XV Series – Severe Exit Sign
AC/DC & Self-Powered Models

> **WARNING:**
> **Risk of Shock.**
> **Disconnect Power before Installation.**
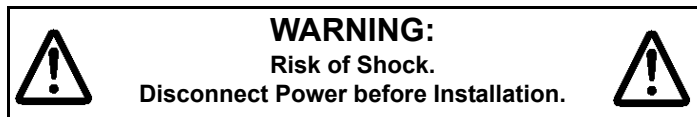
IMPORTANT SAFEGUARDS

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. All unused wires must be capped to prevent shorting.

3. Do not let power supply cords touch hot surfaces.

4. Do not mount near gas or electric heaters.

5. Use caution when handling batteries. Battery acid can cause burns to the skin and eyes. If acid is spilled on the skin or eyes, flush affected area with fresh water and contact a physician immediately.

6. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

7. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

8. Do not use this equipment for other than intended use.

9. 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 Ceiling mount, use the knockout located on side of the unit (opposite side of the diagnostic display). For Side mount, use the knockout located on top of the unit (see fig. 4).

   d. Feed AC wires through large hole in canopy mounting plate.

   e. Make sure the securement screw is accessible (see fig.1 part # 13). Use existing screws in junction box to secure canopy back-plate to the junction box.

   f. Remove lens, exit panel and diffuser panel on the front of the unit (use the supplied bit to remove the tamper-proof screws).
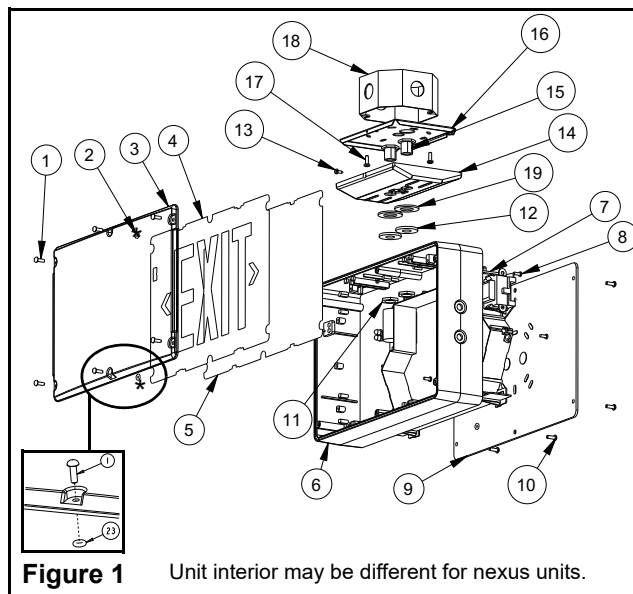

Figure 1   Unit interior may be different for nexus units.

*Note: Install o-rings on the screw between the lens and the frame.

Parts List

1. Tamper-proof screws OR Slot head screws for food processing facilities use only (6)
2. O-rings
3. Lens
4. EXIT panel
5. Diffuser panel
6. Frame
7. Electronic module
8. Electronic module screws (4)
9. Backplate (single face sign)
10. Backplate tamper-proof screws OR Slot head screws for food processing facilities use only (6)
11. Lock-nuts
12. Gasket washer
13. Canopy securement screw
14. Canopy
15. Nipple assembly
16. Canopy backplate
17. Junction box screws (not supplied)
18. Junction box (not supplied)
19. Nylon washer
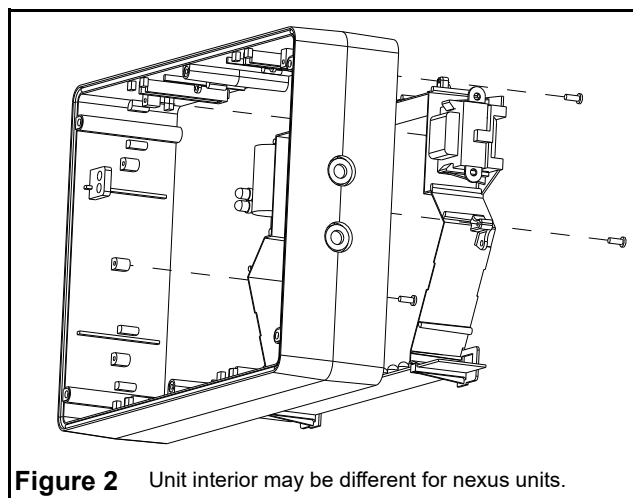20. Junction box gasket (for wall mount)

Figure 2   Unit interior may be different for nexus units.

g. In order to access the knockouts of the frame, remove the 4 electronic module screw(s) holding the electronic module to the frame and separate them (see fig.2).

h. Determine which holes in the exit frame will be used for mounting (see fig.1 & fig.3). 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.

i. Secure canopy to the frame by threading the provided nipple/wire assembly through the canopy and frame. Make sure the gasket washers and nylon washer are between the canopy and frame, and that the locknuts(11) are inside the exit sign (see fig. 1 & 3).

j. Reassemble the electronic module inside the frame.

