



## POWER<sup>+</sup> SA Series



**GAMATRONIC™**  
*Our Power, Your Confidence*

## POWER+ SA 10kVA

Stand Alone  
On-Line Double Conversion UPS  
True on-line batteries

### Features

- Flexible use - available in 3/3, 3/1 and 1/1
- Unique light and compact design - only 18Kg electronic cabinet
- Great performance:
  - > High efficiency AC/AC: 96%
  - > Low input THDi: 5%
  - > Input PF 1
  - > Back light LCD



## POWER+ SA 20kVA, 30kVA &40kVA

Stand Alone  
On-Line Double Conversion UPS  
True on-line batteries

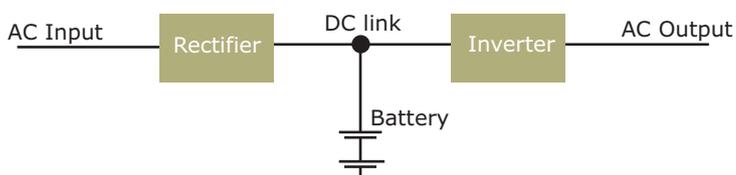
### Features

- Available in 3/3
- Unique light and compact design - only 68Kg!
- Great performance:
  - > High efficiency AC/AC: 96%
  - > Low input THDi: 5%
  - > Input PF: 1
  - > Back light LCD
  - > 10kVA redundant inverters and rectifiers



### Double Conversion True On-Line Battery (VFI)

According to IEC 62040-3



### Battery Cabinet



## POWER+ SA 10kVA Technical Specifications

POWER+ SA UPS	3/3	3/1	1/1
Topology	True Online Battery, Double Conversion		
Model	10kVA		
<b>INPUT</b>	3 phase+N+PE		Single phase+N+PE
Voltage	3X(350V-415V)+N+PE		(220V-240V)+N+PE
Voltage Range	-27% ÷ +20%		
Current	15A per phase, no inrush current at startup		
Power Walk-In	>60 sec		
Frequency	47÷53 Hz; 57÷63 Hz		
Input Power Factor	1		
Input THDI	5%		
<b>OUTPUT</b>	3 phase+N+PE		Single phase+N+PE
Rated Power	10kVA/8kW		
Frequency Tracking Range	±3Hz		
Slew Rate	1 Hz/sec		
Voltage	3X(350V-415V)+N+PE		(220V-240V)+N+PE
Static Regulation	±1%		
Regulation for Unbalanced Load	±1% for 100% Unbalanced load		
Dynamic Response to 100% Load Step	±2%		
Overload	110% for 10 min.; 125% for 60 sec.; 1000% for 1 cycle		
Waveform	Sinusoidal		
THD	Less than 2% for linear load		
Load CF (max)	6:1		
DC/AC Efficiency (nominal)	98%		
AC/AC Efficiency (nominal)	96%		
<b>STATIC SWITCH (bypass)</b>			
Input Connection	Dual Input		
<b>GENERAL</b>			
Maximum Power Dissipation (Po=8KW)	333W (1136 BTU/h)		
Ambient Temperature	-10 <sup>o</sup> to +40 <sup>o</sup> (operating); -20 <sup>o</sup> to +60 <sup>o</sup> (storage)		
Relative Humidity	95% max non-condensation		
Enclosure	IP20		
Cooling System	Multi-Fan with speed control (forced)		
Acoustic Noise (Full load) @1.5m distance	47dBA		
MTBF	250,000 hrs		
Dimensions (H x W x D) (cm)	54 x 9 x 60		
Weight (electronic cabinet)	18Kg		
<b>COMMUNICATION</b>			
RS232	yes		
Alarm - Shutdown Monitor	yes		
SNMP - GMaCi	option		
<b>LCD DATA</b>			
Input	Voltage, Frequency, Current		
Output	Voltage, Frequency, Current		
Batteries	Voltage		
Log (events memory)	Last 200 Events		
<b>STANDARDS</b>			
EMC	EN50091-2 Class A ; IEC 62040-2		
Safety	E50091-1 ; IEC 62040-1-1		
Design	EN50091-3 ; IEC 62040-3		
Low Magnetic Field Radiation	EMF as per ICNIRP		
<b>BATTERIES (external)</b>			
Batteries Type	Valve Regulated Lead-Acid (VRLA)		
	64x5Ah/12V		
Backup Time	min. at 100% load; 24 min. at 50% load		
Battery Recharge Time	Approx. 1-2 hrs.		
<b>Battery Cabinet</b>			
Dimensions (H x W x D) (cm)	45 x 26x 60		
Weight	115Kg		

