

# LER3000 Series – Polyvinyl Combination Unit

## Emergency Light and Exit Sign

### 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 let power supply cords touch hot surfaces.
2. Do not mount near gas or electric heaters.
3. Use caution when handling batteries. Avoid possible shorting.
4. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
5. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
6. Do not use this equipment for other than intended use.
7. All servicing should be performed by qualified service personnel.

### SAVE THESE INSTRUCTIONS

#### Installation Instructions

1. Turn off unswitched AC power.

#### Canopy Mount

- a. Remove canopy assembly from carton. Remove mounting plate from canopy and retain securement screw.
- b. Route unswitched AC circuit wires into the junction box and leave 6" of wire length.
- c. Remove proper knockouts in canopy backplate for desired mounting position. For **Nexus** option, install the liquid tight fitting, provided with the unit. For Ceiling mount, use the k'out located on side of the unit. For Side mount, use the k'out located on top of the unit (see fig. 5).
- d. Feed unswitched AC wires through large hole in canopy mounting plate.
- e. Make sure the securement screw is accessible (see fig.1 & 2 part # 13). Use existing screws in junction box to secure canopy backplate to the junction box.
- f. Remove lens, exit panel and diffuser panel from the packaging.

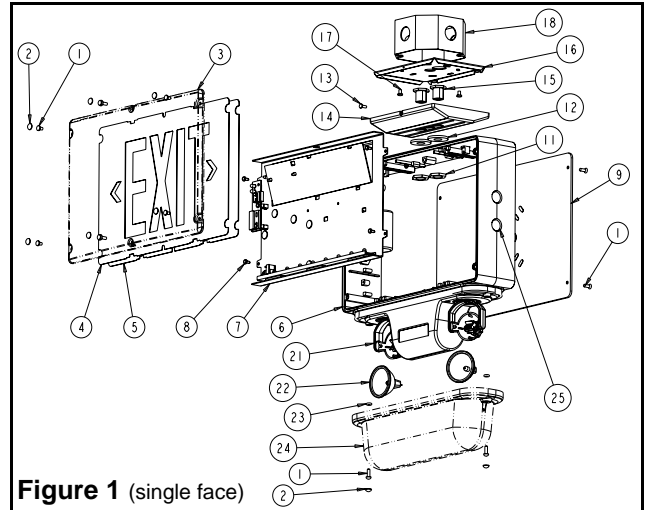


Figure 1 (single face)

#### Part List

- |   |  |
|---|--|
| 1. Tamper-proof screws short (6 per side) | 15. Nipple assembly (2)                  |
| 2. Screw covers                           | 16. Canopy backplate                     |
| 3. Lens-legend                            | 17. Junction box screws (not supplied)   |
| 4. EXIT panel                             | 18. Junction box (not supplied)          |
| 5. Diffuser panel                         | 19. Nylon washer (2 for wall mount)      |
| 6. Frame                                  | 20. Junction box gasket (for wall mount) |
| 7. Electronic module                      | 21. Swivel                               |
| 8. Electronic module screws (4)           | 22. MR16 lamp                            |
| 9. Backplate (single face sign)           | 23. O-ring                               |
| 10. Diffuser (double-face)                | 24. Lens-emergency light                 |
| 11. Lock-nuts (2)                         | 25. Knock-out cover                      |
| 12. Gasket washer (2)                     |  |
| 13. Canopy securement screw               |  |
| 14. Canopy                                |  |

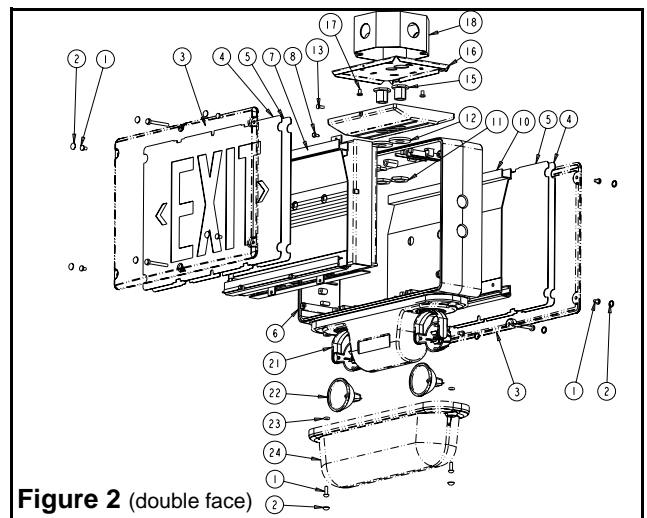


Figure 2 (double face)

