HIOKI

CLAMP METER Series

CLAMP METERS

Find Quality Products Online at: www.GlobalTestSupply.com sales@GlobalTestSupply.com

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Remarkable Ease of Use
New "Slim Jaw" Design

Innovative slim jaw resolves worksite issues such as crowded wiring to deliver safe, accurate and high-performance testing.

CM4375-50

Traditional design

Easily Clamp Within Crowded Cables with New Slim Jaw Design

CM4375-50

34 mm=1.34 in

CM4141-50

55 mm=2.17 in

CM3289

33 mm=1.30 in

CM3281
CM3291

46 mm=1.81 in

CM4001

24 mm=0.94 in

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Safe, Durable, Reliable

-25°C to 65°C operating temperature*1

CM4000 Series can be used in freezing temperatures or on the hottest summer days.

CAT IV 600V*1

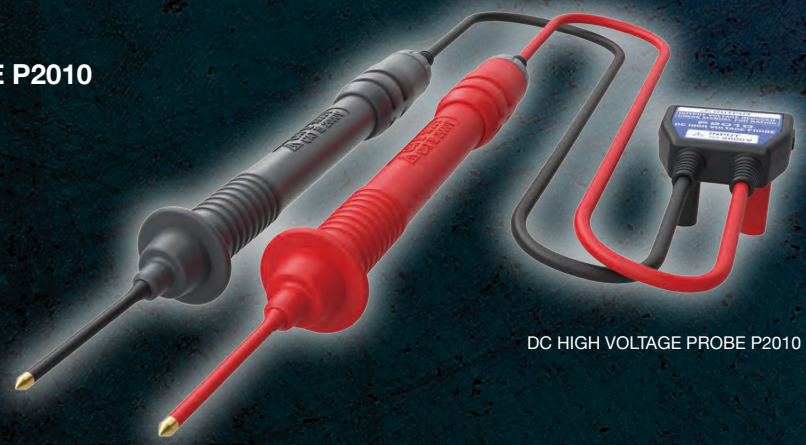
Safely measure embedded cables and electric panels with a maximum rated voltage to earth of 600V

Dustproof and waterproof performance*2

International Protection Code: IP54 (while in storage, or when measuring the current in an insulated conductor). Measurement functionality is maintained despite exposure to sand or dust as well as water droplets.

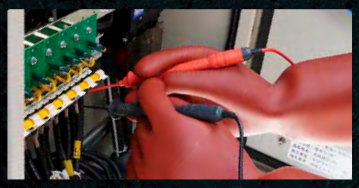
NEW

DC HIGH VOLTAGE PROBE P2010 for CAT III 2000 V*3



DC HIGH VOLTAGE PROBE P2010

Safe Inspection of Solar Installations with High Voltage



Solar installations (also known as photovoltaic or PV installations) are becoming increasingly high-voltage in order to reduce costs and improve the efficiency of power generation systems. As a result, it is important to select measuring instruments that support higher voltage measurement to protect the safety of inspection workers. The P2010 enables high voltage measurement up to CAT III 2000 V by simply connecting to a compatible Hioki clamp meter or digital multimeter.

Why is CAT III 2000 V capability necessary?

According to the standards for Photovoltaic (PV) module safety qualification (IEC 61730-1), PV modules are treated as the overvoltage category III, and a measuring instrument in the measurement category III is required. Using instruments that can accommodate the appropriate measurement category serves to protect workers and equipment from serious accidents such as electric shock and burnout. Currently, adoption of 1500 V solar installation is growing, but instruments that can accommodate even higher voltages will be necessary in the future as larger and even more efficient systems enter into use. Hioki developed the P2010 to support CAT III 2000 V measurement in response to the near-term prospect of such applications.

*1 Supported models : CM4371-50, CM4373-50, CM4375-50, CM4141-50, CM3286-50
*2 Supported models : CM4371-50, CM4373-50, CM4375-50
*3 Supported models : CM4371-50, CM4373-50, CM4375-50, CM4141-50

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P2010 Specifications

Maximum input voltage	2000 V DC (max. rated voltage between INPUT H-INPUT L) *Not available for AC voltage measurement
Maximum rated line-to-ground voltage	2000 V (measurement category III), Anticipated transient overvoltage: 15000 V 1000 V (measurement category IV), Anticipated transient overvoltage: 12000 V
Input resistance	20 MΩ ±5.0% (between INPUT H and INPUT L, when OUTPUT terminal is open)
Output ratio	1/10 or 1/11 (Depends on the compatible product)
Overload protection	2200 V DC/2200 V AC (applied for 1 minute) (between INPUT H and INPUT L) 600 V DC/600 V AC (applied for 1 minute) (between OUTPUT H and OUTPUT L)
OUTPUT terminal	4 mm banana terminal
Operating environment	Indoor use, pollution degree 2, altitude up to 2000 m (6562 ft.)
Operating temperature and humidity range	Temperature: -25°C to 65°C (-13°F to 149°F) Humidity: –25°C to 40°C (–13°F to 104°F): 80% RH or less (non-condensing) 40°C to 65°C (104°F to 149°F): Linearly reduces from 80% RH or less at 40°C (104°F) to 25% RH or less at 65°C (149°F) (non-condensing)
Storage temperature and humidity range	-30°C to 70°C (-22°F to 158°F) 90% RH or less (non-condensing)
Standards	EN 61010
Product warranty period	3 years (probe body and cable part are not covered by warranty)
Included accessories	Instruction Manual ×1, Operating Precautions ×1

DC High Voltage Probe P2010
Compatible models with DC HIGH V PROBE mode

(DC HIGH V PROBE mode: conversion display in terms of partial pressure ratio)

CM4371-50

CM4373-50

CM4375-50

CM4141-50

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So much more than just wireless

Wireless connectivity leading to versatility

Using Bluetooth® communication with the Z3210*1

Install the Wireless Adapter Z3210 to enable Bluetooth® communications.
With the Z3210, you can transfer data directly to an Excel® file and pair the instrument with GENNECT Cross.

Attach to enable Bluetooth® wireless technology

Transport to the Excel® file

Transport to GENNECT Cross

Manage measurement data using GENNECT Cross*2

Pair clamp meters built in with Bluetooth(R) wireless technology with the free GENNECT Cross mobile app to upload data to your mobile device for further data management, processing and reporting.

