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JUMO Instrument Co. Ltd.
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JUMO Process Control, Inc.
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JUMO HEATtemp

Screw-in RTD Temperature Probe for Heat and Cold Meters with Terminal Head for Direct Mounting (Type DL)

- For temperatures between 0 and 180 °C
- Approval for heat meters as replaceable temperature probes; MID and domestic approvals
- Fulfills requirements of DIN EN 1434, AGFW 202, and FW211
- Paired and calibrated according to the German calibration regulations
- Production certified according to module D of MID (CE and metrology identification marking)
- Approval for cold meter

Heat and cold meter RTD temperature probes are used for temperature measurement in closed pipeline systems. Direct mounting without an additional thermowell 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 2004/22/EC (MID) as well as according to the German calibration regulations (domestic approval).

The temperature probes are available in paired and calibrated versions. The officially recognized testing agency for heat KF2 is available for this. Moreover, the production is certified according to module D of MID, and the temperature probes are also available with the CE and metrology identification marking.



Heat meter

Technical data

Terminal head	Form J or B, aluminum diecast, M16 × 1.5 or M24 × 1.5, IP65, ambient temperature -20 to +100 °C
Process connection	Thread G 1/2, stainless steel
Protection tube	Stainless steel, Ø 6 mm or Ø 8 mm stepped down to Ø 6 mm
Measuring insert	Platinum temperature sensor according to DIN EN 60751 Nominal value: Pt100, Pt500, Pt1000; class B Connection: two-wire or four-wire circuit
Temperature	0 to 180 °C
Temperature difference	3 to 180 K
Minimum immersion depth	25 mm
Insertion length	85 to 280 mm
Admissible rated pressure PN	25 bar
Maximum flow velocity	2 m/s (water)
Thermoelectric voltage	≤ 5 µV
Response behavior	t _{0.5} ≤ 5 s
Environmental conditions	Climate -25 to +70 °C Protection type IP65 Electromagnetic E1 Mechanical M3 Environment class C



Cold meter

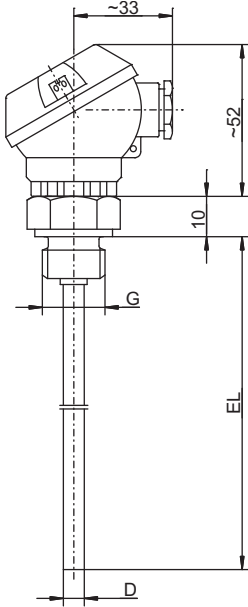
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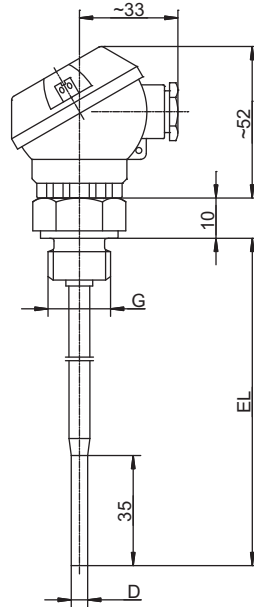
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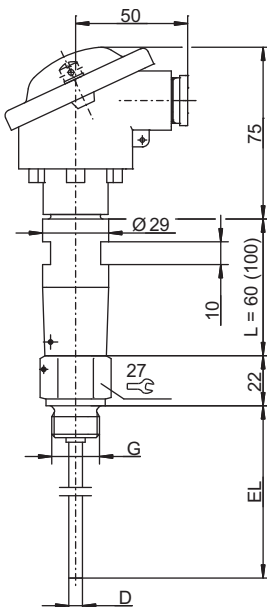
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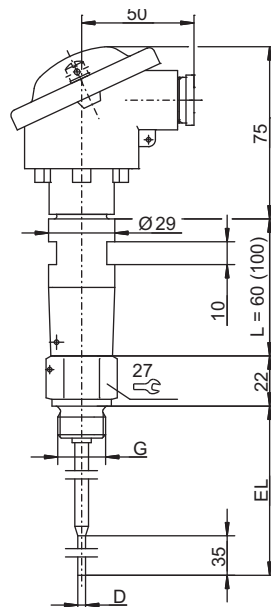
Basic type 90.238-F40 (DL)
 Basic type 902424/10 (DL)
 Basic type 902427/10 (DL)



