

HIOKI

AC/DC CLAMP METER CM4370 series

NEW

پتروفیرهان گستر جنوب

DIGINDT.IR

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CM4371, CM4372 : 600 A AC/DC
CM4373, CM4374 : 2000 A AC/DC

+982165565901

+982144584619

+989034119385

Tehran, Tehransar

Speedy Performance of Professional Testing
Made in Japan for rock-solid quality.

Rugged clamp meters for the toughest situations

INCREASED JAW
STRENGTH

WIDE OPERATING
TEMPERATURE RANGE

DUSTPROOF AND
WATERPROOF DESIGN

HIGH-VOLTAGE
MEASUREMENT

CAT IV 600 V



CAT IV 600V
CAT III 1000V

Bluetooth

*Models with Bluetooth® support :
CM4372, CM4374

Countries and regions where wireless operation is currently supported: Japan, U.S.A., Canada, EU, and Vietnam.

As of February 2016.

For an updated list, please visit the HIOKI website at www.hioki.com.

Making measurement more intelligent

Clamp-on meter with Bluetooth®

Models with *Bluetooth*® support:
CM4372, CM4374

The instruments listed below will be able to send measured values to a smartphone or tablet using *Bluetooth*® wireless technology, enabling you to display measured values and waveforms in real time.



Approx. 10 m
(line of sight)

Varies with device performance and signal reception.

Software specifications

Name	GENNECT Cross
Interface	<i>Bluetooth</i> ® 4.0LE (<i>Bluetooth</i> ® SMART)
Supported devices	iOS (iPhone®5, 3rd generation iPad®, iPad mini™, iPad Pro™, 5th generation iPod Touch® or later) Android™ (Only for <i>Bluetooth</i> ® SMART READY or <i>Bluetooth</i> ® SMART model)
Supported OS	iOS 8 or later, Android™ 4.3 or later
No. of controllable devices	For data logging, up to 8 devices can be connected (up to 8 measured values can be logged) at once Only 1 device can be used with the current/voltage waveform monitor and INRUSH waveform download function at any one time

- *Bluetooth*® is a registered trademark of *Bluetooth* SIG, Inc.(USA). The trademark is used by HIOKI I.E. CORPORATION under license.
- Android™ and Google Play™ are registered trademarks of Google, Inc.
- iOS is a registered trademark of Cisco in the U.S. and other countries.
- iPhone®, iPad®, iPad mini™, iPad Pro™, and iPod Touch® are registered trademarks of Apple Inc.

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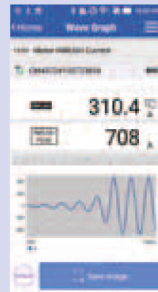


⚠ App for iPhone®, iPad® or other Apple device is scheduled to be released at the beginning of March 2016.



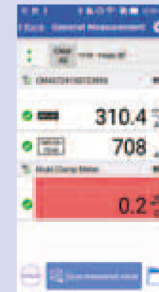
Simple logging function

Convenient for observing fluctuations over a short period of time when it's not practical to set up large-scale recording equipment.



Waveform monitor function

Review waveforms at the same time as measured values during current or voltage measurement, allowing the clamp meter to be used as a simple oscilloscope.



Hold save function

Automatically save measured values while they are being held and at the completion of inrush measurement.

Specifications

CM4371, CM4372 Measurement specifications

Measurement accuracy pertains to 1-year accuracy specifications
Figures in parentheses for ranges indicate the guaranteed accuracy range.

AC Current			
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy
20.00 A (1.00 A to 20.00 A)	0.01 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.10 A
		45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±0.08 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.10 A
600.0 A (1.0 A to 600.0 A)	0.1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.5 A
		45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±0.3 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.5 A

DC Current		
Range	Resolution	Measurement accuracy
20.00 A (±1.00 A to ±20.00 A)	0.01 A	±1.3% rdg. ±0.08 A
600.0 A (±1.0 A to ±600.0 A)	0.1 A	±1.3% rdg. ±0.3 A

DC+AC Current			
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy
20.00 A (1.00 A to 20.00 A)	0.01 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.10 A
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±0.13 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.10 A
600.0 A (1.0 A to 600.0 A)	0.1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.7 A
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±1.3 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.7 A

DC Power *		
Display range switching	Resolution	Measurement accuracy
0.0 VA to 1020 kVA	0.1 VA	±2.0% rdg. ±20 dgt.

