Microohmmeter

MMR-6700/6500

index: WMGBMMR6700 / WMGBMMR6500

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 microhmeter 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 microhmeter 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	Resolution	Basic measurement uncertainty	Test current / Voltage
0.0…999.9 μΩ	0.1 μΩ	±(0,25% + 2 digits)	100 A < I ≤ 200 A/* (200 mV)
0.0…999.9 μΩ	0.1 μΩ		50 A < I ≤ 100 A (200 mV)
1.0000…1.9999 mΩ	0.0001 mΩ		
0.0…999.9 μΩ	0.1 μΩ		20 A < I ≤ 50 A (200 mV)
1.0000…3.9999 mΩ	0.0001 mΩ		
0.0…999.9 μΩ	0.1 μΩ		10 A < I ≤ 20 A (160mV)
1.0000…7.9999 mΩ	0.0001 mΩ		
0…999.9 μΩ	0.1 μΩ		10 A (20 mV)
1.0000…1.9999 mΩ	0.0001 mΩ		
2.000…19.999 mΩ	0.001 mΩ		10 A (200 mV)
20.00…199.99 mΩ	0.01 mΩ		10 A / 1 A (2 V / 200 mV)
200.0…999.9 mΩ	0.1 mΩ		1 A / 0.1 A (2 V / 200 mV)
1.0000…1.9999 Ω	0.0001 Ω		
2.000…19.999 Ω	0.001 Ω		0.1 A (2 V)
20.00…199.99 Ω	0.01 Ω		10 mA (2 V)
200.0…1999.9 Ω	0.1 Ω		1 mA (2 V)

/* MMR-6700 only

Measurements of inductive components

Range	Resolution	Basic measurement uncertainty	Test current
0…999.9 μΩ	0.1 μΩ	±(0.25% m.v. + 2 digits)	10 A
1.0000…1.9999 mΩ	0.0001 mΩ		
2.000 …19.999 mΩ	0.001 mΩ		10 A
20.00…199.99 mΩ	0.01 mΩ		10 A / 1 A
200.0…999.9 mΩ	0.1 mΩ		1 A / 0.1 A
1.0000…1.9999 Ω	0.0001 Ω		
2.000…19.999 Ω	0.001 Ω		0.1 A
20.00…199.99 Ω	0.01 Ω		10 mA
200.0…1999.9 Ω	0.1 Ω		1 mA

for measurements on inductive objects output voltage ≤ 5 V

“m.v” - measured value

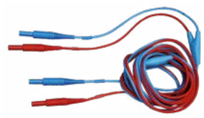
Technical specification

housing protection level acc. to EN 60529	closed cover	IP67
	open cover	IP40
power supply for I ≤ 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



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

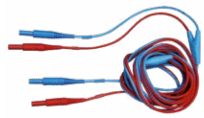
WAPRZ003DZBBU1I1

Test lead 3 m blue 1 kV U1 (banana plugs)

WAPRZ003BUBBU1

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

WAPRZ003BLI2



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

WAPRZ003DZBBU2I2

Test lead 3 m blue 1 kV U2 (banana plugs)

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

Mains cable with IEC C19 plug

WAPRZZAS1

Case L-12

WAFUTL12

Factory calibration certificate

Optional accessories

Current carrying test lead 6 m / 10 m / 15 m black I1 (200 A, 25 mm²)

WAPRZ006BLI1
WAPRZ010BLI1
WAPRZ015BLI1

Double-wire test lead (10 / 25 A) U1/ I1 6 m / 10 m / 15 m

WAPRZ006DZBBU1I1
WAPRZ010DZBBU1I1
WAPRZ015DZBBU1I1

Test lead 6 m / 10 m / 15 m blue 1 kV U1 (banana plugs)

WAPRZ006BUBBU1
WAPRZ010BUBBU1
WAPRZ015BUBBU1

Current carrying test lead 6 m / 10 m / 15 m black I2 (200 A, 25 mm²)

WAPRZ006BLI2
WAPRZ010BLI2
WAPRZ015BLI2

Double-wire test lead (10 / 25 A) U2 / I2 6 m / 10 m / 15 m

WAPRZ006DZBBU2I2
WAPRZ010DZBBU2I2
WAPRZ015DZBBU2I2

Test lead 6 m / 10 m / 15 m blue 1 kV U2 (banana plugs)

WAPRZ006BUBBU2
WAPRZ010BUBBU2
WAPRZ015BUBBU2

ST-1 temperature probe

WASONT1

Kelvin vice with cables

WAZACKEL1

Double pin Kelvin probe - standard pins / thick pins

WASONKEL20GB
WASONKEL20GB2

C-5A current clamp (Φ=39 mm) 1000 A AC/DC

WACEGC5AOKR

Barcode scanner 2D (USB)

WAADACK2D

D2 portable USB report / barcode printer (Sato)

WAADAD2

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

WANAKD2

Ribbon for D2 printer (SATO)

WANAKD2BAR

RJ45 LAN cable

WAPRZRJ45

L-7 Backpack

WAFUTL7

Calibration certificate with accreditation