

HIOKI

AC CLAMP POWER METER CM3286

Test Equipment
Depot
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Toll Free 1-800-517-8431

Visit us at www.TestEquipmentDepot.com

Quickly check current, voltage, power, and power factor

Broad measurement ranges

Current: 60 mA to 600 A
Active power: 5W to 360 kW

Fast response

Shorten test times by identifying all of the necessary data on a single screen
Automatically transfer data with Bluetooth wireless technology



*Harmonic can be displayed with the GENNECT Cross dedicated application software at a future update.

Delivering a broad range of measurements at sites from manufacturing plants to households

Broad measurement range 60 mA (5 W) to 600 A (360 kW)

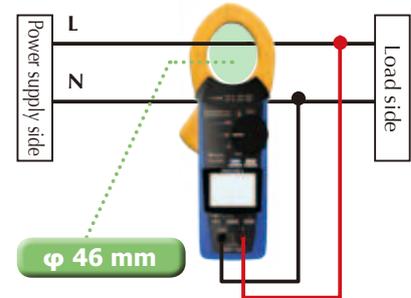
- Accurately measure power from 5 W at a current as low as 60 mA to 360 kW at a maximum of 600 A (single-phase power measurement).
- In addition to current, voltage, and power, measure simple integral power consumption and phase sequence.
- Obtain accurate readings with true RMS measurement.

Measurement line

Measure power in single-phase to balanced three-phase circuits (with estimated values) (1-phase/ 2-wire, 1-phase/ 3-wire, balanced 3-phase/ 3-wire, and balanced 3-phase/ 4-wire).

*The instrument generates estimated power values when measuring 3-phase circuits.

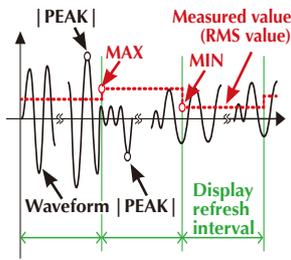
Example: Single-phase AC measurement (1P2W)



Easily check power supply fluctuations

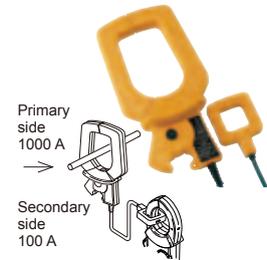
Since it can display maximum (MAX), minimum (MIN), and average (AVG) values, the CM3286 is useful when you need to ascertain the magnitude of fluctuations.

And since it can also measure crest (PEAK) values, you can use it to check fluctuations at the crest value level.



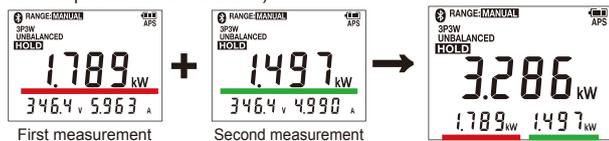
Support for large-diameter, high-current measurement

The CM3286 can be used with the optional Clamp On Adapter 9290-10 to measure busbars of up to 55 mm in diameter or 80 × 20 mm. Measure high currents of up to 1000 A AC (or 1500 A for up to 5 min.).



Quickly check for unbalance

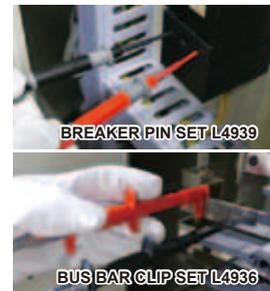
The CM3286 can measure unbalanced power in a 3-phase/ 3-wire circuit by measuring the single-phase power twice and then automatically adding the results. (The instrument can also measure 3-phase/4-wire circuits in three separate measurements.)



Choose from an extensive selection of probe tips

Select the type of probe that best suits your measurement location, letting you measure in areas that can't be reached with conventional probes and busbars that you wish to clamp between probes.

*Probe tips: Sold separately



Functionality and performance that enable a broad range of measurements

White backlight



A white backlight makes the measured values stand out, even in dim locations. Owing to wide viewing angle display, high quality screen lets you read measurements from any angle.

Easily operate with one hand



Turn the rotary switch while holding the instrument in the same hand. Grooves on the switch make it easy to rotate even while wearing work gloves.

CAT IV 600 V



The CM3286 can safely measure service wires with a wire-to-ground voltage of up to 600 V as well as wires found in distribution panels. The clamp meters also feature a safe design that can withstand a transient overvoltage of 8 kV in case of a lightning strike.

