INDUSTRIAL PLCS

INDUSTRIAL PROCESSES

Master Plus Industrial

30-80 kVA

three-phase/single-phase
DC BUS 220 Vdc

PROTECTION FOR INDUSTRIAL APPLICATION

Master Plus Industrial is an on-line double conversion UPS (VFI SS 111 in accordance with IEC EN 62040-3) with a transformer isolated inverter and rectifier. Master Plus Industrial has a compact foot print and high quality output to provide the ultimate power protection for industrial applications: industrial and petrochemical processes, power plants and energy distribution systems.

INDUSTRIAL ENVIRONMENT

Master Plus Industrial is suitable for severe installation environments such as petrochemical manufacturing sites, where the operating conditions (levels of vibration, mechanical stress, ambient temperatures and dust ingress) require a more robust and industrialised UPS design to those installed within, for example, data centres.

HIGH Icc

A high short-circuit current (Icc = 3 In) making the UPS suitable for loads with high current peaks; during switch-on or a load step-change.

220V DC VOLTAGE

An input transformer and isolated inverter to protect the 220Vdc bus bar (from 108 to 114 blocks), the recognised industrial standard.

REDUNDANT VENTILATION

100% redundant ventilation with 50% fan loading at nominal load and each fan monitored for breakdown or failure.

MINIMUM IMPACT ON SUPPLIES - EASY SOURCE

Master Plus Industrial 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 Industrial one of the most generator compatible and environmentally friendly UPS available.

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 Industrial Battery Care System consists of a range of features designed to provide optimum performance and enhanced operating life:

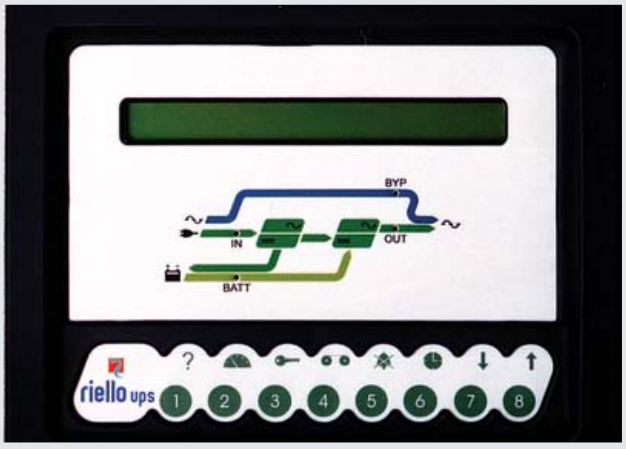
- Dual level charging regime to optimise recharge currents and lower recharge times
- Temperature compensation and deep discharge protection to reduce overall battery aging
- Charge blocking system to reduce electrolyte consumption and lengthen the life of VRLA batteries
- Predictive battery testing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

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

FLEXIBILITY

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 (UGS) 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.

LCD front panel

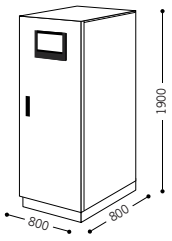


ADVANCED COMMUNICATION

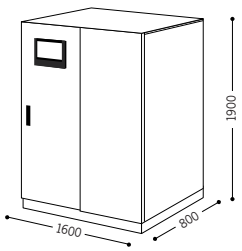
- Compatible with TeleNetGuard for remote maintenance
- Advanced, multi-platform communication for all operating systems and network environments: PowerShield³ monitoring and shut-down software included, with SNMP agent, for Windows 9x, ME, NT 4.0, 2000, XP, Vista and 2003 server; Mac OS X, Linux, Novell 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)

Dimensions (mm)

MPI 30 - MPI 40



MPI 60 - MPI 80



OPTIONS

Isolation transformer module
UPS Group Syncroniser (see UGS)
Hot connection device (see PSJ)
Interface for generator
LED remote status panel
LCD based remote control panel
Closed Loop parallel kit option (to be ordered with the UPS)
Different protection IP rating

MODELS	MPI 30	MPI 40	MPI 60	MPI 80
POWER (kVA)	30	40	60	80
INPUT				
Nominal voltage	380 - 400 - 415 Vac three-phasee			
Voltage tolerance	400 V ± 20%			
Frequency	45 ÷ 65 Hz			
Power factor	≥ 0.93			
Current distortion	< 5% C			
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				
Number of cells	108 ÷ 114			
Max Vdc	274 V			
Temperature compensation	-0,5 Vx°C			
OUTPUT				
Rated power (kVA)	30	40	60	80
Active power (kW)	24	32	48	64
Nominal voltage	230 Vac single phase			
Static stability	± 1%			
Dynamic stability	± 5%			
Voltage distortion with linear load	< 1%			
Voltage distortion with distorting load	< 3%			
Frequency	50 or 60 Hz configurable			
Peak factor	3 : 1			
Overload	110% for 60'; 125% for 10'; 150% for 1'			
Short circuit current	3 I nom.			
SYSTEM				
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)	1900 x 800 x 800		1900 x 1600 x 800	
Weight (kg)	850	900	1400	1500
Noise level	63 ÷ 68 dBA a 1 m			
Ventilation	Redundant fans			
Operating temperature	0 °C - 40 °C			
Relative humidity	< 95% non condensing			
Protection rating	IP20			
Colour	RAL 7035			
Standards	Directives EC 73/23 - 93/68 - 2004/108 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			