

Nema 4X Combination Unit Emergency Light and Exit Sign



WARNING:
Risk of Shock.
Disconnect Power before Installation.



IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. All servicing should be performed by qualified service personnel.
2. Do not let power supply cords touch hot surfaces.
3. Do not mount near gas or electric heaters.
4. Use caution when handling batteries. Avoid possible shorting.
5. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
6. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
7. Caution: If optional Halogen cycle lamp(s), symbol (H—), are used in this equipment, to avoid shattering: do not operate lamp in excess of rated voltage, protect lamp against abrasion and scratches and against liquids when lamp is operating, dispose of lamp with care.
8. Halogen cycle lamps operate at high temperatures. Do not store or place flammable materials near lamp.
9. Do not use this equipment for other than intended use.
10. Unit to be installed only as per configuration described in this instruction manual.

SAVE THESE INSTRUCTIONS

Installation Instructions

1. Turn off AC power.

Canopy Mount

- a. Remove canopy assembly from carton. Remove mounting plate from canopy and retain securement screw.
- b. Route 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 wired option**, install the liquidtight™ fitting, provided with the unit. For side mount, use the knockout located on top of the unit. For ceiling mount, use the knockout located on side of the frame (see fig. 5).
- d. Feed 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.

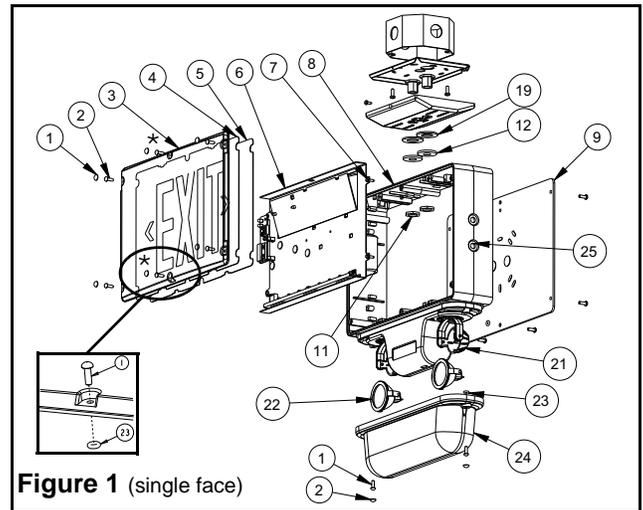


Figure 1 (single face)

*Note: Install o-rings (2x) on the screws between the lens and the frame.

Parts List

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

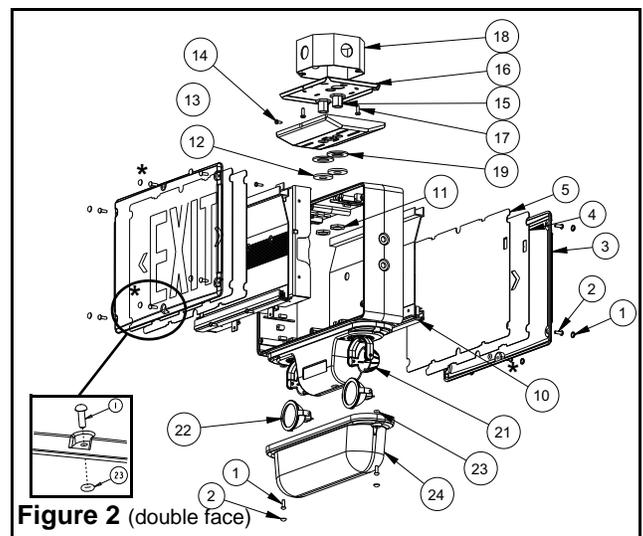


Figure 2 (double face)

*Note: Install o-rings (4x) on the screws between the lens and the frame.

