

ELI™ Series Emergency Lighting Inverters

WITH SELF DIAGNOSTIC FEATURE

PHILIPS
bodine

Installation and Operation Instructions

MODELS ELI-100-SD AND ELI-250-SD



! IMPORTANT SAFEGUARDS !

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Do not use outdoors.
2. Do not let power supply cords touch hot surfaces.
3. Do not mount near gas or electric heaters.
4. Equipment should be mounted securely in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
5. The use of accessory equipment and replacement parts not recommended by the manufacturer may cause an unsafe condition.
6. Do not use this equipment for other than its intended purpose.
7. The AC voltage rating of this equipment is specified on the product label. Do not connect equipment to any other voltage.

SAVE THESE INSTRUCTIONS

INSTALLATION

- Remove front cover and any packing material inside the unit housing that may have been used for shipping purposes.
- Remove the appropriate knockout on the right side of the unit housing for the utility wiring connector being used. Also remove the two keyhole mounting knockouts in the upper corners on the back of the housing.
- Secure housing to the mounting surface through the keyhole knockouts using mounting hardware (not supplied) sized appropriately to hold the unit weight.
- Extend load wires to equipment. Referring to figure 1, connect load neutral to TB1-3 and choose either TB1-2 for 120 volts load, or TB1-1 for 277 volts load; connect load wire to appropriate terminal.
- Extend 24 hour unswitched AC supply to equipment; DO NOT CONNECT AT THIS TIME.
- If required, extend switched AC supply to equipment; DO NOT CONNECT AT THIS TIME.
- The ELI-100-SD and ELI-250-SD mini inverters have a square wave output in emergency mode that may not be compatible with some ballasts or drivers. Please check with your ballast/driver manufacturers to ensure their products are compatible with a square wave input.

11/19/10

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IMPORTANT: BEFORE CONNECTING THE AC INPUT WIRES YOU MUST DETERMINE HOW THE CONNECTED EMERGENCY LIGHTING FIXTURES ARE TO OPERATE; NORMALLY-ON ALL THE TIME, NORMALLY-OFF AND ONLY COME ON DURING A POWER FAILURE, OR SWITCHED ON/OFF. WIRE ACCORDING TO THE APPROPRIATE FOLLOWING SECTION. CONNECT GROUND WIRE IN ACCORDANCE WITH LOCAL CODES.

Normally-On Load: (Fixture remains illuminated at all times - Factory wired)

1. Caution: Make sure branch circuit breaker is open.
2. Connect unswitched utility input line wires to the appropriate terminals on TB-1. (See Figure 1 and Figure 2).
3. Apply utility power, fixture will illuminate. To test, de-energize the unit at the distribution panel (circuit breaker), fixture will remain illuminated.

Normally-Off Load: (Fixture illuminates only upon loss of utility power)

1. Caution: Make sure branch circuit breaker is open.
2. Disconnect the black* and orange* leads of transformer from the PC board. Cut off spade terminals from wire ends and splice appropriate lead to unswitched AC input; choosing either black for 120 volts or orange for 277 volts. Insulate unused wire. Connect input neutral to terminal TB1-4. (See Figure 3 and Figure 4).
3. Apply utility power, fixture will not illuminate. To test, de-energize the unit at the distribution panel (circuit breaker).

Switched: Fixture can be turned on and off from a switching device and will illuminate upon loss of utility power, regardless of the local switch position.

1. Caution: Make sure branch circuit breaker is open.
2. Disconnect the black* and orange* leads of transformer from the PC board. Cut off spade terminals from wire ends and splice appropriate lead to unswitched AC input; choosing either black for 120 volts or orange for 277 volts. Insulate unused wire. Connect input neutral to terminal TB1-4. (See Figure 5 and Figure 6).
3. Connect switched input to either TB1-5 for 120 Volts, or TB1-6 for 277 volts. (See Figure 5 and Figure 6).
4. Apply utility power. The local switching device will be able to turn the fixture on and off, but the fixture will illuminate whenever power is lost, regardless of the local switch position.

