



KENT All-in-One Inverter

with built-in Lithium Battery

AIO 1100

AIO 2400



August 2026

User Manual

Welcome to KENT New Energy

Dear Customer,

At the outset, allow us to thank you for your trust in KENT New Energy. We take pride in our reputation for product quality and industry proven performance. We are certain that your decision to own KENT All in One Inverter will go a long way because our break-through chip embedded sine wave technology delivers the same current as you get from your mains.

This guide will help you in getting the best understanding of your Lithium inverter and its optimum use.

Best Wishes,

KENT New Energy



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INTRODUCTION

In its most basic form, a Lithium inverter transforms Direct Current (DC) to Alternating Current (AC). The battery pack with the Lithium inverter acts as a reserve to ensure continuous supply of power whenever mains supply from utility power is not available.

FEATURES:

- Sine Wave Output suitable for PCs
- DSP Based Intelligent Control Circuit
- LED + LCD Dual Display (Message and Faults)
- DSP Based Smart Charger
- Smarter Overload Sensing & Short Circuit Protection
- Easy to Service
- Battery State Monitoring
- ASIC Technology
- Great Power Saving
- Future Expandability possible
- Eco-Friendly and High Safety

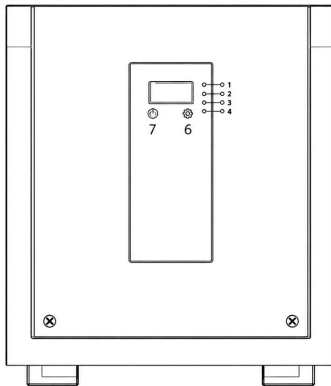


KNOW YOUR PRODUCT

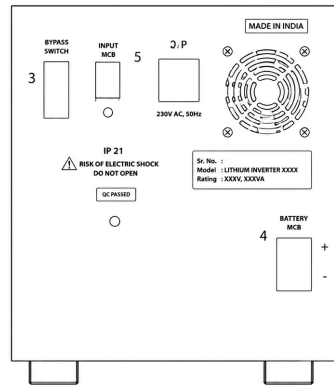
FRONT & BACK PANEL DESIGN

On the front panel of the Lithium inverter there are 3 switches and 4 LED's and on the back panel of the Lithium inverter all wiring related points like TB, socket are given. MCB and By pass switch also given.

FRONT

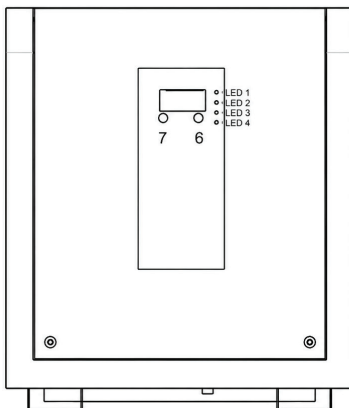


BACK

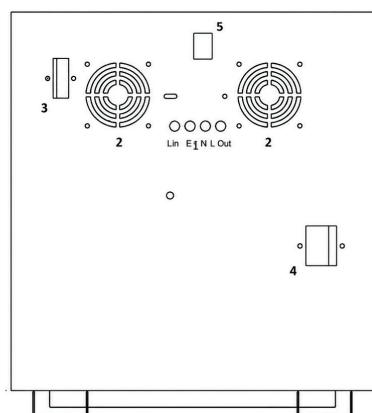


ALL IN ONE INVERTER 1100

FRONT



BACK



ALL IN ONE INVERTER 2400

Below is the table for functions of AIO Inverter

POSITION	FUNCTION	REMARK
1	Output Socket	Connect your load wire here to get the output from Lithium Inverter
2	Cooling Fan	To maintain temperature by forced cooling; Avoid blockage to this point
3	Back Side Input AC Mains Circuit Breaker (Fuse/ MCB)	Use for protection from overload and short circuit - AC Input Mains supply end
4	Battery DC Input Circuit Breaker (MCB)	Use for protection from overload and short circuit - DC inputs supply end
5	Mains Bypass	Use Mains bypass in case of system failure
6	Front side UPS/NOR Mode selection switch	Use to select between UPS or Normal (inverter) mode
7	Power ON-OFF Switch	Use for Load ON-OFF during backup mode

Note: Above Picture is for reference purpose, Actual product may differ.



