermowell Assemblies Are Spring Loaded.

Model: **P3**     **A**     **B**    —     **C**     **D**    —     **E**     **F**     **G**     **H**

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Inconel 600
4	Carbon Steel
5	Solid Teflon

For all other materials contact factory for availability.

C Calibration			
Standard Limits of Error		Special Limits of Error	
1	J	6	J
2	K	7	K
3	T	8	T
4	E	9	E
5	N	10	N

D Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G	U	
Duplex	D	F	H
Triplex	T	Q	R

E Process Connection	
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

G Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

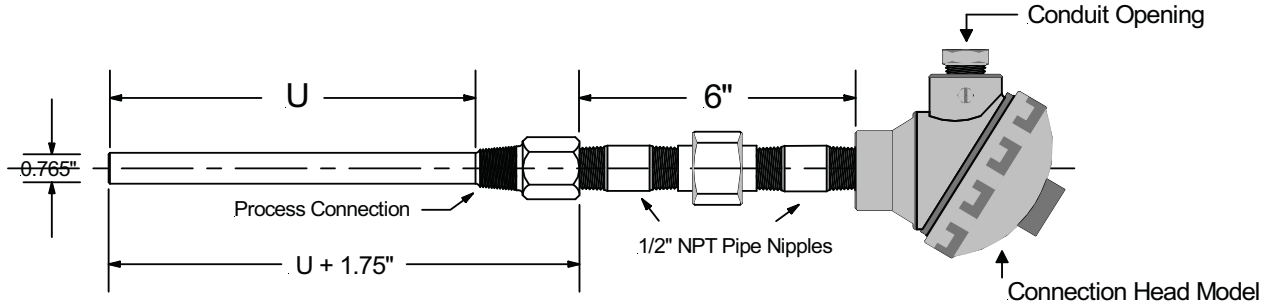
H Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter

# Mineral Insulated Thermocouple & Thermowell Assembly

## Nipple-Union-Nipple-Thermowell Style

Operating Temperature:  
-200 C to +1000 C Max.

Model Code: **P4**



All Thermowell Assemblies Are Spring Loaded.

Model:	<b>A</b>	<b>B</b>	<b>C</b>	—	<b>D</b>	<b>E</b>	—	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
<b>P4</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>	<input type="checkbox"/>	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>A</b>	<b>Thermowell Type</b>
1	Stepped
2	Straight
3	Tapered

<b>B</b>	<b>"U" Fractional Dimension</b>
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

<b>C</b>	<b>Sheath Material</b>
1	304 Stainless
2	316 Stainless
3	Inconel 600
4	Carbon Steel
5	Solid Teflon

For all other materials contact factory for availability.

<b>D</b>	<b>Calibration</b>	
	Standard Limits of Error	Special Limits of Error
1	J	6 J
2	K	7 K
3	T	8 T
4	E	9 E
5	N	10 N

<b>E</b>	<b>Junction Styles</b>		
Element Description	Grounded	Ungrounded	
	Common	Common	Isolated
Single	G	U	
Duplex	D	F	H
Triplex	T	Q	R

<b>F</b>	<b>Process Connection</b>
1	1/2" NPT
2	3/4" NPT
3	1" NPT

<b>G</b>	<b>Connection Head Model</b>
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

<b>H</b>	<b>Conduit Opening</b>
1	None
2	1/2" NPT
3	3/4" NPT

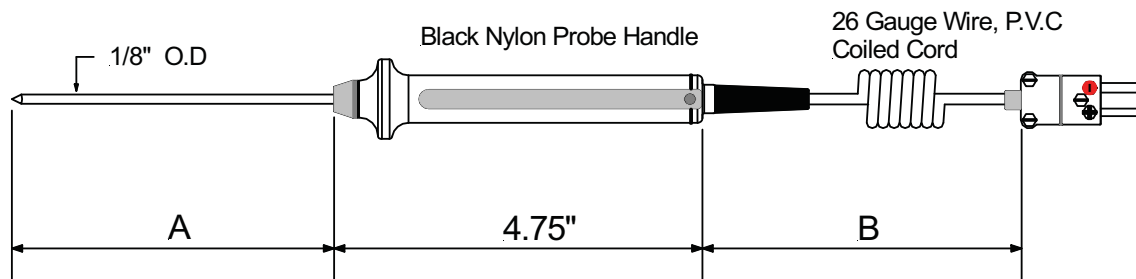
  

<b>I</b>	<b>Connection Head Options</b>
N	None
B	No Terminal Block
T	4-20mA Transmitter

# Process Industry RTD's

## Hand Held RTD Probe

Low temperature application  
-200 C To +100 C



Operating Temperature: -200 C to +250 C

Steps To Follow:

Model: **1L**  -  -  -  -  -  -

**1. Probe Tip Option**

R	Radius Tip Style
D	Drill Point Style

**2. Termination Type**

1	3" Split Leads & 1/2" Bare Ends.
2	Mini Male Plug (2 wire configuration only)

**3. "A" Dimension**

"A" = <u>0 4</u> "
Length In Inches

**4. Coiled Cord "B" Dimension**

	Retracted Length	Extended Length
A	12"	48" to 60"
B	24"	120"
C	32"	180"
D	60"	360"
E	96"	540"

**5. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	2	1
2 x Pt100	4	3
1 x Pt1000	6	5
2 x Pt1000	8	7

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

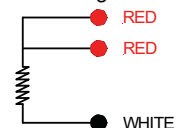
**6. RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration

2 Wire Configuration



3 Wire Configuration



# Mineral Insulated RTD

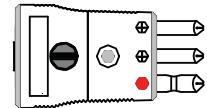
## Straight RTD Elements

Operating Temperature:  
-200 C to +500 C Max.

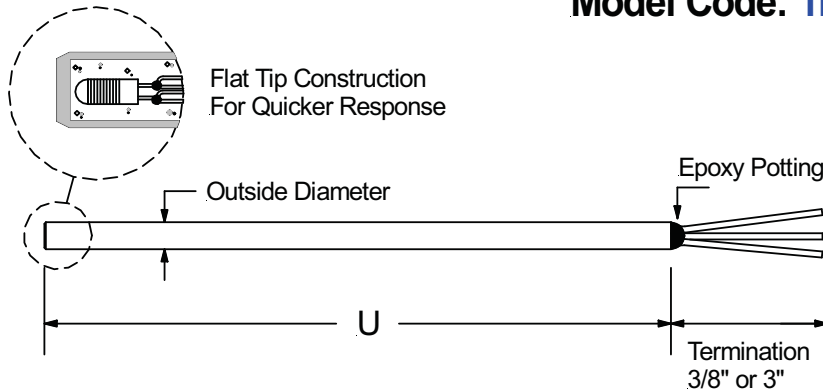
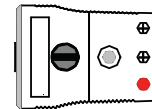
Ceramic RTD Element

Model Code: **1M**

Optional Male Connector



Optional Female Connector



Model: **1M**  **A**  **B**  **C**  **D**  **E**  **F**  **G**

A	Outside Diameter
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
	Specify "U" Length In Inches <u>006</u>

Example "U" is 6" = 006

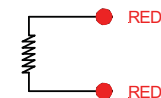
D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E	RTD Element Type	
	Ohms	Class
	1 x Pt100	1 2
	2 x Pt100	3 4
	1 x Pt1000	5 6
	2 x Pt1000	7 8

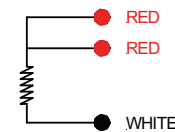
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

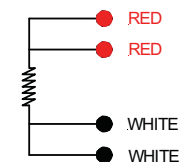
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



G	Termination Type
1	3/8" Split Bare Ends.
2	3" Split & Color Coded Leads.
3	Standard Male Plug
4	Standard Female Jack
5	Mini Male Plug
6	Mini Female Jack

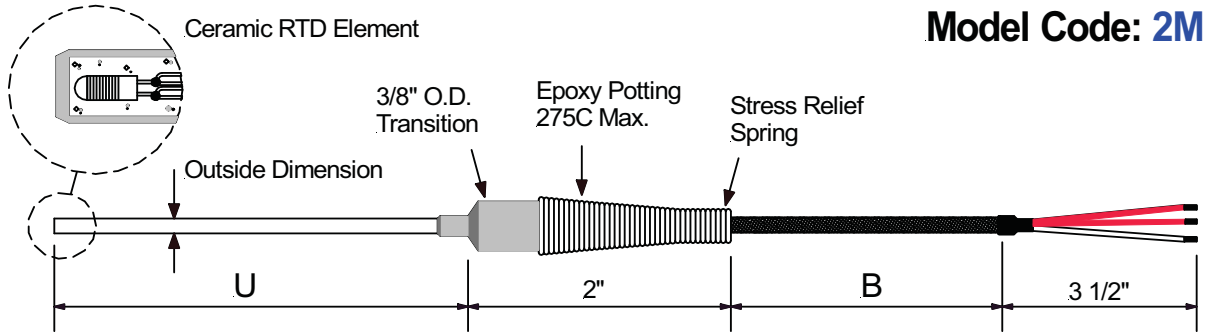
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

## General Purpose Type

Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 2M**



Model: **2M**     -   -   -

A	Outside Diameter
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
	Specify "U" Length In Inches <u>0 0 6</u>

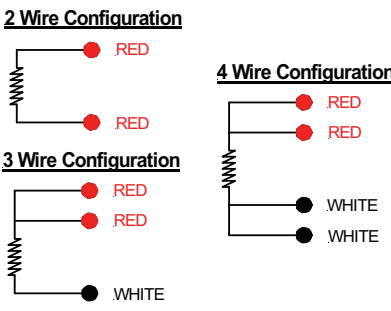
Example "U" is 6" = 006

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E	RTD Element Type	
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration



G	"B" Dimension
	Specify "B" Length In Inches <u>0 4 8</u>

Example "B" is 48" = 048

H	Cable Insulation Description
A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

I	Termination
1	3 1/2" Split leads & bare ends
2	3 1/2" Split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

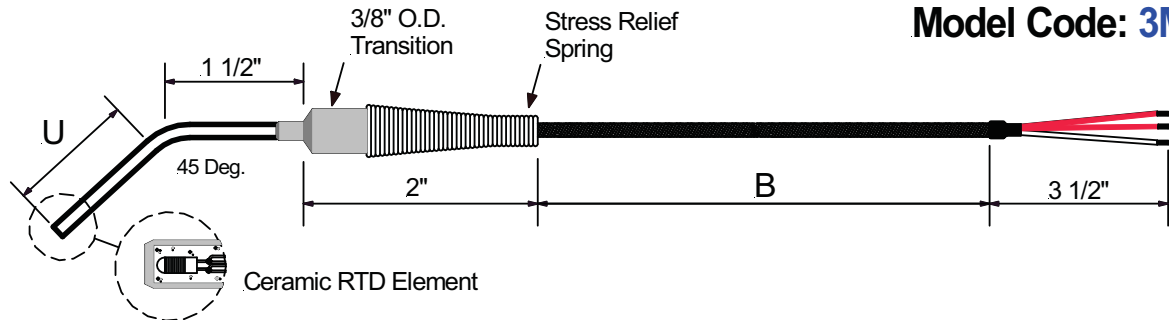
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

