

Resistance thermometers types WTh 26/27/28



Type WTh 26

Version

Weld-in resistance thermometer for high pressure and flow loads

Sensor

1 x Pt 100
2-, 3- or 4-wire
Class B, IEC 751

Measurement insert

Replaceable, Ø 6 mm

Thermowell

According to DIN 43772
Stainless steel 1.4571

Neck

Ø 11 x 2 mm, 140 mm long
Stainless steel 1.4571

Installation lengths

65, 100, 160, 250 mm

Connection head (protection)

Design B according to DIN 43729
Aluminium die cast (IP 54)

Measuring range

-35/+550 °C

Options

- Sensor class A
- Without thermowell (thread M18 x 1.5 and M 14 x 1.5)
- Transmitter installation
- Ex version
- Other thermowell materials, process connections, installation lengths, connection heads



Type WTh 27

Version

Flanged resistance thermometer for medium pressure and flow loads

Sensor

1 x Pt 100
2-, 3- or 4-wire
Class B, IEC 751

Measurement insert

Replaceable, Ø 6 mm

Flanged thermowell

Several parts, Ø 11 x 2 mm
Flange connection according to EN 1092-1
Design B 1, DN25, PN40
Stainless steel 1.4571

Neck

Ø 11 x 2 mm, 120 mm long
Stainless steel 1.4571

Installation lengths

100, 160, 250, 400 mm

Connection head (protection)

Design B according to DIN 43729
Aluminium die cast (IP 54)

Measuring range

-35/+400 °C

Options

- Sensor class A
- Reduced measuring tip (6 mm)
- Transmitter installation
- Ex version
- Other thermowell materials, process connections, installation lengths, connection heads



Type WTh 28

Version

Resistance thermometer for hygienic processes, e.g. food, beverage, pharmaceutical, bio-technological applications

Sensor

1 x Pt 100
2-, 3- or 4-wire
Class B, IEC 751

Measurement insert

Replaceable, Ø 6 mm

Thermowell

Ø 9 x 1 mm, stainless steel 1.4571

Neck

Ø 9 x 1 mm, 145 mm long
Stainless steel 1.4571

Process connection

Either clamp, screw connection
DIN 11851, weld-in ball, weld-in socket

Installation length

100, 125, 160, 250, 400 mm

Connection head (protection)

Design B, type BUZ
Aluminium die cast (IP 54)

Measuring range

-35/+200 °C

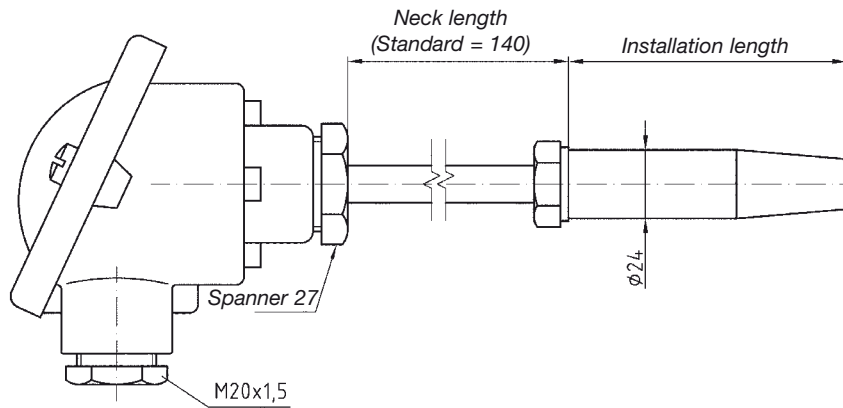
Options

- Sensor class A
- Reduced measuring tip (6 mm)
- Other thermowell materials
- Other process connections
- Other installation lengths
- Transmitter installation
- Ex version
- Weatherproof housing

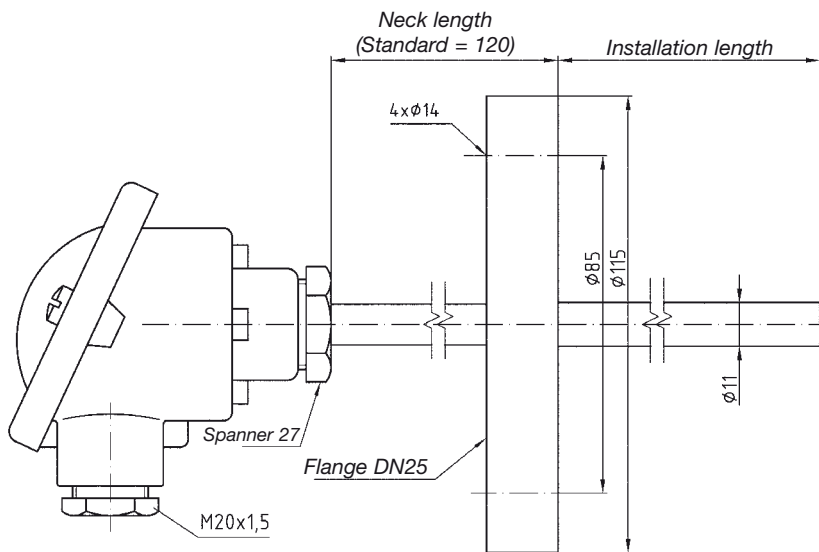
Resistance thermometers types WTh 26/27/28