- g. In order to access the knockouts of the frame, remove the 4 electronic module screw(s) holding the electronic module to the frame (see fig.3 & 4), disconnect the lamps from terminal block and remove the electronic module.
- h. Determine which holes in the exit frame will be used for mounting (see fig.1,2 & 5). Support frame by two blocks of wood, maximum one inch apart. Strike knockouts with a hammer and screwdriver. Clear holes of burrs to allow proper assembly of nipple/wire assembly. Note: end mount installation weatherproof but not certified Nema 4X (see figure 5).
- i. Secure canopy to the frame using the provided nipple/wire assembly. Make sure the gasket washers are between the canopy and frame, and the nuts inside the exit sign (see fig. 5).
- j. Reassemble the electronic module inside the frame and do the electrical connections inside the enclosure.  
Double face: diffuser (part 10 shown in fig. 2) to be removed in order to do the electrical connections (see page 3).

**Wall Mount (Single Face Model Only)**

- a. Remove the backplate from the packaging. Determine the proper knockouts to remove for mounting to a junction box (see fig.6).
- b. Support area around knockouts with two blocks of wood. Strike knockouts from the inside with a hammer and a screwdriver. For **Nexus** option, install the liquid tight fitting, provided with the unit.
- c. Remove the 4 electronic module screw(s) holding the electronic module to the frame (see fig.3 & 4), disconnect the lamps from terminal block and remove the electronic module.
- d. Mount parts 11, 12, 15 & 19 to backplate, as shown in fig. 6, and reinstall the backplate to the frame using the tamper-proof screws (use the supplied bit).
- e. Do the electrical connections inside the junction box (see page 3).
- f. Attach the frame to the junction box, using the junction box supplied screws.
- g. Use the hook provided with in the canopy to temporarily support the electronic module on the frame.
- h. Complete electrical connections (see page 3).

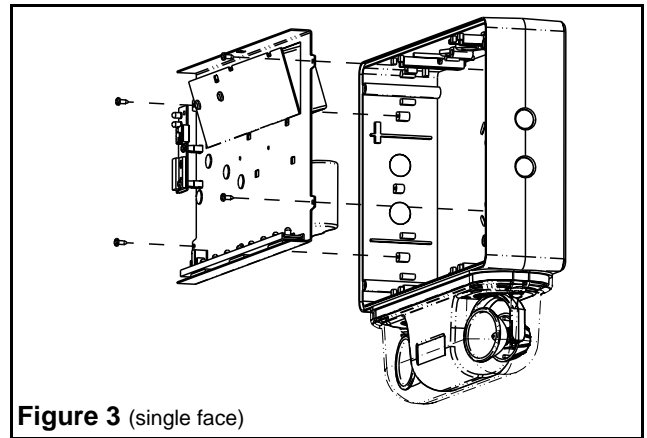


Figure 3 (single face)

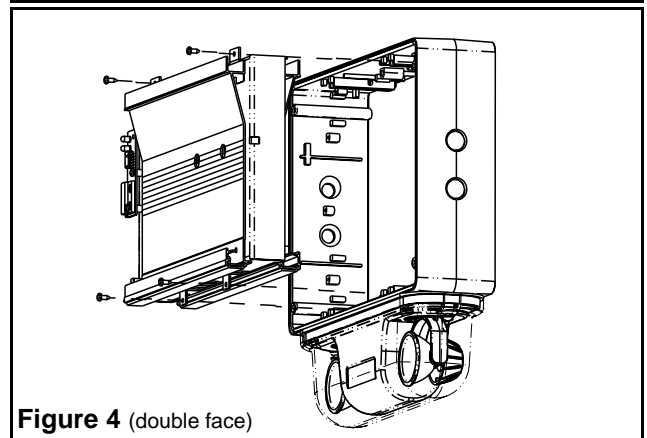


Figure 4 (double face)