## General Purpose Type: 45 Deg. Bend

Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 3M**



Model: **A** **B** **C** **D** - **E** **F** - **G** - **H** **I**

**3M**

**A Outside Diameter**

1	0.079"
2	0.125"
3	0.188"
4	0.250"

**B Sheath Material**

A	304 Stainless
B	316 Stainless

**C "U" Dimension**

Specify "U" Length  
In Inches 0 0 6

Example "U" is 6" = 006

**D "U" Fractional Dimension**

A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

**E RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

**F RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**

**3 Wire Configuration**

**4 Wire Configuration**

**G "B" Dimension**

Specify "B" Length  
In Inches 0 4 8

Example "B" is 48" = 048

**H Cable Insulation Description**

A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

**I Termination**

1	3 1/2" Split leads & bare ends
2	3 1/2" Split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

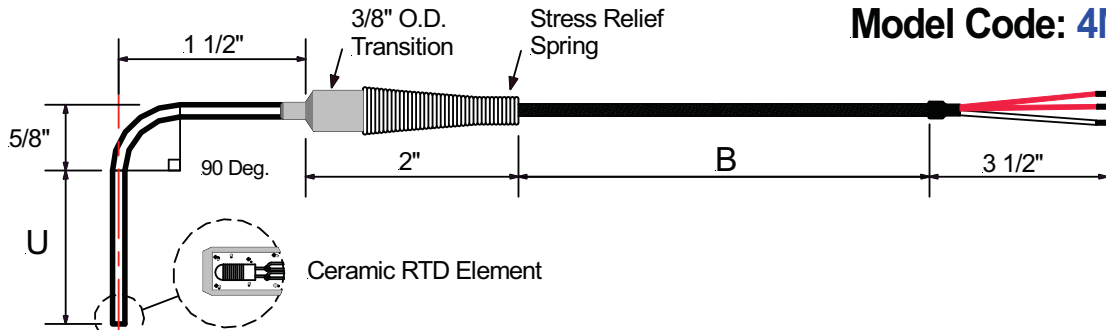
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

## General Purpose Type: 90 Deg. Bend

Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 4M**



Model: **4M**     -   -  -

A	Outside Diameter
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

D	"U" Fractional Dimension
A	0.125"
B	0.188"
C	0.250"
D	0.315"
E	0.375"
F	0.500"
G	0.625"
H	0.750"
I	0.875"
N	None

E	RTD Element Type		
	Ohms	Class A	Class B
1 x Pt100	1	2	
2 x Pt100	3	4	
1 x Pt1000	5	6	
2 x Pt1000	7	8	

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**

**4 Wire Configuration**

G	"B" Dimension
Specify "B" Length In Inches <u>0 4 8</u>	
Example "B" is 48" = 048	

H	Cable Insulation Description
A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

I	Termination
1	3 1/2" Split leads & bare ends
2	3 1/2" Split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

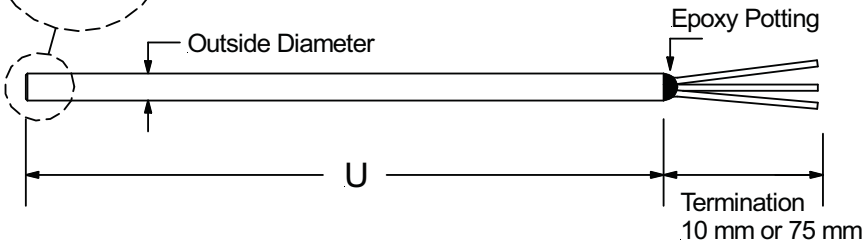
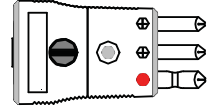
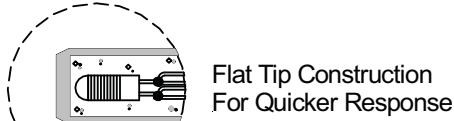
## Metric Straight RTD Elements

Operating Temperature:  
-200 C to +500 C Max.

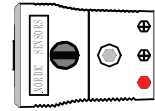
Ceramic RTD Element

Model Code: **5M**

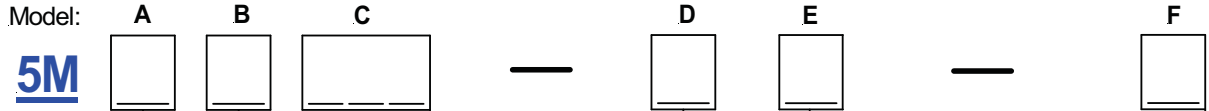
Optional Male Connector



Optional Female Connector



Compression fittings are sold separately. See accessory section.



A	Outside Diameter
1	2 mm
2	3 mm
3	4 mm
4	6 mm

C	"U" Dimension
	Specify "U" Length In mm <u>100</u>

Example "U" is 100 mm = 100

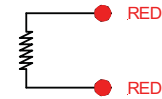
B	Sheath Material
A	304 Stainless
B	316 Stainless

D	RTD Element Type	
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

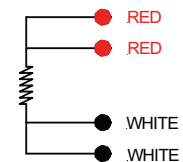
Temperature Coefficient: 0.00385  
Platinum Element  
IEC 751

E	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

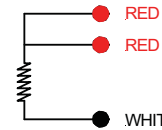
2 Wire Configuration



4 Wire Configuration



3 Wire Configuration



F	Termination Type
1	10 mm Split Bare Ends.
2	75 mm Split & Color Coded Leads.
3	Standard Male Plug
4	Standard Female Jack
5	Mini Male Plug
6	Mini Female Jack

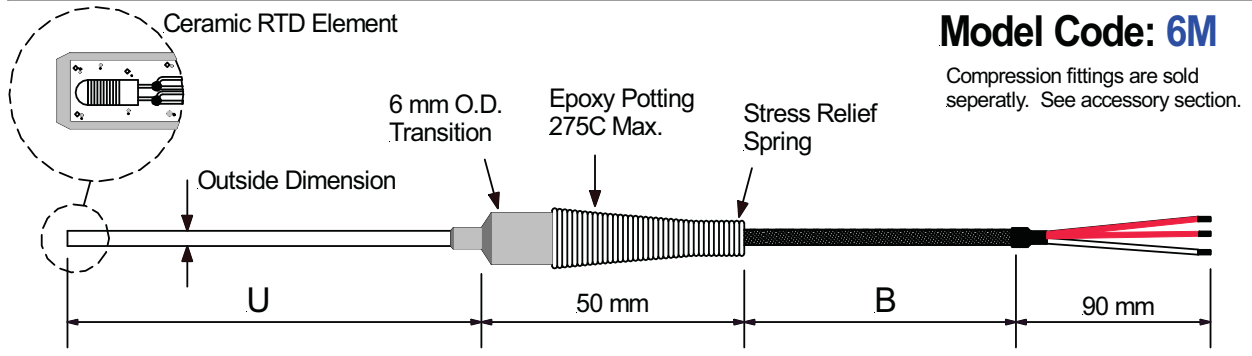
Connectors can only be installed  
on 2 & 3 wire configuration RTDs.



# Mineral Insulated RTD

## Metric General Purpose Type

Operating Temperature:  
-200 C to +500 C Max.



**Model Code: 6M**  
Compression fittings are sold separately. See accessory section.

Model: **A** **B** **C** **D** **E** **F** **G** **H**

**6M**

**A Outside Diameter**

1	2 mm
2	3 mm
3	4 mm
4	6 mm

**B Sheath Material**

A	304 Stainless
B	316 Stainless

**C "U" Dimension**

Specify "U" Length In mm	<u>100</u>
-----------------------------	------------

Example "U" is 100 mm = 100

**D RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

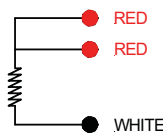
**E RTD Wire Connection**

A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

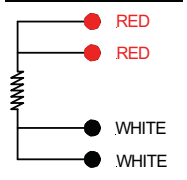
**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



**F "B" Dimension**

Specify "B" Length In Meters	<u>02</u>
---------------------------------	-----------

Example "B" is 2 Meters = 02

**G Cable Insulation Description**

A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

**H Termination**

1	75 mm split leads & 15 mm bare ends
2	75 mm split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

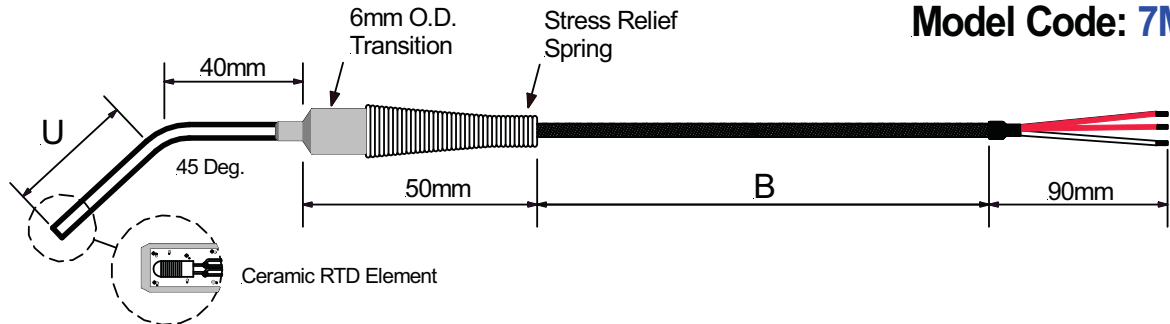
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

Metric General Purpose Type: 45 Deg. Bend

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **7M**



Compression fittings are sold separately. See accessory section.

Model: **7M**

A	Outside Diameter
1	2 mm
2	3 mm
3	4 mm
4	6 mm

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
	Specify "U" Length In mm <u>100</u>

Example "U" is 100 mm = 100

D	RTD Element Type	
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

E	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**

**3 Wire Configuration**

**4 Wire Configuration**

F	"B" Dimension
	Specify "B" Length In Meters <u>02</u>

Example "B" is 2 Meters = 02

G	Cable Insulation Description
A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

H	Termination
1	75 mm split leads & 15 mm bare ends
2	75 mm split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

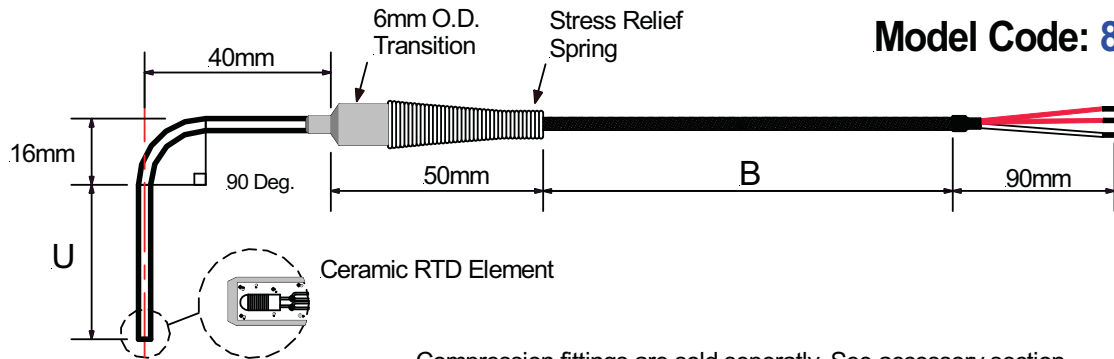
Connectors can only be installed on 2 & 3 wire configuration RTDs.

