

Cable probe fast response with PFA cable

Article no.: 803571 1011

The fast response cable probe uses a protection sleeve that tapers from a diameter of 6 mm to a diameter of 3 mm. This allows it to be used at smaller measuring points, achieves a fast response time and is waterproof. (IP67) To order your cable temperature probe, select the required configuration and send us the order code.



| General Information | |
|---|---|
| Measuring range | -50 °C to +200 °C depending on sensor Type and connection cable |
| Perm. °C range cable | -50 °C to +260 °C |
| Accuracy | depending on sensor Type |
| Response time | t63 / t99: information is available on request |
| Pull-out force | ≥ 30 N |
| Supply and output | |
| Max. meas. current | max. 1 mA |
| Supply voltage | approx. 5 V depending on measurement current |
| Measurement signal | passive (resistance value) |
| Ambient conditions | |
| Protection class | IP67 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 |
| Certificates | Certificate of suitability (on request) |



Customizable options

- A - Measuring element
- B - Connection Type
- E - Material connection cable
- F - Length connection cable
- G - Connector
- H - Bend protection

| A - Measuring element | | | | |
|-----------------------|------------|--|-------------------|-------------------|
| Code | Sensor | Accuracy / Tolerance resistance | min ²⁾ | max ²⁾ |
| A012 | Pt100 | Cl. B dT = ±(0,30 °C + 0,005 t) ¹⁾ | -50 °C | +400 °C |
| A011 | Pt100 | Cl. A dT = ±(0,15 °C + 0,002 t) ¹⁾ | -50 °C | +300 °C |
| A013 | Pt100 | 1/3 Cl. B dT = ±(1/3 · (0,30 °C + 0,005 t)) ¹⁾ | -50 °C | +200 °C |
| A014 | Pt100 | 1/10 Cl. B dT = ±(1/10 · (0,30 °C + 0,005 t)) ¹⁾ | ±0 °C | +100 °C |
| A022 | Pt500 | Cl. B dT = ±(0,30 °C + 0,005 t) ¹⁾ | -70 °C | +500 °C |
| A032 | Pt1000 | Cl. B dT = ±(0,30 °C + 0,005 t) ¹⁾ | -50 °C | +400 °C |
| A031 | Pt1000 | Cl. A dT = ±(0,15 °C + 0,002 t) ¹⁾ | -50 °C | +300 °C |
| A106 | NTC 5 kOhm | R25 = 5 KOhm ±1 % | -40 °C | +150 °C |

| B - Connection Type | |
|---------------------|-------------|
| Code | Conn. Type |
| B2 | 2-Wire (2W) |
| B3 | 3-Wire (3W) |
| B4 | 4-Wire (4W) |

| Possible connections | | | |
|----------------------|----|----|----|
| Sensor | 2W | 3W | 4W |
| Pt | ✓ | ✓ | ✓ |
| NTC | ✓ | | |

¹⁾according to IEC 751 / EN 60751 | ²⁾ Perm. range °C | Please note that the measuring range depends on the measuring element and the connection cable. | Detailed information and the characteristics can be found in our download area.



| Protection sleeve | |
|-------------------|-------------------------------|
| Material | Stainless steel 1.4404 316L |
| Length (mm) | 55,0 / 74 |
| Ø (mm) | 3 / 6 ¹⁾ |



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

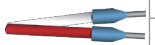
| E - Cable material and configuration connection cable | | | | | | | | | | | | |
|---|-------|------|-----------------|-------|-------------------------|-----------------------|------------------|-----------------|----------------|----------------------|------------------------------------|---------------------|
| Picture | Code | IP | Connection Type | Color | From (°C) ¹⁾ | To (°C) ¹⁾ | Outside material | Material strand | Color strand | Ø (mm) ²⁾ | Q (mm ²) ³⁾ | Ω / m ⁴⁾ |
| | E5500 | IP67 | 2-Wire | white | -50 | +260 | PFA | PFA | rd, wt | 2,4 | 0,22 | 0,09 |
| | E5501 | IP67 | 3-Wire | white | -50 | +260 | PFA | PFA | rd, wt, rd | 2,4 | 0,22 | 0,09 |
| | E5503 | IP67 | 4-Wire | white | -50 | +260 | PFA | PFA | rd, wt, rd, wt | 2,7 | 0,22 | 0,09 |

