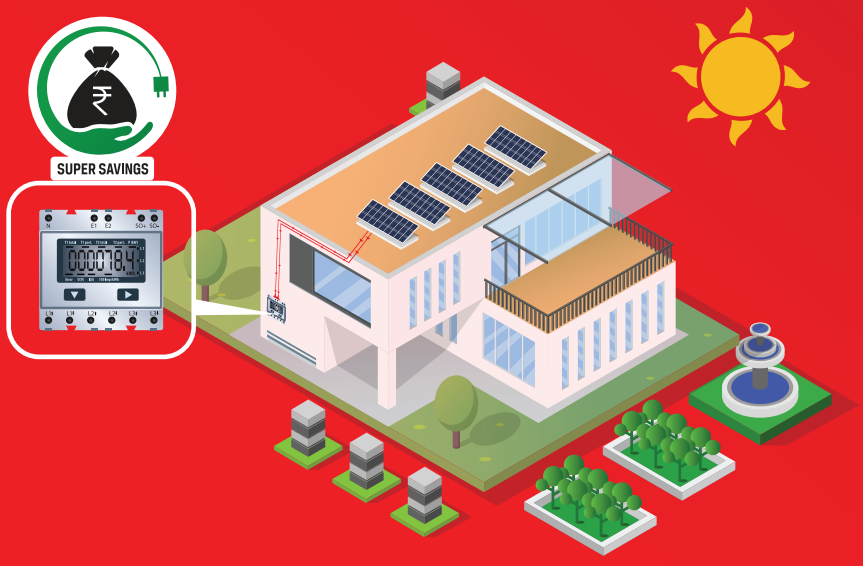
Livguard Solar

# APNI BIJLI BANAO, EXPERT KO BULAO.

## SOLAR KE SMART SOLUTIONS GHAR LE AAO!

## Call: +91 9999 039 039





# ABOUT LIVGUARD

Livguard Energy Technologies Pvt. Ltd. (LETPL) one of India's leading providers for power energy solutions is poised to transform the world with its cutting edge technology, in solar solutions, power back-up, automotive solutions, & e-rickshaw batteries. Livguard was founded in the year 2014 and is a part of the SAR Group which has been serving the nation for the past three decades. With our technologically advanced toolkit and trained technicians we have achieved the customer's trust and faith in our products and services. This has helped us reach the 4,000 crore company milestone in a short period of time.


# MPPT POWER CONDITIONING UNIT

LCD & LED Display

5 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 OG3048M | LS OG5048M | LS OG7500M | LS OG10000M | LS OG15000M |
|---|---|---|---|---|---|
| Product Specification Range of MPPT Solar PCU | 3KVA/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 | 10.5 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) | ≤ 46 msec | | ≤ 25 msec | | |
| Change Over Time From Inverter To Mains (Unregulated Mode) | ≤ 46 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 | 3300W | 5500W | 8250W | 11000W | 16500W |
| Max No. of (@325 Wp) Panels Connected (S:Series, P: Parallel) | S: 3, 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: 1 | 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) | ( 30 ± 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 | | 60A | 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) Battery 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) | | 325X295X415 | 448.5X275X611 | 650X400X753.5 | 650X400X753.5 | 650X450X753.5 |
| Box Dimensions in mm (LXWXH) | | 680X345X510 | 680X345X510 | 835X495X800 | 835X495X800 | 835X565X800 |
| Weight in Kg | Net Weight | 31.0Kg | 52.95Kg | 97.5Kg | 104.35Kg | 138.40Kg |
| | Gross Weight | 33.5Kg | 55.55Kg | 109.85Kg | 116.70Kg | 153.45Kg |
| NOTE: Specifications are subject to change without prior notice | | | | | | |

# LIVSERV SERVICE NETWORK

## NOW SERVING COUNTLESS STATES ACROSS THE COUNTRY

## 380+
Trained Service Engineers

## On-Site* Service Facility
- Solar Panel, UPS, PCU, SCC & SMU: Customer End
- Battery: CSC location


Service centre locations Pan India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