

## SPe SERIES: 5- 12KVA (1Ph-1Ph)

### SINGLE PHASE ONLINE UPS



LOCAL AREA NETWORKS (LAN)



SERVERS



DATA CENTRES



CASH REGISTERS



TELECOMMUNICATIONS DEVICES



INDUSTRIAL PLCS



ELECTRO-MEDICAL DEVICES



EMERGENCY DEVICES (Lights/Alarms)



**SPe SERIES**

**Lithium-Ion UPS**

**SPe series** is online double conversion UPS, meets today's industry standard for energy saving and low reflected harmonic pollution to the Utility. The **SPe series** is designed with latest high frequency techniques and quality components so that reliability is further increased. High system efficiency is achieved in all operation modes saving the electricity.

**SPe series** is available in 5-6-8-10 & 12kVA size.

- High UPS Reliability
- Operational mode Selection
  - Power Share
- High Battery Reliability
- Low Impact on Mains Supply
  - High Quality Output

**FEATURES**

- True Online, double conversion, PWM IGBT -2 technology.
- DSP technology Fully digitized microprocessor control design
- High frequency, pure sine wave output
- Input power factor > 0.99
- N+X parallel redundancy
- Battery optimization; battery selectable for each group 16/18/20pieces
- LCD display
- Wide input voltage and frequency window
- Zero transfer time
- Isolation transformer compatibility
- Superior overload capability
- Generator and Solar compatibility
- High battery reliability (battery test, manual and automatic)
- Smart battery management system monitors the battery charging and discharging status
- Cold Start
- Auto Restart
- RS232 interface standard, dry contacts, USB, RS485 and SNMP as option

**QUALITY STANDARD AND ENVIRONMENTAL SUSTAINABILITY**

SPe Series is designed and manufactured in accordance with the following standards.

- IEC/EN 62040-1-1 (General & Safety Requirements)
- IEC/EN 62040-2, IEC/EN 62040-3, (EMC Requirement)



## N+X POWER SCALABLE PARALLEL REDUNDANCY

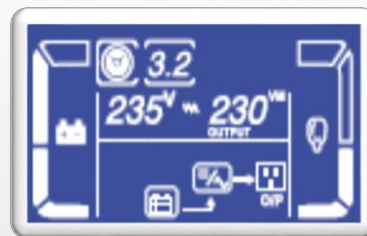
The SPe UPS can be paralleled for power capacity or for redundancy up to 4 units to increase the power capacity or configuring a parallel redundant UPS system.



The standard version can be simply interconnected up to 4 units using the CAN-bus RJ45 cables on the rear of the SPe series UPS. The SPe series UPS uses an inverter control technology that allows to achieve N+1 scalable redundant power without the use of additional components.

## CONTROL PANEL

The front display panel provides all major systems parameters and operational status of the UPS that include full diagnostics for simple, easy servicing. The SPe series UPS with DSP control, systematically checks each component and displays the result using on LCD display. This feature allows service technicians the ability to pinpoint and repair the UPS very quickly.



## INTERNAL TRANSFORMER

SPe series UPS comes with a provision for internal isolation transformer. The considerable footprint and additional cabling and switchgears can be avoided with this feature. Isolation transformer provides additional maximum protection to the connected loads.

