LALDR Series Emergency LED Driver

Installation and Operation Instructions

WARNING:
Risk of Shock.
Disconnect Power before Installation and Maintenance.

IMPORTANT SAFEGUARDS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. All installation and servicing should be performed by qualified service personnel.
2. Install in accordance with the National Electric Code or Canadian Electrical Code and applicable local codes.
3. The Emergency LED Driver requires an unswitched AC power source of 120 to 277 volts, 50/60 HZ.
4. The Emergency LED Driver is suitable for use in dry and damp location where ambient temperature is 10°C to 50°C.
5. The Emergency LED Driver is designed for factory installation and for field installation.
6. The Emergency LED Driver should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
7. To reduce the risk of electrical shock, do not connect the Emergency LED Driver converter connector together until installation is complete and AC power is applied to the luminaire.
8. The Emergency LED Driver has more than one power source. To reduce the risk of electrical shock, remove the normal AC power sources to the luminaire and disconnect the Emergency LED Driver converter connector before servicing.
9. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition and will void warranty.
10. Do not use this equipment for other than intended use.
11. Do not mount near gas or electric heaters.
12. Do not use outdoors.
13. The Emergency LED Driver is a sealed unit. Components are not replaceable. Replace entire unit when necessary.

This Emergency LED Driver contains a non-replaceable LiFePO4 battery that must be recycled properly.

SAVE THESE INSTRUCTIONS

The installation and use of this product must comply with all national, federal, state, municipal, or local codes. Please read this manual thoroughly before installing or operating Emergency LED Drivers.

Installation Instructions

CAUTION: BEFORE INSTALLATION, MAKE CERTAIN THE AC POWER IS OFF AND THE EMERGENCY LED DRIVER'S CONVERTER CONNECTOR IS DISCONNECTED.

Mounting the Emergency LED Driver

Note: Emergency LED Driver should not be mounted inside the unit.

1. Use mounting tabs and provided screws to mount the Emergency LED Driver to desired location.
2. Drill or punch a 7/8" hole on the luminaire for flexible conduit.
3. Attach flexible conduit to luminaire.
4. Wire the Emergency LED Driver to the LED driver (see figure 2)

INSTALLING THE LED TEST SWITCH (see figure 1)

1. Install switch box to desired location.
2. Disconnect test switch from flexible conduit.
3. Attach same flexible conduit to the switch box.
4. Install test switch to switch plate.
5. Connect the test switch connector to the flexible conduit connector.
6. Install switch plate to the switch box.

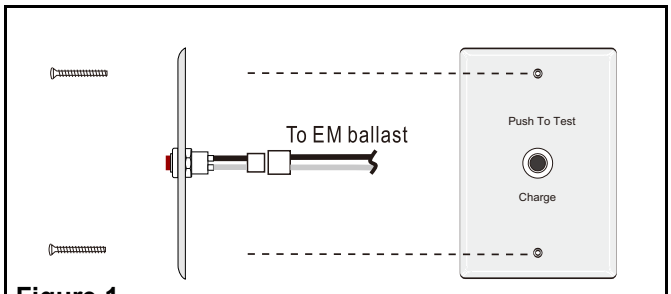

Figure 1

Wiring the Emergency LED Driver (see figure 2)

DO NOT CONNECT THE CONVERTER CONNECTOR AT THIS TIME.

Note: wiring must be performed in accordance with the National Electric Code and applicable local codes.

Consult Customer Service for additional wiring diagrams.

1. The Emergency LED Driver and AC LED Driver must be on the same branch circuit.
2. The Emergency LED Driver requires an unswitched AC power source of 120 to 277 volts.
3. When the Emergency LED Driver is used in a switched luminaire, the AC input to the Emergency LED Driver must be connected on the line side of luminaire switch.
4. If applicable, cut and strip the wires to the LED strip then make all connections as shown in figure 4.
5. When the installation is complete, switch the AC power ON and join the Emergency LED Driver converter connector.

