

# Micro Ohmmeter RMO500A

- Lightweight - only 8 kg
- Powerful 5 A – 500 A DC
- Measuring range 0 – 999,9 mΩ
- Resolution to 0,1 μΩ
- SINGLE / CONTIN Mode
- Mechanical protection IP43



## High DC current resistance meter

### Description

RMO500A is a Micro Ohmmeter based on a state of the art technology, using the most advanced switch mode technique available today. RMO500A generates a true DC ripple-free current with automatically regulated test ramps. During a test the RMO500A ramps with increasing current before measuring and decreasing current after the measurement. This eliminates magnetic transients. After the test current has been set, the automatic test procedure is started by pressing the Ω-button.

The RMO500A instrument can store internally up to 500 measurements. All measurements are time and date stamped. Using the DV-Win software a test can be performed from a user's PC, and the results can be obtained directly on the PC. Communication between the RMO500A and a PC is through an USB (as standard) or an RS232 cable (as an option). Using the DV-Win the result can be arranged as an Excel spreadsheet which can be later shown as a diagram and printed for a report.

The set is equipped with a thermal and an overcurrent protection. The RMO500A has a very high ability to cancel electrostatic and electromagnetic interference in HV electric fields. It is achieved by very efficient filtration. The filtration is made utilizing a proprietary hardware and software.

### Output Ratings

The full output is available from the RMO500A at 230 V Mains Supply. A reduced output is available from lower supply voltages.

Supply Voltage	Output Current	Full Load Voltage
230 V AC	500 A DC smoothed	5,90 V DC
	300 A DC smoothed	6,00 V DC
115 V AC	500 A DC smoothed	2,60 V DC
	300 A DC smoothed	4,70 V DC

Output current is filtered and has a ripple of less than 1 %. The RMO500A current output is rated at 500 A for 30 seconds, at 300 A for 90 seconds and 200 A for 2,5 minutes at 25 °C ambient temperature.

## CONTIN Mode

RMO500A can generate a DC current continuously using the CONTIN menu. In this menu the current can be chosen the same way as in the SINGLE menu, but the duration of the test can be preset. The test is started pressing the  $\Omega$ -button. During the test, a new result is shown on the display and stored into the PC (DV-Win) each second. Using DV-Win the result can be arranged as an Excel spreadsheet which can be later shown as a diagram and printed for a report.

## Application

Typical application is measuring resistance of:

- High, middle and low voltage circuit breakers
- High, middle and low voltage disconnecting switches
- High-current bus bar joints
- Cable splices
- Welding joints

## Accessories

### Included

- DV-Win PC software
- Ground cable
- USB cable

### Recommended

- Current cables 2 x 5 m 50 mm<sup>2</sup> with battery clips
- Sense cables 2 x 5 m with alligator clips
- Cable bag

### Optional

- Built-in thermal printer
- Thermal paper roll
- Test shunt 600 A / 60 mV
- Current cables 2 x 10 m 50 mm<sup>2</sup>
- Current cables 2 x 15 m 70 mm<sup>2</sup>
- Extension cable 2 x 10 m 70 mm<sup>2</sup>
- Sense cables 2 x 10 m with alligator clips
- Sense cables 2 x 15 m with alligator clips
- Cable plastic case



Voltage sense cables



Current cables



Extension cable



Test shunt



Transport bags



Transport case

## Technical Data

### 1 - Mains Power Supply

- Connection according to IEC/EN60320-1; C320
- Voltage 90 V – 264 V AC, 50 / 60 Hz, single-phase
- Power consumption 3800 VA (230 V AC); 2300 VA (110 V AC)
- Fuse 15 A / 230 V, type F

### 2 - Output data

- Test current 5 A – 500 A DC
- Measuring range / Resolution
 

0,1 $\mu\Omega$ - 999,9 $\mu\Omega$	0,1 $\mu\Omega$
1000 $\mu\Omega$ - 9999 $\mu\Omega$	1 $\mu\Omega$
10,00 m $\Omega$ - 99,99 m $\Omega$	10 $\mu\Omega$
100,0 m $\Omega$ - 999,9 m $\Omega$	0,1 m $\Omega$
- Typical accuracy  $\pm$  (0,1 % rdg + 0,1 % FS)

### 3 - Environment conditions

- Altitude below 2000 m
- Temperature -10 °C - +55 °C / 14 °F - +131 °F
- Maximum relative humidity 95 % for temperatures up to 31 °C, decreasing linearly to 40 % relative humidity at 55 °C
- Mains supply voltage fluctuations up to  $\pm$ 10 % of the nominal voltage
- Installation/overvoltage category II
- Pollution degree 2

### 4 - Dimensions and Weight

- Dimensions 198 mm x 255 mm x 380 mm  
7,8 in x 10 in x 15 in  
(W x H x D) without handle
- Weight 8 kg / 17,5 lb

### 5 - Warranty

three years

### 6 - Safety Standards

- European standards EN 61010-1  
LVD 2006/95/EC
- International standards IEC 61010-1  
UL 61010-1  
CAN/CSA-C22.2 No. 61010-1, 2<sup>nd</sup> edition, including Amendment 1

### 7 - Electromagnetic Compatibility (EMC)

- CE conformity EMC standard 89/336/EEC  
EMC directive 2004/108/EC
- Emission EN 61326-1
- Interference Immunity EN 61326-1

*All specifications herein are valid at ambient temperature of + 25 °C and recommended accessories.  
Specifications are subject to change without notice.*