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.4).

   For **Nexus** wired option, install the liquidtight® fitting, provided with the unit (see fig. 4).

b. Support area around knockouts with two blocks of wood. Strike knockouts from the inside with a hammer and a screwdriver.

c. Mount parts 11, 12, 15, 17 & 19 to backplate, as shown in fig. 4, and reinstall the backplate to the frame using the 4 tamper-proof screws (use the supplied bit).

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 purple lead to AC line voltage (the input is universal 110 to 277 VAC). (See fig. 5).

   Optional: For AC models used with DC remote power, the sealed DC nipple/wire assembly (2 wires) will also need to be installed. One end connects to the LED-STRIP leads, 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 of the remote DC input (See fig. 5).

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 back plate by using the provided securement screw.

   For wall mount: Attach the frame to the junction box, using the junction box supplied screws.

4. Reinstall the diffuser and the EXIT panel (if required, remove the appropriate chevron).

5. Install the lens by using the 6 tamper-proof screws. The o-rings has to be installed on the screw between the lens-legend and the frame as shown in figure 1.

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

6. Energize AC. Sign will illuminate.

Manual Testing (Self-Powered Models)

Operate the magnetic "test switch" by holding the provided magnet underneath the unit where indicated on the frame. The AC pilot lamp will go out, the legend will flicker, but remain lit. Remove the magnet. The AC pilot light will turn on, the legend will flicker but remain lit.

Automatic Testing (Self-Powered Models)

The unit will perform an automatic self-test of 30 seconds every 30 days, 60 second every 60 days and a 90 minute self-test once a year.
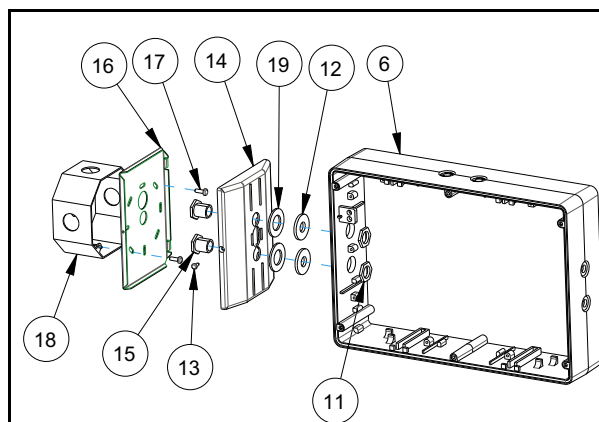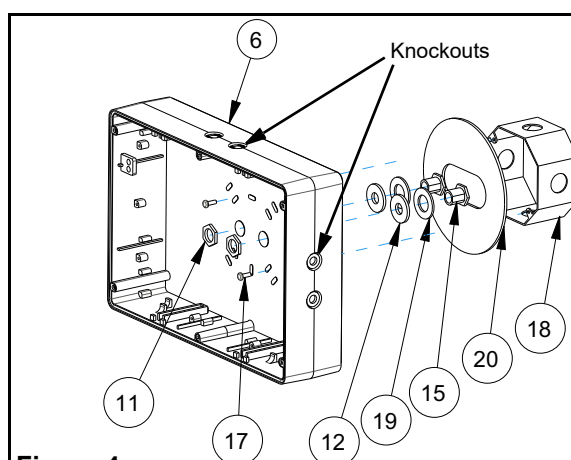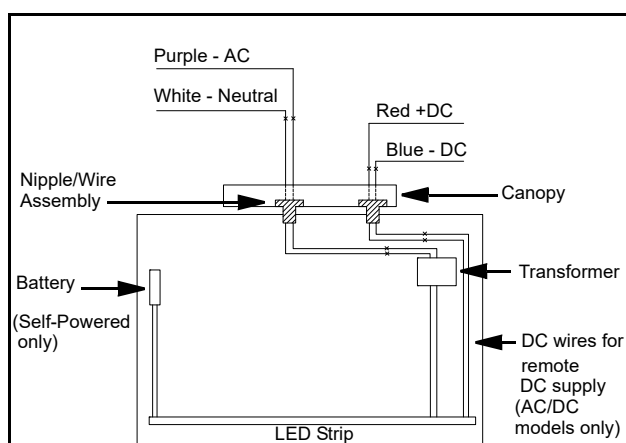

Figure 3

Figure 4

Primary wire connections must be isolated from charger.

