

Duct probe with housing and aluminium flange

Order nr.: 803710 2011

Our duct probe with aluminum flange is used to measure the temperature in gaseous media in a temperature range of -30 °C up to +150 °C. For an easy and quick mounting, a suitable aluminum flange is included. Further mounting flanges made of stainless steel or plastic can be found in our accessories. Simply configure your probe and send us the order code.



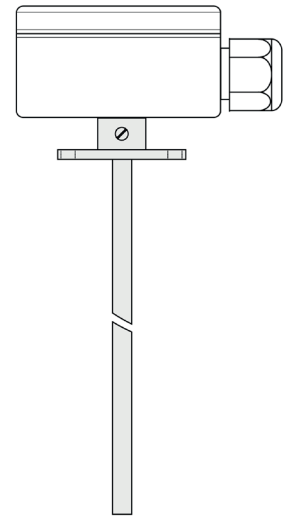
General Information	
Measuring range	-30 °C to +150 °C depending on the sensor type
Perm. range °C Housing	-30 °C to +90 °C
Accuracy	depending on sensor type
Response time	t63 / t99: information is available on request
Supply and output	
Max. measurement current	max. 1 mA
Supply voltage	approx. 5 V depending on measurement current
Measurement signal	passive (resistance value)
Ambient conditions	
Protection class	IP65 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)

A - Measuring element				
Code	Sensor	Accuracy / Tolerance resistance	min ²⁾	max ²⁾
A012	Pt100	Cl. B dT = $\pm(0,30 \text{ °C} + 0,005 t)^{1)}$	-50 °C	+400 °C
A011	Pt100	Cl. A dT = $\pm(0,15 \text{ °C} + 0,002 t)^{1)}$	-50 °C	+300 °C
A013	Pt100	1/3 Cl. B dT = $\pm(1/3 \cdot (0,30 \text{ °C} + 0,005 t))^{1)}$	-50 °C	+200 °C
A014	Pt100	1/10 Cl. B dT = $\pm(1/10 \cdot (0,30 \text{ °C} + 0,005 t))^{1)}$	± 0 °C	+100 °C
A022	Pt500	Cl. B dT = $\pm(0,30 \text{ °C} + 0,005 t)^{1)}$	-70 °C	+500 °C
A032	Pt1000	Cl. B dT = $\pm(0,30 \text{ °C} + 0,005 t)^{1)}$	-50 °C	+400 °C
A031	Pt1000	Cl. A dT = $\pm(0,15 \text{ °C} + 0,002 t)^{1)}$	-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 = $\pm(0,4 \text{ °C} + 0,028 \cdot T)$ 0 °C to +150 °C: dT = $\pm(0,4 \text{ °C} + 0,007 \cdot T)$	-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
A520	DS18B20	-10 °C to +85 °C: $\pm 0,5$ °C -30 °C to +100 °C: ± 1 °C -55 °C to +125 °C: ± 2 °C	-55 °C	+125 °C
A334	LM34	typical $\pm 0,5$ °F at 77 °F $\pm 1,5$ °F at -50 °F to +300 °F	-50 °F	+300 °F

¹⁾according to IEC 751 / EN 60751 | ²⁾ Perm. range °C | A334 only on request | Detailed information and the characteristics can be found in our download area.

Customizable options

A - Measuring element
B - Connection type
C -Mounting length

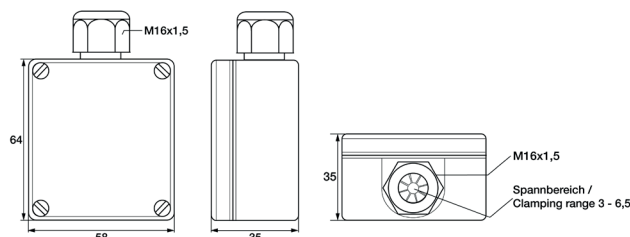


B - Connection type	
Code	Conn. type
B2	2-Wire (2W)
B3	3-Wire (3W)
B4	4-Wire (4W)

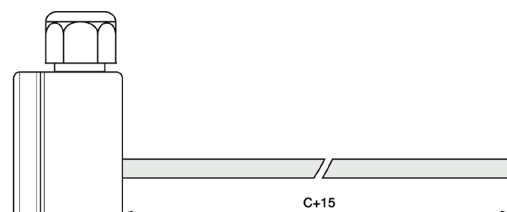
Possible connections			
Sensor	2W	3W	4W
Pt	✓	✓	✓
NTC	✓		
Ni	✓	✓	✓
LM235Z	✓		
KTY	✓		
DS18B20		✓	
LM34		✓	



Material	Polyamide
Dimension (L/W/H) (mm)	64 x 58 x 35
Color	white similar RAL 9010
Cable entry	with strain relief
Clamping range (mm)	5 to 9
Electrical connection	Screw terminals max. 1,5 mm ²



