

# Cable probe fast response with PVC cable

**Article no.:** 803551 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	-30 °C to +105 °C depending on sensor Type and connection cable
Perm. °C range cable	-30 °C to +105 °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 <sup>2)</sup>	max <sup>2)</sup>
A012	Pt100	Cl. B dT = ±(0,30 °C + 0,005 t ) <sup>1)</sup>	-50 °C	+400 °C
A011	Pt100	Cl. A dT = ±(0,15 °C + 0,002 t ) <sup>1)</sup>	-50 °C	+300 °C
A013	Pt100	1/3 Cl. B dT = ±(1/3 · (0,30 °C + 0,005 t )) <sup>1)</sup>	-50 °C	+200 °C
A014	Pt100	1/10 Cl. B dT = ±(1/10 · (0,30 °C + 0,005 t )) <sup>1)</sup>	±0 °C	+100 °C
A022	Pt500	Cl. B dT = ±(0,30 °C + 0,005 t ) <sup>1)</sup>	-70 °C	+500 °C
A032	Pt1000	Cl. B dT = ±(0,30 °C + 0,005 t ) <sup>1)</sup>	-50 °C	+400 °C
A031	Pt1000	Cl. A dT = ±(0,15 °C + 0,002 t ) <sup>1)</sup>	-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	✓		


<sup>1)</sup>according to IEC 751 / EN 60751 | <sup>2)</sup> 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 <sup>1)</sup>



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

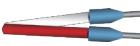
E - Cable material and configuration connection cable												
Picture	Code	IP	Connection Type	Color	From (°C) <sup>1)</sup>	To (°C) <sup>1)</sup>	Outside material	Material strand	Color strand	Ø (mm) <sup>2)</sup>	Q (mm <sup>2</sup> ) <sup>3)</sup>	Ω / m <sup>4)</sup>
	E0000	IP67	2-Wire	black	-30	+105	PVC	PVC	rd, wt	4,8	0,22	0,07
	E0001	IP67	3-Wire	black	-30	+105	PVC	PVC	rd, wt, rd	4,8	0,22	0,07
	E0002	IP67	4-Wire	black	-30	+105	PVC	PVC	rd, wt, rd, wt	4,8	0,22	0,07

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | <sup>1)</sup>Perm. range °C | <sup>2)</sup>Tolerance ± 0,2 mm | <sup>3)</sup> Tolerance ± 0,03 mm<sup>2</sup> | <sup>4)</sup> 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	



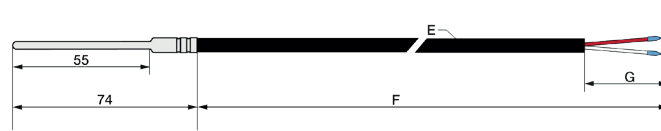
Your order code						
Article no.	Measuring element	Connection Type	Material connection cable	Length connection cable	Connector	Bend protection
803551 1011	A_____	B_____	E_____	F_____	G_____	H_____



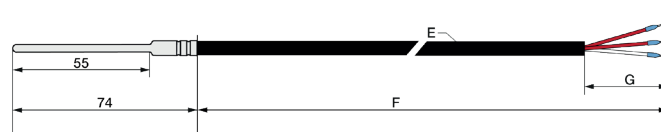
**Technical drawing**

<b>Customizable options</b> A - Measuring element	B - Connection Type E - Material connection cable	F - Length connection cable G - Connector	H - Bend protection All dimensions in mm
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**2-Wire version**



**3-Wire version**



**4-Wire version**



**Delivery and Assembly**

Delivery and Packaging	Probe, separately packaged in PE bag
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**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.

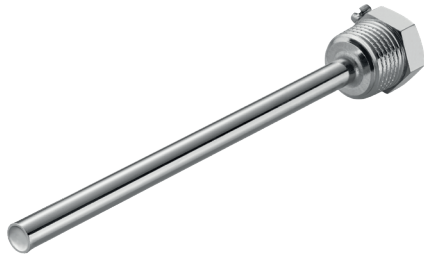
Mounting by using an immersion sleeve (4): Please note that the Ø and the length of the immersion sleeve must be selected to suit the installation situation so that the minimum immersion depth can be achieved. Since the probe is not inserted directly into the medium, but via the immersion sleeve, the 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.