- Save data and create reports right on the App
- Share data via cloud services or E-mail

Bluetooth® communications

Transfer data to a tablet wirelessly

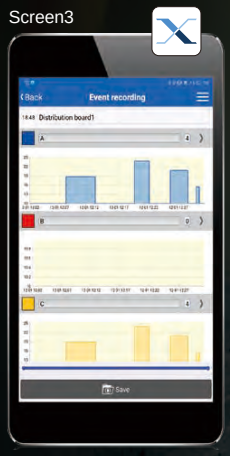
Screen1

Take a picture of the test location and map measured values on it

Screen2

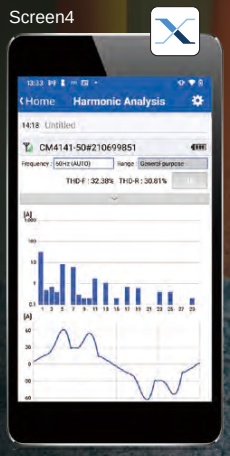
Verify current waveforms on your mobile device

Screen3



Visualize intermittent GFCI and RCD trips Review trip times and maximum current values

Screen4



Harmonic analysis for troubleshooting

*1 Supported models : CM4371-50, CM4373-50, CM4375-50, CM4141-50, CM3286-50, CM4001, CM4002, CM4003
*2 Supported models : When the Z3210 is installed on a compatible model described above*1

Downloading GENNECT Cross

Data can be downloaded to tablets and smartphones using Hioki's dedicated apps available from the Google Play or App Store.
Search for "HIOKI" and download the "GENNECT Cross" app.

Download on the App Store

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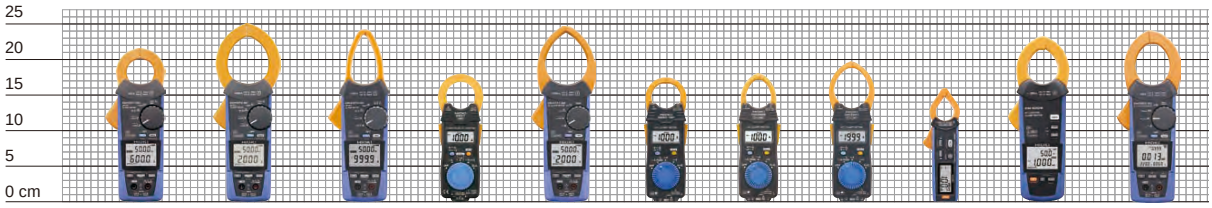
Lineup

Measurement type		AC / DC Current				
Model		CM4371-50	CM4373-50	CM4375-50	3287	3288 3288-20
Appearance						
Core jaw diameter		ϕ33 mm (1.30 in)	ϕ55 mm (2.17 in)	ϕ34 mm (1.34 in)	ϕ35 mm (1.38 in)	ϕ35 mm (1.38 in)
AC measurement system		True RMS	True RMS	True RMS	True RMS	MEAN Value True RMS (-20)
Frequency characteristics		10 Hz to 1 kHz	10 Hz to 1 kHz	10 Hz to 1 kHz	10 Hz to 1 kHz	10 Hz to 500 Hz
Measurement parameters	AC current (Resolution) Guaranteed accuracy range	600 A (0.01) 1 A to 600 A	2000 A (0.1) 1 A to 2000 A	1000 A (0.1) 1 A to 999.9 A	100 A (0.01) Full display range*5	1000 A (0.1) Full display range*5
	DC current (Resolution)	600 A (0.01)	2000 A (0.1)	999.9 A (0.1)	100 A (0.01)	1000 A (0.1)
	AC Voltage	1000 V	1000 V	1000 V	600 V	600 V
	DC Voltage	2000 V*1	2000 V*1	2000 V*1	600 V	600 V
	Power	1200 kVA (DC)*1	4000 kVA (DC)*1	2000 kVA (DC)*1	N / A	N / A
	Resistance	6 MΩ	6 MΩ	6 MΩ	42 MΩ	42 MΩ
	Temperature	-40°C to 400°C	-40°C to 400°C	-40°C to 400°C	N / A	N / A
	Electrostatic capacity	✔	✔	✔	N / A	N / A
	Frequency	999.9 Hz	999.9 Hz	999.9 Hz	N / A	N / A
	Rush current	✔	✔	✔	N / A	N / A
	Continuity check	✔	✔	✔	✔	✔
	Diode check	✔	✔	✔	N / A	N / A
	Non-Contact Voltage	✔	✔	N / A	N / A	N / A
Low-pass filter		✔	✔	✔	N / A	N / A
Auto power off		✔	✔	✔	✔	✔
Auto range		✔	✔	✔	✔	✔
Data hold		AUTO / MANUAL	AUTO / MANUAL	AUTO / MANUAL	MANUAL	MANUAL
Automatic AC/DC detection		✔	✔	✔	N / A	N / A
MAX / MIN / AVG		✔	✔	✔	N / A	N / A
Output		N / A	N / A	N / A	N / A	N / A
Bluetooth® communication		✔ (with Z3210)	✔ (with Z3210)	✔ (with Z3210)	N / A	N / A
Backlight		✔	✔	✔	N / A	N / A
Display refresh rate		5 times / s	5 times / s	5 times / s	2.5 times / s	2.5 times / s
Safety standard category		CAT IV 600 V CAT III 1000 V	CAT IV 600 V CAT III 1000 V	CAT IV 600 V CAT III 1000 V	V: CAT III 300 V A: CAT III 600 V	V: CAT III 300 V A: CAT III 600 V
Safety standard category (with P2010)		CAT IV 1000 V CAT III 2000 V	CAT IV 1000 V CAT III 2000 V	CAT IV 1000 V CAT III 2000 V	N / A	N / A
CE		✔	✔	✔	✔	✔
Dustproof and waterproof		IP20*2, IP54*3	IP20*2, IP54*3	IP20*2, IP54*3	N / A	N / A
Drop proof		N / A	N / A	N / A	N / A	N / A
Power supply		LR03 ×2 Alkaline	LR03 ×2 Alkaline	LR03 ×2 Alkaline	CR2032 ×1 Coin type	CR2032 ×1 Coin type
Dimensions (W × H × D)		65 × 215 × 35 mm 2.56 × 8.46 × 1.38 in	65 × 250 × 35 mm 2.56 × 9.84 × 1.38 in	65 × 242 × 35 mm 2.56 × 9.53 × 1.38 in	57 × 180 × 16 mm 2.24 × 7.09 × 0.63 in	57 × 180 × 16 mm 2.24 × 7.09 × 0.63 in
Weight		340 g / 12.0 oz	530 g / 18.7 oz	350 g / 12.3 oz	170 g / 6.0 oz	150 g / 5.3 oz

