

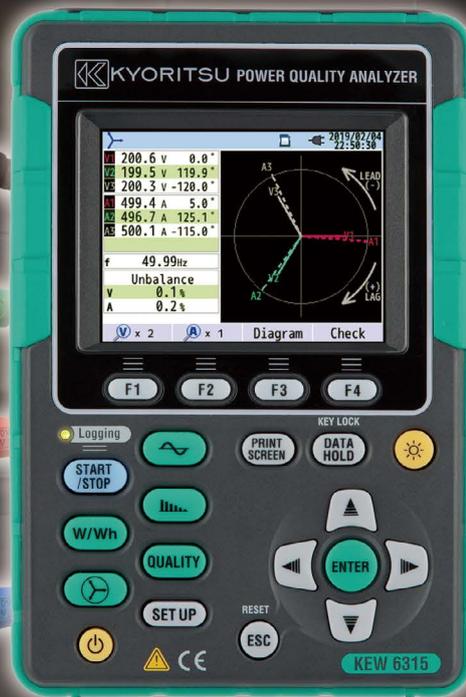


Quality and reliability is our tradition

KYORITSU

POWER QUALITY ANALYZER KEW 6315

**Simultaneous recording of Power & Power Quality measurements,
The perfect tool for Energy Saving and Power Quality control.**



- **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: $\pm 0.3\%rdg$ (energy),
 $\pm 0.2\%rdg$ (voltage/ current)

Complies with the International Standard

IEC 61000-4-30 Class S and the European Standard EN 50160

- **Remote monitoring on PC and Android™ device**

Remote checking of measurement *in real-time* is possible via Bluetooth® communication. Recorded data can be saved in the supplied SD card. EN 50160 report can be generated after measurement by PC software.

- **Various Clamp Current Sensors**

Various types of clamp and flexible sensors are available: from 1000mA range up to 3000A range and Earth leakage measurements

- **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**

KYORITSU ELECTRICAL INSTRUMENTS WORKS, LTD.

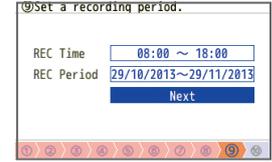
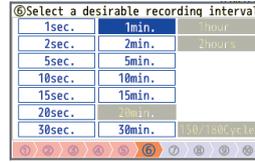
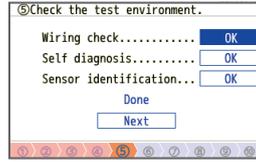
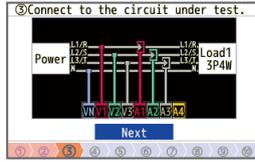
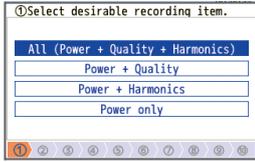
www.kew-ltd.co.jp

Simultaneous recording of all power and power quality with easy operation

START/STOP Quick Start Guide

Easily and securely starts recording

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



W/Wh Power & Energy

Instantaneous value

1ch	2ch	3ch
V: 239.9	246.3	236.6 V
A: 48.1	48.5	47.9 A
P: 11.5	11.9	11.5 kW
Q: 1.2	1.0	0.9 kvar
S: 11.6	11.8	11.4 kVA
PF: 0.812	0.889	0.792
P: 44.8	f: 60.01	Hz
Q: 4.5	kvar	
S: 44.8	kVA	
P: 0.768	An: 4974	W
DCI: 0	DCI: 0	W

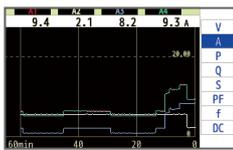
List

V1 INST	P INST
242.3 V	44.8 kW
V2 INST	S INST
246.6 V	44.7 kVA
V3 INST	Q INST
236.8 V	4.2 kvar
f INST	PF INST
59.99 Hz	792

Zoom(8-split)

V1 INST	240.7 V
V2 INST	243.3 V
V3 INST	233.1 V
f INST	59.99 Hz

Zoom(4-split)



Trend

- Measures instantaneous / average / min / max for voltage, current, active / reactive / apparent power, $\cos\theta$ and line frequency all on one screen.
- The recording time for these parameters can be set from 1 second up to 2 hours in several steps.
- Trend of all main parameters and customized Zoom functions.
- Function to define size of capacitor banks of PF correction unit.

