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**آترین الکترونیک**

تخصص، تنوع و کیفیت

02166766957 - 02166766927



info@atrinelec.com



تهران پاساژ امجد طبقه 1 واحد 16



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# MPK204e



## 200 A DIGITAL MICRO-OHMMETER

- ✓ MICROPROCESSOR CONTROLLED
- ✓ ALPHANUMERICAL DISPLAY
- ✓ RESOLUTION DOWN TO: 0.1  $\mu\Omega$
- ✓ RESISTANCE READING UP TO: 200  $\Omega$
- ✓ UP TO 200 A TEST CURRENT
- ✓ KELVIN-TYPE (4 - WIRES) MEASUREMENT
- ✓ POWERED BY INTERNAL BATTERY (UP TO 10 A) OR MAINS SUPPLY
- ✓ DIRECT READING (UP TO 4½ DIGITS)
- ✓ OVERHEATING PROTECTION
- ✓ SERIAL DATA OUTPUT (USB)

The **MPK204e** high current micro-ohmmeter is a portable, microprocessor-controlled instrument, used to accurately measure very low contact resistances of breakers and switches, busbars, transformers winding and engines, etc, with test currents from **1 mA** to **200 A**. It employs the 4 terminals-method to avoid measurement errors caused by test leads and their contact resistances. Resistances readings are shown in the alphanumeric display with up to 4½ digits-resolution. It allows to measure resistances up to **200  $\Omega$** , with a resolution of up to **0.1  $\mu\Omega$** .

Using its internal rechargeable battery, measurements with up to 10A test current may be carried out without connecting the equipment to mains power. Powered by to mains power, it allows to measure with any test current up to 200A.

Measurement accuracy is guaranteed by an state-of-the-arts signals amplification system, offset-free and of high long-term stability. Test current may be adjusted by the operator in every one of the scales and their values are measured using an analogue indicator (bargraph), making it easy to measure resistances with a significant inductive component, as in the case of big transformers windings.

The high-current generation system is based on modern technology that allows to significantly decrease both its weight (16kg) 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, and 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.

# MPH204e - TECHNICAL SPECIFICATIONS

## TEST CURRENTS

1 mA, 10 mA, 100 mA, 1 A, 10 A, 200 A  
Each current may be continuously adjustable from 0 to 100%

## RESISTANCE RANGES

200 A	0-199.9 $\mu\Omega$	0.1 $\mu\Omega$
200 A	0-1999 $\mu\Omega$	1 $\mu\Omega$
10 A	0-1999 $\mu\Omega$	1 $\mu\Omega$
10 A	0-19.999 m $\Omega$	1 $\mu\Omega$
1 A	0-19.99 m $\Omega$	10 $\mu\Omega$
1 A	0-199.99 m $\Omega$	10 $\mu\Omega$
100 mA	0-199.9 m $\Omega$	100 $\mu\Omega$
100 mA	0-1999.9 m $\Omega$	100 $\mu\Omega$
10 mA	0-1999 m $\Omega$	1 m $\Omega$
10 mA	0-19.999 $\Omega$	1 m $\Omega$
1 mA	0-19.99 $\Omega$	10 m $\Omega$
1 mA	0-199.99 $\Omega$	10 m $\Omega$

For each test current, ranges are automatically selected for optimal reading.

## MEASUREMENT PRINCIPLE

Four-terminal, Kelvin-type.

## CONTINUOUS OPERATION TIME

At 200 A this equipment may be used continuously for approx. 3 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

$R < 0.5 \text{ m}\Omega$ :  $\pm (0.50\% \text{ of reading} + 2 \text{ ULSD}^*)$

$R \geq 0.5 \text{ m}\Omega$ :  $\pm (0.20\% \text{ of reading} + 2 \text{ ULSD}^*)$

\* 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.

## TEST CURRENT MEASUREMENT

The current is digitally measured and a bargraph shows the result. The bargraph indication is specially useful when measuring inductive loads, so that the operator can verify easily when the test current has been stabilized.

## SERIAL DATA OUTPUT

USB.

## ENVIRONMENTAL PROTECTION

IP54 with closed lid.

## SAFETY CLASS

Meets the requirements of IEC 61010-1.

## POWER SUPPLY

Mains or internal battery powered.

**Internal battery:** rechargeable, sealed lead-acid, 12 V - 7 Ah (for up to 10 A test current).

**Mains supply:** 220-240 V~ (for up to 200 A test current).

## BUILT-IN BATTERY CHARGER

For 220-240 V~ mains supply.

## OPERATING TEMPERATURE RANGE

-5°C to 50°C.

## STORAGE TEMPERATURE RANGE

-25°C to 65°C.

## HUMIDITY RANGE

95% RH (non condensing).

## EQUIPMENT WEIGHT

Approx. 16 kg.

## DIMENSIONS

502 x 394 x 190 mm.

## INCLUDED ACCESSORIES

- 2 combined current and potential leads for 10 A (1.8 m).
- 2 combined current and potential leads for 200A (6 m).
- 1 USB cable.
- 1 power cord.
- 1 user guide.
- 1 case for the accessories.

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**MEGABRAS INDÚSTRIA ELETRÔNICA LTDA.**  
Rua Gibraltar, 172 - Santo Amaro - CEP 04755-070  
São Paulo - SP - Brazil  
Phone +55 11 5641-8111 - Fax +55 11 5641-9755  
megabras@megabras.com - [www.megabras.com](http://www.megabras.com)



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