

# HIOKI

CLAMP METER Series



# CLAMP METERS



10000A CAT II 600V  
CAT III 1000V

CM4375-50  
AC/DC  
CLAMP METER

TEMP  $\frac{||}{|}$   
 $\rightarrow \Omega$   $\rightarrow$   $\frac{||}{|}$   $\frac{||}{|}$   
 $\bar{A} + \bar{V}$   $\bar{V} \bar{A}$

AUTO V  
AUTO A

True RMS

OFF

Fn

OADJ

HOLD

# 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

# Safe, Durable, Reliable

**-25°C to 65°C  
operating temperature<sup>\*1</sup>**



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

**CAT IV 600V<sup>\*1</sup>**



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

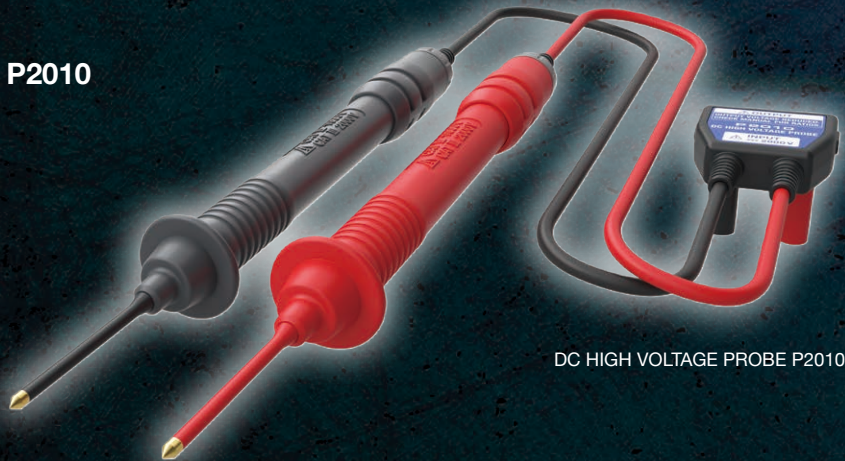
**Dustproof and  
waterproof performance<sup>\*2</sup>**



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.

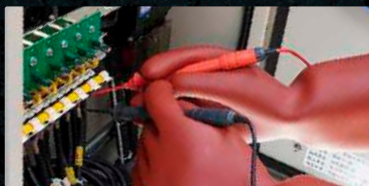
**NEW**

**DC HIGH VOLTAGE PROBE P2010  
for CAT III 2000 V<sup>\*3</sup>**



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.

<sup>\*1</sup> Supported models : CM4371-50, CM4373-50, CM4375-50, CM4141-50, CM3286-50

<sup>\*2</sup> Supported models : CM4371-50, CM4373-50, CM4375-50

<sup>\*3</sup> Supported models : CM4371-50, CM4373-50, CM4375-50, CM4141-50

## P210 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 M $\Omega$ $\pm$ 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 $\times$ 1, Operating Precautions $\times$ 1

## DC High Voltage Probe P210

### 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

# 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

Z3210 For more details

## 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.

Mail

Cloud

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

Bluetooth® communications

Screen1

Screen2

Screen3

Screen4

Transfer data to a tablet wirelessly

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

Verify current waveforms on your mobile device

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

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.

GET IT ON Google Play

Download on the App Store



GENNECT Cross For more details

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\*For the latest information about countries and regions where wireless operation is currently supported, please visit the Hioki website.



