HIOKI

CLAMP ON POWER LOGGER
PW3365

Eliminate the risk of short-circuits and electrical accidents

The world's first instrument to offer no-metal-contact power measurement

Free from the risk of short-circuit accidents since no metal comes into contact with energized parts, the Clamp On Power Logger PW3365-20 can measure voltage, current, and power right on the cable, letting you safely test in locations that were dangerous or even impossible in the past.

GERMAN DESIGN AWARD SPECIAL 2016

*For Voltage Sensor PW9020

Safe, Easy, Voltage Measurement

The PW3365-20's dedicated voltage sensor delivers the world's first no-metal-contact measurement.

Free yourself from the risk of short-circuits by measuring right on the cable sheath without ever needing to touch metal to energized parts

Freely clip either horizontally or vertically

Measure both thick and thin cables

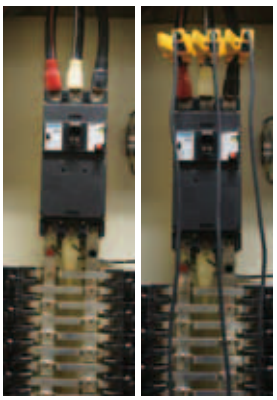
Measure in potentially hazardous locations

Locations without energized parts

Measure on the outside of cables

Locations with covered terminals

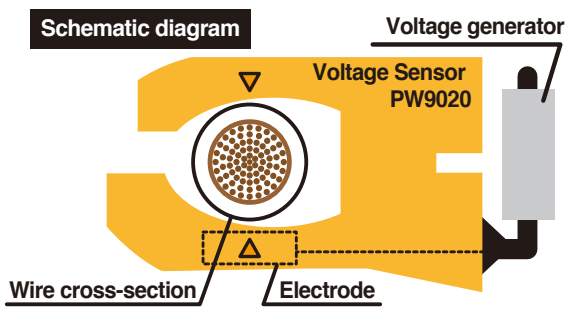
Measure without removing the covers

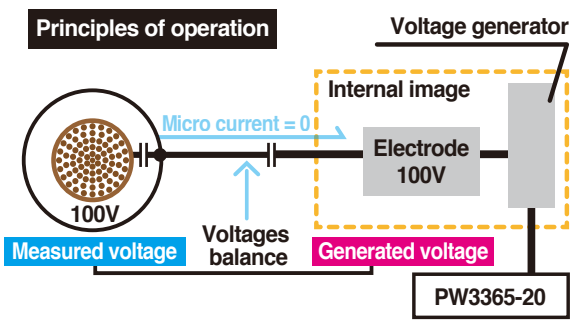


Locations with a risk of electric shock

Measure at safer points

How is voltage measured without any metallic contact?





Inside the PW9020 is an electrode (a metal plate). When there is a potential difference between this electrode and the measured line, a minute current flows as a result. By detecting this minute current and generating a voltage such that the current declines to zero, it is possible to accurately measure the voltage without being affected by the outer diameter of the measured cable or its insulation.

Enlarged view of clamp

Actual maximum size : φ30mm
Actual minimum size : φ6mm

Compatible conductor diameters

SAFETY VOLTAGE SENSOR PW9020 Specifications

Compatible conductor types	Insulated wires*1 In door PVC or metal parts
Compatible conductor diameters	Finished outer diameter φ6mm to φ30mm
Effective measurement range	90 V to 520 V
Accuracy	±1.5% rdg. ±0.2% f.s. (combined accuracy with PW3365-20)*2
Effect of phase	Accuracy combined with the PW3365-20 is within ±1.3% (at 50/60Hz, f.s. input)
Maximum rated voltage to earth	CATIV 300V / CATIII 600V
Cord length	3m (9.84 ft)
Mass	Approx. 220g (7.8 oz)
Operating temperature and humidity	0°C to 50°C(32°F to122°F), 80% RH or less (no condensation)
Storage temperature and humidity	-10°C to 60°C (14°F to 122°F), 80% RH or less (no condensation)
Dielectric strength	7.06k Vrms AC
Applicable standards	Safety: EN61010, EMC: EN61326

* includes relay box on cord

Soil, residue, or moisture on the insulated wires may result in lower voltage and power values than their true values. Use a dry cloth to remove before measuring.

*1: Shielded wires cannot be measured.
*2: For frequencies of 45 Hz to 66 Hz.
Effects of humidity: Add the following to the combined accuracy (for voltage, power, and phase) with the PW3365-20
Accuracy within ±1% f.s., phase within ±1°,
measuring an insulated wire at a humidity of 70% to 80% RH
Effects of adjacent wires: Add the following to the combined accuracy (for voltage and power) with the PW3365-20
Within ±1% f.s. while a wire with a phase difference of 400 V is in contact with the grip

Configure Settings with Quick Set

Graphical, easy-to-understand guidance for connection procedures

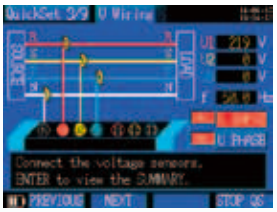
Quick Setup guides you through the process of setting up the instrument for measurement, right up to starting measurement, on the screen to simplify set work. Since any mistaken connections will trigger a FAIL message, the feature also helps prevent measurement mistakes. If you receive a FAIL result, the instrument will also indicate the location of the problem.

