HIOKI

CLAMP ON POWER LOGGER

PW3360-20

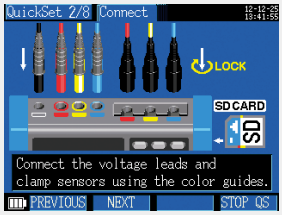
Power Measuring Instruments

Handy and Easy to Use – Power Management Support

Now with QUICK SET Convenience

Reliable measurements start with proper wiring.

The QUICK SET function guides you in making the right connections.



- Supports single to three-phase, 4-wire circuits
  - Simultaneously measure up to three single-phase, 2-wire circuits (in the same power system).
- Measure up to 780V with a 1000V display range
- Broadly applicable for many jobs, including leakage current measurement
  - An optional clamp-on leakage sensor supports measurements as low as 50 mA.
- Store months of data on SD cards

CE

ISO 9001 JMI-0216

ISO14001 JQA-E-90091

INTERNET HIOKI Website

www.hioki.com

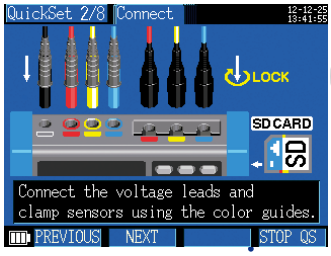
HIOKI company overview, new products, environmental considerations and other information are available on our website.

Begin with QUICK SET Convenience

Select your Wiring Type, Clamp and Destination, and Connect

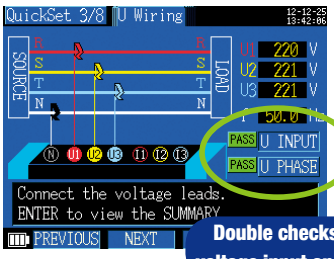
Select wiring type (example: 3P4W) and connect

1 Connect the leads to the PW3360-20.



Make proper connections simply by observing the colors of the displayed leads.

2 Connect the voltage clips.

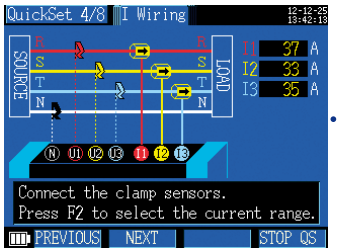


PASS

Double checks your voltage input and phase

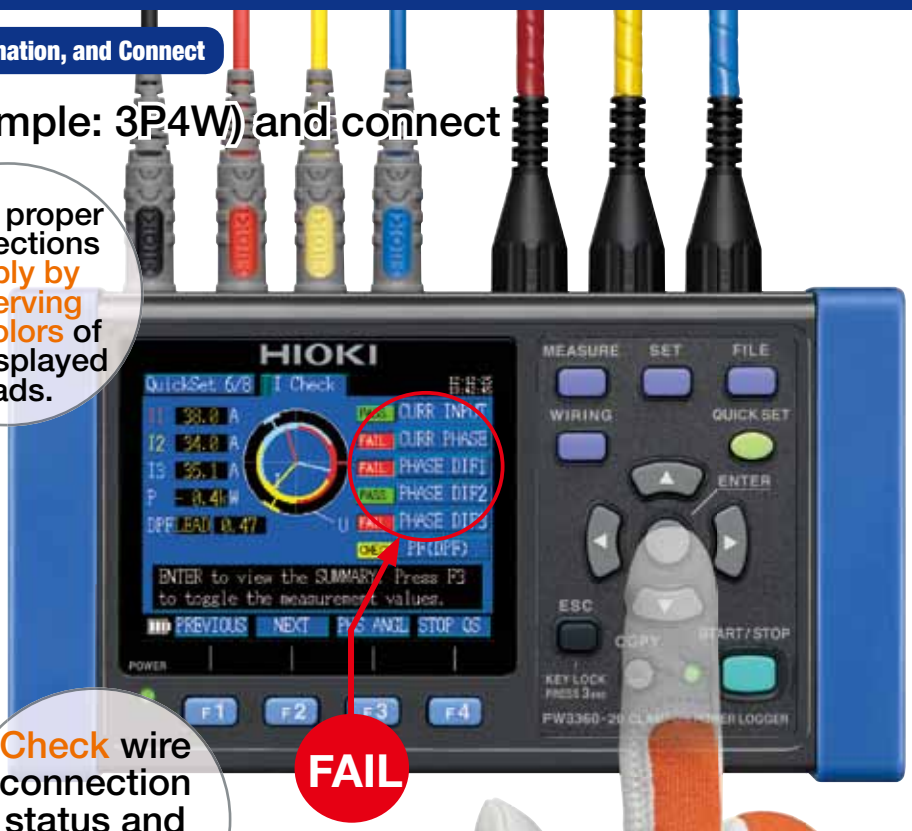
Proceed to the next step when PASS appears.

3 Connect the clamp sensors.



Select the current range

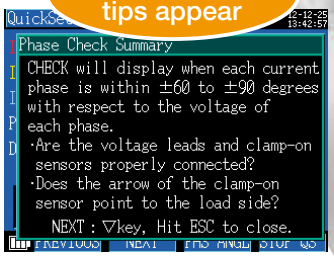
Check wire connection status and judgment indicators.



FAIL

If FAIL appears, move the cursor to the indicator and press the [ENTER] key.

