HIOKI

POWER QUALITY ANALYZER PQ3100

NEW Preview

instrumentos de medida

Circuit management

Record power quality on the utility grid

Equipment malfunctions

Analyze issues with power supplies

DC Power

Measure AC/DC power

Quick and Simple Power Quality Testing

Record and analyze power supply issues with a single instrument

Easy wiring and configuration. Dependable results.

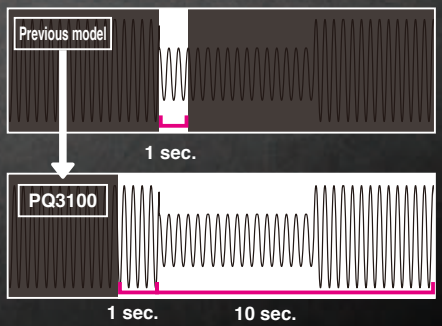
Settings are a breeze with QuickSet

Launch QuickSet to navigate everything from connection procedures to wiring checks and measurement settings on the instrument's screen.

CE

External power supply not required

The PQ3100 powers all sensors, eliminating the need to use AC adapters. Flexible current sensors provide a convenient way to make measurements in tight spaces, including power supply circuits with double and triple wiring.



Complete recording of normal recovery

Where legacy models only recorded post-anomaly waveforms for 1 sec., the PQ3100 extends recordings to 10 sec. The ability to also record 1 sec. before the anomaly occured is useful when you need to analyze waveform characteristics before and after the event.

Comparison of PQ3100 and PW3198 specifications

*The PW3198 is the advanced version of the PQ3100. Special features: PQ3100

Model		PQ3100	PW3198
AC/DC		Voltage, current : ch1, ch2, ch3, ch4 / power : ch1, ch2, ch3	
Fundamental frequency		DC/ 50 Hz/ 60 Hz	DC/ 50 Hz/ 60 Hz/ 400 Hz
Measurement lines		1-phase/ 2-wire, 1-phase/ 3-wire, 3-phase/ 3-wire, 3-phase /4-wire + Ch. 4	
Voltage input	Number of channels	4 U4: Not isolated	4 U4: Isolated from U1 to 3
	Maximum terminal-to-ground rated voltage	1000 V (measurement category III) 600 V (measurement category IV)	600 V (measurement category IV)
Current input	Number of channels	4	4
	Power supply for sensors	Yes	n/a
Measurement parameters	Voltage	1/2 RMS value (half-wave offset wave calculation), RMS value, waveform peak, unbalance rate (Voltage DC), frequency (1 wave/ 200 ms/ 10 sec.)	
		Crest factor	n/a
	Current	Inrush current (half-wave), RMS value, waveform peak, unbalance rate (reverse phase/forward phase), K factor, Current DC	
		1/2 RMS value (half-wave offset wave calculation), crest factor	n/a
	Power	Active power, reactive power, apparent power, power factor, displacement power factor, active energy, reactive energy	
		Apparent energy, electrical charges	n/a
	Flicker	Support for flicker measurement planned with a future firmware update.	Pst, Plt, ΔV10 (simultaneous measurement of 3 channels)
	Harmonics	0th order (DC) to 50th order, voltage/current/power, phase angle (voltage/current), voltage/current phase difference, total harmonic distortion ratio (voltage/current)	
	Inter-harmonics	0.5th order to 49.5th order, voltage/current	
	High-order harmonics	n/a	2 k to 80 kHz

Model		PQ3100	PW3198
Time-series measurement	Recording interval	Max. 1 year	Max. 35 days with repeat function off Max. 55 weeks (about 1 year) with repeat function on
	Recording interval time	200 ms/600 ms/150 cycles (with 50 Hz input)/1/2/5/10/15/30 sec. to 2 h	150 cycles (with 50 Hz input) 1/3/15/30 sec. to 2 h
Event measurement	Maximum number of recordable events	9999 events × 365 days of repeat operation	1000 events × 55 repeats
	Event statistical processing	Display of the number of events per day by event type (Support for event statistics planned with a future firmware update.)	n/a
	Waveform acquisition: Before event	Max. 1 sec.	n/a
	Waveform acquisition: At event	Yes (200 ms)	Yes (200 ms)
	Waveform acquisition: After event	Max. 10 sec.	Max. 1 sec. (with series of events)
Event parameters	Transient overvoltage	Limited (200 kS/s, 2.2 kV)	Yes (2 MS/s, 6 kV)
	Voltage swells, dips, and outages	Yes	Yes
	Frequency fluctuations	Yes	Yes
	Inrush current	Yes	Yes
	RMS value	n/a	Yes
	Voltage/current waveform peak	n/a	Yes
	Comparison of voltage waveforms	n/a	Yes
	Harmonics	THD only	Yes
	Unbalance rate	n/a	Yes
	Power	n/a	Yes
Settings	Setting aid	QuickSet	Simple Setting feature
Operating temperature and humidity		-20°C to 50°C (-4°F to 122°F), 80% RH	0°C to 50°C (32°F to 122°F), 80% RH
IEC 61000-4-30 standard compliance		Class S	Class A

