

Installation Instructions

NEPK-07LEDUNV

EM Battery with Junction Box and Test Switch

READ PRIOR TO ATTEMPTING INSTALLATION
ALWAYS TURN OFF MAIN POWER BEFORE INSTALLATION
INSTALLATION SHOULD BE CARRIED OUT BY YOUR LOCAL ELECTRICIAN

IMPORTANT SAFEGUARDS

WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED, INCLUDING THE FOLLOWING:

1. To prevent high voltage from being present on yellow & orange output leads prior to installation, converter connector must be open. Do not join converter connector until installation is complete and AC power is supplied to the emergency driver.
2. This product is for use with an LED lighting load and supplies up to 7W constant power with output voltage between 10 VDC and 60 VDC in emergency mode for a minimum of 90 minutes.
3. Make sure all connections are in accordance with the National Electrical Code or Canadian Electrical Code and any local regulations.
4. To reduce the risk of electric shock, disconnect both normal and emergency power supplies and converter connector of the emergency driver before servicing.
5. This emergency driver is for factory installation and field installation.
6. This product is suitable for use in damp locations where the ambient temperature is 0°C minimum, +50°C maximum. Product is not suitable for heated air outlets and wet or hazardous locations.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS:

1. Do not use outdoors (this item may be omitted if the product is suitable for outdoor use).
2. Do not let power supply chords touch hot surfaces.
3. Do not mount near gas or electric heaters.
4. Use caution when servicing batteries. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or in eyes, flush acid with fresh water and contact a physician immediately.
5. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

7. An unswitched AC power source is required (120 through 277VAC, 50/60 Hz)
8. Do not install near gas or electric heaters, do not use outdoors.
9. Use with grounded, UL Listed, damp location rated fixtures and case should be grounding.
10. The driver is intended for ordinary locations and for permanent installation into one or more Listed emergency luminaires, for models with suffix B and C.
11. Do not attempt to service battery. A sealed, no-maintenance battery is used that is not field replaceable. Contact the manufacturer for information on service.
12. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
13. Do not use this product for other than intended use.
14. Servicing should be performed by qualified service personnel.
15. Only apply to LED Driver which the output current less than 3.0A
16. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.

6. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
7. Caution: Halogen cycle lamp(s) are used in this equipment. To avoid shattering: Do not operate lamp in excess of rated voltage, protect lamp against abrasion and scratches and against liquids when lamp is operating, dispose lamp with care.
8. Halogen cycle lamps operate at high temperatures. Do not store or place flammable materials near lamp.
9. Do not use this equipment for other than intended use.

SAVE THESE INSTRUCTIONS

LED LUMINAIRE EVALUATE

This product is suitable for field installation with suitable LED loads including LED luminaires, DC voltage driven LED replacements for fluorescent lamps and others. There are 4 checks to determine if your luminaire is eligible for field installation.

1. Ensure the LED load's rated power is greater than or equal to the power output of this emergency LED driver. This is to ensure that this emergency product will not produce more power than the LED load can handle, thus ensuring that the LED load will not be damaged when the system is in the emergency mode.
2. 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 arrays. If multiple LED arrays are to be drive, verify that the total forward voltage is within the limits of this product. Using a voltage meter, it may be possible to directly measure the voltage across the LED arrays when operating from the AC driver.
3. Ensure the output current of the LED driver does not exceed 3.0 Amps. This is the current into the blue wire.
4. Ensure there will be sufficient light output in the end application. Estimate the egress lighting illumination levels by doing the following:
 - a. Find the efficacy of the LED load. This can be given by the luminaire manufacture or DLC test report. This number will be given in lumens per watt (lm/w).

5. Lumens can be calculated by multiplying the output power of the emergency LED driver by the efficacy of the LED load. In many cases the actual lumen output in emergency mode will be greater than this calculation gives, however, it will provide a good estimate for beginning the lighting design of the system.
6. Using the results of this calculation and industry standard lighting design tools, calculate the anticipated illumination levels in the path of egress.

Lumens in Emergency Mode = Lumens per Watt of Fixture * Output Power Emergency LED Driver

$$\underline{\hspace{2cm}} \text{ Lumens } = \underline{\hspace{2cm}} \text{ (lm/W) } * \underline{\hspace{2cm}} \text{ 7(W) }$$

NOTE: This product has been designed to reliably interface with a wide selection of LED loads and is electrically compatible with every simple LED array that meets criteria 1 and 2 above. However, compatibility cannot be guaranteed with all current and future LED systems. Compatibility testing of the end-use system is suggested. Please contact the factory with any questions.

NOTE: After installation, it will be necessary to measure the egress lighting illumination levels to ensure it complies with national, state, and local code requirements.

WARNING: TO PREVENT HIGH VOLTAGE FROM BEING PRESENT ON ORANGE OUTPUT LEADS PRIOR TO INSTALLATION, CONVERTER CONNECTOR MUST BE OPEN. DO NOT JOIN CONVERTER CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED TO THE EMERGENCY DRIVER.

NOTE: Make sure the necessary branch circuit wiring is available. An unswitched source of power is required. The emergency driver must be fed from the same branch circuit as the AC driver.



Contains LiFePO4
Rechargeable Battery.
Must be recycled or
disposed properly.