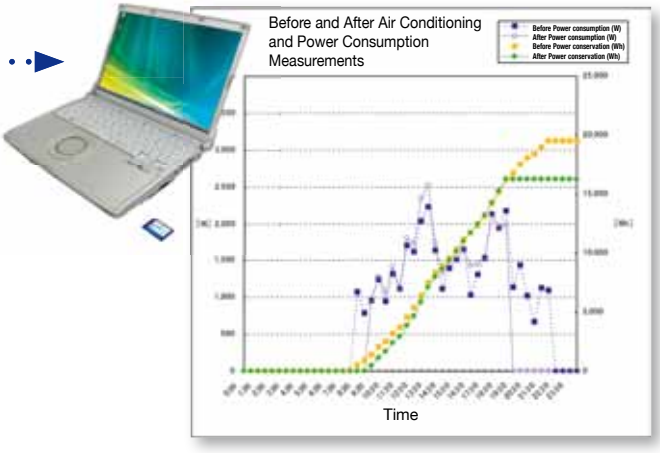
Corrective action tips appear



Create a Graph to Clearly Grasp Power Consumption

Record power consumption on an SD Card* at specific intervals. Load the data into the PC.

Use Excel graph processing for before and after comparisons.



* Store up to one year's data acquired at one minute intervals. Performance cannot be guaranteed on storage media other than Hioki-specified SD card options.

Suits a Variety of Worksites

■ Where no AC power is available

Battery* power provides about eight hours of continuous operation. In addition, **a Voltage Line Power Adapter*** is available to power the PW3360-20 from the measurement lines.

* Battery Set PW9002 and Voltage Line Power Adapter PW9003 options are sold separately.

■ In severe temperature environments

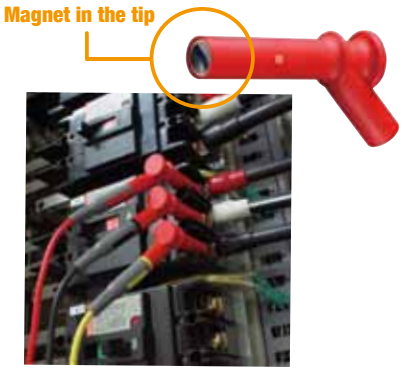
The operating temperature range extends from **–10°C (14°F) to 50°C (122°F).** Even under battery operation, measurements can be performed from 0 °C (32°F) to 40°C (104°F) (0°C (32°F) to 50°C (122 °F) when using LAN communication).

■ Fits in tight spaces

■ Magnetic voltage adapters for hard-to-clip terminals

Magnetic voltage adapters convertible with the Voltage Cords L9438-53 let you accurately detect voltage when the circuit terminals are too shallow for alligator clips to latch on.

* Magnetic Adapter 9804 option sold separately.

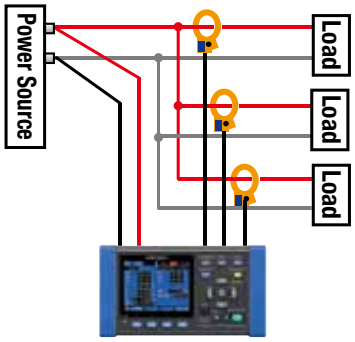


Generally compatible with M6 pan screws

Loaded with More Useful Functions

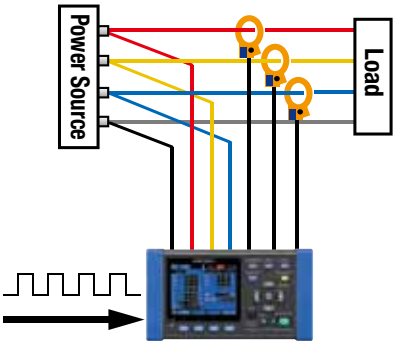
Simultaneous Measurements

Simultaneously measures three single-phase 2-wire circuits in the same system.



Pulse Input

The pulse input function can be used to record power data and production volume counts simultaneously. The power data and pulse volume (production volume) information are **useful for unit cost production management.**



Leakage Current Measurement

As a 3-channel Leakage Current Logger

With the optional leakage current clamp on sensors, turn the instrument into a 3-channel leakage current logger to help identify trouble spots.

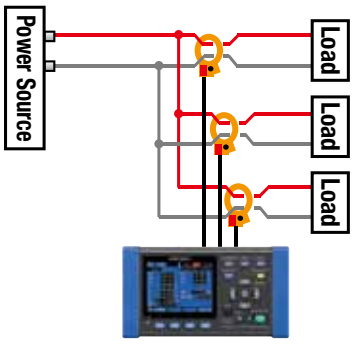
Options **Leak Clamp on Sensor**

9675

φ30mm (1.18 in)

9657-10

φ40mm (1.57 in)



Ideal for quick investigation of intermittent leakage by continuous calculation processing every 200 ms. (Select to save the average, maximum and/or minimum at every interval.)

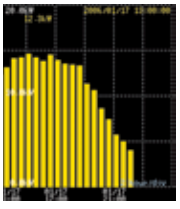
Useful Tip

■ Demand/Time Series Graph Displays

This function will be supported from version 2.00.

Demand graphs at specified times and power time series graphs can be displayed on the color LCD. Observing on-site power fluctuations is useful for confirming energy saving and related effects.

(Demand Graph Display Example)

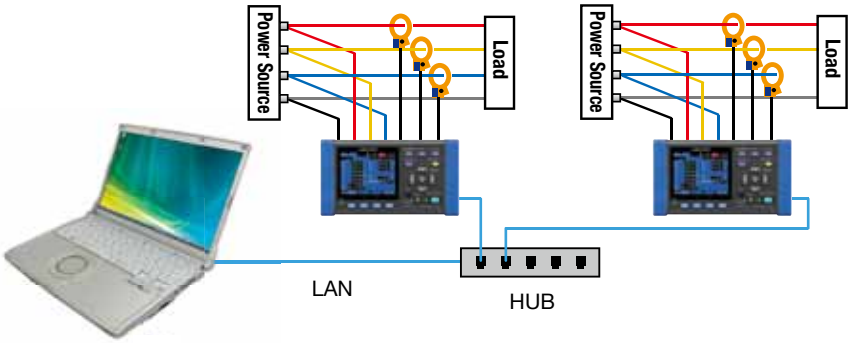


Efficient Power Management by Remote Measuring and PC Processing

Remote Monitor

HTTP Server Function

Use a LAN cable to connect the PW3360-20 to a personal computer for real-time remote monitoring and measurement display in a web browser.



