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Product

CM3286-50 Clamp Power Meter

Headline

Clamp Power Meter, 600 A, 360 kW

Short Description

Clamp power meter for active, reactive and apparent power, power factor and phase angle, current 60 mA to 600 A, voltage 80 V to 600 V, single phase energy measurement, CAT IV 600 V, CAT III 1000 V, optional Bluetooth with Z3210

Banner Specs

- Single phase power and energy measurement with clamp current sensor
- Single phase power measurement from 5 W to 360 kW
- Power estimation in balanced three phase systems
- Sequential measurements for unbalanced three phase systems
- Supports three phase three wire and three phase four wire circuits

Applications

- Load and power consumption checks on single phase circuits
- Verification of power factor and electrical load on motors and equipment
- Troubleshooting of electrical installations using power and phase measurements
- Power evaluation in balanced and unbalanced three phase systems

Product Description

The CM3286-50 Clamp Power Meter measures electrical power parameters directly on live conductors without interrupting the circuit. By combining clamp current measurement with voltage measurement via test leads, the instrument determines active, reactive and apparent power as well as power factor and phase angle. Current is measured from 60 mA to 600 A with a clamp opening of 46 mm, while the voltage measurement range extends from 80 V to 600 V. In single phase systems the instrument supports power measurement from 5 W to 360 kW and can also integrate active energy.

While a clamp meter or clamp multimeter can only approximate power by multiplying current and voltage, the CM3286-50 also measures the phase angle between current and voltage. This allows active power, reactive power, apparent power and power factor to be determined and provides a realistic assessment of the electrical load of a circuit during operation.

Power Measurement in Three Phase Systems

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For three phase systems the CM3286-50 supports several measurement approaches. In balanced three phase circuits, such as three phase motors, the total power can be estimated from a single measurement. In unbalanced systems, for example distribution circuits with uneven loads, the instrument performs sequential measurements and combines the results. Two measurements are required for unbalanced three phase three wire circuits, while three measurements are required for three phase four wire circuits.

This approach allows the power of three phase systems to be evaluated with a single clamp sensor without requiring multiple current probes. For sequential measurements the load conditions should remain stable during the measurement. The display provides indications that support correct connection during the measurement.

Phase Check and High Current Measurements

The CM3286-50 includes a phase check function for three phase systems. By comparing two voltage measurements the instrument can indicate the phase relationship and supports verification of the phase sequence, for example during motor commissioning or when working on distribution circuits.

For measurements above 600 A or on larger conductors and busbars, the CM3286-50 can be used with the optional Clamp On Adapter 9290-10. The adapter works as a current transformer with a 10:1 ratio. A primary current of 1000 A is converted into a 100 A measurement current that can be read by the clamp power meter. This extends the measurement range and allows measurements on larger conductors. Conductors up to 55 mm in diameter and busbars up to 80 × 20 mm can be measured.

Wireless Data Transfer and Harmonic Analysis

With the optional Z3210 wireless adapter, the CM3286-50 can communicate via Bluetooth with the free GENNECT Cross app, which is available for Android and iOS. Measurement values can be transferred wirelessly to a smartphone or tablet for storage and analysis and exported or shared as CSV files or PDF reports.

Alternatively, the adapter can operate in HID mode to transfer measurement values directly into applications such as Microsoft Excel. When the displayed value is held on the instrument, it is automatically entered into the selected cell.

When used with GENNECT Cross, harmonic analysis of voltage and current is also available. The app displays harmonic levels, harmonic content and total harmonic distortion (THD) for orders from the 1st to the 30th.

Rugged Design for Field Use

The CM3286-50 is designed for use in industrial and electrical environments. A bright backlight and the wide viewing angle display make it easy to read measurement values even in dim locations.

The grooved rotary switch can be operated with one hand and remains easy to turn even when wearing work gloves. With a safety rating of CAT IV 600 V (CAT III 1000 V), the instrument is suitable for measurements on service lines and distribution circuits and is designed to withstand transient overvoltages up to 8 kV.

An automatic hold function detects when the measured value stabilizes and freezes the display. This is useful when working in locations where the display cannot be easily seen. If

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excessive current or voltage is detected, the instrument alerts the user with a red backlight and an audible warning.

The specified operating temperature range of $-25\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$ allows reliable use in cold outdoor installations as well as in hot industrial environments. Like all HIOKI clamp meters and clamp multimeters, the CM3286-50 is developed and manufactured in Japan in HIOKI's own facilities.

What's in the box

- CM3286-50 Clamp Power Meter
- L9257 Test Lead Set
- C0203 Carrying Case
- Instruction Manual
- Operating Precautions
- 2 × LR03 (AAA) alkaline batteries

Related Products

- CM3286-90 Clamp Power Meter
- Z3210 Wireless Adapter
- 9290-10 Clamp Adapter
- L9300 Test Lead Set
- 9804 Magnetic Clip Set
- C0207 Carrying Case
- L4930 Safety Test Leads
- CM4371-50 Clamp Multimeter
- CM4373-50 Clamp Multimeter
- CM4375-50 Clamp Multimeter
- CM4001 Leakage Current Clamp
- CM4002 Leakage Current Clamp
- CM4003 Leakage Current Clamp

Version	Date	Author	Approved	Document changes
1.0	06.03.2026	KS	KS	First Release