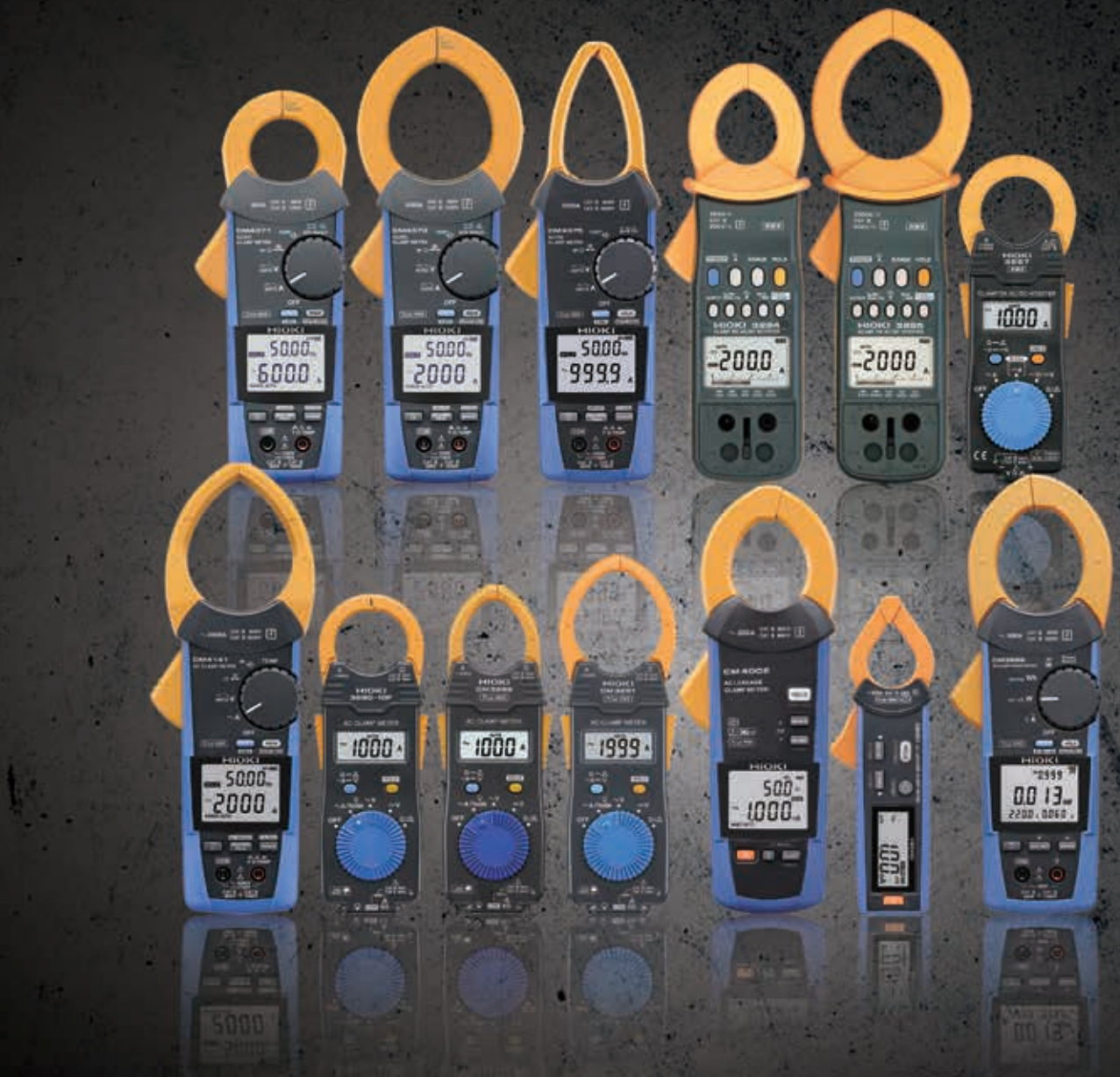
HIOKI

CLAMP METER Series



CLAMP METERS

1000A CAT IV 600V
CAT III 1000V
CM4375
AC/DC
CLAMP METER
TEMP
AUTO V
AUTO A
OFF
True RMS
SHIFT
HOLD
0 ADJ

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.

CM4376

Traditional design

Easily Clamp Within Crowded Cables with New Slim Jaw Design

CM4375
CM4376

34 mm=1.34 in

CM4141
CM4142

55 mm=2.17 in

CM3289

33 mm=1.30 in

CM3281
CM3291

46 mm=1.81 in

CM4001

24 mm=0.94 in

-25°C to 65°C operating temperature*1

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

Dustproof and waterproof performance*1

International Protection Code: IP54 Jaws (current sensor portion): IP50
Measurement functionality is maintained despite exposure to sand or dust as well as water droplets.

