



## Keep an Eye on the Temperature

### Calibration of Temperature Sensors with an MKT 50 Millikelvin Thermometer

#### Temperature Measurement matters in many Places

Temperature is one of the most frequently measured physical properties and plays a key role in almost every industry. The variety and number of temperature sensors is accordingly high. Many production processes require continuous monitoring of the temperature, carried out by numerous temperature sensors. To ensure and maintain the high quality and reliability of measurements, the temperature sensors need to be calibrated regularly.

#### MKT 50: The ideal Solution for calibrating Temperature Sensors

The MKT 50 Millikelvin Thermometer is not only a highly accurate thermometer, but can also be used as a reference system for calibration purposes. A comparison calibration is generally performed twice a year to compare the reading of a temperature sensor (B, see Fig. 1) with a precise reference sensor such as the MKT 50 Millikelvin Thermometer (A). The MKT 50 measures the temperature to the highest level of accuracy and fulfils all requirements for comparison calibration.

The sensor under test (B) and the reference sensor are placed in a temperature-stable system (C). After having reached thermodynamic equilibrium the two temperature readings are compared. If the difference between both sensors is higher than a defined tolerance level, an adjustment or replacement of the temperature sensor (B) is required.

#### Go for MKT 50

- **Affordable:** Best-priced thermometer for applications which require highly accurate measurement results
- **Versatile:** Suitable for comparison and fixed point calibrations
- **Fast:** Two channels to measure reference sensor and device under test simultaneously
- **Smart:** Integrated statistical functions
- **Flexible:** The portable MKT 50 can be used at different measuring sites



#### MKT 50 Millikelvin Thermometer

- User-friendly and versatile
- The ideal measuring device for calibration/adjustment of DMA M density meters and SVM viscometers
- Also usable as reference resistance meter in the range of 0 - 400 Ohm

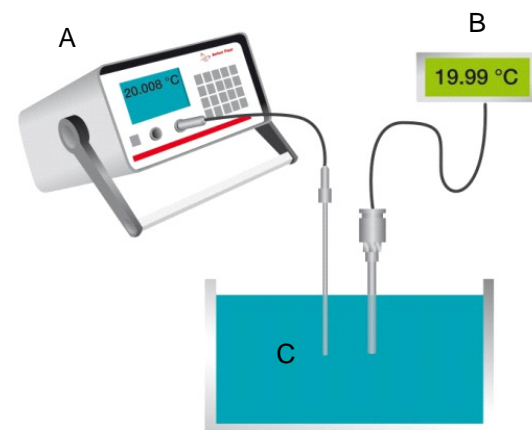


Fig. 1. Calibration Setup  
A... Reference system MKT 50  
B... Temperature sensor to be tested  
C... Temperature-stable system

#### Do you have any questions?

Contact Anton Paar directly:  
[density@anton-paar.com](mailto:density@anton-paar.com)