

RMO-A

Microhmmeters



True ripple-free DC current up to 600 A weighing only 7-8 kg

RMO-A

Micro-ohmmeter for circuit breakers

amperis

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Contact resistance measurement in manufacturing, commissioning and maintenance.

Product overview



Front panel: current and sense terminals, control knob and optional printer

Up to 600 A without ripple

The series generates a true DC current, with less than 1% ripple, in an automatically regulated ramp that rises before measuring and falls afterwards: magnetic transients are removed and the measurement reaches a typical accuracy of $\pm(0.1\%$ of reading + 0.1% of full scale), using Kelvin's four-point principle.

Six models, three test modes

From the 100 A model to the 600 A one, all offer the SINGLE, CONTIN and DTRtest modes; the latter saturates the current transformers of dead-tank circuit breakers before the measurement.

Main features

- Range from 0.1 $\mu\Omega$ to 999.9 m Ω , expandable up to 6 Ω .
- Best resolution of 0.1 $\mu\Omega$.
- 100 A test current continuously, without rest time.
- Optional high-precision module: 1 to 30 $\mu\Omega$ with 0.01 $\mu\Omega$.
- Internal memory for 500 time- and date-stamped measurements.
- Optional thermal printer and Bluetooth.
- Cancellation of electrostatic and electromagnetic interference.



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Applications and software



Measurement on a breaker with four-point Kelvin connection

Applications

- Contact resistance of medium- and high-voltage circuit breakers.
- Live-tank and dead-tank breakers (DTRtest mode).
- Disconnectors, busbar joints, cable splices and welded joints.
- Fuses and other high-current links in factory or substation.
- Pass/fail criterion with R_{max} limit on the device and on the PC.

PC software for control and analysis

The included PC software controls the test over USB or RS232, records results at configurable intervals in continuous mode, downloads the memory with search filters and generates configurable reports with export to Excel.

High output power

The high output voltage widens the measuring range at high currents and allows longer or thinner cables: the 600 A model measures up to 5.3 m Ω with 5 m / 50 mm² cables, and the 100 A model accepts 20 m cables of only 16 mm².

RMO-A — MEASUREMENT DATA

Resistance range	0.1 $\mu\Omega$ – 999.9 m Ω ; expandable from 0 to 6 Ω
Resolution	0.1 $\mu\Omega$ (up to 999.9 $\mu\Omega$); 1 $\mu\Omega$ (up to 9.999 m Ω); 10 $\mu\Omega$ (up to 99.99 m Ω); 0.1 m Ω (up to 999.9 m Ω)
Typical accuracy	$\pm(0.1\%$ of reading + 0.1% of full scale)
Test current	Selectable, up to 600 A DC depending on model; ripple < 1%
Open-circuit voltage	10 V DC $\pm 2\%$
High-precision module (optional)	1 to 30 $\mu\Omega$ with 0.01 $\mu\Omega$ resolution
Memory	500 time- and date-stamped measurements
Test ramp	Automatically regulated, progressive rise and fall

Specifications valid at +25 °C with the recommended accessories.

The manufacturer reserves the right to change the specifications without prior notice.



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RMO-A – TECHNICAL SPECIFICATIONS

	RMO100A	RMO200A	RMO300A	RMO400A	RMO500A	RMO600A
Maximum current	100 A	200 A	300 A	400 A	500 A	600 A
Duration at maximum current	Continuous	150 s	150 s	50 s	30 s	20 s
Consumption at 230 V AC	1210 VA	1890 VA	2360 VA	3520 VA	3930 VA	4560 VA
Full-load voltage (230 V)	7.30 V	7.20 V	6.10 V	6.70 V	6.00 V	5.80 V
Weight	7 kg	7 kg	7.5 kg	7.5 kg	8 kg	8 kg

Common to all models: dimensions 198 × 255 × 380 mm; supply 90 – 264 V AC, 50/60 Hz; backlit 4 × 20 character LCD; USB (optional RS232 and Bluetooth); IP50; operating temperature -20 to +55 °C; storage -40 to +70 °C; humidity 5 – 95% non-condensing.

Standards: IEEE C37.09 and IEC 62271-100 (circuit breaker testing); safety IEC EN 61010-1; EMC EN 61326-1. Specifications valid at +25 °C.



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