CAT IV 600V*1

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

Using Bluetooth® communication with the Z3210*2

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*

*It will be supported by the 2021 upgrade.

Transport to GENNECT Cross

Z3210
For more details

Manage measurement data using GENNECT Cross*3

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.

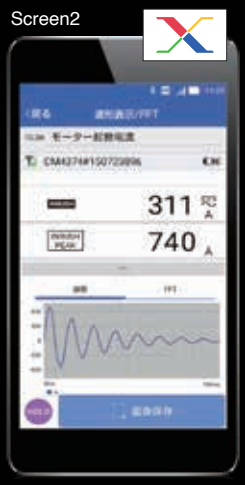
Bluetooth® communications

Transfer data to a tablet wirelessly

Screen1

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

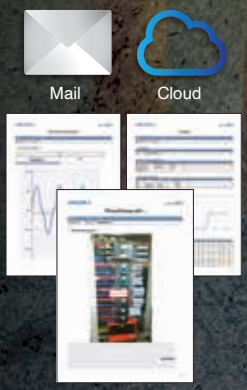
Screen2



Verify current waveforms on your mobile device

Screen3

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



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

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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*The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by HIOKI E.E. CORPORATION is under license.
*For the latest information about countries and regions where wireless operation is currently supported, please visit the Hioki website.

Safe, More Durable, and More Convenient

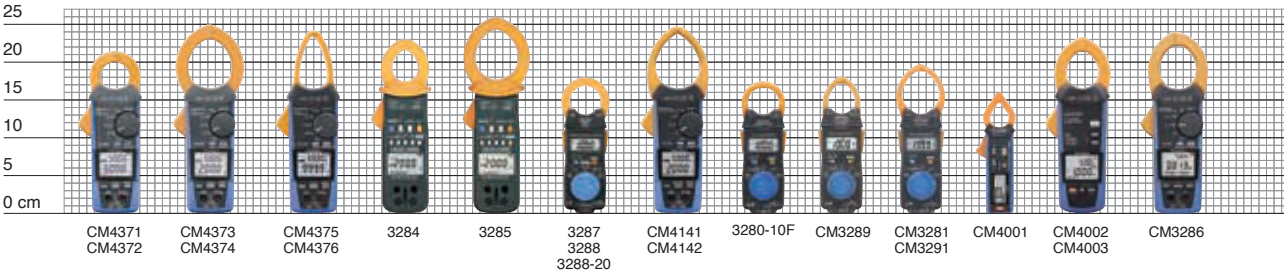
*1 Supported models : CM4371,CM4372,CM4373,CM4374,CM4375,CM4376, CM4141, CM4142, CM3286, CM3286-01 *2 CM4001, CM4002, CM4003
*3 Supported models : CM4372, CM4374, CM4376, CM4142, CM3286-01, CM4001 (with Z3210), CM4002 (with Z3210), CM4003 (with Z3210)