Installation Instructions

NEPK-07LEDUNV

EM Battery with Junction Box and Test Switch

READ PRIOR TO ATTEMPTING INSTALLATION
ALWAYS TURN OFF MAIN POWER BEFORE INSTALLATION
INSTALLATION SHOULD BE CARRIED OUT BY YOUR LOCAL ELECTRICIAN

INSTALLATION OF THIS EMERGENCY LED DRIVER WILL VARY BASED ON THE LUMINAIRE TYPE, HOWEVER, GENERALLY FOLLOW THESE STEPS:

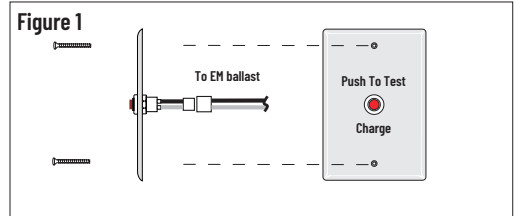
INSTALLING THE EMERGENCY DRIVER:

1. Disconnect AC power from the LED luminaire.
2. Mount the emergency LED driver by the mounting tabs using the supplied screws. The luminaire's installation instructions may provide guidance on the recommended mounting location.
3. The emergency driver with cable conduit suitable for remote mounting from the luminaire, emergency driver without cable conduit do not suitable for remote mounting. If used in conjunction with an AC driver, this distance is up to half the distance the AC driver manufacturer recommends remote mounting the AC driver from the LED Load. If used without an AC driver, consult factory for remote mounting distances.

MOUNTING HEIGHT: This product meets or exceeds the NFPA minimum light requirements with all loads, down to the smallest rated lamp load, at heights up to 7.17ft (2.2m). Many factors influence emergency illumination levels, such as the lamp load selected, luminaire design and environmental factors therefore end use verification is necessary. For field installations, when the attached luminaire is mounted at heights greater than 7.17ft (2.2m), the level of illumination must be measured in the end application to ensure the requirements of NFPA 101 and local codes.

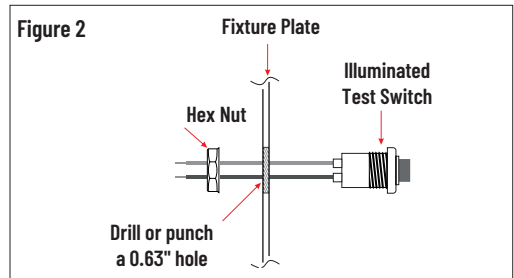
INSTALLING THE TEST SWITCH:

1. Install and wire the test switch per wiring diagrams provided on these instructions. If wired correctly, the test switch indicator light should be ON when AC power is supplied to the fixture indicating that the emergency inverter battery is charging. (Figure 1)
2. Install test switch on fixture surface. Mount the supplied illuminated test switch in a location that is visible and accessible by maintenance personnel. The test switch mounts through a 0.63" hole which may need to be made in the luminaire or could come pre-punched by the luminaire supplier. (Figure 2)

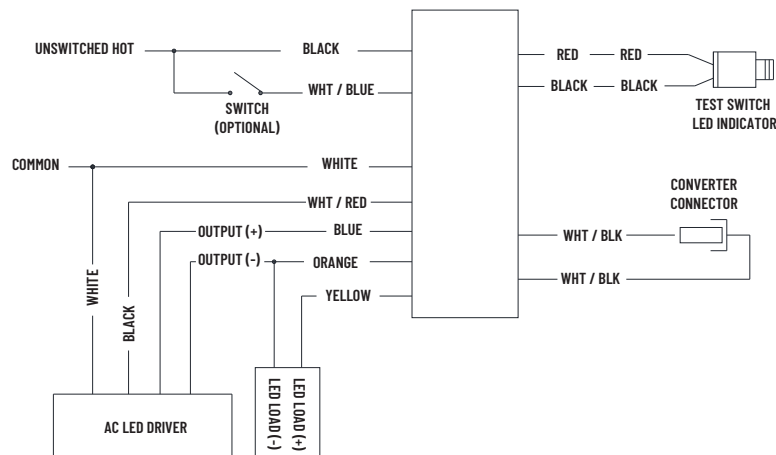


WIRING THE EMERGENCY BALLAST:

1. Refer to wiring diagram and connect the emergency driver to the AC driver and LED load. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
2. After installation is complete, supply AC power to the emergency driver and join the converter connector.
3. At this point, power should be connected to both the AC driver and the emergency driver, and the Charging Indicator Light should illuminate indicating the battery is charging.
4. A short-term discharge test may be conducted after the emergency driver has been charged for one hour. Charge for 24 hours before conducting a long-term discharge test. Refer to Operation section.
5. In a readily visible location, attach the label "CAUTION - This unit has more than one power connection point. To reduce the risk of electric shock, disconnect both the branch circuit breakers or fuses and emergency power supplies before servicing."



Wiring Diagram



OPERATION:

When AC power is applied, the charging indicator light is illuminated, indicating the batteries are being charged. When power fails, the emergency driver automatically switches to emergency power, operating the emergency LED load at reduced illumination. When AC power is restored, the emergency driver returns to charging mode. This emergency driver will operate LED lighting load supplies up to 7W constant power with output voltage between 10VDC and 60VDC in emergency mode for a minimum of 90 minutes.

MAINTENANCE:

Although no routine maintenance is required to keep the emergency driver functional, it should be checked periodically to ensure that it is working. The following schedule is recommended:

1. Visually inspect the charging indicator light monthly. It should be illuminated.
2. Test the emergency operation of the fixture at 30-day intervals for a minimum of 30 seconds. The LED lighting load should operate at reduced illumination.
3. Conduct a 90-minute discharge test once a year. The emergency LED load should operate at reduced illumination for a minimum of 90 minutes.
4. The life expectancy of the batteries is at least 5 years. Integral battery is not replaceable, replace entire unit when necessary.