isolite
The Emergency Lighting Experts

LPDC2 FAMILY

DIE-CAST ALUMINUM EXIT SIGN

INSTALLATION AND OPERATING INSTRUCTION

IMPORTANT SAFEGUARDS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Install in accordance with all national and local electrical codes.
2. Disconnect power at circuit breaker or fuse before installing or servicing the unit.
3. DO NOT mount in hazardous locations, near gas or near electric heaters.
4. DO NOT let power cords contact hot surfaces.
5. Equipment should be mounted in locations and at heights where it will not be readily subject to tampering by unauthorized personnel.
6. DO NOT use accessory equipment not recommended by the manufacturer. The use of such equipment may cause unsafe condition and will void the unit's warranty.
7. DO NOT use this equipment for other than it's intended purpose.
8. All servicing should be performed by qualified personnel only.
9. Allow battery to charge for 24 hours before first use.
10. For indoor use only, unless WL (Wet Location) option is selected.

SAVE THESE INSTRUCTIONS

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NOTES

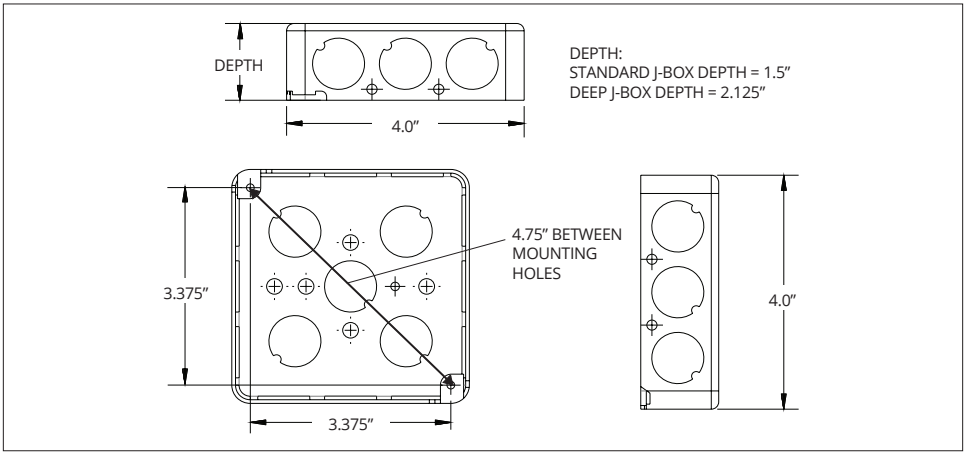
WET LOCATION
Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the housing after installation. Additionally, when mounting the exit sign on a weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings, for optimal protection against outdoor elements.

INSTALLATION
Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the housing after installation. Additionally, when mounting the exit sign on a weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings, for optimal protection against outdoor elements.

INSTALLATION PREPARATION

Surface mounting requires a 4" octagon junction box to be securely mounted in the wall, note that surface back and surface ceiling mounting may also be accomplished with a 4" square junction box. The box should be rigidly supported to the wall framework with either brackets or studs. Wire power receptacle assembly to the AC supply as per wiring instructions below. Securely fasten spider plate to junction box with the two #8-32 tapped holes.

FIGURE 1: Junction Box Dimensional Outline



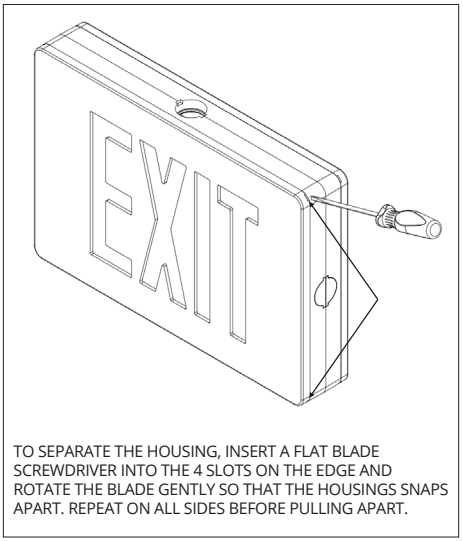
REMOVE THE LENS HOLDER (SURFACE BACK ONLY
In order to allow access to the bottom mounting screw on the canopy, it is necessary to remove the lens holder from the main assembly. Insert a 1/16" rod (or paperclip) into the hole in the side of the main housing to release the lens holder. Disconnect the battery terminal, then proceed with the installation. Once the canopy is mounted to the spider plate, reconnect the battery and snap the lens holder into position, taking care to not pinch any wires or press the connector against any components.

INSTALLATION OF FIXTURE TO SPIDER PLATE
Attach power plug to power receptacle and push back into the fixture. Fasten fixture to spider plate with supplied countersunk screws.

KNOCKOUTS AND CHEVRONS

FIGURE 2: Opening the Sign

Open the enclosure and separate panels using a flat blade screw driver (as shown below).



TO SEPARATE THE HOUSING, INSERT A FLAT BLADE SCREWDRIVER INTO THE 4 SLOTS ON THE EDGE AND ROTATE THE BLADE GENTLY SO THAT THE HOUSINGS SNAPS APART. REPEAT ON ALL SIDES BEFORE PULLING APART.

FIGURE 3: Rear Panel Knock Outs

Support the rear panel on spacers and punch out appropriate knockouts to fix the junction box.

