

TRUE HYBRID
Solar
Power Generating System



India's **Solar**
Most Trusted **Solution**

RANGE 2.5KVA - 20KVA
MPPT BASED PCU



SOLAR
ADVANCE PROTECTION



50 AMP SOLAR
CHARGE CONTROLLER



INTELLIGENT
CHARGING SHARING



POWERFUL CHARGING
FOR LOW VOLTAGE



NO HUMMING
NOISE



FUNDAMENTAL
THERMAL PROTECTION



Key Features :-

- Operate on both Solar Power as well as Grid Power.
- It is integrated with in-built fully regulated MPPT Solar Charge Controller for maximum Solar Power utilization.
- It senses the availability of solar power, grid power and accordingly gives preference to charging through solar power and switches to the grid power if the solar power is not available.
- It is designed to give you maximum benefit from the solar energy and minimize your electricity bill drastically.
- Highly efficient battery charging from the solar energy as a result you will get non-stop power, save money, save electricity and protect the environment.
- Advanced ARM Cortex technology for absolute and stable and 100% pure sine wave output.
- Inbuilt Isolation transformer for more reliability.
- User- friendly LCD for the display of mode of operation and all parameters.
- Intelligent overload sensing circuitry with auto retries facility.
- Programmable thermal protection : cooling fan which operates as needed.
- Pure Sine Wave Output with low Total Harmonic Distortion (THD).
- High End ARM-Cortex based design of Solar Charge Controller for charging through Solar Power.
- Solar PV reverse voltage Protection.
- Reverse Current Flow Protection from Battery to Solar Panel generally during night.
- No mechanical contact for charge Controller.

If solar is available and battery declared as full charged, then Mains will automatic cut till battery discharge upto pre-defined level in PCU mode.



BOOSTER MPPT

TECHNICAL SPECIFICATION

Parameters		Rating				
System Model Name		XE/2500/48V	XE/4000/48V	XE/5000/48V	XE/5500/96V	
Capacity		2500VA	4000VA	5000VA	5500VA	
Operating DC Voltage		48V			96V	
SwUPSching Element		Mosfet			IGBT	
Charger Topology		Boost Mosfet				
Parameter (Grid)		Default Value				Variable Range
Nominal Grid Voltage		230V				
Nominal Frequency		50Hz				
Frequency Range		45-55 Hz \pm 1 Hz				
Battery Charging Method 4 Stage		Bulk/Absorption/Float/Equalize				
Grid - Battery Charging Voltage	TUB (Default)	Boost	14.4V \pm 0.2V (Each Battery)			
		Float	13.8V \pm 0.2V (Each Battery)			13V-14.2V
Grid - Battery Charging Voltage	SMF	Boost	14.2V \pm 0.2V (Each Battery)			13.5V-14.2V
		Float	13.8V \pm 0.2V (Each Battery)			13.5V-14.2V
Grid - Battery Charging Current	Enable	Default	15A \pm 1A			5A-18A
		Maximum	18A \pm 1A			
	Disable	Normal/Boost	Charging Current 0.0A			
Grid Reconnect @ Battery Voltage		11.7V \pm 0.2V (Each Battery)				11V-12.5V
Grid Low Cut Voltage	UPS Mode Enable	170V \pm 10V				
	UPS Mode Disable	100V \pm 10V				
Grid Low Cut Recovery	UPS Mode Enable	180V \pm 10V				
	UPS Mode Disable	110V \pm 10V				
Grid High Cut Voltage	UPS Mode Enable	265V \pm 10V				
	UPS Mode Disable	290V \pm 10V				
Grid High Cut Recovery	UPS Mode Enable	255V \pm 10V				
	UPS Mode Disable	280V \pm 10V				
Changeover (Batt. To Mains)	UPS Mode Enable/Disable	<5ms				
Changeover (Mains To Batt.)	UPS Mode Enable/Disable	<12ms				
DG Mode	Enable/Disable	Disable				
Parameter (Battery Mode)						
Output Phase		1 Phase				
Output Waveform		Sinewave				
Nominal Output Voltage		220V \pm 5%				
Max. Output Current		9.5A	13.5A	18A	18A	
Discharging Current		52A \pm 2A	76A \pm 2A	105A \pm 2A	52A \pm 2A	
Nominal Frequency		50Hz \pm 1%				50-60 Hz
Battery Low Buzzer		10.8V \pm .02V (Each Battery)				Battery Low Cut +0.3V
Battery Low Cut		10.5V \pm .02V (Each Battery)				10V - 11.5V
Battery High Cut		16.5V \pm .02V (Each Battery)				16.5V - 17.5V



