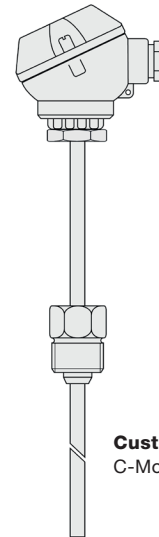


Thermocouple Type K with J-Head - HL

Article no.: 803018 1211

Our screw-in thermocouple type J with J-head - HL is suitable for use up to 800 °C and is installed via the G1/2 " thread and the neck tube. The J-head with the protection sleeve and neck tube is designed according to DIN43772 Form 2G. To configure your screw-in thermocouple for your measuring task, simply select the required configuration features and send us the order code.



Customizable options
C-Mounting length

| General Information | |
|---|--|
| Measuring range | -40 °C to +800 °C |
| Perm. (°C) conn. head | -40 °C to +100 °C |
| Accuracy | -40 °C to +375 °C: ±1,5 °C 375 °C to 1.000 °C: ±0,004 t according to DIN IEC 60584 Class 1 |
| Supply and output | |
| Measuring element | Thermocouple Type K |
| Measuring point | Measuring point isolated |
| Measurement signal | Thermovoltage |
| Ambient conditions | |
| Protection class | IP54 according DIN 60529 |
| 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 |

| Connection head | |
|-----------------------------|--|
| Design | Form J (MA) |
| Material | Aluminium pressure die-casting |
| W/H/Ø (mm) | 50/60/48 |
| Color | RAL 9006 aluminium silver |
| Cable gland head | with strain relief |
| Cable electrical connection | Screw terminals max. 1,5 mm ² |
| Clamping range (mm) | 5 to 9 |
| Ambient temperature max | +100 °C |
| Sensor unit | Fixed |

| Screw-in thread | | Your order code | | C - Mounting length | | | |
|---|--------------------------------|-----------------|------|---------------------|-------------------|-------|-------------------|
| Material | Stainless steel 1.4571 316TI | Article no. | Code | Length (mm) | | | |
| Length (mm) | 14 | | | | | C0050 | 50 ¹⁾ |
| Process connection | G1/2 " | | | | | C0100 | 100 ¹⁾ |
| Wrench size | 27 | | | | | C0150 | 150 ¹⁾ |
| Protection sleeve | | 803018 1211 | C | C0200 | 200 ¹⁾ | | |
| Material | Stainless steel 1.4571 316TI | | | C0250 | 250 ¹⁾ | | |
| Mounting length (mm) | please choose | | | C0300 | 300 ¹⁾ | | |
| Ø (mm) | 6 ²⁾ | | | C0400 | 400 ¹⁾ | | |
| Length neck tube (mm) | 60 | | | C0500 | 500 ¹⁾ | | |
| Other mounting lengths on request ¹⁾ Tolerance ± 1% ²⁾ Tolerance ± 0,1 mm | | | | | | | |

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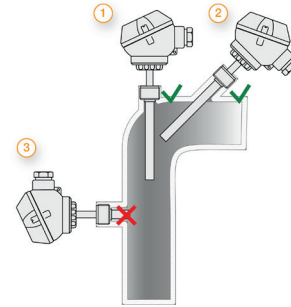
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Delivery and Assembly

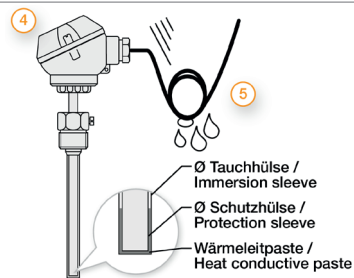
| | |
|------------------------|--------------------------------------|
| Delivery and Packaging | Probe, separately packaged in PE bag |
|------------------------|--------------------------------------|

Important assembly advices

Measuring 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 deep as possible into the medium to be measured during installation. The optimum installation depth should be 10-15 times the Ø of the protection sleeve or, if an immersion sleeve is used, the Ø of the immersion sleeve. When installing in pipes whose Ø does not have a sufficiently deep installation depth, you should either install the probe at an angle or in a pipe elbow. Make sure that you have enough space so that the probe can be removed again. 1) Installation with sufficient installation depth 2) Installation at an angle with small pipe Ø 3) Not like this: Minimum installation depth not reached



