JUMO GmbH & Co. KG

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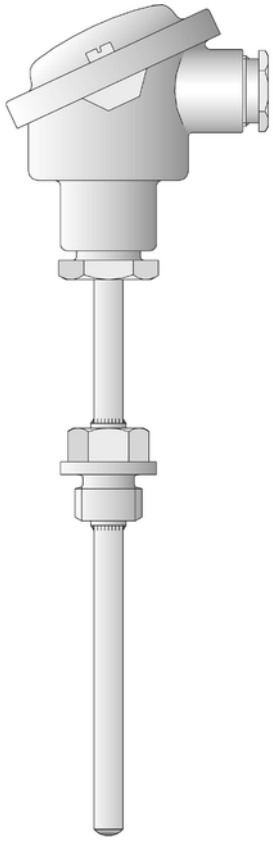
JUMO Instrument Co. Ltd.

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JUMO PROCESS CONTROL INC.

885 Fox Chase, Suite 103
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Screw-in resistance thermometers with terminal head Form B



- **for temperatures from -50 to +600°C**
- **with replaceable measuring insert**
- **as single or twin resistance thermometer**
- **terminal head Form B, BUZ, BUZH, BBK**
- **with transmitter option**

Screw-in resistance thermometers are preferred for measuring temperatures in liquids and gases. An important selection criterion is their reliable sealing against both negative and positive pressures. Applications include HVAC and refrigeration, as well as heating installations, ovens, furnaces and plant engineering.

The terminal head is suitable for temperatures up to +100°C. Terminal heads Form BUZ, BUZH and BBK are available in addition to the standard Form B.

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. 3-wire or 4-wire circuit connections can be provided. Optionally, it is possible to integrate a transmitter into the terminal head.

Technical data

Terminal head	Form B DIN 43 729, aluminium die-casting, M 20x1.5; IP54, ambient temperature -40 to +100°C Form BUZ, aluminium die-casting, M 20x1.5; IP65, ambient temperature -40 to +100°C Form BUZH, aluminium die-casting, M 20x1.5; IP65, ambient temperature -40 to +100°C Form BBK, plastic, M 20x1.5; IP54, ambient temperature -30 to +130°C Caution: reduced ambient temperature when using transmitters, Data Sheets 70.7030 (95.6530) and 70.7010 (95.6550)
Extension tube	stainless steel 1.4571, length 130mm (150mm for Type 902002/50.../51...)
Process connection	thread, stainless steel 1.4571 pocket, stainless steel 1.4571 or steel 1.7335
Protection tube	stainless steel 1.4571, 9mm, 11mm and 12mm dia.
Measuring insert	replaceable, Pt100 temperature sensor EN 60 751, Cl. B, 2-wire circuit (not replaceable on Type 902002/25)
Response times	$t_{0.9}$ approx. 50sec, in water 0.2 m/sec, 9mm dia.
Transmitter	analog transmitter, output 4 - 20mA, Data Sheet 70.7030 (95.6530) analog transmitter, output 0 - 10V, Data Sheet 70.7030 (95.6530) programmable transmitter, output 4 - 20mA/20 - 4mA, Data Sheet 70.7010 (95.6550)
Accessories	pocket, Data Sheet 90.9721

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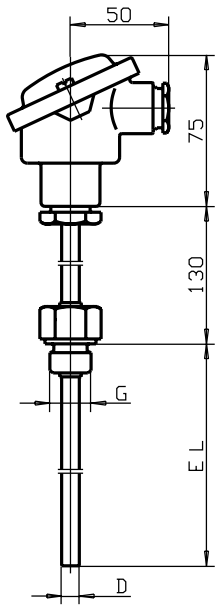
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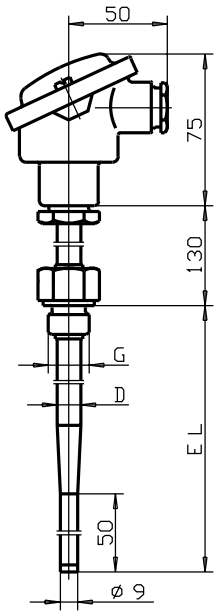
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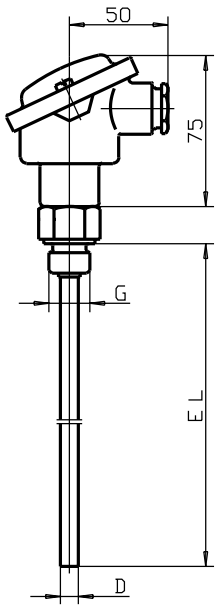
Dimensions



