

## Industrial Process Thermal Sensing

PMJ Heaters manufactures a wide selection of industrial process thermocouples to meet the requirements of the most demanding process applications in the world such as steel processing, turbine and diesel engine temperature measurement, and chemical processing.

In addition, PMJ Heaters also manufactures thermocouples for that are built for commercial applications such as for foodservice, packaging, and semiconductor processing.

These thermocouples are assembled under rigid quality control standards as per ANSI specifications. We can assist you with custom designed process thermocouples for your application.

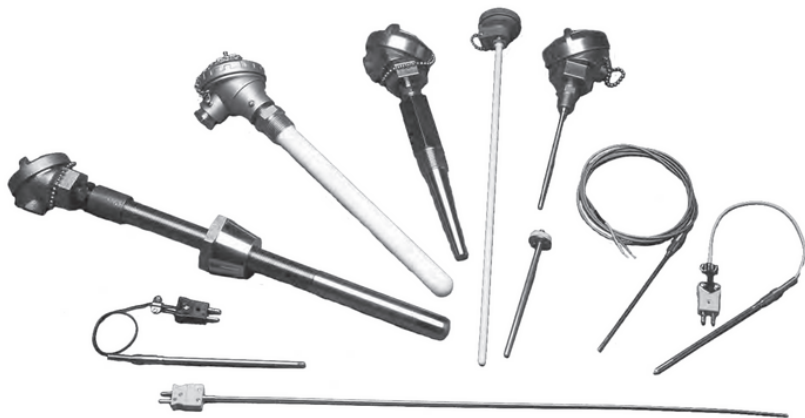


Fig 1. Various Types of Commonly Used Thermocouples

### Design Features

- Various connection and mounting styles available
- Extreme high temperature ranges
- Capable of handling direct immersion into high pressure or corrosive applications
- Utilized in heavy duty industrial applications
- Ideal for limited space requirement

### Advantages

- Superior Material  
SS304, SS316L, Inconel 600, Nickel Sheath Available
- Rugged Construction  
Heavy wall metal sheath with non-flammable enclosure

### Typical Applications

- Steel Processing
- Turbine and Diesel Engine
- Temperature Measurement
- Chemical Processing
- Food Service
- Packaging
- Semiconductor Processing
- Plastic Processing
- Extrusion
- Hot Runner Systems

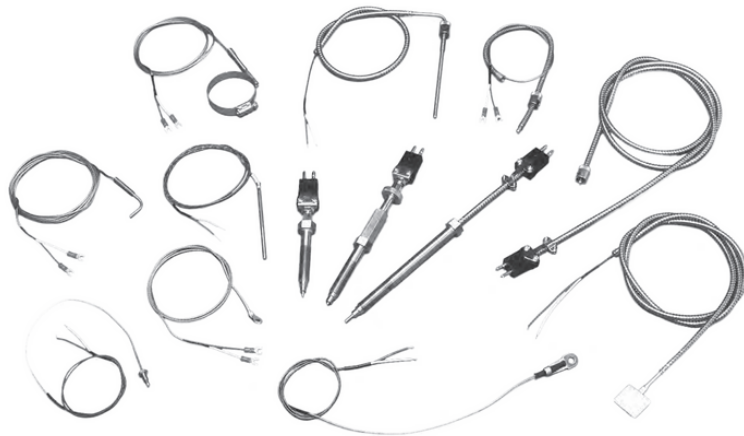


Fig 2. Thermocouples for Plastic Industry Application

# CODE DEFINITIONS AND TERMINATION TYPES

## Thermocouple Type

Thermocouple Type Codes				Limits of Error
E	J	K	T	Standard Limits
2	3	4	8	Special Limits

## Sheath Diameter

Code	Diameters
B	.125" or 1/8" O.D.
V	.156" or 5/32" O.D.
C	.188" or 3/16" O.D.
D	.250" or 1/4" O.D.
F	.375" or 3/8" O.D.

## Junction Type

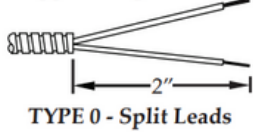
Code	Single Junction
G	Grounded
U	Ungrounded

## Code Definitions

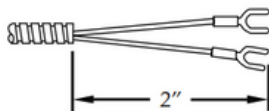
L D imensions				B D imensions				"A" D imensions		Fractional Dimension Letter Code			
"L" dimensions are specified in whole inches and a single alpha character which represents a fraction. Enter the three digit code as follows:				"B" dimensions are specified in fractions from 1/8" to 1". Use the single alpha character to indicate the tip length. Enter the code as follows:				"A" dimensions are specified in whole inches only. Enter the three digit code as follows:		1/16"	A	11/16"	L
3"	030	10 5/8"	10K							1/8"	B	5/8"	K
4 1/2"	04H	12"	120	1/4"	D	3/4"	M	12"	012	1/2"	H	Fraction	
6 1/4"	06D	15 3/8"	15F	3/8"	F	7/8"	P	36"	036	9/16"	J		
7 7/8"	07P	17 3/4"	17M	1/2"	H	1"	S	144"	144	5/8"	K		
9 5/8"	09K	22 1/8"	22B										

