

# ELI-S-400

EMERGENCY LIGHTING INVERTER

PHILIPS  
**bodine**

## Installation Instructions

ELI SERIES EMERGENCY LIGHTING INVERTERS



Intertek

### **! IMPORTANT SAFEGUARDS !**

WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED, INCLUDING THE FOLLOWING:

## READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. This equipment should be installed by a qualified electrician in accordance with all local and national codes.
2. This equipment should be maintained by qualified service personnel.
3. Do not use outdoors.
4. Do not mount near gas or electric heaters.
5. Do not connect with power cords. Hard wire only.
6. The batteries used in this equipment are sealed. Do not puncture them. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or in eyes, flush acid with fresh water and contact a physician immediately.
7. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition, AND VOID THE WARRANTY.
9. Do not use this equipment for other than intended use.
10. **CAUTION:** Do not exceed total output rating of this equipment.

### SAVE THESE INSTRUCTIONS



THIS PRODUCT CONTAINS A RECHARGEABLE LEAD ACID BATTERY.  
THE BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY.

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# INSTALLATION

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## STEP #1 ► INSTALLING THE EMERGENCY LIGHTING INVERTER

- > Carefully remove the cover from the box by removing the cover screws. Place cover where it will not be damaged.
- > Fasten mounting shelf (if furnished, or supply your own capable of supporting at least 100 pounds) securely to the wall using appropriate hardware (not furnished).
- > Place unit securely on the mounting shelf.
- > This equipment is supplied with 8 conduit knockouts. **Do not drill holes in cabinet. Drill filings can render the product inoperable.**
- > Extend conduit and an unswitched 24 hour AC supply of rated voltage to the unit. Power must be off at this time.
- > Extend conduit and load circuit (s) to unit. **Note load wires must be in a separate conduit from the input circuit.**

**NOTE: This unit is supplied as dual input 120 or 277 voltage; Select appropriate voltage leads.**

## STEP #2 ► WIRING THE EMERGENCY LIGHTING INVERTER

- > Make sure all connections are in accordance with the National Electric Code and any local regulations.
- > Make sure that line-in (always-on) and transfer in (wall-switch) power originate from the same (branch circuit).
- > Refer to wiring diagrams on page 4.
- > Connect AC supply of rated voltage to the proper input wires of the unit. They are marked.
  - a. Orange for 277 volt - Marked Line In 277
  - b. Black for 120 volt - Marked Line In 120
  - c. White for neutral - Marked Line In Neutral
- > Make sure all connections are in accordance with the National Electric Code and any local regulations.
- > Refer to wiring diagrams on page 4.
- > Where Applicable, Connect "Wall-Switch" switched input line and Neutral to either Black (120 volt) (marked: transfer in 120V) or Orange (277 volt) (marked: transfer in 277V) and White for neutral (marked: transfer in neutral).
- > Connect the load to the output leads.
- > Connect the AC Load leads as follows:
  - Grey (marked: Load Out Neutral) to the AC Neutral load wire; Either Brown (120 volt) wire (marked: Load Out 120V) or Red (277 volt) wire (marked: Load Out 277V) to the Load hot wire.
- Cap unused leads.**  
Connect grounds in accordance with code.

**Do not turn on AC supply at this time.**

### CAUTION:

- > **During Prolonged power outages, the system's batteries must be disconnected to prevent permanent premature failure.**
- > Connect batteries or battery assemblies to flying leads off of charger board - Red is positive and Black is negative  
- One 12 volt battery is supplied for each 100 watts of power. Emergency fixtures will not turn on at this time.

**NOTE: there will be a small arc and pop when the first battery is connected.**

- > Turn on the unswitched AC supply to the unit and the green and yellow pilot lights should come on.
- > Depress the test switch and hold it for several seconds. The pilot lights will go out and the emergency lights will stay lit.
- > Release the test switch. AC load will go off and the Yellow and Green pilots lights will illuminate.
- > Turn on the switched AC in (transfer in) Line. The AC load will stay lit until the switched AC in is turned off.
- > Replace the cover.



## OPERATION

Allow unit to charge for a minimum of 24 hours for a functional test.

Allow at least 168 hours charge period before full 1.5 hour load testing. After a full load outage, unit may require up to a week to fully recharge, depending on the depth of the discharge, age of the batteries and temperature.

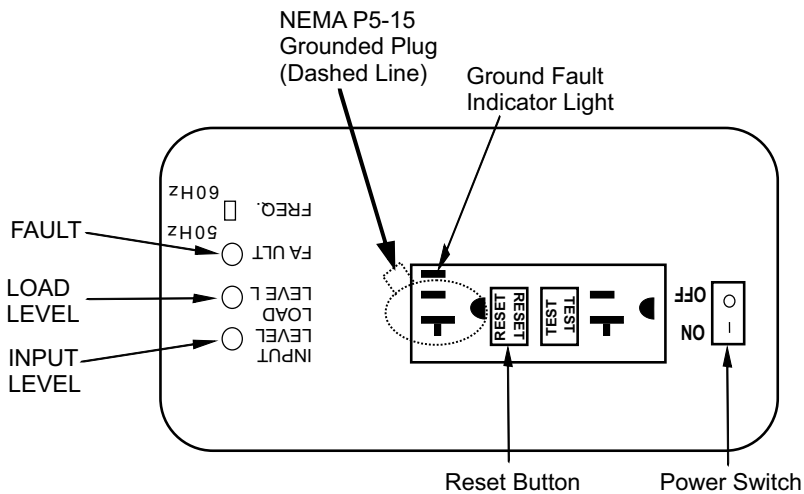
Test unit by depressing the test button for several seconds. Pilot lights should extinguish and connected AC fixtures will remain on. They may blink on and off for a couple of seconds and then come back on.

