HIOKI

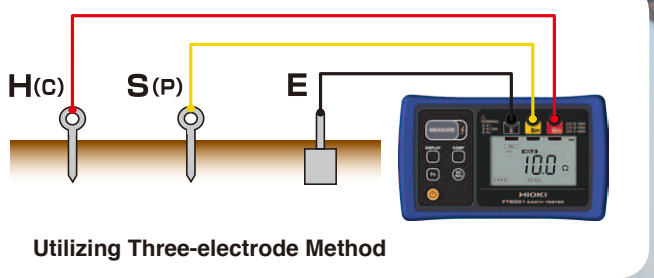
EARTH TESTER FT6031

Tough and Ready for the Field

IP67

Dustproof and Waterproof

2- or 3-Pole Earth Resistance Testing



Utilizing Three-electrode Method

CE 3year Warranty DROP PROOF

Field-tough. Site-ready. So you can get down to work.

Introducing an earth resistance tester engineered to handle dirt with true grit

IP67 protection, even with the terminal caps open

IP67

No ingress of water even if temporarily submerged under defined conditions of pressure thanks to watertight design

No ingress of dust thanks to dust-proof enclosure

Vibration-resistant design

DROP PROOF

Drop-proof

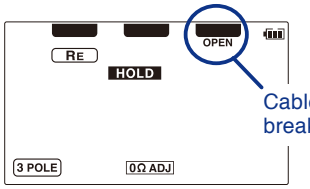
The FT6031-03 is engineered to withstand being dropped onto concrete from a height of 1 m.

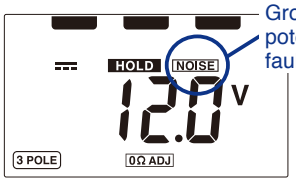
Large, easy-to-ready display

The FT6031-03's large LCD panel features a wide viewing angle for improved visibility outdoors.

Automatic pre-check

The FT6031-03 automatically checks cables for line breaks and the ground potential (noise) before measurement. A warning is shown if either check yields a FAIL result, allowing you to quickly assess the situation.



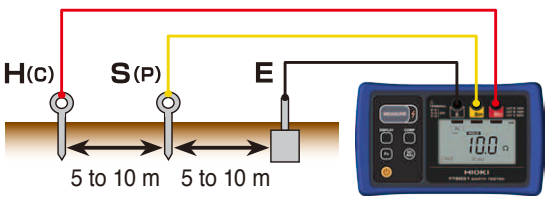


High precision & zero-adjustment

The FT6031-03 delivers high accuracy of ±1.5% rdg. ±8 dgt. The zero-adjustment function aids in delivering even better accuracy by canceling the wiring resistance of long measurement cable runs.

Two- or three-electrode measurement

Choose either two- or three-electrode measurement. Automatic switching of connections internally eliminates the need to use a short bar or other apparatus.



Three-electrode measurement

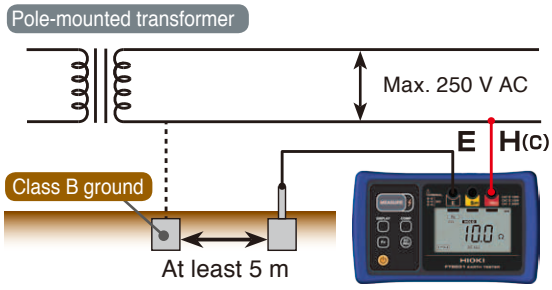
(for measurement classes A through D)

Measurement is performed after inserting a auxiliary grounding rod into the soil. For accurate measurement, position E-S(P)-H(C) in a straight line at an interval of about 5 to 10 m.

Ground types

Type	Criterion	Locations used
Class A	10 Ω	Special high voltage, high voltage
Class B	As per calculations	Transformer neutral point
Class C	10 Ω/500 Ω*	Low voltages in excess of 300 V
Class D	100 Ω/ 500 Ω*	Low voltages of 300 V or less

*With ground-fault interrupter that trips within 0.5 sec.