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | ¹⁾Perm. range °C | ²⁾Tolerance ± 0,2 mm | ³⁾ Tolerance ± 0,03 mm² | ⁴⁾ per single strand | IP67

| 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 | | |
|---------------|--------------------------------|--|
| Code | Feature | |
| G01 | Insulated end ferrules (50 mm) | |



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



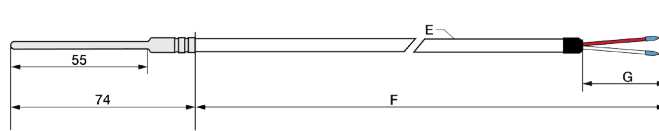
| Your order code | | | | | | |
|-----------------|-------------------|-----------------|---------------------------|-------------------------|-----------|-----------------|
| Article no. | Measuring element | Connection Type | Material connection cable | Length connection cable | Connector | Bend protection |
| 803571 1011 | A_____ | B_____ | E_____ | F_____ | G_____ | H_____ |



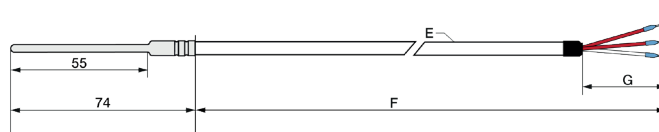
Technical drawing

| | | | |
|--|--|--|---|
| Customizable options A - Measuring element | B - Connection Type E - Material connection cable | F - Length connection cable G - Connector | H - Bend protection All dimensions in mm |
|--|--|--|---|

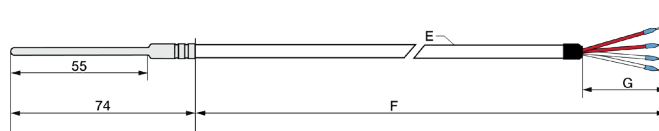
2-Wire version



3-Wire version



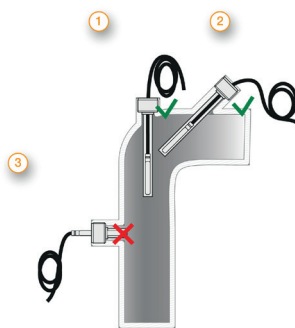
4-Wire version



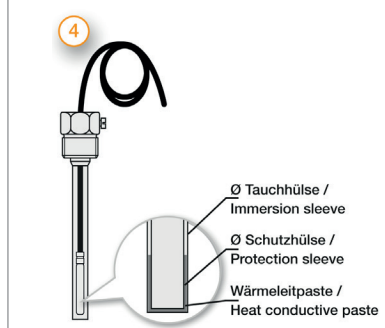
Delivery and Assembly

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

Important assembly advices



Installation by means of compression fitting: Please tighten the union nut of the compression fitting by hand as far as it will go (clearly noticeable). For compression fittings with PTFE pressure ring, please make a 1/4 turn with a wrench suitable for the width across flats. These compression fittings can be used several times in this way. In the case of compression fittings with stainless steel cutting ring, the compression fitting connects to the protection tube. This connection is pressure resistant up to 40 bar. However, the compression fitting can only be used once. It must also be tightened more firmly. Please tighten it with 1 3/4 turns.

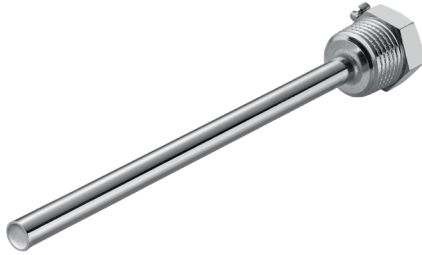


Mounting by using an immersion sleeve (4): Please note that the Ø and the length of the immersion sleeve must be selected to suit the installation situation so that the minimum immersion depth can be achieved. Since the probe is not inserted directly into the medium, but via the immersion sleeve, the response times are somewhat slower. The probe should be selected in such a way that the protection sleeve touches the bottom of the immersion sleeve and that the air cushion around the protection sleeve is as small as possible. The use of thermal paste can improve the response times. Please lay the cable with reserve loop (4) and in such a way that no water can penetrate the sensor head. This allows you to extend the probe without disconnecting the electrical connection.