BOOSTER MPPT

Parameters		Rating			
System Model Name		XE/ 2500 /48V	XE/4000/48V	XE/5000/48V	XE/5500/96V
CapacUPSy		2500VA	4000VA	5000VA	5500VA
Typical Efficiency		≥ 80%		≥ 82%	
Voltage Harmonic		< 3% (Linear Load)			
Over Load CapacUPSy	UPS Mode Disable	>110% 3-Times Auto Reset wUPSh 30Sec. Delay and 4th Time Shut Down			
	UPS Mode Enable	>110% 1st Time Shut Down after 30 Sec Delay.			
		>150% Output Goes Down			
Protection		Overload, Battery Low, Battery High, Over Temperature, Short Circuit, PV Reverse, PV High, Mains Fuse Trip, Grid Overload			
Switches and LED Indication	S.No.	Switch	Function(s)	Switch Led Status	
	1	POWER	ON/OFF the UPS Output	SYSTEM ON - Led ON SYSTEM OFF - Led OFF	
	2	INV/UPS	When it is short pressed it enables UPS/Inverter Mode Selection. When it is Long pressed Enables the UPS Parameter Setting. The LCD Displays : "Edit Parameters Setting". The Switches function now change to: POWER - Enter/OK Switch.	UPS Mode ON - Led ON UPS Mode OFF - Led OFF	
	3	SMF/TUB	When it is short pressed it enables TUBULAR or SMF Battery Selection.	TUBULAR Battery - Led ON SMF Battery - Led OFF	
	4	HYBRID/PCU	When it is Short pressed it Enables the Hybrid or PCU Mode Selection.	PCU Mode - Led ON HYBRID Mode - Led OFF	
Display	5	ONLY LED	Solar status Green/Red	Green LED ON - Full Solar Used Green LED Blinking – Partial Solar Used	
	Battery Voltage, Solar Charging current, Grid Charging current, Solar Load Current, Grid Voltage, Grid Frequency, Output Voltage, Output Frequency, Load in % on Battery, Load in % on Solar, Charging Mode, Protection, Charging Mode, Solar Kwh(Saving), Solar availability Status, Solar Working Mode(HYBRID/PCU LITE/ PCU ULTRA), UPS ON/OFF.				
	Photovoltaic Input				
Input Voltage Range (Min - Max)		80 - 230 VDC			160 - 450 VDC
Maximum PV Power Recommended		3.0 KW	4.0KW	5.0 KW	5.0 KW
Solar Charge Controller Rating		60 A	60A	100 A	50 A
MPPT Based Charging Controller					
Swching Element		IGBT			
Controller		ARM- Cortex			
Type of Charger		MPPT			
Efficiency		95%			
Parameter (Environment)					
Operating Temperature		0 - 50°C			
Cooling		Fan			
Max. Relative HumidUPSy @25°C (Non Condensing)		95%			
Noise @ 1 Meter		50dB			
Standard Compliance		IP20			
Weight (kg)		28.34	31.2	45	45.8
Dimension L x W x H (mm)		430X400X500			520X400X640

*Specification are subject to change wUPShout prior notice due to constant improvement in design & technology.



MEGA MPPT

TECHNICAL SPECIFICATION

Parameters		Rating					
System Model Name		XE/7500/96V	XE/7500/120V	XE/10000/120V	XE/15000/240V	XE/20000/360V	
Capacity		7500VA	7500VA	10KVA	15KVA	20KVA	
Operating DC Voltage		96V	120V		240V	360V	
SwUPSching Element		IGBT					
Charger Topology		Boost Mosfet					
Parameter (Grid)		Default Value					Variable Range
Nominal Grid Voltage		230V					
Nominal Frequency		50Hz					
Frequency Range		45-55 Hz ± 1 Hz					
Battery Charging Method 4 Stage		Bulk/Absorption/Float/Equalize					
Grid - Battery Charging Voltage	TUB (Default)	Boost	14.4V ± 0.2V (Each Battery)			13.8V-15V	
		Float	13.8V ± 0.2V (Each Battery)			13V-14.2V	
Grid - Battery Charging Voltage	SMF	Boost	14.2V ± 0.2V (Each Battery)			13.5V-14.2V	
		Float	13.8V ± 0.2V (Each Battery)			13.5V-14.2V	
Grid - Battery Charging Current	Enable	Default	15A ± 1A			5A-18A	
		Maximum	18A ± 1A				
	Disable	Normal/Boost	Charging Current 0.0A				
Grid Reconnect @ Battery Voltage		11.7V ± 0.2V (Each Battery)					11V-12.5V
Grid Low Cut Voltage	UPS Mode Enable	170V ± 10V					
	UPS Mode Disable	100V ± 10V					
Grid Low Cut Recovery	UPS Mode Enable	180V ± 10V					
	UPS Mode Disable	110V ± 10V					
Grid High Cut Voltage	UPS Mode Enable	265V ± 10V					
	UPS Mode Disable	290V ± 10V					
Grid High Cut Recovery	UPS Mode Enable	255V ± 10V					
	UPS Mode Disable	280V ± 10V					
Changeover (Batt. To Mains)	UPS Mode Enable/Disable	<5ms					
Changeover (Mains To Batt.)	UPS Mode Enable/Disable	<12ms					
DG Mode	Enable/Disable	Disable					
Parameter (Battery Mode)							
Output Phase		1 Phase					
Output Waveform		Sinewave					
Nominal Output Voltage		220V ± 5%					
Max. Output Current		27A	27A	35A	54A	70A	
Discharging Current		76A ± 2A	52A ± 2A	72A ± 2A	52A ± 2A	52A ± 2A	
Nominal Frequency		50Hz ± 1%					50-60 Hz
Battery Low Buzzer		10.8V ± .02V (Each Battery)					Battery Low Cut +0.3V
Battery Low Cut		10.5V ± .02V (Each Battery)					10V - 11.5V
Battery High Cut		16.5V ± .02V (Each Battery)					16.5V - 17.5V



