



SOLAR ENERGY

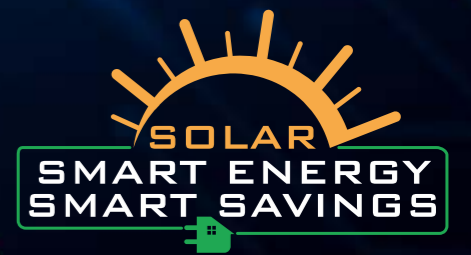
COMPLETE SOLAR SOLUTIONS



SMARTEN
FUSION IS THE FUTURE



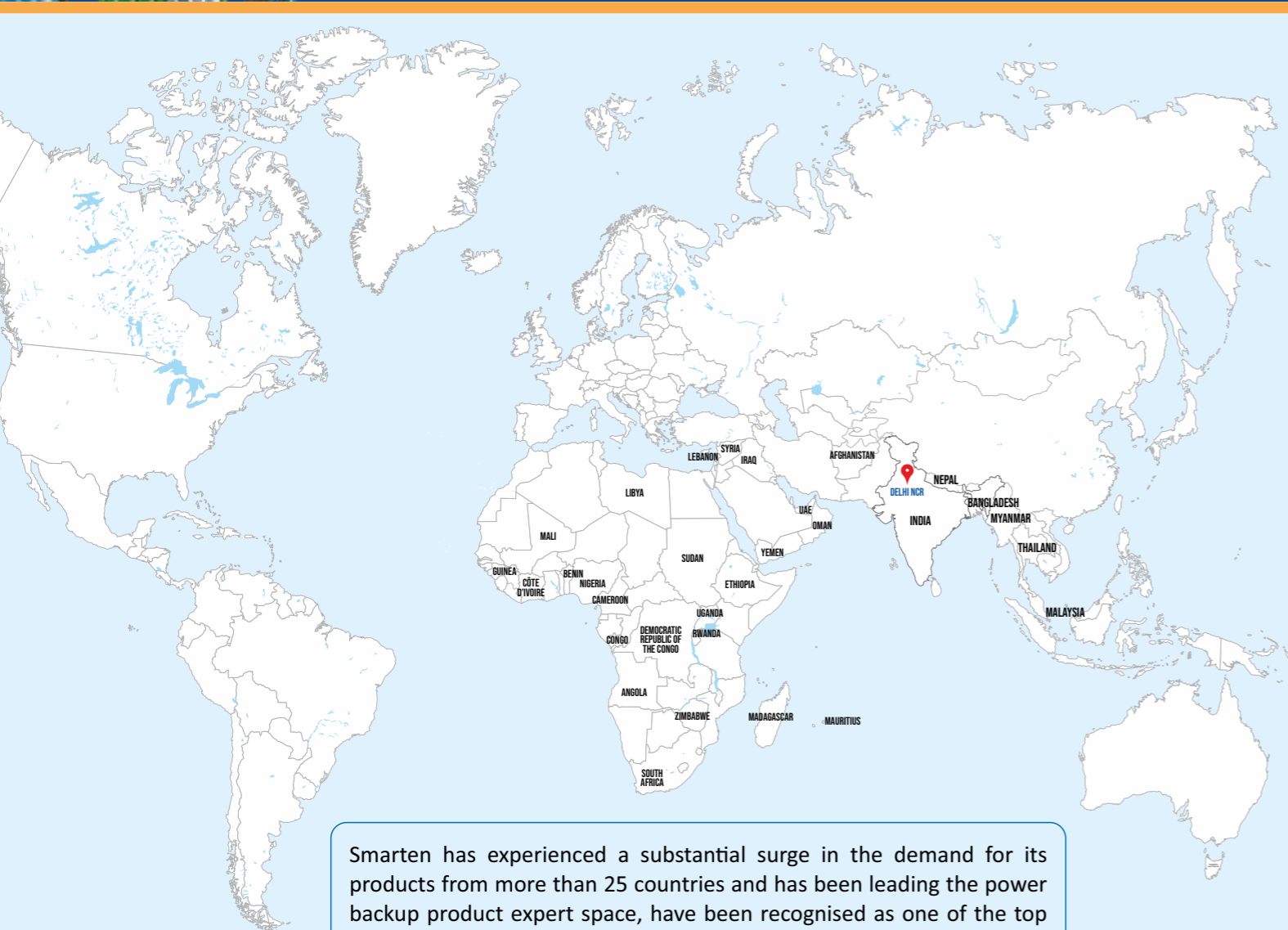
Smarten Power Systems Ltd.
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WHAT DO WE DO

