

# Precision Power Scope PX8000

The PX8000 is a power meter capable of measuring transient power, while featuring a precision power calculation equivalent to a power analyzer, and a high frequency signal values measurement and waveform measurement function usually provided by an oscilloscope. The PX8000 offers significantly enhanced functions and performance as the successor to the previous PZ4000, and contributes to more efficient evaluation in research and development for energy-saving electric and electronic apparatuses.



## MAJOR FEATURES

- High-speed and isolated measurement (100 MS/s, 1 kV direct input)

The PX8000 offers a 12-bit resolution while achieving a maximum sampling rate of 100 MS/s, 20 times faster than the previous model. It can also directly input up to 1000 Vrms. This enables it to capture high speed switching waveforms, and to measure the power of high frequency equipment, both of which were difficult with the previous model.
- Transient power measurement when starting up or radically changing in input or output of apparatuses

Although conventional power analyzers calculate average power at every specific interval, the PX8000 can analyze power changes in each cycle by saving measured waveform data in the internal memory. In particular, it can calculate the averages of drastically fluctuating transient power during start up, or significant changes in input or output of apparatuses, by specifying a desired interval using cursors.
- Providing a compensating function for phase difference

When using external sensors such as a through type current transformer (CT) for measurement, the phase of the input signal from it slightly changes, being affected by the internal circuit of the sensor, which impacts on measurement accuracy. However, the PX8000 is equipped with a function compensating the phase difference, or the transmission time difference, in order to improve measurement accuracy depending on time difference.
- Providing a waveform measurement function

The PX8000 is equipped with a waveform measurement

function equivalent to that provided by a waveform monitoring instrument. In addition to twenty-four automatic calculation functions for waveform parameters, a memory which can archive up to 1000 past measured waveform data, and a statistical calculation processing function are provided.

## MAJOR SPECIFICATIONS

Sampling rate	Max. 100 MS/s
Voltage input	Max. 1000 Vrms (direct input)
Current input	Max. 5 Arms (direct input) Max. 10 Vrms (input via a current sensor)
Frequency band (-3 dB)	Direct voltage input 20 MHz Direct current input 10 MHz Input via a current sensor 20 MHz
The number of power inputs	Max. 4 (the number of pairs of voltage and current modules)
The number of sensor signal inputs	Max. 6 (the number of voltage inputs to AUX modules, each of which has 2 CH)
A/D resolution	12 bits
Record length	Max. 100 M points/CH (with /M2 option)
Time axis resolution setting range	100 ns/div to 2 min/div
The number of waveform parameter calculations within a specified cycle	Max. 8 calculations within max. 4 M points
The number of waveform parameters automatic calculations	Max. 24
The number of user defined functions	Max. 20 (calculation formulas can be set)
Display	10.4 inch color TFT liquid crystal
External dimensions	355 (W) × 259 (H) × 180 (D) mm
Weight	Approx. 6.5 kg (excluding modules and options)

## APPLICATION FIELDS AND USAGE

- Used in R&D or evaluation departments of products such as energy-saving equipment

Examples of the products are: charging equipment, including wireless for electric vehicles (EV) or plug-in for hybrid vehicles (PHV); inverters and components for their booster circuits; energy-saving consumer electrical appliances or office automation equipment which apply intermittent control; and power converters for solar or wind power generation.
- Measuring power and waveform parameters, including during a transient state

Examples of the measured parameters include power consumption, power loss, and power efficiency during the development of devices applying the latest power electronics technologies.

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