



An ISO 9001:2008 Company

# MULTIFUNCTION POWER & HARMONICS ANALYZER

## MODEL - KM 2100 / KM 2200



### • Standard Accessories



### FEATURES :

- \* **Display** : Run Chart, Bar Chart, Vector Graphic, Waveform, Event List, Readings.
- \* **Display** : 5.6" TFT LCD, 320 X 240 Adjustable brightness.

### \* FEATURES :

- Volts / Amps. / Hertz, Dips & Swell, Power / Energy, Unbalance, Monitor, Scope, Harmonic, Logger & Interruption functions. (KM 2200)
- Inter Harmonics, Transient Voltage, Inrush Current, Flicker function not available in KM 2200.
- Frequency upto 400Hz (KM 2100); 50 / 60Hz (KM 2200)
- Single-phase 2W / Single-phase 3W / 3-phase 3W / 3-phase 4W.
- Flash memory 128MB
- TF Card 8G Memory Card for long-term measuring data storage.
- Support USB port to connect to PC and analyze the data / screen shots copied by U-disk.
- Support LAN port to make the remote control available, transfer the measuring data.
- IP : IP51, according IEC60529
- **Safety** : CAT III 1000V / CAT IV 600V.
- **Standards** : IEC61000-4-30 (2008) S class, EN50160 (2007).
- **Electrical Safety** comply with : IEC61010-1
- **Dimension** : 262 x 173 x 66mm
- **Weight** : Approx. 1.6kg.

### • Optional Accessories :

CT Clamps 5A / 50A / 100A / 1000A / 3000A / 5000A.



### \* ACCESSORIES :

- Voltage Test Lead 2 meters long x 5, Alligator Clips x 5, External DC Adaptor, Hang Strap, Software CD & User Manual.

Note: All Specification are Subject to change without prior notice.

## ELECTRICAL SPECIFICATIONS : KM 2100 / KM 2200

### VOLTAGE / CURRENT / FREQUENCY

Functions	Range	Resolution	Accuracy	
Vrms(AC+DC)	1 ~ 1000Vrms	0.1 Vrms	±0.5% of nominal voltage	
Vpk	1 ~ 1400Vpk	0.1 Vpk	±0.5% of nominal voltage	
V(Crest Factor)	1.0 ~ >2.8	0.01	± 5%	
Arms (AC)	10mV/A	0 ~ 100A	0.1A	±0.5% ± 0.2A
	1mv/A	1 ~ 1000A	0.1A	±0.5% ± 0.2A
	50mV (65mV)/ 1000A	15 ~ 5000A	1A	±1% ± 2A
A(Crest Factor)	1 ~ 10	0.01	± 5%	
Frequency	42.5 ~ 57.5Hz (50Hz nominal)	0.01Hz	± 0.01Hz	
	51 ~ 69Hz (60Hz nominal)	0.01Hz	± 0.01Hz	
	340 ~ 460Hz (400Hz nominal)	0.01Hz	± 0.1Hz	

### POWER AND ENERGY

Functions	Range	Resolution	Accuracy
Active Power	1.0 ~ 20.00 MW	0.1KW	± 1.5 ± 10 counts
Apparent Power	1.0 ~ 20.00 MW	0.1KW	± 1.5 ± 10 counts
Reactive Power	1.0 ~ 20.00 MW	0.1KW	± 1.5 ± 10 counts
Kwh	0.00 kWh ~ 200 GWh	10Wh	± 1.5 ± 10 counts
Power Factor	0 ~ 1	0.01	± 0.03

### FLICKER (KM 2100)

Functions	Range	Resolution	Accuracy
Pst (1min), Pst, Plt, PF5	0.00 ~ 20.00	0.01	± 5 %

### VOLTAGE TRANSIENT (KM 2100)

Functions	Range	Resolution	Accuracy
Vpk	6000Vpk	1 V	± 15 %
Vrms	10 ~ 1000Vrms	1 V	± 2.5 %
Min. Test Time	50 us	—	—
Sampling Rate	20 kS / s	—	—

### LOGGER

Functions	Range
Recording	User-defined parameters for 4 phases at the same time
Memory	Data stored in TF Card, 8GB
Duration time	2hrs to 1 year
Interval	1s to 1 hrs

### UNBALANCE

Functions	Range	Resolution	Accuracy
Voltage	0.0 ~ 5.0%	0.1 %	± 0.5 %
Current	0.0 ~ 20.0%	0.1 %	± 1 %
Voltage Phase	-360° ~ 0°	1°	± 2 counts
Current Phase	-360° ~ 0°	1°	± 5 counts