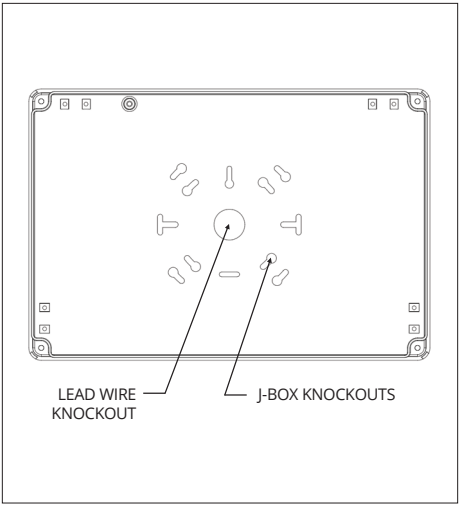
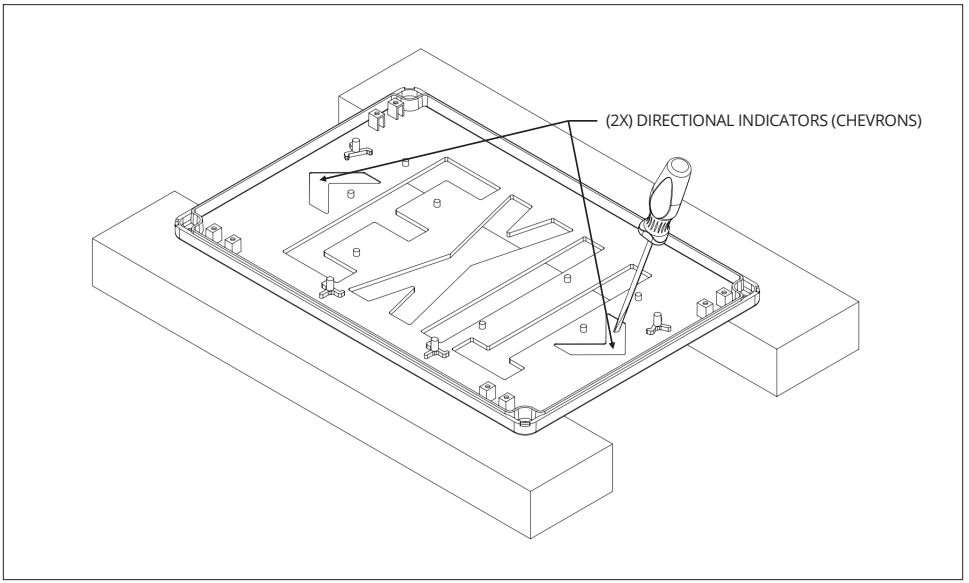


FIGURE 4: Removing the Directional Indicators (Chevrons)

To remove the directional indicators (chevrons, remove light guide assembly and diffusers and set aside. Support front cover and knocked out desired indicators.

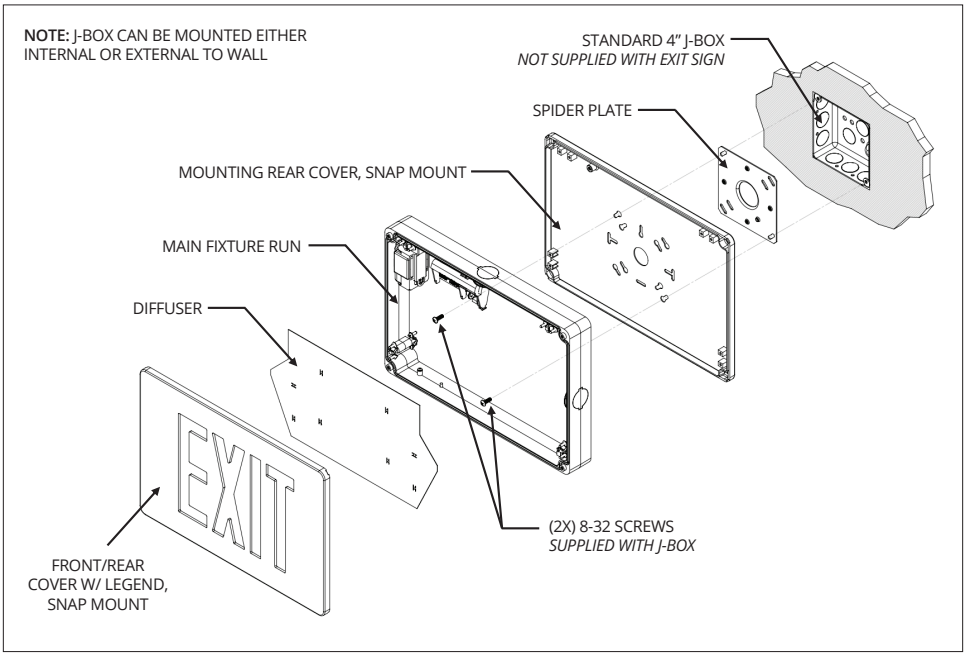


MOUNTING INSTRUCTIONS

BACK MOUNT

1. Connect the power plug to the power receptacle, then push it back into the junction box.
2. Proceed to install the spider plate onto the junction box. Secure the spider plate firmly onto the junction box. Route the transformer's primary leads through the desired knockout of the sign. **NOTE:** When connections are being made local regulations must be followed.
3. Ensure that the wires are not visible when inspecting the sign from the front face.
4. Snap the front panel into place to complete the assembly process.

