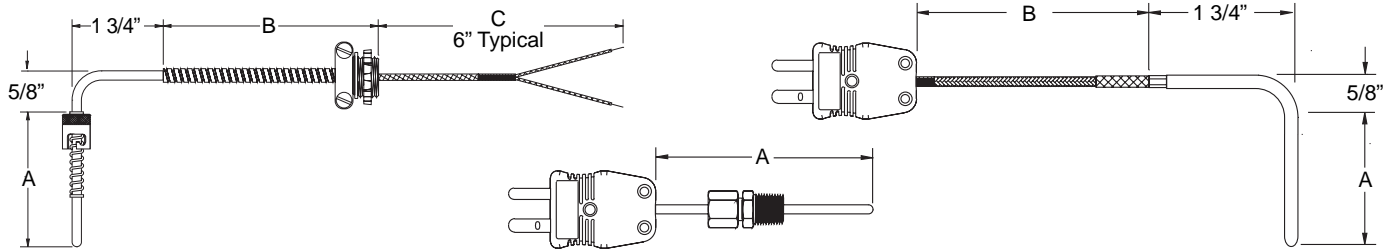


The thermocouples described below are commonly used in the plastic process industry. These assemblies can be used in many general applications where a 1/8" NPT fitting is preferred by utilizing either a compression fitting or a bayonet adapter. These sensors are constructed using a 316 stainless steel sheath. See General Thermocouple Specifications, later in this section, for temperature ratings on selected wire type and other construction specifications.



### ORDER CODES

Example Order Number:

1-1 1-2 1-3 2 3 4 5  
**JP3 3 U - 04 - 13A - F1A012 - 2, BX**

1-1 Thermocouple Type

CODE		SHEATH OD (inches)
SINGLE	DUPLEX	
JP2		1/8
JP3	JJP3	3/16
JP4	JJP4	1/4

Other Element Types

For type E, K or T thermocouples, replace J in order code with required letter designation.

1-2 Bend Angle

CODE	DESCRIPTION
1	Straight
2	45 degree bend
3	90 degree bend

1-3 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

2 'A' Dimension

Insert 2 digit 'A' length in inches (1" min).  
 EX: 04 = 4 inch 'A' dimension.

3 Sheath Fittings

CODE	DESCRIPTION	NOM. LENGTH (inches)
00	No fitting	
13A <sup>[1]</sup>	7/16" ID single slot spring-loaded bayonet fitting	1 5/8
15A	1/8" NPT brass one time adjustable comp. fitting	1 1/8
01A	1/8" NPT SS one time adjustable comp. fitting	1 1/4
16A	Comp. fitting with bayonet cap and spring - 1/8" OD sheaths only (2 5/8" min. 'A' dimension)	2 3/8

[1] 13A are not available with 1/4" OD sheaths

4 Extension Leadwire Type and B+C Dimension

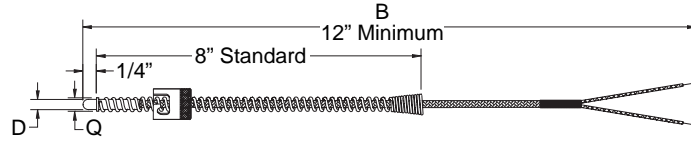
CODE <sup>[1]</sup>	DESCRIPTION
000	No leadwire, connector attached to sheath
F1 ___	Fiberglass insulation - solid conductor
F1A ___	Fiberglass insulation - solid conductor - flexible armor
F1B ___	Fiberglass insulation - solid conductor - stainless steel overbraid
F3 ___	Fiberglass insulation - stranded conductor
F3A ___	Fiberglass insulation - stranded conductor - flexible armor
F3B ___	Fiberglass insulation - stranded conductor - stainless steel overbraid
T1 ___	Teflon <sup>®</sup> insulation - solid conductor
T1A ___	Teflon <sup>®</sup> insulation - solid conductor - flexible armor
T3 ___	Teflon <sup>®</sup> insulation - stranded conductor
T3A ___	Teflon <sup>®</sup> insulation - stranded conductor - flexible armor
K1 ___	Kapton <sup>®</sup> insulation - solid conductor
K1A ___	Kapton <sup>®</sup> insulation - solid conductor - flexible armor

[1] Insert 3 digit B length in inches. EX: F1036=36" B length; for assemblies requiring other than the standard 6" C dimension, insert 3 digit C length in inches after B dimension. EX: F1A036-012=36" B length with additional 12" leads beyond armor.

