LOCAL AREA NETWORKS (LAN) | SERVERS | DATA CENTERS | TELECOM-MUNICATION DEVICES | E-BUSINESS (Servers Farms, ISP/ASP/POP) | INDUSTRIAL PROCESSES | INDUSTRIAL PLCS | ELECTRO-MEDICAL DEVICES | EMERGENCY DEVICES (Lights/Alarms)

Master Plus HIP

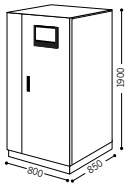
100-400 kVA
three-phase/three-phase

ECO 6 ENERGY LEVELS

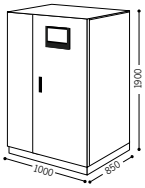
The new HIP version available in 100 to 400kVA models has been added to the Master Plus series.
Thanks to the double conversion on-line technology achieved entirely with **IGBT and DSP (Digital Signal Processor)** control, the **Master Plus HIP** series guarantees maximum protection as well as high quality 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 has been designed using a new configuration that includes an **IGBT rectifier** with sinusoidal input current in place of the traditional thyristor rectifier.

Dimensions (mm)

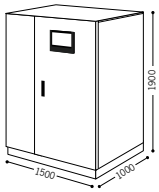
MP 100-HIP
MP 120-HIP



MP 160-HIP
MP 200-HIP
MP 250-HIP



MP 300-HIP
MP 400-HIP



ZERO IMPACT SOURCE

Master Plus HIP is a further evolution of the Master Plus 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. Master Plus HIP 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.

Master Plus HIP 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

Master Plus HIP uses the Battery Care System, also available on the traditional Master Plus models, which optimises battery performance in order to extend the battery life for as long as possible.

FLEXIBILITY

Master Plus models (including the HIP versions) 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 separate 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 98,5 %
- Compact footprint: only 0.85 m^2 for the 250kVA UPS model
- Reduced weight
- Double electronic and galvanic protection of the load from the battery

The whole Master Plus HIP range is suitable for use in the widest selection of applications; thanks to the flexible configurations, accessories and optionals available, it is suitable for powering capacitive loads, such as blade servers etc.

Reliability and availability of the power supply for critical applications are guaranteed by the distributed or centralised parallel of up to 8 units, for a backup (N+1) or power parallel and by all the various configurations available in the Master Plus range.

OPTIONS

Isolation transformer
Synchroniser device (see Master Plus UGS)
Parallel Systems Joiner device (see Master Plus PSJ)
Interface for generator set
Closed Loop kit (to be ordered with the UPS)
Empty battery cabinets or cabinets for extended runtime (Battery Box modules BB 480 A0) (Master Plus)

MODELS	MP 100-HIP	MP 120-HIP	MP 160-HIP	MP 200-HIP	MP 250-HIP	MP 300-HIP	MP 400-HIP
POWER (kVA)	100	120	160	200	250	300	400
INPUT							
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	<3% THDi						
Soft start	0÷100 in 30" (selectable)						
Frequency tolerance	± 2% (selectable between ± 1% a ± 5% from the front panel)						
Standard features	Back Feed protection; separable bypass line						
BATTERIES							
Type	Free lead-acid, and VRLA AGM / GEL; NiCd						
Ripple current	Zero						
Recharge voltage compensation	-0.5 Vx°C						
OUTPUT							
Nominal power (kVA)	100	120	160	200	250	300	400
Active power (kW)	80	96	128	160	200	270	360
Number of phases	3 + N						
Nominal voltage	380 - 400 - 415 Vac 3-phase + N						
Static stability	± 1%						
Dynamic stability	± 5% in 10 ms						
Voltage distortion	< 1% with linear load / < 3% with distorting load						
Peak factor (Ipeak/Irms)	3:1						
Frequency stability on battery	0.05%						
Frequency	50 or 60 Hz (selectable)						
Overload	110% for 60'; 125% for 10'; 150% for 1'						
ENVIRONMENTAL							
Weight (kg)	656	700	800	910	1000	1400	1700
Dimensions (hwd) (mm)	1900 x 800 x 850		1900 x 1000 x 850			1900 x 1500 x 1000	
Remote signals	Voltage-free contacts (configurable)						
Remote commands	EPO and bypass (configurable)						
Communication	Twin RS232 + remote contacts + 2 slots for communication interface						
Environment temperature	0°C / +40°C						
Relative humidity	< 95% non-condensing						
Colour	RAL 7035 light grey						
Noise level	63 ÷ 68 dBA at 1 m					70 ÷ 72 dBA at 1 m	
Protection rating	IP20 (others on request)						
Efficiency Smart Mode	Up to 98,5%						
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						


Ph 3
63 x /1,25