

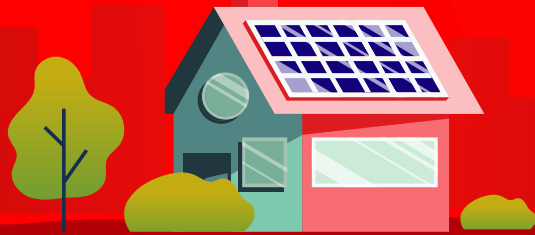
Livguard
Solar



RSS India

EXPERT KO BULAO, APNI BIJLI BANAEO.

**SOLAR POWER KE SMART
SOLUTIONS GHAR LE AAO!**



Trained Technicians



Advanced Tool Kit





MPPT POWER CONDITIONING UNIT

LCD & LED Display

2 Years
Warranty

Livguard Solar Hybrid MPPT HKVA Inverters are high capacity, enhanced efficiency solar PCU that runs both on solar & utility (grid) power supply. It comes with Priority Mode (ECO/GRID/NONSOLAR) feature for maximizing savings and extended backup.

Advanced MPPT algorithm extracts maximum power from PV modules to both run your appliances and charge your batteries.



FEATURES

Enhanced Solar Power Utilization with Priority Mode

- No PV overload tripping via limiting feature to ensure generation does not fully stop
- Greater PV power allowed per KVA along with a wide MPPT voltage range



Fast Battery Charging

- Charging from Grid + Solar
- Multiple Battery Selection available, Flat/Tubular/VRLA



Safety & Protection

- Smart thermal management
- In-built battery, inverter and panel protection
- MCB protection at all Inputs and Outputs



UPS/Unregulated Mode

- Wide range for poor grids where voltage frequently comes down



Best in Class Overload Capability

- Upto 200% overload for peak surges
- Multiple overload attempts allowed



Pure Sine Wave

- Noiseless & long life operations of electrical appliances.



MPPT POWER CONDITIONING UNIT

Model No.	LS OG3500M	LS OG5048M	LS OG7500M	LS OG10000M	LS OG15000M
Product Specification Range of MPPT Solar PCU	3.5KVA/48V	5KVA/48V	7.5KVA/96V	10KVA/120V	15KVA/240V

Mains Input Mode

Mains AC Low Cut (UPS Mode)	180 ± 5V	170 ± 5V
Mains AC Low Cut Recovery (UPS Mode)	9-12V Hysterisis from > Low Cut Voltage	
Mains AC High Cut (UPS Mode)	260 ± 5V	270 ± 5V
Mains AC High Cut Recovery (UPS Mode)	9-12V Hysterisis from < High Cut Voltage	
Mains AC Low Cut (Wide Range Mode)	120 ± 5V	170 ± 5V
Mains AC Low Cut Recovery (Wide range Mode)	9-12V Hysterisis > Low Cut Voltage	
Mains AC High Cut (Wide Range Mode)	280 ± 5V	270 ± 5V
Mains AC High Cut Recovery (Wide Range Mode)	9-12V Hysterisis < High Cut Voltage	
Input Frequency Range	50 ± 5% Hz	
Output voltage in Mains mode	Same as Mains Input	
Output frequency in Mains mode	Same as Mains Input	

Battery

Battery Type	TUBULAR				
	VRLA				
	FLAT PLATE				
DC Input Voltage (Nominal)	48V	48V	96V	120V	240V
Battery Quantity (12V 100Ah to 220Ah)	4	4	8	10	20
Float Charging Voltage (Tubular/VRLA/Flat Plate)	13.2/13.5/13.4 (per Battery) ± .5V				
Boost Charging Voltage(Tubular/VRLA/Flat Plate)	14.5/13.8/13.7 (per Battery) ± .5V				
Boost Charging Voltage Range for Tubular and SMF Battery	Provided Above				
Bulk Absorption Battery Voltage	Same as Above				
Battery Deep Discharge Recovery	YES				
Charging Current By Grid	20.0 ± 1.0A	30.0 ± 1.0A	25.0 ± 1.0A	35.0 ± 1.0A	30.0 ± 1.0A
Charging Current By PV	Provided Above				