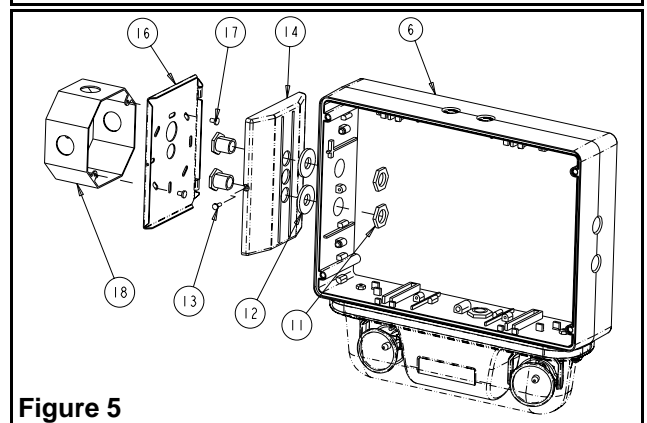


Figure 5

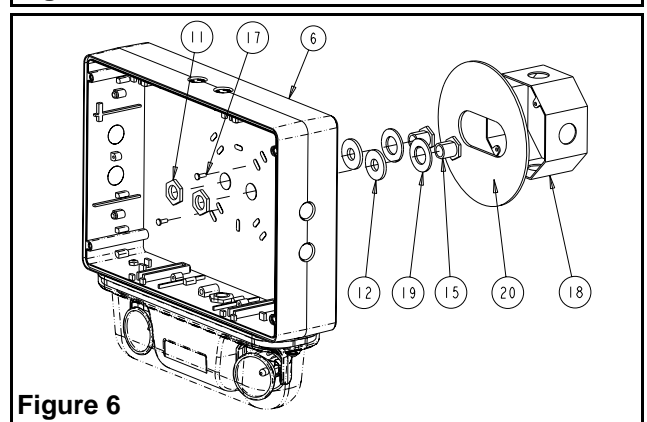


Figure 6

- Electrical connections:** Using the sealed AC nipple/wire assembly (3 wires), connect one end to the transformer leads, inside the enclosure, and the other end, to AC line voltage inside the junction box. Connect the white lead to neutral and the green lead to ground. Connect the purple lead to AC line voltage and to appropriate transformer lead (See fig. 7 for color code). Unused primary wire must be insulated to prevent shorting.

**Optional:**

For models with DC remote capacity, the sealed DC nipple/wire assembly (2 wires) will also need to be installed. One end connects to the AD charger terminal block, inside the enclosure, and the other end to DC output inside the junction box. Connect the red lead to positive, and the blue lead to the negative of the remote DC output (See fig. 7).

For models with flasher-buzzer or fire alarm, the sealed DC nipple/wire assembly (2 wires) will also need to be installed. One end connects to the optional module terminal block, inside the enclosure, and the other end to DC input inside the junction box. Connect the red lead to positive, and the blue lead to the negative (See fig. 8)

**Nexus models**

Refer to figure 9 for the wiring of Nexus models.

These units can accept an input voltage of 120 or 347 VAC:

120 VAC

Connect the black (120 VAC) lead and white (neutral) lead to the building utility. Insulate the red wire to prevent shorting.

347 VAC

Connect the red (347 VAC) lead and white (neutral) lead to the building utility. Insulate the black wire to prevent shorting.

Feed excess wire into the junction box.

Leave as much space as possible between the live voltage cabling and the unsheathed low voltage data cabling.

Run the double insulation of data cables past the line cabling section and only strip back the last 30mm of the data cable sheathing.

- For canopy mount:** Attach the canopy backplate to the junction box using the junction box screws. Mount the frame and canopy assembly to canopy back plate by using the provided securement screw.
- For wall mount:** Reinstall the electronic module inside the frame.
- Reinstall the diffuser and the EXIT panel (if required, remove the appropriate chevron).
- Install the lens by using the 4 short and 2 long tamper-proof screws. **The tamper-proof screws should be equally torqued to approximately 5 lbs-in (0.6 N-m).**
- Remove the lamps protectors.
- Energize AC. Sign will illuminate.

