

EARTH TESTER

# 3150

## Easy to Use and Very Accurate



# Scarcely affected by earth voltage

## ● Performance surpasses\* JIS C-1304 requirements

All performance figures are at JIS standards levels or better.

\*Japanese Industrial Standards

## ● Scarcely affected by external disturbance elements

Accurate readings are possible because the effect of earth voltage, auxiliary earthing resistance and air temperature is minimized.

## ● Easy measuring capability

In measuring earthing resistance in tall buildings or where ground rods cannot be inserted, existing low earthing resistors are used to obtain earthing resistance readings.

When using a common earth wire on existing earth fixtures, the instrument is so designed that leak circuit breakers will not operate.

## ● Small, lightweight and sturdy

The case is made of very strong, shock-resistant plastic.

## ■ Specifications

**Applicable Standard:** JIS C-1304 (Applies in the case of the two-terminal method, 100 Ω and 1000 Ω range only)  
**Measuring Range and Accuracy**  
**Earth Resistance:** 10/100/1000 Ω ±2.5% of f.s.

**Earth Voltage:** 30V AC · ±3% of f.s.

**Operating System:** AC potentiometer

**Effect of Power Voltage:** To accuracies given above, at 4~6.5V

**Effect of Temperature:** Not more than ±1% at 0~40°C

**Effect of Auxiliary Earth Resistance:** Not more than ±5% when fluctuation is 0~5 kΩ

**Effect of Earth Voltage:** Not more than ±2% at 0~5V and not more than ±5% at 5~10V

**Power Source:** SUM-2 x 4 ("C" SIZE)

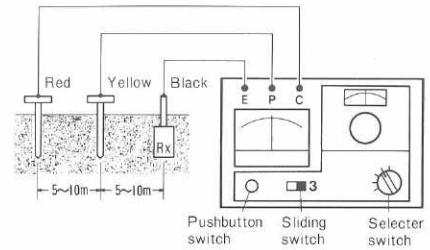
**Battery Life:** Approx. 6 hours

**Insulation Resistance:** At least 20MΩ at 500V DC between circuit and case

**Dielectric Strength:** 1000V for 1 min.

**Dimensions · Weight:** Approx. 125H x 170W x 110D mm · 1.1kg

**Accessories:** 9049 Auxiliary earth probes 2 pcs. 9040 Earth resistance measuring leads (One 5m black, one 10m yellow, one 20m red)  
 Storage bag for accessories



## ● Direct Method

(Two-terminal Method)

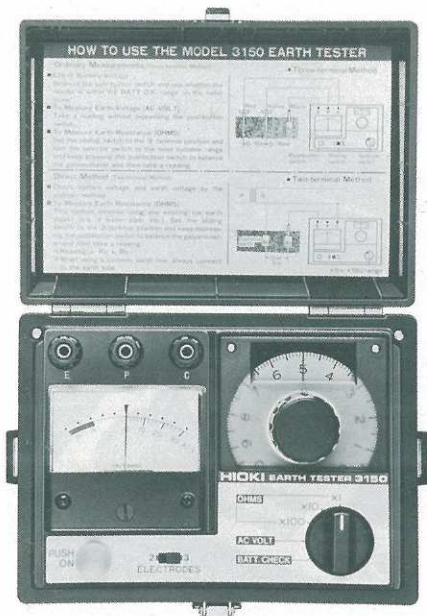
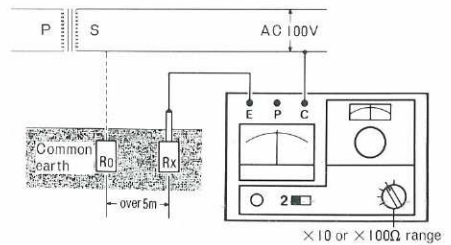
Check battery voltage and earth voltage by the ordinary method.

### To Measure Earth Resistance (OHMS)

This method involves using any existing low earth object (e.g. a water pipe, etc.). Set the sliding switch to the 2-terminal position and keep depressing the pushbutton switch to balance the galvanometer and then take a reading.

\*Reading = Rx + Ro

When using a common earth line, always connect to the earth side.



Approx. 125H x 170W x 110Dmm · 1.1kg



## ■ Taking Measurements

### ● Ordinary Measurements

(Three-terminal Method)

#### Check Battery Voltage

Depress the pushbutton switch and see whether the needle is within the BATT O.K. range on the meter scale.

#### To Measure Earth Voltage (AC VOLT)

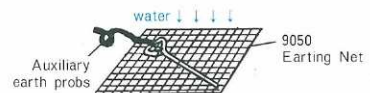
Take a reading without depressing the pushbutton switch.

#### To Measure Earth Resistance (OHMS)

Set the sliding switch to the 3-terminal position and turn the selector switch to the most suitable range and keep pressing the pushbutton switch to balance the galvanometer and then take a reading.

## ■ Optional Accessory

### 9050 Earthing Nets (2pcs.)



Where there are concrete surfaces or if ground bars cannot be inserted, use an earthing mesh. Spread the meshes as on the ground, wet them thoroughly and take readings. Either connect a test cord directly to each mesh with a clip or place a connected ground rod on top of each mesh and take measurements.

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