MOM3
Handheld micro-ohmmeter 300 A

- **Test current up to 300 A**
- **Battery operated**
- **Lightweight – 1.15 kg**
- **Auto range: 0.1 μΩ to 3000 Ω**
- **Optional wifi communication to EGIL 200***
- **Complies with IEEE and IEC standards**

DESCRIPTION

The MOM3 is a handheld, high-current micro-ohmmeter designed with ease of use, versatility and safety in mind.

Being rugged, lightweight and handheld makes the MOM3 very suitable for fieldwork. Using the included carrying strap it can be brought with confidence even to the hard to reach test objects. Its strong rubber body makes it extra durable should it accidentally be dropped.

The MOM3 is designed to enable a full day's work of testing without recharging the battery. It can store more than 2000 test values, and transfer test data via USB-C to a PC.

The MOM3 uses two ultracapacitors to generate the current output. Thanks to the low internal resistance, ultracapacitors are capable of instantaneous delivery of very high currents, in MOM3 up to 300 A up to 2 mΩ**.** With ample energy stored in the ultracapacitors, it is possible to make multiple tests in very rapid sequence. The current output of MOM3 is also regulated and kept at the set value for the duration of the test time.

With an ultra-short measurement time, the MOM3 does not heat up the measurement object and thus eliminates the need for bidirectional measurements otherwise commonly used in micro-ohm measurements.

APPLICATIONS

The MOM3 test system is designed to serve several applications. The most common tests are contact resistance measurements and connection checks for low, medium, and high voltage circuit breakers, as well as for busbar joints and connections. MOM3 is also ideal for all applications in which a low resistance need to be verified, e.g. in switches, disconnecting devices, safety ground connections, welding points, fuses and cables.

If the measured resistance is abnormally high this will lead to power loss and temperature rise, which often leads to serious trouble. To avoid such problems, it is necessary to check the resistance at regular intervals.

The following table demonstrates how important low resistance is at high currents:

Current	Contact resistance	Power loss
10 kA	1 mΩ	100 kW
10 kA	0.1 mΩ	10 kW
1 kA	1 mΩ	1 kW
1 kA	0.1 mΩ	100 W

At 10 kA, a resistance of 0.1 mΩ gives a power loss of 10 kW. This power loss at one single point will definitely result in a temperature rise, which may lead to overheating and possibly premature failure.

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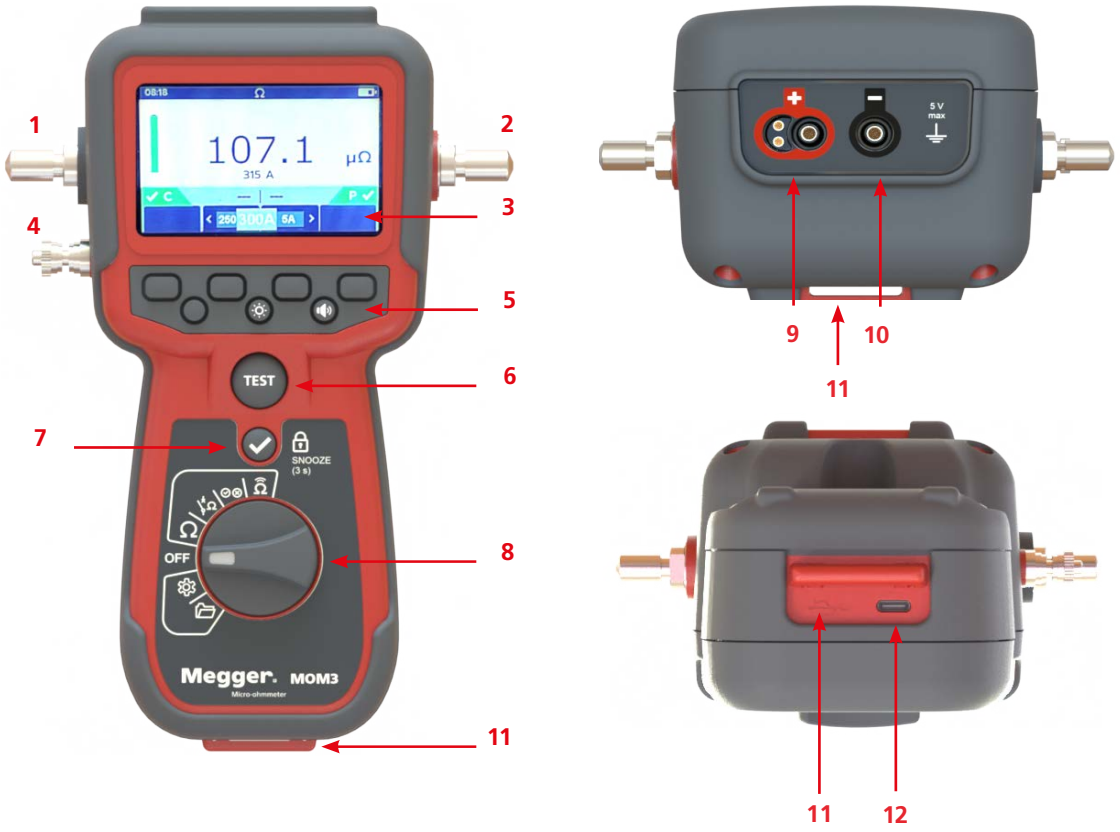