Backup Mode

Output Voltage	230 ± 2% V				
Output Frequency	50 ± 0.5 Hz				
Output Waveform	PURE SINE WAVE				
No Load Current (Switch OFF)	Sleep Mode is not Provided Currently				
Discharging Current @ Full Load	12.2 A± 1 Amp.	17.5 A ± 1 Amp.	26 A± 1 Amp.	35 A± 1 Amp.	52 A± 1 Amp.
Low Battery Warning	11.1V (per Battery) ± 0.2V				
Low Battery Cut	10.8V (per Battery) ± 0.2V				
Change Over Time From Mains To Inverter (Unregulated Mode)	≤ 25 msec		≤ 25 msec		
Change Over Time From Inverter To Mains (Unregulated Mode)	≤ 25 msec		≤ 25 msec		
Change Over Time From Mains To Inverter (UPS Mode)	≤ 20 msec		≤ 25 msec		
Change Over Time From Without Inverter To Mains (UPS Mode)	≤ 20 msec		≤ 25 msec		
Cooling	FORCED COOLING BY FAN				

Protections

Overload in Backup Mode	YES
Short Circuit in Backup Mode	YES
Short Circuit in Mains Mode	Mains MCB Trip
Backfeed	YES
Over Temperature	YES
Reverse Battery	YES
Phase to Phase Protection in Mains Mode	YES

Solar Charge Controller

Solar Charge Controller Type	MPPT				
Max Panel Wattage That Can Be Connected	3850W	5500W	8250W	11000W	16500W
Max No. of (@325 Wp) Panels Connected (S:Series, P: Parallel)	S: 4, P: 3	S: 4, P: 4	S: 7, P: 4	S: 7, P: 5	S:12,P:4
Min No. of (@325 Wp) Panels Connected (S:Series, P: Parallel)	S: 3, P: 1	S: 3, P: 3	S: 5, P: 1	S: 5, P: 2	S:10,P:1
No. of Input Channel	1	1	1	1	1
Max. input Current per Channel (Maximum Isc)	(38 ± 1)A	(50 ± 1)A	(50 ± 1)A	(57 ± 1)A	(57 ± 1)A
Maximum PV Voltage Voc	(190 ± 5)V		(320 ± 5)V		(700 ±5)V
Minimum PV Voltage Vmp	70V		175V		350V
Maximum PV Voltage Vmp	(160 ± 5)V		(266 ± 5)V		(560 ± 5)V

MPPT POWER CONDITIONING UNIT

Solar Charge Controller					
Maximum Battery Current	70A	100A	75A	80A	60A
MPPT Charger Efficiency (Peak)	94%		95%		
Reverse PV Protection	YES				
Reverse Current Flow to PV	NO				
Switching Element(MPPT Charger)	IGBT				
DOD (Depth of Discharge)	As per battery voltage setting (1.8V/cell)				

Display and Alarms

LCD Display Parameters	1. Battery Voltage & Current
	2. PV Voltage & Current
	3. PV Power, Total Generation & Today's Genration
	4. Mains Voltage & Frequency
	5. Load Voltage, Current & Frequency (Inverter Mode Only)
	6. Load Power
	7. Battrey Charging/Discharging Status
	8. Time & Date
	9. User Settings & Factory Settings
LCD Fault/Protection Status Display	i) Overload
	ii) Short Circuit
	iii) Battery & PV Reversew Polarity
	iv) Battrey Over/Under Voltage
	v) Battery Current Limit
	vi) Mains Over/Under Voltage
	vii) System Over Temprature
	viii) Grid/Load/PV Surge Protection(MOV)
Buzzer	YES

Safety

HV Test Input to Earth	YES
HV Test Output to Earth	YES
IR Test Input to Earth	YES
IR Test Output to Earth	YES

Environment

Operating Temperature	0°C to 50°C
Storage Temperature	10°C to 70°C
Operating Relative Humidity	5-95% (Non-condensed)

Dimensions

Dimensions in mm (LXWXH)	448.5X275X611	448.5X275X611	650X400X753.5	650X400X753.5	650X450X753.5	
Box Dimensions in mm (LXWXH)	680X345X510	680X345X510	835X495X800	835X495X800	835X565X800	
Weight in Kg	Net Weight	49.35Kg	52.95Kg	97.5Kg	104.35Kg	138.40Kg
	Gross Weight	51.95Kg	55.55Kg	109.85Kg	116.70Kg	153.45Kg

NOTE: Specifications are subject to change without prior notice

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