

SENTRY MPS 500-800kVA

Uninterruptible Power Supply

Quality power supply

Sentry MPS is an on-line, double conversion UPS of class VFI SS 111 in accordance with IEC EN 62040-3 with the Inverter output transformer inside, solution that is particularly suitable for high level applications where the immunity of the load from the mains is a real issue. It is available in three ratings: 500, 600 and 800 KVA, each of these are offered in two versions to better match the market requirements: - MPS Plus - MPS Sinus.

Clean Input

Thanks to the low input current distortion of up to 3% (MPS Sinus), Sentry MPS represents a load with sine wave input for the source reducing any interference to the other loads connected on the same busbar. For all versions the power factor is > 0,9, while the MPS Sinus version guarantees a power factor up to 0,95 even at partial loads. This means that it is unnecessary to oversize the connection cables and the rating of the upstream MT/BT supply transformers thereby reducing the installation and ownership cost.

Motor Generator friendly

The low input current distortion, the high input power factor, the progressive start-up of the rectifier (settable) and the battery recharge inhibition makes Sentry MPS ideal for use in conjunction with a

smaller size generator set, in some cases close to the UPS rated power.

Battery care system

Sentry MPS includes the 'Battery Care System' which manages the batteries in order to obtain best performances and prolonged operating life: - Absence of the ripple current with battery charged - Charging on two voltage levels to optimize the recharge current and reduce the times required to restore capacity - Recharging voltage with temperature compensation and protection against deep discharges to protect the battery, minimise aging phenomena and prolong the real battery life - Max recharge time block to reduce electrolyte consumption to improve the lifetime of the VRLA batteries - Battery test to check the performance and make sure the battery is always ready to work - Sentry MPS is also compatible with different battery technologies: open lead acid, AGM and Gel VRLA, NiCd.

Battery recharge capability

Sentry MPS is designed to supply the nominal load and recharge the batteries. At partial loads the spare power can be used to recharge the batteries, therefore Sentry MPS can recharge batteries with 3 hours back ups time in only 10 hours .

Flexibility



Sentry MPS Series is ON-LINE double conversion design but can also operate in: - Smart Active - Stand-by-Off, suitable for Emergency Escape Light (CSS - Central Supply System), as per standard EN50171. All models can be used as frequency converter - 50/60Hz and vice versa.

Expandability

The units can be connected in parallel - up to eight modules - to increase power availability or the redundancy. The single module or the system can be expanded at any time depending on the power demand without any impact on the initial investment. Thanks to the peculiarity of the 'Hot System Expansion' feature, the additional unit can be connected in parallel while the other units are on-line and supplying regular power to the load. The new UPS in on-line and will receive the updated information automatically.

Dual Bus System

The Dual Bus System supplies the priority loads from two independent sources. This configuration increases

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the redundancy and availability level of a multi-module configuration. Each bus may consist of a single module or up to 8 modules in parallel, kept in synchro by the optional UGS device (UPS Group Synchroniser). This allows the use of the STS (Static Transfer Switch) downstream to power the loads.

Dynamic Dual Bus System

Two independent systems set in Dual Bus configuration can be merged together at any time for system expansion or maintenance. This provides a lot of flexibility in your installation in case of maintenance or when it is necessary to change the redundancy level of both systems. The safety of the operations is guaranteed by the optional device PSJ.

Ease of installation

Sentry MPS has a very small footprint (only 0,64mq for 200kVA). The front access makes it very easy for all servicing operation while upward ventilation makes positioning against the wall possible.

Advanced communication

MPS Series is delivered with the AROS Watch&Save 3000 Software package and is compatible with PowerNETGuard or Teleguard for remote maintenance. The UPS is supplied with two RS232 outputs for remote monitoring and a wide range of communication cards:
- Netman 102 Plus (SNMP Agent) -

Multicom 302 (MODBUS/JBUS) -
Multicom 352 (Serial Duplexer) -
Profibus Converter - Multi I/O
(Modbus Converter of the alarms coming from outside the UPS cubicle)
- 2 alarms cards with relay contacts, alarms are user-programmable through the software. For more information on the Communication Cards see the CONNECTIVITY area

Application

Sentry MPS guarantees maximum protection and quality of power supply for any type of load and in particular for 'mission critical' applications, security and electromedical systems, industrial processes and telecommunications.

