



SMARTEN®
FUSION IS THE FUTURE

SOLAR
ENERGY

**NEVER FEEL
POWERLESS**



PRODUCT CATALOGUE



 /smartenpowersystems

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SMARTEN

 www.smartenpowersystems.com





WORLD PRESENCE OVER 25+ COUNTRIES



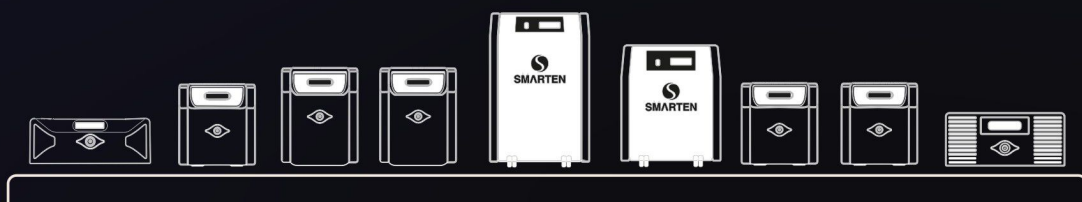
Dear Partners,

Smarten Power Systems is one of India's leading power back up and renewable energy companies. Beginning with a series of Home UPS, Smarten has developed a range of unique Power Backup Solutions and Solar Products which differentiate it from the Industry. Smarten specializes in designing and manufacturing high quality, reliable products with advanced features using the best manufacturing facilities and in-house R&D capabilities.

The products are backed up in the field by unmatched reliability and the company's renowned service support. Due to a clear focus on quality throughout the organisation's operations, Smarten has rapidly established a footprint across India as well as internationally in many countries including Nepal, Bangladesh, Afghanistan, Nigeria and South Africa. Along with an excellent product line, Smarten has developed a reputation as an ethical entity which emphasises transparency in business dealings with all its partners. With Smarten, you always know you will receive the best service and support in every possible way. With the help of its many partners, both in India and overseas, Smarten will continue to provide the best solutions and products and will continue to achieve even bigger success for both itself and its partners.

Sincerely,

ARUN BHARDWAJ
(Director)
Smarten Power Systems Pvt. Ltd.





BRAVO | **HOME UPS** | 300VA - 10 KVA

The technically advanced BRAVO Home UPS operates on mains and supplies output power while charging the battery when Mains supply is available. In case of a power outage, Bravo transfers the entire load to its optimally charged battery and supplies high quality AC power.

Apart from the highest quality components and engineering, what makes Bravo special is the inbuilt stabilizer and charger. With Bravo there is no need to purchase an additional voltage stabilizer, or a charger for charge recovery in case the battery is exhausted. That's why it is becoming the most popular sine-wave UPS in the market.



15 Ampere Current For Faster Battery Charging



Smart Charging even during Low Voltage 90V*



Complete Protection From Back Feed And Phase To Phase Supply.



