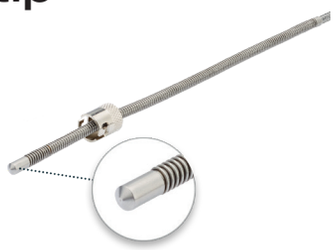
Bayonet probe with conical measuring tip

Order nr.: 802211 1011

Bayonet probes are used in process measurement technology, e.g. in the plastics industry. The immersion depth or mounting length can be adjusted to suit the measuring task by means of the rotating bayonet cap. The bayonet lock ensures a secure hold and the threaded rising spring ensures a constant contact pressure. We offer this special probe design as a platinum resistance thermometer or as a thermocouple. The bayonet probes can be manufactured with cable and ferrules or the appropriate connectors.



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)

Customizable options
A - Measuring element
B - Connection type
E - Material connection cable
F - Length connection cable
G - Connector
I - Ø bayonet tip
J - Ø bayonet cap

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
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

[1]according to IEC 751 / EN 60751 | [2] Perm. range °C | The measuring range depends on the measuring element and the connecting cable. | Detailed information and the characteristics can be found in our download area.

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	✓	✓	✓

E - Cable material and configuration connection cable

Picture	Code	Connection type	Color	IP	From (°C)[1]	To (°C)[1]	Outside material	Material strand	Ø (mm)[2]	Q (mm²)[3]	Color strand	Ω / m[4]
	E3300	2-Wire	steel	IP20	-50	+400	Varnish	Glass fibre	3,2	0,22	rd, wt	0,09
	E3301	3-Wire	steel	IP20	-50	+400	Varnish	Glass fibre	3,2	0,22	rd, wt, rd	0,09
	E3302	4-Wire	steel	IP20	-50	+400	Varnish	Glass fibre	3,4	0,22	rd, wt, rd, wt	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

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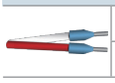
F - Length								
Code	F010	F020	F030	F040	F050	F100	F150	F200
m	1	2	3	4	5	10	15	20

Other lengths on request

G - Connector		
	**Code**	**Feature**
	G01	Insulated end ferrules (50 mm)

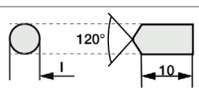
Probe design	
Mounting length (mm)	10 to 240
Design	120° measuring tip

Pressure spring	
Material	Stainless steel spring 1.4310 | SUS 302
Length (mm)	250

Bayonet cap		
	Material	Nickel plated
	Length (mm)	16
	J - Bayonet cap	
	**Code**	**Ø (mm)**
	J12	12
	J14	14

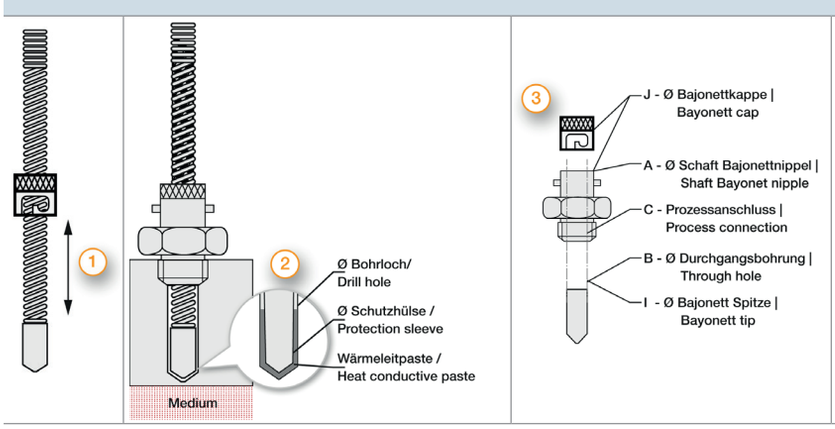
Bayonet tip	
Material	Stainless steel 1.4301 | SUS 304
Length (mm)	10
I - Bayonet tip	
Code	**Ø (mm)**
I6	6[1)]
I8	8[1)]

[1)]Tolerance ± 0,1 mm



Delivery and Assembly	
Assembly instructions	via bayonet fitting
Delivery and Packaging	Probe, seperatly packaged in PE bag

Your order code							
Order nr.	Measuring element	Connection type	Material connection cable	Length connection cable	Connector	Ø bayonet tip	Ø bayonet cap
802211 1011	A_____	B_____	E_____	F_____	G_____	I_____	J_____



For optimal integration of the bayonet probe into your process, please observe the following installation steps:
(1) Please set the bayonet spring to the desired length and make sure that the spring pressure is sufficiently high. The spring constant may decrease with temperature influence. Therefore, check the contact pressure regularly and readjust if necessary.

