

# EMUFO Series

## Self- Diagnostic LED Emergency Driver

# INSTALLATION MANUAL

**!!! IMPORTANT SAFEGUARDS !!!**

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

## READ AND FOLLOW ALL SAFETY INSTRUCTION

- CAUTION** - The emergency driver is only used for emergency back up of LED light load, do not use for other than intended use.
- WARNING** -This **EMUFO** provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency source by turning off the A.C. branch circuit.
- CAUTION** - Servicing of this equipment should be performed by qualified personnel only.
- CAUTION** - Do not attempt to service the battery. A sealed, no-maintenance battery is used that is not field replaceable. Replace the entire unit when necessary.
- CAUTION** - The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition, void warranty, and result in non-compliance with UL specifications.
- IMPORTANT** - The **EMUFO** requires an un-switched AC power source of **100-347VAC, 50 /60Hz**. Installer must confirm that fixtures input voltage covered 120VAC before installation. It will supply power under an output voltage of 170VDC in emergency mode for at least 90 minutes.
- CAUTION** - Battery pack should be charge for 24 hours every 6 months during storage.
- IMPORTANT** - Battery in this unit may not be fully charged. After electricity is connected to the unit for at least 24 hours, then normal operation of this unit should take effect.
- IMPORTANT** - The **EMUFO** should be turned off by pressed test switch or Button A once, before maintenance, storage or shipping.
- For use in 0°C minimum, 50°C maximum ambient temperatures. Suitable for use in damp locations and plenum spaces.
- The **EMUFO** should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Do not use this equipment for anything other than its intended use. Equipment only use for LED Lighting emergency backup.
- Do not mount near gas or electric heaters. Do not let power supply cords touch hot surfaces.
- Do not make or leave any other open holes in the wiring enclosure or electrical component enclosure during installation.
- This fixture is for use with grounded, UL Listed, damp location rated, indoor fixture. Not for use in heated air outlets or hazardous locations.
- Make sure all connections are in accordance with the requirements of National Electrical Code & Canadian Electrical Code or any other local regulations.
- This emergency backup is intended to be mounted outside a luminaire which is suitable for both factory and field installation.
- Do not use outdoor.

## LUMEN OUTPUT DURING EMERGENCY OPERATION

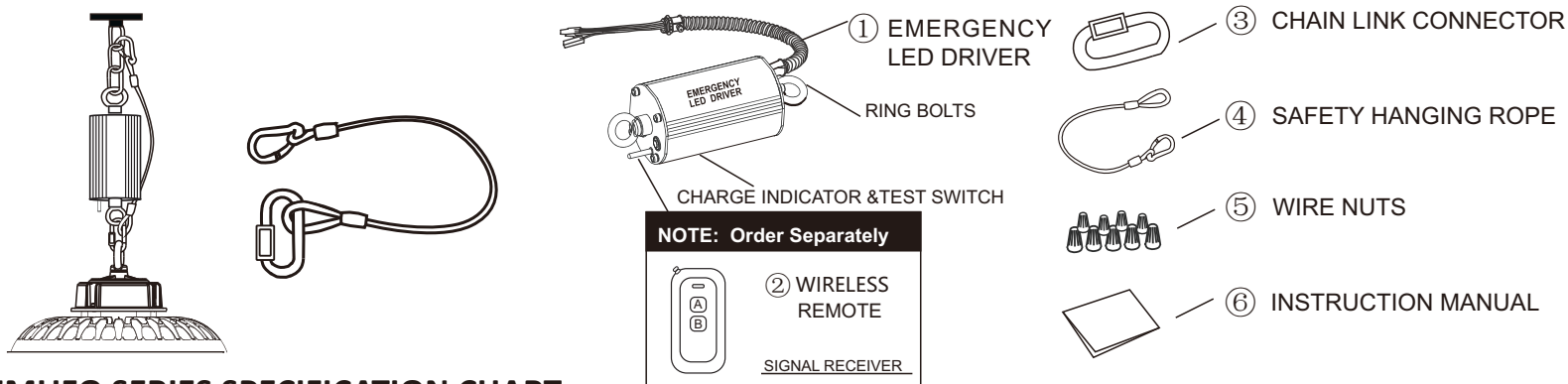
The luminaire rated data and maximum mounting height can be found as follows:

- Determine the fixture efficacy under normal AC operation, based on fixture manufacturer published data in lumens per watt (LM/W).
- Reference DLC QPL ([www.designlights.org](http://www.designlights.org)) and Energy Star QPL ([www.energystar.gov](http://www.energystar.gov)) for rated data on fixture efficacy. If fixture is not found on DLC or Energy Star Qualified Product List, contact fixture manufacturer.
- Multiply *fixture LM/W* by *rated output power of emergency pack* Example ' model EMUFO-25170' is  $25\text{ W} \times 100\text{ LM/W} = 2500\text{ Lumens}$ .


