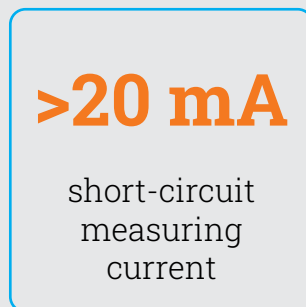




## Easy way to measure earthing and soil



### Measurement methods

- **3-pole and 4-wire method** – measurement of earthing systems using auxiliary probes
- **2-pole method**
- **Earth resistivity** – Wenner and Schlumberger method

### Additional features

- Resistance of auxiliary electrodes  $R_H$  and  $R_S$
- Measurement of interference voltage to 100 V
- Indication of battery state
- Selection of maximum measuring voltage (25 V and 50 V)
- Auto-OFF function
- In ground resistivity measurements, distances between electrodes can be input in meters (m) or feet (ft)
- Memory of 990 measurement results (10 banks of 99 cells each)

### Overview

MRU-12 is a simple meter that allows you to measure grounding by the use of the technical method (3-pole and 4-wire) and soil resistivity by Wenner and Schlumberger method. The instrument is easy to handle, resistive to interference, and highly accurate.

MRU-12 is a basic device that allows for checking the quality of the grounding system on the basis of the received measurement result. Its ergonomic shape, durable and firm housing, as well as big and clear display make this instrument ideal to use both in the field and most working environments.

The device is simple to operate and intuitive. It is the best choice for electrical installations contractors, technicians, and professionals dealing with grounding measurements.

### Sonel MeasureEffect™

The meter is a part of the **Sonel MeasureEffect™** platform. It is a comprehensive system that enables you to take measurements, store and manage data, and provides multi-level control of your instruments.

# Technical specification

Measurement functions	Measurement range	Display range	Resolution	Accuracy ±(% m.v. + digits)
<b>Interference voltage</b>	0 V...100 V	0 V...100 V	1 V	±(10% m.v. + 1 digit)
<b>Earth resistance</b>				
2-pole method	0.00...9999 Ω	0.00...9999 Ω	from 0.01 Ω	from ±(3% m.v. + 3 digits)
3-pole and 4-wire method	0.53...9999 Ω acc. to EN 61557-5	0.00...9999 Ω	from 0.01 Ω	from ±(3% m.v. + 3 digits)
auxiliary electrodes resistance	0 Ω...19.9 kΩ	0 Ω...19.9 kΩ	from 1 Ω	±(5% m.v. + 8 digits)
<b>Earth resistivity</b>				
Wenner method	0.0 Ωm...999 kΩm	0.0 Ωm...999 kΩm	from 0.1 Ωm	Depends on the accuracy of the $R_E$ 4p measurement, but not less than ±1 digit
Schlumberger method	0.0 Ωm...999 kΩm	0.0 Ωm...999 kΩm	from 0.1 Ωm	Depends on the accuracy of the $R_E$ 4p measurement, but not less than ±1 digit
<b>Safety and work conditions</b>				
<b>Measuring category according to EN 61010</b>				III 300 V
<b>Ingress protection</b>				IP65
<b>Type of insulation according to EN 61010-1 and IEC 61557</b>				double
<b>Dimensions</b>				221 x 102 x 62 mm 8.7" x 4.0" x 2.4"
<b>Weight</b>				710 g 1.6 lbs
<b>Operating temperature</b>				-10...+50°C 14...122°F
<b>Storage temperature</b>				-20...+60°C -2...+140°F
<b>Humidity</b>				20...90%
<b>Nominal temperature</b>				23 ± 2°C 73.4°F ± 3.6°F
<b>Reference humidity</b>				40%...60%
<b>Memory and communication</b>				
<b>Memory of measurement results</b>				990 results
<b>Data transmission</b>				Bluetooth
<b>Other information</b>				
<b>Quality standard – development, design and production</b>				ISO 9001
<b>The product meets the EMC (emission for industrial environment) requirements according to standards</b>				EN 61326-1 EN 61326-2-2

## Standard accessories



**Crocodile clip, blue, 1 kV, 20 A**  
WAKROBU20K02



**Crocodile clip, black, 1 kV, 20 A**  
WAKROBL20K01



**4 x earth contact test probe (rod), 25 cm**  
WASONG25



**Test lead 15 m, blue (banana plugs, on H-frame reel)**  
WAPRZ015BUBBN



**Test lead 15 m, red (banana plugs, on H-frame reel)**  
WAPRZ015REBBN



**Test lead 30 m, yellow (banana plugs, on H-frame reel)**  
WAPRZ030YEBBN



**Test lead 2.2 m, blue (banana plugs)**  
WAPRZ2X2BUBB



**Test lead 2.2 m, black (banana plugs)**  
WAPRZ2X2BLBB



**4 x alkaline battery 1.5 V AA, LR6**



**M1 hanging straps**  
WAPOZSZE4  
**M1 hanging hook straps**  
WAPOZUCH1



**M6 carrying case**  
WAFUTM6



**Factory calibration certificate**

## Optional accessories



**Earth contact test probe (rod), 30 cm**  
WASONG30



**Test lead 100 m, red, for MRU (banana plugs, on a reel)**  
WAPRZ100REBBSZ



**Test lead 200 m, yellow, for MRU (banana plugs, on a reel)**  
WAPRZ200YEBBSZ



**Earth contact test probe (rod), 80 cm**  
WASONG80V2



**Test lead 25 m, for MRU (banana plugs, on a reel), red**  
WAPRZ025REBBSZ



**Test lead 40 m / 50 m / 60 m / 80 m for MRU (banana plugs, on a reel), yellow**  
WAPRZ040YEBBSZ  
WAPRZ050YEBBSZ  
WAPRZ060YEBBSZ  
WAPRZ080YEBBSZ



**Cramp (banana plug)**  
WAZACIMA1



**L3 carrying case for 80 cm rods**  
WAFUTL3



**Calibration certificate with accreditation**