

Contact thermocouple Type J with silicone cable

Article no.: 802063 1111

The type J contact thermocouple with silicone cable is used for precise temperature measurements on smooth surfaces in mechanical and apparatus engineering. It is attached using a screw connection. The silicone cable offers excellent sealing and flexibility, so that the thermocouple can be used reliably in the range from -50 °C to +180 °C even at temperatures below freezing. We offer various cable lengths and connection plugs so that you can adapt the thermocouple optimally to your installation situation. You will find suitable plugs and connection cables in our accessories.



| General Information | |
|----------------------|---|
| Measuring range | -40 °C to +180 °C depending on chosen connection cable |
| Perm. °C range cable | -50 °C to +180 °C |
| Accuracy | -40 °C to +375 °C: ±1,5 °C according to DIN IEC 60584 Class 1 |

| Supply and output | |
|--------------------|--------------------------|
| Measuring element | Thermocouple Type J |
| Measuring point | Measuring point isolated |
| Measurement signal | Thermovoltage |

| Ambient conditions | |
|---|---|
| Protection class | IP54 according DIN 60529 (depending on cable) |
| Humidity and moisture condensation resistance | according to application-specific qualification |

| Certificates and Standards | |
|----------------------------|--|
| Standards | DIN EN 61326-1:2013 DIN EN IEC 63000:2019-05 |
| Directive | RoHS 2011/65/EU 2014/30/EU |



- Customizable options**
- E - Material connection cable
 - F - Length connection cable
 - G - Connector
 - H - Bend protection

| Contact body | | | | |
|--------------|---|-----------------|--------------|---------|
| Picture | Contact body | | Dimensioning | Drawing |
| | Contact geometry | Square | Length (mm) | 15 |
| | Material | Stainless Steel | Width (mm) | 8 |
| | Mounting hole (mm) | 5,2 | Height (mm) | 8 |
| | We offer other contact bodies on request. | | | |
| | | | | |

| E - Cable material and configuration connection cable | | | | | | | | | | | |
|--|-------|--------------------|----------------------|------|-------------------------|-----------------------|------------------|-----------------|----------------------|----------------------|--------------|
| Picture | Code | Type | Color | IP | From (°C) ¹⁾ | To (°C) ¹⁾ | Outside material | Material strand | Ø (mm) ²⁾ | Q (mm ²) | Color strand |
| | E8210 | Thermocouple cable | Type J ³⁾ | IP67 | -50 | +180 | Silicone | FEP | 3,6 | 0,22 | bk, wt |
| Insulation resistance: ≥ 100 MOhm a min. 100 VDC ¹⁾ Perm. range °C ²⁾ Tolerance ± 0,2 mm ³⁾ Color according to IEC 584 ⁴⁾ per thermocouple | | | | | | | | | | | |

MW / KC / 23.05.2025

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| F - Length | | | | | | | | |
|------------|------|------|------|------|------|------|------|------|
| Code | F010 | F020 | F030 | F040 | F050 | F100 | F150 | F200 |
| m | 1 | 2 | 3 | 4 | 5 | 10 | 15 | 20 |

Other lengths on request

| G - Connector | | | |
|---------------|------|--------------------------------|-----------------------------|
| Picture | Code | Feature | Technical drawing - Stecker |
| | G01 | Insulated end ferrules (50 mm) | |
| | G11 | Mini-TC connector Type J bk | |
| | G31 | TC connector Type J bk | |

| H - Bend protection | | | | |
|---------------------|-------------|---|------|-----------------------|
| Picture | Length (mm) | Material | Code | Feature |
| | 50 | Stainless steel spring 1.4310 SUS 302 | H0 | Without (Standard) |
| | | | H1 | Metal bend protection |

| Your order code | | | | |
|-----------------|---------------------------|-------------------------|-----------|-----------------|
| Article no. | Material connection cable | Length connection cable | Connector | Bend protection |
| 802063 1111 | E_____ | F_____ | G_____ | H_____ |

| Delivery and Assembly | |
|------------------------|--|
| Assembly instructions | by means of screw fastening or mounting adhesive |
| Delivery and Packaging | Probe, seperatly packaged in PE bag |

| Important assembly advices | |
|--|--|
| <p>The surface must be brightly polished and free of residues. Please attach the probe firmly. Please ensure good thermal contact, use thermal paste if necessary. Depending on the requirements, it may be useful to insulate the probe to minimize the influence of the ambient temperature.</p> | |