- g. In order to access the knockouts of the frame, remove the 4 electronic module screws holding the module to the frame (see fig. 3 & 4), disconnect the lamps from charger board terminal "L+ & L-" (see on fig. 11) and remove the electronic module.
CAUTION! For Nexus RF models. To avoid damaging the antenna, you must be vigilant when removing and re-installing the electronic module.
 For double face models, you must first remove the diffuser (10) to pull out the module from the frame.
- h. Determine which holes in the exit frame will be used for mounting (see fig. 1,2 & 5). Support frame with 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 is weatherproof but not certified for Nema 4X (see fig. 5).
- i. Secure canopy to the frame by threading the provided nipple/wire assembly through the canopy and frame. Make sure the gasket washers are between the canopy and frame, and that the locknuts(11) are inside the exit sign (see fig. 5).
- j. Reassemble the electronic module inside the frame and do the electrical connections inside the enclosure.
- k. For double face models: Before re-installing the electronic module, you must first re-install the diffuser (10) by clipping the top section to the electronic module and then screwing the bottom section (see fig. 4).

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** wired option, install the liquidtight 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. Make 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).

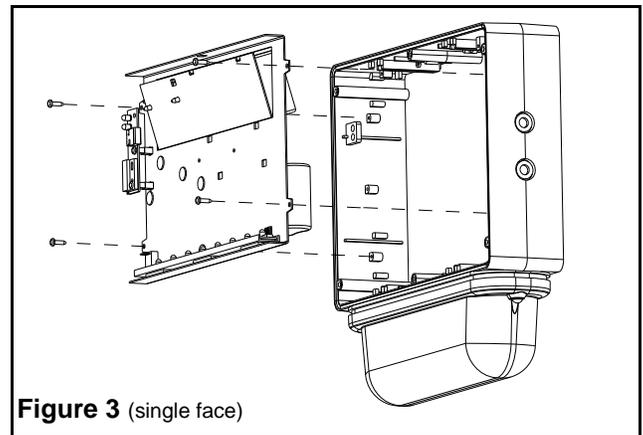


Figure 3 (single face)

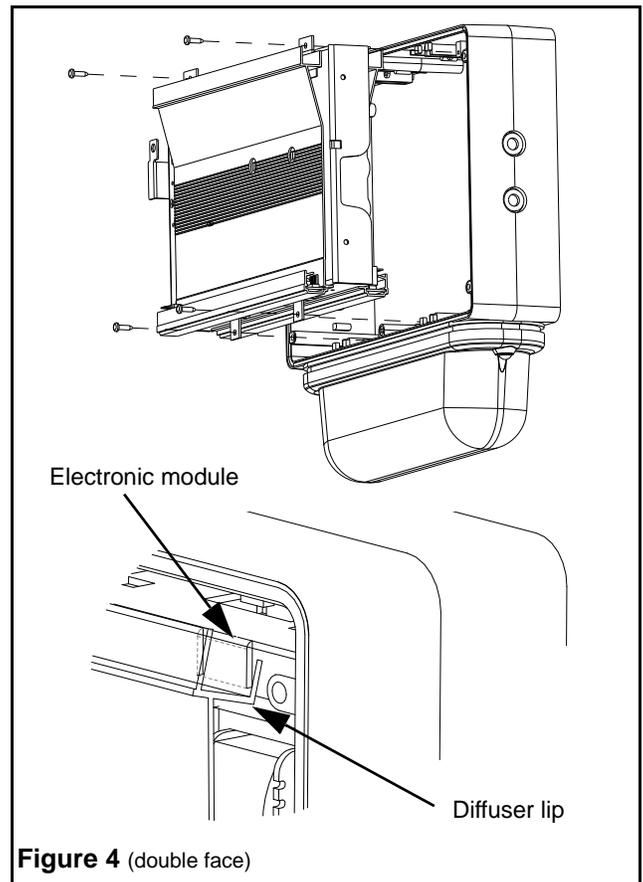


Figure 4 (double face)