Specifications

(Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

Input specifications	Current range (representative sensor)	Load current	CT7044, CT7045, CT7046: 50.000 A/500.00 A/5.0000 kA
			CT7126: 500.00 mA/5.0000 A/50.000 A
			CT7136: 5.0000 A/50.000 A/500.00 A
		Leakage current	CT7116: 50.000 mA/500.00 mA/5.0000 A
	Basic accuracy (50/60 Hz)		Voltage RMS values: ±0.2% of nominal voltage
			Current RMS values: ±0.1% rdg. ±0.1% f.s. + current sensor accuracy
			Active power: ±0.2% rdg. ±0.1% f.s. + current sensor accuracy
Basic specifications	Interfaces		SD memory card, LAN (HTTP server function), USB, RS-232C, external control
	Display	Display hardware	6.5-inch color TFT (640 × 480 dot)
		Display language	Japanese/English/Chinese (simplified/traditional)/Korean/German/French/Italian/Spanish/Turkish
	Power supply		Z1002 AC Adapter (100 to 240 V AC, 50/60 Hz), Z1003 Battery Pack (Ni-MH, 4500 mAh)
	Continuous operating time (battery power)		Approximately 6 h (after full charge, continuous operation, with LCD backlight auto-off enabled)
	Time accuracy		Within ±0.5 sec./day (with instrument powered on, -20°C to 50°C (-4°F to 122°F))
	External dimensions and mass		W 300 × H 211 × D 68 mm (W 11.81 × H 8.31 × D 2.68 in), 2.5 kg (88.2 oz) with Z1003 Battery Pack installed
	Product warranty		3 years

Complete Package

POWER QUALITY ANALYZER PQ3100

Model No. (Order Code): **PQ3100**

Accessories

- Voltage Cord L1000-05 × 1 set*
- AC Adapter Z1002 × 1
- Battery Pack Z1003 × 1
- USB cable (length: 1 m) × 1
- User's manual and measurement guide × 1 each
- PQ One (application software on CD-R) × 1
- Spiral tube × 5
- Color spiral tubes (red, blue, yellow) × 2 each
- Strap × 1

*Set contents: 5 alligator clips (black, red, yellow, green, gray × 1 each), 5 cords (3 m; banana clip to banana clip; black, red, yellow, green, gray × 1 each), 5 spiral tubes for organizing cords

Current measurement options*	
AC Current Sensor CT7126	60 A rating, ø15 mm (0.59 in)
AC Current Sensor CT7131	100 A rating, ø15 mm (0.59 in)
AC Current Sensor CT7136	600 A rating, ø46 mm (1.81 in)
AC Flexible Current Sensor CT7044	6000 A rating, ø100 mm (3.94 in)
AC Flexible Current Sensor CT7045	6000 A rating, ø180 mm (7.09 in)
AC Flexible Current Sensor CT7046	6000 A rating, ø254 mm (10.00 in)
AC Leak Current Sensor CT7116	6 A rating, ø40 mm (1.57 in)
AC/DC Auto-zero Current Sensor CT7731	100 A rating, ø33 mm (1.30 in)
AC/DC Auto-zero Current Sensor CT7736	600 A rating, ø33 mm (1.30 in)
AC/DC Auto-zero Current Sensor CT7742	2000 A rating, ø55mm (2.17 in)
Conversion Cable L9910 (BNC/PL14)	Adapter for BNC sensors

Voltage measurement options
9804-01 Magnetic Adapter (Red × 1, replacement for voltage cord tip)
9804-02 Magnetic Adapter (Black × 1, replacement for voltage cord tip)
9243 Grabber Clip
L1020 Outlet Input Cord

Other options
Z4001 2GB SD Memory Card
Z4003 8GB SD Memory Card
9637 RS-232C Cable
9542 LAN Cable

PQ3100 Package

Model No. (Order Code): **PQ3100-91**
CT7136 × 2
SD Memory Card (2 GB)
CARRYING CASE

Model No. (Order Code): **PQ3100-92**
CT7136 × 4
SD Memory Card (2 GB)
CARRYING CASE

Model No. (Order Code): **PQ3100-94**
CT7045 × 4
SD Memory Card (2 GB)
CARRYING CASE

*New sensors use a different connector than legacy models. The Conversion Cable L9910 is required in order to use legacy models.

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