## PRODUCT COMPONENTS

**NOTE:** The IP65 version of EMUFO is an optional, please order necessarily waterproof components separately before ordering. (see datasheet)

**NOTE:** Before wiring, make sure safety rope is securely locked.



## EMUFO SERIES SPECIFICATION CHART

Models	Output Power	Output Voltage
EMUFO-25170-YY	25Watts (Constant)	 <b>HIGH VOLTAGE OUTPUT</b> <b>170V DC</b>
EMUFO-40170-YY	40Watts (Constant)	

**CAUTION—** See the **EMUFO Model Specification Chart** for output specifications of the unit being installed.  
 For unit of EMUFO-25170-YY better for LED lamp less than 150W.  
 For unit of EMUFO-40170-YY for LED lamp less than 320W.

## SELF-DIAGNOSTIC (MAINTENANCE)

The integrated Self- Diagnostic circuitry will automatically conduct 1 monthly 30-second and annual 90-minute tests to verify proper emergency capability per Life Safety Code requirements. NFPA 101, Life Safety Code Outlines the following schedule:

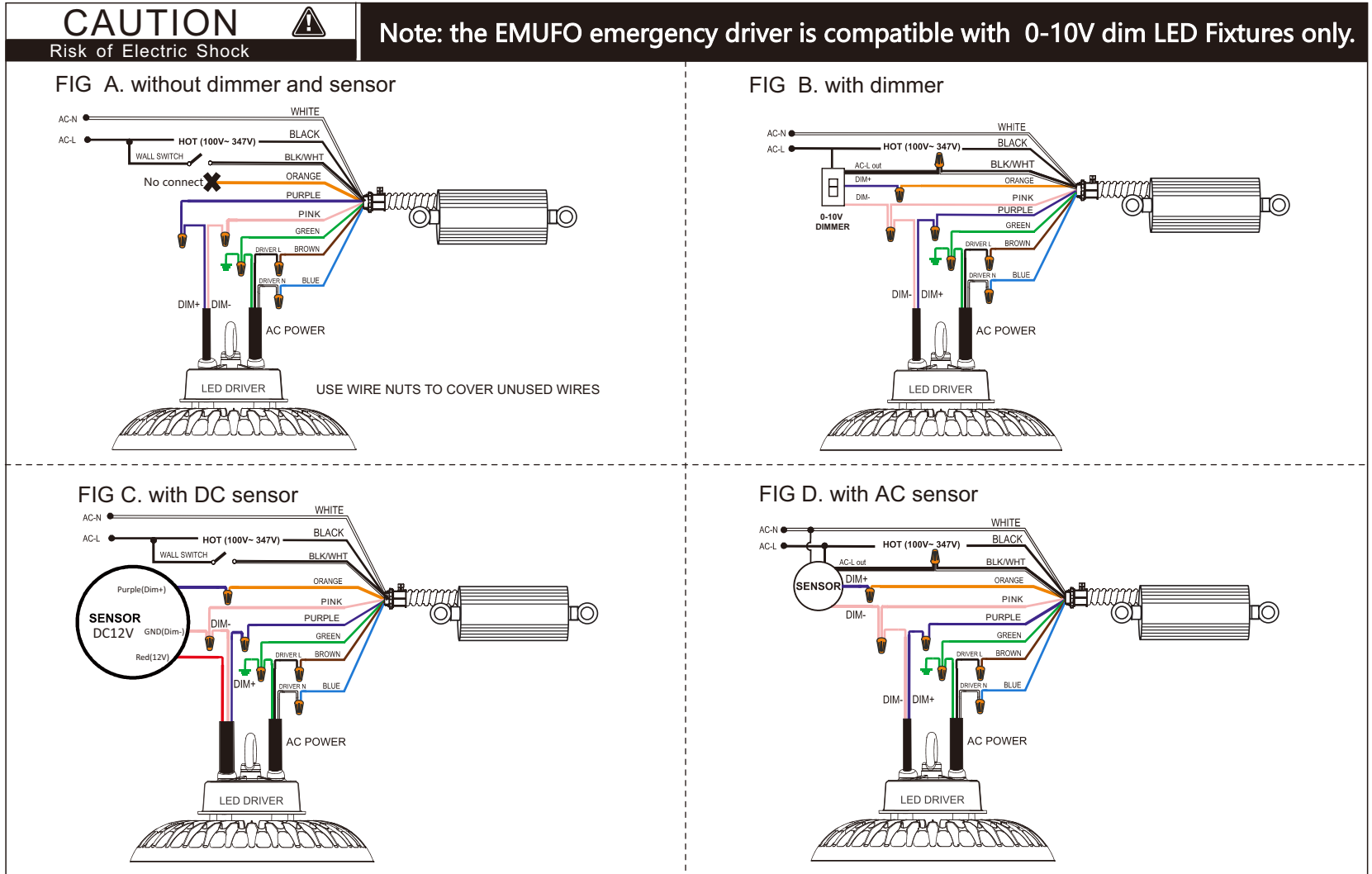
- Monthly-** During AC mode, the system conducts a (30)seconds self-discharge test of the emergency led driver every 30 days. And automatically restore to normal charging after (30)seconds dis-charged.
- Annually-** During AC mode, the system conducts a (90)minutes self-discharge test of the emergency led driver every 365 days. And automatically restore to normal charging after fully dis-charged.
- “Written Records of the Testing should be kept by the owner for inspection by the authority having jurisdiction.”** If the charging indicator is flashing rapidly or off, contact manufacturer.

