Power Quality Analyser

The perfect tool for energy saving and power quality control!

TRUE RMS

Technical Datasheet

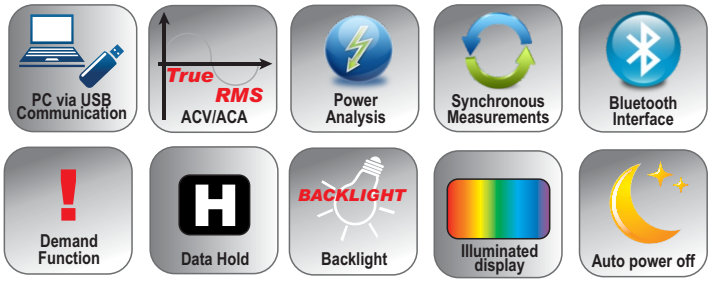
K6315

- **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: ±0.3%rdg (energy), ±0.2%rdg (voltage/ current)
  Complies with the International Standard IEC 61000-4-30 Class S and the European Standard EN50160
- **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.
  EN50160 report can be generated after survey 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**

Specifications

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) 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	± 0.2% rdg ± 0.2%f.s.(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 of Voltage transient	2.4μ s		
Current (RMS)			
Range	8128	(50A type)	: 5/50A/AUTO
	8127	(100A type)	: 10/100A/AUTO
	8126	(200A type)	: 20/200A/AUTO
	8125	(500A type)	: 50/500A/AUTO
	8124/8130	(1000A type)	: 100/1000A/AUTO
	8146/8147/8148	(10A type)	: 1/10A/AUTO
	8129	(3000A type)	: 300/1000/3000A
Accuracy	± 0.2% rdg ± 0.2%f.s.+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	± 0.3% rdg ± 0.2%f.s. + accuracy of clamp sensor (power factor 1, sine wave, 40~ 70Hz)		
Influence of power factor	± 1.0% rdg (reading at power factor 0.5 against power factor 1)		

Frequency meter range	40 ~ 70Hz
Power supply(AC Line)	AC100 ~ 240V/50 ~ 60Hz/7VA max
Power supply(DC battery)	Alkaline size AA battery LR6 or Ni-MH(HR15-5Y)6 Battery life approx. 3 h (LR6, Backlight OFF)
Internal memory	FLASH memory (4MB)
PC card interface	SD card (2GB)
PC communicationinterface	USB Ver2.0, Bluetooth Ver2.1+EDR Class2
Display	320× 240(RGB)Pixel, 3.5inch color TFT display
Display update period	1 sec
Temperature and humidity range	23 ± 5℃, less than 85% RH (without condensation)
Operating temperature and humidity range	0 ~ 45℃, leaa than 85% RH (without condensation)
Storage temperature and humidity range	-20 ~ 60℃, less than 85% RH (without condensation)
Applicable Standards	IEC61010-1, CATIV 300V, CATIII 600V, CATII 1000V Pollution degree 2 IEC61010-2-030, IEC61010-031, IEC61326, EN50160 IEC61000-4-30 Class S, IEC61000-4-5, IEC61000-4-7
Dimension/Weight	175(L) x 120(W) x 68(D)mm / approx 900g
Included accessories	7141B (Voltage test lead), 7170 (Power cord), 7219 (USB cable),8326-02 (SD card 2GB), 9125 (Carrying case for KEW6315) 9135 (Carrying case for KEW6315-03), Input terminal plate 6, KEW Windows for KEW6315 software), Calibration Certificate Quick manual, Alkaline size AA battery (LR6 x 6)
Optional accessories	8124, 8125, 8126, 8127, 8128 (Load current clamp sensor), 8129, 8130 (Flexible clamp sensor), 8146, 8147, 8148 (Leakage and Load current clamp sensor), 8312 (Power supply adapter), 9132 (Magnetic carrying case)



Free Android software "KEW smart 6315" is available on "Google Play Store" (*)
Supporting Android ver. 2.2 - 4.4
WVGA (800 × 480) resolution or higher

