

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)
T 90 = 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

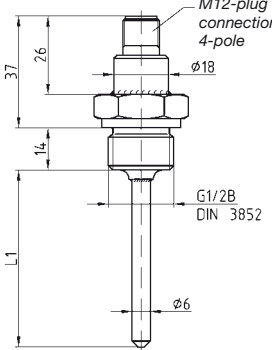
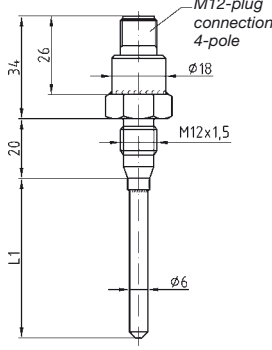
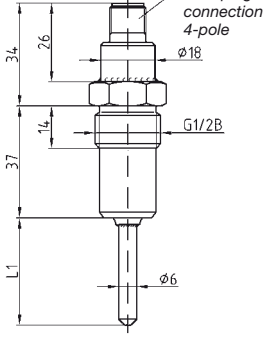
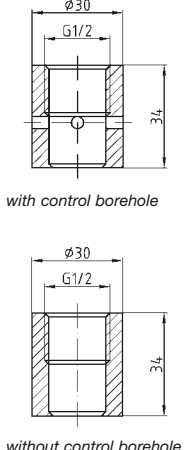
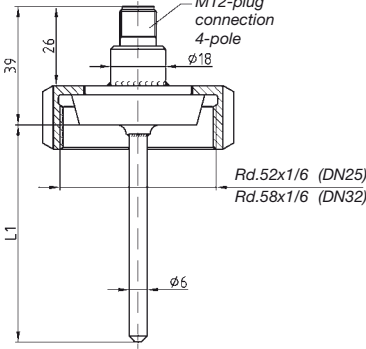
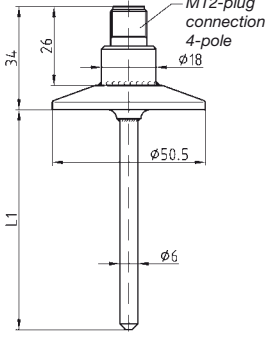
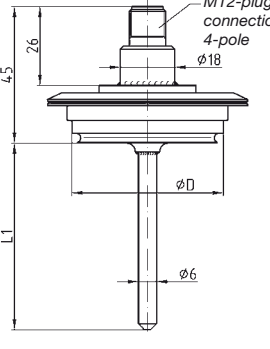
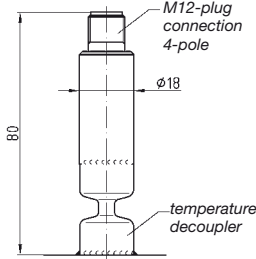
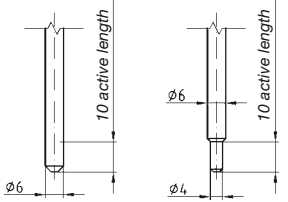
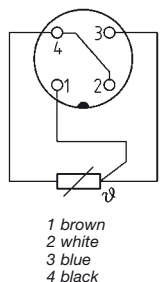
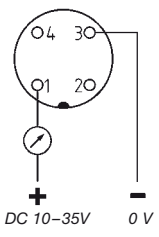
4–20 mA, 2-wire

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>DN 25 G = Rd 52x1/6 DN 32 G = Rd 58x1/6</p>	<p>Clamp connection</p>  <p>Varivent connection</p>  <p>Tri-Clamp 1" / 1 1/2" ISO 2852 DN25/38 32676 DN 25/40 D=31 for varivent housing DN 10 and 15 D=50 for varivent housing DN 25 and 1" DIN 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 4-20 mA, 2-wire</p>