DUAL DISPLAY INDICATION AND REPRESENTATIONS OF KENT AIO 1100

Condition	LED	LCD Slides
Backup Mode	LED 1: OFFLED 2: Blinking-LED 3: OFF	Load StatusLoad VoltageLoad CurrentLoad Percentage
Mains Available	LED 1: Continuous GlowLED 2: Continuous GlowLED 3: OFF	Mains VoltageMains Current
Mains Out of Range	LED 1: OFFLED 2: Blinking-LED 3: OFF	Mains HI (If Mains voltage is more then specification)Mains LOW (If Mains voltage is less then specification)
UPS/Normal Mode	As Backup/Mains Mode	UPS ON (For UPS mode)ORUPS OFF (For Normal Mode)
Battery Full Charged	LED 1: Continuous GlowLED 2: Continuous GlowLED 3: OFF	Battery Charged
Mains Fuse Blown / MCB Trip	LED 1: Continuous GlowLED 2: OFFLED 3: Continuous Glow	Display: MAINS / FUSE TRIP
Over Temperature (When Mains Available)	LED 1: Continuous GlowLED 2: OFFLED 3: Continuous Glow	Display: OVER / t
Over Temperature (When Mains Not Available)	LED 1: OFFLED 2: BlinkLED 3: Continuous Glow	Display: OVER / t
Short Circuit	LED 1: OFFLED 2: BlinkLED 3: Continuous Glow	Display: SHORT CIRCUIT
Low Battery Warning	LED 1: OFFLED 2: BlinkLED 3: Continuous Glow	Battery Voltage
Low Battery Cut	LED 1: BlinkLED 2: OFFLED 3: Continuous Glow	Display: BATTERY / Low
Over Load Warning	LED 1: OFFLED 2: BlinkLED 3: Continuous Glow	Display: LOAD / 135%
Over Load Trip	LED 1: OFFLED 2: BlinkLED 3: Continuous Glow	Display: OVERLOAD / TRIP



DUAL DISPLAY INDICATION AND REPRESENTATIONS OF AIO 2400

Condition	LED	LCD Display / Representation
Backup Mode	LED 1: OFFLED 2: OFFLED 3: BlinkingLED 4: OFF	Load StatusLoad Voltage-Load CurrentLoad Percentage
Mains Available	LED 1: Continuous GlowLED 2: OFFLED 3: OFFLED 4: OFF	Mains VoltageCharging Current
Mains Out of Range	LED 1: OFFLED 2: OFFLED 3: BlinkingLED 4: OFF	Show Mains Voltage out of specifications
UPS/Normal Mode	As Backup/Mains Mode	UPS ON (For UPS mode) UPS OFF (For Normal Mode)
Battery Full Charged	LED 1: Continuous GlowLED 2: OFFLED 3: OFFLED 4: OFF	Battery Charging current less than 3 Amp
Mains Fuse Blown / MCB Trip	LED 1: Continuous GlowLED 2: OFFLED 3: OFFLED 4: Continuous Glow	LCD displays 0000
Over Temperature (When Mains Available)	LED 1: OFFLED 2: OFFLED 3: OFFLED 4: Continuous Glow	Temperature warning symbol
Over Temperature (When Mains Not Available)	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	Temperature warning symbol
Short Circuit	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	LCD displays SC
Low Battery Warning	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	Battery Voltage
Low Battery Cut	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	LCD displays Lo
Over Load Warning	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	LCD displays 127%
Over Load Trip	LED 1: OFFLED 2: OFFLED 3: BlinkLED 4: Continuous Glow	LCD displays OL

Note:

- LED 2 will blink when you press the switch from the front side, for switch operation indication.
- Display Colour will Change as:
 - Green – When Mains/Grid Available
 - Yellow – When Backup Mode
 - Red – When any faulty condition occurs

NON-OBSERVANCE OF THIS USER MANUAL

- Trouble-free and safe operation of this inverter presumes proper, professional and workmanlike transportation, storage, mounting and installation as well as careful operation and thorough maintenance.

Notice!

- KENT is not liable for the consequences arising from faulty installation of the All in One Inverter. Among these consequences are:
 - Damage to the display and keyboard foil, deterioration of the readability.
 - Fading of the print on the housing, the look of the housing deteriorates. Therefore, choose the place of installation for the inverter so that the device is not directly or indirectly exposed to UV radiation.
 - The device must not be exposed to direct sunlight.
 - The device must be protected from reflections from glass facades.
- 

EXPLANATION OF THE SYMBOLS USED ON THE NAMEPLATE



Attention & Danger!

O/P Socket, AC Fuse, AC Input Power Cord carrying high voltage, and it remain even after being disconnected. Please be sure to wait until the capacitor have fully discharged [discharge period].



Attention

Do not operate near water or place with excessive humidity, moisture or fume

CONCEPT OF CHARGING

Five State ATM Pulse Charging

Bulk : Batteries are charged at maximum allowed continuous constant charging current at constant voltage for speedy charging battery up to desired battery voltage.

Boost : The charger checks the charging current when the battery voltage reaches to desired battery voltage for 12.8V. The boost mode of the charger will be activated, which will boost the battery up to 20% more than its rated voltage (Refer specification for boost voltage).

Taper : When the voltage level of battery is 20% more than its rated voltage, the taper mode of the charger will be activated, which will keep the charging current about 4AMP to achieve the specific gravity of electrolyte for fully charged battery.

