HIOKI

PW3360

The Hioki PW3360 is a compact, 3-channel clamp-on power logger designed for energy auditing, demand monitoring, and power analysis. Supporting various wiring configurations from single-phase to three-phase four-wire systems, it allows users to safely and easily measure power consumption, demand, and basic harmonics (model PW3360-21) with high accuracy and log data directly to SD cards.

SPECIFICATIONS

General

Interfaces	USB 2.0 (Mini-B) for PC connection, SD Card Slot
Display	3.5-inch color TFT LCD (320 × 240 dots)

Physical

Power Supply	100 V to 240 V AC (50/60 Hz) via Z1006 AC Adapter; optional PW9002 Battery Pack (7.2 V NiMH)
Operating Temperature	0 to 50 °C
Dimensions (W×H×D)	180 mm W × 120 mm H × 48 mm D mm
Weight	0.55 kg

Measurement Lines & Configurations

Wiring Configurations Supported	Single-phase 2-wire (1P2W), Single-phase 3-wire (1P3W), Three-phase 3-wire (3P3W2M/3P3W3M), Three-phase 4-wire (3P4W)
Number of Voltage Channels	3 channels (U1, U2, U3)
Number of Current Channels	3 channels (I1, I2, I3)
Target Line Frequency	50 Hz / 60 Hz

Measurement Parameters & Functions

Measured Parameters	Voltage RMS, Current RMS, Active power, Reactive power, Apparent power, Power factor, Displacement power factor, Active energy (consumption/regeneration), Reactive energy (lag/lead), Energy cost, Demand value, Harmonic parameters (PW3360-21 only)
Harmonic Analysis Range	Up to 40th order (PW3360-21 only)
Harmonic Measured Parameters	Harmonic voltage, Harmonic current, Harmonic power, Phase angle, Total Harmonic Distortion (THD) (PW3360-21 only)

Voltage Input & Accuracy

Voltage Measurement Range	600 V AC
Voltage Crest Factor	3.0 or less (at 600 V), 6.0 or less (at 300 V)
Voltage Input Impedance	1.5 MΩ ±10%
Voltage Basic Accuracy	±0.3% rdg. ±0.1% f.s. (at 50/60 Hz)
Maximum Input Voltage	780 V AC (peak: 1103 V)
Maximum Rated Voltage to Earth	600 V AC (CAT III), 300 V AC (CAT IV)

Current Input & Accuracy

Compatible Sensors	Hioki AC Clamp-On Sensors (e.g., 9660, 9661, 9669, CT9667 series)
Current Measurement Ranges	500.00 mA to 5.0000 kA AC (sensor dependent)
Current Crest Factor	3.0 or less (at full scale of current range)
Current Basic Accuracy	±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy (at 50/60 Hz)
Phase Accuracy	±0.3 deg (at 50/60 Hz, plus clamp sensor accuracy)

Power Measurement Accuracy

Active Power Basic Accuracy	±0.3% rdg. ±0.1% f.s. + clamp sensor accuracy (at 50/60 Hz, power factor = 1)
Effect of Power Factor	±1.0% rdg. or less (at power factor = 0.5, lag/lead)
Temperature Coefficient	±0.03% f.s. / °C or less
Effect of Common Mode Voltage	Within ±0.2% f.s. (600 V AC, 50/60 Hz, between voltage input terminal and case)

Data Logging & Recording

Recording Interval	1, 2, 5, 10, 15, 30 seconds; 1, 2, 5, 10, 15, 30, 60 minutes
Internal Memory	Available for saving setting configurations and system data
External Storage Compatibility	SD Card up to 2 GB, SDHC Card up to 32 GB
Maximum Recording Period	1 year (based on interval and SD card capacity)
File Formats	CSV format (binary for internal processing)

Display & User Interface

Display Type	3.5-inch TFT color LCD
Display Resolution	320 × 240 dots (QVGA)
Display Refresh Rate	Approx. 0.5 seconds (except when accessing SD card or USB)
Language Support	English, Japanese, Chinese (Simplified)
Measurement Screen Views	Value, Trend, Vector, Harmonic list/graph (PW3360-21 only)

Interfaces & Connectivity

USB Interface	USB 2.0 High Speed, Mini-B connector (for PC communication, data download)
SD Card Slot	1 × SD standard slot (SDHC compatible)
LAN Interface	10BASE-T/100BASE-TX × 1 (RJ-45 connector)
LAN Protocols	TCP/IP, HTTP server, FTP server, FTP client, Modbus TCP

Power Supply & Battery

AC Adapter Supply Range	100 V to 240 V AC (50/60 Hz)
Battery Option	PW9002 Battery Pack (NiMH, 7.2 V, 2700 mAh)
Battery Charging Time	Approx. 6 hours and 10 minutes (with power off)
Continuous Battery Operating Time	Approx. 8 hours (backlight off)
Power Consumption (Maximum)	40 VA (including AC adapter), 3 VA (battery only)

Environmental & Safety

Operating Humidity Range	80% RH or less (non-condensing)
Storage Temperature Range	-10 °C to 60 °C
Storage Humidity Range	80% RH or less (non-condensing)
Maximum Operating Altitude	2000 m (6562 ft) above sea level
Safety Standards	EN 61010
EMC Standards	EN 61326 Class A
Measurement Category	CAT III 600 V (Anticipated transient overvoltage: 6000 V)

Physical Characteristics

Weight with Battery	Approx. 830 g (including PW9002 Battery Pack)
Weight without Battery	Approx. 550 g

Pulse Input

Pulse Input Channels	1 channel
Pulse Input Signal Type	No-voltage contact, open collector, or voltage pulse (High: 2.0 V to 45 V, Low: 0 V to 0.5 V)
Pulse Input Maximum Frequency	5 kHz
Pulse Input Minimum Pulse Width	100 µs (for both high and low levels)

Measurement Specifications

Measurement Method	Simultaneous digital sampling, PLL synchronization or fixed clock (50 Hz / 60 Hz)
A/D Conversion Resolution	16-bit
Sampling Frequency	10.24 kHz
PLL Synchronization Frequency Range	45 Hz to 66 Hz
Frequency Measurement Range	45.0 Hz to 66.0 Hz
Frequency Measurement Accuracy	±0.2% rdg. ±1 dgt.
Power Factor Measurement Range	-1.000 (lead) to 0.000 to 1.000 (lag)

General & Clock

Clock Accuracy	Within ±0.3 s/day (at 25°C, with power on)

Safety & Compliance

Dielectric Strength	4.29 kV AC (50/60 Hz, 1 min, between voltage input terminals and case/interfaces)
Insulation Resistance	100 MΩ or more (500 V DC, between voltage input terminals and case/interfaces)
Pollution Degree	2

General Specifications

Clock Backup Battery Life	Approx. 10 years (at 23°C, reference value)
Display Power Saving Mode	1 to 60 min (user-selectable, turns display off during inactivity)

Measurement Performance

Leakage Current Measurement Ranges	50.000 mA AC, 500.00 mA AC, 1.0000 A AC, 5.0000 A AC (with compatible leakage current clamp sensors)
Accuracy Guarantee Period	1 year
Accuracy Guarantee Temperature and Humidity	23°C ± 5°C, 80% RH or less

TECHNOLOGY

Clamp-on Power Logging / Electrical Power Analysis

APPLICATIONS

Energy auditing, power consumption logging, demand monitoring, and basic harmonic analysis