

## 8.2 Extra Smart Long-Run Series (Tower) 1000VA~5000VA

### General Features:

- ◆ Smart backup time estimation for any kind of battery
- ◆ Adjustable voltage sensitivity, voltage-transfer points, & charging voltage
- ◆ Generator compatible
- ◆ Automatic restart of load after UPS shutdown
- ◆ Smart AVR function (Two buck / boost modes)
- ◆ Cold-start capable
- ◆ Audible alarm
- ◆ Hot-swappable batteries
- ◆ Network manageable (SNMP optional)
- ◆ Full function of LCD display (LED display optional)
- ◆ Smart battery management
- ◆ Intelligent double stages of charging control, Wet battery compatible
- ◆ Thermal control cooling fan



### Output

	115V Models	230V Models
Power Levels (rated at nominal inputs)	12Vdc models : 1000VA/ 600W; 1500VA/ 900W 24Vdc~48Vdc models : 1100VA/ 660W; 2200VA/ 1320W; 3000VA/ 1800W ; 5000VA/3200W (48Vdc; 230V models)	
Output Voltage	100V/110V/115V/120V Selectable	200V/220V/230V/240V Selectable
Voltage Waveform	Sine wave	
Crest Factor	3 : 1	
Output Frequency (Synchronized to Mains)	Auto Select for 50/60Hz 47Hz ~ 55Hz for 50Hz nominal; 56Hz ~ 65Hz for 60Hz nominal	
Regulation (Nominal)	±5% typical of nominal voltage (optional at ±10% AVR for wide I/P up to ±35%)	
Regulation (Battery mode)	±3% of selected output voltage (adjustable with the remote set-up software)	
Transfer time	Blackout 3ms typical; Brownout 1ms typical; Battery mode to Normal mode : 1ms typical	
Over current protection	Over load alarm level 100% ~ 120%, Over load shutdown level 120% ~ 190% (Adjustable by using the remote set-up software)	

### Input

	115V Models	230V Models
--	-------------	-------------

Nominal Voltage	100V/110V/115V/120V Selectable	200V/220V/230V/240V Selectable
Input Frequency	47Hz ~ 65Hz, 50/60Hz auto-sensing	
Efficiency	97% (Normal mode)	
Noise Filtering	Full time EMI/RFI filtering	
Over current protection	1000VA ~ 1500VA : by AC fuse 2200VA / 3000VA : by re-settable over current protector	1000VA ~ 2200VA : by AC fuse 3000VA / 5000VA : by re-settable over current protector
Voltage Range	-20% ~ +24% for selected nominal voltage. -29% ~ +33% adjustable by using the remote set-up software	
AVR Range (2 Bucks, 2 Boosts)	Enhanced Buck: +15% of selected nominal voltage Buck mode: +5% of selected nominal voltage Boost mode: -5% of selected nominal voltage Enhanced Boost: -12.5% of selected nominal voltage	
Surge Protection	1000VA ~ 1500VA : 216 Joules 2200VA / 3000VA : 324 Joules	1000VA ~ 1500VA : 220 Joules 2200VA : 440 Joules 3000VA / 5000VA : 660 Joules
<b>☐ Battery</b>		
Battery type	Lead-Acid 25Ah ~ 250Ah	
Voltage	1000VA/ 1500VA : 12Vdc 1100VA : 24Vdc (48Vdc); 2200VA : 48Vdc (24V/ 36Vdc); 3000VA : 48Vdc (36Vdc) 5000VA : 48Vdc	
Typical backup time	No Limit	
Charging method	Smart pulse charging with two charging modes : Quick charging when battery is not fully charged, trickle charging when battery is 90% fully charged.	
Charging current	11A at normal line and normal temperature (Average) 20A/28A for 12Vdc models 1000VA/1500VA (special design) 30A for 5000VA/48Vdc model	
Average charging voltage for each battery	Quick charging mode : 14V maximum. Trickle charging mode : 13.2V ~ 13.9V adjustable with the set-up software.	
Protection	Over current protection & Over charging voltage protection (SCR control) Thermal protection (CPU control) : When temperature inside UPS is over 45°C, charger will stop charging for 2.5 minutes followed by an 1.5 minutes charging. The cycle will be repeated until the temperature is lower than 44°C.	
Monitoring	Smart monitoring & warning for failed battery or open-circuit battery. Auto-detection each time when power on or every 6 days.	
<b>☐ Communications &amp; Management</b>		
Standard Interface port	UPSilon2000 compatible. 1000VA (12Vdc) : RS232 / 1100VA ~ 5000VA : RS232 + USB	
Optional Interface part	RJ45 (Surge protection), DB9, SNMP	
Control panel	LCD or LED Selectable	

Audible alarm	Alarm on battery : Low battery & Battery over voltage Alarm on abnormal operation : Over load, Short-circuit, & Over heat
EBT (Estimation of Backup Time) system	Support for LCD display
Green mode function (Auto-shutdown during blackout)	1% to 14% of full load (adjustable by using the remote set-up software). The default setting is OFF.
Cooling fan control	Auto on / off, controlled by temperature & operation mode
<b>☐ Environmental and Safety</b>	
Operating Temperature	Up to 1500 meters : 0°C to 40°C (32°F to 104°F)
Transit/storage Temp.	-15°C to 55°C (5°F to 131°F)
Relative Humidity	5 - 95% non condensing
Operating Altitude	0 ~ 3000 meters
Audible noise at 1M from surface of unit	≤50 dBA
Isolation	3KVac for 1 minute between battery and AC side
Quality control system	ISO 9001
<b>☐ Physical</b>	
Dimensions: (D×H×W) Unit / Shipping	1000VA : 12 x 25 x 37 (cm) / 22 x 31 x 47 (cm) (Wall-mount type) 1100VA ~ 3000VA : 45 x 20 x 18 (cm) / 54 x 33 x 30 (cm) 5000VA : 51 x 20 x 18 (cm) / 61 x 33 x 30 (cm)
Weight: Net / Gross (kg)	12Vdc battery voltage : 1000VA : 10 / 11 (kg); 1500VA : 14 / 15 (kg) 24Vdc ~ 72Vdc battery voltage : 1100VA : 15 / 16 (kg); 2200VA : 19 / 20 (kg); 3000VA : 23 / 24 (kg); 5000VA : 40 / 42 (kg)
Packing	Export carton for each unit, 16 - 30 units per pallet