



JUMO HEATtemp

Screw-in RTD temperature probes for heat meters with connection line for direct mounting (type DS)

- For temperatures from 0 to 150 °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)

Heat meter RTD temperature probes are used for temperature measurement in closed pipeline systems. Direct mounting without additional immersion sleeve is recommended to achieve optimum thermal coupling to the measurement medium in the heating system.

The temperature probes are approved according to the EU Directive 2014/32/EU (MID).

For heat/cold meters with nominal flows $\leq q_p$ 6 m³/h, only the installation of type DS temperature probes for a new installation of the pipeline section in the measuring point area with nominal pressures \leq 16 bar is intended. Installation in ball valves has been shown to be the optimum installation point (see data sheet 902442). In addition, emptying the system when installing and replacing the temperature probe at the end of the calibration period is no longer necessary.

The temperature probes are available in a paired and conformity-assessed version. 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.



Type 902428/90

Technical data


Connection	Ferrules, tin-plated connecting wires
Connection line	PVC, PUR (TPE), silicone; unshielded, shielded
Process connection	3/8" screw connection
Protection tube	Stainless steel Ø 3.5 mm
Measuring insert	Platinum film resistor with accuracy classes according to DIN EN IEC 60751
Nominal width	Pt100, Pt500, or Pt1000
Connection	Two-wire circuit, four-wire circuit
Temperature	0 to 150 °C
Temperature difference	3 to 150 K
Minimum immersion depth	15 mm
Insertion length	75 to 150 mm
Maximum pressure	PS 16
Flow velocity	2 m/s (water)
Thermoelectric voltage	\leq 5 μ V
Environmental influences	
Climatic	5 to 55 °C
Protection type	IP54 (as delivered condition) In heat applications, it must be ensured that the dew point is not reached or the temperature falls below this.
Mechanical	M3
Maximum measuring current	The maximum measuring current is calculated using the maximum admissible power loss of 5 mW. Depending on the nominal values, this results in the following effective current values: Pt100: 1783 μ A, Pt500: 797 μ A, Pt1000: 564 μ A
Response times	$t_{0,5} \leq$ 2.0 s, $t_{0,9} \leq$ 5.0 s
Sensor accuracy class	Class F0.3 according to DIN°EN°IEC°60751; restricted tolerances optional When using two-wire technology, the display will be systematically higher due to the line resistance (see maximum connection length according to DIN EN 1434).

Connection line lengths according to DIN EN 1434

Conductor cross section	Max. connection line length AL for Pt100	Max. connection line length AL for Pt500	Max. connection line 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

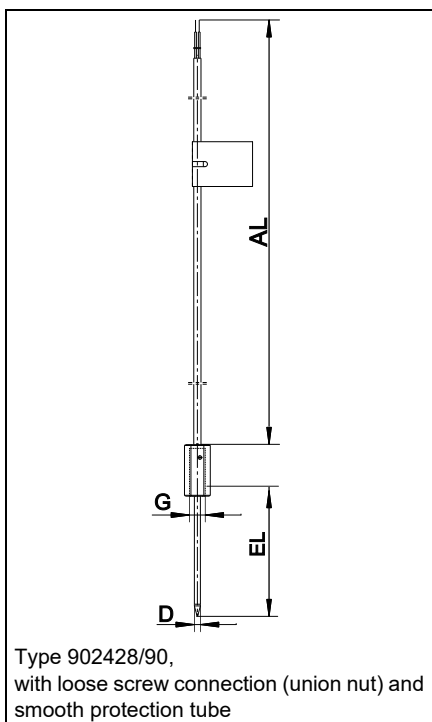
The possible limitation of the connection line length due to the type examination certificate of the ALU/meter should also be taken into account. For four-wire circuits, the max. connection line lengths are limited by the requirements of the ALU/meter.

Overview of approvals

Version	Basic type	Type examination certificate	
		Type	Number
	902428/90	Module B according to MID ^a (heat)	CH-MI004-09009

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

Dimensions





Order details

(1) Basic type		
902428/90	Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection (union nut)	
(2) Operating temperature in °C		
815	0 to 105 °C/PVC, PUR (TPE) (only in two-wire circuit)	
824	0 to 150 °C/silicone	
(3) Measuring insert		
1003	1 × Pt100 in two-wire circuit	
1004	1 × Pt500 in two-wire circuit	
1005	1 × Pt1000 in two-wire circuit	
1011	1 × Pt100 in four-wire circuit	
1012	1 × Pt500 in four-wire circuit	
1013	1 × Pt1000 in four-wire circuit	
(4) Sensor accuracy classes		
1	Class F0.3 (standard)	
2	Class F0.15	
3	Class F0.1	
(5) Protection tube diameter D in mm		
3.5	Ø 3.5 mm	
(6) Insertion length EL in mm (75 to 150 mm)		
75	75 mm	
...	Specifications in plain text	
(7) Process connection G		
195	Screw connection, union nut 3/8-24 UNF	
(8) Connection line end		
04	Tin-plated connection wires (only for temperature probes permanently connected to the ALU)	
11	Ferrules according to DIN 46228 Part 4 (standard)	
(9) Connection line length AL in mm (> 500 mm)		
1500	1500 mm	
2500	2500 mm (standard)	
...	Specifications in plain text (increments of 500 mm)	
(10) Extra codes		
000	None	
317	Shielded connection line	
340	Paired according to DIN EN 1434 ^a	
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) (10) ...^a
 Order example 902428/90 - 815 - 1004 - 1 - 3.5 - 75 - 195 - 04 - 2000 / 761

^a List extra codes in sequence and separate using commas.