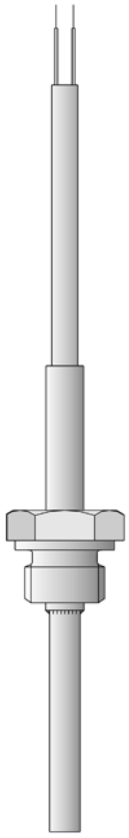
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Screw-in RTD temperature probes with connecting cable



- **for temperatures from -50 to +400°C**
- **as single or twin RTD temperature probe**
- **in 2-wire, 3-wire or 4-wire circuit**
- **connecting cable in PVC, silicone, PTFE or with metal braiding**

Screw-in RTD temperature probes are mainly used for measuring temperatures in liquids and gases. An important selection criterion is their reliable sealing against both negative and positive pressures. Applications include HVAC, refrigeration, heating installations, ovens, furnaces and plant engineering.

Depending on the version, the connecting cables are suitable for use in dry and humid areas within the temperature range -50 to +350°C. The junction between cable and protection tube incorporates strain relief. A cable protector can be supplied as an option.

The measuring insert is normally fitted with a Pt100 temperature sensor to EN 60 751, Class B in 2-wire circuit. Versions with Pt500 or Pt1000 are also available. In addition, there is a choice of 3-wire or 4-wire circuit connections.

Technical data

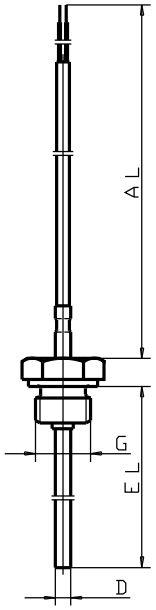
Connection	available with cable ends as: bare wires, with ferrules, receptacles or multipole connector
Connecting cable	PVC, ambient temperature -5 to +80°C (+105°C) silicone, ambient temperature -50 to +180°C PTFE, ambient temperature -190 to +260°C metal braiding, ambient temperature -50 to +350°C connecting cable can optionally be supplied with shielding
Process connection	thread, stainless steel 1.4571
Protection tube	stainless steel 1.4571 (Type 902050/30 Inconel 2.4816), 5mm, 5.4mm, 6mm and 8mm dia.
Measuring insert	Pt100 temperature sensor, EN 60 751, Cl. B, 2-wire circuit
Response times	$t_{0.5}$ approx. 2sec, $t_{0.9}$ approx. 6sec, in water 0.2m/sec, 6mm dia.
Accessories	pocket, see Data Sheet 90.9721 and 90.2440

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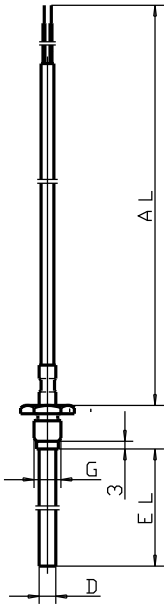
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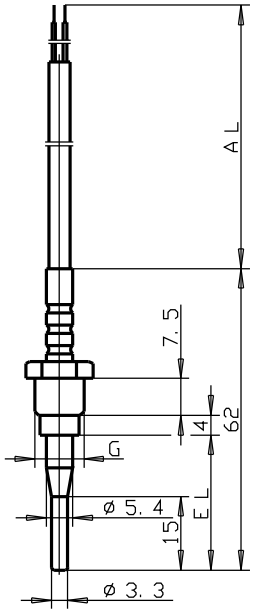
Dimensions



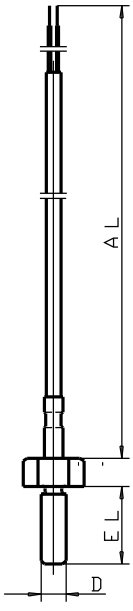
Type 902050/10



Type 902050/20



Type 902050/30



Type 902050/40

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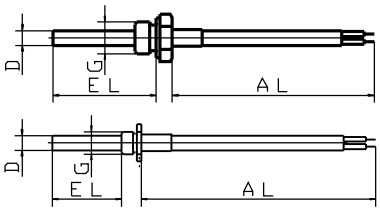
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Order details: Screw-in RTD temperature probes with connecting cable

(1) Basic version

902050/10 Screw-in RTD temperature probe with fixed screw fitting

902050/20 Screw-in RTD temperature probe with loose screw fitting



			(2) Operating temperature in °C / connecting cable
x	x	130	-200 to +400°C / metal braiding
x	x	380	-50 to +200°C / silicone
x	x	386	-50 to +260°C / PTFE
x	x	402	-50 to +400°C / metal braiding
x	x	724	-5 to +80°C / PVC
x	x	912	5 to 105°C / PVC (only with 1 x 2-wire or 3-wire circuit)
			(3) Measuring insert
x	x	1001	1 x Pt100 in 3-wire circuit
x	x	1003	1 x Pt100 in 2-wire circuit
x	x	1011	1 x Pt100 in 4-wire circuit
x	x	2001	2 x Pt100 in 3-wire circuit
x	x	2003	2 x Pt100 in 2-wire circuit
			(4) Tolerance class to EN 60 751
x	x	1	Class B (standard)
x	x	2	Class A
			(5) Protection tube diameter D in mm
x	x	5	5mm
x	x	6	6mm
			(6) Fitting length EL in mm (50≤ EL ≤500)
	x	17	17mm
	x	37	37mm
x	x	50	50mm
x	x	100	100mm
	x	137	137mm
x	x	200	200mm
x		250	250mm
x	x	...	please specify in plain text (50mm steps)
			(7) Process connection
x		102	thread 1/4"pipe
x		104	thread 1/2"pipe
	x	114	thread M 10 x 1
			(8) Connecting cable end
x	x	03	bare cable ends
x	x	11	ferrules to DIN 46 228 Part 4 (standard)
x	x	13	receptacle 6.3 to DIN 46 247
x	x	80	multipole connector (please specify type in plain text)
x	x	99	to customer specification
			(9) Connecting cable length AL in mm (500≤ AL ≤500000)
x	x	2500	2500mm
x	x	...	please specify in plain text (500mm steps)
			(10) Extra codes
x	x	000	no extra code
x	x	310	stepped protection tube
x	x	315	cable protector: coil
x	x	316	cable protector: tube
x	x	317	shielded connecting cable