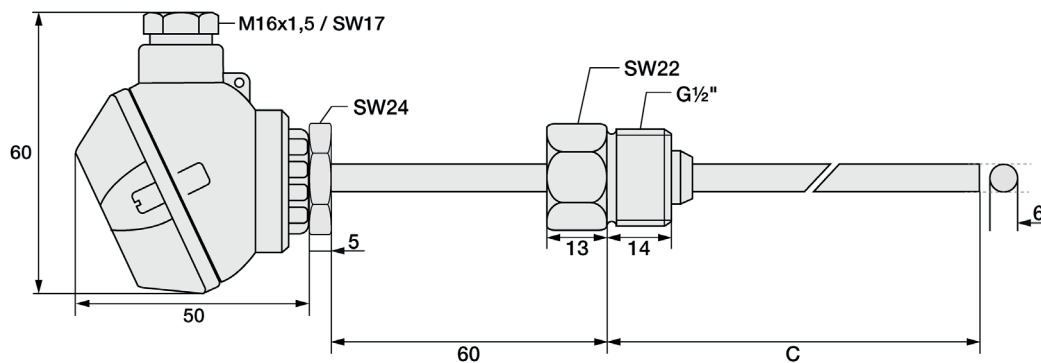
Installation by using an immersion sleeve (4): Please ensure that the Ø and length of the immersion sleeve are selected to suit the installation situation so that the minimum immersion depth can be achieved. Please also ensure that the process connection is correct. Because the probe is not inserted directly into the medium, but via the immersion sleeve, the response times are somewhat slower. The probe should be selected so that the protection sleeve touches the bottom of the immersion sleeve and the air cushion around the protection tube is as small as possible. The use of thermal conduction paste can improve the response times.



Please lay the cable so that no water can penetrate the probe and with a spare loop (4). This allows you to extend the probe without disconnecting the electrical connection.

Technical drawing

| | | |
|-----------------------------|---------------------|----------------------|
| Customizable options | C - Mounting length | All dimensions in mm |
|-----------------------------|---------------------|----------------------|



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Matching accessories: Thermocouple cables

Details of accessories can be found on our website.

| 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⁾ |
| 809300 2 | Thermocouple cable | Type K ³⁾ | IP67 | -30 | +105 | PVC | PVC | 3,8 | 0,22 | gn, wt | 4,50 |
| 809310 2 | Thermocouple cable | Type K ³⁾ | IP67 | -50 | +180 | Silicone | FEP | 3,6 | 0,22 | gn, wt | 4,50 |





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

| Connector | | | | | |
|---|-------------|-----------------------------|---|-------------|----------------------------|
| Picture | Code | Feature | Picture | Code | Feature |
|  | 809140 2000 | Mini-TC connector Type K gn |  | 809100 2000 | Mini-TC coupling Type K gn |
|  | 809150 2000 | TC connector Type K gn |  | 809110 2000 | TC coupling Type K gn |

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 |

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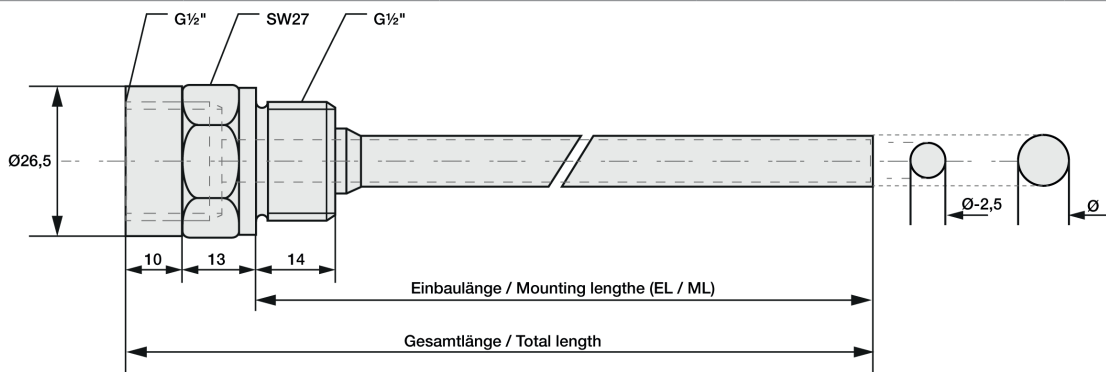
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Matching accessories: Immersion sleeves

| Immersion sleeves | | Please select Ø and mounting length and append the codes to your order code. | | | | |
|---|--|--|------|-------------------------|------|---------|
| Picture | Immersion sleeve G1/2 " with internal thread | | Code | Ø Inside / Outside (mm) | Code | ML (mm) |
|  | Article no. | 809520 3XXX | | | | |
| | Temp. Max | +600 °C | | | | |
| | pressure proof until | 40 bar | 1 | 6,5 / 9 | 03 | 30 |
| | Material | Stainless steel 1.4571 316TI | 2 | 7,5 / 10 | 08 | 80 |
| | Process connection | G1/2 " | 3 | 8,5 / 11 | 13 | 130 |
| | Wrench size | 27 | 4 | 9,5 / 12 | 18 | 180 |
| | Screw-in thread | G1/2 " | | | 23 | 230 |
| | Scope of delivery | Immersion sleeve, packed in PE bag | | | 28 | 280 |
| | | | | | 38 | 380 |
| Your order code | 809520 3 | - | | -- | | |

Technical drawing Immersion sleeves



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