

JUMO HEATtemp

Screw-in RTD Temperature Probe for Heat Meters with Connecting Cable for Direct Mounting (Type DS/DL)

- For temperatures between 0 and 180 °C
- Approval for heat meters as replaceable temperature probes; MID and domestic approvals
- Fulfils the requirements of DIN EN 1434, AGFW FW202, and FW211
- Approval for cold and combined cold/heat meters
- Paired and calibrated according to the German calibration regulations
- Production certified according to module D of MID (CE and metrology identification

Heat meter RTD temperature probes are installed to measure temperatures in closed pipeline systems. For optimum thermic coupling to the measured medium in the heating system, direct mounting without additional thermowell is recommended.

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).

For pipelines with a nominal width smaller than 50 mm, type DS temperature probes are used. Installation in ball valves has been shown to be the optimum installation location, see data sheet 902440. 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 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.



Technical data

Connection

Connecting cable

Process connection

Protection tube

Measuring insert

Temperature

Temperature difference

Minimum immersion depth

Insertion length

Maximum pressure

Flow velocity

Response behavior

Thermoelectric voltage

Environmental conditions

Ferrules

PVC, PUR, TPE, silicone; unshielded or shielded

For max. connecting cable length see table on the next page

Type DS: screw connection M10 x 1, brass according to DIN EN 1434

Type DL: thread G 1/4, G 1/2 stainless steel

Type DS: stainless steel Ø 5.4 mm offset by Ø 3.3/Ø 3.6 mm

Type DL: stainless steel Ø 8 mm offset by Ø 6 mm

Platinum temperature sensor according to DIN EN 60751

Nominal value: Pt100, Pt500, Pt1000; class B

Connection: two-wire/four-wire circuit

0 to 180 °C

3 to 180 K

Type DS: 15 mm

Type DL: 30 mm

Type DS: 25 to 60 mm

Type DL: 60 to 280 mm

PN 25

2 m/s (water)

Type DS: $t_{0.5} = 2$ s

Type DL: $t_{0.5} = 6$ s

$\leq 5 \mu\text{V}$

Climatic 0 to 70 °C

Protection type IP65

Electromagnetic E1

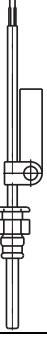
Mechanical M3

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

Note:

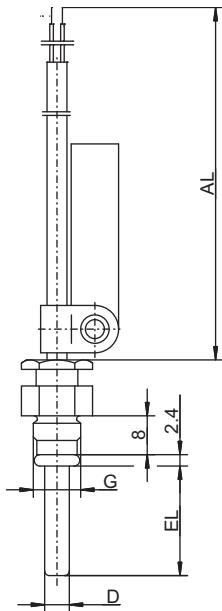
The possible limitation of the connecting cable length due to the qualification approval of the ALU/meter.
For four-wire circuits, the max. connecting cable lengths are limited by the requirements of the ALU/meter.

Overview of approvals

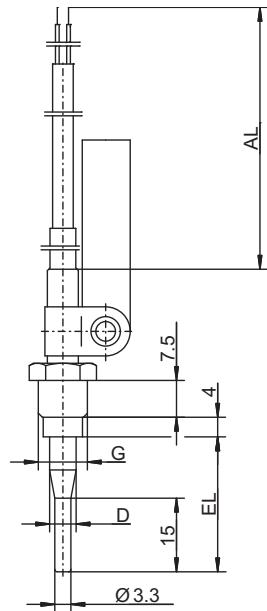
Version	Basic type	Approval	
		Type	Number
	902425/05 (DS) not for new developments	Domestic (Germany)	22.30/89.07 (Pt100) (150 °C) 22.30/89.08 (Pt500) (150 °C) 22.30/89.09 (Pt1000) (150 °C)
	902425/10 (DS)	Domestic (Germany)	22.30/99.10 (105 °C)
	902425/50 (DS)	Domestic (Germany)	22.30/02.03 (150 °C)
	902425/10 (DS)	Domestic (Germany) according to DIN EN 1434	22.70/99.10 (105 °C)
	902425/50 (DS)	Domestic (Germany) according to DIN EN 1434	22.70/02.03 (150 °C)
	902428/50 (DS)	Module B according to MID ^a	A0445-2112-2007 (150 °C)
	902455/50 (DS)	Domestic (Germany; cold)	22.77/08.04 (150 °C)
	902425/20 (DS)	Domestic (Germany)	22.30/99.04 (180 °C)
	902425/20 (DS)	Domestic (Germany) according to DIN EN 1434	22.70/99.04 (180 °C)
	902425/50 (DS)	Domestic (Germany)	22.30/02.09 (150 °C)
	902425/50 (DS)	Domestic (Germany) according to DIN EN 1434	22.70/02.09 (150 °C)
	902428/70 (DS)	Module B according to MID ^a	DE-06-MI004-PTB010 (150 °C)
	902428/20 (DS)	Module B according to MID ^a	DE-06-MI004-PTB012 (180 °C)
	902455/20 (DS) 902455/70 (DS)	Domestic (Germany; cold)	22.77/08.04 (150 °C)
	90280-F50 (DL)	Domestic (Germany)	22.30/91.05 (180 °C)
	902425/30 (DL) 902425/40 (DL)	Domestic (Germany) according to DIN EN 1434	22.70/00.01 (180 °C)
	902428/30 (DL) 902428/40 (DL)	Module B according to MID ^a	DE-06-MI004-PTB011 (180 °C)
	902455/30 (DL) 902455/40 (DL)	Domestic (Germany; cold)	22.77/09.01 (150 °C)