Lineup

Clamp Multimeters How to Use

Measurement type		AC / DC Current						
Model		CM4371 CM4372	CM4373 CM4374	CM4375 CM4376	3284	3285	3287	3288 3288-20
Appearance								
Core jaw diameter		ϕ33 mm (1.30 in)	ϕ55 mm (2.17 in)	ϕ34 mm (1.34 in)	ϕ33 mm (1.30 in)	ϕ55 mm (2.17 in)	ϕ35 mm (1.38 in)	ϕ35 mm (1.38 in)
AC measurement system		True RMS	True RMS	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 2 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	200 A (0.01) 1 A to 200 A	2000 A (0.1) 10 A to 2000 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)	200 A (0.01)	2000 A (0.1)	100 A (0.01)	1000 A (0.1)
	AC Voltage	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V
	DC Voltage	1500 V*1	1500 V*1	1500 V*1	600 V	600 V	600 V	600 V
	Power	1020 kVA (DC)*1	3400 kVA (DC)*1	1700 kVA (DC)*1	N / A	N / A	N / A	N / A
	Resistance	600 kΩ	600 kΩ	600 kΩ	N / A	N / A	42 MΩ	42 MΩ
	Temperature	-40°C to 400°C	-40°C to 400°C	-40°C to 400°C	N / A	N / A	N / A	N / A
	Electrostatic capacity	✔	✔	✔	N / A	N / A	N / A	N / A
	Frequency	999.9 Hz	999.9 Hz	999.9 Hz	1000 Hz	1000 Hz	N / A	N / A
	Rush current	✔	✔	✔	N / A	N / A	N / A	N / A
	Continuity check	✔	✔	✔	N / A	N / A	✔	✔
	Diode check	✔	✔	✔	N / A	N / A	N / A	N / A
	Voltage detection	✔	✔	N / A	N / A	N / A	N / A	N / A
Low-pass filter		✔	✔	✔	N / A	N / A	N / A	N / A
Auto power off		✔	✔	✔	✔	✔	✔	✔
Auto range		✔	✔	✔	✔	✔	✔	✔
Data hold		AUTO / MANUAL	AUTO / MANUAL	AUTO / MANUAL	MANUAL	MANUAL	MANUAL	MANUAL
Automatic AC/DC detection		✔	✔	✔	N / A	N / A	N / A	N / A
MAX / MIN / AVG		✔	✔	✔	✔	✔	N / A	N / A
Output		N / A	N / A	N / A	✔	✔	N / A	N / A
Bluetooth® communication		✔ (CM4372 only)	✔ (CM4374 only)	✔ (CM4376 only)	N / A	N / A	N / A	N / A
Backlight		✔	✔	✔	N / A	N / A	N / A	N / A
Display refresh rate		5 times / s	5 times / s	5 times / s	4 times / s *3	4 times / s *3	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	CAT III 600 V	CAT III 600 V	V: CAT III 300 V A: CAT III 600 V	V: CAT III 300 V A: CAT III 600 V
CE		✔	✔	✔	N / A	N / A	✔	✔
Dustproof and waterproof		IP54*2	IP54*2	IP54*2	IP40	IP40	N / A	N / A
Drop proof		N / A	N / A	N / A	N / A	N / A	N / A	N / A
Power supply		LR03 ×2 Alkaline	LR03 ×2 Alkaline	LR03 ×2 Alkaline	6F22 ×1 Stacked manganese	6F22 ×1 Stacked manganese	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	62 × 230 × 39 mm 2.44 × 9.06 × 1.54 in	62 × 260 × 39 mm 2.44 × 10.24 × 1.54 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	330 g / 11.6 oz	460 g / 16.2 oz	540 g / 19.0 oz	170 g / 6.0 oz	150 g / 5.3 oz

Size comparison



*1 Your instrument can be used to measure voltages in excess of 1000 V DC if and only if both of the following conditions are satisfied:
1. The circuit under measurement is isolated from the commercial power grid. 2. The circuit under measurement is isolated from ground.
e.g.: when measuring the no-load voltage of an ungrounded PV panel. Do not use the instrument with circuits whose terminal-to-ground voltage exceeds 1000 V. Doing so may result in electric shock.
*2 Grip only, jaws: IP50, measurement functionality is maintained despite exposure to sand or dust as well as water droplets.
*3 4 times / s (FAST), 2 times / s (NORMAL), 1 time / 3s (SLOW) *4 Input Voltage *5 displayed 0 with below 0.06

Measurement type		AC Current					Leakage Current		AC Power
Model		CM4141 CM4142	3280-10F	CM3289	CM3281	CM3291	CM4001	CM4002 CM4003	CM3286 CM3286-01
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	1500 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	600 kΩ	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
	Voltage detection	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		✔ (CM4142 only)	N / A	N / A	N / A	N / A	✔ (with Z3210)	✔ (with Z3210)	✔ (CM3286-01 only)
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
CE		✔	✔	✔	✔	✔	✔	✔	✔
Dustproof and waterproof		IP54*2	IP40	IP40	IP40	IP40	N / A	IP40	IP54*2
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	82 × 241 × 37 mm 3.23 × 9.49 × 1.46 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

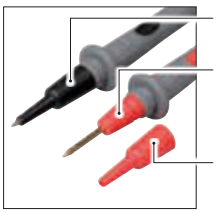
Insulated sleeves prevent short-circuits

Previous model

No sleeves attached to the tip of test leads?
DANGER of short-circuit accident.

NEW model

With sleeve attached to the tip of test leads,
short-circuit accidents can be prevented.



Sleeve attached
CAT III, CAT IV

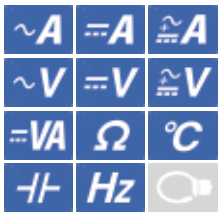
No sleeve attached
CAT II
When a sleeve is not attached, the test leads can only be used in a CAT II environment.

Sleeve
included as a standard accessory
*This sleeve cannot be attached to previous products

AC/DC Current

AC/DC CLAMP METER CM4371, CM4372, CM4373, CM4374, CM4375, CM4376

Product warranty for 3 years
Accuracy guaranteed for 1 year



Accessories

L9207-10 C0203

- LR03 Alkaline battery ×2
- Instruction manual

ϕ33 mm =1.30 in

CM4371
600 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

CM4372
600 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

GENNECT Cross
Bluetooth®
Please see www.hioki.com for list of supported regions.

ϕ55 mm =2.17 in

CM4373
2000 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

CM4374
2000 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

GENNECT Cross
Bluetooth®
Please see www.hioki.com for list of supported regions.