Size comparison



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*1: Only when DC HIGH VOLTAGE PROBE P2010 is used *2: Voltage measurement in a completely dry condition. When jaw closes. *3: While in storage.
*4: When measuring the current in an insulated conductor. Do not use when wet. *5: displayed 0 with below 0.06

Measurement type		AC Current					Leakage Current		AC Power
Model		CM4141-50	3280-10F	CM3289	CM3281	CM3291	CM4001	CM4002 CM4003	CM3286-50
Appearance									
Core jaw diameter		ϕ55 mm (2.17 in)	ϕ33 mm (1.30 in)	ϕ33 mm (1.30 in)	ϕ46 mm (1.81 in)	ϕ46 mm (1.81 in)	ϕ24 mm (0.94 in)	ϕ40 mm (1.57 in)	ϕ46 mm (1.81 in)
AC measurement system		True RMS	MEAN Value	True RMS	MEAN Value	True RMS	True RMS	True RMS	True RMS
Frequency characteristics		45 Hz to 1 kHz	50 / 60 Hz	40 Hz to 1 kHz	50 / 60 Hz	40 Hz to 1 kHz	40 Hz to 1 kHz	15 Hz to 2 kHz	45 Hz to 1 kHz
Measurement parameters	AC current (Resolution) Guaranteed accuracy range	2000 A (0.01) 1 A to 2000 A	1000 A (0.01) 4 A to 1000 A	1000 A (0.01) 4 A to 1000 A	2000 A (0.01) 4 A to 1999 A	2000 A (0.01) 4 A to 1999 A	600 A (0.01mA)) 0.6 mA to 600 A	200 A (0.001mA) 0.06 mA to 200 A	600 A (0.001) 0.06 A to 600 A
	DC current (Resolution)	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A
	AC Voltage	1000 V	600 V	600 V	600 V	600 V	N / A	N / A	600 V
	DC Voltage	2000 V*1	600 V	600 V	600 V	600 V	N / A	N / A	N / A
	Power	N / A	N / A	N / A	N / A	N / A	N / A	N / A	360 kW (AC)
	Resistance	6 MΩ	42 MΩ	42 MΩ	42 MΩ	42 MΩ	N / A	N / A	N / A
	Temperature	-40°C to 400°C	N / A	N / A	N / A	N / A	N / A	N / A	N / A
	Electrostatic capacity	✔	N / A	N / A	N / A	N / A	N / A	N / A	N / A
	Frequency	999.9 Hz	N / A	N / A	N / A	N / A	999.9 Hz	2000 Hz	999.9 Hz
	Rush current	✔	N / A	N / A	N / A	N / A	✔	✔	N / A
	Continuity check	✔	✔	✔	✔	✔	N / A	N / A	N / A
	Diode check	✔	N / A	N / A	N / A	N / A	N / A	N / A	N / A
	Non-Contact Voltage	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A
Low-pass filter		✔	N / A	N / A	N / A	N / A	✔	✔	N / A
Auto power off		✔	✔	✔	✔	✔	✔	✔	✔
Auto range		✔	✔	✔	✔	✔	✔	✔	✔
Data hold		AUTO / MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	AUTO / MANUAL	AUTO / MANUAL	AUTO / MANUAL
Automatic AC/DC detection		✔ (Voltage only)	N / A	N / A	N / A	N / A	N / A	N / A	N / A
MAX / MIN / AVG		✔	N / A	N / A	N / A	N / A	✔	✔	✔
Output		N / A	N / A	N / A	N / A	N / A	N / A	✔ (CM4003 only)	N / A
Bluetooth® communication		✔ (with Z3210)	N / A	N / A	N / A	N / A	✔ (with Z3210)	✔ (with Z3210)	✔ (with Z3210)
Backlight		✔	N / A	N / A	N / A	N / A	✔	✔	✔
Display refresh rate		5 times / s	2.5 times / s	2.5 times / s	2.5 times / s	2.5 times / s	5 times / s	5 times / s	2 times / s
Safety standard category		CAT IV 600 V CAT III 1000 V	V: CAT III 300 V A: CAT IV 300 V	V: CAT III 300 V A: CAT IV 300 V	V: CAT III 300 V A: CAT IV 300 V	V: CAT III 300 V A: CAT IV 300 V	CAT III 300 V	CAT IV 300 V (CM4002) CAT III 600 V (CM4002) CAT III 300 V (CM4003)	CAT IV 600 V CAT III 1000 V
Safety standard category (with P2010)		CAT IV 1000 V CAT III 2000 V	N / A	N / A	N / A	N / A	N / A	N / A	N / A
CE		✔	✔	✔	✔	✔	✔	✔	✔
Dustproof and waterproof		IP50*3 *4	IP40	N / A	N / A	N / A	N / A	IP40	IP20*2, IP50*3
Drop proof		N / A	✔	✔	✔	✔	N / A	N / A	N / A
Power supply		LR03 ×2 Alkaline	CR2032 ×1 Coin type	CR2032 ×1 Coin type	CR2032 ×1 Coin type	CR2032 ×1 Coin type	LR03 ×1 Alkaline	LR6 ×2 Alkaline	LR03 ×2 Alkaline
Dimensions (W × H × D)		65 × 247 × 35 mm 2.56 × 9.72 × 1.38 in	57 × 175 × 16 mm 2.24 × 6.89 × 0.63 in	57 × 181 × 16 mm 2.24 × 7.13 × 0.63 in	57 × 198 × 16 mm 2.24 × 7.80 × 0.63 in	57 × 198 × 16 mm 2.24 × 7.80 × 0.63 in	37 × 160 × 27 mm 1.46 × 6.30 × 1.06 in	64 × 233 × 36 mm 2.52 × 9.17 × 1.41 in	65 × 241 × 35 mm 2.56 × 9.49 × 1.38 in
Weight		300 g / 10.6 oz	100 g / 3.5 oz	100 g / 3.5 oz	103 g / 3.6 oz	103 g / 3.6 oz	115 g / 4.1 oz	400 g / 14.1 oz	450 g / 15.9 oz

New L9300 test leads with integrated cap for greater convenience and safety

CAT IV 600 V/CAT III 1000 V

CAT II 1000 V

L9300 Video

L9300 3D view

Test leads L9300 now incorporate integrated caps. The design lets you change the measurement category simply by sliding the test lead's protective finger guard. As an added bonus, you no longer have to worry about losing caps!

