

# DM 200

200 A DIGITAL MICRO-OHMMETER PORTABLE



The DM-200 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, and others 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 4 ½ digits resolution. It allows to measure resistances up to 200 Ω, with a resolution of up to 0.1 mΩ. Using its internal rechargeable battery, measurements with up to 10 A test current may be carried out without connecting the equipment to mains power. Powered by to mains power, it is able to measure with any test current up to 200 A.

- MICROPROCESSOR CONTROLLED
- ALPHANUMERICAL DISPLAY
- RESOLUTION DOWN UP TO : 0.1 mΩ
- RESISTANCE READING UP TO : 200 Ω
- UP TO 200 A TEST CURRENT
- KELVIN-TYPE (4 - WIRES) MEASUREMENT
- DIRECT READING (UP TO 4½ DIGITS)
- OVERHEATING PROTECTION
- SERIAL DATA OUTPUT (RS-232)
- LIGHTWEIGHT (16 KG)
- POWERED BY INTERNAL BATTERY OR MAINS SUPPLY

## TECHNICAL SPECIFICATIONS

### TEST CURRENTS (T.C.)

1 mA, 10 mA, 100 mA, 1 A, 10 A, 200 A

Each current may be continuously adjustable from 0 to 100 %

### RESISTANCE RANGES

0 – 200 mΩ and 0 – 2000 mΩ @ 200 A T.C.

0 – 2000 mΩ and 0 – 20 mΩ @ 10 A T.C.

0 – 20 mΩ and 0 – 200 mΩ @ 1 A T.C.

0 – 200 mΩ and 0 – 2000 mΩ @ 100 mA T.C.

0 – 2000 mΩ and 0 – 20 Ω @ 10 mA T.C.

0 – 20 Ω and 0 – 200 Ω @ 1 mA T.C.

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

### RESOLUTION

0.1 mΩ @ 200 A T.C.

1 mΩ @ 10 A T.C.

10 mΩ @ 1 A T.C.

100 mΩ @ 100 mA T.C.

1 mΩ @ 10 mA T.C.

10 mΩ @ 1 mA T.C.

### 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 damages due to overheating

### BASIC ACCURACY

± 0.25 % of reading ± 2 digits

### 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

Although the current is digitally measured, an analogue taut band instrument shows the result in order to facilitate the evaluation. This is especially 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, 12 V 7 Ah

Mains: 220 – 240 VAC

Internal battery is useful for up to 10 A T.C.

Mains power is useful for any test current, including 200 A

### BUILT-IN BATTERY CHARGER

For 220 – 240 VAC mains

### OPERATING TEMPERATURE RANGE

-5 °C – 50 °C

### STORAGE TEMPERATURE RANGE

-25 °C – 65 °C

### HUMIDITY RANGE

95 % RH (non condensing)

### ALTITUDE MAXIMUM

3000 m

### WEIGHT

Approx. 16 kg, including battery

### DIMENSIONS

502 mm x 394 mm x 190 mm

### ACCESSORIES INCLUDED

- Combined current and potential leads with alligator clips for 200 A – 3.5 m (2)
- Combined current and potential leads with alligator clips for 10 A – 1.8 m (2)
- Aluminum case for the accessories
- Power cord
- RS-232 cable
- Operating instructions



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