-25°C to +65°C



The CM3286 can be used in freezing temperatures or on the hottest summer days

Powerful features and functions deliver fast and efficient testing

Easy-to-see display Related parameters shown on the display at once

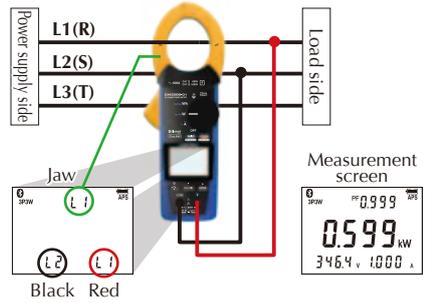
Related parameters and connection locations shown on the display at once (Main parameter×1, Sub-parameter×3)

<p>[Power display]</p> <p>Sub-parameter: Power factor Main parameter: Active power Sub-parameter: Current Sub-parameter: Voltage</p>	<p>[Current Measurement display]</p> <p>Main parameter: Current value Current frequency 60.0 Hz 10.00 A 14.2 PEAK A</p> <p>no display Current peak value</p>	<p>[Integrated Measurement display]</p> <p>Main parameter: Single-phase active energy Single-phase active energy 1.32 kW 15.84 kWh 1:59</p> <p>Elapsed time no display</p>	<p>[Phase Detection display]</p> <p>Forward phase L1 L2 L3 123</p> <p>Connection names light up in order</p>
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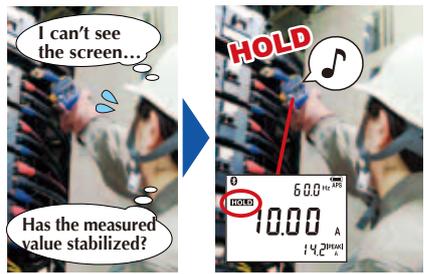
<h3>Simple wiring guide</h3>	<h3>AUTO HOLD</h3>	<h3>Double warnings with sound and light</h3>
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The CM3286 provides a simple on-screen guide indicating how to connect it to a 3-phase circuit.

Example: 3-phase AC measurement (3P3W, balanced)



The clamp meters beep when the measured value stabilizes and then automatically hold the display value. This is useful when using the instrument in locations where it is difficult to see the display or press the hold button.



When the clamp power meter detects excessively over current or voltage input during a continuity check, it alerts you with a red backlight and beeping tone in order to help prevent accidents.



Quick and easy data recording Hold measured values to send them to a smartphone

CM3286-01 only

Bluetooth

Available for Android and iOS devices

Approx. 10 m (line of sight)

Varies with device performance and signal reception.

When you freeze the measured value, it is automatically transferred to a smartphone or tablet, eliminating the need to jot down readings by hand. You can also create a simple PDF report right there in the field, and save data in CSV format for later editing in Excel.

<p>General measurement</p>	<p>Simple logging function</p>	<p>Harmonic measurement function</p>
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Tap "Save measured value" in the app or press the HOLD key on the measuring instrument to save the data. Measured values from multiple channels can be saved.

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

The CM3286-01 can measure the harmonic level, content percentage, and total harmonic distortion of voltage or current for the 1st through 30th orders.

Android support scheduled for fall 2017. iOS support scheduled for 2018. Prototype screen shown.