# Mineral Insulated RTD

Metric General Purpose Type: 90 Deg. Bend

Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 8M**



Compression fittings are sold separately. See accessory section.

Model: **A** **B** **C** **D** **E** **F** **G** **H**

**8M**

A	Outside Diameter
1	2 mm
2	3 mm
3	4 mm
4	6 mm

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
	Specify "U" Length In mm <u>100</u>

Example "U" is 100 mm = 100

D	RTD Element Type	
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

E	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**

**3 Wire Configuration**

**4 Wire Configuration**

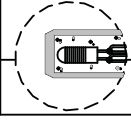
F	"B" Dimension
	Specify "B" Length In Meters <u>02</u>

Example "B" is 2 Meters = 02

G	Cable Insulation Description
A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

H	Termination
1	75 mm split leads & 15 mm bare ends
2	75 mm split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

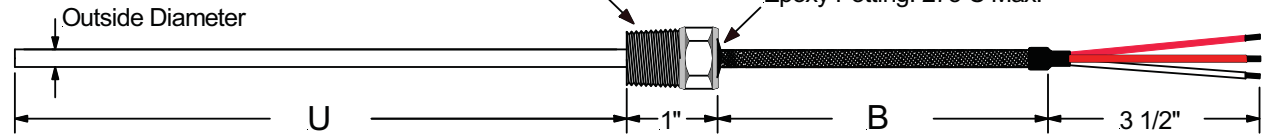
Connectors can only be installed on 2 & 3 wire configuration RTDs.



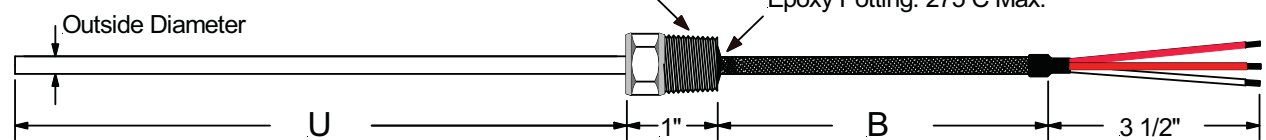
# Mineral Insulated RTD Hex Bushing Style RTD

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **1N**



Model Code: **2N**



Model: **A** **B** **C** **D** **E** **F** **G** **H** **I** **J**

**1N**

**2N**

A Outside Diameter	
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B Sheath Material	
A	304 Stainless
B	316 Stainless

C "U" Dimension	
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

D "U" Fractional Dimension	
A	0.125"
B	0.250"
C	0.375"
D	0.500"
E	0.750"
F	None

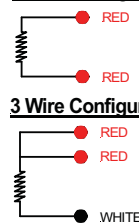
E Process Connection	
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

F RTD Element Type		
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

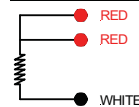
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

G RTD Wire Connection	
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**



**3 Wire Configuration**



**4 Wire Configuration**



H "B" Dimension	
Specify "B" Length In Inches <u>0 4 8</u>	

Example "B" is 48" = 048

I Cable Insulation Description	
A	24 gage, Stranded, Fiberglass
B	24 gage, Fiberglass, Metal Braid
C	.281" O.D. Flexible Armor Cable
D	.210" O.D. Flexible Armor Cable
E	24 gage, Stranded, Teflon
F	24 gage, Stranded, Sheilded, Teflon
G	24 gage, Stranded, PVC
H	24 gage, Stranded, Sheilded, PVC

J Termination	
1	3 1/2" Split leads & bare ends
2	3 1/2" Split leads & No.10 spade lugs
3	Standard Male Plug (350 F)
4	Standard Female Jack (350 F)
5	Mini Male Plug (350 F)
6	Mini Female Jack (350 F)

Connectors can only be installed on 2 & 3 wire configuration RTDs.

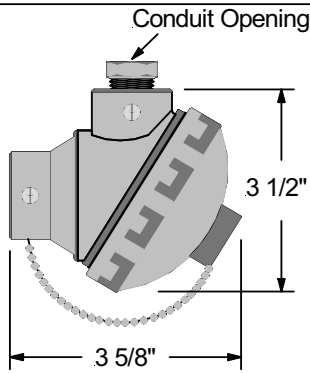
# Mineral Insulated RTD Probe Assembly

## Compression Fitting Mounting Style

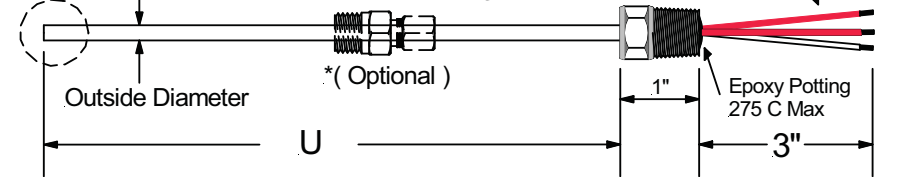
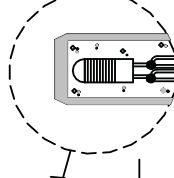
Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 3N**

### Connection Head



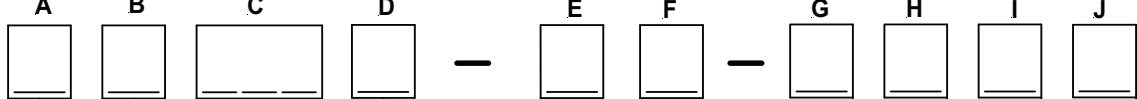
Ceramic RTD Element



Compression fittings are sold separately. See accessory section.

Model:

**3N**



A	Outside Diameter
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B	Sheath Material
A	304 Stainless
B	316 Stainless

C	"U" Dimension
Specify "U" Length In Inches <u>0 0 6</u>	
Example "U" is 6" = 006	

D	"U" Fractional Dimension
A	0.125"
B	0.250"
C	0.375"
D	0.500"
E	0.625"
F	0.750"
G	None

E	RTD Element Type		
	Ohms	Class A	Class B
1	1 x Pt100	1	2
2	2 x Pt100	3	4
3	1 x Pt1000	5	6
4	2 x Pt1000	7	8

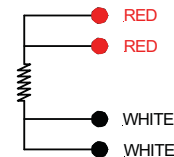
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

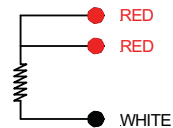
#### 2 Wire Configuration



#### 4 Wire Configuration



#### 3 Wire Configuration



G	Head Connection
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

H	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel

I	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

J	Connection Head Options
N	None
T	4-20mA Transmitter
X	No Terminal Block

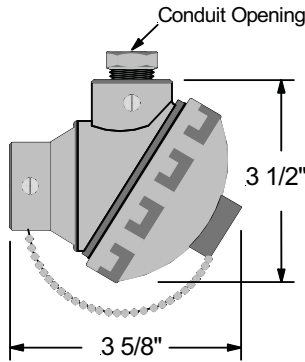
# Mineral Insulated RTD Probe Assembly

## Hex Nipple Process Style

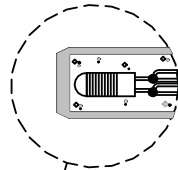
Operating Temperature:  
-200 C to +500 C Max.

**Model Code: 4N**

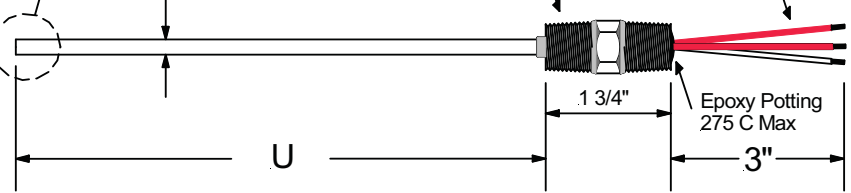
### Connection Head



### Ceramic RTD Element



Outside Diameter



Model:

**4N**

A    B    C    D    E    F    G    H    I    J

A Outside Diameter	
1	0.079"
2	0.125"
3	0.188"
4	0.250"

B Sheath Material	
A	304 Stainless
B	316 Stainless

C "U" Dimension	
Specify "U" Length In Inches	<u>0 0 6</u>
Example "U" is 6" =	006

D "U" Fractional Dimension	
A	0.125"
B	0.250"
C	0.375"
D	0.500"
E	0.625"
F	0.750"
G	None

E RTD Element Type			
Ohms	Class A	Class B	
1 x Pt100	1	2	
2 x Pt100	3	4	
1 x Pt1000	5	6	
2 x Pt1000	7	8	

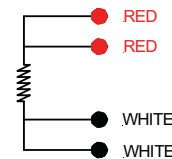
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

F RTD Wire Connection	
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

#### 2 Wire Configuration



#### 4 Wire Configuration



#### 3 Wire Configuration



G Process Connection	
1	1/4" NPT
2	1/2" NPT
3	3/4" NPT

H Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

I Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

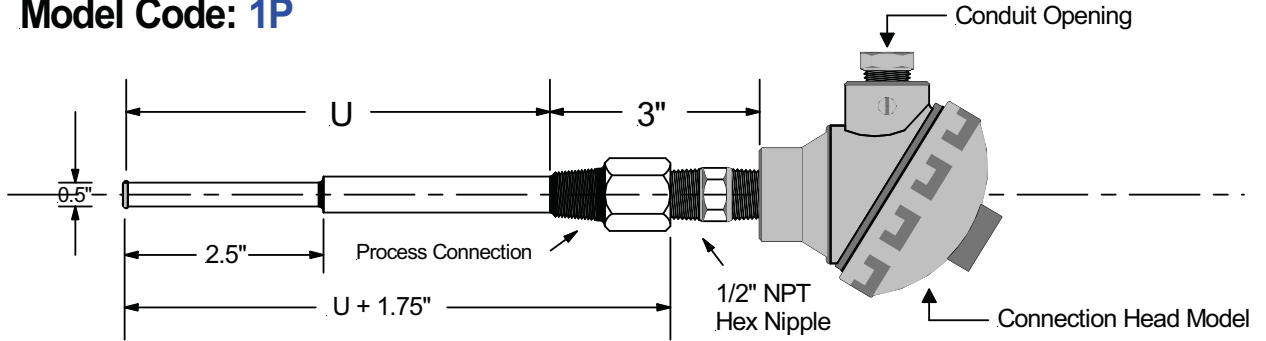
J Connection Head Options	
N	None
B	No Terminal Block
S	Spring Loaded
T	4-20mA Transmitter
R	Options S & T
Q	Options S & B

# Mineral Insulated RTD & Thermowell Assembly

## Standard Stepped Threaded Thermowell

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **1P**



All Thermowell Assemblies Are Spring Loaded.