*Current: Fixed to 600.0 A range

CM4373, CM4374 Measurement specifications

Measurement accuracy pertains to 1-year accuracy specifications
Figures in parentheses for ranges indicate the guaranteed accuracy range.

AC Current			
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy
600.0 A (1.0 A to 600.0 A)*	0.1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.5 A
		45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±0.3 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.5 A
2000 A (10 A to 1800 A)	1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±5 A
		45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±3 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±5 A
2000 A (1801 A to 2000 A)	1 A	10 Hz ≤ f < 45 Hz	±2.8% rdg. ±5 A
		45 Hz ≤ f ≤ 66 Hz	±2.3% rdg. ±3 A
		66 Hz < f ≤ 1 kHz	-

*For currents of 30.0 A or less, add 0.5 A to the measurement accuracy

DC Current		
Range	Resolution	Measurement accuracy
600.0 A (±1.0 A to ±600.0 A)*	0.1 A	±1.3% rdg. ±0.3 A
2000 A (±10 A to ±2000 A)	1 A	±1.3% rdg. ±3 A

*For currents of 30.0 A or less, add 0.5 A to the measurement accuracy

DC+AC Current			
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy
600.0 A (1.0 A to 600.0 A)	0.1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±0.7 A
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±1.3 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±0.7 A
2000 A (10 A to 1800 A)	1 A	10 Hz ≤ f < 45 Hz	±1.8% rdg. ±7 A
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.3% rdg. ±13 A
		66 Hz < f ≤ 1 kHz	±2.0% rdg. ±7 A
2000 A (1801 A to 2000 A)	1 A	10 Hz ≤ f < 45 Hz	±2.8% rdg. ±7 A
		DC, 45 Hz ≤ f ≤ 66 Hz	±2.3% rdg. ±13 A
		66 Hz < f ≤ 1 kHz	-

DC Power *		
Display range switching	Resolution	Measurement accuracy
0.000 kVA to 3400 kVA	1 VA	±2.0% rdg. ±20 dgt.

*Current: Fixed to 2000 A range

Shared specifications

Measurement accuracy pertains to 1-year accuracy specifications
 Figures in parentheses for ranges indicate the guaranteed accuracy range.

AC Voltage					
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy	Input impedance	
6.000 V (0.000 V to 0.299 V)	0.001 V	15 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.015 V	3.2 MΩ±5%	
		45 Hz ≤ f ≤ 66 Hz	±0.9% rdg. ±0.013 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.015 V		
6.000 V (0.300 V to 6.000 V)	0.001 V	15 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.005 V		
		45 Hz ≤ f ≤ 66 Hz	±0.9% rdg. ±0.003 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.005 V		
60.00 V (3.00 V to 60.00 V)	0.01 V	15 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.05 V		3.1 MΩ±5%
		45 Hz ≤ f ≤ 66 Hz	±0.9% rdg. ±0.03 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.05 V		
600.0 V (30.0 V to 600.0 V)	0.1 V	15 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.5 V	3.0 MΩ±5%	
		45 Hz ≤ f ≤ 66 Hz	±0.9% rdg. ±0.3 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.5 V		
1000 V (50 V to 1000 V)	1 V	15 Hz ≤ f < 45 Hz	±1.5% rdg. ±5 V		
		45 Hz ≤ f ≤ 66 Hz	±0.9% rdg. ±3 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±5 V		

Frequency range of 15 Hz ≤ f < 20 Hz is designed value

DC Voltage			
Range	Resolution	Measurement accuracy	Input impedance
600.0 mV (0.0 mV to ±600.0 mV)	0.1 mV	±0.5% rdg. ±0.5 mV	6.7 MΩ±5%
6.000 V (0.000 V to ±6.000 V)	0.001 V	±0.5% rdg. ±0.003 V	
60.00 V (0.00 V to ±60.00 V)	0.01 V	±0.5% rdg. ±0.03 V	6.1 MΩ±5%
600.0 V (0.0 V to ±600.0 V)	0.1 V	±0.5% rdg. ±0.3 V	6.0 MΩ±5%
1500 V (0 V to ±1000 V)	1 V	±0.5% rdg. ±3 V	
1500 V (±1001 V to ±1700 V)		±2.0% rdg. ±5 V	