Dimensions (in mm)

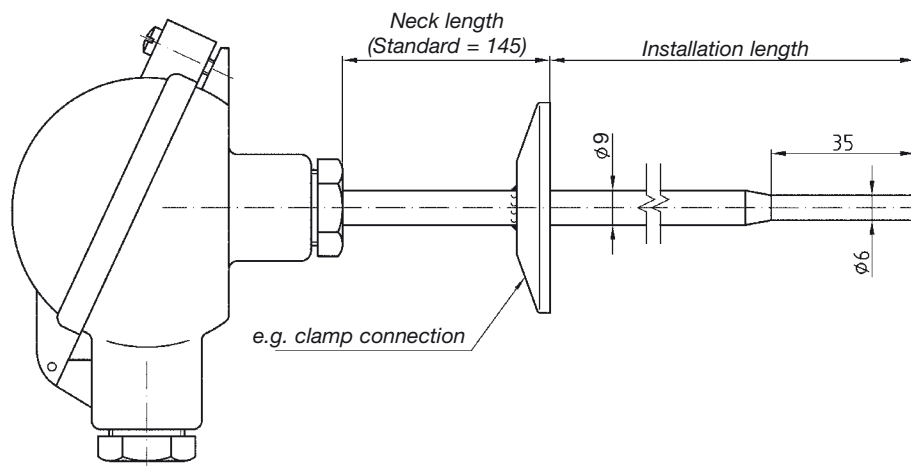
Type WTh 26



Type WTh 27

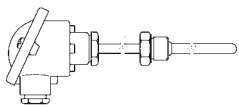
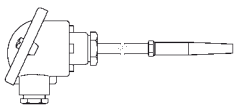
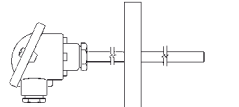
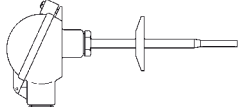


Type WTh 28



Resistance thermometers

DG: E

Type	WTh 25	WTh 26	WTh 27	WTh 28
Version				
Sensor	1 x Pt 100 3-wire, class B	1 x Pt 100 3-wire, class B	1 x Pt 100 3-wire, class B	1 x Pt 100 3-wire, class B
Thermowell/probe Diameter Material	Design B 9 mm stainless steel 1.4571	Weld-in thermowell according to DIN 43772* stainless steel 1.4571	Flange DN 25/PN 40 11 mm stainless steel 1.4571	9 mm stainless steel 1.4571
Neck	120 mm	140 mm	120 mm	145 mm
Process connection	G ¹ / ₂ B stainless steel 1.4571	Weld-in thermowell according to DIN 43772*	Flange DN 25/PN 40	Clamp 1"
Connection head/ electrical connection	DIN 43729, design B cable gland	DIN 43729, design B cable gland	DIN 43729, design B cable gland	Design B, Typ BUZ cable gland
Measuring range	-35/+400 °C	-35/+550 °C	-35/+400 °C	-35/+200 °C
Installation length	Price € Part no.	Price € Part no.	Price € Part no.	Price € Part no.
65 mm	---	32250	---	---
100 mm	32240	32251	32260	32230
125 mm	32241	---	---	32231
160 mm	32242	32253	32261	32232
250 mm	32243	32254	32262	32233
400 mm	32244	---	32263	32234
Additional costs				
Per additional 100 mm installation length		---		
Transmitter installation** DC 12–36 V/4–20 mA				
1 x Pt 100 4-wire				
2 x Pt 100 2-wire				
Sensor class A				
Reduced measuring tip (Ø 6 mm)		---		
Clamp 1 ¹ / ₂ "	---	---	---	
DIN 11851, DN 40	---	---	---	
Hygienic, DN 40	---	---	---	
Weld-in ball	on request	---	---	
Weld-in socket	---	---	---	on request
Ex version WTh				
Ex transmitter EEx ib** DC 12–36 V / 4–20 mA				

* Refer to page 244 for thermowells made of other materials – ** Applies to standard ranges (-50/+50, 0/50, 0/100, 0/120, 0/150, 0/200, 0/300, 0/400, 0/500 °C), additional cost in all other cases €

Resistance thermometer WTh 30 for hygienic processes



Application

For temperature measurement in tanks and pipelines and applications requiring hygienic process connections, materials and processing. Specially suitable for food technology, pharmaceutical and biotechnology applications due to the compact design and the high accuracy.

