






# POWER METERS

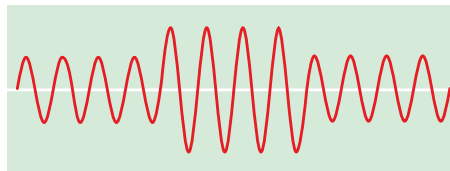
Selection Guide of Power Meters

	Power Meter	Power Quality Analyzer	Loggers			
	6305	6315	5010	5020	5050	
Appearance						
Voltage [V]	✓	✓	✓	✓	✓	
Current [A]	✓	✓	✓	✓	✓	
for 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

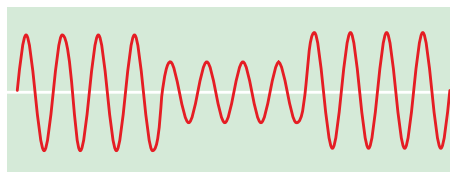
### ● Swell

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.



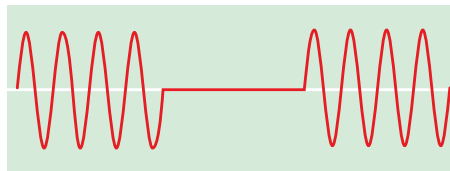
### ● Dip

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 down-stream power line failure.



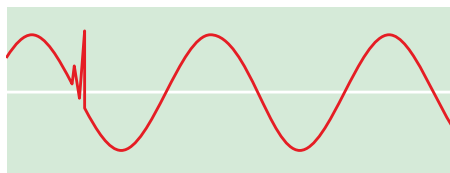
### ● Interruption

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.



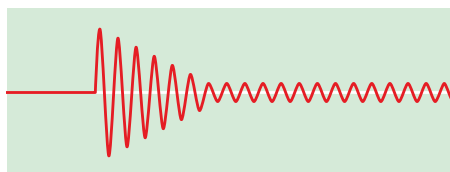
### ● Transients/Over Voltage (Impulse)

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 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.



# POWER METER

## KEW 6305

True RMS USB Bluetooth External Power Supply



CE

- Comprehensive real-time monitoring, recording and analysis of single and 3-phase systems
- Voltage, Current, Power Factor and Frequency measurements
- Power analysis (Active, Apparent and Reactive power)
- Energy analysis (Active, Apparent and Reactive energy)
- Active power accuracy:  $\pm 0.3\%rdg \pm 0.2\%f.s.$
- Automatic wiring check function to prevent incorrect connections
- Large memory capability (2 GB) using built-in SD card Interface
- Recording interval can be set between 1second and 1hour.
- Real time & remote measurements using Android application
- Windows software for data analysis and setting via USB port or Bluetooth
- Synchronous measurements between two units of KEW6305
- Wide selection of clamp sensors allow measurements from 0.1A to 3000A
- The instrument automatically recognizes what kind of clamp sensor is connected to it
- Double power supply system via AC line and batteries

## As easy as 1 → 2 → 3!

Starting from OFF position and rotating the Rotary switch clockwise, KEW6305 is ready to use in 3 simple steps

### 1. SET UP

Rotate the Rotary switch to SET UP. All the instrument settings can be easily selected by using instrument buttons. All the settings can also be selected by connecting KEW6305 to a PC via USB or Bluetooth.

### 2. WIRING CHECK

Rotate the Rotary switch to WIRING CHECK. The Automatic Wiring check function will prevent incorrect connections, check the connections and display the results on the LCD. Error messages appear on display to indicate wrong orientation of Clamp sensors or incorrect connections.

Everything is OK



Shows "Good"

Error is found



Shows "Err" (Error) e.g.: Err PH A  
→ Current phase (orientation of sensor) may be incorrect.

### 3. W/Wh/DEMAND Measurements

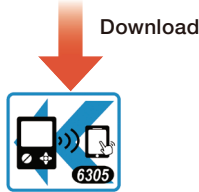
Rotate the Rotary switch to W/Wh/DEMAND. The instrument can perform Instantaneous, Integration and DEMAND measurements. START / STOP button to start / stop recording

