

# HIOKI

CLAMP METER Series



# CLAMP METERS



1000A CAT II 600V  
CAT III 1000V

CM4375  
AC/DC  
CLAMP METER

AUTO V

AUTO A

OFF

True RMS

SHIFT

0 AD1

HOLD

Ω

TEMP

A+VVA



# 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=1.33 in



CM4141  
CM4142

55 mm=2.16 in



CM3289

33 mm=1.29 in



CM3291

46 mm=1.81 in



CM4001

24 mm=0.94 in

# Safe, More Durable, and More Convenient

**-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

## 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.

**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**

- 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.



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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.



~2000A  
 CAT II 600V  
 CAT III 1000V

CM4141  
 AC CLAMP METER

TEMP  
 Ω  
 AUTO V  
 ~A

True RMS  
 SHIFT  
 HOLD  
 0 ADJ  
 AUTO HOLD  
 OFF

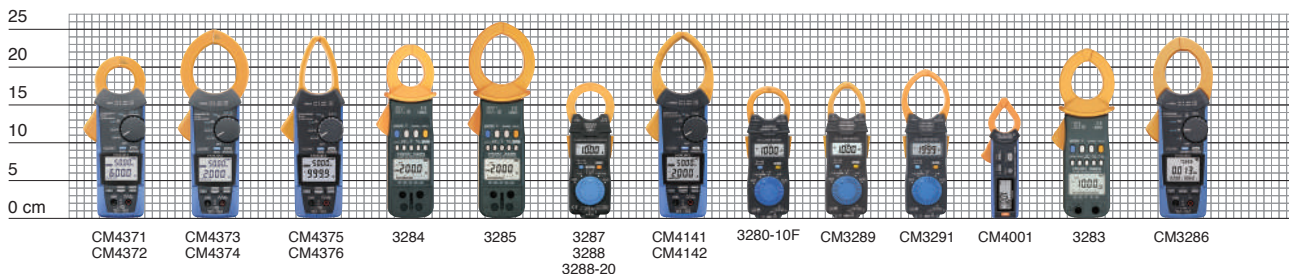
HIOKI  
 2000V  
 APS

\*1 Supported models : CM4371, CM4372, CM4373, CM4374, CM4375, CM4376, CM4141, CM4142, CM3286, CM3286-01  
 \*2 Supported models : CM4372, CM4374, CM4376, CM4142, CM3286-01

# Lineup

Measurement type	AC / DC Current							
Model	CM4371 CM4372	CM4373 CM4374	CM4375 CM4376	3284	3285	3287	3288 3288-20	
Appearance								
Core jaw diameter	φ33 mm (1.29 in)	φ55 mm (2.16 in)	φ34 mm (1.33 in)	φ33 mm (1.33 in)	φ55 mm (2.16 in)	φ35 mm (1.4 in)	φ35 mm (1.37 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)	600 A (0.01)	2000 A (0.1)	1000 A (0.1)	200 A (0.01)	2000 A (0.1)	100 A (0.01)	1000 A (0.1)
	Guaranteed accuracy range	1 A to 600 A	1 A to 2000 A	1 A to 999.9 A	1 A to 200 A	10 A to 2000 A	Full display range	Full display range
	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 <sup>1</sup>	1500 V <sup>1</sup>	1500 V <sup>1</sup>	600 V	600 V	600 V	600 V
	Power	1020 kVA (DC) <sup>1</sup>	3400 kVA (DC) <sup>1</sup>	1700 kVA (DC) <sup>1</sup>	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 <sup>2</sup>	IP54 <sup>2</sup>	IP54 <sup>2</sup>	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 x2 Alkaline	LR03 x2 Alkaline	LR03 x2 Alkaline	6F22 x1 Stacked manganese	6F22 x1 Stacked manganese	CR2032 x1 Coin type	CR2032 x1 Coin type	
Dimensions (W x H x D)	65 x 215 x 35 mm 2.6 x 8.5 x 1.4 in	65 x 250 x 35 mm 2.6 x 9.8 x 1.4 in	65 x 242 x 35 mm 2.6 x 9.5 x 1.4 in	62 x 230 x 39 mm 2.4 x 9.0 x 1.5 in	62 x 260 x 39 mm 2.4 x 10.2 x 1.5 in	57 x 180 x 16 mm 2.2 x 7.0 x 0.6 in	57 x 180 x 16 mm 2.2 x 7.0 x 0.6 in	
Mass	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	

