



KEW 6310

POWER QUALITY ANALYZER



To monitor the Quality of Power and cutting Energy costs through consumption measurements!

- 12 kinds of Power Measurements for Power Control and Applicable to Power Quality Control including Harmonics Analysis.
- One click easy-to-use operation helps complicated setting and processing of large data through the setting / analyzing software provided as accessory.
- Direct communication with PC via USB cable.
- Built-in Input / Output Function of external signal enables the signal transmission to alarms.
- 2-way power supply by AC and Battery, and Nickel hydrogen battery usable with rechargeable function.
- Pull / Insert of CF card possible whenever on recording under the function of memory backup device.
- Can monitor insulation at leakage current by using optional leak clamp sensors.
- Built-in Print Screen Function enables to record display screen (Records 512 screens by using CF card: 1 screen 40KB).
- Can display Waveform and Vector, and can confirm the wiring connection, too.
- Complies fully with International Safety Standards IEC61010-1 CAT. III 600V.

6310

Wiring connections	1P 2W, 1P 3W, 3P 3W, 3P 4W
Measurements and parameters	Voltage, Current, Frequency, Active power, Reactive power, Apparent power, Active energy, Reactive energy, Apparent energy, Power factor (cos θ), Neutral current, Demand, Harmonics, Quality (Swell/Dip/Instantaneous stop, Transients/Over voltage, Inrush Current, Unbalance Rate), Phase advance condenser IEC Flicker [Pst (1 min)*, Pst, Plt] * Pst can be shown in details for 1 minute intervals.
Other functions	Digital output function, External communication function, Scaling function
Voltage [RMS]	
Range	150 / 300 / 600 / 1000V
Allowable input	10~110% of each range
Display range	5~120% of each range
Crest factor	2.5 or less (100% or less of each range)
Accuracy	$\pm 0.3\% \text{rdg} \pm 0.2\% \text{f.s.}$ (sine wave, 45~65Hz)
Current [RMS]	
Range	8128 (50A type) : 1 / 5 / 10 / 20 / 50A 8127 (100A type) : 10 / 20 / 50 / 100A 8126 (200A type) : 20 / 50 / 100 / 200A 8125 (500A type) : 50 / 100 / 200 / 500A 8124 (1000A type) : 100 / 200 / 500 / 1000A 8129 (3000A type) : 300 / 1000 / 3000A
Allowable input	10~110% of each range
Display range	1~120% of each range
Crest factor	3.0 or less (90% or less of each range)
Accuracy	$\pm 0.3\% \text{rdg} \pm 0.2\% \text{f.s.}$ + Accuracy of Clamp sensor (sine wave, 45~65Hz)
Active power	
Range	Depending on combinations of (V Range) x (A Range)
Accuracy	$\pm 0.3\% \text{rdg} \pm 0.2\% \text{f.s.}$ + Accuracy of Clamp sensor (Power factor 1, Sine wave 45~65 Hz)
Influence of power factor	$\pm 1.0\% \text{rdg}$ (reading at power factor 0.5 against power factor 1)

Frequency meter range	40~70Hz
Internal memory	1.8MB (Measurement file [CSV] $\times 6$ blocks, Screen file [BMP] $\times 7$ blocks, Configuration file [KAS] $\times 20$ blocks)
Display	320 \times 240 (RGB) Pixel, 3.5-inch color STN display
Temperature & humidity range	23°C \pm 5°C, Relative humidity 85% or less (no condensation)
Storage temperature & humidity range	-20°C \pm 60°C, Relative humidity 85% or less (no condensation)
Operating temperature & humidity range	0°C \pm 40°C, Relative humidity 85% or less (no condensation)
PC Card type	Compact flash card (Capacity: 32 / 64 / 128 / 256 / 512MB / 1 / 2 / 4 / 8GB) *The CF card larger than 2GB is usable, however, the possible stored size will be limited to 2GB. For example, when the CF card of 4GB or 8GB is used, the maximum stored size will be 2GB.
Applicable standards	IEC 61010-1 CAT. III 600V Pollution degree 2 IEC 61010-031, IEC 61326
Power supply	AC 100V~240V \pm 10% (45~65Hz) Alkaline size AA battery LR6 (9V 1.5V \times 6) or Ni-MH (HR15-51)
Dimensions	175(L) \times 120(W) \times 68(D) mm
Weight	approx. 900g (including batteries)
Accessories	7141B (Voltage test lead set), 7148 (USB Cable), 7170 (Power Cord) 8307 (Compact flash card [128MB]), 8319 (CF Card reader) 9125 (Carrying case), Input terminal plate (6-kind) Alkaline size AA battery (LR6) \times 6, Cable marker \times 32 KEW PQA MASTER (PC Software), Quick manual
Optional	8124, 8125, 8126, 8127, 8128 (Load current clamp sensor) 8129 (Flexible clamp sensor) 8146, 8147, 8148 (Leakage & Load current clamp sensor) 8141, 8142, 8143 (Leakage clamp sensor) 8322 (Compact flash card [256MB]), 8323 (Compact flash card [1GB]) 8325F (Flicker sensor), 8312 (Power supply adaptor) 9132 (Carrying case with magnet)