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Uninterruptible Power Supply

INPUT	MPS 500	MPS 600	MPS 800
Voltage	380 - 400 - 415 V three-phase		
Voltage tolerance	400 V $\pm 20\%$		
Input frequency	45 \div 65 Hz		
Accepted frequency	$\pm 2\%$ (selectable from $\pm 1\%$ to $\pm 5\%$ from the front panel)		
Current distortion	MPS Plus: $< 8\%$ THDI; MPS Sinus: $< 4\%$ THDI		
Input phases	3		
Soft start (Power Walk In)	0 \div 100% in 120' configurable		
BATTERIES	MPS 500	MPS 600	MPS 800
Type	Lead, open vase acid and VRLA AGM / GEL; NiCd		
Number of Pb elements	240		
Recharging voltage	$< 1\%$		
Temperature compensation	$-0,5 \text{ V} \times ^\circ\text{C}$		
OUTPUT	MPS 500	MPS 600	MPS 800
Rated power	500000 VA	600000 VA	800000 VA
Active power	400kW	480kW	640kW
Phases number	3+N		
Waveform	Sinusoidal		
Rated voltage	380 - 400 - 415 V threephase + N		
Voltage distortion with distorting load	$< 3\%$		
Voltage distortion with linear load	$< 1\%$		
Frequency	50/60 Hz configurable		
Dynamic stability	$\pm 5\%$ in 10msec.		
Static stability	$\pm 1\%$		
Crest factor (I _{peak} /I _{rms})	3:1		
Output phases	3		
Overload	110% for 60'; 125% for 10'; 150% for 1'		
SYSTEM	MPS 500	MPS 600	MPS 800
AC/AC efficiency	Up to 94%		
Operating altitude	Up to 1000 m a.s.l. (1% derating each 100 m from 1000 m to 2000 m)		
Noise	78dBA at 1 m		
Storing temperature	$-20 \text{ }^\circ\text{C} \div -70 \text{ }^\circ\text{C}$ (UPS); $20 \text{ }^\circ\text{C} \div 30 \text{ }^\circ\text{C}$ (Batteries)		
Operating temperature	0 \div 40 $^\circ\text{C}$		
Relative humidity	$< 95\%$ non condensing		
Protection degree	IP20		
Protections	Back Feed protection; separated By-pass line		
Communication	no. 2 RS232 + remote contacts + 2 communication interface slots		
Remote signals	Voltage free contacts		
Remote controls	E.P.O. and bypass		
Cooling	Forced air		
Colour	Light grey RAL 7035		
Standards	Directives EEC 73/23 - 93/68 - 89/336 Safety IEC EN 620401; EMC IEC EN 6204-2; Performance IEC EN 62040-3		

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Technology	On-line double conversion		
Weight (kg)	3600 Kg	4000 Kg	5300 Kg
Dimensions (WxDxH) mm	3200x980x1900 mm		4400x1000x1900 mm
Classification as per IEC 6240-3	(voltage Frequency Independent) VFI - SS - 111		

DATA	MPS 500	MPS 600	MPS 800
Back up time at full load (min)		0 Min.	
Installation		Tower	
Configuration		Parallel	

OPTIONS	MPS 500	MPS 600	MPS 800
Battery cabinets for longer runtimes		Yes	
Empty battery cabinets for longer runtimes		Yes	
Parallel kit		Yes	
Isolation transformer module (WxDxH)		Yes	
LCD-based remote control panel		Yes	
LED-based remote control panel		Yes	
Communication software 'professional' version		Yes	

OPTIONS	MPS 500	MPS 600	MPS 800
MultiCom 351	X	X	X
MultiCom 352	X	X	X
MultiCom 301	X	X	X
MultiCom 302	X	X	X
NetMan 101 Plus	X	X	X
NetMan 102 Plus	X	X	X
Multi I/O	X	X	X
AS/400 interface kit	X	X	X
UGS - UPS Group Synchronizer	X	X	X
PSJ - Power System Joiner	X	X	X
MultiCom 401	X	X	X