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Smarten Power Systems Ltd.
Plot No -374, Pace City-II, Sector 37, Gurugram, Haryana. India.

SOLAR
ENERGY



COMPLETE ENERGY SOLUTIONS
INNOVATIVE • RELIABLE • SUSTAINABLE



PRODUCT CATALOGUE
2026



smartenpowersystems.com

POWERING
31+
COUNTRIES
WORLDWIDE



Dear Partners,

Welcome to Smarten Power Systems a trusted global manufacturer of advanced power backup and renewable energy solutions.

For over a decade, Smarten has been committed to delivering innovative, reliable, and high-performance energy solutions that empower homes, businesses, and industries across the world. From Home UPS systems and Solar Inverters to Lithium Batteries, Solar Charge Controllers, and complete energy storage solutions, our products are engineered to meet the evolving demands of global markets.

At Smarten, quality is at the core of everything we do. Every product is designed, developed, and manufactured in our state-of-the-art facilities, supported by advanced technologies, stringent quality control, and a dedicated in-house research and development team. This commitment ensures exceptional performance, long service life, and dependable operation even in the most challenging environments.

Today, Smarten proudly serves customers and partners across 25+ countries spanning Asia, Africa, and the Middle East. Our growing international presence reflects the trust our distributors, dealers, and customers place in our products, services, and long-term business relationships.

We believe successful partnerships are built on trust, transparency, innovation, and mutual growth. Our mission extends beyond supplying products we strive to create lasting value by supporting our partners with dependable solutions, responsive service, and continuous innovation.

As global energy demands continue to evolve, Smarten remains dedicated to developing smarter, cleaner, and more sustainable power solutions that help businesses grow while contributing to a better future.

On behalf of the entire Smarten family, I sincerely thank our partners, customers, and stakeholders for their continued confidence and support. We look forward to building a stronger and more successful future together.

Warm Regards,

Arun Bhardwaj
Director
Smarten Power Systems Ltd.

Global Presence

Powering 31+ Countries Across The Globe

01 Afghanistan	09 Ethiopia	17 Mali	25 Sudan
02 Angola	10 Guinea	18 Mauritius	26 Syria
03 Bangladesh	11 India Delhi NCR - HQ	19 Myanmar	27 Thailand
04 Benin	12 Iraq	20 Nepal	28 UAE
05 Cameroon	13 Lebanon	21 Nigeria	29 Uganda
06 Congo	14 Libya	22 Oman	30 Yemen
07 Cˆte d'Ivoire	15 Madagascar	23 Rwanda	31 Zimbabwe
08 D.R. Congo	16 Malaysia	24 South Africa	



MANUFACTURING EXCELLENCE

Since 2014, Smarten Power Systems has grown into a globally trusted manufacturer of power backup and renewable energy solutions. Our advanced manufacturing capabilities, supported by in-house R&D, modern production technologies, and rigorous quality standards, enable us to deliver reliable, high-performance products to customers across 31+ countries. Every product reflects our commitment to innovation, precision, and long-term reliability.



QUALITY & CERTIFICATIONS

Committed to Quality, Compliance & Global Standards

At Smarten Power Systems, our commitment to quality is reflected through recognized certifications, government approvals, export registrations, and industry memberships that support our manufacturing excellence and global business operations.

QUALITY MANAGEMENT



ISO 9001:2015
Quality Management
System



IAF
Member of Multilateral
Recognition Arrangement



JAS-ANZ
Accredited
Certification



ISO 14001:2015
Environmental
Management System

PRODUCT STANDARDS & COMPLIANCE



IS 14242
Battery Standard



IEC
International
Electrotechnical
Commission



CE MARK
European Conformity



BIS / ISI
Standard Mark

GOVERNMENT RECOGNITION & EXPORT REGISTRATION



MSME
Micro, Small & Medium
Enterprises



IEC
Importer Exporter
Code



MNRE
Approved Channel
Partner

**RCMC
by
MPEDA**

RCMC
Registered with
MPEDA

INDUSTRY MEMBERSHIPS & RECOGNITION



SON
Standards Organisation
of Nigeria



**Packaging for
Better Living**



NSIC
National Small Industries
Corporation



EverOn

HOME UPS WITH
INBUILT LI-ION BATTERY
1500/12.8V | 2500/25.6V



Key Features



WALL-MOUNT
DESIGN



INBUILT 2560Wh*
LI-ION BATTERY



RAPID CHARGING
EXTENDED BACKUP



COMPACT
& POWERFUL



The Smarten EverOn Smart Home UPS, featuring an inbuilt lithium battery, is a compact and efficient power backup solution designed for modern homes.

Equipped with Pure Sine Wave technology and a high-performance lithium battery pack, it delivers reliable, stable power for your most essential household appliances. Seamlessly run your TVs, ceiling fans, LED bulbs, laptops, and Wi-Fi routers during any outage.

With fast charging capabilities, extended backup time, and a sleek design, the Smarten EverOn combines dependable performance, convenience, and advanced technology to provide uninterrupted power whenever you need it.

• INBUILT 2560Wh LI-ION BATTERY* For 2500/25.6V model only



SMARTEN POWER SYSTEMS LIMITED

EVERON HOME UPS WITH INBUILT LI-ION BATTERY

1500/12.8V | 2500/25.6V

PRODUCT SPECIFICATION

MODEL NAME	EVERON 1500/12.8V HUPS	EVERON 2500/25.6V HUPS
Mains Input 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		
DC Input Voltage	12.8V , 1280 Wh	25.6V, 2560Wh
Boost Charging Voltage for Li-Ion Battery	14.2V±0.2V	28.8V +/- 0.2V
Battery Deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)	
Charging Current	25A ± 3A	
Backup Mode		
Output Voltage	220VAC +5% -10% (until battery low alarm)	
Output Frequency	50Hz ± 0.2 Hz	
Output Waveform & THD	Pure Sine Wave, ≤ 5% THD	
Low Battery Warning	10.8V±0.2V	21.6V±0.2V
Low Battery Cut	10.4V±0.2V	20.8V±0.2V
Change Over Time UPS Mode	< 10msec	
Change Over Time WUPS Mode	< 25msec	
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 Fuse Blown	Mains MCB will trip
Backfeed	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 by electronic means	
Battery High Protection	Yes provided by Firmware	
Display and Alarms		
LCD Initial Display	Welcome to smarten world, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected -LI-ION	
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, 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 will trip	
Weight and Dimensions		
Dimensions in mm	425x315x335	450x435x660
Weight (Kg)	26.5	48.4



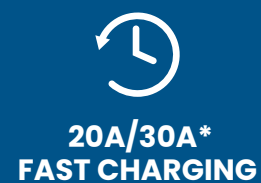


BRAVO

**PURE SINE WAVE
HOME UPS
850VA TO 10KVA**



Key Features



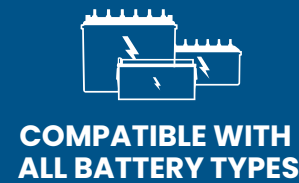
**20A/30A*
FAST CHARGING**



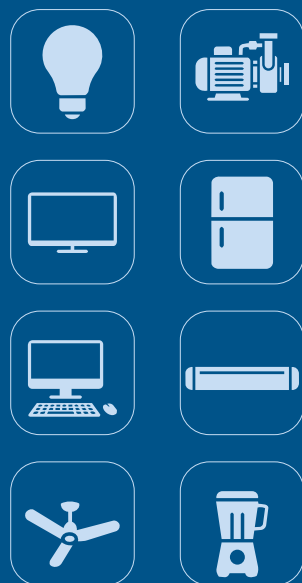
**SMART
CHARGING AT 90V**



**BACKFEED &
PHASE TO PHASE
PROTECTION**



**COMPATIBLE WITH
ALL BATTERY TYPES**



The BRAVO Home UPS is engineered to deliver reliable, high-quality power for homes and everyday electrical loads. When mains power is available, BRAVO efficiently powers connected appliances while charging the battery. During a power outage, it automatically switches to battery backup, ensuring uninterrupted and stable AC power.

Integrated Stabilizer & Intelligent Charging
What sets BRAVO apart is its built-in voltage stabilizer and intelligent battery charging system. The integrated stabilizer helps protect connected appliances from voltage fluctuations, eliminating the need for a separate external stabilizer. Its advanced charging system supports efficient battery charging and recovery, helping maintain dependable backup performance.

• 30A FAST CHARGING* Available for 3.2 kVA only



SMARTEN POWER SYSTEMS LIMITED

**BRAVO PURE SINE WAVE HOME UPS
850VA TO 10kVA**

PRODUCT SPECIFICATIONS

MODEL NAME	850VA	1050VA	1250VA	1500VA	2KVA	2.5KVA	3.2KVA	3.5KVA	5.5KVA	5.5KVA	6KVA	7.5KVA	10KVA
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	LA/Tubular/SMF/Li-Ion												
DC Input Voltage (Battery AH : 100AH to 260AH)	12V				24V			48V	48V	96V	72V	96V	120V
Battery Deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)												
Charging Current Setting (I/P Voltage 135-295VAC)	20A/25A ± 3A		25A/30A ± 3A		20A/25A ± 3A		25A/30A ± 3A		20A/30A ± 3A				
BACKUP MODE													
Output Voltage/ Frequency	220VAC ± 10%, 50Hz ± 0.2Hz												
Output Waveform & THD	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												
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 be blown			Mains MCB will trip									
Backfeed	System will shutdown & there will be no retry												
Over Temperature	Yes provided, if heat sink temp. goes above 100 degree C. System will shut down.												
Reverse Battery	DC Fuse will be blown							DC MCB will trip					
DISPLAYS & ALARMS													
LCD Status Display	Mains ON, Input Voltage/ Frequency , Battery Voltage/ Charging/ Charged , Battery Charging Current , Backup Mode , UPS ON/OFF , Load % , Output Voltage/ Frequency, Mains Low Cut/ High Cut ,Mains Not Available Etc.												
Buzzer	Audible Beep for Overload, Short Ckt, Backfeed, Low Battery, Mains Fuse Blown/ Mains MCB Trip , Over Temp.												
WEIGHT & DIMENSIONS													
Dimensions (in mm)	270*190*125				340*230*260			350*230*310		530*360*585		550*410*650	
Weight (Kgs)	8.5	9.35	9.5	13.5	18.5	21.4	22.4	25.2	26.3	43	51	73	78



STAR
SERIES



Smart Conversion. Maximum Solar Performance.

The Smarten STAR Series On-Grid Solar Inverter is engineered for efficient and reliable solar power conversion across residential and commercial applications. With advanced MPPT technology, intelligent cooling, comprehensive protection and flexible communication, the STAR Series delivers dependable performance across a wide range of operating conditions.