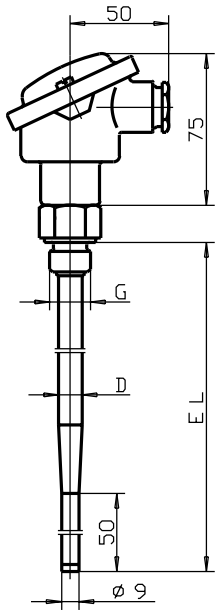
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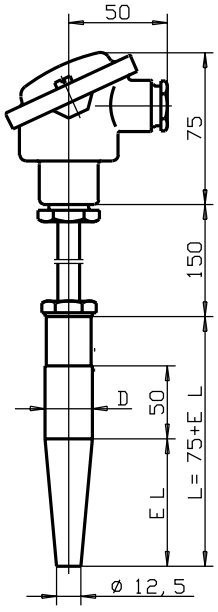
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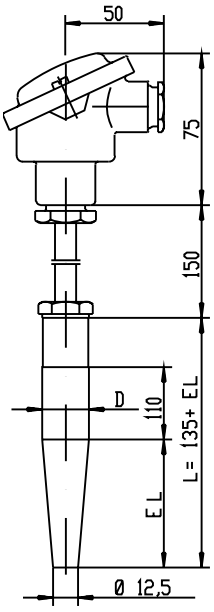
Type 902002/20
Type 902002/25



Type 902002/21



Type 902002/50



Type 902002/51

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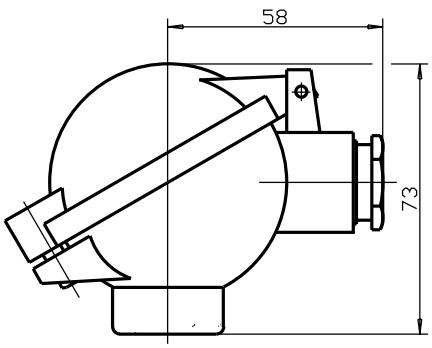
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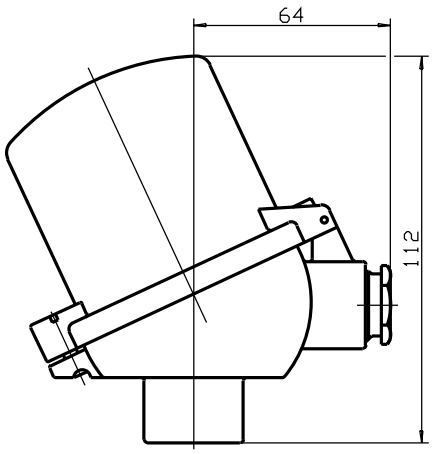
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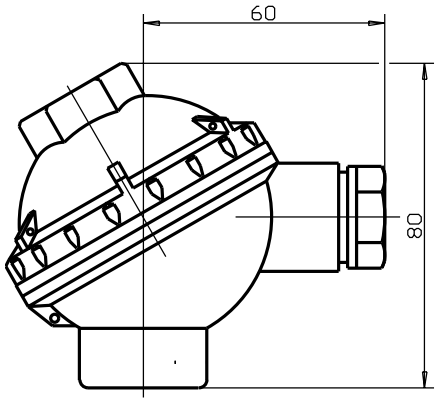
Dimensions