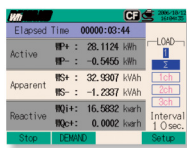
POWER METERS

Power Consumption (Energy) Control



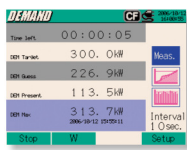
Instantaneous value measurement / saving

Measures Current / Voltage / Instantaneous averaged value of Power etc. / Maximum value / Minimum value.



Integration value measurement / saving

Measures Active power energy / Apparent power energy / Reactive power energy.



Demand value measurement / saving

Sets Demand target value and measures Demand value from start to stop of measurement. Can warn with digital output terminal when the set value exceeds the target value.

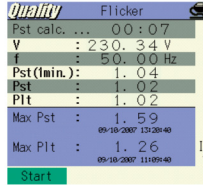
Equipped with the Flicker measurement function
Flicker can be measured by using flicker sensor KEW8325F of the option.

Can measure Flicker in accordance to IEC61000-4-15 and EN 50160 standards. Using our Flicker sensor, available as optional accessory, Pst value (short term severity in 10 minutes value) and the Plt value (long term severity in 2 hours value) can be measured.

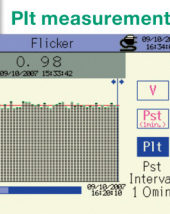
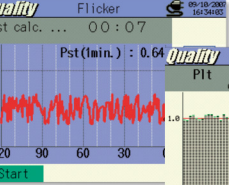
Flicker sensor KEW 8325F



V measurement



Pst(1min) measurement



Direct Data Transmission to PC via USB

Easy-to-use setting-up and analyzing with KEW PQA MASTER supplied.

**Analysis Soft
Supplied!**

[System requirements]

OS: Windows® 7(32/64bit)/Vista/XP
Display: XGA(Resolution 1024×768 dots) or more
Hard-disk: Space required 100Mbyte or more
Others: With CD-ROM drive and USB Port

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



Set Model

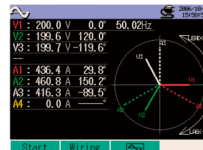
Model	Clamp sensor
KEW 6310-00	—
KEW 6310-01	8125(500A) × 3
KEW 6310-02	8125(500A) × 2
KEW 6310-03	8124(1000A) × 3
KEW 6310-04	8124(1000A) × 2
KEW 6310-05	8126(200A) × 3
KEW 6310-06	8126(200A) × 2
KEW 6310-07	8127(100A) × 3
KEW 6310-08	8127(100A) × 2
KEW 6310-09	8128(5A) × 3
KEW 6310-10	8128(5A) × 2
KEW 6310-11	8129-03 × 1
KEW 6310-12	8129-02 × 1

Consists of:
6310 × 1
7141B (Voltage test lead set)
7148 (USB cable)
7170 (Power cord)
8307 (Compact Flash card [128MB])
8319 (CF card reader)
9125 (Carrying case)
KEW PQA MASTER (PC software)
Input terminal plate (6-kind)
Quick manual
Alkaline size AA battery (LR6) × 6
Cable marker × 32



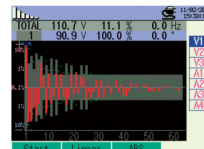
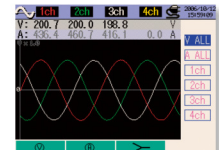
photo : 6310-01

Power Quality Control



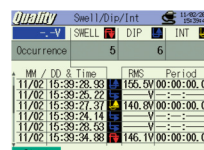
Wave Range Measurement / Saving

Displays vector / waveform corresponding to voltage and current of each channel.



Harmonics Measurement / Saving

Measures and analyzes harmonics contents of current and voltage of each phase.



Quality

Can measure Swells / Dips / Interruptions, Transients, Inrush current, Unbalanced, and can simulate power factor correction with capacitor banks.

