

**WEIS**  
**MEIS**

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## **MM100 / MM200**

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**Micro-Ohm Meter**  
**Self Powered Micro-Ohm Tester with 100/1200A Output**  
**or 10/100/200A Output**

## Introduction

In response to ever growing demands for safer and more accurate methods of testing circuit breakers, Weis has developed the **self powered MM100** portable micro-ohm meter. It is used for measurement of resistance ( $\mu\Omega$ ) by injecting a heavy current through a breaker contact or load carrying joint.

A regulated 100A continuous or pulsed current output is used for regular resistance measurement. Alternatively a high current pulsed output (1200A maximum at 4V) allows for testing of the latest arcing and main contacts that require more than 500-600A to determine the difference between them, as well as to see if they are able to carry such a current.

An alternative self powered **MM200** micro-ohm meter with fixed output ranges of 10A, 100A or 200A is also available.

As a stand-alone unit, static testing can be performed with a direct readout on a built in LCD meter. When used in conjunction with the Weis **SA100**, **SA100R** or **SA100RS** switchgear analyser / breaker tester (having a travel input for breaker mechanism movement), a dynamic micro-ohm test can be made that will give detailed information about the state of fixed contact surfaces, moving contact surfaces, main contact, arcing contact and the complete current circuit of the breaker in every step during a close-open operation.

## Technical Specification

### MEASUREMENT OUTPUT

<b>Current:</b>	Pulsed 1200A DC maximum (at 4V) dependant on loop impedance. Pulsed / continuous 100A DC regulated (up to 6V).
<b>No-Load Voltage:</b>	10V DC maximum.
<b>Operation:</b>	1200A pulse with 1 second duration. 100A pulse with 2 second duration. 100A continuous (no time limit).
<b>Safety:</b>	Re-settable thermal / magnetic circuit breaker.
<b>Connectors:</b>	Heavy duty wing-nut.

### MEASUREMENT INPUT

<b>Range:</b>	0 to 1.999 or 19.99m $\Omega$ (selectable). With SA100/SA100'R' 1200m $\Omega$ max.
<b>Resolution:</b>	1 or 10 $\mu\Omega$ (range selected).
<b>Accuracy:</b>	1% of reading +/- 1 digit.
<b>Voltage Sense:</b>	1 x voltage input from contact / joint.
<b>Connectors:</b>	4mm safety socket.

### OUTPUTS

<b>Analogue:</b>	3 x 0 to 10V DC conditioned outputs representing measured Voltage Drop, Current Level and Micro-Ohms. 1 x Calibrate for calibration check.
<b>Connectors:</b>	4mm safety socket.

### GENERAL SYSTEM

Back-lit 3½ digit LCD for readout of Ohms or Amps (switch selectable).  
Current On lamp indication (red).  
Unit Armed lamp indication (green).  
Trigger In (volt free contact) for Dynamic Micro-Ohm Test (**SA100** / **SA100R** / **SA100RS** required) and Trigger Out (15V logic).

Intermittent audible during continuous operation.  
'Operate' push button for 100 / 1200A pulse or 100A continuous with stop, modes of operation (static testing).  
Rotary selector switch for Off / 100A (1.999m $\Omega$  range) / 100A (19.99m $\Omega$  range) / 1200A (1.999m $\Omega$  range).  
LED indicators for Fault, Over Current, Battery Low and Charging.  
Multipurpose accessory socket for in-car charging, remote meter, power out, trigger in and trigger out.

### OPERATING VOLTAGES

<b>Prime Power:</b>	Internal sealed rechargeable batteries.
<b>Recharge Power:</b>	110 to 330V DC or 85 to 265V AC (47 to 440Hz) auto-sensing. In-Car 12V DC @ 3A (negative earth). <100VA load.
<b>Burden:</b>	<100VA load.

### ENVIRONMENTAL

<b>Operating Temperature:</b>	-20°C to 70°C (-4°F to 158°F).
<b>Humidity:</b>	0 to 97% RH non-condensing.
<b>Isolation:</b>	2kV rms for 1 minute (input / output to ground).
<b>Surge Withstand Transient:</b>	To IEC 801-5. 5kV, 1.2/50 $\mu$ Sec, 0.5 joule. Common Mode: Severity level class 4. Series Mode: Severity level class 3.
<b>RF Immunity:</b>	To IEC 801-3 level 3. 10V/m 26-1000MHz.
<b>Emissions:</b>	To EN50081-1: 1992.

### MECHANICAL DETAILS

<b>Case:</b>	500mm W x 330mm H x 380mm D.
<b>Weight:</b>	19.6kg.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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