Terminal head Form BUZ
extra code 320



Terminal head Form BUZH
extra code 321



Terminal head Form BBK
extra code 322

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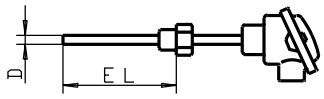
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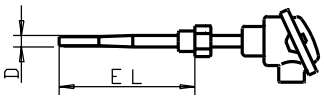
Order details: Screw-in resistance thermometers with terminal head Form B

(1) Basic version

902002/10 Screw-in resistance thermometer with extension tube, continuous protection tube



902002/11 Screw-in resistance thermometer with stepped protection tube



			(2) Operating temperature in °C
x	x	402	-50 to +400°C (standard)
x	x	415	-50 to +600°C
			(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		9	9mm
x		11	11mm
	x	12	12mm stepped down to 9mm
			(6) Fitting length EL in mm (100 ≤EL ≤1000, EL ≤700 for Type 902002/11, 902002/21)
x	x	160	160mm
	x	220	220mm
x	x	250	250mm
	x	280	280mm
x	x	400	400mm
x	x	...	please specify in plain text (50mm steps)
			(7) Process connection
x	x	104	thread 1/2"pipe
x	x	105	thread 3/4"pipe
x	x	106	thread 1"pipe
x	x	126	thread M 18 x 1.5
			(8) Extra codes
x	x	000	no extra code
x	x	306	extension tube 70mm
x	x	320	terminal head Form BUZ
x	x	321	terminal head Form BUZH
x	x	322	terminal head Form BBK
x	x	330	1 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	331	1 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	333	1 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)
x	x	334	2 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	335	2 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	337	2 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
Order code		-		-		-		-		-		-		/		,...
Order example	902002/10	-	402	-	1001	-	1	-	11	-	250	-	106	/	000[1]	

1. List extra codes in sequence, separated by commas.
2. Please specify range in plain text.
3. Please specify range and output signal in plain text.

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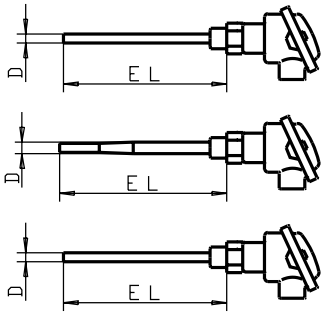
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Order details: Screw-in resistance thermometers with terminal head Form B

(1) Basic version

			902002/20	Screw-in resistance thermometer without extension tube, continuous protection tube
			902002/21	Screw-in resistance thermometer without extension tube, stepped protection tube
			902002/25	Screw-in resistance thermometer without extension tube, continuous protection tube, without replaceable measuring insert



				(2) Operating temperature in °C
x	x	x	402	-50 to +400°C (standard)
x	x	x	415	-50 to +600°C
				(3) Measuring insert
x	x	x	1001	1 x Pt100 in 3-wire circuit
x	x	x	1003	1 x Pt100 in 2-wire circuit
x	x	x	1011	1 x Pt100 in 4-wire circuit
x	x		2001	2 x Pt100 in 3-wire circuit
x	x	x	2003	2 x Pt100 in 2-wire circuit
				(4) Tolerance class to EN 60 751
x	x	x	1	Class B (standard)
x	x	x	2	Class A
				(5) Protection tube diameter D in mm
		x	7	7mm
x			9	9mm
x			11	11mm
	x		12	12mm stepped down to 9mm
				(6) Fitting length EL in mm (100 ≤EL ≤1000, EL ≤700 for Type 902002/11, 902002/21)
x	x	x	100	100mm
x	x	x	160	160mm
x	x	x	250	250mm
x	x	x	400	400mm
x	x	x	...	please specify in plain text (50mm steps)
				(7) Process connection
x	x	x	104	thread 1/2"pipe
x	x	x	105	thread 3/4"pipe
x	x	x	106	thread 1"pipe
x	x	x	126	thread M 18 x 1.5
				(8) Extra codes
x	x	x	000	no extra code
x	x	x	320	terminal head Form BUZ
x	x	x	321	terminal head Form BUZH
x	x	x	322	terminal head Form BBK
x	x	x	330	1 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	x	331	1 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	x	333	1 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)
x	x	x	334	2 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	x	335	2 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	x	337	2 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
Order code		-		-		-		-		-		-		/		,...
Order example	902002/20	-	402	-	1001	-	1	-	9	-	160	-	104	/	000[1]	

1. List extra codes in sequence, separated by commas.
2. Please specify range in plain text.
3. Please specify range and output signal in plain text.