Material	Stainless steel 1.4571 316Ti	Code	Length (mm)	Code	Length (mm)
Ø (mm)	6 ¹⁾	C0050	50 ¹⁾	C0250	250 ¹⁾
Other mounting lengths on request ¹⁾ Tolerance ± 1 % other protective sleeve lengths and Ø available on request ¹⁾ Tolerance ± 0,1 mm		C0100	100 ¹⁾	C0300	300 ¹⁾
		C0150	150 ¹⁾	C0400	400 ¹⁾
		C0200	200 ¹⁾	C0500	500 ¹⁾



Material	Aluminum
Fixing	two holes Ø 4.5 mm
Hole (mm)	6
Article number flange	809500 2060

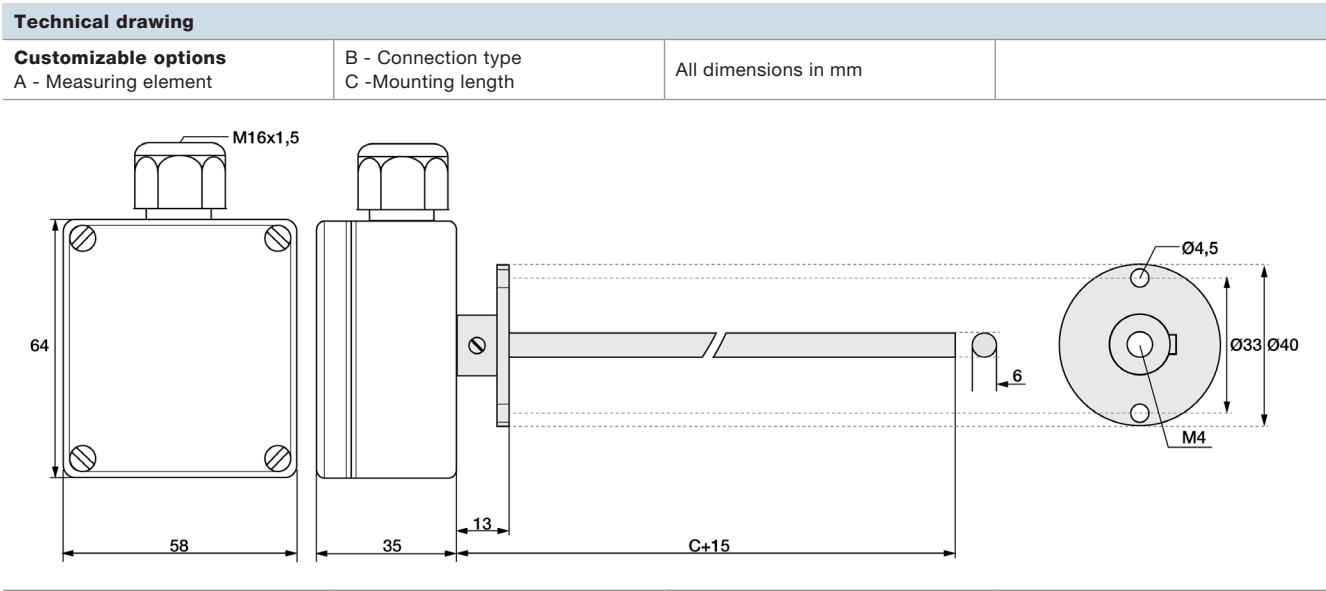
Assembly instructions	Installation by using the enclosed mounting flange
Delivery and Packaging	Probe, Mounting flange, separately packaged in PE bag

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. Please make sure that you have enough space to remove the probe if necessary.

A diagram of a rectangular box, possibly a container or a piece of equipment. A horizontal rod or tube extends from the left side of the box. On the left end of this rod, there is a small rectangular control unit or sensor. A thick black cable is connected to the bottom of this unit and loops downwards and to the left. The box has a metallic or reflective appearance with some shading to indicate depth.

Mounting by means of mounting flange (included in delivery): Please make sure that the Ø of the mounting flange matches the Ø of the protection sleeve. Please lay the cable with reserve loop (5) and in such a way that no water can penetrate into the sensor head. This allows you to extend the probe without disconnecting the electrical connection.





Matching accessories

Details of accessories can be found on our website.

Connection cable

Please select your desired cable first.

Picture	Code		Color	IP	From (°C) ¹⁾	To (°C) ¹⁾	Outside material		Ø (mm) ²⁾	Q (mm ²) ³⁾	Color strand	Ω / m ⁴⁾
	809200 0	2-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt	0,07
	809200 1	3-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt, rd	0,07
	809200 2	4-Wire	black	IP67	-30	+105	PVC	PVC	4,8	0,22	rd, wt, rd, wt	0,07
	809210 0	2-Wire	red-	IP67	-50	+180	Silicone	Silicone	4,7	0,22	rd, wt	0,08
	809210 1	3-Wire	red-	IP67	-50	+180	Silicone	Silicone	4,9	0,22	rd, wt, rd	0,08
	809210 3 ⁵⁾	3-Wire	red-	IP67	-50	+180	Silicone	Silicone	4,4	0,22	br, gn, wt	0,08
	809210 2	4-Wire	red-	IP67	-50	+180	Silicone	Silicone	4,9	0,22	rd, wt, rd, wt	0,08

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 | ⁵⁾We use this cable only when using a DS18B20 or LM34 sensor. Litz color brown, green, white | 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.

