



Illustration photo



HIGHLIGHTS

- IGBT-based rectifier technology
- Compact and reliable
- Galvanic isolation
- High overload capacity
- LCD graphic display

The Master HP series from 100 to 600 kVA is the Riello UPS solution for installations requiring high energy efficiency and maximum power availability. Master HP Series provides maximum protection and power quality for data centres and industrial loads. The UPS has an IGBT-based rectifier, DSP (Digital Signal Processors) technology and provides true On-line, double conversion power protection, (VFI SS 11 - Voltage and Frequency Independent in accordance with IEC EN 62040-3).

Maximised cost savings

The Master HP has the ability to monitor the mains input quality and to select the best operating mode based on the interference present (Smart Active mode) or circular redundancy (Parallel Energy Saving mode, which allows the UPS to regulate available capacity based on the immediate demands of the load, automatically switching to standby in the event of excess

capacity), the Master HP also offers high levels of efficiency for partial loads, resulting in reduced operating costs.

Power continuity

For years, Riello UPS has developed and supplied solutions for dealing with the different requirements and problems that inevitably arise in critical applications. Riello UPS offers flexible, high-availability solutions that are able to adapt to different system structures and critical levels. Riello UPS creates UPS systems that can tolerate a number of component or subsystem failures, while continuing to operate normally, providing power without interruption. This is achieved by careful design, installing redundant elements, eliminating common failure points, scheduling maintenance activities and controlling and supervising the system operating parameters and environment. The TEC service team is ready to provide guidance and advice on projects.

Main features

- High efficiency (up to 98,5%)
- Compact size: e.g.: only 0,85 m² for the Master HP 250 kVA
- Reduced weight
- Double load protection, both electronic and galvanic, towards the battery.

The entire Master HP range is suitable for use in a wide range of applications. Thanks to the flexibility of configuration, available options and accessories, it is suitable for supplying any type of load, e.g. capacitive loads such as blade servers etc. Power supply reliability and availability are ensured for critical applications by distributed or centralised parallel configurations of up to 8 units, for redundant (N+1) or power parallel configurations and all the different configurations offered by the Master MPS range.

Zero impact source

Master HP has a zero impact on connected power sources - grid networks or generators:

- ≤ 3% input current distortion
- Input power factor 0,99
- power walk-in function - to ensure a progressive rectifier start-up
- start-up delay function - to restart the rectifier when the mains power supply is restored.

Battery care system

Master HP series UPS include a range of features designed to prolong battery life and reduce their usage.

Output isolation transformer

- Better load protection from DC/Battery problems
- The UPS can be supplied from 2 independent lines
- Fault on DC bus will not affect the by-pass Availability
- High Short circuit current
- Higher immunity to harmonics or energy backfeed generated by the load.

Advanced supervision

Master HP series UPS have a front panel mounted graphic display providing UPS information, measurements, status updates and alarms in different languages, with wave form

