



## MEAS MICRO-THERMOCOUPLES

- Welded or soldered
- Encapsulated or bare
- Bifilar construction
- Moisture seal (encapsulated only)
- Flexible tip
- High volume, low cost
- Custom packaging

Our Micro-Thermocouples (MTC) are flexible fine gage thermocouples used whenever fast, accurate temperature measurements are required. The thermocouple consists of two dissimilar metals, joined together at one end. A small voltage is produced by the two metals, which can be measured and interpreted by a control system. The dissimilar metals are individually insulated, and an overcoat is present to maintain an intimate bifilar configuration.

### Features

- Junction Types:
  - » Welded, Soldered
- Joint Encapsulation Types:
  - » Polymer Encapsulated, Bare
- Thermocouple Gauges:
  - » 44 AWG, 40 AWG, 38 AWG, 36 AWG
- Wire Insulation
  - » Polyesterimide, Polyimide

### Applications

- Medical



Individual Packaging on Spools

**Dimensions**

**Model 600** Soldered, Non-Insulated Junction



**Model 601** Welded, Non-Insulated Junction



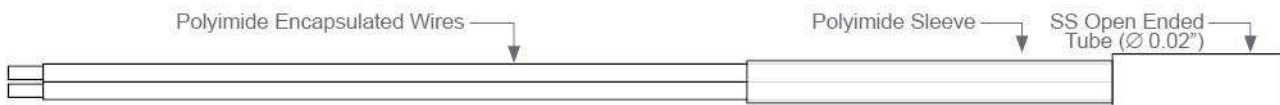
**Model 605** Soldered, Insulated Junction



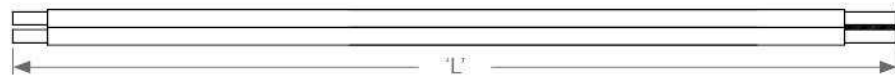
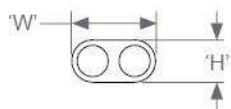
**Model 606** Soldered Welded, Insulated Junction



**Model 602** Welded Junction, Hypo Tube



**Model 607** Soldered Junction, Polyimide Tube



### Performance Specifications

**Wire Strip Length (Tail):** 0.50"  $\pm$  0.25"

**Solder Joint Length:** 0.10" Max.

**Encapsulation Length:** 0.25" Max.

**Encapsulation Profile:**

0.010" Max. for 44 AWG

0.013" Max. for 40 AWG

0.015" Max. for 38 AWG

0.017" Max. for 36 AWG

**Wire length tolerance:**  $\pm$  3.0"

**Packaging:** Sensors wrapped on white plastic spools

**Note:**

Specifications listed above are standard.

Other options are available upon request. Consult factory for details.

#### Commonly Stocked Wire

Type	AWG	Insulation Type	Insulation Color	Limits of Error
T	40	Polyesterimide	Green/Red	Special
T	40	Polyesterimide	Gold/Red	Special
T	44	Polyesterimide	Green/Red	Special
T	44	Polyesterimide	Black/Red	Special
T	36	Polyesterimide	Green/Red	Special
K	40	Polyimide	Amber/Black	Special

## Ordering Information

Micro-Thermocouples					
Model	Junction Type	Junction Insulation	Profile	Common	Notes
600	Soldered (Lead Free)	Non-Encapsulated (Bare)	Low Profile (Flat)	Yes	Type T Only.
601	Welded	Non-Encapsulated (Bare)	Round Profile	Yes	Type K Only.
605	Soldered (Lead Free)	Insulated	Low Profile (Flat)	Yes	Type T Only. Encapsulation Rated to 200°C.
606	Welded	Insulated	Round Profile	Yes	Type K Only. Encapsulation Rated to 200°C.
602	Welded	Insulated	Round Profile	No	Type K Only. Junction Epoxy Potted in SS Hypo Tube. Rated to 140°C.
607	Soldered	Insulated	Round Profile	Yes	Type T Only. Junction Epoxy Potted in Polyimide Tube. Rated to 150°C.
Model	Thermocouple Type	Stocked Wire Gauges	Special Order Gauges	Common	
T	T [Constantan/Copper]	40 AWG, 44 AWG, 36AWG	38 AWG	Yes	
K	K [Alumel/Chromel]	40 AWG	44 AWG, 38 AWG, 36 AWG	Yes	
Model	Thermocouple Gauge	Bare Conductor Diameter	Bifilar Insulated Wire Profile	Common	
44	44 AWG	0.002"	0.0030" x 0.0060" (H x W) Max.	Yes	
40	40 AWG	0.003"	0.0041" x 0.0081" (H x W) Max.	Yes	
38	38 AWG	0.004"	0.0052" x 0.0104" (H x W) Max.	No	
36	36 AWG	0.005"	0.0065" x 0.0128" (H x W) Max.	Yes	
Model	Wire Insulation Type	Max. Temp		Common	
PE	Polyesterimide	180°C	Nylon Bond Coat	Yes	
PI	Polyimide	240°C	Nylon Bond Coat	No	
Model	Wire Length 'L'				
---	Define 'L' length in inches Example: (72.0 = 72.0"; 24.5 = 24.5")				
Model	Limits of Error	Limits for Type T	Limits for Type K	Common	
ST	Standard	± 1.0°C	± 2.2°C	Yes	
SP	Special	± 0.5°C	± 1.1°C	Yes	
C	Custom	± 0.2°C (Consult Factory)	Consult Factory	No	

\*Consult factory for availability.

### Standard Part Numbers\*

Part Number	Model Number	Description
R-12454-13	605-T-40-PE-71.0-SP	Type T, 40 AWG, 71", Polymer Insulated Tip, Solder Junction
R-12167-17	600-T-44-PE-71.0-SP	Type T, 44 AWG, 71", Bare, Soldered Junction
R-12167-21	605-T-44-PE-71.0-SP	Type T, 44 AWG, 71", Polymer Insulated Tip, Solder Junction
R-13022-1	600-T-40-PE-72.0-ST	Type T, 40 AWG, 72", Bare, Solder Junction

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