

SENTRY MPS 100 - 200 kVA

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 four ratings: 100, 120, 160 and 200 KVA, each of these are offered in four versions to better match the market requirements:

- **MPS**
- **MPS LH**
- **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



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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.

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Dual Bus System

The Dual Bus System supplies the priority loads from two independent sources. This configuration increases 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 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 Plus 102 (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

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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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INPUT	MPS 100	MPS 120	MPS 160	MPS 200
Soft start	0 ÷ 100% in 120" configurable			
Current distortion	MPS: <25%THDI; MPS LH: <5%THDI; MPS Plus: <5%THDI; MPS Sinus: <3%THDI			
Accepted frequency	±2% (selectable from ±1% to ±5% from the front panel)			
Input frequency	45 ÷ 65 Hz			
Voltage	380 - 400 - 415 V three-phase			
Voltage tolerance	400 V ±20%			
OUTPUT	MPS 100	MPS 120	MPS 160	MPS 200
Voltage distortion with distorting load	< 3%			
Voltage distortion with linear load	< 1%			
Crest factor (I _{peak} /I _{rms})	3:1			
Waveform	Sinusoidal			
Frequency	50/60 Hz configurable			
Phases number	3+N			
Rated power	100 KVA	120 KVA	160 KVA	200 KVA
Active power	80kW	96kW	128kW	160kW
Overload	110% for 60'; 125% for 10'; 150% for 1'			
Dynamic stability	± 5% in 10msec.			
Static stability	± 1%			
Rated voltage	380 - 400 - 415 V threephase + N			
BATTERIES	MPS 100	MPS 120	MPS 160	MPS 200
Type	Lead, open vase acid and VRLA AGM / GEL; NiCd			
Ripple current	<1%			
SYSTEM	MPS 100	MPS 120	MPS 160	MPS 200
Operating altitude	Up to 1000 m a.s.l. (1% derating each 100 m from 1000 m to 2000 m)			
Colour	Light grey RAL 7035			
Remote controls	E.P.O. and bypass			
Communication	no. 2 RS232 + remote contacts + 2 communication interface slots			
Protection degree	IP20			
Protections	Back Feed protection; separated By-pass line			
AC/AC efficiency	92,5% On-line; 98% Eco-Mode			
Noise	63 ÷ 68 dBA at 1 m			
Remote signals	Voltage free contacts			
Operating temperature	0 ÷ 40 °C			
Storing temperature	-20 °C ÷ -70°C (UPS); 20 °C ÷ 30 °C (Batteries)			
Relative humidity	<95% non condensing			
Cooling	Forced air			

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Standards	Directives EEC 73/23 - 93/68 - 89/336 Safety IEC EN 620401; EMC IEC EN 6204-2; Performance IEC EN 62040-3			
Classification as per IEC 6240-3	(voltage Frequency Independent) VFI - SS - 111			
OPTIONS	MPS 100	MPS 120	MPS 160	MPS 200
Battery cabinets for longer runtimes	Yes			
Empty battery cabinets for longer runtimes	Yes			
Parallel kit	Yes			
Optional filters	Yes			
Isolation transformer module (WxDxH)	Yes			
LCD-based remote control panel	Yes			
LED-based remote control panel	Yes			
Communication software "professional" version	Yes			
DATA	MPS 100	MPS 120	MPS 160	MPS 200
Weight (kg)	600	650	750	800
Dimensions (WxDxH) mm	1900x800x800			
Back up time at full load (min)	0			
Input phases	3			
Output phases	3			
Technology	On-line double conversion			
Installation	Tower			
Configuration	Parallel Unit	Parallel		

OPZIONI MPS 120

MultiCom 351
 MultiCom 352
 MultiCom 301
 MultiCom 302
 NetMan 101 Plus
 NetMan 102 Plus
 Multi I/O
 AS/400 interface kit
 UGS - UPS Group Synchronizer
 PSJ - Power System Joiner
 Profibus DP Gateway

OPZIONI MPS 160

MultiCom 351
 MultiCom 352
 MultiCom 301
 MultiCom 302
 NetMan 101 Plus

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NetMan 102 Plus
Multi I/O
AS/400 interface kit
UGS - UPS Group Synchronizer
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Profibus DP Gateway

OPZIONI MPS 200

MultiCom 351
MultiCom 352
MultiCom 301
MultiCom 302
NetMan 101 Plus
NetMan 102 Plus
Multi I/O
AS/400 interface kit
UGS - UPS Group Synchronizer
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OPZIONI MPS 100

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