Item	Description	Item	Description
1	Current output terminal (-)	7	Confirm button (OK)
2	Current output terminal (+)	8	Function selector
3	Display	9	Connector for the voltage (+) sense lead and the trig function
4	Ground (earth) terminal	10	Connector for the voltage (–) sense lead
5	Keys for navigation and to make settings in the display	11	Strap holder
6	Test button	12	USB-C connector for the battery charger and data transfer

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SPECIFICATIONS

Specifications are valid at fully charged batteries and an ambient temperature of +25° C, ± 3 °C. Specifications are subject to change without notice.

Environment

Application field For use in high-voltage substations and industrial environments.

Temperature
Operation -20 °C to + 50 °C (-4 °F to + 122 °F)
Storage -40 °C to + 70 °C (-40 °F to + 158 °F)
Relative humidity %RH 5 % - 95 %, non condensing
Altitude Operational to 3 000 m

CE-marking

RED 2014/53/EU

Classifications and standards

Shock IEC 60068-2-27
Vibration IEC 60068-2-6
Transport ISTA 2A
Flammability class V0

General

Battery capacity Li-Ion Battery 19.8 Wh
Typical recharge time at 25 °C 3 h

Battery charger

Mains voltage 100 - 250 V AC, 50 / 60 Hz
Input 100 - 240 V AC, 50 / 60 Hz, 1.3 A
Output 5.0 V, 3.0 A 15 W
Protection Low / high temperature
Charge operation
Temperature 0 °C to + 45 °C (32 °F to + 113 °F)

Audible feedback Different buzzer sounds
Encapsulation IP54
Dimensions
Instrument (excl. Binding posts) L 230 x W108 x H 98.5 mm
L 9.0 x W 422 x H 3.8 in
Carrying case L 230 x W 360 x H 210 mm
L 9.0 x W 14.1 x H 8.2 in

Weight 1.15 kg (2.5 lbs) instrument only
4.3 kg (9.8 lbs) with accessories and carrying case

Measurement section

Minimum current guarantee Selectable 5 A to 300 A
Valid at resistance ≤2 mΩ
Pass / Fail Settable from 0.1 µΩ to 3000 mΩ
Number of measurements on fully charged batteries typical. 2000 at 50A
typical. 1500 at 100A
typical. 500 at 300A

Range 0 - 3000 mΩ
Range selection Auto
Resolution

Range	Resistance range with intervals	Full Range Display	Resolution	Recommended Test Current
1	0.1 µΩ - 1 mΩ	999.9 µΩ	0.1 µΩ	300 A
2	1 mΩ - 10 mΩ	9.999 mΩ	1 µΩ	300 A - 200 A
3	10 mΩ - 100 mΩ	99.99 mΩ	10 µΩ	200 A - 40 A
4	100 mΩ - 1 Ω	999.9 mΩ	0.1 mΩ	40 A - 5 A
5	1 Ω - 3 Ω	3000 mΩ	1 mΩ	5 A

Inaccuracy ± 0.1% of reading ± 0.05% of range
Typical inaccuracy Only valid when the following conditions are met:
- Resistive load
- Ambient temperature 25 °C ± 3 °C.
- Maximum test current per the range being used.

Test interval 5 s

Outputs + / –

Range Max 300 A DC (R < 2 mΩ)

Output voltage Max 5 VDC

Inputs

SENSE + / –
Connector 4 mm banana jack
Voltage +5 VDC

Logger

Logger, Data label Timestamp, Current, Resistance
Labeling schemes Circuit breaker oriented or running numbers
Capacity >2000 measurements in running numbers

WIFI

Frequency band 2412 MHz to 2472 MHz
RF power Max 20 dBm

Communication

Wi-Fi EGIL200*
PC communication USB-C

*Available Q4 2025

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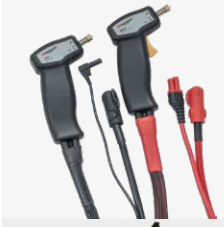
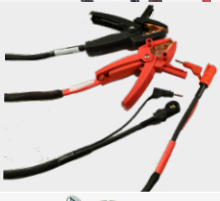
INCLUDED ACCESSORIES