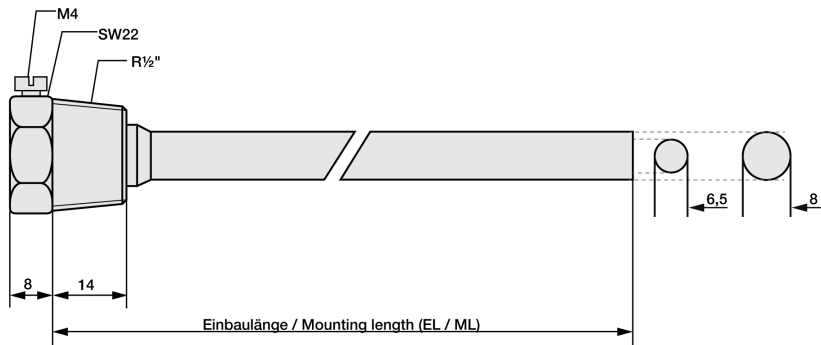
Matching accessories: Immersion sleeves

| Brass immersion sleeve R1/2 " | | | | |
|-------------------------------|------------------------------------|------|---------|--|
| Article no. | 809520 10XX | Code | ML (mm) | |
| Temp. max | +150 °C | 05 | 50 | |
| Pressure proof up to | 10 bar | 10 | 100 | |
| Material | Nickel plated | 15 | 150 | |
| Process connection | R1/2 " | 20 | 200 | |
| Wrench size | 22 | 25 | 250 | |
| Ø Inside / Outside (mm) | 6,5 / 8 | 30 | 300 | |
| Scope of delivery | Immersion sleeve, packed in PE bag | 40 | 400 | |
| Order code | 809520 10 | -- | | |

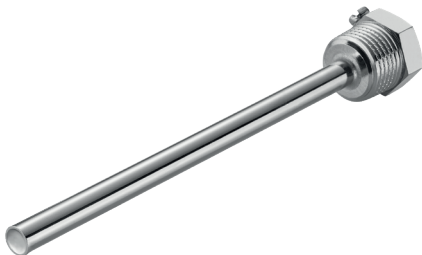


Please attach the code for the mounting length.

Technical drawing

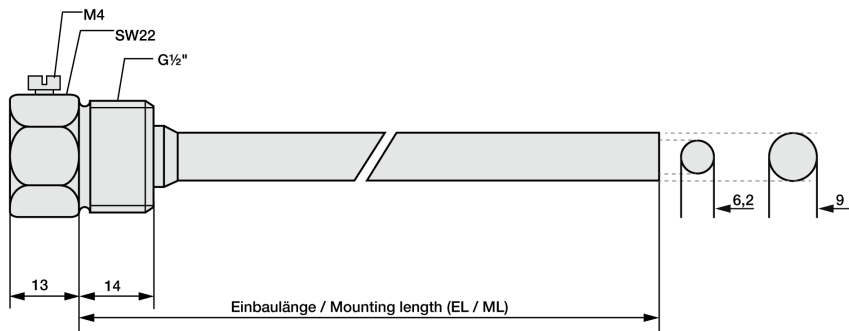


| Stainless steel immersion sleeve G1/2 " | | | | |
|---|------------------------------------|------|---------|--|
| Article no. | 809520 20XX | Code | ML (mm) | |
| Temp. max | +600 °C | 05 | 50 | |
| Pressure proof up to | 40 bar | 10 | 100 | |
| Material | Stainless steel 1.4571 316TI | 15 | 150 | |
| Process connection | G1/2 " | 20 | 200 | |
| Wrench size | 22 | 25 | 250 | |
| Ø Inside / Outside (mm) | 6,2 / 9 | 30 | 300 | |
| Scope of delivery | Immersion sleeve, packed in PE bag | 40 | 300 | |
| Your order code | 809520 20 | -- | | |



Please attach the code for the mounting length.