~2000A CAT IV 600V CAT III 1000V

CM4141-50 AC CLAMP METER

TEMP

Ω

AUTO V

~A

True RMS

OFF

Fn

O ADJ

HOLD


AUTO HOLD

HIOKI

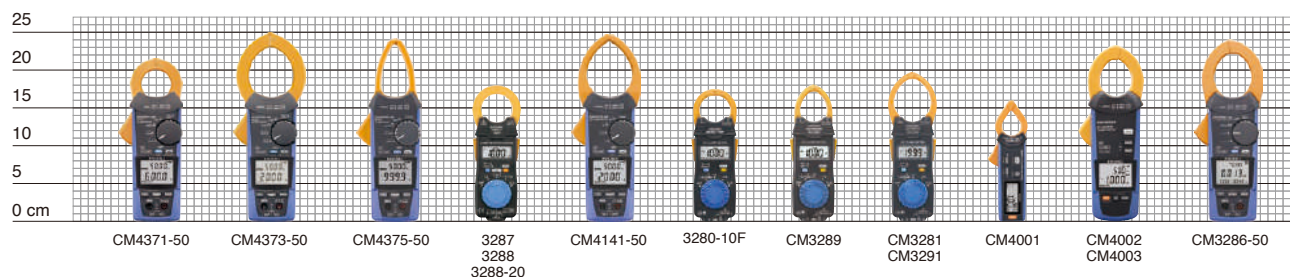
6000

APS

# 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 <sup>5</sup>	1000 A (0.1) Full display range <sup>5</sup>
	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 <sup>1</sup>	2000 V <sup>1</sup>	2000 V <sup>1</sup>	600 V	600 V
	Power	1200 kVA (DC) <sup>1</sup>	4000 kVA (DC) <sup>1</sup>	2000 kVA (DC) <sup>1</sup>	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 <sup>2</sup> , IP54 <sup>3</sup>	IP20 <sup>2</sup> , IP54 <sup>3</sup>	IP20 <sup>2</sup> , IP54 <sup>3</sup>	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





\*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)	2000 A (0.01)	1000 A (0.01)	1000 A (0.01)	2000 A (0.01)	2000 A (0.01)	600 A (0.01mA)	200 A (0.001mA)	600 A (0.001)
	Guaranteed accuracy range	1 A to 2000 A	4 A to 1000 A	4 A to 1000 A	4 A to 1999 A	4 A to 1999 A	0.6 mA to 600 A	0.06 mA to 200 A	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 <sup>1</sup>	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 <sup>3,4</sup>	IP40	N / A	N / A	N / A	N / A	IP40	IP20 <sup>2</sup> , IP50 <sup>3</sup>	
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



L9300  
Video ▶



L9300  
3D view ▶



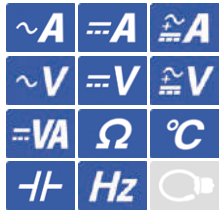
Test leads L9300 now incorporate integrated caps. The design lets you change the measurement category simply by sliding the test lead's protective finger guard. As an added bonus, you no longer have to worry about losing caps!

# 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 x2
- 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**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**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**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**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**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**GENNECT Cross**



**WIRELESS ADAPTER  
Z3210 (Option)**

**Attach to enable Bluetooth®  
wireless technology**



**DC HIGH VOLTAGE PROBE  
P2010 (Option)**

**Available to measure 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 CR2032x1
- 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



For more details



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 <sup>2</sup>	±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 <sup>2</sup>	±2.0% rdg ±20 dgt	
	N/A	✓	N/A	0.000 kVA to ±4000 kVA <sup>2</sup>	±2.0% rdg ±20 dgt	
	N/A	N/A	✓	0.000 kVA to ±2000 kVA <sup>2</sup>	±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	

Display refresh rate	5 times/s <sup>3</sup>
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 <sup>4</sup> , IP54 <sup>5</sup>
Power supply	Alkaline battery LR03 x2
Continuous operating time	40 hours <sup>6</sup>
Dimensions (W x H x D)	CM4371-50: 65 x 215 x 35 mm (2.56 x 8.46 x 1.38 in) CM4373-50: 65 x 250 x 35 mm (2.56 x 9.84 x 1.38 in) CM4375-50: 65 x 242 x 35 mm (2.56 x 9.53 x 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	<b>CM4371-50</b>	Order code	<b>CM4371-90</b>	
Order code	<b>CM4373-50</b>	Order code	<b>CM4373-90</b>	Order code <b>CM4373-93</b>
Order code	<b>CM4375-50</b>	Order code	<b>CM4375-90</b>	Order code <b>CM4375-93</b>

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<sup>®</sup> communications turned OFF



Model	3287	3288	3288-20		Basic accuracy
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

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	Coin type lithium battery CR2032 x1
Continuous operating time	25 hours
Dimensions (W x H x D)	57 x 180 x 16 mm (2.24 x 7.09 x 0.63 in)
Weight	3287: 170 g (6.0 oz), 3288, 3288-20: 150 g (5.3 oz)

Order code	<b>3287</b>
Order code	<b>3288</b>
Order code	<b>3288-20</b>

# 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 measure 2000 V DC

**Included accessories**



L9300 C0203

- LR03 Alkaline battery x2
- 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®**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**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 CR2032x1
- 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 x1
- Instruction manual