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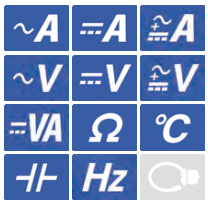
AC/DC Current

AC/DC CLAMP METER CM4371-50, CM4373-50, CM4375-50

Product warranty for 3 years
Accuracy guaranteed for 1 year



Included accessories

L9300

C0203

- LR03 Alkaline battery ×2
- Instruction manual

ϕ35 mm =1.30 in

CM4371-50

600 A AC/DC

True RMS

CAT IV 600 V
CAT III 1000 V

With P2010

CAT IV 1000 V DC
CAT III 2000 V DC

With Z3210

Bluetooth®

GENNECT Cross

ϕ55 mm =2.17 in

CM4373-50

2000 A AC/DC

True RMS

CAT IV 600 V
CAT III 1000 V

With P2010

CAT IV 1000 V DC
CAT III 2000 V DC

With Z3210

Bluetooth®

GENNECT Cross

ϕ34 mm =1.34 in

CM4375-50

1000 A AC/DC

True RMS

CAT IV 600 V
CAT III 1000 V

With P2010

CAT IV 1000 V DC
CAT III 2000 V DC

With Z3210

Bluetooth®

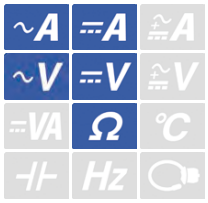
GENNECT Cross

WIRELESS ADAPTER
Z3210 (Option)
Attach to enable Bluetooth® wireless technology

DC HIGH VOLTAGE PROBE
P2010 (Option)
Available to mesure 2000 V DC

CLAMP ON AC/DC HiTESTER 3287, 3288, 3288-20

Product warranty for 3 years
Accuracy guaranteed for 1 year



Included accessories

L9208

9398

- Coin type lithium battery CR2032×1
- Instruction manual

ϕ35 mm =1.38 in

3287

100 A AC/DC

True RMS

V: CAT III 300 V
A: CAT III 600 V

ϕ35 mm =1.38 in

3288

1000 A AC/DC

True RMS

V: CAT III 300 V
A: CAT III 600 V

ϕ35 mm =1.38 in

3288-20

1000 A AC/DC

True RMS

V: CAT III 300 V
A: CAT III 600 V

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*1

CAT3 | DISPLAY HOLD | AUTO OFF | TRUE RMS | NCV | MIN/MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

	Model	CM4371-50	CM4373 -50	CM4375-50		Basic accuracy
Measurement parameters	AC Current	✔	N / A	N / A	20.00 A/600.0 A (guaranteed accuracy range: 1.00 A to 600.0 A)	±1.3% rdg ±0.08 A
		N / A	✔	N / A	600.0 A/2000 A (guaranteed accuracy range: 1.0 A to 2000 A)	±1.3% rdg ±0.3 A
		N / A	N / A	✔	1000 A (guaranteed accuracy range: 1.0 A to 999.9 A)	±1.3% rdg ±0.3 A
	DC Current	✔	N / A	N / A	20.00 A/600.0 A (guaranteed accuracy range: ±1.00A to ±600.0 A)	±1.3% rdg ±0.08 A
		N / A	✔	N / A	600.0 A/2000 A (guaranteed accuracy range: ±1.0A to ±2000 A)	±1.3% rdg ±0.3 A
		N / A	N / A	✔	1000 A (guaranteed accuracy range: ±1.0 A to ±999.9 A)	±1.3% rdg ±0.3 A
	AC + DC Current	✔	N / A	N / A	20.00 A/600.0 A (guaranteed accuracy range: 1.00 A to 600.0 A)	±1.3% rdg ±0.13 A
		N / A	✔	N / A	600.0 A/2000 A (guaranteed accuracy range: 1.0 A to 2000 A)	±1.3% rdg ±1.3 A
		N / A	N / A	✔	1000 A (guaranteed accuracy range: 1.0 A to 999.9 A)	±1.3% rdg ±1.3 A
	AC Voltage	✔	✔	✔	6.000 V/60.00 V/600.0 V/1000 V	±0.9% rdg ±0.003 V
	DC Voltage	✔	✔	✔	600.0 mV/6.000 V/60.00 V/600.0 V/1000 V/2000 V*2	±0.5% rdg ±0.5 mV
	AC + DC Voltage	✔	✔	✔	6.000 V/60.00 V/600.0 V/1000 V	±1.0% rdg ±0.013 V
	DC Power	✔	N / A	N / A	0.0 VA to ±1200 kVA*2	±2.0% rdg ±20 dgt
		N / A	✔	N / A	0.000 kVA to ±4000 kVA*2	±2.0% rdg ±20 dgt
		N / A	N / A	✔	0.000 kVA to ±2000 kVA*2	±2.0% rdg ±0.020 kVA
	Resistance	✔	✔	✔	600.0 Ω/6.000 kΩ/60.00 kΩ/600.0 kΩ/6.000 MΩ	±0.7% rdg ±0.5 Ω
	Temperature	✔	✔	✔	-40.0°C to 400.0°C	±0.5% rdg ±3.0°C
	Electrostatic capacity	✔	✔	✔	1.000 µF/10.00 µF/100.0 µF/1000 µF	±1.9% rdg ±0.005 µF
	Frequency	✔	✔	✔	9.999 Hz/99.99 Hz/999.9 Hz	±0.1% rdg ±0.003 Hz