FIGURE 9: Indoor Back Mount Assembly (Single Face)



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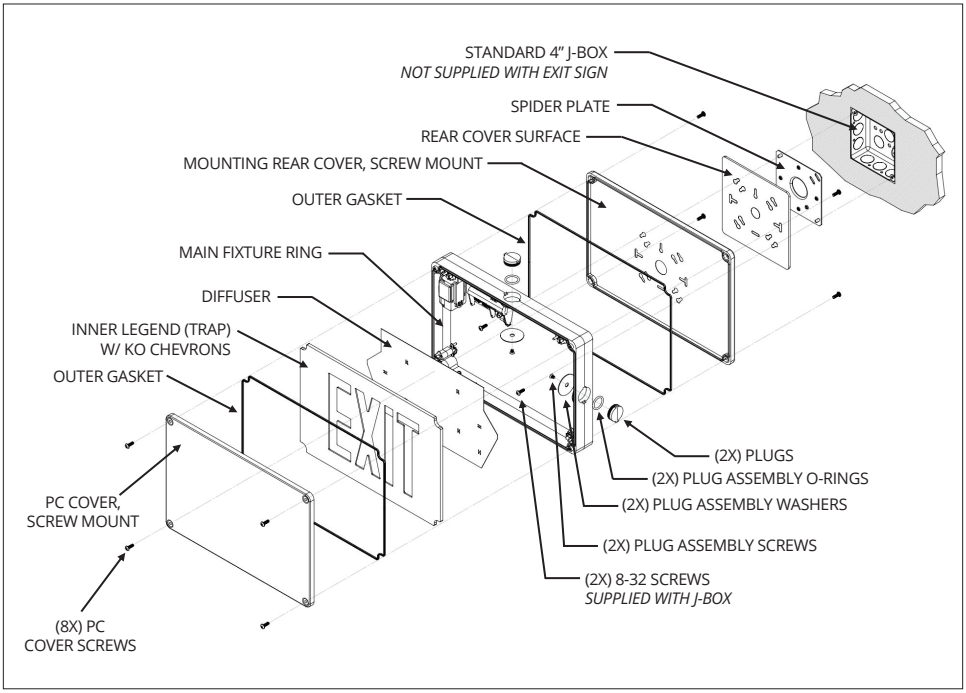
MOUNTING INSTRUCTIONS
CONTINUED

RECESSED J-BOX OUTDOOR BACK MOUNT (SINGLE FACE)

1. Connect the power plug to the power receptacle, then push it back into the junction box.
2. Proceed to install the rear cover surface followed by the spider plate onto the junction box.
3. Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the housing after installation.
4. Route the transformers primary leads through the desired knockout of the sign.
   NOTE: When connections are being made local regulations must be followed.
5. Ensure the a the wires are not visible when inspecting the sign from the front face.
6. Snap the front panel into place to complete the assembly process.
7. When mounting the LPDC2 on a weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings for optimal protection against outdoor elements.

FIGURE 10: Recessed J-Box Outdoor Back Mount (Single Face)