**Manual Testing**

Operate the magnetic “test switch” by holding the provided magnet near the AC pilot lamp, where indicated on the legende. This will initiate a one minute test. The DC lamps will illuminate for approximately one minute, then the unit will automatically return to stand by mode. Test can be cancelled by holding the magnet near the test switch again.

**Automatic Testing**

The unit will perform an automatic self-test of 1 minute every month, 10 minutes every 6 month and a 30 minutes self-test once a year.

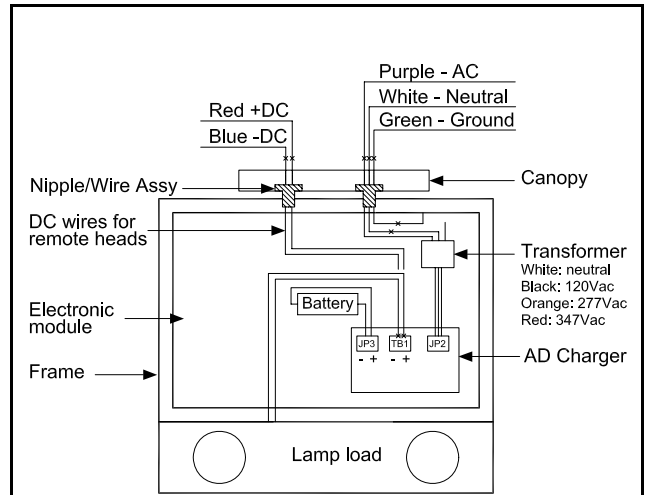


Figure 7

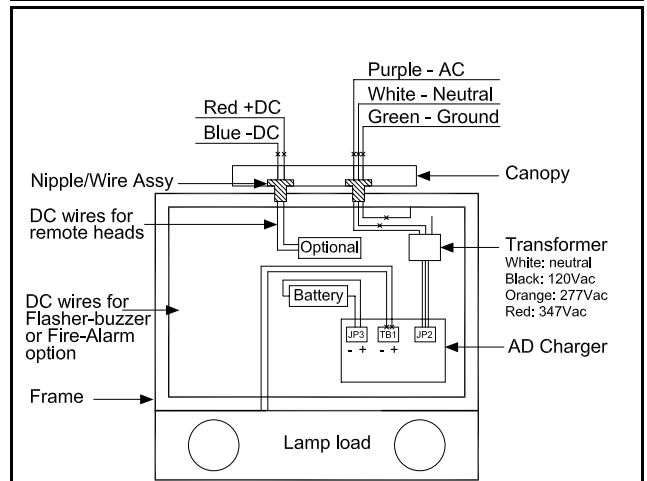


Figure 8

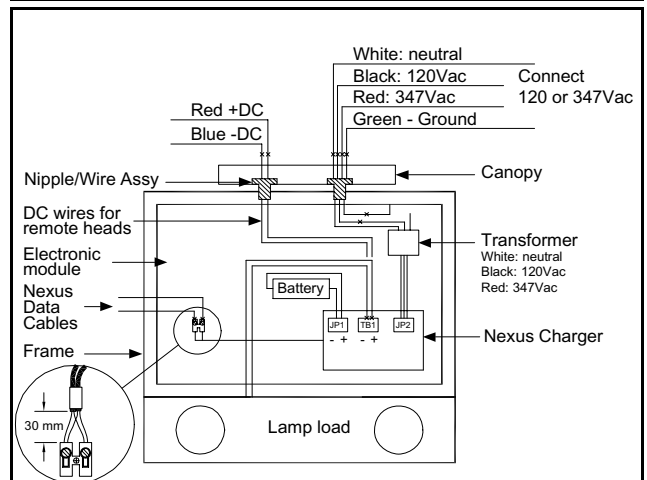


Figure 9

### Automatic Diagnostics

There are five diagnostic indicators: one external and four internal. Unit must be opened to gain access to internal indicators.

External: General alarm, “Service Required”. The LED will turn-on if any alarm condition is detected (see fig. 10).

Internal: Battery Failure, Battery Disconnect, Charger Failure & Lamp Failure. Steady ON if alarm condition exists (See fig. 11).

