

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO UK LTD
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6724 Joy Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



JUMO HEATtemp

Push-in RTD temperature probe for heat meters with connecting cable for thermowells (type PS/PL)

- For temperatures between 0 and 150 °C and 180 °C
- Type examination certificate for MID heat meters as replaceable temperature probes
- Fulfills the requirements of DIN EN 1434, AGFW FW 202 and FW 211
- Pairing and declaration of conformity according to MID
- Production certified according to module D (MID) (CE and metrology identification marking)
- Coordinated accessories for installation (data sheet 902440 and 902442)

Heat meter RTD temperature probes are used for temperature measurement in closed pipeline systems. As the probes are installed in thermowells, emptying the system for regular replacement at the end of the certification period is no longer necessary.

The temperature probes are approved according to the EU Directive 2014/32/EU (MID). The temperature probes are available in the paired version and a version with a declaration of conformity. The officially recognized test facility for heat KHE2 is available for this purpose. Production has been certified according to Annex D of Directive 2014/32/EU and Annex 4 Module D of the German Weights and Measures Act.

Installation recommendation according to TR-K9 (current state of technology):

For heat/cold meters with nominal flow rates $\leq q_p 6 \text{ m}^3/\text{h}$, the temperature sensors must only be installed directly immersed in the area of the measuring point with nominal pressures $\leq 16 \text{ bar}$ when the pipeline section is newly installed. Temperature probes with immersion sleeves can also be installed under these circumstances, but only when under increased strain (for example pressure, temperature, flow velocity, or oscillation).



Typ 902438/51

Technical data

Connection	Ferrules
Connecting cable	PVC, PUR (TPE), silicone; unshielded or shielded
Protection tube	Type PS: stainless steel $\varnothing 5 \text{ mm}$, $\varnothing 5.2 \text{ mm}$, or $\varnothing 6 \text{ mm}$ Type PL: stainless steel $\varnothing 6 \text{ mm}$ Protection tube with fitting tolerance for thermowells
Measuring insert	Platinum temperature sensor according to DIN EN 60751 Nominal value: Pt100, Pt500, or Pt1000 Connection: two-wire or four-wire circuit
Sensor design	Type 902438/50: all-round contact Type 902438/51: flip chip
Temperature	Type PS: 0 to 150 °C Type PL: 0 to 180 °C
Temperature difference	Type PS: 3 to 150 K Type PL: 3 to 180 K
Minimum immersion depth	Type PS: > 15 mm Type PL: 30 mm
Insertion length	Type PS: 45 to 85 mm Type PL: 85 to 450 mm
Response	Type PS: $t_{0.5} = 15 \text{ s}$ (installed in thermowell) Type PL: $t_{0.5} = 12 \text{ s}$ (installed in thermowell)
Environmental influences	Climatic 0 to 55 °C Protection type IP65 Mechanical M3
Accessories	Thermowells, see data sheet 902440 Accessories, see data sheet 902442

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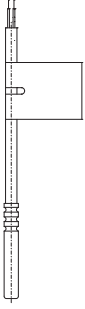
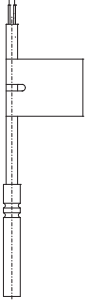


Connecting cable lengths according to DIN EN 1434

Conductor cross section	Max. connecting cable length AL for Pt100	Max. connecting cable length AL for Pt500	Max. connecting cable length AL for Pt1000
0.22 mm ²	2500 mm	12500 mm	25000 mm
0.34 mm ²	3500 mm	17500 mm	35000 mm
0.50 mm ²	5000 mm	25000 mm	50000 mm

The possible limitation of the connecting cable length due to the type examination certificate of the ALU/meter should also be taken into account. For four-wire circuits, the max. connecting cable lengths are limited by the requirements of the ALU/meter.

Overview of approvals

Version	Basic type	Type examination certificate	
		Type	Number
	902438/50 (PS), 902438/51 (PS)	Module B according to MID ^a (heat)	A0445-2112-2007 (150 °C)
	PS = Pocket Short (short temperature probe, with thermowell)		
	902438/30 (PL)	Module B according to MID ^a (heat)	DE-06-MI004-PTB011 (180 °C)
	PL = Pocket Long (long temperature probe, with thermowell)		

^a MID = Measuring Instruments Directive, 2014/32/EU

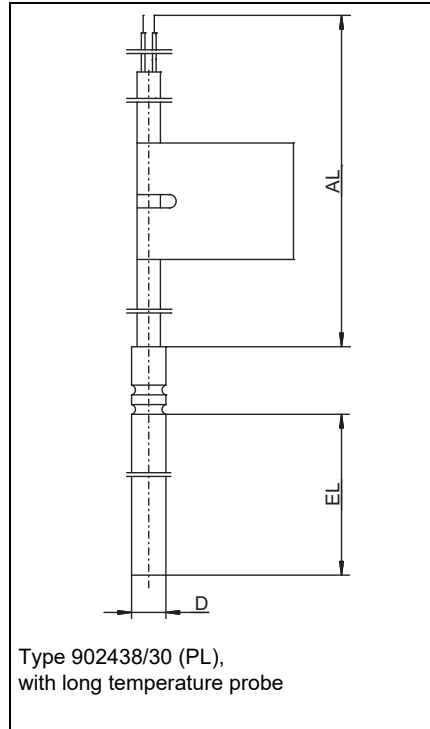
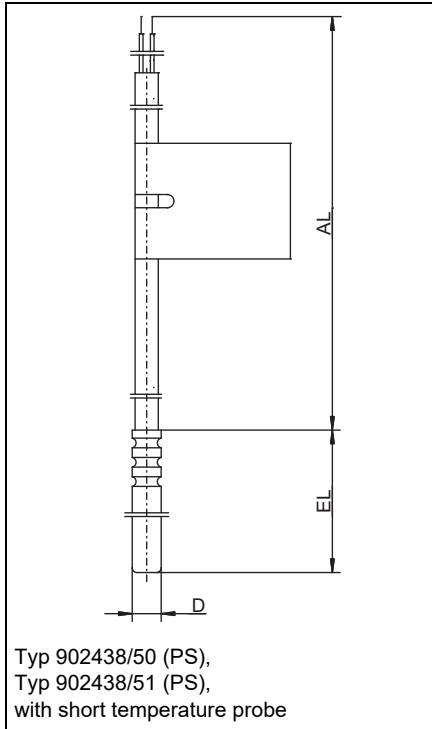
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Dimensions



