MGR10 | MGR10A

Datasheet

Milliohmmeter

MGR10|MGR10A

General specifications

Power supply	**230V ±10% or 115V ±10% single-phase, 47–63 Hz Power consumption: 40 to 100 VA depending on usage**
Measurement range	From 0,1 µΩ to 30 kΩ
Measurement current	Up to 10A
Open-circuit voltage	20 mV and 50 mV according NFC 93050
Storage temperature	from -10°C to +60°C
Operating temperature	from 0°C to +45°C
Dimensions Height Width Depth	 131 mm 440 mm 455 mm
Weight	12 kg max.
Overvoltage category	CATII
Pollution degree	2
Class	Classe 1 (relié à la terre)
Accuracy	<0.03%

MGR10 RANGE'S ADVANTAGES

- **Range selection:** Automatic and manual
- **Display:** 30,000-count LCD screen
- **Measurement current accuracy:** 0.1% in pulsed mode (battery) or DC mode (mains power)
- **Trigger mode:** Manual or continuous, with selection of current polarity (+VE, -VE, -VE with averaging to eliminate thermocouple effects)
- **Measurement speed:** Up to 50 measurements per second, with selectable speeds (higher accuracy at lower speed)
- **Connections:** 4 × 4 mm banana sockets on front panel
- **Protections:** Against inductive loads and overvoltages (up to 415 V)
- **Temperature compensation:** From 0 to 100 °C, display in °C, °F, or °K, manual or automatic compensation for copper and aluminum (other values possible)
- **Dual comparator:** Displays low and high limits with LED indicators (green for pass, red for fail) and relay contacts available (MGR10-07 option)
- **Measurement storage:** Capacity for 4,000 timestamped measurements

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Range	Resolution	Max	Current min.	Resolution	Accuracy
30 KΩ	1Ω	100 µA	10 µA	1 µA	0.03% of reading + 0.02% of range
3 KΩ	100 mΩ	1 mA	100 µA	10 µA	0.03% of reading + 0.01% of range
300 Ω	10 mΩ	10 mA	1 mA	100 µA	
30 Ω	1 mΩ	100 mA	10 mA	1 mA	
3 Ω	100 µΩ	1A	100 mA	10 mA	
200 mΩ	10 µΩ	10A	1A	100mA	
30 mΩ	1 µΩ	10A	1A	100mA	
3 mΩ	0,1 µΩ	10A	1A	100mA	0.03% of reading + 0.02% of range

The MGR10 milliohmmeter operates in 4-wire mode (Kelvin method).
This technique delivers a highly stable constant current through two wires and measures the voltage across two separate wires. This configuration eliminates the influence of contact and lead resistance, ensuring accurate low-resistance measurements.

ACCESSORIES

CO160	Red-Green indicator lamp
KRM-G3U	19-inch rack kit
TE66	4-wire continuity test probe (CO183 + CO184)
TE80	2-wire continuity test probe with remote control
TE81	2-wire continuity test probe with remote control and Pass/Fail indicators
CO183	2-wire continuity test lead with alligator clip
CO184	2-wire continuity test lead with retractable tips
CO64	4-wire test cable with Kelvin clips
CO226	Alligator clips with large 41 mm jaw opening
KW	Low-value resistor, to be selected between 1 mΩ and 10 kΩ

OPTIONS

MGR10-01	RS232C serial interface (talk/listen mode)
MGR10-02	Programmable Logic Controller (PLC) interface • Cycle start contact • Pass/Fail contact • End-of-cycle contact • Fault contact
MGR10-04	Temperature sensor
MGR10-05	Measurement output on the rear panel
MGR10-06	IEEE488.2 Interface (Talker-Listener)
MGR10-07	Analog output
MGR10A	Powered by mains and batteries