Compatible with all Type Battery



LED BULB



TULLU PUMP



JUICER MIXER



PC



LED TV



REFRIGERATOR



SUBMERSIBLE PUMP



DENTAL CHAIR



PHOTOCOPIER



WASHING MACHINE

PRODUCT SPECIFICATIONS																								
MODEL NAME	300VA	500VA	700VA	900VA	1100VA	1500VA	1700VA	2000VA	2500VA	2500VA	3500VA	5000VA	5000VA	6000VA	7500VA	10000VA								
MAINS MODE																								
Mains AC low-high cut UPS mode	175VAC-265VAC ± 10 V																							
Mains AC low-high recovery cut UPS mode	185VAC · 255 VAC ± 10VAC																							
Mains AC low-high cut WUPS mode	90VAC · 295 VAC ± 10VAC																							
Mains AC low-high recovery cut WUPS mode	110VAC · 285 VAC ± 10VAC																							
Input Frequency Range	48Hz to 52 Hz																							
Battery																								
Yes (Independent Charger to Recover Deep Discharged Battery)																								
DC input voltage	12V				24V				36V	48V	96V	72V	96V	120V										
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharged Battery)																							
Charging Current 100Ah-135Ah Setting (I/P range 135VAC to 295VAC)	6.5A ± 1A (50-80Ah Battery)		12A/15A ± 2A																					
Charging Current 150Ah-220Ah Setting (I/P range 135VAC to 295VAC)	10A ± 1A (100-135Ah Battery)		15A/20A ± 2A																					
Backup Mode																								
Output voltage / Frequency	220VAC +5% -10% (until battery low alarm)																							
Output Frequency	50Hz ± 0.2 Hz																							
Output waveform	Pure Sine Wave ≤5% THD																							
Low Battery Warning	10.8V ± 0.2V				21.6V ± 0.2V				32.4V ± 0.2V	43.2V ± 0.4V	86.4V ± 0.4V	64.8V ± 0.4V	86.4V ± 0.4V	108V ± 0.4V										
Low Battery Cut	10.4V ± 0.2V				20.8V ± 0.2V				31.8V ± 0.2V	42.4V ± 0.4V	84.8V ± 0.4V	63.6V ± 0.4V	84.8V ± 0.4V	106V ± 0.4V										
Change over time UPS mode	< 10msec											< 4msec												
Change over time WUPS mode	< 25msec																							
Protections																								
Overload in backup mode	Yes provided, system will give indication at 101% load																							
Short Circuit in Backup Mode	System will shutdown after 3 - retries in case of output short cir																							
Short Circuit in Mains Mode	Mains Fuse will blown											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											Battery MCB will trip												
Display and Alarms																								
LED 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, Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut																							
Buzzer	Audible beep for Overload, Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown / MCB Trip																							
Weight and Dimensions																								
Dimensions in mm	301x297x160			270x190x125			340x230x260			350x230x310			530x360x585			550x410x650								
Weight	6.5Kg	8Kg	8.5kg	9.35kg	9.5kg	13.5 Kg.	15.9kg	18.5kg	21.4kg	23.5Kg	25.2Kg	26.3kg	43kg	51kg	73kg	78kg								

LOAD CHART*																												
PRODUCTS	300VA		500VA		700VA		900VA		1100VA		1500VA		1700VA		2 KVA		2.5 KVA		3.5 KVA		5 KVA		6 KVA		7.5 KVA		10 KVA	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
21" TV/29"TV*	-	1	-	1	-	1	-	1	-	1	2	1	2	1	2	1	1	1	2	-	4	2	2	1	4	3	2	2
Fan	1	1	-	1	1	2	3	4	4	3	5	3	5	3	8	10	5	4	4	4	15	10	10	6	15	5	20	4
Tube Light	1	-	-	2	2	2	3	4	4	3	5	3	5	3	8	10	4	6	4	8	15	10	10	5	15	10	20	15
11W CFL	-	2	2	-	3	2	3	6	5	5	6	4	6	4	10	16	10	8	4	4	15	20	20	10	15	10	20	15
0.8 Ton AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-
Computer	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
Air Cooler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	2	1	-	2	2	4	4	4
Refrigerator 360 ltr	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-
1 Ton AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	2	-	-	-	-	-
1.5 Ton AC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2

*Conditions apply



SAVER SOLAR PCU | 300VA - 10 KVA
SOLAR HYBRID POWER CONDITIONING UNIT

The name says it all. Powered by Smarten’s high quality solar panels, the SAVER solar PCU provides power saving up to 30%. Saver is new generation Hybrid Power Conditioning Unit which accepts dual Inputs i:e Grid power as well as Solar Power at same time while giving priority to solar power hence helps in bringing down the electricity bill. Moreover, Dual inputs helps to protect ourselves from extended power cuts. System can also work as a normal UPS in case solar panels are not connected with system.

BATT VOLT 27.6V
 AC LOAD 26%

Big LCD Screen for all Notification



Smart Solar Optimization Usage Settings



Recover Deep Discharge Battery Even Zero Volt Gravity



In built strong Solar charge controller.