ϕ34 mm =1.34 in

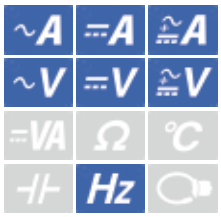
CM4375
1000 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

CM4376
1000 A AC/DC
True RMS
CAT IV 600 V
CAT III 1000 V

GENNECT Cross
Bluetooth®
Please see www.hioki.com for list of supported regions.

CLAMP ON AC/DC HiTESTER 3284, 3285

Not CE marked
Product warranty for 3 years
Accuracy guaranteed for 1 year



Accessories

L9207-10 9399/9345*

- Hand strap
- Stacked manganese battery 6F22
- Instruction manual

Model 3284 includes the 9399, and Model 3285 includes the 9346 carrying case.

ϕ33 mm =1.30 in

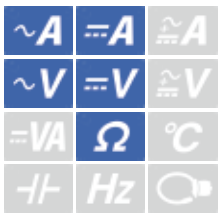
3284
200 A AC/DC
True RMS
CAT III 600 V

ϕ55 mm =2.17 in

3285
2000 A AC/DC
True RMS
CAT III 600 V

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

Product warranty for 3 years
Accuracy guaranteed for 1 year



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

For more details

*1

Model	CM4371・72	CM4373・74	CM4375・76		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	±1.3% rdg ±0.13 A
	N / A	✔	N / A	600.0 A/2000 A	±1.3% rdg ±1.3 A
	N / A	N / A	✔	30.0 A/900.0 A/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/1500 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 1020 kVA*2	±2.0% rdg ±20 dgt
	N / A	✔	N / A	0.000 kVA to 3400 kVA*2	±2.0% rdg ±20 dgt
	N / A	N / A	✔	0.000 kVA to ±1700 kVA*2	±2.0% rdg ±0.020 kVA
Resistance	✔	✔	✔	600.0 Ω/6.000 kΩ/60.00 kΩ/600.0 kΩ	±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	Grip IP54*4
Power supply Continuous operating time	Alkaline battery LR03 ×2 45 hours*5
Dimensions (W × H × D)	CM4371, CM4372: 65 × 215 × 35 mm (2.56 × 8.46 × 1.38 in) CM4373, CM4374: 65 × 250 × 35 mm (2.56 × 9.84 × 1.38 in) CM4375, CM4376: 65 × 242 × 35 mm (2.56 × 9.53 × 1.38 in)
Weight	CM4371, CM4372: 340 g (12 oz) CM4373, CM4374: 530 g (18.7 oz) CM4375, CM4376: 330 g (11.6 oz)

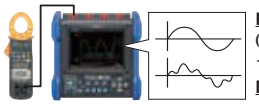
*1 Excludes CM4375, CM4376
*2 Your instrument can be used to measure voltages in excess of 1000 V DC if and only if both of the following conditions are satisfied:
1. The circuit under measurement is isolated from the commercial power grid.
2. The circuit under measurement is isolated from ground.
e.g.: when measuring the no-load voltage of an ungrounded PV panel
Do not use the instrument with circuits whose terminal-to-ground voltage exceeds 1000 V. Doing so may result in electric shock.
*3 Excludes electrostatic capacity, frequency, and temperature
*4 While in storage, or when measuring an insulated conductor.
Do not use when wet.
*5 With backlight and Bluetooth® communications turned OFF

Order code **CM4371**
Order code **CM4372**
Order code **CM4373**
Order code **CM4374**
Order code **CM4375**
Order code **CM4376**

Model	3284	3285		Basic accuracy
Measurement parameters				
AC Current	✔	N / A	20.00 A/200.0 A (guaranteed accuracy range: 1.00 A to 200.0 A)	±1.3% rdg ±3 dgt
	N / A	✔	200.0 A/2000 A (guaranteed accuracy range: 10.0 A to 2000 A)	±1.3% rdg ±3 dgt
DC Current	✔	N / A	20.00 A/200.0 A (guaranteed accuracy range: 1.00 A to 200.0 A)	±1.3% rdg ±3 dgt
	N / A	✔	200.0 A/2000 A (guaranteed accuracy range: 10.0 A to 2000 A)	±1.3% rdg ±3 dgt
AC + DC Current	✔	N / A	20.00 A/200.0 A	±1.3% rdg ±13 dgt
	N / A	✔	200.0 A/2000 A	±1.3% rdg ±13 dgt
AC Voltage	✔	✔	30.00 V/300.0 V/600 V	±1.0% rdg ±3 dgt
DC Voltage	✔	✔	30.00 V/300.0 V/600 V	±1.0% rdg ±3 dgt
AC + DC Voltage	✔	✔	30.00 V/300.0 V/600 V	±1.0% rdg ±7 dgt
Frequency	✔	✔	10.00 Hz/100.0 Hz/1000 Hz	±0.3% rdg ±1 dgt

