TENTECH

Micro-ohmmeter

MPK 253

- Microprocessor controlled
- Alphanumerical display
- Resolution: 1 µΩ
- Resistance reading: up to 200 Ω
- Up to 10 A test current
- Kelvin-type (4-Wires) measurement
- Powered by rechargeable battery or mains supply
- Direct reading (up to 4½ digits)
- Serial data output (RS232)

Description

The MPK-253 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 200 Ω, with a resolution down to 1 µΩ. 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 a printer, laptop, 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 10 V, depending on the selected test current, reducing the stabilization time for the test current when highly inductive elements (especially 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, 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 outdoors and under severe weather conditions. It supplies very reliable and accurate measurements both in laboratory and out in the field.

MPH 253

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
1 µΩ @ 10 A.

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

MEASUREMENT PRINCIPLE
Four-terminal, Kelvin-type.

BASIC ACCURACY
± 0.2% of reading ± 2 digits.

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.

POWER SUPPLY
Rechargeable battery 12 V - 7 Ah or 100 - 240 V~ mains supply.

BUILT-IN BATTERY CHARGER
For 100 - 240 V~ mains supply.

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).

WEIGHT
Approx. 19.18 lb (8.7 kg) (including accessories).

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 RS232 cable.
1 Operating instructions.
1 Synthetic bag, for cables and instrument.

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