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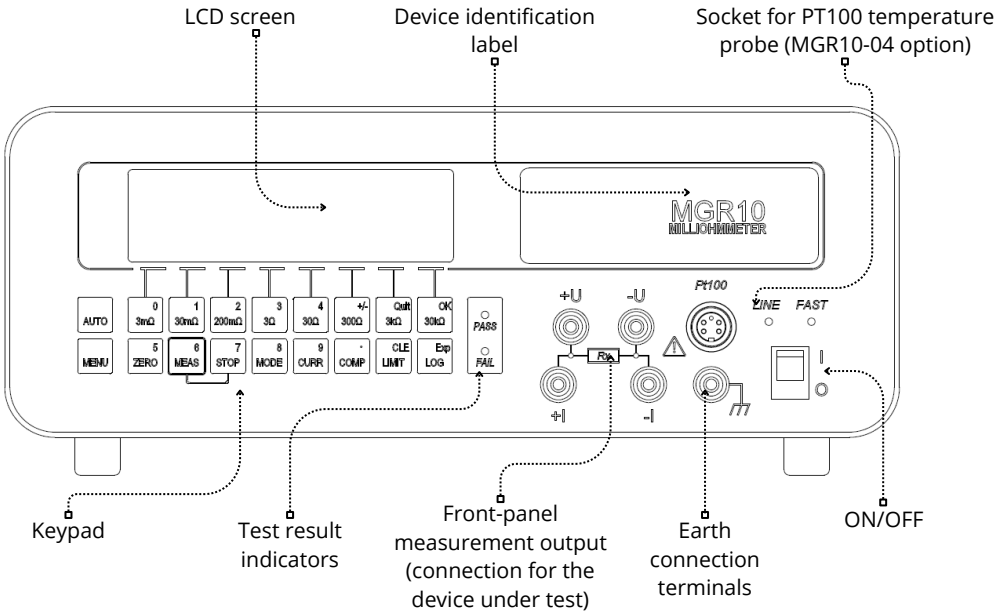
DESIGN

FRONT



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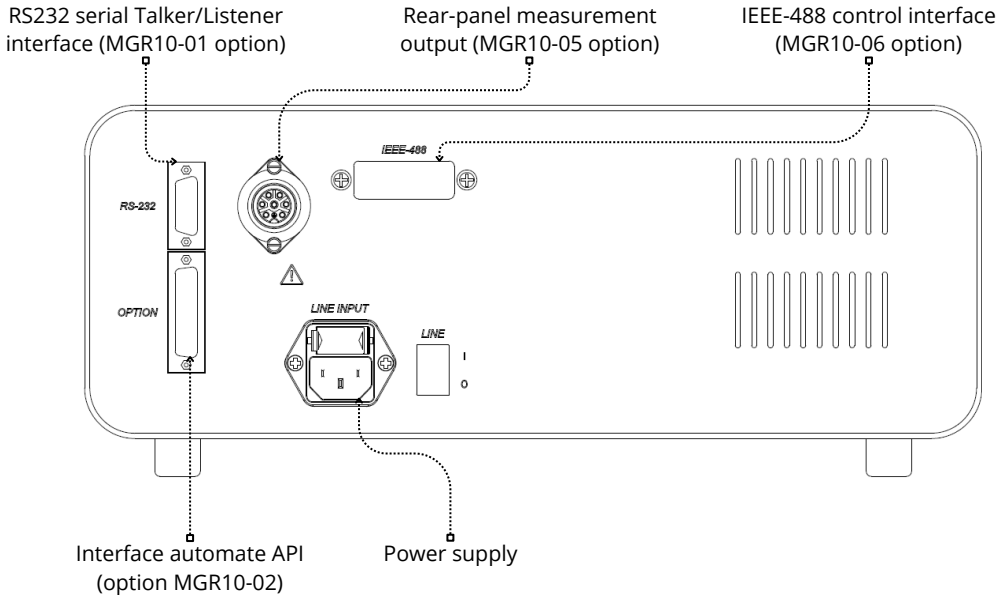

Discover our product ranges:

SCANNER 64-SC

- High density: 8 to 512 channels
- Maximum voltage: 5kVAC 500VA and 6kVDC
- Insulation: up to 200GΩ under 1000 VDC
- Ground continuity: up to 32A AC max.
- Compliant with: IEC 61010-2-034

SEFELEC 5X

- Dielectric strength: 5 kVAC and 6 kVDC with a power of 50 or 500VA
- Insulation measurement: under 1000VDC for measurements up to 2 TΩ
- Ground continuity control: under 32A or 50AAC