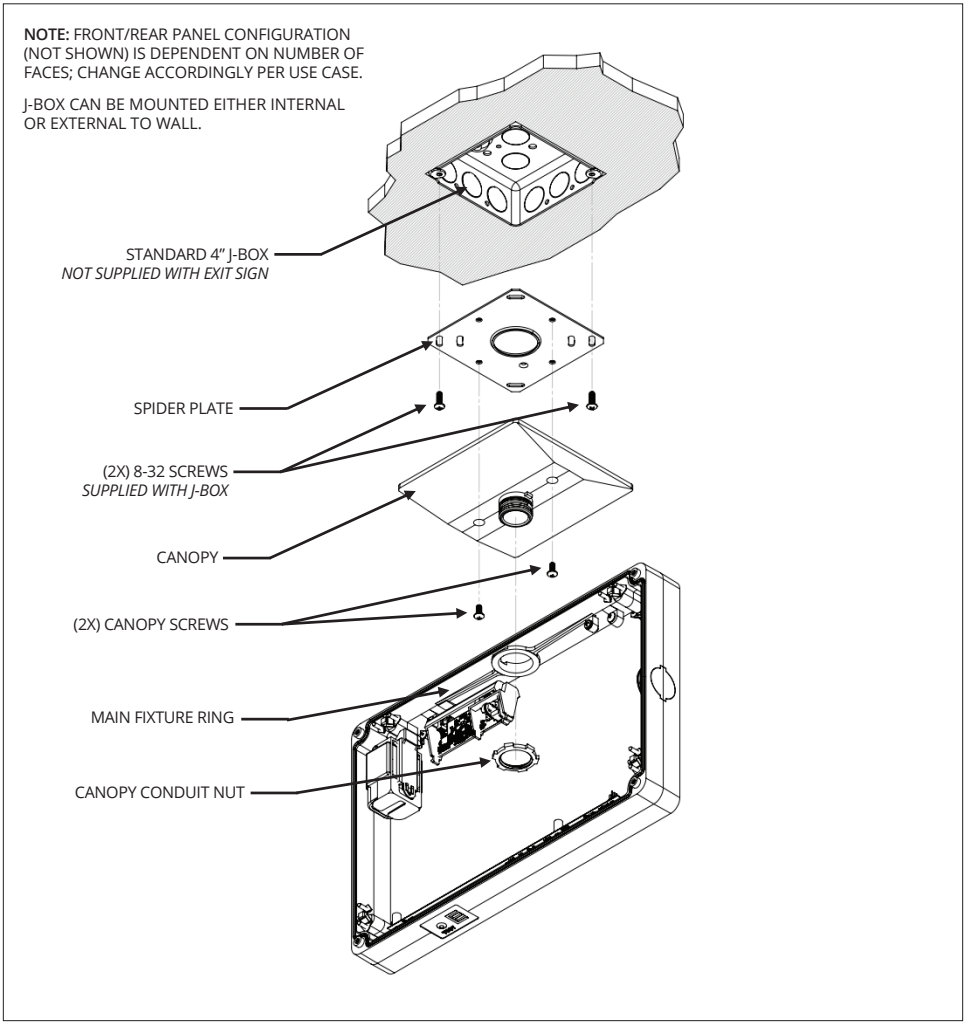


MOUNTING INSTRUCTIONS
CONTINUED

CEILING MOUNT

1. Begin by attaching the power plug to the power receptacle and then push it back into the junction box. Install the spider plate onto the junction box.
2. Secure the spider plate firmly to the junction box. Next, route the transformer's primary leads through the desired knockout of the sign.
3. Secure the canopy to the spider plate by twisting it until it is tight.
4. **IF NECESSARY,** remove the screw and washer holding the plug assembly together, then reposition it to fill the top position plug.
5. Ensure that the wires are not visible when inspecting the sign from the front face.
6. Snap on the front panel to complete the assembly process.

FIGURE 11: Indoor Ceiling Mount (Single or Double Face)

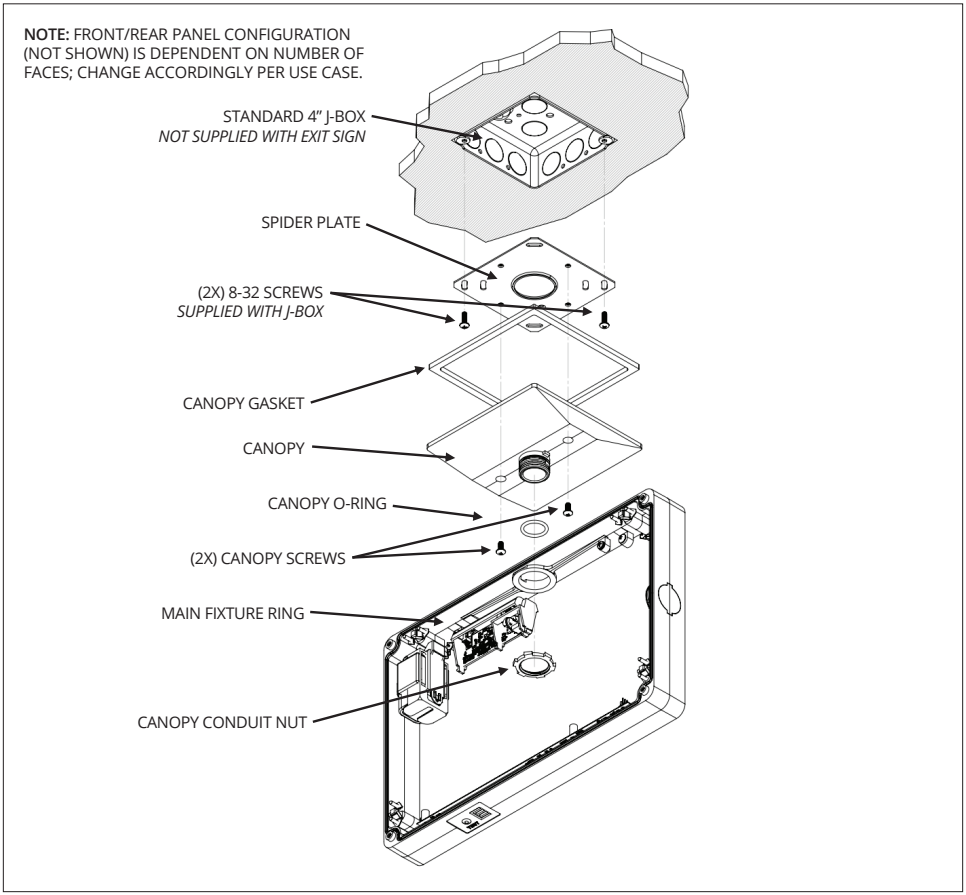


MOUNTING INSTRUCTIONS
CONTINUED

OUTDOOR CEILING MOUNT

1. Begin by attaching the power plug to the power receptacle and then push it back into the junction box. Install the spider plate onto the junction box.
2. Secure the spider plate firmly to the junction box. Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the housing after installation.
3. Next, route the transformer's primary leads through the desired knockout of the sign.
4. Secure the canopy to the spider plate by twisting it until it is tight.
5. **IF NECESSARY,** remove the screw and washer holding the plug assembly together, then reposition it to fill the top position plug.
6. Ensure that the wires are not visible when inspecting the sign from the front face.
7. Snap on the front panel to complete the assembly process.
8. When mounting the exit sign on a weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings, for optimal protection against outdoor elements.