Other	Display refresh rate	5 times/s*3
	Operating temperature	-25°C to 65°C, 90% RH or less (non-condensating)
	Storage temperature	-30°C to 70°C, 90% RH or less (non-condensating)
	Dustproof and waterproof	IP20*4, IP54*5
	Power supply Continuous operating time	Alkaline battery LR03 ×2 40 hours*6
	Dimensions (W × H × D)	CM4371-50: 65 × 215 × 35 mm (2.56 × 8.46 × 1.38 in) CM4373-50: 65 × 250 × 35 mm (2.56 × 9.84 × 1.38 in) CM4375-50: 65 × 242 × 35 mm (2.56 × 9.53 × 1.38 in)
	Weight	CM4371-50: 340 g (12 oz) CM4373-50: 530 g (18.7 oz) CM4375-50: 350 g (12.3 oz)

Order code **CM4371-50** Order code **CM4371-90**

Order code **CM4373-50** Order code **CM4373-90** Order code **CM4373-93**

Order code **CM4375-50** Order code **CM4375-90** Order code **CM4375-93**

Model CM437x-90 includes Z3210 as a set
Model CM437x-93 includes P2010, Z3210 as a set

*1: Excludes CM4375-50 *2: Only when DC HIGH VOLTAGE PROBE P2010 is used *3: Excludes electrostatic capacity, frequency, and temperature
*4: Voltage measurement in a completely dry condition. When jaw closes. *5: While in storage. *6: With backlight and Bluetooth® communications turned OFF

CAT3 | DISPLAY HOLD | AUTO OFF | TRUE RMS | NCV | MIN/MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

	Model	3287	3288	3288-20		Basic accuracy
Measurement parameters	AC Current	✔	N / A	N / A	10.00 A/100.0 A (Display range: 0A to 10.00 A/100.0 A)	±1.5% rdg ±5 dgt
		N / A	✔	✔	100.0 A/1000 A (Display range: 0A to 100.0 A/1000 A)	±1.5% rdg ±5 dgt
	DC Current	✔	N / A	N / A	10.00 A/100.0 A	±1.5% rdg ±5 dgt
		N / A	✔	✔	100.0 A/1000 A	±1.5% rdg ±5 dgt
	AC Voltage	✔	✔	✔	4.200 V/42.00 V/420.0 V/600 V	±2.3% rdg ±8 dgt
	DC Voltage	✔	✔	✔	420.0 mV/4.200 V/42.00 V/420.0 V/600 V	±1.3% rdg ±4 dgt
	Resistance	✔	✔	✔	420.0 Ω/4.200 kΩ/42.00 kΩ/420.0 kΩ/4.200 MΩ/42.00 MΩ	±2.0% rdg ±4 dgt

Other	Display refresh rate	2.5 times/s
	Operating temperature	0°C to 40°C, 80% RH or less (non-condensating)
	Storage temperature	-10°C to 50°C, 80% RH or less (non-condensating)
	Dustproof and waterproof	N / A
	Power supply Continuous operating time	Coin type lithium battery CR2032 ×1 25 hours
	Dimensions(W × H × D)	57 × 180 × 16 mm (2.24 × 7.09 × 0.63 in)
	Weight	3287: 170 g (6.0 oz), 3288, 3288-20: 150 g (5.3 oz)

Order code **3287**

Order code **3288**

Order code **3288-20**

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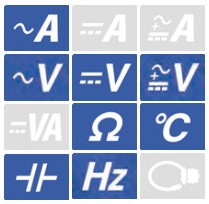
AC Current

AC CLAMP METER CM4141-50

Product warranty for 3 years
Accuracy guaranteed for 1 year



WIRELESS ADAPTER
Z3210 (Option)
Attach to enable Bluetooth® wireless technology

NEW

DC HIGH VOLTAGE PROBE
P2010 (Option)
Available to mesure 2000 V DC

Included accessories

L9300 **C0203**

- LR03 Alkaline battery ×2
- Instruction manual

ϕ55 mm =2.17 in

CM4141-50

2000 A AC

True RMS

CAT IV 600 V
CAT III 1000 V

With P2010

CAT IV 1000 V DC
CAT III 2000 V DC

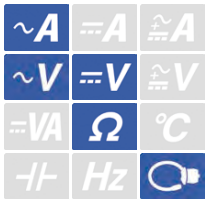
With Z3210

Bluetooth®

GENNECT Cross

AC CLAMP METER 3280-10F, CM3289, CM3281, CM3291

Product warranty for 3 years
Accuracy guaranteed for 1 year



Included accessory

L9208

- CARRYING CASE (models vary as shown on right)
- Coin type lithium battery CR2032×1
- Instruction manual

ϕ33 mm =1.30 in

3280-10F
3280-70F

1000 A AC

MEAN Value

V: CAT III 300 V
A: CAT IV 300 V

9398 (-10F) **C0205 (-70F)**

ϕ33 mm =1.30 in

CM3289

1000 A AC

True RMS

V: CAT III 300 V
A: CAT IV 300 V

9398

ϕ46 mm=1.81 in

CM3281
CM3291

2000 A AC

CM3281: MEAN Value
CM3291: True RMS

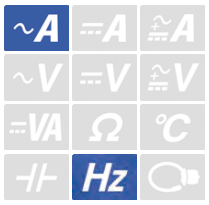
V: CAT III 300 V
A: CAT IV 300 V

CARRYING CASE

Leakage Current

AC LEAKAGE CLAMP METER CM4001, CM4002, CM4003

Product warranty for 3 years
Accuracy guaranteed for 1 year



WIRELESS ADAPTER
Z3210 (Option)
Attach to enable Bluetooth® wireless technology

ϕ24 mm=0.94 in

CM4001

0.6 mA to 600 A AC

True RMS

CAT III 300 V

Included accessory

CARRYING CASE

- STRAP
- LR03 Alkaline battery ×1

Bluetooth®

GENNECT Cross

ϕ40 mm=1.57 in

CM4002

0.06 mA to 200 A AC

True RMS

CAT IV 300 V
CAT III 600 V

Included accessory

C0203

- LR6 Alkaline battery ×2
- Instruction manual

With Z3210

Bluetooth®

GENNECT Cross

ϕ40 mm=1.57 in

CM4003

0.06 mA to 200 A AC

True RMS

CAT III 300 V

Included accessories

C0203 **L9097**

- LR6 Alkaline battery ×2
- Instruction manual
- USB cable

With Z3210

Bluetooth®

GENNECT Cross

Functions

- **External output**
- **External power supply**

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CAT | DISPLAY HOLD | AUTO OFF | TRUE RMS | NCV | MIN/MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