Model: **1P**    A    B    —    C    D    —    E    F    G    H

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

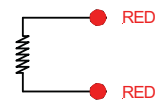
For all other U lengths contact factory for availability.

C RTD Element Type		
Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

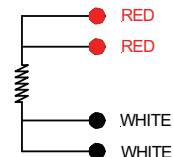
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

D	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

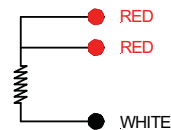
2 Wire Configuration



4 Wire Configuration



3 Wire Configuration



E	Process Connection
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

G	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Solid Teflon

For all other materials contact factory for availability.

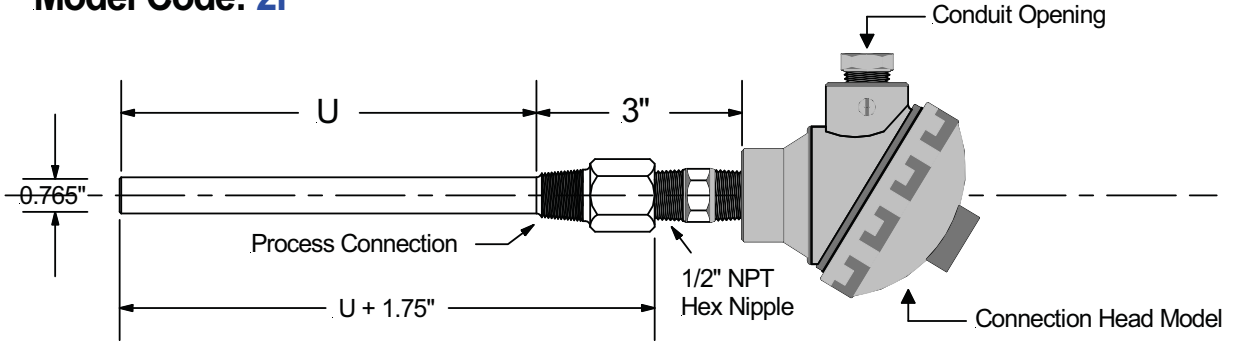
H	Connection Head Options
N	None
B	No Terminal Block
T	4-20mA Transmitter

# Mineral Insulated RTD & Thermowell Assembly

## Standard Straight Threaded Thermowell

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **2P**



All Thermowell Assemblies Are Spring Loaded.

Model:

**2P**

A	B	C	D	E	F	G	H
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Solid Teflon

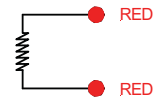
For all other materials contact factory for availability.

C	RTD Element Type	
	Ohms	Class
		<b>A</b>
		<b>B</b>
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

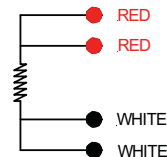
Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

D	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

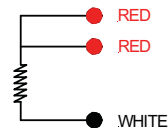
2 Wire Configuration



4 Wire Configuration



3 Wire Configuration



E	Process Connection
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

G	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

H	Connection Head Options
N	None
B	No Terminal Block
T	4-20mA Transmitter

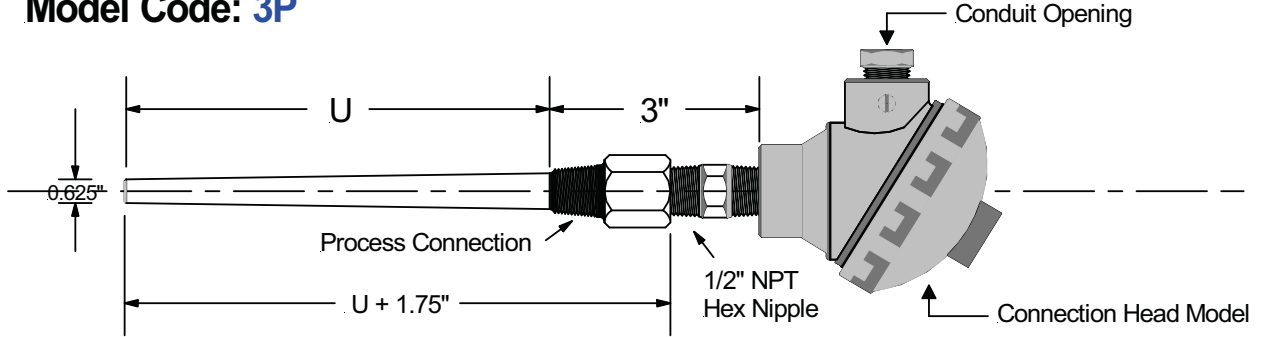


# Mineral Insulated RTD & Thermowell Assembly

## Standard Tapered Threaded Thermowell

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **3P**



All Thermowell Assemblies Are Spring Loaded.

Model: **3P**    A    B    —    C    D    —    E    F    G    H

A	"U" Fractional Dimension
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

B	Sheath Material
1	304 Stainless
2	316 Stainless
3	Solid Teflon

For all other materials contact factory for availability.

C	RTD Element Type		
Ohms	Class A	Class B	
1 x Pt100	1	2	
2 x Pt100	3	4	
1 x Pt1000	5	6	
2 x Pt1000	7	8	

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

D	RTD Wire Connection
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

**2 Wire Configuration**

**4 Wire Configuration**

E	Process Connection
1	1/2" NPT
2	3/4" NPT
3	1" NPT

F	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

G	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

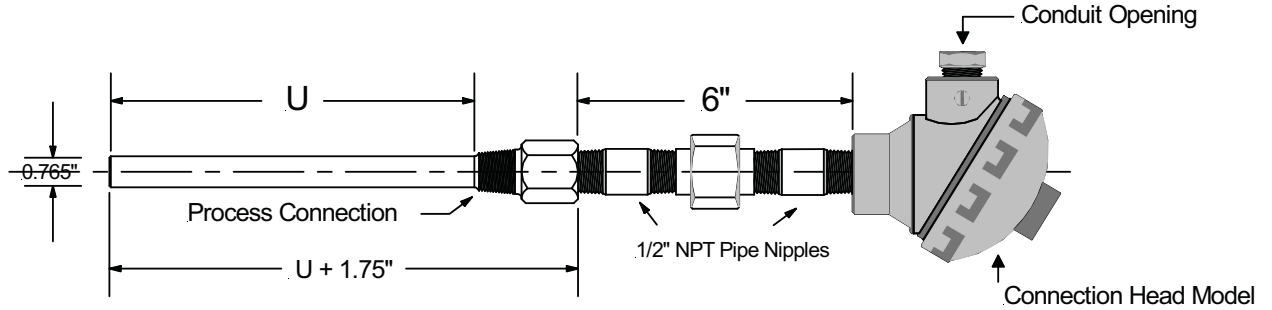
H	Connection Head Options
N	None
B	No Terminal Block
T	4-20mA Transmitter

# Mineral Insulated RTD & Thermowell Assembly

## Nipple-Union-Nipple-Thermowell Style

Operating Temperature:  
-200 C to +500 C Max.

Model Code: **4P**



All Thermowell Assemblies Are Spring Loaded.

Model:	<b>A</b>	<b>B</b>	<b>C</b>	—	<b>D</b>	<b>E</b>	—	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
	<b>4P</b>										

<b>A</b>	<b>Thermowell Type</b>
1	Stepped
2	Straight
3	Tapered

<b>B</b>	<b>"U" Fractional Dimension</b>
A	1 5/8"
B	2 1/2"
C	4 1/2"
D	7 1/2"
E	10 1/2"
F	13 1/2"
G	16 1/2"
H	22 1/2"

For all other U lengths contact factory for availability.

<b>C</b>	<b>Sheath Material</b>
1	304 Stainless
2	316 Stainless
3	Solid Teflon

<b>D</b>	<b>RTD Element Type</b>															
	<table border="1"> <thead> <tr> <th>Ohms</th> <th>Class A</th> <th>Class B</th> </tr> </thead> <tbody> <tr> <td>1 x Pt100</td> <td>1</td> <td>2</td> </tr> <tr> <td>2 x Pt100</td> <td>3</td> <td>4</td> </tr> <tr> <td>1 x Pt1000</td> <td>5</td> <td>6</td> </tr> <tr> <td>2 x Pt1000</td> <td>7</td> <td>8</td> </tr> </tbody> </table>	Ohms	Class A	Class B	1 x Pt100	1	2	2 x Pt100	3	4	1 x Pt1000	5	6	2 x Pt1000	7	8
Ohms	Class A	Class B														
1 x Pt100	1	2														
2 x Pt100	3	4														
1 x Pt1000	5	6														
2 x Pt1000	7	8														
	Temperature Coefficient: 0.00385 Platinum element IEC 751															

<b>E</b>	<b>RTD Wire Connection</b>
A	2 Wire Configuration
B	3 Wire Configuration
C	4 Wire Configuration

<b>2 Wire Configuration</b>	
<b>3 Wire Configuration</b>	
<b>4 Wire Configuration</b>	

<b>F</b>	<b>Process Connection</b>
1	1/2" NPT
2	3/4" NPT
3	1" NPT

<b>G</b>	<b>Connection Head Model</b>
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Polypropylene: FDA Appr.
E	Cast Iron: Standard
F	316 Stainless Steel
G	Explosion Proof

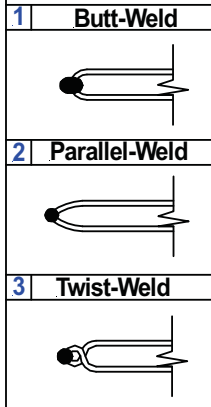
<b>H</b>	<b>Conduit Opening</b>
1	None
2	1/2" NPT
3	3/4" NPT

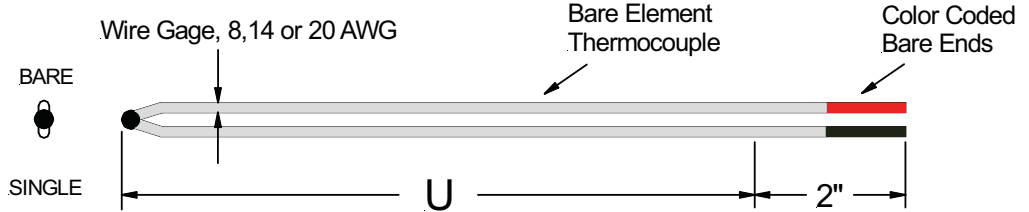
<b>I</b>	<b>Connection Head Options</b>
N	None
B	No Terminal Block
T	4-20mA Transmitter

# INDUSTRIAL THERMOCOUPLES

## Base Metal Bare Thermocouple Elements



Model: **Q1**



Steps:     **A**                    **B**                    **C**                    **D**