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

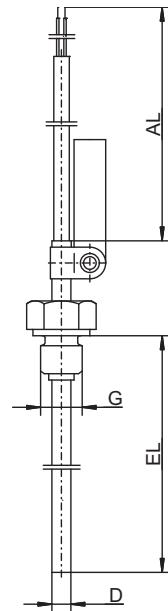
Dimensions



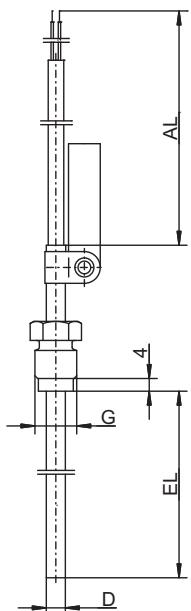
Basic type 902425/05 (DS)
Basic type 902425/10 (DS)
Basic type 902425/50 (DS)
Basic type 902428/50 (DS)
Basic type 902455/50 (DS)



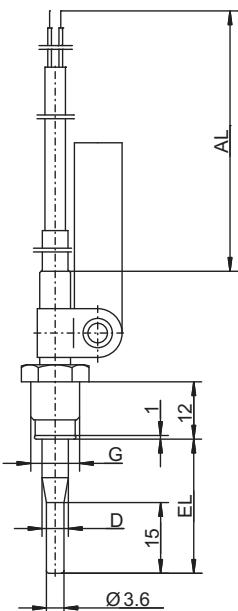
Basic type 902425/20 (DS)
Basic type 902428/20 (DS)
Basic type 902455/20 (DS)



Basic type 90.280-F50 (DL)
Basic type 902425/30 (DL)
Basic type 902428/30 (DL)
Basic type 902455/30 (DL)



Basic type 90.280-F50 (DL)
Basic type 902425/40 (DL)
Basic type 902428/40 (DL)
Basic type 902455/40 (DL)

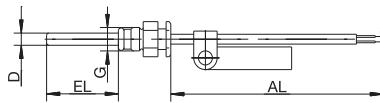


Basic type 902425/50 (DS)
Basic type 902428/70 (DS)
Basic type 902455/70 (DS)

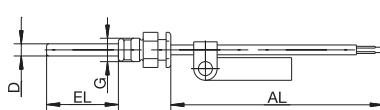
Order details: heat meter RTD temperature probe with connecting cable,
PTB approved 22.30/89.07 (.08; .09), 22.30/99.10, 22.70/99.10, 22.30/02.03, 22.70/02.03

(1) Basic type

902425/10 Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and smooth protection tube $T_{max.} = 105\text{ }^{\circ}\text{C}$



902425/05 Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and smooth protection tube $T_{max.} = 150\text{ }^{\circ}\text{C}$ (902425/05 not for new developments)



(2) Operating temperature in $^{\circ}\text{C}$

815 0 to 105 $^{\circ}\text{C}$ /PVC 105, PUR (only in two-wire circuit)
824 0 to 150 $^{\circ}\text{C}$ /silicone

(3) Measuring insert

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

(4) Tolerance class according to DIN EN 60751

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

(5) Protection tube diameter D in mm

5 Ø 5 mm
5.2 Ø 5.2 mm

(6) Insertion length EL in mm (25 to 60 mm)

