

IMPORTANT SAFEGUARDS READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

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

- **DISCONNECT AC POWER SUPPLY BEFORE SERVICING.**
- Installation and servicing of this equipment should be performed by qualified service personnel only.
- Ensure that the electrical wiring conforms to the National Electrical Code NEC® and local regulations if applicable.
- For use with metal enclosure wiring systems.
- Do not mount near gas or electrical heaters.
- Do not use outdoors.
- Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Any modification or use of non-original components will void the warranty and product liability.
- Do not use this equipment for other than intended use.
- Use caution when servicing batteries. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or eyes, flush acid with fresh water and contact a physician immediately.
- Allow battery to charge for 24 hours before first use.

SAVE THESE INSTRUCTIONS!

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900EX Series

Installation Instructions

Recessed Ceiling Installation

1. Cut a 2¾" x 15" opening in the ceiling or wall. Ensure that the opening is less than the trimplate dimensions of 3" x 15½".
2. Remove the trimplate and homeplate assembly from the recessed housing by loosening the flat screws and set aside. (Fig. 1)
3. Position recessed kits and bar hangers between joists. Make sure bar hangers are in the correct position. Position recessed kits temporarily by hammering "nail-in" tabs on bar hangers, then secure permanently with nails. Bar hangers should be level with bottom of joists. (Fig. 2)
4. Adjust height of recessed kits vertically using adjusting slots and then tightening all screws on adjusting slots and bar hanger bracket to secure adjusting bracket and bar hangers .
5. Connect the battery to the PCB, if applicable. (Fig. 3)
6. Route the wires out through the knockout hole and make electrical connections; see **Electrical Connections** section.
7. Re-attach the homeplate assembly and trimplate on the recessed housing by using original screws.

Fig. 1

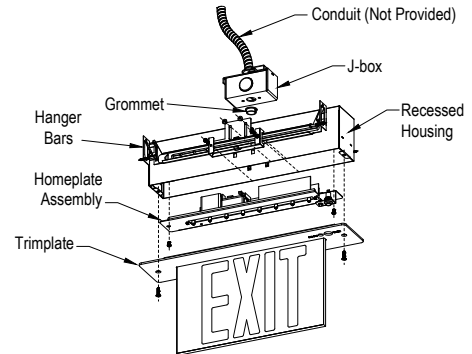


Fig. 2

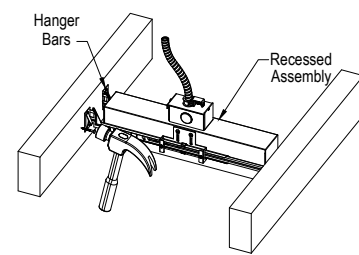
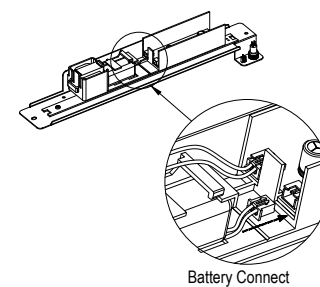


Fig. 3



Electrical Connections

Note: Cap off the UNUSED input lead. Failure to do so can cause an unsafe operating condition.

- If using 120VAC, connect the black and white wires to the building utility.
- If using 277VAC, connect the orange and white wires to the building utility.
- For **AC Input Only** please refer to (Fig. 4)
- For **Emergency Battery Backup** please refer to (Fig. 4)
- For **Dual AC Input Only** please refer to (Fig. 5)

Fig. 4

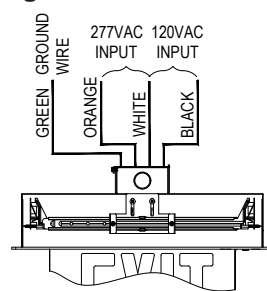
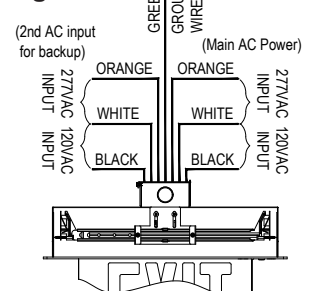


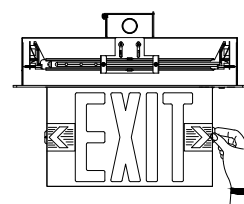
Fig. 5



Chevron Placement (Fig. 6)

- If chevron is needed remove only the instruction film.
- If no chevron is needed, remove both the instruction film and chevron together.

Fig. 6



Self-Test/Self-Diagnostics (G2)

Operation

The battery in this unit may not be fully charged. After electricity is connected to the unit for at least 24 hours, then normal operation of this unit should take effect. To check, press the “TEST” button. The EXIT sign should stay illuminated by battery backup and the LED indicator will be turned off. Release the “TEST” button, LED indicator will be turned on.

