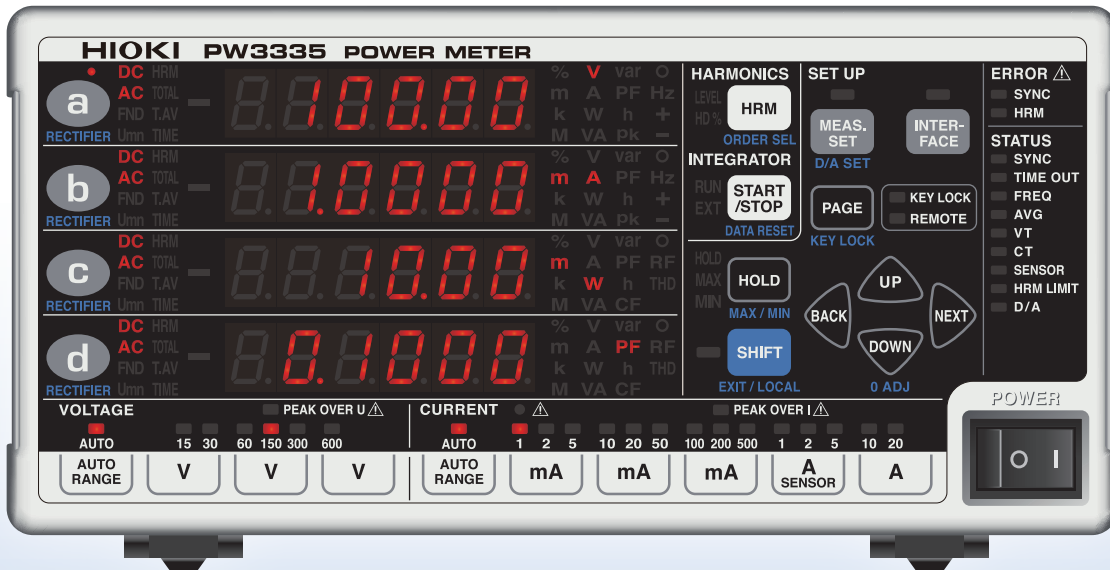


# POWER METER PW3335

Power Measuring Instruments



\*Product image depicts pre-release hardware.



Measure standby power consumption and load for household electronics, assess solar panel performance, and acquire battery charge/discharge data and energy usage information

## Identify power usage ranging from AC/DC standby power to large power loads

- Broad current measurement range coverage : 1.0000 mA to 20.000 A (max. continuous input of 30 A)
- Basic accuracy for voltage, current, and power measurement :  $\pm 0.1\%$  \*
- Measurement frequency bandwidth : DC, 0.1 Hz to 100 kHz
- Standby power measurement conforming to IEC62301 : Precise enough for measuring standby power
- High-accuracy measurement, even at lower power factors : Power factor effect of just  $\pm 0.1\%$  f.s.
- Measure up to 5000 A AC : External sensor input terminal (PW3335-03, -04)

\* For complete details, please refer to the specifications.



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091



[www.hioki.com](http://www.hioki.com)

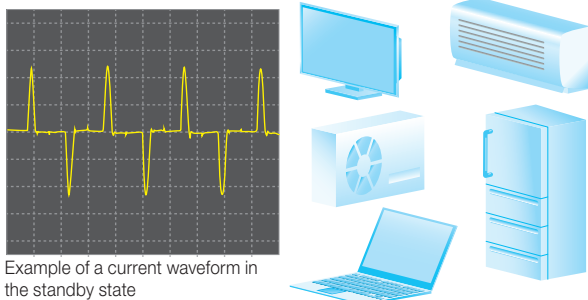
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# Accurately measure at low power factors and over a broad range of current magnitudes

## ■ Measure with a high degree of accuracy, even at low power factors

When electrical equipment enter a standby state, control algorithms designed to minimize power consumption may result in a current waveform with sharp peaks and troughs. The sharper the current waveform, the lower the power factor becomes. In addition, devices may minimize standby power using a low power factor at which the phase difference between the voltage and current approaches 90°. Although measurement error increases as the power factor decreases, the PW3335 limits the power factor effect to a maximum of ±0.1%, enabling accurate measurement even at low power factors.



