

# LIGEN POWER

## BETTER PERFORMANCE

Than ever before

**LIGEN-INV3500 - 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 -3.5KW

**MPPT 50AMP/150Voc**  
2.5 KW 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	Specification	Details
Model No	LIGEN-INV3500-48VDC	Model	3.5KVA MPPT PCU Inverter
Product	Solar MPPT PCU Inverter	Rated Power	3500VA / 2800W (1-Phase Input 1-Phase Output)
Functionality	Works with Grid, Solar & Integrated LFP Battery	Input Voltage (Battery Mode)	51.2V DC
Technology	DSP BasedLess Components, small size, less electricity bill, more efficiency	Battery Chemistry	Lithium iron phosphate (LFP)
Soft Start Features	Protects appliances at start-up	Battery Pack	Internal integrated with 16S1P BMS
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 Capacity	100Ah
Battery Support	Internal 51.2V LiB Battery integrated with 16S1P BMS	Grid Input Voltage (Vmp)	90V - 260V AC
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.	Solar Input Voltage (Vmp)	70V - 85V DC
Smart Display	Offers unique indications for mains status, Output status, system faults, Load status, Temperature status, Charging and battery status.	Solar Voc	≤ 100V DC
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.	Maximum PV Connected	2000W
Protection Features	Includes MCB/Fuse for input mains protection and a bypass switch for direct main supply in case of inverter faults.	Solar Controller Type	MPPT (Maximum Power Point Tracking)
Grid Protection	AC input low and high voltage cut off protections in both, inverter and UPS modes.	Battery Type	Integrated LFP (LiFePO <sub>4</sub> )
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.	Battery Capacity	Configurable (100Ah)
		Charging Modes	Solar, Grid
		Output Waveform	Pure Sine Wave
		Efficiency	> 90%
		Max Solar Charging Current	35A ± 5A (Boost Mostet based)
		Max Grid Charging Current	15A ± 1A (CCCV)
		Operation Logic for Charging	Solar Priority (By default) / Grid Priority
		Output Voltage (Backup Mode)	220V AC ± 2%
		Output Voltage (Grid Mode)	Same as Input
		Output Frequency on Battery	50Hz ± 0.05Hz
		Changover Time	< 8ms
		Protection	Yes (Automatic Cut-off)
		Protection Supported	Overload, 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, PRI/LW 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 65°C
		Cooling Mechanism	Intelligent Fan Cooling
		Cooling Fan Start/Stop	60°C or load above 50% / 50°C & Load below 50%
		Audible Alarm	Yes
		Bypass Feature	Manual