

		SMARTEN POWER SYSTEMS LIMITED PRODUCT SPECIFICATION	
Model Name		SUPERB+ 3575VA/24V SOLAR PCU	
Mains Input mode			
Mains AC low cut UPS mode		165VAC ± 10VAC	
Mains AC low cut recovery UPS mode		175VAC ± 10VAC	
Mains AC high cut UPS mode		265VAC ± 10VAC	
Mains AC high cut recovery UPS mode		255VAC ± 10VAC	
Mains AC low cut WUPS mode		90VAC ± 10VAC	
Mains AC low cut recovery W.UPS mode		110VAC ± 10VAC	
Mains AC high cut WUPS mode		295VAC ± 10VAC	
Mains AC high cut recovery W.UPS mode		285VAC ± 10VAC	
Input Frequency Range		48Hz to 52Hz	
Voltage Output in Mains Mode		Same as input	
Mains Charging Enable/Disable		Yes Provided,you can set by front switch	
Frequency Output in Mains Mode		Same as input	
Battery			
Battery Type		LA / Tubular / SMF	
DC input voltage		24V	
Battery Quantity 12V 100Ah to 220Ah		2	
Float charging voltage		27.4V±0.2V	
Boost charging voltage for LA Battery		28V±0.3V	
Boost charging voltage for Tubular and SMF Battery		28.8V±0.3V	
Bulk Absorption Battery Voltage		29.6±0.2V	
Battery deep Discharge Recovery		Yes (Independent Charger to Recover Deep Discharge Battery)	
Charging Current By Grid		15A±3A	
Backup Mode			
Output voltage		220VAC±10%	
Output frequency		50Hz ± 0.2 Hz	
Output waveform		Pure Sine Wave ≤ 5% THD	
No Load current		<1.8A	
Discharging current @ full load		90A ± 3A	
Low Battery Warning		21.6V±0.2V	
Low Battery Cut		20.8V±0.2V	
Change over time UPS mode		< 10msec	
Change over time WUPS mode		< 25msec	
Switching Element		MOSFET	
Cooling		Temp. Controlled Fan	
Protections			
Overload in backup mode		Yes provided, system will indicate on display at 101% load	
Short Circuit in Backup Mode		System will shutdown after 3 - retries in case of output short circuit	
Short Circuit in Mains Mode		Mains MCB will trip	
Back feed		System will shutdown in case of back feed and there is no retry	
Over temperature		Yes provided, if heat sink temperature goes above 100°C System will shut down	
Reverse Battery		DC fuse will blown	
Phase to Phase protection in mains mode		Yes provided by electronic	
Solar Charge Controller			
Solar Charge Controller type		MPPT	
Max Panel wattage can be connected		2400WATT	
Maximum PV Voltage		105±2V	
Maximum Battery current		50Amp.	
Efficiency		> 93%	
Reverse PV protection		Yes provided, it will also display on LCD panel	
Switches		Menu(Select),up,Down,Esc.	
Reverse current flow to PV		Yes provided	
Sharing of current when PV and Grid Both are available		If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.	
Mode Option		1. Solar >> Grid >> Battery 2. Solar >> Battery >> Grid 3. Grid>> Solar >> Battery	
DOD definition(Depth of Discharge)		Mains will be connect when battery voltage reach at defined value of the battery voltage.	
DOD (Depth of Discharge)		20%- if battery voltage is 25.0v±0.2V	
		30%- if battery voltage is 24.0v±0.2V	
		40%- if battery voltage is 23.0v±0.2V	
		50%- if battery voltage is 22.0v±0.2V	
Display and Alarms			
LCD Initial Display		Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected LA / SMF / Tubular, DOD.	
LCD Status Display		Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Battery Current, PV Current,PV Voltage. Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut	
LCD Fault / Protection Status Display		Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed	
Buzzer		Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed	
Safety			
HV Test Input to Earth		Leakage current <5mA when 1.5kV applied for 1 min	
HV Test Output to Earth		Leakage current <5mA when 1.5kV applied for 1 min	
IR Test Input to Earth		>5MΩ between @ 500VDC	
IR Test Output to Earth		>5MΩ between @ 500VDC	
Earth Leakage current in Mains mode		< 2.5mA	
Earth Leakage current in Backup mode		< 2.5mA	
Environment			
Operating Temperature		0°C to 50°C	
Storage Temperature		0°C to 50°C	
Operating Relative Humidity		90% Non-Condensing	