Files recorded in the PW3360-20 internal memory or SD card are accessible by LAN or USB connection, and are downloadable using the free **PW3360 Setup and Download Software**.

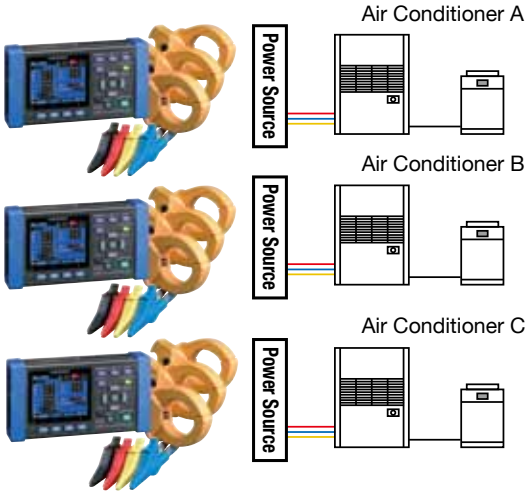
PC Processing

Power Logger Viewer SF1001 (option, sold separately)

Data saved to an SD card or internal memory can be loaded into a PC for expanded display, aggregation and analysis.

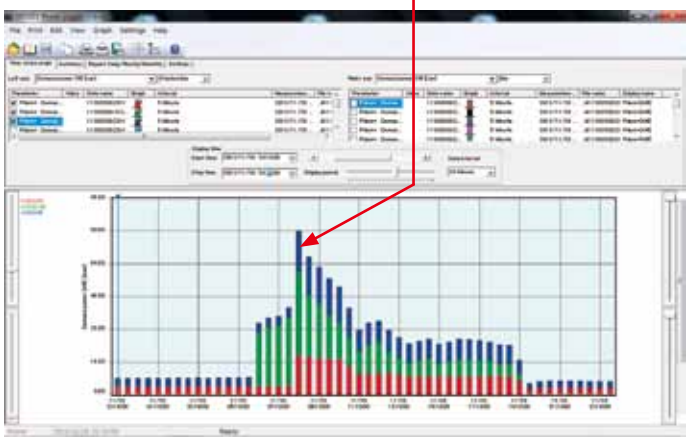
On the same time axis, view measured power consumption and equipment operating status at specific intervals, along with equipment characteristics and management details.

Simultaneously measure and record separate loads using three PW3360-20s



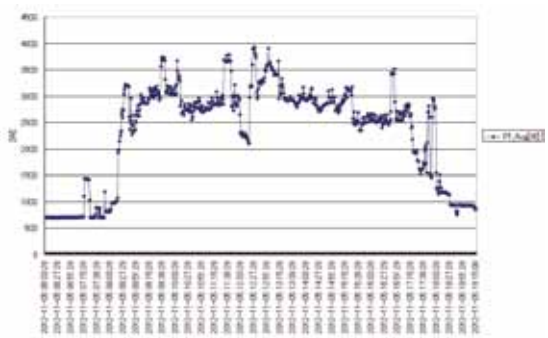
Stacked Graph Display Example

Use the [Stacked Display] to confirm at a glance comparative power consumption at multiple locations simultaneously.



Freeware for Model PW3360-20 (free download from Hioki's website)

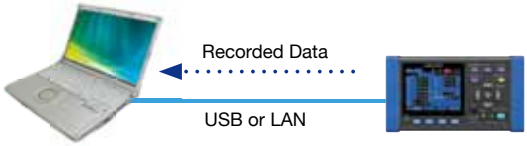
PW3360 Excel Graph Auto-Creation Software



Install the PW3360 Excel Graph Auto-Creation Software to create graphs in Excel automatically using recorded measurement data.

PW3360 Setup and Download Software

Use with a LAN or USB connection to download data recorded in the PW3360-20's internal memory or SD Card to a PC, and to change instrument settings from the PC.



PW3360-20 Specifications (product guaranteed for one year)

Accuracy guarantee period: One year 23°C ±3°C, 80%RH or less, (no condensation)