26 26 mm
... Specifications in plain text

(7) Process connection G

114 Screw connection M10 x 1

(8) Connecting cable end

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

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

1500 1500 mm
2500 2500 mm (standard)
... Specifications in plain text (increments of 500 mm)

(10) Extra code

000 Without
317 Shielded connecting cable
318 Spiral connecting cable (only PUR)
340 Version paired according to DIN EN 1434^a
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

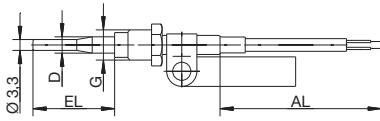
Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)									
Order example	902425/10	-	815	-	1003	-	1	-	5.2	-	26	-	114	-	11	-	2500	/	341

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

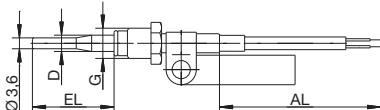
Order details: heat meter RTD temperature probe with connecting cable,
PTB approved 22.30/99.04, 22.70/ 99.04, 22.30/02.09, 22.70/02.09

(1) Basic type

902425/20 Screw-in RTD temperature probe
for direct mounting (DS)
with loose screw connection and offset protection tube,
 $T_{max.} = 180^\circ\text{C}$



902425/50 Screw-in RTD temperature probe
for direct mounting (DS)
with loose screw connection and offset protection tube,
 $T_{max.} = 150^\circ\text{C}$



(2) Operating temperature in °C

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

(3) Measuring insert

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

(4) Tolerance class according to DIN EN 60751

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

(5) Protection tube diameter D in mm

5.4 Ø 5.4 mm offset by Ø 3.3 mm
5.4 Ø 5.4 mm offset by Ø 3.6 mm

(6) Insertion length EL in mm (25 to 60 mm)

27.5 27.5 mm
38 38 mm
60 60 mm
... Specifications in plain text

(7) Process connection G

114 Screw connection M10 x 1

(8) Connecting cable end

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

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

1500 1500 mm
2500 2500 mm (standard)
... Specifications in plain text (increments of 500 mm)

(10) Extra code

000 Without
317 Shielded connecting cable
318 Spiral connecting cable (only PUR)
340 Version paired according to DIN EN 1434^a
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

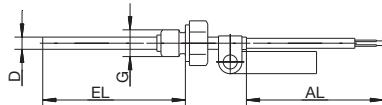
Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Order example	902425/20	-	824	-	1003	-	1	-	5.4	-

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

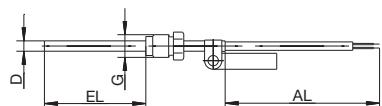
Order details: heat meter RTD temperature probe with connecting cable,
PTB approved 22.30/91.05; 22.70/00.01

(1) Basic type

902425/30 Screw-in RTD temperature probe
for direct mounting (DL)
with fixed screw connection
and smooth protection tube



902425/40 Screw-in RTD temperature probe
for direct mounting (DL)
with loose screw connection
and smooth protection tube



(2) Operating temperature in °C

x x 824 0 to 150 °C/silicone
x x 830 0 to 180 °C/silicone

(3) Measuring insert

x x 1003 1 x Pt100 in two-wire circuit
x x 1004 1 x Pt500 in two-wire circuit
x x 1005 1 x Pt1000 in two-wire circuit
x x 1011 1 x Pt100 in four-wire circuit
x x 1012 1 x Pt500 in four-wire circuit
x x 1013 1 x 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 x 6 Ø 6 mm
x x 8 Ø 8 mm offset by Ø 6 mm

(6) Insertion length EL in mm (60 to 400 mm)

x x 85 85 mm
x x 120 120 mm
x x 210 210 mm (only for Ø 8 mm offset by Ø 6 mm)
x x ... Specifications in plain text

(7) Process connection G

x x 102 Screw connection G 1/4
x x 104 Screw connection G 1/2
x x ... Specifications in plain text

(8) Connecting cable end

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

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

x x 1500 1500 mm
x x 2500 2500 mm (standard)
x x ... Specifications in plain text (increments of 500 mm)

(10) Extra code

x x 000 Without
x x 317 Shielded connecting cable
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

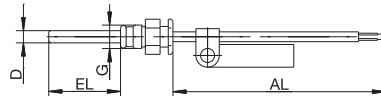
Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Order example	902425/30	-	830	-	1003	-	1	-	6	-

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

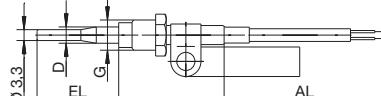
Order details: heat meter RTD temperature probe with connecting cable,
MID approved A0445-2112-2007, DE-06-MI004-PTB010, DE-06-MI004-PTB012

