




# POWER METERS

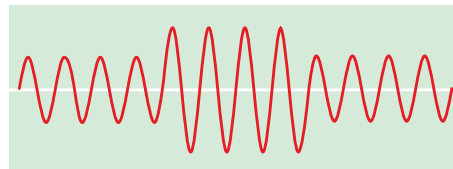
Selection Guide of Power Meters

	Power Meter	Power Quality Analyzer	Loggers		
	6305	6315	5010	5020	5050
Appearance					
Voltage [V]	✓	✓	✓	✓	✓
Current [A]	✓	✓	✓	✓	✓
or Resistive leakage current [mA]	–	–	–	–	✓
Power [W]	✓	✓	–	–	–
Frequency [Hz]	✓	✓	–	–	✓
Energy [Wh]	✓	✓	–	–	–
Harmonics	–	✓	–	–	–
Power Quality	Swell	✓	–	✓	✓
	Dip	–	–	✓	✓
	Interruption	–	–	✓	✓
	Transients	–	–	–	✓
	Inrush Current	–	✓	✓	✓
Memory	SD card	SD card	Inner memory	Inner memory	SD card
Number of Input Channel	6ch (V3, A3)	7ch (V3, A4)	3ch	3ch	5ch (V1, A4)

## Power Quality

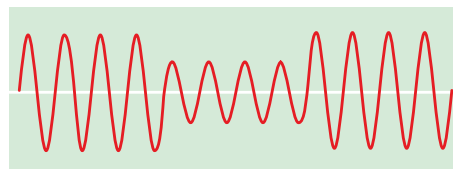
### ● Swell

Swell is a instantaneous voltage increase, most of the time originated by upstream power line failure or switching OFF large load or switching ON large capacitor.



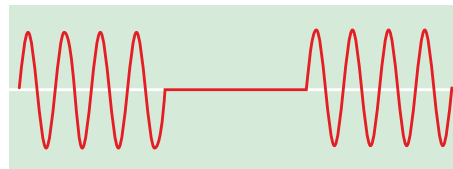
### ● Dip

Dip, as the opposite of a swell, is a instantaneous voltage decrease, most of the time caused by switching ON large load e.g. motors or by downstream power line failure.



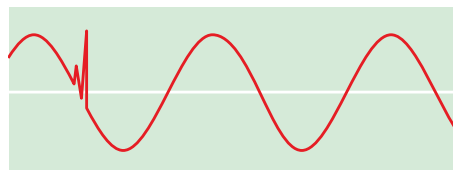
### ● Interruption

Interruption is a power line cut-off from any source of supply. It can be caused by a fault in a power line, which causes switch gear to open.



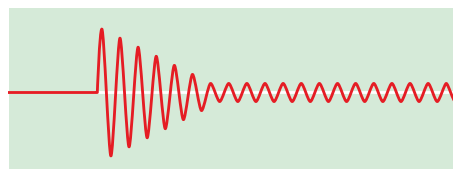
### ● Transients/Over Voltage (Impulse)

Transient is a very fast and momentary voltage increase that can seriously damage devices connected to a power line. It may be caused by electrical switching events such as instable contacts of relays, tripping of breakers but also by lightning. KEW 6315 can catch Transients from 24  $\mu$ s.



### ● Inrush Current

Inrush current is a surge current that happens when motors, large or low-impedance loads are switched ON. Then the current will stabilize as soon as the load has reached normal working conditions.



# POWER QUALITY ANALYZER

KEW 6315

True RMS USB Bluetooth External Power Supply



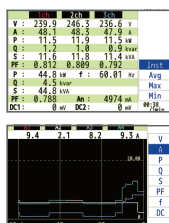
- Simultaneous Power & Power quality measurements  
Power/Harmonics/Waveform/Power quality are recorded at all CHs. (Voltage:3ch,Current 4ch)
- Helpful support functions  
Quick Start Guide,Wiring check and Sensor detection for easy and reliable measurement
- Measurement with high accuracy  
Guaranteed accuracy:  $\pm 0.3\% \text{rdg(energy)}$ ,  
 $\pm 0.2\% \text{rdg(voltage/current)}$   
Complies with the International Standard  
IEC 61000-4-30 Class S and the European Standard EN50160
- Energy consumption check on site  
Trend and demand graphs for easy recognition. TFT color display with high resolution.
- IEC 61010-1 CAT IV 300V,CAT III 600V,CAT II 1000V