Two-electrode measurement

(for measurement class D)

Class D ground installations can be measured by using the Class B ground of a pole-mounted transformer. The measured value will include the resistance value of the Class B ground. The distribution panel's main ground terminal is typically connected to the power supply's ground line.

Fast-track preparations, measurement, and cleanup.

Prep

Thin for a reason

Since variations in the thickness of auxiliary grounding rods cause almost no change in their grounding resistance, the FT6031-03 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

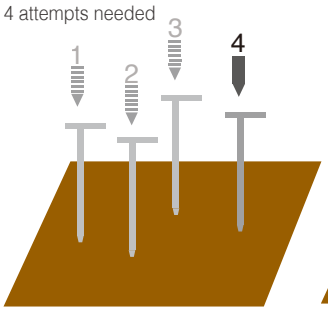
The FT6031-03 uses hard, rust-resistant rods made of stainless steel.

You only need to do it once…

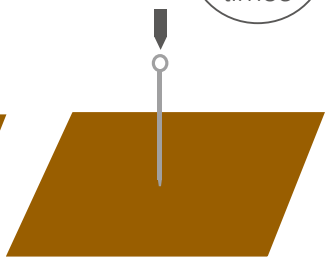
The tolerance for the supplemental grounding electrode's resistance has been increased by a factor of 10, eliminating the inconvenience of inserting and reinserting auxiliary grounding rods over and over again every time the resistance tolerance is exceeded due to dry soil or other non-optimal conditions.

Repeated insertions ····► Single insertion

Before



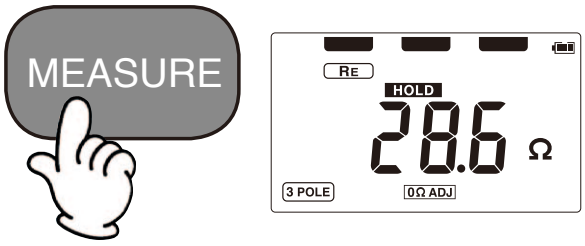
After



Measurement

You need only press the MEASURE button.

The FT6031-03 automatically checks the ground potential, checks the auxiliary grounding electrode, and measures the grounding resistance. Auto-ranging operation eliminates the need to switch ranges, enabling efficient measurement.

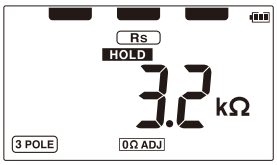


Ground potential check ▶ Auxiliary grounding electrode check ▶ Grounding resistance measurement (Auto-ranging)

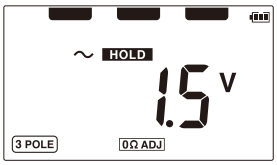
It's easy to check the auxiliary grounding electrode's **resistance value and the ground potential value**.

Toggle with the DISPLAY button.

S(P) electrode/H(C) electrode resistance value



Ground potential value

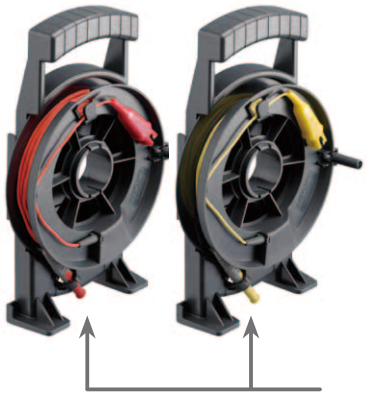


Cleanup

Tangle- and twist-free measurement cord winders

Easily rewind measurement cords, even if they're 20 m long.

Measurement cord retrieval is a time-consuming part of grounding resistance measurement. The FT6031-03's newly developed winders allow cords to be rewound about twice as quickly as with conventional reels.



Insert this plug into the instrument's S(P)/H(C) terminal and pull out the cord.

Auxiliary grounding rods can be stowed here.