(2) Insert the probe tip into the borehole and fix the probe to the bayonet nipple with the bayonet cap. The borehole should be made so that the borehole is approx. 0.2 mm larger than the outer diameter of the probe and that the borehole corresponds to the shape of the probe tip. The borehole must be clean and free of residues (e.g. chips). To optimize heat transfer, we recommend using our thermal paste at temperatures below 200 °C.

(3) For a safe installation, please select the appropriate bayonet nipple from our accessories. Make sure that the process connection thread is suitable for your application.

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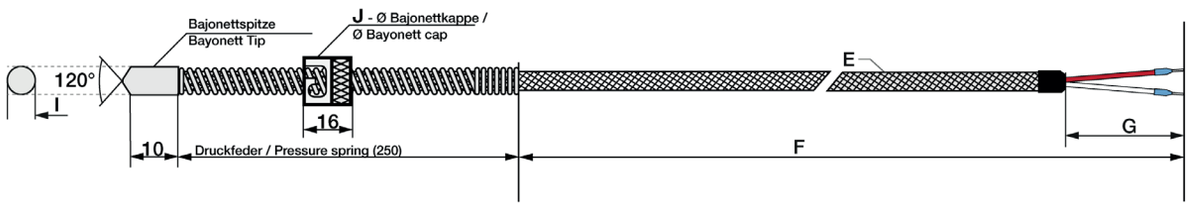
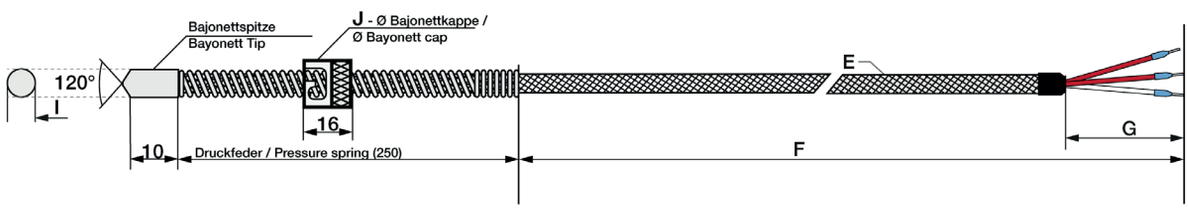
Technical drawing

Customizable options A - Measuring element B - Connection type	E - Material connection cable F - Length connection cable G - Connector	I - Ø bayonet tip J - Ø bayonet cap All dimensions in mm

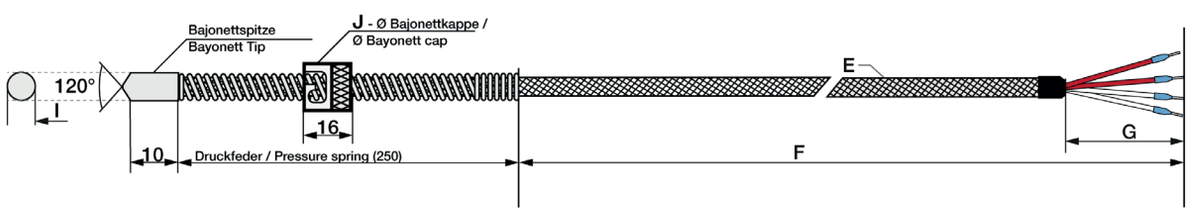
Ausführung 2-Leiter / 2-Wire version



Ausführung 3-Leiter / 3-Wire version



Ausführung 4-Leiter / 4-Wire version



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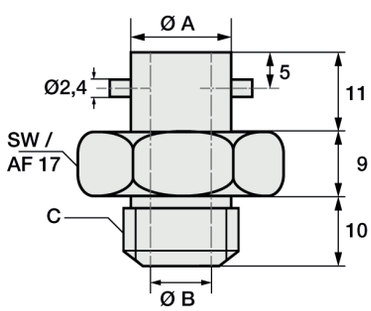
Matching accessories: Bayonet nipple / Threaded nipple

Details of accessories can be found on our website.

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

Bayonet nipple / Threaded nipple					
Material	**Please select the appropriate dimensions.**				**Technical drawing**
Nickel plated Total length (mm)	**Article no.**	**A - Ø shaft (mm)**	**B - Through hole (mm)**	**C - Screw-in thread**	
30	809601 2622	12	6,5	M10 x 1	
Picture	809601 2812	12	8,5	G1/4 "	
	809601 2823	12	8,5	M12	
	809601 2824	12	8,5	M12x1	
	809601 2825	12	8,5	M12x1,5	
	809601 2826	12	8,5	M14x1,5	
	809601 4812	14	8,5	G1/4 "	
	809601 4823	14	8,5	M12	
	809601 4824	14	8,5	M12x1	
	809601 4825	14	8,5	M12x1,5	
	809601 4826	14	8,5	M14x1,5	

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