DC+AC Voltage					
Range	Resolution	Accuracy guarantee frequency range	Measurement accuracy	Input impedance	
6.000 V (0.000 V to 0.299 V)	0.001 V	10 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.023 V	DC: 6.7 MΩ±5% AC: 3.2 MΩ±5%	
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.0% rdg. ±0.023 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.023 V		
6.000 V (0.300 V to 6.000 V)	0.001 V	10 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.013 V		
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.0% rdg. ±0.013 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.013 V		
60.00 V (3.00 V to 60.00 V)	0.01 V	10 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.13 V		DC: 6.1 MΩ±5%
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.0% rdg. ±0.13 V		AC: 3.1 MΩ±5%
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.13 V		
600.0 V (30.0 V to 600.0 V)	0.1 V	10 Hz ≤ f < 45 Hz	±1.5% rdg. ±0.7 V	DC: 6.0 MΩ±5% AC: 3.0 MΩ±5%	
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.0% rdg. ±0.7 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±0.7 V		
1000 V (50 V to 1000 V)	1 V	10 Hz ≤ f < 45 Hz	±1.5% rdg. ±7 V		
		DC, 45 Hz ≤ f ≤ 66 Hz	±1.0% rdg. ±7 V		
		66 Hz < f ≤ 1 kHz	±1.5% rdg. ±7 V		

Frequency range of 10 Hz ≤ f < 20 Hz is designed value

Frequency		
Range	Resolution	Measurement accuracy
9.999 Hz (1.000 Hz to 9.999 Hz)	0.001 Hz	±0.1% rdg. ±0.003 Hz
99.99 Hz (1.00 Hz to 99.99 Hz)	0.01 Hz	±0.1% rdg. ±0.01 Hz
999.9 Hz (1.0 Hz to 999.9 Hz)	0.1 Hz	±0.1% rdg. ±0.1 Hz

Frequency detection range of AC current
 CM4371, CM4372: 20.00 A range 4.00 A or more, 600.0 A range 20.0 A or more
 CM4373, CM4374: 600.0 A range 40.0 A or more, 2000 A range 200 A or more
 The AC voltage frequency detection range is 10% of each range's full scale

Continuity check				
Range	Resolution	Measurement current	Measurement accuracy	Open terminal voltage
600.0 Ω (0.0 Ω to 600.0 Ω)	0.1 Ω	200 μA±20%	±0.7% rdg. ±0.5 Ω	2.0 V DC or less

Continuity on threshold: 25 Ω±10 Ω, Continuity off threshold: 245 Ω±10 Ω

Diode				
Range	Resolution	Short-circuit current	Measurement accuracy	Open terminal voltage
1.800 V (0.000 V to 1.800 V)	0.001 V	200 μA±20%	±0.7% rdg. ±0.005 V	2.0 V DC or less

Beeping buzzer tone at forward connection (0.15 V to 1.8 V)

Resistance				
Range	Resolution	Measurement current	Measurement accuracy	Open terminal voltage
600.0 Ω (0.0 Ω to 600.0 Ω)	0.1 Ω	200 μA±20%	±0.7% rdg. ±0.5 Ω	2.0 V DC or less
6.000 kΩ (0.000 kΩ to 6.000 kΩ)	0.001 kΩ	100 μA±20%	±0.7% rdg. ±0.005 kΩ	
60.00 kΩ (0.00 kΩ to 60.00 kΩ)	0.01 kΩ	10 μA±20%	±0.7% rdg. ±0.05 kΩ	
600.0 kΩ (0.0 kΩ to 600.0 kΩ)	0.1 kΩ	1 μA±20%	±0.7% rdg. ±0.5 kΩ	

Electrostatic capacity				
Range	Resolution	Discharge current	Measurement accuracy	Open terminal voltage
1.000 μF (0.000 μF to 1.100 μF)	0.001 μF	10n/ 100n/ 1μA ±20%	±1.9% rdg. ±0.005 μF	2.0 V DC or less
10.00 μF (0.00 μF to 11.00 μF)	0.01 μF	100n/ 1μ/ 10μA ±20%	±1.9% rdg. ±0.05 μF	
100.0 μF (0.0 μF to 110.0 μF)	0.1 μF	1μ/ 10μ/ 100μA ±20%	±1.9% rdg. ±0.5 μF	
1000 μF (0 μF to 1100 μF)	1 μF	10μ/ 100μ/ 200μA±20%	±1.9% rdg. ±5 μF	