Input specifications

Measurement line type	Single-phase 2-wire, single-phase 3-wire, three-phase 3-wire, three-phase 4-wire
Measurement line Frequency	50/ 60 Hz
Number of input channels	Voltage: 3 channels U1 to U3 Current: 3 channels I1 to I3
Voltage range	600 V AC (single range)
	Total display area: 5V to 1000 V (less than 5 V displays as 0 V)
	Effective measurement range: 90 V to 780 V, peak: ±1400V
	[OVER] indicates over-range warning
Current ranges	**Load current** CLAMP ON SENSOR 9694 : 500m/1/5/10/50 A CLAMP ON SENSOR 9695-02 : 500m/1/5/10/50 A CLAMP ON SENSOR 9660 : 5/10/50/100 A CLAMP ON SENSOR 9695-03 : 5/10/50/100 A CLAMP ON SENSOR 9661 : 5/10/50/100/500 A CLAMP ON SENSOR 9669 : 100/200/1k A FLEXIBLE CLAMP ON SENSOR CT9667 : 500/5k A **Leakage current** LEAK CLAMP ON SENSOR 9657-10 : 50m/100m/500m/1/5 A LEAK CLAMP ON SENSOR 9675 : 50m/100m/500m/1/5 A
	Total display range: Within 0.4 to 130% of the range (zero is suppressed for less than 0.4%)
	Effective measurement range: Within 5 to 110% of the range peak: ±400% of range, however, maximum range is 200%.
	[OVER] indicates over-range warning
Power ranges	300.00 W to 9.0000 MW Depends on voltage/current combination and measured line type (see Measurement Range Configuration Tables)
	Total display range: Within 0 to 130% of the range ("0W" display indicates zero rms voltage and/or current)
	Effective measurement area: Within 5 to 110% of the range
VT ratio settings	Any (0.01 to 9999.99) Selections (1/60/100/200/300/600/700/1000/2000/2500/5000)
CT ratio settings	Any (0.01 to 9999.99) Selections (1/40/60/80/120/160/200/240/300/400/600/800/1200)
Input methods	Voltage: Insolated inputs (except between U1, U2, U3 and N) Current: Isolated input using a clamp-on sensor
Input resistance	Voltage input part: 3 MΩ ±20% (50/ 60 Hz)
Maximum rated voltage between terminals	Voltage input section: 1000 VAC, 1400 Vpeak Current input section: 1.7 VAC, 2.4 Vpeak
Maximum rated voltage to earth	Voltage input section: 600V Measurement Category Ⅲ 300V Measurement Category Ⅳ Current input section: Depends on clamp sensor in use.

General specifications

Display device	3.5 inch TFT color LCD (320 × 240 pixel)
	Japanese, English (supported from version 1.50), Chinese (Simplified, supported from version 2.00) Backlight auto-off function (after 2 minutes)
Operating environment	Indoors, Pollution degree 2, altitude up to 2000 m (6562-ft.)
Operating temperature and humidity (no condensation)	-10°C to 50°C (14°F to 122°F), 80% RH or less During LAN communication: 0°C to 50°C (32°F to 122°F), 80% RH or less During battery operation: 0°C to 40°C (32°F to 104°F), 80% RH or less During battery charging: 10°C to 40°C (50°F to 104°F), 80% RH or less
Storage temperature and humidity (no condensation)	-20°C to 60°C (-4°F to 140°F), 80% RH or less However, the battery's storage temperature range is -20°C to 30°C (-4°F to 86°F), 80% RH or less
Dielectric strength	4.29 kVrms AC (1 mA sense current) between voltage input terminals and external terminals, 50/ 60 Hz for 60 sec.
Applicable standards	Safety: EN61010, EMC: EN61326, EN61000-3-2, EN61000-3-3
Power supply	•Z1006 AC Adapter (12 V, 1.25 A), Rated supply voltage 100 VAC to 240 VAC, Rated power supply frequency 50/60 Hz •Model 9459 Battery Pack (Ni-MH DC7.2 V 2700 mAh)
Charge function	Charges the battery regardless of whether the instrument is on or off. Charge time: Max. 6 hr. 10 min. (reference value at 23°C)
Maximum rated power	•When the Z1006 AC Adapter is used: 40 VA (including AC adapter), 13 VA (PW3360-20 instrument only) •When the 9459 Battery Pack is used: 3 VA
Continuous battery operation time	Approx. 8 hr. (Continuous, backlight off) (when using the battery pack)
Backup battery life	Clock and settings (Lithium battery), Approx. 10 years @23°C (@73.4°F)
Dimensions	Approx. 180W(7.09") × 100H(3.94") × 48D (1.89") mm (without PW9002) Approx. 180W(7.09") × 100H(3.94") × 68D (2.68") mm (with PW9002)
Mass	Approx. 550g (19.4 oz) (without PW9002), Approx. 830g (29.3 oz) (with PW9002)
Accessories	Voltage Cord L9438-53(1 set), AC Adapter Z1006 (1), USB cable(1), instruction manual (1), measurement guide (1), color spiral tubes (1 set): red, yellow, blue/two each, for color-coding clamp sensors, spiral tubes for grouping clamp sensor cords (5)

Measurement specifications

Connection	Single-phase 2-wire (1P2W, 1P2W × 2 circuits, 1P2W × 3 circuits) Single-phase 3-wire (1P3W, 1P3W+I, 1P3W1U, 1P3W1U+I) Three-phase 3-wire (3P3W2M, 3P3W2M+I, 3P3W3M) Three-phase 4-wire (3P4W), Current only: 1 to 3 channels
Simultaneous power/current measurement modes	1P3W+I: 1 power circuit and 1 current channel 3P3W2M+I: 1 power circuit and 1 current channel
Measurement items	Voltage RMS, current RMS, voltage fundamental wave value, current fundamental wave value, voltage fundamental wave phase angle, current fundamental wave phase angle, frequency (U1), voltage waveform peak (absolute value), current waveform peak (absolute value), active power, reactive power (with lag/lead display), apparent power, power factor (with lag/lead display) or displacement power factor (with lag/lead display), active energy (consumption, regeneration), reactive energy (consumption, regeneration), electricity rate display (by means of planned future function update), active power demand quantity (consumption, regeneration), reactive power demand quantity (lag, lead), active power demand value (consumption, regeneration), reactive power demand value (lag, lead), power factor demand, pulse input
Calculation selection	Power factor, reactive and apparent power: rms calculation/ fundamental wave calculation
Measurement accuracy (50/ 60Hz, power factor = 1)	Voltage: ±0.3% rdg. ±0.1% f.s. Current: ±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy Active power: ±0.3% rdg. ±0.1% f.s. +clamp sensor accuracy Clamp-On Sensor 9661 accuracy: ±0.3% rdg. ±0.01% f.s. (Accuracy depends on clamp sensor. See page 6 for the accuracy of each model, and page 7 for combined accuracy of Model PW3360-20 and each clamp sensor.)
Display update rate	Approx. 0.5 sec (except when accessing SD card or internal memory, or during LAN/USB communication)
Measurement method	Digital sampling and zero cross synchronization calculation method Sampling: 10.24 kHz (2048 points) **Calculation processing** 50 Hz: Continuous, gapless measurement at 10 cycles 60 Hz: Continuous, gapless measurement at 12 cycles
A/D converter resolution	16bit

