

Expertise for Earths

*Ground,
earth electrode and
coupling measurement
using traditional rod
methods*



- **3 testers in one:** resistivity, earth, coupling
- **Validation of measurement through automatic check:**
3 lights indicate the presence of faults liable to impair measurement results
- **Heavy-duty on-site case** with cover for use on difficult grounds
- **Large LCD display with backlighting**

Robust and watertight, the DET27 and DET36 are easy-to-use instruments designed specially for use in the field. Wherever you need to install an electric ground connection or certify an existing one, the DET27 and DET36 help you perform accurate, reliable and quick diagnosis while providing the friendliest and safest test environment.

COMPLETE AND WELL-DESIGNED TOOLS

Using the conventional rod-based method, the (DET 27) and (DET 36) measure resistivity ("4-wire" connections), ground resistances ("3-wire" connections) and coupling between electrically independent earth electrodes ("4-wire" connections).

They are equipped with 4 color-coded terminals for easy connection and a captive bar for changing from a 4-wire to a 3-wire measurement very quickly and easily.

Plus, the (DET 36) is fitted with a rechargeable battery with an internal charger.

MEASUREMENT AND ERROR DIAGNOSIS

Once the rods have been installed and connected (named E, ES, S and H), begin measurement by simply pressing the push-button. For maximum accuracy, the range and current selection is carried out automatically.

The measurement result and its unity are read directly on the large, backlit digital screen.

Three lights indicate any defect or interference liable to impair measurement results:

- red flashing FAULT LED (E-H): indicates a fault in the current circuit (voltage at terminals ≥ 30 V peak)
- red flashing HIGH RESISTANCE LED (ES-S): voltage circuit resistance too high ($R \geq 50$ k Ω)
- red flashing HIGH NOISE LED (ES-S): voltage circuit noise ≥ 13 V peak

VERY SAFE TO USE

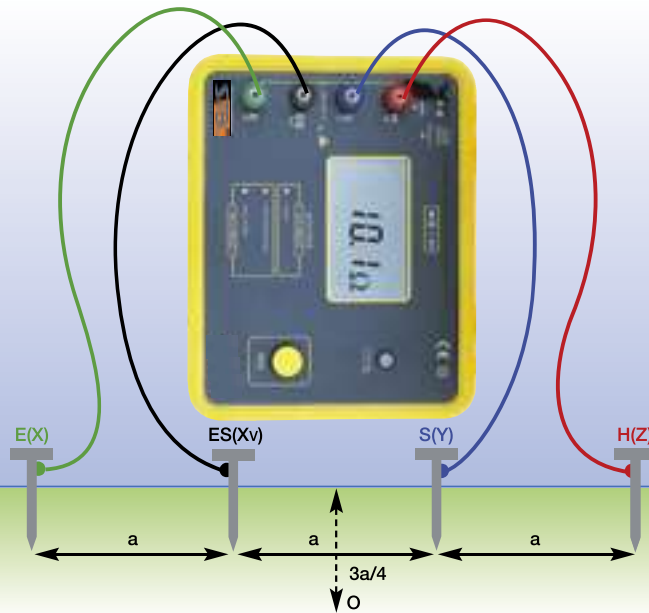
When it comes to safety, the DET27 and DET36 meet the strictest of standards.

These instruments are very suitable to severe environments: parasitic voltages, high telluric currents, highly resistive auxiliary connections, etc.



■ Ground resistivity measurement with the "Wenner method" (4-rod method)

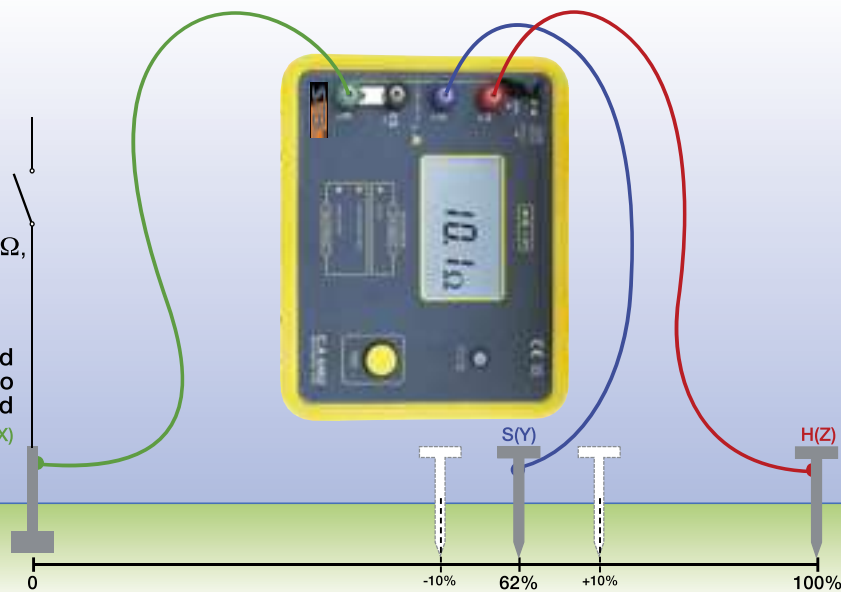
Depending on the soil's properties, this measurement defines the best positions, depth and geometry necessary for installing electric ground connections.



