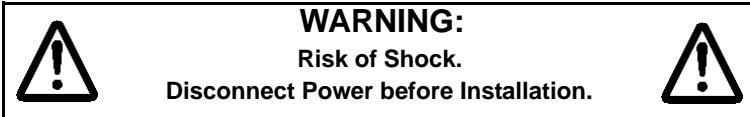


Nema 4X Battery Unit Emergency Light Unit



IMPORTANT SAFEGUARDS

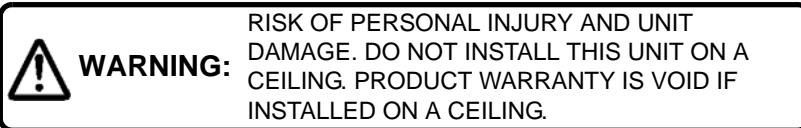
When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. All servicing should be performed by qualified service personnel.
2. All unused wires must be insulated 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. Avoid possible shorting.
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.
9. 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.
10. Halogen cycle lamps operate at high temperatures. Do not store or place flammable materials near lamp.
11. Do not use this equipment for other than intended use.
12. Unit to be installed only as per configuration described in this instruction manual.

SAVE THESE INSTRUCTIONS

Installation Instructions



1. Turn off unswitched AC power.
2. Open clear cover by removing the screws making sure not to lose the o-rings. Remove lamp protectors.
3. Remove the electronic module. Pull on the cover until snapping features disengage or use a screw driver by inserting it into the slots shown in figure 13 and prying the cover open.
4. Remove the battery(ies) in order to access the knockouts.
5. Install back plate.

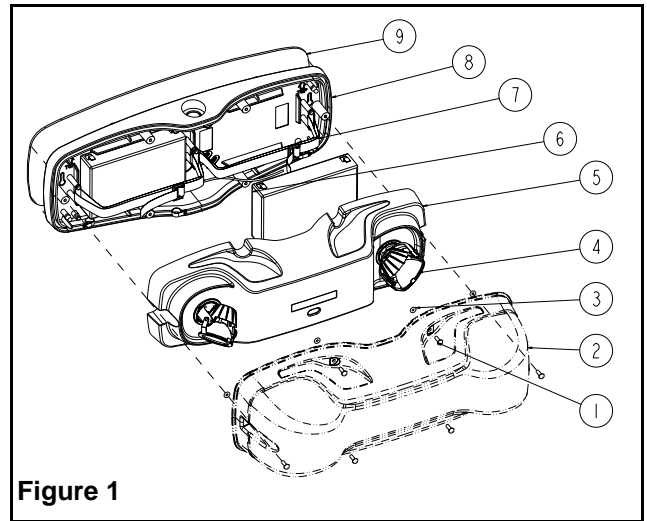


Figure 1

Parts List

- | | |
|----------------------------------------------------------------------------------------|---------------------------------|
| 1. Tamper-proof screws OR Slot head screws for food processing facilities use only (6) | 7. Battery strap or bracket |
| 2. Clear cover | 8. Backplate |
| 3. O-ring | 9. Gasket |
| 4. Lamps | 10. AC harness |
| 5. Electronic module | 11. Ground wire |
| 6. Battery | 12. Wire nut |
| | 13. J-box (not supplied) |
| | 14. J-box screws (not supplied) |