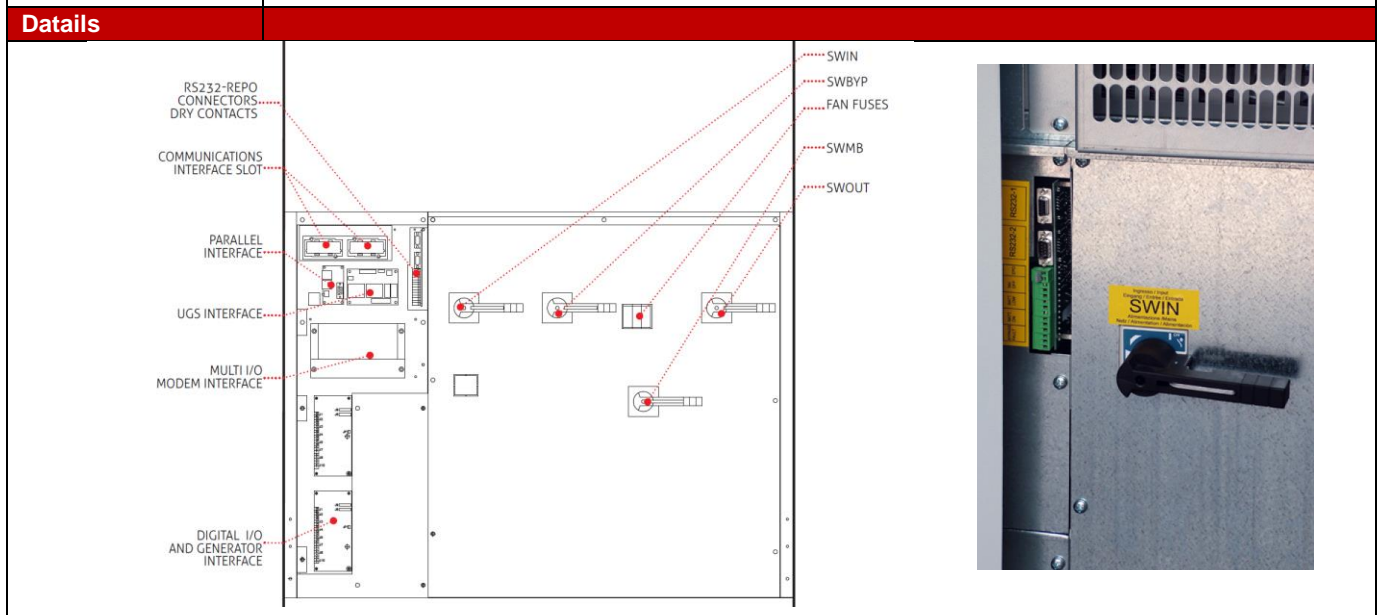
displays including voltage/current and providing a kWh reading that can be used to measure IT loads and calculate a datacenter PUE (power usage effectiveness) ratio.

Smart Grid Ready

Being smart grid ready, Master HP allows for the implementation of power accumulation solutions, and at the same time ensures extremely high levels of efficiency. It is also able to independently select the most efficient operating method based on the status of the grid. Master HP UPS are also able to electronically interface with the energy manager using the smart grid communication network.

Technical specifications

Other cabinets	MHT 100	MHT 120	MHT 160	MHT 200	MHT 250	MHT 300	MHT 400	MHT 500	MHT 600
Battery box	BB 1900 480-V6 / BB 1900 480-V7 / BB 1900 480-V8 / BB 1900 480-V9								
Dimensions (wxdxh) (mm)	860x800x1900								
Cabinets with TOP acces for cable	TCE MHT 100-250				TCE MHT 300-600				
Dimensions (wxdxh) (mm)	400x850x1900				400x1000x1900				
Three-phase isolation transformer	TBX 100 T - TBX 160 T			TBX 200 T - TBX 250 T		TBX 300 T - TBX 600 T			
Dimensions (wxdxh) (mm)	640x800x1900			800x800x1900		1200x1000x1900			
Details									
Software	PowerShield ³ , PowerNetGuard								
Accessories	NETMAN 204, MULTICOM 302 (352, 401), MULTI I/O, Interface kit AS400, MULTIPANEL, RTG 100, 56K Modem, GSM Modem								
Product accessories	Isolation transformer, Synchronisation device (UGS), Hot connection device (PSJ), Digital I/O and Generator interface, Parallel configuration kit (Closed Loop), Battery cabinets empty or for extended runtimes, Top Cable Entry cabinets, IP rating IP31/IP42								