Setup Flow (example: 3P4W)

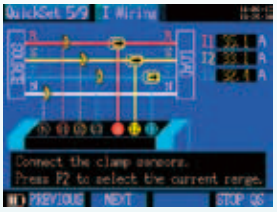
STEP1 Quick Set START / Choose the wire type

STEP2 Connect the leads to the PW3365-20

STEP3 Connect the voltage sensor

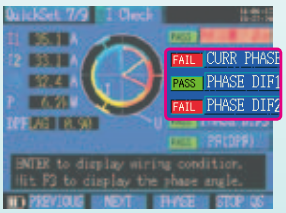


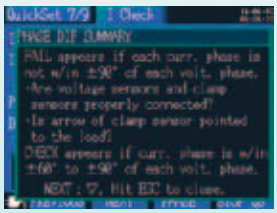
STEP4 Connect the clamp sensors



STEP5 Select the current range

STEP6 Check wire connection status





If you receive a FAIL result

Highlight the FAIL message with the cursor and press ENTER to view information about where the connection needs to be corrected.

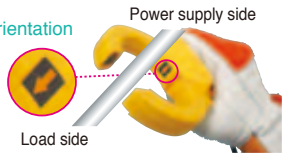
Measurement

Miswiring Example (Clamp Orientation)

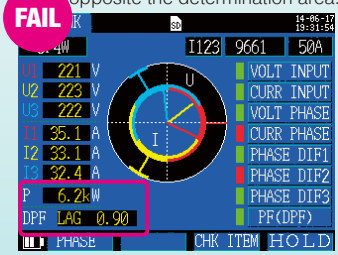
Neither power nor power factor can be measured accurately with the clamp in the wrong orientation.

Correct Orientation

Point the arrow toward the load side

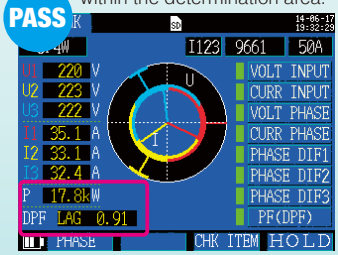


FAIL The I vector's phase direction is opposite the determination area.



P: 6.2kW
Power displayed value is too low

PASS The I vector's phase direction is within the determination area.



P: 17.8kW

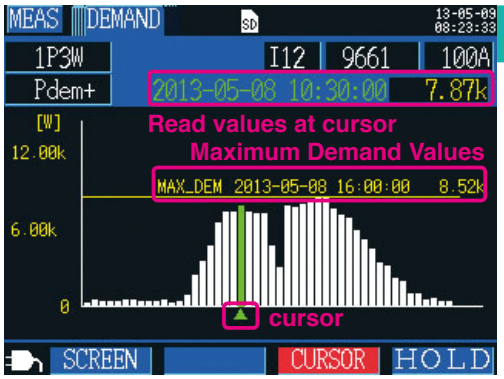
CURR PHASE Red means : FAIL VOLT PHASE Green means : PASS

Review Results

At the Worksite

Display measured values as a graph and evaluate results at a glance

Measured values can be displayed as a graph, which is convenient when using the instrument in power management applications. Since you can statistically review not only the measured value at that moment, but also measured values that have been recorded, it's easy to check values on the spot.



Bar graph of values measured over a period of 24 hours at a 30-minute interval

Demand Graph Display

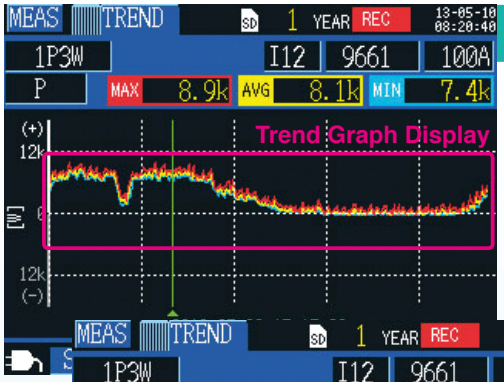
Display demand value trends

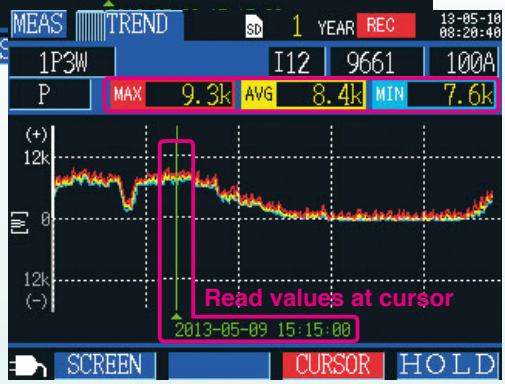
It's easy to check the maximum demand value and the time at which it occurred.

Particularly useful in power management applications

Evaluate Photovoltaic Generation Capabilities

You can create a bar graph that makes it obvious whether power is being bought or sold by switching the active power demand value display from consumption to regeneration





Graph of values measured over a period 24 hours at 5-minute intervals

Trend Graph Display

* Except for demand

Choose one measured parameter to create a time-series display as a graph

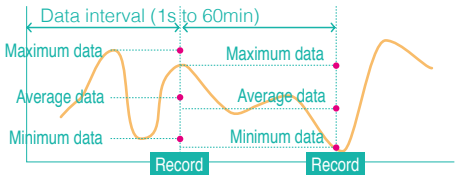
Monitor power variations to check for connections between equipment operating status and power consumption.

