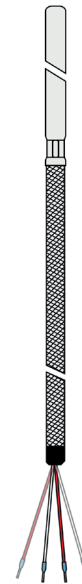


Cable probe with glass fibre cable

Order nr.: 803580 1011

Cable probes with with glass fibre cables are shielded and measure temperature up to +400 °C. They are crimped and also have a poorer seal than other cables due to the used insulation material. To order your cable temperature probe, select the required configuration and send us the order code.



Customizable options

- A - Measuring element
- B - Connection type
- C - Length protection sleeve
- D - Ø protection sleeve
- E - Material connection cable
- F - Length connection cable
- G - Connector
- H - Bend protection

General Information	
Measuring range	-50 °C to +400 °C depending on sensor type and connection cable
Perm. °C range cable	-50 °C to +400 °C
Accuracy	depending on sensor type
Response time	t63 / t99: information is available on request
Pull-out force	≥ 30 N
Supply and output	
Max. measurement current	max. 1 mA
Supply voltage	approx. 5 V depending on measurement current
Measurement signal	passive (resistance value)
Ambient conditions	
Protection class	IP20 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)

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
A105	NTC 5 kOhm	R25 = 5 kOhm ±1 %	-40 °C	+125 °C
A110	NTC 10 kOhm	R25 = 10 kOhm ±1 %	-40 °C	+125 °C
A120	NTC 20 kOhm	R25 = 20 kOhm ±1 %	-40 °C	+125 °C
A210	Ni1000	-60 °C to 0 °C: dT = ±(0,4 °C + 0,028 · T) 0 °C to +150 °C: dT = ±(0,4 °C + 0,007 · T)	-60 °C	+150 °C
A323	LM235Z	typical ±1 °C	-40 °C	+125 °C
A421	KTY 81-210	R25 = 2 kOhm ±1 %	-50 °C	+150 °C
A411	KTY 81-110	R25 = 1 kOhm ±1 %	-50 °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	✓		
Ni	✓	✓	✓
LM235Z	✓		
KTY	✓		

¹⁾according to IEC 751 / EN 60751 | ²⁾ Perm. range °C | A105, A110, A120, A323, A421, A411 only on request | 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.

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Protection sleeve									
Bild	Material and possible configuration					C - Length prot. sleeve		D - Ø prot. sleeve	
	Length / Ø (mm)	3	4	5	6	Code	Length (mm)	Code	Ø (mm)
	30	1.4571	1.4571	1.4404	1.4404	C0030	30 ¹⁾	D030	3,0 ²⁾
	40	1.4571	1.4571	1.4404	1.4404	C0040	40 ¹⁾	D040	4,0 ²⁾
Zeichnung	50	1.4571	1.4571	1.4404	1.4404	C0050	50 ¹⁾	D050	5,0 ²⁾
	60	-	-	-	1.4571	C0060	60 ¹⁾	D060	6,0 ²⁾
	100	1.4571	1.4571	1.4571	1.4571	C0100	100 ¹⁾		
	200	1.4571	1.4571	1.4571	1.4571	C0200	200 ¹⁾		

A105, A110 only from Ø protection sleeve 4 mm | A120 only from Ø protection sleeve 5 mm | A323, A421, A411 only from Ø protection sleeve 6 mm | 1.4571 = 316Ti | 1.4404 = 316 L | ¹⁾Tolerance C ≥ 100: ± 1 mm / C > 100: ± 1 % | ²⁾Tolerance ± 0,1 mm | other protective sleeve lengths and Ø available on request

E - Cable material and configuration connection cable											
Code	perm. Ø mm sleeve	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⁾
E3303	3	2-Wire	steel	-50	+400	Varnish	Glass fibre	rd, wt	2,5	0,09	0,21
E3304	3	3-Wire	steel	-50	+400	Varnish	Glass fibre	rd, wt, rd	2,5	0,09	0,21
E3300	4, 5, 6	2-Wire	steel	-50	+400	Varnish	Glass fibre	rd, wt	3,2	0,22	0,09
E3301	4, 5, 6	3-Wire	steel	-50	+400	Varnish	Glass fibre	rd, wt, rd	3,2	0,22	0,09
E3302	4, 5, 6	4-Wire	steel	-50	+400	Varnish	Glass fibre	rd, wt, rd, wt	3,4	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 | IP20 | Other lengths on request

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
¹⁾ on request	50	Stainless steel spring 1.4310 SUS 302	H0	Without (Standard)
			H1	Metal bend protection ¹⁾

Your order code								
Order nr.	Measuring element	Connection type	Length protection sleeve	Ø protection sleeve	Material connection cable	Length connection cable	Connector	Bend protection
803580 1011	A_____	B_____	C_____	D_____	E_____	F_____	G_____	H_____