Figure 5

Nexus models

Refer to figure 6 for the wiring of Nexus models.

These units can accept an input voltage of 120 or 277 VAC:

120 VAC — Connect the black (120 VAC) lead and white (neutral) lead to the building utility. Insulate the orange wire.

277 VAC — Connect the orange (277 VAC) lead and white (neutral) lead to the building utility. Insulate the black wire.

Feed excess wire into the junction box.

Nexus wired models

Route the double insulated data cables through the liquid tight fitting previously installed on frame and strip 1 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 unsheathed low voltage data cabling (Refer to fig. 9).

Refer to the "Nexus Addendum" for additional information.

Nexus RF

Refer to "Nexus RF Addendum 750.1575".

Nexus®Pro

Refer to "Nexus®Pro Addendum 750.2060" for important information before powering up unit.

For additional information about the Nexus system, go to "www.nexus-system.com".

Automatic Diagnostics (Self-Powered Models)

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

External: General alarm, "Service Required". The LED will blink if any alarm condition is detected (see fig. 7).

Internal: Battery Alarm & Charger Alarm. Steady ON if alarm condition exists (See fig. 8).

Normal operation, No fault — "Service Required" is OFF and one of the two internal LED blinks, showing that the micro controller is active.

Faulty operation — "Service Required" blinks.

Battery Alarm ON, Charger Alarm OFF: Check battery or replace battery.

Battery Alarm ON, Charger Alarm ON: Check LED strip.

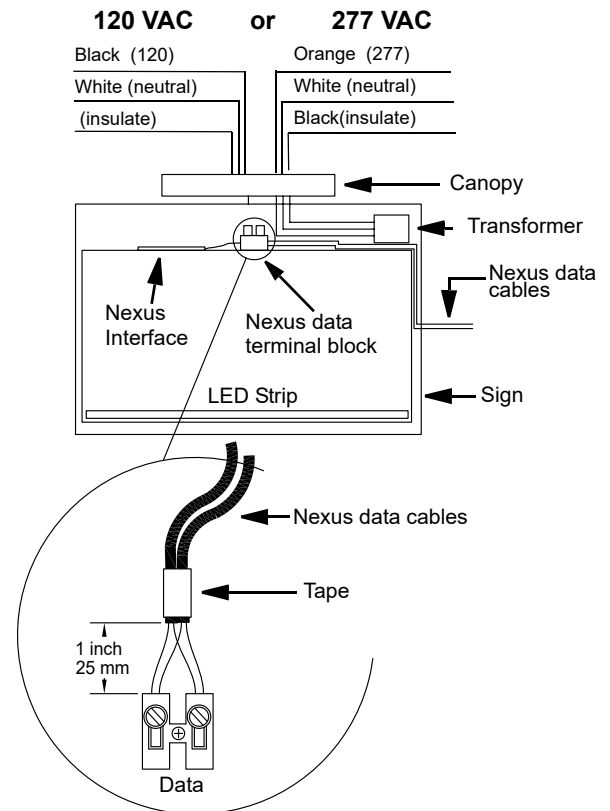Battery Alarm OFF, Charger Alarm ON: Check charger circuit.

Food processing facilities

Slot head screws and knock-out covers are available in the hardware kit. To comply with food processing facilities the tamper-proof screws must be remove and replaced with the slot head screws provided. The covers must be installed on the knockouts to avoid any accumulation of contaminants. Note: some detergent used in the food processing industry can affect durability of polycarbonate lens.

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, Self-Powered Models only.

Nexus model wiring

120 VAC or **277 VAC**

Black (120)   Orange (277)
White (neutral)   White (neutral)
(insulate)   Black(insulate)

Canopy
Transformer
Nexus data cables
Nexus Interface
Nexus data terminal block
LED Strip
Sign
Nexus data cables
Tape
1 inch 25 mm
Data

Primary wire connections must be isolated from charger.