(1) Basic type

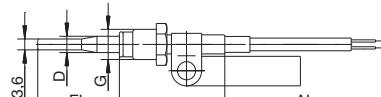
902428/50 Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and smooth protection tube $T_{max.} = 150 \text{ }^{\circ}\text{C}$



902428/20 Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and offset protection tube $T_{max.} = 180 \text{ }^{\circ}\text{C}$



902428/70 Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and offset protection tube $T_{max.} = 150 \text{ }^{\circ}\text{C}$



(2) Operating temperature in $^{\circ}\text{C}$

x x x 815 0 to 105 $^{\circ}\text{C}$ /PVC 105, PUR (only in two-wire circuit)
x x x 824 0 to 150 $^{\circ}\text{C}$ /silicone
x 830 0 to 180 $^{\circ}\text{C}$ /silicone

(3) Measuring insert

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

(4) Tolerance class according to DIN EN 60751

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

(5) Protection tube diameter D in mm

x 5 Ø 5 mm
x 5.2 Ø 5.2 mm
x 5.4 Ø 5.4 mm offset by Ø 3.3 mm
x 5.4 Ø 5.4 mm offset by Ø 3.6 mm

(6) Insertion length EL in mm (25 to 60 mm)

x 26 26 mm
x x x 27.5 27.5 mm
x 38 38 mm
x x x 60 60 mm
x x ... Specifications in plain text

(7) Process connection G

x x x 114 Screw connection M10 x 1

(8) Connecting cable end

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

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

x x x 1500 1500 mm
x x x 2500 2500 mm (standard)
x x x ... Specifications in plain text (increments of 500 mm)

(10) Extra code

x x x 000 Without
x x x 317 Shielded connecting cable
x x x 318 Spiral connecting cable (only PUR)
x x x 340 Version paired according to DIN EN 1434^a
x 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

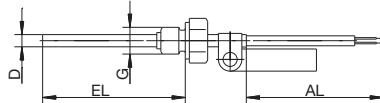
Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	...								
Order example	902428/20	-	830	-	1003	-	1	-	5.4	-	27.5	-	114	-	11	-	2500	/	761

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

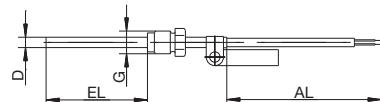
Order details: heat meter RTD temperature probe with connecting cable, MID approved DE-06-MI004-PTB011

(1) Basic type

902428/30 Screw-in RTD temperature probe for direct mounting (DL) with fixed screw connection and smooth protection tube



902428/40 Screw-in RTD temperature probe for direct mounting (DL) with flange and loose screw connection and smooth protection tube



(2) Operating temperature in °C

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

(3) Measuring insert

x x 1003 1 x Pt100 in two-wire circuit
x x 1004 1 x Pt500 in two-wire circuit
x x 1005 1 x Pt1000 in two-wire circuit
x x 1011 1 x Pt100 in four-wire circuit
x x 1012 1 x Pt500 in four-wire circuit
x x 1013 1 x 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 x 6 Ø 6 mm
x x 8 Ø 8 mm offset by Ø 6 mm

(6) Insertion length EL in mm (60 to 210 mm)

x x 85 85 mm
x x 120 120 mm
x x 210 210 mm (only for Ø 8 mm offset by Ø 6 mm)
x x ... Specifications in plain text

(7) Process connection G

x x 102 Screw connection G 1/4
x x 104 Screw connection G 1/2
x x ... Specifications in plain text

(8) Connecting cable end

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

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

x x 1500 1500 mm
x x 2500 2500 mm (standard)
x x ... Specifications in plain text (increments of 500 mm)

(10) Extra code

x x 000 Without
x x 317 Shielded connecting cable
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

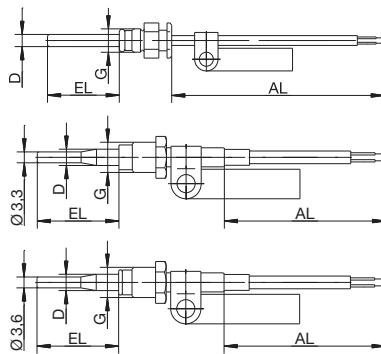
^a Price for pairing depends on number of units; cost effective from 30 pairs of temperature probes

Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	...								
Order example	902428/30	-	830	-	1003	-	1	-	6	-	120	-	104	-	11	-	2500	/	761