Temperature			
Thermocouple type	Range	Resolution	Accuracy
K	-40.0°C to 400.0°C	0.1°C	±0.5% rdg. ±3.0°C
	-40.0°F to 752.0°F	0.1°F	±0.5% rdg. ±5.4°F

Accuracy does not include the error of the K thermocouple

AC Voltage detection function		
Range (detection sensitivity)	Detection voltage range	Detection target frequency
Hi	AC 40 V to AC 600 V	50/60 Hz
Lo	AC 80 V to AC 600 V	

General Specifications

AC measurement method	True RMS measurement
Guaranteed accuracy period	1 year/ 2nd and 3rd year accuracy is 1.5 times the 1-year accuracy specifications and should be used for reference only.
Guaranteed accuracy period after adjustment made by Hioki	1 year
Guaranteed accuracy for temperature and humidity	23°C±5°C (73.0°F±9.0°F) 90% RH or less (no condensation)
Product warranty period	3 years (Measurement accuracy is defined in terms of a 1-year accuracy and a 3-year accuracy*) *2nd and 3rd year accuracy values are for reference only. Number of sensor open/close cycles: 30,000
Crest factor	CM4371, CM4372: For the 20.00 A range, 7.5 For the 600.0 A range (500.0 A or less), 3 For the 600.0 A range (greater than 500.0 A and less than or equal to 600.0 A), 2.5 CM4373, CM4374: For the 600.0 A range (500.0 A or less), 3 For the 600.0 A range (greater than 500.0 A and less than or equal to 600.0 A), 2.5 For the 2000 A range (1000 A or less), 2.84 For the 2000 A range (greater than 1000 A and less than or equal to 2000 A), 1.42
Functions	Automatic AC/ DC detection, DC current and DC voltage polarity detection function, Max/ Min/ AVG/ PEAK MAX/ PEAK MIN value display, Low-pass filter function, Display value hold, Auto hold, Backlight, Auto power save, Buzzer sound, Zero-adjustment
Display update rate	Measured value excluding electrostatic capacity, frequency, and temperature: 5 times/s (after the range is fixed) Electrostatic capacity: 0.5 to 5 times/s (The number of times varies depending on the capacitance.) Frequency: 0.3 to 5 times/s (The number of times varies depending on the capacitance.) Temperature: 1 times/s (including thermocouple wiring break check)
Operating environment	Indoors, pollution degree 2, altitude up to 2000 m (6562 ft.)
Operating temperature and humidity	-25°C to 65°C (-13.0°F to 149.0°F) 90% RH or less (no condensation)
Storage temperature and humidity	-30°C to 70°C (-22.0°F to 158.0°F) 90% RH or less (no condensation)
Dustproof and waterproof	Grip: IP54 (when measuring an insulated conductor only) Jaw (the current sensor portion of the instrument), barrier: IP50 *Risk of electric shock from the conductor being measured increases when wet.
Dielectric strength	Between the jaw (the current sensor portion of the instrument) and chassis Between the terminal and chassis 7.4 kV AC sine wave (50 Hz/60 Hz, 60 seconds)
Maximum terminal-to-terminal rated voltage	1000 V AC (up to 1 kHz) /1700 V DC
Maximum rated voltage to earth	1000 V AC (Measurement category III) 600 V AC (Measurement category IV)
Standards	Safety: EN61010, EMC: EN61326
Power supply	LR03 Alkaline battery x2
Continuous use	Approx. 24 hours (Backlight OFF, Bluetooth® ON) Approx. 45 hours (Backlight OFF, Bluetooth® OFF)
Dimensions, Mass	CM4371, CM4372: Approx. 65 mm (2.56 in) W x 215 mm (8.46 in) H x 35 mm (1.38 in) D mm, 340 g (12.0 oz) CM4373, CM4374: Approx. 65 mm (2.56 in) W x 250 mm (9.84 in) H x 35 mm (1.38 in) D mm, 530 g (18.7 oz)
Core jaw diameter	CM4371, CM4372: 69 mm (2.72 in) W x 14 mm (0.55 in) D, φ33 mm (1.30 in) CM4373, CM4374: 92 mm (3.62 in) W x 18 mm (0.71 in) D, φ55 mm (2.17 in)