Figure 6

General alarm (red)
Service Required
AC ON
AC Line connection (green)
Status LED

Figure 7

Charger alarm
Battery Alarm
Diagnostic board

Figure 8

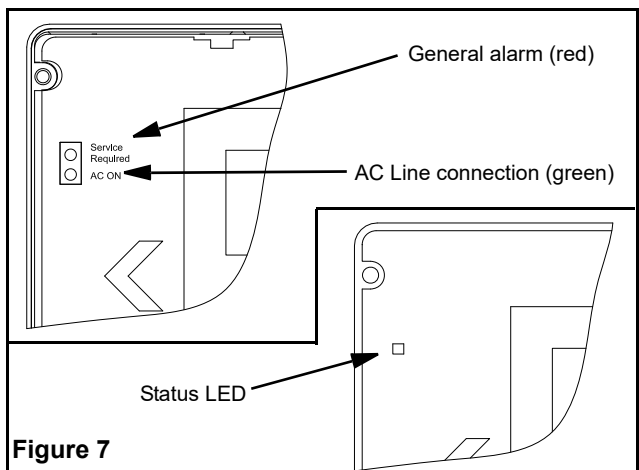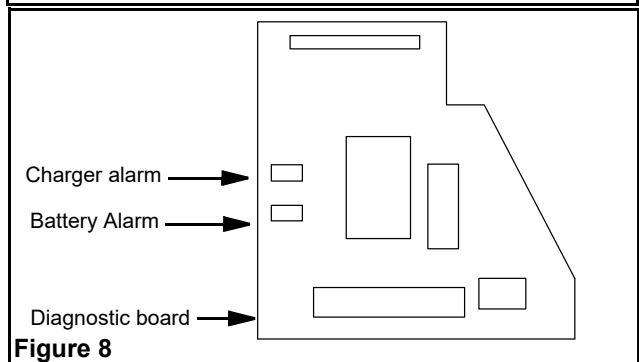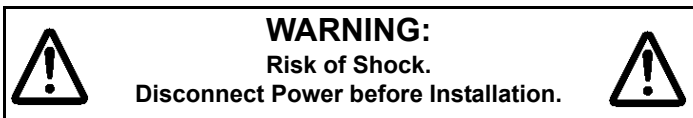| ⚠	**WARNING:** **Risk of Shock.** **Disconnect Power before Installation.**	⚠

Double Face Installation

Installation Instructions

1. Turn off unswitched AC power.
2. Remove backplate by unscrewing the six tamper-proof screws holding the backplate to the frame (see fig. 9).
3. Install the four backpanel retention screws (see fig. 10).
   Note: The four screws may already be installed.
4. Install the diffuser panel by snapping the top edges under the two top retention screws and then snapping the bottom edges under the two bottom retention screws (see fig.11).
5. The EXIT panel installs in the same manner (if required, remove the appropriate chevron).
6. Install the lens by using the 6 tamper-proof screws. The o-rings has to be installed on the screw between the lens-legend and the frame as shown in figure 12.
   The tamper-proof screws should be equally torqued to approximately 10 - 15 in-lbs (1.1 - 1.7 N-m).
7. Energize AC. Sign will illuminate.

Warranty: For the complete warranty information, please refer to the landing page of our website (http://www.lightalarms.com).
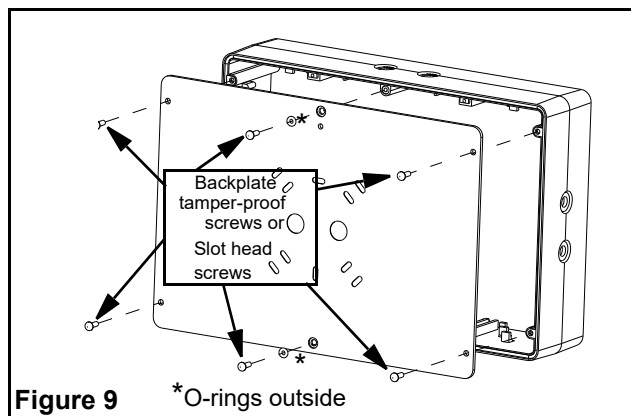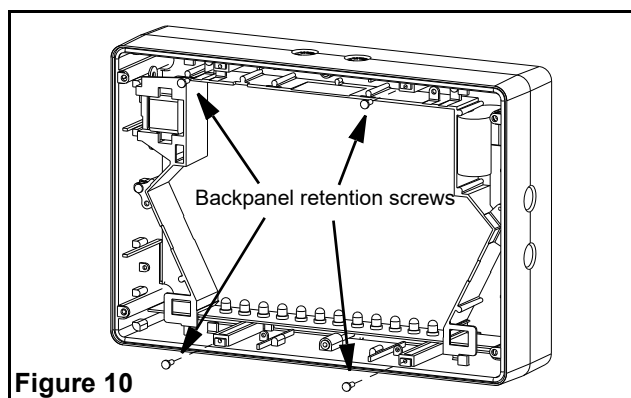

Backplate tamper-proof screws or Slot head screws

Figure 9   *O-rings outside

Backpanel retention screws

Figure 10

Snap panel under these screws

Figure 11

*O-rings inside

Figure 12