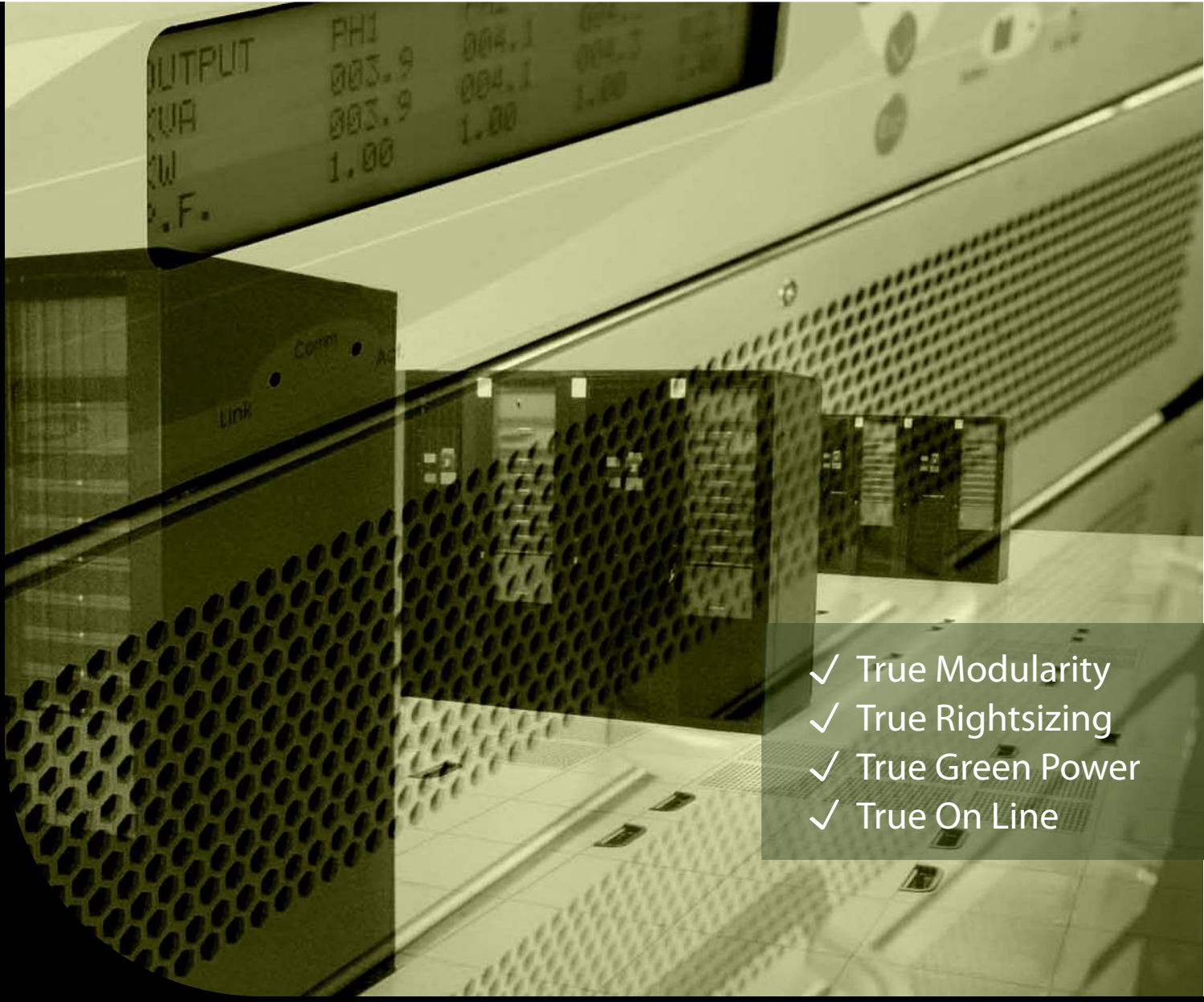


- ✓ True Modularity
- ✓ True Rightsizing
- ✓ True Green Power
- ✓ True On Line

POWER+

Modular UPS System 10 -100 KVA

GAMATRONIC™

Our Power Your Confidence

True Modularity

Maximum Power Availability

Owing to its modular N+1 structure, Power+ guarantees load integrity and minimizes the possibility of load failure.