In accordance with NFPA 101, your emergency lighting system must be tested monthly for a minimum of 30 seconds and annually for 90 minutes. Refer to your local codes for any additional requirements that may apply.

Testing and Reporting Instructions

- When AC power is supplied to fixture, the unit will automatically initiate a self-test and self-diagnostic test as follows:
 - Verifies battery disconnection, charger board failure at every 5 seconds.
 - 1 minute self-testing every month.
 - 30 minutes self-testing on every 6 months after installation.
 - 90 minutes self-testing on every 12 months after installation.
- Dual color LED lamp indicator shows the following status:
 - Green color: On / Ready
blinking: Testing
 - Red color: (Service Alert)
 - Service Alert LED Code (Red color LED lamp indicator)

●	One blink, 4 second pause	Battery is not connected
● ●	Two blinks, 4 second pause	Battery voltage too low
● ● ●	Three blinks, 4 second pause	Charger board circuit failure
● ● ● ●	Four blinks, 4 second pause	Transfer function failure
● ● ● ● ● ● ●	Seven blinks, 4 second pause	LED strip failure

Note: After solving the fault of emergency equipment, please press test button for 2 seconds then release to reset. LED indicator will show green.

- “-G2” models also have a manual test function, press test button as follows:

Press test button once	(within 2 seconds)	30 seconds discharge test
Press test button twice	(within 2 seconds)	3 minutes discharge test
Press test button 3 times	(within 2 seconds)	30 minutes discharge test
Press test button 4 times	(within 2 seconds)	90 minutes discharge test

Battery Stock and Recharge Guideline

Emergency fixtures use maintenance free batteries. When a fixture is on the shelf (stored) before an installation, all battery types need regular discharge and recharge to avoid battery deterioration. Deterioration can result in permanent capacity loss or complete battery failure. The manufacturer can not provide a quality warranty for a battery if proper maintenance is not done before installation. The recharge period is always taken from the Manufacture Date written on the battery's exterior.

Lead-Acid battery: Shelf life = Recharge Required = 3 months. (Recharge should involve full discharge and recharge to at least 50% rated capacity)

Ni-Cad and Ni-MH battery: Shelf life = Recharge Required = 9 months. (Recharge should involve full discharge and recharge to at least 50% rated capacity)

LiFePO4 battery: Shelf life = Recharge Required = 12 months. (Battery should recharge to at least 50% rated capacity) Battery discharge and recharge can be performed by the emergency fixture itself and can also be performed by other professional discharge and recharge equipment, see below instructions for reference.

Battery type	Operate by EM fixture	Operate by other equipment
Lead-Acid battery (Rated 6V battery)	Discharge then charge battery around 12 hours	Discharge 100% rated capacity, Charge current 0.3A max, constant voltage 7.2-7.35V* 12 hours
Ni-Cad and Ni-MH battery	Discharge then charge battery around 12 hours	Discharge current 0.2CA to 1V per cell cut off. Charge current 0.1C*12 hours
LiFePO4 battery	Charge battery around 12 hours	Charge current 0.2CA. Limit battery voltage 3.365V per cell

Emergency fixture in stock

When a fixture is on the shelf (stored) before installation, the battery must not be connected to the PCBA in order to avoid self-discharge. Battery must be keep disconnected before installation.

If the battery is connected to the PCBA without charging the battery for over 10 days, the battery will deteriorate due to the battery self-discharge properties and cannot be recovered to its original capacity.

BATTERY SHIPPING

We advise that when shipping batteries (of any type) over long distances, where the battery may be subjected to high temperatures for long periods of time, it is best practice to not charge the battery above 60% capacity. This practice helps to minimize permanent damage to the battery.

BATTERY SAFETY INFORMATION

Proposed long term storage temperature of 15°C-25°C and humidity of 45-85% for all battery types.

Lead-Acid battery handling and storage

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under a roof for protection against adverse weather conditions and separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat.

Ni-cad battery / Ni-MH battery / LiFePO4 battery

- Do not damage or remove the external tube.
- Never throw out cells in a fire or expose to high temperature.
- Do not soak cells in water and seawater.
- Do not expose to strong oxidizers.
- Do not give a strong mechanical shock or throw down to the ground.
- Never disassemble, modify or deform.
- Do not connect the positive terminal to the negative terminal with electrically conductive material.
- Do not short or install with incorrect polarity.
- Avoid direct sunlight, high temperature, high humidity and places where it is exposed to static electricity.