



ST-90 user-manual

Precise thermocouple thermometer



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 | **Termoprodukt**


ST-90

Thermometer ST-90 is designed to measure temperatures in the range of -50°C - 1200°C. It is equipped with a mini socket which allows it to attach measuring probe with a K-type thermocouple sensor. The device can be used for temperature measurements in, for example, laboratories.



Switching on the device

To turn the device on or off, press the button . When the device is running, the display shows the current temperature.

HOLD function

The HOLD function allows the measured value to be “paused” and displayed until the function is turned off. To turn the function on/off, press the button .

MIN/MAX functions

When the button  is pressed twice, the display will show the max icon and the maximum temperature, and when the button  is pressed three times, the min icon and the minimum temperature recorded since the device was started.

Display backlighting

To turn on the display backlight, press the  button. The backlighting time is about 15 seconds.

Battery symbol

The battery symbol is located in the upper right corner of the screen.

When the battery condition is low the battery symbol is active.

When the battery condition is critical, the display is turned off and only the battery symbol remains active.

In both cases, the device must be charged.

When charging the battery, the battery symbol “flashes”.

Charging

To charge the device, connect it via micro-USB cable to the charging port. The average charging time for the battery is 1.5h.

Calibration

The ST-90 thermometer is calibrated using a DTI 1000 calibration thermometer, factory no. 008954-01159 from Ametek Jofra Instruments, which has a declaration of conformity to European Union standards.

We certify that the ST-90 thermometer has been manufactured in accordance with the standards:

- Directive 2006/42/EC
- Directive 2014/35/EU
- Directive 2014/30/EU
- PN-EN ISO 12100:2012
- PN-EN ISO 13857:2010
- PN-EN 349+A1:2010
- EN60335-1:2012
- EN60335-2-40:2004/A2:2009
- PN-EN 55014-1:2017-06
- PN-EN 13486:2004

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Probes

The device is equipped with a mini socket, which allows to connect different types of probes to it. Below is a list of probes offered by Thermoproduct. Use the QR code to go to the page and learn more.

- ST-01K (-50°C to 250°C) probe length 120mm
- ST-07 (-50°C to 250°C) probe length 300mm
- ST-08 (-50°C to 250°C) probe length 120mm
- ST-16 (-30°C to 180°C) probe length 120mm
- ST-17 (-76°C to 260°C) probe length 135mm
- ST-20 (-100°C to 200°C) probe length 120mm
- ST-K (-200°C to 800°C) probe length 300mm



Parameter	ST-90
Temperature range	-200°C to 1200°C
Resolution	0.1°C (-99.9°C to 999.9°C) 1°C (-200°C to -100°C & 1000°C to 1200°C)
Thermometer accuracy	0.0°C (-200°C) -0.4°C (-98.0°C) -0.4°C (-80.0°C) 0.0°C (0.0°C) -0.2°C (+10.0°C) -0.3°C (+50.0°C) -0.3°C (+100.0°C) -0.1°C (+195.0°C) -0.1°C (+250.0°C) +0.3°C (+500.0°C) +1°C (+1300°C) with measurement uncertainty of -/+0,41°C
Thermometer accuracy with ST-01-K probe	from -80°C to -50°C: -/+2°C from -49,9°C to 149,9°C: -/+0,3°C from 150°C to 200°C: -/+2°C Otherwise: -/+3°C
Sampling frequency	2 measurements per second
Battery life on a single charge	Approximately 2 months
Power supply	Li-ion battery 3,7 V 800 mAh
Dimensions of the device	60mm x 120mm x 20mm
Screen	LCD
Leakage class	IP65