**SMARTEN POWER SYSTEMS LIMITED**

ON-GRID SOLAR INVERTER

TECHNICAL SPECIFICATIONS

Model	S1KW	S1.5KW	S2.2KW	S3KW	S3.6KW	S4.2KW	S5KW	S6KW
DC SIDE / INPUT PARAMETERS								
Maximum DC Power (W)	1500W	2250W	3300W	4500W	5400W	6300W	7500W	7500W
Maximum DC Voltage (Vdc)	550	550	550	550	550	550	550	550
Minimum System Start/Shutdown Voltage (Vdc)	70/65	100/75	100/75	100/75	100/75	100/75	100/75	100/75
MPPT Voltage Range (Vdc)	70~500	100~500	100~500	100~500	100~500	100~500	100~500	100~500
Maximum Input Current (A)	18A					22A		
Max. Input Short-Circuit Current per MPPT	25A					30A		
Number of MPPT Trackers	1							
Strings per MPPT Tracker	1							

AC SIDE / OUTPUT PARAMETERS								
Nominal Output Power (W)	1000	1500	2200	3000	3600	4000	5000	6000
Maximum Output Power (W)	1100	1650	2420	3300	3960	4400	5500	6600
Nominal Output Voltage Range (V)	208, 220, 230, 240 / 180~270							
AC Grid Frequency Range (Hz)	50 Hz, 60 Hz (Auto-Selection) / 44~55 Hz; 54~65 Hz							
Maximum Output Current (A)	6	8	12	14.35	17.22	21	23	28
AC Connection (with PE)	Single-Phase							
Current Distortion (THDi)	<1.5%	<1.5%	<1.5%	<1.5%	<2.5%	<2.5%	<2.5%	<2.5%
Power Factor	~1 (Adjustable from 0.8 Leading to 0.8 Lagging)							

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SAFETY AND PROTECTION	
DC Reverse-Polarity Protection	Yes
Anti-Islanding / Overvoltage Protection	Yes
Short-Circuit Protection	Yes
Leakage Current Protection	Yes
Grid Monitoring / Ground Fault Monitoring	Yes
DC/AC Side SPD (Thermally Protected)	Yes

General Parameters		
Dimensions (L × W × H) (mm)	300 / 294 / 104	370 / 318.5 / 105.5
Weight (kg)	5	7
Embedded DC Switch	Optional	
Night Power Consumption (W)	< 0.2	
Isolation Type	Transformerless	
Degree of Protection	IP65 Compliant with IEC 60529	
Operating Temperature Range (°C)	-25 ~ +60	
Cooling Method	Smart Cooling	
Operating Altitude (m)	< 2000 m Without Power Derating	
Acoustic Noise Level (dB)	< 25	
Display	Graphic LCD	
Communication Interface	Standard WiFi, Optional RS485	



STAR
SERIES

ON GRID
SOLAR INVERTER
5KW -25KW
THREE-PHASE



Key Features



BIG LCD
DISPLAY



COMPACT &
EASY TO INSTALL



POWER
EXPORT LIMIT



WIFI/GPRS/LAN
COMMUNICATION
OPTIONAL



Patented
Cooling Design



Unique H6 Topology
Helps Prevent
Leakage Current



IP66
Protection



Built-in
DC Switch

Smarten STAR Series Three-Phase On-Grid Solar Inverter (5 kW-25 kW) Built for commercial and industrial solar applications, the Smarten STAR Series delivers maximum energy yield with up to 98.5% peak efficiency.

Advanced Efficiency: Transformerless design with dual MPPT trackers and a wide input voltage range of up to 850 V DC.

Enhanced Protection: Unique H6 topology helps prevent leakage current and includes a built-in DC breaker, SPDs, and an IP66-rated enclosure.

Smart Operation: Smart dual cooling system with LCD display and optional WiFi, GPRS, LAN, and RS485 communication.

Smart Conversion • Maximum Solar Performance



SMARTEN POWER SYSTEMS LIMITED

ON-GRID SOLAR INVERTER
5KW -25KW THREE-PHASE

TECHNICAL SPECIFICATIONS

Model	TP5KW	TP6KW	TP8KW	TP10KW	TP12KW	TP15KW	TP17KW	TP20KW	TP25KW
INPUT (DC)									
Maximum DC Power (W)	6500W	7500W	9500W	11.5KW	18KW	22.5KW	25.5KW	30KW	30KW
Maximum DC Voltage (Vdc)	1000 V DC								
Minimum Operating Voltage (Vdc)	160 V DC.						250 V DC		
MPPT Voltage Range (Vdc)	160–850 V DC						200–850 V DC		
Maximum Input Current per String (A)	18 A / 18 A						26 A / 26A	36 A / 26 A	
Maximum Input Short-Circuit Current per MPPT	25A/25A						34 A / 34 A	46 A / 34 A	
Number of MPPT Trackers	2								
Strings per MPPT Tracker	1						2		
OUTPUT (AC)									
Nominal AC Power (W)	5000	6000	8000	10KW	12KW	15KW	17KW	20KW	25KW
Maximum AC Apparent Power (VA)	6000	7000	8800	11KVA	13.2KVA	16.5KVA	18.7KVA	22.0KVA	27.5KVA
Maximum Output Current (A)	10	12	15	17	20	23	25	30	36
Nominal AC Output Voltage (V)	50/60 Hz, 400 V AC								
AC Output Voltage Range (V)	45–55 Hz; 280–490 V AC (Adjustable)								
Power Factor	Adjustable from 0.8 Leading to 0.8 Lagging								
Harmonics	< 5%								
Grid Connection	3P + N + PE								
EFFICIENCY									
Maximum Efficiency	98.2%	98.2%	98.3%	98.4%	98.4%	98.4%	98.5%	98.5%	98.5%
European Efficiency	97.7%	97.7%	97.8%	97.9%	97.9%	98.0%	98.1%	98.1%	98.2%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
SAFETY AND PROTECTION									
DC Reverse-Polarity Protection	Yes								
DC Circuit Breaker	Yes								
DC/AC Surge Protection Device (SPD)	Yes								
Leakage Current Protection	Yes								
Insulation Impedance Detection	Yes								
Residual Current Protection	Yes								
GENERAL PARAMETERS									
Dimensions (W × H × D) (mm)	480 × 476 × 157						520 × 510 × 160		
Weight (kg)	16						23		
Operating Temperature Range (°C)	–25 °C to +60 °C								
Degree of Protection	IP65								
Cooling Method	Smart Cooling								
Topology	Transformerless								
Display	LCD								
Relative Humidity	0–95% RH (Non-Condensing)								
Communication Interface	RS485/WiFi/GPRS								



SCAN TO CONNECT
WITH GLOBAL SALES





ULTRA

MPPT HYBRID
SOLAR PCU
5KVA to 12.5KVA



Key Features



HIGH PV INPUT



SMART BATTERY
MANAGEMENT



REMOTE MONITORING



DUAL SMART OUTPUT

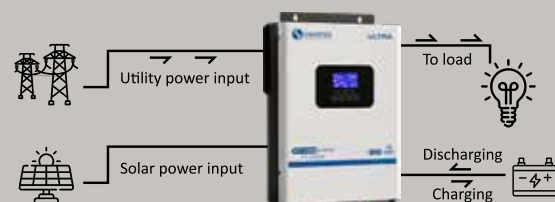


ON-GRID & OFF-GRID

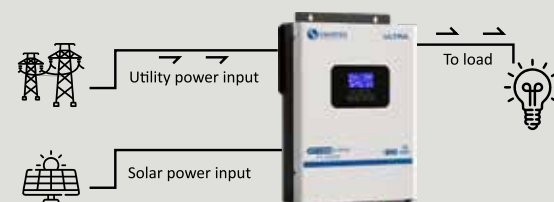


COMPREHENSIVE
PROTECTION

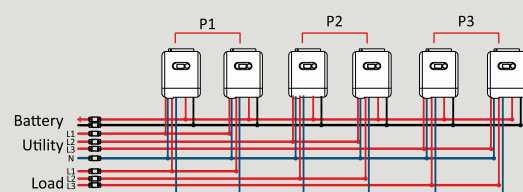
WITH BATTERY CONNECTED



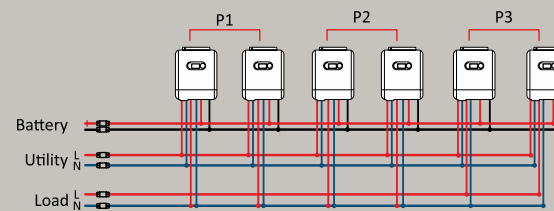
WITHOUT BATTERY CONNECTED



Three phase output using either
3 units (18kW) or max 6 units (36kW)



Single phase output up to 36kW using 6 units



SMARTEN POWER SYSTEMS LIMITED

ULTRA HYBRID PCU

5KVA/4000W to 12.5KVA/11000W

PRODUCT SPECIFICATIONS

MODEL NAME	5KVA/4000W	7.5KVA/6000W	10KVA/8000W	12.5KVA/11000W
AC INPUT				
AC Voltage	230VAC			
Voltage Range	170-280VAC (For Personal Computers), 90-280VAC (For Home Appliances)			
Frequency Range	50/60Hz (Auto Sensing)			
AC OUTPUT				
Surge Power	8000VA	12000VA	16000VA	22000VA
AC Voltage Regulation (Battery Mode)	230VAC +/- 5%			
Rated Frequency	50Hz / 60Hz			
Efficiency (Peak)	93%			
Transfer Time	10ms (For Personal Computer), 20ms (For Home Appliances)			
BATTERY				
Battery Voltage	24 VDC	48 VDC		
Floating Charge Voltage	27 VDC	54 VDC		
Overcharge Protection	33 VDC	63 VDC		
Battery Type	Lithium / Lead acid			
SOLAR CHARGER & AC CHARGER				
Maximum PV Array Open Voltage (V)	500 VDC			
Maximum PV Array Power	5000Wp	7000Wp	10KWp (5KW*2)	13KWp (6.5KW*2)
MPPT Voltage Range (V)	60-450 VDC			
Maximum Input Current	20A	27A	27A*2 (Max. 40A)	
MPPT Tracker / Strings	1		2	
Maximum Solar Charge Current	120A		120A	150A
Maximum AC Charge Current	100A		120A	150A
Maximum Charge Current	120A		120A	150A
PROTECTION & FEATURE				
AC Over Current	Yes			
AC Over Voltage	Yes			
AC Temperature Protection	Yes			
Smart Load Management	Yes			
On Grid	Yes			
Parallel Function	Yes (Optional)			
GENERAL PARAMETERS				
Operation Temperature	,-10°C to 50°C			
Relative Humidity	5% - 95% (Non-condensing)			
Attitude	(2000m Derating)			
Dimensions DxWxH (mm)	466x313x136.5		541*480*400	136*440* 540
Net Weight (Kg)	9.0	10	18.5	19.4
Display	Touch Buttons			
Interface	Standard; RS232, USB, CAN&RS485; Optional: WiFi, Bluetooth			
Safety Standard	EN/IEC62109-1, EN/IEC62109-2			





HELIO
MPPT SOLAR PCU

IN-BUILT
LITHIUM BATTERY
1500/12.8V | 2500/25.6V



Key Features


**GRID CHARGING
ENABLE / DISABLE OPTION**


**MULTIPLE
SOC SETTING**


**FASTER CHARGING,
MORE BACKUP**


**SUPPORTS SOLAR PANELS
UP TO 2500W***


**INBUILT 2560Wh*
LI-ION BATTERY**



Smarten Helio Solar PCU (with In-Built Lithium Battery) is a smart, compact, and reliable solar power backup solution designed for efficient and uninterrupted energy management.



With advanced MPPT technology, Helio maximizes solar power even in low light, ensuring faster charging and higher efficiency. Its in-built lithium battery delivers long life, quick charging, and zero maintenance in a sleek wall-mount design.



Helio provides pure sine wave output for the safe operation of all sensitive appliances. The smart LCD display shows real-time battery, load, and solar status for complete control.



Ideal for homes, shops, offices, schools, clinics, and small businesses, Helio delivers clean, silent, and dependable power every day.