FIGURE 1

NORMALLY-ON LOADS AT 120 VAC

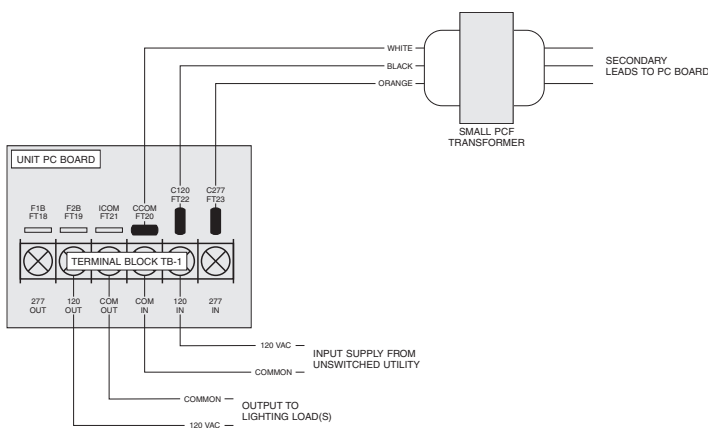


FIGURE 2

NORMALLY-ON LOADS AT 277 VAC

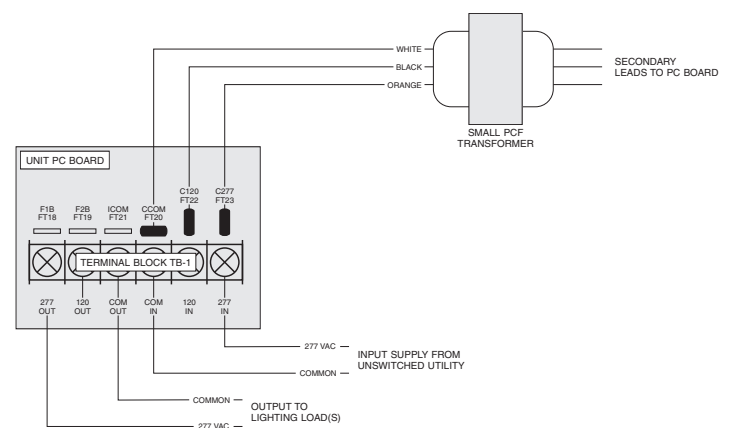


FIGURE 3

NORMALLY-OFF LOADS AT 120 VAC