Other	
Display refresh rate	4 times/s (FAST), 2 times/s (NORMAL), 1 time/3s (SLOW)
Operating temperature	0°C to 40°C, 80% RH or less (non-condensating)
Storage temperature	-10°C to 50°C (non-condensating)
Dustproof and waterproof	IP40
Power supply Continuous operating time	Stacked manganese battery 6F22 ×1, 25 hours or AC adapter 9445-02/-03 (Options)
Dimensions (W × H × D)	3284: 62 × 230 × 39 mm (2.44 × 9.06 × 1.54 in) 3285: 62 × 260 × 39 mm (2.44 × 10.24 × 1.54 in)
Weight	3284: 460 g (16.2 oz) 3285: 540 g (19 oz)

Includes external output function
Pair with a recorder to capture instantaneous or current waveforms



*Requires optional L9094, L9095 or L9096 Output Cord

Recording output
(REC mode)
1V DC / f.s.
Monitor output
(MON mode)
1V AC / f.s.

Order code **3284**
Order code **3285**

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

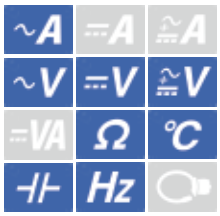
Other	
Display refresh rate	2.5 times/s
Operating temperature	0°C to 40°C, 80% RH or less (non-condensating)
Storage temperature	-10°C to 50°C, 80% RH or less (non-condensating)
Dustproof and waterproof	N / A
Power supply Continuous operating time	Coin type lithium battery CR2032 ×1 25 hours
Dimensions(W × 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**

AC Current

AC CLAMP METER CM4141, CM4142

Product warranty for 3 years
Accuracy guaranteed for 1 year



Accessories

L9207-10 **C0203**

- LR03 Alkaline battery ×2
- Instruction manual

ϕ55 mm =2.17 in

CM4141

2000 A AC

True RMS

CAT IV 600 V
CAT III 1000 V

ϕ55 mm =2.17 in

CM4142

2000 A AC

True RMS

CAT IV 600 V
CAT III 1000 V

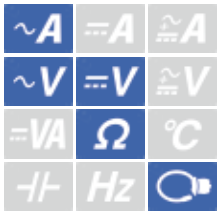
GENNECT Cross

Bluetooth®

Please see www.hioki.com for list of supported regions.

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

Product warranty for 3 years
Accuracy guaranteed for 1 year



Accessories

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

New

2000 A AC

CM3281: MEAN Value
CM3291: True RMS

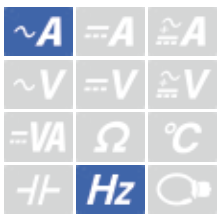
V: CAT III 300 V
A: CAT IV 300 V

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

New

0.6 mA to 600 A AC

True RMS

CAT III 300 V

Accessories

CARRYING CASE

- STRAP
- LR03 Alkaline battery ×1
- Instruction manual

GENNECT Cross

Bluetooth®

Please see www.hioki.com for list of supported regions.

With Z3210

ϕ40 mm=1.57 in

CM4002

New

0.06 mA to 200 A AC

True RMS

CAT IV 300 V
CAT III 600 V

Accessories

C0203

- LR6 Alkaline battery ×2
- Instruction manual

GENNECT Cross

Bluetooth®

Please see www.hioki.com for list of supported regions.

With Z3210

ϕ40 mm=1.57 in

CM4003

New

0.06 mA to 200 A AC

True RMS

CAT III 300 V

Accessories

C0203 **L9097**

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

GENNECT Cross

Bluetooth®

Please see www.hioki.com for list of supported regions.

With Z3210

Functions

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

For more details

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

Model		CM4141・CM4142		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/1500 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	±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	Grip IP54*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)

*1 Your instrument can be used to measure voltages in excess of 1000 V DC if and only if both of the following conditions are satisfied:
1. The circuit under measurement is isolated from the commercial power grid.
2. The circuit under measurement is isolated from ground.
e.g.: when measuring the no-load voltage of an ungrounded PV panel
Do not use the instrument with circuits whose terminal-to-ground voltage exceeds 1000 V. Doing so may result in electric shock.
*2 Excludes electrostatic capacity, frequency, and temperature
*3 While in storage, or when measuring an insulated conductor.
Do not use when wet.
*4 With backlight and Bluetooth® communications turned OFF

Order code **CM4141**

Order code **CM4142**

*1

CAT S | DISPLAY HOLD | AUTO OFF | TRUE RMS | 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)
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)