Technical drawing

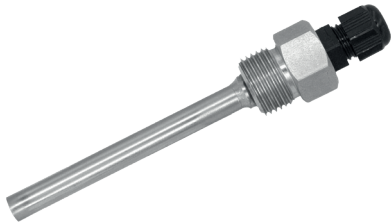


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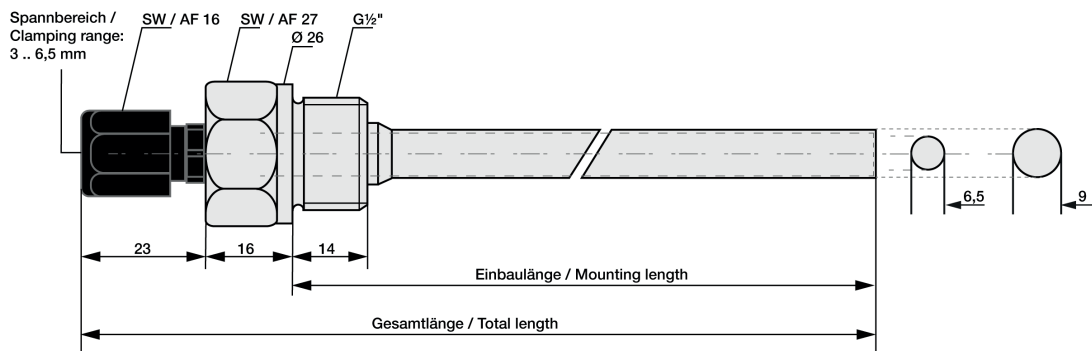
Matching accessories: Immersion sleeves

| Immersion sleeve G1/2 " with cable gland | | | | | |
|--|------------------------------------|---------------------|---------------|------|---------|
| Article no. | 809520 60XX | Compression fitting | | Code | ML (mm) |
| Temp. max | +600 °C | Temp. max | 100 °C | 05 | 50 |
| pressure proof until | 40 bar | Material | Plastic | 10 | 100 |
| Material | Stainless steel 1.4571 316Ti | Screw | M12 x 1,5 | 15 | 150 |
| Process connection | G1/2 " | Clamping range (mm) | 3 to 6,5 | 20 | 200 |
| Wrench size | 22 | | | 25 | 250 |
| Scope of delivery | Immersion sleeve, packed in PE bag | Cable gland | strain relief | 30 | 300 |
| | | | | 40 | 400 |
| Your order code | 809520 60 | | | -- | -- |



Please attach the code for the mounting length.

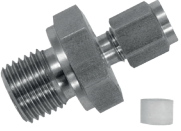
Technical drawing



Matching accessories: Compression fittings

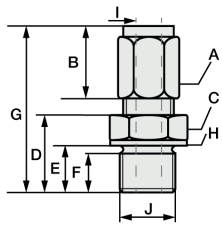
Compression fitting with PTFE clamping ring

Compression fittings with PTFE clamping ring can be used several times. They are only pressure-tight up to 10 bar. For assembly, please tighten the connecting nut of the compression fitting by hand as far as it will go (clearly noticeable) by hand. With a wrench suitable for the width across flats, please make a 1/4 turn for compression fittings with PTFE pressure ring.

| | | | | | | |
|---|------------------------|---------------------------------------|-------------|--------------------------|-------------|-------------------------------|
|  | Article no. | 809610 2XXX | Code | I - Ø Inside (mm) | Code | J - Process connection |
| | Temp. max | +260 °C | 0 | 1 | 27 | M6x1 ¹⁾ |
| | Pressure proof up to | 10 bar | 1 | 1,5 | 28 | M8x1 ¹⁾ |
| | Material | Stainless steel 1.4571 316TI | 3 | 3 | 22 | M10x1 |
| | Material clamping ring | PTFE | 6 | 6 | 14 | G1/8 " |
| | Scope of delivery | Compression fitting, packed in PE bag | | | 12 | G1/4 " |
| | | | | | 11 | G1/2 " |
| Your order code | 809610 2 | - | - | - | - | - |