Float : In float stage, the charger keeps the charging voltage and current level at its trickle charging set point for 12.8V. (Refer specification for float voltage)

Pulse (Reset) : To maintain the float level, the charger resets to zero current at desired float voltage for some time and starts again with pulse charging for <1AMP current at same voltage. This keeps the battery in full charge condition even when not in use.



Special Notice:

The Home UPS charger is for use with nominal battery supply voltage of 12.8V.

No AC or DC disconnects are provided as an integral part of this UPS. Both AC and DC disconnects must be provided as part of system installation.

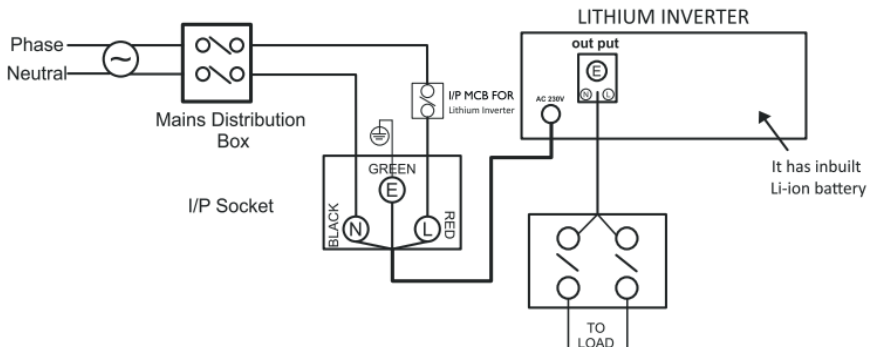
No over current protection for the battery supply is provided as an integral part of this UPS. Over current protection for the battery cables must be provided as part of the system installation.

No over current protection for the AC output wiring is provided as an integral part of this UPS. Overcurrent protection for the AC output wiring must be provided as part of the system installation.

Grounding Instructions: This UPS must be connected to a grounded, permanent wiring system.

INSTALLATION PROCESS

INSTALLATION DIAGRAM



*(1. Point to point wiring required.
2. Max. 0.8 PF of rated capacity bulb load)

Steps to Install your All in One Inverter

To be done by a professional service person.

Note :-

Environment:- All in One Inverter is a sophisticated device and must be treated accordingly. Keep the Lithium Inverter in non-condensing, well-ventilated environment, ensure that there is no ingress of moisture or foreign material.

Location:- Do not Locate the All in One Inverter in the same compartment in which non-sealed batteries, flammable or any kind of gases/fume generating materials. Because they generate gases, which are very corrosive to the electronic equipment and everything else. Always ensure there should be some distance between Inverter and the wall so that hot air from fan get some area to dissipate.

Step 1:- Switch off the supply to distribution point to which the All in One Inverter unit to be connected. Make absolutely sure with the measurement that there is no power.

Step 2:- Connect AC input supply to the power cord/terminal of All in One Inverter such that the phase is connected to L (RED), Neutral is connected to N (Black) and Earth is connected to E (Green). Make sure AC supply/Grid/Mains switch is in OFF Condition.

Step 3:- Connect output Load wires to the socket/terminal of All in One Inverter, Such that the phase is connected to L (RED), Neutral is connected to N (Black) and Earth is connected to E (Green).

Step 4:- Turn ON Battery DC MCB (Input Circuit Breaker) located at the rear panel of All in One Inverter.

Step 5:- Switch ON Power ON/OFF Switch located at the front panel of the All in One Inverter and check at display Load LED indication and also at LCD representation and also verify load is in running condition.

Step 6:- Check Input AC Mains Circuit Breaker (Fuse/MCB) is in ON Condition, if you found OFF then turn it ON.

Step 7:- Switch ON AC supply/Grid/Mains switch and check at display mains LED indication and also at LCD representation.



CAUTION

1. Before buying a Lithium Ion battery other than KENT, the consumer should match the specifications of the battery with the specifications of the system (UPS).
2. Wrong specifications of battery may cause technical problems, when used with the system. You can contact to the KENT Technical Team to know the suitable Li-ion battery.
3. Under warranty, If the fault in the system is due to other component such as Lithium Ion Battery (other than KENT provided) including BMS and installation or other component malfunction, service visit and component replaced will be on chargeable basis.
4. If the Lithium Ion Battery BMS gets disconnected or in order to Revive the Deep Discharged Battery from the system, user have to provide GRID to the system for at least 15 min. Further time depends on BMS and Battery Condition.
5. No user serviceable part inside.
6. Do not operate near water or place near excessive humidity, wet or fume.
7. Hazardous live parts inside this system are energized from battery supply, even when the input AC power is disconnected.
8. Observe correct polarity of wires.
9. Call authorised service engineer, if required.

RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER.

NOTE : O/P-1, 2 & O/P TB ARE INTERNALLY PARALLEL CONNECTED TO RUN THE LOAD CUMULATIVELY AS PER SYSTEM RATING.





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