**With Z3210**

**Bluetooth®**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**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 x2
- Instruction manual

**With Z3210**

**Bluetooth®**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**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 x2
- Instruction manual
- USB cable

**With Z3210**

**Bluetooth®**

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

**GENNECT Cross**

**Functions**

- External output
- External power supply



For more details



Model	CM4141-50	Basic accuracy
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 <sup>1</sup> ±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

Display refresh rate	5 times/s <sup>2</sup>
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 <sup>3</sup>
Power supply	Alkaline battery LR03 x2
Continuous operating time	48 hours <sup>4</sup>
Dimensions (W x H x D)	65 x 247 x 35 mm (2.56 x 9.72 x 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

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



Model	3280-10F	CM3289	CM3281 · CM3291	Basic accuracy
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
AC Voltage	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
DC Voltage	✓	✓	✓	4.200 V/42.00 V/420.0 V/600 V ±1.8% rdg ±7 dgt
Resistance	✓	✓	✓	420.0 mV/4.200 V/42.00 V/420.0 V/600 V ±1.0% rdg ±3 dgt
				420.0 Ω/4.200 kΩ/42.00 kΩ/420.0 kΩ/4.200 MΩ/42.00 MΩ ±2.0% rdg ±4 dgt

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) <sup>2</sup>
Power supply	Coin type lithium battery CR2032 x1
Continuous operating time	3280-10F, CM3281: 120 hours CM3289: 70 hours CM3291: 70 hours
Dimensions (W x H x D)	3280-10F: 57 x 175 x 16 mm (2.24 x 6.89 x 0.63 in) 3280-10F, CM3281: 57 x 181 x 16mm (2.24 x 7.13 x 0.63 in) CM3281, CM3291: 57 x 198 x 16 mm (2.24 x 7.80 x 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**

<sup>1</sup> Excludes 3280F <sup>2</sup> Excludes CM3289, CM3281, CM3291

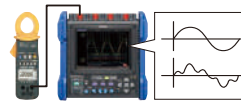


Model	CM4001	CM4002-CM4003	Basic accuracy
AC Current	✓	N / A	60.00 mA/600.0 mA/6.000A/60.00A/600.0A (guaranteed accuracy range: 0.60 mA to 600.0A) ±1.5% rdg ±0.05 mA
	N / A	✓	6.000 mA/60.00 mA/600.0 mA/6.000A/60.00A/200.0A (guaranteed accuracy range: 0.060 mA to 200.0A) ±1.0% rdg ±0.005 mA
Frequency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

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	CM4001: LR03 Alkaline battery x 1, 32 hours CM4002, CM4003: LR6 Alkaline battery x 2, 48 hours (LR6, without Z3210)
Continuous operating time	CM4003: AC ADAPTER Z1013 (Option)
Dimensions (W x H x D)	CM4001: 37 x 160 x 27 mm (1.46 x 6.30 x 1.06 in) CM4002, CM4003: 64 x 233 x 36 mm (2.52 x 9.17 x 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



## 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

Please see [www.hioki.com](http://www.hioki.com)  
for list of supported regions.

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 x2
- Instruction manual

\*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.

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 <sup>*1</sup> (With Z3210)	Voltage or current harmonic levels up to 30th order, content factor, total harmonic distortion ratio	
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 <sup>*2</sup> , IP50 <sup>*3</sup>	
Power supply	LR03 Alkaline battery x2	
Continuous operating time	25 hours	
Dimensions ( W x H x D )	65 x 241 x 35 mm (2.56 x 9.49 x 1.38 inch)	
Weight	450 g (15.9 oz)	