LED BULB



TULLU PUMP



JUICER MIXER



LAPTOP



LED TV



REFRIGERATOR



SUBMERSIBLE PUMP



DENTAL CHAIR



PHOTOCOPIER



WASHING MACHINE

PRODUCT SPECIFICATIONS														
MODEL NAME	300VA	500VA	700VA	900VA	1100VA	1700VA	2000VA	2500VA	3500VA	5000VA	5000VA	6000VA	7500VA	10000VA
MAINS MODE														
Mains AC Input range (UPS mode)	175VAC-265VAC ± 10 V													
Mains AC low cut recovery UPS mode	185VAC ± 10VAC													
Mains AC high cut recovery UPS mode	255VAC ± 10VAC													
Mains AC Input range (WUPS mode)	90VAC-285VAC ± 10V													
Mains AC low cut recovery WUPS mode	110VAC ± 10VAC													
Mains AC high cut recovery WUPS mode	285VAC ± 10VAC													
Input Frequency Range	48Hz to 52Hz													
Battery														
DC input voltage	12V			24V		36V	48V	48V	96V	72V	96V	120V		
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharged Battery)													
Charging Current 100Ah-135Ah Setting (I/P range 135VAC to 295VAC)	6.5A ± 1A (50-80Ah Battery)		12A ± 1A											
Charging Current 150Ah-220Ah Setting (I/P range 135VAC to 295VAC)	10A ± 1A (100-135Ah Battery)		15A ± 1A											
Backup Mode														
Output voltage / Frequency	220VAC +5% -10% (until battery low alarm) / 50Hz ± 0.2 Hz													
Output waveform	Pure Sine Wave													
Low Battery Cut	10.4V ± 0.2V			21.6V ± 0.2V		32.4V ± 0.4V	43.2V ± 0.4V		86.4V ± 0.4V	64.8V ± 0.4V	86.4V ± 0.4V		108V ± 0.4V	
Change over time UPS /WUPS mode	< 10msec / < 25msec													
Protections														
Overload /Short Ckt./Backfeed in backup mode	Available													
Over temperature/ Reverse Battery	Available													
Phase to Phase protection in mains mode	Yes provided by electronic													
Solar Charge Controller														
Solar Charge Controller type	PWM type													
Maxi Panel wattage can be connected	600W			1500W		3000W		6500W	4500W	6500W	6500W			
Maxi PV current	25A			50A										
Reverse PV protection /current flow to PV	Available													
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.													
Option for Grid and Battery priority	Available, Customer friendly settings													
Display and Alarms														
LCD Status Display	Mains ON, Input -Voltage/Frequency, Battery -Voltage/Charging/Charged, Charging Current, PV Voltage/current Backup Mode, UPS- ON/OFF, Load %, Output -Voltage/ Frequency and all protections etc.,													
Weight and Dimensions														
Dimensions in mm	301x297x160		270x190x125		340x230x260		350x230x310		530x360x585			550x410x650		
Weight	6.5Kg	7Kg	8.5kg	9.35kg	9.5kg	15.9kg	18.3kg	21.4kg	26.3kg	41kg	43kg	51kg	73kg	78kg

LOAD CHART*			
S. No	Model	Load on Solar	Solar Panel Capacity
1.	300VA/12V	1 LED TV 32" + 2 CFL 15W + 1 Fan	Upto 500 W
2.	500VA/12V	2 Fan + 2 CFL + 2 LED Bulb + 1 LED TV 32"	Upto 500 W
3.	700/12V	2 Fan + 4 CFL + 1 TV	Upto 500 W
4.	900VA/12V	4 Fan + 8 CFL + 1 TV or 2 Fan + 4 CFL + 1 Refrigerator	Upto 600 W
5.	1100/12V	5 Fan + 10 CFL + 1 TV or 3 Fan + 6 CFL + 1 Refrigerator + 1 TV	Upto 600 W
6.	1700VA/24V	4 Fan + 8 CFL + 1 TV or Water Pump 1 HP or 2 Fan + 4 CFL + 1 Refrigerator	Upto 1500 W
7.	2000/24V	12 Fan + 10 CFL + 1 TV or Water Pump 1 HP + 3 Fan + 6 CFL + 1 Refrigerator + 1 TV	Upto 1500 W
8.	2500/24V	14 Fan + 15 CFL + 1 TV or Submersible Pump 1 HP + 4 Fan + 5 CFL or 3 Fan + 6 CFL + 1 TV	Upto 1800 W
9.	3500/48V	10 Fan + 20 CFL + 1 TV or Submersible Pump 1 HP + 6 Fan + 10 CFL or 5 Fan + 8 CFL + 1 TV or 1 Petrol Pump Nosel	Upto 3000 W
10.	5250/48V	25 Fan + 25 CFL + 1 TV or Submersible Pump 2 HP + 6 Fan + 15 CFL or 8 Fan + 8 CFL + 1 AC 1 Ton + 1 TV or 2 Petrol Pump Nosel + 6 CFL	Upto 3000 W
11.	5250/96V	25 Fan + 25 CFL + 1 TV or Submersible Pump 2 HP + 6 Fan + 15 CFL or 8 Fan + 8 CFL + 1 AC 1 Ton + 1 TV or 2 Petrol Pump Nosel + 6 CFL	Upto 6500 W
12.	6000/72V	25 Fan + 25 CFL + 1 TV or Submersible Pump 2 HP + 6 Fan + 15 CFL or 8 Fan + 8 CFL + 1 AC 1.5 Ton + 1 TV or 2 Petrol Pump Nosel + 6 CFL	Upto 4500 W
13.	7500/96V	5 Fan + 10 CFL + 10 LED Bulb 7W + 2 Room Cooler + 3 TV 32" + 2 AC 1.5 Ton	Upto 6500 W
14.	10000/120V	35 Fan + 36 CFL + 3 TV or Submersible Pump 2 HP + 10 Fan + 25 CFL or 10 Fan + 10 CFL + 2 AC 1.5 Ton + 1 TV or 4 Petrol Pump Nosel + 10 CFL	Upto 8000 W

