

Digital micro-ohmmeter

MPK257



Remote control
by App



Illustrative image

Features

- Direct reading (up to 4½ digits)
- Resolution: 0.1 $\mu\Omega$
- Resistance reading: up to 2000 Ω
- Up to 10 A test current
- Accuracy: \pm (0.10 % of reading + 3 ULSD*)
*Units of the Least Significant Digit
- Temperature compensation
- 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

LFP Rechargeable battery

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.

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. Measurements accuracy is guaranteed by the state-of-the-art system for signal-amplification, offset-free and with long-term stability.

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.

The equipment is housed in a rugged plastic case. It is a portable, strong, impact resistant and lightweight equipment, suitable to be used in outdoors. It supplies very reliable and accurate measurements both in laboratory and out in the field.

Remote control by Android™ App



Increased safety and comfort: Set up, start and stop tests in an even safer and more comfortable way

Automatic reports: Generate test reports directly on the App

Smartphone / tablet features: Incorporate smartphone features into your reports (photo, GPS coordinates and test location map)

• Android, Google Play and the Google Play logo are trademarks of Google LLC



Modbus® Protocol

This equipment implements the Modbus® open protocol. All configuration, real-time control, monitoring of measurements, and retrieval of test information can be performed using commercial tools such as LabVIEW® and PLCs, or even through dedicated software and own development. In this way, the entire measurement and analysis process can be automated according to the application's needs. Complete documentation with accessible and controllable parameters is provided, as well as clarification of doubts about the use through technical support.

- Modbus is a registered trademark of Schneider Electric USA, Inc.
- LabVIEW is a registered trademark of National Instruments Corporation

Technical specifications

| ELECTRICAL | |
|--------------------------|---|
| MPK257 | |
| Test current | 1 mA - 10 mA - 100 mA - 1 A - 5 A - 10 A Each current may be continuously adjustable from 0 to 100 % |
| Test current accuracy | ± 3 % |
| 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 |
| Basic accuracy | ±(0.10 % of reading + 3 ULSD*). *Units of the Least Significant Digit |
| FEATURES | |
| Measuring modes | Manual, production line and automatic |
| Measurement principle | Four-terminal, U/I |
| Advanced features | Digital direct reading of very low resistances in the alphanumeric display, with up to 4½ digits. Very fast and accurate measurements. |
| Filter function | Minimizes interferences in resistance measurements |
| Temperature compensation | Allows you to define the type of metal that will be used in the calculation of temperature compensation: Copper, aluminum, gold, iron, nickel, platinum, silver, zinc, custom (metal alpha) |
| Display | Alphanumeric LCD display, 4 lines / 20 characters (Big Number) |
| Printer | Built-in thermal printer |
| Built-in memory | Memory for up to 30,000 measured values |
| STANDARDS | |
| Safety | IEC 61010-1 |
| COMMUNICATION | |
| Protocol | Modbus |
| USB | For configuration, control and download the stored values |
| Bluetooth | For configuration, control and download the stored values |

| SOFTWARE | |
|-----------------------------------|--|
| Desktop (PC/Notebook) | MegaLogg 3 software: for remote control, allowing to configure, run tests and generate reports |
| Android (Smartphone/ Tablet) | BlueLogg app: for remote control, allowing to configure, run tests and generate reports |
| ENVIRONMENTAL | |
| IP rating | IP65 (with closed lid) |
| Operating temperature | -5 °C to 50 °C |
| Storage temperature | -25 °C to 70 °C |
| Humidity | 95 % RH (non condensing) |
| POWER SUPPLY | |
| Mains-powered or internal battery | Rechargeable LFP battery 12 V, 6000 mAh or 100 - 240 V~ mains supply |
| Battery charger | For 100 - 240 V~ mains supply or auxiliary 12 V supply input. |
| MECHANICAL (OF THE INSTRUMENT) | |
| Weight | Approx. 6.5 kg |
| Dimensions | 378 x 308 x 175 mm |

Included accessories

- 2 Combined current and potential leads
- Ground cable
- Temperature sensor
- Charger power cord
- 2 Auxiliary external power cord (12 V)
- USB cable
- User manual
- MegaLogg 3 software (download)
- BlueLogg app (download)
- Case for the accessories

Global Presence

MEGABRAS equipment are used in more than 40 countries around the world



Test & Measurement equipment

Digital transformer ratiometer
Earth ground testers
Hipots
Insulating glove tester
Insulation testers
Kilovoltmeters
Micro-ohmmeters
Power quality analyzers
Vibration meter



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