\* All specifications are typical and subject to change without prior notice

## POWER+ SA 20,30,40kVA Technical Specifications

POWER+ SA UPS	20 kVA	30 kVA	40 kVA
Topology	True Online Battery, Double Conversion		
<b>INPUT</b>	3 phase+N		
Voltage	3 X 380 V $\div$ 415V + N + PE; 45-65 Hz		
Voltage Range	-27% $\div$ +20%		
Power Walk-In	> 60 sec		
Power Factor	1		
THDI	5%		
Earth Leakage Current	3mA max		
<b>OUTPUT</b>	3 phase+N		
Rated Power	20 kVA / 16 kW	30 kVA / 24 kW	40 kVA / 32 kW
Frequency Tracking Range	$\pm$ 1, $\pm$ 2, $\pm$ 3, $\pm$ 4Hz (selectable)		
Slew Rate	1 Hz/sec		
Voltage	3 X 380 V $\div$ 415V + N; 50 Hz		
Static Regulation	$\pm$ 1 %		
Regulation for Unbalanced Load	$\pm$ 1 % for 100% Unbalanced load		
Dynamic Response to 100% Load Step	2 %		
Overload	110 % for 10 min.; 125 % for 60 sec.; 1000 % for 1 cycle		
Waveform	Sinusoidal		
THD	Less than 2% for linear load		
Load CF (max)	6:1		
DC/AC Efficiency (nominal)	98 %		
AC/AC Efficiency (nominal)	96 %		
<b>STATIC SWITCH (bypass)</b>			
Input Connection	Dual Feed		
<b>GENERAL</b>			
Maximum Power Dissipation (Po=8KW)	666.6W (2274 BTU)	999W (3408 BTU)	1332W (4544 BTU)
Ambient Temperature	-10 <sup>o</sup> to +40 <sup>o</sup> (operating); -20 <sup>o</sup> to +70 <sup>o</sup> (storage)		
Relative Humidity	95% max non-condensation		
Altitude	1500 without derating		
Enclosure	IP20		
Cooling System	Multi-Fan with speed control (forced)		
Acoustic Noise (Full load) @1.5m distance	48dBA		
MTBF	250,000 hrs		
Dimensions (H x W x D) (cm)	66 x 48 x 58		
Weight (electronic cabinet)	50Kg	59Kg	68Kg
<b>COMMUNICATION</b>			
RS232	yes		
Alarm - Shutdown Monitor	yes		
SNMP	option		
<b>LCD DATA DISPLAY</b>			
Input	Voltage, Frequency, Current		
Output	Voltage, Frequency, Current		
Batteries	Voltage		
Log (events memory)	Last 256 Events		
<b>STANDARDS</b>			
EMC Emission	EN50091-2 Class A ; IEC 62040-2		
EMC Immunity	EN50082-2		
Safety	E50091-1 ; IEC 62040-1-1		
Design	EN50091-3 ; IEC 62040-3		
Low Magnetic Field Radiation	EMF as per ICNIRP		
<b>BATTERIES (external)</b>			
Type	Sealed, valve regulated, lead-acid		
Number	64x12V, 12Ah/20Ah		
Backup Time	5 min. at 100% load; 15 min. at 50% load		
Recharge Time	Approx. 1-2 hrs.		

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