• INBUILT 2560Wh LI-ION BATTERY* For 2500/25.6V model only



SMARTEN POWER SYSTEMS LIMITED

HELIO MPPT SOLAR PCU

1500/12.8V | 2500/25.6V

PRODUCT SPECIFICATIONS

MODEL NAME	1500/12.8V	2500/25.6V
MAINS MODE		
Mains AC Input Range (UPS Mode)	185VAC to 255VAC ± 10VAC	
Mains AC Low Cut/High Cut (UPS Mode)	175VAC/265VAC ± 10VAC	
Mains AC Low Cut/-High Cut Recovery (UPS Mode)	185VAC/255VAC±10VAC	
Mains AC Input Range (WUPS Mode)	110VAC to 285VAC ± 10VAC	
Mains AC Low Cut/High Cut (WUPS Mode)	90VAC/295VAC ± 10VAC	
Mains AC Low Cut/-High Cut Recovery (WUPS mode)	110VAC/285VAC ± 10VAC	
Input Frequency Range	40Hz to 60Hz	
BATTERY		
Battery Type	Li-Ion	
Li-Ion Battery Quantity	1 Number * 12.8V/100AH	1 Number * 25.6V/100AH
Battery Deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)	
Charging Current	20A+/-3A	
BACKUP MODE		
Output Voltage / Frequency	220VAC+/-10% , 50Hz+/-0.2Hz	
Output Waveform & THD	Pure Sine Wave, ≤ 5% THD	
Low Battery Warning	10.8V+/-0.2V Per Battery	21.6V+/-0.2V Per Battery
Low Battery Cut	10.4V+/-0.2V Per Battery	20.8V+/-0.2V Per Battery
Changeover Time (UPS Mode)	<10ms	
Changeover 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	AC 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 MCB will trip	
SOLAR CHARGE CONTROLLER		
Solar Charge Controller Type	MPPT TYPE	
Max Panel Wattage Can be Connected	1200W	2500W
Max PV Voltage	60V+/-3V	105V+/-3V
Max PV Current	55A ±3A	70A ±3A
Reverse PV Protection / Reverse Current Flow to PV	Yes provided, it will also display on LCD panel	
Current Sharing When Both PV and Grid Are Available	If PV power is insufficient to charge the battery, the system will charge the battery using both PV and the grid.	
Mode Options	1. Solar >> Grid >> Battery (In this condition, the priority is Solar, followed by 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 disconnected in this condition.)	
Mains Disconnect SOC (State of charge)**	65% of Battery Capacity*	65% of Battery Capacity*
	75% of Battery capacity*	75% of Battery Capacity*
	85% of Battery capacity*	85% of Battery Capacity*
	95%of Battery capacity*	95% of Battery Capacity*
Mains Disconnect SOC definition(State of charge)**	Mains will disconnect if battery will charge defined SOC level	
Mains Connect SOC (State of charge)**	20% of Battery Capacity	30% of Battery Capacity
	30% of Battery Capacity	40% of Battery Capacity
	40% of Battery Capacity	50% 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	
DISPLAYS & ALARMS		
LCD Status Display	Mains ON, I/P Voltage/ Frequency, Battery Voltage/ Charging/Charged, Charging Current, Backup Mode, UPS ON/OFF, Battry Voltage, Load %, O/P 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	Audible beep for Overload , Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown / MCB Trip	





HELIX

MPPT BASED
SOLAR PCU
1100/12V | 1250/12V



Key Features



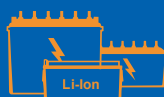
UPTO 1200W
PANEL SUPPORT



MPPT
TECHNOLOGY



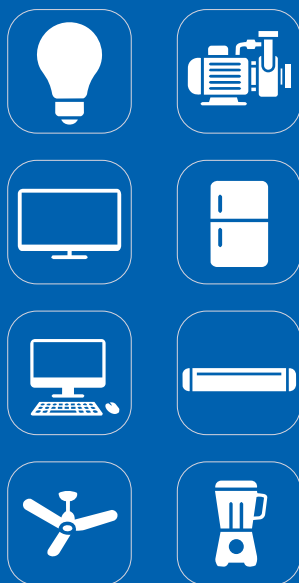
24V PANEL
COMPATIBLE



Li-Ion / LA / SMF/TT
COMPATIBLE



WALL MOUNT
DESIGN



Smarten MPPT Based Solar PCU is an advanced solar power solution designed to deliver efficient energy utilization, dependable backup and intelligent power management for homes and businesses. Its advanced MPPT technology maximizes available solar energy, ensuring higher efficiency and improved overall system performance.

The smart charging system intelligently manages power from both solar and grid sources to provide reliable and uninterrupted performance. Designed for diverse global power conditions, it features pure sine wave output, flexible solar priority settings and compatibility with Li-ion batteries for enhanced flexibility.

The system also offers comprehensive protection, a compact wall-mountable design, fast changeover and an intuitive graphical LCD interface. Together, these features provide seamless, convenient and efficient power management, making it an ideal choice for everyday residential and commercial energy needs.



SMARTEN POWER SYSTEMS LIMITED

HELIX MPPT BASED SOLAR PCU

1100/12V | 1250/12V

PRODUCT SPECIFICATIONS

MODEL NAME	1100/12V	1250/12V
MAINS MODE		
Mains AC Input Range (UPS Mode)	185VAC to 255VAC ± 10VAC	
Mains AC Low Cut/High Cut (UPS Mode)	175VAC/265VAC ± 10VAC	
Mains AC Low Cut/High Cut Recovery (UPS mode)	185VAC/255VAC±10VAC	
Mains AC Input Range (WUPS Mode)	110VAC to 285VAC ± 10VAC	
Mains AC Low Cut/High Cut (WUPS Mode)	90VAC/295VAC ± 10VAC	
Mains AC Low Cut/High Cut Recovery (WUPS mode)	110VAC/285VAC ± 10VAC	
Input frequency range	40Hz to 60Hz	
BATTERY		
Battery type	LA/TUB/ Li-Ion/SMF	
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)	
Adjustable Charging Current Setting (Front Panel)	5A-20A+/-3A *(20A Fixed for Li-Ion Battery)	
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	AC Fuse will blow	
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 be blown	
SOLAR CHARGE CONTROLLER		
Solar Charge Controller type	MPPT TYPE	
Max Panel wattage can be connected	600W	1200W
Max PV Voltage	60V+/-3V	
Max PV current	25A ±3A	50A ±3A
Reverse PV protection/ Reverse current flow to PV	Yes provided, it will also display on LCD panel	
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 & grid.	
Mode Option	1. Solar >> Grid >> Battery (In this condition first 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)	
Mains Disconnect SOC (State of charge)**	65%- of Battery capacity*	
	75%- of Battery capacity*	
	85%- of Battery capacity*	
	95%- of Battery capacity*	
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	
DISPLAYS & ALARMS		
LCD Status Display	Mains ON, I/P Voltage/ Frequency, Battery Voltage/ Charging/Charged, Charging Current, Backup Mode, UPS ON/OFF, Battry Voltage, Load %, O/P 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, Short Circuit, Overload, Battery Low, High Temperature, Back feed	
Buzzer	Audible beep for Overload , Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown	





Superb

MPPT BASED
SOLAR PCU
1100VA | 2500VA | 3.2KVA

LITHIUM-ION
BATTERY COMPATIBLE



Key Features



MPPT Based Advance
Technology PCU



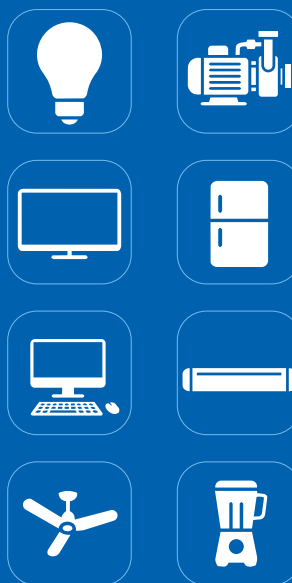
Compatible with
Lithium-Ion Batteries



Smart Charging
Even During Low
Voltage 90V*



Grid Charging Enable
/Disable Option for
Reduced Electricity Bill



Superb MPPT Solar PCU is an advanced solar hybrid inverter engineered for efficient and reliable power. Powered by MPPT technology and advanced DSP control, it maximizes solar energy utilization while ensuring uninterrupted power supply. Compatible with Lead Acid, Tubular, SMF, and Lithium-Ion (Li-Ion) batteries, it offers greater flexibility to suit a wide range of energy storage needs.

Designed with premium components and intelligent power management, Superb delivers enhanced energy efficiency and dependable performance across varying operating conditions. With an LCD display, 4 DOD levels, 10 ms changeover, independent battery charging, and an inbuilt UPS system, it provides greater flexibility and control.

Its robust design ensures consistent performance, efficient battery management, and reliable backup power. Engineered for long-term operation, Superb MPPT Solar PCU is an ideal solar power solution for residential and commercial applications across global markets.



SMARTEN POWER SYSTEMS LIMITED

SUPERB SOLAR PCU MPPT BASED

1100VA/12V TO 3.2KVA/24V

TECHNICAL SPECIFICATIONS

MODEL NAME	1100VA/12V	2500VA/24V	3.2KVA/24V
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	LA/Tubular/SMF/Li-Ion		
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)		
Adjustable Charging Current Setting (Front Panel)	5A-20A+/-3A	5A-25A+/-3A	
BACKUP MODE			
Output Voltage/ Frequency	220VAC+/-10% , 50Hz+/-0.2Hz		
Output Waveform & THD	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 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		
SOLAR CHARGE CONTROLLER			
Solar Charge Controller Type	MPPT TYPE		
Max Panel Wattage Can Be Connected	1200W	2400W	3000W
Max PV Voltage	60V+/-3V	103V +/-3V	105V±2V
Max PV Current	55A ±3A	50A ±3A	70A ±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.		
Mode Option	1. Solar >> Grid >> Battery (In this condition first 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 (Depth Of Discharge)	20%- if Batt. Volt. is 12.5V±0.2V*	20%- if Batt. Volt. is 25V±0.2V*	
	30%- if Batt. Volt. is 12V±0.2V*	30%- if Batt. Volt. is 24V±0.2V*	
	40%- if Batt. Volt. is 11.5V±0.2V*	40%- if Batt. Volt. is 23V±0.2V*	
	50%- if Batt. voltage is 11V±0.2V*	50%- if Batt. Volt. is 22V±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**	upto 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	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed		



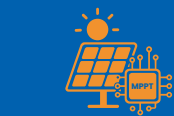


Superb

MPPT BASED
SOLAR PCU
5.5KVA TO 20KVA



Key Features



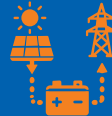
ADVANCED
MPPT TECHNOLOGY



PURE SINE
WAVE OUTPUT



MULTIPLE BATTERY
COMPATIBILITY



INTELLIGENT
POWER PRIORITY



COMPREHENSIVE
PROTECTION



Smarten's Superb Series Solar PCU is an advanced MPPT-based power solution designed for efficient solar utilization, reliable backup and intelligent energy management. Its wide operating voltage range and selectable Solar, Grid and Battery priority modes help optimize available solar energy, with intelligent PV and grid sharing when required.

Delivering pure sine wave output, the series supports LA, Tubular and SMF batteries, features deep-discharge battery recovery and offers less than 10 ms changeover time in UPS mode. An informative LCD interface provides real-time visibility of key operating parameters, while comprehensive built-in protections help ensure safe and dependable operation.

Engineered for residential, commercial and professional applications, the Superb Series provides flexible power management across varying energy requirements. Its intelligent charging and priority controls make it a reliable solution for maximizing solar utilization while maintaining continuous power availability.



SMARTEN POWER SYSTEMS LIMITED
SUPERB SOLAR PCU MPPT BASED
5.5KVA TO 20KVA

TECHNICAL SPECIFICATIONS

MODEL NAME	5.5KVA/48V	5.5KVA/96V	7.5KVA/96V	10KVA/120V	15KVA/180V	15KVA/240V	20KVA/240V
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	LA/Tubular/SMF						
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)						
Adjustable Charging Current Setting (Front Panel)	5A-15A +/-3A						
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 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 MCB will trip						
SOLAR CHARGE CONTROLLER							
Solar Charge Controller Type	MPPT TYPE						
Max Panel Wattage Can Be Connected	5500W	6500W	8000W	15000W		20KW	
Max PV Voltage	160V	250V	350V	450V	550V		
Max PV Current	70A	50A					
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.						
Mode Option	1. Solar >> Grid >> Battery (In this condition first 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 (Depth Of Discharge)	20%- if Batt. Volt. is 50V±0.2V*	20%- if Batt. Volt. is 100V±0.2V*	20%- if Batt. Volt. is 125V±0.2V*	Grid Reconnection can be set from 10.7V to 12.5 Per Battery .			
	20%- if Batt. Volt. is 48V±0.2V*	30%- if Batt. Volt. is 96V±0.2V*	30%- if Batt. Volt. is 120V±0.2V*				
	20%- if Batt. Volt. is 46V±0.2V*	40%- if Batt. Volt. is 92V±0.2V*	40%- if Batt. Volt. is 115V±0.2V*				
	20%- if Batt. Volt. is 44V±0.2V*	50%- if Batt. Volt. is 88V±0.2V*	50%- if Batt. Volt. is 110V±0.2V*				
Recommended Battery Capacity**	upto 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	MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed						
Buzzer	MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed						





Kranti+

BATTERY LESS
SOLAR PCU
5 KVA-10 KVA



Key Features



ADVANCE DSP
TECHNOLOGY



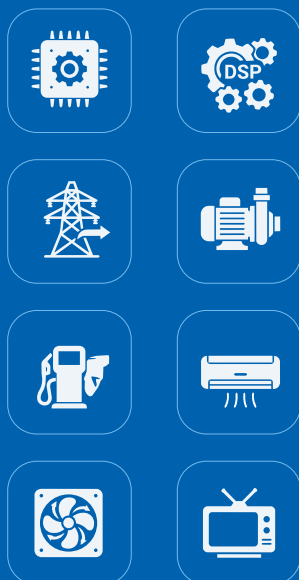
MAX PANEL
VOLTAGE RANGE:
VOC 400-750 V



BIG LCD
DISPLAY



NO BATTERY
REQUIREMENT



At Smarten, we are revolutionizing clean energy with high-efficiency, intelligent solar technologies designed for global adoption.