FIGURE 12: Recessed J-Box Outdoor Ceiling Mount (Single or Double Face)

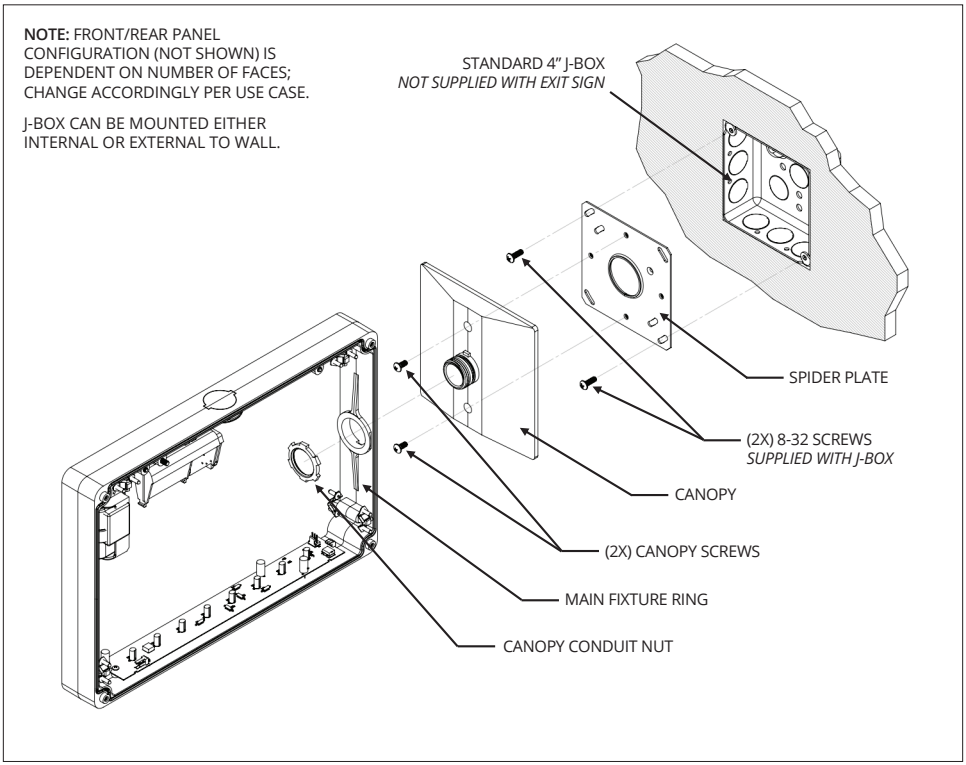


MOUNTING INSTRUCTIONS
CONTINUED

FLAG MOUNT

1. Begin by attaching the power plug to the power receptacle and then push it back into the junction box. Install the spider plate onto the junction box.
2. Secure the spider plate firmly to the junction box. Next, route the transformer's primary leads through the desired knockout of the sign.
3. Secure the canopy to the spider plate by twisting it until it is tight.
4. **IF NECESSARY,** remove the screw and washer holding the plug assembly together, then reposition it to fill the top position plug.
5. Ensure that the wires are not visible when inspecting the sign from the front face.
6. Snap on the front panel to complete the assembly process.

FIGURE 13: Indoor Flag Mount (Single or Double Face)

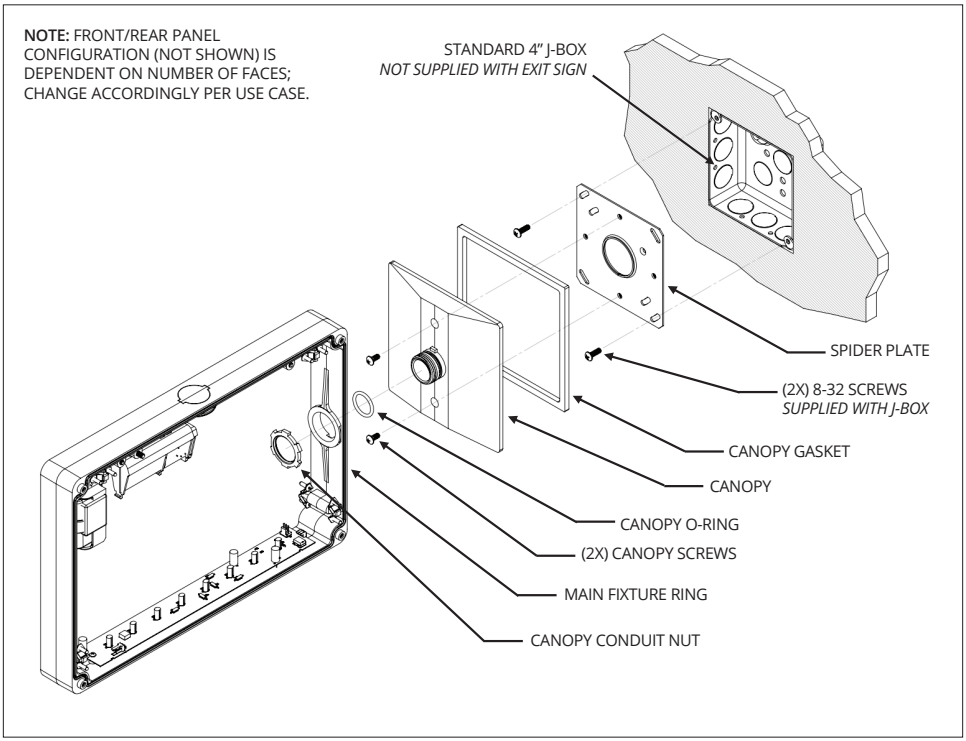


MOUNTING INSTRUCTIONS
CONTINUED

OUTDOOR FLAG MOUNT

1. Begin by attaching the power plug to the power receptacle and then push it back into the junction box. Install the spider plate onto the junction box.
2. Secure the spider plate firmly to the junction box. Ensure thorough weatherproofing by applying silicon sealant to all knockout openings in the housing after installation.
3. Next, route the transformer's primary leads through the desired knockout of the sign.
4. Secure the canopy to the spider plate by twisting it until it is tight.
5. **IF NECESSARY,** remove the screw and washer holding the plug assembly together, then reposition it to fill the top position plug.
6. Ensure that the wires are not visible when inspecting the sign from the front face.
7. Snap on the front panel to complete the assembly process.
8. When mounting the exit sign on a weatherproof outdoor box, remember to apply silicon sealant to all threaded connections, including plugs and conduit fittings, for optimal protection against outdoor elements.