Display the maximum, minimum, and average values at the cursor position

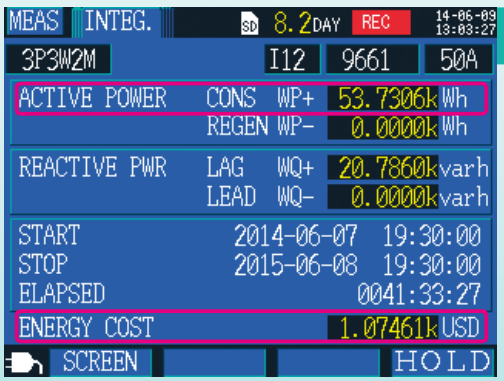
Identify these parameters right on the time-axis graph display

Example
Power trend graph display

Capture and record all fluctuations



Set the power logger to save all parameters to record the maximum, minimum, and average values during the set recording interval.



Display electricity charges

Convert integrated power use to electricity charges

Know how much you are spending on electricity in real-time

Displaying electricity charges

Active power use 1 kWh × set rate

Calculate electricity charges

[Example screenshot to left]

The electricity charge per 1kWh has been set to $20

Active power use 53.7306kWh × set rate 20 USD

electricity charges 1074.61 USD

Save &Analyze

Results on a PC

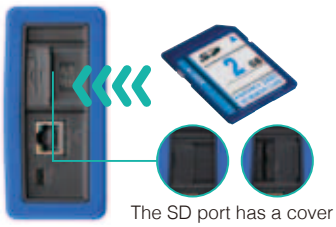
Easily download and interpret data on a PC

Download the measurement results to a computer via the power logger's LAN or USB interface or its SD card. Once data has been downloaded, it can be graphed easily with free software. For more detailed analysis, Hioki's optional SF1001 application software is recommended.

Storage media for data

SD card 2GB

Stores up to one year's data that is acquired at one minute intervals. Performance cannot be guaranteed on storage media other than SD cards sold by Hioki.



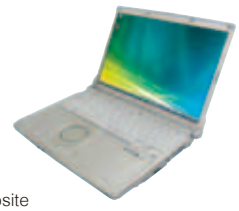
The SD port has a cover

Loading data

SD card 2GB

LAN interface

USB interface



Use the free software from the Hioki website
in order to download data to a computer using the instrument's LAN or USB interface

Available Recording Time

Measurement Interval	Save Time	Measurement Interval	Save Time
1 seconds	15.6 days	30 seconds	1 year
2 seconds	31.2 days	1 minutes	1 year
5 seconds	77.9 days	2 minutes	1 year
10 seconds	155 days	5 minutes	1 year
15 seconds	233 days	More than 10 minites	1 year

[Save conditions for above figures]
Measurement target : 3P4W
Storage media : Z4001 2-GB SD card
Saved parameters : All data: average, maximum, and minimum values
Screen copy saving : OFF Waveform save : OFF

In all cases, the maximum single file size for measurement data is about 200 MB.
When this is exceeded, a new file is created and saving continues.

Freeware (free download from the Hioki website)

Convenient Functions

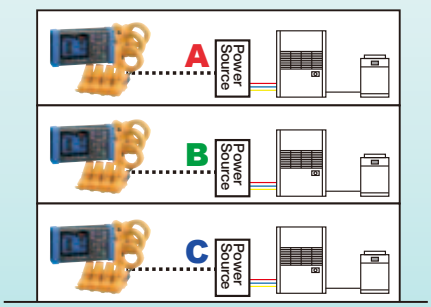
- Load saved data directly from the instrument (via a USB/LAN connection)
- Graph saved data in Excel
- Transfer settings from a computer to the PW3365-20
- Print data

Automatically Create Excel Graphs

Power Logger Viewer SF1001 (option, sold separately/for PW3365,PW3360,PW3198)

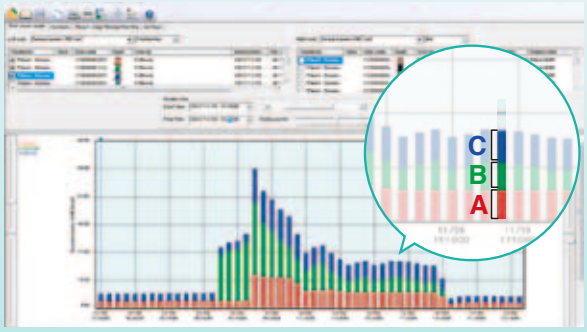
Display, tabulate, analyze, and print saved data

- Trend graph display
- Summary display
- Waveform display
- Copy
- Print
- Report printing



Example of a Stacked Graph Display

You can combine power consumption data measured at multiple locations into a single graph to capture the total power demand across a facility, allowing you to identify time periods and locations characterized by high power consumption at a glance.



Convenient Functions

For the Worksite

More Uses for the PW3365-20

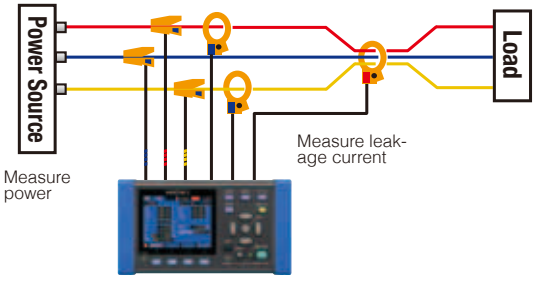
The Hioki PW3365-20 is not just a power logger. Added-value features and functions let you meet many other electrical testing applications.

