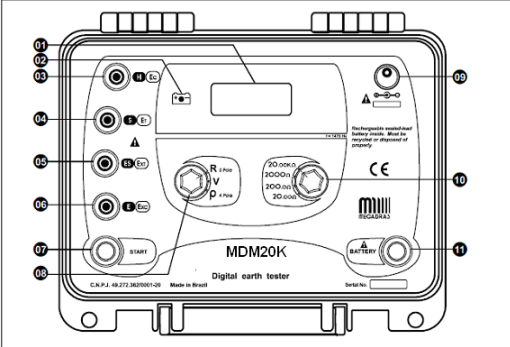





Ground tester

Reference	Designation
MDM20K	Numerical ground tester

Description
Numerical ground tester MDM20K allows an easy and fast measure of the earthing resistance and soil resistivity. This pack is composed of accessories such as (earth rods, decameter...)

Scheme	Picture	Features																								
 <p> 01- 3½ digits display 02- Battery Charger Status LED 03- Output Terminal H (Ec) 04- Output Terminal S (Et) 05- Output Terminal ES (EXT) 06- Output Terminal E (EXC) 07- START (Pushbutton) 08- FUNCTION SELECTOR (Rotary Switch) R (3 poles) = Grounding Resistance V = AC Voltmeter p (4 poles) = Resistivity (4 rods) 09- DC Power Input 10- RANGE SELECTOR (Rotary Switch) 11- BATTERY TEST (Pushbutton) </p>		<table border="1"> <tbody> <tr> <td>Range of measure</td> <td>0 – 20 kΩ for resistance 0 – 200 V for AC voltage</td> </tr> <tr> <td>Resolution</td> <td>0,01 Ω</td> </tr> <tr> <td>Precision</td> <td>+/- 2% of the measured value + 1% of the value of the chosen range</td> </tr> <tr> <td>Frequency of measure operation</td> <td>1470 Hz</td> </tr> <tr> <td>Temperature of working</td> <td>-10°C / +50°C</td> </tr> <tr> <td>Temperature of storage</td> <td>-25°C / +65°C</td> </tr> <tr> <td>Humidity</td> <td>95% RH (without condensation)</td> </tr> <tr> <td>Weight</td> <td>2kg</td> </tr> <tr> <td>Dimensions</td> <td>221 x 189 x 99 mm</td> </tr> <tr> <td>Battery</td> <td>12V recharged Charger : 220V / 240V ~ Charger «Cigar lighter »</td> </tr> <tr> <td>Measure current</td> <td>< 15mA (peak to peak)</td> </tr> <tr> <td>Measure power</td> <td>< 0,5W</td> </tr> </tbody> </table>	Range of measure	0 – 20 kΩ for resistance 0 – 200 V for AC voltage	Resolution	0,01 Ω	Precision	+/- 2% of the measured value + 1% of the value of the chosen range	Frequency of measure operation	1470 Hz	Temperature of working	-10°C / +50°C	Temperature of storage	-25°C / +65°C	Humidity	95% RH (without condensation)	Weight	2kg	Dimensions	221 x 189 x 99 mm	Battery	12V recharged Charger : 220V / 240V ~ Charger «Cigar lighter »	Measure current	< 15mA (peak to peak)	Measure power	< 0,5W
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TECHNICAL FEATURES

A MDM 20 K ground tester is an autonomous and universal product. It is used to measure the earthing resistance, but also the soil resistivity which allows implementing the needs for the earthing systems.

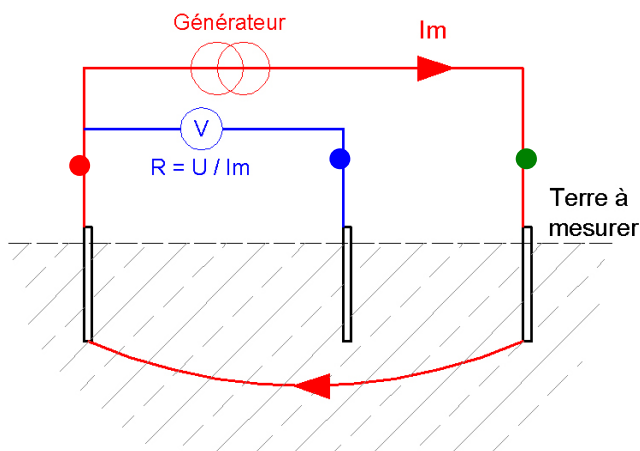
This tool is perfect to measure the earthing systems resistances of the lightning arrestors, towers, buildings... thanks to an important measure range from 0 Ω to 20 k Ω with a resolution of 0,01 Ω .