Append the code for Ø Inside & process connection to the article no. | ¹⁾ not available for Ø Inside (I) 6 mm

Dimensions for technical drawing




| I | J | A | B | C | D | E | F | G | H |
|-----|--------------------|-----------------------------|----|------|------|-----|----|------|-------|
| 1 | M6x1 ¹⁾ | SW10 | 13 | SW12 | 13 | 9 | 8 | 31 | Ø10 |
| 1,5 | M8x1 ¹⁾ | SW10 | 13 | SW12 | 13,5 | 9,5 | 8 | 31 | Ø11,8 |
| 3 | M10x1 | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW14 | 13,5 | 9,5 | 8 | 32 | Ø13,8 |
| 6 | G1/8 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW14 | 13,5 | 9,5 | 8 | 32 | Ø13,8 |
| | G1/4 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW19 | 20 | 14 | 12 | 38,5 | Ø18 |
| | G1/2 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW27 | 23 | 17 | 14 | 38,5 | Ø26 |

All dimensions in mm | ¹⁾ not available for Ø Inner (I) 6 mm

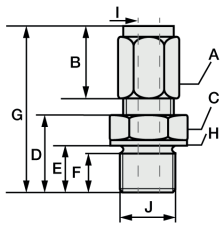
Compression fitting with stainless steel cutting ring

In compression fittings with stainless steel cutting ring, the compression fitting connects with the protective sleeve. This connection is pressure-resistant up to 40 bar. Therefore, these compression fittings can also only be used once and must be tightened more firmly. For assembly, please tighten the union nut of the compression fitting by hand as far as it will go (clearly noticeable). With a wrench suitable for the wrench size, please make 1 3/4 turns for compression fittings with stainless steel cutting ring.

| | | | | | | |
|---|------------------------|--|-------------|--------------------------|-------------|-------------------------------|
|  | Article no. | 809610 1XXX | Code | I - Ø Inside (mm) | Code | J - Process connection |
| | Temp. max | +800 °C | 1 | 1,5 | 27 | M6x1 ¹⁾ |
| | Pressure proof up to | 40 bar | 3 | 3 | 28 | M8x1 ¹⁾ |
| | Material | Stainless steel 1.4571 316TI | 6 | 6 | 22 | M10x1 |
| | Material clamping ring | Stainless steel 1.4571 316TI | | | 14 | G1/8 " |
| | Scope of delivery | Cutting ring screw fitting, packed in PE bag | | | 12 | G1/4 " |
| | | | | | 11 | G1/2 " |
| Your order code | 809610 1 | - | - | - | - | - |

Append the code for Ø Inside & process connection to the article no. | ¹⁾ not available for Ø Inside (I) 6 mm

Dimensions for technical drawing



| I | J | A | B | C | D | E | F | G | H |
|-----|--------------------|-----------------------------|----|------|------|-----|----|------|-------|
| 1,5 | M6x1 ¹⁾ | SW10 | 13 | SW12 | 13 | 9 | 8 | 31 | Ø10 |
| 3 | M8x1 ¹⁾ | SW10 | 13 | SW12 | 13,5 | 9,5 | 8 | 31 | Ø11,8 |
| 6 | M10x1 | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW14 | 13,5 | 9,5 | 8 | 32 | Ø13,8 |
| | G1/8 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW14 | 13,5 | 9,5 | 8 | 32 | Ø13,8 |
| | G1/4 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW19 | 20 | 14 | 12 | 38,5 | Ø18 |
| | G1/2 " | Ø 1,5 & 3: SW10 Ø 6: SW12 | 13 | SW27 | 23 | 17 | 14 | 38,5 | Ø26 |

All dimensions in mm | ¹⁾ not available for Ø Inner (I) 6 mm

MW / KS / 28.07.2022



Matching accessories: Heat-conducting paste

| Heat-conducting paste | |
|-----------------------|-------------|
| Article no. | 809540 1000 |
| Content | 10 ml |
| Thermal conductivity | >2.5 W/mK |
| Min / Max °C | |
| Thermal resistance | < 0.126 |

