

Handheld Micro-Ohmmeter **RMO10H**

- Extremely lightweight – only 0,95 kg / 2.1 lbs
- Regulated test current up to 10 A DC
- Best resolution: 0,1 $\mu\Omega$
- Battery-powered / Internal memory
- Typical accuracy $\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
- Measuring range 1 $\mu\Omega$ – 3 k Ω
- Pass/fail assessment



Description

The RMO10H is a battery-powered, and handheld micro-ohmmeter manufactured for low resistance measurement. It is designed to provide fast, repeatable, and accurate measurements, where non-inductive resistance is checked during factory, maintenance, and commissioning inspections or testing in high-induction field environments.

The high-capacity Li-Po battery enables generating a true DC ripple-free current.

Applications

- Cables and wire resistance and cable connections checking
- Switches, busbars, relays, welding joints resistance measurement
- Lightning protection and protective bonding systems verification
- Railway lines, vehicles, and rail track joints testing
- Quality control during manufacturing of components and panels
- Bonds and joints checking in aircraft manufacturing industry

Connecting RMO10H to a test object

The illustration diagram of the RMO10H device connection to the test object is shown in the figure above.

The combined current and voltage sense leads with appropriate clamps are specially designed to fulfill the Kelvin's 4-point principle. That way, a resistance of both current cables and clamps is excluded from the resistance measurement.



Benefits and features

RMO10H is ideal for field and factory testing, with a very user-friendly interface (1-click test). This is achieved with an intuitive keyboard, menu design, and flexible duplex probe with a test button. It is designed to provide fast, accurate, and repeatable measurements even in electrically noisy environments.

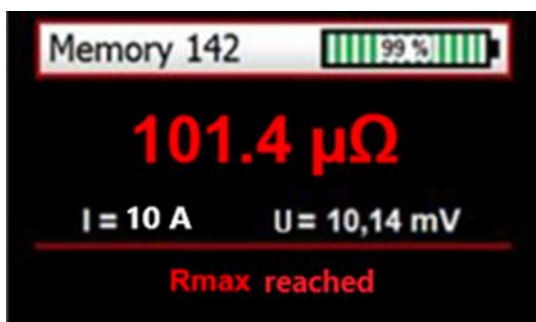
The high-capacity Li-Po battery enables multiple measurements. With a fully charged battery, RMO10H can perform over 2000 tests with the 10 A test current.

RMO10H devices can store up to 10 000 test results in internal memory (time and date stamped resistance, test current, and voltage drop values). The results can be transferred to a PC with the use of Bluetooth communication.

The RMO10H device has a very high typical accuracy $\pm (0,2\% \text{ rdg} + 0,2\% \text{ FS})$, with the best resolution of $0,1 \mu\Omega$.

Pass/fail criteria

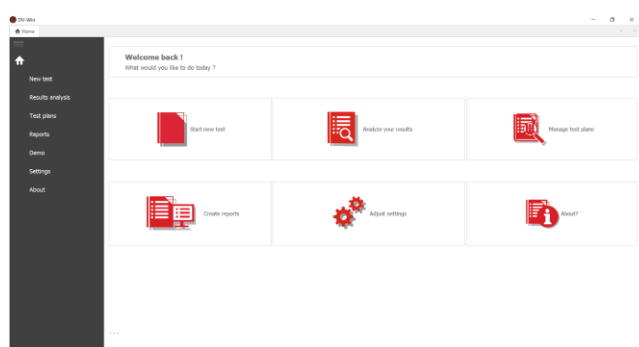
An additional feature is the pass/fail criteria implemented through the R_{max} function. When this function is turned ON, the RMO10H device displays information if the measured value is higher than the set R_{max} resistance value.



DV-Win Software

DV-Win software for the RMO10H device is an application set of tools based on the Windows operating system. It enables communication between a standard PC and the RMO10H device over the Bluetooth connection. The main features of the software are:

- Download of the test results to a PC
- Saving the test results in different formats
- Test reports creation (fully customized)



Resistance measurement ranges

Test current	Resistance range	Typical accuracy
1 mA	3 k Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
10 mA	300 Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
100 mA	20 Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
1A	3 Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
2 A	1,5 Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
5 A	500 m Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$
10 A	200 m Ω	$\pm (0,2 \% \text{ rdg} + 0,2 \% \text{ FS})$

**Accuracy is valid under the maximal test current per the range being used and in case the standard leads are being used.*