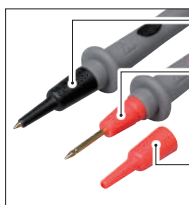
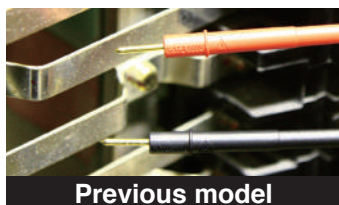
## Size comparison



\*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.  
 \*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

Measurement type	AC Current					Leakage Current		AC Power	
Model	CM4141 CM4142	3280-10F	CM3289	CM3281	CM3291	CM4001	3283 3283-20	CM3286 CM3286-01	
Appearance									
Core jaw diameter	φ55 mm (2.16 in)	φ33 mm (1.29 in)	φ33 mm (1.29 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	True RMS	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	40 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 (0.01mA) 1 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 <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	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	N / A	N / A
	Rush current	✓	N / A	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	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	✓ (3283 only)	N / A	
Bluetooth® communication	✓ (CM4142 only)	N / A	N / A	N / A	N / A	✓ (with Z3210)	N / A	✓ (CM3286-01 only)	
Backlight	✓	N / A	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	4 times / s *3	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 III 300 V	CAT IV 600 V CAT III 1000 V	
CE	✓	✓	✓	✓	✓	✓	✓ (3283-20 only)	✓	
Dustproof and waterproof	IP54 <sup>*2</sup>	IP40	IP40	IP40	IP40	N / A	IP40	IP54 <sup>*2</sup>	
Drop proof	N / A	✓	✓	✓	✓	N / A	N / A	N / A	
Power supply	LR03 x2 Alkaline	CR2032 x1 Coin type	CR2032 x1 Coin type	CR2032 x1 Coin type	CR2032 x1 Coin type	LR03 x1 Alkaline	6F22 x1 Stacked manganese	LR03 x2 Alkaline	
Dimensions (W x H x D)	65 x 247 x 35 mm 2.6 x 9.7 x 1.4 in	57 x 175 x 16 mm 2.2 x 6.9 x 0.6 in	57 x 181 x 16 mm 2.2 x 7.1 x 0.6 in	57 x 198 x 16 mm 2.2 x 7.8 x 0.6 in	57 x 198 x 16 mm 2.2 x 7.8 x 0.6 in	37 x 160 x 27 mm 1.5 x 6.3 x 1.1 in	62 x 225 x 39 mm 2.4 x 8.9 x 1.5 in	82 x 241 x 37 mm 3.2 x 9.5 x 1.5 in	
Mass	300 g / 10.6 oz	100 g / 3.5 oz	100 g / 3.5 oz	103 g / 3.5 oz	103 g / 3.5 oz	115 g / 4.0 oz	400 g / 14.1 oz	450 g / 15.9 oz	

### Insulated sleeves prevent short-circuits



**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

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

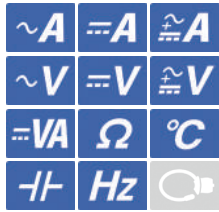
With sleeve attached to the tip of test leads,  
 short-circuit accidents can be prevented.

# 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 x2
- Instruction manual



φ33 mm =1.29 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



φ55 mm =2.16 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



φ34 mm =1.33 in

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

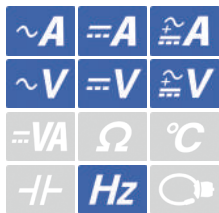
**CM4376**  
**1000 A AC/DC**  
True RMS  
CAT IV 600 V  
CAT III 1000 V



**Not CE marked**

## CLAMP ON AC/DC HiTESTER 3284, 3285

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 =1.29 in

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



φ55 mm =2.16 in

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

**Includes external output function**

Pair with a recorder to capture instantaneous or current waveforms

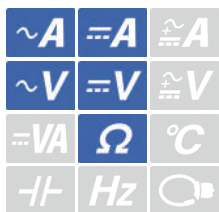
- Recording output (REC mode): 1V DC / f.s.
- Monitor output (MON mode): 1V AC / f.s.