*1 Excludes 3280F

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**

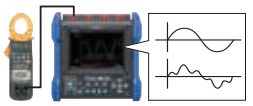
CAT S | DISPLAY HOLD | AUTO OFF | TRUE RMS | NCV | MIN MAX | PEAK | FILTER | AUTO AC/DC | INRUSH

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)

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

Order code **CM4001**

Order code **CM4001-90**

Order code **CM4002**

Order code **CM4002-90**

Order code **CM4003**

Order code **CM4003-90**

Order code **Z3210**

AC Power

For more details

AC CLAMP POWER METER CM3286, CM3286-01

Product warranty for 3 years
Accuracy guaranteed for 1 year

ϕ46 mm=1.81 in

CM3286 CM3286-01

CM3286

AC 600 A

True RMS

CAT IV 600 V
CAT III 1000 V

CM3286-01

AC 600 A

True RMS

CAT IV 600 V
CAT III 1000 V

GENNECT Cross

Bluetooth®

Please see www.hioki.com for list of supported regions.

Accessories

L9257 C0203

- LR03 Alkaline battery ×2
- Instruction manual

Order code **CM3286**

Order code **CM3286-01**

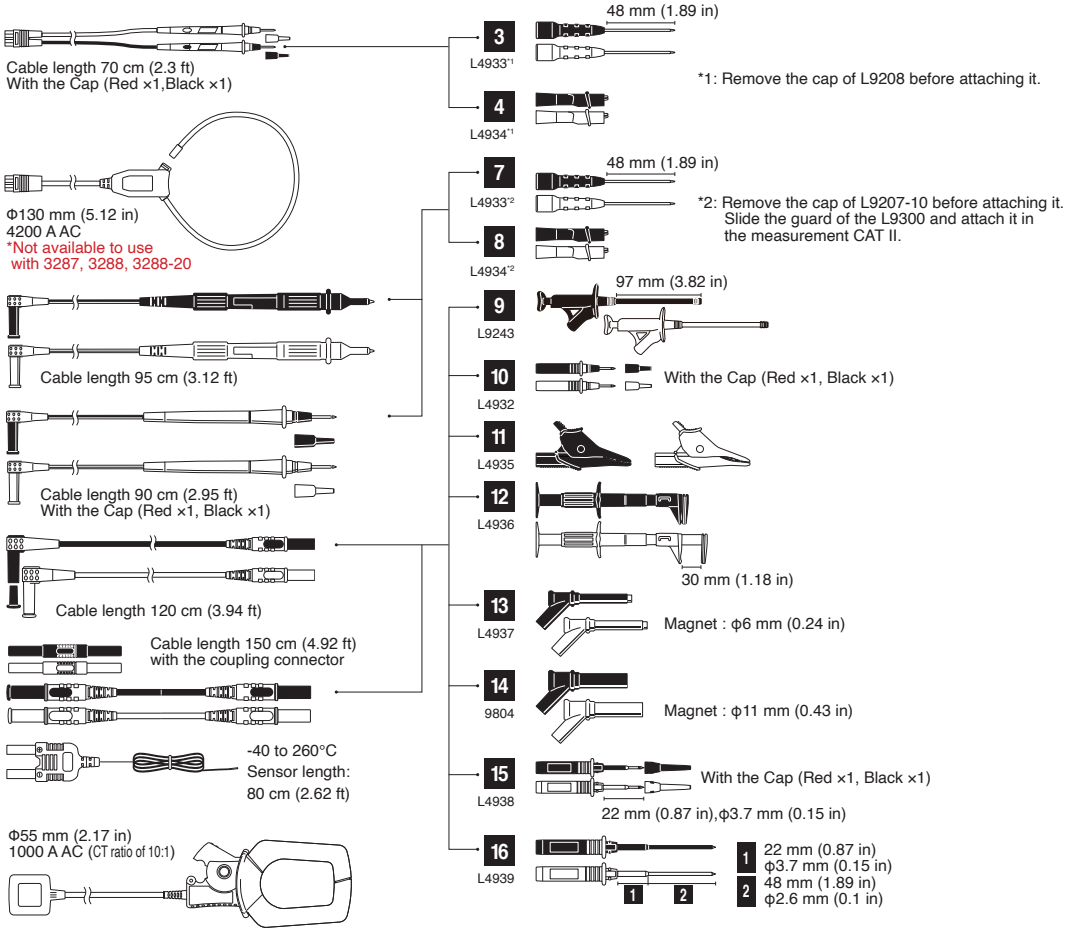
Measurement parameters	Power (Active/ reactive/ apparent)	Single phase	3.600 kW/36.00 kW/360.0 kW Guaranteed accuracy range: 0.005 kW to 360.0 kW Basic accuracy: ±2.0% rdg ±7 dgt
		Balanced three-phase 3-wire	7.200 kW/72.00 kW/720.0 kW guaranteed accuracy range: 0.020 kW to 623.5 kW Basic accuracy: ±3.0% 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 CM3286-01 only		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		Grip IP54*2
	Power supply Continuous operating time		LR03 Alkaline battery ×2 25 hours
	Dimensions (W × H × D)		82 × 241 × 37 mm (3.23 × 9.49 × 1.46 inch)
	Weight		450 g (15.9 oz)

