# Micro-Thermocouples



Welded or Soldered
Insulated or Non-Insulated
Bifilar Construction
Moisture Seal
Flexible Tip
High Volume, Low Cost
Custom Packaging

Our Micro-Thermocouples 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 thermocouple thermometer. 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 Types:
  - » T, K
- Thermocouple Gauges:
  - » 44 AWG, 40 AWG, 38 AWG, 36 AWG
- Wire Insulation:
  - » Polyesterimide, Polyimide

#### **APPLICATIONS**

Medical

**Bulk Packaging** 



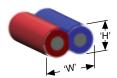
Individual Packaging

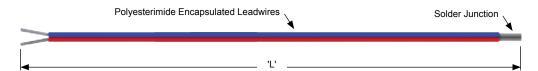


# **Micro-Thermocouples**

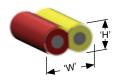
### dimensions

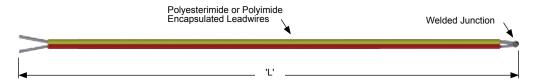
#### Soldered Junction, Non-Insulated



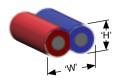


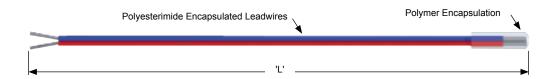
#### Welded Junction, Non-Insulated



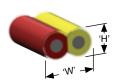


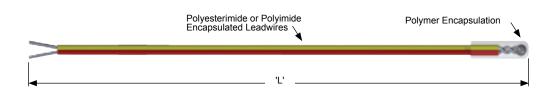
#### Soldered Junction, Insulated



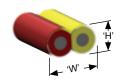


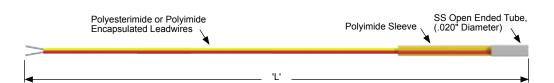
#### Welded Junction, Insulated





#### Welded Junction, Hypo Tube





## **Micro-Thermocouples**

## performance specifications

Wire Strip Length (Tail): 0.50" ± 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; 0.017" Max. for 36 AWG

Wire length tolerance: ± 3.0"

Packaging: Sensors wrapped on white plastic spools

**Note:**Specifications listed above are standard.
Other options are avaialble upon request. Consult factory for details.

#### **Commonly Stocked Wire**

| Type | AWG | Insulation Type | Insulation Color | Limits of Error |
|------|-----|-----------------|------------------|-----------------|
| T    | 40  | Polyesterimide  | Green/Red        | Special         |
| Т    | 44  | Polyesterimide  | Green/Red        | Special         |
| Т    | 44  | Polyesterimide  | Black/Red        | Special         |
| Т    | 36  | Polyesterimide  | Green/Red        | Standard        |

### ordering info

| Micro-Thermocouples |  |                         |                                |        |  |  |  |  |
|---------------------|--|-------------------------|--------------------------------|--------|--|--|--|--|
| Model               | Junction Type                              | Junction Insulation     | Profile                        | Common | Notes  |  |  |  |
| 600                 | Soldered (Lead Free)                       | Non-Insulated (Bare)    | Low Profile (Flat)             | Yes    | Model Type T Only.                                     |  |  |  |
| 601                 | Welded                                     | Non-Insulated (Bare)    | Round Profile                  | Yes    |  |  |  |  |
| 605                 | Soldered (Lead Free)                       | Insulated               | Low Profile (Flat)             | Yes    | Model Type T Only. Encapsulation Rated to 200°C.       |  |  |  |
| 606                 | Welded                                     | Insulated               | Round Profile                  | Yes    | Encapsulation Rated to 200°C.                          |  |  |  |
| 602                 | Welded                                     | Insulated               | Round Profile                  | No     | Junction Epoxy Potted in SS Hypo Tube. Rated to 140°C. |  |  |  |
| Model               | Thermocouple Type                          | Stocked Wire Gauges     | Special Order Gauges           | Common |  |  |  |  |
| T                   | T [Constantan/Copper]                      | 40 AWG, 44 AWG          | 38 AWG, 36 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. | No     |  |  |  |  |
| Model               | Wire Insulation Type                       | Max. Temp               |                                | Common |  |  |  |  |
| PE                  | Polyesterimide                             | 180°C                   | Nylon Bondcoat                 | Yes    |  |  |  |  |
| PI                  | Polyimide                                  | 240°C                   | Nylon Bondcoat                 | No     |  |  |  |  |
| Model               |  |                         |                                |        |  |  |  |  |
|                     | Define 'Y' length in inches (120 = 120.0") |                         |                                |        |  |  |  |  |
| Model               | Limits of Error                            | Limits for Type T       | Limits for Type K / J          | Common |  |  |  |  |
| ST                  | Standard                                   | ± 1.0°C                 | ± 2.2°C                        | Yes    |  |  |  |  |
| SP                  | Special                                    | ± 0.5°C                 | ± 1.1°C                        | Yes    |  |  |  |  |
| С                   | Custom                                     | Consult Factory         | Consult Factory                | No     |  |  |  |  |

### 联系方式



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