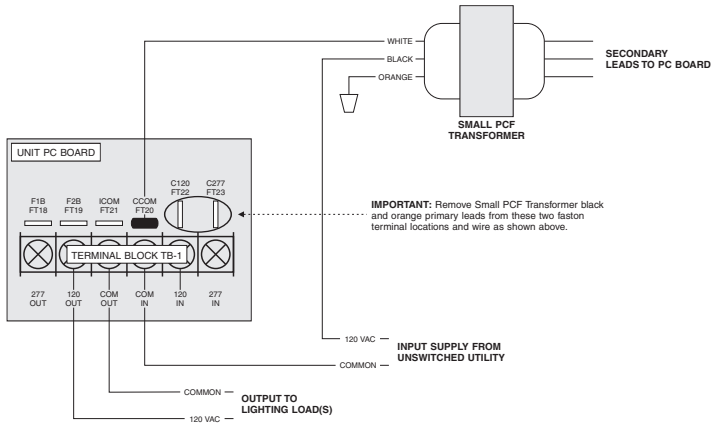


FIGURE 4

NORMALLY-OFF LOADS AT 277 VAC

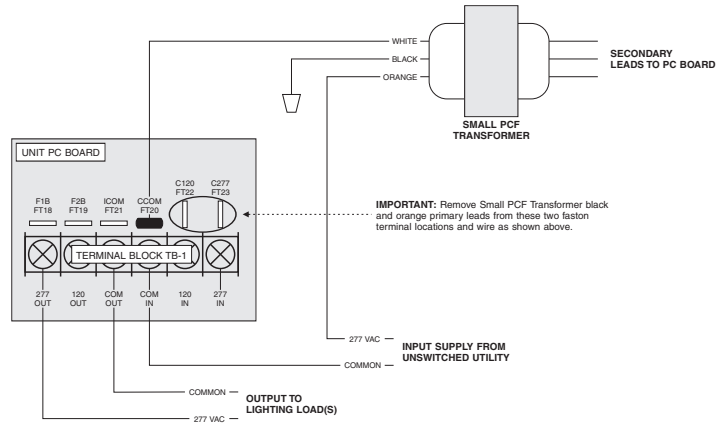


FIGURE 5

SWITCHED LOADS AT 120 VAC

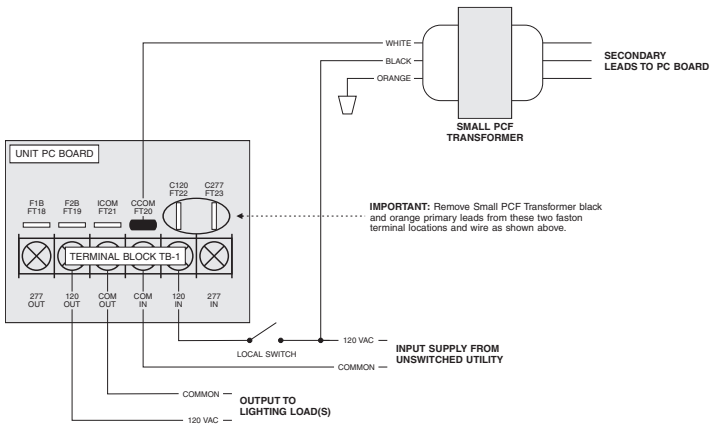
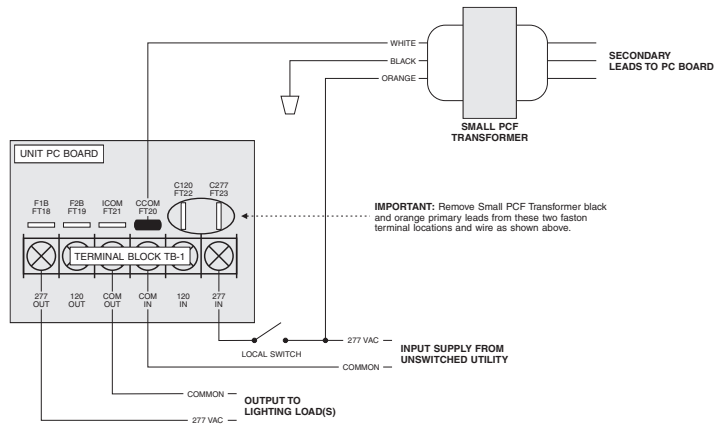


