

USB-programmable Compact-resistance thermometer



Description

Compact USB thermometer is an additional member of our product range 80xx.

The measuring range can be programmed according to the customer's demands with especially developed software. The communication between the thermometer and a PC is done via an USB connection. Programming-Kits are not more needed.

The output signal of the compact USB thermometer is an analogue 4...20 mA.

In order to program the measuring range, it is necessary to remove the measuring insert from the housing. The USB-interface is placed directly on the electronic board of the thermometer.

You do not have to remove the thermowells of the USB-thermometer, in order to program the range, thus you do not have to stop your process.

Technical details

Applications	-50 ... +200° C / -50...+600° C
Output signal	4-20 mA, 2-wire 0...10 V on request individual settings
Measuring range	
Minimum	30K
Sensor element	PT100, class A or B
Material	Stainless steel, 1.4571
USB-interface	Mini-USB – Form B
Accuracy	Transmitter: <0,2%
Electrical connection	Angle plug according to DIN EN 175301-803
Protection	IP65

Features

- Integrated USB-interface
- Simple programming, without programming unit
- Reprogrammable
- Service friendly
- Factory setting: maximum temperature range

Technical Details

Model	8013	
Output signal	4...20 mA 0...10 V on request	
Sensor	PT100 Class B Optional: PT100 Class A	
Supply voltage Error signal	4...20 mA, 2-wire Supply voltage: 10...30 VDC Ripple < 10% Sensor burnout: 23mA Sensor short circuit: 3,3 mA	
Temperature range	at temp. ranges up to 600° C: with neck pipe -50...+200° C (Standard) -50...+600° C (High temperature = type 8014, with neck pipe)	
Measuring range	Factory setting: maximum temperature range, or acc. to customer requirements Minimum measuring range: 30K Maximum measuring range: temperature range	
Process connections	Fixed thread: G 1/2 A, G 1/4 A, G 3/8 A, G 3/4 A, 1/2" NPT, 1/4" NPT Adjustable compression fitting: G 1/2 A, G 3/8 A, G 1/4 A, 1/2" NPT Other connections: on request	
Material	Stainless steel: 1.4571 (316Ti) Other materials or coatings on request	
Stem length and pressure ranges ¹⁾	<ul style="list-style-type: none"> fast reaction version with tapered stem up to 12 bar ¹⁾ Stem length 25mm: Ø 3 x 0,3 mm Stem length 50mm up to 100mm: Ø 6 x 0,3 mm, with tapered stem Ø 3 x 0,3 mm From stem 150mm: Ø 8 mm x 1,75 mm With tapered stem to Ø 6 x 0,3 mm With tapered stem Ø 3 x 0,3 mm Ø 6 x 0,75 mm from stem 50 mm up to 500 mm: up to 40 bar Ø 8 x 1,75 mm from stem 50 mm up to 1000 mm: up to 100 bar ¹⁾ Special parts manufactured for pressures up to 600 bar ¹⁾ 	
USB-interface	Mini USB – Form B 5-pins USB 1.0 transfer rate: 1,5 Mbit/s	
Ambient temperatures	Max. 85° C	
Accuracy	Transmitter: 0,2% (related to maximum temperature range)	
Storage temperature	-40 up to +85° C	
Electrical connection	L-plug acc. to. DIN EN 175301-803 form A Optional: round connector M12x1 4-pins on request	
EMC-resistance	Acc. to DIN EN 61326 (with screened connection cable)	
Vibration resistance	Depended on the stem length For stem lengths up to 100mm: resistant up to 20g acc. to DIN 60068-2-6	
Shock resistance	Shock resistance acc. to DIN EN 837	
Protection class	IP65 acc. to DIN EN 60529 / IEC 529	

¹⁾ Pressure ranges refer to static pressure; Ratings depends on:
- Process medium
- Process pressure and –temperature
- Flow rate
- Stem design (length, diameter, wall thickness)