Example of a current waveform in the standby state

## ■ Broad AC/DC current input range

Power meters are required to measure parameters ranging from standby power to load power. To meet this need, the PW3335 is engineered to deliver broad current range coverage from 1 mA to 20 A (up to a maximum of 30 A). Additionally, the PW3335-03 and -04 support current sensors to measure currents of up to 5000 A AC.

### Current input range



## ■ Downloadable PC software

Free PC software can be downloaded from Hioki's website to capture data from the instrument, observe waveforms, and configure settings. Software for creating IEC 62301 reports is also available to support various measurement applications.

## ■ Specifications

Guaranteed accuracy period: 1 year

Measurement lines	2, single-phase
Measured parameters	Voltage, current, active power, apparent power, reactive power, power factor, phase angle, current integration, active power integration, integration time, voltage waveform peak value, current waveform peak value, efficiency, voltage crest factor, current crest factor, time-averaged current, time-averaged active power, voltage ripple rate, current ripple rate, THD and other harmonic measurements, fundamental wave measurements
Voltage ranges	Auto, 15.000 V, 30.000 V, 60.000 V, 150.00 V, 300.00 V, 600.00 V
Voltage effective measurement range	1% to 150% of range
Maximum effective peak voltage	±600% of range, up to ±1,500 Vpeak (crest factor of 6)
Current ranges	Auto, 1.0000 mA, 2.0000 mA, 5.0000 mA, 10.000 mA, 20.000 mA, 50.000 mA, 100.00 mA, 200.00 mA, 500.00 mA, 1.0000 A, 2.0000 A, 5.0000 A, 10.000 A, 20.000 A
Current effective measurement range	1% to 150% of range; up to max. of 30 A in 20 A range
Maximum effective peak current	±600% of range, up to ±60 Apeak (crest factor of 6)
Basic accuracy (45 to 66 Hz)*	Voltage, current, power: ±0.1% rdg. ±0.05% f.s.
Basic accuracy (DC)*	Voltage, current, power: ±0.1% rdg. ±0.1% f.s.
Rectification methods	AC+DC, AC+DC Umn, DC, AC, FND

Frequency bandwidth	DC, 0.1 Hz to 100 kHz
Power factor effect	±0.1% f.s. (from 45 to 66 Hz at a power factor of 0)
A/D conversion unit	16-bit, 700 kHz sampling
Display resolution	5 digits (99999 count) Integrated values: 6 digits (999999 count) Example: Display format in 300 V voltage range and 200 mA current range: 300.00 V voltage, 200.00 mA current, 60.000 W active power, 60.0000 Wh active power integration (starting from 0.00001 Wh)
Harmonic measurement	Standard on all models
D/A output	PW3335-02 and -04 only: User-switchable between level output and waveform output, 7 channels Output voltage: 2 V f.s. or 5 V f.s. (level output), 1 V f.s. (waveform output)
Communication interfaces	LAN: Standard on all models RS-232C: All models except PW3335-01 GP-IB: PW3335-01 and -04 only
Current sensor input terminal	PW3335-03 and -04 only: Use after setting the CT ratio based on the sensor rating.
Compatible current sensors	Type 1 (can be connected directly to the PW3335 series): 9661, 9669, 9660, CT9667 Type 2 (requires 9555-10 and L9217 to connect to the PW3335 series): 9272-10, 9277, 9278, 9279, 9709, CT6862, CT6863, CT6865, CT6841, CT6843
Power supply	100 to 240 V AC, 50 Hz/60 Hz, 30 VA
Dimensions and mass	210W × 100H × 245D mm (8.26W × 3.94H × 9.66D in), approx. 3 kg
Accessories	Instruction manual × 1, power cord × 1

\*Accuracy guarantee conditions: 23°C ±5°C, 80% RH or less, 30 min. warm-up time, after zero-adjustment

## ■ Functions by model

●: Function available -: Function not available

Model	No. of channels	Harmonic measurement	LAN interface	RS-232C interface	GP-IB interface	D/A output	Current sensor input
POWER METER PW3335	1	●	●	●	-	-	-
POWER METER PW3335-01		●	●	-	●	-	-
POWER METER PW3335-02		●	●	●	-	●	-
POWER METER PW3335-03		●	●	●	-	-	●
POWER METER PW3335-04		●	●	●	●	●	●

POWER METER PW3335, PW3335-01, PW3335-02, PW3335-03, PW3335-04..... Scheduled for release in September 2014

Note: Company names and Product names appearing in this catalog are trademarks or registered trademarks of various companies.

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