Basic type 90.238-F40 (DL)
 Basic type 902424/11 (DL)
 Basic type 902427/11 (DL)



Basic type 902454/10 (DL)



Basic type 902454/11 (DL)

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Overview of approvals

Basic type	Approval	
	Type	Number
90.238-F40	Domestic (Germany)	22.30/90.04
902424/10 902424/11	Domestic (Germany) According to DIN EN 1434	22.70/00.02
902427/10 902427/11	Module B of MID ^a	DE-06-MI004-PTB015
902454/10 902454/11	Domestic (Germany) (Cold)	22.77/13.01

^a MID = Measuring Instruments Directive 2004/22/EC

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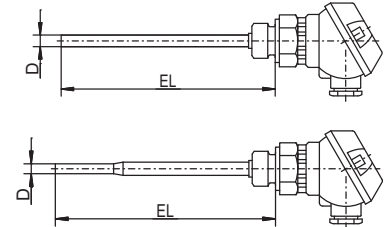
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Order details

(1) Basic type

	902424/10	Screw-in RTD temperature probe with continuous protection tube, design type DL according to DIN EN 1434
	902424/11	Screw-in RTD temperature probe with stepped down protection tube, design type DL according to DIN EN 1434
	(2) Operating temperature in °C	
x	x	824 0 to 150 °C (standard)
x	x	830 0 to 180 °C
	(3) Measuring insert	
x	x	1003 1 × Pt100 in two-wire circuit
x	x	1004 1 × Pt500 in two-wire circuit
x	x	1005 1 × Pt1000 in two-wire circuit
x	x	1011 1 × Pt100 in four-wire circuit
x	x	1012 1 × Pt500 in four-wire circuit
x	x	1013 1 × Pt1000 in four-wire circuit
	(4) Tolerance class according to DIN EN 60751	
x	x	1 Class B (standard)
x	x	2 Class A
x	x	3 Class AA (1/3 DIN B)
	(5) Protection tube diameter D in mm	
x		6 Ø 6 mm
	x	8 Ø 8 mm stepped down to Ø 6 mm
	(6) Insertion length EL in mm (85 to 400 mm)	
x	x	85 85 mm
x	x	120 120 mm
x	x	210 210 mm
x	x	... Specifications in plain text
	(7) Process connection	
x	x	104 Screw connection G 1/2
x	x	... Specifications in plain text
	(8) Extra code	
x	x	000 Without
x	x	319 Terminal head form B
x	x	320 Terminal head form BUZ
x	x	340 Version paired according to DIN EN 1434 ^a
x	x	341 Version paired according to DIN EN 1434 and calibrated ^{a, b}



^a Price for pairing depends on number of units; cost effective from 30 pairs of temperature probes

^b Calibration fees according to current Federal Law Gazette (Bundesgesetzblatt), dependent on number of units, not eligible for discount

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)							
Order code	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	/	<input type="text"/>	, ... ^a			
Order example	902424/10	-	824	-	1003	-	1	-	6	-	85	-	104	/	341

^a List extra codes in sequence, separated by commas.