■ Ground connection resistance measurement with the "TAGG method" (62 % method)

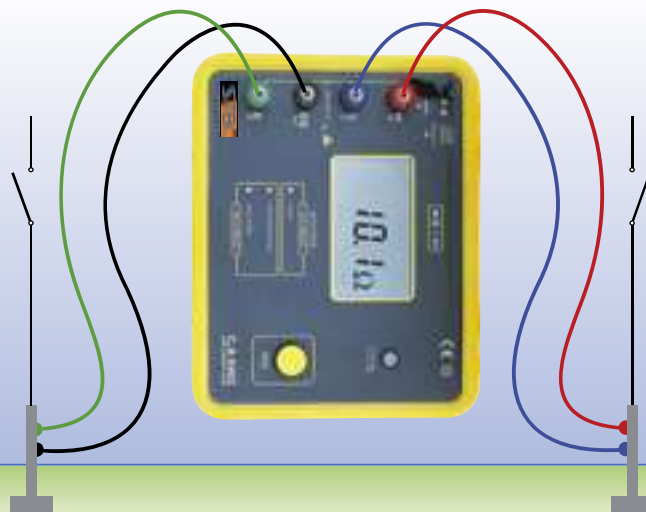
This method, using 2 auxiliary rods, measures up to 2000 Ω , even in worst-case conditions.

Ground connection to be measured
E(X)



■ Coupling measurement between two earths

4-wire measurements are considered better than 2-wire because they free you from cord resistance, which is often too high.



TECHNICAL SPECIFICATIONS:



MEASUREMENT CHARACTERISTICS

- Measurement from 0 to 2000 Ω within three automatic ranges

Measurement range	Resolution	Test current	Accuracy
0.00...19.99 Ω	0.01 Ω	10 mA	$\pm 2\% \pm 1$ pt
20.00...199.9 Ω	0.1 Ω	1 mA	$\pm 2\% \pm 1$ pt
200.0...1999 Ω	1 Ω	0.1 mA	$\pm 2\% \pm 3$ pt

- Measurement frequency: 128 Hz
- Open circuit voltage ≤ 42 V peak

- Conditions for use: $-10\text{ }^{\circ}\text{C} \dots +55\text{ }^{\circ}\text{C}$ / $20\% \dots 90\%$ RH
- Response time: between 4 and 8 seconds depending on measurement conditions

OTHER FEATURES

- Power supply

DET 27	DET 36
8 alkaline 1.5 V LR14 batteries or same-size rechargeable NiMH or NiCd storage batteries	Rechargeable NiMH battery (life: 6 h for a load at 80 %)

- Average charge life under permanent control

DET 27	DET 36
4,500 measurements of 15 s	1,180 measurements of 15 s

- Watertight IP 53 case
- Dimensions: 273 x 247 x 127 mm

- Weight: about 2.8 kg (DET 27) and about 3.3 kg (DET 36)

COMPLIANCE TO STANDARDS

- Electric safety: double insulation device, according to NF EN 61010 / IEC 61557

- EMC: EN 61 000-3, EN 61 000-4

TO ORDER

delivered with batteries and user's manual in 5 languages	delivered with 2 m European-type mains supply lead and user's manual in 5 languages
P01.1265.01	P01.1265.02

ACCESSORIES:



Standard Earth / Resistivity Kit

P01.1018.23

Shoulder bag with 4 straight rods, 2 extractors, 2 reels (30 m of red cord, 30 m of blue cord), 3 m of green cord, 3 m of black cord and 1 hammer.



Prestige Earth / Resistivity Kit

P01.1018.25

Compartmentalized rigid bag with space for the tester, including 4 T-rods, 4 reels (100 m of red cord, 60 m of blue cord, 10 m of green cord and 20 m of black cord) and a hammer.

REPLACEMENT PARTS:

- 1.5 V alkaline LR14 battery (pack of 2)
- 9.6 V – 3.5 AH NIMH storage battery
- European mains lead
- GB mains lead
- HPC 0.1A fuse (pack of 10)

P01.2960.27
P01.2960.21
P01.2961.74
P01.2952.53
P01.2970.12