		6315
Wiring connections		1P2W, 1P3W, 3P3W, 3P4W
Measurements and parameters		Voltage, Current, Frequency, Active power, Reactive power, Apparent power, Active energy, Reactive energy, Apparent energy, Power factor (cos $\phi$ ), Neutral current, Transients/ Over Demand, Harmonics, Quality(Swell/Dip/Interruption, voltage, Inrush current, Unbalance rate), Phase advance condenser, IEC Flicker
Other functions		Digital output function, External communication function,Scaling function
Voltage [RMS]	Range	600.0/1000V
	Accuracy	$\pm 0.08\%$ of nominal voltage (sine wave, 40 - 70Hz)
	Allowable input	1 - 120% of each range (rms). 200% of each range (peak)
	Display range	0.15 - 130% of each range
	Crest factor	3 or less
	Sampling speed	24 $\mu$ s
Current [RMS]	Range	8128(50A type): 5000mA/50.00A/AUTO 8127(100A type): 10.00/100.0A/AUTO 8126(200A type): 20.00/200.0A/AUTO 8125(500A type): 50.00/500.0A/AUTO 8124/8130(1000A type): 100.0/1000A/AUTO 8146/8147/8148(10A type): 1000mA/10.00A/AUTO 8129(3000A type): 300.0/1000/3000A
	Accuracy	$\pm 0.2\% \text{rdg} \pm 0.2\% \text{f.s.} + \text{accuracy of clamp sensor}$ (sine wave, 40 - 70Hz)
	Allowable input	1 - 110% of each range (rms). 200% of each range (peak)
	Display range	0.15 - 130% of each range
	Crest factor	3 or less
Active power	Accuracy	$\pm 0.3\% \text{rdg} \pm 0.2\% \text{f.s.} + \text{accuracy of clamp sensor}$ (power factor 1, sine wave, 40 - 70Hz)
	Influence of power factor	$\pm 1.0\% \text{rdg}$ (reading at power factor 0.5 against power factor 1)
Frequency meter range		40 - 70Hz
Power source (AC Line)		AC100 - 240V/50 - 60Hz/7VA max
Power source (DC battery)		LR6 or Ni-MH(HR15-51) $\times$ 6 Battery life approx. 3h (LR6,Backlight OFF)
Memory card		SD card (2GB)
PC communication interface		USB Ver2.0, Bluetooth Ver2.1+EDR Class2
Display		320 $\times$ 240(RGB)Pixel, 3.5inch color TFT display
Temperature and humidity range		23 $\pm$ 5 $^{\circ}$ C less than 85% RH (without condensation)
Operating temperature and humidity range		0 - 45 $^{\circ}$ C less than 85% RH (without condensation)
Storage temperature and humidity range		-20 - 60 $^{\circ}$ C less than 85% RH (without condensation)
Applicable Standards		IEC 61010-1 CAT IV 300V, CAT III 600V, CAT II 1000V Pollution degree 2, IEC 61010-2-030,IEC 61010-031, IEC 61326,EN50160 IEC 61000-4-30 Class S, IEC 61000-4-15, IEC 61000-4-7
Dimension/Weight		175(L) $\times$ 120(W) $\times$ 68(D) mm/approx 900g
Accessories		7141B(Voltage test lead), 7170(Power cord), 7219(USB cable), 8326-02(SD card 2GB), 9125(Carrying case),Input terminal plate $\times$ 6, KEW Windows for KEW6315(software), Quick manual, LR6(AA) $\times$ 6

## Simultaneous Power & Power quality measurements

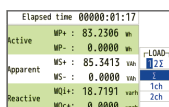
W/Wh

Power & Energy



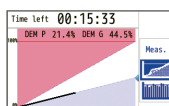
Instantaneous value

- Measures instantaneous / average / min / max for voltage, current, active / reactive / apparent power, PF (cos $\phi$ ) and line frequency all on one screen.
- Trend of all main parameters and customized Zoom functions.



Integration value

- The display will list the active / reactive / apparent energy in total and for each phase consumed (or generated in case of co-generation like solar panels, etc).



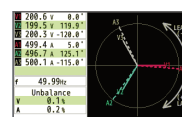
Demand

- To support demand control, present energy usage and estimated value are displayed on a graph while recording max demand value and the occurred time.

