SMARTEN®
FUSION IS THE FUTURE

Shine
Solar Power Conditioning Unit

SOLAR PCU (PWM BASED)
900VA TO 3.5KVA

LITHIUM-ION BATTERY COMPATIBLE



Key Features

- ADVANCED PWM SOLAR CHARGE CONTROLLER
- COMPREHENSIVE SAFETY PROTECTION
- WIDE INPUT VOLTAGE OPERATION
- MULTIPLE BATTERY COMPATIBILITY

The SHINE Series is a Solar Power Conditioning Unit (PCU) designed to provide reliable solar power for home and small commercial applications. Available in models from 900VA to 3.5KVA, it combines Pure Sine Wave output with an advanced PWM-based Solar Charge Controller for efficient solar charging and dependable performance.

Its intelligent solar-priority operation and solar-grid sharing help maximize solar utilization. User-friendly controls allow convenient management of battery charging, mains charging and operating modes. Wide PV input compatibility supports different solar panel configurations.

SHINE supports Tubular, SMF and Li-ion battery types and provides configurable battery charging and discharge settings. It also features fast changeover, bypass functionality and comprehensive protection against overload, short circuit, high PV, reverse battery connection, wiring faults and over-temperature conditions.

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SMARTEN POWER SYSTEMS LIMITED

SHINE SOLAR POWER CONDITIONING UNIT
900VA TO 3.5KVA

TECHNICAL SPECIFICATIONS

MODEL NAME	900VA/12V	1100VA/12V	1700VA/24V	2KVA/24V	2.5KVA/24V	3.2KVA/24V	3.5KVA/48V
MAINS MODE							
Mains AC Input Voltage Range (UPS Mode)	185VAC to 255VAC ± 10VAC						
Mains AC Low Cut/High Cut Voltage (UPS Mode)	175VAC/265VAC ± 10VAC						
Mains AC Low Cut/-High Cut Recovery Voltage (UPS Mode)	185VAC/255VAC±10VAC						
Mains AC Input Voltage Range (WUPS Mode)	110VAC to 285VAC ± 10VAC						
Mains AC Low Cut/High Cut Voltage (WUPS Mode)	90VAC/295VAC ± 10VAC						
Mains AC Low Cut/-High Cut Recovery Voltage (WUPS Mode)	110VAC/285VAC ± 10VAC						
Input Frequency Range	40Hz to 60Hz						
BATTERY							
Battery Type	Tubular/SMF/Li-Ion		LA/Tubular/SMF/Li-Ion				
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)						
Charging Current	20A+/-3A					25A+/-3A	20A+/-3A
Mains Charging Enable/Disable	Yes, Provided user can set mains charging ENABLE/DISABLE from front switch						
BACKUP MODE							
Output Voltage/ Frequency	220VAC+/-10% , 50Hz+/-0.2Hz						
Output Waveform	Pure Sine Wave 5% THD						
Low Battery Warning	10.8V+/-0.2V Per Battery						
Low Battery Cut	10.4V+/-0.2V Per Battery						
Change Over Time UPS Mode	<10ms						
Change Over Time WUPS Mode	<25ms						
Cooling	Temp. Controlled Fan						
PROTECTIONS							
Overload In Backup Mode	Yes provided , System will give Overload Indication 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 Fuse will blow		Mains MCB will trip				
Backfeed	System will shutdown & there will be no retry						
Phase To Phase Protection In Mains Mode	Yes, Provided by Electronic means						
Over Temperature	Yes provided, if heat sink temp. goes above 100 degree C. System will shut down.						
Reverse Battery	DC Fuse will blow						MCB will trip
SOLAR CHARGE CONTROLLER							
Solar Charge Controller Type	PWM TYPE						
Max Panel Wattage Can Be Connected	800W		1500W		2400W		3000W
Max PV Voltage	40V		60V				100V
Max PV current	40A ±3A		50A+/-3A		70A+/-3A		60A+/-3A
Reverse PV Protection/ Reverse Current Flow To PV	Yes provided, it will also display on LCD panel						
Sharing Of Current When PV & Grid Both Are Available	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV & grid.						
BATTERY CHARGING CURRENT BY SOLAR							
30%			20A+/-3A	20A+/-3A			
40%			30A+/-3A	30A+/-3A			
50%			40A+/-3A	40A+/-3A			
100%			50A+/-3A	70A+/-3A			
Mode Option			1. Solar >> Grid >> Battery (In this condition firt priority is Solar then Grid and Battery) 2. Solar >> Battery >> Grid (in this condition first priority is solar then Battery and Grid) 3.Grid >> Solar >> Battery (In this condition first priority is Grid then Solar and Battery, Mains will not be disconnect in this condition)				
DOD Definition(Depth Of Discharge)	Mains will be connect when battery voltage reach at defined value of the battery voltage.*						
DOD 20%, If Battery Voltage is :			25V±0.2V*				50V±0.2V*
DOD 30%, If Battery Voltage is :			24V±0.2V*				48V+/-0.2V
DOD 40%, If Battery Voltage is :			23V±0.2V*				46V+/-0.2V
DOD 50%, If Battery Voltage is :			22V±0.2V*				44V+/-0.2V
Mains Disconnect SOC (State Of Charge)**			65%- of Battery Capacity*** Default SOC is 40%				
			75%- of Battery Capacity*** Default SOC is 30%				
			85%- of Battery Capacity*** Default SOC is 30%				
			95%- of Battery Capacity*** Default SOC is 30%				
Mains Disconnect SOC definition (State Of Charge)**	Mains will disconnect if battery will charge defined SOC level						
Mains Connect SOC (State Of Charge)**			30%- of Battery capacity				
			40%- of Battery capacity				
			50%- of Battery capacity				
			60%- of Battery capacity				
Mains Connect SOC Definition (State Of Charge)**	Mains will be connect when battery use defined SOC value of full capacity						
Recommended Battery Capacity**	Up to 260AH						
DISPLAYS & ALARMS							
LCD Status Display	Mains ON, I/P Voltage/Frequency, Battery Voltage/Charging/Charged, Charging Current, Backup Mode, UPS ON/OFF, Battery Voltage, Load %, Output Voltage/Frequency, Battery Current, PV Current/Voltage , Mains Low Cut/High Cut, Mains Not Available, Mains Frequency Cut Etc						
LCD Fault / Protection Status Display	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed						
Buzzer							

MAKE IN INDIA

CONTACT US:
+91 85069 09749

info@smartenpowersystems.com
www.smartenpowersystems.com

Smarten Power Systems Ltd
Plot 374, Sector 37, Gurugram, Haryana 122001.