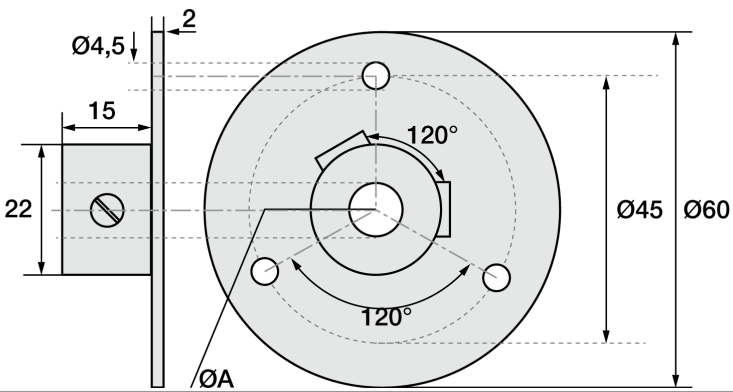
Length (m)	1	2	5	10	20
Code	010	020	050	100	200

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

Matching accessories: Mounting flange

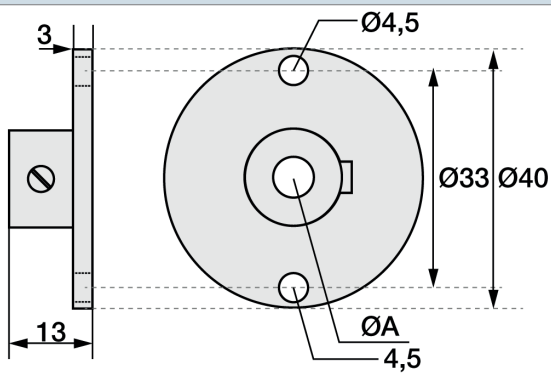
Steel flange

Article no.	809500 1XXX
Material	Stainless Steel
Fixing	3 x Ø 4,5 mm drill holes
Now please select the size of the hole and append the last digits to your order number.	
A - Hole (mm)	Code
6	060
9	090
10	100
15	150
Your order code 809500 1 _ _ _	



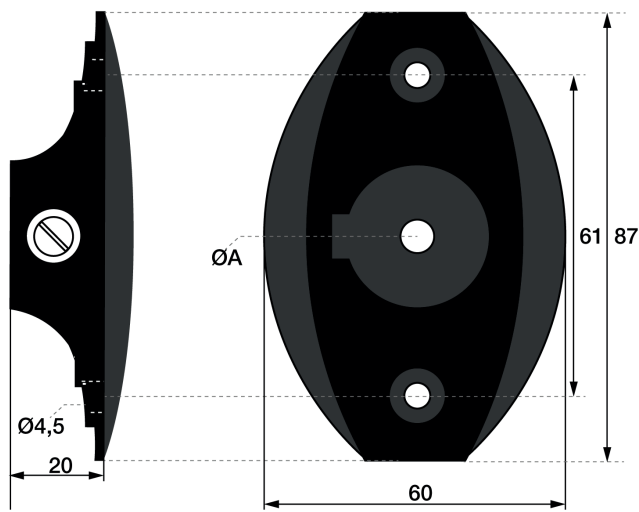
Aluminium flange

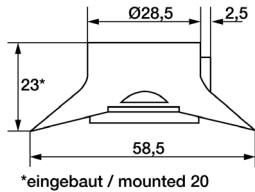
Article no.	809500 2XXX
Material	Aluminium
Fixing	2 x Ø 4,5 mm drill holes
Now please select the size of the hole and append the last digits to your order number.	
A - Hole (mm)	Code
6	060
11	110
Your order code 809500 2 _ _ _	



Plastic flange

Article no.	809500 4XXX
Material	Plastic
Fixing	2 x Ø 4,5 mm drill holes
Now please select the size of the hole and append the last digits to your order number.	
A - Hole (mm)	Code
6	060
12	120
Your order code 809500 4 _ _ _	



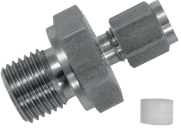


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Matching accessories: Compression fittings

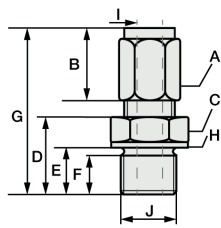
Compression fitting with PTFE clamping ring

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

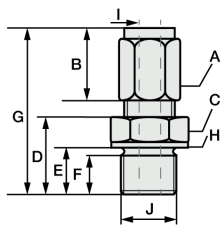
Compression fitting with stainless steel cutting ring

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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