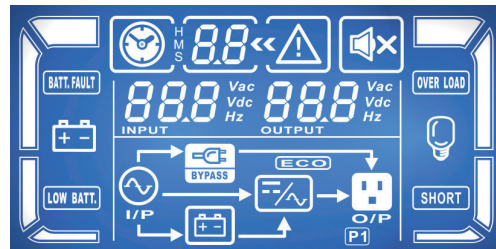




GUARDIAN On-Line UPS series

LCD Display Panel



- **True double-conversion online UPS**

A true double conversion UPS will provide clean, high level quality power to fully protect mission-critical devices such as sensitive networks, small computer centers, servers, telecom applications, as well as for industrial applications.

- **Output power factor 0.8**

Compared to the online UPSs in the current market, Guardian series provides a better output power factor of up to 0.8. It offers higher performance and efficiency for critical applications.

- **Wide input voltage range (110 V -300 V)**

Guardian's robust design can provide stable power to connected devices even under unstable power environments.

- **Programmable power management outlets**

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature enables users to extend battery time to mission-critical devices by shutting down the non-critical devices.



Programmable Outlets (P1)
 - connect to non-critical devices

- **50/60 Hz Frequency Converter Mode**

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

- **ECO mode operation for energy saving**

Offers efficiency as high as 97% to cut energy usage & cost. UPS power application via static bypass, timely returning to online double conversion when the need arises.

- **Emergency Power Off (EPO) Function**

Thanks to its EPO feature, Guardian series can secure your personnel & equipment in case of fires or other emergencies.

- **SNMP+USB+RS-232 multiple communications for 1-3K models**

Guardian allows either USB or RS-232 communication port to work with SNMP interface simultaneously.

- **DSP technology for 6K & 10K models**

An Advanced DSP controller provides an improved and cost-effective solution that offers sky-high performance.

- **Smart battery charger design to optimize battery performance**

- Guardian 1-3K series are equipped with a **2-stage charger design** to guarantee battery discharge time. Besides, it will adjust charging voltage according to outside temperature. These features help to extend the useful service life of batteries.
- Guardian 6K and up models are equipped with a **3-stage extendable charger** for optimized battery performance. This feature extends the useful service life of batteries and optimizes battery recharge time. Besides, the extendable charger design can be stacked in numbers for large-capacity battery charging.

- **Maintenance Bypass available for 6K & 10K models**

The availability of an internal Bypass assures continuous power to critical devices even during UPS maintenance.

- **Optional hot standby mode and N+X parallel redundancy available for 6K & 10K models**

For genuinely redundant power protection, Guardian (6K and up models) can either be used in parallel operation with up to 3 units or hot standby mode. The slave UPS will back up the load in the event of critical component failure. These additional features will certainly increase power safety and availability.

- **Adjustable battery numbers for 6K & 10K models**

Guardian (6K and up models) can operate normally with only 18 or 19 internal batteries.

- **Built-in isolation transformer for 6K and up models**

With a built-in isolation transformer, Guardian will offer full isolation and complete common mode noise rejection for connected precious equipment, becoming an ideal power source with 100% protection against unexpected AC power problems.