A screen of 3 -1/2 digits will allow an easy use.

The autonomy of MDM 20K depends on an internal battery system. The recharge of this last one is secured by the use of a micro processor which adapts the level of charge current to the battery in order to obtain an optimal lifetime for the battery.

To overcome the problems of « interferences » voltage in the ground, system of filter allows a reliable measure. In the case where the disturbances are too important regarding to the signal of the internal generator, a sound signal rings out.

The measure of the earthing system resistance is done with the method of 3 earth rods :

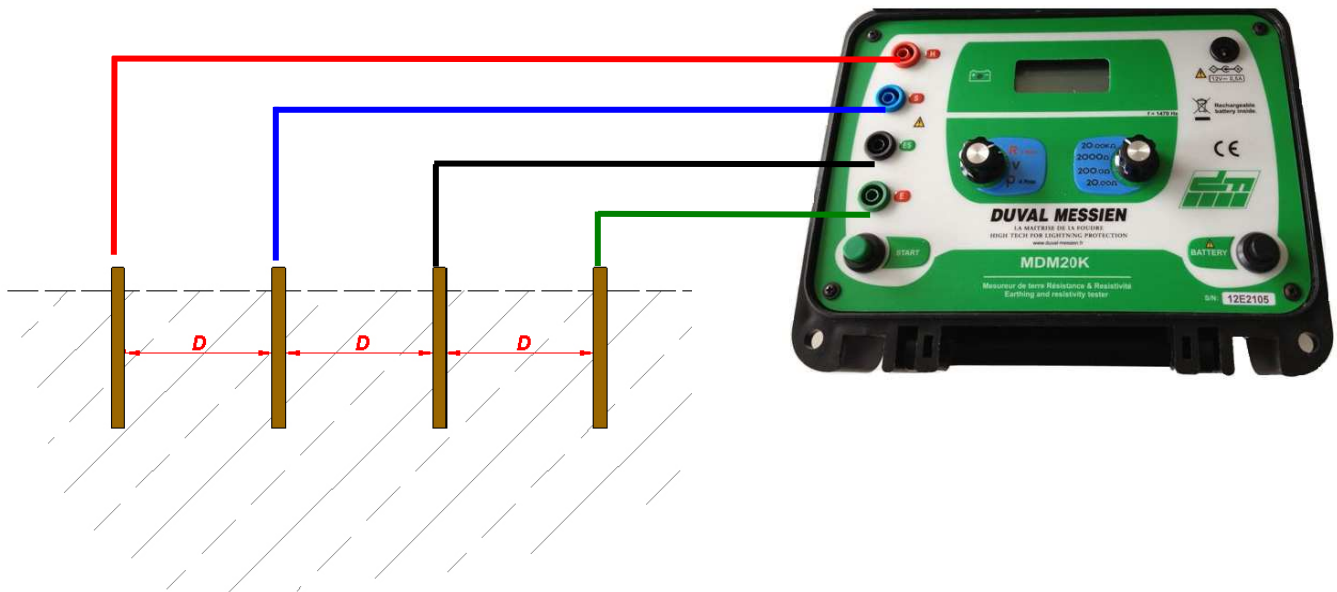


In this method a current which has a frequency of 1470 Hz is injected in the ground by a generator integrated in the tool. By a measure of voltage in a given place, it is then possible to determine the earthing system resistance by a simple Ohm law.

The earth resistivity is done by Wenner method. This method consists in the drilling of 4 in line earth rods separated with a D constant distance. To obtain the soil resistivity it is necessary to apply Wenner equation :

$$\rho = 2\pi RD$$

Method of 4 earth rods :



Features

Dimension (in mm) :	221 x 189 x 99
Weight (kg)	2,00
Accessories included :	1 cigar lighter charger / 1 sector charger
	1 red cable of 40 m, 1 black of 5m.
	1 tape measure of 50m
	2 blue and green cables of 20m
	1 green cable of 5 m
	1 bag for the tools and 1 for the accessories