



ERT Series

Clamp Earth Testers



Measure the Loop, Leave the Earth Connected.

Clamp-on earth testers for looped grounding systems. The jaw injects a signal above 1 kHz and measures the resulting current, returning the resistance of the path without disconnecting the down conductor or driving temporary electrodes. On a transmission tower, a cable-shield network or a bonded building grid, a reading takes seconds.

Resistance reads from 0.01 Ω , at $\pm(1\% + 0.01 \Omega)$ below 1 Ω where earthing work is usually judged. The ERT-20C and ERT-20C+ extend to 1200 Ω and add true RMS leakage and neutral current measurement to 20 A, which shows whether a high reading is a genuine fault or interference on the loop.

Every model stores 99 readings, carries an audible and visual alarm against a threshold you set, and flags interference on the loop so a doubtful reading is not recorded as a good one. A test loop is supplied so the instrument can be proved on site before the survey starts.

KEY FEATURES

- No auxiliary electrodes on a looped system
- $\pm(1\% + 0.01 \Omega)$ from 0.01 to 0.99 Ω
- True RMS leakage current to 20 A on C models
- 99-reading memory with settable alarm
- Interference indicator flags a doubtful reading
- CAT III 150 V · double insulated · IP30

IDEAL FOR

- Transmission and telecom tower earthing
- Lightning protection down conductors
- Substation and distribution maintenance
- Bonded building grids and PV arrays
- Flat steel earthing, on the 65 × 32 mm jaw

TECHNICAL SPECIFICATIONS

Model	ERT-15C	ERT-20C	ERT-20C+
Jaw type	Round, Ø32 mm	Long elliptic, 65 × 32 mm	
Maximum conductor	32 mm round	28 mm round, 65 × 32 mm flat	
Resistance range	0.01 to 200 Ω	0.01 to 1200 Ω	
Current range	—	0.0 mA to 20.0 A, true RMS	
Alarm thresholds	Resistance 1 to 199 Ω	Resistance 1 to 199 Ω current 1 to 499 mA	
Memory	99 readings		
RS232 data upload	—	—	Standard
Size and weight	260 × 90 × 66 mm 1120 g	285 × 90 × 66 mm 1160 g	
Part number	800115	800120	800121

RANGES AND ACCURACY

Resistance		
Range	Resolution	Accuracy
0.010 to 0.099 Ω	0.001 Ω	±(1% + 0.01 Ω)
0.10 to 0.99 Ω	0.01 Ω	±(1% + 0.01 Ω)
1.0 to 49.9 Ω	0.1 Ω	±(1% + 0.1 Ω)
50.0 to 99.5 Ω	0.5 Ω	±(1.5% + 0.5 Ω)
100 to 199 Ω	1 Ω	±(2% + 1 Ω)
200 to 395 Ω	5 Ω	±(5% + 5 Ω)
400 to 590 Ω	10 Ω	±(10% + 10 Ω)
600 to 880 Ω	20 Ω	±(20% + 20 Ω)
900 to 1200 Ω	30 Ω	±(25% + 30 Ω)

Current, true RMS (C models)		
Range	Resolution	Accuracy
0.00 to 9.00 mA	0.05 mA	±(2.5% + 2 mA)
10.0 to 99.0 mA	0.1 mA	±(2.5% + 10 mA)
100 to 300 mA	1 mA	±(2.5% + 20 mA)
0.30 to 2.99 A	0.01 A	±(2.5% + 0.1 A)
3.0 to 9.9 A	0.1 A	±(2.5% + 0.5 A)
10.0 to 20.0 A	0.1 A	±(2.5% + 1 A)

Resistance rows above 200 Ω apply to the ERT-20C and ERT-20C+ only. The ERT-15C measures to 200 Ω.

These instruments measure the resistance of a closed loop. On a multi-point system, such as a tower line bonded by an overhead earth wire, the parallel path is small enough to ignore and the reading is the electrode under the jaw. A single isolated electrode has no loop and cannot be read directly; bond it to a second known-good electrode and read the pair in series, or use the three-point method across three electrodes and solve for each. Both are set out in the user manual.



WHAT'S IN THE BOX

- ERT main unit, model as ordered
- Test loop for on-site verification
- Carrying case
- User manual

TEST LOOP · Nominal 5.1 Ω at 20 °C, for checking the instrument before a survey

POWER · 4 × AA alkaline, supplied separately

GENERAL SPECIFICATIONS

Code	Item	Part Number
ERT-15C	Clamp earth tester, round Ø32 mm jaw, 200 Ω	800115
ERT-20C	Clamp earth tester, 65 × 32 mm jaw, 1200 Ω, leakage current	800120
ERT-20C+	Clamp earth tester, 65 × 32 mm jaw, 1200 Ω, leakage current, RS232	800121

SAFETY

IEC/EN 61010-1 and 61010-2-032 · CAT III 150 V to earth, 20 A maximum

DISPLAY AND MEASUREMENT

4-digit LCD with backlight · resistance above 1 kHz · current at 50/60 Hz · fully automatic ranging

ENVIRONMENT

Operating -10 to 55 °C, 10 to 90% RH · storage -20 to 60 °C · field immunity 40 A/m, 1 V/m

PROTECTION

Double insulated · pollution degree II · IP30 · IK04

POWER

4 × 1.5 V LR6 AA alkaline · below 50 mA · auto power off after 5 minutes

WARRANTY

1 year, subject to product registration with GPS LTD