IEC 61010-1 CAT IV 300V

IEC 61010-1 CAT III 600V

IEC 61010-1 CAT II 1000V

LIFETIME WARRANTY

Series

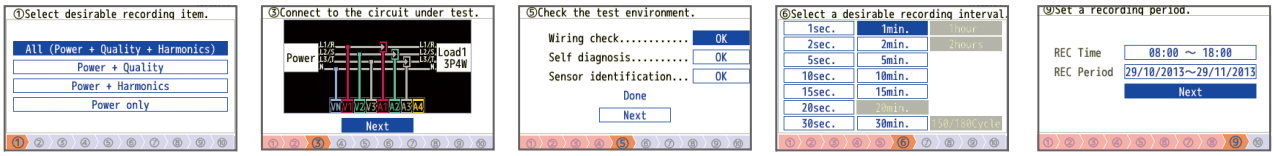
National Contact Number: 08 61 62 5678 • E-mail: sales@major-tech.com • www.major-tech.com

Easy-to-use settings to simultaneous power energy and power quality recordings

START /STOP Quick Start Guide

Easily and securely starts recording

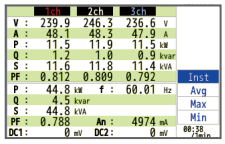
One-Touch START/STOP Key for Quick Start Guide providing easy setup guides.



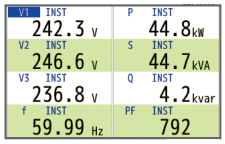
Guide start → Connect to the circuit → Wring check → Select interval → Set recording time → Start recording

W/Wh Power & Energy

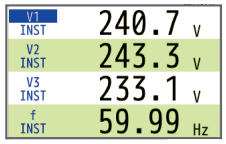
Instantaneous value



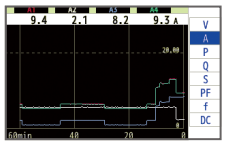
List



Zoom 8-split dz



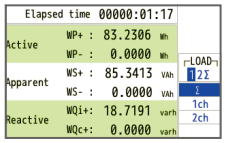
Zoom 4-split dz



Trend

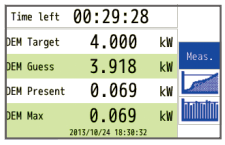
- Measures instantaneous / average / min / max for voltage, current, active / reactive / apparent power, PF (cosfi) and line frequency all on one screen.
- The recording time for these parameters can be set from 1 second up to 2 hours in several steps.
- Trend of all main parameters and customized Zoom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

Integration value

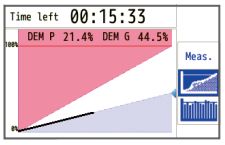


- The display will list the active / reactive / apparent energy in total and for each phase consumed (or generated in case of co-generation like solar panels, etc).
- The elapsed time is also shown on the same display screen.

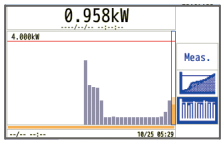
Demand



Measurement



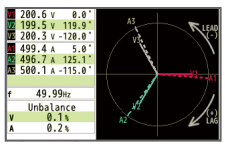
Change in specific period



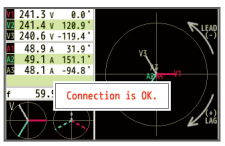
Demand change

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

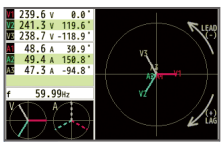
Vector and Wiring check



Vector



Wiring check



Ideal vector

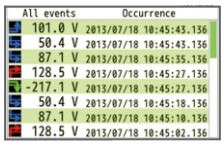
- Can display voltage and current by vector per CH and also unbalance ratio.
- Wiring check function confirms connection and displays ideal vector (at the lower left corner) according to the selected wiring system, and shows connection errors.

PRINT SCREEN Print Screen

- This function "takes a color photo" of the display screen and saves it as BMP file useful for reports.