*Conditions apply



Superb MPPT SOLAR POWER CONDITIONING UNIT | **MPPT BASED PCU | 1100VA-15KVA**

Superb MPPT based Solar PCU is a magnificent product of SMARTEN fitted with premium quality components and technically advanced processor. The meaning of MPPT is “Maximum Power Point Tracking.” Superb is an innovative Solar Hybrid inverter that gives you the joy of uninterrupted power supply backed by smarten’s impeccable solar panels.

It’s advanced technology makes it 30% extra efficient than normal PCU’s It is power packed with exciting features like LCD screen, advanced DSP controller, 4 levels of DOD levels, 10 ms change over time, independent battery Charger, inbuilt UPS system etc which makes it a another jewel of Smarten’s product port folio.



MPPT BASED ADVANCE TECHNOLOGY PCU



30% MORE EFFICIENT



SMART CHARGING EVEN DURING LOW VOLTAGE 90V*



GRID CHARGING ENABLE /DISABLE OPTION FOR REDUCED ELECTRICITY BILL



LED BULB



TULLU PUMP



JUICER MIXER



LAPTOP



LED TV



REFRIGERATOR



SUBMERSIBLE PUMP



FAN



TUBE LIGHT



PETROL PUMP NOZZLE

PRODUCT SPECIFICATIONS

MODEL NAME	1100VA/12V	2500VA/24V	4000VA/48V	5.2 KVA/48V	7.5 KVA/96V	10 KVA/120V	15 KVA/240V
Mains Input mode							
Mains Input AC Range UPS mode	175VAC - 265VAC ± 10VAC						
Mains Input AC Range WUPS mode	90VAC - 295VAC ± 10VAC						
Input Frequency Range	48Hz to 52Hz						
Battery							
Boost charging voltage for LA Battery	14V ± 0.2V	28V ± 0.2V	56V ± 0.2V	112V ± 0.4V	140V ± 0.4V	280V ± 0.4V	
Boost charging voltage for Tubular and SMF Battery	14.5V ± 0.2V	29V ± 0.2V	58V ± 0.2V	116V ± 0.4V	145V ± 0.4V	290V ± 0.4V	
Charging Current By Grid	15A ± 3A						5A - 15A ± 3A
Grid Charging Enable/Disable option	Yes						
Backup Mode							
Output voltage	220VAC + 5% - 10% (until battery low alarm)						
Output frequency	50Hz ± 0.2 Hz						
Low Battery Cut	10.6V ± 0.2V	20.8V ± 0.2V	42.4V ± 0.4V	83.2V ± 0.4V	104V ± 0.4V	210V ± 0.4V	
Protections							
Overload in backup mode	Available						
Short Circuit in Backup Mode	Available						
Short Circuit in Mains Mode	Available						
Reverse Battery	Available						
Solar Charge Controller							
Solar Charge Controller type	MPPT						
Maxi Panel wattage can be connected	750 WATT	1800 WATT	3000 WATT	6500 WATT	8000 WATT	15000 WATT	
Maximum PV Voltage	50V	85V	135V	250V	350V	600V	
Maximum Battery current	50 Amp.						60 Amp.
Efficiency	> 93%						
Reverse PV protection /current flow to PV	Available						
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 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 batt. volt. is 12.5V	20%- if batt. volt. is 25.0V	20%- if batt. volt. is 50.0V	20%- if batt. volt. is 100V±0.2V	20%- if batt. volt. is 125V±0.2V	Grid Reconnect Can set 214V To 250V (10.7V To 12.5 per battery)	
	30%- if batt. volt. is 12.0V	30%- if batt. volt. is 24.0V	30%- if batt. volt. is 48.0V	30%- if batt. volt. is 96V±0.2V	30%- if batt. volt. is 120V±0.2V		
	40%- if batt. volt. is 11.5V	40%- if batt. volt. is 23.0V	40%- if batt. volt. is 46.0V	40%- if batt. volt. is 92V±0.2V	40%- if batt. volt. is 115V±0.2V		
	50%- if batt. volt. is 11.0V	50%- if batt. volt. is 22.0V	50%- if batt. volt. is 44.0V	50%- if batt. volt. is 88V±0.2V	50%- if batt. volt. is 110V±0.2V		
Display and Alarms							
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						

