



ET 3000 series electric earth resistance meter

Earth and ground resistance meter (resistance / voltage)
for houses and buildings

Earth resistance meter is used to measure lightning-arresters or ground connection lightning-arresters for all kind of buildings. Earth resistance meter possesses a hermetic case and fulfils all the VDE 0413 safety requirements for the technical service operators. Earth resistance meter is appropriate for measuring ground electrodes, lightning-arresters or little earth resistance systems as well as for measuring power resistance, conductive elements and coupling components. Modern switching circuits reduce the influences of both pressure and earth resistance of the surrounding earth electrodes. Calibration of the earth resistance meter with the adjoining control mechanism avoids the loss of precision at measuring. Frequency control of 850 Hz avoids the influence of scattered currents of the net and its harmonic elements. Besides, this meter has a filter incorporated to delete distorted signs. Earth resistance meter is delivered with the factory calibration however it can also have ISO calibration certificate.

Characteristics:

- 3 ½ positions LCD display (máx. 1999)
- High accuracy
- Battery indicator / of range superation
- Data Hold
- Safety: IEC-1010-1 y CAT III 300 V
- Very good quality
- Components: checking cables: 15 m of red cable, 10 m of yellow cable, 5 m of green cable, ground needles, batteries and user manual.
- Optional ISO calibration certificate.



Removing the yellow protection case of the earth resistance meter (removing the case back) you will see the connection unit to connect the different cables: "E" for the black cable, "P" for the green cable and "C" for the red one with the needles of ground. The connection collocation (depending on the kind of measurement (earth resistance or earth tension measurement) is indicated in the user manual (upper image)

Measuring earth resistance.

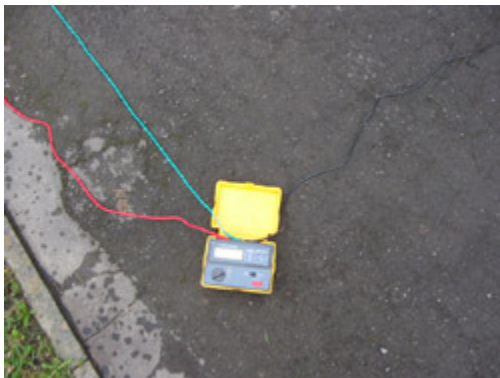
Earth resistance meter is connected with the special ground components introduced on the earth by means of the checking cables. To make accurate measurements with this meter, ground has to be wet, if not ground will be wet. Ground components will be put in a straight line (place the black cable, then the green cable, the yellow one for one ground rod and finally the red cable for the second ground rod). Now everything is ready to connect the earth resistance meter to check the earth connection of your building. This can be also used inside a building to check that water connections with earth work properly. This meter has been developed according to IEC 1010-1 standard and fulfils all the safety conditions for control electronic mechanism (CAT III). Bellow, you will see some examples of earth resistance measurements (lightning-arresters)



At measuring earth resistance cables will be disposed according to specific distances you will see in the user manual.



When cables are placed correctly, customer will be able to switch on the meter which can be placed on the ground.



Rods have to be placed at an appropriate distance to avoid checking cables are crossed or very closed each other.



Ground rods (with green and red cable) are introduced when grass is wet. Cables can be also adapted to tubes.

Technical specifications

Functions	Range	Resolution	Accuracy
Earth resistance	0 ... 19,99/ 0 ... 199/ y 0 ... 1999 Ω	10/ 100 m Ω / 1 Ω	\pm 2% + 2 positions
AC Stress	0 ... 200 V AC 50/60 Hz	0,1 V	\pm 3% + 2 positions
lower measurement limit.		0,01 Ω	
Current of measurement		2 mAeff / rms	
Response time		aprox. 2,5 s	

Measuring quota	0,4 s
Frequency	820 Hz
Overload range	in case of overloaad, „1“ is shown
Power	8 x 1,5 V batteries
Dimensions	250 x 190 x 120 mm
Weight	1,5 kg
Safety	IEC- 1010- 1; EN 61010- 1 instalation category: III
EMV	EN 50081- 1; EN 50082- 1 corresp. DIN/ VDE 0413 part 7
Delivering content 1 ET 3000 series earth resistance meter, chechin cables (15 m of red cable, 10 m of yellow cable, 5 m of green cable), 1 set of earth rods and the user manual	

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