QUALITY Power Quality

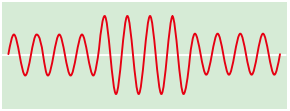
Event



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

- Swell

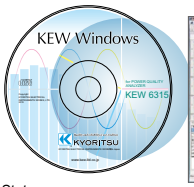
Swell is a instantaneous voltage increase, most of the time originated by upstream power line failure or switching OFF large load or switching ON large capacitor.

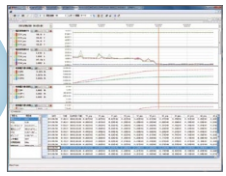


Helpful support functions

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_2 equivalent values in the report.





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

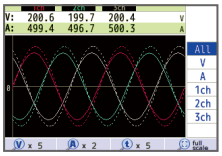
※Windows ®is registered trademark of Microsoft in the United States.

Real time and Remote measurements

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

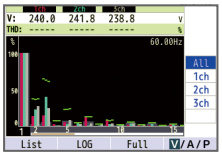
※Bluetooth is a registered trademark of the Bluetooth SIG, Inc.
Android is a registered trademark of the Google Inc.

Waveform

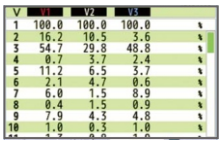


- Displays voltage and current on each Ch by waveform.
- Scales of voltage/current axis and time axis are selectable, and also full-scale function for automatic scaling is available.

Harmonics Analysis



Graph



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, over-heating transformers / neutral conductors / cables, unwanted tripping of breakers.

USB Terminal

Digital Output Terminal

- Open Collector Output (1ch)

Analogue Input Terminal

- 2ch DC100mV / 1000mV, 10V. To record additional parameters (i.e. Lux, Temperature, Humidity,etc.)

SD card Interface

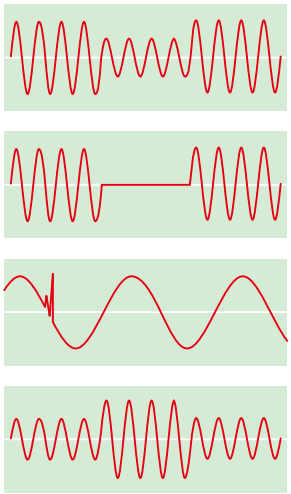
- SD cards up to 2GB can be used

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

Interval	REC item	
	Power	armonics
1sec	13days	3days
1min	1-year or more	3mounths
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.

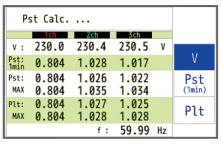
- Dip
  Dip, as the opposite of a swell, is a instantaneous voltage decrease, most of the time caused by switching ON large load e.g. motors or by downstream power line failure.
- Interruption
  Interruption is a power line cut-off from any source of supply. It can be caused by a fault in a power line, 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 lightening. KEW 6315 can catch Transients from 2.4 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.



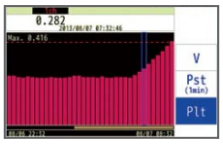
Flicker

Designed to meet IEC61000-4-15

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..



List



Trend graph

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

National Contact Number: 08 61 62 5678 • E-mail: sales@major-tech.com • www.major-tech.com

Various Clamp Current Sensors

Optional

Load current clamp sensors

K8128

MAX 50A φ24

K8127

MAX 100A φ24

K8126

MAX 200A φ40

K8125

MAX 500A φ40

K8124

MAX 1000A φ68

Load current flexible clamp sensors

K8129

8129-01 (for 1ch)
8129-02 (for 2ch)
8129-03 (for 3ch)

MAX 3000A φ150

K8130

MAX 1000A φ110

Leakage &Load current clamp

K8146

MAX 30A φ24

K8147

MAX 70A φ40

K8148

MAX 100A φ68

※ 8146/8147/8148 can measure up to 10A

Power supply adaptor

MODEL K8312

Magnetic carrying case

MODEL K9132

Can you close your distribution board door during surveys?

The K6315 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.

Set Model
K315-03

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.