Integration value

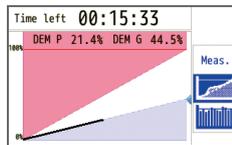
Elapsed time 00:00:01:17	
Active	WP+: 83.2306 Wh
	WP-: 0.0000 Wh
Apparent	WS+: 85.3413 VAh
	WS-: 0.0000 VAh
Reactive	WQi+: 18.7191 varh
	WQi-: 0.0000 varh

- 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).
- The elapsed time is also shown on the same display screen.

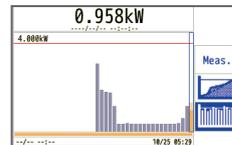
Demand

Time left 00:29:28	
DEM Target	4.000 kW
DEM Guess	3.918 kW
DEM Present	0.069 kW
DEM Max	0.069 kW

Measurement



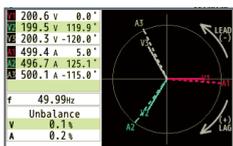
Change in specific period



Demand change

- 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 and Wiring check



Vector



Wiring check

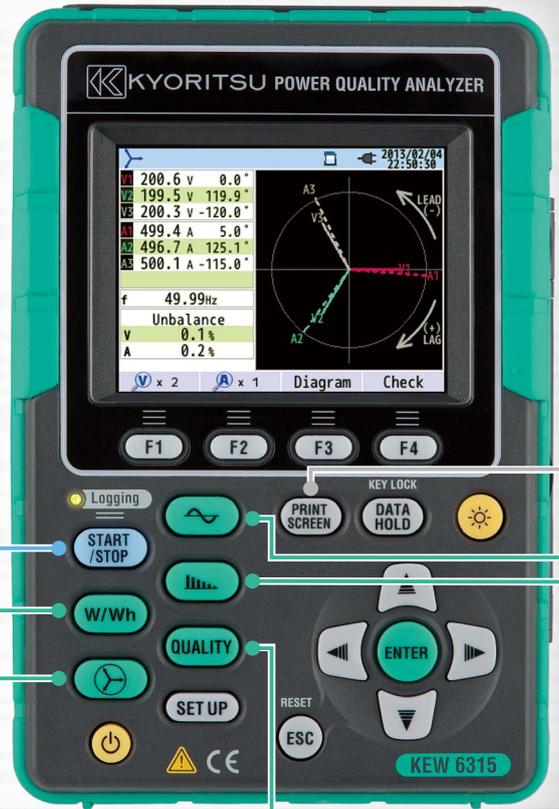


Ideal vector

- Can display voltage and current by vector per CH and also unbalance ratio.
- Wiring check function confirms connection and displays ideal vector (at the lower left corner) according to the selected wiring system, and shows connection errors.

PRINT SCREEN Print Screen

- This function takes a color photo of the display screen and saves it as BMP file. Useful for report creation.



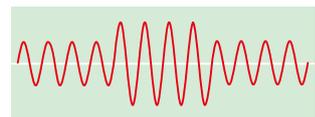
QUALITY Power Quality

Event

All events	Occurrence
101.0 V	2015/07/18 10:45:43.136
50.4 V	2015/07/18 10:45:43.136
87.1 V	2015/07/18 10:45:35.136
128.5 V	2015/07/18 10:45:27.136
127.1 V	2015/07/18 10:45:27.136
50.4 V	2015/07/18 10:45:18.136
87.1 V	2015/07/18 10:45:18.136
128.5 V	2015/07/18 10:45:02.136

Measures voltage swells / dips / interruptions / transients and inrush currents that may indicate a weak power distribution system. Such phenomena may damage or reset devices. KEW 6315 can catch swells / dips / interruptions and inrush currents based on half cycle (10 ms @ 50Hz or 8.3ms @ 60Hz) True RMS. All necessary data is displayed by pressing one key.

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



POWER QUALITY ANALYZER KEW 6315

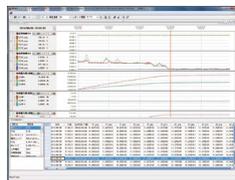
Windows software for data analysis and setting via USB port

- Automatic creation of graph and list from recorded data.
- Centralized management of setting and recorded data acquired from multiple devices.
- Data can be expressed in crude oil and CO₂ equivalent values in the report.

