

EARTH RESISTANCE TESTER

263

Features :

1. Basic measurement functions
 - Earth resistance measurement (RE)
 - Measurement method: 3-pole method, 4-pole method
 - Measuring range: 0.02Ω ~ 1999Ω
 - Minimum resolution: 0.01 Ω
 - Basic accuracy: 5%
 - Soil resistivity measurement (ρ)
 - Measurement range: 0.01Ω • m ~ 376.8KΩ • m
 - Interval of auxiliary earth rods, setting range: 1.0 m ~ 30.0 m.
 - AC true RMS voltage E.V
 - Measurement range : 0 ~ 50V
 - AC bandwidth: 40Hz ~ 200Hz
 - Measurement basic accuracy : 2%

2. Earth test other features
 - Earth resistance measurement adopts square wave excitation test, the maximum open-circuit voltage is 50Vp-p, and the short-circuit current is <3mA.
 - Automatic range detection in earth resistance measurement.
 - RK resistance test, the line resistance effect can be removed.
 - Earth comparison test, the measurement result can be evaluated by the preset "pass/fail (✓ / ✕)" limit and be given audio alarms accordingly.

3. Product calibration

By connecting with the standard instrument, calibrating panel according to the procedures and saving the appropriate calibration data, the periodic calibration is completed and the due accuracy and performance of the product are guaranteed.

4. Large LCD display with white LED backlight.

5. Easy man-machine operation, portable, solid and suitable for field use.



Specifications :

AC Voltage E.V

Measurement range	Resolution	Frequency range	Precision
0.00V ~ 50.00V	0.01V	45 ~ 200Hz sine	2%+5
Input resistance: about 1MΩ			
Measurement rate: 2 times/s.			

Earth Resistance RE (RG when testing ρ)

Range	Measurement range	Resolution	Precision	Remarks
20Ω	0.10Ω ~ 19.99Ω	0.01Ω	5%+5	0.2 Ω error is added when the resistance is less than 2Ω. RH and RS are 500ΩRk corrected data.
200Ω	20.0Ω ~ 199.9Ω	0.1Ω		
2000Ω	200Ω ~ 1999Ω	1Ω		

Output features: test open circuit voltage UM , the maximum is around 50Vpp, square wave

Test the short circuit current IM , the maximum is around 3mA_{pp}, but $IM \times (RH + RE) < UM$

Measurement time: typical 2 seconds.

RH MAX: (4K Ω +100RE) or 50K Ω (whichever is lower).

RS MAX: (4K Ω +100RE) or 50K Ω (whichever is lower).

Additional error at RH MAX or RS MAX: 3%+10.

Series interference voltage: 16-2/3Hz, 50Hz, 60Hz, 400Hz and DC 3V (20 Ω range does not include DC).

Additional error at 3V series interference voltage: 5%+10.

Soil Resistivity (ρ) Measurement

Range	Measurement range	Resolution	Precision
20 Ω ·m	0 Ω ·m ~ 19.99 Ω ·m	0.01 Ω ·m	Depends on RG $\rho = 2 \times \pi \times a \times RG$
200 Ω ·m	20.0 Ω ·m ~ 199.9 Ω ·m	0.1 Ω ·m	
2000 Ω ·m	200 Ω ·m ~ 1999 Ω ·m	1 Ω ·m	
20K Ω ·m	2.00K Ω ·m ~ 19.99K Ω ·m	0.01K Ω ·m	
200K Ω ·m	20.0K Ω ·m ~ 376.8K Ω ·m	0.1K Ω ·m	

The distance between the earth rods: $a=1.0$ m ~ 30.0 m

General Specifications :

Operating temperature and humidity	0 to 40°C (non-condensing $\leq 10^\circ\text{C}$), $\leq 85\%$ RH
Storage temperature and humidity	-20°C to 60°C, $\leq 90\%$ RH
Working altitude	≤ 2000 m. (Indoor use)
Rated transient overvoltage	6K (1.2*50us) I, II, III measurement peak value
Withstand voltage	AC8320V(50/60Hz)/5 seconds (between the circuit and the outer box)
Insulation impedance	1000M Ω or greater/DC1000V (between the circuit and the outer box)
Vibration and shock	Randomness 2g, 5 to 500Hz; 1m drop test
Power supply	8 x 1.5 V (AA) alkaline batteries
Automatic shutdown operation	Automatic shutdown time 0 ~ 90 minutes can be set
Size and weight	178 x 110 x 59 (mm), about 600g (including batteries)

Standard Delivery :

- Test kit (Red : 15 m; black/green : 5 m; yellow : 10 m) - 1 set
- Earth steel chisel - 4
- 1.5V Alkaline Battery - 8 Nos.
- Handle Rope
- Cloth Bag
- Traceable Calibration Certificate
- Instruction Manual

Optional :

- 15V Power Adaptor
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

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