

**MP-NET** from 20 to 80 kVA



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**MP-NET 100% real modular power** - Masterguard's first modular UPS is designed to grow with evolving load requirements, making it the perfect solution to power modular distributed networks.

**MP-NET has been developed to meet the highest standards of serviceability, flexibility and scalability, while also having maximum energy and space saving features, guaranteeing maximum availability.**

### The smart solution that easily adapts to run time requests

MP-NET offers the most secure and flexible system architecture able to grow with your business. This modular solution is made up of a bespoke cabinet that is able to house up to four 20kVA power modules. Additional power modules can be added at any time without dropping the load or making other changes to the battery bank.

MP-NET represents the best solution for parallel redundant systems; maximizing system efficiency, and minimizing the total cost of ownership thanks to:

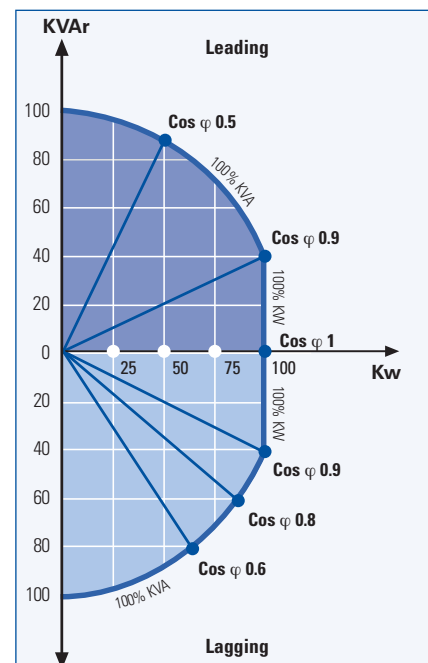
- Hot Swap plug-in modules
- High conversion efficiency
- Reduced footprint (optimizing layout space and transport costs)
- Optimized N+1 redundant configurations

### Key performances

MP-NET offers the most secure and flexible system architecture together with intelligent double conversion.

The main features of the MP-NET are:

- IGBT double conversion technology
- Excellent input performances:
  - PF > 0.99
  - THDi < 5%
- High conversion efficiency (up to 98%)
- Output PF up to 0.9
- Capability to power leading and lagging loads without derating
- 300% short circuit current
- Dual separated rectifier and bypass input
- Cold start



### MP-NET: adapts to business needs for maximum availability

MP-NET is easy to install and service thanks to its modular design, making it a full service friendly solution that considerably minimizes the MTTR (Mean Time to Repair).

The Hot Swap feature makes it possible to plug in a power module while maintaining maximum load security. This means that the power module is replaceable without having to transfer the load to the raw mains.

The replacement or the scaling is achieved without any risk of manipulation

errors (that could potentially damage the system or even cause the load to crash).

Each power module provides a 5A battery charging current, guaranteeing full redundancy and long autonomy battery configurations, making it compatible with many different types of installations.

Hot Swappable plug-in/out power modules make MP-NET perfectly suitable for parallel redundant configurations, especially when minimum space impact is required.





## Geographical modularity - maximum flexibility for customised solutions

**MP-NET is a dynamic modular UPS designed for large-scale, geographically located power systems, ideal for applications such as data centres, transport, communication, distributed networks and emergency systems.**

MP-NET is designed to meet the changing requirements of loads located in different geographical areas, making it the best solution to maximize system efficiency, reduce running costs and minimize TCO (Total Cost of Ownership).

The flexible design of the power modules makes it possible to move them easily from one bespoke cabinet to another. The module is capable of powering any kind of load leading or lagging, with no derating, and via the LIFE.net system it is also possible to constantly monitor the actual power offered. These elements combined, allow for the optimization of energy consumption even in large distributed networks.



### Optimum Space Impact

It is possible to have a 60 kVA N+1 configuration in a space of just: W 520 x H 1165 x D 910.



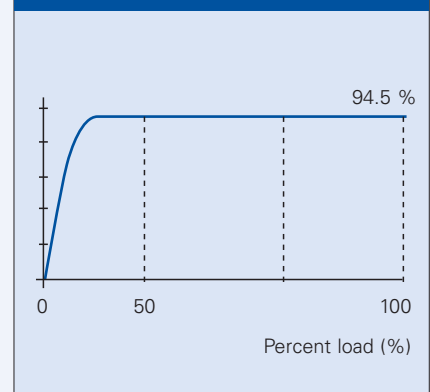
### Tailored sizing for maximum efficiency

Tailoring your power protection system, to use only the necessary power required, makes for a smart investment which is more economic to run.

The modular design of this UPS allows it to work at maximum efficiency by offering the possibility of adding or removing modules according to the load requirement. This in turn enables it to obtain maximum energy savings even at partial load.

A power upgrade can be made whenever necessary avoiding system over sizing which could potentially lead to higher running costs.