LOAD CHART*

Model	Load on Solar	Solar Panel Capacity
1100VA	8 Fan + 10 CFL + 1 TV or 3 Fan + 6 CFL + 1 Refrigerator + 1 TV	Upto 500 W
2500VA	14 Fan + 15 CFL + 1 TV or Submersible Pump 1 HP + 4 Fan + 5 CFL or 3 Fan+6 CFL+1 TV	Upto 1800 W
4 KVA	10 Fan + 20 CFL + 1 TV or Submersible Pump 1 HP + 6 Fan + 10 CFL or 5 Fan + 8 CFL + 1 TV or 1 Petrol Pump Nozzle	Upto 3000 W
5.2 KVA	25 Fan + 25 CFL + 1 TV or Submersible Pump 2 HP + 6 Fan + 15 CFL or 8 Fan + 8 CFL + 1 AC 1 Ton + 1 TV or 2 Petrol Pump Nozzle	Upto 3000 W
7.5 KVA	5 Fan + 10 CFL + 10 LED Bulb 7W+ 2 Room Cooler+ 3 TV 32" + 2 AC 1.5 Ton	Upto 6500 W
10 KVA	35 Fan + 36 CFL + 3 TV or Submersible Pump 2 HP + 10 Fan + 25 CFL or 10 Fan + 10 CFL + 2 AC 1.5 Ton + 1 TV or 4 Petrol Pump Nosel + 10 CFL	Upto 8000 W
15 KVA	60 Fan + 15 Computer + 60 CFL + 50 CCTV OR 3 HP Submersible + 20 Fan + 50 CFL or 20 Fan + 10 CFL + 3 AC 1.5 Ton + 5 TV or 20 CCTV + 5 TV + 5 Petrol Pump Nozzle + 50 CFL	Upto 15000 W

*Conditions apply



PRIME+ | **SOLAR CHARGE CONTROLLER** | **MPPT BASED 12V to 120V/50 Amp**

Prime+ is MPPT based solar charge controller which is an efficient current regulator that prevents your batteries from deep discharging. It performs controlled discharges, depending on the battery. It also saves 30% more power than other charge controllers it comes with a friendly user interface which makes it easy to control.