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

Order details: cold/combined cold-heat meter RTD temperature probe with connecting cable, PTB approved 22.77/08.04 and MID approved DE-06-MI004-PTB010, DE-06-MI004-PTB012, A0445-2112-2007

(1) Basic type	
902455/50	Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and smooth protection tube
902455/20	Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and offset protection tube
902455/70	Screw-in RTD temperature probe for direct mounting (DS) with loose screw connection and offset protection tube
(2) Operating temperature in °C	
x x x	815 0 to 105 °C/TPE (only in two-wire circuit)
x x x	824 0 to 150 °C/silicone
(3) Measuring insert	
x x x	1003 1 x Pt100 in two-wire circuit
x x x	1004 1 x Pt500 in two-wire circuit
x x x	1005 1 x Pt1000 in two-wire circuit
x x x	1011 1 x Pt100 in four-wire circuit
x x x	1012 1 x Pt500 in four-wire circuit
x x x	1013 1 x Pt1000 in four-wire circuit
(4) Tolerance class according to DIN EN 60751	
x x x	1 Class B (standard)
x	2 Class A
x	3 Class AA (1/3 DIN B)
(5) Protection tube diameter D in mm	
x	5 Ø 5 mm
x	5.2 Ø 5.2 mm
x	5.4 Ø 5.4 mm offset by Ø 3.3
x	5.4 Ø 5.4 mm offset by Ø 3.6
(6) Insertion length EL in mm (25 to 60 mm)	
x	26 26 mm
x x	27.5 27.5 mm
x	38 38 mm
x x	60 60 mm
x x	... Specifications in plain text
(7) Process connection G	
x x x	114 Screw connection M10 x 1
(8) Connecting cable end	
x x x	04 Tin-plated connection strands (only for temperature probes permanently connected to the ALU)
x x x	11 Ferrules according to DIN 46228 part 4 (standard)
(9) Connecting cable length AL in mm (> 500 mm)	
x x x	1500 1500 mm
x x x	2500 2500 mm (standard)
x x x	... Specifications in plain text (increments of 500 mm)
(10) Extra code	
x x x	000 Without
x x x	317 Shielded connecting cable
x x x	340 Version paired according to DIN EN 1434 ^a
x x x	341 Version paired according to DIN EN 1434 and calibrated (cold, only for Germany) ^{a, b}
x x x	761 Version paired with CE and metrology identification marking (initial calibration, heat) ^a



^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

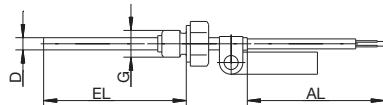
Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	...	^a							
Order example	902455/50	-	824	-	1003	-	1	-	5.2	-	26	-	114	-	11	-	2500	/	341, 761

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

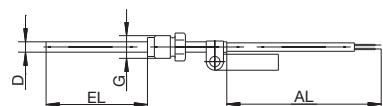
Order details: cold/combined cold-heat meter RTD temperature probe with connecting cable, PTB approved 22.77/09.01 and MID approved DE06-MI004-PTB011

(1) Basic type

902455/30 Screw-in RTD temperature probe for direct mounting (DL) with fixed screw connection and smooth protection tube



902455/40 Screw-in RTD temperature probe for direct mounting (DL) with flange and loose screw connection and smooth protection tube



(2) Operating temperature in °C

824 0 to 150 °C/silicone

(3) Measuring insert

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

(4) Tolerance class according to DIN EN 60751

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

(5) Protection tube diameter D in mm

6 Ø 6 mm
8 Ø 8 mm offset by Ø 6 mm

(6) Insertion length EL in mm (60 to 210 mm)

85 85 mm
120 120 mm
210 210 mm (only for Ø 8 mm offset by Ø 6 mm)
... Specifications in plain text

(7) Process connection G

102 Screw connection G 1/4
104 Screw connection G 1/2
... Specifications in plain text

(8) Connecting cable end

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

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

1500 1500 mm
2500 2500 mm (standard)
... Specifications in plain text (increments of 500 mm)

(10) Extra code

000 Without
317 Shielded connecting cable
340 Version paired according to DIN EN 1434^a
341 Version paired according to DIN EN 1434 and calibrated (cold, only for Germany)^{a, b}
761 Version paired with CE and metrology identification marking (initial calibration, heat)^a

^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

Order code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	^a								
Order example	902455/30	-	824	-	1003	-	1	-	6	-	120	-	104	-	11	-	2500	/	341.761

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