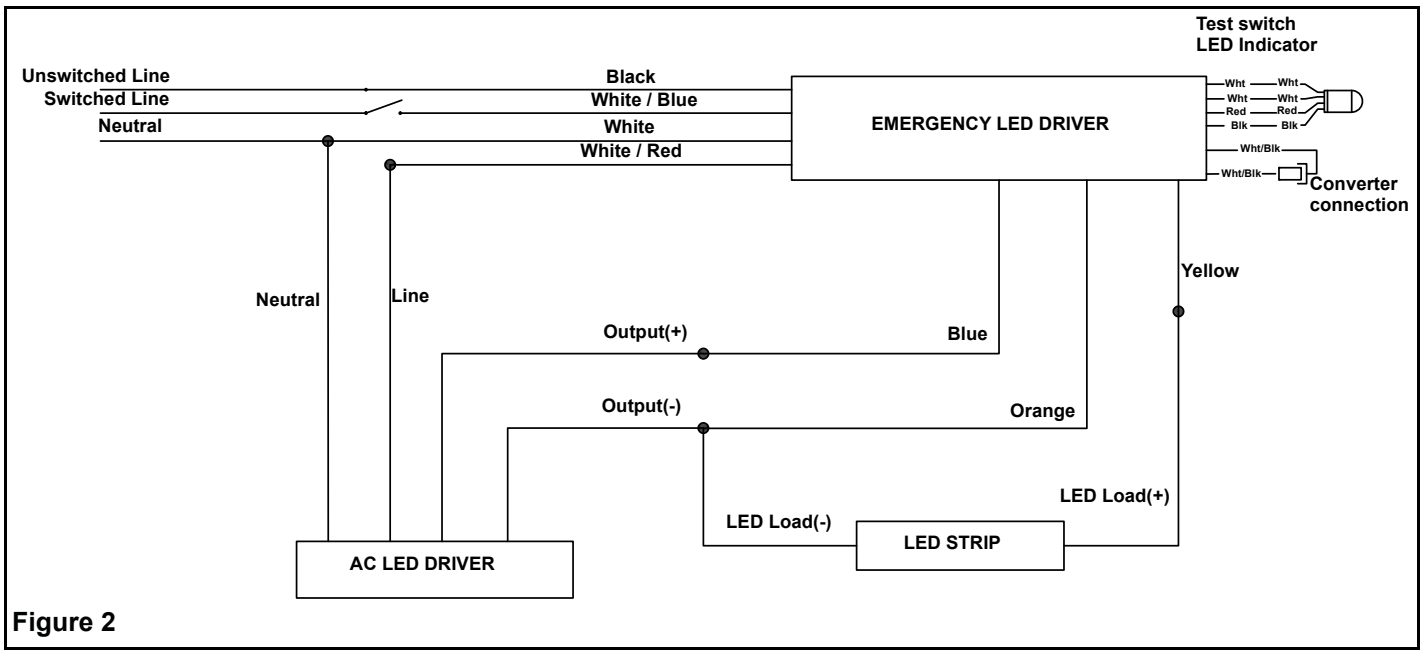

Figure 2

Operation

Normal Mode:

AC power is present. The AC LED Driver operates the LED lamp(s) as intended.
The LED indicator will be illuminated indicating that the Emergency LED Driver is in the standby charging mode.

Emergency Mode:

AC power fails. The Emergency LED Driver senses the AC power failure and automatically switches to Emergency Mode. One or multiple LED lamps will work at reduced illumination for a minimum of 90 minutes. When AC power is restored, the Emergency LED Driver switches the system back to Normal Mode and resumes battery charging.

Testing and Maintenance

Pressing the LED indicator test switch to simulate an AC power failure forces the system into Emergency Mode.
Only the emergency LED lamp (s) will be illuminated.
Testing may also be performed by opening circuit breaker powering the system.

Initial Testing:

Allow the unit to charge for approximately 1 hour, then press the LED indicator test switch to conduct a short test.
Allow a 24 hour charge before conducting a 1 ½ hour test.

Monthly:

Ensure that the LED indicator test switch is illuminated. Conduct a 30 second test by depressing the LED indicator test switch.

Annually:

Ensure that the LED indicator test switch is illuminated. Conduct a 1 ½ hour test by opening circuit breaker controlling the Emergency LED Driver unit(s) to be tested.

IMPORTANT: Written records of testing shall be kept on file for inspection by the authority having jurisdiction.

This LED driver comes with a (5) five year full warranty.

LALDR SERIES System Coordination Guidelines

These guidelines were developed to allow the lighting system Designer/Specifier to estimate the operating performance levels of LED luminaires when powered by an electrically compatible LALDR Series model. It is ultimately the responsibility of the Designer/Specifier to ensure that the “as installed” system delivers a code-compliant path of egress illumination.

1. Determine Electrical Compatibility
   a. Verify that the forward voltage of the luminaire’s LED array is within the limits of this emergency LED driver. The forward voltage of the LED array is commonly designated as Vf and should be found on the luminaire markings, in the luminaire specifications, or imprinted directly on the LED array. If multiple LED arrays are used, verify that the total forward voltage is within the limits of this product.
   b. Verify that the Luminaire LED Lamp(s) have an operating output voltage of (see table).
   c. Verify that the Luminaire LED Lamp(s) have a power rating equal to, or greater than, the emergency power rating of the LALDR model under consideration.

Refer to table below and catalog page for more information.

LALDR Model Number	EMERGENCY OUTPUT	OUTPUT VOLTAGE
LALDR-7-*	7 WATTS	BETWEEN 10VDC TO 60VDC
LALDR-12-*	12 WATTS	BETWEEN 10VDC TO 60VDC
LALDR-25-*	25 WATTS	BETWEEN 20VDC TO 50VDC

*** May be followed by suffix CEC.**

   d. Verify that the output current of the LED driver does not exceed 5.0 Amps. This is the current measured going into the blue wire.

2. Calculate Lumen Output During Emergency Operation.
   a. Access luminaire data by logging onto DesignLights Consortium® (www.designlights.org).
   b. Select "Search the DLC Qualified Product List' on the DLC homepage.
   c. Enter manufacturer name and P/N of luminaire under consideration in the “search by keyword” text window.
   d. Select "Search" tab to open the “Qualified Products List”.
   e. Determine luminaire Lumens per Watt efficacy in “Rated Data” specifications.
   f. Multiply luminaire Lumens per Watt by Emergency Output of the LALDR model under consideration.

   Refer to Table above.

   The Lumens available from the luminaire during emergency operation.

3. Determine Suitability of Means of Egress Lighting Levels.
   a. Using industry standard lighting design software, along with IES files for the luminaire under consideration, verify that the “as installed” available Lumens (as calculated in 2f above) are sufficient to meet code-compliant path of egress illumination levels.

   While the LALDR series, as designed, meets the requirements of UL Standard 924, it is ultimately the responsibility of the Designer/Specifier to ensure the “as installed” system delivers code-compliant path of egress illumination in accordance with Federal, State or local municipal requirements.