Smarten believes in empowering every home & commercial space with its world class product range of Solar Inverters, Batteries, Solar Panels & much more. "Evolution of Renewable Energy" is the only motto, to achieve the desired Smarten is rigorously working on its designs, R&D & manufacturing capacity. We believe that "Fusion is the Future", with such advancements in technology the time is to enrich mother earth through ultimate source of all power Sun.



Smarten has experienced a substantial surge in the demand for its products from more than 25 countries and has been leading the power backup product expert space, have been recognised as one of the top players in the country. Backed by a team of over 300 technologists and dignitaries in power, Smarten is now well-known across many countries in the world, including India, Nepal, Bangladesh, Afghanistan, UAE, Nigeria and Benin.

WHAT ARE WE

Smarten Power Systems Pvt. Ltd. is a Solar Product Manufacturing Company that was established in 2014 with a mission to provide best solution to need of power/solar that can drive our present towards a sustainable future.

Smarten Power Systems is more than just inverter manufacturers. Since inception in 2014, Smarten has been defined by the vision of its founders: to put the company at the forefront of the evolution to a renewable energy future. This vision is enshrined in the company's brand statement, Fusion is the Future, which is a salute to the nuclear fusion reactions in the Sun which are the ultimate source of all power on the Earth.

Beginning with a series of Home UPS, Smarten has developed a range of unique Power Backup Solutions and Solar Products which differentiate it from the Industry. The diverse product range includes Home UPS, Inverters, Solar Power Conditioning Units, Solar Charge Controllers, Solar Inverters, Solar Panels, Batteries, Off-Grid Solutions, Grid Tie Inverters and Customized Solar Solutions.

Smarten's products are designed and manufactured in-house to exacting standards and best-practice processes and are backed up in the field by unmatched reliability and the company's renowned service support. Due to a clear focus on quality throughout the organization's operations, Smarten has rapidly established a footprint across India as well as further afield in Nepal, Bangladesh, Afghanistan, Dubai, Nigeria, Benin, Uganda and South Africa.

Thank you for associating with Smarten, we have been doing continuous efforts to cater your requirements & deliver the best. You are so valuable for us.
Stay Tuned!
Rajnish Sharma
Rajnish Sharma
Director



Welcome to the next chapter of Smarten Power Systems, culminating in our brand-new facility at Reliance MET. Established in 2014, we began our journey in a modest space with a focused range of products, earning the trust and loyalty of our customers while meeting market needs with precision.

Today, we proudly announce our expansion to a larger, cutting-edge factory. This move signifies a monumental step forward, empowering us with robust in-house manufacturing capabilities. We now produce over thousands of products daily, meticulously crafted to uphold our commitment to quality and innovation. This growth not only reinforces our dedication to meeting market demands but also sets a new standard in the industry.



CERTIFICATIONS



ISO 14001:2015
Environmental Management System

RCMC by MPEDA





HELIO

900 VA - 1500 VA

MPPT SOLAR PCU IN-BUILT LITHIUM BATTERY

DSP Based
Pure Sine Wave

Faster Charging,
More Backup

LCD Display

Can Install 24V
Solar Panels

Wall Mount

Zero Maintenance

Smarten Helio MPPT in-built Lithium Battery Solar PCU is a next-generation power conditioning unit designed for reliable and efficient solar energy management. Powered with advanced MPPT technology, it ensures maximum solar energy extraction even in low light conditions.

