

MPK257

Digital micro-ohmmeter

Fast response on inductive resistance measurements (eg transformer windings and motors), internal memory for 30,000 measured values and auxiliary 12 V supply input.



Illustrative Photo. Smartphone not included.

Features

- Microprocessor controlled
- Alphanumerical display
- Direct reading (up to 4½ digits)
- Resolution: 0.1 $\mu\Omega$
- Resistance reading: up to 2000 Ω
- Up to 10 A test current
- Basic accuracy: $\pm(0.10\%$ of reading + 3 ULSD)
- Kelvin-type (4-Wires) measurement
- USB interface
- Built-in memory for up to 30,000 measured values
- Built-in printer
- Software for data management
- Remote control by an Android device
- Powered by rechargeable LFP battery or mains supply
- Auxiliary power input

Description

The **MPK257** digital very low resistance ohmmeter is a portable, microprocessor-controlled instrument used to accurately measure resistances of switches and circuit breaker contacts, transformer and motor windings, wire and cable samples, joints in busbars, etc., using test currents from 1 mA up to 10 A. It uses the Kelvin-type, four-terminals measurement principle, thus eliminating errors caused by lead and contact resistances.

Resistance readings are shown in the alphanumeric display with up to a 4½ digit-resolution. It allows to measure resistances of up to 2000 Ω , with a resolution down to 0.1 $\mu\Omega$. Measurements accuracy is guaranteed by the state-of-the-art system for signal-amplification, offset-free and with long-term stability. The equipment has a USB interface that allows to download the measured values to a computer for their later analysis.

The open circuit output voltage is of up to 10 V, depending on the selected test current, reducing the stabilization time for the test current when highly inductive elements (specially transformers windings) are measured. The measurement circuit has an effective protection against voltage peaks originated by those inductances.

Operation is very simple: Just connect the leads, switch-on the equipment, select the test current and press the start button. After a few seconds (depending on inductance of the element), direct reading appears on the display with the measure unit indication (Ω , m Ω or $\mu\Omega$). If it is necessary, the display will show messages to help the operator (Low battery, Overrange, etc).

The equipment is housed in a rugged plastic case with a hinged lid and carrying handle. It is a portable, strong, impact resistant and lightweight equipment, suitable to be used in outdoors and under severe weather conditions. It supplies very reliable and accurate measurements both in laboratory and out in the field.



This instrument has Bluetooth® interface and can be controlled remotely via an Android™ smartphone / tablet running the BlueLogg application.



Rechargeable battery (LiFePO4)

Expected lifetime: 2000 charge / discharge cycles (average).

Low self-discharge: when the equipment is not in use, battery charge decreases with time at a much lower rate than other battery technologies.

Safety: in contrast to other lithium battery technologies commonly used, LFP batteries are thermally and chemically stable, significantly improving battery safety.

Technical specifications

MPH257

TEST CURRENTS

1 mA - 10 mA - 100 mA - 1 A - 5 A - 10 A.

Each current may be continuously adjustable from 0 to 100 %

RESISTANCE RANGES

0-200 mΩ @ 10 A.

0-1000 mΩ @ 5 A.

0-200 mΩ @ 1 A.

0-2000 mΩ @ 100 mA.

0-20 Ω @ 10 mA.

0-2000 Ω @ 1 mA.

RESOLUTION

0.1 μΩ @ 10 A.

OUTPUT VOLTAGE

Up to 10 Vdc (open circuit) @ 1 A.

MEASUREMENT PRINCIPLE

Four-terminal, Kelvin-type.

BASIC ACCURACY

±(0.10% of reading + 3 ULSD*).

*Units of the Least Significant Digit

ADVANCED FEATURES

Digital direct reading of very low resistances in the alphanumerical display, with up to 4½ digits. Very fast and accurate measurements.

TEST CURRENT MEASUREMENT

The current is digitally measured and a bargraph shows the result. The bargraph indication is specially useful when measuring inductive loads, so that the operator can verify easily when the test current has been stabilized.

MEGALOGG2 SOFTWARE

Friendly, easy to use software. Tests are represented in tabular views. With automatic report generator, including the operator's commentaries.

BUILT-IN PRINTER

Prints elapsed time, current and measured value.

BUILT-IN MEMORY

Memory for up to 30,000 measured values.

DATA OUTPUT

USB

ENVIRONMENTAL PROTECTION

IP54 (with closed lid).

SAFETY CLASS

Meets the requirements of IEC 61010-1.

POWER SUPPLY

Rechargeable LFP battery 12 V, 6000 mAh or 100 - 240 V~ mains supply.

BUILT-IN BATTERY CHARGER

For 100 - 240 V~ mains supply or auxiliary 12 V supply input.

OPERATING TEMPERATURE RANGE

-5 °C to 50 °C.

STORAGE TEMPERATURE RANGE

-25 °C to 70 °C.

HUMIDITY RANGE

95 % RH (non condensing).

EQUIPMENT WEIGHT

Approx. 6.5 kg.

DIMENSIONS

378 x 308 x 175 mm

Included accessories

- 2 Combined current and potential leads
- 1 Power cord
- 1 USB cable
- 1 Operating instructions
- 1 MegaLogg2 software
- 1 Synthetic bag, for cables and instrument



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