



Uninterruptible Power Supplies

Sinus Premium & Premium LCD Series

On-Line "Double Conversion" Technology

1 phase in-1 phase out

1kVA to 3kVA

- ▶ Online double conversion technology
- ▶ Input power factor correction PFC (>0,99)
- ▶ High output power factor (PF : 0.9)
- ▶ Pure sinewave output less than 3% THD
- ▶ Wide input voltage / Frequency range
- ▶ Smart RS-232 communication port
- ▶ Internal SNMP Slot Card Option
- ▶ Management software compatible
- ▶ Overload & short circuit protection
- ▶ Cold start (DC power on)
- ▶ Smart battery management
- ▶ Compact size, light weight & low noise



Sinus Premium & Premium LCD Series Technical Specifications

MODEL	SPS 210 SPS LCD 210	SPS 220 SPS LCD 220	SPS 230 SPS LCD 230
Power (kVA)	1	2	3
INPUT			
Voltage Range	160VAC - 300VAC (@ 0% to 78% Load) 185VAC - 260VAC (@ 78% to 89% Load) 210VAC - 240VAC (@ 89% to 100% Load)		
Frequency	45Hz - 65Hz		
Power Factor	≥0.99 (@full linear load)		
OUTPUT			
Output Power Factor	0.9		
Voltage	220V / 230V / 240VAC		
Voltage Regulation	<±1% (till low battery warning signal)		
Frequency (Synchronized range)	3Hz or 1Hz (selectable)		
Frequency (Battery Mode)	50 / 60Hz±0.1%		
Harmonic Distortion	<3% (@full linear load), <6% (@full non-linear load)		
Crest Factor	3:1		
Output Waveform	Sinusoidal		
Overload Capacity	100%-105% : Continuous		
	106%-120% for 30 seconds		
	121%-150% for 10 seconds		
	>150% : Transfer to Bypass		
Line Mode efficiency	±>86%	±>87%	±>88%
Battery Mode efficiency	±>85%	±>86%	±>87%
Transfer Time (AC to DC)	0ms		
Outlets	3pcs IEC C13 & 1pc Schuko	3pcs IEC C13 & 2pcs Schuko	6pcs IEC C13 & 2pcs Schuko
BATTERY			
Type	Maintenance-free lead acid batteries		
Recharge Time	5 hours (to 80% of full capacity)		
Voltage	24VDC	48VDC	72VDC
Internal Battery	2pcs 12V 7Ah	4 pcs 12V 7Ah	6 pcs 12V 9Ah
Cold Start	YES		
DISPLAY			
LED Display	Normal Mode, Battery Mode, Bypass Mode, Self-Test, Weak-Bad Battery, Site Wiring Fault, Fault, Overload, Load/Battery Level		
LCD Display (Optional)	Input/Output/Bypass Voltage, Input/Output/Bypass Frequency, Load%, Battery Voltage, Internal Temperature		
ALARMS			
	Battery Mode, Battery Low, Overload, Failure Events		
PROTECTION			
Short Circuit	Bypass Mode: Fuse, Normal Mode: Output Breaker / Electronic Circuit, Battery Mode: Output Breaker / Electronic Circuit		
Battery	Battery Discharge Management		
EPO	UPS shuts down immediately		
Over Temperature	Normal Mode: Transfers to Bypass Mode, Battery Mode: UPS shuts down immediately		
COMMUNICATION			
Interface (Communication Ports)	RS-232 Standard, Optional USB		
Monitoring and Management Software	Standard		
Options	Dry Contact Board, USB Board, SNMP Card		
ENVIRONMENT			
Temperature	0°C - 40°C		
Humidity	0% - 90% (without condensation)		
Noise Level (1m Distance)	<50dBA		
Protection Class	IP20		
PHYSICAL SPECIFICATIONS			
Net Weight (kg)	12	22	27
Dimensions (mm) WxDxH	144x360x220	152x438x322	190x438x322
STANDARDS			
Standards	EN 62040-1-1 (safety), EN 62040-2(EMC)		
ACCESORIES			
Optional	Internal&External SNMP, Dry Contact Board, Additional Charging Board		