Sentry MPS
Three-phase output

QUALITY POWER SUPPLY

SENTRY MPS is an on-line double conversion UPS (VFI SS 111 in accordance with IEC EN 62040-3) with a transformer isolated inverter. With a compact footprint and high power quality output, SENTRY MPS is designed to protect “mission critical” applications including data processing, telecommunications, industrial processes, security and electro-medical systems.

BATTERY CARE SYSTEM: MAXIMUM LIFETIME POTENTIAL

Traditionally, when a mains supply is present the UPS charges its batteries. Battery power is used for the inverter should the input supply fail. Efficient battery management and care is therefore essential to the overall performance of the UPS in an emergency. The SENTRY MPS Battery Care System consists of a range of features designed to provide optimum performance and enhanced operating life:

- Dual level charging regime to optimise recharge currents and lower recharge times;
- Temperature compensation and deep discharge protection to reduce overall battery aging;
- Charge blocking system to reduce electrolyte consumption and lengthen the life of VRLA batteries;
- Predictive battery testing to spot potential battery deterioration and failure.

SENTRY MPS is also compatible with different battery technologies: open-vase lead acid and AGM and Gel VRLA, NiCd.

MINIMUM INPACT ON SUPPLIES - EASY SOURCE

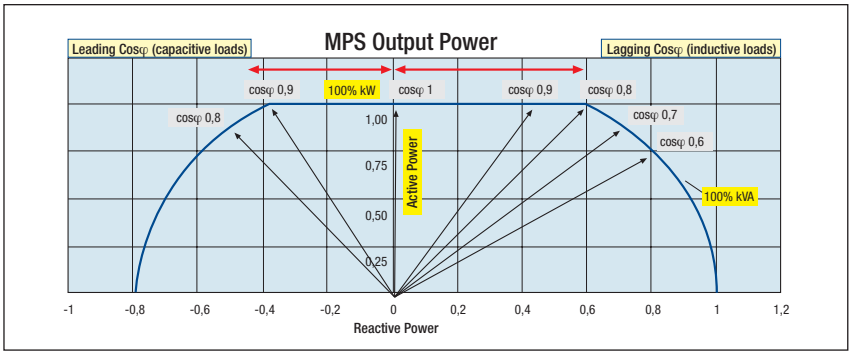
SENTRY MPS technology removes the problems of over sizing downstream power sources, whilst improving load power factors and current harmonics. The UPS features the latest input current absorption techniques including progressive rectifier start-up and the option to reduce battery charging currents. These features make SENTRY MPS one of the most generator compatible and environmentally friendly UPS available.

FLEXIBILITY

SENTRY MPS is suitable for a wide range of applications including IT and the most demanding industrial environments suitable for power capacitive loads such as blade servers, without any reduction of the active power, from 0,8 lagging to 0,9 leading. With a broad of accessories and options, complex configurations and system architectures can be achieved to guarantee maximum power availability and the option to add new UPS without interruption to existing users. Using the AROS UPS Group Synchroniser (USG) and Parallel Systems Joiner (PSJ) sophisticated inter group parallel and redundant systems can be achieved to provide the highest possible levels of resilience and availability.

EASY INSTALLATION

SENTRY MPS has a small footprint (only 0,64 sqm for 200kVA and 1,63 sqm for 400kVA). Front access to internal assemblies and top panel ventilation make space allocation within confined data processing or plant rooms easy. SENTRY MPS can be placed against a wall as there is no requirement for rear or side panel access for maintenance or ventilation.



FREQUENCY CONVERTER OPERATION

The standard UPS with 400V operating voltage can be configured on site as 50 to 60Hz frequency converter and vice-versa, with or without connection to the battery. On request units 400V-50Hz input and 440V-60Hz output are also available.
For the frequency converter range 400Hz output see page 84.

