

OPERATION

“AC ON” LED is illuminated when AC power is present.

NOTE: All models are supplied with an AC Lockout circuit, which prevents the “EXIT” legend from illuminating when the battery is connected and no AC power is present.

NOTE: All models are supplied with a Low Voltage Disconnect circuit, which prevents damage to the battery from deep discharge during prolonged emergency operation.

NOTE: Batteries are often shipped in a discharged state – this is normal. The battery will require charging. Allow several hours of charge before testing the unit.

Models With SPECTRON® Self-Testing/Self-Diagnostic Circuitry

Models equipped with the Spectron self-testing/self-diagnostic electronics system provide:

- Visual indication of AC power status
- Visual indication of self-diagnostic test cycle
- Visual indication of any unit malfunctions including—
- **Battery fault**
- **Transfer fault**
- **Charger fault**
- **Emergency Lamp fault**

Spectron equipped units also include:

Brownout protection: unit will automatically transfer to emergency operation upon detection of low AC power (approximately 80% of nominal line).

Time Delay Retransfer: upon return of normal AC power, unit will remain in the emergency mode for an additional 15 minutes to allow AC power to stabilize.

LED Status Indicator

A bicolor LED (green/red) is provided on the control panel of all models equipped with the Spectron option.

Green Operating Status Indicator

The green Operating Status Indicator serves as both an AC power and a self-test indicator. During normal operation, the green Operating Status Indicator will be illuminated, indicating the presence of AC power. During all automatic or manual self-test cycles, the green Operating Status Indicator will blink at a 1 Hz. rate.

Red Service Alert Indicator

Under normal operating conditions, the red Service Alert Indicator will remain “off”.

In the event the Spectron controller detects a malfunction, the red Service Alert Indicator will blink at a 1 Hz. rate, based on the following table:

Red Status Indicator Code	Description
One blink ON/pause	Battery not connected
Two blinks ON/pause	Battery fault
Three blinks ON/pause	Charger fault
Four blinks ON/pause	Transfer circuit fault
Five blinks ON/pause	Emergency Lamp fault

Automatic Tests

The unit will automatically initiate a self-test/self-diagnostic cycle based on the following table:

Testing Period	Duration of Test
Once a month	1 minute
Once every 6 months	Alternating: 30 minutes or 60 minutes

Manual Tests

Using the unit test switch, users can initiate different duration test cycles based on the following table:

Initiating Action	Test Cycle
Press test switch once	1 minute
Press test switch twice	90 minutes

Pressing the test switch at any time after a test cycle has begun cancels the remainder of the test and returns the unit to normal operation.



LN4X Series

**LED Exit Sign Listed For Damp And Wet Locations
AC Non-Emergency Models Are UL Type 4X Rated
Installation, Operation and Maintenance Instructions**



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MAINTENANCE

TROUBLE SHOOTING

•“EXIT” legend does not illuminate

- Check wiring connections.

•Emergency circuit does not work

- Batteries are shipped uncharged and disconnected. Connect power pack leads and charge before testing.
- Make sure charger board is properly seated.
- Check wiring connections.

TESTING

Signs should be tested and maintained in accordance with National Electrical Code and NFPA 101 Life Safety Code requirements. It is recommended that emergency exit signs be tested for 30 seconds once a month and for 90 minutes once a year.

REPLACING A BATTERY PACK

De-energize the AC power supply to the exit sign; remove the clear cover. Remove the white trim plate and the exit sign face. Disconnect the 2-pin battery pack connector from the charger board. Remove the battery pack from the compartment. Install a new battery pack with the correct part number into the compartment, and plug in the 2-pin connector to the charger board. Reinstall the exit sign face, white trim plate and secure the clear cover. Energize AC power to the exit sign. Allow the new battery pack to fully charge, and press the “TEST” button to verify operation.

RECYCLING INFORMATION

All thermoplastic parts are recyclable. All cartons contain recycled materials. Please recycle responsibly.

NOTICE:

Emergency model exit signs contain rechargeable nickel-cadmium batteries which must be recycled or disposed of properly.

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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. Equipment should be mounted in locations and at heights where it will not readily be subject to tampering by unauthorized personnel.
4. The use of accessory equipment not authorized by the manufacturer may cause an unsafe condition.
5. Do not use this equipment for other than its intended purpose.
6. Servicing of this equipment should be performed by qualified service personnel.
7. Test cycling: the Life Safety Code (NFPA 101) requires testing of emergency exit signs once a month for a minimum of 30 seconds and once a year for a minimum of 90 minutes.

INSTALLER:

- SEE UNIT LABEL FOR ADDITIONAL MODEL SPECIFICATIONS
- SAVE THESE INSTRUCTIONS FOR USE BY OWNER/OCCUPANT

WARNING – This product contains chemicals known to the State of California to cause cancer, birth defects and/or other reproductive harm. Thoroughly wash hands after installing, handling, cleaning, or otherwise touching this product.



Hubbell Lighting, Inc.