5 Terminations and Options

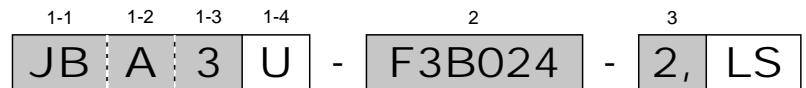
CODE	DESCRIPTION
0	Leads not stripped
2	2" split leads, 1/4" stripped
3	2" split leads with spade lugs
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
8	2" split leads with 1/4" female disconnect lugs
Options	
MC	Mating connector
CC	Cable clamp
BX	Box connector

The JB series spring adjustable immersion thermocouple has a bayonet cap on an 8" spring (standard) to allow for immersion depths of 1/2" to 7". This assembly is used in a variety of applications (with a bayonet adapter) where ease of installation and quick disconnect is preferred. A wide array of standard and metric size bayonet caps and adapters are available. See specifications, later in this section, for temperature ratings on selected wire type and other construction specifications.



### ORDER CODES

Example Order Number:



#### 1-1 Thermocouple Type

CODE		TYPE
<b>SINGLE</b>	<b>DUPLEX<sup>[1]</sup></b>	
JB	JJB	J
Other Element Types		
For type E, K or T thermocouples replace J in order code with required letter designation. [1] Duplex not available with 1/8" OD tip.		

#### 1-2 Bayonet Cap Style

CODE	DESCRIPTION
A	7/16" ID single slot (standard) (not available with Opt. 4 tip)
B	12 mm ID dual slot
C	12 mm OD dual pin
E	15 mm ID dual slot

#### 1-3 Tip and Spring Diameters

CODE	TIP OD 'D' DIM. (inches)	SPRING OD 'Q' DIM. (inches)
2	0.125	0.203
3	0.188	0.263
4	0.250	0.324

#### 1-4 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

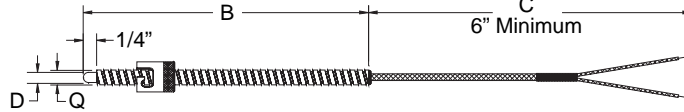
#### 3 Terminations and Options

CODE	DESCRIPTION
0	Leads not stripped
2	2" split leads, 1/4" stripped
3	2" split leads with spade lugs
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
8	2" split leads with 1/4" female disconnects
Options	
MC	Mating connector
CC	Cable clamp
BX	Box connector
LS	12" long spring (3/16" OD only)

#### 2 Extension Leadwire B

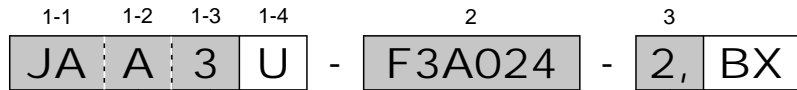
CODE <sup>[1]</sup>	DESCRIPTION
F3B_ _ _	Fiberglass insulation - stranded conductor - stainless steel overbraid
[1] Insert 3 digit B length in inches. EX: F3B024=24" B length.	

The JA series armor adjustable immersion thermocouple has a bayonet cap on the flexible armor and allows for immersion for the entire specified 'B' dimension. This assembly is used in a variety of applications (with a bayonet adapter) where ease of installation and quick disconnect is preferred. A wide array of standard and metric size bayonet caps and adapters are available. See General Thermocouple Specifications, later in this section, for temperature ratings on selected wire type and other construction specifications.



### ORDER CODES

Example Order Number:



#### 1-1 Thermocouple Type

CODE		TYPE
SINGLE	DUPLEX	
JA	JJA	J
KA	KKA	K
Other Element Types		
For type E and T thermocouples replace J in order code with required letter designation.		

