

MPK203x

Digital micro-ohmmeter

Instrument with optimized filters and protections for measurements in electrical substations



Illustrative Photo.

Features

- Alphanumerical display
- Direct reading (up to 4½ digits)
- Resolution: 0.1 $\mu\Omega$
- Resistance reading: up to 20 m Ω
- U/I (4-wires) measurement
- Overheating protection
- Internal memory for up to 200 readings
- USB interface
- Software for data management
- Built-in printer

MegaLogg2

Software to manage the equipment's memory, adjust date / time and generate test reports.



Description

The **MEGABRAS MPK203x** is a smart and portable digital ohmmeter. Has optimized filters and protections for measurements in electrical substations. Can be used to accurately measure very low contact resistances of high voltage circuit-breakers and switches, busbars, etc., with test currents up to 200 A. It employs the 4 terminals-method (U/I measuring principle) to avoid errors caused by test leads and their contact resistances.

Measurement accuracy is guaranteed by a state-of-the-arts signal amplification system, offset-free and of high long-term stability. Resistances readings are shown in the alphanumeric display with up to 4½ digits-resolution.

Test current may be adjusted by the operator and his value is measured using an analogue indicator (bargraph).

It has an internal memory for up to 200 readings. The serial data output (USB) may be connected to a computer to download the stored values.

The high-current generation system is based on modern technology that allows to significantly decrease both its weight (approx. 11kg) 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 damage caused to the instrument due to overheating.

This is a strong but lightweight equipment, and may be easily carried by one person. It is water-resistant and can be used under severe weather conditions (IP54 with closed lid) offering an excellent performance working both in the laboratory and out in the field.

Technical specifications

MPH203x

TEST CURRENT

100 A, 200 A (True DC).
The current may be continuously adjustable from 0 to 100 %.

RESISTANCE RANGES

0 up to 2000 $\mu\Omega$ (test current: up to 200 A).
0 up to 20 m Ω (test current: up to 100 A).

READING RESOLUTION

0.1 $\mu\Omega$ from 0 up to 2000 $\mu\Omega$.
1 $\mu\Omega$ from 2 m Ω up to 20 m Ω .

OUTPUT VOLTAGE

3.5 Vdc @ 200 A.
4.5 Vdc @ 100 A.
5.8 Vdc (without load).

MAXIMUM LOAD RESISTANCE

10 m Ω @ 200 A.
30 m Ω @ 100 A.

MEASUREMENT PRINCIPLE

Four-terminal, U/I.

THERMAL PROTECTION

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

CONTINUOUS OPERATION TIME

At 200 A this equipment may be used continuously for approx. 3 minutes before the thermal protection activates.
At 100 A this equipment may be used continuously for approx. 15 minutes before the thermal protection activates.

BASIC ACCURACY

2000 $\mu\Omega$ range:
 $\pm 0.5\%$ of reading ± 2 digits from 200.0 $\mu\Omega$ up to 1999.9 $\mu\Omega$.
 $\pm 1\%$ of reading ± 2 digits from 0 up to 199.9 $\mu\Omega$.

20 m Ω range:

$\pm 0.5\%$ of reading ± 2 digits from 2.000 m Ω up to 20.000 m Ω .
 $\pm 2\%$ of reading ± 2 digits from 0 up to 1999.9 $\mu\Omega$.

ADVANCED FEATURES

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

BUILT-IN MEMORY

It allows the storage of 200 tests readings.

SERIAL DATA OUTPUT

USB for download the stored values.

ENVIRONMENTAL PROTECTION

IP54 (with closed lid).

SAFETY CLASS

Meets the requirements of IEC 61010-1.

POWER SUPPLY

Mains: 220 - 240 V~.

OPERATING TEMPERATURE RANGE

-5 °C to 50 °C.

STORAGE TEMPERATURE RANGE

-25 °C to 70 °C.

HUMIDITY RANGE

95 % RH (non condensing).

EQUIPMENT WEIGHT

Approx. 11 kg.

DIMENSIONS

502 x 394 x 190 mm.

ACCESSORIES WEIGHT

Approx. 20.5 kg.

Included accessories

- 2 combined current and potential leads - up to 15 m
- Power cord
- Ground cable
- USB cable
- Case for the accessories
- User guide
- MegaLogg2 software