## COMMUNICATION FEATURES

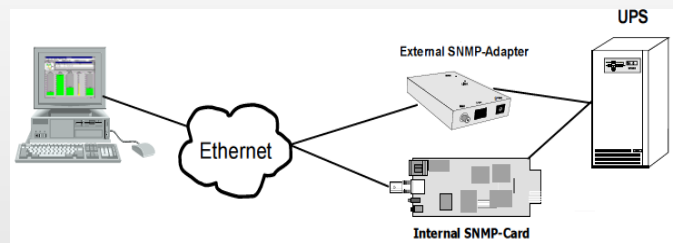
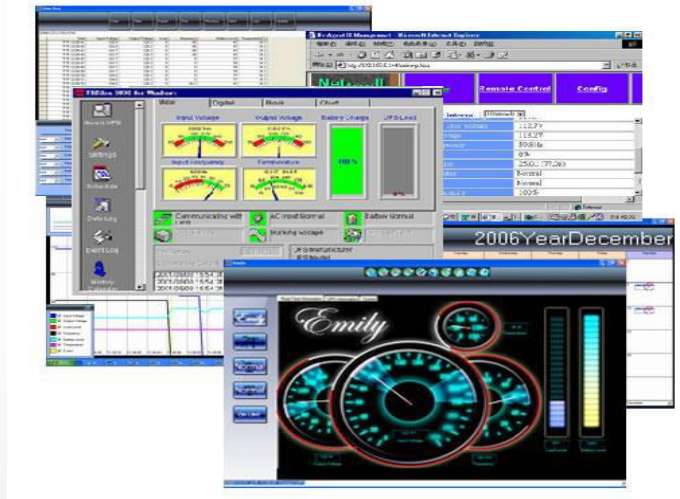
### STANDARD SERIAL RS 232

The smart port is an intelligent RS232 serial port. The connector is a standard D-Type, 9 pin, female. The software optionally allows the computer to monitor the mains voltage and the UPS status continuously.



RS485 and USB port for remote signaling and automatic computer shutdown.

**SNMP card** for monitoring and integration in network management. The Simple Network Management Protocol (SNMP) is a worldwide-standardized communication-protocol. It is used to monitor any device in the network via simple control language.



The SPe series UPS is provided on request with monitoring and shutdown software. The monitoring software provides real-time UPS status display via easy-to-read Meter and Gauges, Digital Table, Block Diagram and Graph Chart as well as remote monitoring of the UPS through Intranet or Internet.

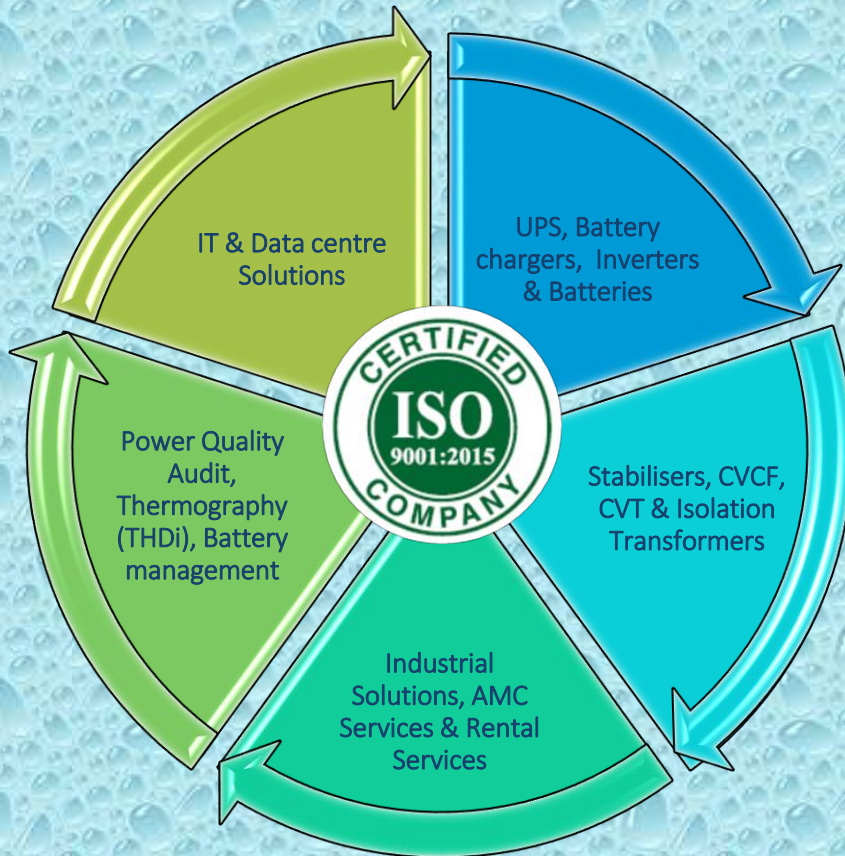
The software is compatible with many operating systems such as Windows 98, 2000, XP, Vista and Windows 7 For other applications like Novell, NetWare, Unix, Linux.



