

## Resistance thermometers for the food and pharmaceutical industries

- for temperatures from -50 to +250°C
- stainless steel protection tubes
- as single or twin resistance thermometer
- available with 2-wire transmitter
- CIP-conform mounting

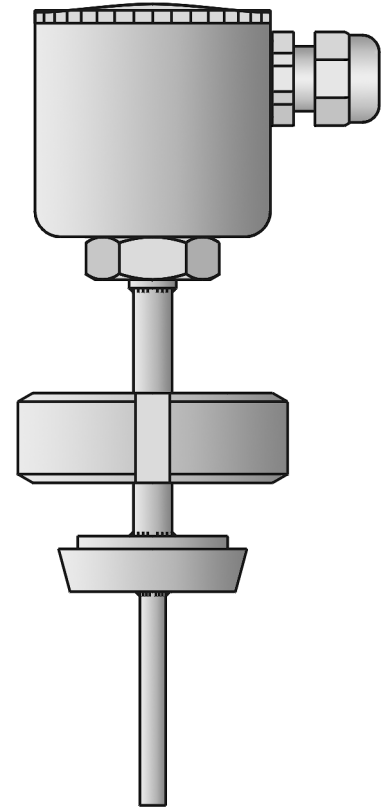
The resistance thermometers can optionally be provided with terminal heads in stainless steel, aluminium die-casting or plastic.

Different process connections are available to suit the individual requirements of the different areas of the food and pharmaceutical industries. From 1/2" screw fitting with CIP-conform sealing cone, taper nipples with ring nut (milk pipe fitting), clamping nipples, up to sliding ball weld-in sockets, weld-in sockets, Varivent connections and ball weld-in pocket. The protection tubes are in stainless steel.

The resistance thermometers for the food and pharmaceutical industries are suitable for operation in the temperature range from -50 to +250°C.

Single or twin Pt100 temperature sensors to EN 60 751, Class A in 3-wire circuit ensure a high degree of accuracy.

For longer transmission distances, analog and programmable 2-wire transmitters can be used as options.



### Technical data

#### Terminal head

stainless steel 1.4571, Pg9, IP67, ambient temperature -20 to +100°C  
aluminium die-casting, Pg16, IP54 to IP65, ambient temperature -20 to +100°C  
plastic terminal head (PA 66), Pg16, IP54, ambient temperature -20 to +100°C  
Caution: reduced ambient temperature when using transmitters  
(see Data Sheet 95.6045/95.6550)

#### Extension tube

stainless steel, length approx. 70mm, 9mm dia.

#### Process connection

screw fitting with CIP-conform sealing cone, stainless steel 316 L  
clamping nipple DIN 32 676, stainless steel 316 L  
clamping nipple with ring nut (milk pipe fitting) DIN 11 851, stainless steel 316 L  
ball weld-in socket, stainless steel 316 L, clamping ring in Teflon PTFE  
CIP-conform weld-in socket, stainless steel 316 L, Teflon seal  
Varivent connection, stainless steel 316 L  
ball weld-in pocket, stainless steel 316 Ti

#### Protection tube

stainless steel 316 L, 6mm dia.  
stainless steel 316 Ti, on request

#### Measuring insert

Pt100 temperature sensor EN 60 751, Cl. A, 3-wire circuit

#### Response times

$t_{0.5} = 4\text{sec}$ ,  $t_{0.9} = 12\text{sec}$ , in water 0.4m/sec, 6mm dia.

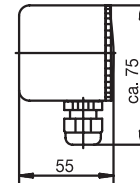
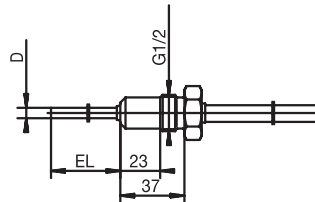
#### Transmitter

analog transmitter, see Data Sheet 95.6045  
programmable transmitter, see Data Sheet 95.6550

## Dimensions

### Possible variants

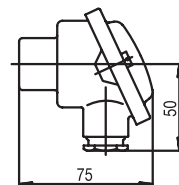
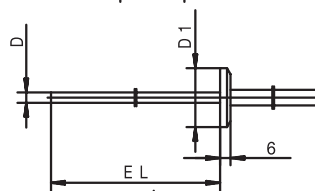
Screw fitting with  
CIP-conform sealing cone



Stainless steel  
terminal head KGI-1

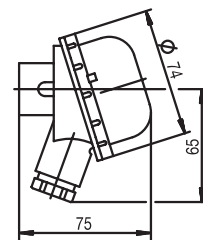
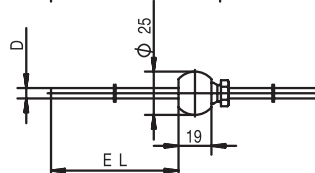
Clamping nipple to DIN 32 676

