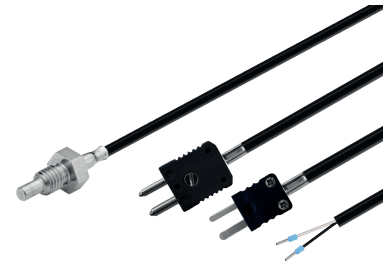


Thermocouple type J M8 with PFA cable

Order nr.: 803171 3111

Screw-in thermocouples measure the temperature in pipelines or vessels. PFA cable can be used up to +260 °C. They are robust, acid-resistant, flexible and a good alternative to silicone cables. To configure your screw-in thermocouple for your measurement task, simply select the required configuration features and send us the order code.



| General Information | |
|---|---|
| Measuring range | -40 °C to +260 °C |
| Perm. °C range cable | -50 °C to +260 °C |
| Accuracy | -40 °C to +375 °C: ±1,5 °C according to DIN IEC 60584 Class 1 |
| Response time | t63 / t99: information is available on request |
| Pull-out force | ≥ 30 N |
| 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 |
| Certificates | Certificate of suitability (on request) |



Customizable options

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

| Screw-in thread | | | | | |
|-----------------|--------------------|----------------------------------|------|----------------------|----------------------------------|
| Bild | Screw-in thread | | Bild | Protection sleeve | |
| | Material | Stainless steel 1.4301 SUS 304 | | Material | Stainless steel 1.4301 SUS 304 |
| | Length (mm) | 9 | | Mounting length (mm) | 17 |
| | Process connection | M8 | | Ø (mm) | 4,5 ¹⁾ |
| | Wrench size | 12 | | | |

other protective sleeve lengths and Ø available on request | ¹⁾ Tolerance ± 0,1 mm |

| E - Cable material and configuration connection cable | | | | | | | | | | | |
|---|-------|--------------------|----------------------|-------------------------|-----------------------|------------------|-----------------|----------------------|----------------------|--------------|---------------------|
| | Code | Type | Color | From (°C) ¹⁾ | To (°C) ¹⁾ | Outside material | Material strand | Ø (mm) ²⁾ | Q (mm ²) | Color strand | Ω / m ⁴⁾ |
| | E8510 | Thermocouple cable | Type J ³⁾ | -50 | +260 | PFA | PFA | 2,6 | 0,22 | bk, wt | 2,50 |

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | ¹⁾Perm. range °C | ²⁾Tolerance ± 0,2 mm | ³⁾Color according to IEC 584 | ⁴⁾per thermocouple




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

Other lengths on request

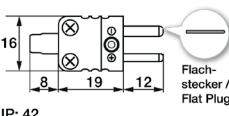
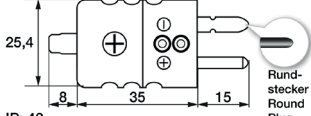
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Would you like to contact us? Click [here...](#)



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

Other connectors available on request

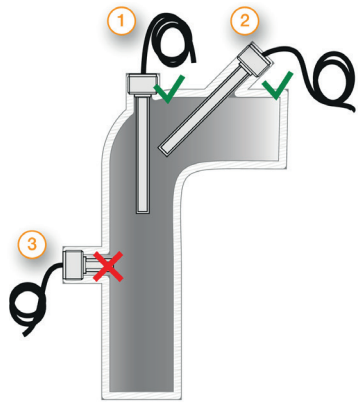
| Technical drawing - Connector | |
|---|---|
|  <p>IP: 42</p> <p>Flachstecker / Flat Plug</p> |  <p>IP: 42</p> <p>Rundstecker / Round Plug</p> |

| H - Bend protection | | |
|--|-------------|---|
| Picture | Length (mm) | Material |
|  | 50 | Stainless steel spring 1.4310 SUS 302 |
| | Code | Feature |
| | H0 | Without (Standard) |
| | H1 | Metal bend protection ¹⁾ |

¹⁾on request

| Delivery and Assembly | |
|------------------------|--------------------------------------|
| Assembly instructions | per process connection |
| Delivery and Packaging | Probe, separately packaged in PE bag |

| Your order code | | | | |
|-----------------|---------------------------|-------------------------|-----------|-----------------|
| Order nr. | Material connection cable | Length connection cable | Connector | Bend protection |
| 803171 3111 | E_____ | F_____ | G_____ | H_____ |

| Important assembly advices | |
|---|--|
|  | <p>Measurement errors can occur due to heat dissipation to the environment. To keep these as small as possible, we recommend immersing the protection sleeve of your temperature probe as deeply as possible in the medium to be measured during installation. The optimum installation depth should be 10-15 times the Ø of the protection sleeve or, when using an immersion sleeve, the Ø of the immersion sleeve. When installing in pipelines whose Ø does not have a sufficiently deep installation depth, you should install the probe either at an angle or in a pipe elbow. Make sure that there is sufficient space for the probe to be removed. 1) Installation with sufficient installation depth 2) Installation at an angle with small pipe Ø 3) Not like this: Minimum installation depth not reached</p> <p>Please lay the cable in such a way that no water can penetrate the probe and with reserve loop (4). This allows you to extend the probe without disconnecting the electrical connection.</p> |

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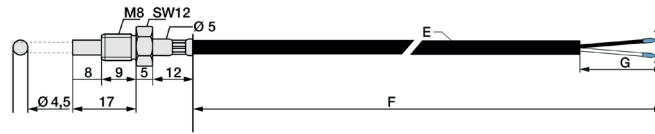
Technical drawing (All dimensions in mm)

Customizable options
 E - Material connection cable
 F - Length connection cable

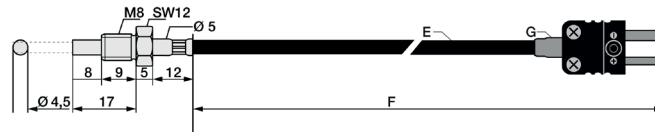
G - Connector
 H - Bend protection

All dimensions in mm

Version with insulated end ferrules



Version with mini TE connector



Version with TE connector



Matching accessories: Connector

| 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 |

Other connectors available on request

Matching accessories: Heat-conducting paste

| Heat-conducting paste | | |
|-----------------------|----------------------|-------------------|
| | 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 |

Details of accessories can be found on our website.