Wall Mounting option



User Friendly Display



Smart Auto detect Battery Function

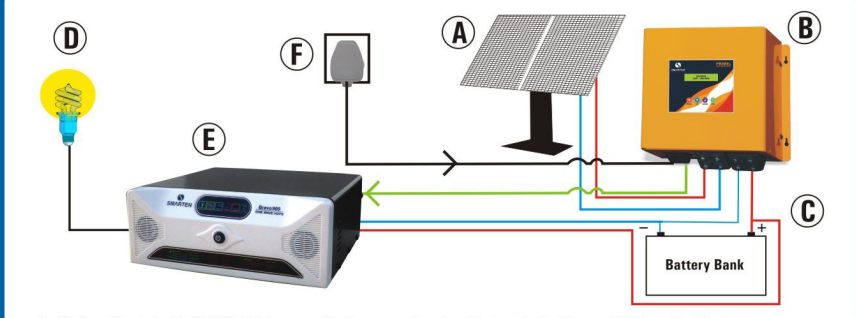


Compatible with all type of batteries

DISPLAY MESSAGES

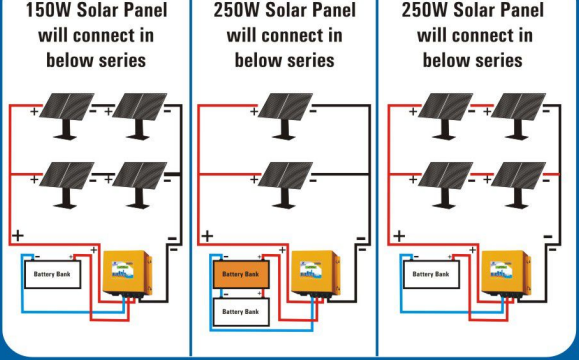
Welcome To Smarten World	Website www.smartenpowersystems.com	Prime MPPT SCC 12V/30 Amp	Reverse PV Connected
Solar PV Current 10 Amp	Mains Available 200 V	Batt Volt 12.2V	Saving Unit 010
Batt Type Switch Lead Acid / Tubular Battery	Solar Power Available/ Not Available	PV Voltage	

BLOCK DIAGRAM OF PRIME+ MPPT SOLAR PCU KIT

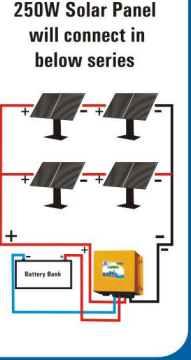


A. Solar Module B. MPPT Prime+ C. Battery Bank D. Load E. Home UPS F. Mains

FOR 12V SYSTEM



FOR 24V SYSTEM




SAVIOR
PWM BASED SOLAR CHARGE CONTROLLER
 12V/25Amp to 120V/50Amp

It's truly a savior. It saves people from the worries of buying a separate solar inverter when they're willing to switch to solar. All you have to do is install Smarten's top quality Panels, and connect them to your existing UPS via the Smarten Savior.

Smarten Savoir charge controller is a voltage and current regulator that prevents your batteries from deep discharging. It also protect your solar panels.


Wall Mounting option

User Friendly Display

Smart Auto detect Battery Function

Compatible with all type of batteries
TECHNICAL SPECIFICATION

	12V	12V	24V	48V	72V	96V	120V
Battery Type	LA/Tubular/SMF						
Technology	Digital Processor Based High Efficiency Design						
Max. PV Current Rating	25 AMP	50 AMP					
Max. PV Voltage Rating	25V	25V	55V	100V	132V	265V	265V
Max. Panel Install	500 Watt	1000 Watt	1500 Watt	3000 Watt	4500 Watt	6500 Watt	8500 Watt
Float Charging Voltage	13.7V±0.2V	13.7V±0.2V	27.4V±0.2V	54.8V±0.2V	82.2V±0.2V	109.6V±0.2V	137V±0.2V
Boost Charging Voltage For Tubular And SMF Battery	14.5V±0.2V	14.5V±0.2V	29V±0.2V	58V±0.2V	87V±0.2V	116V±0.2V	145V±0.2V
Boost Charging Voltage For LA Battery	14V±0.2V	14V±0.2V	28V±0.2V	56V±0.2V	84V±0.2V	112V±0.2V	140V±0.2V
Bulk/Absorption Voltage	14.8V±0.2V	14.8V±0.2V	29.6V±0.2V	59.2V±0.2V	88.8V±0.2V	118.4V±0.2V	148V±0.2V
Solar Charge Controller To PV Power Connection Time	<15 Sec.						
Peak Efficiency	>90%						
SCC Type	PWM (Pulse With Modulation)						
PROTECTIONS							
Reverse PV Protection	Provided						
Reverse Current Flow to PV	Provided						
High PV Voltage	Provided						
Over Temperature	Provided (If heat sink temperature goes above 100°C, system will shut down)						
DISPLAY PARAMETERS							
Display Type	LCD Display						
Display Messages	Welcome, Smarten Website Address, System Capacity						
SCC Fault/Protection Status	Reverse PV/DC Load Overload/High PV voltage / High Temp.						
ENVIRONMENT							
Operating Temperature	0°C To 40°C						
Storage Temperature	0°C To 50°C						
Operating Relative Humidity	90% Non-Condensing						


BRAVO
TUBULAR BATTERY
TUBULAR BATTERY
120 Ah - 240 Ah (C20)

Under the supervision of Smarten's quality experts, Bravo battery is manufactured using cutting-edge technology and premium grade raw materials at our in-house well-equipped manufacturing unit.