Model: **Q1**          —          —          —    

<b>A</b>	<b>Junction Weld Description</b>
<b>A</b>	Butt-weld
<b>B</b>	Parallel-weld
<b>C</b>	Twist-weld

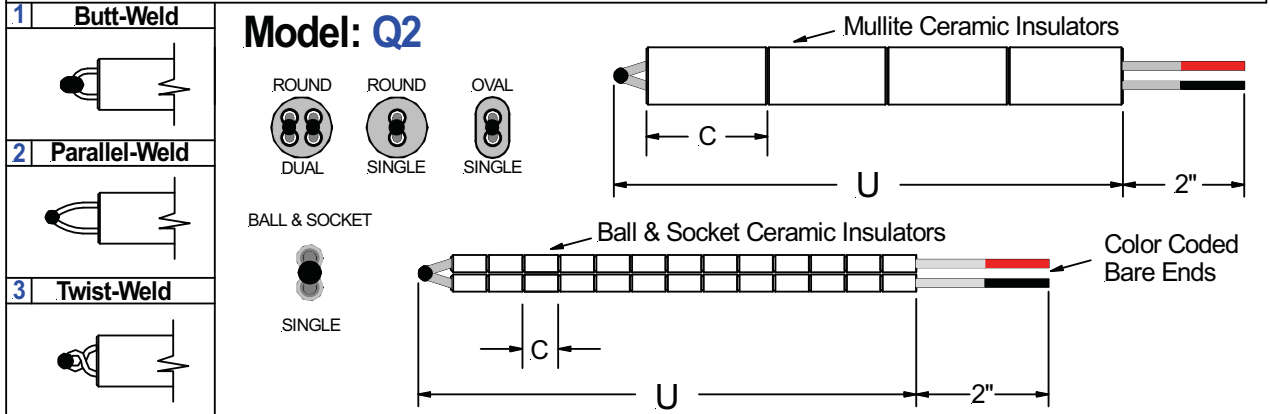
<b>C</b>		<b>Calibration</b>	
		Standard Limits of Error	Special Limits of Error
<b>A</b>	J	<b>C</b>	J
<b>B</b>	K	<b>D</b>	K

<b>D</b>	<b>"U" Dimension</b>
	Specify "U" Length In Inches <u>0 1 8</u>
	Example "U" is 18" = 018

<b>B</b>	<b>Thermocouple Wire Gage</b>	
<b>Model</b>	<b>Wire Gage</b>	<b>Description</b>
<b>1</b>	8	No Ceramic Insulators, Bare Thermocouple Element
<b>2</b>	14	No Ceramic Insulators, Bare Thermocouple Element
<b>3</b>	20	No Ceramic Insulators, Bare Thermocouple Element

# INDUSTRIAL THERMOCOUPLES

## Base Metal Thermocouple Elements With Ceramic Insulators



Steps: A — B — C — D

Model: **Q2**

A	Junction Weld Description
A	Butt-weld
B	Parallel-weld
C	Twist-weld

C	Calibration
	Standard Limits of Error
	Special Limits of Error
A	J
B	K

D	"U" Dimension
	Specify "U" Length In Inches <u>0 1 8</u>

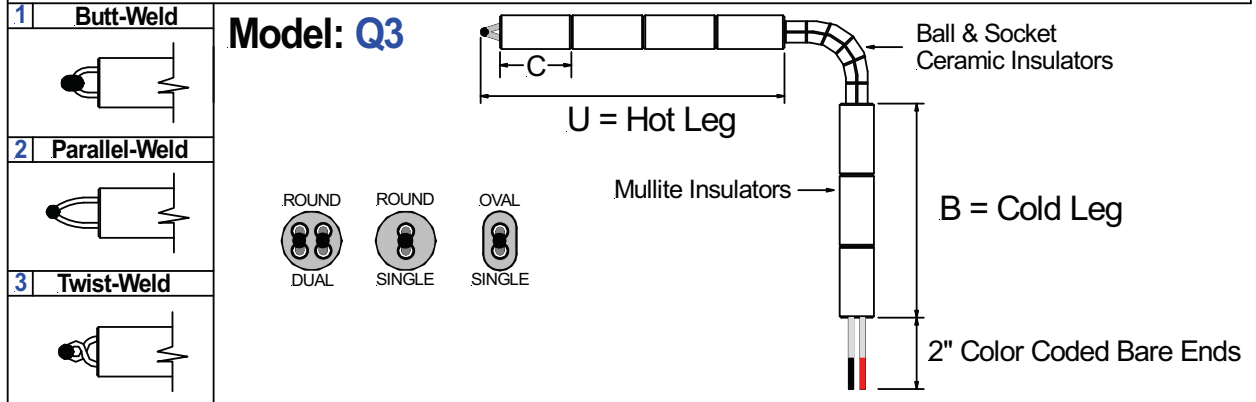
Example "U" is 18" = 018

### B Wire Gage & Ceramic Insulator Selection

Model	Wire Gage	Shape	"C" Length	Outside Diameter	Elements
1	8	Round	1"	0.468"	Single
2	8	Round	3"	0.500"	Single
3	8	Oval	1"	0.435" x 0.250"	Single
4	8	Oval	3"	0.562" x 0.312"	Single
5	14	Round	1"	0.250"	Single
6	14	Round	3"	0.281"	Single
7	14	Round	1"	0.312"	Dual
8	14	Oval	1"	0.312" x 0.187"	Single
9	14	Oval	3"	0.375" x 0.217"	Single
10	20	Round	1"	0.187"	Single
11	20	Round	3"	0.225"	Single
12	8	Ball & Socket	0.260"	0.260"	Single
13	14	Ball & Socket	0.200"	0.200"	Single
14	20	Ball & Socket	0.170"	0.170"	Single

# INDUSTRIAL THERMOCOUPLES

## Base Metal Angle Thermocouple Elements With Ceramic Insulators



Steps: A B C D E

Model: **Q3**

A	Junction Weld Description
A	Butt-weld
B	Parallel-weld
C	Twist-weld

C	Calibration
	Standard Limits of Error
	Special Limits of Error
A	J
B	K
C	J
D	K

D	"U" Hot Dimension
	Specify "U" Length In Inches <u>12</u>
	Example "U" is 12" = 12

E	"B" Cold Dimension
	Specify "B" Length In Inches <u>18</u>
	Example "U" is 18" = 18

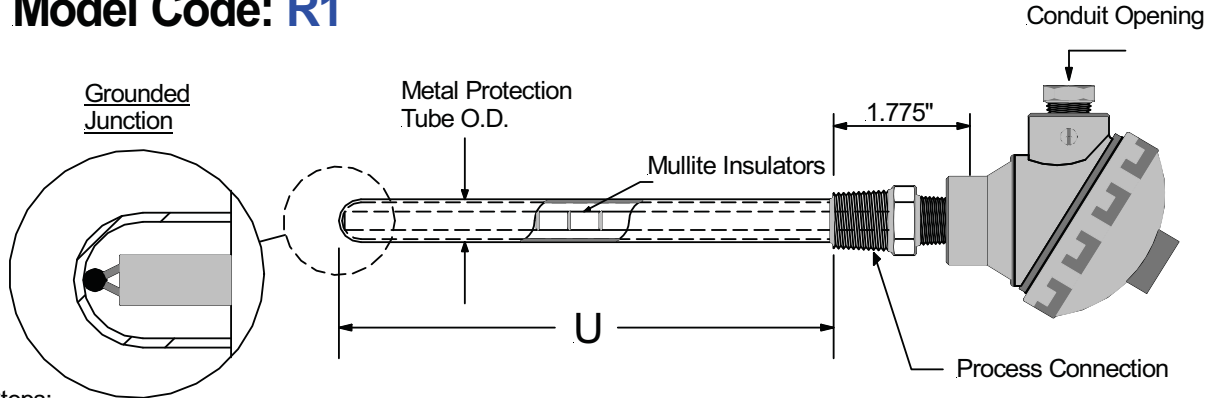
## B Wire Gage & Ceramic Insulator Selection

Model	Wire Gage	Shape	"C" Length	Outside Diameter	Elements
1	8	Round	1"	0.468"	Single
2	8	Round	3"	0.500"	Single
3	8	Oval	1"	0.435" x 0.250"	Single
4	8	Oval	3"	0.562" x 0.312"	Single
5	14	Round	1"	0.250"	Single
6	14	Round	3"	0.281"	Single
7	14	Round	1"	0.312"	Dual
8	14	Oval	1"	0.312" x 0.187"	Single
9	14	Oval	3"	0.375" x 0.217"	Single
10	20	Round	1"	0.187"	Single
11	20	Round	3"	0.225"	Single

# INDUSTRIAL THERMOCOUPLES

## Base Metal Thermocouple & Metal Protection Tube Assembly

Model Code: **R1**



Steps:

Model:

**R1**

A     B     C     D     E     F     G     H     I     J

A Outside Diameter	
1	1/4" NPT Pipe
2	1/2" NPT Pipe
3	3/4" NPT Pipe

B Wall Thickness	
1	Schedule 20
2	Schedule 40
3	Schedule 80

C Sheath Material	
A	Carbon Steel
B	304 SS
C	316 SS
D	Inconel 600
E	Ceramic Coated

D "U" Dimension	
Specify "U" Length In Inches <u>0 0 6</u>	

Example "U" is 6" = 006

E Calibration			
Standard Limits of Error		Special Limits of Error	
A	J	C	J
B	K	D	K

F Junction				
Wire Gage	Gounded		Ungounded	
	Single	Dual	Single	Dual
8	1	4	7	10
14	2	5	8	11
20	3	6	9	12

G Process Connection	
1	None
2	1/2" NPT
3	3/4" NPT
4	1" NPT

H Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

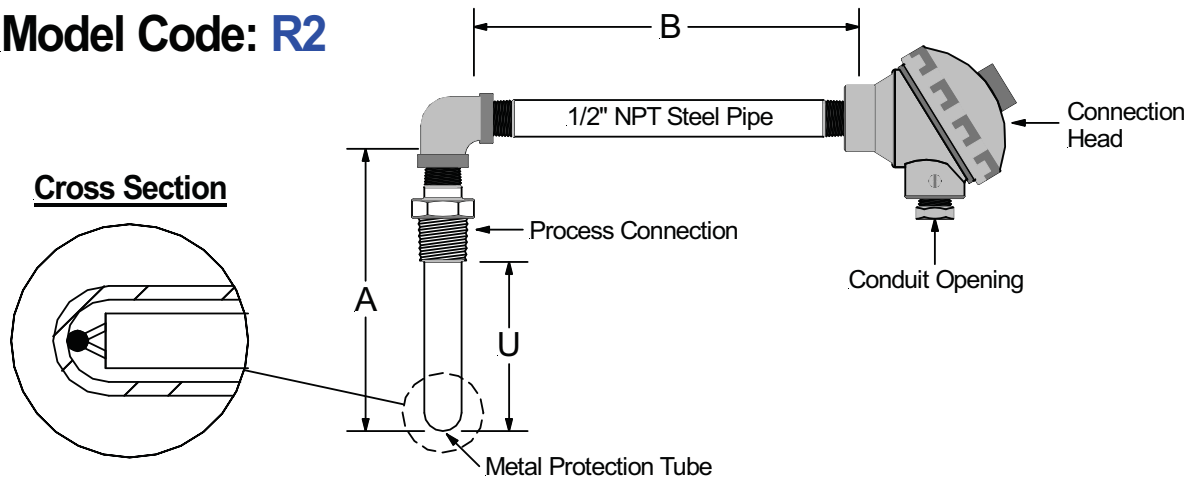
I Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

J Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter

# INDUSTRIAL THERMOCOUPLES

## Base Metal Angle Thermocouple & Metal Protection Tube Assembly

Model Code: **R2**



Steps: A B C D E F G H I J K L

Model: **R2**

**A Protection Tube O.D.**

A	1/4" Pipe
B	1/2" Pipe
C	3/4" Pipe

**B Wall Thickness**

1	Schedule 20
2	Schedule 40
3	Schedule 80

**C Sheath Material**

A	Carbon Steel
B	304 SS
C	316 SS
D	Inconel 600
E	Ceramic Coated

**D "A" Dimension**

Specify "A" Length  
In Inches 0 1 2

Example "A" is 12" = 012

**E Calibration**

Standard Limits of Error		Special Limits of Error	
A	J	C	J
B	K	D	K

**F Junction**

Wire Gage	Gounded		Ungounded	
	Single	Dual	Single	Dual
8	1	4	7	10
14	2	5	8	11
20	3	6	9	12

**G Process Connection**

A	None
B	1/2" NPT
C	3/4" NPT
D	1" NPT

**H "U" Dimension**

Specify "U" Length  
In Inches 0 0 8

Example "U" is 8" = 008

**I Connection Head Model**

A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

**J Conduit Opening**

1	None
2	1/2" NPT
3	3/4" NPT

**K Connection Head Options**

N	None
B	No Terminal Block
T	4-20mA Transmitter

**L "B" Insertion**

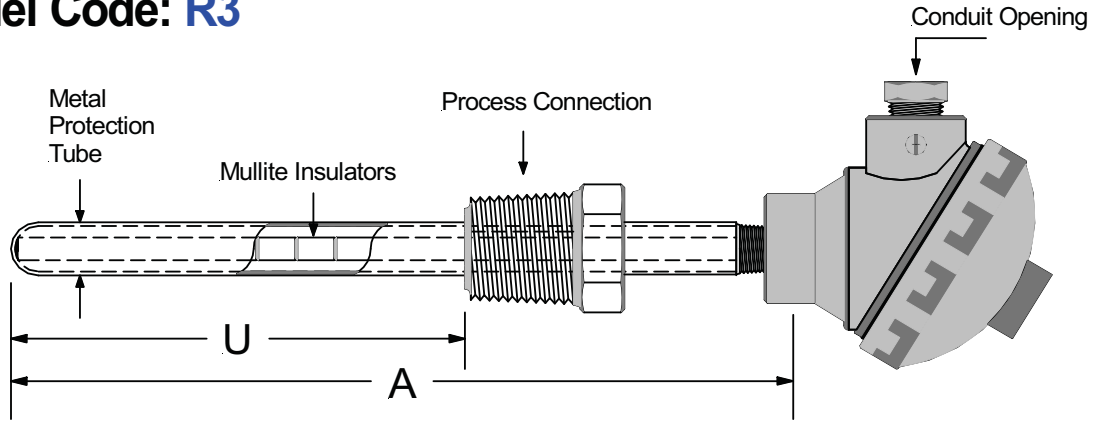
Specify "B" Length  
In Inches 0 1 8

Example "B" is 18" = 018

# INDUSTRIAL THERMOCOUPLES

## Base Metal Thermocouple & Metal Protection Tube Assembly

Model Code: **R3**



Steps: A B C D E F G H I J K

Model: **R3**

A Protection Tube O.D.	
A	1/4" Pipe
B	1/2" Pipe
C	3/4" Pipe

B Wall Thickness	
1	Schedule 20
2	Schedule 40
3	Schedule 80

C Sheath Material	
A	Carbon Steel
B	304 SS
C	316 SS
D	Inconel 600
E	Ceramic Coated

D "A" Dimension	
Specify "A" Length In Inches <u>0 1 2</u>	
Example "A" is 12" = 012	

E Calibration	
Standard Limits of Error	Special Limits of Error
A J	C J
B K	D K

F Junction				
Wire Gage	Gounded		Ungounded	
	Single	Dual	Single	Dual
8	1	4	7	10
14	2	5	8	11
20	3	6	9	12

G Process Connection	
A	1/2" NPT Hex Bushing
B	3/4" NPT Hex Bushing
C	1" NPT Hex Bushing

H "U" Dimension	
Specify "U" Length In Inches <u>0 0 8</u>	
Example "U" is 8" = 008	

I Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

J Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

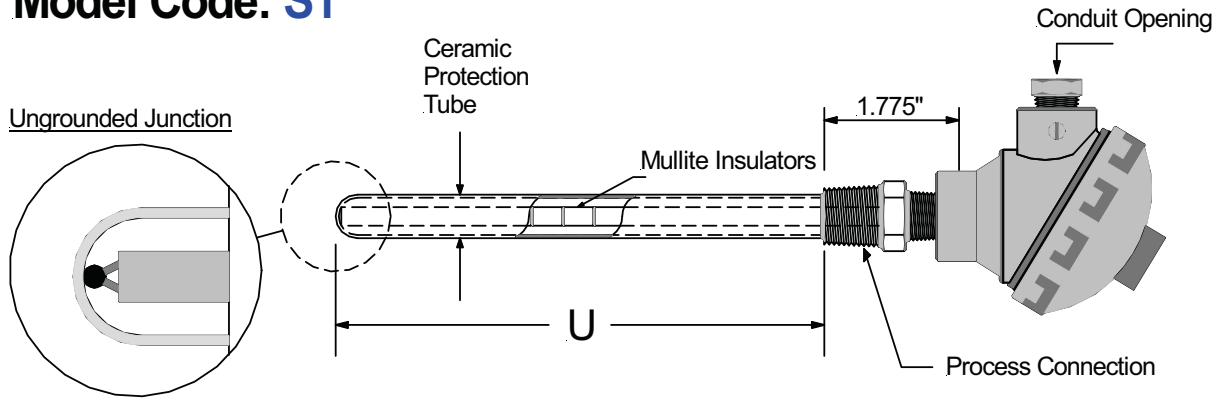
K Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter



# INDUSTRIAL THERMOCOUPLES

## Base Metal Thermocouple & Ceramic Protection Tube Assembly

**Model Code: S1**



Model:

**S1**

A

B

C

D

E

F

G

H

I

A	Ceramic Tube Size
A	1/4" O.D.
B	3/8" O.D.
C	1/2" O.D.
D	11/16" O.D.
E	1" O.D.

B	Protection Tube
1	Alumina 1800C Max.
2	Mullite 1600C Max.

C	"U" Dimension
	Specify "U" Length In Inches <u>06</u>

Example "U" is 6" = 06

D	Calibration		
	Standard Limits of Error		
	Special Limits of Error		
A	J	C	J
B	K	D	K

E	Wire Size	
Gage	Single	Dual
8	1	4
14	2	5
20	3	6

F	Process Connection
1	None
2	1/2" NPT
3	3/4" NPT
4	1" NPT

G	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

H	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

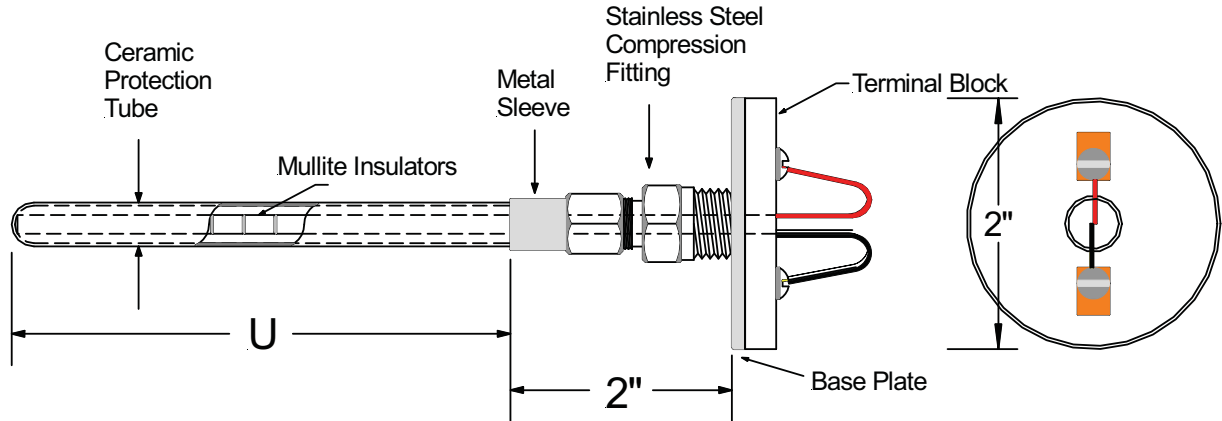
I	Connection Head Options
N	None
B	No Terminal Block
T	4-20mA Transmitter

# INDUSTRIAL THERMOCOUPLES

Base Metal Thermocouple, Ceramic Protection Tube & Terminal Block Assembly

Model Code: **S2**

Operating Temperature:  
+1000 C Max.



Model: **S2**                —            —   

<b>A</b>	<b>Ceramic Tube Size</b>
A	1/4" O.D.
B	3/8" O.D.

<b>B</b>	<b>Protection Tube</b>
1	Alumina 1800C Max.
2	Mullite 1600C Max.