### DIPS AND SWELLS

Functions	Range	Resolution	Accuracy
Vrms 1/2	0 ~ 200% of nominal Voltage	0.1 Vrms	± 1 %
Arms 1/2	1 ~ 3000% A	1A	± 1 % ± 2A
Threshold levels	Thresholds is settable according to nominal voltage percentage Detectable events type : Dips, Swells, Interruption, Voltage Rapid Change		
Duration	hour-minute-second-microsecond	0.5 cycle	1 cycle

### HARMONIC

Functions	Range	Resolution	Accuracy
Harmonic Number	1 ~ 50	—	—
Inter-Harmonic (KM 2100)	1 ~ 49	—	—
Harmonic Voltage	0.0 ~ 100.0 %	0.1 %	± 0.1 % ± nx0.1 %
Harmonic Current	0.0 ~ 100.0 %	0.1 %	± 0.1 % ± nx0.1 %
THD	0.0 ~ 100.0%	0.1 %	± 2.5 %
DC Relative	0.0 ~ 100.0 %	0.1 %	± 0.2 %
Frequency	0 ~ 3500Hz	1Hz	1Hz
Phase	-360° ~ 0°	1°	± nx1.5°

### INRUSH CURRENT (KM 2100)

Functions	Range	Resolution	Accuracy
Arms (AC + DC)	0 ~ 3000 Arms	0.1	± (1 % ± 5 counts)
Inrush Duration	6s ~ 32min selectable	10 ms	± 20 ms

### GENERAL SPECIFICATIONS

Interface (USB Host)	download file to PC by U disk for analyze with PC software
Lan	For remote control of the Analyzer & measurement data transmission.
Working Temperature	0°C ~ 40°C
Storage Temperature	-20°C ~ 60°C
Humidity	90% relative humidity
Power Supply	
Adapter input	90 ~ 264V
Adapter output	12V 2A
Battery	Rechargeable Ni-MH 7.2V 3.8Ah
Battery working time	> 7 hours
Battery charge time	6 hours

### Sampling System

Resolution	8 channels 16 bits AD
Sampling Rate	20kS/s for each channel, 8 channels sample synchronously
RMS Sampling	5000 points for 10/12 cycles (according to IEC 61000-4-30)
PLL Sync	4096 points for 10/12 cycles (according to IEC61000-4-7)

### Current Input

Number of Input	4 (3 phase + neutral) DC coupling
Type	Clamp current sensor with mV output
Input Range	1 to 3000 Arms with supplied current clamps
Input Impedance	50kΩ
Bandwidth	>3kHz

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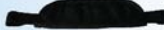

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## Accessories

Voltage Test Leads Alligator Clips		(2m) × 5 pcs	Soft Carry Bag		1 pcs
Power Adapter		1 pcs	Hang Strap		1 pcs
Power Patch Cord		1 pcs	CD (Software, Manuals)		1 pcs

## CT Clamps

Clamp Mode	KLC8C-5A	CTC0080	CTC130	CTC1535
Appearance				
Measurement Range	5A	50A	100A	1A ~ 1000A
Output Voltage Ratio	10mV/A	10mV/A	10mV/A	1mV/A
Working Frequency	45Hz~55Hz	50Hz~400Hz	50Hz~400Hz	40Hz ~ 100KHz
Accuracy	0.2%	0.2%	0.2%	1%
Safety				CAT III 600V
Clamp Radius	8mm	8mm	13mm	52mm
Dimension(mm)	158 x 43 x 24	171 x 46 x 27	174 x 52 x 27	111 x 216 x 45

Flexible Probes Mode	PY-3000A	JK-5000A
Appearance		
Primary Current Rating	3000A	5000A
Output Voltage Ratio	65mV/1000A	50mV/1000A
Measurement Range	15A~3000A	20A~5000A
Accuracy	±1% + Position Error	±1% + Position Error
Maximum Allowable Input	100KA	100KA
Phase Error	<±1°	<±1°
Noise	<2mVrms (10Hz~10KHz)	<2mVrms (10Hz~10KHz)
Frequency Characteristic	10Hz~10KHz (-3dB)	10Hz~10KHz (-3dB)
Weight	130g	130g
Length	200cm	200cm
CT Perimeter	50mm	45mm
Measurement Position Error	±2%	±2%