

CLAMP ADAPTOR FOR POKCT MULTIMETER

Model **CD-CT33**



Model **CD-CT240**



Model **CD-CT140**



FEATURES

- These clamp adaptors are designed for use with Pocket Type Digital Multimeters Model Nos. MCD-006, MCD-007, MCD-008, MCD-009 & MCD-010.
- They can be connected with probe pins of DMM easily and AC/DC current or Leakage current can be measured.

SPECIFICATIONS

Model CD-CT33 for AC Current (1A~200A)
 Model CD-CT240 for AC/DC Current (1A~200A)
 Model CD-CT140 for AC Leakage Current (1mA~300A)

• True Rms

In making AC signal measurements, the usual scheme is to determine the average value and then convert this value to the rms value. However, since this assumes a sinewave input, waveforms other than a sinewave result in measurement errors. To measure the true rms value of distorted waveforms and the noise signals two methods exist, one which relies on calculation and the other on conversion to thermal energy. The calculation method provides highspeed response and high accuracy and the thermal energy technique provides wide frequency response. Our testers with true rms response use the calculation technique to provide good response to AC signals and high accuracy.

ANALOG INSULATION RESISTANCE TESTER

Single Scale Indicator for 3 Range Insulation Measurements

Model **MIS-1A**

50V/10M Ω
 125V/20M Ω
 250V/50M Ω

Model **MIS-2A**

125V/ 20M Ω
 250V/ 50M Ω
 500V/100M Ω

Model **MIS-3A**

125V/ 20M Ω
 250V/ 50M Ω
 1000V/2000M Ω

Model **MIS-4A**

250V/ 50M Ω
 500V/ 100M Ω
 1000V/2000M Ω



FEATURES

- The single and fluorescent scale indicator for 3 ranges insulation measurements enabled easy observation. Especially useful when working in dark place.
- Hand free and continuous measurements with custom made switch.
- Safe design with built in automatic discharging function for any capacitors present in the circuit.
- The voltage in the circuit can be pre-checked without any switch operation for safe insulation measurements.
- Compact, light weight and heavy duty rugged case.

ANALOG INSULATION RESISTANCE TESTER

SPECIFICATIONS

Function	: Insulation resistance, AC voltage, battery check
Meter movement	: 100 μ A, 870 Ω , taut band meter.
Safety standard	: Meets the requirements for double insulation to IEC 1010-1(1995) : EN 61010-1 (1995) installation Category II, 600V phase to earth.
E.M.C. standard	: The instrument meets EN 50081-1 and EN 50082-1(1992)
Constructional standard	: In accordance with IEC 1557-2 or JIS C1302(1994)
Insulation resistance	: DC 500V-50M Ω or more (MIS-1A, MIS-2A) DC 1000V-50M Ω or more (MIS-3A, MIS-4A)
Withstanding voltage	: AC 3700V, 1 minute (Between input terminal and outer case)
Overload protection	: 120% of the highest nominal output voltage (10sec.)
Battery check	: DC 6.3V ~ 9.5V
Low battery limit	: DC 6.3V
Temperature characteristics (0 ~ 40 $^{\circ}$ C)	: \pm 5%rdg of specified accuracy
Operating temperature	: 0 $^{\circ}$ C to 40 $^{\circ}$ C, 80% RH max. (Non-condensing)
Storage temperature	: -10 $^{\circ}$ C to 60 $^{\circ}$ C 80% RH max. (Non-condensing)
Power supply	: 1.5V ("AA" size, R6) \times 6
Size	: 170(W) \times 105(D) \times 54(H) mm
Weight	: Approx. 330g (Excluding batteries)
Accessories	: Line test lead 1 Earth test lead 1 Batteries 6 Test lead case 1 Belt 1 Instruction manual 1
Optional accessory	: Remote switch test lead

Measuring Ranges and Technical Data

Insulation resistance measurement

Model	MIS-1A	MIS-2A	MIS-3A	MIS-4A
Rated voltage & effective measuring range	50V-10M Ω 125V-20M Ω 250V-50M Ω	125V- 20M Ω 250V- 50M Ω 500V-100M Ω	125V-20M Ω 250V-50M Ω 1000V-2000M Ω	250V-50M Ω 500V-100M Ω 1000V-2000M Ω
Center scale	0.2M Ω /0.5M Ω /1M Ω	0.5M Ω /1M Ω /50M Ω	0.5M Ω /1M Ω /2M Ω	1M Ω /2M Ω /50M Ω
Minimum measurable resistance at rated voltage	0.05 M Ω 0.125M Ω 0.25 M Ω	0.125M Ω 0.25M Ω 0.5 M Ω	0.125M Ω 0.25M Ω 1M Ω	0.25M Ω 0.5M Ω 1M Ω
Rated current	1mA \pm 20% - 0%			
Maximum no-load voltage	Rated voltage \pm 30% - 0%			
Short circuit current	< 2mA			

