

Millikelvin **Thermometers**

MKT Series











4

5

CALIBRATION CERTIFICATIONS

The MKT instruments are designed to facilitate a wide range of calibration and maintenance tasks,

 ensuring your equipment adheres to modern accuracy standards. Combine with various sheaths for liquid bath systems and dry block calibrators.

RESEARCH AND DEVELOPMENT

Enhance your analytical efficiency with rapid sampling rates, dual-channel measurement

2 capabilities, and the PC logging feature. These high-precision thermometers make it easy to identify optimization effects such as energy loss or condensation.

TROUBLESHOOTING IN CHALLENGING ENVIRONMENTS

Benefit from the compact MKT 10 in confined spaces and capture temperature differences with

3 exceptional accuracy using the MKT 50. Their precision accelerates troubleshooting, significantly reducing production downtime by facilitating quicker repairs.

Efficiency Meets Precision

High-Precision Thermometers

Discover the versatility of the MKT 10 and MKT 50, your superior partners for precise temperature measurement and temperature calibration. Whether used in laboratories, production facilities or in the field, these instruments are specially designed to meet the requirements of modern calibration, maintenance, optimization and repair tasks.

- → Unbox the lightweight 500 g MKT 10 instrument and get precise 10 mK measurements within 1 minute
- \rightarrow The MKT 50 is the only thermometer with <1 mK precision in its price range
- \rightarrow Portable, accurate temperature readings from -260 °C to +962 °C in just one second
- → Clear display minimizes reading errors while glove-friendly buttons ensure easy operation
- → Full 3-year warranty, supported by more than 86 service stations worldwide, the possibility for factory calibration and ISO 17025, DAkkS or UKAS certification

CALIBRATING YOUR MEASURING DEVICE

The natural drift of resistance sensors, thermocouples, transmitters, and temperature controllers necessitates regular calibrations. The MKT series ensures that your instruments remain within the necessary tolerances, guaranteeing optimal performance and reliability.

FIND THE PERFECT OPERATING POINT IN YOUR PRODUCTION

Precisely measuring temperature differences is crucial for evaluating the performance of heat exchangers, internal combustion engines, ovens, turbines, steam systems, as well as identifying energy-saving opportunities and optimizing cooling systems.

MKT 10

Seamless Path to Precise Measurement

MKT 10 offers portability with one included flexible sensor in an easy-to-use case. Boasting an accuracy of less than 10 mK, it's the perfect choice for the chemical, pharmaceutical and biotechnology industries, facilitating at-line and on-site measurements, including liquid baths thermostat calibration.

Buy online shop.anton-paar.com

Fast

- → Get results in just 1 second
- → Quick setup allows measurement within 1 minute of unpacking

Portable

- \rightarrow Lightweight and ergonomic form at only 500 g
- \rightarrow Includes a convenient carrying case for simple transportation, and one PRT

Easy handling

- → Buttons designed for smart use with gloves
- \rightarrow Display is large and easy to read for clear visibility
- → The sensor parameters are entered into MKT 10 according to DIN EN 60751
- → Flexible power supply and communication

Battery-operated

→ Power over Ethernet (PoE): Ecologically friendly power supply for minimum battery use

MKT 50

Outstanding Price-Performance Ratio

Experience unparalleled precision with the MKT 50, which delivers measurements with an accuracy of less than 1 mK in any location thanks to its battery operation. Such performance makes this high-precision thermometer the best choice for laboratory, industrial, and temperature calibration measurements.

Save both time and money

- → Intuitive user interface
- → High sampling rates for quicker measurements
- → Connect up to 16 PRT 100

Choose your certificates

- → Platinum resistance thermometers PRT 100, with ISO 17025, factory or DAkkS, UKAS, ITS-90, DIN EN 60751 and ASTM E1137 certificates
- → 30 sets of calibration data for PRTs can be stored

Supported functions

- → Measure temperature and resistance
- \rightarrow Average and standard deviations can be displayed

Connect to your network

- → Data transfer via RS-232, USB or Ethernet (XML or HTML file)
- → Laboratory Information Management System (LIMS)







Your Perfect Configuration



	MKT 10	MKT 50
	\downarrow	Ļ
MEASURING RANGE		
Temperature	-50 ℃ to 180 ℃ (-58 ℃ to 356 ℃F)	−260 °C to +962 °C (−436 °F to +1764 °F)
Resistance	80 Ω to 175 Ω	0 Ω to 440 Ω
RESOLUTION		
Temperature	1 mK	0.1 mK (Pt 100)
Resistance	0.4 mΩ	40 μΩ
MEASUREMENT UNCERTAINTY*		
Temperature	< 10 mK	< 1 mK (Pt 100)
Resistance	< 4 mΩ	< 400 μΩ
GENERAL INFORMATION		
Measuring sensor	Pt 100 (EN 60751)	Pt 100 or Pt 25.5 (EN 60751 or ITS-90)
Measuring current	1 mA _{DC}	0.41 mA _{rms}
Internal reference resistor	400 Ω (Vishay Precision Group, VHP 101)	400 Ω (Vishay Precision Group, VHP 101)
Number of sensor inputs	1	2
Sensor connection	4-wire, soldered	4-wire (LEMO 1S304)
Measuring time	1 second (for one channel)	1.44 seconds (for both channels)
Data outputs	LAN (PoE, 10 Mbit)	RS-232D (optional USB**) LAN (Ethernet, 10 Mbit)
Ambient operating temperature	0 °C to 35 °C (for highest accuracy 20 °C to 25 °C recommended)	0 °C to 35 °C (for highest accuracy 20 °C to 25 °C recommended)
Power supply	4× AA batteries or Power over Ethernet (PoE)	Power adapter 7.5 V or 2× AA batteries
Dimensions (L \times W \times H)	200 mm × 100 mm × 35 mm (7.9 in × 3.9 in × 1.4 in)	240 mm × 190 mm × 110 mm (9.5 in × 7.5 in × 4.3 in)
Weight	approx. 500 g (1.1 lbs)	approx. 2 kg (4.4 lbs)

*) refers to the calibration of the reference resistor without contribution of the sensor (confidence level: 95 %, number of measurement values: 50, reference temperature: 23 °C)

**) with USB/RS-232 adapter

Reliable. Compliant. **Qualified.**

Our well-trained and certified technicians are ready to keep your instrument running smoothly.



www.anton-paar.com/ service © 2024 Anton Paar GmbH | All rights reserved. Specifications subject to change without notice. XDLIP021EN-B