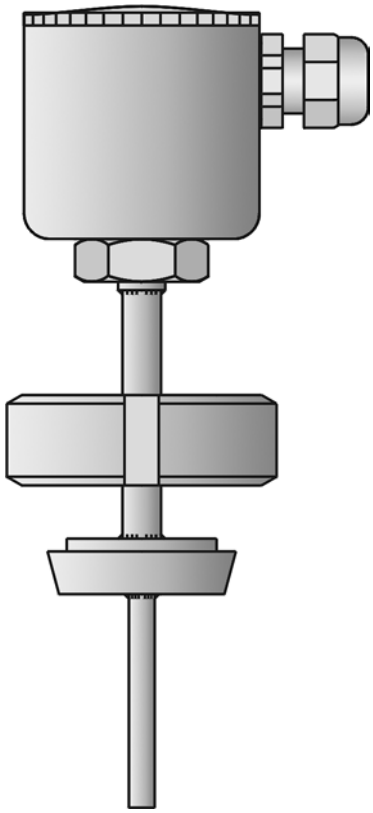
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RTD temperature probes for the food and pharmaceutical industries



- **for temperatures from -50 to +250 °C**
- **EHEDG certification**
- **stainless steel protection tubes**
- **with optional 2-wire transmitter**
- **CIP-compliant installation**

The RTD temperature probes can optionally be provided with terminal heads in stainless steel, aluminium die-casting, or plastic.

To suit the specific needs of the different sectors of the food and pharmaceutical industries, a wide variety of process connections can be supplied: from G 1/2 (1/2" pipe) screw fittings with CIP-compliant sealing cone, through taper nipples with ring nut (milke pipe fitting), and clamping nipples, to sliding ball weld-in sockets, weld-in sockets, Varivent connections, and ball weld-in pockets. The protection tubes are made from stainless steel.

The RTD temperature probes for the food and pharmaceuticual industries are suitable for the temperature range from -50 to +250 °C.

Pt100 single and twin temperature sensors to EN 60751, Class A, in 3-wire circuit ensure the highest degree of accuracy.
For longer transmission distances, analog or programmable 2-wire transmitters are optionally available.

Technical data

Terminal head	stainless steel 1.4571, M 16x1.5; IP67, ambient temperature -20 to +100 °C Form B DIN 43729, aluminium die-casting, M 20x1.5; IP54, ambient temperature -40 to +100 °C Form BUZ, aluminium die-casting, M 20x1.5; IP65, ambient temperature -40 to +100 °C Form BUZH, aluminium die-casting, M 20x1.5; IP65, ambient temperature -40 to +100 °C Form BBKS, plastic (PA 6), M 20x1.5; IP54, ambient temperature -30 to +130 °C Caution: reduced ambient temperature when using transmitters; data sheet 70.7010/70.7030
Extension tube	stainless steel, approx. 70 mm long, 9 mm dia.
Process connection	screw fitting with CIP-compliant sealing cone, stainless steel 316 L, with EHEDG certification clamping nipple to DIN 32676, stainless steel 316 L clamping nipple with ring nut (milk pipe fitting) to DIN 11851, stainless steel 316 L ball weld-in socket, stainless steel 316 L, clamping ring in PTFE CIP-compliant weld-in socket, stainless steel 316 L, seal in PTFE Varivent connection, stainless steel 316 L, with EHEDG certification ball weld-in pocket, stainless steel 316 Ti JUMO PEKA process connection adapter, stainless steel 316 L, with EHEDG certification
Sheath	stainless steel 316 L, 6 mm dia. stainless steel 316 Ti, on request
Measuring insert	Pt100 temperature sensor to EN 60751, Class A, 3-wire circuit
Response times	$t_{0.9}$ = 10 sec, in water 0.4 m/sec, 6 mm dia.
Transmitter	analog transmitter, output 4 to 20 mA, data sheet 70.7030 analog transmitter, output 0 to 10 V, data sheet 70.7030 programmable transmitter, output 4 to 20mA/20 to 4 mA, data sheet 70.7010