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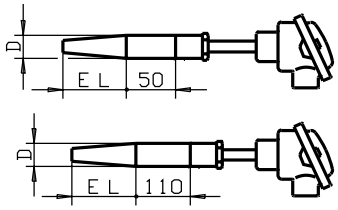
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Order details: Screw-in resistance thermometers with terminal head Form B

(1) Basic version

		902002/50	Screw-in resistance thermometer with pocket DIN 43 767 Form D1/D2
		902002/51	Screw-in resistance thermometer with pocket DIN 43 767 Form D4/D5



			(2) Operating temperature in °C (for restrictions see DIN 43 763)
x	x	402	-50 to +400°C (standard)
x	x	415	-50 to +600°C
			(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) Pocket diameter D in mm
x	x	24	24 mm dia. stepped down to 12.5mm
			(6) Fitting length EL in mm
x	x	65	65mm with Form D 1 / D 4
x	x	125	125mm with Form D2 / D5
			(7) Pocket material
x	x	26	stainless steel X 6 CrNiMoTi 17 12 2, 1.4571 (operating temperature +600°C)
x	x	36	steel 13 CrMo 44, 1.7335 (operating temperature +540°C)
			(8) Extra codes
x	x	000	no extra code
x	x	306	extension tube 70mm
x	x	320	terminal head Form BUZ
x	x	321	terminal head Form BUZH
x	x	322	terminal head Form BBK
x	x	330	1 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	331	1 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	333	1 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)
x	x	334	2 x analog transmitter, output 4 - 20mA[2], Data Sheet 70.7030 (95.6530)
x	x	335	2 x programmable transmitter, output 4 - 20mA/20 - 4mA[3], Data Sheet 70.7010 (95.6550)
x	x	337	2 x analog transmitter, output 0 - 10V[2], Data Sheet 70.7030 (95.6530)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Order code	[ ]	- [ ]	- [ ]	- [ ]	- [ ]	- [ ]	- [ ]	/ [ ] ,...
Order example	902002/50	- 402	- 1001	- 1	- 24	- 65	- 26	/ 000[1]

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Stock versions

(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	Sales No.
902002/10	-	402	-	1003	-	1	-	9	-	160	-	104	/	000	90/00055562
902002/10	-	402	-	1003	-	1	-	9	-	250	-	104	/	000	90/00055563
902002/10	-	402	-	1003	-	1	-	9	-	400	-	104	/	000	90/00055564
902002/10	-	402	-	2003	-	1	-	9	-	160	-	104	/	000	90/00055565
902002/10	-	402	-	2003	-	1	-	9	-	250	-	104	/	000	90/00055566
902002/10	-	402	-	2003	-	1	-	9	-	400	-	104	/	000	90/00055567
902002/10	-	402	-	1001	-	1	-	9	-	160	-	104	/	330 (0 to 100°C)	90/00054616
902002/10	-	402	-	1001	-	1	-	9	-	160	-	104	/	330 (0 to 200°C)	90/00087522
902002/10	-	402	-	1001	-	1	-	9	-	250	-	104	/	330 (0 to 100°C)	90/00054617
902002/10	-	402	-	1001	-	1	-	9	-	250	-	104	/	330 (0 to 200°C)	90/00087527
902002/10	-	402	-	1001	-	1	-	9	-	400	-	104	/	331 (0 to 100°C)	90/00335111
902002/25	-	402	-	1003	-	1	-	7	-	100	-	104	/	330 (0 to 100°C)	90/00081832
902002/25	-	402	-	1003	-	1	-	7	-	100	-	104	/	331 (0 to 100°C)	90/00342414