

JUMO GmbH & Co. KG

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JUMO Instrument Co. Ltd.

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JUMO Process Control, Inc.

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Push-in resistance thermometers with connecting cable

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

Push-in resistance thermometers are preferred for measuring temperatures in liquids and gases. Applications include HVAC and refrigeration, heating installations, ovens, plant engineering, and laboratories.

Depending on the version, the connecting cables are suitable for dry or humid areas within the range -50 to +350°C. The connection of the cable to the 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. Furthermore, there is a choice of 3-wire and 4-wire circuit connections.



Technical data

Connection**Connecting cable**

cable ends available as: bare wires, with ferrules, receptacles or multipole connectors

PVC, ambient temperature -5 to +80°C (+100/+105°C)

silicone, ambient temperature -50 to +180°C

PTFE, ambient temperature -190 to +260°C

metal braiding, ambient temperature -50 to +350°C

a shielded connecting cable can be supplied as an option

stainless steel 1.4571, 5mm, 5.2mm, 6mm and 8mm dia.

Protection tube**Measuring insert**

Pt100 temperature sensor, EN 60 751, Cl. B, 2-wire circuit

Response times

$t_{0.9}$ approx. 10sec, in water 0.2 m/sec, 6mm dia.

Accessories

pocket, see Data Sheet 90.9721 and 90.2440

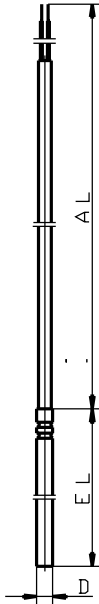
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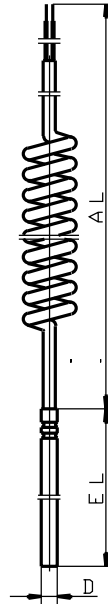
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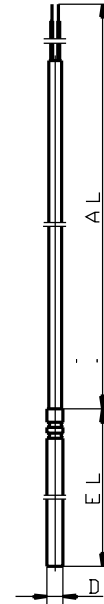
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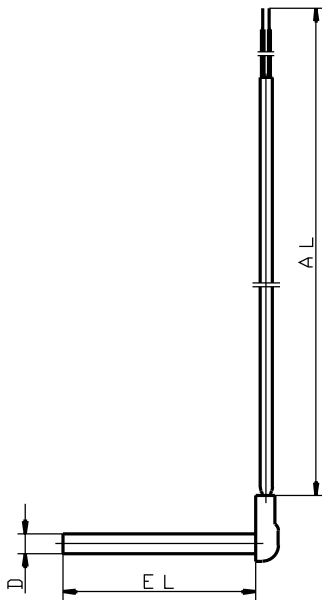
Type 902150/10



Type 902150/20



Type 902150/30



Type 902150/40

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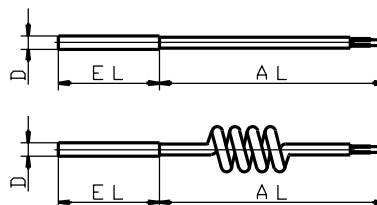
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Order details: Push-in resistance thermometers with connecting cable

(1) Basic version

	902150/10	Push-in resistance thermometer with connecting cable, one-piece protection tube in stainless steel
	902150/20	Push-in resistance thermometer with coiled connecting cable, one-piece protection tube in stainless steel



(2) Operating temperature in °C / connecting cable		
x	378	-50 to +180°C / silicone
x	386	-50 to +260°C / PTFE
x	388	-50 to +260°C / metal braiding
x	724	-5 to +80°C / PVC
x	730	-5 to +105°C / PUR
x	912	-5 to +105°C / PUR (for 1 x 2-wire circuit only)

(3) Measuring insert		
x	1001	1 x Pt100 in 3-wire circuit
x	1003	1 x Pt100 in 2-wire circuit
x	1011	1 x Pt100 in 4-wire circuit
x	2001	2 x Pt100 in 3-wire circuit
x	2003	2 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	5mm
x	5.2	5.2mm
x	6	6mm