Description

WTh 30 consists of a rugged stainless steel housing with variable process connections and a Pt 100 measurement insert which is directly integrated in a thermowell. The change in resistance depending on the measured temperature can be used directly or detected by a transducer and converted into a 4–20 mA output signal. The instrument is connected by means of a compact M12 plug connection.

WTh 30 features:

- Hygienic design according to EHEDG recommendations
- Compact design
- High accuracy
- Short response time
- Variable process connections
- Integratable transducer

Technical specifications

Measuring range

-50/+200 °C

Response time

According to IEC 751, test in flowing water (without transducer)
T₉₀ = 5.5 s

Sensor

1 x Pt 100, 4-wire
Class A, IEC 751

Thermowell

Stainless steel 1.4404, Ø 6 mm

Installation lengths

15, 25, 30, 35, 50, 100, 150, 200 mm

Housing

Stainless steel, Ø 18 mm

Protection

IP 67 (EN 60529)

Electrical connections

M 12 plug connection
Plug housing stainless steel

Process connections

Stainless steel 1.4435, one of the following:
G¹/₂B
G¹/₂B, tapered, metallic seal
M12x1.5, tapered, metallic seal
Grooved union nut DIN 11851
Clamp DIN 32676
Clamp ISO 2852
Tri-Clamp
Varivent quick-action connection

Surface roughness

Ra < 0.8 µm
Welding seam < 1.6 µm

Operating pressure

Max. 16 bar
(Varivent D68 max. 10 bar)

Technical specifications transducer (option)

Version

Transducer directly integrated in the plug housing, with encapsulated electronics.

Measuring range

-50/+150 °C
(configuration according to specifications)
Minimum span 10 K

Supply voltage

DC 10–35 V

Output signal

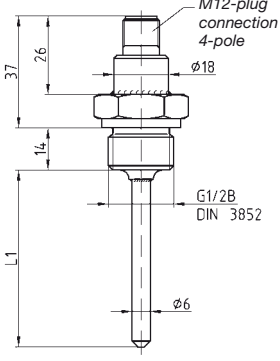
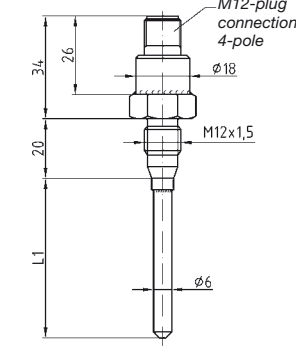
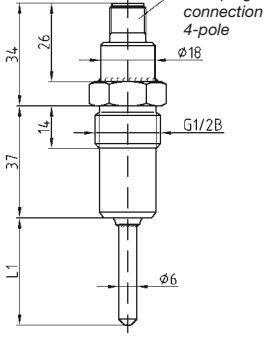
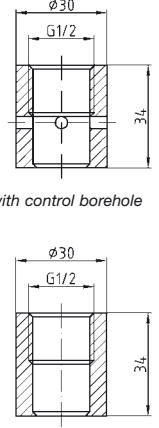
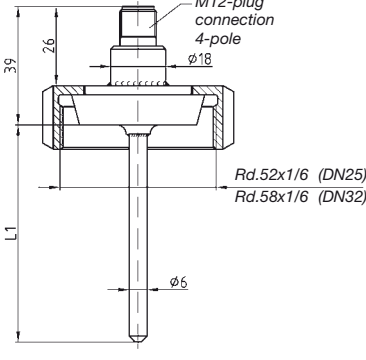
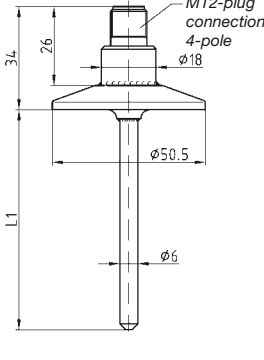
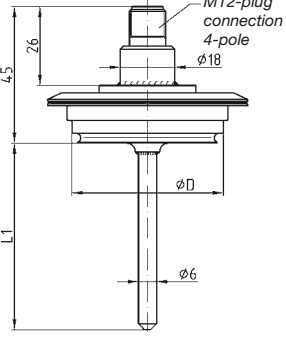
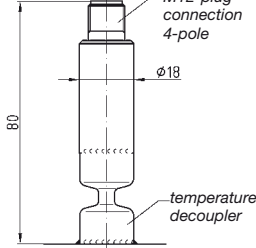
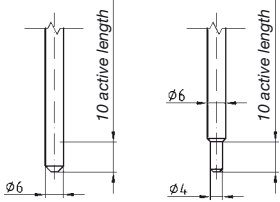
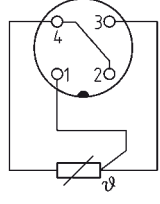
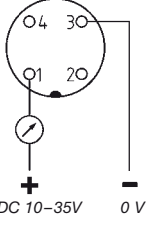
4–20 mA, 2-wire