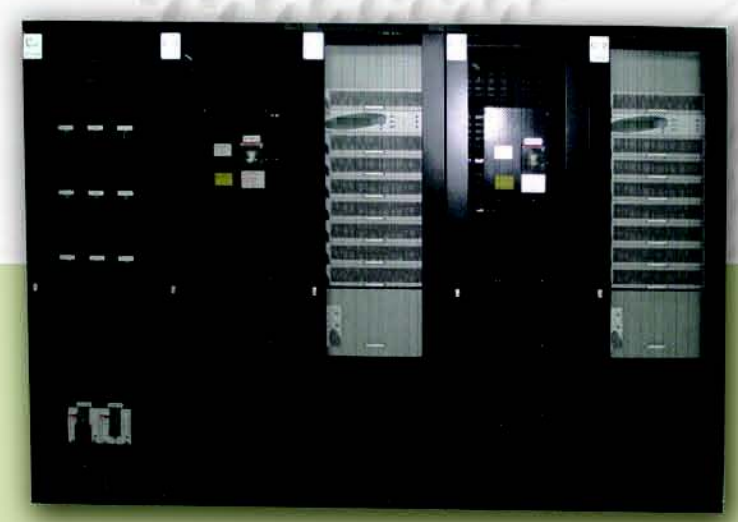
MTBF: 707,882Hrs

Minimum MTTR

Designed from the ground up for cost savings, Power+ is a completely modular solution. Each 10 KVA module is entirely self-contained and ready for hot-swapping – without complex and expensive stocks of components, subsystems, and spare parts.

True Rightsizing

As opposed to costly and complex N+n solutions, Power+ is comprised of 10KVA building modules. Built to grow as business grows, modular Power+ enables purchase of the capacity required today, while expanding tomorrow by simple module addition.



Ultrahigh Power Density

Weighing only 9kg and measuring vertically 2U, lightweight 10KVA Power+ modules are easily handled by the individual technician. Offering complete power system density of 2W/inch^3, Power+ provides high power density with a space-saving footprint.

Universal UPS

Power+ offers all the benefits and power of a universal UPS, including:
- Frequency: 50/60Hz
- Voltage: 380V;400V;415V
- Site configurable phases: 1/1; 3/1;3/3*

*1/1 & 3/1 phases are limited in capacity

User Friendly

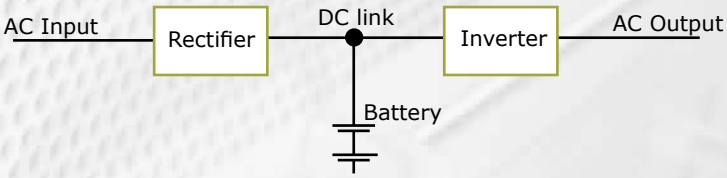
Designed for usability, modular Power+ offers:
- A user-friendly controller with all communication and control options easily accessible
- Simple maintenance procedures
- Notably quiet operation

Integral Multi-System Parallel Connectivity

Power+ features enable parallel-redundant connection of multiple systems up to 400KVA for data centers, industrial sites and large service operators that require the highest levels of resilience and availability.

Double Conversion True On-Line Battery (VFI)

According to IEC 62040-3



True Online Batteries Double Conversion VFI Topology

Complying with IEC-62040-3 standards, highest classification VFI-SS-111, Power+ features a galvanic battery connection between the rectifier output and the inverter input on a common DC link, resulting in:

- Maximum reliability
- No transfer time to battery mode
- No need for separate battery charger

Lower TCO & High ROI

- SAVE ON purchasing & installation costs
- SAVE ON electricity costs
- SAVE ON maintenance costs
- SAVE ON cooling costs
- SAVE ON space costs
- SAVE ON upscaling costs
- SAVE ON generator costs

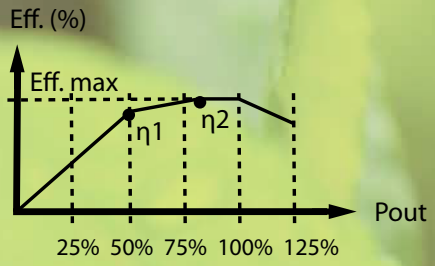
True Green Power and High Efficiency

Power+ UPS enables significant reduction of energy loss, with efficiency directly influenced by load level.