\*Requires optional L9094, L9095 or L9096 Output Cord



## 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 CR2032x1
- Instruction manual



φ35 mm =1.37 in

**3287**  
**100 A AC/DC**  
True RMS  
V: CAT III 300 V  
A: CAT III 600 V



φ35 mm =1.37 in

**3288**  
**1000 A AC/DC**  
True RMS  
V: CAT III 300 V  
A: CAT III 600 V



φ35 mm =1.37 in

**3288-20**  
**1000 A AC/DC**  
True RMS  
V: CAT III 300 V  
A: CAT III 600 V





\*1 Excludes CM4375, CM4376

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 <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
DC Power	✓	N / A	N / A	0.0 VA to 1020 kVA <sup>1</sup>	±2.0% rdg ±20 dgt.	
	N / A	✓	N / A	0.000 kVA to 3400 kVA <sup>1</sup>	±2.0% rdg ±20 dgt.	
	N / A	N / A	✓	0.000 kVA to ±1700 kVA <sup>1</sup>	±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	

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	Grip IP54 <sup>3</sup>
Power supply	Alkaline battery LR03 x2
Continuous operating time	45 hours <sup>4</sup>
Dimensions (W x H x D)	CM4371, CM4372: 65 x 215 x 35 mm (2.6 x 8.5 x 1.4 in) CM4373, CM4374: 65 x 250 x 35 mm (2.6 x 9.8 x 1.4 in) CM4375, CM4376: 65 x 242 x 35 mm (2.6 x 9.5 x 1.4 in)
Mass	CM4371, CM4372: 340 g (12 oz) CM4373, CM4374: 530 g (18.7 oz) CM4375, CM4376: 330 g (11.7 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.
- \*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	<b>CM4371</b>
Order code	<b>CM4372</b>
Order code	<b>CM4373</b>
Order code	<b>CM4374</b>
Order code	<b>CM4375</b>
Order code	<b>CM4376</b>



Model	3284	3285		Basic accuracy
Measurement parameters	✓	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.
	✓	N / A	20.00 A/200.0 A (guaranteed accuracy range: 1.00 A to 200.0 A)	±1.3% rdg ±3 dgt.
DC Current	N / A	✓	200.0 A/2000 A (guaranteed accuracy range: 10.0 A to 2000 A)	±1.3% rdg ±3 dgt.
	✓	N / A	20.00 A/200.0 A	±1.3% rdg ±13 dgt.
AC + DC Current	✓	✓	200.0 A/2000 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.

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	Stacked manganese battery 6F22 x1, 25 hours
Continuous operating time	or AC adapter 9445-02 (Options)
Dimensions (W x H x D)	3284: 62 x 230 x 39 mm (2.4 x 9.0 x 1.5 in) 3285: 62 x 260 x 39 mm (2.4 x 10.2 x 1.5 in)
Mass	3284: 460 g (16.2 oz) 3285: 540 g (19 oz)

Order code	<b>3284</b>
Order code	<b>3285</b>



Model	3287	3288	3288-20	Basic accuracy
Measurement parameters	✓	N / A	N / A	10.00 A/100.0 A (Display range: 0A to 10.00 A/100.0 A)
	N / A	✓	✓	100.0 A/1000 A (Display range: 0A to 100.0 A/1000 A)
	✓	N / A	N / A	10.00 A/100.0 A
DC Current	N / A	✓	✓	100.0 A/1000 A
AC Voltage	✓	✓	✓	4.200 V/42.00 V/420.0 V/600 V
DC Voltage	✓	✓	✓	420.0 mV/4.200 V/42.00 V/420.0 V/600 V
Resistance	✓	✓	✓	420.0 Ω/4.200 kΩ/42.00 kΩ/420.0 kΩ/4.200 MΩ/42.00 MΩ

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 (1.1 x 7.1 x 0.6 in)
Mass	3287: 170 g (6.0 oz), 3288, 3288-20: 150 g (5.3 oz)

