



## MEAS TIP SENSITIVE BEARING THERMOCOUPLE PROBE

- ◆ Variety of Configurations
- ◆ Cut-To-Length
- ◆ Fast Response
- ◆Tip Sensitive
- Single and Dual Junctions
- Custom Designs Available

The Tip Sensitive Bearing Thermocouple Probe is a tubular sensor in which the sensing junction is encased in a Copper alloy tip. This allows for increased accuracy and sensitivity to temperature changes at the point of contact in bearings. Inserted at an opening on the bearing housing, they are used in electric motors and generators for continuous sensing of the bearing temperature.

Bearing sensors can be used with a fluid sealed adjustable spring loaded holder for proper loading in any depth hole to maintain contact with the bearing surface.

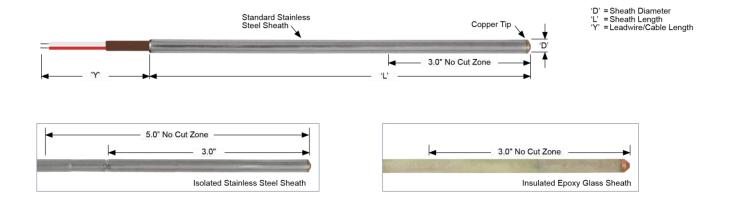
### **Features**

- ◆ Sheath Styles:
- » Stainless Steel, Isolated Stainless Steel, Insulated Epoxy Glass
- » Copper Tip
- ◆ Junction Types, Single and Dual:
- » J, K, T, E, Grounded or Ungrounded
- ◆ Sheath Diameters
  - » 0.188", 0.250", 0.215"
- ◆ Leadwire/Cable Options

### **Applications**

- ◆ Electric Motors
- Generators

### **Dimensions**



### Performance Specifications

# **Insulation Resistance – Ungrounded Model:** 1,000 Megaohms @ 500 V, leads to case

### Vibration:

Withstands 5 to 500 Hz at 3 g-level peak for 3 hours. Per ASTM E 644, Sec. 10.

### Shock:

Withstands 50 g-level peak sine was shock of 11 milliseconds duration. Per ASTM E 644, Sec. 11

Pressure Rating: Standard Stainless Steel Sheath: 100 psi (6.9 bar) Isolated Stainless Steel Sheath: 100 psi (69. bar) Insulated Epoxy Glass Sheath: 30 psi (2.1 bar) Fluid Seal Holder: 50 psi

THERMOCOUPLE TEMPERATURE ACCURACY SPECIFICATIONS:				
Туре	Temp Range	Standard Limits of Error	Special Limits of Error	
Т	-200 to 0°C	±1°C or 1.5%	Not ASTM Defined	
	0 to 350°C	±1°C or 0.75%	±0.5°C or 0.4%	
J	0 to 750°C	±2.2°C or 0.75%	±1.1°C or 0.4%	
Е	-200 to 0°C	±1.7°C or 1%	Not ASTM Defined	
	0 to 900°C	±1.7°C or 0.5%	±1°C or 0.4%	
K	-200 to 0°C	±2.2°C or 2%	Not ASTM Defined	
	0 to 1,250°C	±2.2°C or 0.75%	±1.1°C or 0.4%	



### **Ordering Information**

TIP SENSITIVE BEARING THERMOCOUPLE PROBE				
Model	Sheath Style	Temperature Range	Minimum / Maximum Lengths	
410A 410B 410C	Insulated Epoxy Glass Standard Stainless Steel Isolated Stainless Steel	-50 to 155°C (-58 to 311°F) -50 to 250°C (-58 to 482°F) -50 to 250°C (-58 to 482°F)	3.0" Minimum / 48.0" Maximum 3.0" Minimum / 96.0" Maximum 5.0" Minimum / 96.0" Maximum	
Model	Thermocouple Type	Junction	Color Code	
J K T E JJ KK TT FF	J K T E JJ KK TT EE	Single Single Single Single Dual Dual Dual Dual	Red/White [Constantan/Iron] Red/Yellow [Alumel/Chromel] Red/Blue [Constantan/Copper] Red/Purple [Constantan/Chromel] Red/White // Red/White Red/Yellow // Red/Yellow Red/Blue // Red/Blue Red/Purple // Red/Purple	
Model	Junction Style			
G U	Grounded Junction Ungrounded Junction			
Model	Limits of Error			
A B	Standard Limits of Error Special Limits of Error			
Model	'L' Sheath Length			
	Define 'L' Length in Inches (See above for Minimum / Maximum Lengths) Example: (10.0 = 10.0"; 6.3 = 6.3")			
Model	'D' Sheath Diameter			
B C D	.188" Diameter .250" Diameter (Standard SS and Isolated SS Only) .215" Diameter			
Model	'Y' Leadwire/Cable Options			
N W	No Options, Solid TFE Leadwires (36.0" Standard) Leadwire Options			

<sup>\*</sup> Please consult factory for availability.

### **STOCKED PART NUMBERS\***

Part Number	Model Number
R-10318-69	410C T U A 36.0 B W=10.0" Leads
R-10318-51 R-10318-52	410C E U A 36.0 B W=10.0" Leads 410C J U A 36.0 B W=10.0" Leads
R-10318-53	410C K U A 36.0 B W=10.0" Leads

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