Model		CM4141-50		Basic accuracy
Measurement parameters	AC Current	✔	60.00 A/600.0 A/2000 A (guaranteed accuracy range: 1.00A to 2000 A)	±1.5% rdg ±0.08 A
	AC Voltage	✔	6.000 V/60.00 V/600.0 V/1000 V	±0.9% rdg ±0.003 V
	DC Voltage	✔	600.0 mV/6.000 V/60.00 V/600.0 V/1000 V/2000 V*1	±0.5% rdg ±0.5 mV
	AC + DC Voltage	✔	6.000 V/60.00 V/600.0 V/1000 V	±1.0% rdg ±0.013 V
	Resistance	✔	600.0 Ω/6.000 kΩ/60.00 kΩ/600.0 kΩ/6.000 MΩ	±0.7% rdg ±0.5 Ω
	Temperature	✔	-40.0°C to 400.0°C	±0.5% rdg ±3.0°C
	Electrostatic capacity	✔	1.000 µF/10.00 µF/100.0 µF/1000 µF	±1.9% rdg ±0.005 µF
	Frequency	✔	9.999 Hz/99.99 Hz/999.9 Hz	±0.1% rdg ±0.003 Hz

Other	Display refresh rate	5 times/s*2
	Operating temperature	-25°C to 65°C, 90% RH or less (non-condensating)
	Storage temperature	-30°C to 70°C, 90% RH or less (non-condensating)
	Dustproof and waterproof	IP50*3
	Power supply Continuous operating time	Alkaline battery LR03 ×2 48 hours*4
	Dimensions(W × H × D)	65 × 247 × 35 mm (2.56 × 9.72 × 1.38 in)
	Weight	300 g (10.6 oz)

Order code **CM4141-50**

Order code **CM4141-90**

Model CM4141-90 includes Z3210 as a set

*1: Only when DC HIGH VOLTAGE PROBE P2010 is used *2: Excludes electrostatic capacity, frequency, and temperature
*3: While in storage, or when measuring resistance or current in an insulated conductor in a completely dry condition. Do not use when wet. *4 With backlight and Bluetooth® communications turned OFF

CAT | DISPLAY HOLD | AUTO OFF | TRUE RMS*1 | NCV | MIN/MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

Model		3280-10F	CM3289	CM3281 • CM3291		Basic accuracy
Measurement items	AC Current	✔	✔	N / A	42.00 A/420.0 A/1000 A (guaranteed accuracy range: 4.00A to 1000 A)	±1.5% rdg ±5 dgt
		N / A	N / A	✔	42.00 A/420.0 A/2000 A (guaranteed accuracy range: 4.00A to 1999 A)	±1.5% rdg ±5 dgt
	AC Voltage	✔	✔	✔	4.200 V/42.00 V/420.0 V/600 V	±1.8% rdg ±7 dgt
	DC Voltage	✔	✔	✔	420.0 mV/4.200 V/42.00 V/420.0 V/600 V	±1.0% rdg ±3 dgt
	Resistance	✔	✔	✔	420.0 Ω/4.200 kΩ/42.00 kΩ/420.0 kΩ/4.200 MΩ/42.00 MΩ	±2.0% rdg ±4 dgt

Other	Display refresh rate	2.5 times/s
	Operating temperature	-25°C to 65°C, 80% RH or less (non-condensating)
	Storage temperature	-25°C to 65°C, 80% RH or less (non-condensating)
	Dustproof and waterproof	IP40 (EN60529)*2
	Power supply Continuous operating time	Coin type lithium battery CR2032 ×1 3280-10F, CM3281: 120 hours CM3289: 70 hours CM3291: 70 hours
	Dimensions (W × H × D)	3280-10F: 57 × 175 × 16 mm (2.24 × 6.89 × 0.63 in) CM3289: 57 × 181 × 16mm (2.24 × 7.13 × 0.63 in) CM3281, CM3291: 57 × 198 × 16 mm (2.24 × 7.80 × 0.63 in)
	Weight	3280-10F: 100 g (3.5 oz) CM3289: 100 g (3.5 oz) CM3281, CM3291: 103 g (3.6 oz)

3280F,CM3289,CM3291 are compatible with the CT6280 AC Flexible Current Sensor

Φ130mm (5.1 in), 4200 A AC

Model 3280-70F includes 3280-10F AC Clamp Meter and CT6280 AC Flexible Sensor as a set

Order code **3280-10F**

Order code **3280-70F**

Order code **CM3289**

Order code **CM3291**

Order code **CM3281**

*1 Excludes 3280F *2 Excludes CM3289, CM3281, CM3291

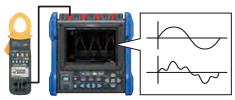
CAT | DISPLAY HOLD | AUTO OFF | TRUE RMS | NCV | MIN/MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

Model		CM4001	CM4002•CM4003		Basic accuracy
Measurement items	AC Current	✔	N / A	60.00 mA/600.0 mA/6.000A/60.00A/600.0A (guaranteed accuracy range: 0.60 mA to 600.0A)	±1.5% rdg ±0.05 mA
		N / A	✔	6.000 mA/60.00 mA/600.0 mA/6.000A/60.00A/200.0A (guaranteed accuracy range: 0.060 mA to 200.0A)	±1.0% rdg ±0.005 mA
	Frequency	✔	N / A	999.9 Hz	±1.5% rdg ±0.1 Hz
		N / A	✔	999.9 Hz/2000 Hz	±0.1% rdg ±0.1 Hz

