



Personal computers

Small computers network

Local Area Networks (LAN)

Workstations

Servers

EPOS (Electronic Point Of Sale) systems

Data Centers

Industrial PLCs

Cash registers

Electro-medical devices

Emergency devices (lights/alarms)

Telecommunication devices

e-Business (Server farms, ISP/ASP/POP)

Industrial processes

# MASTER PLUS

**100 - 200 kVA**  
**three-phase/three-phase**

MASTER PLUS



## MINIMUM IMPACT ON SUPPLIES - EASY SOURCE

Master Plus technology removes the problems of over sizing upstream 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 Master Plus one of the most generator compatible and environmentally friendly UPS available.

## ABSOLUTE PROTECTION

Master Plus is an on-line double conversion UPS (VFI SS 111 in accordance with IEC EN 62040-3) with a transformer isolated inverter. Master plus has a compact foot print and high quality output to provide the ultimate power protection for "mission critical" applications: data processing, telecommunications, industrial processes, security and electro-medical systems.



INDUSTRY Range

**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 Master Plus 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

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

**FLEXIBILITY**

Master Plus is suitable for a wide range of applications including IT and the most demanding industrial environments. With a broad range 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 Riello 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.

**OPTIONS**

- Isolation transformer module
- UPS Group Synchroniser (see UGS page 42)
- Hot connection device (see PSJ page 42)
- Interface for generator
- LED remote status panel
- LCD based remote control panel
- Closed Loop parallel kit option (to be ordered with the UPS)
- Empty battery cabinets for prolonged runtime

**EASE OF INSTALLATION**

Master Plus is compact with a foot print of only 0.64sqm for a 200kVA system. Front access to internal assemblies and top panel ventilation make space allocation within confined data processing or plant rooms easy. Master Plus can be placed against a wall as there is no requirement for rear or side panel access for maintenance or ventilation.



**Mimic panel**

**ADVANCED COMMUNICATION**

- Compatible with TeleNetGuard for remote maintenance
- Advanced, multi-platform communication, for all operating systems and network environments: PowerShield<sup>2</sup> supervision and shut-down software included, with SNMP agent, for Windows 95, 98, NT 4.0, Me, 2000, 2003, XP, Mac OS 9.x, X, Linux, Novell operating systems. The UPS is supplied with a cable for direct connection to the PC (Plug and Play)
- RS232 double serial port
- Slot for installation of the mains adapter; EPO contact (Emergency Switching Device) for switching off the UPS with a remote emergency switch.
- Remote mimic panel (LED or LCD).

MODELS	MP 100	MP 120	MP 160	MP 200
<b>POWER (kVA)</b>	<b>100</b>	<b>120</b>	<b>160</b>	<b>200</b>
<b>INPUT</b>				
Nominal voltage	380 - 400 - 415 Vac three-phase			
Voltage tolerance	400 V $\pm$ 20%			
Frequency	45 $\div$ 65 Hz			
Power factor	>0.95 in the 12MP HC version			
Current distortion	<3% in the 12MP HC version			
Soft start	0 $\div$ 100% in 120" configurable			
Permitted frequency tolerance	$\pm$ 2% (selectable from $\pm$ 1% to $\pm$ 5% from the front panel)			
Standard features	Back Feed protection; separable bypass line			
<b>BATTERY</b>				
Type	Lead, flooded and VRLA AGM / GEL; NiCd			
AC ripple	<1%			
Temperature compensation	-0,5 Vx °C			
<b>OUTPUT</b>				
Rated power (kVA)	100	120	160	200
Active power (kW)	80	96	128	160
Number of phases	3 + N			
Nominal voltage	380 - 400 - 415Vac three-phase + N			
Static stability	$\pm$ 1%			
Dynamic stability	$\pm$ 5% in 10 msec.			
Voltagedistortionwithlinearload	<1%			
Voltagedistortionwithdistortingload	<3%			
Frequency	50 or 60 Hz configurable			
Waveform	Sinusoidal			
Peak factor	3:1			
Overload	110% for 60'; 125% for 10'; 150% for 1'			
<b>SYSTEM</b>				
Remote signalling	Voltage-free contacts			
Remote commands	EPO and bypass			
Communication	double RS232 + remote contacts + 2 communication interface slots			
Performance	Up to 94%			
Dimensions (HxLxD) (mm)	1900x800x800			
Weight (kg)	600	650	750	800
Noise level	63 $\div$ 68 dBA a 1 m			
Operating temperature	0 °C / +40 °C			
Relative humidity	<95% non condensing			
Protection rating	IP20			
Colour	RAL 7035			
Standards	Directives EEC 73/23 - 93/68 - 89/336 Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3			
Classification as per IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111			

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