Technical data

Battery

- Type: Li-Po (User-replaceable)
1-cell, 8800 mAh
- Recharge time: 2 hours

AC Adapter

- Input voltage 90 – 264 V AC, 47-63 Hz
- Output voltage 12 V DC
- Output current 3 A

Output data

- Test current range:
 - 1 mA – 10 A DC**Test current is regulated and user-selectable*
- Maximum DC output voltage:
 - 4,2 V

Measurement

- Resistance range 1 $\mu\Omega$ – 3 k Ω
- Resolution

1 – 1000 $\mu\Omega$	0,1 $\mu\Omega$
1 – 9,999 m Ω :	1 $\mu\Omega$
10 – 99,99 m Ω :	10 $\mu\Omega$
100 – 999,9 m Ω :	0,1 m Ω
1 – 9,999 Ω :	1 m Ω
10 – 99,99 Ω :	10 m Ω
100 – 999,9 Ω :	0,1 Ω
1000 – 2999 Ω :	1 Ω
- Typical accuracy
 - $\pm (0,2 \% \text{ rdg} + 0,2\% \text{ FS})$**Accuracy is valid under the maximal test current per the range being used.*
- The device is equipped with the overcurrent, overvoltage, and undervoltage protection

Display

- LCD display TFT 2.8 in
(43,2 mm x 57,6 mm) / 1.8 in x 2.3 in
320 x 240 pixels

Memory

- Internal: 32 GB SD Card
- RMO10H can store up to 10 000 measurements*
**Time and date stamped resistance, measured and selected test current, and voltage drop values*

Interface

- Bluetooth communication

Environment conditions

- Operating temperature: -10 $^{\circ}\text{C}$ - +55 $^{\circ}\text{C}$ / +14 $^{\circ}\text{F}$ - +131 $^{\circ}\text{F}$
- Storage & transportation temperature: -40 $^{\circ}\text{C}$ - +70 $^{\circ}\text{C}$ / -40 $^{\circ}\text{F}$ - +158 $^{\circ}\text{F}$
- Humidity: up to 95 %, non-condensing

Dimensions and Weight

- Dimensions (L x W x D):
226 mm x 116 mm x 50 mm
8.9 in x 4.5 in x 1.9 in
- Weight: 0,95 kg / 2.1 lbs

Encapsultaion

- IP67

Warranty

- 3 + 1 years upon device registration at DV Power website

Applicable Standards

- Installation/overvoltage: category II
- Pollution: degree 2
- Environmental tests – Shock: IEC 60068-2-27
- Environmental tests – Vibrations: IEC 60068-2-6
- Safety: Directive 2014/35/EU (CE conform) Standard EN61010-1 (LVD Directive)
- EMC: Directive 2014/30/EU (CE conform) Standard EN 61326-1:2021

All specifications herein are valid at the rated battery voltage (or higher output voltage), ambient temperature of + 25 $^{\circ}\text{C}$ and standard accessories. Specifications are subject to change without notice.

Accessories



Test lead set with flexible duplex probes (one with trigger button)



Test lead set with small TTA clamps



Test lead extension



Power supply adapter



Transport bag



Transport case with accessories

Order info

Instrument with included accessories	Article No
Handheld Micro Ohmmeter RMO10H	RMO10H0-N-02
<ul style="list-style-type: none"> - USB with software - Ground (PE) cable - Carrying belts - Transport bag - Mains power cable with power supply adapter 12 V, 3 A 	

Standard accessories	Article No
Test lead set 2 x 2 m with small TTA clamps	TL-02-2MCNWS
Optional accessories	Article No
Test lead set 2 x 1 m with small TTA clamps	TL-01-2MCNWS
Test lead set 2 x 3 m with small TTA clamps	TL-03-2MCNWS
Test lead set 2 x 5 m with small TTA clamps	TL-05-2MCNWS
Test lead set extensions 2 x 5 m	TLE2-05-2FCN
Test lead set extensions 2 x 10 m	TLE2-10-2FCN
Test lead set 2 x 2 m with flexible duplex probes (one with trigger button)	TL-022MCN-XTDP
Test lead set 2 x 2 m with fixed duplex probes (one with trigger button)	TL-022MCN-FTDP
Cable bag	CABLE-BAG-00
Plastic Transport Case – small size	PLCAS-P00-01
LiPo battery 3,8 V 8800 mAh within fire retardant battery bag	LIPO-BAT-003

B-RMOXHN-107-EN

Date published: 2025-01-08.

Subject to change without notice.