INSTALLATION INSTRUCTIONS

Fig.1

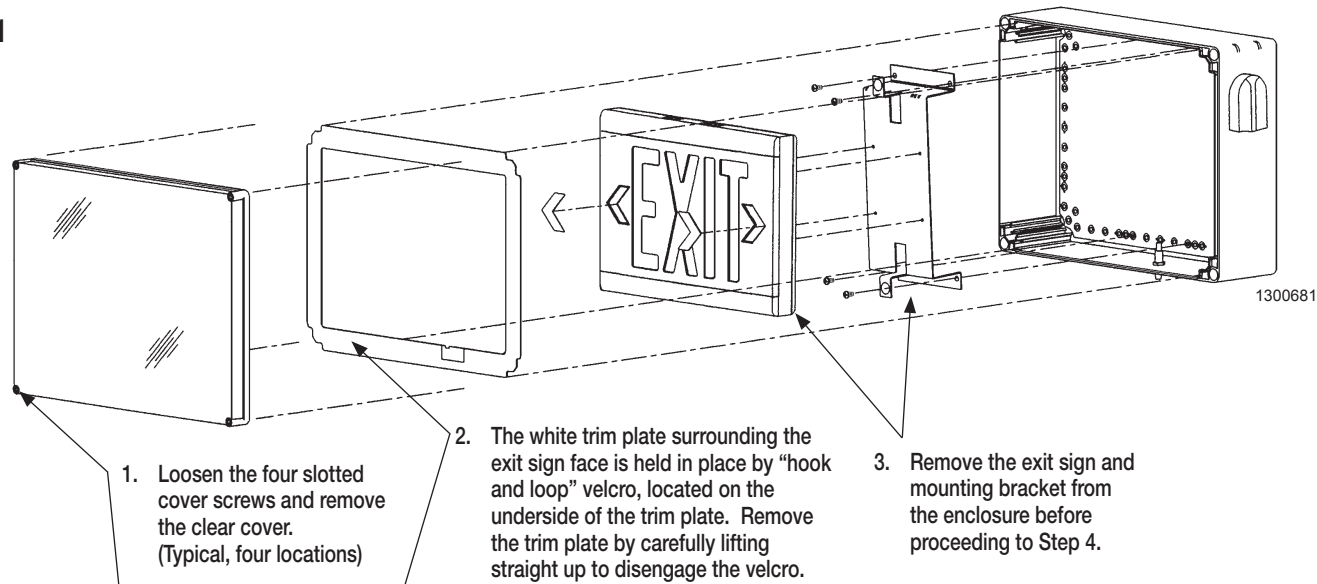


Fig.2

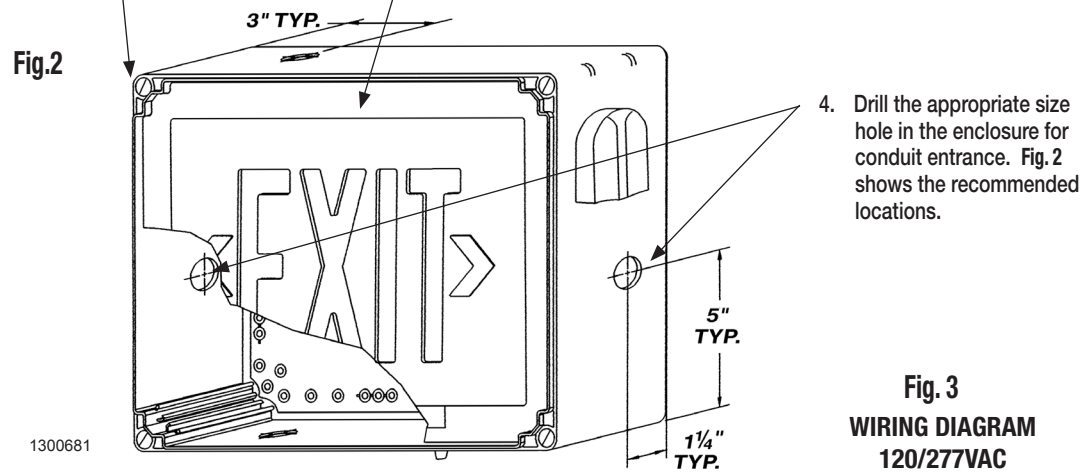


Fig. 3

**WIRING DIAGRAM
120/277VAC**

AC ONLY, EMERGENCY MODELS

To Building Utility 120 Or 277VAC

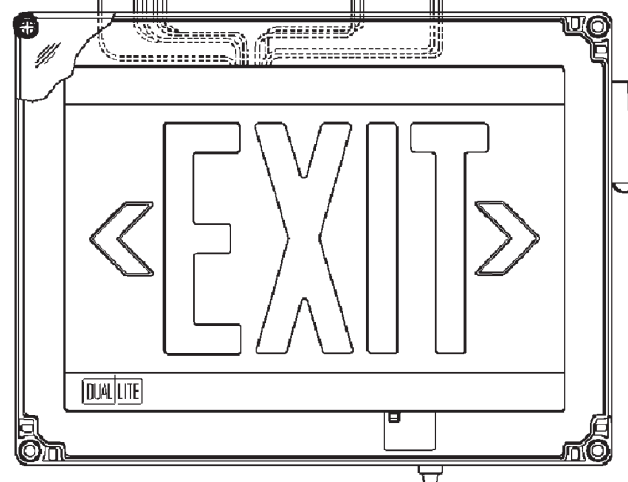
BLACK 120VAC { INSULATE UNUSED LEAD TO RED 277VAC } PREVENT ELECTRIC SHOCK

120VAC - CONNECT BLACK & WHITE WIRES
277VAC - CONNECT RED & WHITE WIRES
TRANSFORMER GROUND - GREEN WIRE

-DC OPTION (IF APPLICABLE)
TO REMOTE DC POWER SOURCE (6-24VDC)
CONNECT YELLOW (-) & BLUE (+) WIRES

-FAP OPTION 24V AC OR DC (IF APPLICABLE)
TO FIRE ALARM SYSTEM
CONNECT BOTH VIOLET WIRES

TO GROUND FROM PLATE, GREEN



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5. Connect appropriate UL Listed hub(s) to the conduit, and connect to the enclosure. Route building utility conductors through conduit and into enclosure.
6. Reinstall exit sign mounting bracket and exit sign. Remove exit sign front face from housing before proceeding to Step 7.

7. Make all connections to building utility AC conductors using color coded leads provided. See Fig. 3 and Fig 4. for appropriate wiring diagrams.

**Fig. 4
WIRING DIAGRAM
120/277VAC
DUAL CIRCUIT (-2C Option) MODELS**

Circuit 1

To Building Utility 120 Or 277VAC

BLACK 120VAC { INSULATE UNUSED LEAD TO RED 277VAC } PREVENT ELECTRIC SHOCK

120VAC - CONNECT BLACK & WHITE WIRES
277VAC - CONNECT RED & WHITE WIRES
TRANSFORMER GROUND - GREEN WIRE

-FAP OPTION 24V AC OR DC (IF APPLICABLE)
TO FIRE ALARM SYSTEM
CONNECT BOTH VIOLET WIRES

Circuit 2

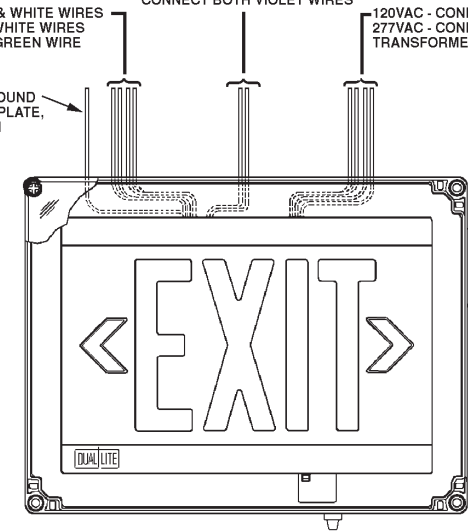
To Building Utility 120 Or 277VAC

BLACK 120VAC { INSULATE UNUSED LEAD TO RED 277VAC } PREVENT ELECTRIC SHOCK