Our flagship Battery-Less Solar Power Conditioning Units (PCU) directly convert solar energy into reliable 220V AC utility power without requiring costly batteries eliminating up to one-third of traditional setup costs and recurring replacement fees.

Key Advantages:

- **Direct Solar Utility:** Converts solar energy instantly to power daily electrical loads.
- **Smart Hybrid Switching:** Automatically draws supplementary power from the grid during high-demand or low-sunlight periods with zero interruption.
- **Maximum ROI & Sustainability:** Cuts capital expenditure, eliminates battery maintenance, and reduces environmental waste.

Smarten delivers smarter, cost-effective, and eco-friendly power solutions engineered for a sustainable future.



SMARTEN POWER SYSTEMS LIMITED

BATTERY LESS SOLAR PCU
5KVA TO 10KVA

TECHNICAL SPECIFICATIONS

MODEL: KRANTI+	5KVA	8KVA	10KVA
Min. Solar Input Voltage	400V		
Max. Solar Input Voltage	750V		
Technology	Digital Processor Based High Efficiency Design		
Max. Load Wattage	4200 Watt*	6500 Watt*	8000 Watt*
Max. Output Current	20Amp. $\pm$ 3Amp.	30Amp. $\pm$ 3Amp.	37Amp. $\pm$ 3Amp.
Panel Install	5KW to 10KW	5KW to 20KW	5KW to 35KW
Output Voltage	220VAC $\pm$ 10%		
Low Solar Cut	300V		

PROTECTIONS

Low Solar Voltage	Yes Provided, It will show on display
High PV Voltage	Yes Provided, It will show on display
Reverse PV Protection	Yes Provided, System will not ON

DISPLAY PARAMETERS

Display Type	LCD Display
Display Parameters	Solar PV Voltage, Load%, Output Voltage, Solar Current, Overload, Short Circuit, Low Solar Please Reduce load

ENVIRONMENT

Operating Temperature	0°C to 40°C
Storage Temperature	0°C to 50°C
Operating Relative Humidity	90% Non-Condensing

*The load depends on the connected panel and weather conditions. There may be load fluctuations during morning and evening hours due to low solar power.

Note: If you want to run heavy load like (1.5 Ton AC, 2HP Water Pump) you need to connect > 8KW solar panel.



SCAN TO CONNECT
WITH GLOBAL SALES

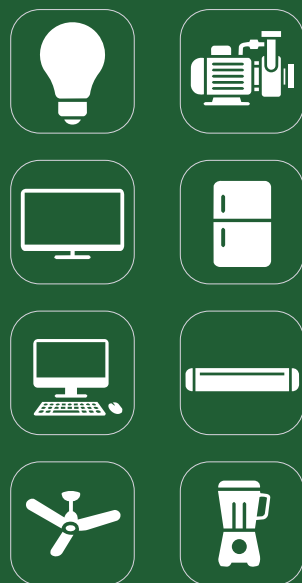




SAVER

SOLAR
HYBRID PCU
900VA/12V TO 3.5KVA/48V

Key Features



The Smarten SAVER Series is a next-generation Hybrid Solar PCU engineered to deliver reliable backup power while maximizing the use of clean solar energy. Designed for residential, commercial, and small business applications, the SAVER Series intelligently manages solar, grid, and battery power to ensure uninterrupted performance with reduced electricity consumption.

With advanced energy management technology, the system prioritizes solar power whenever available, automatically switching between multiple power sources for seamless operation. Its intelligent charging algorithm enhances battery life, while the high-efficiency solar charge controller ensures faster charging and optimum energy utilization.

Built to perform even in challenging power conditions, the SAVER Series offers dependable backup, lower operating costs, and long-term energy savings-making it the ideal choice for modern solar power systems worldwide.



SMARTEN POWER SYSTEMS LIMITED

SAVER SOLAR PCU
900VA/12V TO 3.5KVA/48V

PRODUCT 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/285VAC ± 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 Display 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 first 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	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed						





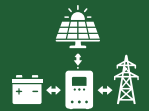
**SOLAR
HYBRID PCU**
5.5KVA/48V / TO 10KVA/120V



Key Features



**MAXIMUM
SOLAR UTILIZATION**



**INTELLIGENT HYBRID
OPERATION**
SOLAR + GRID + BATTERY



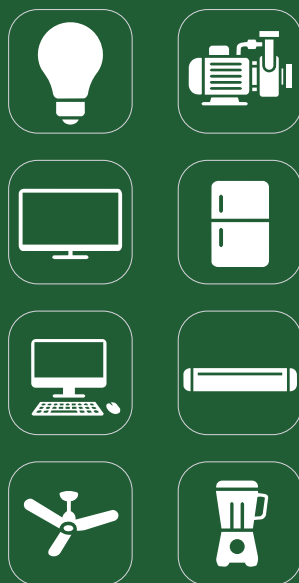
**HIGH-EFFICIENCY
SOLAR CHARGE CONTROLLER**



**SMART LCD DISPLAY
WITH REAL-TIME MONITORING**



**DEEP DISCHARGE
BATTERY RECOVERY**



SAVER SERIES

Advanced Hybrid Solar PCU

The Smarten SAVER Series is a high-performance Hybrid Solar PCU engineered for intelligent and efficient power management across solar, grid and battery sources.

Featuring an advanced MPPT Solar Charge Controller, SAVER maximizes solar energy utilization while intelligently managing available power sources to deliver reliable backup and optimized energy performance.

Designed for demanding residential, commercial and small-business applications, the SAVER Series combines intelligent hybrid operation, efficient solar charging, smart system monitoring and deep-discharge battery recovery in a robust, high-performance power solution. Engineered for smarter energy. Designed for dependable power.



SMARTEN POWER SYSTEMS LIMITED

SAVER SOLAR PCU

5.5KVA/48V / TO 10KVA/120V

PRODUCT SPECIFICATIONS SAVER SOLAR PCU (PWM BASED)

MODEL NAME	5.5KVA/48V	5.5KVA/96V	6KVA/72V	7.5KVA/96V	10KVA/120V
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	LA/Tubular/SMF				
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)				
Charging Current	15A +/-3A				
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 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 MCB will trip				
SOLAR CHARGE CONTROLLER					
Solar Charge Controller Type	PWM TYPE				
Max Panel wattage can be connected	5500W	6500W	4500W	6500W	8000W
Max PV Voltage	100V	230V	150V	230V	230V
Max PV current	70A	50A			
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.				
Mode Option	1. Solar >> Grid >> Battery 2. Solar >> Battery >> Grid 3. Grid >> Solar >> Battery		This function not available		
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 :	50V±0.2V*	This function not available			
DOD 30%, If Battery Voltage is :	48V+/-0.2V				
DOD 40%, If Battery Voltage is :	46V+/-0.2V				
DOD 50%, If Battery Voltage is :	44V+/-0.2V				
Battery Capacity**	upto 260AH				
DISPLAYS & ALARMS					
LCD Status Display	Mains ON, IP 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	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed				





PRIME+

MPPT SOLAR
CHARGE CONTROLLER
12V TO 120V/50 AMP



Key Features



30% MORE
EFFICIENT



GRID CONTROL FOR SAVING
THE ELECTRICITY BILL

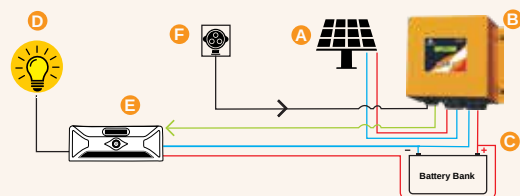


4 DOD LEVEL
SETTINGS



SMART AUTO DETECT
BATTERY FUNCTION

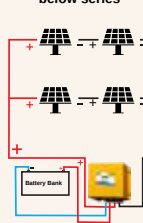
BLOCK DIAGRAM OF PRIME+ MPPT SOLAR PCU KIT



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

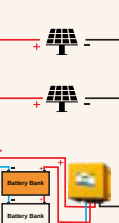
For 12V System

150W Solar Panel
will connect in
below series



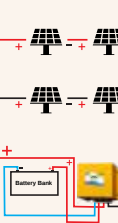
For 24V System

250W Solar Panel
will connect in
below series



For 24V System

250W Solar Panel
will connect in
below series



Transform your standard inverter into a high-efficiency solar system with our advanced MPPT converter. Designed for flexible installation, it features a convenient wall-mount option and uniquely connects a 24V solar panel directly to a single battery. Stay fully informed via the intuitive LCD screen, which displays real-time charging status, active power sources, and your total energy savings. For maximum safety, a premium built-in MCB completely shields your connected appliances from short circuits. The system also guarantees long-term reliability with robust environmental and electrical safeguards. Enjoy complete peace of mind with comprehensive protections against reverse solar polarity, extreme temperatures, battery overcharging, and deep discharge.



SMARTEN POWER SYSTEMS LIMITED

PRIME+/ PRIME MPPT BASED SOLAR CHARGE CONTROLLER
12V TO 120V/50AMP

TECHNICAL SPECIFICATIONS

		12-24 (Auto)		24-48 (Auto)					
MODEL		12V	24V	24V	48V	72V	96V	120V	180V
ELECTRICAL									
Battery Type		LA/Tubular/SMF							
Technology		Digital Processor Based High Efficiency Design							
Max. Battery Current Rating		50AMP.							
Max. PV Voltage Rating		60V±2V	85V±2V	100V±2V	120V±2V	200V±2V	250V±2V	350V±2V	450V±2V
High PV Voltage		>60V	>85V	>100V	>120V	>200V	>250V	>350V	>450V
Max. Solar Panel Wattage		up to 750W@12V Selection	up to 1500W@24V Selection	up to 1500W@24V Selection	up to 3KWp@48V selection	up to 5KWp	up to 6.5KWp	up to 8KWp	up to 12KWp
Battery Qty.12V 100-220AH		1	2	2	4	6	8	10	15
Boost Charging Voltage For Tubular And SMF Battery		14.5V±0.2V	29V±0.2V	29V±0.2V	58V±0.4V	87V±1V	116V±1V	145V±1V	217.5V±1V
Boost Charging Voltage For LA Battery		14V±0.2V	28V±0.2V	28V±0.2V	56V±0.4V	84V±1V	112V±1V	140V±1V	210V±1V
Bulk/ Absorption Voltage		14.8V±0.2V	29.6V±0.2V	29.6V±0.2V	59.2V±0.4V	88.8V±1V	118.4V±1V	148V±1V	222V±1V
DOD Level (Depth of Discharge)	20% - if battery voltage is	12.5V	25.0V±0.2V	25.0V±0.2V	50.0V±0.4V	DOD function not available in this segment			
	30% - if battery voltage is	12.0V	24.0V±0.2V	24.0V±0.2V	48.0V±0.4V				
	40% - if battery voltage is	11.5V	23.0V+±0.2V	23.0V+±0.2V	46.0V±0.4V				
	50% - if battery voltage is	11.0V	22.0V±0.2V	22.0V±0.2V	44.0V±0.4V				
Mains Connect if Solar Power Not Available		At any Stage of Battery Voltage					Mains Connect/Disconnect function is not available		
Mains Disconnect		If battery reaches boost level then after <10 minutes mains will be disconnect							
D.O.D (Depth of Discharge)		Mains will be connect when battery voltage reach at defined value of the battery voltage							
MPPT To PV Power Connection Time		<15 Sec.							
Peak Efficiency		>94%							
Mains AC Low Cut / High Cut (WUPS Mode)		90VAC/ 295 VAC ± 10VAC					This function Not Available .		
Mains AC Low Cut / High Cut Recovery (WUPS Mode)		110VAC / 285VAC ± 10VAC							
Input Frequency Range		40Hz to 60Hz							
Voltage / Frequency Output in Mains Mode		Same as input							
Panel Configuration (NTC)		375W 2P	250W 2S 3P/300W 5P	250W 2S 3P/300W 5P	250W 3S 4P / 330W 3S 3P	330W 4S 4P	330W 5S 4P	330W 6S 4P	330W 10S 4P
Panel Configuration VOC (NTC)		39.75V	74V/ 44V	74V/ 44V	111V/132V	180V	225V	270V	450V
PROTECTIONS									
Reverse Battery , Reverse PV Protection/ Current Flow to PV , High PV Voltage , Over Current , Thermal Protection		Yes							
MCB		MCB ensures your UPS and connected loads stay protected from short circuits							
DISPLAY PARAMETERS									
LCD Display Messages		Welcome, Smarten Website Address, System Capacity, Mains available, Battery Priority, PV Current, Battery Current, PV Voltage, Battery Voltage							
SCC Fault/Protection Status		Reverse PV/High PV voltage /High Temp.							