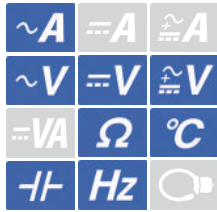
Order code	<b>3287</b>
Order code	<b>3288</b>
Order code	<b>3288-20</b>

# AC Current

## AC CLAMP METER CM4141, CM4142



Product warranty for 3 years  
Accuracy guaranteed for 1 year



**Accessories**



- L9207-10 C0203
- LR03 Alkaline battery x2
- Instruction manual



φ55 mm =2.16 in

**CM4141**

**2000 A AC**

True RMS

CAT IV 600 V  
CAT III 1000 V



φ55 mm =2.16 in

**CM4142**

**2000 A AC**

True RMS

CAT IV 600 V  
CAT III 1000 V



## AC CLAMP METER 3280F, 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 CR2032x1
- Instruction manual



φ33 mm =1.29 in

**3280-10F  
3280-70F**

**1000 A AC**

MEAN Value  
V: CAT III 300 V  
A: CAT IV 300 V



φ33 mm =1.29 in

**CM3289**

**1000 A AC**

True RMS

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



φ46 mm =1.81 in

**CM3291**

**2000 A AC**

True RMS

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



**CARRYING CASE**

# Leakage Current

## AC LEAKAGE CLAMP METER CM4001



Product warranty for 3 years  
Accuracy guaranteed for 1 year



**Accessories**



- CARRYING CASE
- STRAP
- LR03 Alkaline battery x1
- Instruction manual



φ24 mm =0.94 in

WIRELESS ADAPTER Z3210  
Attach to enable Bluetooth® wireless technology

φ24 mm =0.94 in

**0.6 mA to 600 A AC**

True RMS

CAT III 300 V

## CLAMP ON LEAK HITESTER 3283, 3283-20



\* 3283-20 only  
Product warranty for 3 years  
Accuracy guaranteed for 1 year



**Accessories**



- 9399
- Hand strap
- Stacked manganese battery 6F22
- Instruction manual



φ40 mm =1.57 in

**Includes external output function**  
Refer to previous page under Models 3284 and 3285 for further details.

φ40 mm =1.57 in

**1 mA to 200 A AC**

True RMS

CAT III 300 V



Model	CM4141 · CM4142		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/1500 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	±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 <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	Grip IP54 <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 (2.6 x 9.7 x 1.4 in)
Mass	300 g (10.6 oz)

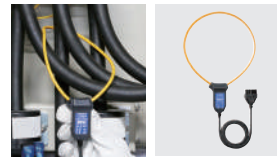
<sup>\*1</sup> Your instrument can be used to measure voltages in excess of 1000 V DC if and only if both of the following conditions are satisfied:  
 1. The circuit under measurement is isolated from the commercial power grid.  
 2. The circuit under measurement is isolated from ground.  
<sup>\*2</sup> Excludes electrostatic capacity, frequency, and temperature.  
<sup>\*3</sup> While in storage, or when measuring an insulated conductor. Do not use when wet.  
<sup>\*4</sup> With backlight and Bluetooth<sup>®</sup> communications turned OFF

Order code **CM4141**  
 Order code **CM4142**



Model	3280F	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.

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	Coin type lithium battery CR2032 x 1
Continuous operating time	3280F, CM3281: 120 hours CM3289: 70 hours CM3291: 70 hours
Dimensions (W x H x D)	3280: 57 x 175 x 16 mm (2.2 x 6.9 x 0.6 in) CM3289: 57 x 181 x 16mm (2.2 x 7.1 x 0.6 in) CM3281, CM3291: 57 x 198 x 16 mm (2.2 x 7.8 x 0.6 in)
Mass	3280: 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  
 Model 3280-70F includes CT6280 AC Flexible Sensor as a set

Order code **3280-10F**  
 Order code **3280-70F**  
 Order code **CM3289**  
 Order code **CM3291**



Model	CM4001	3283	Basic accuracy	
AC Current	✓	N / A	60.00 mA/600.0 mA/6.000A/60.00A/600.0A (guaranteed accuracy range: 0.6 mA to 600A)	±1.5% rdg ±5 dgt.
Frequency	N / A	✓	10.00 mA/100.0 mA/1.000 A/10.00 A/200.0 A (guaranteed accuracy range: 1.00 mA to 200.0 A)	±1.0% rdg ±5 dgt.
	✓	N / A	999.9 Hz	±1.5% rdg ±0.1 Hz
	N / A	✓	100.0 Hz/1000 Hz	±0.3% rdg ±1 dgt.

