



# Sinus LCD

1 Phase In - 1 Phase Out / 1kVA – 3kVA

- On-line 'double conversion' technology
- Real Digital Signal Processor (DSP) Controller
- Power factor correction PFC (PF: >0.99)
- User friendly LCD display
- Programmable Receptacles
- Wide input voltage range and frequency
- Availability to configure as 50/60Hz Frequency Converter from LCD Panel
- Smart communication port and SNMP management capability
- Hot Swappable Battery
- Emergency shutdown control through EPO
- Overload & short circuit protection
- Cold start (DC power on)
- Genius battery management (GBM)
- RS232, USB and SNMP can be activated simultaneously
- Compact size, light weight & low noise



## TECHNICAL SPECIFICATIONS

MODEL	SS LCD 210		SS LCD 220	SS LCD 230
Power(kVA)	1		2	3
INPUT				
Voltage	160VAC - 288VAC			
Frequency	50/60 Hz ± 5% (Auto-sensing)			
Power Factor	>0.99			
OUTPUT				
Power Factor	0.8			
Voltage	220VAC / 230 / 240VAC			
Voltage Regulation	±1%			
Frequency	50/60 Hz			
Frequency Regulation	± 0.1%			
Output Voltage Harmonic (THDv)	<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	6 pcs IEC C13 or 2pc German Std. Socket	6 pcs IEC C13 or 2pcs German Std. Socket		4pcs IEC C13 or 2pcs German Std. Socket
BATTERY				
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
Back Up Time	Full Load	5 min		4 min
	Half Load	12 min		10 min
Cold Start	YES			
DISPLAY				
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			
ALARMS				
	Line Failure, Battery Low, Over Load, Failure Events			
PROTECTIONS				
	Short Circuit, Over Temperature, Overload, High Voltage, Battery Low, EPO			
COMMUNICATION				
Interface	RS232 and USB			
ENVIRONMENT				
Temperature	0°C - 40°C			
Humidity	0 - 95% (non-condensing)			
Noise Level(1m distance)	<50dBA [at 1 meter]			
Protection Class	IP 20			
PHYSICAL				
Net Weight (kg)	16	29.5		30
Dimensions (mm) WxDxH (Rack)	440x450x88 (2U)	440x650x88 (2U)		440x650x88 (2U)
STANDARDS				
	EN 62040-1-1 (safety), EN 62040-2(EMC)			
ACCESSORIES				
	Internal&External SNMP, Dry Contact Board, External Manual Bypass, Rail Kit, Software			