DN	D1
-	Φ 25
10/20	Φ 34
25/1"	Φ 50.5
40/1.5"	Φ 64
50/2"	Φ 77.5



Aluminium die-cast  
terminal head Form B

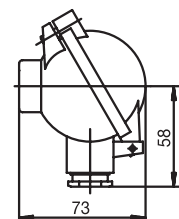
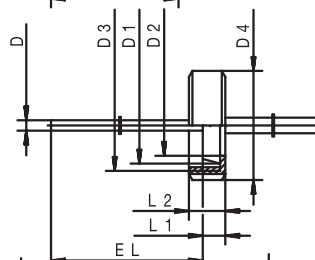
Ball weld-in socket  
with clamp fitting



Plastic  
terminal head Form BBKS

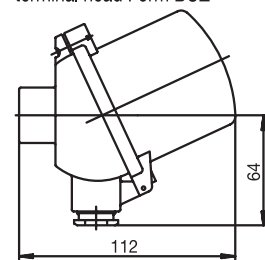
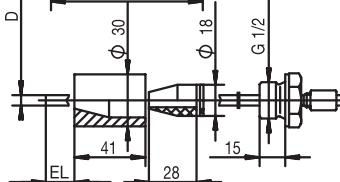
Taper nipple with ring nut  
to DIN 11 851  
(milk pipe fitting)

DN	D1	D2	D3	D4	L1	L2
10	Φ 22	Φ 18	RD 28x1/8	Φ 38	9	18
25	Φ 44	Φ 35	RD 52x1/6	Φ 63		
32	Φ 50	Φ 41	RD 58x1/6	Φ 70	13	21



Aluminium die-cast  
terminal head Form BUZ

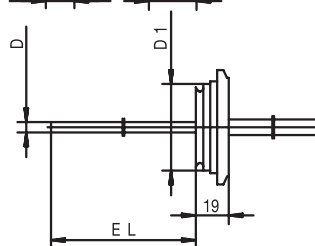
Weld-in socket  
with CIP-conform sealing system



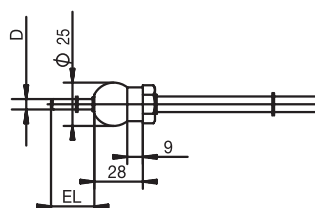
Aluminium die-cast  
terminal head Form BUZH

Varivent connection

DN	D1
15/10	Φ 31
32/25	Φ 50
50/40	Φ 68



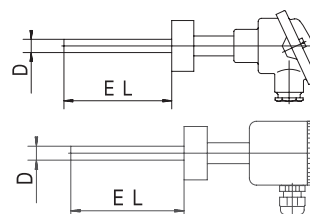
Ball weld-in pocket



**Order details: Resistance thermometers for the food and pharmaceutical industries**

**(1) Basic version**

	902810/13	Resistance thermometer with terminal head Form B
	902810/20	Resistance thermometer with stainless steel terminal head
	<b>(2) Measuring insert</b>	
x x	1001	1 x Pt100 in 3-wire circuit
x x	2001	2 x Pt100 in 3-wire circuit
	<b>(3) Tolerance class to EN 60 751</b>	
x x	2	Class A (standard)
x x	3	Class 1/3 DIN
	<b>(4) Protection tube diameter D in mm</b>	
x x	6	6mm
	<b>(5) Fitting length EL in mm (25 ≤ EL ≤ 400)</b>	
x x	25	25mm
x x	50	50mm
x x	100	100mm
x x	150	150mm
x x	...	please specify in plain text (50mm steps)
	<b>(6) Process connection</b>	
x x	380	thread 1/2" pipe with CIP-conform sealing cone
x x	601	taper nipple with ring nut DN10 DIN 11 851 (milk pipe fitting)
x x	604	taper nipple with ring nut DN25 DIN 11 851 (milk pipe fitting)
x x	605	taper nipple with ring nut DN32 DIN 11 851 (milk pipe fitting)
x x	611	clamping nipple DN 10/20 DIN 32 676
x x	613	clamping nipple DN25/40 (1"/1.5") DIN 32 676
x x	616	clamping nipple DN50 (2") DIN 32 676
x x	617	clamping nipple 2.5" similar to DIN 32 676
x x	681	ball weld-in socket with clamp fitting
x x	682	weld-in socket with CIP-conform sealing system
x x	684	Varivent connection DN15/10
x x	685	Varivent connection DN32/25
x x	686	Varivent connection DN50/40
x x	840	ball weld-in pocket (material 316 Ti)
	<b>(7) Protection tube material</b>	
x x	24	stainless steel 316 L
x x	26	stainless steel 316 Ti (on request)
	<b>(8) Extra codes</b>	
x x	000	no extra code
x x	305	without extension tube (only for process connection 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 Type 956045 (please specify range in plain text)
x x	331	1 x programmable transmitter Type 956550 (please specify range in plain text)
x x	452	parts in contact with medium electrolytically polished, surface roughness Ra ≤ 0.8µm
x x	810	weld-in socket (only for process connection 380)



Order code      (1)      (2)      (3)      (4)      (5)      (6)      (7)      (8)      ,...

Order example      902810/13 - 1001 - 2 - 6 - 100 - 380 - 24 / 000<sup>1</sup>

1. List extra codes in sequence, separated by commas.

Note: Analog transmitter, see Data Sheet 95.6045

Programmable transmitter, see Data Sheet 95.6550; please specify range, output and response on probe break/short-circuit in plain text