



Resistance thermometer Pt100

acid-resistant and alkali resistant, Temperature measurement for media in pipelines for food, pharmaceutical and chemical industries and biotechnology

Description

This sensor with integrated cable anchorage is built with a silver-based (Ag) contact surface and adapts to the radius of the respective pipeline. In addition to the positive-locking contact surface, an adjustable spring mechanism ensures optimum measuring results without the need for thermal compound. The technology of this miniaturized 4-wire Pt100 sensor with shielded silicone/PTFE cable is the core of our latest development and meets the quality requirements demanded especially for sterile technologies as used in the food and pharmaceutical industry. Plastic pipeline clamps (POM) for mounting temperature sensors onto the outside of pipes are currently available in sizes from DN8 to DN100. To remove the sensor element, the clamp only needs to be partially opened by loosening a screw. The clamp itself remains on the pipe. This ensures easy validation, where the "PTV" on the cable can be dipped directly into the test medium. Stainless steel hose straps are also available for other pipe dimensions. Also available is a miniaturized transducer that can be integrated into the measuring line. "PTV" mini-clamp-on temperature sensors allow the temperature of the medium in the pipeline to be

measured with only the slightest (unavoidable) temperature deviation.

To ensure the long-term operational reliability of our pipe sensors, each sensor is subject to a rigorous testing programme before being released for sale.

Upon completion of the basic sensor, all pipe sensors undergo a temperature cycle test with measurements at 30-second intervals: 15 temperature cycles for: 5 min 140 °C (in oil) 20 min Cooling phase in ambient air

Once the sensor has been adapted to the respective pipe radius, another final test is performed with 15 temperature cycles and measurements identical to the first measurement test.

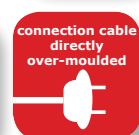
Once the endurance test is complete, the final step is to verify the pipe sensor's measurement accuracy at 0 °C.

Application

- No dead space – 100% hygienic
- Free of questionable thermal compounds
- Quick response
- Compact dimensions
- Quick mounting
- Easy validation
- Calibratable
- Optional 4–20 mA transducer



Special



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Technical data

technical data	
measuring element:	Platinum resistance element Pt100
measuring temperature:	up to 140°C
tolerance:	class A, according IEC 60751
signal type:	1x Pt100 in 4-wire-switch 4...20 mA / 20...4 mA with line transmitter LTN-500
installation:	contact sensor with special clamp
connection:	Silikon/PTFE shielded cable, others on request
materials	
Messfläche:	Ag
sensor housing:	Polyamid
clamp:	POM; others on request
protection class:	IP68

Order code

sensor type
4-wire Pt100

class
class A

sensor material
aluminium with silver contact surface (Ag)

cable
Silicone/PTFE cable with shielding

sensor connection
0T 0.20 m, cable with moulded M8 plug (4-pin)
YY special model

protection class
IP68

diameter
mm diameter in mm

order code

PTV	3	A	K	C	0T	3	mm
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Equipment

equipment PTV LTN-500 transmitter Pt100 on ...20 mA to plug into the sensor cable

connection

certification
for non-hazardous area

connection
Input (Pt100) M8-female; Output (4...20 mA) M12-female
others

senso
A Pt100 4-wire / 4...20 mA

configuration
A standard factory setting Pt100 / 0...100°C
B customized adjustments (please indicate measuring range!)

order code

LTN-500	A	A	S
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