Leakage Current Measurement

Requires optional clamp-on leak sensor

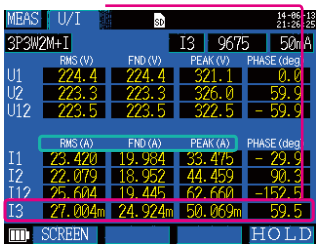
Measure power + 1-channel of leakage current

Example : 3P3W2M+1-channel leakage current



With the ability to calculate and process data every 200ms, you can do simple checks of intermittent leakage current. Choose from average, maximum and/or minimum value of the measured interval.

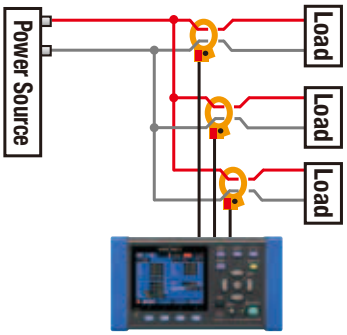
Leakage current results



By capturing the RMS of the fundamental wave, you can also identify the leakage current of the 50/60Hz component.

RMS (A)	RMS that includes harmonic components
FND (A)	RMS of fundamental wave
PEAK (A)	Peak value (waveform peak)

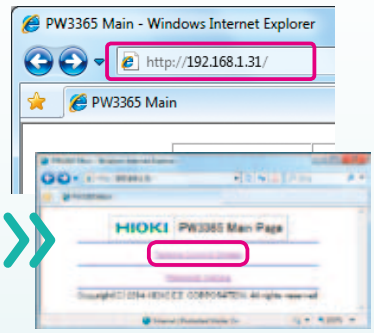
Measure 3 channels of leakage current



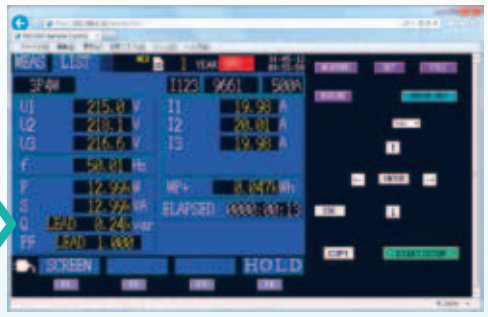
Control and monitor from a remote location

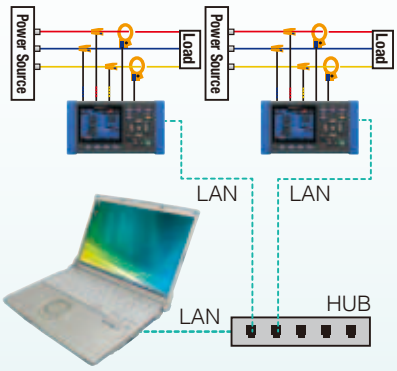
Use a LAN cable to connect the PW3365-20 to a personal computer for real-time remote monitoring and measurement display on a web browser.

Files recorded in the Clamp On Power Logger's internal memory or SD card are accessible via a LAN or USB connection, and are downloadable using the free PW3365-20 Setup and Download Software



Enter the IP address in the browser.

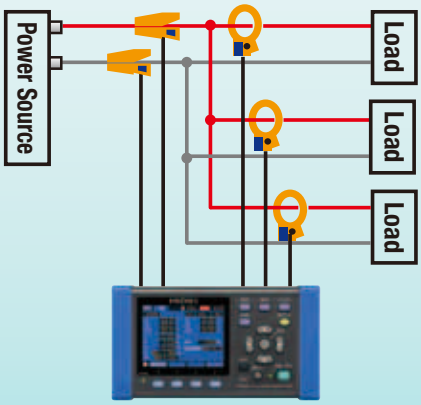




Display the power logger's screen and make adjustments virtually by clicking the buttons and entering new information.

Simultaneous Measurements

Measure three single-phase, 2-wire circuits in the same system at the same time.



Other convenient features

Compact, lightweight

Small form factor lets you set the power logger even inside cramped cubicles

Battery power

Power the instrument for about five hours with batteries if the power goes out

Outage recovery

Resume recording automatically following recovery from a power outage

Key lock function

Lock the buttons to prevent erroneous operation

Display hold

Freeze the displayed value for easier reading

PW3365-20 Specifications

No dirt or moisture on insulated wire or voltage sensor, Product guaranteed for one year
(Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 6 months)

