

# DATASHEET

## MICRO-OHMMETER

# MO-5892-1A



The MO-5892-1A digital low resistance ohmmeter is a portable, microprocessor-controlled instrument used to accurately measure resistances of contacts, switches, transformers and motor windings, etc., using test currents from 1 mA up to 1 A.

It uses the Kelvin-type (4-terminals) measurement principle, thus eliminating errors caused by lead and contact resistances.

Resistance readings are shown in the alphanumeric display with up to a 4½ digit-resolution. It allows to measure resistances of up to 2 kΩ, with resolution of 0.01 mΩ.

## DESCRIPTION

Measurements accuracy is guaranteed by the state-of-the-art system for signal-amplification, offset-free and with long-term stability.

The equipment has a serial output (RS232) that allows to collect measured values in a serial printer, notebook, palm-top computer or any data logger in order to register the tests performed.

The HOLD function keeps in the display the value measured at a certain time-point.

Test current may be adjusted by the operator in every one of the ranges and their values are displayed in analog form (bargraph), making it easy to measure resistances with a significant inductive component. The open circuit output voltage is up to 10 V, depending on the selected test current, reducing the stabilization time for the test current when highly inductive elements (specially transformers windings) are measured. The measurement circuit has an effective protection against voltage peaks originated by those inductances.

The equipment is housed in a rugged plastic case with a hinged lid and carrying handle. It is a portable, strong, impact resistant and lightweight equipment, suitable to be used in outdoors and under severe weather conditions. It supplies very reliable and accurate measurements both in laboratory and out in the field.

## KEY FEATURES

- Microprocessor controlled
- Alphanumerical display
- Resolution 0.01 mΩ
- Resistance reading: up to 2 kΩ
- Direct reading (Up to 4½ digits)
- Up to 1 A test current
- Rechargeable battery
- 0.2% ± 2 digits basic accuracy
- Kelvin-type (4-wires) measurement
- Built-in printer (optional)
- Serial data output (RS232)

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### TECHNICAL SPECIFICATIONS

<b>Test Currents</b>
1 mA, 10 mA, 100 mA, 1 A. Each current may be continuously adjustable from 0 to 100%.
<b>Resistance ranges</b>
0-2 $\Omega$ @ 1 A. 0-20 $\Omega$ @ 100 mA. 0-200 $\Omega$ @ 10 mA. 0-2000 $\Omega$ @ 1 mA.
<b>Resolution</b>
0.01 m $\Omega$ @ 1 A.
<b>Output Voltage</b>
Up to 10 VDC (open circuit) @ 1 A.
<b>Measurement Principle</b>
4-terminal, Kelvin-type.
<b>Basic Accuracy</b>
$\pm 0.2\%$ of reading $\pm 2$ digits.
<b>Advanced Features</b>
Digital direct reading of low resistances in the alphanumeric display, with up to 4½ digits. Very fast and accurate measurements.
<b>Serial Data Output</b>
RS232 @ 4800 bps. Suitable for data collection in an external serial printer, computer or data-logger.
<b>Environmental Protection</b>
IP54 with closed lid.

<b>Safety Class</b>
Meets the requirements of IEC 61010-1.
<b>Power Supply</b>
Internal rechargeable 12 V - 3000 mAh battery or mains
<b>Built-In Battery Charger</b>
For 100 - 240 V~ mains supply
<b>Operating Temperature Range</b>
23°F to 122°F (-5°C to 50°C).
<b>Storage Temperature Range</b>
-13°F to 149°F (-25°C to 65°C).
<b>Humidity Range</b>
95% RH (non condensing).
<b>Equipment Weight</b>
Approx. 6.6 lb (3 kg).
<b>Dimensions</b>
10.16" x 8.07" x 4.72" (258 x 205 x 120 mm).
<b>Included Accessories</b>
2 Combined current and potential test leads. 1 Power cord. 1 RS232 cable. 1 User guide. 1 Synthetic bag.