Other	
Display refresh rate	5 times/s
Operating temperature	-10°C to 65°C (non-condensating)
Storage temperature	-10°C to 65°C (non-condensating)
Dustproof and waterproof	N / A
Power supply	LR03 alkaline battery x 1
Continuous operating time	32 hours
Dimensions (W x H x D)	37 x 160 x 27 mm (1.5 x 6.3 x 1.1 in)
Mass	115 g (4.1 oz)

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	Stacked manganese battery 6F22 x 1 (or stacked alkaline battery 6LR61 x 1); 40 hours (with 6F22)
Continuous operating time	
Dimensions (W x H x D)	62 x 225 x 39 mm (2.4 x 8.9 x 1.5 in)
Mass	400 g (14.1 oz)

Order code **CM4001**

Order code **3283**      Order code **3283-20**

# AC Power



## 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



### Accessories



L9257

C0203

- LR03 Alkaline battery x2
- Instruction manual

Order code **CM3286**

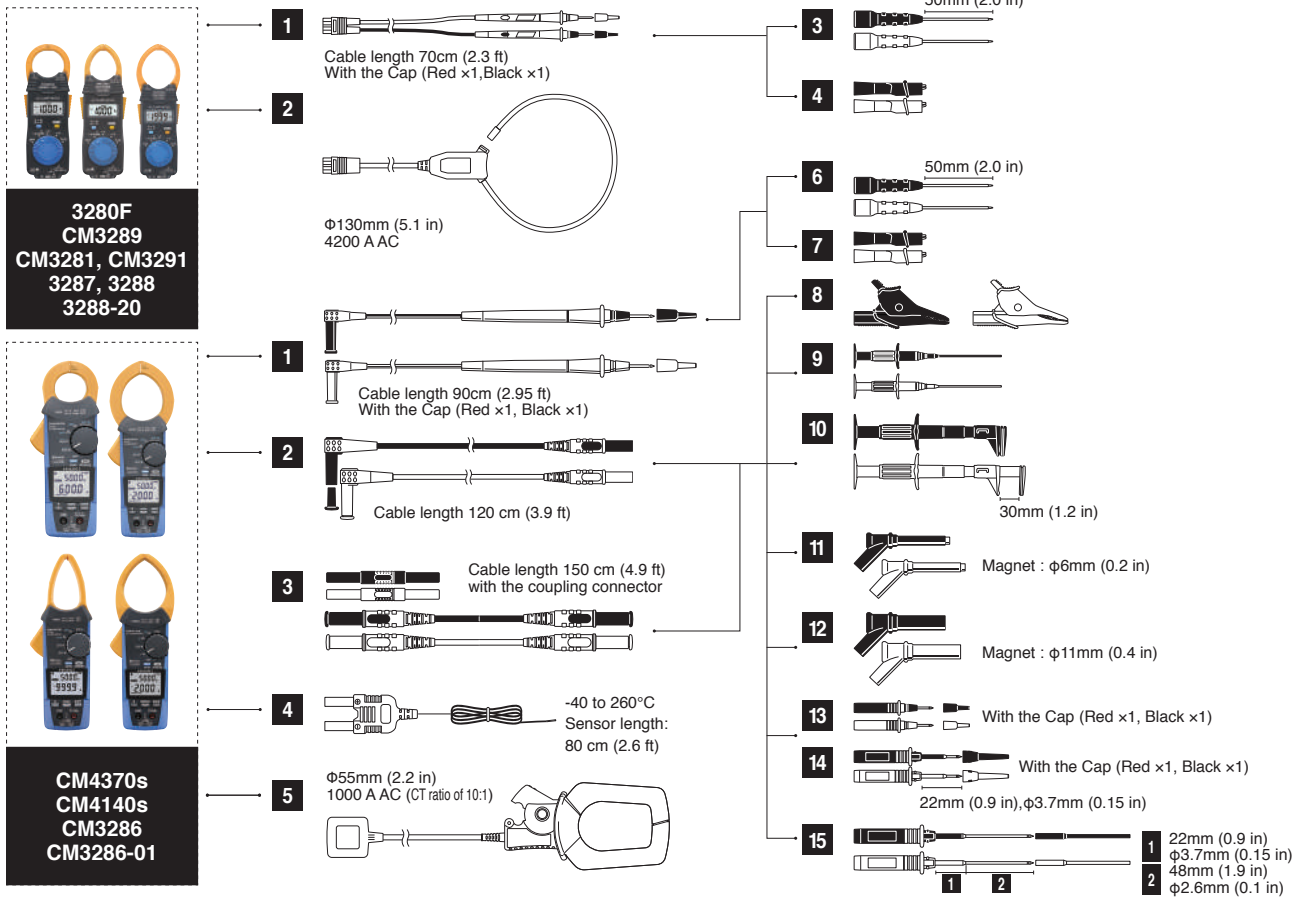
Order code **CM3286-01**

Power	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	Active reactive apparent	
	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> CM3286-01 only	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)	
Other	Dustproof and waterproof	Grip IP54 <sup>2</sup>
	Power supply	LR03 Alkaline battery x2
