

## Low Resistance Micro Ohm Meter

- Measurement of resistive object type:

- welded and soldered connections, equipotential bonding, earth wire,
- terminals and connectors, rail welded joints, cables and wires,
- measurement 4-pole method.

- Measurement of inductive object type:

- coils (motors and transformers), low resistance coils.
- Range selection autoranging or manual (measurement of inductive object type).
- Selectable measurement mode adjusted to object type:

- for resistive objects - fast mode (3 seconds),
- for inductive objects - long mode with automatic discharge after measurements (or with lower accuracy - shorter mode).

- Selectable measurement mode adjusted to application:

- normal mode - after pushing „START“ button,

automatic mode - since test leads are connected to the object meters automatically starts measurement with dual direction current flow and gives average result

- what eliminates eventual DC voltage on tested object,

- continuous mode - every 3 seconds for resistive objects or continuous measurement for inductive objects.

- Limits:

this option enables setting an upper and a lower limit between which the average measurement result is bound to appear.

The results outside of this range will be indicated by two long audible signals and the symbols.

Memory store for up to 990 results and a communications facility for transferring data from the device to a PC.

- Electric security:

- type of insulation: double, according to EN 61010 - 1 and IEC 61557

- measurement category: CAT III 300 V acc. to EN 61010 - 1

- protection class acc. to EN 60529: IP54

Other technical data:

- meter's power supply: battery package SONEL/Ni-MH 4,8 V

- battery charging time: approx. 2.5 hours

- number of measurements with the current of 10 A: 300

- auto-off time: 120 seconds

- immunity to interference: additional error  $\leq 1\%$  for voltage 50 Hz  $\leq 100$  mV RMS

- maximum leads resistance for the 10 A current: 0,1  $\Omega$

- maximum inductance of the tested object: 40H

- accuracy of the test current:  $\pm 10\%$

- resistance measurement time:
- with the selected resistive object type with the bidirectional current: 3 seconds
- with the selected inductive object type, dependant on the resistance and inductance of the object: a few minutes (max. 10)

Directive:

Electromagnetic compatibility (EMC) 89/336/EEC, 92/31/EEC, 93/68/EEC.

Standards:

EN 61326:1997+A1:1998+A2:2001 Electrical equipment for measurement, control and laboratory use - EMC requirements.

Resistance measurement-

with Ranges 0...999 $\mu$  $\Omega$  with Resolution 1 $\mu$  $\Omega$ , 1,000...1,999 m $\Omega$  with Resolution 0,001m $\Omega$ , 2,00...19,99 m $\Omega$  with Resolution 0,01m $\Omega$ , 20,0...199,9 m $\Omega$

Resolution 0,1m $\Omega$ , 200...999 m $\Omega$  with Resolution 1m $\Omega$ , 2,00...19,99  $\Omega$  with Resolution 0,01 $\Omega$ , 20,0...199,9  $\Omega$  with Resolution 0,1 $\Omega$ , 200...1999  $\Omega$  with Resolution 1 $\Omega$

Accuracy should be 0.25%

- input impedance of the voltmeter:  $\geq$ 200

k $\Omega$  „m.v.” - measured value.

Measurements of resistive component

Range[ $\Omega$ ]	Resolution[ $\Omega$ ]	Test current	Basic measurement uncertainty
0,0...999,9 $\mu$	0,1 $\mu$	100 A < I <= 200 A (200 mV)	
0,0...999,9 $\mu$	0,1 $\mu$	50 A < I <= 100 A (200 mV)	
1,0000...1,9999 m	0,0001 m	50 A < I <= 100 A (200 mV)	
0,0...999,9 $\mu$	0,1 $\mu$	20 A < I <= 50 A (200 mV)	
1,0000...3,9999 m	0,0001 m	20 A < I <= 50 A (200 mV)	
0,0...999,9 $\mu$	0,1 $\mu$	10 A < I <= 20 A (160mV)	
1,0000...7,9999 m	0,0001 m	10 A < I <= 20 A (160mV)	$\pm(0,25\% \text{ w.m.} + 2 \text{ digits})$
0...999,9 $\mu$	0,1 $\mu$	10 A (20 mV)	
1,0000...1,9999 m	0,0001 m	10 A (20 mV)	
2,000...19,999 m	0,001 m	10 A (200 mV)	
20,00...199,99 m	0,01 m	10 A / 1 A (2 V / 200 mV)	
200,0...999,9 m	0,1 m	1 A / 0,1 A (2 V / 200 mV)	
1,0000...1,9999	0,0001	1 A / 0,1 A (2 V / 200 mV)	
2,000...19,999	0,001	0,1 A (2 V)	
20,00...199,99	0,01	10 mA (2 V)	
200,0...1999,9	0,1	1 mA (2 V)	

### Core Demagnetization:

Demagnetization of the magnetic core, after DC testing on transformers.

## Measurements of inductive components

Range	Resolution	Measurement current	Accuracy
0...999,9 $\mu\Omega$	1 $\mu\Omega$	10A	$\pm(0,25\% \text{ w.m.} + 2 \text{ digits})$
1,0000...1,9999 m $\Omega$	0,0001 m $\Omega$		
2,000...19,999 m $\Omega$	0,001 m $\Omega$		
20,00...199,99 m $\Omega$	0,01 m $\Omega$		
200,0...999,9 m $\Omega$	0,1 m $\Omega$		
1,0000...1,9999 $\Omega$	0,0001 $\Omega$		
2,000...19,999 $\Omega$	0,001 $\Omega$		
20,00...199,99 $\Omega$	0,01 $\Omega$		
200,0...1999,9 $\Omega$	0,1 $\Omega$		

## Standard Accessories

current carrying test lead 3 m black I1 (200 A, 25 mm<sup>2</sup>), current carrying test lead 3 m black I2 (200 A, 25 mm<sup>2</sup>), ST-3 temperature probe, USB transmission cable, Sonel Reader, Software,

Additional accessories:

doble-wire test lead 3 m (10 A / 25 A) U1/I1, double-wire testlead 3 m (10 A/ 25 A) U2/I2, 2x kelvin clamp,1 kV, 25 A, mains cable with IEC C19 plug, test lead 3 m blue 1 kV U1 (banana plug),test lead 3 m blue 1 kV U2 (banana plug),2x crocodile clip, black, 1 kV, 32 A, case L12,