

### 8.3 Extra Smart Rack Series (Rack) 1100VA~4000VA

#### General Features:

- Smart Estimation of Backup Time (EBT system)
- 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



#### Output

	115V Models	230V Models
Power Levels crated at nominal inputs	1100VA / 660W, 1650VA / 1000W, 2200VA / 1350W, 3300VA / 2000W, 4000VA / 2600W	
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 ±8% AVR for wide I/P up to ±35%)	
Regulation (Batt. mode)	±3% of selected output voltage (adjustable with the remote set-up software)	
Transfer time	Blackout 3ms; Brownout 1ms; Battery mode to Normal mode : 1ms typical	
Over current protection	Over load alarm level 100% ~ 120%; Over load shutdown level 120% ~ 190% (Adjustable with 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 (Normal mode)	97%	
Noise Filtering	Full time EMI/RFI filtering	

Over current protection	1100VA : by AC fuse 1650VA ~ 4000VA : by re-settable over current protector	1100VA ~ 2200VA : by AC fuse 3300VA ~ 4000VA : 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	1100VA ~ 1650VA : 216 Joules 2200VA ~ 4000VA : 324 Joules	1100VA ~ 1650VA : 220 Joules 2200VA ~ 3300VA : 440 Joules 4000VA : 660 Joules
<b>☐ Battery</b>		
Battery type	Maintenance-free sealed, valve-regulated, Lead-Acid 1100VA ~ 3300VA : 12V, 7Ah; 4000VA : 12V, 9Ah	
Voltage	1100VA : 24Vdc, 1650VA : 36Vdc 2200VA : 48Vdc, 3300VA/4000VA : 72Vdc	
Typical backup time at half-load	1100VA ~ 3300VA : 14 minutes 4000VA : 12 minutes	
Typical backup time at full load	1100VA ~ 3300VA : 4.5 minutes 4000VA : 4 minutes	
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 time	Less than 3 hours to 90% at normal line and normal temperature.	
Charging current	2.5A (Average)	
Average charging voltage for each battery	Quick charging mode : 14V maximum. Trickle charging mode : 13.2V ~13.9V adjustable with the remote 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. RS232, USB, SNMP slot, RJ45 (Surge Protection, Optional)	

Optional Interface port	DB9	
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 with the remote set-up software) The default setting is OFF.	
<b>☐ Environmental and Safety</b>		
Operating Temp.	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	≤40 dBA (at 1M from surface of unit)	
Safety Markings	BSMI	CE
EMC	Class B, EN62040-2, FCC part15, IEC1000-2-2	
Quality control system	ISO 9001	
<b>☐ Physical</b>		
Dimensions: (H×W×D) Unit / Shipping	1100VA ~ 2200VA : 2u x 47cm / 22.5 x 61 x 59(cm) 3000VA ~ 4000VA : 3u x 47cm / 27 x 62 x 58(cm)	
Weight: Net / Gross (kg)	2u	1100VA : 21 / 23 (kg)    1650VA : 23.5 / 25.5 (kg)    2200VA : 31 / 33 (kg)
	3u	3300VA : 41 / 43 (kg)    4000VA : 42 / 44 (kg)
Packing	Export carton for each unit, 14~21 units per pallet	