

TECHNICAL SPECIFICATION

MODEL - SUPERB 5500VA MPPT SOLAR PCU

PRODUCT FG CODE	SPD-SB-552-048-01	
MAINS INPUT MODE		
Mains AC low cut UPS mode		175VAC ± 10VAC
Mains AC low cut recovery UPS mode		185VAC ± 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		48V
Battery Quantity 12V 100Ah to 220Ah		4
Float charging voltage		54.8V±0.2V
Boost charging voltage for LA Battery		56V±0.4V
Boost charging voltage for Tubular and SMF Battery		57.8V±0.4V
Bulk Absorption Battery Voltage		60V±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
Capacity		5500VA
Discharging current @ full load		90A ± 3A
Low Battery Warning		43.2V±0.4V
Low Battery Cut		41.6V±0.4V
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(PCB-SC-020-01)	
Max Panel wattage can be connected	Approx 4000 WATT	
Maximum PV Voltage	150V	
Maximum Battery current	70 Amp.	
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	
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 50.0v±0.2V	
	30%- if battery voltage is 48.0v±0.2V	
	40%- if battery voltage is 46.0v±0.2V	
	50%- if battery voltage is 44.0v±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	
DIMENSIONS		
Dimensions in mm	530x360x585	