120VAC - CONNECT BLACK & WHITE WIRES
277VAC - CONNECT RED & WHITE WIRES
TRANSFORMER GROUND - GREEN WIRE

TO GROUND FROM PLATE, GREEN

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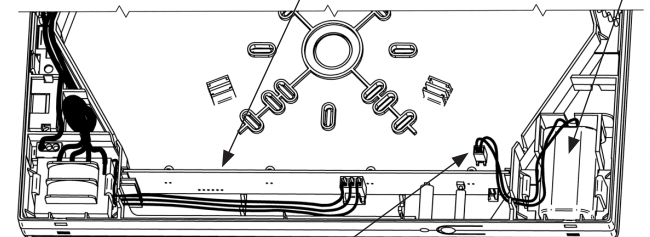
Dual-circuit transformer secondary wires connect to input connector on option board.

Connect dual-circuit primary transformer wires to utility source.
120VAC - connect black and white leads.
277VAC - connect red and white leads.

8. For emergency models, connect the battery as shown in Fig. 5.

**Fig. 5
EMERGENCY MODEL
BATTERY CONNECTION**

Charger board and battery pack. (Emergency models only).



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For emergency models, plug 2-pin battery connector into PC board.

9. Snap-in appropriate chevron arrow blank-outs in exit sign front face, if required. Reassemble exit sign face to housing. Reinstall the white trim plate (press down to engage the fastening strips). Secure the clear cover to the enclosure.
10. Energize the AC power to the exit sign.
NOTE: For emergency models, allow the battery to fully charge before testing.

IMPORTANT: This exit sign may be equipped with one or more options. Check model number suffix for option designation. Option connection wires must be run before exit sign face, white trim plate and clear cover are installed.

FIRE ALARM PANEL (-FAP) OPTION
FAP option connects to 24 volt AC or DC (purple wires).
Flash Rate: .5 seconds on, .5 seconds off. Duty Cycle: 50%.

DC REMOTE (-DC) OPTION
DC Remote option connects to 6-24 volt DC [yellow (-), blue(+)].

FLASHER MODULE (-FM) OPTION
Flash Rate: .5 seconds on, .5 seconds off. Duty Cycle: 50%