Other	Display refresh rate	5 times/s
	Operating temperature	-10°C to 65°C (non-condensating)
	Storage temperature	CM4001: -10°C to 65°C (non-condensating) CM4002, CM4003: -30°C to 70°C (non-condensating)
	Dustproof and waterproof	CM4002, CM4003: IP40
	Power supply Continuous operating time	CM4001: LR03 Alkaline battery × 1, 32 hours CM4002, CM4003: LR6 Alkaline battery × 2, 48 hours (LR6,without Z3210) CM4003: AC ADAPTER Z1013 (Option)
	Dimensions(W × H × D)	CM4001: 37 × 160 × 27 mm (1.46 × 6.30 × 1.06 in) CM4002, CM4003: 64 × 233 × 36 mm (2.52 × 9.17 × 1.41 in)
	Weight	CM4001: 115 g (4.1 oz) CM4002, CM4003: 400 g (14.1 oz)

Includes external output function
(CM4003 Only)

Pair with a recorder to capture instantaneous or current waveforms



RMS value output
(RMS mode)
DC 600 mV/f.s.
Waveform output
(WAVE mode)
AC 600 mV/f.s.

*Using CONNECTION CABLE L9097 (Accessories)

Order code **CM4001**

Order code **CM4001-90**

Order code **CM4002**

Order code **CM4002-90**

Order code **CM4003**

Order code **CM4003-90**

Order code **Z3210**

Model CM4001-90, CM4002-90, CM4003-90 includes Z3210 as a set

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AC Power

AC CLAMP POWER METER CM3286-50

Product warranty for 3 years
Accuracy guaranteed for 1 year

ϕ46 mm=1.81 in

CM3286-50

AC 600 A

True RMS

CAT IV 600 V
CAT III 1000 V

With Z3210

Bluetooth®

GENNECT Cross

WIRELESS ADAPTER
Z3210 (Option)
Attach to enable Bluetooth® wireless technology

Order code **CM3286-50**

Order code **CM3286-90**

Model CM3286-90 includes Z3210 as a set

Included accessories

L9257

C0203

- LR03 Alkaline battery ×2
- Instruction manual

Measurement parameters	Power (Active/ reactive/ apparent)	Single phase	3.600 kW/36.00 kW/360.0 kW Guaranteed accuracy range: 0.005 kW to 360.0 kW Basic accuracy: ±2.0% rdg ±7 dgt
		Balanced three-phase 3-wire	7.200 kW/72.00 kW/720.0 kW guaranteed accuracy range: 0.020 kW to 623.5 kW Basic accuracy: ±3.0% rdg ±10 dgt
		Balanced three-phase 4-wire	10.80 kW/108.0 kW/1080 kW guaranteed accuracy range: 0.040 kW to 1080 kW Basic accuracy: ±2.0% rdg ±3 dgt
	AC Current		6.000 A/60.00 A/600.0 A Basic accuracy: ±1.0% rdg ±3 dgt
	AC Voltage		600.0 V Basic accuracy: ±0.7% rdg ±3 dgt
	Power factor		Single-phase, Balanced three-phase 4-wire: [Regeneration] -1.000 to -0.001, [Consumption] 0.000 to 1.000 Balanced three-phase 3-wire: [Regeneration] -0.001, [Consumption] 0.000 to 1.000
	Phase angle		Single-phase, Balanced three-phase 4-wire : [lead] -180.0° to -0.1°, [lag] 0.0° to 179.9° Balanced three-phase 3-wire: [lead] -90.0° to -0.1°, [lag] 0.0° to 90.0°
	Frequency		45.0 Hz to 999.9 Hz
	Simple Active Energy Consumption (Single-phase)		99.99 Wh/999.9 Wh/9.999 kWh/ 99.99 kWh/999.9 kWh/9999 kWh/
	Harmonic*1 (With Z3210)		Voltage or current harmonic levels up to 30th order, content factor, total harmonic distortion ratio
Other	Display refresh rate		2 times/s
	Operating temperature		-25°C to 65°C, 80% RH or less (non-condensating)
	Storage temperature		-25°C to 65°C, 80% RH or less (non-condensating)
	Dustproof and waterproof		IP20*2, IP50*3
	Power supply Continuous operating time		LR03 Alkaline battery ×2 25 hours
	Dimensions (W × H × D)		65 × 241 × 35 mm (2.56 × 9.49 × 1.38 inch)
	Weight		450 g (15.9 oz)

*1: Harmonics can be displayed using dedicated application software (GENNECT Cross)
*2: Voltage measurement in a completely dry condition. When jaw closes.
*3: While in storage.

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Options

3280-10F, CM3289, CM3291, 3287*1, 3288*1, 3288-20*1

1 L9208
With caps: CAT IV 600 V, CAT III 1000 V
Without caps: CAT II 1000 V
Rated current: 10 A
Cable length: 70 cm (2.3 ft.)
Includes red and black caps (1 each)

2 CT6280*1
4200 A AC, Φ130 mm (5.12 in)
*1: Not available to use with 3287, 3288, 3288-20

CM4371-50
CM4373-50
CM4375-50
CM4141-50
CM3286-50

1 L9300
With sliding cap design:
- Extended cap/shorter pin: CAT IV 600 V, CAT III 1000 V
- Retracted cap/longer pin: CAT II 1000 V

Rated current: 10 A
Cable length: 95 cm (3.12ft)

2 L9207-10
With caps: CAT IV 600 V, CAT III 1000 V
Without caps: CAT II 1000 V
Rated current: 10 A
Cable length: 90 cm (2.95 ft.)
Includes red and black caps (1 each)

3 L4930
Rated current: 10 A
Cable length: 1.2 m (3.94 ft.)

4 L4931
Rated current: 10 A
Cable length: 1.5 m (4.92 ft.)
Includes coupling connector

5 P2010*4
CAT IV 1000 V and CAT III 2000 V
Cable length 1.5 m (4.92 ft.)
*4: Not available to use with CM3286-50

6 DT4910*4
-40°C to 260°C
Sensor length 80 cm (2.62 ft.)

3 L4933*2
48 mm (1.89 in)
Rated voltage: AC 30 V, DC 60 V
Rated current: 3 A

4 L4934*2
CAT III 300 V, CAT II 600 V
Rated current: 3 A

7 L4933*3
48 mm (1.89 in)
Rated voltage: AC 30 V, DC 60 V
Rated current: 3 A

8 L4934*3
CAT III 300 V, CAT II 600 V
Rated current: 3 A

9 L9243
97 mm (3.82 in)
CAT II 1000 V
Rated current: 1 A

10 L4932
With caps: CAT IV 600 V, CAT III 1000 V
Without caps: CAT II 1000 V
Rated current: 10 A
Includes red and black caps (1 each)

11 L4935
CAT IV 600 V and CAT III 1000 V
Rated current: 10 A

12 L4936
CAT III 600 V
Rated current: 5 A
30 mm (1.18 in)

13 L4937
CAT III 1000 V
Rated current: 2 A
Magnet: Φ6 mm (0.24 in.)

14 9804
CAT IV 1000 V
Rated current: 2 A
Magnet: Φ11 mm (0.43 in.)