FIGURE 14: Recessed J-Box Outdoor Flag Mount (Single or Double Face)



MOUNTING INSTRUCTIONS
CONTINUED

SURFACE UNIVERSAL MOUNT (BACK, CEILING AND FLAG)

After chosen method of mounting, remove screw and washer holding the plug assembly together and move to corresponding position.

FOR CEILING MOUNT

1. Move screw and washer to fill the left position plug.
2. Refer to “CEILING AND FLAG MOUNT INSTALLATION” to complete installation.

FOR FLAG MOUNT

1. Move screw and washer to fill the top position plug.
2. Refer to “CEILING AND FLAG MOUNT INSTALLATION” to complete installation.

INDOOR CONDUIT ENTRY MOUNT (SINGLE OR DOUBLE FACE)

1. Begin by plugging the provided 72” wire whip into the power receptacle located in the mainframe.
   NOTE: When connections are being made local regulations must be followed.
2. Feed the 72” wire whip through the provided tightened conduit adapter.
3. Thread the conduit adapter onto the conduit (supplied by others), ensuring to connect the wire whip to the sign connector simultaneously per local codes.
4. Insert the sign into the conduit adapter securely.
5. Finally, thread on the nut to complete the assembly process.

OUTDOOR CONDUIT ENTRY MOUNT (SINGLE OR DOUBLE FACE)

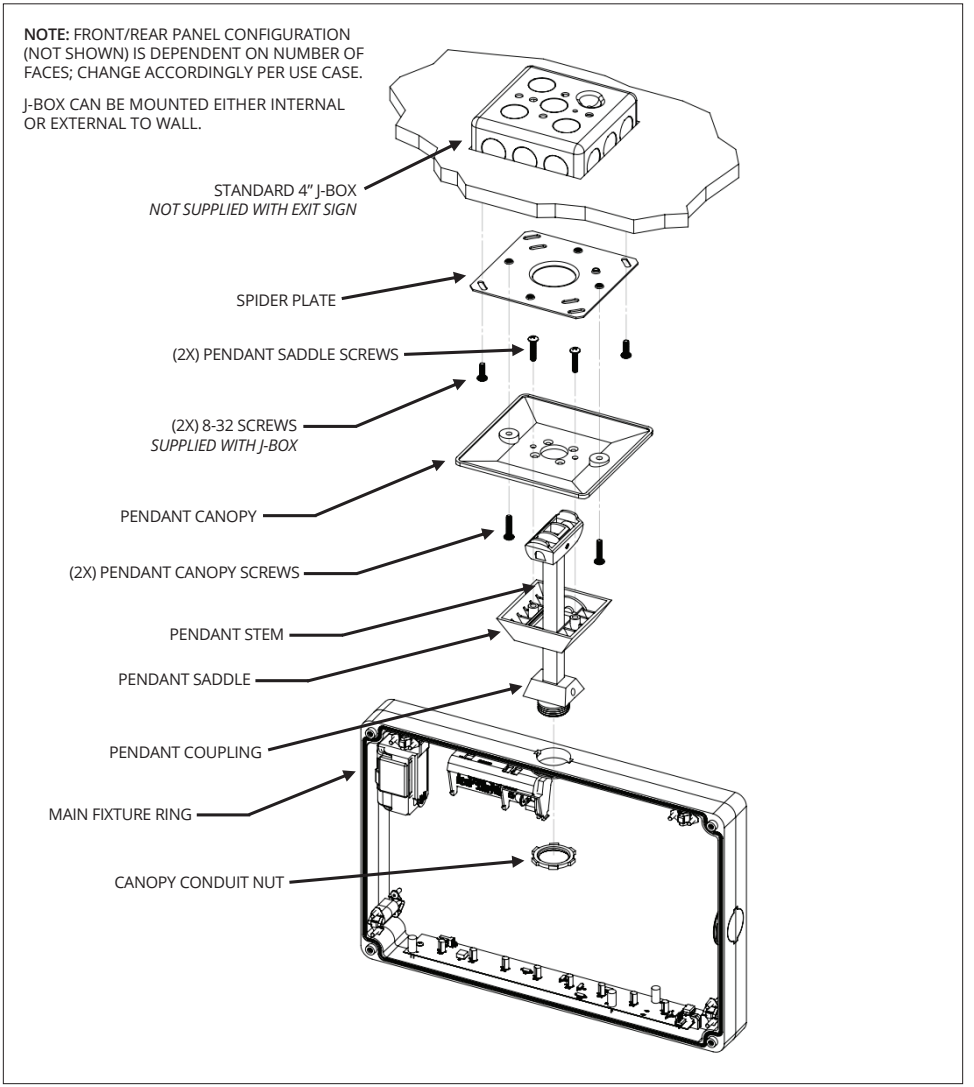
1. Begin by removing the screw and washer from the top position inside the panel. Reinsert them into the left position plug.
2. Utilize the provided 72” wire whip to allow for conduit adapter installation. Screw in the conduit adapter firmly until it is tight.
3. Feed the provided wire whip through both the conduit and conduit adapter into the unit.
4. Secure the conduit to the rear panel for stability.
5. Attach the power plug to the power receptacle, then push it back into the junction box. Install the spider plate onto the junction box securely.
6. Fasten the spider plate to the junction box and route the transformer’s primary leads through the desired knockout of the sign.
7. Secure the canopy to the spider plate by twisting it until it is tight. Ensure that the wires are not visible when observing the sign from the front face.
8. Snap the front panel into place to complete the assembly process.

