

HIOKI

CLAMP METER Series



CLAMP METERS

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www.itm.com

information@itm.com



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^{*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

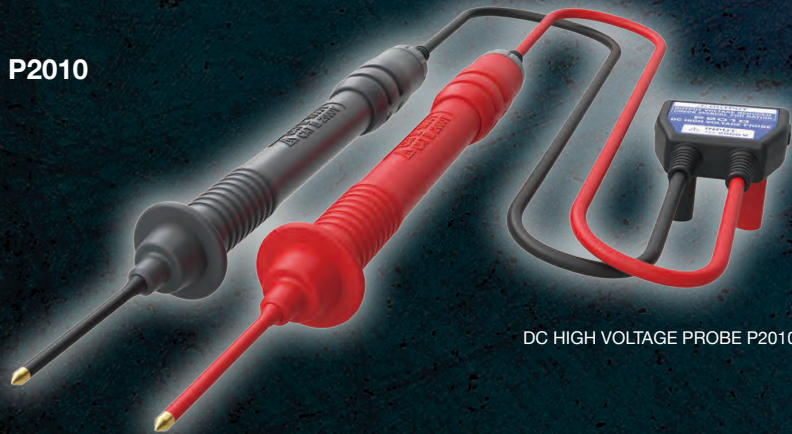
**Dustproof and
waterproof performance^{*2}**



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.

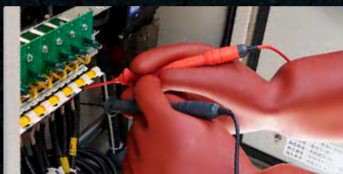
NEW

**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

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

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



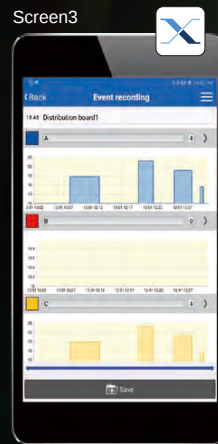
Transfer data to a tablet wirelessly



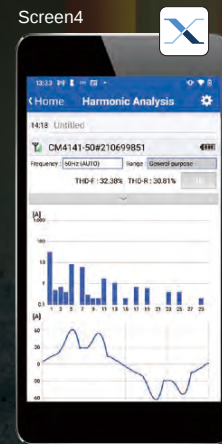
Take a picture of the test location and map measured values on it



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.



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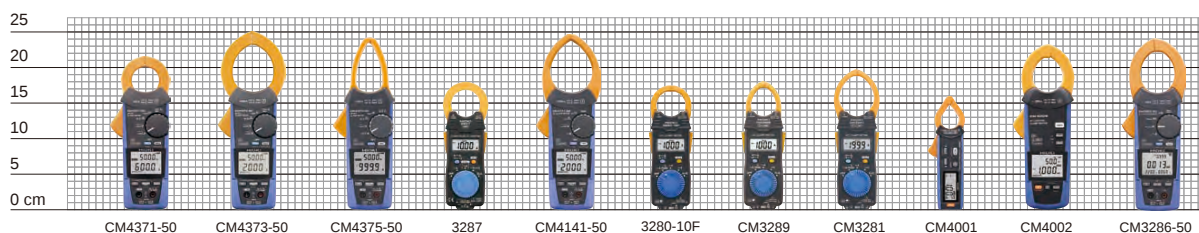




Lineup

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



*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



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



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

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



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



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



GENNECT Cross



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

CATs

DISPLAY HOLD

AUTO OFF

TRUE RMS

NCV

MIN MAX

PEAK

FILTER

AUTO AC/DC

INRUSH

1

Model	CM4371-50	CM4373-50	CM4375-50		Basic accuracy
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	Alkaline battery LR03 ×2				Order code CM4371-50
	Continuous operating time	40 hours ^{*6}				Order code CM4371-90
	Dimensions (W × H × D)	CM4371-50: 65 × 215 × 35 mm (2.56 × 8.46 × 1.38 in)				Order code CM4373-50
		CM4373-50: 65 × 250 × 35 mm (2.56 × 9.84 × 1.38 in)				Order code CM4373-90
		CM4375-50: 65 × 242 × 35 mm (2.56 × 9.53 × 1.38 in)				Order code CM4373-93
	Weight	CM4371-50: 340 g (12 oz)				Order code CM4375-50
CM4373-50: 530 g (18.7 oz)				Order code CM4375-90		
CM4375-50: 350 g (12.3 oz)				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

CATs 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	Coin type lithium battery CR2032 ×1				
	Continuous operating time	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	

