

3 Wire Earth Resistance Tester



CE

1120 ER

The 1120 ER is a "professional instrument". The instrument is suitable for the testing of single earth electrodes such as lightning conductors and other small earthing systems. The resistance of conductors such as continuity and conduit coupling joints can also be measured. Two-terminal operation measurement, which reduces the accuracy, can also be done by shorting P and C terminals.

Earth resistance can be measured directly from 0.01 ohms up to 1999 ohms. The reading is displayed on a large, easy-to-read digital display. It is available to adjust to 0Ω ADJ. Control to set reading of zero.

The 1120 ER makes measurements by passing a constant current through the device under test (generally a conductor or low resistance) and measuring the voltage across it. The earth resistance is then calculated by Ohm's Law.



It has an advanced circuit design that permits the instrument to operate with the minimum influence from earth voltage and earth resistance of the auxiliary spikes. This superb instrument is powered by 8 x 1.5 volt manganese-alkaline AA batteries. The calibration of the instrument is performed with the included test leads. Therefore, when using the supplied test leads, the accuracy does not suffer of the three-terminal method of measurement for the most common applications.

The test frequency of 820Hz has been chosen to avoid stray currents at power frequencies and their harmonics. However, the 1120 ER has a built-in filter to reject unwanted signals. The batteries are constantly being checked while in use. The case is ideal for outdoor work. With the 1120 ER, earth electrode testing, which is an important part of electrical installation and maintenance procedure, is made easy. The 1120 ER can be used by the electrical contractor or maintenance engineer to check the effectiveness of their type of earth electrode systems.

FEATURES

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- 0Ω adjustment.
- Battery operated.
- Data hold function.
- Low battery indication.
- Calibration performed with supplied test leads.

SPECIFICATIONS

Measuring ranges	Earth resistance 0-20Ω / 0-200Ω / 0-2000Ω Earth voltage 0-200 Vac(40-500Hz) Earth resistance ±(2%rdg+2dgt) or ±0.1Ω, which is greater Earth voltage ±(1%rdg+2dgt)
Accuracy	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Earth resistance resolution	Earth Resistance by constant current inverter 820Hz approx. 2mA.
Measuring system	3½ digit (2000 counts)
Display	0Ω adjustment √
Open circuit indication	LED will be unlit
Low battery indication	"  "symbol appears on the display
Data hold indication	"  "symbol appears on the display
Over range indication	"1"(MSD)
Dimensions	175(L) × 85(W) × 75(D)mm
Weight (battery included)	Approx. 600g
Power source	1.5V (AA) × 8
Safety standard	IEC/EN 61010-1 CAT III 200V IEC 61557-1 IEC 61557-5 EN 61326-1
Accessories	Instruction manual Test leads (red-15m, yellow-10m, green-5m) Auxiliary earth spikes Simplified measurement probe Soft pouch Shoulder belt Batteries