

Battery operated Milli-Ohmmeter RESISTOMAT®

Model 2320

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|---------------|-----------|
| Code: | 2320 E |
| Manufacturer: | burster |
| Delivery: | ex stock |
| Warranty: | 24 months |
| Issue: | 1.7.2005 |



NEW
preliminary data sheet

2320-E

- Measuring range from 40 mΩ to 4 kΩ
- Resolution up to 10 μΩ
- Measuring accuracy 0.05 %
- Automatic measuring range selection
- Temperature compensation
- Bipolar measurement
- Input voltage protection up to 415 V_{rms}

Application

The RESISTOMAT® Model 2320 is a universally applicable and easy to operate measurement device for low-ohmic resistances. The light and handy device in a stable IP54 plastic housing with membrane keypad is likewise suitable for use in service, laboratory or on the production floor. The power supply is done via built-in rechargeable battery pack or by standard batteries.

If need be, the temperature of samples can be measured and the sample resistance is subsequently compensated to fit the value at 20°C. This applies for samples with resistances depending on the sample's temperature. The temperature coefficients for Copper and Aluminium are included as standard - a third coefficient may be set individually for any given material to be measured.

The range of applications is manifold, such as measurement of:

- resistance elements
- plug connection
- power rails
- fuses
- cable connections
- transformers
- electrical motors
- cable and wire, and many more

Description

The 4-wire measurement configuration eliminates possible errors caused by test lead and contact resistance. This is the basis for resistance measurements in the mΩ range. The resistance value calculated in the current-voltage method is then indicated on the large LCD-display in mΩ, Ω or kΩ.

Single as well as permanent measurements are possible whereby the 6 measurement ranges can be selected in manual or automatic mode. The standard resistance value at 20 °C is calculated and displayed if the temperature compensation is active. The measured temperature may also be displayed directly.

Thermo voltages are eliminated by the bipolar current source and the calculation of the mean value (key AVE).

A low battery charge is informed by the LED "LOBAT". The battery pack can be replaced in a very simple manner. Recharging is done in an external station.

Technical Data

Construction

The device has a portabel, sturdy plastic housing according IP54. The operation is done via the membrane keypad. The connections for the sample and the Pt100 sensor are located at the backside of the device. The rechargeable battery pack is easily and quickly changeable without opening of the device.

| Measuring Range | Resolution | Measuring Current |
|-----------------|------------|-------------------|
| 40.00 mΩ | 10 μΩ | 100 mA |
| 400.0 mΩ | 100 μΩ | 10 mA |
| 4.000 Ω | 1 mΩ | 10 mA |
| 40.00 Ω | 10 mΩ | 10 mA |
| 400.0 Ω | 100 mΩ | 1 mA |
| 4.000 kΩ | 1 Ω | 100 μA |

Accuracy (with temp. comp. off): $< \pm 0.05 \% \text{ Rdg.} + 2 \text{ counts}$

Burden voltage: approx. 2 V

Measuring time (for ohmic probes): approx. 20 ms

Measuring connection: 4-wire technology, 4 mm ø safety terminals

Input protected:
against inductive voltage up to 415 V_{rms}

Measurement mode:
forward current and average of forward and reverse current

Zero compensation: via zero button to null measurement offsets

Range selection: manual or automatic

Temperature compensation: TC for copper and brass plus user coefficients

Temperature measurement: with external Pt100 sensor
measuring range - 50 °C ... + 800 °C
resolution 0.1 °C
accuracy 0.2 °C

Display: LCD-Display 15 mm high with error indicator

Indicator extent: 4000 Digits

Power supply: with 5 AA batteries or 5 AA NiMHd
rechargeable batteries in a changeable battery box

Period of operation: approx. 13 hours or 100 000 measurements
with NiMHd-1850 mAh
approx. 16 hours or 130 000 measurements
with Duracell-2800 mAh

Battery check: LOBAT Indicator

Temperature coefficient: approx. 30 ppm/°C

Operating temperature: 0 ... 23 ... 40 °C
rel. humidity 80 % max non condensing

Storage temperature: - 20 ... + 50 °C

Device Safety: EN 61010-1, EMC-EN 61326

Type of protection: IP54

Weight: 0.8 kg

Dimension (H x W x D): 55 x 130 x 215 [mm]

Order Information

RESISTOMAT®
incl. batteries and test certificate

Model 2320-V001

Accessories

Pt 100 sensor to the plug

Model 2320-Z001

Rechargeable battery
with docking station charger

Model 2320-Z002

Battery box spare unit

Model 2320-Z003

Carrying bag

Model 2320-Z004

Calibration resistors

see data sheet 1240 E

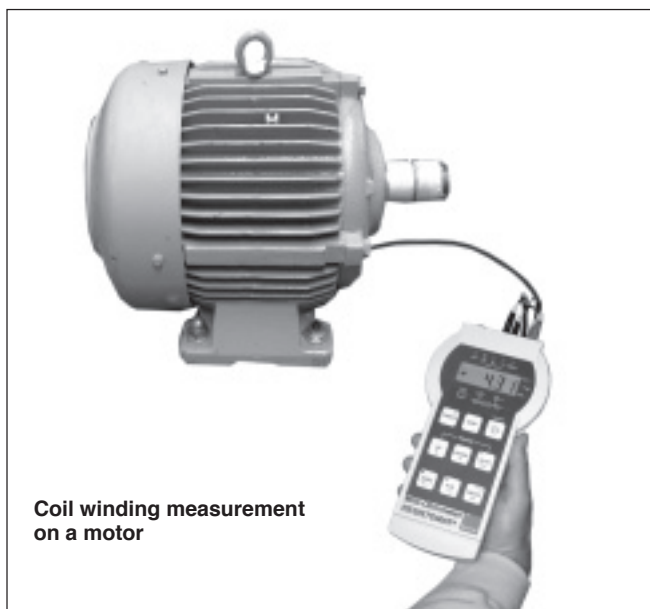
Kelvin measuring pliers and probes

see data sheet 2385 E

Wire holding devices
for wires up to 1500 mm²

see data sheet 2381 E

Application



**Coil winding measurement
on a motor**