Vector

Vector

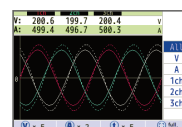
- Can display voltage and current by vector per Ch.



Waveform

Waveform

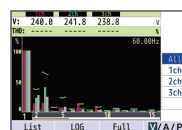
- Displays voltage and current on each Ch by waveform.



Harmonics Analysis

Harmonics Analysis

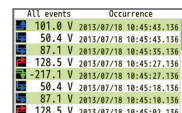
- Graphic display of harmonic components up to 50th order for voltage, current and power.



QUALITY

Event

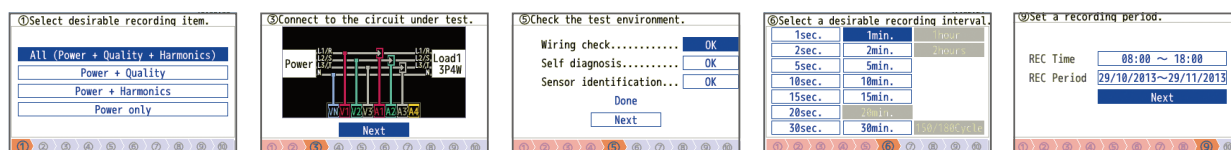
- Measures voltage swells / dips / interruptions / transients and inrush currents that may indicate a weak power distribution system. Such phenomena may damage or reset devices. All necessary data is displayed by pressing one key.



# POWER QUALITY ANALYZER

## Quick Start Guide

One-Touch START/STOP Key for Quick Start Guide providing easy setup guides.



Guide start

Connect to the circuit

Wiring check

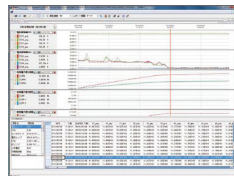
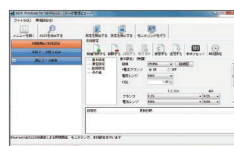
Select interval

Set recording time

Start recording

## Windows software for data analysis and setting via USB port

- Automatic creation of graph and list from recorded data.
- Uniform management of setting and recorded data acquired from multiple devices.
- Data can be expressed in crude oil and CO<sub>2</sub> equivalent values in the report.
- EN50160 report can be generated after survey.

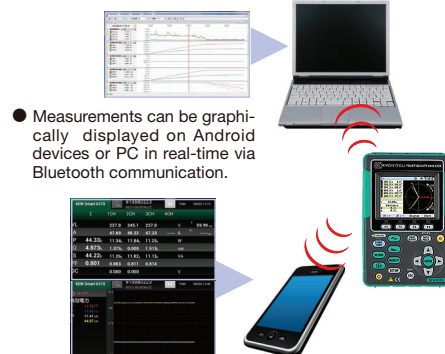


(System requirements)

- OS: Windows® Vista/7/8/10
- Display: XGA (Resolution 1024 × 768 dots) or more
- Hard-disk: Space required 1 Gbyte or more
- Other: With CD-ROM drive and USB port, NET Framework (3.5 or more)

\*Windows® is registered trademark of Microsoft in the United States.

## Real time and Remote measurements



- Measurements can be graphically displayed on Android devices or PC in real-time via Bluetooth communication.

\*Bluetooth is a registered trademark of the Bluetooth SIG, Inc.  
Android is a registered trademark of the Google Inc.

## Optional Accessories

### Load current clamp sensors



### Leakage & Load current clamp



\*8146/8147/8148 can measure up to 10A for use in KEW 6315

### Load current flexible clamp sensors



### Can you close your distribution board door during surveys?

The KEW6315 facilitates safe testing by being extremely compact and with two clever option extras: a magnetic case (9132) for attaching it to the sides of metal enclosures and a power supply adaptor (8312) which takes the power for the instrument from the supply being measured.



## SD card Interface

SD cards up to 2GB can be used

Possible recording time  
When the 2GB of SD is used:

Interval	REC item	
	Power	+Harmonics
1sec	13days	3days
1min	1-year or more	3months
30min	10-year or more	7-year or more

Data of power quality events are not considered to estimate the possible recording time. The max possible time will be shortened by recording such events.

## Set Model



**KEW 6315-01**  
8125(500A) × 3  
Carrying case : 9125



**KEW 6315-03**  
8130(1000A) × 3  
Carrying case : 9135

