TEMPERATURE TRANSMITTER WITH PROBE



- RANGES –200 TO +250 °C
- PT100 CLASS A · 4 ... 20 MA
- THREAD OR SANITARY CLAMP
- CONFIGURABLE VIA PC
- STAINLESS STEEL 304 · IP65 · M12

IP65 · Stainless Steel AISI 304 · 1.4301 · M12 · Analog-signal · Kleine Abmessungen

VERSIONS

Feature	Versions
Measuring range, standard	–20 ... +80 °C · –20 ... +100 °C · 0 ... +100 °C
Measuring range, high / low temperature	–50 ... +100 °C · –50 ... +150 °C · 0 ... +150 °C · –50 ... +200 °C · –50 ... +250 °C · –100 ... +100 °C · –200 ... +100 °C – with 50 mm cooling neck
Output	4 ... 20 mA, 2-wire
Probe	Ø 6 or Ø 8 mm · length L 25, 50, 75 or 100 mm
Process connection	thread G1/4 male with ED seal · sanitary thread G1/2 male or M12 × 1.5 male · sanitary clamp OD 50.5 mm
Electrical connection	M12 × 1 connector, 4-pin

Measuring range and probe length also to customer specification. With thermowell: choose thread G1/2; smaller threads come without thermowell.

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OVERVIEW

Compact temperature transmitter with Pt100 probe and 4 … 20 mA output – for machine building, hydraulics and sanitary applications, in ranges from –200 to +250 °C.

A Pt100 element of accuracy class A to IEC 60751 measures the temperature; the integrated transmitter converts it into a 2-wire 4 … 20 mA signal. Its parameters are set with PC software. The compact design is shock-resistant and responds fast. Housing stainless steel, wetted parts stainless steel 304, connection via M12 × 1 connector. The high / low temperature version has a 50 mm cooling neck between process connection and housing. Mounting by thread, sanitary thread or clamp.

–200 … +250 °C
ranges per version

4 … 20 mA
2-wire

5.4 s
response time t90

IP65
protection class

MEASUREMENT

- Pt100, class A to IEC 60751
- ranges from –200 to +250 °C
- accuracy ± (0.2 K + 0.5 % of full scale)
- resolution 0.1 K

APPLICATIONS

- machine, plant and tank building
- drive technology, hydraulics
- food, beverages, dairy, brewery
- pharma, surfactants, biotechnology

TECHNICAL DATA

MEASUREMENT AND PRECISION

Sensing element	Pt100, class A to IEC 60751
Measuring range	–200 … +250 °C, sub-ranges per version
Accuracy	± (0.2 K + 0.5 % of full scale)
Linearity	< 0.5 %
Resolution	0.1 K
Temperature effect	0.1 K / 10 K
Response time	t50 2.3 s · t90 5.4 s

TEMPERATURES

Measuring range, standard	–20 … +100 °C
Measuring range, high / low temperature	–200 … +250 °C, with 50 mm cooling neck
Ambient temperature	–25 … +80 °C

MECHANICAL PROPERTIES

Housing	stainless steel, Ø 17.8 mm
Wetted parts	stainless steel 304
Probe	Ø 6 or Ø 8 mm
Probe pressure resistance	Ø 6 mm: 40 bar · Ø 8 mm: 100 bar
Protection class	IP65

ELECTRICAL PROPERTIES

Supply voltage	12 … 30 V DC
Output	4 … 20 mA, 2-wire
Protection	reverse polarity, overload
Configuration	via PC software
Electrical connection	M12 × 1 connector, 4-pin

PROCESS CONNECTION

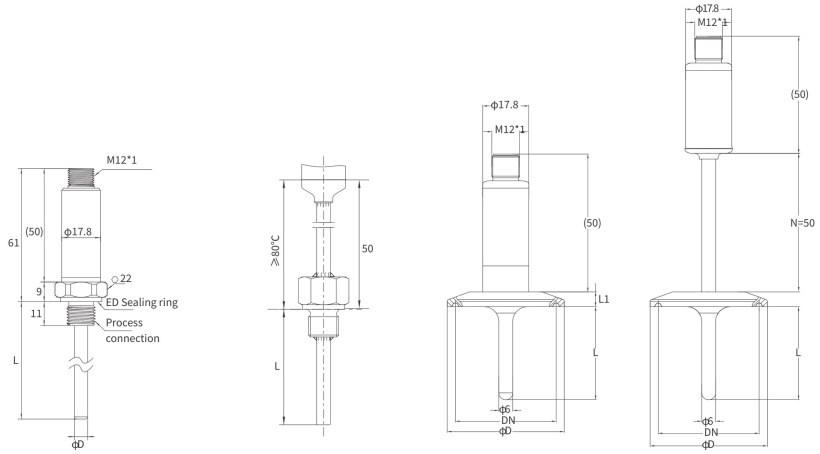
Thread	G1/4 male with ED seal
Sanitary thread	G1/2 male or M12 × 1.5 male, welding sleeve see dimensional drawing
Sanitary clamp	OD 50.5 mm
Width across flats	SW 22

PIN ASSIGNMENT M12 × 1, 4-PIN – 2-WIRE 4 … 20 mA

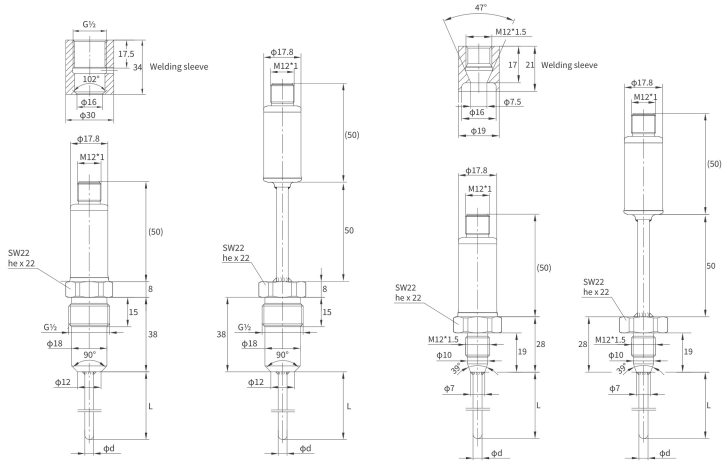
Pin	Assignment	Connection
1	supply 24 V DC	L+
2	temperature signal 4 … 20 mA	via evaluation unit / display to L–

DIMENSIONS (mm)

Left thread with ED seal, right sanitary clamp – each standard version (–20 ... +100 °C) and high / low temperature version (–200 ... +250 °C) with cooling neck



Sanitary thread with welding sleeve: left G1/2, right M12 × 1.5 – each standard and high / low temperature version



	Pipe nominal width for clamp Ø D 50.5 mm	PN (MPa)
DIN 32676, pipe DIN 11866 series A	DN 25 ... 40	2.5
DIN 32676, pipe DIN 11866 series B	21.3 ... 33.7	2.5
DIN 32676, pipe DIN 11866 series C	1″ ... 1 ½″	2.5
Clamp, inch tube	1″ ... 1 ½″	1.38
ISO 2852	DN 25 ... 38	1.6

Dimensions in mm. L = probe length (selectable), Ø D (thread) or Ø d = probe diameter Ø 6 or Ø 8 mm; for the clamp Ø D = outer diameter, DN = nominal width. N = cooling neck, ED = ED seal, SW = width across flats.

COMPLIANCE AND CERTIFICATION

Protection Rating	IP65