ADVANCED COMMUNICATION

- Compatible with TeleNetGuard for remote maintenance
- Advanced, multi-platform communication for all operating systems and network environments: Watch&Save 3000 monitoring and shut-down software included, for Windows 2008, Vista, 2003, XP; Mac OS X, Linux, Novell and most popular Unix operating systems
- The UPS is supplied with a cable for direct connection to the PC (Plug and Play)
- RS232 double serial port
- Installation slot for an Emergency Power Off (EPO) interface to allow the UPS to be switched off remotely in an emergency.
- Remote mimic panel (LED or LCD)
- Generator interface: enables desynchronisation of the UPS output from a generator supply which may be subject to phase and frequency variations. The interface also enables more economic use of the battery charger.

APPLICATIONS

- Servers
- Local Area Network (LAN)
- Data centers
- Telecommunications
- Industrial equipment
- Electro-medical equipment

OPTIONS

Input Isolation transformer
UPS Group Syncroniser (UGS)
Parallel System Joiner (PSJ)
Interface for generator
LED remote status panel
LCD based remote control panel
Graphic Display Remote panel
Empty battery cabinets for prolonged runtime

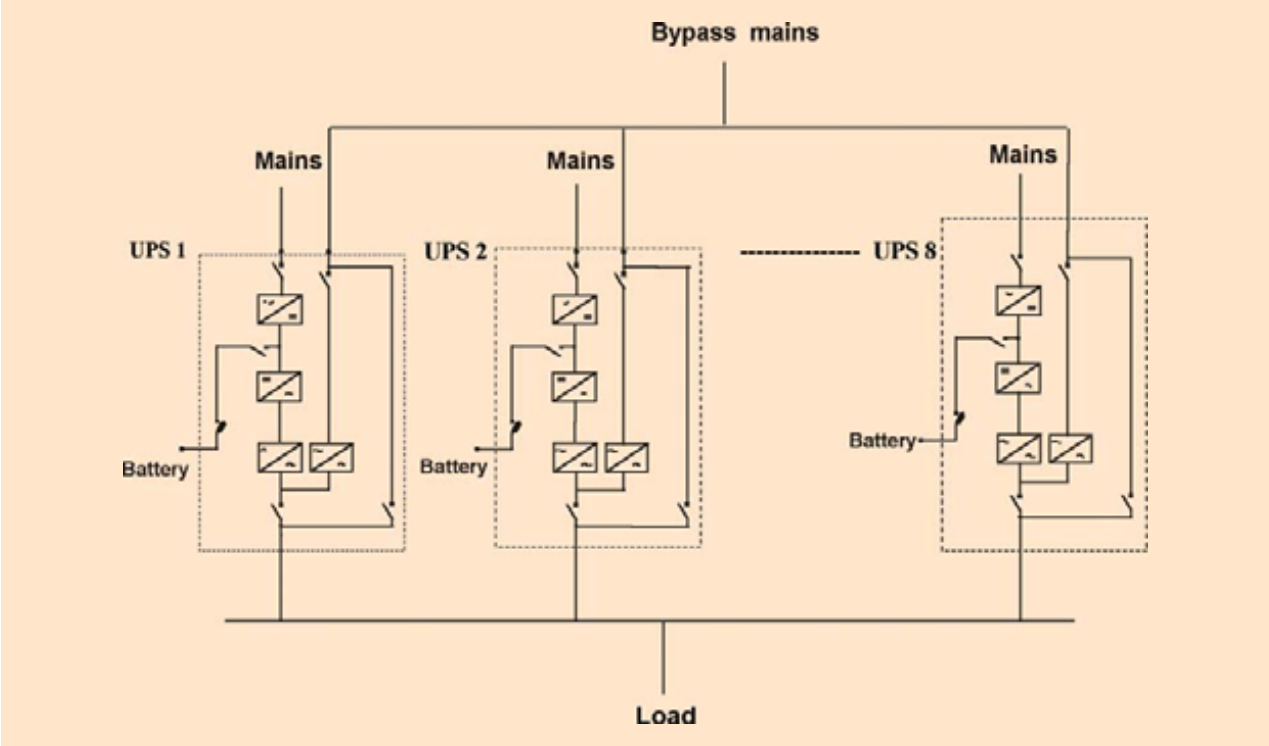


Fig 1- Bock diagram UPS in parallel up to 8 units

EXPANDABILITY

The units can be connected in parallel up to 8 units to increase power availability or redundancy.
The single module or the system can be expanded any time to suit power requirements without influencing 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 is on-line and will be set up automatically.