Recording specifications

Save destination	SD Card, internal memory (capacity: approx. 320 KB)
Save interval time	1/2/5/10/15/30 seconds, 1/2/5/10/15/20/30/60 minutes * Available storage time is displayed on PW3360-20's setting screen
Save items	Measurement save: Average only / all (average, maximum, minimum) Screen copy: ON/OFF (Saves the displayed screen as a BMP at a fixed interval.) The minimum interval time for saving screen copies is 5 min. If the setting is less than 5 min., screen copies will be saved every 5 min. Waveform save: Stores binary waveform data (with shortest interval 1 minute) Supported from version 2.00
Recording start methods	Interval time, manual, or at specified time
Recording stop methods	Manual, or at specified time (up to one year)

Pulse input

Input specifications	No-voltage contact input (counts when shorted terminals open) Voltage input (Hi: 2 V to 45 V, Lo: 0 V to 0.5 V, counts at Lo to Hi) Maximum rated input between terminals: 45 V DC Maximum rated input to ground: not isolated (GND is equipment common)
Measurement range	0 to 9999 (maximum pulse count per save interval)
Filter	Filter On (for mechanical contacts) 25 Hz or less, and at least 20 ms Hi and Lo pulse width
	Filter Off (for solid-state contacts) 5 kHz or less, and at least 100 µs Hi and Lo pulse width
Scaling	Displays product of pulse count and scaling factor setting Setting ranges: 0.001 to 1.000, and 1.000 to 100.00

Pulse output

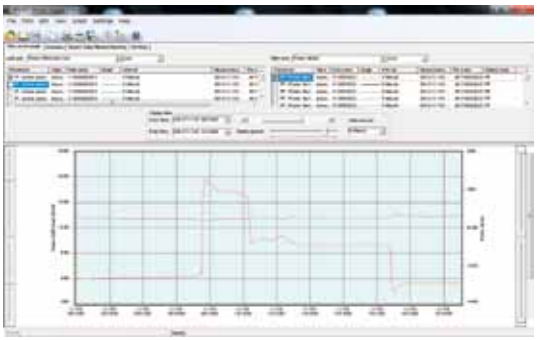
Function	Output pulse rate is proportional to active power consumption (WP+) when measuring integral power consumption
Pulse rate	OFF/1Wh/10Wh/100Wh/1kWh/10kWh/100kWh/1000kWh (Default: 1 kWh)
Pulse width	approx. 100 ms
Output signal	Open-collector 30 V, 5 mA max (photocoupler isolated) Active Low

External interfaces Specifications

SD card Interface	Settings data, measurement data, screen data Waveform data (support planned from version 2.00)
LAN interface	10BASE-T/100BASE-TX IEEE802.3 Compliance - HTTP server function - Download settings and data by communication application program
USB interface	USB Ver 2.0, Windows 7 (32/64bit) / Vista (32bit) /XP - When connected to a computer, the SD Card and internal memory are recognized as removable storage devices. - Download settings and data by communication application program

■ POWER LOGGER VIEWER SF1001 Specifications

General Specifications	
Read-compatible model	PW3360-20
Supported computer operating systems	Windows 7 SP1 or later (32/64bit) Windows Vista SP2 or later (32bit) Windows XP SP3 or later (32bit)



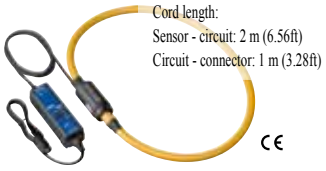
Functions Specifications	
Time series graph display function	**Display items:** Voltage, current, active power, reactive power, apparent power, power factor, frequency, integrated active power, integrated reactive power, demand volume, demand value, voltage disequilibrium factor, pulse *Measurement values can be displayed by the cursor
	Stacked bar graph display: Up to 16 types of data series can be displayed in an overlay graph
Summary display function	Displayed items are the same as for Time Series Graph Display - Display and totalize monthly/weekly/daily reports for specified period - Calculate load factor and demand factor for daily/weekly/monthly reports, and displays results - Hourly totalization (up to four segments)
Copy function	Captures any display image to the clipboard
Print function	Preview and print content shown on the time series graph, report, and settings displays.
	Comment entry (Text comments can be entered in any printout)
	Printing support: Any color or monochrome printing supported by the operating system
Report printing	Print (static) contents over a specific time period