(6) Fitting length EL in mm		
x	45	45mm (standard with D 5mm and D 5.2mm)
x	50	50mm (with D 6mm only)
x	60	60mm (with D 6mm only)

(7) 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)

(8) Connecting cable length AL in mm (500 ≤ AL ≤ 500000 for type 902150/10)		
x	1100	1100mm (stretched)
x	2500	2500mm
x	...	please specify in plain text (500mm steps)

(9) Extra codes		
x	000	no extra code
x	315	cable protector: coil
x	316	cable protector: tube
x	317	shielded connecting cable

Order code (1) - (2) - (3) - (4) - (5) - (6) - (7) - (8) / (9) ,...

Order example 902150/10 - 378 - 1001 - 1 - 6 - 50 - 11 - 2500 / 000¹

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

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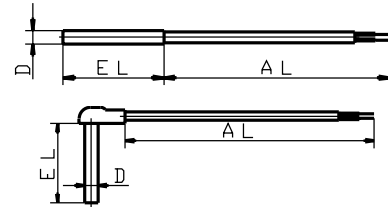
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Order details: Push-in resistance thermometers with connecting cable

(1) Basic version

902150/30	Push-in resistance thermometer with connecting cable, multi-piece protection tube (welded) in stainless steel
902150/40	Push-in resistance thermometer with connecting cable, protection tube angled 90° (welded) in stainless steel



(2) Operating temperature in °C / connecting cable

x	378	-50 to +180°C / silicone
x	386	-50 to +260°C / PTFE
x	388	-50 to +260°C / metal braiding
x	397	-50 to +350°C / metal braiding
x	402	-50 to +400°C / metal braiding
x	724	-5 to +80°C / PVC
x	912	5 to 105°C / PUR (for 1 x 2-wire circuit only)

(3) Measuring insert

x	1001	1 x Pt100 in 3-wire circuit
x	1003	1 x Pt100 in 2-wire circuit
x	1011	1 x Pt100 in 4-wire circuit
x	2001	2 x Pt100 in 3-wire circuit
x	2003	2 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	6	6mm
x	8	8mm

(6) Fitting length EL in mm (50 ≤ EL ≤ 500)

x	50	50mm
x	60	60mm
x	100	100mm
x	150	150mm
x	200	200mm
x	...	please specify in plain text (50mm steps)

(7) 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)

(8) Connecting cable length AL in mm (500 ≤ AL ≤ 500000)

x	2500	2500mm
x	...	please specify in plain text (500mm steps)

(9) Extra codes

x	000	no extra code
x	310	stepped protection tube
x	315	cable protector: coil
x	316	cable protector: tube
x	317	shielded connecting cable

Order code (1) - (2) - (3) - (4) - (5) - (6) - (7) - (8) - (9) / ...
 Order example 902150/30 - 378 - 1001 - 1 - 6 - 50 - 11 - 2500 / 000¹

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

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**Stock versions**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Sales No.
902150/10	- 378	- 1003	- 1	- 5.2	- 45	- 11	- 2500	/ 000	90/00326037
902150/10	- 378	- 1003	- 1	- 6	- 50	- 11	- 2500	/ 000	90/00389771
902150/10	- 378	- 1001	- 1	- 6	- 50	- 11	- 2500	/ 000	90/00392513
902150/10	- 724	- 1003	- 1	- 6	- 50	- 11	- 2500	/ 000	90/00059085
902150/20	- 730	- 1003	- 1	- 6	- 50	- 11	- 1100	/ 000	90/00065495
902150/30	- 388	- 1003	- 1	- 6	- 50	- 11	- 2500	/ 315,317	90/00055718
902150/30	- 388	- 1003	- 1	- 6	- 100	- 11	- 2500	/ 315,317	90/00055719
902150/30	- 388	- 1001	- 1	- 6	- 50	- 11	- 2500	/ 315,317	90/00065451
902150/30	- 388	- 1001	- 1	- 6	- 100	- 11	- 2500	/ 315,317	90/00065453
902150/40	- 397	- 1003	- 1	- 6	- 60	- 11	- 2500	/ 317	90/00055715