## SAVE THESE INSTRUCTIONS



THIS PRODUCT CONTAINS A RECHARGEABLE LITHIUM-ION BATTERY. THE BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY TO PREVENT FIRE.

## WIRING DIAGRAM



**Caution: Before Installation, Make Certain The A.C. Power is Off !**

### STEP 1: ASSEMBLING NOTICE

- > The Maximum weight of lighting fixture should be less than 20kg.
- > Before wiring, make sure safety rope is securely locked and make sure all the screws are tight.

### STEP 2: INSTALLING

- > Turn off the AC power before installing.
- > Assembling the EM backup with the Safety Rope with the chain link connector.
- > The IP65 version of EMUFO is an optional for this series, please using waterproof flexible conduit, connector and J-box to install it if it is necessary.

### STEP 3: WIRING

- > Select the appropriate wiring diagram to connect the emergency driver to the AC driver. For other diagrams, consult the manufacturer.
- > The voltage input to the dimmable wires (DIM+, DIM-) of emergency LED driver must less than 20Vdc.
- > Using wire nuts to cover un-used wires and make sure all connections are in accordance with the NEC and any local regulations.

### STEP 4: TESTING

- > After wiring is complete, apply A.C. power. Check if the indicator light lights or not, which will indicate the battery's charging situation.
- > The battery in this unit may not be fully charged. A short-term discharge test may be conducted after the EMUFO has been charging for 1 hour. Charge for 24 hours before conducting a long-term discharge test.

## OPERATION (INDICATOR STATUS)

Mode	Test Switch Operation	Wireless Remote Operation	Indicator Status	Comment & Solutions
AC MODE (1)	NO Pressed	NO Pressed	ON(no flashing)	Battery is charging
AC MODE (2)	Pressed once	Pressed Button A once	2s ON and 2s OFF (slow flashing)	Battery is conducting a 30s short-term emergency test
AC MODE (3)	Pressed twice (2s) in sequence	Pressed Button B once	2s ON and 2s OFF (slow flashing)	Battery is conducting a long-term emergency test until battery is fully discharged
EMERGENCY MODE (1)	NO Pressed	NO Pressed	2s ON and 2s OFF (slow flashing)	Battery is automatically conducting a emergency until battery is fully discharged
EMERGENCY MODE (2)	Pressed once	Pressed Button A once	OFF	Battery is turned off

**PROBLEM** When indicator flashes (0.2s) ON and (0.2s) OFF fast or goes off, the emergency backup pack is abnormal. Contact the manufacturer.

**WARNING** Risk of Electric Shock

**Note:** Please pressed test switch or wireless remote button A of the EMUFO (in once) and make certain the battery is turned off, before installation, maintenance, storage or shipping.