	6305
Wiring connections	1P2W, 1P3W, 3P3W, 3P3W3A, 3P4W
Measurements	Voltage, Current, Frequency, Active power
Parameters	Apparent power, Reactive power, Active energy, Apparent energy, Reactive energy, Power factor (cos $\theta$ ), Neutral current
Voltage range[RMS]	150.0/300.0/600.0V
Voltage accuracy	$\pm 0.2\%rdg \pm 0.2\%f.s.$ (sine wave, 45 - 65Hz)
Current range[RMS]	10.00/50.00/100.0/250.0/500.0A/Auto (with clamp sensor MODEL8125)
Current accuracy	$\pm 0.2\%rdg \pm 0.2\%f.s.$ + Accuracy of Clamp sensor (sine wave, 45 - 65Hz) *+1%f.s. at the lowest range.
Effective input range	10 - 110% of rating range
Display range	5 - 130% of each range (Voltage) 1 - 130% of each range (Current)
Crest factor	Voltage : up to 2.5, Current : up to 3.0 (with 90% fs or less)
Active power accuracy	$\pm 0.3\%rdg \pm 0.2\%f.s.$ + Accuracy of Clamp sensor *+1%f.s. when the lowest current ranges is selected.
Effect of power factor	Active power: $\pm 1.0\%rdg \cos \theta \pm 0.5$ (PF=1)
Frequency meter range	40.0 - 70.0Hz
Frequency meter accuracy	$\pm 3dgt$
Accuracy precondition	PF=1, Sine wave, 45 - 65Hz, 23°C $\pm 5^\circ C$
Display update period	1 second
Operating temperature and humidity range	0 - +50°C, less than 85% RH (without condensation)
Storage temperature and humidity range	-20 - +60°C, less than 85% RH (without condensation)
PC communication interface	USB, Bluetooth
PC card interface	SD card (2GB)
Safety standard	IEC 61010-1 CAT III 600V
Power source (AC Line)	AC100 - 240V $\pm 10\%$ (50/60Hz)
Power source (DC battery)	LR6 or Ni-MH(HR-15-51) $\times 6$ (Battery charger not included), Battery life approx. 15h (LR6)
Power consumption	10VA (max.)
Dimension	175(L) $\times$ 120(W) $\times$ 65(D)mm
Weight	Approx. 800g (including batteries)
Accessories	7141B (Voltage test lead set: 4pcs), 7148 (USB cable), 7170(Powercord), 9125(Carrying case), 8326-02 (SD card 2GB), KEW Windows (PC Software), Battery(LR6) $\times 6$ , Quick manual
Optional	8124, 8125, 8126, 8127, 8128(Clamp sensor), 8129, 8130(Flexible clamp sensor), 8312(Power supply adaptor), 9132(Magnetic carrying case)

# POWER METER

## Bluetooth communication with Android application

Free Android software "KEW Smart 6305" is available on download site



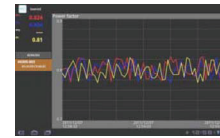
### Real time & remote measurements using Android application

Measurement can be displayed in graphic or numeric forms on Android devices in real-time via Bluetooth communication.

Remote checking of measurements is possible without accessing KEW6305.



Android device



Real-time display

\*communication charges may be incurred separately to download application

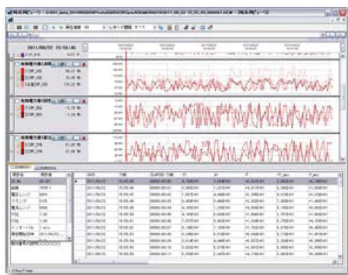
Max communication distance: 10m

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

## Windows software

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.



### [System requirements]

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

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

## SD card Interface

### Max amount of data (reference)

Data saved on:	SD card	Internal memory
Capacity	2GB	3MB
Instantaneous measurement	6,670,000	10,000
Integration / demand measurement interval	1 sec.	17 days
	1 min.	992 days
	30 min.	3 years or more
Max number of file	511	4

\*in case the SD card is empty

SD cards up to 2GB can be used.

## Set Model

### KEW 6305-01

KEW 6305 × 1  
 MODEL 8125 × 3



Carrying case : 9125

### KEW 6305-03

KEW 6305 × 1  
 MODEL 8130 × 3



Carrying case : 9135

## Optional

### Load current clamp sensors

#### MODEL 8128



CE  
 MAX 50A Ø24

#### MODEL 8127



CE  
 MAX 100A Ø24

#### MODEL 8126



CE  
 MAX 200A Ø40

#### MODEL 8125



CE  
 MAX 500A Ø40

#### MODEL 8124



CE  
 MAX 1000A Ø68

### Load current flexible clamp sensors

#### KEW 8129

8129-01 (for 1ch)  
 8129-02 (for 2ch)  
 8129-03 (for 3ch)  
 FLEXIBLE CLAMP SENSOR WITH 3 RANGES AC300, 1000, 3000A



MAX 3000A Ø150 CE

### Power supply adaptor

#### MODEL 8312

For taking single phase supply (100-240V) from the test leads to power the instrument (FUSE: 8923)



### Magnetic carrying case

#### MODEL 9132

For mounting inside metal distribution boards



#### KEW 8130

FLEXIBLE CLAMP SENSOR AC1000A



MAX 1000A Ø110 CE