



Measure HV switches and transformers with one device

Product features

- measurements of resistive objects with current up to 100/200 A
- measurements of induction objects up to 10 A
- measurements of objects earthed on both sides (i.e. main joints of HV switches)
- measurement with one- or both-way current flow
- high immunity to outside interference
- measurements temperature of windings
- automatic compensation temperature of objects measured
- a state of art interface with a touch screen and expanded memory
- cooperation with a printer and a 2D barcode reader
- WiFi, USB and LAN communication
- IP67
- it can work in an environment where electromagnetic interferences of 400 kV occur

Application

MMR-6xxx micrometers series are devices with a state of art design with unprecedented approach to measuring small resistances. The instruments allow to measure resistive objects with a high current and have a unique in his measurement class module for inductive current objects up to 10 A.

Device capabilities

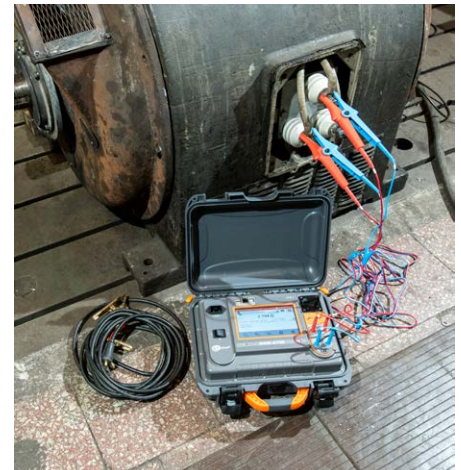
Sonel microhmmeter MMR-6xxx series thanks to the use of special algorithms, measuring functions and a stabilized, non-pulsing measurement current allow user to work in difficult conditions. Possibility of use measurement current up to 200 A and a high power source allows you to measure the contacts of the HV switch with basic uncertainty from 0.25%.

Simplicity of readings

The MMR-6xxx microhmmeter is equipped with readable, touch screen, 5-inch colored display with a resolution of 800x480 pixels for convenience of readings measurement results.

Help system

The use of a large, readable display allowed for use helpful appetent drawings how to use the meter.



Measurements of resistive components

| Range [Ω] | Resolution [Ω] | Basic measurement uncertainty | Test current / Voltage |
|--------------------|-------------------------|---|-----------------------------------|
| 0.0...999.9 μ | 0.1 μ | $\pm(0,25\% \text{ m.v.} + 2 \text{ digits})$ | 100 A < I \leq 200 A/* (200 mV) |
| 0.0...999.9 μ | 0.1 μ | | 50 A < I \leq 100 A (200 mV) |
| 1.0000...1.9999 m | 0.0001 m | | 20 A < I \leq 50 A (200 mV) |
| 0.0...999.9 μ | 0.1 μ | | 10 A < I \leq 20 A (160mV) |
| 1.0000...3.9999 m | 0.0001 m | | 10 A (20 mV) |
| 0.0...999.9 μ | 0.1 μ | | 10 A (200 mV) |
| 1.0000...7.9999 m | 0.0001 m | | 10 A / 1 A (2 V / 200 mV) |
| 0...999.9 μ | 0.1 μ | | 1 A / 0.1 A (2 V / 200 mV) |
| 1.0000...1.9999 m | 0.0001 m | | 0.1 A (2 V) |
| 2.000...19.999 m | 0.001 m | | 10 mA (2 V) |
| 20.00...199.99 m | 0.01 m | | 1 mA (2 V) |
| 200.0...999.9 m | 0.1 m | | |
| 1.0000...1.9999 | 0.0001 | | |
| 2.000...19.999 | 0.001 | | |
| 20.00...199.99 | 0.01 | | |
| 200.0...1999.9 | 0.1 | | |

/* MMR-6700 only

Measurements of inductive components

| Range [Ω] | Resolution [Ω] | Basic measurement uncertainty | Test current |
|-------------------------------|-------------------------|---|--------------|
| 0 $\mu\Omega$...999.9 μ | 0.1 μ | $\pm(0,25\% \text{ m.v.} + 2 \text{ digits})$ | 10 A |
| 1.0000 m Ω ...1.9999 m | 0.0001 m | | 10 A |
| 2.000 m Ω ...19.999 m | 0.001 m | | 10 A / 1 A |
| 20.00 m Ω ...199.99 m | 0.01 m | | 1 A / 0.1 A |
| 200.0 m Ω ...999.9 m | 0.1 m | | 0.1 A |
| 1.0000 Ω ...1.9999 | 0.0001 | | 10 m |
| 2.000 Ω ...19.999 | 0.001 | | 1 mA |
| 20.00 Ω ...199.99 | 0.01 | | |
| 200.0 Ω ...1999.9 | 0.1 | | |

for measurements on inductive objects output voltage \leq 5 V



"m.v." - measured value

Technical specification

| | | |
|---|--|---|
| housing protection level acc. to EN 60529 | closed cover | IP67 |
| | open cover | IP40 |
| power supply for $I \leq 10$ A measurements | | Li-Ion battery 7.2 V 8.8 Ah |
| mains supply | MMR-6500 | 100 V...265 V / 50 ...60 Hz, 10 A |
| | MMR-6700 | 100 V...265 V / 50 ...60 Hz, 16 A |
| battery charging time | | ca. 3.5 h |
| maximum resistance for current of 10A | | 200 mΩ |
| current pre-setting accuracy | | ±10% |
| measurement time | resistance mode, with bidirectional current flow | 7-15 s |
| | inductive mode (depends on object resistance and inductance) | 10 s or more |
| dimensions | | 401 x 307 x 175 mm 15.8" x 121.1" x 6.9" |
| meter weight | MMR-6500 | ca. 8.2 kg ca. 18.1 lbs |
| | MMR-6700 | ca. 8.7 kg ca. 19.2 lbs |
| operating temperature | | -10°C...+50°C 14°F...122° |
| humidity | | 20%...90% |
| display | | 800 x 480 pixels |
| communication | | USB, LAN, Wi-Fi |



Standard accessories



current carrying test lead 3 m black I1 (200 A, 25 mm2)

WAPRZ003BLI1



doble-wire test lead 3 m (10 A / 25 A) U1/I1

WAPRZ003DZBBU11



test lead 3 m blue 1 kV U1 (banana plug)

WAPRZ003BUBBU1



current carrying test lead 3 m black I2 (200 A, 25 mm2)

WAPRZ003BLI2



doble-wire test lead 3 m (10 A / 25 A) U2/I2

WAPRZ003DZBBU2I2



test lead 3 m blue 1 kV U2 (banana plug)

WAPRZ003BUBBU2



ST-3 temperature probe

WASONT3



2x Kelvin clamp, 1 kV, 25 A

WAKROKELK06



2x crocodile clip, black, 1 kV, 32 A

WAKROBL30K03



USB transmission cable

WAPRZUSB



IEC C19 power plug

WAPRZZAS1US



case L12

WAFUTL12



factory calibration certificate

Optional accessories



Kelvin vice with cables

WAZACKEL1



double pin Kelvin probe with banana connector

WASONKEL20GB



C-5A current clamps (Φ=39 mm)

WACEGC5AOKR



D2 portable USB report / barcode printer (Sato)

WAADAD2



label roll – black on white for D2 printer (SATO)

WANAKD2



ribbon for D2 printer (SATO)

WANAKD2BAR



barcode scanner 2D (USB)

WAADACK2D



calibration certificate with accreditation