Release the test switch. The pilot lights will illuminate.

## MAINTENANCE

None required.

## IMPORTANT INFORMATION



The diagram to the left shows the inverter side panel inside the unit. If the pilot light marked "input level" is not lit then check to see that the inverter switch is in the on position. Check to make sure the ground fault reset is pushed all the way in. The load level light is dark below 10% load and changes from green to red as the connected load increases. As you approach inverter overload the light will blink bright Red.

\*Panel may look different depending on system size

## FAULT INDICATIONS

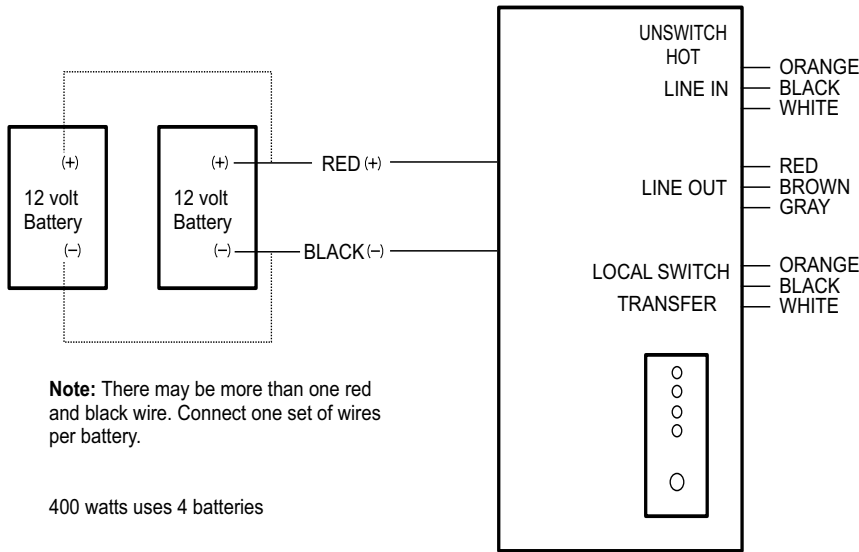
The inverter has self protection circuitry that will disconnect the battery and or load in the event of a Fault. If there is no output check the fault light for the following

Indications:

- > Quickly blinking red - the battery is above 15.3 volts and the charger and or battery is faulty.
- > Slowly blinking red - the battery is below 10.5 volts and needs to be recharged. If this occurs During the annual 90 minute test then the battery needs to be replaced as it will not sustain the Load for 90 minutes.
- > Intermittent blinking red - The inverter is hot because of overload, high ambient temperature, Blocked vents.
- > Continuous red - Serious overload or short circuit in the output wiring.

IT MAY BE NECESSARY TO RESET THE GROUND FAULT CIRCUIT INTERRUPTER (GFCI). TO DO THIS TURN THE INVERTER POWER SWITCH TO OFF. THEN WHILE HOLDING THE RESET BUTTON IN, TURN THE INVERTER POWER SWITCH BACK TO ON WHILE CONTINUING TO HOLD THE RESET BUTTON IN UNTIL THE (GFCI) CLICKS ON AND HOLDS THE RESET BUTTON IN.

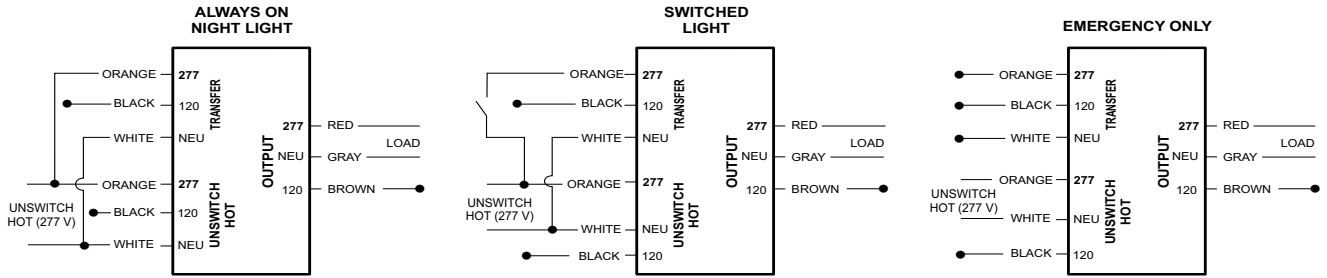
# WIRING DIAGRAM



Do not exceed total nameplate rating of equipment.

# WIRING DIAGRAMS

## 277 IN / 277 OUT



## 120 IN / 120 OUT