■ CLAMP SENSOR Specifications

CLAMP ON SENSOR

		9694	9660	9661	9669	9695-02	9695-03
Appearance		 Cord length: 3 m (9.84ft)	 Cord length: 3 m (9.84ft)	 Cord length: 3 m (9.84ft)	 Cord length: 3 m (9.84ft)	 **CONNECTION CORD 9219** Connect with the 9695-02/-03, Output BNC terminal	  Cord length: 3 m (9.84ft)
Measurable conductor diameter		ϕ15mm (0.59")	ϕ15mm (0.59")	ϕ46mm (0.81")	ϕ55mm (2.17"), 80 (3.15")×20 (0.79")mm	ϕ15mm (0.59")	ϕ15mm (0.59")
Primary current rating		5A AC	100A AC	500A AC	1000A AC	50A AC	100A AC
Accuracy	Amplitude (45 to 66 Hz)	±0.3% rdg. ±0.02% f.s.	±0.3% rdg. ±0.02% f.s.	±0.3% rdg. ±0.01% f.s.	±1.0% rdg. ±0.01% f.s.	±0.3% rdg. ±0.02% f.s.	±0.3% rdg. ±0.02% f.s.
	Phase (45 Hz to 5 kHz)	Within ±2°	Within ±1°	Within ±0.5°	Within ±1°	Within ±2°	Within ±1°
Frequency characteristic 40Hz to 5kHz (deviation from accuracy)		Within ±1.0%			Within ±2.0%	Within ±1.0%	
Effect of external magnetic field (with a magnetic field of 400 A/ m AC)		Equivalent to 0.1 A or less			Equivalent to 1 A or less	Equivalent to 0.1 A or less	
Effect of conductor position		Within ±0.5%			Within ±1.5%	Within ±0.5%	
Maximum rated voltage to earth		CAT Ⅲ 300Vrms	CAT Ⅲ 300Vrms	CAT Ⅲ 600Vrms	CAT Ⅲ 600Vrms	CAT Ⅲ 300Vrms	
Maximum input (45 to 66Hz)		50 A continuous	130 A continuous	550 A continuous	1000 A continuous	60 A continuous	130 A continuous
Dimensions		46W (1.81") × 135H (5.31") × 21D (0.83") mm	46W (1.81") × 135H (5.31") × 21D (0.83") mm	77W (3.03") × 151H (5.94") × 42D(1.65") mm	99.5W (3.92") × 188H (7.40") × 42D (1.65") mm	50.5W(2.28") × 58H(2.28") × 18.7D(0.74") mm	
Mass		230g (8.1 oz)	230g (8.1 oz)	380g (13.4 oz)	590g (20.8 oz)	50g (1.8 oz)	

FLEXIBLE CLAMP ON SENSOR

		CT9667
Appearance		 Cord length: Sensor - circuit: 2 m (6.56ft) Circuit - connector: 1 m (3.28ft)
Measurable conductor diameter		ϕ254mm
Primary current rating		500A AC/5,000A AC
Accuracy (45 to 66Hz)	Amplitude	±2.0% rdg. ±0.3% f.s.
	Phase	Within ±1°
Frequency characteristic 10Hz to 20kHz (deviation from accuracy)		Within ±3 dB
Effect of external magnetic field (with a magnetic field of 400 A/ m AC)		1.5% / f.s. or less.
Effect of conductor position		Within ±3.0%
Maximum rated voltage to earth		CAT Ⅲ 1000Vrms, CAT Ⅳ 600Vrms
Maximum input (45 to 66Hz)		10000 A continuous
Dimensions		Circuit box: 35W (1.38") × 120H (4.74") × 34D (1.34") mm
Mass		470g (16.6 oz.) (Sensor + Circuit Box, w/battery)
Power supply		LR06 alkaline battery x 2 (continuous operation max. 7 days) or **AC ADAPTER 9445-02/9445-03** (optional)

CLAMP ON LEAK SENSOR (Leakage Current Measurement Only)

		9657-10	9675
Appearance		 Insulated conductor Cord length: 3 m (9.84ft)	 Insulated conductor Cord length: 3 m (9.84ft)
Measurable conductor diameter		ϕ40mm (1.57")	ϕ30mm (1.18")
Primary current rating		10A AC*	10A AC*
Accuracy	Amplitude (45 to 66 Hz)	±1.0% rdg. ±0.05% f.s.	±1.0% rdg. ±0.005% f.s.
	Phase angle (@50 or 60 Hz)	Within ±3°	Within ±5°
Frequency characteristic 40Hz to 5kHz (deviation from accuracy)		Within ±5%	Within ±5%
Effect of external magnetic field (with a magnetic field of 400 A/ m AC)		7.5 mA max.	7.5 mA max.
Effect of conductor position		Within ±0.1%	Within ±0.1%
Maximum rated voltage to earth		CAT Ⅲ 300Vrms	CAT Ⅲ 300Vrms
Maximum input (45 to 66Hz)		30 A continuous	10 A continuous
Dimensions		74W(2.91") × 145H(5.71") × 42D(1.65")	60W(2.36") × 112.5H(4.43") × 23.6D(0.95")
Mass		380g (13.4 oz)	160g (5.6 oz)
Notes		Not used for power measurements	

* Maximum AC measurement range with PW3360-20 is 5A.

Measurement Range Configurations

Voltage \ Current	Connection	CLAMP ON SENSOR 9694 (CAT Ⅲ 300V) *1 CLAMP ON SENSOR 9695-02 (CAT Ⅲ 300V)				
		500.00 mA	1.0000 A	5.0000 A	10.000 A	50.000 A
600.00 V	1P2W	300.00 W	600.00 W	3.0000 kW	6.0000 kW	30.000 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	600.00 W	1.2000 kW	6.0000 kW	12.000 kW	60.000 kW
	3P4W	900.00 W	1.8000 kW	9.0000 kW	18.000 kW	90.000 kW

*1. For the 9694 sensor, the range of guaranteed accuracy is from 500 mA to 5 A, and for the 9695-02, from 500 mA to 50 A.