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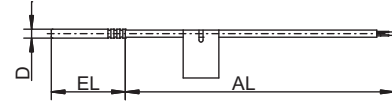
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Order details

(1) Basic type

902438/50 Push-in RTD temperature probe
 902438/51 for installation in a thermowell (PS),
 protection tube made from stainless steel



(2) Operating temperature in °C

x 815 0 to 105 °C/PVC, PUR (TPE) (only in two-wire circuit)
 x 824 0 to 150 °C/silicone

(3) Measuring insert

x 1003 1× Pt100 in two-wire circuit
 x 1004 1× Pt500 in two-wire circuit
 x 1005 1× Pt1000 in two-wire circuit
 x 1011 1× Pt100 in four-wire circuit
 x 1012 1× Pt500 in four-wire circuit
 x 1013 1× Pt1000 in four-wire circuit

(4) Tolerance class according to DIN EN 60751

x 1 Class B (standard)
 x 2 Class A
 x 3 Class AA

(5) Protection tube diameter D in mm

x 5 Ø 5 mm
 x 5.2 Ø 5.2 mm
 x 6 Ø 6 mm

(6) Insertion length EL in mm (45 to 85 mm)

x 45 45 mm (only for Ø 5 mm and Ø 5.2 mm)
 x 50 50 mm (only for Ø 6 mm)
 x 60 60 mm (only for Ø 6 mm)
 x ... Specifications in plain text

(7) Connecting cable end

x 04 Tin-plated connection strands (only for temperature probes permanently connected to the ALU)
 x 11 Ferrules according to DIN 46228 Part 4 (standard)

(8) Connecting cable length AL in mm (> 500 mm)

x 1500 1500 mm
 x 2500 2500 mm (standard)
 x ... Specifications in plain text (increments of 500 mm, max. connecting cable length: see table)

(9) Extra codes

x 000 None
 x 317 Shielded connecting cable
 x 340 Paired according to DIN EN 1434^a
 x 761 Paired according to DIN EN 1434 with conformity assessment/identification marking according to MID^a (heat)

^a Price for pairing depends on number of units; minimum quantity for paired temperature probes to be cost effective: 30 pairs

Order code (1) - (2) - (3) - (4) - (5) - (6) - (7) - (8) - (9) / ...^a
 Order example 902438/50 - 824 - 1003 - 1 - 5 - 45 - 11 - 2500 / 761

^a State extra codes one after another, separated by commas.

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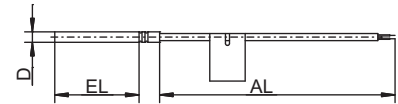
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(1) Basic type

902438/30 Push-in RTD temperature probe for installation in a thermowell (PL), protection tube made from stainless steel



(2) Operating temperature in °C

- x 815 0 to 105 °C/PVC, PUR (TPE) (only in two-wire circuit)
- x 824 0 to 150 °C/silicone
- x 830 0 to 180 °C/silicone

(3) Measuring insert

- x 1003 1× Pt100 in two-wire circuit
- x 1004 1× Pt500 in two-wire circuit
- x 1005 1× Pt1000 in two-wire circuit
- x 1011 1× Pt100 in four-wire circuit
- x 1012 1× Pt500 in four-wire circuit
- x 1013 1× Pt1000 in four-wire circuit

(4) Tolerance class according to DIN EN 60751

- x 1 Class B (standard)
- x 2 Class A
- x 3 Class AA

(5) Protection tube diameter D in mm

- x 6 Ø 6 mm

(6) Insertion length EL in mm (105 to 450 mm)

- x 105 105 mm
- x 140 140 mm
- x 230 230 mm
- x ... Specifications in plain text

(7) Connecting cable end

- x 04 Tin-plated connection strands (only for temperature probes permanently connected to the ALU)
- x 11 Ferrules according to DIN 46228 Part 4 (standard)

(8) Connecting cable length AL in mm (> 500 mm)

- x 1500 1500 mm
- x 2500 2500 mm (standard)
- x ... Specifications in plain text (increments of 500 mm, max. connecting cable length: see table)

(9) Extra codes

- x 000 None
- x 317 Shielded connecting cable
- x 340 Paired according to DIN EN 1434^a
- x 761 Paired according to DIN EN 1434 with conformity assessment/identification marking according to MID^a (heat)

^a Price for pairing depends on number of units; minimum quantity for paired temperature probes to be cost effective: 30 pairs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) ^a							
Order code	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	/	<input type="text"/>						
Order example	902438/30	-	830	-	1003	-	1	-	6	-	140	-	11	-	2500	/	761

^a State extra codes one after another, separated by commas.