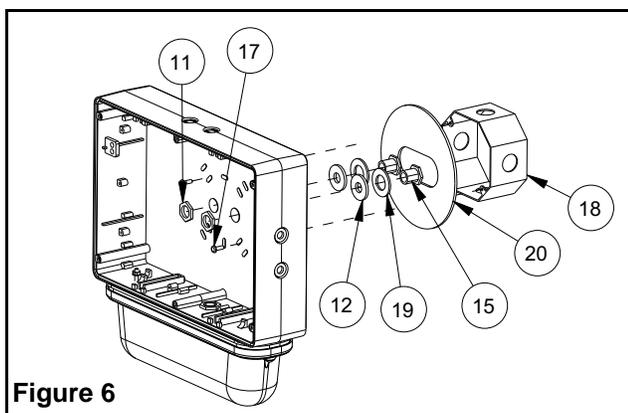


Figure 6

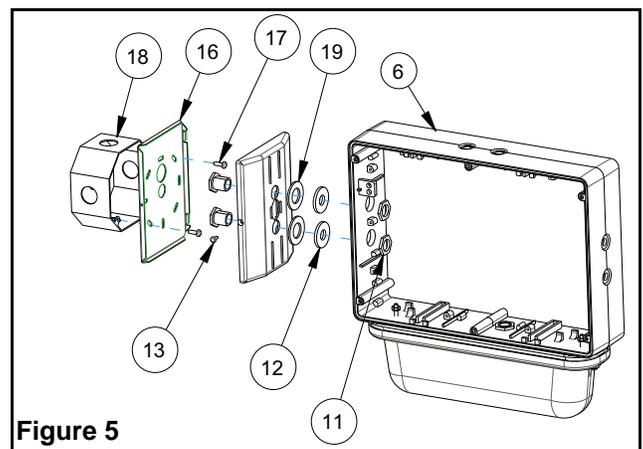


Figure 5

2. **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)

Cold weather option

For electrical connections with cold weather option, refer to the document "Addendum for cold weather option".

Nexus wired models

Route the double insulated data cables through the liquid tight fitting previously installed on frame and strip one inch (25mm) of the double insulation. The two cables are identical and both contain 2 wires of different colors: "color A" and "color B". Gather the "color A" wire from each cable, and connect them to the same pole on the terminal block. Gather the "color B" wire from each cable, and connect them to the other pole on the terminal block. The result must be 2 wires of the same color in each pole on the terminal block. Leave a minimum of one inch (25mm) between the live voltage cabling and the unshathed low voltage data cabling (Refer to fig. 9).

NOTICE: When using 347VAC with data cable FT6, the silicone sleeving must go over the data cable as shown. Refer to the "Nexus Addendum" for additional information.

Nexus RF

Refer to the "Nexus RF Addendum".

3. **For canopy mount:** Attach the canopy backplate to the junction box using the junction box screws. Mount the frame and canopy assembly to canopy backplate by using the provided securement screw.
4. **For wall mount:** Reinstall the electronic module inside the frame.
5. Connect the battery and reconnect the lamp to the charger board.
6. Reinstall the diffuser and the EXIT panel (if required, remove the appropriate chevron).
7. Install the lens-legend by using the 6 tamper-proof screws. The o-rings have to be installed on the center screws between the lens-legend and the frame (see fig. 1 & 2)

The tamper-proof screws should be equally torqued to approximately 10 - 15 in-lbs (1.1 - 1.7 N-m).