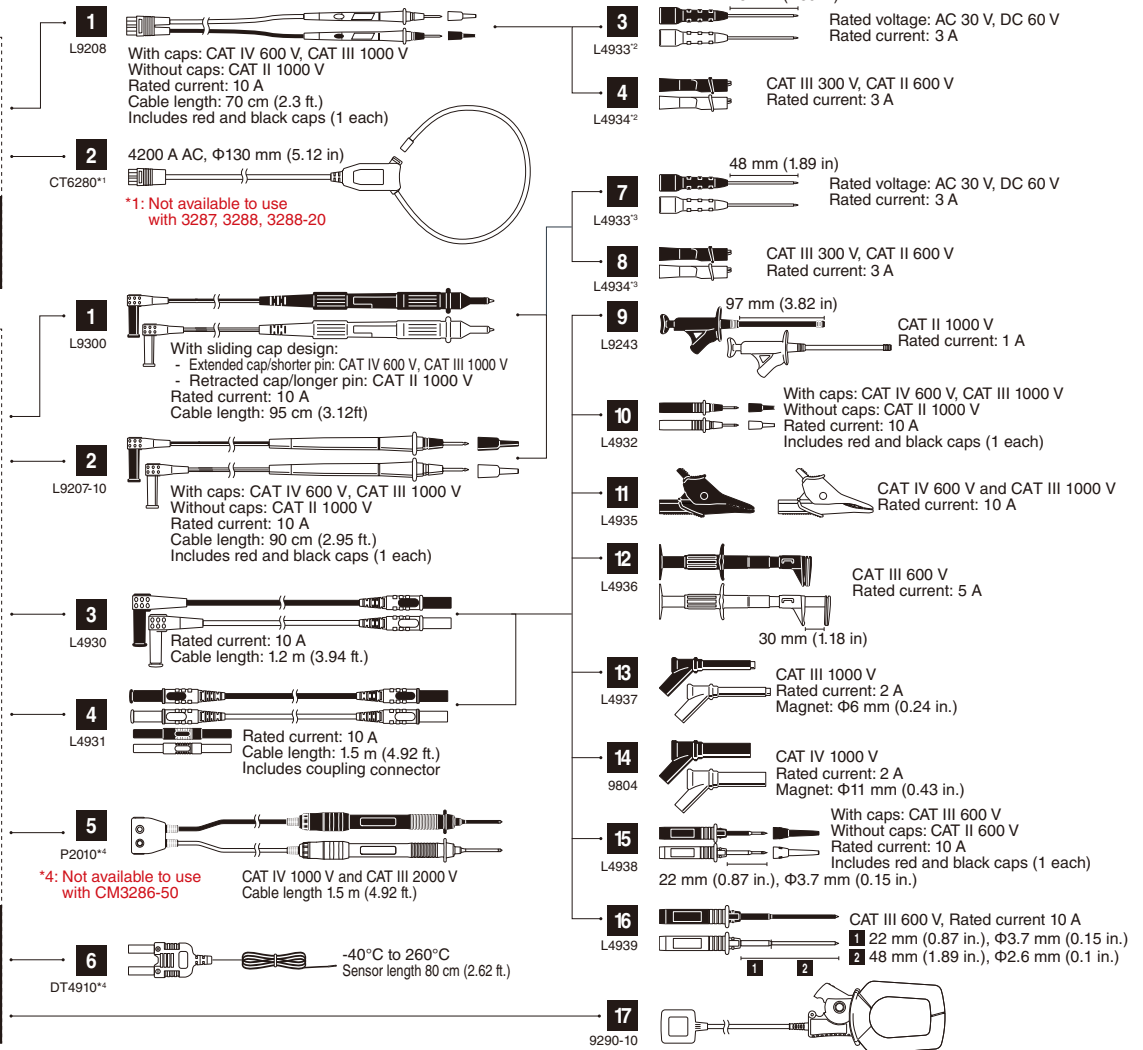
# Options



**3280-10F, CM3289,  
CM3291, 3287\*<sup>1</sup>,  
3288\*<sup>1</sup>, 3288-20\*<sup>1</sup>**



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



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, $\Phi$ 130 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














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 AC 30 V, DC 60 V, 3 A
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, $\Phi$ 55 mm, CT ratio 10 : 1
18	CONNECTION CORD L9257 Combination of L4930 and L4935
19	CARRYING CASE 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



## About the Marks

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

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

	<b>AC voltage</b>
	<b>DC voltage</b>
	<b>DCV + ACV</b>
	<b>Frequency</b>
	<b>Resistance</b>
	<b>Capacitance</b>
	<b>Temperature</b>
	<b>ACA current</b>
	<b>DCA current</b>
	<b>DCA + ACA</b>
	<b>DC Power</b>
	<b>Continuity check</b> Buzzer sounds when continuity is detected
	<b>Diode check</b> Displays voltage if in the correct direction, and OVER if in the reverse direction
	<b>Non-Contact Voltage</b> Buzzer sounds when AC voltage is detected
	<b>Inrush (Rush current)</b> Measures inrush current when power is turned on, etc.

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# HIOKI

HIOKI E. E. CORPORATION

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