



# Data Sheet

## ERT-50 Double Clamp Multifunction Earth Tester

### Features

- 2, 3 and 4 point testing, Double clamp method,
- Attached Rod Technique
- Stakeless measurements
- Complete with lead and stake kit
- Measurement of Earth Resistance, Soil Resistivity, Earth voltage and Leakage current of grounding line
- FFT and AFC Technology.
- Data memory: 300 sets. Data upload with RS232
- Robust carry case
- Large LCD display with Backlit
- Robust carry case



The new GPS ERT-50 ground testing instrument family offers a comprehensive solution to your ground stake and soil resistivity testing needs.

The complete kit comprising the instrument, test leads, stakes, batteries and calibration certificate are delivered in a tough carry case which has space to accommodate all the instrument accessories everything you need to start testing in one kit.

The clear, easy-to-read display provides excellent contrast and viewing angle making the instrument ideally suited to outdoor use. The display is backlit, extending the operational environment of the instrument to cable cellars and other dark locations.





## Technical Specification

| Model   | ERT-50 Double Clamp Grounding Resistance Tester   |                           |  |
|---|---|---------------------------|--|
| 2/3/4 pole method measure grounding resistance(R) | Range:0.00Ω~30.00Ω;   | Resolution:0.01Ω;         | Accuracy:±2%rdg±3dgt   |
|   | Range:30.0Ω~300.0Ω;   | Resolution:0.1Ω;          | Accuracy:±2%rdg±3dgt   |
|   | Range:300Ω~3000Ω;   | Resolution:1Ω;            | Accuracy:±2%rdg±3dgt   |
|   | Range:3.00kΩ~30kΩ;  | Resolution:10Ω;           | Accuracy:±4%rdg±3dgt   |
| Selection method measure grounding resistance(R)  | Range:0.00Ω~30.00Ω;   | Resolution:0.01Ω;         | Accuracy:±2%rdg±3dgt   |
|   | Range:30.0Ω~300.0Ω;   | Resolution:0.1Ω;          | Accuracy:±2%rdg±3dgt   |
|   | Range:300Ω~3000Ω;   | Resolution:1Ω;            | Accuracy:±2%rdg±3dgt   |
| Earth Voltage                                     | Range:0.0~100V AC;  | Resolution:0.1V;          | Accuracy:±2%rdg±3dgt   |
| AC current  | Range:0.00mA~600.0A   | Resolution:0.1mA;         | Accuracy:±2%rdg±3dgt   |
| Soil Resistivity(ρ)                               | Range:0.00Ωm~99.99Ωm;   | Resolution:0.01Ωm         | According to the precision of R<br>( $\rho=2\pi aR$ , a:1 m-100m, $\pi=3.14$ ) |
|   | Range:100.0Ωm~999.9Ωm;  | Resolution:0.1Ωm          |  |
|   | Range:1000Ωm~9999Ωm;  | Resolution:1Ωm            |  |
|   | Range:10.00kΩm~99.99kΩm;  | Resolution:10Ωm           |  |
|   | Range:100.0kΩm~999.9kΩm;  | Resolution:100Ωm          |  |
|   | Range:1000kΩm~9000kΩm;  | Resolution:1kΩm           |  |
| Measuring Method                                  | 2/3/4 pole method: change-pole method, measurement current 20mA Max<br>Selection method: change-pole method, measurement current 20mA Max<br>Double clamp method: disconnect mutual inductance method, measurement current 1mA Max<br>Soil Resistivity: 4-pole measurement (Wenner method)<br>Earth Voltage: average rectification(between P(s)-ES)<br>AC current: mutual inductance method |                           |  |
| Power Supply                                      | DC 9V (Alkaline dry battery LR14 1.5V 6 PCS )   |                           |  |
| Test Frequency                                    | 128Hz/111Hz/105Hz/94Hz(AFC)   |                           |  |
| Short-circuit Test Current                        | AC 20mA max   | Open-circuit Test Current | AC 40V max   |
| Data Storage                                      | 2000 sets   | Test Voltage Wave         | Sine wave  |
| Electrode Distance Range                          | Can be set 1m-100m  | Weight                    | 8kg(with packing)  |
| Tester Dimension                                  | LWH:215mm×190mm×95mm  | Caliber of clamp          | φ68mm  |
| Data Access                                       | Data read function: "READ" icon display   |                           |  |
| Data Hold   | Data hold function: "HOLD" icon display   |                           |  |
| Overflow Display                                  | Exceeding measuring range overflow function: "OL" icon display  |                           |  |
| LCD Dimension                                     | 128mm×75mm; LCD Window Dimension: 124mm×67mm  |                           |  |
| Testing Wires                                     | Six wires: each for Red 20m, black 20m, yellow 10m, green 10m, red 1.6m, black 1.6m   |                           |  |
| Auxiliary Earthing Rod                            | 4 PCS: Φ10mm×150mm  |                           |  |
| RS232 Interface                                   | Possess RS232 interface, software supervision, storage data can be uploaded to computer, preserved and printed  |                           |  |
| Alarm Function                                    | When measuring value exceeds alarm setting value, there is "Toot-toot-toot" alarm hint  |                           |  |
| Auto Power-off                                    | 15 Minutes after power on, it will power off automatically to lower the power consumption   |                           |  |
| Overload Protection                               | Measuring earth ground resistance: between each interfaces of E-P,E-C, AC 280V/3 seconds  |                           |  |
| Interference Test                                 | Recognize interference signal automatically, "NOISE" icon display when interference voltage exceed 5V   |                           |  |
| Auxiliary Earthing Test                           | Can measure auxiliary earth resistance, 0.00KΩ-30kΩ(100R+rC<50kΩ, 100R+rP<50kΩ)   |                           |  |
| Battery Voltage                                   | When battery voltage decreases to about 7.5V, battery voltage low icon will display, reminding to replace battery   |                           |  |
| Power Consumption                                 | Backlight:25mA Max; Standby: 45mA Max(Backlight shut off);Measurement:100mA Max(Backlight shut off)   |                           |  |
| Accessories                                       | Tester:1PC; Earthing Rod:4PCS; Testing Wire:4PCS; Simple testing wire:2PCS; RS232 Com-cable:1PCS; Software disk:1PC; Tester bag:1PC   |                           |  |

