

 Temperature Compensation



## MPK 257 Digital micro-ohmmeter

### Features

- Microprocessor controlled
- Alphanumerical display
- Direct reading (up to 4½ digits)
- Resolution: 0.1  $\mu\Omega$
- Resistance reading: up to 2000  $\Omega$
- Up to 10 A test current
- $\pm(0.10\%$  of reading + 3 ULSD\*).
- \*Units of the Least Significant Digit.
- Kelvin-type (4-Wires) measurement
- USB interface
- Built-in memory
- Built-in printer
- Software for data management
- Remote control by an Android device
- Powered by rechargeable LFP battery
- IP54 protection

Illustrative Photo. Smartphone not included.



### 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  $\Omega$ , 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 ( $\Omega$ , m $\Omega$  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.



#### Remote Control App

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



• Android™ and Google Play™ Store are trademarks of Google, Inc.  
• Bluetooth® is a registered trademark of the Bluetooth SIG, Inc. worldwide.

#### 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.

# MPH 257

## Technical specifications

**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 m $\Omega$  @ 10 A.

0-1000 m $\Omega$  @ 5 A.

0-200 m $\Omega$  @ 1 A.

0-2000 m $\Omega$  @ 100 mA.

0-20  $\Omega$  @ 10 mA.

0-2000  $\Omega$  @ 1 mA.

**RESOLUTION**

0.1  $\mu\Omega$  @ 10 A.

**OUTPUT VOLTAGE**

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

**MEASUREMENT PRINCIPLE**

Four-terminal, Kelvin-type.

**BASIC ACCURACY**

$\pm(0.10\%$  of reading + 3 ULSD\*).

\*Units of the Least Significant Digit.

**ADVANCED FEATURES**

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

**T-LOGGER 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.

**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.

**BATTERY CHARGER**

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

**OPERATING TEMPERATURE RANGE**

23 °F to 122 °F (-5 °C to 50 °C).

**STORAGE TEMPERATURE RANGE**

-13 °F to 158 °F (-25 °C to 70 °C).

**HUMIDITY RANGE**

95 % RH (non condensing).

**EQUIPMENT WEIGHT**

Approx. 14.33 lb (6.5 kg).

**DIMENSIONS**

14.88" x 12.12" x 6.89" (378 x 308 x 175 mm).

## Included accessories

- 2 Combined current and potential leads
- 1 Power cord
- 1 USB cable
- 1 Auxiliary power cord
- 1 User guide
- 1 T-Logger software
- 1 Bag for the accessories