Specifications

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

Measurement system	Two-electrode method/three-electrode method (switchable)				
Range configuration	Range (auto range)	Display range	Resolution		Accuracy
			3 electrode	2 electrode	
	20 Ω	0 to 20.00 Ω	0.01 Ω*1	—	±1.5 %rdg.±8 dgt.
	200 Ω	0 to 200.0 Ω	0.1 Ω	1 Ω	±1.5 %rdg.±4 dgt.
	2000 Ω	0 to 2000 Ω	1 Ω	1 Ω	±1.5 %rdg.±4 dgt.
Measuring frequency	128Hz±2Hz				
Measuring time	Three-electrode method: Within 8 seconds (effective measurement time including ground potential check and auxiliary grounding electrode check: 4 sec. [representative value]), Two-electrode method: Within 3 seconds				
Measurement current	Three-electrode method: 25 mA rms or less, Two-electrode method: 4 mA rms or less				
Resistance tolerance of auxiliary earthing electrode	20 Ω range: 5 kΩ, 200 Ω range: 50 kΩ, 2000 Ω range: 50 kΩ				
Earth potential measurement	0 to 30.0 Vrms Accuracy: ±2.3 %rdg.±8 dgt. (50/60Hz), 1.3 %rdg.±4 dgt. (DC)				
Operating temperature	-10°C to 55°C (14°F to 131°F)				
Operating humidity	-25°C to 40°C: 80 % rh or less (non-condensing) 40°C to 45°C: 60 % rh or less (non-condensing) 45°C to 50°C: 50 % rh or less (non-condensing) 50°C to 55°C: 40 % rh or less (non-condensing) 55°C to 60°C: 30 % rh or less (non-condensing) 60°C to 65°C: 25 % rh or less (non-condensing)				
Storage temperature and humidity	-25°C to 65°C: 80 % rh or less (non-condensing)				
Operating environment	Indoor, outdoor (excluding farmland*2) pollution degree 3, altitude up to 2,000 (6,562-ft.)				
Power supply	LR6 Alkaline battery × 4				
Possible number of measurements on new batteries	400 times (measurement conditions: three-electrode method, auxiliary earthing electrode resistance 100 Ω, measuring 10 Ω at the 20 Ω range in 10-second intervals)				
Dustproof and waterproof	IP65/IP67 (EN60529)				
Drop-proof	1 m above concrete (with protector attached)				
Maximum rated voltage to earth	100 V AC/DC (measurement category Ⅳ), 150 V AC/DC (measurement category Ⅲ), 300 V AC/DC (measurement category Ⅱ) anticipated transient overvoltage 2500 V				
Withstand voltage	3510 V, 50/60 Hz, between measurement terminals (together) and case, for 15 seconds, sensed current: 1 mA				
Applicable standards	Safety: EN 61010 (main unit), EN 61010 (measuring circuit)	EMC: EN 61326	Earth tester: EN 61557		
Dimensions	Approx. 185 W × 111H × 44D mm (7.28″ W × 4.37″ H × 1.73″ D) (including protector, excluding terminal covers)				
Mass	Approx. 570 g(20.1 oz.) (including batteries and protector, excluding other accessories)				
Accessories	Auxiliary Earthing Rod L9840 (2 piece set) ×1, Measurement Cable (alligator clip, black 4 m) L9841×1, Measurement Cable (yellow 10 m, equipped with winder) L9842-11×1, Measurement Cable (red 20 m, equipped with winder) L9842-22×1, Carrying Case ×1, Protector×1, LR6 Alkaline battery ×4, Instruction manual×1				

*1 If the auxiliary grounding resistance is 5 kΩ or greater, 0.1 Ω.

*2 According to the requirements regarding the limits for open-circuit voltage in EN 61557-5

Model : EARTH TESTER FT6031

Model No. (Order Code)

FT6031-03

Guaranteed for 3 years

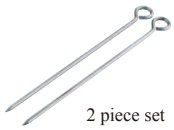
DROP PROOF

CE

CAT Ⅳ 100 V
CAT Ⅲ 150 V
CAT Ⅱ 300 V

Accessories

AUXILIARY EARTHING ROD
L9840



2 piece set

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
L9841

Alligator clip, black 4 m (13.12 ft) length

CARRYING CASE
C0106

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/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

EARTH NETS
9050

2 sheets in set

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All information correct as of Apr. 2, 2019. All specifications are subject to change without notice.

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