*1 Harmonics can be displayed using dedicated application software (GENNECT Cross)
*2 While in storage, or when measuring current on an insulated conductor

Options

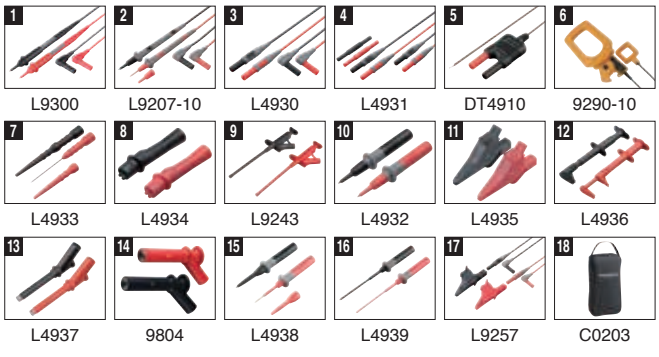
3280-10F
CM3289
CM3281, CM3291
3287*, 3288*
3288-20*

CM437x series
CM414x series
CM3286
CM3286-01

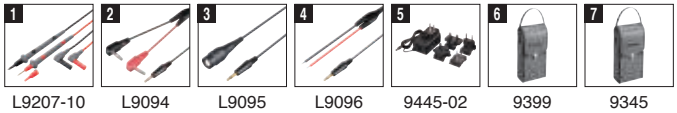


3280-10F, CM3289, CM3281, CM3291, 3287, 3288, 3288-20		
1	TEST LEAD L9208	
2	AC FLEXIBLE CURRENT SENSOR CT6280	For 3280-10F, CM3289, CM3281, CM3291
3	CONTACT PIN SET L4933	
4	SMALL ALLIGATOR CLIP SET L4934	
5	CARRYING CASE 9398	For 3280-10F, CM3289, 3287, 3288, 3288-20
6	CARRYING CASE C0205	Bundled accessory for CT6280
7	TEST LEADS HOLDER 9209	For 3280-10F, CM3289, 3287, 3288, 3288-20

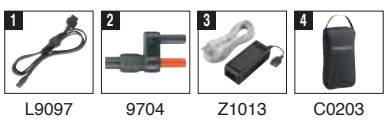
CM437x series, CM4141, CM4142, CM3286, CM3286-01		
1	TEST LEAD L9300	
2	TEST LEAD L9207-10	
3	CONNECTION CABLE SET L4930	
4	EXTENSION CABLE SET L4931	
5	THERMOCOUPLES(K) DT4910	For CM437x series, CM4141, CM4142
6	CLAMP ON ADAPTER 9290-10	For CM3286, CM3286-01
7	CONTACT PIN SET L4933	
8	SMALL ALLIGATOR CLIP SET L4934	
9	GRABBER CLIP L9243	
10	TEST PIN SET L4932	
11	ALLIGATOR CLIP SET L4935	
12	BUS BAR CLIP SET L4936	
13	MAGNETIC ADAPTER SET L4937	
14	MAGNETIC ADAPTER SET 9804	
15	TEST PIN SET L4938	
16	BREAKER PIN SET L4939	
17	CONNECTION CORD L9257	Combination of L4930 and L4935
18	CARRYING CASE C0203	



3284, 3285		
1	TEST LEAD L9207-10	3284, 3285 only, 90cm
2	OUTPUT CORD L9094	1.5m, Banana terminal
3	OUTPUT CORD L9095	1.5m, BNC terminal
4	OUTPUT CORD L9096	1.5m, Block terminal
5	AC ADAPTER 9445-02	
6	CARRYING CASE 9399	3284 only
7	CARRYING CASE 9345	3285 only



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



About the Marks

CAT S	**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

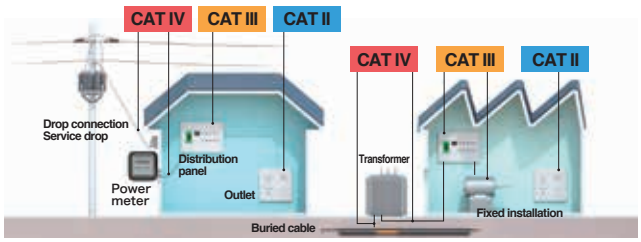
*For more detailed information, please refer to the next page.

