

MICROHMMETER

MILLIOHMMETER

DEFINITION

MICROHMMETER AND MILLIOHMMETER ARE LOW RESISTANCE METERS DEDICATED TO MEASURE AN OHMIC VALUE UNDER A DEDICATED CURRENT

They are based on two main circuits : an extremely stable current source + a high impedance and very accurate voltage measurement system for real 4 wire measurement method (also called Kelvin method)

APPLICATION

MANUFACTURER, HIGH SPEED PRODUCTION, MAINTENANCE, LABORATORY, BUT ALSO AERONAUTICAL INDUSTRY



- ▶ cable manufacturer (measurement on 1 meter cable sample, ...) with MGR10
- ▶ electric motors, generators (test of the winding resistance for the determination of heat rise) with MGR10
- ▶ resistors, fuses, transformer windings, transducers, coils, printed circuit boards ... with MGR10
- ▶ automotive component manufacturer (test of air bag and seat belt detonator resistance, of the ABS braking system coils, ...) with MGR10C
- ▶ delectric/electronic component manufacturer, relays, connectors (measurement of the switch contact resistance, relay contact resistance, ...) with MGR10B
- ▶ rockets, launch vehicles, tanks, planes, helicopter bondings (also called bonding test or metalisation) for production and maintenance with RCP2A
- ▶ household, industrial equipment, medical industry, information technology industry, measurement, control and laboratories industry in order to validate that all the touch accessible parts are properly connected to the protective earth connection, according to the quality standards from the Low Voltage Directive (LVD), applicable to the corresponding standards (IEC335, IEC950, IEC601, IEC1010, IEC598, IEC990, IEC204...) with CMG30



SPECIFICATION OVERVIEW

FROM LABORATORY TO PRODUCTION TESTING AND MAINTENANCE, OUR RANGE IS MADE OF 3 FAMILIES

- ▶ very low measurement resistance measurement from 0.1 $\mu\Omega$ up to 10 A with MGR10
- ▶ temperature compensation for copper and aluminium (but also any additional materials) with MGR10
- ▶ 10A pulsed current with a 600 m Ω range for measurement on dissimilar materials (also called composite) with RCP2A
- ▶ ground bond test up to 40A (typical resistance limits 100 m Ω , 200 m Ω or 500 m Ω) with CMG30
- ▶ GPIB, RS232, 0-10V, PLC available
- ▶ Smg Pro, RCP2A Pro & MGR10 Pro software for quality purposes, traceability and professional reporting



SELECTOR GUIDE

From the below board select the right product according to your application

Microhmmeter & Milliohmmeter range	Resistance range	AC or DC current	Accuracy	Temperature Compensation	Interface	Portative	Software (in option)
MGR10 microhmmeter	0,1μΩ - 30kΩ	10μA - 10A DC	0,03%	Yes	RS232 included GPIB, PLC in option	See MGR10A	MGR10 Pro
MGR10A microhmmeter (on battery)	0,1μΩ - 30kΩ	10μA - 10A DC	0,03%	Yes	RS232 included, GPIB, PLC in option	Yes	MGR10 Pro
MGR10B microhmmeter (for contact resistance)	10μΩ - 30kΩ	10μA - 100mA DC	0,03%	Yes	RS232 included, GPIB, PLC in option	No	MGR10 Pro
MGR10C microhmmeter (pyrothecnic version)	100μΩ - 30kΩ	10μA - 10mA DC	0,03%	Yes	RS232 included, GPIB, PLC in option	No	MGR10 Pro
RCP2A milliohmmeter (metalisation)	1μΩ - 6Ω	100mA - 10A DC	0,1%	No	RS232 included	Yes	RCP2A Pro
CMG30 ground bond tester	1mΩ - 1,5Ω	5 - 30A AC 40A option	2,5%	No	RS232, GPIB, PLC in option	No	SMG Pro
MK Series Clamping device	1 meter linear measurement guides to measure cable section : from 0,1mm ² to 2500 mm ²						

For product detailed datasheet, options and accessory details, or for more technical information about RCP2A application, go to our website

In order to know the requirement from the Low Voltage Directive, for the most common standards, go to our website

All our equipment are delivered with data measurement, calibration certificate, CE mark certificate and user manual

SEFELEC ADDED VALUES

- ▶ MGR10 : no other tester on the market gives you such a price/specs ratio
- ▶ MGR10 : automatic or manual temperature compensation with possibility of specific coefficient
- ▶ MGR10 : fast measuring mode (50 measurements/second), ideal for production lines (fuses, switches, connectors, ...)
- ▶ RCP2A : the only equipment to measure on composites, worldwilde
- ▶ CMG30 : where AC current and 40A are needed for ground bond test (electrical safety testing standards), this is the solution

For more information on Sefelec products, applications or services, please contact your local Sefelec office.

The complete list is available at :

http://www.sefelec.com/carte_en.html



Specifications subject to change without notice
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