Designed for highly-economical energy consumption, Power+ is a perfect fit in your data center and server room. Offering efficiency of up to 96%, a THDi of 5%, and unity input P.F. without harmonic filters, Power+ delivers:

- Significant energy savings
- Lower cooling costs
- Smaller generator sizing

Efficiency = Pout/Pin



A typical 1+1 50kVA system operates at less than 50% load, therefore efficieny is low (η1)
An N+1 50kVA Power+ system operates at x 100 = 83.3% load
Conclusion: the efficiency of an N+1 redundant Power+ system is higher (η2)

Power with environmental integrity

Gamatronic understands that energy-savings is not only a matter of cost-savings, but also of social responsibility. Power protection solutions from Gamatronic are based on green, clean, and globally responsible energy technology that meets and exceeds power requirements - while minimizing environmental impact.

POWER+ Models

POWER+ Classic

POWER+ Classic is an electrically and mechanically modular 10-100KVA UPS system, uniquely designed to grow flexibly as power requirements grow. Easily upgradable on-site through addition of plug-and-play 10KVA modules, POWER+ offers the optimal combination of efficiency, economy, and usability – and boasts the industry's lowest TCO (Total Cost of Ownership) and fastest ROI (Return on Investment).

Capacity (kVA)	10KVA	20KVA	30KVA	40KVA	50KVA	60KVA	70KVA	80KVA	90KVA	100KVA
Dimensions (mm)										
H	690	790	880	970	1070	1160	1250	1350	1440	1540
W	600 (external)									
D	690									
Weight (kg)	98	113	128	143	158	173	188	203	218	233

POWER+ 19"

POWER+ 19" is a 10-20KVA rackmount solution, suitable for co-location in existing component cabinets.

Capacity	10kVA	20kVA
Dimensions		
H	4U / 177 mm	6U / 266 mm
W	19" / 483 mm	
D	600 mm	
Weight	20kg	32kg

POWER+ 19"

POWER+ RM

POWER+ RM is a complete, end to end 19" 10-100KVA rackmount solution, ideal for datacenters, that includes UPS, MMBS (maintenance bypass), battery cabinet.

Built for high-density aesthetics as well as usability, POWER+ RM is available in uniform and modern cabinets that integrate perfectly with existing data center design. Alternately, POWER+ RM components may be easily housed in existing racks.

RM 100KVA:
POWER+ FS 10-100KVA; MMBS in Rack

RM 50KVA Complete:
POWER+ FS 10-50KVA ; MMBS; Battery Cabinet 64x 20Ah in Rack

RM 50KVA Basic:
POWER+ FS 10-50KVA in Rack

Capacity (kVA)	10	20	30	40	50	60	70	80	90	100
Dimensions										
H	42U / 2,020 mm (external, including levers)									
W	19" / 600 mm (external)									
D	1,000 mm									
Weight single module	9.8Kg									
RM 100kVA weight (kg)	121	131	140	150	160	170	180	189	199	209
RM 50kVA **basic** weight (kg)	195	205	214	224	234	w/o batt				
RM 50kVA **complete** weight (Kg)	368	378	387	397	407	w/o batt				

Matching products :

Matching External Battery Cabinets :
Battery cabinet 64 x 20 Ah in rack 42 U
Battery cabinet 2 x 64 x 20 Ah in rack 42 U

Matching isolation transformers :
Isolation transformer 50 kVA in rack 42 U
Isolation transformer 100 kVA in rack 42 U

