



## Micro OhmMeter RMO400

- Lightweight - only 12 kg
- Powerful 10 A – 400 A DC
- Measuring range 0 – 999,9 mΩ
- Resolution to 0,1 μΩ
- SINGLE / CONT Mode
- Mechanical protection IP54



### High DC current resistance meter

#### Description

RMO400 is a micro-ohmmeter based on state of the art technology, using the most advanced switch mode technique available today. RMO400 generates true DC current with automatically regulated test ramps. During the test RMO400 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 RMO400 instrument can store up to 500 measurements. All measurements are time and date stamped. Using RMOWin software a test can be performed from a PC, and the results can be obtained directly at a PC. Communication between RMO400 and PC is through USB cable. Using RMOWin 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 thermal and overcurrent protection. The RMO400 has 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 proprietary hardware and software.

#### Output Ratings

The full output is available from the RMO400 at 230 V Mains Supply. A reduced output is available from lower supply voltages.

Supply Voltage	Output Current	Full Load Voltage
230 V AC	400 A DC smoothed	5,6 V DC
	200 A DC smoothed	6,0 V DC
115 V AC	400 A DC smoothed	4,0 V DC
	200 A DC smoothed	6,0 V DC

Output current is filtered and has a ripple of less than 1%. The RMO400 current output is rated at 400 A for 1 minute, at 300 A for 2 minutes and 200 A continuously at 25°C ambient.

#### CONT Mode

RMO400 can generate DC current continuously using the CONT menu. In this menu the current can be chosen the same way like in the SINGLE menu, but the duration of the test can be preset. The test is started pressing the Ω-button. During the test, a new result is shown on the display and stored into the PC (RMOWin) each second. Using RMOWin the result can be arranged as an Excel spreadsheet which can be later shown as a diagram and printed for a report.

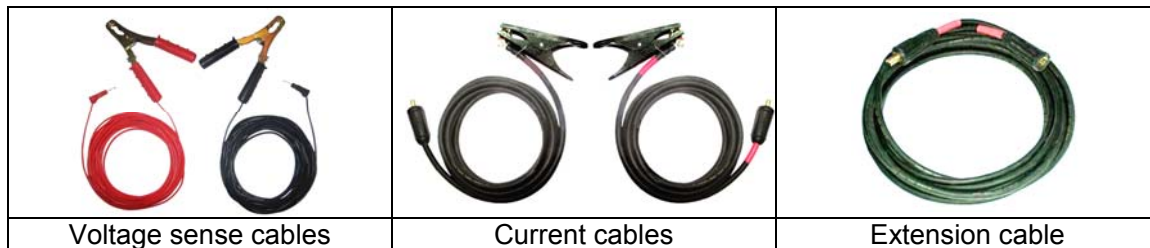
## Application

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

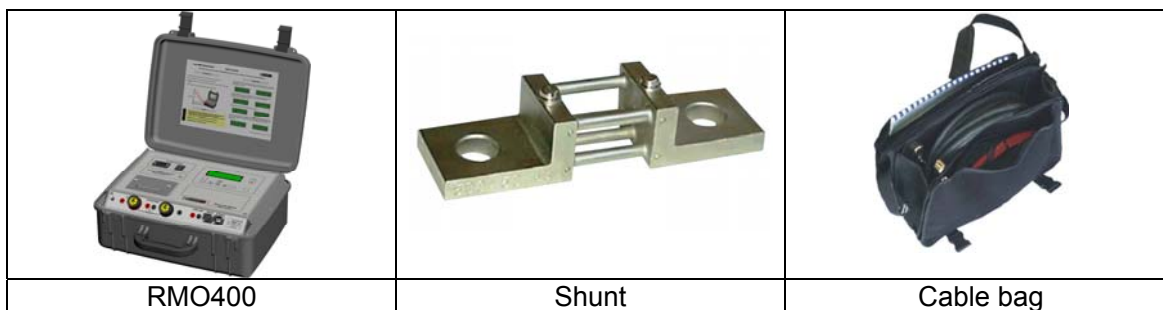
## Standard accessories

- ✓ Current cables 2 x 5 m 35 mm<sup>2</sup> with battery clips
- ✓ Sense cables 2 x 5 m 2,5 mm<sup>2</sup> with alligator clips
- ✓ RMOWin PC software
- ✓ Mains power cable
- ✓ Ground (PE) cable
- ✓ Cable bag



