

# HIOKI

## POWER QUALITY ANALYZER PQ3198, PQ3100



IEC61000-4-30 Ed. 3 Class S



**Ver 2.00**

Newly Added Functions

Now IEC61000-4-30 Ed. 3 Class A compliant!\*

### Investigate power characteristics and analyze the causes of problems

Exceptional ease of use and international standard-compliant reliability



\*The new software update to V.2.00 now makes  
the device compliant to the IEC61000-4-30 standard.

**Includes  
PQ ONE**  
Analytical  
Software

- Extensive statistical analysis
- EN50160
- IEEE519 TDD
- GB Power Quality Statistics Report

## High-precision, wideband, broad-dynamic-range measurement

The PQ3198 delivers the high-end specifications and high reliability needed to capture the full range of power anomalies and analyze the underlying data with a high degree of precision.

### International standard IEC 61000-4-30 Ed. 3 Class A compliant



The PQ3198 complies with the IEC 61000-4-30 Ed. 3 Class A standard. As a result, it can perform standard-mandated measurement tasks such as gapless, continuous calculation; detection of events such as swells, dips, and interruptions; and time synchronization using GPS (optional).

#### Basic measurement accuracy (50/60 Hz)

Voltage	$\pm 0.1\%$ of nominal voltage
Current	$\pm 0.1\% \text{ rdg} \pm 0.1\% \text{ FS} + \text{current sensor accuracy}$
Power	$\pm 0.2\% \text{ rdg} \pm 0.1\% \text{ FS} + \text{current sensor accuracy}$
Frequency	$100 \text{ ms} \pm 0.001 \text{ Hz} \pm 10 \text{ s} \pm 0.001 \text{ Hz}$

Thanks to basic measurement accuracy that is among the best of any instrument in the industry, the PQ3198 offers high-precision measurement without the need to switch voltage ranges.

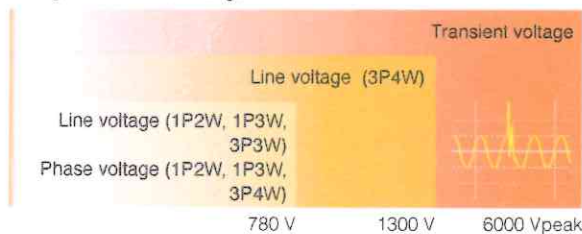
#### Class A

Part of the IEC 61000-4-30 international standard, Class A defines power quality parameters, accuracy, and standard compliance to facilitate the comparison and discussion of measurement results from different instruments.

### High-voltage, wideband performance

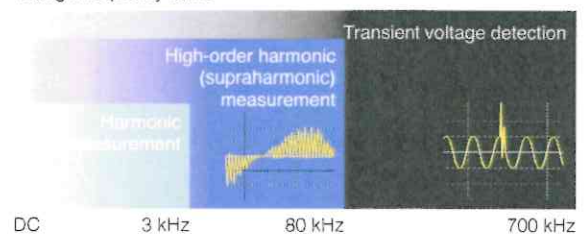
The PQ3198 can measure transient voltages of up to 6000 V lasting as little as 0.5  $\mu\text{s}$  (2 MS/s). It can also measure high-order harmonic (supraharmonic) components from 2 kHz to 80 kHz. As inverters enter into widespread use, malfunctions and failures in that frequency band are becoming more common.

#### Voltage measurement range



The PQ3198 can measure voltages of all magnitudes using a single range.

#### Voltage frequency band



The PQ3198's wideband capability extends from DC voltages to 700 kHz.

### Two-circuit measurement

Since the PQ3198's fourth voltage channel is isolated from its first three voltage channels, the instrument can measure power and efficiency across two separate circuits.

#### Applications

- Simultaneous measurement/monitoring of the primary (AC) and secondary (DC) sides of an EV rapid charger
- Simultaneous measurement/monitoring of the primary (DC) and secondary (AC) sides of a solar power system
- Simultaneous measurement of the primary (DC) and secondary (AC) sides of a DC/AC (3-phase) inverter
- Simultaneous measurement of the primary and secondary sides of a UPS
- Simultaneous measurement of power supply (AC) and control (DC) circuits
- Simultaneous measurement of a 3-phase line and a ground line
- Simultaneous measurement of a neutral line to detect ground

\*For DC measurement, an AC/DC Auto-Zero Current Sensor is required



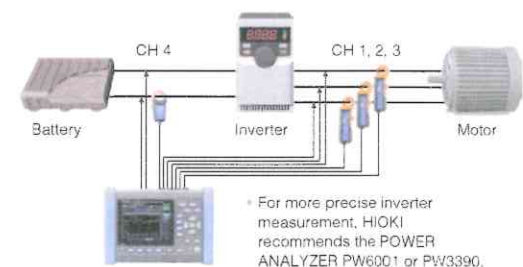
### 400 Hz line measurement

In addition to 50/60 Hz, the PQ3198 can measure a line frequency of 400 Hz.



### Simple inverter measurement

The PQ3198 can measure the secondary side of inverters with a fundamental frequency of 40 to 70 Hz and a carrier frequency of up to 20 kHz. It can also measure the efficiency of DC/3-phase inverters.



### GPS time synchronization

The GPS OPTION PW9005 can be used to correct the instrument's internal time to UTC standard time. This capability eliminates any time difference between instruments to allow analysis that preserves the simultaneity of phenomena measured with multiple instruments.