MOUNTING INSTRUCTIONS
CONTINUED

INDOOR HANG-STRAIGHT PENDANT MOUNT

1. Insert pendant stem/universal joint assembly through the saddle.
2. Attach the housing to the pendant coupling with the attachment nut, set aside the assembly.
3. Affix the spider plate to the junction box.
4. Attach the saddle (from the pendant assembly) to the canopy with the provided screws.
5. Connect wires according to local codes.
6. Attach canopy to the spider plate with the provided screws.

FIGURE 15: Indoor Pendant Mount (Single or Double Face)

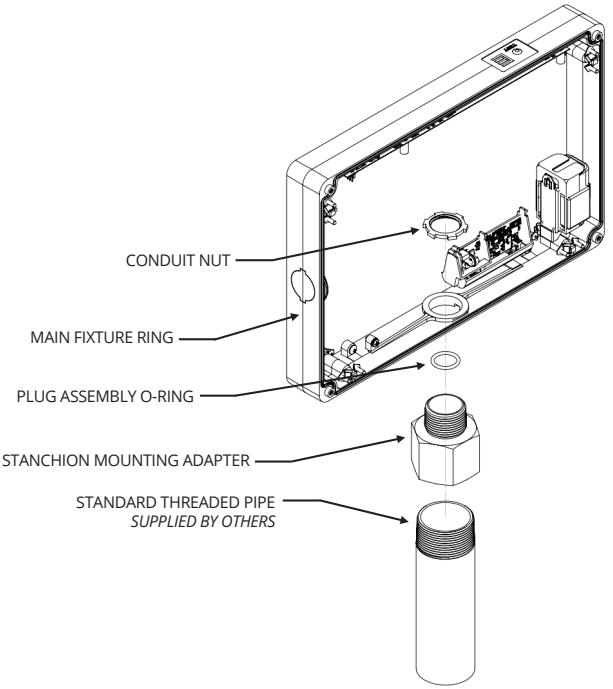


MOUNTING INSTRUCTIONS
CONTINUED

STANCHION MOUNT

1. Start by removing the face plate from the sign.
2. Securely clip the faces of the sign together to ensure stability.
3. Using the wire whip, establish the connection to the main power source following local electrical code regulations.
4. Thread the stanchion mount adapter onto the sign.
5. Inside the sign, feed the sign wires through the conduit nut.
6. Connect the wire whip to the power receptacle located on the sign. NOTE: When connections are being made local regulations must be followed.
7. Install the sign onto the stanchion mount adapter and secure it in place using the provided conduit nut.
8. Reinstall the face plate in its inverted position to complete the assembly process.

FIGURE 16: Outdoor Stanchion Mount (Single or Double Face)



NOTE: REFER TO OUTDOOR SINGLE/DOUBLE FACE ASSEMBLY INSTRUCTIONS FOR FRONT/ REAR PANEL CONFIGURATION (NOT SHOWN)

REPLACE STANCHION MOUNTING ADAPTER WITH CONDUIT ENTRY BUSHING (NOT SHOWN) FOR CONDUIT ENTRY USE CASES

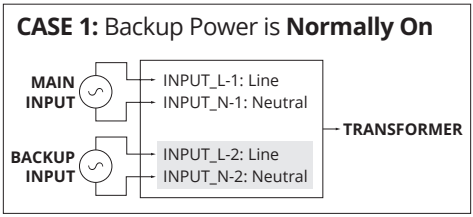
FRONT/REAR PANEL MUST BE REINSTALLED IN INVERTED ORIENTATION

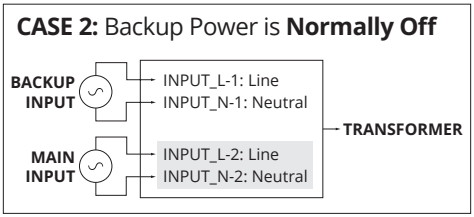
TWO CIRCUIT INPUT OPTION (AC VERSIONS ONLY)

For AC versions with two circuit input, connect power to the input wires as follows (refer to case 1 and case 2 diagrams below):

Case 1 (Backup power is Normally On): Connect main power to input 1 and backup power to input 2.

Case 2 (Backup power is Normally Off): Connect backup power to input 1 and main power to input 2.





FLASHER AND FIRE ALARM OPTIONS

Battery backup signs equipped with "FLASH IN EMERGENCY MODE" option which will automatically flash/beep in emergency mode but not flash/beep on AC operation. AC only signs equipped with the flasher option which will flash continuously while power is supplied.

AC only and Battery Backup signs equipped with the FIRE ALARM SIGNAL or FLASH options will automatically flash/beep in both AC and emergency modes upon application of a fire alarm signal to the BLACK & RED 22 AWG leads. The fire alarm signal can be either AC or DC of either polarity and range from 12 to 24 volts. The current draw from the fire alarm signal is less than 10 milliamps.

Units that include one of the above options are intended in locations where such features are permitted by local codes. Flash rate 60/min, duty cycle: 50%.

