



LOCAL AREA NETWORKS (LAN)



SERVERS



DATA CENTRES



TELECOMMUNICATIONS DEVICES



E-BUSINESS (Server Farms, ISP/ASP/POP)



EMERGENCY DEVICES (Lights/Alarms)

Multi Guard



Highlights

- Power flexibility 15-120 KVA
- UPS module with hot-swap function
- Modular power and runtime
- Intelligent battery charging system
- High MTBF and low MTTR



The Multi Guard 15-120 kVA modular UPS is a scalable 3 Phase / 3 phase with double conversion Uninterruptible Power Supply system. Its power capacity ranges from 15kVA to 120kVA, delivering the best combination of reliability, functionality and flexibility.

The Multi Guard 15-120 N+X parallel architecture adopts a drawer-style, highly intelligent design to achieve maximum power availability and redundancy. It is specially designed to meet the protection demands of mission critical

loads in Datacentres or other important applications. Each module has an individual power capacity of 15 kVA, and a standard cabinet can be fitted with up to 8 modules to reach 120 kVA. If the load is within limits, modules can be hot-swapped to enable true power continuity without any interruptions.

System features

- Maximum 120kVA capacity in a 19" rack.
- 15kVA per module with hot-swappable feature

- the LCD display on the front panel displays unit status and important information such as input and output rating, capacity and temperature. This is available in a number of languages, and can include after sales contact details.
- Communication port is available for RS232, RS485, SNMP & AS400.
- Regular battery strings for the DC power without using particular battery modules.
- DSP Technology.
- Charging current is up to 36 DC Amp constant current on 90kVA system, suitable for several hours of battery back up.
- High output power availability up to 99.999%, MTBF more than 1,000,000 hours & MTTR<5mins Input power factor >0.99 and THDi <5%

Other advantage

- The Multi Guard 15-120 UPS power modules use the latest DSP microchip technology. This reduces hardware components, increases UPS reliability and also makes it convenient to upgrade and maintain using the remote software.
- The UPS operates with load sharing technology. Should any of the UPS modules fail, the load will be taken over by the rest of the modules without interruption. This increases the real time operation and power availability compared to other standby UPS.
- The Multi Guard 15-120 UPS is designed to connect to external battery banks without limiting the battery run time. The 19" racks in black color design can blend easily into most Data Centres, Computer or Power Rooms.

N+X Parallel Redundancy UPS

The N+X parallel redundant configuration of the Multi Guard 15-120 increases the reliability of the UPS system.

Advanced Modular Design

The Multi Guard 15-120 system contains UPS modules, LCD Display module, PDU and other accessories. Each UPS module is a fully functionable 15kVA UPS. Through the advanced wireless parallel control technology and smart communication modulation, the UPS modules or LCD display module can

be replaced easily at any time without affecting the operation of the UPS. The user friendly "plug & play" design simplifies UPS service and maintenance.

The most reliable N+X parallel redundancy

The Multi Guard 15-120 de-centralises its controller in each UPS Module. The LCD Display module is for display and communication purposes only, so even if the LCD Display module fails, the UPS system would still function and support the load without any interruption.

High MTBF ability

Each UPS module in the 15-120 UPS system is a fully functional UPS. There is no additional controlling module for parallel and load sharing. System MTBF for two modules in parallel is more than 1,000,000 hours and power availability is above 99.999%.

MTTR < 5 mins

In a parallel redundant 15-120 UPS system, the UPS will keep working even one of the modules fails. The module replacement procedure only needs 5 minutes for full system recovery, minimizing expensive downtime.

Superior Electrical Characteristic

Pure Sine Wave input current with THDi ≤5% and unity input power (≥0.99). The output voltage distortion is ≤1.5%.

Intelligent charging system

The Multi Guard 15-120 UPS system applies a two-step intelligent charging system. The first stage is a constant charging current that can recharge the battery capacity to 90% in a short time. The system then transfers to a constant voltage mode to complete the charging and guarantee the battery can be fully



GMT 30kVA

charged all the time. This intelligent charging system not only reduces the battery recharging time, but can also extend runtime by using plug-in battery packs.

Modular back up time

The Multi Guard 30 and 60 versions are designed to build up autonomy time using a single battery mode brick.

Saving:

- Installation costs
- electricity costs
- cooling costs
- expansions costs
- maintenance costs

Ease of Maintenance

Redundancy



Scalability



UPS Power selection

The Multi Guard 15-120 can be configured from 1 up to 8 modules in its cabinet to form the most suitable N+ X configuration.

The Multi Guard grows as business grows by simply adding further UPS modules to the to existing frame. The initial investment is minimised, while future expansion is easy, cost-effective and efficient to complete.

Multi Guard 30

Multi Guard 30 is the Entry Level to the Multi Guard Range. It is the ideal solution to supply a medium load that requires redundancy with the ability to expand the capacity in the future. Its flexibility and expandability give it an advantage over any stand alone ups solution.

The solution is very compact, with the possibility to also expand the autonomy by adding up to 3 battery banks in the

same cabinet. Power ranges from 15 kVA to 30 kVA (2 modules); 19" rack mounted with the internal battery pack.

NO. OF POWER MODULES	kVA	Typical runtime (min)(*)
1	15	90
2	30	42

(*) The autonomy refers to the max number of installed batteries.



Multi Guard 60

Modular three phase UPS system ranging from 15 kVA to 60 kVA, 19" rack mounted with the internal battery pack. This solution can include 4 x 15 kVA modules providing the following back up time at 75% of nominal load.

If redundancy is requested (N+1 modules) the max output power will be 45 kVA.

NO. OF POWER MODULES	kVA	Typical runtime (min)(*)
1	15	113
2	30	54
3	45	30
4	60	21

(*) The autonomy refers to the max number of installed batteries.



Multi Guard 120

Modular three phase UPS system ranging from 15 kVA to 120 kVA, 19" rack mounted and designed for an external battery cabinet. The maximum output power of the Multi Guard cabinet is 120 kVA (8 x 15 kVA modules). If redundancy is requested (N+1 modules) the max output power is 105 kVA.



MODELS	GMT - da 15kVA a 120kVA
INPUT	
Voltage	380V/ 400V/ 415V, 4-wire three-phase + E
Voltage range	from 294Vac to 520Vac
Frequency range	from 40 Hz to 70 Hz
Power factor	>0.99
THDI	< 5%
BY PASS	
Voltage	380V/ 400V/ 415V, 4-wire three-phase + E
Voltage range	from 323Vac to 437Vac
Transfer time from On-line to Off-Line or vice versa	0 sec
OUTPUT	
Voltage	380V/ 400V/ 415V, 4-wire three-phase + E
Voltage stability	≤ 1.5%
Frequency	50 Hz / 60 Hz
MODULE	
Power	15kVA / 13,5kW
Output power	15kVA x number of modules (up to 8 modules)
TECHNICAL SPECIFICATIONS	
Noise level (measured at 1m from UPS)	from ≤ 60dBA to ≤62dBA
Operating temperature	0°C / +40°C
Humidity	20% - 90% non-condensing
Storage temperature	-15° +55°
Module weight	35 kg
Module dimensions (hwd) (mm)	131 x 440 x 700
GMT 30 Dimensions (hwd) (mm)	1500 x 600 x 1000
GMT 60 Dimensions (hwd) (mm)	2000 x 600 x 1000
GMT 120 Dimensions (hwd) (mm)	2000 x 600 x 1000
Eco Mode efficiency	up to 99%
Standards	Safety: IEC 62040-1-1 EMC: IEC 62040-2