It is made with LSP Technology to handle high surge current of loads. The offered battery is a programmable battery. Hence, it can be used in a wide variety of applications.


LOW SELF DISCHARGE

LONG CYCLE LIFE.

SUPERIOR HIGH RATE DISCHARGE FEATURE.

LEVEL INDICATOR FOR EASY MAINTENANCE

Sr. No.	Model	Volts	Capacity C20	Initial Charging Current (Amps)	Maximum Overall Dimensions (mm)		
					Length	Width	Height
1.	BRTT 1200	12	120 AH	9	503	193	412
2.	BRTT 1600	12	160 AH	11	503	193	412
3.	BRTT 2200	12	220 AH	11	503	193	412
4.	BRTT 2400	12	240 AH	11	503	193	412


SAVER
 TUBULAR BATTERY

SOLAR TUBULAR BATTERY
100 Ah - 220 Ah (C10)

Made with Hi-Power Selenium technology which makes it almost self-sustainable battery (Low maintenance) and more durable (Low self-discharge current). All of smarten's batteries are solar panel compatible.

It protects you from the suffering of buying a new battery whenever you wish to switch to solar. Saver is a programmable battery. Hence, it can be used in a wide variety of applications.


LOW SELF DISCHARGE

LONG CYCLE LIFE.

SUPERIOR HIGH RATE DISCHARGE FEATURE.

LEVEL INDICATOR FOR EASY MAINTENANCE

S. No.	Model	Volts	Capacity @C20	Capacity @C10	Initial Charging Current (Amps)	Dimensions (H x W x L) mm
1.	SRTT 1000	12	100 AH	100 AH	15A	503 x 193 x 412
2.	SRTT 1500	12	150 AH	150 AH	15A	503 x 193 x 412
3.	SRTT 2000	12	200 AH	170 AH	15A	503 x 193 x 412
4.	SRTT 2200	12	220 AH	170 AH	15A	503 x 193 x 412



SMF GENERAL RANGE

SMARTEN SP
 SP12V/7.2 Ah -
 200 Ah

SMARTEN SP

This range is the most common standard and the first generation delicate product which is designed with AGM (Absorbent Glass Mat) technology, high performance plates and electrolyte. The definition of SM is coming from General purpose. Therefore, this range product has possessed various applications for common power backup system.

Applications

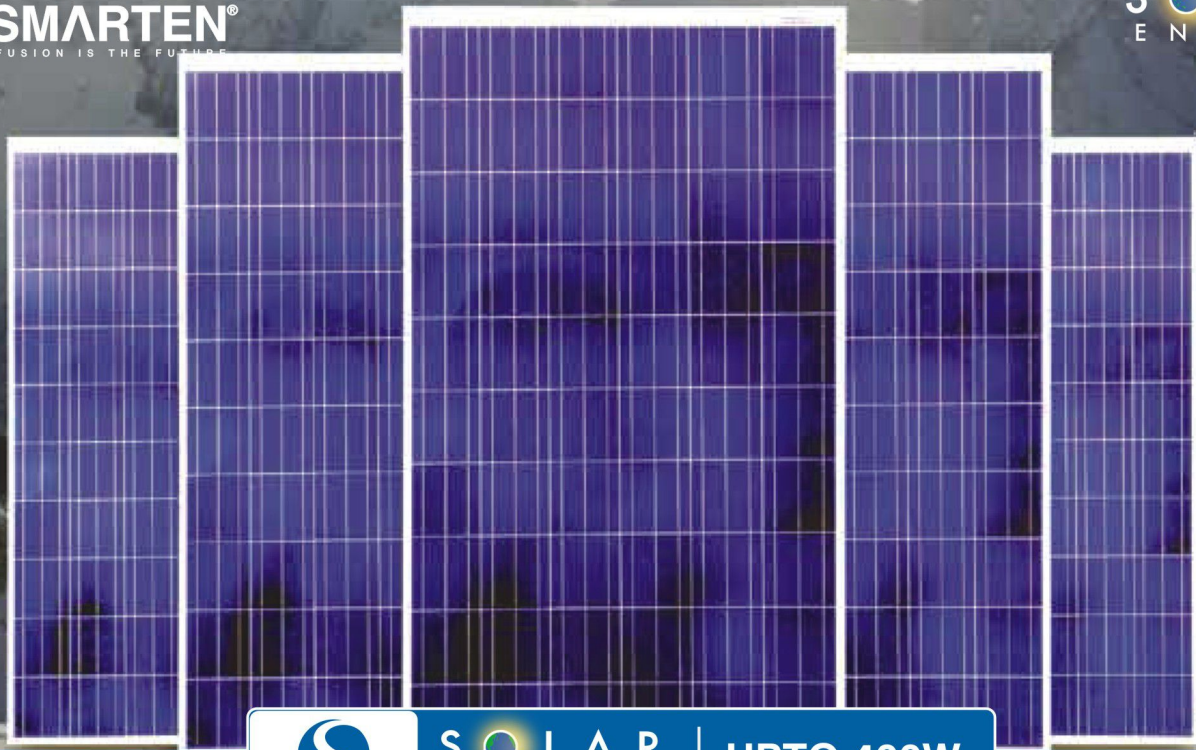
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Emergency Lighting System
- Medical Equipment
- UPS
- Power Tool
- Emergency Power System
- Stand-by Electric Power Control System