	Continuous operating time	25 hours
Dimensions (W x H x D)	82 x 241 x 37 mm (3.2 x 9.5 x 1.5 inch)	
Mass	450 g (15.9 oz)	

<sup>1</sup> Harmonics can be displayed using dedicated application software (GENNECT Cross)

<sup>2</sup> While in storage, or when measuring current on an insulated conductor

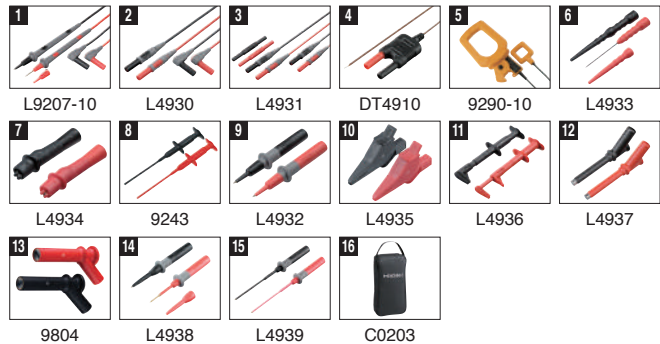
# Options



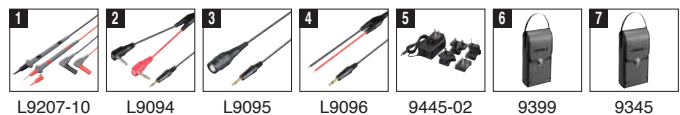
3280F, CM3289, CM3281, CM3291, 3287, 3288, 3288-20	
1	TEST LEAD L9208
2	AC FLEXIBLE CURRENT SENSOR CT6280 3280-10F/CM3281/CM3291 only
3	CONTACT PIN SET L4933
4	SMALL ALLIGATOR CLIP SET L4934
5	CARRYING CASE 9398
6	CARRYING CASE C0205 Excludes CM3281, CM3291














CM4371, 72, 73, 74, 75, 76, CM4141, 42, CM3286, CM3286-01	
1	TEST LEAD L9207-10
2	CONNECTION CABLE SET L4930
3	EXTENSION CABLE SET L4931
4	THERMOCOUPLES(K) DT4910 Excludes CM3286, CM3286-01
5	CLAMP ON ADAPTER 9290-10 CM3286, CM3286-01 only
6	CONTACT PIN SET L4933
7	SMALL ALLIGATOR CLIP SET L4934
8	GRABBER CLIP 9243
9	TEST PIN SET L4932
10	ALLIGATOR CLIP SET L4935
11	BUS BAR CLIP SET L4936
12	MAGNETIC ADAPTER SET L4937
13	MAGNETIC ADAPTER SET 9804
14	TEST PIN SET L4938
15	BREAKER PIN SET L4939
16	CARRYING CASE C0203


