CF Card Interface Loaded

External Memory up to 1GB Available.*1

Recordable Number of Data Point / Approx. Time

Destination to save data		CF Card						Internal Memory
Capacity		32MB	64MB	128MB	256MB	512MB	1GB	1.8MB
Instantaneous value measurement	1sec	15H	1D	2D	5D	10D	20D	7min
	1min	10D	20D	1M	2M	5M	10M	2H
	30min	10M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	2D
Integration value measurement	1sec	6H	13H	1D	2D	4D	8D	3min
	1min	7D	15D	1M	2M	4M	8M	1H
	30min	7M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1D
DEMAND measurement	1sec	4H	8H	17H	1D	2D	5D	2min
	1min	6D	12D	24D	1M	3M	6M	1H
	30min	6M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1D
WAVE range	10sec	1D	3D	7D	14D	28D	1M	20min
	1min	10D	21D	1M	2M	5M	11M	2H
	30min	10M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	2D
Harmonic analysis	15sec	3D	7D	15D	1M	2M	4M	44min
	1min	15D	1M	2M	4M	8M	1Y	2H
	30min	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	3D
Swell / Dip / Int measurement *2	1sec	2D	5D	11D	22D	1M	2M	32min
	1min	5M	11M	1Y	Over 1Y	Over 1Y	Over 1Y	1D
	30min	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1M
Transient measurement *2	1sec	3D	6D	12D	24D	1M	3M	35min
	1min	6M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1D
	30min	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1M
Inrush current measurement *2	1sec	2D	5D	11D	22D	1M	2M	32min
	1min	5M	11M	1Y	Over 1Y	Over 1Y	Over 1Y	1D
	30min	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1M
Unbalance rate	1sec	21H	1D	3D	7D	14D	27D	10min
	1min	14D	29D	1M	3M	7M	1Y	2H
	30min	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	3D
Flicker *3	1min	7M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	1D
	1sec	15H	1D	2D	5D	10D	19D	7min
	1min	10D	20D	1M	2M	5M	10M	1H
Capacitance calculation	30min	10M	1Y	Over 1Y	Over 1Y	Over 1Y	Over 1Y	2D
	Measurement data file (CSV)							6
	Graphics file (BMP)	512						7
Max number of file	Configuration file (KAS)							20

* In case that no file exist in the CF card or the Internal memory, where: H=hour(s), D=day(s), M=month(s), Y=year(s)

*1 Downloading data from CF cards needs the optional card reader (8319) or card readers being on sale.

*2 Assumed one event occur per minute and calculated.

*3 Flicker measurement function is only available with ver.2.00 or later.

Optional Accessories of Loggers, Power Meter and Power Quality Analyzer

Applicable model table

			5001	5010	5020	6305	6310
Sensor	Load current	8121		✓	✓		
		8122		✓	✓		
		8123		✓	✓		
		8124		✓	✓	✓	✓
		8125		✓*1	✓*1	✓	✓
		8126		✓*2	✓*2	✓	✓
		8127		✓*3	✓*3	✓	✓
		8128		✓	✓	✓	✓
		8129		✓*4	✓*5	✓	✓
	Leakage current	8141*6	✓	✓	✓		✓
		8142*6	✓	✓	✓		✓
		8143*6	✓	✓	✓		✓
	Leakage & Load current	8146*6		✓	✓		✓
		8147*6		✓	✓		✓
		8148*6		✓	✓		✓
	Voltage sensor	8309			✓		
	Flicker sensor	8325F					✓
Adaptor		8312				✓	✓
		8320		✓	✓		
Case		9132				✓	✓
		9135	✓	✓	✓		

*1~5: Can use with after the following serial numbers.

*1: No.02637~

*2: No.00151~

*3: No.00181~

*4: No.8029792~

*5: No.8031560~

*6: Cannot be used for power measurement.

Voltage sensor

KEW 8309

Floating Voltage can be measured

*Floating voltage :
phase to phase voltage not grounded



* KEW 5020-01 : KEW 5020 logger with KEW 8309 (1pce.)



Flicker sensor

KEW 8325F

Can measure Flicker
in combination with
KEW 6310



Power supply adaptor

MODEL 8312

Power source can be taken
through the measured line
(100~240v)



Carrying case with magnet

MODEL 9132

Easy-to-use setting with magnet on the steel
plate etc. of switch board



AC adaptor (External power supply)

MODEL 8320



- Appropriate for a longer period of recording.
- Complies to
90~264V(45~66Hz).

Carrying case

MODEL 9135



Dimensions :
250(L) × 270(W) × 216(D)mm