Ground Resistance and Soil Resistivity Meter

MRU-30

index: WMGBMRU30

CAT III
300 V
IP65

Universal earth tester

Measurement methods

- **3-pole and 4-wire method** – measurement of earthing systems using auxiliary probes
- **3-pole method with clamp** – measurement of earthing systems with multiple earth electrodes
- **Two-clamp method** – measurement of earthing system when the auxiliary probes cannot be used
- **Earth resistivity** – Wenner method
- **Resistance of earth connection and equipotential bonding** measured using current ≥200 mA with auto-zero function – meets the requirements of EN 61557-4

Features

- Measurement of auxiliary electrode resistances R_S and R_H
- Measurement of interference voltage
- Measurement in the presence of interference voltages in networks with frequencies of 50 Hz and 60 Hz
- Selection of maximum measurement voltage (25 V and 50 V)
- In ground resistivity measurements, distances between electrodes can be input in meters (m) or feet (ft)

Application

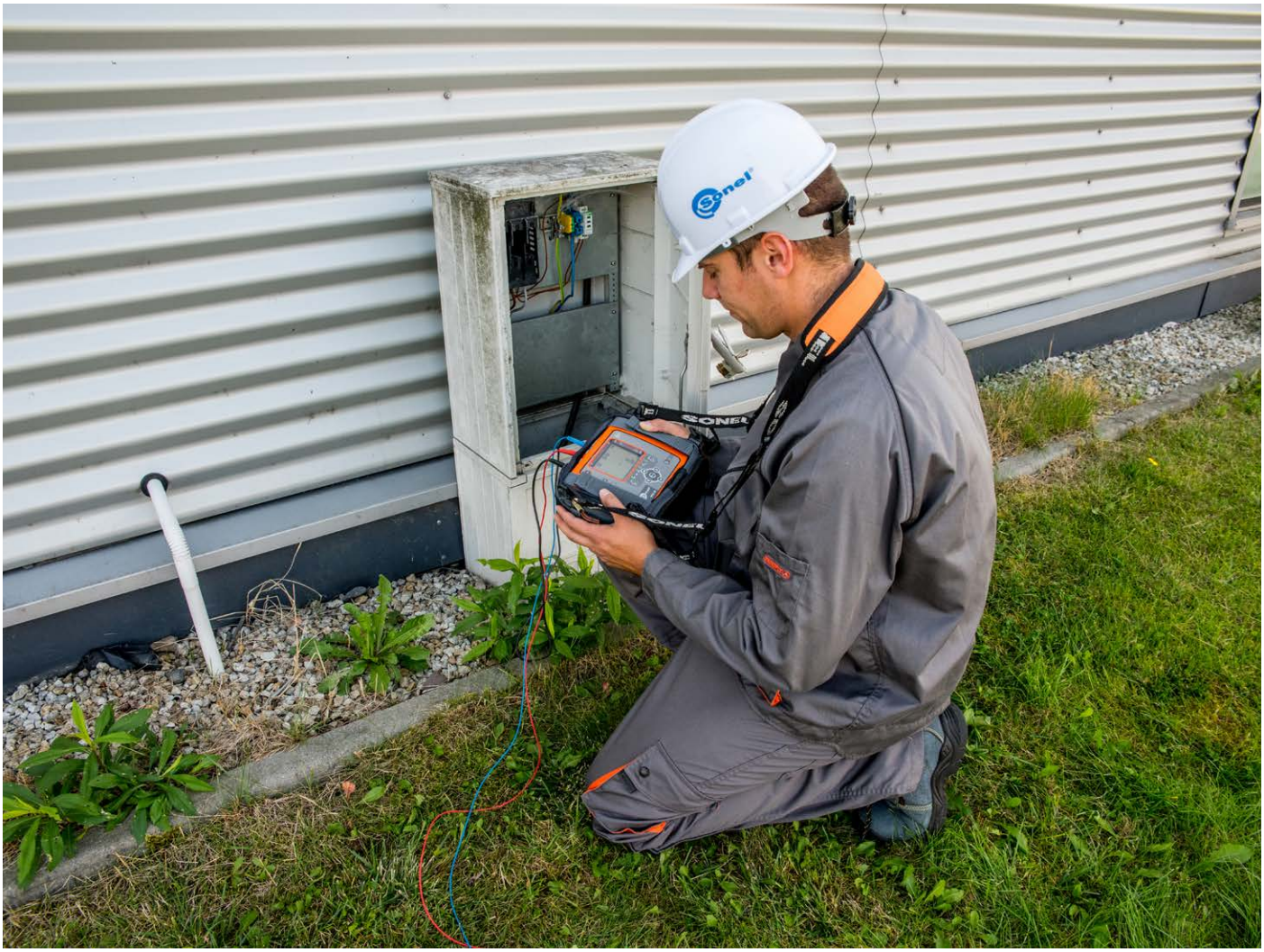
The MRU-30 earth resistance meter is designed to measure single and multiple earthings using auxiliary electrodes and/or clamps. Moreover it is possible to measure ground resistivity (Wenner method) and verify the continuity of equipotential bondings and protective conductors.

Capabilities

The meter provides the ability to make grounding tests with all kinds of the technical method. High immunity to interference allows it to be used even in difficult conditions in circuits with interfering currents. Simple and intuitive operation makes the measurements easier and faster. The meter has internal memory. The measurement results can be transmitted to a computer for data processing and preparation of documentation from the grounding tests.

Durable and practical casing

Ergonomic, small and practical housing allows comfortable and easy operation. The meter is resistant to all weather conditions. IP65 ingress protection guarantees dustproof and resistance to water jets on each side. The battery is permanently built-in and can be charged from a PowerBank or car cigarette lighter.



