



ERT-10

Earth Resistance Tester Kit



KEY FEATURES

- Three-wire precise and two-wire simplified
- 20 / 200 / 2000 Ω · 0.01 Ω resolution
- Earth voltage to 200 V on its own range
- 3 mA test current will not trip an RCD
- PRESS TO TEST with LOCK for hands-free use
- Backlit 1999-count LCD · data hold · HV lamp

Drive the Spikes, Read the Electrode.

The reference method for measuring an earth electrode. Two auxiliary spikes go into the ground in line with the electrode under test, the instrument passes a current between the far spike and the electrode, and measures the potential at the middle one. That gives the true resistance of a single electrode, which a clamp tester cannot do because a lone electrode forms no loop.

Three ranges cover 20, 200 and 2000 Ω , reading to 0.01 Ω at the bottom where a good electrode should sit. A simplified two-wire test is there for when only one spike can be placed. Earth voltage is measured first, on its own dial position, because stray voltage in the ground will corrupt a resistance reading.

The test signal is about 3 mA at about 820 Hz, low enough and off-frequency enough not to trip an RCD on the circuit under test. PRESS TO TEST locks down for hands-free work, the display is backlit for pits and risers, and everything travels in one bag with the reels and spikes.

IDEAL FOR

- Commissioning new earthing installations
- Lightning protection system verification
- Periodic inspection and compliance records
- Substations, generators and plant earthing
- Locating high-resistance electrodes and joints

MEASUREMENT RANGES

Range	Accuracy	Resolution	Method
Earth resistance · about 3 mA at about 820 Hz			
20 Ω	$\pm(2\% \text{ rdg} + 10 \text{ digits})$	0.01 Ω	3-wire
200 Ω	$\pm(2\% \text{ rdg} + 3 \text{ digits})$	0.1 Ω	3-wire
2000 Ω	$\pm(2\% \text{ rdg} + 3 \text{ digits})$	1 Ω	3-wire
2000 Ω	$\pm(2\% \text{ rdg} + 5 \text{ digits})$	1 Ω	2-wire, simplified
Earth voltage			
200 V, 40 to 400 Hz	$\pm(1\% \text{ rdg} + 5 \text{ digits})$	0.1 V	ACV input

Accuracy is quoted at 23 ± 5 °C with relative humidity below 75%. Measure earth voltage before resistance: a stray potential in the ground will corrupt the reading, and it should be below about 10 V.



WHAT'S IN THE BOX

- ERT-10 earth resistance tester
- Test lead set: 15 m red, 10 m yellow, 5 m green
- Auxiliary earth spikes, two
- Six 1.5 V AA (R6P) batteries
- Instruction manual
- Carrying bag

LEAD LENGTHS · The 15 m and 10 m reels set the spike spacing for a three-wire test; the 5 m green lead goes to the electrode under test

GENERAL SPECIFICATIONS

Code	Item	Part Number
ERT-10	Earth resistance tester kit, 3-wire and 2-wire, with leads and spikes	600101

MEASURES

Earth resistance by the fall-of-potential method, three-wire precise or two-wire simplified · earth voltage on the ACV input

DISPLAY

75 × 52 mm LCD, 1999 count, backlit by the * key · data hold · HV indicator lamp

SAFETY

IEC 61010-1 · CAT II 600 V · overload protection on every function · CE

ENVIRONMENT

Operating -10 to 50 °C, below 80% RH · storage -20 to 60 °C, below 75% RH

DIMENSIONS · WEIGHT

175 × 110 × 70 mm · 680 g with batteries

TEST SIGNAL

About 3 mA at about 820 Hz · low enough not to trip an RCD on the circuit under test

OPERATION

Manual ranging · PRESS TO TEST with a LOCK position for hands-free and continuous measurement

POWER

6 × 1.5 V AA (R6P) · low battery indicator · auto power off

BEST ACCURACY

23 ± 5 °C, below 75% RH

WARRANTY

1 year, subject to product registration with GPS LTD · service and calibration available