With a built-in lithium battery, Helio offers higher efficiency, longer life, faster charging, and zero maintenance compared to traditional batteries. Its compact design saves space, while the intelligent control system provides seamless power backup, making it an ideal solution for homes, offices, and institutions looking for sustainable and uninterrupted green energy.



TECHNICAL SPECIFICATION

HELIO 1500	
Mains Input mode	HELIO 1500
Mains AC low cut UPS mode	175VAC ± 10VAC
Mains AC low cut recovery UPS mode	185VAC ± 10VAC
Mains AC high cut UPS mode	265VAC ± 10VAC
Mains AC high cut recovery UPS mode	255VAC ± 10VAC
Mains AC low cut WUPS mode	90VAC ± 10VAC
Mains AC low cut recovery W.UPS mode	110VAC ± 10VAC
Mains AC high cut WUPS mode	295VAC ± 10VAC
Mains AC high cut recovery W.UPS mode	285VAC ± 10VAC
Input Frequency Range	48Hz to 52Hz
Voltage Output in Mains Mode	Same as input
Frequency Output in Mains Mode	Same as input
Battery	
Battery Type	LI-ION
DC input voltage	12V
Battery Quantity 12V 100Ah LI-ION	1
Bulk absorption Voltage	14.2±0.2V
Boost charging voltage for LI-ION Battery	14.2V±0.2V
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)
Charging Current LI-ION Battery	20A ± 3A
Charging mode	5Amp 5A ± 1A
	10Amp 10A ± 2A
	Enable 20A ± 3A
	Disable
Backup Mode	
Output voltage	220VAC +5% -10% (until battery low alarm)
Output frequency	50Hz ± 0.2 Hz
Output waveform	Pure Sine Wave ≤ 5% THD
Capacity	1250VA
Discharging current @ full load	73 ± 3A
Low Battery Warning	10.8V±0.2V
Low Battery Cut	10.4V±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 MCB will trip
Back feed	System will shutdown in case of back feed and there is no retry
Over temperature	Yes provided, if heat sink temperature goes above 100°C System will shut down
Reverse Battery	DC fuse will blown
Phase to Phase protection in mains mode	Yes provided by electronic
Battery High Protection	Yes provided by Firmware
Solar Charge Controller	
Solar Charge Controller type	MPPT type
Max Panel wattage can be connected	1200W
Max PV Voltage	60 ± 3V
Max PV current	55A
Reverse PV protection	Yes provided, it will also display on LCD panel
Reverse current ow 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 and 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*** Default SOC is 30% 75% of battery capacity*** Default SOC is 40% 85% of battery capacity*** Default SOC is 30% 90% of battery capacity*** Default SOC is 30%
SOC definition (State of charge)**	Mains will disconnect if battery will charge densed SOC level
SOC (State of charge)**	20%- of battery capacity 30%- of battery capacity 40%- of battery capacity 50%- of battery capacity
SOC definition (State of charge)**	Mains will be connect when battery use defined SOC value of full capacity
Battery Capacity**	100Ah
Display and Alarms	
LCD Initial Display	Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected LA / SMF / Tubular/LI-ION, Battery
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,
Buzzer	Audible beep for Overload, Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown / MCB Trip
Mains Chargin Enable and Disable	Yes, Provided user can set mains charging Enable/Disable from front keypad
UNIT SAVING IN DISPLAY	
	LCD Display will show the toal saving unit from Solar
Safety	
HV Test Input to Earth	Leakage current <5mA when 1.5kV applied for 1 min
HV Test Output to Earth	Leakage current <5mA when 1.5kV applied for 1 min
IR Test Input to Earth	>5MΩ between @ 500VDC
IR Test Output to Earth	>5MΩ between @ 500VDC
Earth Leakage current in Mains mode	< 2.5mA
Earth Leakage current in Backup mode	< 2.5mA
Definition	
	* This option is enabled only for the LA/SMF/TUB batteries
	** This option is enabled only for the Li-Ion Batteries