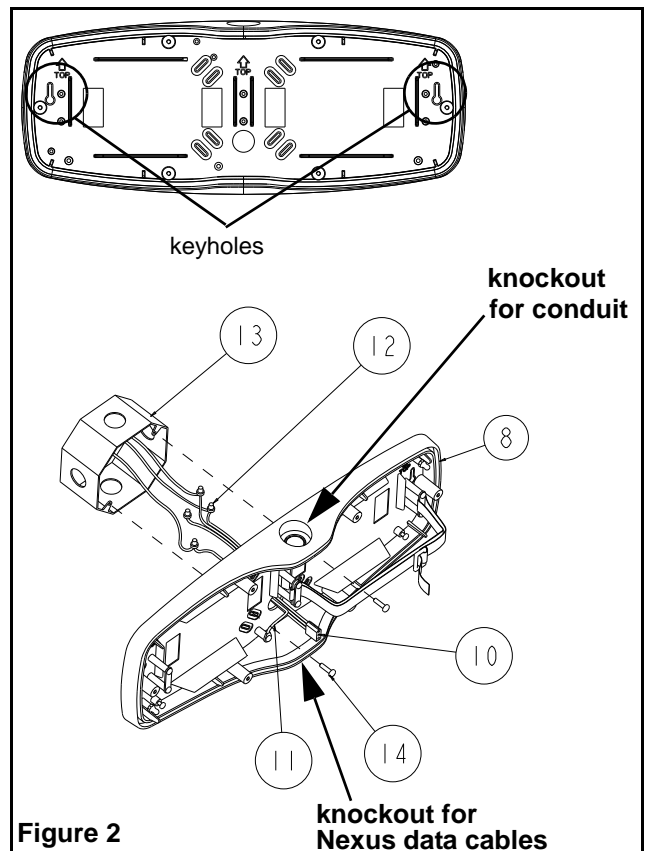


Figure 2

Wall mounting on a junction (figure 2)

- Route unswitched AC circuit wires into the junction box and leave 6" of wire length.
- Remove the knockouts needed to mount backplate. Considering the weight of the unit, it's recommended to use the keyholes for additional securing (see fig.4). For Nexus wired option, install the liquidtight[®] fitting, provided with the unit. Use the knockout located on the bottom of the unit.
- Remove AC harness from electronic module. Wire to AC circuit wires using wire nuts (see figure 2). Refer to hookup instructions on page 2.
- Install the gasket on the back plate. Feed AC harness and the ground through the large hole in the backplate (see figure 2). Mount to J-box using the J-box screws (not provided). J-box should be properly secured directly to a stud.

Note: When back mounting the unit on uneven surface such as brick, silicone caulking should be used to prevent water from seeping in between the unit and the J-box.

Wall mounting with conduit

- Remove knockout on top of the backplate for conduit entry and keyhole knockouts to fix the backplate to the wall. For Nexus wired option, install the liquidtight[®] fitting, provided with the unit, on the bottom of the backplate. Don't route data cables with AC wires.
- Install a liquidtight[®] conduit fitting on the backplate. Conduit size: 1/2" NPT (not provided).
- Install the unit on the wall using screws (not provided).
- Connect the conduit to fitting and route unswitched AC circuit wires in the unit.
- Remove AC harness from electronic module. Wire to AC circuit wires using wire nuts. Refer to hookup instructions.

Pole or I-beam mounting (Option)

- Universal bracket (part 16 on figure 4) is an accessory and needs to be ordered separately. Remove knockouts on top of the backplate for conduit entry.
- Install a liquidtight[®] conduit fitting on the backplate. Conduit size: 1/2" NPT.
- Install the universal bracket as shown in figure 4. Don't install the gasket (9). Note: this type of installation is not NSF certified for food processing areas.
- Unit can be installed using steel banding for routing around the poles and I-beam. Standard banding 3/4" in width or less can be used (not provided). It can also be mounted on a Superstrut[®] metal framing (1 5/8" channel series) using 1/4" bolt (not provided). Holes are placed at 9" apart horizontally.
- Connect the conduit to fitting and route unswitched AC circuit wires in the unit.
- Remove AC harness from electronic module. Wire to AC circuit wires using wire nuts. Refer to hookup instructions.

Note: If the unit is to be mounted vertically (see fig. 5) , the position of the lowest lamp must be at a minimum height of 7 feet 3 inches from floor level to respect the standardized light distribution.

INSTRUCTIONS - HOOKUP

- 120 VAC OPERATION - -347 VAC OPERATION-

White wire - Common
Black wire - 120V Line
Green wire - Ground

White wire - Common
Red wire - 347V Line
Green wire - Ground

Note: Secure AC wires via wire clip after having completed connections.

Unused primary wire must be insulated to prevent shorting. Primary wire connections must be isolated from charger.

To ensure watertightness:
install the o-ring
inside the unit, as shown.

Put the screw in the lens
hole and then install the
o-ring.