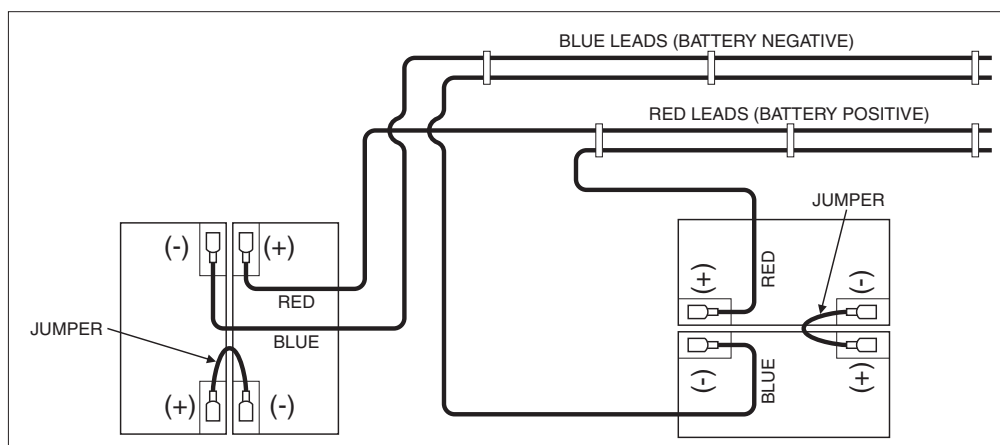
FIGURE 6

SWITCHED LOADS AT 277 VAC

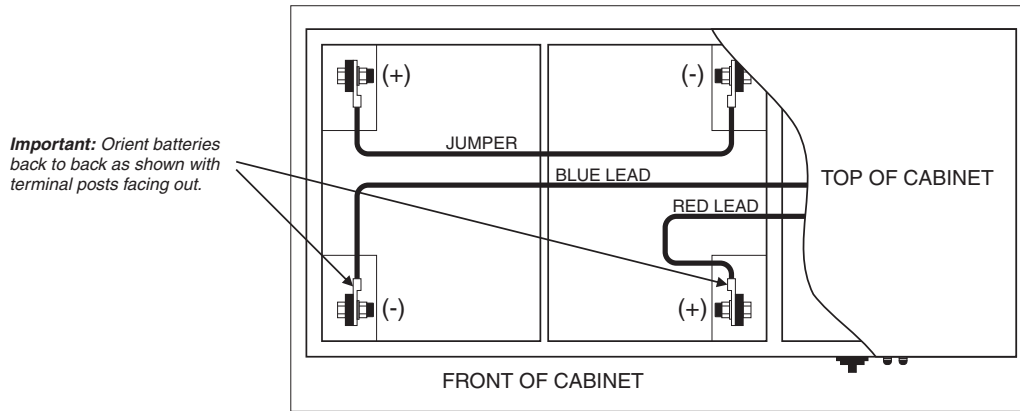


BATTERY CONNECTIONS

ELI-100-SD Models: Supplied with 4 batteries shipped separately. Connect the two blue Battery Negative (-) leads and the two red Battery Positive (+) leads from the PC board to the battery terminals as shown below. Measure the voltage across the Battery Positive and Battery Negative terminals on the PC board. The reading should measure 12 volts (± 1 volt).



ELI-250-SD Models: Supplied with 2 batteries shipped separately. Install the batteries into the cabinet and with the jumper wire supplied, connect the Battery Positive (+) terminal of the first battery to the Battery Negative (-) terminal of the second battery. Connect the red lead from the PC board to the open Battery Positive (+) terminal. Connect the blue lead from the PC board to the open Battery Negative (-) terminal. Measure the voltage across the Battery Positive and Battery Negative terminals on the PC board. The reading should measure 24 volts (± 1 volt).



Maintenance

Caution: Always turn off AC power to the equipment before servicing. Servicing should be performed only by qualified service technicians. Use only manufacturer supplied replacement parts.

Testing

NFPA 101, Life Safety Code requires that all emergency lighting equipment be functionally tested every 30 days for a minimum of 30 seconds and tested yearly for a full 90 minute duration. Written records of testing are to be kept for examination by the authority having jurisdiction.

Battery: The Battery supplied with this equipment requires no maintenance. However, it should be tested periodically and replaced whenever it will no longer operate the connected fixtures for the duration of a 90-minute test. The battery supplied has a life expectancy of 5-7 years when used in a normal ambient temperature of 72 degrees F.

Troubleshooting

Emergency lights do not operate

- If charge indicator is off: Check that circuit breaker for AC supply is on.
- If charge indicator is on: Check that the battery is properly connected and check output fuses.

Output Ratings and Replacement Parts

Model Number	Voltage	Output Ratings	Batteries	
			Part No.	Quantity
ELI-100-SD	12VDC	(2) 50 watt PL-L or equivalent, or 100 watts	PRT39-03	4
ELI-250-SD	24VDC	(4) 55 watt PL-L or equivalent, or 250 watts	PRT39-07	2

WIRING DIAGRAM