POWER+ Specifications

POWER										
Topology	True online battery, double-conversion VFI									
Construction	Modular hot swap/hot plug modules									
INPUT										
Voltage	3 × 380/400/415 Vac +N +PE (5 wire system)									
Voltage range	–27 % and +20 %									
Current	3 × 15 A per module – no inrush current at startup									
Frequency	47 Hz ~ 63 Hz									
Power Factor	1									
THDI (%)	<5 %									
OUTPUT										
Rated Power	10 kVA / 8 kW to 100 kVA / 80 kW									
Frequency (in free-running mode)	50/60 Hz ±0.1 %									
Frequency tracking range	±0.5, ±1, ±2, ±3, ±4 Hz (selectable)									
Slew rate	1 Hz/sec									
Voltage	3 × 380/400/415 Vac (selectable) +N +PE									
Static Regulation	±1 %									
Regulation for unbalanced load	±1 % for 100 % unbalanced load									
Dynamic response to 100 % load step	±2 %, <1 ms recovery time									
Overload	110 % : 10 min; 125% : 60 s; 1000% :1 cycle									
Waveform	Sinusoidal									
THD	Less than 2 % for linear load									
Load CF (max)	6:1									
Ac-Ac efficiency (nominal)	Up to 96 %									
Dc-Ac efficiency (nominal)	Up to 98 %									
BATTERIES										
Dc nominal voltage	±432									
Quantity	64 × 12 V									
Type	Sealed, lead acid, rechargeable									
GENERAL										
Maximum power dissipation (Po=8 kW)	333 W (1136 BTU/h) for a single module									
Ambient temperature (°C)	–10 to +40 °C (operating)									
	–20 to +60 °C (storage)									
Relative humidity	95 % max non-condensing									
Altitude (m)	1500 m without derating									
Enclosure	IP20									
Cooling system	Forced air: multi-fan with speed control									
STANDARDS										
EMC	IEC 62040-2, under EMC 2004/108/EC									
Design	IEC 62040-3									
Safety	IEC 62040-1, under LVD 2006/95/EC									
Low magnetic field radiation	EMF as per ICNIRP									
DIMENSIONS										
One 10 kVA module (HxWxD)	88 mm (2U) x 483 mm (19") x 455 mm									
Weight	9 kg									
ACOUSTIC NOISE (@ 1.5 m from front of unit)										
Noise (dBA) with half load	48	52	53	54	55	55.8	56.4	57	57.5	58
Noise (dBA) with full load	51	54	55	57	58	58.8	59.4	60	60.5	61

Supplemental Products

Internal Battery Cabinets and Batteries

Gamatronic's standard battery cabinets combine safety and flexibility with easy battery access.

Battery Capacity	POWER+ Model	Dimensions (HxWxD) of each cabinet
64 x 5 Ah 19"	POWER+ 19" (up to 3 cab.)	6Ux19"x685 mm
64 x 17/20 Ah 19"	POWER+ RM	19"x20Ux1000 mm

External Battery Cabinets

Gamatronic's external battery cabinets may be delivered pre-built or in easily-assembled kit form to reduce shipping costs.

Battery Capacity	No. of Cabinets for POWER+*	Dimensions (HxWxD) of each cabinet
64x17/20Ah	1 Pcs (each cabinet incl. 64 batt.)	1700x1121x300mm
64x24/26/38/40Ah	2 Pcs (each cabinet incl. 32 batt.)	1700x1121x300mm
64x65/90Ah	4 Pcs (each cabinet incl. 16 batt.)	1230x800x420mm

*Cabinets can be installed side by side or back to back

Management

POWER+ Controller

All POWER+ systems are supplied with an integral POWER+ Controller that enables remote UPS management through web access. This includes display of active alarms and alarm log access, automatic server shutdown, email alerts, and SNMP management for interface with NMS software. Together with the optional external cellular modem, POWER+ can also provide SMS alerts and enable remote cellular commands.

WING

WING is a GSM cellular communication device, installed on UPS, which provides SMS alerts to end users or control centers.

G4 and G-Eye

Available for both manned and unmanned sites, the G4 and G-Eye Management and Monitoring Systems deliver user-friendly unit monitoring, control and management of physical UPS sites - including temperature and humidity, movement and doors, air conditioning units, servers, power devices , and more.

PSM

PSM POWER+ is Windows-based shutdown software supported on WIN 2000/XP/2003, installed on a local PC and connected to POWER+ in the LAN.
Shutdown of remote UNIX/LINUX/WINDOWS computers is supported through the master computer.

GEMSi

GEMSi (Gamatronic Element Management System) is a highly user-friendly application that provides real time remote monitoring and management of hundreds of units at diverse and distributed sites.

POWER+ Applications

Modular and advanced, Power+ solutions are an excellent choice for:

• **Local Area Networks** • **Servers** • **Data Centers** • **Point of Sale Applications** • **Telecom Facilities** • **Medical Equipment** • **Industrial PLCs**

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