Figure 3

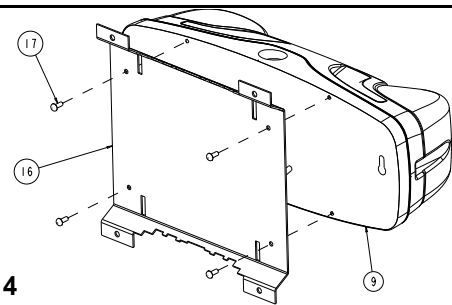
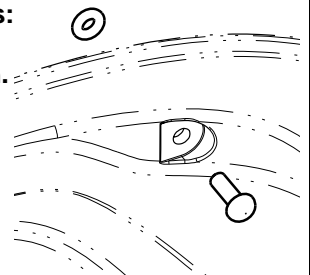


Figure 4

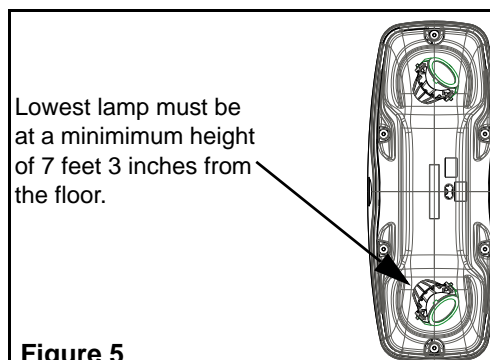


Figure 5

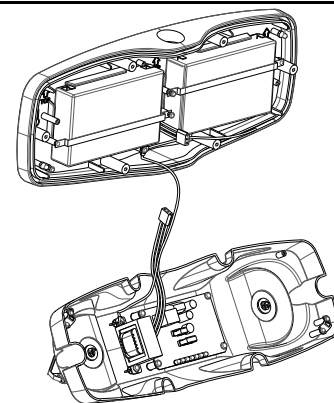


Figure 6

6. Complete electrical connection:

Standard product:

- a. Reinstall batteries and electronic module as shown on figure 6. See figure 7 for batteries wiring diagram.
- b. Connect transformer harness to AC harness.

Cold weather option:

- a. Install the gasket on the backplate.
 - b. Connect battery heater (18) to thermostat (19) and to AC harness (10) (see figure 8).
 - c. Refer to figure 9 for 120VAC input voltage and to figure 10 for 347VAC. Use wire taps provided with the hardware kit to connect battery heater. Unused wires must be insulated to prevent shorting.
 - d. Install to mounting surface.
 - e. Place the battery(ies) back in place one at a time, secure each battery with a battery bracket and screws. Battery heater is placed between the battery and the backplate. See figure 7 for battery(ies) wiring diagram. Put the electronic module back in place as shown in figure 6.
 - f. Connect transformer harness to AC harness.
7. For unit with remote capacity, connect remote heads to terminal L+ and L- (see figure 12).

Calculation of total allowable remote capacity of unit:
 Maximum remote lamp power = unit capacity minus the total power of lamps included with unit.

8. Snap electronic module on backplate.
9. Adjust lamp aiming.
10. Install the lens by using the 6 tamper-proof screws (1). To insure water tightness, 6 o-rings have to be installed from the inside (see figure 3). **The tamper-proof screws should be equally torqued to approximately 10 - 15 in-lbs (1.1 - 1.7 N-m).** If the installation is done in a food processing area, see section: (Food processing facilities).
11. Energize AC. Lamps will turn on for few minutes.
12. See page 4 for testing procedure.

Nexus:

For connections related to Nexus system, refer to Nexus Addendum.

