



High-precision reference measurement standard for industrial temperature calibrations

- **Parameters measured**
Temperature
- **Measurement technology**
PT100 - 4 wire sensing / temperature
- **Product highlights**
0.005°C accuracy, high quality wooden case, PT100 ceramic sensor, 2m cable, batteries and DAkks calibration certificate are included in delivery
- **Interfaces**
USB (Cable and SmartGraph3 software included)
- **Article number**
5810.10

The highly precise temperature probe of the hand held device XP101 is an ideal reference standard e.g. in calibration laboratories. It's Mini USB interface uncludes software and online data collection. Excellent stability through multiple annealing cycles. Sensor characteristic curve is determined individually and is saved in the device. Integrated root 2 function for determination of the sensor self-heating, plus automatic elimination of parasitic thermovoltage. For traceability to national standards a DAkks calibration certificate is attached.

General

Technical Data

Hand-held Measuring Device XP101 for reference temperature



Dimensions	170 x 62 x 34 mm
Weight	Approx. 205 g
Measuring current in normal operation	1 mA DC with duty cycle of 50 % = 0.50 mA, 1.85 measurements/sec. Automatic elimination of thermo voltage
Measuring current $\sqrt{2}$ function	1 mA DC with duty cycle of 33 % = 0.33 mA, 1.25 measurements/sec.
Integrated sensor characteristic curves	DIN EN IEC 60751 / IST - 90 or XP101 - mode

Storage conditions

Permissible ambient temperature	-20...60 °C
Operating rel. humidity	<90 % RH non - condensing

Operating conditions

Operating rel. humidity	<90 % RH non - condensing
Admissible height above absolute altitude	4000 m

Power supply

Power supply	4 Alkaline LR6 AA 1.5 V/USB 5 V
Active power consumption	Approx. 400 mW
Battery life passive	Approx. 1 year
Battery life active	Min. 24 hours

Data storage

Integrated data storage	Up to 200 gauges taking approx. 1 mill. values
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Interface

USB	Cable and SmartGraph3 software included in delivery
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Display

Definition of measured values	3 decimal places
Display	
Control	Touch screen, capacitive
Technology	TFT, resolution 240 x 320, 65 k colours, very good contrast due to Piezoresistive technology
Surface, toughened glass	Degree of hardness: 7, scratch - resistant

Temperature

Principle	4 wire sensing
Measuring range	-150°C ... +400°C (-238°F ... +752°F)
Unit	°C or °F
Accuracy	0.005 °C at 0 °C otherwise -40...+200 °C 0.02 °C
Response time	10 s