Delivery and Assembly	
Assembly instructions	by using compression fitting or immersion sleeve
Delivery and Packaging	Probe, separately packaged in PE bag

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Technical drawing

Customizable options

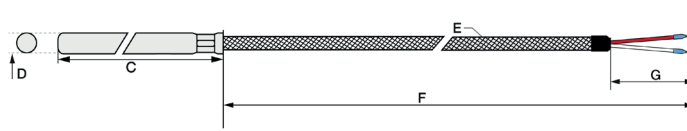
A - Measuring element
B - Connection type

C - Length protection sleeve
D - Ø protection sleeve

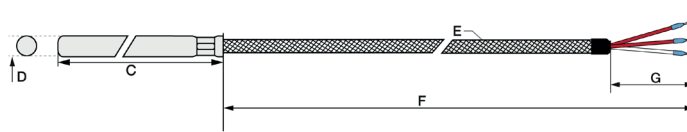
E - Material connection cable
F - Length connection cable

G - Connector
H - Bend protection
All dimensions in mm

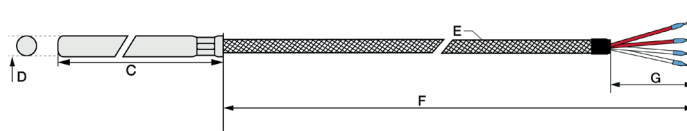
Ausführung 2-Leiter / 2-Wire version



Ausführung 3-Leiter / 3-Wire version



Ausführung 4-Leiter / 4-Wire version

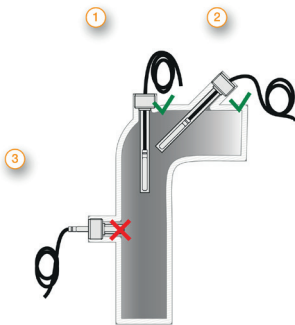


Delivery and Assembly

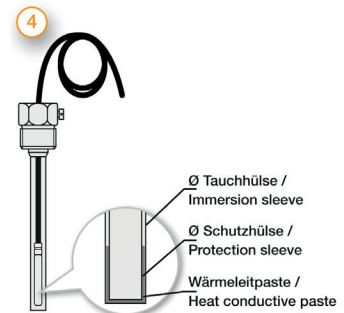
Delivery and Packaging

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.



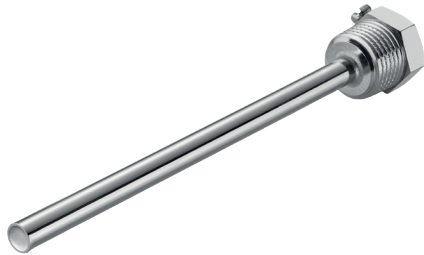
Mounting by using an immersion sleeve (4): Please note that the Ø and the length of the immersion sleeve must be selected to suit the installation situation so that the minimum immersion depth can be achieved. Since the probe is not inserted directly into the medium, but via the immersion sleeve, the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

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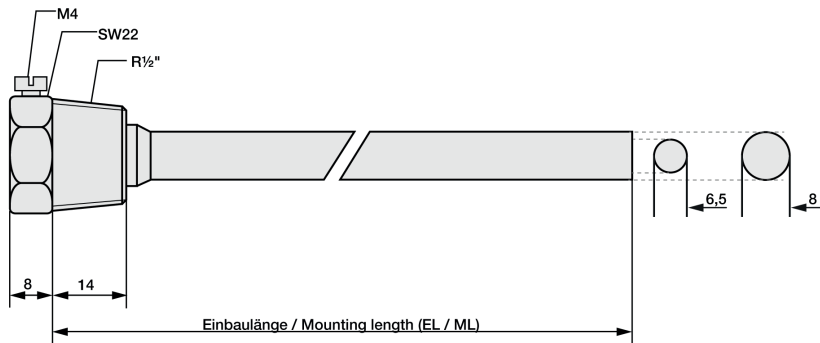
Matching accessories: Immersion sleeves

Brass immersion sleeve R1/2 "				
Article no.	809520 10XX	Code		
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	--		

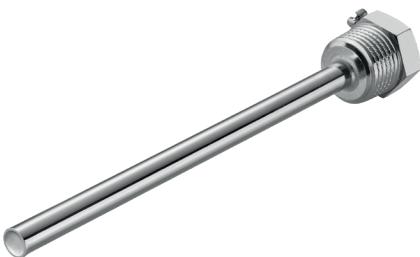


Please attach the code for the mounting length.