General Features

- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and coversl.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

Construction

- Component - Raw material
- Positive - Lead dioxide
- Negative - Lead
- Container - ABS
- Cover - ABS
- Sealant - Epoxy Resin
- Safety valve - EPDR
- Terminal - Lead
- Separator - Fiber glass
- Electrolyte - Sulfuric acid



With the highest quality materials and based on the latest solar technology from Germany and Taiwan, Smarten SOLAR PANELS are completely immune to India's extreme heat, cold, dust and heavy rainfall. Whatever the weather, these panels are crafted to serve you reliably for 25 years or more.

Authentic, durable with the highest efficiency of solar cells. Smarten Solar Panels offer the best performance in cloudy weather, and don't even get damaged in winds of 12 km/hr.

Smarten SOLAR PANELS help you cut down your electricity bills and also friendly to the environment. We urge you to invest in this very best of investments, both for yourself and your planet.

Technical Specifications

Wattage Wp	40W	50W	60W	75W	100W	150W	160W	190W**	260W	265W	335W	400W**
Voltage at max. Power, Vmax	17.00	18.00	18.00	18.00	18.00	18.20	18.20	20.4	30.92	30.92	38.12	39.92
Open circuit Voltage, Voc	21.00	21.00	21.00	22.00	22.00	22.20	22.20	24.3	37.95	37.95	45.15	49.20
current at max. Power, Imax	2.36	2.78	3.33	4.17	5.56	8.30	8.30	9.3	8.58	8.58	8.39	9.53
short circuit current, Isc	2.54	3.20	3.83	4.67	6.06	8.50	8.50	9.86	9.18	9.18	8.98	9.9
FF	0.75	0.74	0.75	0.73	0.75	0.80	0.80	0.80	0.76	0.76	0.75	0.75
Note: *STC(1000W/AM1.5/cell temperature 25°C)												
Module Mechanical Details												
Module Length (mm) ±2mm	470	545	645	775	1010	1490	1490	1490	1645	1645	1963	1963
Module width (mm) ±2mm	665	665	665	665	665	665	665	665	985	985	985	985
Module efficiency (%)	13.99	13.80	13.99	14.55	14.89	15.14	15.14	16.35	16.35	16.35	16.55	19.58
Mounting hole Pitch X axis in mm ±2mm	637	637	637	637	637	630	630	630	945	945	945	945
Mounting hole Pitch Y axis in mm ±2mm	210	300	300	400	500	750	750	750	860/1360	860/1360	1175/1400	1175/1400
Module weight (Aprox in kg)	3	4	5	6.5	7.75	10.6	10.6	10.6	17.5	17.5	22	22.5
Packing Type	5 in 1	5 in 1	5 in 1	5 in 1	5 in 1	4 in 1	4 in 1	4 in 1	1 in 1	1 in 1	1 in 1	1 in 1

Power Tolerance -0/+3%, Electrical Parameters Tolerance ±5%

*Conditions apply ** These are Monocrystalline Panel.



SMARTEN®

FUSION IS THE FUTURE



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