Options

- Integrated transducer
- Other process connections
- Electropolishing
- Reduced measuring tip (Ø 4 mm)
- Replaceable measurement insert
- Other installation lengths
- Weld-in connectors


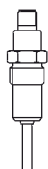
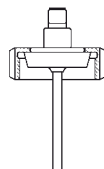


Resistance thermometer WTh 30

Dimensions (in mm) and electrical connections

<p>Connection G1/2B</p>  <p>Connection M 12 x 1.5, metallic seal</p> 	<p>Connection G1/2B, metallic seal</p>  <p>Weld-in connector</p> 
<p>Tapered socket with grooved union nut DIN 11851</p>  <p>Clamp connection</p>  <p>Varivent connection</p>  <p>DN 25 G = Rd 52x1/6 DN 32 G = Rd 58x1/6</p> <p>Tri-Clamp 1" / 1 1/2" ISO 2852 DN25/38 32676 DN 25/40</p> <p>D=31 for varivent housing DN 10 and 15 D=50 for varivent housing DN 25 and 1" IN D=68 for varivent housing DN 40-125</p>	<p>Version with transducer</p>  <p>Thermowell versions</p>  <p>Pin assignment without transducer</p>  <p>1 brown 2 white 3 blue 4 black</p> <p>Pin assignment with transducer</p>  <p>DC 10-35V 0 V</p> <p>1 x Pt 100</p> <p>4-20 mA, 2-wire</p>

Resistance thermometer WTh 30

DG: E

Type	WTh 30	WTh 30 DK	WTh 30 MR	WTh 30 CP	WTh 30 VT
Version					
Sensor	1 x Pt 100 4-wire, class A	1 x Pt 100 4-wire, class A	1 x Pt 100 4-wire, class A	1 x Pt 100 4-wire, class A	1 x Pt 100 4-wire, class A
Thermowell/probe Diameter	6 mm	6 mm	6 mm	6 mm	6 mm
Material	Stainless steel 1.4404	Stainless steel 1.4404	Stainless steel 1.4404	Stainless steel 1.4404	Stainless steel 1.4404
Process connection	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B tapered, metallic seal	Grooved union nut DIN 11851 DN 25	Clamp ISO 2852 DN 25	Varivent D = 31
Electrical connection	M12 plug connection	M12 plug connection	M12 plug connection	M12 plug connection	M12 plug connection
Measuring range	-50/+200 °C	-50/+200 °C	-50/+200 °C	-50/+200 °C	-50/+200 °C
Installation length L1	Price € Part no.	Price € Part no.	Price € Part no.	Price € Part no.	Price € Part no.
15 mm	32300	32308	32316	32324	32332
25 mm	32301	32309	32317	32325	32333
30 mm	32302	32310	32318	32326	32334
35 mm	32303	32311	32319	32327	32335
50 mm	32304	32312	32320	32328	32336
100 mm	32305	32313	32321	32329	32337
150 mm	32306	32314	32322	32330	32338
200 mm	32307	32315	32323	32331	32339
Additional costs	Price €	Price €	Price €	Price €	Price
Integrated transducer 4–20 mA*					
Reduced measuring tip Ø 4 mm					
Process connection					
M12x1.5. tapered	---	no additional cost	---	---	---
DIN 11851 DN 32	---	---	---	---	---
ISO clamp DN 38	---	---	---	no additional cost	---
DIN clamp DN 25	---	---	---	no additional cost	---
DIN clamp DN 40	---	---	---		---
Tri-Clamp 1"	---	---	---		---
Tri-Clamp 1½"	---	---	---		---
Varivent D=50	---	---	---	---	
Varivent D=68	---	---	---	---	
Accessories				Part no.	Price €
Weld-in connector for G $\frac{1}{2}$ B tapered, metallic seal. without control hole				32340	
Weld-in connector for G $\frac{1}{2}$ B tapered, metallic seal. with control hole				32341	

* Please specify desired measuring range: 0/+100 °C, 0/+150 °C, -50/+100 °C (corresponding to 4–20 mA each)
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