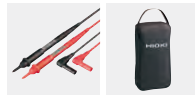
AC Current

AC CLAMP METER CM4141-50

CE
Product warranty for 3 years
Accuracy guaranteed for 1 year



Included accessories



L9300 C0203

- LR03 Alkaline battery x2
- Instruction manual



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



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

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

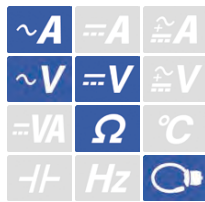
With Z3210

Bluetooth®

GENNECT Cross

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

CE
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)



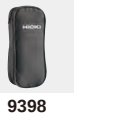
φ33 mm = 1.30 in

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

CE
Product warranty for 3 years
Accuracy guaranteed for 1 year



WIRELESS ADAPTER
Z3210 (Option)
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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

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 x2
- 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 x2
- Instruction manual
- USB cable

With Z3210
Bluetooth®

GENNECT Cross

Functions

- External output
- External power supply



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	Alkaline battery LR03 ×2		
	Continuous operating time	48 hours ⁴		
	Dimensions (W × H × D)	65 × 247 × 35 mm (2.56 × 9.72 × 1.38 in)		
Weight	300 g (10.6 oz)			
Model CM4141-90 includes Z3210 as a set				

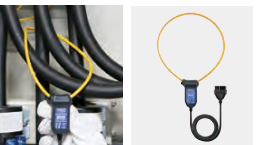
*1: Only when DC HIGH VOLTAGE PROBE P2010 is used *2: Excludes electrostatic capacity, frequency, and temperature

*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



Model		3280-10F	CM3289	CM3281 • CM3291		Basic accuracy
Measurements	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	Coin type lithium battery CR2032 x1
	Continuous operating time	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



Model	CM4001	CM4002-CM4003		Basic accuracy
Measurement items	✓	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
	✓	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	CM4001: LR03 Alkaline battery × 1, 32 hours CM4002, CM4003:	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
	Continuous operating time	LR6 Alkaline battery × 2, 48 hours (LR6 without Z3210) CM4003: AC ADAPTER Z1013 (Option)		Order code CM4001-90
	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)		Order code CM4002
	Weight	CM4001: 115 g (4.1 oz) CM4002, CM4003: 400 g (14.1 oz)		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 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



WIRELESS ADAPTER
Z3210 (Option)

**Attach to enable Bluetooth®
wireless technology**

Included accessories



L9257

C0203

- LR03 Alkaline battery ×2
- 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.

Order code **CM3286-50**

Order code **CM3286-90**

Model CM3286-90
includes Z3210 as a set

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
Measurement parameters	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°
Other	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
	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	LR03 Alkaline battery ×2
	Continuous operating time	25 hours
	Dimensions (W × H × D)	65 × 241 × 35 mm (2.56 × 9.49 × 1.38 inch)
	Weight	450 g (15.9 oz)

Options



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



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

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)	3 L4933*	48 mm (1.89 in) Rated voltage: AC 30 V, DC 60 V Rated current: 3 A
2 CT6280**	4200 A AC, Φ 130 mm (5.12 in) *1: Not available to use with 3287, 3288, 3288-20	4 L4934*	CAT III 300 V, CAT II 600 V Rated current: 3 A
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 (3.12 ft)	7 L4933*	48 mm (1.89 in) Rated voltage: AC 30 V, DC 60 V Rated current: 3 A
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)	8 L4934*	CAT III 300 V, CAT II 600 V Rated current: 3 A
3 L4930	Rated current: 10 A Cable length: 1.2 m (3.94 ft.)	9 L9243	97 mm (3.82 in) CAT II 1000 V Rated current: 1 A
4 L4931	Rated current: 10 A Cable length: 1.5 m (4.92 ft.) Includes coupling connector	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)
5 P2010**	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	11 L4935	CAT IV 600 V and CAT III 1000 V Rated current: 10 A
6 DT4910**	-40°C to 260°C Sensor length 80 cm (2.62 ft.)	12 L4936	CAT III 600 V Rated current: 5 A
		13 L4937	30 mm (1.18 in) CAT III 1000 V Rated current: 2 A Magnet: Φ 6 mm (0.24 in.)
		14 9804	CAT IV 1000 V Rated current: 2 A Magnet: Φ 11 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.), Φ 3.7 mm (0.15 in.)
		16 L4939	CAT III 600 V, Rated current 10 A 1 22 mm (0.87 in.), Φ 3.7 mm (0.15 in.) 2 48 mm (1.89 in.), Φ 2.6 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, Φ 130 mm (5.12 in.) AC 30 V, DC 60 V, 3 A
3	CONTACT PIN SET L4933	CAT III 300 V, CAT II 600 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, Φ 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

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

	AC voltage
	DC voltage
	DCV + ACV
	Frequency
	Resistance
	Capacitance
	Temperature
	ACA current
	DCA current
	DCA + ACA
	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
	Non-Contact Voltage Buzzer sounds when AC voltage is detected
	Inrush (Rush current) Measures inrush current when power is turned on, etc.

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