Measurement

Number of input channels		Voltage: 3 channels / Current: 3 channels			
Measurement targets (50/60Hz)		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/Y-wiring only) 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 value, fundamental wave value, waveform peak (absolute value), fundamental wave phase angle, frequency (U1)			
	Current	RMS value, fundamental wave value, waveform peak (absolute value), fundamental wave phase angle			
	Power	Active power, reactive power, apparent power, power factor, (with lag/lead display) or displacement power factor (with lag/lead display), active energy (consumption, regeneration, regeneration), reactive energy(lag, lead) Energy cost display (per-kWh price × power consumption)			
	Demand	Active power demand value (consumption, regeneration), reactive power demand value (lag, lead), active power demand quantity (consumption, regeneration), reactive power demand quantity (lag, lead), power factor demand value			
Voltage range		400 V AC			
		Total display area: 5V to 520 V (less than 5 V displays as 0 V)			
		Effective measurement range: 90 V to 520 V, peak: ±750V [OVER] indicates over-range warning			
Current ranges	Load current	CLAMP ON SENSOR 9660 : 5/10/50/100 A			
		CLAMP ON SENSOR 9661 : 5/10/50/100/500 A			
		CLAMP ON SENSOR 9669 : 100/200/1k A			
		CLAMP ON SENSOR 9694 : 500m/1/5/10/50 A			
		CLAMP ON SENSOR 9695-02 : 500m/1/5/10/50 A			
		CLAMP ON SENSOR 9695-03 : 5/10/50/100 A			
		AC FLEXIBLE CURRENT SENSOR CT9667-01, -02, -03 : 50/100/500 A (500A range)			
		AC FLEXIBLE CURRENT SENSOR CT9667-01, -02, -03 : 500/1k/5k A (5000A range)			
	Leakage current	LEAK CLAMP ON SENSOR 9675 : 50m/100m/500m/1/5 A			
		LEAK CLAMP ON SENSOR 9657-10 : 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 [OVER] indicates over-range warning			
Power ranges		200.00 W to 6.0000 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 130% of the range			
Measurement accuracy (50/60Hz)		Voltage : ±1.5% rdg. ±0.2% f.s. (combined accuracy with PW3365-20 + PW9020) Current : ±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy Active power : ±2.0% rdg. ±0.3% f.s. + clamp sensor accuracy (power factor = 1)			
Calculations		RMS calculation/ fundamental wave calculation			
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: Isolated inputs using Voltage Sensor PW9020 Current: Isolated input using a clamp-on 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			

*1 For individual clamp sensors’ accuracy and combined accuracy figures, see pages 10 and 11.

Screen display

List	Voltage, current, frequency, active/apparent/reactive power power factor, integrated power use, elapsed time
U/I	RMS value, fundamental wave value, waveform peak, phase angle
Power	Per-channel and total active power, apparent power, reactive power,power factor
Integ	Active energy, reactiv energy, recording start time recording stop time, elapsed time, energy cost
Demand	Active power demand value, reactive power demand value power factor demand value
Waveform	Displays voltage and current waveform
Zoom	Enlarged view of 4 user-selected parameters
Trend	For one selected measurement item displays maximum, average and minimum values

Recording

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 the PW3365-20's setting screen
Save items	Measurement save : Average only/average, maximum, minimum Screen save : Saves the displayed screen as a BMP at a fixed interval*1 Waveform save : Stores binary waveform data*2
Recording start methods	Interval time, manual, or at specified time, repeat
Recording stop methods	Manual, or at specified time (up to one year), timer

*1 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.

*2 With shortest interval of 1 minute.When set to less than 1 minute, waveforms are saved once every minute

External interfaces

SD card	Settings data, measurement data, screen data, waveform data
LAN	10BASE-T/100BASE-TX IEEE802.3 Compliance - HTTP server function
USB	USB Ver 2.0, Windows 8 (32/64bit)/Windows 7 (32/64bit) / Vista (32bit) /XP - When connected to a computer, the SD Card and internal memory are recognized as removable storage devices.
LAN/USB	Download settings and data using free application program

General

Product guarantee	One year
Display	3.5 inch TFT color LCD (320 × 240 pixel)
	Japanese, English, Chinese Backlight auto-off function (after 2 minutes) When AUTO OFF is active, the Power LED blinks
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 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)	0°C to 60°C (32°F to 140°F), 80% RH or less However, the battery's storage temperature range is -10°C to 30°C (14°F to 86°F)
Maximum rated voltage between terminals	Voltage input section : 1.7 VAC, 2.4 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.
Dielectric strength	7.06 kVrms AC
Applicable standards	Safety: EN61010, EMC: EN61326, EN61000-3-2, EN61000-3-3
Power supply	(1) Z1008 AC Adapter : 100 VAC to 240 VAC Maximum rated power : 45VA (including AC adapter) (2) Model 9459 Battery Pack : Ni-MH DC7.2 V 2700 mAh Continuous battery operation time Approx. 5 hr. Maximum rated power : 3VA
Charge function	Charge time: Max. 6 hr. 10 min. (reference value at 23°C) Charges the battery regardless of whether the instrument is on or off
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. 540g (19 oz) (without PW9002), Approx. 820g (28.9 oz) (with PW9002)
Accessories	SAFETY VOLTAGE SENSOR PW9020 (4) AC ADAPTER Z1008 (1) USB cable (1) Instruction manual (1) Measurement guide (1) Color spiral tubes (1 set : red, yellow, blue/four each) Spiral tubes (10)