**Efficiency Curve of MP-NET  
3N+1 configuration**





## Interfaces

### Communication

MP-NET features a centralized high resolution LCD display with eight languages, allowing for easy interaction with all modules through the navigation menu design. Detailed information and measures of:

- UPS system status
- Each single power module
- Battery
- Electrical parameters

The UPS is perfectly suitable for use in any building management system and offers the following standard communication features:

- EPO
- I/p contact closure (two)
- I/p port for External Battery Temperature sensor
- Battery cabinet status
- Two smart slots (for LIFE.net and Connectivity cards).



### Hardware Connectivity

MP-NET includes a complete suite of Connectivity solutions, ensuring the monitoring and control of the networked UPS, through the TCP/IP protocol.

A complete set of adaptors allow MP-NET to be integrated with building and Automation Systems via TCP/IP, MODBUS and JBUS. An external sensor box is available for monitoring

the environmental conditions where the UPS systems are installed. A relay I/O card with programmable output can be inserted into the slot to monitor UPS systems and modules.

### Software Connectivity

A complete suite of software tools allows for automatic and scheduled shutdowns as well as a variety of other features that help manage the system and its peripheral

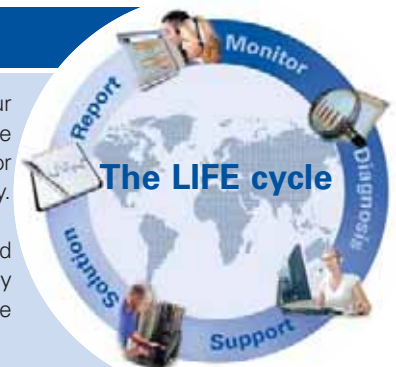
components. The software works in conjunction with the Connectivity Card to provide easy, unattended shutdown of multiple computer systems across the

network. It also enables the simultaneous monitoring of UPS locally and remotely. The hierarchical design makes it easy to manage all UPS intuitively.

## Service and LIFE.net 24/7 remote diagnostic system

Installation is only the beginning of your relationship with Masterguard as it is essential that your critical power protection system is maintained in an optimum state of readiness at all times. The innovative range of maintenance and support services available from Masterguard ensure reliability for life-long protection. Masterguard takes responsibility for the health of your UPS units 24 hours per day.

LIFE.net is the maintenance program which includes the remote diagnosis, monitoring and managing of the operational status of UPS and power distribution systems. LIFE.net provides early warning of any alarm condition or out of tolerance status, allowing effective pro-active maintenance and fast incident response, giving customers complete security and peace of mind.



### Maximise availability



#### Pre-emptive maintenance

LIFE.net provides early warning of more than 150 separate parameters allowing real-time diagnosis and swift identification and resolution of operating anomalies.

### Minimise downtime



#### Immediate identification of problems

Should an emergency condition arise, a Masterguard engineer in the 24x7 manned Service Centre carries out an immediate fault analysis and instigates appropriate corrective action.

### Reduce operating costs



#### Superior asset management

Through comprehensive data collection and analysis, LIFE.net's detailed reporting system provides valuable information on power and equipment trends, over any selected period of time.



MP-NET	20	40	60	80
<b>TECHNICAL CHARACTERISTICS</b>				
Apparent nominal output power at 40° C (kVA)	20	40	60	80
Maximum output active power (kW)*	18	36	54	72
<b>INPUT</b>				
Nominal primary mains input voltage/voltage range (V)	400 (300 to 480), three phase + neutral			
Nominal bypass input voltage/voltage tolerance (V)	400 ± 10% (380 V, 415 V selectable) three phase + neutral			
Nominal input frequency/frequency tolerance (Hz)	50 ± 10% (60 Hz selectable)			
Input current distortion (THDi) (%)	<5			
Primary input Power Factor	>0.99			
<b>OUTPUT</b>				
Nominal output voltage (V)	400 (380 V, 415 V selectable) three pahse + neutral			
Output voltage stability by load variation 0 - 100% (%)	Complies with IEC/EN 62040-3, Class 1			
static				
dynamic				
Output frequency (nominal) (Hz)	50 (60 Hz selectable)			
Output frequency variation (%)	± 0.05			
with mains synchronisation				
with internal reference				
Inverter overload capacity*	125% for 10 min, 150% for 1 min.			
Compatibility with loads	Any power factor (leading or lagging) up to 0.9 without output derating; crest factor up to 3:1			
<b>GENERAL</b>				
Classification according to IEC/EN 62040-3	VFI - SS - 111			
Operating temperature (°C)	0-40			
Relative humidity (without condensation at 20°C)	<95%			
Protection level	IP 21			
Frame colour	RAL 9005			
Noise at 1 m (dBA)*	62 - 68			
AC/AC efficiency (%) ECO	up to 98%			
AC/AC efficiency (%) Normal	up to 95%			
<b>DIMENSIONS AND WEIGHT</b>				
Height (mm)	1165			
Width (mm)	520			
Depth (mm)	910			
UPS maximum weight (kg)	259			

\* Conditions apply.

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