SCAN TO CONNECT
WITH GLOBAL SALES





TEJAS

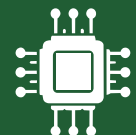
DC MPPT SOLAR PCU
12V /25AMP



Key Features



ADVANCED MPPT
TECHNOLOGY



SMART DIGITAL
CONTROL



LCD STATUS
DISPLAY



WALL MOUNT
DESIGN



MULTI-LEVEL
PROTECTION



Tejas 12V/25A DC Solar MPPT PCU is a compact and intelligent solar power solution designed to deliver efficient battery charging and reliable DC power for off-grid and backup power applications. Equipped with advanced MPPT technology, it maximizes solar energy harvesting, improves charging efficiency, and helps extend battery life under varying solar conditions.

Designed with intelligent digital control, comprehensive protection features, an easy-to-read LCD display, and a compact wall-mounted enclosure, the TEJAS MPPT PCU ensures safe, dependable operation and simple installation. Compatible with 24V solar PV modules and a 12V battery system, it is an ideal choice for residential, rural, and commercial applications across global markets.



SMARTEN POWER SYSTEMS LIMITED

MPPT SOLAR CHARGE CONTROLLER
12V /25AMP DC MPPT SOLAR PCU

TECHNICAL SPECIFICATION

MODEL: 12V/25AMP DC MPPT SOLAR PCU

Battery Volt	12V
Battery Type	Lead Acid/TUB/SMF
Technology	Digital Processor Based High Efficiency Design
Max. Battery charging Current	25 Amp.
Charge controller Rating	25 Amp.
Max. Solar VOC	25V
Min. Solar VOC	20V
PV High Cut	>25V
PV High Cut Recovery	22V
Max. Panel Install	500W
Low Battery Cut	10.6V
Battery Boost Voltage LA Mode	14.0V
Battery Boost Voltage Tub Mode	14.5V
Battery Float Voltage	13.7V
Battery High cut	15V
DC load Rating	15 Amp.
Mobile Charging	500 milli ampere
DC load ON/OFF	By Power Switch
MPPT To PV Power Connection Time	15 Sec.
Peak Efficiency	>94%
SCC Type	MPPT

PROTECTIONS

Battery Low	Yes Provided, It Will show on display
High PV voltage	
Reverse PV Protection	
Reverse Current Flow to PV	Yes Provided
Reverse Battery Protection	System will not turn ON
Load short circuit protections	Yes provided it will show on display
Load overload Protection	If the DC load exceeds 15 A, the system will display a warning. After 3 retries, the load will be shut down.

DISPLAY PARAMETERS

Display Type	LCD Display
Display Parameters	Reverse PV, High PV Voltage, High Temperature, DC Load Overload/Short Circuit, Battery Voltage/Current, PV Voltage/Current, Low Battery, DC Load Voltage/Current, Solar Power Available/Not Available.

SAFETY

HV Test Input/ Output to Earth	Leakage current <5 mA when 1.5KV Applied for 1 Min.
IR Test Input/ Output to Earth	<5MΩ between @500V DC

ENVIRONMENT

Operating Temperature	0°C To 40°C
Storage Temperature	0°C To 50°C
Operating Relative Humidity	90% Non-Condensing

WEIGHT AND DIMENSIONS

Dimensions in mm (LxWxH)	310x310x180
Weight (Kg)	3.2





SAVIOR

PWM BASED SOLAR
CHARGE CONTROLLER
12V/25AMP TO 120V/50AMP



LCD DISPLAY FOR
EASY UPDATES



SMART AUTO-DETECT
BATTERY FUNCTION*



CONVERT NORMAL INVERTER
TO SOLAR INVERTER

Don't replace your current setup, upgrade it. The Smarten Savior is the ultimate bridging device, saving you from the high costs of buying a dedicated solar inverter when transitioning to clean energy.

How It Works:

Simply install Smarten's top-quality solar panels and link them to your existing UPS via the Smarten Savior.



The SAVIOR PWM Solar Charge Controller seamlessly transforms standard inverters into high-efficiency solar setups, offering broad compatibility with 12V to 120V systems and multiple battery types.

Operating at over 90% peak efficiency, it maximizes solar energy utilization.

It ensures long-lasting system protection and user convenience through world-class safety mechanisms, customizable battery discharge settings, and an intuitive real-time LCD display.

• This function available in 12-24V & 24-48V model.



SMARTEN POWER SYSTEMS LIMITED
PWM BASED SOLAR CHARGE CONTROLLER
12V/25AMP TO 120V/50AMP

TECHNICAL SPECIFICATION

MODELS	12V	12V-24V (Auto)		24-48V (Auto)		72V	96V	120V
		12V	24V	24V	48V			
Battery Type	LA/Tubular/SMF							
Technology	Digital Processor Based High Efficiency Design							
Max. PV Current Rating	25 AMP	70 AMP		70 AMP		50 AMP		
Max. PV Voltage Rating	25V	55V		55V	100V	150V	205V	230V
Max. Panel Wattage	500 Watt	1000 Watt @12V selection	2400 Watt@24 V selection	2400 Watt@24V selection	5000 Watt@48V selection	5000 Watt	6500 Watt	8500 Watt
Float Charging Voltage	13.7+/-0.2V	13.7+/-0.2V	27.4+/-0.2V	27.4+/-0.2V	54.8+/-0.4V	82.2+/-1V	109.6+/-1V	137+/-1V
Boost Charging Voltage For Tubular And SMF Battery	14.5+/-0.2V	14.5+/-0.2V	29+/-0.2V	29+/-0.2V	58+/-0.4V	87+/-1V	116+/-1V	145+/-1V
Boost Charging Voltage For LA Battery	14+/-0.2V	14+/-0.2V	28+/-0.2V	28+/-0.2V	56+/-0.4V	84+/-1V	112+/-1V	140+/-1V
Bulk/Absorption Voltage	14.8+/-0.2V	14.8+/-0.2V	29.6+/-0.2V	29.6+/-0.2V	59.2+/-0.4V	88.8+/-1V	118.4+/-1V	148+/-1V
Solar Charge Controller To PV Power Connection Time	< 15 Sec.							
Peak Efficiency	>90%							
SCC Type	PWM (Pulse Width 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



SCAN TO CONNECT
WITH GLOBAL SALES





SAVIOR+

PWM BASED SOLAR CHARGE CONTROLLER
12V-24V (AUTO) & 24-48V (AUTO)



>90% PEAK EFFICIENCY



SMART MAINS CONTROL FOR ENERGY SAVINGS



ADVANCED SYSTEM PROTECTION



SMART AUTO DETECT BATTERY FUNCTION*

How It Works

Simply connect your solar panels and existing inverter through SAVIOR+. With intelligent battery charging, configurable mains connection levels, real-time system monitoring, and comprehensive protection features, SAVIOR+ delivers a smarter, safer, and more efficient solar power solution.



SAVIOR+ — Smart PWM Solar Charge Controller

Transform your conventional inverter into a smarter, more efficient solar power system with SAVIOR+. Supporting 12V, 24V, and 48V battery systems, it is compatible with LA, Tubular, and SMF batteries for versatile residential and backup applications.

With >90% peak efficiency, intelligent multi-stage charging, real-time monitoring, and advanced protection, SAVIOR+ maximizes solar energy utilization while enhancing battery performance and overall system reliability.

• This function available in 12-24V & 24-48V model.



SMARTEN POWER SYSTEMS LIMITED

Savior+ PWM BASED SOLAR CHARGE CONTROLLER
12V-24V (AUTO) & 24-48V (AUTO)

TECHNICAL SPECIFICATION

	12V-24V (Auto)		24-48V (Auto)	
MODEL	12V	24V	24V	48V
Battery Type	LA/Tubular/SMF			
Technology	Digital Processor Based High Efficiency Design			
Max. PV Current Rating	50A			
Max. PV Voltage Rating	25V ±3V	55V ± 3V	55V ± 3V	100V ± 3V
Max. Panel Wattage	1000 Watt @12V selection	1500 Watt@24 V selection	1500 Watt@24V selection	3000 Watt@48V selection
Float Charging Voltage	13.7+/-0.2V	27.4+/-0.2V	27.4+/-0.2V	54.8+/-0.4V
Boost Charging Voltage For Tubular And SMF Battery	14.5+/-0.2V	29+/-0.2V	29+/-0.2V	58+/-0.4V
Boost Charging Voltage For LA Battery	14+/-0.2V	28+/-0.2V	28+/-0.2V	56+/-0.4V
Bulk/Absorption Voltage	14.8+/-0.2V	29.6+/-0.2V	29.6+/-0.2V	59.2+/-0.4V
Low Battery Cut	10.5V+/-0.2V	21V+/-0.2V	21V+/-0.2V	42V+/-0.4V
MAINS RECOVERY	11.8V+/-0.2V	23.6V+/-0.2V	23.6V+/-0.2V	47.2V+/-0.4V
MAINS DISCONNECT	14.5V+/-0.2V	29V+/-0.2V	29V+/-0.2V	58V+/-0.4V
Solar Charge Controller To PV Power Connection Time	< 15 Sec.			
Peak Efficiency	>90%			
SCC Type	PWM (Pulse Width Modulation)			
Mains AC low cut / High Cut WUPS mode	90VAC/295V ± 10VAC			
Mains AC Low cut / High Cut recovery WUPS mode	110VAC/285V ± 10VAC			
Input Frequency Range	40Hz to 60Hz			
Voltage / Frequency Output in Mains Mode	Same as input			
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)			
AC MCB	MCB ensures your UPS and connected loads stay protected from short circuits			
MAINS CONNECT	20%- if Battery voltage is 12.5V	20%- if Battery voltage is 25.0V	20%- if Battery voltage is 25.0V	20%- if Battery voltage is 50.0V
	30%- if Battery voltage is 12.0V	30%- if Battery voltage is 24.0V	30%- if Battery voltage is 24.0V	30%- if Battery voltage is 48.0V
	40%- if Battery voltage is 11.5V	40%- if Battery voltage is 23.0V	40%- if Battery voltage is 23.0V	40%- if Battery voltage is 46.0V
	50%- if Battery voltage is 11.0V	50%- if Battery voltage is 22.0V	50%- if Battery voltage is 22.0V	50%- if Battery voltage is 44.0V
DISPLAY PARAMETERS				
Display Messages	Welcome, Smarten Website Address, System Capacity,Mains Available,Battery Priority			
SCC Fault/Protection Status	Reverse PV/High PV voltage / High Temp.			
ENVIRONMENT				
Operating Temperature	Same as input			
Storage Temperature	0°C To 50°C			
Operating Relative Humidity	90% Non-Condensing			



SCAN TO CONNECT WITH GLOBAL SALES



www.smartenpowersystems.com





Lithium-Ion Battery

12.8V-360V (100-400Ah)



Key Features



The Smarten Energiq Lithium-Ion Battery delivers "Power with Intelligence," offering a robust and eco-friendly energy storage solution. Available in 12.8V, 25.6V, and 51.2V configurations, these 100Ah powerhouses are designed to provide highly efficient and reliable power for your diverse energy needs.

Built to go the extra mile, the Energiq series features active cell balancing, ultra-low self-discharge, and a remarkably long life cycle. Select models also include Bluetooth connectivity, allowing you to easily monitor your system's performance and ensure optimal energy management.