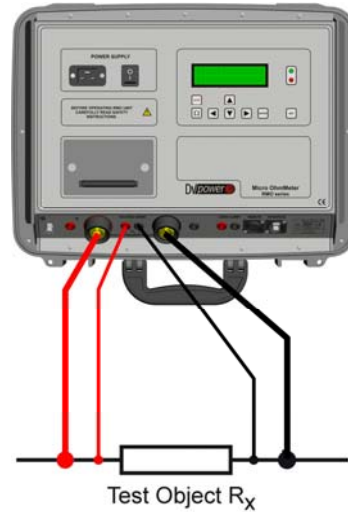
## Optional accessories

- ✓ Built-in thermal printer
- ✓ Remote control unit
- ✓ Current clamp meter
- ✓ Test shunt 600 A / 60 mV
- ✓ Current cables 2 x 10 m 35 mm<sup>2</sup>
- ✓ Current cables 2 x 15 m 50 mm<sup>2</sup>
- ✓ Extension cable 1 x 10 m 50 mm<sup>2</sup>
- ✓ Sense cables 2 x 10 m 2,5 mm<sup>2</sup> with alligator clips
- ✓ Sense cables 2 x 15 m 2,5 mm<sup>2</sup> with alligator clips
- ✓ Sense cables, extension 2 x 10 m 2,5 mm<sup>2</sup>



## Connecting a Test Object to RMO400

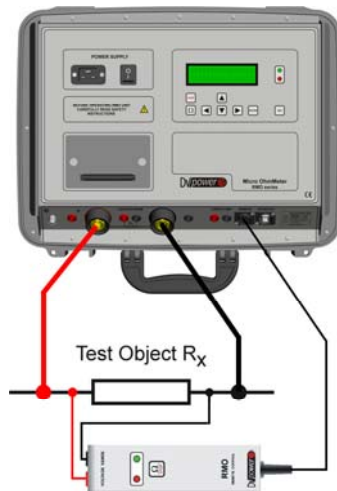
With RMO400 turned off, connect RMO400 to the test object ( $R_x$ ) in such a way that the measuring cables from the "Voltage Sense" sockets are attached as close as possible to  $R_x$ , and in between the current feeding cables. That way, resistance of both cables and clamps is almost completely excluded from the resistance measurement.



## Remote Control Unit

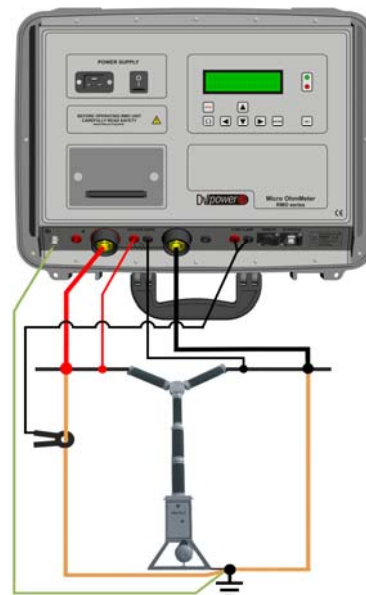
The RMO Remote Control Unit is an optional control unit that is used to start and stop the tests from a remote location, away from the actual RMO.

Provided that, for a series of tests, the same test current is fed through the test object, multiple measurements can be carried out with the RMO Remote Control Unit.



## Current clamp meter

Using RMO400 with current clamp meter it is possible to make safer measurement of breakers with both sides of the breaker grounded. Measuring the current through the ground connection and reducing this value from the total current is an additional safety feature.



## Technical data

### 1 - Mains Power Supply

- Connection according to IEC/EN60320-1; UL498, CSA 22.2
- Mains supply from 90 V to 264 V AC; 50 Hz – 60 Hz

### 2 - Output data

- Test current 10 A – 400 A DC
- Measuring range / Resolution
  - 0,1  $\mu\Omega$  - 999,9  $\mu\Omega$  0,1  $\mu\Omega$
  - 1,000 m $\Omega$  - 9,999 m $\Omega$  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  $\pm$  (0,2% rdg + 0,2% FS)

### 3 – Environment conditions

- Operating temperature  $-10^{\circ}\text{C}$  -  $+50^{\circ}\text{C}$  /  $14^{\circ}\text{F}$  -  $+122^{\circ}\text{F}$
- Storage and transportation  $-25^{\circ}\text{C}$  -  $+70^{\circ}\text{C}$  /  $-13^{\circ}\text{F}$  -  $+158^{\circ}\text{F}$
- Humidity 5% - 95% relative humidity, non condensing

### 4 - Dimensions and Weight

- Dimensions 502 mm x 190 mm x 395 mm  
19,75 in x 7,48 in x 15,53 in  
(W x H x D) without handle
- Weight 12 kg/26,4 lb
- Mechanical protection IP54

### 5– Safety Standards

- European standards EN 61010-1
- International standards IEC 61010-1  
UL 3111-1  
CAN/CSA-C22.2 No 1010.1-92

### 6 – Electromagnetic Compatibility (EMC)

- CE conformity EMC standard 89/336/EEC
- Emission EN 50081-2, EN 61000-3-2/3
- Interference Immunity EN 50082-2

Specifications are subject to change without notice.



**IBEKO POWER AB**