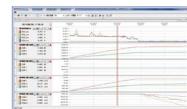
<System requirements>

- OS : Windows® 11/10
- Display : XGA (Resolution 1024×768 dots) or more
- Required hard-disk space: 1 Gbyte or more
- Other : With CD-ROM drive and USB port, .NET Framework (4.6.1 or later)

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



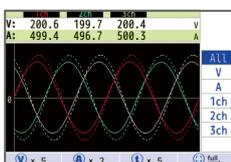
Real-time and remote measurements



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



Waveform



- Displays voltage and current on each Ch by waveform.
- Scales of voltage/current axis and time axis are selectable, and also full-scale function for automatic scaling is available.



Harmonics Analysis



Graph

V	V1	V2	V3	%
1	100.0	100.0	100.0	%
2	16.2	10.5	5.6	%
3	54.7	29.8	48.8	%
4	0.7	3.7	2.4	%
5	11.2	6.5	3.7	%
6	2.1	4.7	0.6	%
7	6.0	1.5	8.9	%
8	0.4	1.5	0.9	%
9	7.9	4.3	4.8	%
10	1.0	0.3	1.0	%

List

- Graphic display of harmonic components up to 50th order for voltage, current and power in total and for each phase.
- List display of harmonic content, RMS value and phase angle of each order.
- Can analyze harmonic currents that may contribute to damage capacitor banks for PF correction, overheating transformers / neutral conductors / cables, unwanted tripping of breakers.



USB Terminal

Digital Output Terminal

- Open Collector Output (1ch)

Analog Input Terminal

- 2ch DC/100mV / 1000mV, 10V. To record additional parameters (e.g. Lux, Temperature, Humidity, etc.)

SD card Interface

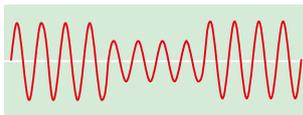
- SD cards up to 2GB can be used
- Possible recording time
When the 2GB of SD is used:

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

Dip

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



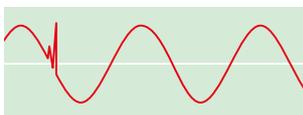
Interruption

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.



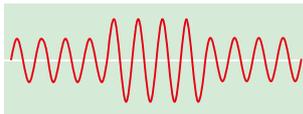
Transients/Over Voltage (Impulse)

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 unstable contacts of relays, tripping of breakers but also by lightning. KEW 6315 can catch Transients from 24 μs.



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.



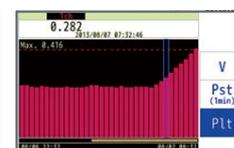
Flicker

Designed to meet IEC 61000-4-15

Flicker is a phenomenon giving an impression of unsteadiness of visual sensation induced by periodic voltage changes caused by fluctuating loads when using: arc furnace, spot welder, crane, excavator, etc.

Pst Calc. ...		
v :	230.0	230.4
Pst :	0.804	1.028
Pst (1min) :	0.804	1.022
MAX :	0.804	1.034
PLT :	0.804	1.027
MAX :	0.804	1.028
f :	59.99 Hz	

List



Trend graph

- Displays Pst (1min.) on a trend graph.

Optional Accessories

Load current clamp sensors

MODEL 8128 MODEL 8127 MODEL 8126 MODEL 8125 MODEL 8124



Leakage & Load current clamp sensors

KEW 8146 KEW 8147 KEW 8148



※8146/8147/8148 can measure up to 10A

Power supply adapter

MODEL 8312



Carrying case with magnet

MODEL 9132



Load current flexible clamp sensors

KEW 8135 KEW 8130 KEW 8133



Before connecting with the sensors KEW 8133 or KEW 8135, confirm that the internal firmware version is later than the one listed in the table below.

MODEL	Firmware version
KEW 8133	V1.50 or later
KEW 8135	V3.00 or later

The latest firmware is available on our website.

Distribution board door can be closed during measurement?

KEW 6315 facilitates safe testing thanks to its extreme compact design and with two attractive optional accessories: a carrying case with magnet (9132) for attaching it to the sides of metal enclosures and a power supply adapter (8312) which takes the power for the instrument from the supply being measured.