8. Remove the lamps protectors.
9. Energize AC. Sign will illuminate.

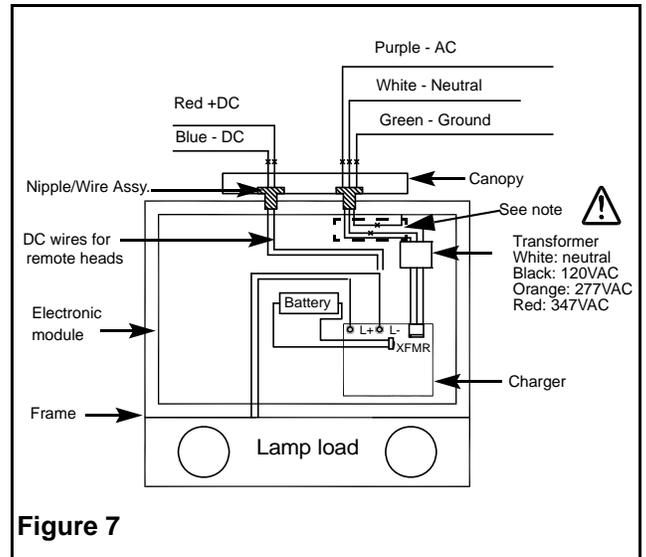


Figure 7

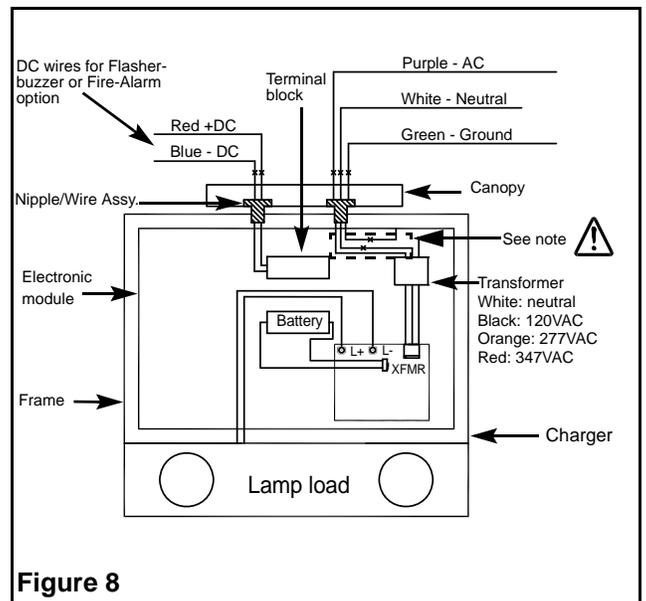


Figure 8

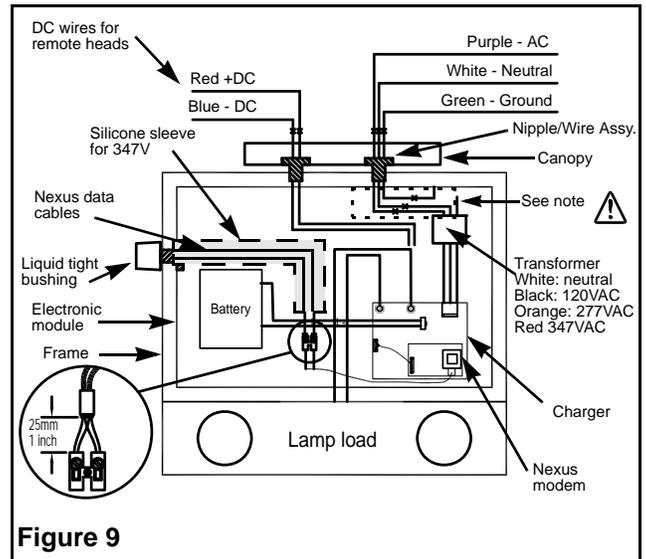


Figure 9



Primary wires connections must be isolated from charger.

Manual Testing

Operate the magnetic “test switch” by holding the provided magnet near the AC pilot lamp, where indicated on the legend. 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 and diagnostics

The automatic testing and diagnostic function includes a micro controller which self-tests the unit on a monthly basis and identifies as well displays failures of the electrical components: battery, battery charger and lamps.

Self-test

The self-test is performed every month for 1 minute, every 6 months for 10 minutes, and annually for 30 minutes.