Image	Item	Description	Probe	Clamp	Part No.
	Test cables with Kelvin probes (current & sense)	2 x 1.3 m (4 ft), (one with trig button), 16 mm² 1.3 m (4 ft) Red, 16 mm² (with trig button) 1.3 m (4 ft) Black, 16 mm² (with trig button)	✓		GA-90003 GA-00390 GA-00391
	Test cables with Kelvin clamps (current and sense)	1.3 m (4 ft) Red, 3 m (10 ft) black, 16 mm² 3 m (10 ft) Black, 16 mm² 1.3 m (4 ft) Red, 16 mm² 5 m (16 ft) Black, 25 mm²		✓	GA-90004 GA-00392 GA-00390 GA-00394
	Ground cable	5 m (16 ft), Green / yellow	✓	✓	GA-90003
	Battery charger		✓	✓	HC-04290
	USB-C to USB-C	2 m (6.6ft)	✓	✓	HG-00240
	Carrying strap		✓	✓	50-11012
	Soft carrying case	For MOM3, charger and cables	✓	✓	GD-90070

OPTIONAL ACCESSORIES

Image	Item	Description	Part No.
	Sensing lead	5 m (16 ft), Red 60 A clip	KG-00522
	Sensing lead	5 m (16 ft), Black 60 A clip	KG-00520

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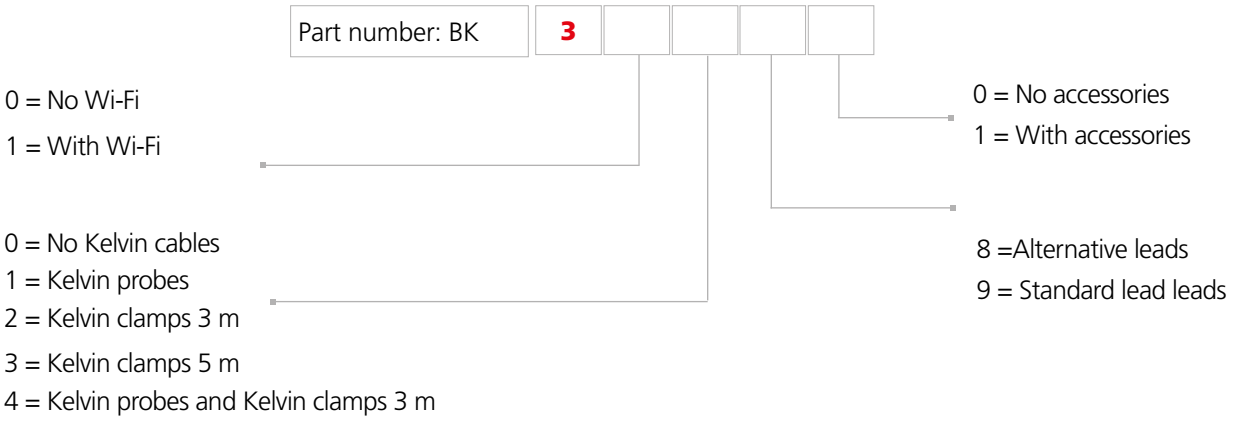
CUSTOM CONFIGURATIONS

MOM3 can be ordered either in pre-configured, standard configurations including main unit and accessories or in fully customised configurations.

MOM3 naming and part number structure



ORDERING INFORMATION

Description	Part number
MOM3 Kelvin probes Incl. Test cables with Kelvin probes, Soft carrying case, Charger and Carrying strap.	BK-30191
MOM3 Kelvin probes Wi-Fi* Incl. Test cables with Kelvin probes, Soft carrying case, Charger and Carrying strap.	BK-31191
MOM3 Kelvin clamps, 3 m cable set Incl. Test cable red with Kelvin clamp Test cable black with Kelvin clamp. Soft carrying case, Charger and Carrying strap.	BK-30291
MOM3 Kelvin clamps, 3 m cable set Wi-Fi* Incl. Test cable red with Kelvin clamp Test cable black with Kelvin clamp Soft carrying case, Charger and Carrying strap.	BK-31291
MOM3 with Kelvin clamps, 5 m cable set WI-FI* Incl. Test cable red with Kelvin clamp Test cable black with Kelvin clamp Soft carrying case, Charger and Carrying strap.	BK-30381
*Wi-Fi available from Q4 - 2025	BK-31381

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