



MMR-620

Indeks: WMGBMMR620

Microohmmeter

Description

The MMR-620 Series meters are professional portable instruments for measuring very low resistances. Due to their special measurement algorithm they can be used for both resistive and inductive type of a specimen that makes MMR-620 a perfect instrument for electrician testing electrical junctions, motors and power transformers windings. The results can be stored in the internal memory and send to a computer via serial interface. A quick PASS/FAIL test function with results displayed and acoustically indicated simplifies measurements considerably. The MMR-620 meter can also be used for testing the quality of the junctions in a production process via the interface.



Technical Specification

- **Measurement of resistive object type:**
 - welded and soldered connections, equipotential bonding, earth wire,
 - terminals and connectors, rail welded joints, cables and wires,
 - measurement 4-pole method.
- **Measurement of inductive object type:**
 - coils (motors and transformers), low resistance coils.
- **Range selection autoranging or manual (measurement of inductive object type).**
- **Selectable measurement mode adjusted to object type:**
 - for resistive objects - fast mode (3 seconds),
 - for inductive objects - long mode with automatic discharge after measurements (or with lower accuracy - shorter mode).
- **Selectable measurement mode adjusted to application:**
 - normal mode - after pushing „START” button,
 - automatic mode - since test leads are connected to the object meters automatically starts measurement with dual direction current flow and gives average result - what eliminates eventual DC voltage on tested object,
 - continuous mode - every 3 seconds for resistive objects or

continuous measurement for inductive objects.

- **Window mode:**

- this option enables setting an upper and a lower limit between which the average measurement result is bound to appear. The results outside of this range will be indicated by two long audible signals and the symbols.

- **MMR-630 is designated not to be effected by interference up to 20 mV and to show noises from 20 to 100 mV (so in edge conditions even 5 times higher than measured drop of potential).**

- **Memory store for up to 990 results and a communications facility for transferring data from the device to a PC.**

Electric security:

- type of insulation: double, according to EN 61010 - 1 and IEC 61557
- measurement category: CAT III 300 V acc. to EN 61010 - 1
- protection class acc. to EN 60529: IP54

Other technical data:

- meter's power supply: battery package SONEL/Ni-MH 4,8 V
- battery charging time: approx. 2,5 hours
- number of measurements with the current of 10 A: 300
- auto-off time: 120 seconds
- immunity to interference: additional error $\leq 1\%$ for voltage 50 Hz ≤ 100 mV RMS
- maximum leads resistance for the 10 A current: 0,1 Ω
- maximum inductance of the tested object: 40H
- accuracy of the test current: $\pm 10\%$
- resistance measurement time:
 - with the selected resistive object type with the bidirectional current: 3 seconds
 - with the selected inductive object type, dependant on the resistance and inductance of the object: a few minutes (max. 10)
- dimensions: 295 x 222 x 95 mm
- weight: approx. 1,7 kg

Rated operational conditions:

- operation temperature: 0...+40°C
- storage temperature: -20...+60°C

MMR-620 microohmmeter conforms the following directives or standards according to CE requirements.

Directive:

Low Voltage Directive (LVD) 73/23/EEC, 93/68/EEC.

Standards:

EN 61010 - 1:2001 Safety requirements for electrical equipment for measurement, control and laboratory use. General requirements .

EN 61010 - 031:2002: Safety requirements for electrical equipment for measurement, control and laboratory use. Safety requirements for hand-held probe assemblies for electrical measurement and test.

Directive:

Electromagnetic compatibility (EMC) 89/336/EEC, 92/31/EEC, 93/68/EEC.

Standards:

EN 61326:1997+A1:1998+A2:2001 Electrical equipment for measurement, control and laboratory use - EMC requirements.

Resistance measurement

MMR-620		Current	Accuracy
Range	Resolution		
0...999 $\mu\Omega$	1 $\mu\Omega$	10 A	$\pm(0,25\% \text{ m.v.} + 2 \text{ digits})$
1,000...1,999 m Ω	0,001 m Ω		
2,00...19,99 m Ω	0,01 m Ω		
20,0...199,9 m Ω	0,1 m Ω	1 A	
200...999 m Ω	1 m Ω	0,1 A	
1,000...1,999 Ω	0,001 Ω		
2,00...19,99 Ω	0,01 Ω	10 mA	
20,0...199,9 Ω	0,1 Ω	0,1 mA	

200...1999 Ω

1 Ω

0,1 mA

- input impedance of the voltmeter: $\geq 200 \text{ k}\Omega$

„m.v.” - measured value.