3283, 3283-20, 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 3283, 3283-20, 3284 only
7	CARRYING CASE 9345 3285 only



## About the Marks

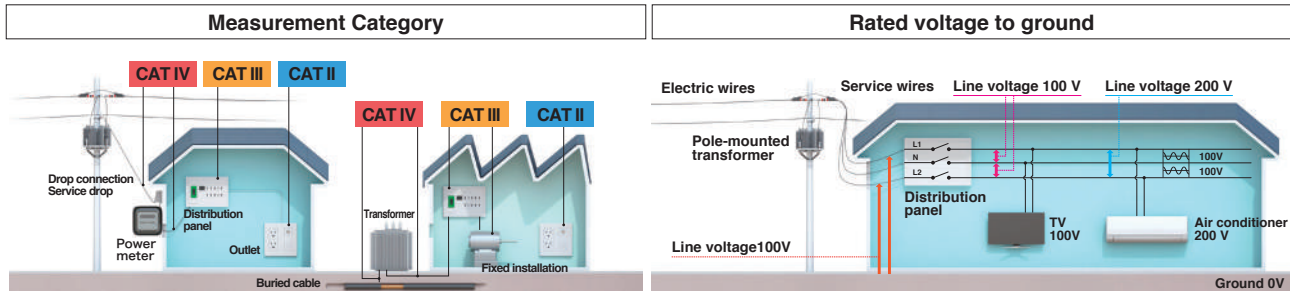
	<b>Safety standard categories*</b>
	<b>Drop proof</b> Robust design capable of withstanding a drop from a height of 1 m onto concrete
	<b>Back light</b>
	<b>Auto power OFF</b> Automatically turns off after a certain time
	<b>Display hold</b>
	<b>True RMS</b> True RMS measurement for accurate measurement 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>Voltage detection</b> Buzzer sounds when AC voltage is detected
	<b>Inrush (Rush current)</b> 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.



- 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**

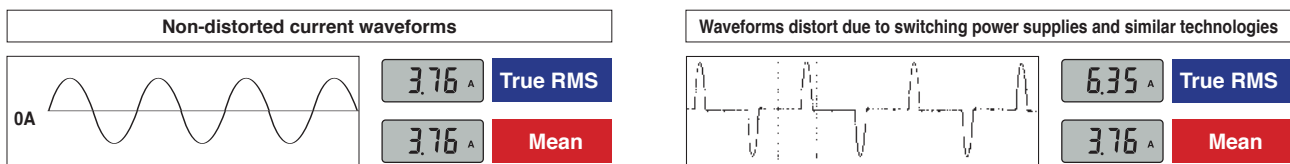
**CAT IV** **600V**  
 Measurement Category    Rated voltage to ground

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.

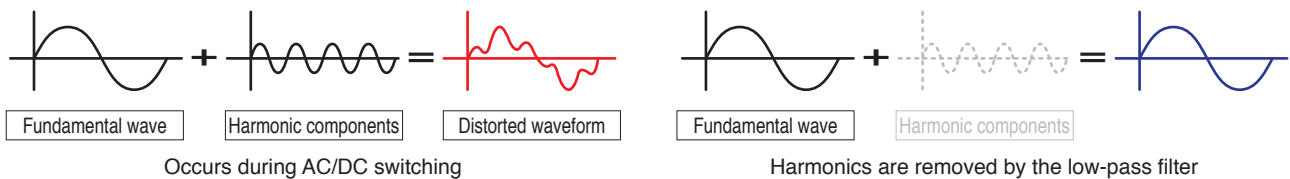
**Rectification Methods: True RMS and Mean**

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.

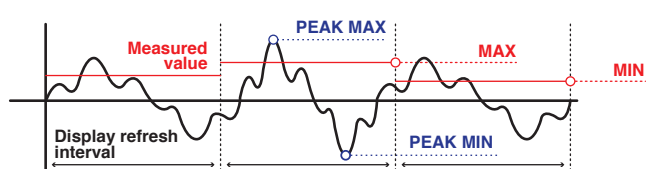


**Low-Pass Filter Reduces the Effects of Harmonics and Measures the Fundamental Wave Component Accurately**

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.



**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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