Accuracy

Rated voltage	DC 50V	DC 125V	DC 250V	DC 500V	DC 1000V
First effective range	0.01M Ω ~ 5M Ω \pm 5%rdg	0.02M Ω ~ 10M Ω \pm 5%rdg	0.05M Ω ~ 20M Ω \pm 5%rdg	0.1M Ω ~ 50M Ω \pm 5%rdg	2M Ω ~ 1000M Ω \pm 5%rdg
Second effective range	0.005M Ω ~ 0.01M Ω 5M Ω ~ 10M Ω \pm 10%rdg	0.01M Ω ~ 0.02M Ω 10M Ω ~ 20M Ω \pm 10%rdg	0.02M Ω ~ 0.05M Ω 20M Ω ~ 50M Ω \pm 10%rdg	0.05M Ω ~ 0.1M Ω 50M Ω ~ 100M Ω \pm 10%rdg	1M Ω ~ 2M Ω 1000M Ω ~ 2000M Ω \pm 10%rdg
	10M Ω ~ 50M Ω \pm 30%rdg	20M Ω ~ 100M Ω \pm 30%rdg	50M Ω ~ 100M Ω \pm 30%rdg		

AC voltage measurement (50/60Hz)

Range	Accuracy	Input impedance	Maximum input voltage
AC 600V	\pm 2.5% of full scale	Approx. 1.5M Ω	AC 600V rms