#### 1-2 Bayonet Cap Style

CODE	DESCRIPTION
A	7/16" ID single slot (standard)
B	12 mm ID dual slot
C	12 mm OD dual pin
D	Positive seat indicating
E	15 mm ID dual slot

#### 1-3 Tip and Flex Armor Diameters

CODE	TIP OD 'D' DIM. (inches)	FLEX OD 'Q' DIM. (inches)
2	0.125	0.210
3	0.188	0.275

#### 1-4 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

#### 3 Terminations and Options

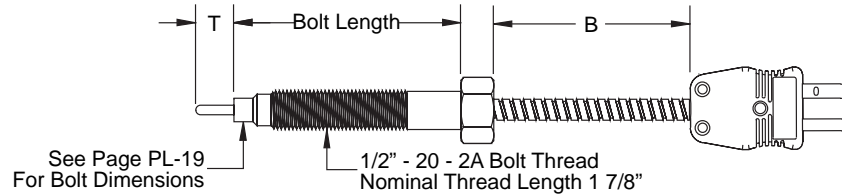
CODE	DESCRIPTION
0	Leads not stripped
2	2" split leads, 1/4" stripped
3	2" split leads with spade lugs
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
8	2" split leads with 1/4" female disconnects
Options	
MC	Mating connector
CC	Cable clamp
BX	Box connector

#### 2 Extension Leadwire B + C

CODE <sup>[1]</sup>	DESCRIPTION
F1A___	Fiberglass insulation - solid conductor - flexible armor
F3A___	Fiberglass insulation - stranded conductor - flexible armor

[1] Insert 3 digit B length in inches. EX" F1036=36" B length; for assemblies requiring other than the standard 6" C dimension, insert 3 digit C length in inches after B dimension. EX: F1A036-012=36" B length with additional 12" leads beyond armor.

The melt bolt thermocouple illustrated below is made of 304 stainless steel and is constructed using a fiberglass insulated element. This style of thermocouple is used on extruders and injection molding machines to directly measure the melt temperature of plastic as it moves down the extruder barrel. See General Thermocouple Specifications, later in this section, for temperature ratings on selected wire type and other construction specifications.



### ORDER CODES

Example Order Number:

JFMB2 - 3 - U - 02 - F1A006 - 4

#### 1-1 Thermocouple Type

CODE		TIP DIAMETER (inches)
<i>SINGLE</i>	<i>DUPLEX</i>	
JFMB2		1/8
JFMB3	JJFMB3	3/16
Other Element Types		
For type E, K, or T thermocouples replace J in order code with required letter designation.		

#### 1-2 Bolt Length

CODE	LENGTH (inches)
3	3
4	4
6	6
Consult factory for other lengths.	

#### 1-3 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

#### 2 Tip Length

CODE	'T' TIP LENGTH (inches)	CODE	'T' TIP LENGTH (inches)
00	Flush	08	1/2
02	1/8	12	3/4
04	1/4	16	1
Consult factory for other lengths.			

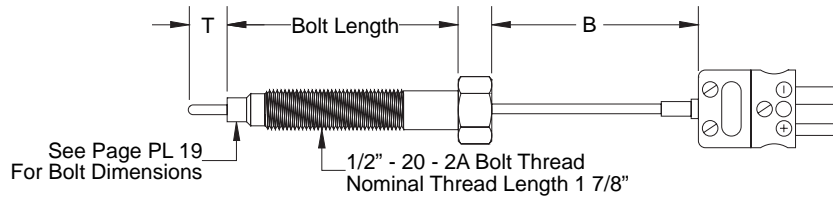
#### 3 Extension Leadwire B

CODE <sup>[1]</sup>	DESCRIPTION
000	No leadwire, connector attached to sheath
F1A_ _ _	Fiberglass insulation - solid conductor - flexible armor
F3A_ _ _	Fiberglass insulation - stranded conductor - flexible armor
[1] Insert 3 digit B length in inches. EX: F1A012=12" B length; for assemblies requiring other than the standard 6" C dimension, insert 3 digit C length in inches after B dimension. EX: F1A036-012=36" B length with additional 12" C length.	

#### 4 Terminations and Options

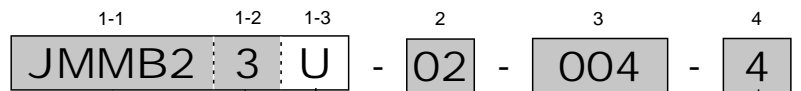
CODE	DESCRIPTION
2	2" split leads, 1/4" stripped
3	2" split leads with spade lugs
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
Options	
MC	Mating connector

The melt bolt thermocouple illustrated below is used on extruders and injection molding machines to directly measure the melt temperature of plastic as it moves down the extruder barrel. This heavy-duty style of melt bolt is made with 304 stainless steel and is constructed using a metal sheathed MgO element. See General Thermocouple Specifications, later in this section for other construction specifications.