Specifications Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year

Measurement line	Single-phase, Three-phase (should be balanced with no distortion)
Measurement items	Voltage, Current, Voltage/ current peak, Active/ reactive/ apparent power, Power factor, Phase angle *1, Frequency, Simple Active Energy Consumption (Single-phase) [CM3286-01 only*2] Voltage/ current harmonic levels
AC voltage	[Measurement range] 80.0 V to 600.0 V, Single range, Basic accuracy 45 Hz - 66 Hz: $\pm 0.7\%$ rdg. ± 3 dgt. (Frequency characteristics: 45 Hz to 1 kHz, True RMS)
AC current	[Measurement range] 0.060 A to 600.0 A, 3 range, Basic accuracy 45 Hz - 66 Hz: $\pm 1.3\%$ rdg. ± 3 dgt. (Frequency characteristics: 45 Hz to 1 kHz, True RMS)
Power	[Single phase] 0.005 kW to 360.0 kW Basic accuracy: $\pm 2.0\%$ rdg. ± 7 dgt. (50/ 60 Hz, Power factor=1) [Balanced three-phase 3-wire] 0.020 kW to 623.5 kW Basic accuracy: $\pm 3.0\%$ rdg. ± 10 dgt. (50/ 60 Hz, Power factor=1) [Balanced three-phase 4-wire] 0.040 kW to 1080 kW Basic accuracy: $\pm 2.0\%$ rdg. ± 3 dgt. (50/ 60 Hz, Power factor=1)
Harmonic (CM3286-01 only *2)	Voltage/ current harmonic levels up to 30th, Content factor, Total harmonic distortion ratio
Other functions	[Phase angle *1] lead -180.0° to lag 179.9°, [Power factor] -1.000 to 1.000 [Frequency] 45.0 Hz to 999.9 Hz, PEAK, phase detection, max/min/avg value display, auto hold, electric meter comparison, unbalanced 3-phase power estimate display, etc.
Maximum rated voltage to earth Maximum rated voltage to terminal	600 V AC (Measurement category IV) 1000 V AC (Measurement category III)
Crest factor	6 A/ 60 A range 3 or less, 600 A/ 600 V range 1.6 or less
Operating and storage temperature and humidity ranges	-25°C to 65°C or less (-13.0°F to 149.0°F) 80% RH or less (no condensation, less than 40°C)
Dustproof and waterproof*3	Grip: IP54 (EN60529), Jaw: IP50 (EN60529)

Standards	Safety: EN61010, EMC: EN61326
Power supply	LR03 Alkaline battery x2
Continuous operating time	Approx. 25 hours (Backlight OFF, Bluetooth® OFF) Approx. 18 hours (Backlight OFF, Bluetooth® ON)
Core jaw diameter	ϕ 46 mm (1.81 in)
Dimensions and Mass	82 mm (3.23in) W x 241 mm (9.49in) H x 37 mm (1.46in) D, 450 g (15.9 oz)

*1) Phase angle obtained from zero cross of current / voltage.
*2) Harmonic can be displayed by dedicated application software (Gennect Cross).
Android support scheduled for fall 2017. iOS support scheduled for 2018.
*3) Although CM3286 is designed to resist the ingress of dust and dripping water, it is not entirely waterproof or dustproof. Therefore, to prevent an electric shock, do not use it in a wet or dusty environment.

*The indicated value for three-phase power is based on the assumption of a balanced condition and sine wave without distortion at 50/60 Hz. Accurate measurement is not possible on an unbalanced or inverter controlled three-phase line. Also, if the phase (zero cross) cannot be detected due to significant waveform distortion, it cannot be measured nor displayed.
*The power factor / phase angle are values obtained from the zero cross of the current and voltage. If the phase (zero cross) cannot be detected due to significant waveform distortion, it cannot be measured nor displayed.

Software specifications (CM3286-01 only)

Interface	Bluetooth® 4.0LE
Name	GENNECT Cross (freeware)
Supported devices	Android™ (Only for Bluetooth® low energy models) iOS (iPhone®5, 3rd generation iPad®, iPad mini™, iPad Pro™, 5th generation iPod Touch® or later)
Supported OS	Android™ 4.3 or later, iOS 8 or later

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Order code/ Options

AC CLAMP POWER METER CM3286

Model No. (Order Code) (Note)

CM3286

CM3286-01 Built-in Bluetooth® wireless technology

Accessories:

CONNECTION CORD L9257 x1
CARRYING CASE C0203 x1
LR03 Alkaline battery x2
Instruction manual x1

[CM3286-01 only]
Precautions Concerning Use of Equipment That Emits Radio Waves

Accessories



CONNECTION CORD L9257 (Combination of L4930 and L4935)



CARRYING CASE C0203

Options (Test leads)



CONNECTION CABLE SET L4930 (1.2m)

EXTENSION CABLE SET L4931 (1.5m, Expands the length of the L4930)

Options (for L9257, L4930, L4931)

Tip options (Red/ Black: 1 each). Attaches to the tip of the banana plug cable.

TEST PIN SET L4938



ALLIGATOR CLIP SET L4935



BUS BAR CLIP SET L4936



MAGNETIC ADAPTER SET L4937



BREAKER PIN SET L4939



TEST PIN SET L4932



GRABBER CLIP 9243



MAGNETIC ADAPTER 9804



Options (Clamp adapter)

CLAMP ON ADAPTER 9290-10 (1000 A AC, $\phi 55$ mm, CT ratio of 10:1)



Options (Test leads)

TEST LEAD L9207-10



Connection app (CM3286-01 only)

GENNECT Cross (freeware)



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