<b>C</b>	<b>"U" Dimension</b>
Specify "U" Length In Inches <u>06</u>	

Example "U" is 6" = 06

<b>D</b>	<b>Calibration</b>			
	Standard Limits of Error	Special Limits of Error		
A	J	C	J	
B	K	D	K	

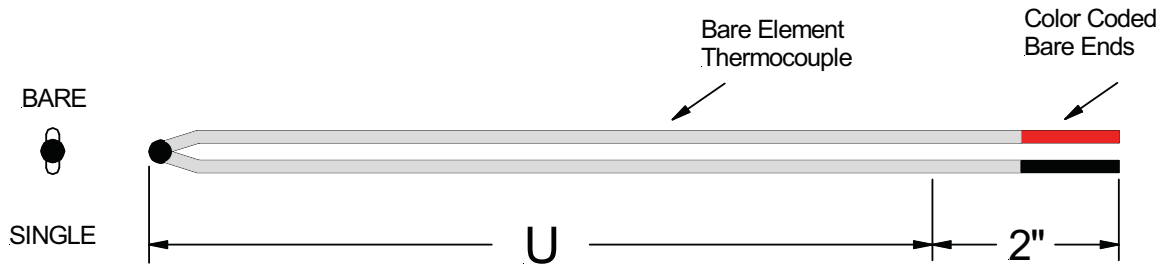
<b>E</b>	<b>Wire Size</b>	
<b>Gage</b>	<b>Single</b>	<b>Dual</b>
20	1	4
24	2	5

<b>F</b>	<b>Terminal Block Description</b>
A	Ceramic
B	Ceramic, Spring Loaded
C	Plastic, 1" Dia. Micro Head Size

# NOBEL METAL THERMOCOUPLES

## Bare Element Thermocouples

Model: **T1**



Steps:      **A**      **B**      **C**

Model: **T1**            —            —     

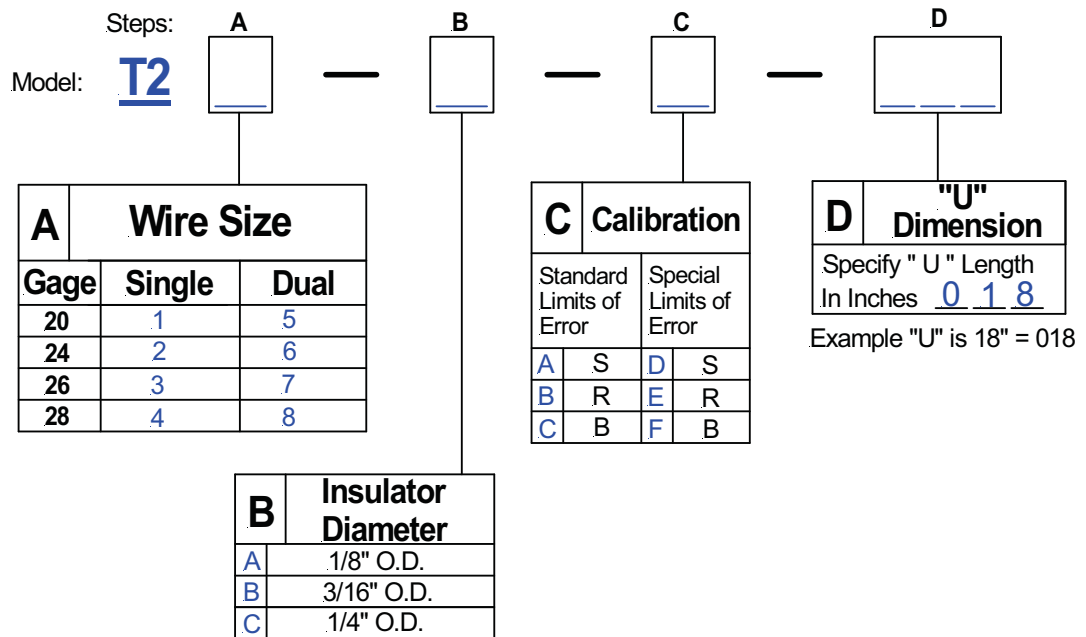
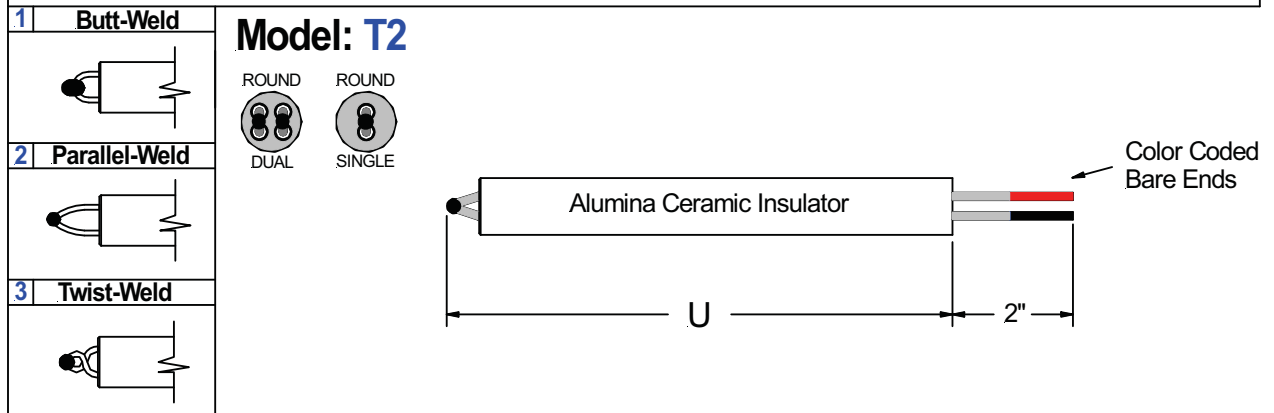
<b>A</b>	<b>Wire Gage</b>
<b>A</b>	20 Gage
<b>B</b>	24 Gage
<b>C</b>	26 Gage
<b>D</b>	28 Gage

<b>B</b>		<b>Calibration</b>	
		Standard Limits of Error	Special Limits of Error
<b>A</b>	<b>S</b>	<b>D</b>	<b>S</b>
<b>B</b>	<b>R</b>	<b>E</b>	<b>R</b>
<b>C</b>	<b>B</b>	<b>F</b>	<b>B</b>

<b>C</b>	<b>"U" Dimension</b>
Specify "U" Length In Inches <u>0 1 8</u>	
Example "U" is 18" = 018	

# NOBEL METAL THERMOCOUPLES

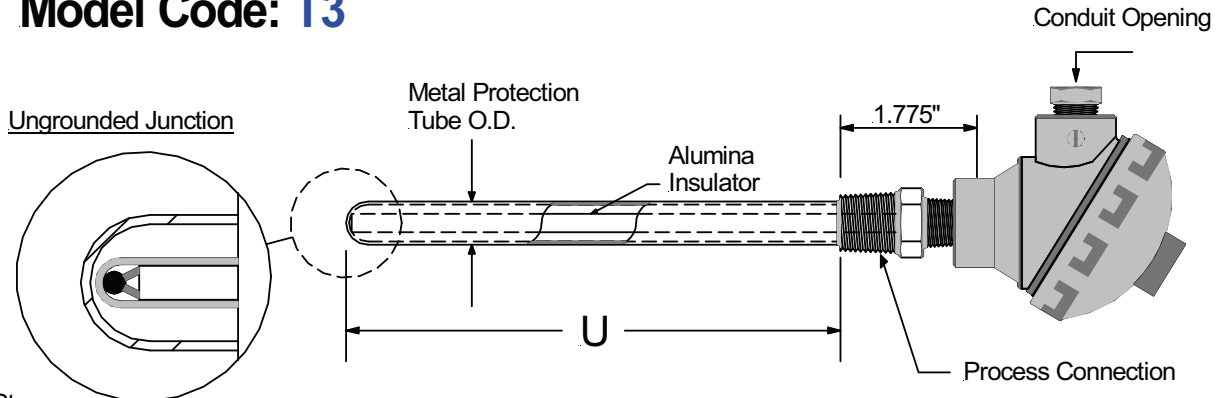
## Nobel Metal Thermocouple Elements With Ceramic Insulators



# NOBEL METAL THERMOCOUPLES

## Nobel Metal Thermocouple & Metal Protection Tube Assembly

Model Code: **T3**



Steps:

Model:

**T3**

A	Outside Diameter
1	1/4" NPT Pipe
2	1/2" NPT Pipe
3	3/4" NPT Pipe

B	Wall Thickness
1	Schedule 20
2	Schedule 40
3	Schedule 80

C	Sheath Material
A	Carbon Steel
B	304 SS
C	316 SS
D	Inconel 600
E	Ceramic Coated

D	"U" Dimension
	Specify "U" Length In Inches <u>0.6</u>

Example "U" is 6" = 06

E Calibration			
Standard Limits of Error		Special Limits of Error	
A	S	D	S
B	R	E	R
C	B	F	B

F Wire Size		
Gage	Single	Dual
20	1	5
24	2	6
26	3	7
28	4	8

G	Process Connection
1	None
2	1/2" NPT
3	3/4" NPT
4	1" NPT

H	Connection Head Model
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

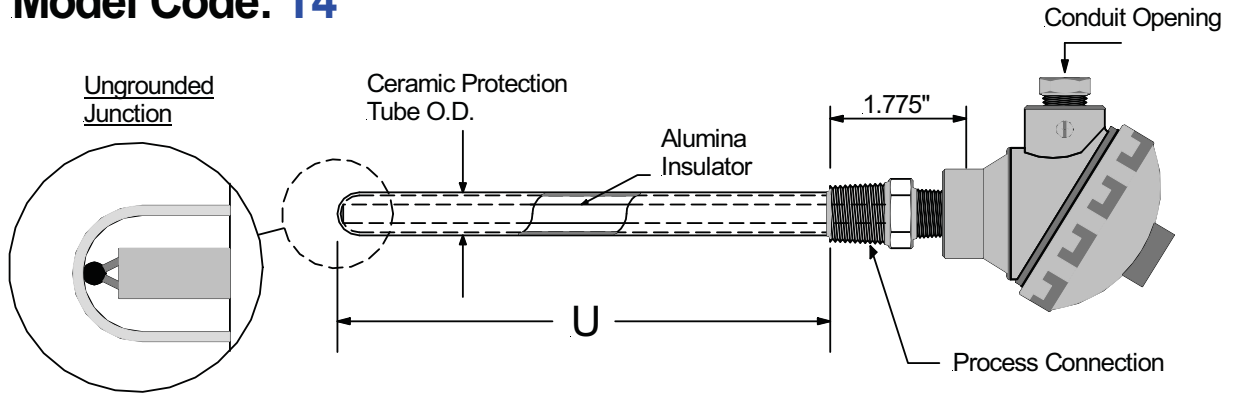
I	Conduit Opening
1	None
2	1/2" NPT
3	3/4" NPT

J	Connection Head Options
N	None
B	No Terminal Block
T	4-20mA Transmitter

# NOBEL METAL THERMOCOUPLES

Nobel Metal Thermocouple & Ceramic Protection Tube Assembly

Model Code: **T4**



Model: **T4**  A  B  C  —  D  E  F  —  G  H  I

A Ceramic Tube Size	
A	1/4" O.D.
B	3/8" O.D.
C	1/2" O.D.
D	11/16" O.D.
E	1" O.D.

B Protection Tube	
1	Alumina 1800C Max.
2	Mullite 1600C Max.

