

MPK102

100A PORTABLE DIGITAL MICRO-OHMMETER

- ✓ MICROPROCESSOR CONTROLLED
- ✓ ALPHANUMERICAL DISPLAY
- ✓ RESOLUTION DOWN TO: 0,1
- ✓ RESISTANCE READING UP TO: 200
- ✓ UP TO 100 A TEST CURRENT
- ✓ KELVIN-TYPE (4 - WIRES) MEASUREMENT
- ✓ POWERED BY INTERNAL BATTERY OR MAINS SUPPLY
- ✓ DIRECT READING (UP TO 4½ DIGITS)
- ✓ OVERHEATING PROTECTION
- ✓ SERIAL DATA OUTPUT (RS-232)
- ✓ LIGHTWEIGHT (15KG)

m
MEGABRAS



The MPK-102 high-current micro-ohmmeter is a truly portable, microprocessor-controlled instrument, used to accurately measure very low contact resistances of breakers and switches, busbars, transformer and motors winding and motors, etc, with test current from 1mA to 100A. It employs the Kelvin-type measurement to avoid measurement errors caused by test leads and their contact resistances. Readings are shown in the alphanumeric display with up to 4 ½ digits resolution. It allows to measure resistances up to 200 Ω , with a resolution down to 0,1 Ω . Using its internal rechargeable battery, measurements with up to 10 A test current may be carried out without connecting the equipment to the main supply. Powered by the mains supply, it allows to measure with any test current up to 100A.

Measurement accuracy is guaranteed by a state-of-the-arts signal amplification system, offset-free and of high long-term stability. For each test current the micro-ohmmeter has two scales, automatically eligible by the microprocessor in order to increase ten times reading resolution. Test current may be continuously adjusted by the operator in every one of the scales and their values are measured using an analogue indicator, making it easy to measure resistances with a significant inductive component, as in the case of big transformers windings.

It has a Serial output (RS232) that may be connected to a printer, computer, or any data-logger to register measured values. The Hold function keeps in the display the measured value at a certain time-point, when the corresponding key is pressed.

The high-current generation system is based on modern technology that allows to significantly decrease both its weight (15kg) and size. The cabinet is made of plastic material highly resistant to impacts and to environmental challenges. Internal thermal sensors in all sensitive components avoid any damaged caused to the instrument due to overheating.

This is a strong but lightweight equipment, it may be easily carried by one person. It is water-resistant and can be used under severe weather conditions offering an excellent performance working both in the laboratory and out in the field.

MPK 102 - TECHNICAL SPECIFICATIONS

TEST CURRENTS (T.C.)

1 mA, 10mA, 100 mA, 1A, 10A, 100A
Each current may be continuously adjustable from 0 to 100%

RESISTANCE RANGES

0-200 and 0-2000 @ 100 A.T.C.
0-2000 and 0-20 m @ 10 A.T.C.
0-20 m and 0-200 m @ 1 A.T.C.
0-200 m and 0-2000 m @ 100 mA.T.C.
0-2000 m and 0-20 @ 10 mA.T.C.
0-20 and 0-200 @ 1mA.T.C.
For each test current, ranges are automatically selected for optimal reading.

RESOLUTION

0,1 @ 100 A.T.C.
1 @ 10 A.T.C.
10 @ 1 A.T.C.
100 @ 100 mA.T.C.
1 m @ 10 mA.T.C.
10 m @ 1 mA.T.C.

OUTPUT VOLTAGE

Up to 10V DC (open circuit) @ 1 A.T.C.

MEASUREMENT PRINCIPLE

Four-terminal, Kelvin-type.

CONTINUOUS OPERATION TIME

At 100A this equipment may be used continuously for aprox. 15 minutes before the thermal protection activates. At 10 A or less, there is not a limited time for continuous operation.

THERMAL PROTECTION

Protects all sensitive components, avoiding any damage due to overheating.

BASIC ACCURACY

$\pm 0,25\%$ 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.

TEST CURRENT MEASUREMENT

Although the current is digitally measured, an analogue taut band instrument show the result in order to facilitate the evaluation. This is specially useful when measuring inductive loads, so that the operator can verify easily when the test current has been stabilized

SERIAL DATA OUTPUT

RS-232 @ 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 61010-1/1990, IEC 61010 1/1992 amendment 2

E.M.C

In accordance with IEC 61326-1

ELECTROSTATIC IMMUNITY

In accordance with IEC 1000-4-2

ELECTRO MAGNETIC IRRADIATION IMMUNITY

In accordance with IEC 61000-4-3

POWER SUPPLY

Mains or internal battery powered
Battery is rechargeable, sealed lead-acid, 12V 7Ah
Mains: 110-127 or 220-230 V AC
Internal battery is useful for up to 10A T.C.
Mains power is useful for any test current, including 100A

BUILT-IN BATTERY CHARGER

For 110-127 or 220 V AC mains

OPERATING TEMPERATURE RANGE

-5°C to 50°C

STORAGE TEMPERATURE RANGE

-25°C to 65°C

HUMIDITY RANGE

95% RH (non condensing)

ALTITUDE MAXIMUM

2000m

WEIGHT

Approx. 15 kg, including battery

DIMENSIONS

490 x 390 x 200 mm

INCLUDED ACCESSORIES

- Combined current and potential leads with C-clamps 5m. (2)
- Combined current and potential leads with alligator clips 5m. (2)
- Aluminum case for the accessories
- Power cord.
- Operating instructions



Technical modifications reserved.

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