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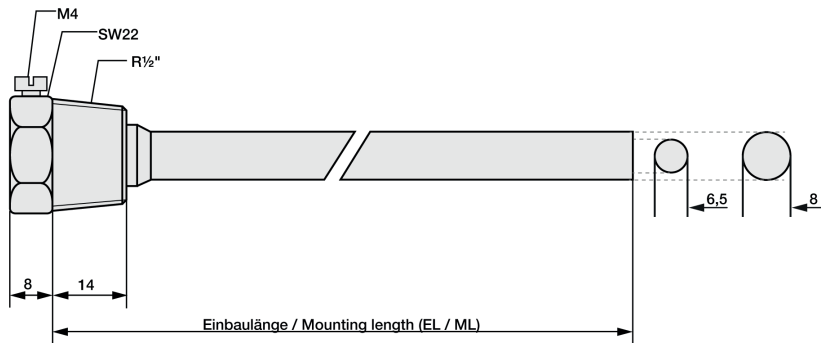
# Matching accessories: Immersion sleeves

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	--		

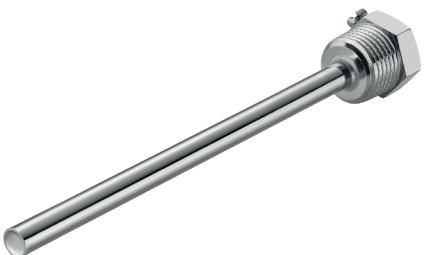


Please attach the code for the mounting length.

### Technical drawing

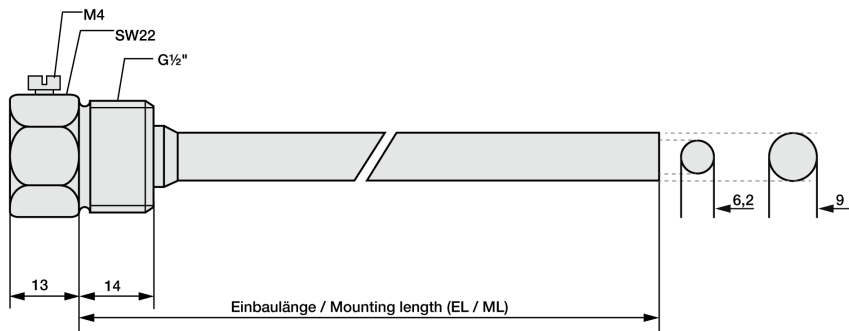


Stainless steel immersion sleeve G1/2 "				
Article no.	809520 20XX	Code	ML (mm)	
Temp. max	+600 °C	05	50	
Pressure proof up to	40 bar	10	100	
Material	Stainless steel 1.4571   316TI	15	150	
Process connection	G1/2 "	20	200	
Wrench size	22	25	250	
Ø Inside / Outside (mm)	6,2 / 9	30	300	
Scope of delivery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



Please attach the code for the mounting length.

### Technical drawing

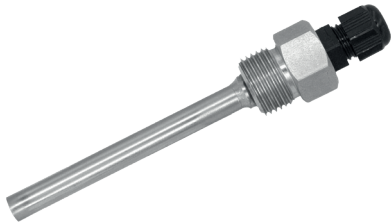


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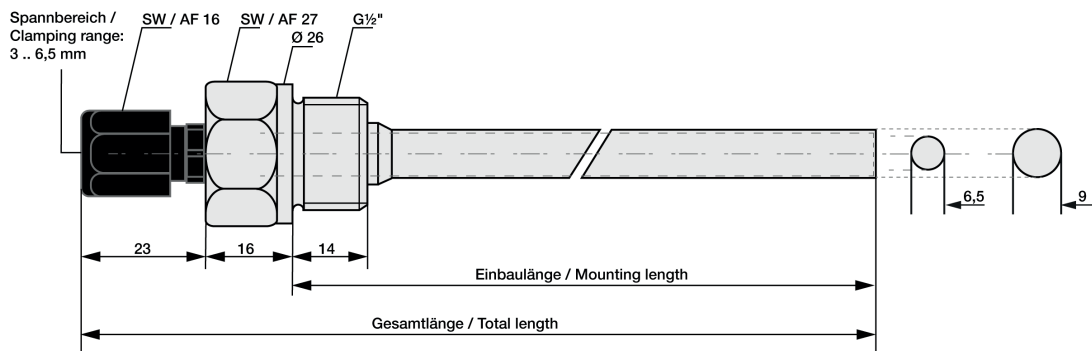
# Matching accessories: Immersion sleeves

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.