Technical specification

Measurement functions	Measurement range	Display range	Resolution	Accuracy ±(% m.v. + digits)
Interference voltage	0 V...100 V	0 V...100 V	1 V	±(5% m.v. + 2 digits)
Resistance of earth connection and equipotential bonding	0.13 Ω...1999 Ω acc. to EN 61557-4	0.00 Ω...1999 Ω	from 0.01 Ω	±(2% m.v. + 3 digits)
Earth resistance				
2-pole method	0.00 Ω...9999 Ω	0.00 Ω...9999 Ω	from 0.01 Ω	from ±(3% m.v. + 3 digits)
3-pole and 4-wire method	0.53 Ω...9999 Ω acc. to EN 61557-5	0.00 Ω...9999 Ω	from 0.01 Ω	from ±(3% m.v. + 3 digits)
3-pole + clamp method	0.00 Ω...9999 Ω	0.00 Ω...9999 Ω	from 0.01 Ω	from ±(3% m.v. + 3 digits)
two-clamp method	0.00 Ω...99.9 Ω	0.00 Ω...99.9 Ω	from 0.01 Ω	from ±(10% m.v. + 8 digits)
auxiliary electrodes resistance	0 Ω...19.9 kΩ	0 Ω...19.9 kΩ	from 1 Ω	±(5% (R_E+R_H+R_S) + 8 digits)
Earth resistivity	0.00 Ωm...999 kΩm	0.00 Ωm...999 kΩm	from 0.1 Ωm	Depends on the accuracy of the R_E 4p measurement, but not less than ±1 digit
Leakage current	0.0 mA...5.00 A	0.0 mA...5.00 A	from 0.1 mA	from ±(5% m.v. + 5 digits)

Safety and work conditions	
Measuring category according to EN 61010	III 300 V
Ingress protection	IP65
Type of insulation according to EN 61010-1 and IEC 61557	double
Dimensions	200 x 150 x 73 mm 7.9” x 5.9” x 2.9”
Weight	ca. 1.14 kg ca. 2.5 lbs
Operating temperature	-10...+50°C 14...122°F
Storage temperature	-20...+60°C -2...+140°F
Humidity	20...90%
Nominal temperature	23 ± 2°C 73.4°F ± 3.6°F
Reference humidity	40%...60%

Memory and communication	
Memory of measurement results	990 results
Data transmission	USB 2.0

Other information	
Quality standard – development, design and production	ISO 9001
The product meets the EMC (emission for industrial environment) requirements according to standards	EN 61326-1 EN 61326-2-2

Standard accessories

Test lead with banana plugs; 1 kV; 1.2 m; red

WAPRZ1X2REBB

Test probe with banana socket; 1 kV; red

WASONREOGB1

2x earth contact pin probe (30 cm)

WASONG30

Meter power adapter (type Z7)

WAZASZ7

USB cable

WAPRZUSB

Earthing measurement test lead with banana plugs on reel; 25 m; red

WAPRZ025REBBSZ

Black crocodile clip 1 kV 20 A

WAKROBL20K01

Clamp terminal with banana plug termination

WAZACIMA1

230 V power cord (IEC C7 plug)

WAPRZLAD230

Factory calibration certificate

Earthing measurement test lead with banana plugs on reel; 50 m; yellow

WAPRZ050YEBBSZ

Test lead with banana plugs; 1 kV; 2.2 m; black

WAPRZ2X2BLBB

M-9 carrying case

WAFUTM9

L-10 carrying case

WAFUTL10

Optional accessories

Test lead 75 / 100 / 200 m red, for MRU (banana plugs, on a reel)

WAPRZ075REBBSZ
WAPRZ100REBBSZ
WAPRZ200REBBSZ

Test lead 75 / 100 / 200 m blue, for MRU (banana plugs, on a reel)

WAPRZ075BUBBSZ
WAPRZ100BUBBSZ
WAPRZ200BUBBSZ

Test lead 75 / 100 / 200 m yellow, for MRU (banana plugs, on a reel)

WAPRZ075BUBBSZ
WAPRZ100YEBBSZ
WAPRZ200YEBBSZ

Test lead 30 m, red, for MRU (banana plugs, on a reel)

WAPRZ030REBBSZ

Test lead 15 / 25 m blue, for MRU (on a reel)

WAPRZ015BUBBSZ
WAPRZ025BUBBSZ

Test wire reel

WAPOZSZP1

Earth contact test probe (rod), 15 cm

WASONG15

Earth contact test probe (rod), 26 cm

WASONG26

Earth contact test probe (rod), 80 cm

WASONG80V2

Crocodile clip, 1 kV 20 A red /blue/yellow

WAKRORE20K02
WAKROBU20K02
WAKROYE20K02

Test lead 1.2 m CAT III/1000V CAT IV/600V black/blue/yellow

WAPRZ1X2BLBB
WAPRZ1X2BUBB
WAPRZ1X2YEBB

Pin probe CAT III/1000V CAT IV/600V black/blue/yellow

WASONBLOGB1
WASONBUOGB1
WASONYEOGB1

N-1 transmitting clamp (Φ=52 mm)

WACEGN1BB

C-3 current clamp (Φ=52 mm)

WACEGC3OKR

Battery charging cable for 12 V car sockets

WAPRZLAD12SAM

Double-wire test lead 2 m, for N-1 clamps (banana plugs)

WAPRZ002DZBB

L3 carrying case for 80 cm rods

WAFUTL3

Calibration certificate with accreditation