

# Sentry MPS-HP



## ABSOLUTE PROTECTION

Thanks to the double conversion on-line technology achieved entirely with IGBT and DSP (Digital Signal Processor) control, the Sentry MPS-HP series guarantees maximum protection as well as high quality power for any type of IT and industrial load. It is especially suited for mission critical applications and is classed VFI SS 111 (Voltage and Frequency Independent) in compliance with IEC EN 62040-3 standards. This series, available in 100 to 250kVA models, has been designed using a new configuration that includes an IGBT rectifier with sinusoidal input current in place of the traditional thyristor rectifier.

## ZERO IMPACT SOURCE

Sentry MPS-HP is a further evolution of the Sentry MPS series with the added advantages offered by an IGBT-based rectifier assembly. This feature further reduces the impact of the UPS on the local supply and simplifies installation where there is limited power capacity in the form of available electrical supply rating or generator size. Sentry MPS-HP is classed as a "Zero Impact Source" and provides:

- low input current distortion – less than 2,5%
- high input power factor 0.99
- power walk-in function that ensures progressive rectifier start up
- delayed start up phased with the return of mains power supply, when several UPS are connected in the system.

Sentry MPS-HP also performs the role of a high performance filter, protecting its upstream power supply sources from any harmonics and reactive power generated by the loads powered.

## BATTERY CARE SYSTEM

Sentry MPS-HP uses the Battery Care System, also available on the traditional Sentry MPS models, which optimises battery performance in order to extend the battery life for as long as possible.



## FLEXIBILITY

Sentry MPS-HP models feature an output transformer with galvanic isolation (between the load and the battery supply) to provide greater versatility and installation options. The UPS can be supplied from two separated power sources (mains power and a second emergency standby source) which can help increase the resilience of parallel system configurations.

## MAIN CHARACTERISTICS

- Efficiency up to 98%;
- Compact footprint: only 0.85 m<sup>2</sup> for the 250kVA UPS model;
- Reduced weight;
- Double electronic and galvanic protection of the load from the battery.

The entire Sentry MPS-HP range is suitable for a wide range of applications thanks to the flexibility of the configurations, accessories and options and choice of performance levels: compatible with capacitive loads, such as blade servers, without any reduction in active power, ranging from 0.9 lead to 0.8 lag and up to 0.8 capacitive power with a low derating equal to 15% of the active power (kW). Efficient and reliable power supply for mission critical applications is guaranteed by operating in redundancy and power parallel mode with up to 8 units (N+1), and by the Dual Bus System and Dynamic Dual Bus system configurations.

## APPLICATIONS

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



Details of the connection

## OPTIONS

- Isolation transformer
- Synchroniser device (UGS)
- Parallel Systems Joiner device (PSJ)
- Interface for generator set
- Closed Loop kit (to be ordered with the UPS)
- Empty battery cabinets or cabinets for extended runtime



# Sentry MPS-HP

## Technical data

Three-phase input  
Three-phase output

Models	MPS-HP 100	MPS-HP 120	MPS-HP 160	MPS-HP 200	MPS-HP 250
Power (kVA)	100	120	160	200	250
<b>Input</b>	<b>MPS-HP 100</b>	<b>MPS-HP 120</b>	<b>MPS-HP 160</b>	<b>MPS-HP 200</b>	<b>MPS-HP 250</b>
Nominal voltage	380 - 400 - 415 Vac three-phase				
Range acceptable without battery intervention	300 ÷ 480 Vac				
Frequency	45 ÷ 65 Hz				
Power factor	>0.99				
Current harmonic distortion	<2.5% THDi				
Soft start	0 ÷ 100% in 30" (selectable)				
Permitted frequency tolerance	± 2% (selectable from ± 1% to ± 5% from the front panel)				
Standard features	Back Feed protection; separable bypass line				
<b>Battery</b>	<b>MPS-HP 100</b>	<b>MPS-HP 120</b>	<b>MPS-HP 160</b>	<b>MPS-HP 200</b>	<b>MPS-HP 250</b>
Type	Free lead-acid, and VRLA AGM / GEL; NiCd				
AC ripple current	Zero				
Temperature compensation	-0,5 Vx °C				
<b>Output</b>	<b>MPS-HP 100</b>	<b>MPS-HP 120</b>	<b>MPS-HP 160</b>	<b>MPS-HP 200</b>	<b>MPS-HP 250</b>
Rated power (kVA)	100	120	160	200	250
Active power with load PF from 0,9 cap. to 0,8 ind. (kW)	80	96	128	160	200
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 stability on battery	0.05%				
Frequency	50 or 60 Hz (selectable)				
Overload	110% for 60'; 125% for 10'; 150% for 1'				
<b>System</b>	<b>MPS-HP 100</b>	<b>MPS-HP 120</b>	<b>MPS-HP 160</b>	<b>MPS-HP 200</b>	<b>MPS-HP 250</b>
Remote signalling	Voltage-free contacts (configurable)				
Remote commands	EPO and bypass (configurable)				
Communication	Double RS232 + remote contacts + 2 slots for communication interface				
Efficiency Smart Mode	Up to 98%				
Dimensions (wdh) (mm)	800x850x1900			1000x850x1900	
Weight (kg)	656	700	800	910	1000
Noise level	63 ÷ 68 dBA at 1 m				
Operating temperature	0 °C ÷ +40 °C				
Relative humidity	<95% non condensing				
Protection degree	IP20 (others on request)				
Colour	Light grey (RAL 7035)				
Compliance	Safety: EN 62040-1-1 (directive 2006/95/EC); EMC: EN 62040-2 (directive 2004/108/EC)				
Classification according to IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111				

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