200kVA

DUAL BUS SYSTEM

The Dual Bus System powers 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 UGS (UPS Group Synchroniser).

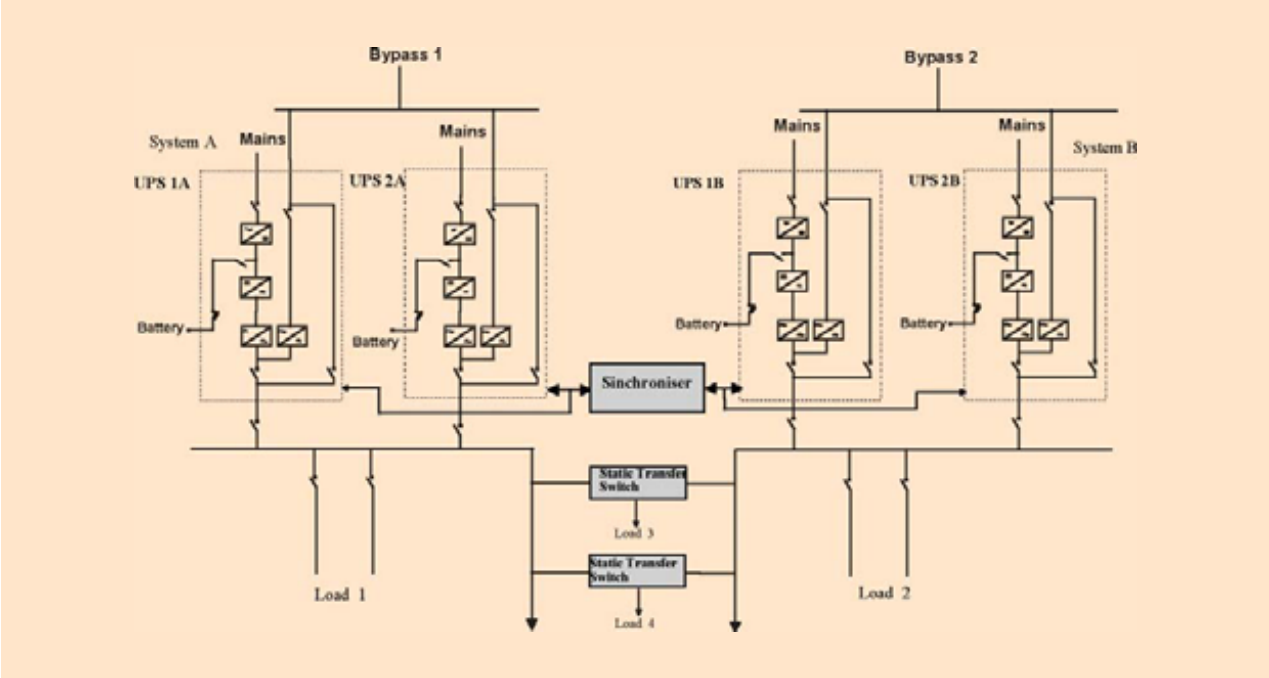


Fig. 2 - Dual bus System

DYNAMIC DUAL BUS SYSTEM

Two independent systems set in Dual Bus Configuration can be merged together at any time for system expansion or maintenance thanks to the PSJ (Parallel System Joiner) option. 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.