POWER LOGGER VIEWER SF1001 Specifications

Functions

Trend 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 dis-equilibrium factor
	Stacked bar graph display : Up to 16 types of data series
	Cursor measurements Measurement values can be displayed by the cursor
Summary display function	Displayed items are the same as for the trend Graph Display
	Daily, weekly and monthly report displays: Accumulates and displays daily, weekly and monthly reports over specified period.
	Load factor calculation display: Calculates and displays load factor and demand factor results with daily, weekly and monthly reports
	Time span aggregation: Aggregates data into up to four specified time spans
Waveform display	Displays waveform data at specified date and time
Copy function	Captures any display image to the clipboard
Print function	Preview and print content shown on the trend graph, report, harmonic graph and settings displays.
	Comment entry (Text comments can be entered in any printout)
	Header/Footer settings: Sets the header and footer for each printout
	Printing support Any color or monochrome printing supported by the operating system
Report printing	Print (static) contents over a specific time period
	Output contents: Standard or selected output items
	Available output items: Trend graph, summary, daily report, waveform
	Report creation method: Standard print
	Report output settings: Save/load report output settings

General Specifications

Supported models	PW3365-20 / PW3360-20 / PW3360-21 LR5000 series ; Data previously loaded by the LR5000 Utility (.hrp2 format) using a PC
Supported computer operating systems	Windows 8 (32/64bit) Windows 7 SP1 or later (32/64bit) Windows Vista SP2 or later (32bit) Windows XP SP3 or later (32bit)

Current CLAMP

CLAMP ON SENSOR
9694
Cord length
3 m (9.84ft)

CLAMP ON SENSOR
9660
Cord length
3 m (9.84ft)

CLAMP ON SENSOR
9661
Cord length
3 m (9.84ft)

CLAMP ON SENSOR
9669
Cord length
3 m (9.84ft)

CLAMP ON SENSOR
9695-02

Connect with the 9695-02/-03,
Output BNC terminal
Cord length: 3 m (9.84ft)

CONNECTION CORD
9219

CLAMP ON SENSOR
9695-03

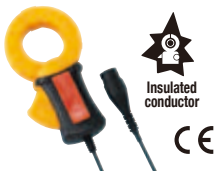
Measurable conductor diameter	φ15 mm (0.59")	φ15 mm (0.59")	φ46 mm (0.81")	φ55 mm (2.17") 80 (3.15")×20 (0.79") mm	φ15 mm (0.59")	φ15 mm (0.59")
Primary current rating	5 A AC	100 A AC	500 A AC	1000 A AC	50 A AC	100 A AC
Accuracy Amplitude (45 to 66 Hz) / Phase (45 Hz to 5 kHz)	±0.3% rdg.±0.02% f.s. Within ±2°	±0.3% rdg.±0.02% f.s. Within ±1°	±0.3% rdg.±0.01% f.s. Within ±0.5°	±1.0% rdg.±0.01% f.s. Within ±1°	±0.3% rdg.±0.02% f.s. Within ±2°	±0.3% rdg.±0.02% f.s. Within ±1°
Frequency characteristic 40Hz to 5kHz	Within ±1.0%	Within ±1.0%	Within ±1.0%	Within ±2.0%	Within ±1.0%	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 0.1 A or less	Equivalent to 0.1 A or less	Equivalent to 1 A or less	Equivalent to 0.1 A or less	Equivalent to 0.1 A or less
Effect of conductor position	Within ±0.5%	Within ±0.5%	Within ±0.5%	Within ±1.5%	Within ±0.5%	Within ±0.5%
Maximum rated voltage to earth	CAT Ⅲ 300 V rms	CAT Ⅲ 300 V rms	CAT Ⅲ 600 V rms	CAT Ⅲ 600 V rms	CAT Ⅲ 300 V rms	CAT Ⅲ 300 V rms
Maximum input 45-66Hz	50 A continuous	130 A continuous	550 A continuous	1000 A continuous	60 A continuous	130 A continuous
Dimensions / Mass	46W × 135H × 21D mm / 230g (1.81") × (5.31") × (0.83") / (8.1 oz)	46W × 135H × 21D mm / 230g (1.81") × (5.31") × (0.83") / (8.1 oz)	77W × 151H × 42D mm / 380g (3.03") × (5.94") × (1.65") / (13.4 oz)	99.5W×188H×42D mm/ 590g (3.92")×(7.40")×(1.65") / (20.8 oz)	50.5W×58H×18.7Dmm / 50g (2.28")×(2.28")× (0.74") / (1.8 oz)	50.5W×58H×18.7Dmm / 50g (2.28")×(2.28")×(0.74") / (1.8 oz)

CT9667-01 CT9667-02 CT9667-03
AC FLEXIBLE CURRENT SENSOR

Cord length : Sensor - circuit: 2 m (6.56ft) , Circuit - connector: 1 m (3.28ft)

Measurable conductor diameter	CT9667-01 : φ100 mm, CT9667-02 : φ180 mm CT9667-03 : φ254 mm
Primary current rating	AC500 A/ AC5000 A (Switchable)
Accuracy 45-66Hz	±2.0% rdg ± 0.3% f.s. / Within ±1°
Frequency 10-20kHz	Within ± 3dB
Effect of external magnetic field	1.5% / f.s. or less
Effect of conductor position	Within ± 3%
Maximum rated voltage to earth	CAT Ⅲ 1000 V rms / CAT IV 600 V rms
Maximum input 45-66Hz	10000 A continuous
Dimensions / Mass	Circuit box: 35W×120.5H×34D CT9667-01, -02 : 280g, CT9667-03 : 470g
Power supply	LR06 alkaline battery × 2 or AC ADAPTER 9445-02/9445-03 (optional)