Diagnostic function

The diagnostic function uses an external red LED indicator. Service is required if the red LED is present indicating that an alarm condition is detected (See fig. 10).

o	Green	Steady On	AC On
o	Red	Steady On	Battery Disconnect
-o	Red	Blinking	Battery Failure
o-o	Red	Two Blinks	Charger Failure
o-o-o	Red	Three Blinks	Lamp Failure
o-o-o-o	Red	Four Blinks	LED Strip Failure

For Nexus models, refer to “Nexus addendum” and for additional information about the Nexus system, go to “www.nexus-system.com”.

For more information about the AD function, please consult the “Advanced Diagnostic Charger User Manual - AD with Single LED Status User Manual”

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 fig. 1 part 2 & 25) are available in the hardware kit. These covers can be installed on screws and knockouts to avoid any food accumulation. Note: some detergent used in food processing industry can affect durability of polycarbonate lens (see fig. 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 disconnected.

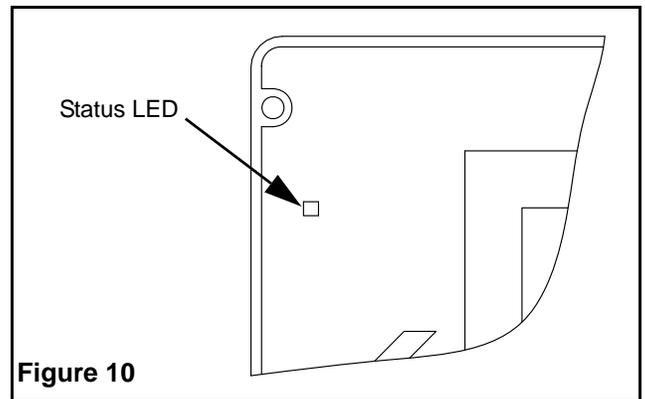


Figure 10

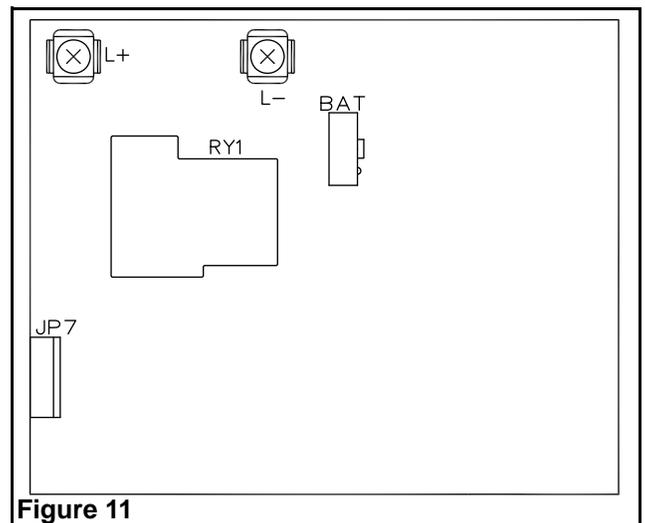


Figure 11

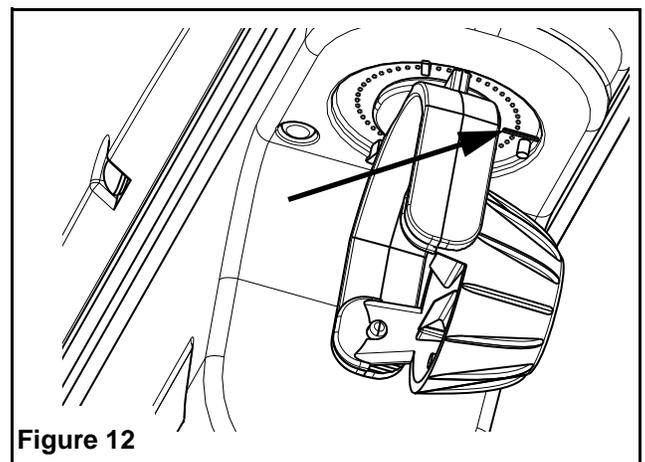


Figure 12