Voltage \ Current	Connection	CLAMP ON SENSOR 9660, 9695-03 (CAT Ⅲ 300V) *2 CLAMP ON SENSOR 9661				
		5.0000 A	10.000 A	50.000 A	100.00 A	500.00 A
600.00 V	1P2W	3.0000 kW	6.0000 kW	30.000 kW	60.000 kW	300.00 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	6.0000 kW	12.000 kW	60.000 kW	120.00 kW	600.00 kW
	3P4W	9.0000 kW	18.000 kW	90.000 kW	180.00 kW	900.00 kW

*2. For the 9660 and 9695-03 sensors, the range of guaranteed accuracy is from 5 A to 100 A, and for the 9661, from 5 A to 500 A.

Voltage \ Current	Connection	CLAMP ON SENSOR 9669		
		100.00 A	200.00 A	1.0000 kA
600.00 V	1P2W	60.000 kW	120.00 kW	600.00 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	120.00 kW	240.00 kW	1.2000 MW
	3P4W	180.00 kW	360.00 kW	1.8000 MW

Voltage \ Current	Connection	FLEXIBLE CLAMP ON SENSOR CT9667	
		500.00 A	5.0000 kA
600.00 V	1P2W	300.00 kW	3.0000 MW
	1P3W 1P3W1U 3P3W2M 3P3W3M	600.00 kW	6.0000 MW
	3P4W	900.00 kW	9.0000 MW

Leak current: CLAMP ON LEAK SENSOR 9657-10, 9675	
Range	50.000 mA/100.00 mA/500.00 mA/1.0000 A/5.0000 A

Total display range

Voltage is displayed from 5 V to 1000 V, with less than 5 V displayed as 0 V.
Current is displayed from 0.4% to 130% of the selected range, with less than 0.4% displayed as 0 A
Power is displayed from 0 to 130% of full scale, with 0 W displayed when voltage or current is zero.

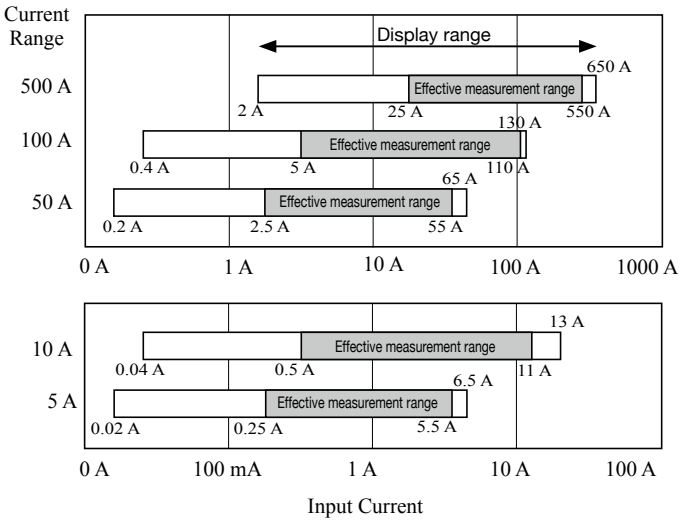
The range configurations for apparent power (S) and reactive power (Q) are the same, with units of [VA] and [var], respectively.

When VT and CT ratios are set, the range configuration is the product (VT ratio × CT ratio).

Effective measurement range

For voltage, 90 to 780 V, with max. 1400 V peak.
For current, 5% to 110% of the selected range with peak ±400% of range, but maximum range is ±200%.
For power, 5% to 110% of the selected range.
For frequency, 45 to 66 Hz.

Current Display and Effective Measurement Ranges (typical)



Measurement accuracy

Voltage	±0.3% rdg. ±0.1% f.s.
Current	±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy
Active power	±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy (power factor = 1)

Combined accuracy of PW3360-20 + clamp sensors

Range	9694	9695-02
50.000 A	—	±0.6% rdg. ±0.12% f.s.
10.000 A	—	±0.6% rdg. ±0.2% f.s.
5.0000 A	±0.6% rdg. ±0.12% f.s.	±0.6% rdg. ±0.3% f.s.
1.0000 A	±0.6% rdg. ±0.2% f.s.	±0.6% rdg. ±1.1% f.s.
500.00 mA	±0.6% rdg. ±0.3% f.s.	±0.6% rdg. ±2.1% f.s.

Range	9660, 9695-03	9661
500.00 A	—	±0.6% rdg. ±0.11% f.s.
100.00 A	±0.6% rdg. ±0.12% f.s.	±0.6% rdg. ±0.15% f.s.
50.000 A	±0.6% rdg. ±0.14% f.s.	±0.6% rdg. ±0.2% f.s.
10.000 A	±0.6% rdg. ±0.3% f.s.	±0.6% rdg. ±0.6% f.s.
5.0000 A	±0.6% rdg. ±0.5% f.s.	±0.6% rdg. ±1.1% f.s.

Range	9669
1.0000 kA	±1.3% rdg. ±0.11% f.s.
200.00 A	±1.3% rdg. ±0.15% f.s.
100.00 A	±1.3% rdg. ±0.2% f.s.

Range	CT9667 5.000 kA range	CT9667 500 A range
5.0000 kA	±2.3% rdg. ±0.4% f.s.	—
500.00 A	—	±2.3% rdg. ±0.4% f.s.