CLAMP ON LEAK SENSOR
9657-10
Leakage Current Measurement Only
Cord length : 3 m (9.84ft)



CLAMP ON LEAK SENSOR
9675
Leakage Current Measurement Only
Cord length : 3 m (9.84ft)

Measurable conductor diameter	φ40 mm	φ30 mm
Primary current rating	AC 10 A*	AC 10 A*
Accuracy	±1.0% rdg ±0.05% f.s. / Within ±3°	±1.0% rdg ±0.05% f.s. / Within ±5°
Frequency 40 - 5kHz	Within ± 5%	Within ± 5%
Effect of external magnetic field	7.5 mA max.	7.5 mA max.
Effect of conductor position	Within ±0.1%	Within ±0.1%
Measurable conductor	Insulated conductor	Insulated conductor
Maximum input 45-66Hz	30A continuous	10A continuous
Dimensions / Mass	74W× 145H × 42D / 380g	60W× 112.5H × 23.6D / 160g
Notes	Not used for power measurements *Maximum AC measurement range with PW3365-20 is 5 A	Not used for power measurements *Maximum AC measurement range with PW3365-20 is 5 A

Measurement Range Configurations

CLAMP ON SENSOR 9694 / 9695-02 *1

Voltage	Connection	Current				
		500.00 mA	1.0000 A	5.0000 A	10.000 A	50.000 A
400.0V	1P2W	200.00 W	400.00 W	2.0000 kW	4.0000 kW	20.000 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	400.00 W	800.00 W	4.0000 kW	8.0000 kW	40.000 kW
	3P4W	600.00 W	1.2000 kW	6.0000 kW	12.000 kW	60.000 kW

CLAMP ON SENSOR 9660 / 9695-03 / 9661*2

Voltage	Connection	Current				9661only
		5.0000 A	10.000 A	50.000 A	100.00 A	500.00 A
400.0V	1P2W	2.0000 kW	4.0000 kW	20.000 kW	40.000 kW	200.00 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	4.0000 kW	8.0000 kW	40.000 kW	80.000 kW	400.00 kW
	3P4W	6.0000 kW	12.000 kW	60.000 kW	120.00 kW	600.00 kW

CLAMP ON SENSOR 9669

Voltage	Connection	Current		
		100.00 A	200.00 A	1.0000 kA
400.0V	1P2W	40.000 kW	80.000 kW	400.00 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	80.000 kW	160.00 kW	800.00 kW
	3P4W	120.00 kW	240.00 kW	1.2000 MW

AC FLEXIBLE CURRENT SENSOR CT9667-01, -02, -03 (5kA)

Voltage	Connection	Current		
		500.00 A	1.0000 kA	5.0000 kA
400.0V	1P2W	200.00 kW	400.00 kW	2.0000 MW
	1P3W 1P3W1U 3P3W2M 3P3W3M	400.00 kW	800.00 kW	4.0000 MW
	3P4W	600.00 kW	1.2000 MW	6.0000 MW

AC FLEXIBLE CURRENT SENSOR CT9667-01, -02, -03 (500A)

Voltage	Connection	Current		
		50.00 A	100.00 A	500.00 A
400.0V	1P2W	20.000 kW	40.000 kW	200.00 kW
	1P3W 1P3W1U 3P3W2M 3P3W3M	40.000 kW	80.000 kW	400.00 kW
	3P4W	60.000 kW	120.00 kW	600.00 kW

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

Combined Accuracy

PW3365-20 + PW9020 + clamp sensors

Range	9694	9695-02
50.000 A	-	±2.3% rdg. ±0.32% f.s.
10.000 A	-	±2.3% rdg. ±0.4% f.s.
5.0000 A	±2.3% rdg. ±0.32% f.s.	±2.3% rdg. ±0.5% f.s.
1.0000 A	±2.3% rdg. ±0.4% f.s.	±2.3% rdg. ±1.3% f.s.
500.00 mA	±2.3% rdg. ±0.5% f.s.	±2.3% rdg. ±2.3% f.s.

Range	9660, 9695-03	9661
500.00 A	-	±2.3% rdg. ±0.31% f.s.
100.00 A	±2.3% rdg. ±0.32% f.s.	±2.3% rdg. ±0.35% f.s.
50.000 A	±2.3% rdg. ±0.34% f.s.	±2.3% rdg. ±0.4% f.s.
10.000 A	±2.3% rdg. ±0.5% f.s.	±2.3% rdg. ±0.8% f.s.
5.0000 A	±2.3% rdg. ±0.7% f.s.	±2.3% rdg. ±1.3% f.s.

Range	9669
1.0000 kA	±3% rdg. ±0.31% f.s.
200.00 A	±3% rdg. ±0.35% f.s.
100.00 A	±3% rdg. ±0.4% f.s.

Range	CT9667-01, -02, -03 5.000kA range	CT9667-01, -02, -03 500A range
5.0000 kA	±4% rdg. ±0.6% f.s.	-
1.0000 kA	±4% rdg. ±1.8% f.s.	-
500.00 A	±4% rdg. ±3.3% f.s.	±4% rdg. ±0.6% f.s.
100.00 A	-	±4% rdg. ±1.8% f.s.
50.000 A	-	±4% rdg. ±3.3% f.s.

