

Resistance thermometer WTh 30 for hygienic processes



- Hygienic design as per EHEDG recommendations
- Compact design
- High accuracy
- Short response time
- Various process connections
- Transducer can be integrated



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

Description WTh 30 consists of a robust stainless steel housing with various process connections and a Pt 100 measuring insert which is directly integrated in a thermowell. The change in resistance depending on the measured temperature is directly available as a signal or can be detected by a transducer and converted into a 4–20 mA output signal. The instrument will be offered, as standard, with a compact M12 plug connection.

Technical specifications

Measuring range

-50/+200 °C

Response time

As per to EN 60751, test in flowing water (without transducer) T 90 = 5.5 s

Sensor

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

Thermowell

Stainless steel 316, Ø 6 mm

Installation lengths

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

Housing

Stainless steel, Ø 18 mm

Degree of protection

IP 67 (EN 60529)

Electrical connections

M12 connection, connector housing stainless steel

Process connections

Stainless steel 316 L, one of the following: G½B; G½B conical, metal seal; grooved union nut DIN 11851; Clamp DIN 32676; Clamp ISO 2852; Tri-Clamp
VARIVENT® type N

Surface roughness

Ra < 0.8 µm
Welding seam < 1.6 µm

Operating pressure

Max. 16 bar
(VARIVENT® type N max. 10 bar)

Technical specifications Transducer (option)

Version

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

Measuring ranges

0/100° C (standard)
0/150 °C
-50/+100° C

Supply voltage

DC 8.5–36 V

Output signal

4–20 mA, 2-wire

Options

- Integrated transducer
- Other process connections
- Electropolishing
- Replaceable measuring insert
- Other installation lengths
- Weld-in sockets

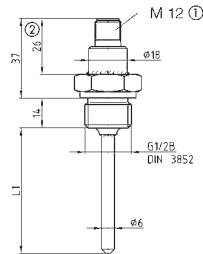


See page 295 for prices.

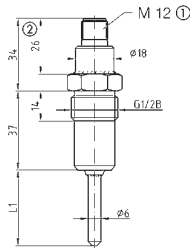
Resistance thermometers WTh 30

Electrical connections and dimensions (mm)

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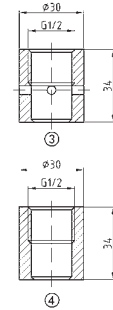
Connection G $\frac{1}{2}$ B

- ① Connector 4-pin
② Version with integrated transducer (um 24 mm longer)

Connection G $\frac{1}{2}$ B, conical metal seal

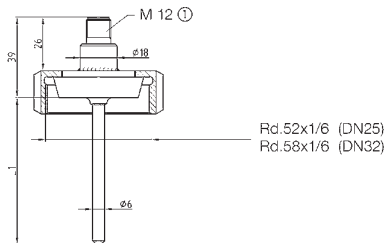
- ① Connector 4-pin
② Version with integrated transducer (um 24 mm longer)

Weld-in socket



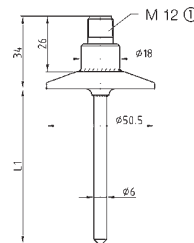
- ③ Socket with inspection hole
④ Socket without inspection hole

Tapered socket with grooved union nut DIN 11851



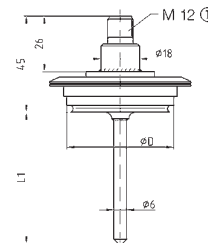
- ① Connector 4-pin

Clamp connection

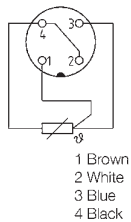


- ① Connector 4-pin
Clamp DIN 32676 DN 25, DN 40
Clamp ISO 2852 1\", 1 1/2\"
TriClamp 1\", 1 1/2\"

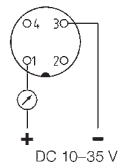
VARIVENT® connection



- D=68 for VARIVENT® type N

Pin assignment
Without transducer


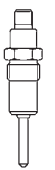
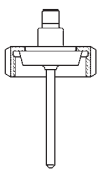

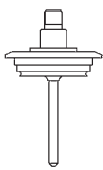
1 x Pt 100, 4-wire

Pin assignment
With transducer

4-20 mA, 2-wire

Resistance thermometers WTh 30

DG: H, PG: 4

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 Material	6 mm Stainless steel 316 L	6 mm Stainless steel 316 L	6 mm Stainless steel 316 L	6 mm Stainless steel 316 L	6 mm Stainless steel 316 L
Process connection	G½B	G½B, conical, metal seal	Grooved union nut DIN 11851 DN 25/PN 40	Clamp ISO 2852 DN 25	VARIVENT® Type N
Electrical connection	M12 connector	M12 connector	M12 connector	M12 connector	M12 connector
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.
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
Extra charges (without PG)	Price €	Price €	Price €	Price €	Price €
Installed transducer 4–20 mA*					
Process connection					
DIN 11851 DN 32	---	---		---	---
ISO Clamp DN 38	---	---	---	No extra charge	---
DIN Clamp DN 25	---	---	---	No extra charge	---
DIN Clamp DN 40	---	---	---	No extra charge	---
Tri-Clamp 1"	---	---	---	No extra charge	---
Tri-Clamp 1½"	---	---	---	No extra charge	---
Accessories			Part no.	Price €	
Weld-in socket for G½B conical, metal seal, with inspection hole			32340		
Weld-in socket for G½B conical, metal seal, without inspection hole			32341		
Connector with cable, 5 metres					

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

Blue part no. = in-stock items