Safety and durability are at the core of its design, featuring comprehensive built-in protections against over-current, short circuits, and voltage fluctuations. Step into the future of smart power storage with a battery that guarantees safe, superior, and sustainable performance.



SMARTEN POWER SYSTEMS LIMITED

LITHIUM-ION BATTERY
12.8V-360V (100-400Ah)

TECHNICAL SPECIFICATION

Parameters	Specified Value		
	SMARTEN 12.8V - 100Ah	SMARTEN 25.6V - 100Ah	SMARTEN 51.2V - 100Ah
Battery Capacity	100Ah		
Battery Nominal Voltage	12.8V± 0.2V	25.6V ± 0.2V	51.2V ± 0.2V
Battery High cut Voltage	14.4V± 0.2V	28.8V ± 0.2V	57.6V ± 0.2V
Battery Low Cut Voltage	10.4V± 0.2V	20.8V ± 0.2V	41.5V ± 0.2V
Standard Charging Current	50Amp. ± 0.5Amp.		
Allowed Maximum Charging Current	70Amp. ± 1.0Amp.		
Allowed Maximum Discharging Current	80Amp. ± 1.0Amp.		
Standard Charge	CV-CC		
Overcurrent Protection	150Amp-60Sec		
Battery Cell	4S	8S	16S
Over Voltage Protection (OVP)	3.65V ± 25mV per cell		
Over Voltage Protection Release (OVPR)	3.55V ± 50mV per cell		
Under Voltage Protection (UVP)	2.60V ± 80mV per cell		
Under Voltage Protection Release (UVPR)	2.90V ± 100mV per cell		
Short Circuit Current Protection	660A		
Operating Temperature	0°C to 60°C		

*Selected models only



SCAN TO CONNECT
WITH GLOBAL SALES





NOVA | BRAVO

TALL TUBULAR
BATTERY
UP TO 260AH (C20)



Key Features



TOUGH DESIGN FOR
LONG LIFE



CONSISTENT
OUTPUT



ULTRA-LOW MAINTENANCE
LONGER REFILLING TIME



CERAMIC VENT PLUGS FOR
LOW WATER LOSS

Sr.No.	Volts	Capacity C20	Maximum Overall Dimensions (mm)		
			Length	Width	Height
1.	12	120 AH	503	193	412
2.	12	160 AH	503	193	412
3.	12	200 AH	503	193	412
4.	12	220 AH	503	193	412
5.	12	240 AH	503	193	412
6.	12	260 AH	503	193	412

Smarten BRAVO and NOVA Tall Tubular Batteries are engineered with advanced tubular technology to deliver reliable backup power, long service life, and consistent performance. Manufactured using premium-grade raw materials in a modern production facility, they are built to meet the highest quality standards.

Designed for residential, commercial, and solar energy applications, these batteries provide dependable power in a wide range of operating conditions. Their robust construction, high efficiency, and durable performance make them an ideal energy storage solution for global markets.



SAVER | Shine

TALL TUBULAR
BATTERY
UP TO 240AH (C10)



Key Features



STEADY DEEP CYCLE
PERFORMANCE



CERAMIC VENT PLUGS FOR
LOW WATER LOSS



COMPATIBLE WITH
SOLAR PANELS



TOUGH DESIGN FOR
LONG LIFE



WORKS SEAMLESS UNDER
PSOC CONDITIONS

S. No.	Volts	Capacity @C10	Dimensions (H x W x L) mm
1.	12	100 AH	503 x 193 x 412
2.	12	150 AH	503 x 193 x 412
3.	12	200 AH	503 x 193 x 412
4.	12	220 AH	503 x 193 x 412
5.	12	240 AH	503 x 193 x 412

Powered by advanced Hi-Power Selenium technology, Smarten Saver and Shine batteries provide highly durable, low-maintenance energy storage with a remarkably long cycle life. They are completely solar-compatible, protecting your investment by ensuring you won't need a replacement battery when you decide to switch to renewable energy.

Available in capacities up to 240AH, these robust batteries feature superior high-rate discharge capabilities to easily handle heavy electrical loads. The programmable Saver series adapts seamlessly to diverse global applications, while a built-in level indicator makes routine maintenance completely effortless.





VRLA/SMF BATTERY

7.5AH TO 200AH

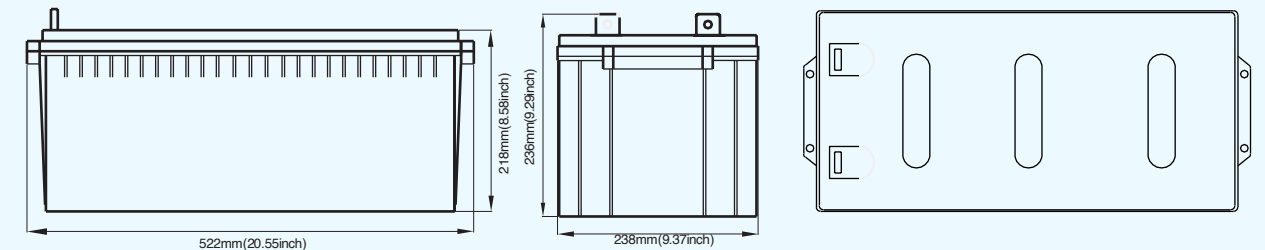


Key Features

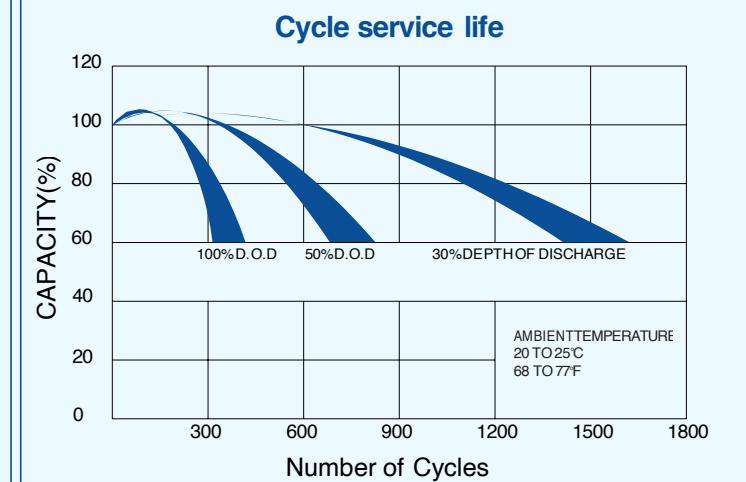
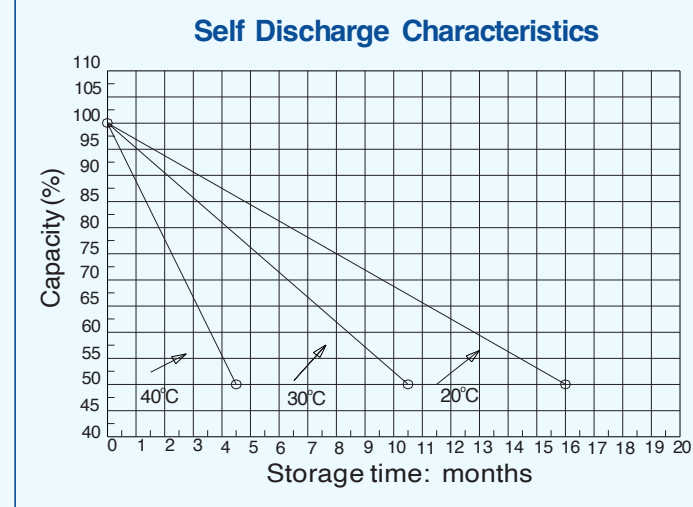
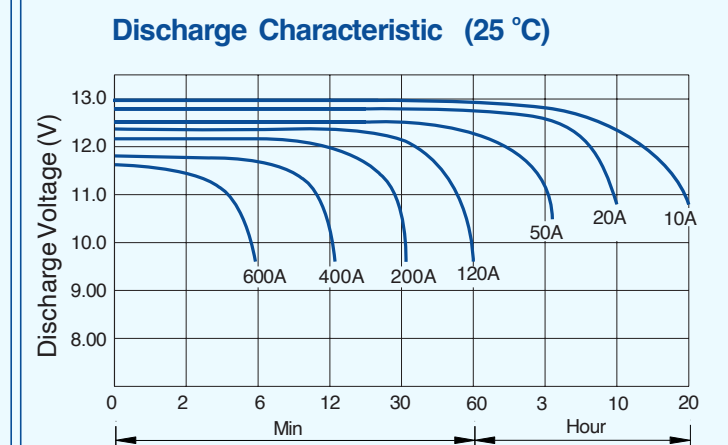
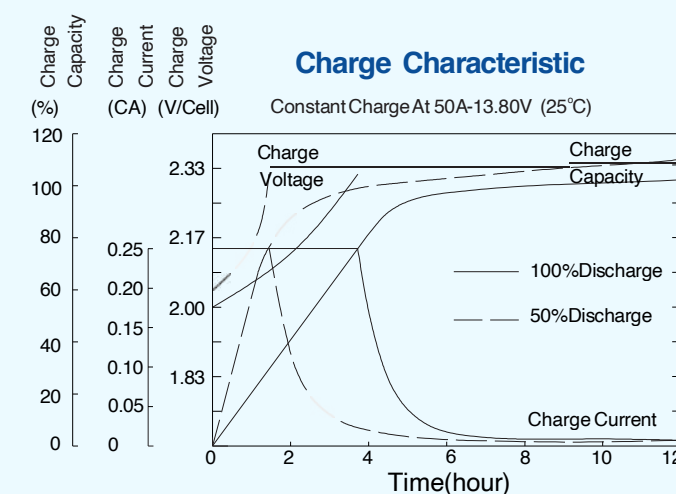


Smarten VRLA/SMF Batteries (7.5Ah–200Ah) are engineered with advanced AGM (Absorbent Glass Mat) technology to deliver dependable, maintenance-free power for a wide range of standby and cyclic applications. Manufactured using high-purity lead-calcium alloy and enclosed in a rugged ABS casing, these batteries provide excellent reliability, long service life, and consistent performance in diverse operating environments.

Designed for UPS systems, telecom, security, emergency lighting, medical equipment, renewable energy, and backup power applications, the Smarten VRLA/SMF range features a fully sealed, leak-proof construction with low self-discharge and high-rate discharge capability. Available in capacities from 7.5Ah to 200Ah, it is the ideal power solution for residential, commercial, and industrial applications worldwide.



Battery Model	SP 12-200			
Designed Cycle Life	> 350 cycles @ -0.5CA to 9.6V			
Capacity(25°C)	20HR(10.1A, 1.75V)	10HR(20A, 1.75V)	5HR(37A, 1.75V)	1HR(120A, 1.75V)
	202Ah	200Ah	185Ah	120Ah
Dimensions	Length	Width	Height	Total Height
	522mm(20.55inch)	238mm(9.37inch)	218mm(8.58inch)	236mm(9.29inch)
Approx. Weight	61Kg (134.2 lbs)			
Internal Resistance	Full charged at 25°C : 0.0038 Ohm			
Self Discharge	Self discharge < 3% per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.4-14.8V(-30mV/°C), max. Current: 50A		13.6-13.8(-20mV/°C)	





EV SCOOTER CHARGER
72V / 10A | 72V / 3.3A
60V / 4A | 48V / 5A



Key Features



INTELLIGENT MULTI-STAGE
CHARGING TECHNOLOGY



INTEGRATED BATTERY
MANAGEMENT SYSTEM (BMS)



REAL-TIME STATUS VIA
LED INDICATORS



QUICK PLUG & PLAY EU
STANDARD AC CONNECTION

The Smarten EV Scooter Charger is designed to deliver safe, efficient, and reliable charging for electric scooters. Available in 72V / 10A, 72V / 3.3A, 60V / 4A, and 48V / 5A variants, it provides the flexibility to match different battery configurations and charging requirements.

Built with intelligent multi-stage charging technology, the charger ensures efficient power delivery while helping maintain battery health and performance. Integrated protection features safeguard against short circuits, over-temperature, reverse battery connection, and other electrical conditions, providing dependable operation during every charging cycle.