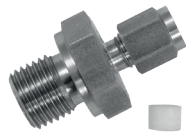
### Technical drawing



# Matching accessories: Compression fittings

## Compression fitting with PTFE clamping ring

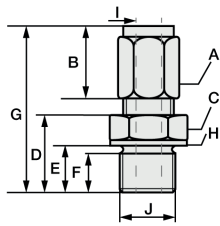
Compression fittings with PTFE clamping ring can be used several times. They are only pressure-tight up to 10 bar. For assembly, please tighten the connecting nut of the compression fitting by hand as far as it will go (clearly noticeable) by hand. With a wrench suitable for the width across flats, please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



<b>Article no.</b>	<b>809610 2XXX</b>	<b>Code</b>	<b>I - Ø Inside (mm)</b>	<b>Code</b>	<b>J - Process connection</b>	
Temp. max	+260 °C	0	1	27	M6x1 <sup>1)</sup>	
Pressure proof up to	10 bar	1	1,5	28	M8x1 <sup>1)</sup>	
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. | <sup>1)</sup> not available for Ø Inside (I) 6 mm

## Dimensions for technical drawing

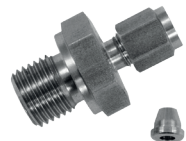


I	J	A	B	C	D	E	F	G	H
1	M6x1 <sup>1)</sup>	SW10	13	SW12	13	9	8	31	Ø10
1,5	M8x1 <sup>1)</sup>	SW10	13	SW12	13,5	9,5	8	31	Ø11,8
3	M10x1	Ø 1,5 & 3: SW10   Ø 6: SW12	13	SW14	13,5	9,5	8	32	Ø13,8
6	G1/8 "	Ø 1,5 & 3: SW10   Ø 6: SW12	13	SW14	13,5	9,5	8	32	Ø13,8
	G1/4 "	Ø 1,5 & 3: SW10   Ø 6: SW12	13	SW19	20	14	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 | <sup>1)</sup> not available for Ø Inner (I) 6 mm

## Compression fitting with stainless steel cutting ring

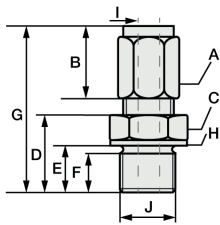
In compression fittings with stainless steel cutting ring, the compression fitting connects with the protective sleeve. This connection is pressure-resistant up to 40 bar. Therefore, these compression fittings can also only be used once and must be tightened more firmly. For assembly, please tighten 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.



<b>Article no.</b>	<b>809610 1XXX</b>	<b>Code</b>	<b>I - Ø Inside (mm)</b>	<b>Code</b>	<b>J - Process connection</b>	
Temp. max	+800 °C	1	1,5	27	M6x1 <sup>1)</sup>	
Pressure proof up to	40 bar	3	3	28	M8x1 <sup>1)</sup>	
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. | <sup>1)</sup> 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 <sup>1)</sup>	SW10	13	SW12	13	9	8	31	Ø10
3	M8x1 <sup>1)</sup>	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 | <sup>1)</sup> not available for Ø Inner (I) 6 mm

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## Matching accessories: Connection cable

**Connection cable - Please select your desired cable first.**

Picture	Code	Connection Type	Color	IP	From (°C) <sup>1)</sup>	To (°C) <sup>1)</sup>	Outside material	Material strand	∅ (mm) <sup>2)</sup>	Q (mm <sup>2</sup> ) <sup>3)</sup>	Color strand	Ω / m <sup>4)</sup>
	E0000	2-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt	0,07
	E0001	3-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt, rd	0,07
	E0002	4-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt, rd, wt	0,07

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | <sup>1)</sup>Perm. range °C | <sup>2)</sup>Tolerance ± 0,2 mm | <sup>3)</sup>Tolerance ± 0,03 mm<sup>2</sup> | <sup>4)</sup>per single strand | Please also note the connection Type of your selected temperature sensor.

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

<b>Length (m)</b>	1	2	5	10	20
<b>Code</b>	010	020	050	100	200

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

## Matching accessories: Heat-conducting paste

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