UPS

Master HP 100-600kVA



Technical specifications

Three phase input
Three phase output

Models	MHT 100	MHT 120	MHT 160	MHT 200	MHT 250
Nominal/Active power (kVA / kW)	100 / 90	120 / 108	160 / 144	200 / 180	250 / 225
Input					
Nominal voltage	380 - 400 - 415 Vac three-phase				
Frequency	45 - 65 Hz				
Power factor	> 0,99				
Harmonic current distortion	<3% THDi				
Soft start	0 - 100% in 120" (selectable)				
Frequency tolerance	± 2% (selectable from ± 1% to ± 5% from front panel)				
Standard equipment provided	Back Feed protection; separable bypass line				
By-pass					
Nominal voltage	380 - 400 - 415 Vac three-phase + N				
Nominal frequency	50 or 60 Hz (selectable)				
Output					
Number of phases	3 + N				
Nominal voltage	380 - 400 - 415 Vac three-phase + N (selectable)				
Static stability	± 1%				
Dynamic stability	± 5% in 10 ms				
Voltage distortion	< 1% with linear load / < 3% with non-linear load				
Crest factor	3:1 Ipeak/Irms				
Frequency stability on battery	0,05%				
Frequency	50 or 60 Hz (selectable)				
Overload	110% for 60'; 125% for 10'; 150% for 1'				
Batteries					
Type	VRLA AGM / GEL; NiCd; Supercaps; Li-ion; Flywheels				
Ripple current	Zero				
Recharge voltage compensation	-0,5 Vx°C				
Info for instalation					
Weight (kg)	656	700	800	910	1000
Dimensions (wxdxh) (mm)	800x580x1900		1000x850x1900		
Remote signals	dry contacts (configurable)				
Remote controls	ESD and bypass (configurable)				
Communications	Double RS232 + dry contacts + 2 slots for communications interface				
Operating temperature	0 °C / +40 °C				
Relative humidity	<90% non-condensing				
Colour	Dark grey RAL 7016				
Noise level at 1 m	63 - 68 dBA				
IP rating	IP20 (others on request)				
Smart Active efficiency	up to 98,5%				
Standards	Safety: EN 62040-1-1 (Directive 2006/95/EC); EMC: EN 62040-2 (Directive 2004/108/EC)				
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111				
Moving the UPS	transpallet				



UPS

Master HP 100-600kVA



Technical specifications

Three phase input
Three phase output

Models	MHT 300	MHT 400	MHT 500	MHT 600
Nominal/Active power (kVA / kW)	300 / 270	400 / 360	500 / 450	600 / 540
Input				
Nominal voltage	380 - 400 - 415 Vac three-phase			
Frequency	45 - 65 Hz			
Power factor	> 0,99			
Harmonic current distortion	<3% THDi			
Soft start	0 - 100% in 120" (selectable)			
Frequency tolerance	± 2% (selectable from ± 1% to ± 5% from front panel)			
Standard equipment provided	Back Feed protection; separable bypass line			
By-pass				
Nominal voltage	380 - 400 - 415 Vac three-phase + N			
Nominal frequency	50 or 60 Hz (selectable)			
Output				
Number of phases	3 + N			
Nominal voltage	380 - 400 - 415 Vac three-phase + N (selectable)			
Static stability	± 1%			
Dynamic stability	± 5% in 10 ms			
Voltage distortion	< 1% with linear load / < 3% with non-linear load			
Crest factor	3:1 Ipeak/Irms			
Frequency stability on battery	0,05%			
Frequency	50 or 60 Hz (selectable)			
Overload	110% for 60'; 125% for 10'; 150% for 1'			
Batteries				
Type	VRLA AGM / GEL; NiCd; Supercaps; Li-ion; Flywheels			
Ripple current	Zero			
Recharge voltage compensation	-0,5 Vx°C			
Info for instalation				
Weight (kg)	1400	1700	2100	2400
Dimensions (wxdxh) (mm)	1500x1000x1900		2100x1000x1900	
Remote signals	dry contacts (configurable)			
Remote controls	ESD and bypass (configurable)			
Communications	Double RS232 + dry contacts + 2 slots for communications interface			
Operating temperature	0 °C / +40 °C			
Relative humidity	<90% non-condensing			
Colour	Dark grey RAL 7016			
Noise level at 1 m	70 - 72 dBA			
IP rating	IP20 (others on request)			
Smart Active efficiency	up to 98,5%			
Standards	Safety: EN 62040-1-1 (Directive 2006/95/EC); EMC: EN 62040-2 (Directive 2004/108/EC)			
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111			
Moving the UPS	transpallet			

A2B reserves the right to change any information without prior notice. (76-000302-01)

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