Note:

Terminal heads, data sheet 909715

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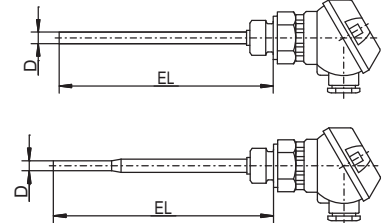


Order details

(1) Basic type

902427/10 Screw-in RTD temperature probe with continuous protection tube, design type DL according to DIN EN 1434

902427/11 Screw-in RTD temperature probe with stepped down protection tube, design type DL according to DIN EN 1434



(2) Operating temperature in °C

x x 824 0 to 150 °C (standard)
 x x 830 0 to 180 °C

(3) Measuring insert

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

(4) Tolerance class according to DIN EN 60751

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

(5) Protection tube diameter D in mm

x 6 ELØ 6 mm (max. admissible EL = 210 mm)
 x 8 Ø 8 mm stepped down to Ø 6 mm (max. admissible EL = 280 mm)

(6) Insertion length EL in mm (85 to 280 mm)

x x 85 85 mm
 x x 120 120 mm
 x x 210 210 mm
 x x ... Specifications in plain text

(7) Process connection

x x 104 Screw connection G 1/2
 x x ... Specifications in plain text

(8) Extra code

x x 000 Without
 x x 319 Terminal head form B
 x x 320 Terminal head form BUZ
 x x 340 Version paired according to DIN EN 1434^a
 x x 761 Version paired with CE and metrology identification marking (initial calibration)^a

^a Price for pairing depends on number of units; cost effective from 30 pairs of temperature probes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)							
Order code	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	/	<input type="text"/>	, ... ^a			
Order example	902427/10	-	824	-	1003	-	1	-	6	-	85	-	104	/	761

^a List extra codes in sequence, separated by commas.

Note:

Terminal heads, data sheet 909715

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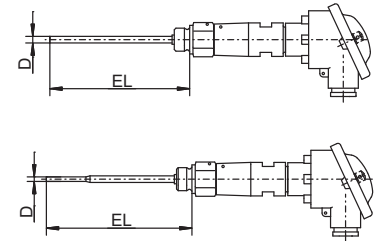
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Order details

		(1) Basic type	
	902454/10	Screw-in RTD temperature probe with terminal head form B and continuous protection tube, design type DL according to DIN EN 1434, PTB-approved	
	902454/11	Screw-in RTD temperature probe with terminal head form B and stepped down protection tube, design type DL according to DIN EN 1434, PTB-approved	
		(2) Operating temperature in °C	
x	x	818	0 to 120 °C
		(3) Measuring insert	
x	x	1003	1 × Pt100 in two-wire circuit
x	x	1004	1 × Pt500 in two-wire circuit
x	x	1005	1 × Pt1000 in two-wire circuit
x	x	1011	1 × Pt100 in four-wire circuit
x	x	1012	1 × Pt500 in four-wire circuit
x	x	1013	1 × Pt1000 in four-wire circuit
		(4) Tolerance class according to DIN EN 60751	
x	x	1	Class B (standard)
x	x	2	Class A
x	x	3	Class AA (1/3 DIN B)
		(5) Protection tube diameter D in mm	
x		6	Ø 6 mm (standard)
	x	8	Ø 8 mm stepped down to Ø 6 mm
		(6) Insertion length EL in mm (85 to 400 mm)	
x	x	85	85 mm
x	x	120	120 mm
x	x	210	210 mm
x	x	...	Specifications in plain text
		(7) Process connection	
x	x	104	Screw connection G 1/2
x	x	...	Specifications in plain text
		(8) Extra code	
x	x	000	Without
x	x	320	Terminal head form BUZ
x	x	340	Version paired according to DIN EN 1434 ^a
x	x	341	Version paired according to DIN EN 1434 and calibrated ^{a, b}



^a Price for pairing depends on number of units; cost effective from 30 pairs of temperature probes

^b Calibration fees according to current Federal Law Gazette (Bundesgesetzblatt), dependent on number of units, not eligible for discount

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)							
Order code	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	/	<input type="text"/>	, ... ^a			
Order example	902454/10	-	818	-	1003	-	1	-	6	-	85	-	104	/	341

^a List extra codes in sequence, separated by commas.

Note:

Terminal heads, data sheet 909715