Rewind with Ease

Three-electrode measurement
Two-electrode measurement (Simple Measurement)

Dramatically faster set-up and break-down

Thin for a reason
Since variations in the thickness of auxiliary grounding rods cause almost no change in their grounding resistance, the FT3151 uses thinner rods that are easier to drive into the ground.

Before
Thick rods had to be hammered into the ground and were difficult to remove.

After
The FT3151 uses hard, rust-resistant rods made of stainless steel.

Cleanup
Tangle- and twist-free measurement cord winders

Easily rewind measurement cords, even if they’re 20 m long
Ensuring safe, reliable measurement

~ V Ground potential check

Easily check for ground potential. Distorted ground potential can result in measurement errors, so it’s important to eliminate any impact, for example by turning off electrical devices.

H(C) | S(P) Auxiliary grounding resistance check

When measuring an installation with low grounding resistance, inadequate measurement sensitivity can interfere with measurement. The FT3151 lets you check the auxiliary grounding electrode S (P), too.

Measurement

Turn the knob to align the ammeter with the [▼] mark.

If the ammeter’s needle wavers…

Switch measurement frequencies.

This will make the instrument less susceptible to the effects of harmonic ground potential and other conditions.

Specifications

(Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

<table>
<thead>
<tr>
<th>Measurement system</th>
<th>Two-electrode method/three-electrode method (switchable), AC potentiometer method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounding resistance measurement (Measurement range)</td>
<td>Range</td>
</tr>
<tr>
<td>10 Ω</td>
<td>0 to 11.5 Ω</td>
</tr>
<tr>
<td>100 Ω</td>
<td>0 to 115 Ω</td>
</tr>
<tr>
<td>1000 Ω</td>
<td>0 to 1150 Ω</td>
</tr>
<tr>
<td>Measuring frequency</td>
<td>575 Hz/600 Hz, Nominal Deviation: ±10 %</td>
</tr>
<tr>
<td>Measurement current</td>
<td>Three-electrode method: 15 mA rms or less</td>
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<tr>
<td>Two-electrode method: 3 mA rms or less</td>
<td></td>
</tr>
<tr>
<td>Open circuit voltage</td>
<td>AC50 V rms or less</td>
</tr>
</tbody>
</table>

Earth potential measurement

0 to 30 V, Nominal Deviation: ±3.0 % f.s.

Operating temperature and humidity

0°C to 40°C (32°F to 104°F), 80 % rh or less (non-condensing)

Storage temperature and humidity

-10°C to 50°C (14°F to 122°F), 80 % rh or less (non-condensing)

Operating environment

Indoor, outdoor (excluding farmland*1), pollution degree 2, altitude up to 2000m (6,562-ft.)

Power supply

LR6 Alkaline battery × 6

Number of uses

Approx 1100 operations (using LR6 battery), Measurement conditions: 30 sec. measurement/30 sec. rest, 3-electrode method, 575 Hz, auxiliary grounding resistance measuring 100 Ω, measuring 10 Ω in the instrument’s ×1 Ω range

Maximum rated voltage to earth

300 V AC (measurement category II) anticipated transient overvoltage 2500 V

Overload protection

250 V AC, 1 minute (between E - S (P), E - H (C) terminals)

Applicable standards

Safety (instrument/measurement circuitry): EN 61010, EMC: EN 61326, Grounding resistance meter: EN 61557

Dimensions and mass

164 (W) × 119 (H) × 88 (D) mm (6.46″ W × 4.69″ H × 3.46″ D)(not including protrusions) , 760 g (26.8 oz. main unit only)

Number of uses

Auxiliary Earthing Rod L9840 (2 piece set) × 1, Measurement Cable (alligator clip, black 4 m) L9841×1, Measurement Cable (red 20 m, equipped with winder) L9842-22×1, Carrying Case ×1, Protector×1, LR6 Alkaline battery ×6, Instruction manual×1

Options

MEASUREMENT CABLE L9843-51
Yellow 50 m (164.06 ft) length, equipped with flat cable winder

MEASUREMENT CABLE L9843-52
Red 50 m (164.06 ft) length, equipped with flat cable winder

MEASUREMENT CABLE L9844
For earthing terminal board, red/yellow or black 1.2 m (3.94 ft) each length

TEST LEAD L9787
For simplified measurement method, indoor use only, red and black 1.2 m (3.94 ft) each length

MEASUREMENT CABLE L9842-11
Yellow 10 m (32.81 ft) length, equipped with winder

MEASUREMENT CABLE L9842-22
Red 20 m (65.62 ft) length, equipped with winder

MEASUREMENT CABLE L9842-22
Red 20 m (65.62 ft) length, equipped with winder

Accessories

AUXILIARY EARTHING ROD L9840
2 piece set

MEASUREMENT CABLE L9841
Alligator clip, black 4 m (13.12 ft) length

MEASUREMENT CABLE L9842-11
Yellow 10 m (32.81 ft) length, equipped with winder

MEASUREMENT CABLE L9842-22
Red 20 m (65.62 ft) length, equipped with winder

CARRYING CASE C0108
2 sheets in set

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