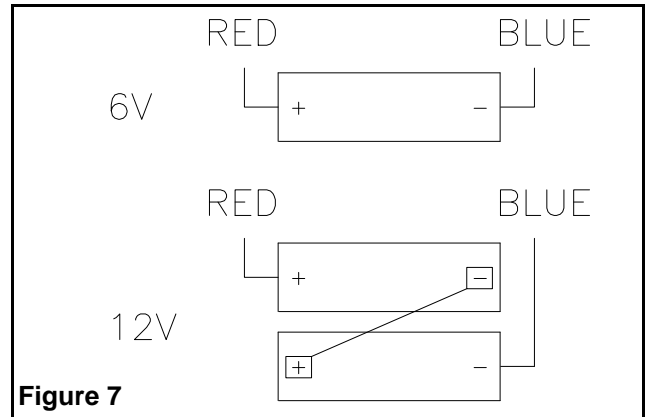


Figure 7

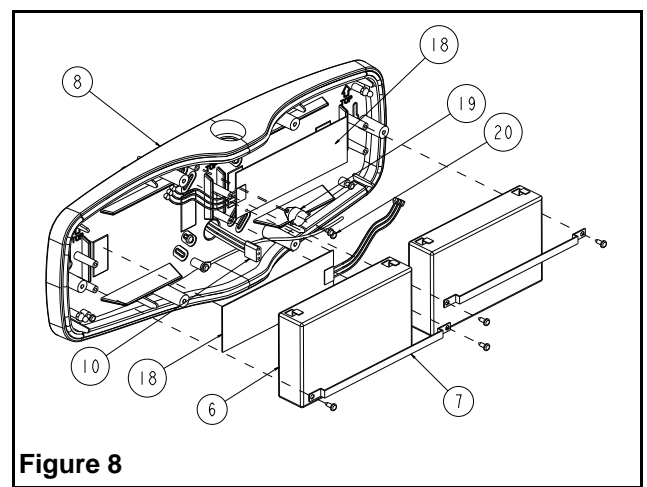


Figure 8

FOR COLD WEATHER OPTION ONLY

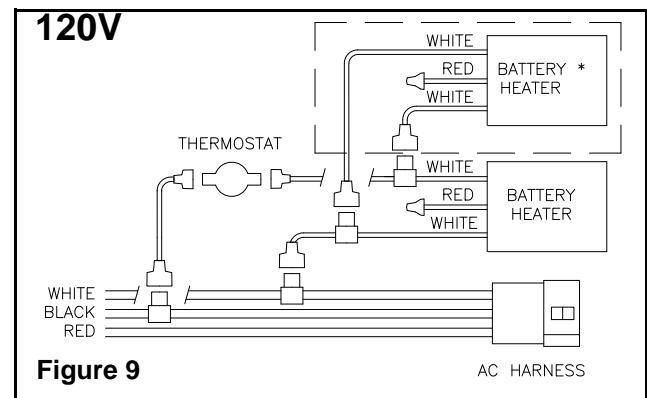


Figure 9

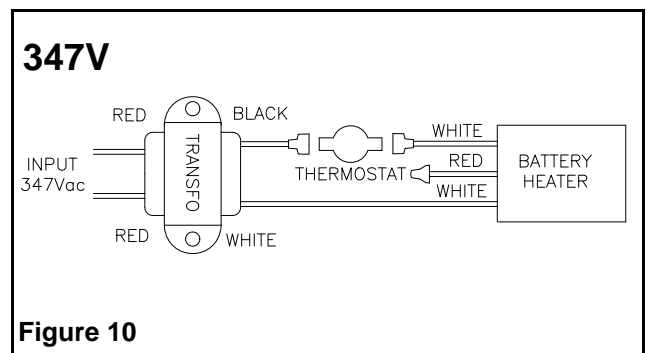


Figure 10

Unit testing

Manual Testing

Operate the magnetic test switch by holding the provided magnet near the status LED, where indicated. This will initiate a one minute test and the lamps will illuminate. At the end of the test, 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. 11).

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

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 web site for this user manual:

"AD with Single LED Status User Manual"

Food processing facilities

To comply with NSF requirements the following steps must be respected:

1. Install unit on a flat surface to ensure watertightness and avoid any gaps between the gasket and the wall.
2. The backplate must be mounted with the knockout and keyholes facing down (see fig.14). If the keyholes are used to mount the backplate to the wall, washers must be installed over the screws to ensure the backplate will not disengage from the screws.
3. If applicable plug the quick connect wires together.
4. Reinstall the electronic module as shown in figure 15.
5. Tamper-proof screws must be removed from the lens and replaced with the slot head screws provided.

Note: some detergents used in the food processing industry can affect the durability of the 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.

Warranty: For the complete warranty information, please refer to the landing page of our website (<http://www.tnb.ca/en/products/emergency-lighting/>).