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Technical drawing

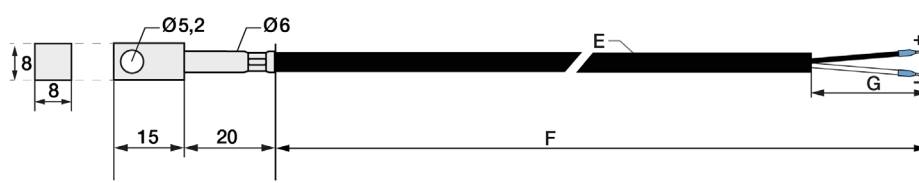
Customizable options

E - Material connection cable
F - Length connection cable

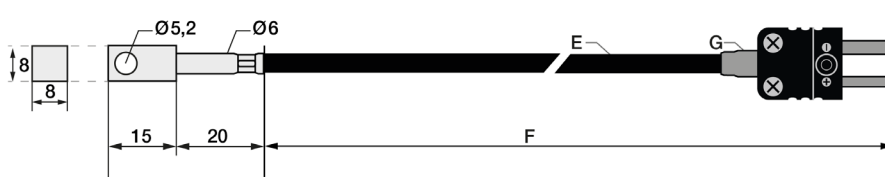
G - Connector
H - Bend protection

All dimensions in mm

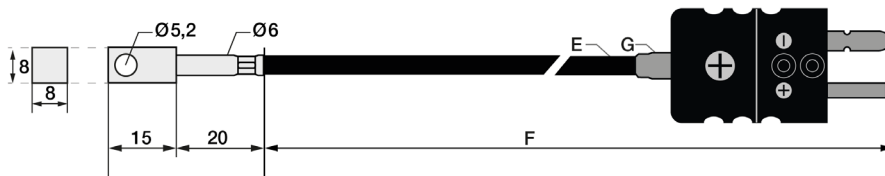
Version with insulated end ferrules



Version with Mini TE connector



Version with TE connector



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Matching accessories: Thermocouple cables

Thermocouple cables - Please select your desired cable first.

| Order code | Type | Color | IP | From (°C) ¹⁾ | To (°C) ¹⁾ | Outside material | Material strand | Ø (mm) ²⁾ | Q (mm ²) | Color strand | Ω / m ⁴⁾ |
|------------|--------------------|----------------------|------|-------------------------|-----------------------|------------------|-----------------|----------------------|----------------------|--------------|---------------------|
| 809310 1 | Thermocouple cable | Type J ³⁾ | IP67 | -50 | +180 | Silicone | FEP | 3,6 | 0,22 | bk, wt | 2,50 |

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | ¹⁾per. °C range | ²⁾Tolerance ± 0.2 mm | ³⁾ Color according to IEC 584 | ⁴⁾per thermocouple

Now please select the length and add the code to the article no. of the cable.

| | | | | | |
|-------------------|-----|-----|-----|-----|-----|
| Length (m) | 1 | 2 | 5 | 10 | 20 |
| Code | 010 | 020 | 050 | 100 | 200 |

Please append these digits to the part number of your desired cable.

Matching accessories: Connector

G - Connector

| Picture | Code | Feature | Picture | Code | Feature |
|---------|-------------|-----------------------------|---------|-------------|----------------------------|
| | 809140 1000 | Mini-TC connector Type J bk | | 809100 1000 | Mini-TC coupling Type J bk |
| | 809150 1000 | TC connector Type J bk | | 809110 1000 | TC coupling Type J bk |

Technical drawing - Connector

| | | | |
|--|-------------------|--|------------------|
| | Mini-TC connector | | Mini-TC coupling |
| | TC connector | | TC coupling |

Other connectors available on request

Matching accessories: Heat-conducting paste

Heat-conducting paste

| Picture | Article no. | 809540 1000 |
|---------|----------------------|-------------------|
| | Content | 10 ml |
| | Thermal conductivity | >2.5 W/mK |
| | Min / Max °C | -30 °C to +280 °C |
| | Thermal resistance | < 0.126 |

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