

# SEAMLESS POWER

UNINTERRUPTED LIVING

## LIGEN-INV5000 - 48VDC

### Solar Features

- Auto switchover between Solar and Main charging
- Zero drop solar charger (Max. 50A)
- Simultaneous charging through mains as well as solar panel
- Short charging time
- Long battery backup

### PATENTED BMS TECHNOLOGY

### COMPLETE RENEWABLE SOLUTION

### INTEGRATED INVERTER WITH PATENTED TECHNOLOGY

### SIGNIFICANT SAVINGS & ECO-FRIENDLY



### EFFICIENT POWER PERFORMANCE

High efficiency with low energy consumption.

### CRGO LAMINATED CORE

Premium quality for improved performance and durability.

### PURE COPPER TRANSFORMER

Ensures optimal power conversion.

**INVERTER**  
48V -5KW

**MPPT 50AMP/150Voc**  
4KW PV PANEL

**GRID CHARGER**  
Max. 15AMP

- Zero Grid Power Consumption on Idle Stage
- Battery Grid Charging even at low grid Voltage
- Special charging algorithm to enhance battery life
- Intelligence charging adapts itself to low, high battery, more and less power cut areas, battery health condition.
- Forced Grid to Solar Mode Shifting Facility
- Constant Noise Free DSP Pure Sine Wave Output
- 4 Line Multifunctional LCD Front Panel display

- Intelligent true multi stage smart solar and grid charging (Bulk, Absorption, Float)
- High over load and surge load handling capacity
- MCB Short Circuit Protection for Grid Power
- Easy to operate
- No maintenance cost
- Fumeless



# SPECIFICATIONS

## Product Overview

The "LIGEN POWER" inverter is a robust commercial-grade solution designed for small to medium-sized businesses, offices, and shops. With its advanced features and sturdy build, it ensures uninterrupted power supply during outages, enabling smooth operations. Key highlights include:

Description	Details
Model No	LIGEN-INV5000-48VDC
Product	Solar MPPT PCU Inverter
Functionality	Works with Grid, Solar & Integrated LFP Battery
Technology	DSP Based/less Components, small size, less electricity bill, more efficiency
Soft Start Features	Protects appliances at start-up
Usage	Reliable power backup for residential & commercial applications. Built-in MPPT solar charge controller for optimized performance. Utilizes Sine-Wave Technology for safe and efficient power delivery.
Battery Support	Internal 102.4V LFP Battery integrated with 3251P BMS
Intelligent Processing	DSP technology enables advanced control algorithms for precise output regulation, adaptive learning for optimized battery management, and fault detection for enhanced reliability. Efficient power management and quick fault response ensure uninterrupted operation in offline applications.
Smart Display	Offers unique indications for mains status, Output status, system faults, Load status, Temperature status, Charging and battery status.
Operation Modes	Switching from mains power to battery power and Solar power during outages, ensuring uninterrupted supply to connected devices. Ideal for sensitive appliances like computers.
Protection Features	Includes MCB/Fuse for input mains protection and a bypass switch for direct main supply in case of inverter faults.
Grid Protection	AC input low and high voltage cut-off protections in both inverter and UPS modes.
Noiseless Operation	Low harmonic distortion ensures quiet operation. This inverter prioritizes reliability, efficiency, and safety, making it an ideal choice for commercial establishments requiring dependable backup power solutions.

Specification	Details
Model	SKVA-MPPT PCU Inverter
Rated Power	SKVA / 48V (2-Phase Input 1-Phase Output)
Input Voltage (Battery Mode)	51.2V DC
Battery Chemistry	Lithium Iron phosphate (LFP)
Battery Pack	Internal integrated with 3251P BMS
Battery Capacity	100Ah
Grid Input Voltage (Vmp)	90V ~ 260V AC
Solar Input Voltage (Vmp)	50V ~ 120V DC
Solar Voc	≤ 150V DC
Maximum PV Connected	4KW
Solar Controller Type	MPPT (Maximum Power Point Tracking)
Battery Type	Integrated LFP (LiFePO4)
Battery Capacity	Configurable (100Ah)
Charging Modes	Solar Grid, Solar + Grid, Li Solar CHG 5.0Ah/5A
Output Waveform	Pure Sine Wave
Efficiency	> 90%
Max Solar Charging Current	10A ± 5A (Boost Modifer based)
Max Grid Charging Current	15A ± 3A (CCCV)
Operation Logic for Charging	Solar Priority (By default) / Grid Priority
Output Voltage (Backup Mode)	230V AC ± 2%
Output Voltage (Grid Mode)	Same as Input
Output Frequency on Battery	50Hz ± 0.05Hz
Changeover Time	< 6ms
Protection	Yes (Automatic Cut-off)
Protection Supported	Deepload, Deep Discharge, Over Charge, Short Circuit, Over Temperature
Over Load Capacity	+120%: 3 times auto reset, 4th time shut down>200%. Output goes down
LED Indication	Solar (SR, BR, PH/LOW BATT, BATT, VOLTAGE, CHG, CURRENT, DISPLAY ON UPS/INVERTER CHG. MODE, AC IN, AC OUT, LOAD, OVERLOAD, TEMPERATURE, INV ON/OFF STATUS)
Operating Temperature Range	-20°C to 60°C
Cooling Mechanism	Intelligent Fan Cooling
Cooling Fan Start/Stop	50°C or Load above 50% / 50°C & Load below 50%
audible Alarm	Yes
Bypass Feature	Manual