Technical drawing

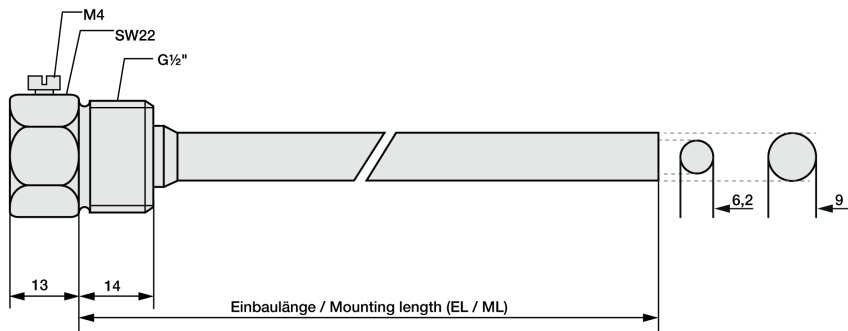


Stainless steel immersion sleeve G1/2 "				
Article no.	809520 20XX	Code		
Temp. max	+600 °C	05	50	
Pressure proof up to	40 bar	10	100	
Material	Stainless steel 1.4571 316TI	15	150	
Process connection	G1/2 "	20	200	
Wrench size	22	25	250	
Ø Inside / Outside (mm)	6,2 / 9	30	300	
Scope of delivery	Immersion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



Please attach the code for the mounting length.

Technical drawing

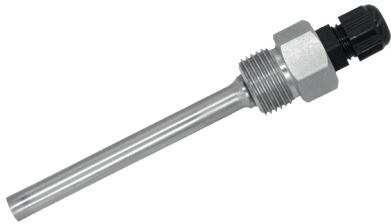


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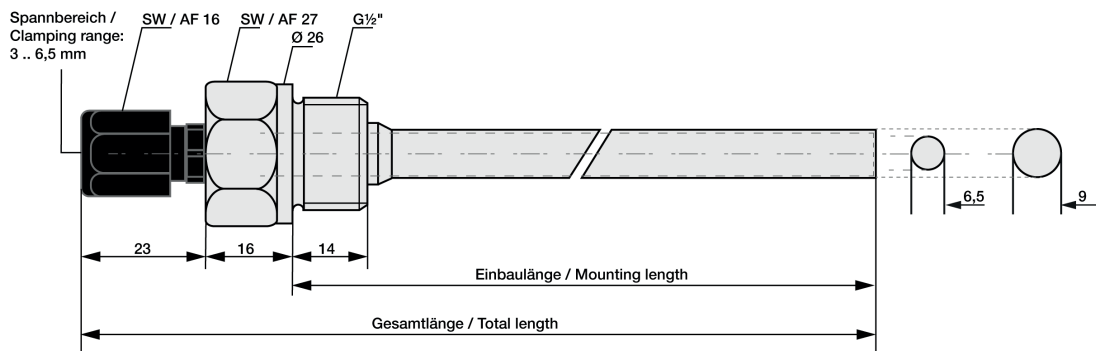
Matching accessories: Immersion sleeves

Immersion sleeve G1/2 " with cable gland					
Article no.	809520 60XX	Compression fitting		Code	
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

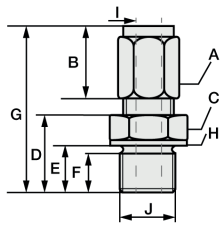
Compression fitting with PTFE clamping ring

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

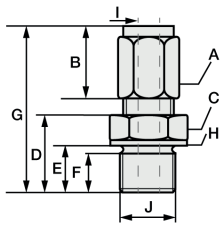
Compression fitting with stainless steel cutting ring

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

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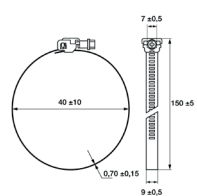
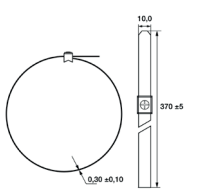
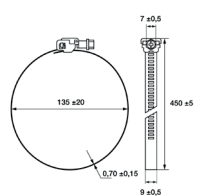


Matching accessories:

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

Matching accessories: Quick-release strap

Quick-release strap			
			
Article no.	809550 1000	809550 2000	809550 3000
Clamping range (mm)	Ø 25 to 40	Ø 30 to 110	Ø 25 to 135
Material	Stainless Steel	Stainless Steel	Stainless Steel
Dimensions (L/W) (mm)	150 ¹⁾ / 9 ²⁾	370 ¹⁾ / 10	450 ¹⁾ / 9 ²⁾
Closure	Quick release	Quick release	Quick release

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¹⁾± 5 mm | ²⁾± 0,5 mm