Approval/approval marks

2010-04-26/00351582

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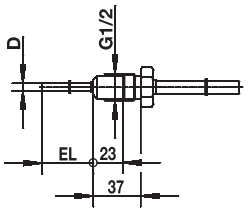
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Dimensions

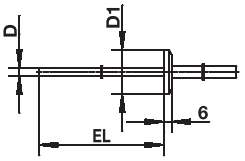
Possible variants

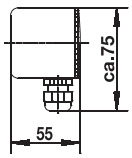
Screw fitting with
CIP-compliant conical seal



Clamping nipple to DIN 32676

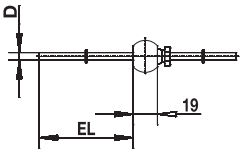
DN	D1	DN	D1
-	Ø25	40/1,5"	Ø50.5
10/20	Ø34	50/2"	Ø64
25/1"	Ø50.5	2.5"	Ø77.5

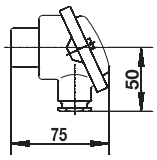




Stainless steel
terminal head KGI-1

Ball weld-in socket
with clamping thread

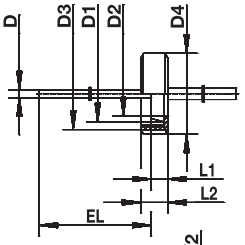


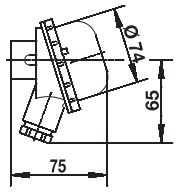


Aluminium die-casting
terminal head Form B

Taper nipple with ring nut
to DIN 11851
(milk pipe fitting)

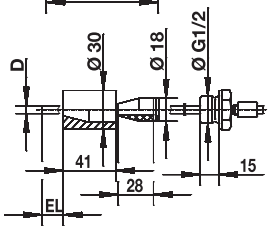
DN	D1	D2	D3	D4	L1	L2
10	Ø22	Ø18	RD 28x1/8	Ø38	9	18
25	Ø44	Ø35	RD 52x1/6	Ø63	13	21
32	Ø50	Ø41	RD 58x1/6	Ø70		





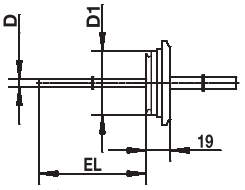
Plastic
terminal head Form BBKS

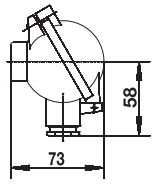
Weld-in socket
with CIP-compliant sealing system



Varivent connection

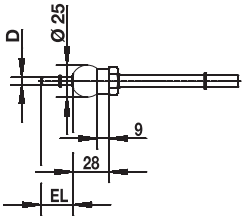
DN	D1
15/10	Ø31
32/25	Ø50
50/40	Ø68

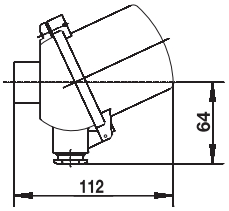




Aluminium die-casting
terminal head Form BUZ

Ball weld-in pocket

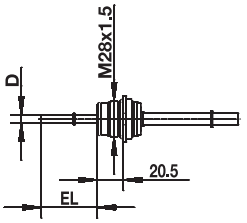




Aluminium die-casting
terminal head Form BUZH

JUMO PEKA
Process connection adapter
as per data sheet 40.9711

Varivent	Clamp	Aseptic	Weld-in socket
DN 25/32	DN 25/32/40	DN 40	Ø 55 mm
DN 40-125	DN 50	DN 50	
		NKS DN 40	



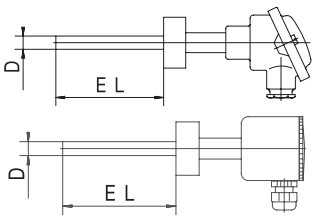
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Order details: RTD temperature probes for the food and pharmaceutical industries

