Installation And Operation Instructions

For Outdoor-rated Emergency LED Drivers

IMPORTANT SAFEGUARDS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS:

1) ***This LED emergency driver is designed for factory installation and for field installation only if determined to meet the as installed egress requirements as outlined on page 4 of these instructions.***
2) ***Installation should be performed by qualified personnel only.***
3) ***Install in accordance with the National Electric Code and applicable local codes.***
4) ***This LED emergency driver requires an Unswitched AC power source of 120 to 277 volts, 50/60 HZ.***
5) ***This LED emergency driver is suitable for use in wet locations where ambient temperature is -20 to 50C.***
6) ***This LED emergency driver should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.***
7) ***This LED emergency driver is suitable for use only with LED lamps having an operating voltage of 20 Vdc - 50 Vdc and will provide 90 minutes of emergency operation. CAUTION: Risk of electric shock due to high output voltage. Ensure the LED array and it's connection points are not accessible after the unit is installed inside the luminaire.***
8) ***To reduce the risk of electrical shock, do not connect LED emergency driver's converter connector until installation is complete and AC power is applied to the Luminaire.***
9) ***This LED emergency driver has more than one power source. To reduce the risk of electrical shock, remove the normal AC power source(s) to the Luminaire and disconnect the LED emergency driver's converter connector before servicing.***
10) ***The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition and will void warranty.***
11) ***Do not use this equipment for other than intended use.***
12) ***Do not mount near gas or electric heaters.***
13) ***Servicing of this equipment should be performed by qualified personnel only.***
14) ***The LED emergency driver is a sealed unit. Components are not replaceable. Replace entire unit when necessary.***
15) ***The LED emergency driver contains a non-replaceable NiCad battery that must be recycled properly.***

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

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

INSTALLATION INSTRUCTIONS

CAUTION: *Before installing, make certain the AC power is off and the LED emergency driver's converter connector is disconnected.*

1. MOUNTING THE LED EMERGENCY DRIVER

Mount the emergency driver to the top of the luminaire or to a wall surface (with sufficient strength) using the driver housing brackets and suitable fasteners (not provided).
Drill or punch a 7/8” hole (1/2” knockout) on top or side of luminaire for flexible conduit.
Attach flexible conduit to luminaire. Apply silicone to prevent water intrusion through the conduit opening
Refer to Figure 1 at right.

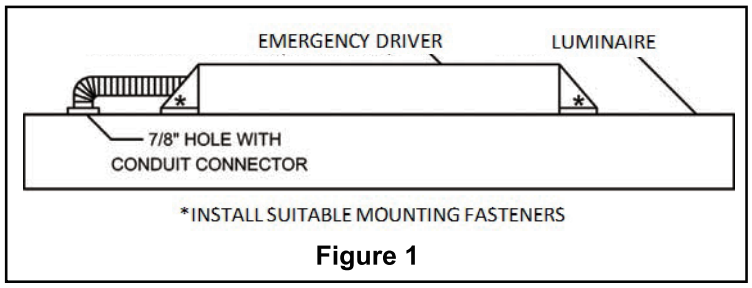

Figure 1

2. WIRING THE LED EMERGENCY DRIVER

Perform all wiring inside the luminaire or in a junction box suitable for the application.
Do not join the emergency driver’s converter connectors at this point.
Note: Wiring must be done in accordance with the National Electric Code and applicable local codes. Consult Customer Service for additional wiring diagrams.
Refer to Figure 2 at right.

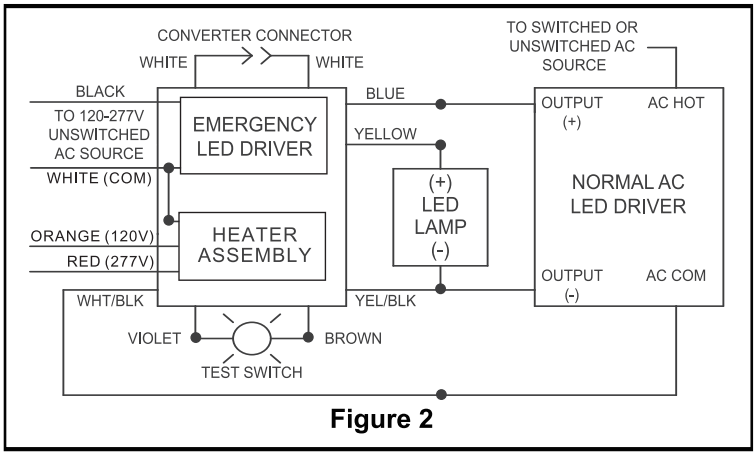

Figure 2

3. WIRING THE AC INPUT

A) The emergency driver and AC LED Driver must be on the same branch circuit.
B) The emergency driver requires an Unswitched AC power source of 120 to 277 volts. Battery heater assembly requires a power source of 120V or 277V.
C) When the emergency driver is used in a switched luminaire, the AC input to the emergency driver must be connected to ahead of the luminaire switch (line side of luminaire switch). **Refer to Figure 2.**

4. COMPLETING INSTALLATION

When the installation is complete, switch the AC power ON and join the LED emergency driver's converter connector.
Refer to Figure 2.

OPERATION

Normal Mode – AC power is present. The AC LED Driver operates the LED lamp(s)/load as intended. The LCTS (LED COMBO TEST SWITCH) on the emergency driver will be illuminated indicating that the emergency driver is in the standby charging mode.

Emergency Mode – AC power fails. The emergency driver senses the AC power failure and automatically switches to Emergency Mode. One or multiple LED lamps/load will be illuminated for a minimum of 90 minutes. When AC power is restored, the emergency switches the system back to the Normal Mode and resumes battery charging.

TESTING AND MAINENANCE

Pressing the LCTS simulates an AC power failure and forces the system into the Emergency Mode. Only the emergency LED lamp(s)/load 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 LCTS to conduct a short test. Allow a 24 hour charge before conducting a 1 ½ hour test.

Monthly – Ensure that the LCTS is illuminated. Conduct a 30 second test by depressing the LCTS

Annually – Ensure that the LCTS is illuminated. Conduct a 1 ½ hour test by opening circuit breaker controlling the luminaires with emergency drivers installed, to be tested.

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

Emergency lighting System Coordination Guidelines

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

1) Determine Electrical Compatibility

A) Verify that the Luminaire LED Driver, where applicable, is Class 2 compliant.
B) Verify that the Luminaire LED Lamp(s) have an operating voltage between 20Vdc and 50Vdc
C) Verify that the Luminaire LED Lamp(s) have a power rating equal to, or greater than, the emergency power rating (17 watts) of the LED emergency driver under consideration.

2) Calculate Lumen Output During Emergency Operation

A) Access luminaire data by logging onto Design Lites 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 LED emergency driver under consideration (17 watts for these driver models).
This figure is 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 BLEM-CP series has been found compliant with the requirements of UL Standard 924, it is ultimately the responsibility of the Designer/Specifier to assure t the as-installed system delivers code-compliant path of egress illumination in accordance with Federal, State or local municipal requirements.