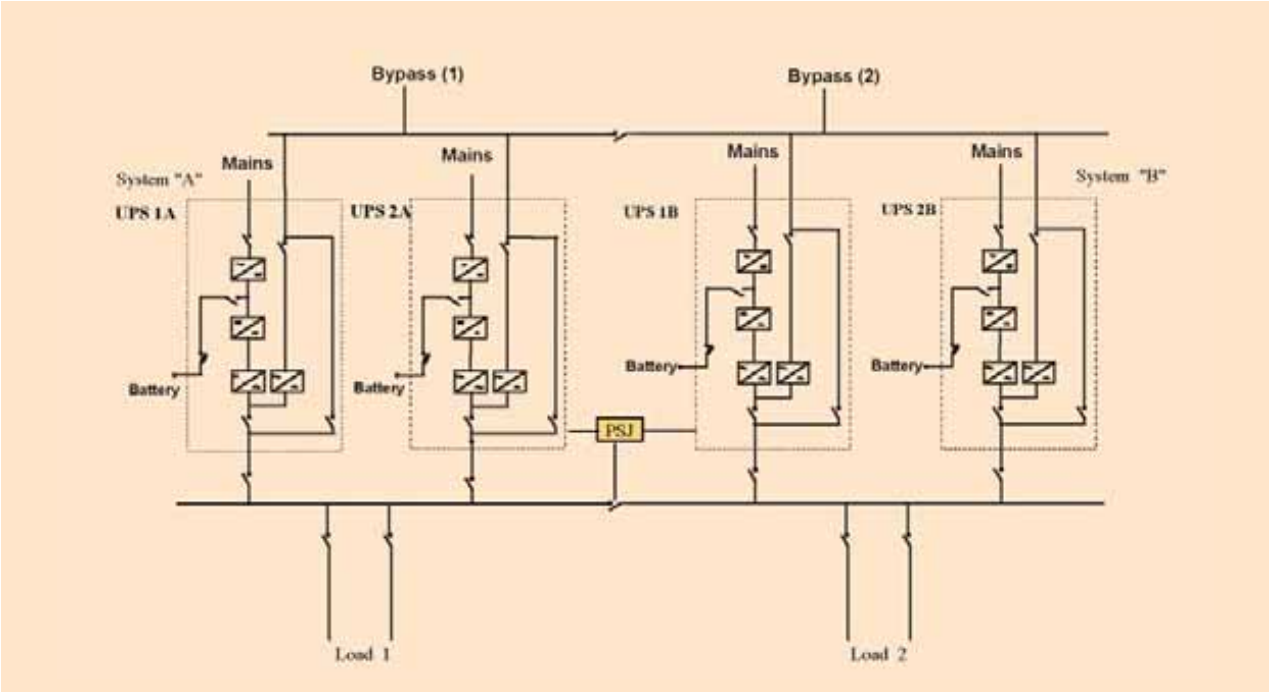


Fig. 3 - Dynamic Dual Bus System

Sentry MPS

Three-phase input
Three-phase output

Technical data

Models	MPS 100	MPS 120	MPS 160	MPS 200
Power (kVA)	100	120	160	200

Input	MPS 100	MPS 120	MPS 160	MPS 200
Nominal voltage	380 - 400 - 415 Vac three-phase			
Voltage tolerance	400 V ± 20%			
Frequency	45 ÷ 65 Hz			
Soft start	0 ÷ 100% in 30" configurable			
Permitted frequency tolerance	± 2% (selectable from ± 1% to ± 5% from the front panel)			
Standard features	Back Feed protection; separable bypass line			

Battery	MPS 100	MPS 120	MPS 160	MPS 200
Type	Lead, open vase acid and VRLA, AGM / GEL; NiCd			
AC ripple current	Zero			
Temperature compensation	-0,5 Vx °C			

