

TECHNICAL SPECIFICATION

MODEL - SUPERB 15KVA/20KVA/240V MPPT SOLAR PCU

Product Specification Range of MPPT Solar PCU	SUPERB 15KVA /240V	SUPERB 20KVA /240V
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	40Hz to 60Hz	
Voltage Output in Mains Mode	Same as input	
Frequency Output in Mains Mode	Same as input	
Mains Charging Enable/Disable	Yes Provided, Charging mode can be change through front switches	
Battery		
Battery Type	LA / Tubular / SMF	
DC input voltage	240V	
Battery Quantity 12V 100Ah to 220Ah	20	
Float charging voltage	230.0/ Battery +/-2%	
Boost charging voltage for LA Battery	310.0/ Battery +/-2%	
Boost charging voltage for Tubular and SMF Battery	290.0/ Battery +/-2%	
Bulk Absorption Battery Voltage	280.0/ Battery +/-2%	
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)	
Charging Current By Grid	Disable, 5 Amp, 10Amp	
Backup Mode		
Output voltage	230VAC +5% -10% (until battery low alarm)	
Switching Element	IGBT Module	
Output frequency	50Hz ± 0.2 Hz	
Output waveform	Digitally Filtered Pure Sine Wave ≤ 5% THD	
Output Power Factor	0.8	
Phase	1Phase-3Wire P,N,E	
No Load current	0.02%	
Capacity	15KVA	20KVA
Discharging current @ full load	50A ± 2A	70A ± 2A
Low Battery Warning	214V±0.4V	
Low Battery Cut	210V±0.4V	
Change over time UPS mode	< 10msec	
Change over time WUPS mode	< 25msec	
Cooling	Forced Air cooling(Temp Controlled)	
Protections		
Overload in backup mode	>100% to <120% Load, System will shut down after 3 try.	
Short Circuit in Backup Mode	System will shut down after 3 - retries in case of output short circuit	
Short Circuit in Mains Mode	Mains MCB 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 MCB will trip	
Phase to Phase protection in mains mode	Yes provided	
Solar Charge Controller		
Solar Charge Controller type	MPPT	
Switching Element	IGBT Module	
Max Panel wattage can be connected	15KW	20KW
Maximum PV Voltage	300V-600V	
Maximum Battery current	60 Amp.	
Efficiency	> 93%	
Battery Charging Stages	5 (Softstart, Boost, Absorbion, Float, Equalise)	
Reverse PV protection	Yes provided, it will also display on LCD panel	
Switches	On/Off, Mode selec., Hybrid/PCU/Smart/UPS	
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.	
DOD (Depth of Discharge)	Grid Reconnect Can set 214V To 250V (10.7V To 12.5 per battery)	
Display and Alarms		
LCD Initial Display	Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery,	
LCD Status Display	Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS	
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	95% Non-Condensing	
Protection class	IP20	
Dimension(LXWXH (mm))	510x460x305	