Guardian 1KVA/1.5KVA/2KVA/3KVA/6KVA/10KVA Online UPS Selection Guide

MODEL	Guardian 1K (L)	Guardian 1.5K (L)	Guardian 2K (L)	Guardian 3K (L)	Guardian 6K (L)	Guardian 10K (L)			
PHASE	Single phase with ground								
CAPACITY	1000 VA/800 W	1500 VA/1200 W	2000 VA/1600 W	3000 VA/2400 W	6000 VA/4800 W	10000 VA/8000 W			
INPUT									
Voltage Range	Low Line Transfer	80 VAC ± 5% @ 100% load 50 VAC ± 5% @ 50% load			176 VAC ± 3% @ 100% load 110 VAC ± 3% @ 50% load				
	Low Line Comeback	85 VAC ± 5% @ 100% load			186 VAC ± 3% @ 100% load 120 VAC ± 3% @ 50% load				
	High Line Transfer	150 VAC ± 5 %			300 VAC ± 3%				
	High Line Comeback	145 VAC ± 5 %			290 VAC ± 3%				
Frequency Range	40 Hz ~ 70 Hz			46 ~ 54 Hz or 56 ~ 64 Hz					
Power Factor	≥ 0.99 @ Nominal Voltage (Full load)			≥ 0.99 @ 100% load					
OUTPUT									
Output Voltage	110/115/120/127 VAC			104 VAC x 2 / 110 VAC x 2 / 115 VAC x 2 / 120 VAC x 2					
AC Voltage Regulation (Batt. Mode)	± 3%			± 3%					
Frequency Range (Synchronized Range)	47~53 Hz or 57~63 Hz			46 ~ 54 Hz or 56 ~ 64 Hz					
Frequency Range (Batt. Mode)	50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz			50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz					
Current Crest Ratio	3:1			3:1					
Harmonic Distortion	≤ 3 % THD (Linear Load) ≤ 6 % THD (Non-linear Load)		≤ 4 % THD (Linear Load) ≤ 7 % THD (Non-linear Load)		≤ 3 % THD (Linear Load) ≤ 10 % THD (Non-linear Load)				
	AC Mode to Batt. Mode		Zero		Zero				
Transfer Time	Inverter to Bypass		4 ms (Typical)		Zero				
Waveform (Batt. Mode)	Pure Sinewave								
EFFICIENCY									
AC Mode	85%			88%		89%			
Battery Mode	83%					88%			
BATTERY									
Standard Model	Battery Type	12 V / 7 Ah	12 V / 9 Ah	12 V / 7 Ah	12 V / 9 Ah	12 V / 7 Ah	12 V / 9 Ah		
	Numbers	3	3	6	6	20	20		
	Typical Recharge Time	4 hours recover to 90% capacity				7 hours recover to 90% capacity	9 hours recover to 90% capacity		
	Charging Current (max.)	1.0 A			1.0 A		1.0 A		
Long-run Model	Charging Voltage	41.0 VDC ± 1%		82.1 VDC ±1%		273.0 VDC ±1%			
	Battery Type	Depending on applications				Depending on applications			
	Numbers	3	3	6	6	18-20			
	Charging Current (max.)	8.0 A			4.0 A		4.0 A		
	Charging Voltage	41.0 VDC ± 1%		82.1 VDC ±1%		273.0 VDC ±1%			
INDICATORS									
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions								
ALARM									
Battery Mode	Sounding every 4 seconds								
Low Battery	Sounding every second								
Overload	Sounding twice every second								
Fault	Continuously sounding								
PHYSICAL									
Standard Model	Dimension, DxWxH(mm)	397 x 145 x 220			421 x 190 x 318		592 x 250 x 826		
	Net Weight (kgs)	13	14	26	28	124	142		
Long-run Model	Dimension, DxW x H(mm)	397 x 145 x 220			421 x 190 x 318		592 x 250 x 576		592 x 250 x 826
	Net Weight (kgs)	7	7	13	13	64	86		
ENVIRONMENT									
Humidity	20-90 % RH @ 0- 40°C (non-condensing)								
Noise Level	Less than 45dB@ 1 Meter				Less than 58dB @ 1 Meter		Less than 60dB @ 1 Meter		
MANAGEMENT									
Smart RS-232	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7, Linux, Unix, and MAC								
USB									
Optional SNMP							Power management from SNMP manager and web browser		

*Derate to 60% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 208VAC.

** L means long-run model

Guardian Tower Battery Pack (Optional built-in charger)

Capacity (VA)	1K/1.5K		2K/3K			
Battery Type	12 V 7 Ah	12 V 9 Ah	12 V 7 Ah	12 V 9 Ah	12 V 7 Ah	12 V 9 Ah
Battery Number	6pcs	6 pcs	12 pcs	12 pcs	18 pcs	18 pcs
Dimension (DxWxH) mm	397 X 145 X 220		421 X 190 X 318		535 X 190 X 318	
Net Weight (kgs)	18	20	36	40	55	61
Capacity (VA)	6K/10K					
Battery Type	12 V 7 Ah	12 V 9 Ah	12 V 7 Ah	12 V 9 Ah	12 V 7 Ah	12 V 9 Ah
Battery Number	20 pcs	20 pcs	40 pcs	40 pcs	60 pcs	60 pcs
Dimension (DxWxH) mm	592 X 250 X 576		592 X 250 X 576		830 X 250 X 576	
Net Weight (kgs)	64	72	109	125	166	190

* There are several battery options for Guardian 2K/3K/6K/10K. Please check the above table for the detailed dimensions.



* 1K/1.5K Battery Pack (capable for 6 pcs batteries inside)

* 2K/3K Battery Pack (capable for 12 pcs or 18 pcs batteries inside)

* 6K/10K Battery Pack (capable for 20 pcs or 40 pcs or 60 pcs batteries inside)