Conditions of guaranteed accuracy	After 30 minute warm-up, with 50/60 Hz sine wave input voltage to earth 400V or less
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
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 external magnetic field	Within ±1.5% f.s. (in a magnetic field of 400 A/m rms AC, 50/60 Hz)
Effect of radiated, radio-frequency, electromagnetic field	Within ±5% f.s. for voltage and active power at 10 V/m
Apparent power	±1 dgt. for the calculation obtained from each measurement value
Reactive power	Fundamental waveform calculations ±2.0% rdg. ±3.0% 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 520 V sine wave input)
Demand value	Active and reactive power measurement accuracies ±1 dgt.
Demand quantity	Active and reactive power measurement accuracies ±1 dgt.

*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.

*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.

Current Display and Effective Measurement Ranges

typical

	Range	Total display range	Effective measurement range		Total display range	Effective peak
		Minimum	Minimum	Maximum	Maximum	Range
Voltage	400 V Range	5.0 V	90.0 V	520.0 V	520.0 V	±750 Vpeak
Current	5 A Range	0.0200 A	0.2500 A	5.5000 A	6.5000 A	±20 Apeak
	10 A Range	0.040 A	0.500 A	11.000 A	13.000 A	±40 Apeak
	50 A Range	0.200 A	2.500 A	55.000 A	65.000 A	±200 Apeak
	100 A Range	0.40 A	5.00 A	110.00 A	130.00 A	±400 Apeak
	500 A Range	2.00 A	25.00 A	550.00 A	650.00 A	±1000 Apeak

* Current sensors : sold separately
* Voltage sensors : bundled

Model : CLAMP ON POWER LOGGER PW3365

Model No. (Order Code)	(Note)
PW3365-20	(English model, main unit only)

Accessories

- SAFETY VOLTAGE SENSOR PW9020 ×4
- AC ADAPTER Z1008 ×1
- USB cable (0.9 m, 2.95 ft length) ×1
- Instruction manual ×1
- Measurement guide ×1
- Color spiral tubes (red, yellow, blue/four each) ×1 set
- Spiral tubes ×10

Clamp On Power Logger PW3365-20 by itself does not support current and power measurements. Current and power measurements require clamp on sensors, sold separately. Use only HIOKI SD cards guaranteed to work for saving measurement data (options, sold separately).

Options

CLAMP ON SENSOR (for load current measurement)

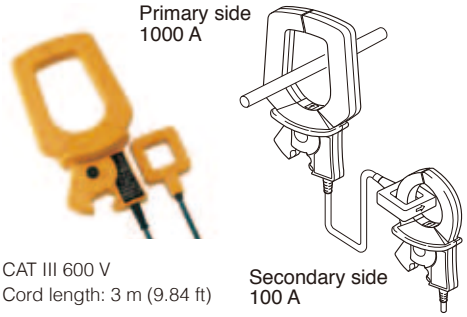
CLAMP ON SENSOR	9694	(AC 5 A)
CLAMP ON SENSOR	9660	(AC 100 A)
CLAMP ON SENSOR	9661	(AC 500 A)
CLAMP ON SENSOR	9669	(AC 1000 A)
AC FLEXIBLE CURRENT SENSOR	CT9667-01	(AC 500 A/ 5000 A)
AC FLEXIBLE CURRENT SENSOR	CT9667-02	(AC 500 A/ 5000 A)
AC FLEXIBLE CURRENT SENSOR	CT9667-03	(AC 500 A/ 5000 A)
CLAMP ON SENSOR (Not CE marked) *	9695-02	(AC 50 A)
CLAMP ON SENSOR (Not CE marked) *	9695-03	(AC 100 A)
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

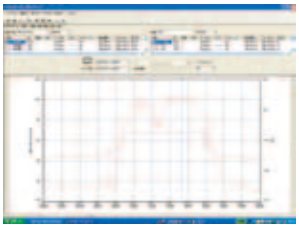


CAT III 600 V
Cord length: 3 m (9.84 ft)

Measurable conductor diameter

φ55 mm (2.17 in)
Bus bar : 80 mm (3.46in) 5 20 mm (0.79 in)
CT ratio : 10:1
MAX. 1500 A AC (continuous: 1000 A)

POWER LOGGER VIEWER SF1001

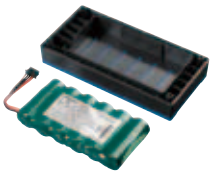


Supported computer operating systems

Windows 8 (32/64bit)
Windows 7 SP1 or later (32/64bit)
Windows Vista SP2 or later (32bit)
Windows XP SP3 or later (32bit)

Trend graph display function
Summary display function
Waveform display
Print function
Report printing

BATTERY SET PW9002



Battery Case and Battery Pack Set

BATTERY PACK 9459
For purchase as replacement battery pack

SAFETY VOLTAGE SENSOR PW9020

PW3365-20 is bundled with 4 sensors
Additional single sensors also available
Cord length: 3 m (9.84 ft)

CARRYING CASE C1005/C1008

	C1005	C1008
Dimension : (Approx)	390 W (15.4") 275 H (10.8") 110 D (4.3") mm	390 W (15.4") 275 H (10.8") 150 D (5.9") mm

AC ADAPTER Z1008

Includes standard
For separate purchase

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.

LAN CABLE 9642

HIOKI
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