



MPOWER UPS



SINUS LCD SERIES

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**10 years of uninterruptible power**

# SINUS LCD SERIES

**On-line "Double Conversion" Technology. 1 PHASE IN - 1 PHASE OUT. 1kVA to 3kVA**  
**True online technology continuously supplies your critical device with stable, regulated, transient-free pure sine wave AC Power.**

- High efficiency PWM sine-wave topology with transformerless technology
- Handles high in-rush current loads without the need to upgrade the power rating
- Plug-and-Play design to allow easy installation
- All units supplied with input cables and output sockets.
- Built-in sealed battery
- Extended run time available with external battery pack
- Automatic overload protection
- Automatic switch to stand-by, with audible and visual alarms, in the event of short circuit output.
- Rack/tower convertible allowing easy installation where there are space constraints
- Wide input voltage tolerance 120V to 288V
- DC-start function ensures start-up even during power outages
- Enhanced battery management system extends battery life span
- Active power factor correction constantly maintains Input Power Factor at  $>0.99$  for improved energy efficiency
- Selectable Output Voltages 200/208/220/230/240V



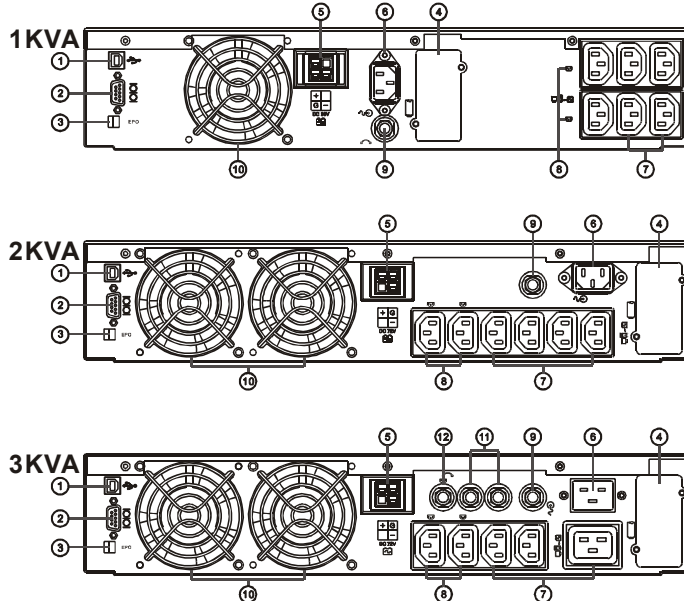
## General

Designed and built to protect your electronic equipment from power fluctuations, this UPS is your insurance for a reliable, clean and stable supply.

The multi-functional LCD/LED panel displays various readings including voltage, load status and inner cabinet temperature. Fully programmable from the display,

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## 230V



## Rear Panel

1. USB Port
2. RS232 Port
3. Emergency Power Off (EPO) Dry Contact Signal inputs
4. Communication Card Options Slot
5. External Battery Connector
6. AC power connection socket
7. AC Outlets
8. Two programmable outlets
9. Utility Input fuse holder
10. Cooling Fans
11. Output fuse holders
12. Output fuse holders for two programmable outlets

## Communication

The UPS is equipped with EPO dry contact input, and true RS232 & USB Communication port as standard. The serial ports provide communication with bundled UPS monitoring software for remote monitoring of UPS status via PC.

There are 4 other optional interface cards available to meet various communication needs:

- DCE (dry contact relay card)
- R2E (second RS232 card)
- USE (USB card)
- SNMP/WEB card.

## Specification

MODEL	SS LCD 210	SS LCD 220	SS LCD 230
Power(kVA)	1	2	3
<b>INPUT</b>			
Voltage	160VAC - 288VAC		
Frequency	50/60 Hz $\pm$ 5% (Auto Sensing)		
Power Factor	$>$ 99%		
<b>OUTPUT</b>			
Power Factor	0.8		
Voltage	220 / 230 / 240VAC		
Voltage Regulation	$\pm$ %1		
Frequency	50/60 Hz		
Frequency Regulation	$\pm$ 0,1%		
Harmonic Distortion	$<$ 3%		
Crest Factor	3:1		
Output Waveform	Sinusoidal		
Overload Capacity	100%-120% for 30 seconds		
	120%-150% for 10seconds		
Whole efficiency	$>$ 85%		$>$ 88%
Transfer Time	0ms		
Outlets	6pcs IEC C13		4pcs IEC C13
<b>INTERNAL BATTERY</b>			
Type	Maintenance-free lead acid batteries		
Recharge Time	3 hours (to 90% of full capacity)		
Voltage	36VDC	72VDC	
Internal Battery	3pcs 12V 7Ah	6pcs 12V 7Ah	6pcs 12V 9Ah
Built in max. Charge Current	1.8A	2.1A	2.7A
Back Up Time	Full Load	5 min	
	Half Load	12 min	
Cold Start	YES		
<b>DISPLAY</b>			
LED Display	Utility or Bypass, Battery Low, Battery Abnormal, Overload, Site Wiring Fault, Service Mode, UPS Off, UPS Abnormal		
LCD Display	Input /Output Voltage and Frequency Values, Load %, Battery Voltage, Internal Temperature		
<b>ALARMS</b>			
	Line Failure, Battery Low, Over Load, Failure Events		
<b>PROTECTION</b>			
	Short Circuit, Over Temperature, Overload, High Voltage, Battery Low, EPO		
<b>COMMUNICATION</b>			
Interface	RS232 and USB		
Monitoring and Management Software	Standard		
<b>ENVIRONMENT</b>			
Temperature	0°C - 40°C		
Humidity	0% - 90% (without condensation)		
Noise Level (1m Distance)	$<$ 50dBA		
Protection Class	IP 20		
<b>PHYSICAL SPECIFICATIONS</b>			
Net Weight (kg)	16	29.5	30
Dimensions(mm) WxHxD	440 x 88 x 405	440 x 88 x 650	440 x 88 x 650
<b>STANDARDS</b>			
Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC)		
<b>ACCESSORIES</b>			
Optional	Internal & External SNMP, Dry Contact Board, External Manual Bypass, Rail Kit, External Battery Connection Cable		