15 L4938
With caps: CAT III 600 V
Without caps: CAT II 600 V
Rated current: 10 A
Includes red and black caps (1 each)
22 mm (0.87 in.), Φ3.7 mm (0.15 in.)

16 L4939
CAT III 600 V, Rated current 10 A
1 22 mm (0.87 in.), Φ3.7 mm (0.15 in.)
2 48 mm (1.89 in.), Φ2.6 mm (0.1 in.)

17 9290-10

3280-10F, CM3289, CM3291, 3287, 3288, 3288-20		
1	TEST LEAD L9208	With caps: CAT IV 600 V, CAT III 1000 V Without caps: CAT II 1000 V Rated current: 10 A
2	AC FLEXIBLE CURRENT SENSOR CT6280	For 3280-10F, CM3289, CM3281, CM3291 AC 4200 A, Φ130 mm (5.12 in.)
3	CONTACT PIN SET L4933	AC 30 V, DC 60 V, 3 A
4	SMALL ALLIGATOR CLIP SET L4934	CAT III 300 V, CAT II 600 V, 3 A
5	CARRYING CASE 9398	For 3280-10F, CM3289, 3287, 3288, 3288-20
6	CARRYING CASE C0205	Bundled accessory for CT6280
7	TEST LEADS HOLDER 9209	For 3280-10F, CM3289, 3287, 3288, 3288-20

1 L9208 2 CT6280 3 L4933 4 L4934 5 9398 6 C0205 7 9209

CM4371-50, CM4373-50, CM4375-50, CM4141-50, CM3286-50		
1	TEST LEAD L9300	CAT IV 600 V, CAT III 1000 V CAT II 1000 V Rated current: 10 A
2	TEST LEAD L9207-10	With caps: CAT IV 600 V, CAT III 1000 V Without caps: CAT II 1000 V 10 A
3	CONNECTION CABLE SET L4930	10 A
4	EXTENSION CABLE SET L4931	10 A
5	DC HIGH VOLTAGE PROBE P2010	For CM437x-50 series, CM4141-50 CAT IV 1000 V, CAT III 2000 V
6	THERMOCOUPLES(K) DT4910	For CM437x-50 series, CM4141-50
7	CONTACT PIN SET L4933	AC 30 V, DC 60 V, 3 A
8	SMALL ALLIGATOR CLIP SET L4934	CAT III 300 V, CAT II 600 V, 3 A
9	GRABBER CLIP L9243	CAT II 1000 V, 1 A
10	TEST PIN SET L4932	With caps: CAT IV 600 V, CAT III 1000 V Without caps: CAT II 1000 V 10 A
11	ALLIGATOR CLIP SET L4935	CAT IV 600 V, CAT III 1000 V, 10 A
12	BUS BAR CLIP SET L4936	CAT III 600 V, 5 A
13	MAGNETIC ADAPTER SET L4937	CAT III 1000 V, 2 A
14	MAGNETIC ADAPTER SET 9804	CAT IV 1000 V, 2 A
15	TEST PIN SET L4938	With caps: CAT III 600 V Without caps: CAT II 600 V 10 A
16	BREAKER PIN SET L4939	CAT III 600 V, 10 A
17	CLAMP ON ADAPTER 9290-10	For CM3286-50 AC 1000 A, ϕ 55 mm, CT ratio 10 : 1
18	CONNECTION CORD L9257	Combination of L4930 and L4935
19	CARRYING CASE C0203	

1 L9300 2 L9207-10 3 L4930 4 L4931 5 P2010 6 DT4910 7 L4933
8 L4934 9 L9243 10 L4932 11 L4935 12 L4936 13 L4937 14 9804
15 L4938 16 L4939 17 9290-10 18 L9257 19 C0203

CM4002, CM4003		
1	CONNECTION CABLE L9097	For CM4003
2	CONVERSION ADAPTER 9704	For CM4003
3	AC ADAPTER Z1013	For CM4003
4	CARRYING CASE C0203	

1 L9097 2 9704 3 Z1013 4 C0203

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About the Marks

CAT	**Safety standard measurement categories***
	Drop proof Robust design capable of withstanding a drop from a height of 1 m onto concrete
	Backlight
AUTO OFF	**Auto power OFF** Automatically turns off after a certain time
DISPLAY HOLD	**Display hold**
TRUE RMS	**True RMS** True RMS measurement for accurate measurement of even distorted current waveforms
FILTER	**Low-pass filter** Cuts high frequency content to provide stable numerical values for measurement
AUTO AC/DC	**AUTO AC/DC** Automatically detects and measures AC and DC voltage
MIN MAX	**MAX/MIN/AVG value*** Displays the maximum, minimum, and average of the displayed values
PEAK	**Peak measurement*** Displays the wave maximum and minimum peak values
	Flexible current sensor can be connected

*For more detailed information, please refer to the next page.

~V	**AC voltage**
⎓V	**DC voltage**
±V	**DCV + ACV**
Hz	**Frequency**
Ω	**Resistance**
⊣⊢	**Capacitance**
°C	**Temperature**
~A	**ACA current**
⎓A	**DCA current**
±A	**DCA + ACA**
⎓VA	**DC Power**
	Continuity check Buzzer sounds when continuity is detected
	Diode check Displays voltage if in the correct direction, and OVER if in the reverse direction
NCV	**Non-Contact Voltage** Buzzer sounds when AC voltage is detected
INRUSH	**Inrush (Rush current)** Measures inrush current when power is turned on, etc.

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