TENTECH

# Micro-ohmmeter

## MPK 2000e


- Microprocessor controlled
- Alphanumerical display
- Direct reading (up to 4½ digits)
- Resolution: 0.1 µΩ
- Resistance reading: up to 200 Ω
- U/I (4-wires) measurement
- RS232 Data output
- 0.1% Basic accuracy
- Rechargeable battery

## Description

The MPK-2000e 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 1mA up to 10A. 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 200Ω, with basic accuracy of 0.1% and resolution of 0.1µΩ. 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 serial output (RS232) that allows to collect measured values in printer, lap-top, palm-top computer, or any data logger in order to register the tests performed.

The HOLD function keeps in the display the value measured at a certain time-point. The open circuit output voltage is of up to 10V, depending on the selected test current, reducing the stabilization time for the test current when highly inductive elements 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, mΩ or µΩ). If it is necessary, the display will show messages to help the operator (Low battery, Over range, etc).

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

# MPH 2000e

## Technical specifications

**TEST CURRENTS**
1 mA - 10 mA - 100 mA - 1 A - 10 A.
Each current may be continuously adjustable from 0 to 100%.

**RESISTANCE RANGES**
0-2000 µΩ @ 10 A.
0-20 mΩ @ 10 A.
0-200 mΩ @ 1 A.
0-2000 mΩ @ 100 mA.
0-20 Ω @ 10 mA.
0-200 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**
±(0.1% of reading + 0.005% of full scale).

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

**SERIAL DATA OUTPUT**
RS232 @ 4800 bps. Suitable for data collection in an external serial printer, computer or data-logger.

**ENVIRONMENTAL PROTECTION**
IP54 with closed lid.

**SAFETY CLASS**
Meets the requirements of IEC 61010-1.

**POWER SUPPLY**
Internal battery powered. Battery is rechargeable, sealed lead-acid, 12 V - 7 Ah.

**BUILT-IN BATTERY CHARGER**
For 110-127 V~ or 220-230 V~ mains.

**OPERATING TEMPERATURE RANGE**
23°F to 122°F (-5°C to 50°C).

**STORAGE TEMPERATURE RANGE**
-13°F to 149°F (-25°C to 65°C).

**HUMIDITY RANGE**
95% RH (non condensing).

**EQUIPMENT WEIGHT**
Approx. 16.76 lb (7.6 kg).

**DIMENSIONS**
14.88" x 12.13" x 6.89" (378 x 308 x 175 mm).

**INCLUDED ACCESSORIES**
2 Combined current and potential leads.
1 Charger Power cord.
1 Operating instructions.
1 RS232 cable.
1 Synthetic bag, for cables and instrument.

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