C "U" Dimension	
Specify "U" Length In Inches <u>06</u>	

Example "U" is 6" = 06

D Calibration			
Standard Limits of Error		Special Limits of Error	
A	S	D	S
B	R	E	R
C	B	F	B

E Wire Size		
Gage	Single	Dual
20	1	5
24	2	6
26	3	7
28	4	8

F Process Connection	
1	None
2	1/2" NPT
3	3/4" NPT
4	1" NPT

G Connection Head Model	
A	None, 3" Split Leads
B	Cast Aluminum: Standard
C	Cast Aluminum: Mini
D	Black Nylon Head
E	Cast Iron: Standard Size
F	316 Stainless Steel
G	Explosion Proof

H Conduit Opening	
1	None
2	1/2" NPT
3	3/4" NPT

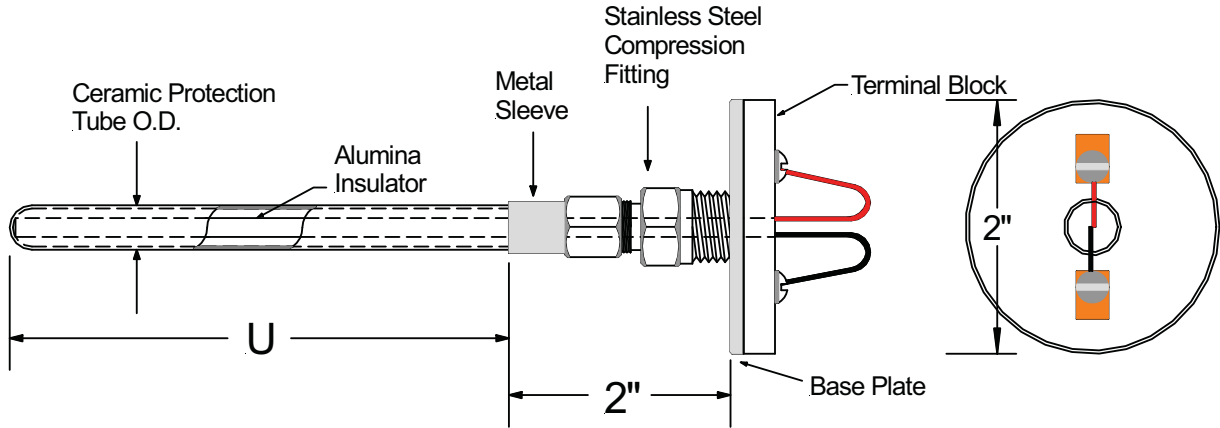
I Connection Head Options	
N	None
B	No Terminal Block
T	4-20mA Transmitter

# NOBEL METAL THERMOCOUPLES

Nobel Metal Thermocouple, Ceramic Protection Tube & Terminal Block Assembly

**Model Code: T5**

Operating Temperature:  
+1000 C Max.



Model:

**T5**

A

B

C

—

D

E

—

F

A	Ceramic Tube Size
1	1/4" O.D.
2	3/8" O.D.

B	Protection Tube
A	Alumina 1800C Max.
B	Mullite 1600C Max.

C	"U" Dimension
	Specify "U" Length In Inches <u>06</u>

Example "U" is 6" = 06

D	Calibration	
	Standard Limits of Error	Special Limits of Error
A	S	D S
B	R	E R
C	B	F B

F	Terminal Block Description
A	Ceramic
B	Ceramic, Spring Loaded
C	Plastic, 1" Dia. Micro Head Size

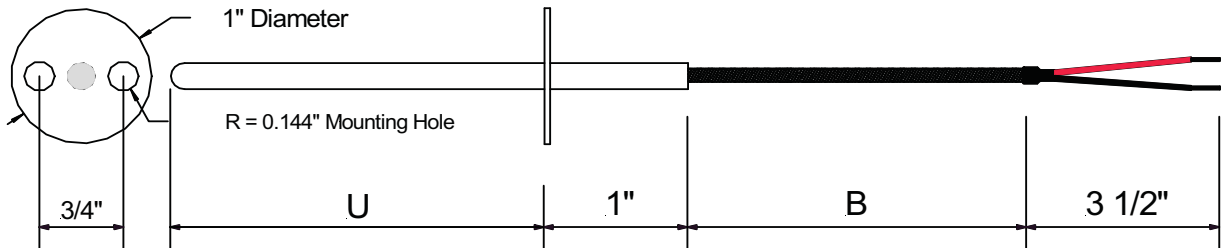
E	Wire Size		
	Gage	Single	Dual
	20	1	5
	24	2	6
	26	3	7
	28	4	8

# SPECIAL THERMOCOUPLE ASSEMBLIES

## Flanged Style Tube & Wire Thermocouple Probe

Model Code: **Z1**

Maximum operating temperature: 900F or 500C



Model: A B C D E F G H I J K

**Z1**

A	Outside Diameter
A	1/8"
B	3/16"
C	1/4"
D	5/16"

B	"U" Dimension
Specify "U" Length In Inches <u>06</u>	

Example "U" is 6" = 06

C	"U" Length Fractional
A	0"
B	1/8"
C	3/16"
D	1/4"
E	1/2"
F	5/8"
G	3/4"
H	7/8"

D	"B" Dimension
Specify "B" Length In Inches <u>048</u>	

Example "B" is 48" = 048

E	Calibration	
	+	-
J	White	Red
K	Yellow	Red
T	Blue	Red

F	Junction Styles		
Element Description	Grounded	Ungrounded	
	Common	Common	Isolated
Single	G		U
Duplex	D	C	I

G	Cable Conductor Description
1	24 Gage, Solid Conductor
2	24 Gage, 7 Stranded Conductors
3	20 Gage, Solid Conductor
4	20 Gage, 7 Stranded Conductors

H	Cable Insulation Description
A	Fiberglass Insulation: 950F / 510C
B	Teflon Insulation: 500F / 260C
C	P.V. C. Insulation: 221F / 105C
D	Teflon, Shielded + Drain Wire
E	P.V.C., Shielded + Drain Wire

I	Outer Jacket Protection
1	None
2	Stainless Steel Braid
3	Armor Flexible Cable: 0.280" Outside Diameter
4	Armor Flexible Cable 0.210" Outside Diameter

Metal Braid Protection not available on P.V.C insulation cable.

J	Termination
A	3 1/2" Split leads & bare ends
B	3 1/2" Split leads & No. 10 spade lugs.
C	Standard Male Plug (350 F)
D	Standard Female Jack (350 F)
E	Mini Male Plug (350 F)
F	Mini Female Jack (350 F)

K	Termination Options
1	None
2	Bx Connector
3	Cable Clamp

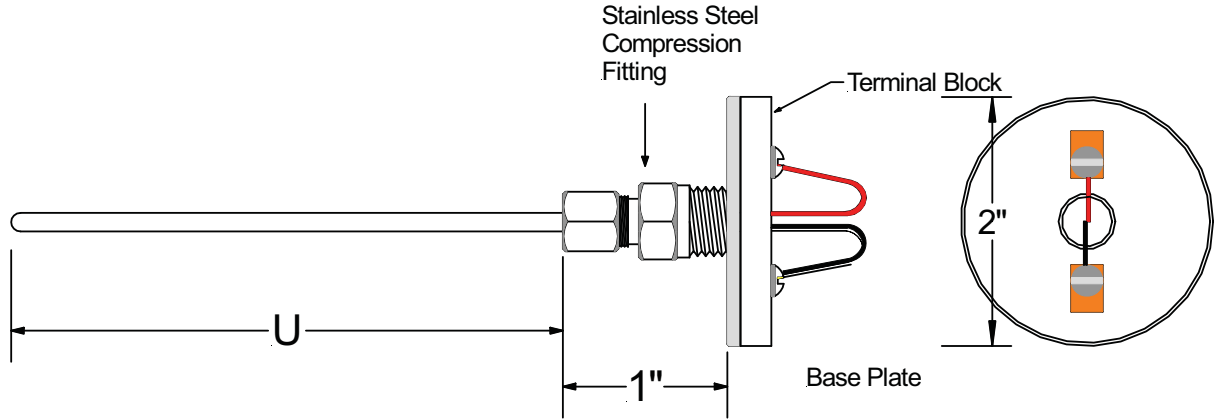


# SPECIAL THERMOCOUPLE ASSEMBLIES

## Mineral Insulated Thermocouple & Terminal Block Assembly

Model Code: **Z2**

Operating Temperature:  
-200 C to +1000 C Max.



Model:

**Z2**

A

B

C

D

E

A	Outside Diameter
A	1/8" O.D.
B	3/16" O.D.
C	1/4" O.D.
D	1/2" O.D.

C Calibration			
Standard Limits of Error		Special Limits of Error	
A	J	D	J
B	K	E	K
C	T	F	T

E	Terminal Block Description
A	Ceramic
B	Ceramic, Spring Loaded
C	Plastic, Micro Head Size

B	"U" Dimension
Specify "U" Length In Inches <u>06</u>	

Example "U" is 6" = 06

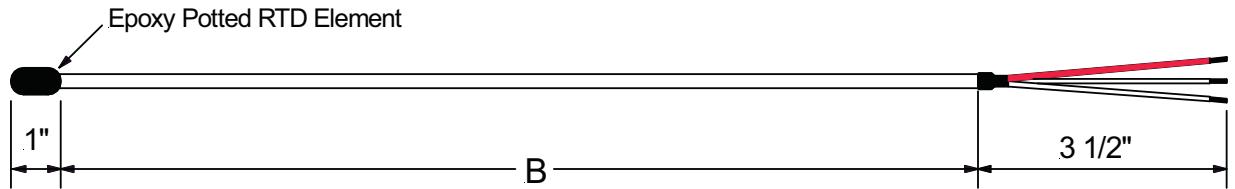
D Junction Styles			
Element Description	Grounded		Ungrounded
	Common	Common	Isolated
Single	G	■	U
Duplex	D	F	H

# SPECIAL SENSOR ASSEMBLIES

## Epoxy Potted RTD Assembly

Low temperature application

Model Code: **Z3**



Operating Temperature: -200 C to +250 C

Steps To Follow:

Model: **Z3**  1.  2.  3.  4.  5.  6.

**1. Wire Description**

S	24 Gage Stranded Stainless Steel Braid
F	24 Gage Stranded Fiberglass Cable
T	24 Gage Stranded Teflon Cable

**4. "B" Dimension**

"B" = <u>0 4 8</u> "
Leads Wire Length In Inches

**2. Termination Type**

0	3" Split Leads & 1/2" Bare Ends.
1	3" Slip Leads & Spade Lugs
2	Standard Male Plug (2 & 3 Wire config. only)
3	Standard Female Jack (2 & 3 Wire config. only)
4	Mini Male Plug (2 & 3 Wire config. only)
5	Mini Female Jack (2 & 3 Wire config. only)

**5. RTD Element Type**

Ohms	Class A	Class B
1 x Pt100	1	2
2 x Pt100	3	4
1 x Pt1000	5	6
2 x Pt1000	7	8

Temperature Coefficient: 0.00385  
Platinum element  
IEC 751

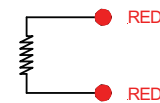
**3. Accessories**

N	None
X	Bx Connector
C	Cable Clamp

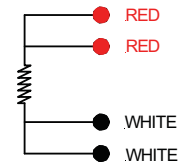
**6. RTD Wire Connection**

2	2 Wire Configuration
3	3 Wire Configuration
4	4 Wire Configuration

**2 Wire Configuration**



**4 Wire Configuration**



**3 Wire Configuration**