DIGITAL INSULATION RESISTANCE TESTER

For 3 Range Insulation Measurements

Model MIS-2D

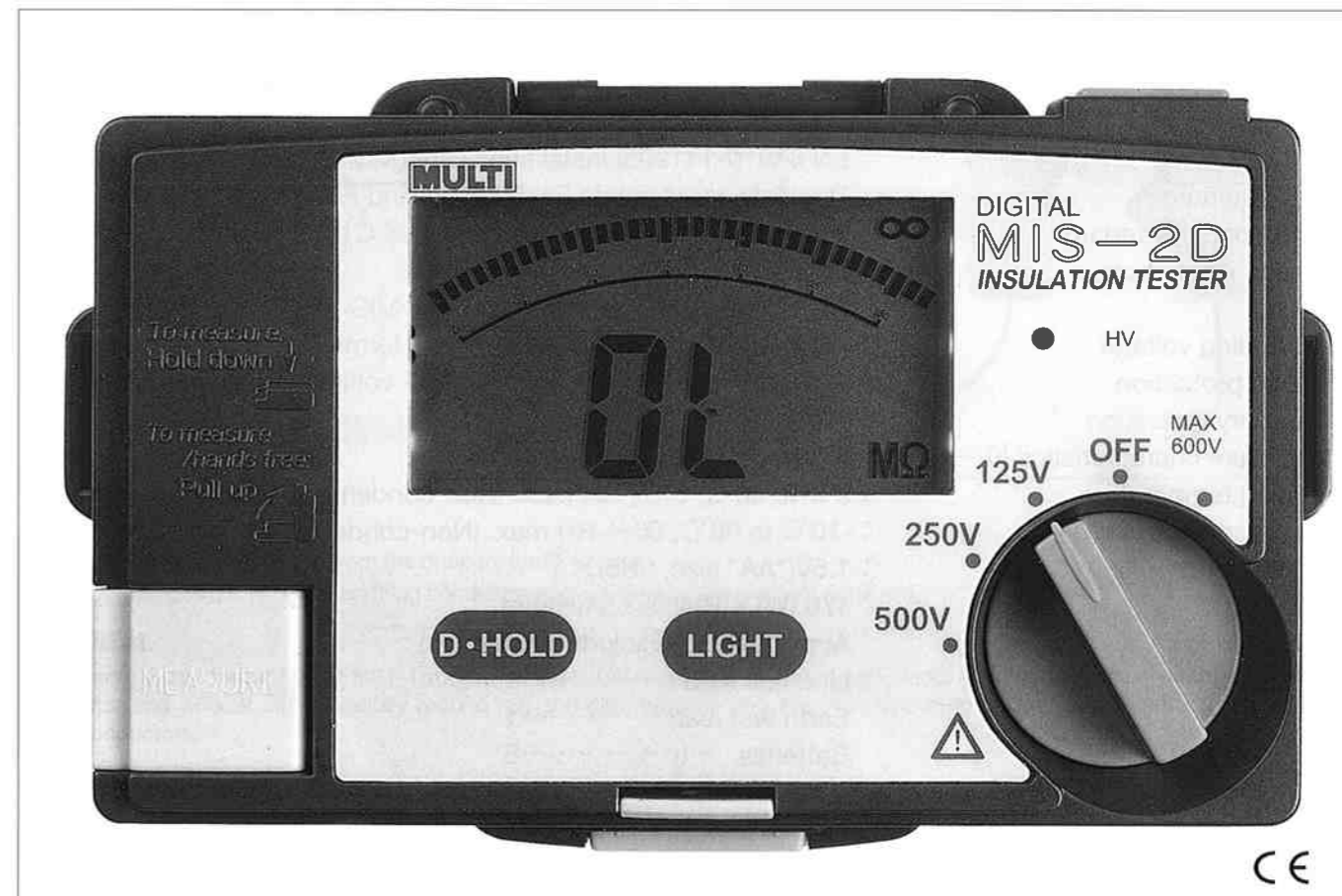
125V/ 20M Ω
250V/ 50M Ω
500V/100M Ω

Model MIS-3D

250V/ 50M Ω
500V/ 100M Ω
1000V/2000M Ω

Model MIS-4D

125V/ 20M Ω
250V/ 50M Ω
1000V/2000M Ω



FEATURES

- The big digital and bargraph LCD display with back light enabled easy observation. Especially useful when working in dark place.
- Hand free and continuous measurements with custom made switch.
- Safe design with built in automatic discharging function for any capacitors present in the circuit.
- The voltage in the circuit or capacitor can be checked by warning lamp for safe insulation measurements.
- Data hold and auto power off function.
- Compact, light weight and heavy duty rugged case.

DIGITAL AND BARGRAPH DISPLAY INSULATION TESTER

SPECIFICATIONS

Function	: Insulation resistance, AC voltage
Display	: 3½ digit LCD with bargraph display, max. reading of 3200 count and annunciators
Response time	: Less than 5 sec. (Auto ranging)
Data hold indication	: "DH" mark on LCD readout
Infinity indication	: "OL(∞)" mark on LCD readout (Over 3200 count)
Safety standard	: Meets the requirements for double insulation to IEC 1010-1 (1995) EN 61010-1 (1995) installation Category II, 600V phase to earth.
E.M.C. standard	: The instrument meets EN 50081-1 and EN 50082-1 (1992)
Constructional standard	: In accordance with IEC 1557-2 or JIS C1302 (1994)
Insulation resistance	: DC 500V-50MΩ or more (MIS-2D) DC 1000V-50MΩ or more (MIS-3D, MIS-4D)
Withstanding voltage	: AC 3700V, 1 minute (Between input terminal and outer case)
Overload protection	: 120% of the highest nominal output voltage (10sec.)
Low battery indication	: "B" mark on LCD readout
Temperature characteristics (0 ~ 40°C)	: ±5%rdg of specified accuracy
Operating temperature	: 0°C to 40°C, 80% RH max. (Non-condensing)
Storage temperature	: -10°C to 60°C, 80% RH max. (Non-condensing)
Power supply	: 1.5V("AA" size, LR6)×6
Size	: 170 (W)×105(D)×54(H)mm
Weight	: Approx. 365g (Excluding batteries)
Accessories	: Line test lead 1 Earth test lead 1 Batteries 6 Test lead case 1 Belt 1 Instruction manual 1
Optional accessory	: Remote switch test lead

Measuring Ranges and Technical Data

Insulation resistance measurement

Model	MIS-2D	MIS-3D	MIS-4D
Rated voltage & effective measuring range	125V-20MΩ 250V-50MΩ 500V-100MΩ	250V- 50MΩ 500V- 100MΩ 1000V-2000MΩ	125V-20MΩ 250V-50MΩ 1000V-2000MΩ
Minimum measurable resistance at rated voltage	0.125MΩ 0.25MΩ 0.5MΩ	0.25MΩ 0.5MΩ 1MΩ	0.125MΩ 0.25MΩ 1MΩ
Rated current	1mA+20%-0%		
Maximum no-load voltage	Rated voltage +30%-0%		
Short circuit current	<2mA		

Accuracy

	DC 125V	DC 250V	DC 500V	DC 1000V
Rated voltage	DC 125V	DC 250V	DC 500V	DC 1000V
Measuring range	0~20MΩ~OL(∞)	0~50MΩ~OL(∞)	0~100MΩ~OL(∞)	0~2000MΩ~OL(∞)
First effective range	0.02MΩ~10MΩ <±5%rdg	0.05MΩ~20MΩ <±5%rdg	0.1MΩ~50MΩ <±5%rdg	2MΩ~1000MΩ ±5%rdg
Second effective range	0.01MΩ~0.02MΩ 10MΩ~100MΩ <±10%rdg	0.02MΩ~0.05MΩ 20MΩ~100MΩ <±10%rdg	0.05MΩ~0.1MΩ 50MΩ~100MΩ <±10%rdg	1MΩ~2MΩ 1000MΩ~2000MΩ <±10%rdg
Other range	100MΩ~OL(∞) Not specified			2000MΩ~OL(∞) Not specified

AC voltage measurement (50/60Hz)

Range	Accuracy	Input impedance	Maximum input voltage
AC 600V	±2.5% of full count	Approx.20MΩ	AC 600V rms