			(1)	**Basic type**
		902810/13		RTD temperature probes with terminal head Form B
		902810/20		RTD temperature probes with terminal head in stainless steel
			(2)	**Measuring insert**
x	x	1001		1 x Pt100 in 3-wire circuit
x	x	2001		2 x Pt100 in 3-wire circuit
			(3)	**Tolerance class to EN 60751**
x	x	2		Class A (standard)
x	x	3		Class AA (1/3 DIN B)
			(4)	**Protection tube diameter D in mm**
x	x	6		6 mm
			(5)	**Fitting length EL in mm (25 ≤ EL ≤ 400)**
x	x	25		25 mm
x	x	50		50 mm
x	x	100		100 mm
x	x	150		150 mm
x	x	...		please specify in plain text (50 mm steps)
			(6)	**Process connection**
x	x	104		G 1/2 (1/2" pipe) thread
x	x	380		G 1/2 (1/2" pipe) thread with CIP-compliant conical seal, with EHEDG certification
x	x	601		taper nipple with ring nut DN 10 to DIN 11851 (milk pipe fitting)
x	x	604		taper nipple with ring nut DN 25 to DIN 11851 (milk pipe fitting)
x	x	605		taper nipple with ring nut DN 32 to DIN 11851 (milk pipe fitting)
x	x	611		clamping nipple DN 10/20 to DIN 32676
x	x	613		clamping nipple DN 25/40 (1"/1.5") to DIN 32676
x	x	616		clamping nipple DN 50 (2") to DIN 32676
x	x	617		clamping nipple 2.5" similar to DIN 32676
x	x	681		ball weld-in socket with clamping thread
x	x	682		weld-in socket with CIP-compliant sealing system
x	x	684		Varivent connection DN 15/10 with EHEDG certification
x	x	685		Varivent connection DN 32/25 with EHEDG certification
x	x	686		Varivent connection DN 50/40 with EHEDG certification
x	x	840		ball weld-in pocket (material 316 Ti)
x	x	997		JUMO PEKA with EHEDG certification[4]
			(7)	**Sheath material**
x	x	24		stainless steel 316 L (Mat. Ref. 1.4404 / 1.4435)
x	x	26		stainless steel 316 Ti (Mat. Ref. 1.4571) (on request)
			(8)	**Extra codes**
x	x	000		no extra code
x	x	305		without extension (only for process connection 104 and 380)
x		320		terminal head Form BUZ
x		321		terminal head Form BUZH
x		324		terminal head Form BBKS
x	x	330		1 x analog transmitter, output 4 to 20 mA[2], data sheet 70.7030
x	x	331		1 x programmable transmitter, output 4 to 20 mA/20 to 4 mA[3], data sheet 70.7010
x	x	333		1 x analog transmitter, output 0 to 10V[2], data sheet 70.7030
x	x	365		acceptance test certificate 3.1B EN 10204: insulation resistance
x	x	367		acceptance test certificate 3.1B EN 10204: pressure test
x	x	368		acceptance test certificate 3.1B EN 10204: leakage test
x	x	374		acceptance test certificate 3.1B EN 10204: material
x	x	452		parts in contact with the medium electrolytically polished, surface roughness Ra ≤ 0.8 µm (not for process connection 104, 681, 682 and 840)
x	x	810		weld-in socket G 1/2 (1/2“ pipe) (only for process connection 380 and sheath material 24))



	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
Order code		-		-		-		-		-		-		/		,...
Order example	902810/13	-	1001	-	2	-	6	-	100	-	380	-	24	/	000[1]	

1. List extra codes in sequence, separated by commas.
2. Specify range in plain text.
3. Specify range and output signal in plain text.
4. For matching process connection adapters, see data sheet 40.9711

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Stock versions

(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	Sales No.
902810/20	-	1001	-	2	-	6	-	25	-	380	-	24	/	000	90/00466457
902810/20	-	1001	-	2	-	6	-	50	-	380	-	24	/	000	90/00378357
902810/20	-	1001	-	2	-	6	-	100	-	380	-	24	/	000	90/00381830
902810/20	-	1001	-	2	-	6	-	25	-	611	-	24	/	000	90/00407336
902810/20	-	1001	-	2	-	6	-	25	-	613	-	24	/	000	90/00405849
902810/20	-	1001	-	2	-	6	-	100	-	681	-	24	/	000	90/00379859