BUILT-IN BLUETOOTH CLAMP-TYPE EARTH RESISTANCE METER MET-10X

■ SPECIFICATIONS

Measuring Functions	Earth resistance Surge Impedance AC current (both leakage and load currents)
Measuring Method	CT clamp method
Measuring Range （φ80mmCT）	Earth resistance & surge impedance 0.10～500.0Ω AC current 1.0mA～5.50A
CT Diameter	φ34mm(Optional φ80mm)
Injection Frequency	3～200kHz
Injection Level	Approx. 160 mVp
Wireless Connection	Bluetooth 4.2 Class 2
Memory Function	200data
Other Functions	Data hold, auto power off, over value display, battery voltage drop display
Operating Temp.	0-40°C 85% RH or less（without condensation）
Power Supply	4xAA alkaline batteries (capable of measuring approx. 600 times) or US type AC adapter (optional)
Size & Weight	Main body：190 (W) × 140 (H) × 42 (D) mm, approx. 450g (not including battery) Detection CT：125 (W) × 240 (H) × 40 (D) mm 、 approx.570g Injection CT：125 (W) × 240 (H) × 40 (D) mm, approx.670g
Accessories	Battery, carrying case, detection CTφ34mm, injection CTφ34mm, auxiliary lead wire
Optional Items	Detection CTφ80mm, injection CTφ80mm, AC adapter

Exclusive Use Free Application
“Multi-Tracer”

App Store

Google Play

Compatible OS: Equivalent or above iOS10, Android 5.0

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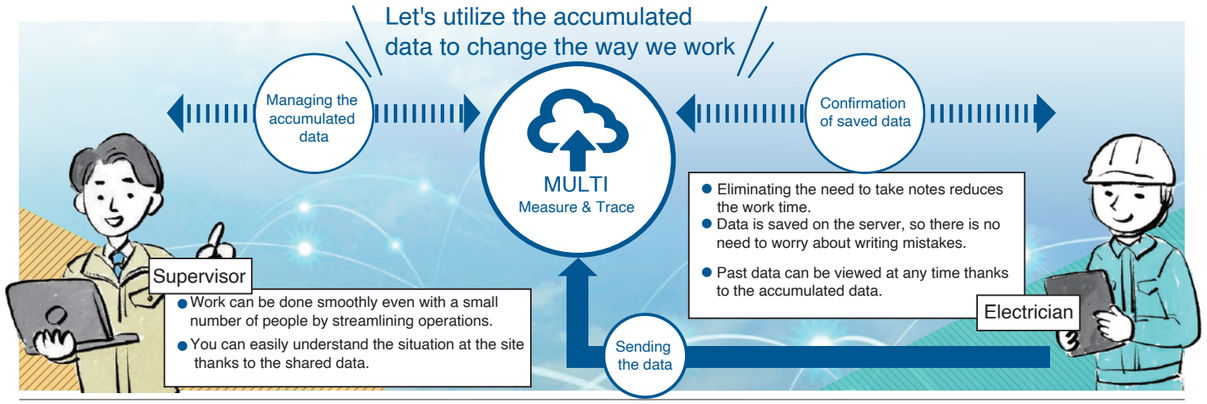
■ Accuracy at 23°C±2°C and 80%RH

AC Current(50/60Hz)

CT	Range	Display Scope	Resolution	Accuracy
φ34mm	200mA	0.0～200.0mA	0.1mA	±3%rdg±8dgt
	2A	0.200～2.000A	0.001A	±2%rdg±8dgt
	20A	2.00～20.00A	0.01A	
φ80mm	200mA	0.0～200.0mA	0.1mA	±3%rdg±8dgt
	2A	0.200～2.000A	0.001A	±2%rdg±8dgt
	5A	2.00～ 5.50A	0.01A	

Earth resistance / Surge impedance

CT	Range	Display Scope	Resolution	Accuracy
φ34mm	10Ω	0.10～10.00Ω	0.01 Ω	0.10 Ω ～ 1.00 Ω ：± 0.10 Ω 1.00 Ω ～ 10.00 Ω：± 0.50 Ω
	100Ω	10.0～100.0Ω	0.1Ω	10.0 Ω ～ 50.0 Ω ：± 2.0 Ω 50.0 Ω ～ 100.0 Ω：± 5.0 Ω
	1000Ω	100.0～500.0Ω		100.0 Ω ～ 200.0 Ω ：± 5.0 Ω 200.0 Ω ～ 300.0 Ω ：± 20.0 Ω 300.0 Ω ～ 500.0 Ω ：± 30.0 Ω
		500～1000Ω	1Ω	500 Ω ～ 800 Ω ：± 50 Ω 800 Ω ～ 1000 Ω：± 80 Ω
φ80mm	10Ω	0.10～10.00Ω	0.01 Ω	0.10 Ω ～ 1.00 Ω ：± 0.10 Ω 1.00 Ω ～ 10.00 Ω：± 0.50 Ω
	100Ω	10.0～100.0Ω	0.1Ω	10.0 Ω ～ 50.0 Ω ：± 2.0 Ω 50.0 Ω ～ 100.0 Ω：± 5.0 Ω
	500Ω	100.0～500.0Ω		100.0 Ω ～ 200.0 Ω ：± 5.0 Ω 200.0 Ω ～ 300.0 Ω ：± 20.0 Ω 300.0 Ω ～ 500.0 Ω ：± 30.0 Ω



MULTI
Let's Create New Concepts of Instruments

BUILT-IN BLUETOOTH CLAMP-TYPE EARTH RESISTANCE METER

MET-10X

Multi Measuring Instruments Co., Ltd.

A device that you can use in various facilities; from electrical equipment to lightning protection equipment

BUILT-IN BLUETOOTH CLAMP-TYPE
EARTH RESISTANCE METER

MET-10X

- Powered by AA batteries for improved convenience
- Provides easy operation by simply clamping to the ground wire and pressing the button
- You can operate and save data remotely (up to about 10m) by connecting to a smartphone or a tablet via Bluetooth

Point 1 It is possible to do measurement from a distance

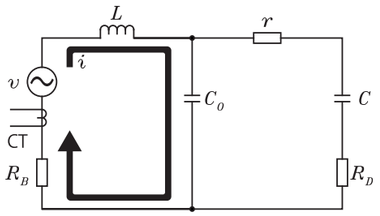
You can operate the main unit from a distance up to 10m by using our measurement application Multi-Tracer.
It is safer to measure the live wires.

Point 2 Measurement at single point ground is also possible (by using attached lead wire)

It is even possible to measure at single point ground by connecting the BCD type grounding and the attached lead wire.

Measuring Principle

Equivalent circuit



υ	: Injected voltage by using injection CT
i	: Resonance current
CT	: Detection CT
L	: Inductance in circuit
r	: DC resistance in circuit
C_0	: Electrostatic capacitance of circuit
C	: Electrostatic capacitance of device
R_B	: Ground resistance of point B($R_B \gg r$)
R_D	: Ground resistance of point D

Injection CT injects a voltage υ around 160mVpp to the electric circuit with a variable frequency of 4kHz to 200kHz. Due to the inductance L of the electric circuit and the electrostatic capacitance C_0 of the electric circuit, it resonance phenomena at a certain frequency and current i flows. At resonance, the current is in the same phase with the injected maximum signal voltage, so the detection CT detects the maximum current that passed through the grounding resistance R_B, and the grounding resistance R_B is obtained from $R_B=\upsilon/i$.