Conditions of guaranteed accuracy	After 30 minute warm-up, with 50/60 Hz sine wave input
Temperature and humidity for guaranteed accuracy	23˚C ±5˚C (73 ± 9°F), 80%RH or less (applies to all specifications unless otherwise noted)
Display area of guaranteed accuracy	Effective measurement range
Period of guaranteed acuracy	1 year
Real-time clock accuracy	Within ±0.3 sec/day (with power on, within specified operating temperature and humidity ranges)
Temperature characteristic	Within ±0.1% f.s./ ˚C (except 23 ±5°C)
Effect of common mode voltage	Within ±0.2% f.s. (600 V AC, 50/60 Hz, between voltage input terminal and case)
Effect of external magnetic field	Within ±1.5% f.s. (in a magnetic field of 400 A/m rms AC, 50/60 Hz)
Effect of phase	Phase accuracy ±0.3° equivalent (with 50/60 Hz f.s. input)
Apparent power	±1 dgt. for the calculation obtained from each measurement value
Reactive power	Fundamental waveform calculations ±0.3% rdg. ±0.1% f.s. + clamp-on sensor accuracy (w/power factor = 1)
	Rms calculations From each measurement applied to calculation ±1 dgt.
Energy	Active and reactive power measurement accuracies ±1 dgt.
Power factor	From each measurement applied to calculation ±1 dgt.
Frequency	±0.5% rdg. (with 90 to 780 V sine wave input)
Demand value	Active and reactive power measurement accuracies ±1 dgt.
Demand quantity	Active and reactive power measurement accuracies ±1 dgt.
Pulse input	±1 dgt. for the calculation obtained from each measurement value
Frequency characteristic	At 50/60 Hz fundamental waveform frequency, up to 1 kHz, ±3% rdg. ±0.2% f.s. up to 3kHz, ±10% rdg. ±0.2% f.s. For current and active power, add clamp-on sensor accuracy. Note: only for 3P3W3M wiring, add ±0.5% rdg.

CLAMP ON POWER LOGGER PW3360-20

Accessories

VOLTAGE CORD L9438-53 (1 set) , **AC ADAPTER Z1006** (1) , USB cable (1), instruction manual (1), measurement guide (1), color spiral tubes (1 set): red, yellow, blue/two each, for color-coding clamp sensors, spiral tubes for grouping clamp sensor cords (5)

Clamp-On Power Logger PW3360-20 by itself does not support current and power measurements. Current and power measurements require clamp-on sensors, sold separately. Also, use only HIOKI-issued SD cards guaranteed to work for saving measurement data, (options, sold separately).

AC ADAPTER Z1006

VOLTAGE CORD L9438-53

cord length: 3m (9.84 ft)

1 cord each of black, red yellow, and blue, and five spiral tubes for bundling cords

Options

CLAMP ON SENSOR (for load current measurement)

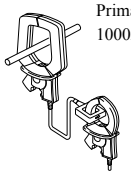
CLAMP ON SENSOR 9694 (AC5A)
CLAMP ON SENSOR 9660 (AC100A)
CLAMP ON SENSOR 9661 (AC500A)
CLAMP ON SENSOR 9669 (AC1000A)
FLEXIBLE CLAMP ON SENSOR CT9667 (AC5000A)
CLAMP ON SENSOR 9695-02 (AC50A)
CLAMP ON SENSOR 9695-03 (AC100A)
CONNECTION CORD 9219 (for connection to 9695-02, 9695-03)
When purchasing the 9695-02 and 9695-03, we recommend also purchasing the separately sold 9219 Connection Cord.

CLAMP ON LEAK SENSOR (for leakage current measurement)

CLAMP ON LEAK SENSOR 9657-10
CLAMP ON LEAK SENSOR 9675

CLAMP ON ADAPTER

9290-10 MAX. 1500A AC (continuous: 1000A)



Primary side
1000A

Secondary side
100A

CAT Ⅲ 600V
Cord length: 3m (9.84 ft)

Measurable conductor diameter
φ55 mm (2.17in)
Bus bar: ■ 80 mm (3.46in) × 20 mm (0.79 in)
CT ratio: 10:1

SD MEMORY CARD 2GB

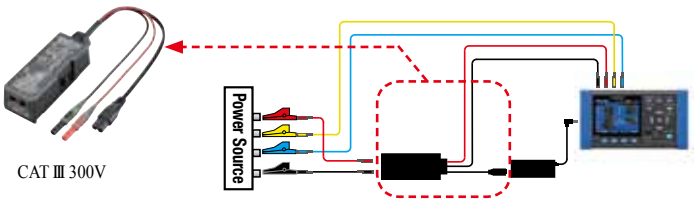
Z4001

Stores up to one year's data when acquired at one minute intervals. Performance cannot be guaranteed on storage media other than Hioki-specified SD card options.

VOLTAGE LINE POWER ADAPTER

PW9003
(supplies power from measurement lines)

Rated voltage: 240 V AC
Operating temperature and humidity range: -10 to 50°C, 80% RH or less



CAT Ⅲ 300V

BATTERY SET

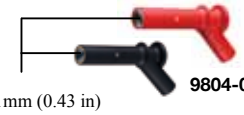
Battery Case and Battery Pack Set
PW9002

BATTERY PACK 9459
For purchase as replacement battery pack

CARRYING CASE

C1005

MAGNET ADAPTER



9804-01 Red
9804-02 Black

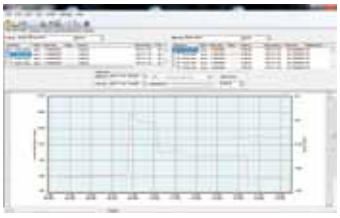
φ11mm (0.43 in)
(generally compatible with M6 pan screws)

Magnetic tip for use with the standard VOLTAGE CORD L9438-53

Red and black adapters sold separately.
Purchase the quantity and color appropriate for your application.
(Example: 3P3W-3 adapters, 3P4W-4 adapters)

POWER LOGGER VIEWER

SF1001



LAN CABLE

9642

HIOKI
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All information correct as of Apr. 1, 2013. All specifications are subject to change without notice.
PW3360E2-34B Printed in Japan