Kits



KEW 6315-01

KEW 6315 × 1
MODEL 8125(500A) × 3
Carrying case : MODEL 9125



photo : 6315-03

KEW 6315-03

KEW 6315 × 1
KEW 8130(1000A) × 3
Carrying case : MODEL 9135

KEW 6315-04

KEW 6315 × 1
KEW 8130(1000A) × 4
Carrying case : MODEL 9135

KEW 6315-05

KEW 6315 × 1
KEW 8133(3000A) × 3
Carrying case : MODEL 9135

Specification

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 (cosθ), Neutral current, Demand, Harmonics, Quality (Swell/Dip/Interruption, Transients/Over voltage, Inrush current, Unbalance rate), Capacitance calculation for PF correction unit, Flicker		
Voltage (RMS)	Range 600.0/1000V		
Accuracy	600.0V Range : (sine wave 40 to 70Hz) 10% to 150% against 100V or more of nominal V : Nominal V±0.5% Out of above range : ±0.2%rdg±0.2%f.s. 1000V Range : ±0.2%rdg±0.2%f.s.(sine wave 40 to 70Hz)		
Allowable input	1 to 120% of each range (rms), 200% of each range (peak)		
Display range	0.15 to 130% of each range		
Crest factor	3 or less		
Sampling speed of Voltage transient	24μs		
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	(1000A type)	100.0/1000A/AUTO	
8146/8147/8148	(10A type)	1000mA/10.00A/AUTO	
8130	(1000A type)	100.0/1000A/AUTO	
8133	(3000A type)	300.0/3000A/AUTO	
8135	(50A type)	5000mA/50.00A/AUTO	
Accuracy	±0.2%rdg±0.2%f.s.+accuracy of clamp sensor (sine wave, 40 to 70Hz)		
Allowable input	1 to 110% of each range (rms), 200% of each range (peak)		
Display range	0.15 to 130% of each range		
Crest factor	3 or less		

Active power	Accuracy		±0.3%rdg±0.2%f.s. + accuracy of clamp sensor (power factor 1, sine wave, 40 to 70Hz)
	Influence of power factor		±1.0%rdg (reading at power factor 0.5 against power factor 1)
Frequency meter range	40 to 70Hz		
Power source (AC Line)	AC100 to 240V / 50 to 60Hz / 7VA max		
Power source (DC battery)	Alkaline size AA battery LR6 or Ni-MH (HR15-51)×6 Battery life approx. 3 h (LR6, Backlight OFF)		
Internal memory	FLASH memory (4MB)		
PC card interface	SD card (2GB)		
Communication interface	USB, Bluetooth®		
Display	320×240(RGB)Pixel, 3.5inch color TFT display		
Display update period	1 sec.		
Temperature and humidity range	23±5°C, relative humidity 85% or less(no condensation)		
Operating temperature and humidity range	0 to 45°C, relative humidity 85% or less(no condensation)		
Storage temperature and humidity range	-20 to 60°C, relative humidity 85% or less(no 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, EN 50160 IEC 61000-4-30 Class S, IEC 61000-4-15, IEC 61000-4-7		
Dimension / Weight	175 (L) × 120 (W) × 68 (D) mm / Approx. 900g		
Accessories	7141B (Voltage test lead set), 7170(Power cord[EU]) or 7240(Power cord[UK]), 7219 (USB cable), 8326-02(SD card [2GB]), 9125 (Carrying case for KEW 6315, KEW 6315-01) 9135 (Carrying case for KEW 6315-03, KEW 6315-04, KEW 6315-05), Input terminal plate×6, KEW Windows for KEW6315 (software), Quick manual, Alkaline size AA battery (LR6)×6		
Optional accessories	8124, 8125, 8126, 8127, 8128 (Load current clamp sensor), 8130, 8133, 8135(Flexible clamp sensor), 8146, 8147, 8148(Leakage and Load current clamp sensor), 8312 (Power supply adapter), 9132 (Carrying case with magnet)		

Bluetooth® is a registered trademark of the Bluetooth SIG, Inc.
Android™ is a registered trademark of the Google Inc.

! Safety Warnings : Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely for correct use. Failure to follow the safety rules can cause fire, trouble, electrical shock, etc. Therefore, make sure to operate the instrument on a correct power supply and voltage rating marked on each instrument.

■ For inquiries or orders :



**KYORITSU ELECTRICAL
INSTRUMENTS
WORKS, LTD.**

2-5-20, Nakane, Meguro-ku, Tokyo, 152-0031 Japan
Phone:+81-3-3723-0131
Fax:+81-3-3723-0152

www.kew-ltd.co.jp