Designed for everyday convenience, the Smarten EV Scooter Charger features clear LED status indicators for easy monitoring and a compact, user-friendly design with a standard EU connection. With reliable performance, efficient charging, and built-in safety protection, it is a smart charging solution for modern electric scooters.



SMARTEN POWER SYSTEMS LIMITED

EV SCOOTER CHARGER
72V / 10A | 72V / 3.3A | 60V / 4A | 48V / 5A

TECHNICAL SPECIFICATIONS

PRODUCT NAME				
CHARGER RATING	72V/10A	72V/3.3A	60V/4A	48V/5A
Battery Pack	72V, Lithium	72V, Lead Acid	60V, Lead Acid	48V, Lead Acid
Nominal Input Voltage	230V			
Nominal Input Current (RMS)	3.5A	2.55A ± 15%		
Input Operation Voltage	180-300V	125-300V		
Max. Input Power	910W	320W ± 10%		
Input Frequency Range	50-60Hz			
Battery Type	Li-Ion	Lead Acid/VRLA		
DC Output Voltage Range	60V to 84V	63V to 87V	52.5V to 72.5V	42V to 58V
Battery Quantity Required	72V Li-Ion Battery Pack	6	5	4
Float Charging Voltage	84V ± 0.5V	81.6V ± 0.5V	68.0V ± 0.5V	54.4V ± 0.5V
Boost Charging Voltage	NA	87.0V ± 0.5V	72.5V ± 0.5V	58V ± 0.5V
Battery Charging Current	10A ± 0.5A	3.3A ± 0.3A	4A ± 0.3A	5A ± 0.3A
PROTECTIONS				
Short Circuit Protection	Yes, Provided			
Over Temperature	Yes provided, if Mosfet heat sink temperature goes above 110°C System will decrease the charging current			
Reverse Battery	Red LED will glow			
DISPLAY PARAMETERS				
LED	Charging LED, Charged LED, Reverse Battery LED, Battery connected			
SAFETY				
HV Test Input to Output	Leakage current <5mA when 3.75kV applied for 1 min			
ENVIRONMENT				
Operating Temperature	0°C to 50°C			
Storage Temperature	0°C to 50°C			
Operating Relative Humidity	95% Non-Condensing			



SCAN TO CONNECT
WITH GLOBAL SALES





SOLAR PANEL

DCR & NON-DCR BIFACIAL
TOPCon | MONOCRYSTALLINE



Key Features

Up to **24.1%**
MODULE EFFICIENCY

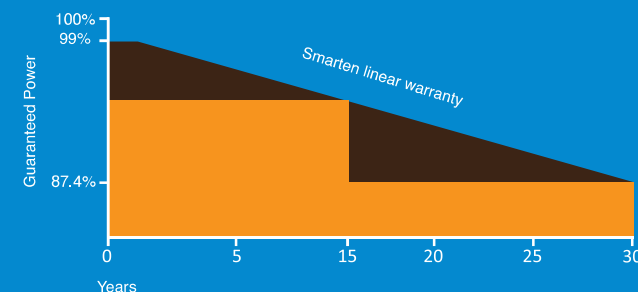
660W
HIGHEST POWER OUTPUT

1.00% FIRST
YEAR POWER DEGRADATION

PRODUCT ADVANTAGES

- 16BB HALF-CUT CELL TECHNOLOGY**
New circuit design, lower internal current, lower Rs loss.
Ga-doped wafer, attenuation <1% (1st year) / ≤0.40% (Linear)
- SIGNIFICANTLY LOWER RISK OF HOT SPOT**
Special circuit design with much lower hot spot temperature
- LOWER LCOE**
2% more power generation, lower LCOE
- EXCELLENT ANTI-PID PERFORMANCE**
2 times of industry standard Anti-PID test by TUV SUD
- IP68 JUNCTION BOX**
High waterproof level

PERFORMANCE WARRANTY



SMARTEN POWER SYSTEMS LIMITED

DCR & NON-DCR | BIFACIAL TOPCon MONOCRYSTALLINE
640-660W

ELECTRICAL DATA (STC)

	640	645	650	655	660
Maximum Power (Pmax)	640	645	650	655	660
Optimum Operating Voltage (Vmp)	40.60	40.80	41.00	41.20	41.40
Optimum Operating Current (Imp)	15.52	15.57	15.61	15.66	15.71
Open Circuit Voltage (Voc)	48.90	49.10	49.30	49.52	49.77
Short Circuit Current (Isc)	16.38	16.44	16.50	16.55	16.59
Module Efficiency η_m (%)	23.3	23.5	23.7	23.9	24.1

STC: Irradiance 1000W/m², module temperature 25°C, AM=1.5; *Measuring tolerance: ±3%

ELECTRICAL DATA (BNPI)

	698	704	709	715	721
Maximum Power (Pmax)	698	704	709	715	721
Optimum Operating Voltage (Vmp)	40.60	40.80	41.00	41.20	41.40
Optimum Operating Current (Imp)	17.20	17.25	17.30	17.35	17.41
Open Circuit Voltage (Voc)	48.90	49.10	49.30	49.52	49.77
Short Circuit Current (Isc)	18.15	18.22	18.28	18.34	18.38

BNPI: Irradiance 1000W/m², module temperature 25°C, backside irradiance 135W/m²

ELECTRICAL DATA (NMOT)

	481	485	489	493	497
Maximum Power (Pmax)	481	485	489	493	497
Optimum Operating Voltage (Vmp)	38.30	38.50	38.70	38.90	39.10
Optimum Operating Current (Imp)	12.46	12.60	12.64	12.68	12.72
Open Circuit Voltage (Voc)	46.50	46.70	46.90	47.10	47.30
Short Circuit Current (Isc)	13.20	13.25	13.30	13.35	13.39

NMOT: Irradiance 800W/m², module temperature 20°C, AM=1.5, wind speed 1m/s

MECHANICAL DATA

Cell type	N-Type TOPCon Half-Cut Cells, 132 (6*22)
Module Dimensions	2382x1134x30 mm
Weight	34.0 kg
Front Glass	2.0 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EPE + EVA
Back Glass	2.0 mm, Heat Strengthened Glass (White Grid)
Frame	30mm Anodized Aluminium Alloy
Junction Box	IP 68 rated
Cables	Positive 350mm, negative 280mm or customized length

*Please refer to regional datasheet for specified connector.

TEMPERATURE / APPLICATION CONDITIONS

NMOT (Nominal Module Operating Temperature)	42°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.29%/°C
Temperature Coefficient of V _{OC}	-0.25%/°C
Temperature Coefficient of I _{SC}	+0.046%/°C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

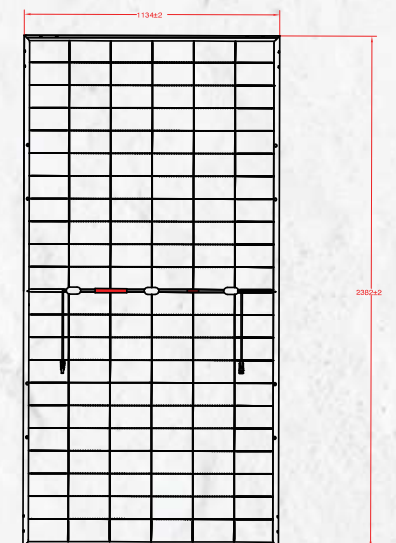
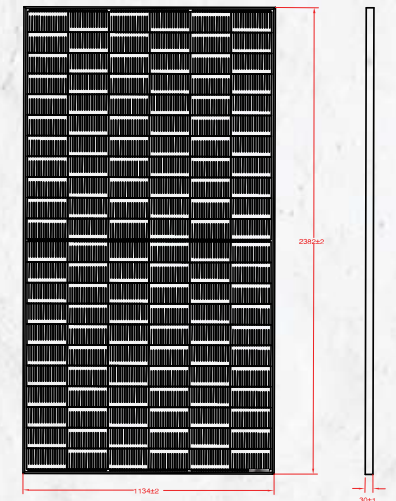
APPLICATION CONDITIONS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	30A
Bifaciality coefficient	$\phi Voc: 98 \pm 10\%$, $\phi Isc: 80 \pm 10\%$, $\phi Pmax: 80 \pm 10\%$

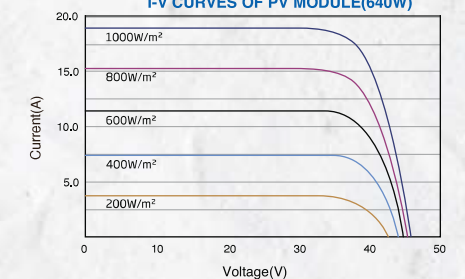
PACKAGING CONFIGURATION

Modules per box	37 pieces
Modules per 40' container	740 pieces

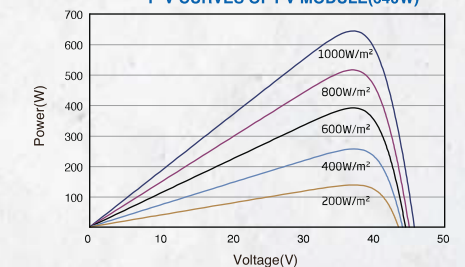
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE(640W)



P-V CURVES OF PV MODULE(640W)





ULTRA ECO

TRANSFORMER BASED
HYBRID PCU SINGLE PHASE
1 KVA - 50 KVA



Key Features



SCALABLE
POWER



MAXIMUM
EFFICIENCY



SMART
MONITORING



ULTIMATE
VERSATILITY



ADVANCED
PROTECTION

The ULTRA ECO Single Phase Transformer-Based Hybrid PCU is engineered to deliver reliable, efficient, and uninterrupted power for homes, small businesses, commercial facilities, and off-grid applications. By intelligently integrating solar energy, battery storage, and grid power, it ensures maximum energy utilization while reducing dependence on conventional electricity.

Built with a robust transformer-based design, ULTRA ECO provides superior protection against voltage fluctuations and demanding power conditions, ensuring long-term durability and dependable performance. Featuring advanced MPPT technology, over 93% system efficiency, and Wi-Fi-enabled remote monitoring, it offers optimized solar harvesting, intelligent energy management, and minimal maintenance.

Designed to meet international standards, the ULTRA ECO Single Phase PCU is the ideal choice for reliable backup power and sustainable energy solutions across global residential and light commercial applications.