Model	MPS-SPe 11-05	MPS-SPe 11-06	MPS-SPe 11-08	MPS-SPe 110-10	MPS-SPe 11-12
Capacity (VA/Watt)	5000/4500	6000/5400	8000/7200	10000/9000	12000/10800
<b>INPUT</b>					
Nominal Voltage	220V /230V/240V AC (1Ph +N+PE, 3 wire )				
Operating Voltage Range	160-276V AC				
Operating Frequency Range	50Hz: 45-55Hz ; 60Hz: 54-66Hz ( Auto sensing)				
Power Factor	> 0.99				
Bypass Voltage range	Max Voltage: + 15%(Optional: +5%, +10% +25%) Min Voltage: -45% (Optional : -20%, -30%) Frequency : +/- 10%				
ECO range	Same as Bypass				
Harmonic Distortion (THDi)	< 5% (100% Linear load)				
<b>OUTPUT</b>					
Output Voltage / Power factor	220V/ 230V / 240V AC +/- 1% , 0.9pf Unity pf (optional)				
Output Frequency	Mains mode : +/- 1%/+/-2%/+/-4%/+/-5%/+/-10% of the rated Frequency (Optional) Battery mode : 50 / 60Hz +/- 0.2Hz				
Harmonic Distortion (THDi)	≤2% (Linear load), ≤5% (Non Linear load)				
Crest Factor	3:1				
Efficiency	With isolation transformer : 96.5%. Without isolation transformer :95.5%				
<b>BATTERY</b>					
DC Voltage	192VDC /216VDC/240VDC (Optional)				
Charge Current	6A	6A	10A	10A	10A
Typical Recharge Time	6-8Hrs ( 90% of full capacity)				
<b>SYSTEM FEATURES</b>					
LCD Indication	Input voltage /Frequency,Output voltage /Frequency,Battery voltage,Load Watt /VA &%,Inverter temperature, Operation mode such as "ONLINE","ON Batt" or "ON Bypass",Fault codes,Battery & "Error code"				
LED Indication	Line mode, Backup mode,Eco mode, Bypass mode, Battery low, Battery bad,Overload & UPS fault				
Audiable Alarm	Battery mode, Low battery, Overload and Fault				
Overload Capability (Line mode)	≤110% 60min,≤125% 10min,≤150% 1min				
Transfer Time	AC to Battery: 0msec, Inverter to Bypass:4msec (Typical)				
<b>ENVIRONMENTAL</b>					
Temperature	Operating : 0-40°C. Storage: -25°C~55°C				
Humidity/Altitude	0-95% RH Non-condensing / < 1500M				
Noise	< 55dBA @ 1mtrs				
<b>PHYSICAL</b>					
Dimension WxDxH (mm)	220 x 481 x 438 250 x 500 x 650	220 x 481 x 438 250 x 500 x 650	220 x 481 x 438 250 x 500 x 650	305 x 585 x 864	
Weight (kg)	18 Kgs / 65Kgs		20Kgs /70Kgs		98Kgs
<b>STANDARDS</b>					
Quality	ISO 9000, ISO 14001, OHSAS 18001,ISO 27001, BIS, RoHS				
Safety	IEC/EN62040-1				
EMC/Performance	IEC/EN62040-2,IEC/EN62040-3, complying to CE				
<b>COMMUNICATION INTERFACE</b>					
Standard	RS 232				
Optional	SNMP/ModBus/Dry contact / USB / RS 485				
Monitoring Software	Net agent utility v5.8 / View Power / UP Silon 2000 /Muser 4000				

\*Specifications are subject to change without prior notice.

\* custom built systems on request



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