Calibration Resistor

Model 1240

Application
The 0.02 class calibration resistors excel in their modern design and small mechanical dimensions. Their ruggedness also ensures a long life.

Calibration resistors of the 1240 series are used wherever very constant operating standards are required. Typical main areas of application therefore include:

► When normal resistors prove to be too large scale
► For test and calibration of resistance measurement devices
► For tests on electrical temperature measuring equipment
► For laboratory setup of a Wheatstone bridge
► As shunt resistor for accurate current measurement
► As part of standard equipment in research laboratories
► For a large part of measurements in calibration laboratory

A test certificate according to ISO 9000 with detailed technical data is included in the scope of delivery of these high-quality calibration resistors.

DAkkS Calibration Certificate
The calibration laboratory D-K-15141-01-00 at burster praezisionsmesstechnik is supervised by DAkkS (Deutsche Akkreditierungsstelle GmbH) according to ISO 17025. It can prove its status by a certificate and is authorized to issue calibration certificates with the DAkkS logo and with the DKD logo (Deutscher Kalibrierdienst). These calibration certificates are internationally approved by multilateral contracts.

Manufacturer Calibration Certificate
Please refer to DAkkS Calibration Certificate but with reduced accuracy. The calibration resistors can also be delivered with a manufacturer calibration certificate. It confirms the traceability of the used secondary voltage and resistance standards to the national standards according to DIN ISO 9000ff and is guaranteed by our certified calibration laboratory (D-K-15141-01-00).

- Range 25 µΩ ... 100 kΩ
- Low capacitance and low inductance design
- Suitable for direct current and technical frequencies
- High stability < ± 0.01 % over years

With Certificate according to ISO 9000
**Technical Data**

- **Resistance material**: 25 µΩ ... 100 mΩ MANGANIN® sheet
- 200 mΩ ... 10 kΩ ZERANIN® wire
- **Temperature coefficient**: approx. ± 10 ppm/K MANGANIN® sheet
- approx. 5 ppm/K ZERANIN® wire
- **Calibration temperature**: 23 °C ± 3 K (< 0.5 W load)
- **Surface temperature** ($T_{surf}$): max. 85 °C
- **Thermal resistance** ($R_{th}$): 11 K/W

- **Operation temperature** ($T_{op}$): 0 ... 23 ... 40 °C
- **Increase of temperature** ($T_p$): $T_p = R_{th} \cdot \frac{P}{T'} (R + R_i)$
- **Surface temperature** ($T_{surf}$): $T_{surf} = T_{op} + T_p$ (Tomax = 85 °C)
- **Test voltage**: 2900 VDC (resistance element housing)
- **Nominal insulation voltage**: 650 VDC (insulated mounting required)

- **Specifications**: according DIN EN 60477

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**Order Information**

- **Calibration Resistor 100 mΩ**: Order code 1240-0.1
- **DAkkS Calibration Certificate**: Order code 12DKD-1240
- **Manufacturer Calibration Certificate**: Order code 12WKS-1240

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**Adapter model 2394**

for the check-up and calibration of our resistance measurement devices model 2304 and model 2316-V000X