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
Order code		-		-		-		-		-		-		-		-		/		,...
Order example	902050/10	-	380	-	1001	-	1	-	6	-	100	-	104	-	11	-	2500	/	000[1]	

1.List extra codes in sequence, separated by commas.

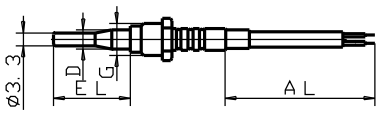
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Order details: Screw-in RTD temperature probes with connecting cable

			(1) Basic version
	902050/30		Screw-in RTD temperature probe with loose screw fitting and stepped protection tube
			(2) Operating temperature in °C / connecting cable
x	380		-50 to +200°C / silicone
			(3) Measuring insert
x	1001		1 x Pt100 in 3-wire circuit
x	1003		1 x Pt100 in 2-wire circuit
			(4) Tolerance class to EN 60 751
x	1		Class B (standard)
x	2		Class A
			(5) Protection tube diameter D in mm
x	5.4		5.4mm dia. stepped down to 3.3mm
			(6) Fitting length EL in mm
x	27.5		27.5mm
			(7) Process connection
x	114		thread M 10 x 1
			(8) Connecting cable end
x	03		bare cable ends
x	11		ferrules to DIN 46 228 Part 4 (standard)
x	13		receptacle 6.3 to DIN 46 247
x	80		multipole connector (please specify type in plain text)
x	99		to customer specification
			(9) Connecting cable length AL in mm (500≤ AL ≤500000)
x	2500		2500mm
x	...		please specify in plain text (500mm steps)
			(10) Extra codes
x	000		no extra code
x	315		cable protector: coil
x	316		cable protector: tube
x	317		shielded connecting cable



	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
Order code		-		-		-		-		-		-		-		-		/		,...
Order example	902050/30	-	380	-	1003	-	1	-	5.4	-	27.5	-	114	-	11	-	2500	/	000[1]	

1.List extra codes in sequence, separated by commas.

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Order details: Screw-in RTD temperature probes with connecting cable

		(1)	**Basic version**
	902050/40		Screw-in RTD temperature probe, screw-in protection tube
		(2)	**Operating temperature in °C / connecting cable**
x	380		-50 to +200°C / silicone
x	390		-50 to +300°C / metal braiding
x	724		-5 to +80°C / PVC
x	912		5 to 105°C / PVC (only with 1 x 2-wire or 3-wire circuit)
		(3)	**Measuring insert**
x	1001		1 x Pt100 in 3-wire circuit
x	1003		1 x Pt100 in 2-wire circuit
		(4)	**Tolerance class to EN 60 751**
x	1		Class B (standard)
x	2		Class A
		(5)	**Protection tube diameter D in mm**
x	8		M 8
		(6)	**Fitting length EL in mm**
x	25		25mm
		(7)	**Process connection**
x	111		thread M 8
		(8)	**Connecting cable end**
x	03		bare cable ends
x	11		ferrules to DIN 46 228 Part 4 (standard)
x	13		receptacle 6.3 to DIN 46 247
x	80		multipole connector (please specify type in plain text)
x	99		to customer specification
		(9)	**Connecting cable length AL in mm (500≤ AL ≤500000)**
x	2500		2500mm
x	...		please specify in plain text (500mm steps)
		(10)	**Extra codes**
x	000		no extra code
x	315		cable protector: coil
x	316		cable protector: tube
x	317		shielded connecting cable



	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
Order code		-		-		-		-		-		-		-		-		/		,...
Order example	902050/40	-	390	-	1003	-	1	-	8	-	25	-	111	-	11	-	2500	/	000[1]	

1.List extra codes in sequence, separated by commas.

Stock versions:

(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	Sales No.
902050/10	-	380	-	1001	-	1	-	6	-	100	-	104	-	11	-	2500	/	316	90/00065232
902050/10	-	380	-	1001	-	1	-	6	-	250	-	104	-	11	-	2500	/	316	90/00065235
902050/20	-	130	-	1003	-	1	-	6	-	37	-	114	-	11	-	2500	/	315,317	90/00055644
902050/20	-	130	-	1001	-	1	-	6	-	37	-	114	-	11	-	2500	/	315,317	90/00055646
902050/30	-	380	-	1001	-	1	-	5.4	-	27.5	-	114	-	11	-	2500	/	316	90/00089972
902050/40	-	390	-	1003	-	1	-	8	-	25	-	111	-	11	-	2500	/	315,317	90/00055722
902050/40	-	390	-	1001	-	1	-	8	-	25	-	111	-	11	-	2500	/	315,317	90/00055732