TEST FOR BATTERY BACKUP WITHOUT SELF-TEST FEATURE

The test (EM) battery backup units, use the test switch to simulate AC power outage. The indicator light will go out and the sign will remain lit, indicating transfer to emergency mode; and remain lit on battery power until switch is released. Release of switch will automatically restore AC/battery charge mode, with indicator light on. Testing for longer periods is best accomplished by turning off AC circuit power. Signs should be tested in accordance with National Electrical Code and NFPA 101 Life Safety Code requirements, which specify monthly testing for 30 seconds and yearly testing for 90 minutes. Note that the batteries will take some time to reach full charge after a prolonged test, and that the unit cannot provide full duration operation should a real power outage occur before the batteries have had an opportunity to reach full charge. It is recommended that long duration tests be limited to once yearly and be conducted when the area will be unoccupied afterwards.

SELF-TESTING OPERATING INSTRUCTIONS

This unit meets requirements of NFPA 101 for period testing of emergency lighting equipment. It provides visual indication of unit malfunctions including "Charger Fault", "Transfer Fault" and "Lamp Fault".

SELF-TEST

The unit will perform a self-test and diagnostic function at least once every 28 days. The self-test will disable the charger and turn on the LEDs for 5 minutes to check the lamp load and battery. The test will be performed only if the battery is fully charged. If not, the test will automatically reschedule. Charger function is monitored continuously.

USER-TEST

A user-test may be performed at any time the status display is continuously green. On initial power-up, it could take up to 72 hours for the status display to reach continuous green.

With a fully charged battery, pressing the test switch momentarily will initiate a 30 second test. Holding the test switch for 4 seconds will initiate a 90 minute test.

Either test can be canceled by pressing the test switch again for 1 second.

INFRARED REMOTE TESTING

To activate TRANSMITTER, remove tab from the back of the device.

The USER-TEST can be performed up to 20 feet away using the optional “INFRARED REMOTE TESTING TRANSMITTER”. By aiming the transmitter at the legend face and pushing either the “30 SECOND” or “90 MINUTE” button for 1 second. The behavior of the exit sign is the same as when the user tests are initiated from the local test button.

1.0 STATUS INDICATORS

STATUS DISPLAY	MEANING	ACTION
Continuous Green	Battery in Float / Trickle Charge	None
Continuous Red	Battery High Charging	Wait for Green Status
Flashing Green	In Test Mode	Wait for Test to Complete
Alternate Red & Green	Insufficient Charge for User Test	Wait for Full Charge
Red Single Blink (ON / Pause)	Transfer System Failure	Factory Service
Red Three Blinks (ON / Pause)	Charger Failure	Factory Service
Red Five Blinks (ON / Pause)	Lamp Failure	Check Remote Connection / Factory Service

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BATTERY REPLACEMENT

To replace battery, disconnect branch circuit and detach unit from junction box. Unplug battery connector from printed circuit assembly. For the EM LPDC2, the unit will be supplied with a Nickel Cadmium (Ni-Cd) battery, replace with part number B310023 only.

For the LPDC2 SD, the unit will be supplied with a Nickel Metal Hydride (Ni-MH) battery, replace with part number B350009 only. Do not interchange battery types.

Used batteries may not be disposed of in the municipal solid waste stream. For information on local recycling drop-off points, phone toll free 1-800-BATTERY (1-800-228-8379).

LPDC2 SD BATTERY REPLACEMENT ONLY

Using the Remote:

- Press and hold the 90 seconds test button for up to 10 seconds until the LEDs turn off on their own.

Using the Test Button:

- Press and hold the switch for up to 10 seconds until the LEDs turn off on their own. During both procedures: The red/green INDICATOR light will FLASH erratically for 10 seconds and then change to solid red once the main LEDs turn off. This indicates that the battery reset has been triggered.

NOTE: The fixture will not respond to any remote or switch operations until the battery conditioning is complete, which may take a few hours. However, it will respond to power loss, but full run-time is NOT guaranteed until both conditioning and 24-hour charge cycles are completed.

MASTER CONFIGURATION

The self-diagnostic system "learns" the exit load when the unit reaches full charge for the first time. It is therefore necessary to have any remote exits already connected when first applying AC power. Subsequent self-tests and user-tests will compare the actual exit load to the "learned value".

If the remote exit load is changed once it has been learned, it is necessary to disconnect AC power at the circuit breaker panel and unplug the internal battery. Once these are reconnected, the unit will "learn" the new exit load.

The LPDC2 has the capability to power a Remote Lamp OR a low-level Exit sign, not both at the same time.

REMOTE SIGN CONFIGURATION

The remote sign (TLMR2) is assembled in the same manner as the master sign, without a spider plate assembly. An option connector is also installed in the remote sign for interconnection to the master sign.

Interconnect the signs with a 2-conductor cable (22 AWG minimum, supplied by contractor), per the National Electric

Code, White + Blue wires. The run should be a distance of 50 feet or less.

REMOTE LAMP CONFIGURATION

To install remote lamp (3.6V, 3W max - not shown), the option connector is installed similarly in the master sign as shown in (Figure 13). Terminate remote lamp leads to the option connector in mating pins labeled "Remote Lamp". Remote Lamp max mounting height to be 11 feet or the equivalent.

COMPATIBLE REMOTE LAMPS

1. **MVH** Multi-Volt LED Remote Head
2. **MVI** Indoor LED Remote Head

TROUBLESHOOTING

PROBLEM

Lamp failure indicated when there's no lamp failure.

SOLUTION

The product may have calculated a larger lamp load when the lamp load calculation was performed at the first self-diagnostic function test. To reset the lamp failure status, remove the unit from the wall, disconnect the battery, wait 30 seconds, reconnect the battery, reinstall the unit onto the mounting plate.

The lamp current calculation will be performed on the next function test.

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