### ORDER CODES

Example Order Number:



1-1 Thermocouple Type

CODE		TIP DIAMETER (inches)
SINGLE	DUPLEX	
JMMB2	JJMMB2	1/8
JMMB3	JJMMB3	3/16
Other Element Types		
For type E, K or T thermocouples replace J in order code with required letter designation.		

1-2 Bolt Length

CODE	LENGTH (inches)
3	3
4	4
6	6
Consult factory for other lengths.	

1-3 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

2 Tip Length

CODE	'T' TIP LENGTH (inches)	CODE	'T' TIP LENGTH (inches)
00	Flush	08	1/2
02	1/8	12	3/4
04	1/4	16	1
Consult factory for other lengths.			

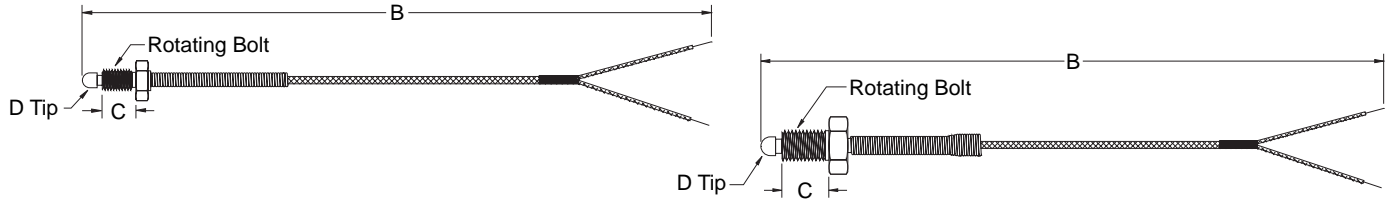
3 MgO Extension B

CODE	DESCRIPTION
000	Connector 1/2" from bolt
0 _ _ _	Insert "B" length in inches using 3 digits

4 Terminations and Options

CODE	DESCRIPTION
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
Options	
MC	Mating connector
CL	Compression L bracket

The threaded nozzle thermocouple illustrated below is generally used to measure the temperature of the nozzle of an injection molding machine. This style is not in direct contact with the molten plastic. Due to the relatively small size of this sensor, other general areas of use include mounting in bearing housings, sealing bars, heat plates, and other limited space applications. See General Thermocouple Specifications, later in this section, for temperature ratings on selected wire type and other construction specifications.



### ORDER CODES

Example Order Number:

1-1    1-2                    2                    3                    4  
**JTN** **U** - **F6** - **F1B024** - **2**

#### 1-1 Thermocouple Type

CODE	DESCRIPTION
JTN	Iron - Constantan
Other Element Types	
For type E, K or T thermocouples replace J in order code with required letter designation.	

#### 1-2 Junction

Grounded junctions supplied as standard. Insert 'U' only when requiring an ungrounded junction.

#### 2 Bolt Designation

CODE	NOZZLE SIZE		
	THREADS	'D' TIP (inches)	'C' LENGTH
F6	1/4" - 28	3/16	3/8"
G8	3/8" - 24	1/4	1/2"
I6	6 mm x 1 mm	3/16	10 mm
K6	8 mm x 1.25 mm	1/4	10 mm
M10	10 mm x 1.50 mm	1/4	16 mm
Other bolt sizes available consult factory.			

#### 3 Extension Length B

CODE <sup>[1]</sup>	WIRE DESCRIPTION
F1 ___	Fiberglass insulation - solid conductor
F1B ___	Fiberglass insulation - solid conductor - stainless steel overbraid
F3 ___	Fiberglass insulation - stranded conductor
F3B ___	Fiberglass insulation - stranded conductor - stainless steel overbraid
K1 ___	Kapton <sup>®</sup> insulation - solid conductor
K3 ___	Kapton <sup>®</sup> insulation - stranded conductor

[1] Insert 3 digit B length in inches. EX: F3B024=24" B length.

#### 4 Terminations and Options

CODE	DESCRIPTION
0	Leads not stripped
2	2" split leads, 1/4" stripped
3	2" split leads with spade lugs
4	Standard plug
5	Standard jack
6	Miniature plug
7	Miniature jack
8	2" split leads with 1/4" female disconnects
Options	
MC	Mating connector
CC	Cable clamp
BX	Box connector