SMARTEN POWER SYSTEMS LIMITED

TRANSFORMER BASED HYBRID PCU SINGLE PHASE
1 KVA - 50 KVA

TECHNICAL SPECIFICATIONS - SINGLE PHASE

INVERTER RATING (KVA)		1KVA	2KVA	3KVA	5KVA	5KVA	7.5KVA	10KVA	15KVA	20KVA	25KVA	30KVA	40KVA	50KVA
A. SOLAR CHARGE CONTROLLER (SCC)														
1	Charger Type & Topology	Buck Type MPPT												
2	PV Total Nominal Capacity (KVA)	1KW	2KW	3KW	5KW	5KW	7.5KW	10KW	15KW	20KW	25KW	30KW	40KW	50KW
3	No. of MPPT Channels	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Per Channel PV Capacity (w/Nominal Peak)	1KW/1.1KW	2KW/2.2KW	3KW/3.3KW	5KW/5.5KW	5KW/5.5KW	7.5KW/8.2KW	10KW/11KW	15KW/16.5KW	20KW/22KW	25KW/27.5KW	30KW/33KW	40KW/44KW	50KW/55KW
5	Max. open Circuit PV Volts (Voc)	240	240	240	240	300	300	400	700	700	700	700	700	700
6	MPPT Voltage Range (Volts)	70-240	70-240	70-240	70-240	96-300	96-300	140-400	240-700	240-700	240-700	240-700	240-700	240-700
7	PV Minimum Voltage (Volts)	48	48	48	48	96	96	120	240	240	240	240	240	240
8	Max. I/P Amps per channel (Amps)	15	30	45	75	35	55	60	45	60	75	80	105	132
9	Max. Battery Amps during PV Charging(Amps)	20	40	60	100	50	73	78	60	78	80	97	129	161
10	Max. SCC O/P (Amps)	20	40	60	100	50	73	78	60	78	80	97	129	161
11	Battery type Supported	VRLA / LMLA/Li-Ion/Li-Ph (User Settable)												
12	Min. Battery AH (Suggested)	150	150	150	150	150	150	150	300	300	300	300	300	300
13	Peak charging Efficiency (%)	>93												
B. SOLAR INVERTER														
1	No. of Phases/Connection Type	1-Phase/2 wire												
2	Nominal Battery Voltage (Volts)	48	48	48	48	96	96	120	240	240	240	240	240	240
3	Battery Ripple	5% for VRLA & LMLA / 1% for Li-Ion & Li-Ph Battery												
4	Nominal Output Voltage/Frequency (Volts/Hz)	230/50												
5	Output Amps	3.47	6.96	10.43	17.39	17.39	26.09	34.78	52.17	69.57	86.96	104.3	139.1	173.9
6	Voltage Regulation / Frequency Regulation (in standalone Mode)	± 2% / ± 0.5 Hz												
7	THD	< 3%												
8	Load Power Factor	0.8 lag to unity												
9	Efficiency (%): Peak/ 100% Load/25% Load	>89/ >88/ >86	>89/ >88/ >86	>89/ >88/ >86	>90/ >87/ >86	>90/ >87/ >86	>90/ >87/ >86	>89/ >88/ >86	>89/ >88/ >86	>89/ >88/ >86	>89/ >88/ >86	>91/ >89/ >86	>91/ >89/ >86	>91/ >89/ >86
10	Over Loads :	100-110% - 60 sec												
11		110-125% - 30 sec												
12		125-150% - 5 sec												
13		N/A												
14	Max Allowed Phase Imbalance (%)													
15	Auto Bypass Feature	Provided												
16	Parallel Operation with Grid/DG	Provided												
17	Power Export to Grid Facility Enable / Disable	Enable / Disable (User Settable)												
18	Anti islanding from Grid	Provided												
C. GRID CHARGER														
1	Grid Voltage Range (Voltage Sync. Range)	160V-280V (Phase to Neutral)												
2	Grid Frequency Range (Freq. Sync. Range)	50 Hz ±5%												
3	Max Grid Import Power (KVA)	1KVA	2KVA	3KVA	5KVA	5KVA	7.5KVA	10KVA	15KVA	20KVA	25KVA	30KVA	40KVA	50KVA
4	Max Battery Amps During Grid Charging (Amps)	13	27	40	68	34	51	54	40	54	68	72.5	96.6	120.8
5	Peak charging Efficiency (%)	>87												
PROTECTIONS														
1	PV Side	Reverse Polarity, Surge Protection												
2	Battery Side	Reverse Polarity, Over/Under Voltage, Current Limit												
3	Grid Side	Over/Under Voltage, Over/Under Frequency, Anti-islanding, Surge Protection												
4	Load Side	Overloads, Short circuit												
5	System Protection	Over Temperature, Trip, Breakers at all Inputs, Emergency stop												
D. USER INTERFACE														
1. DISPLAY INTERFACE		Graphical Display with mimic diagram												
2. DISPLAYED PARAMETERS														
1	Battery Parameters	Voltage, Charging Current, Discharging Current, AH-in, AH-out, Cumulative AH-in, Cumulative AH-out, charging state-charging/Discharging.												
2	PV Parameters	Voltage, Current, Power, Cumulative, Today Generation, Irradiance, Ambient Temperature.												
3	Grid Parameters	Voltage, Current, Frequency, Export Power, Import Power, Export Cumulative Energy, Import Cumulative Energy, Power Factor												
4	Load Parameters	Voltage, Current, Frequency, Power, Cumulative, Power Factor												
5	Data Logging	90 Days PV Generation, Export Energy, Import Energy, Load Energy.												
6	System Level	Faults and warnings												
3. INDICATIONS/PROTECTION														
1	LED Indications:	Power ON, PV Available/ Charging, Inverter ON, Grid Import / Export Mode, Fault, HYBRID /OFF GRID Mode												
2	User Keypad for Settings Change	Keypad for Settings Input												
3	Breakers at all inputs/Space Heater/Emergency	Provided												
4	Over shoot due to misbehaviour of BHMS	Provided												
5	Remote monitoring: Optional*	Data monitoring through GPRS (Optional)												
	Designed and Manufactured the product as for IEC	Tested as per IEC 61683, IEC 61727, IEC 62116 / IS 16169 EN 50530 and IEC 60068 (1, 2, 14, 30).												
MISCELLANEOUS														
1	Degree of Protection	IP31												
2	Cooling Method	Temp. Controlled Force Cooling												
3	Operating Temperature	0-55°C ambient operation												
4	Humidity (Non-condensing)	Max. 95% Non-Condensing												
5	Altitude (above sea level)	1000m above sea level												
6	Dimensions in mm (H X W X D)	360X280X530	360X280X560	360X280X6565	360X280X6655	476X375X675	526X375X775	526X375X775	715x650x750			715X1000X750		
7	Approx. Weight (kg)	30	35	60	80	80	130	140	160	215	245	260	300	350
Note: The specifications are subject to change due to continuous improvements. Higher rating systems are available on request.														

Note: The specifications are subject to change due to continuous improvements. Higher rating systems are available on request.





Key Features



ADVANCED PROTECTION



The **ULTRA ECO** Three Phase Transformer-Based Hybrid PCU is engineered to deliver reliable, high-capacity, and uninterrupted power for commercial, industrial, institutional, and utility-scale applications. By intelligently integrating solar energy, battery storage, and grid power, it ensures continuous operation and optimized energy utilization. Built with a rugged transformer-based architecture, ULTRA ECO provides superior protection against voltage fluctuations and demanding operating conditions. Featuring advanced MPPT technology, over 93% system efficiency, Wi-Fi-enabled remote monitoring, and compatibility with a wide range of battery technologies, it delivers dependable performance with minimal maintenance.

Designed to meet international standards, the ULTRA ECO Three Phase PCU is the ideal power solution for manufacturing facilities, telecom infrastructure, hospitals, commercial buildings, data centers, educational institutions, mini-grids, and remote industrial operations worldwide.

Note: The specifications are subject to change due to continuous improvements. Higher rating systems are available on request.



Solar DC Wire

AVAILABLE IN
80 MTR. & 100 MTR.

Light Up Your Future

Solar DC Wire Excellence



Features



RELIABLE PERFORMANCE:
ENDURING DESIGN FOR
LASTING RELIABILITY.



SAFETY PRIORITY:
FIRE-RESISTANT,
LOW SMOKE EMISSION
FOR PEACE OF MIND.



GLOBAL COMPATIBILITY:
RESILIENT AGAINST DIVERSE
CLIMATES AND CONDITIONS.



ADVANCED TECHNOLOGY:
ELECTRON BEAM CROSS-LINKING
ENSURES SUPERIOR PERFORMANCE.



Applications



Residential Solar
Systems



Commercial
Solar Installations



Industrial
Solar Projects



Utility-Scale
Solar Farms

www.smartenpowersystems.com



SMARTEN®
FUSION IS THE FUTURE

Kranti

PV CHANGER



Key Features



DUAL PV
SOURCE SWITCHING



QUICK & SAFE
OPERATION



IDEAL FOR AGRICULTURAL
& OFF-GRID SYSTEMS

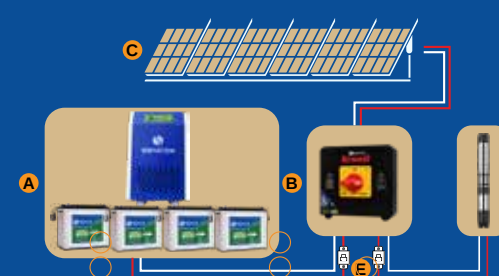


LOW
MAINTENANCE



HEAVY-DUTY 63A
ROTARY SWITCH

HOW IT WORKS



A PCU + BATTERY B PV CHANGER
C SOLAR MODULE D PUMP E MCB

Kranti PV Changer

The Smarten Kranti PV Changer is an intelligent photovoltaic (PV) switching solution designed to maximize the utilization of your solar panels. It enables a single solar array to be conveniently shared between a solar water pumping system and a solar inverter or backup power system, ensuring your solar investment delivers value throughout the day. By eliminating repeated wiring changes and simplifying system operation, Kranti PV Changer provides a safe, reliable, and efficient way to utilize available solar energy whenever it is needed.

IDEAL FOR





SMARTEN
SOLAR

Pump Controller

SOLAR PUMP CONTROLLER
3 HP 5 HP 7.5 HP 10 HP

Key Features



ADVANCED
MPPT TECHNOLOGY



HIGH
CONVERSION EFFICIENCY



SOFT START
PROTECTION



INTELLIGENT
V/F CONTROL



IP65
RATED



AGRICULTURAL
IRRIGATION



BOREWELL
WATER PUMPING



COMMERCIAL
FARMING



COMMUNITY
WATER SUPPLY



LIVESTOCK
FARMS



GREENHOUSES



WATER STORAGE
SYSTEMS



REMOTE &
OFF-GRID AREAS

Intelligent MPPT Solar Pump Drive
Efficient Water Pumping Powered by Solar Energy
The Smarten Solar Pump Controller is an advanced MPPT-based solar drive designed to deliver reliable and energy-efficient water pumping for agricultural, commercial, and off-grid applications.

By intelligently converting solar DC power into stable three-phase AC output, it maximizes solar energy utilization, ensures smooth motor operation, and provides reliable performance even under changing sunlight conditions.

Built with an IP65-rated enclosure and intelligent protection functions, the controller offers long service life, low maintenance, and dependable operation in demanding outdoor environments.



DRY RUN
PROTECTION



OVER TEMPERATURE
PROTECTION



OVER CURRENT
PROTECTION



SHORT CIRCUIT
PROTECTION



PHASE LOSS
PROTECTION



EARTH FAULT
PROTECTION



SMARTEN POWER SYSTEMS LIMITED

SOLAR PUMP CONTROLLER SPECIFICATIONS

3 HP 5 HP 7.5 HP 10 HP

MPPT Controller

With the inbuilt MPPT (Maximum Power Point Tracking) technology, the controller regulates output frequency based on real-time solar irradiation to achieve maximum efficiency. The advanced dynamic VI MPPT algorithm ensures fast response, stable tracking, and superior performance compared to traditional methods.

Salient Features of Smarten Solar Pump Controller:

- Automatic switching between solar power and AC supply when sunlight is low
- High-resolution LCD display: Speed (%), DC input voltage, AC/PWM output voltage, system status
- MPPT technology to maximize water discharge at different solar levels
- Fast, stable MPPT tracking for improved efficiency
- GSM option for remote monitoring & control
- RS485 telemetry support (optional)
- High-flow performance for faster tank filling
- Easy installation and low maintenance
- Efficient DC-to-AC conversion for submersible pump operation
- Fully operable through the Smarten Mobile App

RATING	3 HP	5 HP	7.5 HP	10 HP
Pump Controller Rating	2.2 kW	3.7 kW	5.5 kW	7.5 kW
MPPT Range	250-450 VDC	350-790 VDC	350-790 VDC	350-790 VDC
Controller I/P Voc	310-450 VDC	540-790 VDC	540-790 VDC	540-790 VDC
Controller I/P Vmp	310-450 VDC	450-790 VDC	300-790 VDC	450-790 VDC
Controller I/P Current DC	10 Amp	10 Amp	18.5 Amp	18.5 Amp
Controller O/P Current	9 Amp	9 Amp	17 Amp	17 Amp
Controller I/P Power (kW)	2.2 kW	3.7 kW	5.5 kW	7.5 kW
Enclosure IP Protection	IP 65	IP 65	IP 65	IP 65
MPPT Tracking	Yes	Yes	Yes	Yes
Operating Temp	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C(+55)
Inside the control box	up to 60	up to 60	up to 60	up to 60
Relative Humidity	Less than 95%	Less than 95%	Less than 95%	Less than 95%
Controller overload capacity	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s



GLOBAL SUPPORT

POWERING PARTNERSHIPS BEYOND PRODUCTS

At Smarten, we deliver more than advanced energy solutions we build long-term partnerships. Our global support network ensures reliable technical assistance, fast response times, and dependable after-sales service to help distributors, installers, and customers succeed in every market.

Whether you're installing a residential solar system or managing a large commercial project, our experienced team is committed to supporting you at every stage.



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