**Normal operation, No fault** — “Service Required” is OFF.

**Faulty operation** — “Service Required” is ON.  
(see AD charger owner manual for more details)

### Nexus models

Nexus models use two local indicators. One is a green LED for AC pilot lamp. The other is a bicolor LED (Service) which identifies and displays the Nexus status. The table below describes each status:

#### Nexus bicolor LED - Status table

	<i>Uncommissioned</i>	<i>Commissioned</i>
Normal	Red/Off pulsing	Green steady
Under test	N/A	Green/Off pulsing
Wink mode	Yellow-orange/(red or off) pulsing	Yellow-orange/Off pulsing
Neuron faulty	Red Steady	Red steady
Power fail	Off	Off
Battery disconnected	N/A	Off

### Lamps adjustment

Adjust the lamps in appropriate position. The lamp can adjusted 90 degrees horizontally and vertically when wall mounted. For canopy mount, a plastic pin can be removed to increase horizontal adjustment up to 180 degrees (See fig. 12). Lamp shouldn't be directed on opaque surface, closer than 1 meter.

### Food processing facilities

Screw and knock-out covers (see figure 1 part 2 & 25) are available in the hardware kit. These covers can be installed on screws and knock-out to avoid any food accumulation. Note: some detergent used in food processing industry can affect durability of Polycarbonate lens (see figure 1 part 3 & 24).

### Maintenance (All Models)

None required. If AC supply to the unit is to be disconnected for 2 months or more, the battery must be disconnecte.

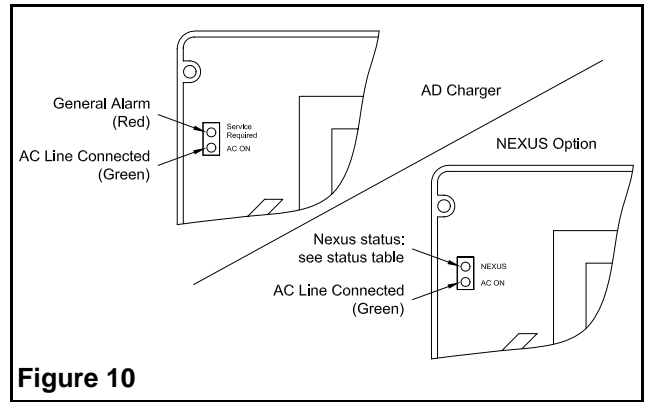


Figure 10

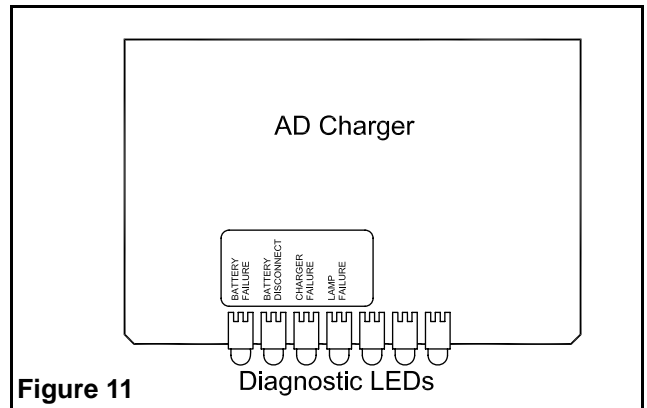


Figure 11

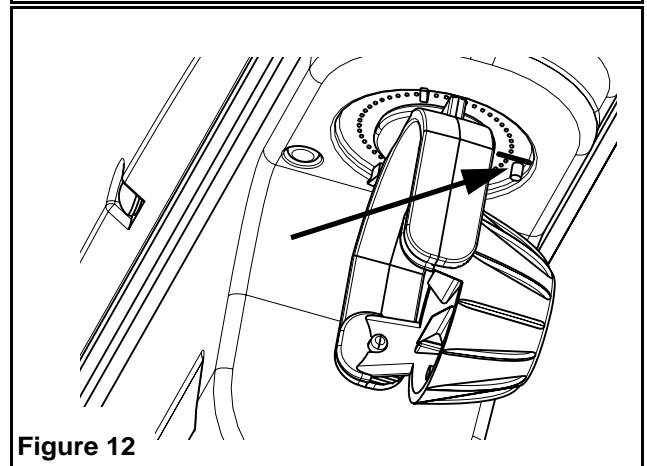


Figure 12