Output	MPS 100	MPS 120	MPS 160	MPS 200
Rated power (kVA)	100	120	160	200
Active power with load PF from 0,9 cap. to 0,8 ind. (kW)	80	96	128	160
Number of phases	3 + N			
Nominal voltage	380 - 400 - 415Vac three-phase + N			
Static stability	± 1%			
Dynamic stability	± 5% in 10 msec.			
Voltage distortion with linear load	≤1%			
Voltage distortion with non linear load	≤3%			
Frequency	50 or 60 Hz configurable			
Waveform	Sinusoidal			
Crest factor (Ipeak/Ipms)	3:1			
Overload	110% for 60'; 125% for 10'; 150% for 1'			

System	MPS 100	MPS 120	MPS 160	MPS 200
Remote signalling	Voltage-free contacts (configurable)			
Remote commands	EPO and bypass			
Communication	Double RS232 + remote contacts + 2 communication interface slots			
Efficiency Smart Mode	Up to 98%			
Dimensions (wdh) (mm)	800x800x1900			
Weight (kg)	640	650	770	810
Noise level	63 ÷ 68 dBA a 1 m			
Operating temperature	0 °C / +40 °C			
Relative humidity	<95% non condensing			
Protection degree	IP20			
Colour	Light grey (RAL 7035)			
Compliance	European Directives: L V 2006/95/EC Low voltage directive EMC 2004/108/EC Electromagnetic compatibility directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111			

Sentry MPS

Three-phase input
Three-phase output

Technical data

Models	MPS 300	MPS 400	MPS 500	MPS 600	MPS 800
Power (kVA)	300	400	500	600	800

Input	MPS 300	MPS 400	MPS 500	MPS 600	MPS 800
Nominal voltage	380 - 400 - 415 Vac three-phase				
Voltage tolerance	400 V ± 20%				
Frequency	45 ÷ 65 Hz				
Power factor	>0.95 in the Sinus version		>0.93 in the Sinus version		
Current harmonic distortion	<3% in the Sinus version				
Soft start	0 ÷ 100% in 30" configurable				
Permitted frequency tolerance	± 2% (selectable from ± 1% to ± 5% from the front panel)				
Standard features	Back Feed protection; separable bypass line				

Battery	MPS 300	MPS 400	MPS 500	MPS 600	MPS 800
Type	Lead, open vase acid and VRLA, AGM / GEL; NiCd				
AC ripple current	<1%				
Temperature compensation	-0,5 Vx °C				

Output	MPS 300	MPS 400	MPS 500	MPS 600	MPS 800
Rated power (kVA)	300	400	500	600	800
Active power with load PF from 0,9 cap. to 0,8 ind. (kW)	240	320	400	480	640
Number of phases	3 + N				
Nominal voltage	380 - 400 - 415 Vac three-phase + N				
Static stability	± 1%				
Dynamic stability	± 5% in 10 msec.				
Voltage distortion with linear load	≤1%				
Voltage distortion with non linear load	≤3%				
Frequency	50 or 60 Hz configurable				
Waveform	Sinusoidal				
Crest factor (Ipeak/Ipms)	3:1				
Overload	110% for 60'; 125% for 10'; 150% for 1'				

System	MPS 300	MPS 400	MPS 500	MPS 600	MPS 800
Remote signalling	Voltage-free contacts (configurable)				
Remote commands	EPO and bypass				
Communication	Double RS232 + remote contacts + 2 communication interface slots				
Efficiency Smart Mode	Up to 98%				
Dimensions (wdh) (mm)	1630x850x1900	1630x1000x1900	3200x980x1900		440x1000x1900
Weight (kg)	2200	2600	3600	4000	5300
Noise level	<70 dBA at 1 m		<77 dBA at 1 m		<80 dBA at 1 m
Operating temperature	0 °C / +40 °C				
Relative humidity	<95% non condensing				
Protection degree	IP20				
Colour	Light grey (RAL 7035)				
Compliance	European Directives: L V 2006/95/EC Low voltage directive EMC 2004/108/EC Electromagnetic compatibility directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111				