## Termination Type Numbers

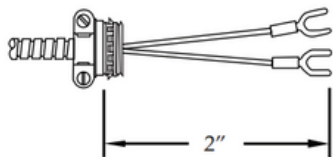
1/4" Stripped Length



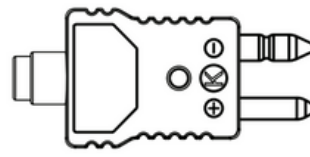
TYPE 0 - Split Leads



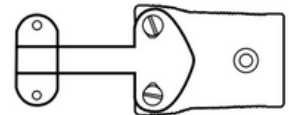
TYPE 1 - Spade Leads



TYPE 2 - BX Connector with Lugs



TYPE 3 - Standard Molded Plug

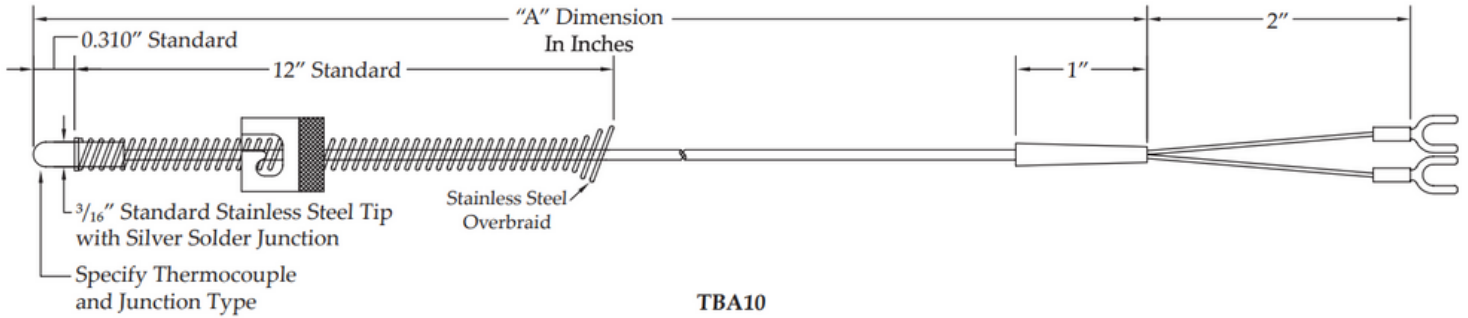


TYPE 4 - Standard Cable Clamp Jack



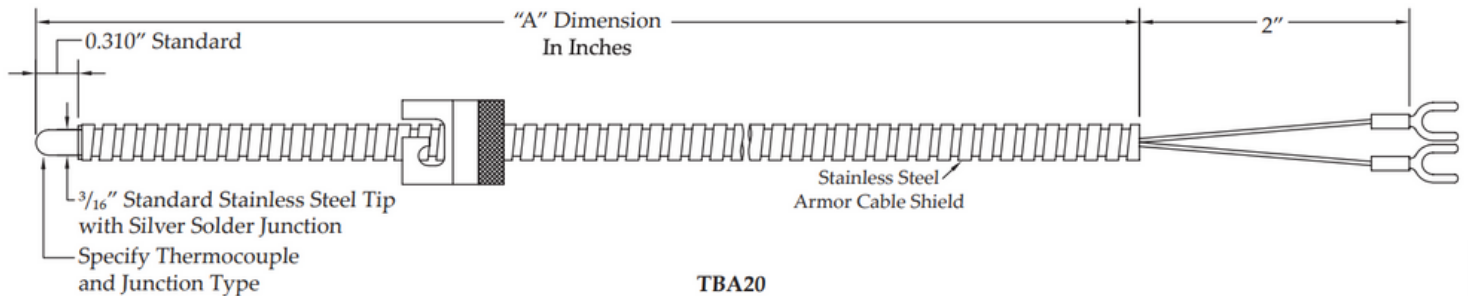
## ADJUSTABLE DEPTH THERMOCOUPLE WITH SPRING

The TBA10 thermocouple uses a compression spring and bayonet lockcap which allows this design to adjust to hole depths up to 12" deep. This design also features a stainless steel tip with a silver solder junction for fast response. A tig welded junction is available upon request.



## ADJUSTABLE DEPTH THERMOCOUPLE WITH ARMOR

The TBA20 thermocouple uses flexible stainless steel armor cable with a rotating bayonet lockcap on the outside diameter that adjusts to various immersion depths. The armor cable assures maximum protection of the thermocouple element for extension from the process.



<b>Part Number Sequence</b>						
TBA10	-	J	G	-	036	0
Sensor Type & Style No.		Thermocouple Type	Junction Type		"A" Dimension	Termination Number

TBA10-JG-0360 See tables on page 54