MEGA MPPT

Parameters	Rating				
System Model Name	XE/7500/96V	XE/7500/120V	XE/10000/120V	XE/15000/240V	XE/20000/360V
Capacity	7500VA	7500VA	10KVA	15KVA	20KVA
Operating DC Voltage	96V	120V		240V	360V
Typical Efficiency	≥ 80%		≥ 82%		
Voltage Harmonic	< 3% (Linear Load)				
Over Load CapacUPSy	UPS Mode Disable	>110% 3-Times Auto Reset wUPSh 30Sec. Delay and 4th Time Shut Down			
	UPS Mode Enable	>110% 1st Time Shut Down after 30 Sec Delay.			
		>150% Output Goes Down			
Protection	Overload, Battery Low, Battery High, Over Temperature, Short Circuit, PV Reverse, PV High, Mains Fuse Trip, Grid Overload				
Switches and LED Indication	S.No.	Switch	Function(s)	Switch Led Status	
	1	POWER	ON/OFF the UPS Output	SYSTEM ON - Led ON SYSTEM OFF - Led OFF	
	2	INV/UPS	When it is short pressed it enables UPS/Inverter Mode Selection. When it is Long pressed Enables the UPS Parameter Setting. The LCD Displays : "Edit Parameters Setting". The Switches function now change to: POWER - Enter/OK Switch.	UPS Mode ON - Led ON UPS Mode OFF - Led OFF	
	3	SMF/TUB	When it is short pressed it enables TUBULAR or SMF Battery Selection.	TUBULAR Battery - Led ON SMF Battery - Led OFF	
	4	HYBRID/PCU	When it is Short pressed it Enables the Hybrid or PCU Mode Selection.	PCU Mode - Led ON HYBRID Mode - Led OFF	
5	ONLY LED	Solar status Green/Red	Green LED ON - Full Solar Used Green LED Blinking – Partial Solar Used Green LED OFF - No Solar Used Red LED ON – PV Reverse Protection Red LED OFF – No Protection Selected		
Display	Battery Voltage, Solar Charging current, Grid Charging current, Solar Load Current, Grid Voltage, Grid Frequency, Output Voltage, Output Frequency, Load in % on Battery, Load in % on Solar, Charging Mode, Protection, Charging Mode, Solar Kwh(Saving), Solar availability Status, Solar Working Mode(HYBRID/PCU LITE/ PCU ULTRA), UPS ON/OFF.				
Photovoltaic Input					
Input Voltage Range (Min - Max)	160 - 450 VDC	200 - 500 VDC	200 - 500 VDC	300 - 625VDC	400 - 750VDC
Maximum PV Power Recommended	7.5 KW	7.5 KW	10 KW	15KW	20KW
Solar Charge Controller Rating	75A	60 A	80 A	60A	80A
MPPT Based Charging Controller					
Switching Element	IGBT				
Controller	DSP				
Type of Charger	MPPT				
Efficiency	95%				
Parameter (Environment)					
Operating Temperature	0 - 50°C				
Cooling	Fan				
Max. Relative HumidUPSy @25°C (Non Condensing)	95%				
Noise @ 1 Meter	50dB				
Standard Compliance	IP20				
Weight (kg)	65.14	64.74	68.1	98	100
Dimension L x W x H (mm)	520X400X640			610X410X730	
*Specification are subject to change wUPShout prior notice due to constant improvement in design & technology.					