~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	**Voltage detection** Buzzer sounds when AC voltage is detected
INRUSH	**Inrush (Rush current)** Measures inrush current when power is turned on, etc.

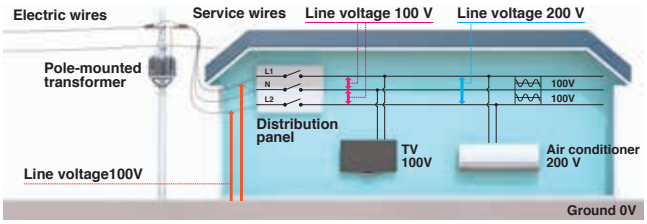
Measurement Category・Anticipated Transient Overvoltage

Under safety standards (EN61010 Series, JIS C 1010 Series), measurement is classified into Categories II to IV according to the measurement point's rated voltage to ground, current capacity (size of current that flows in a short-circuit fault), etc., and the transient overvoltage that occurs at the measurement point.

Measurement Category



Rated voltage to ground



CAT II :	Measurement at a point from the power plug to the equipment's power circuits, where equipment is directly connected to an outlet.
CAT III :	Measurement at a point on the power distribution cabling or power supply circuits, or at a point from the distribution panel to a distribution terminal behind an outlet, where equipment (for example a fixed installation) takes electricity directly from a distribution panel.
CAT IV :	Measurement at a point on a service drop to a building, or on the line from the drop connection to the power meter or distribution panel.

Anticipated Transient Overvoltage

Rated voltage to ground	Transient overvoltage		
	CAT II	CAT III	CAT IV
300 V	2500 V	4000 V	6000 V
600 V	4000 V	6000 V	8000 V
1000 V	6000 V	8000 V	12000 V

Power lines in factories and similar facilities will at times include transient overvoltage (impulse voltage) that is around 10 times the power source voltage. The transient overvoltage of the measurement points must be predicted in advance, and the instrument will need a safety design that will enable it to withstand such overvoltage.

Marks

CAT IV Measurement Category　**600V** Rated voltage to ground

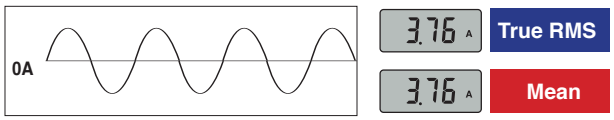
Assuming 600 V for the measurement point's voltage to ground, a Category IV location could potentially include transient overvoltage of 8000 V. Hence, CAT IV measurement instruments are designed to withstand transient overvoltage of 8000 V. CAT III measurement instruments can only withstand up to 6000 V, so if 8000 V transient overvoltage enters, it will cause insulation breakdown that could result in electric shock.

Never measure a location with a higher category number than the category indicated on the measuring instrument. Doing so could lead to a serious accident such as electric shock.

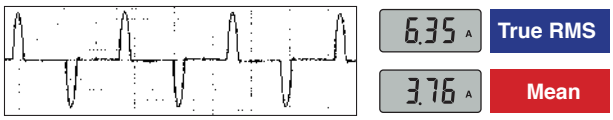
Rectification Methods: True RMS and Mean

A measuring instrument uses one of two rectification methods, “True RMS" or “Mean”. Using mean rectification assumes that the signal is based on a sine wave without distortions in order to calculate the value. Distorted waveforms cannot be measured accurately using this method. As the performance of equipment increases, so do distorted waveforms. In order to accurately measure in these situations, using the True RMS method is necessary.

Non-distorted current waveforms



Waveforms distort due to switching power supplies and similar technologies



Low-Pass Filter Reduces the Effects of Harmonics and Measures the Fundamental Wave Component Accurately

Switching power supplies and the secondary side of inverters include harmonic components. Waveforms containing harmonics are distorted and difficult to measure with accuracy. By using a low-pass filter to remove harmonic components, accurate measurement values can be obtained.

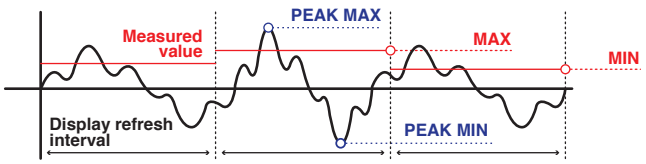
Fundamental wave　Harmonic components　Distorted waveform

Occurs during AC/DC switching

Distorted waveform　Harmonic components　Fundamental wave

Harmonics are removed by the low-pass filter

MAX/MIN/AVG/PEAK value



The ability to identify the maximum, minimum, average, and crest maximum and minimum values for equipment like machine tools whose load current fluctuates is useful in preventive maintenance and quality control.

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All information correct as of Oct. 20, 2021. All specifications are subject to change without notice. series_clampmeters_E9-1XE Printed in Japan