

# RemPhos | SILVAIR | LIGHTING CONTROL

## Application Note: Install Options for LBI MAX with Emergency Battery Backup

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### Introduction

The Light Efficient Design LBI MAX an advanced LED lighting fixture designed for a variety of commercial and industrial applications. It is available with the option of an emergency battery backup, ensuring that critical lighting is maintained during power outages.

This application note outlines two installation methods for the LBI MAX with an emergency battery.

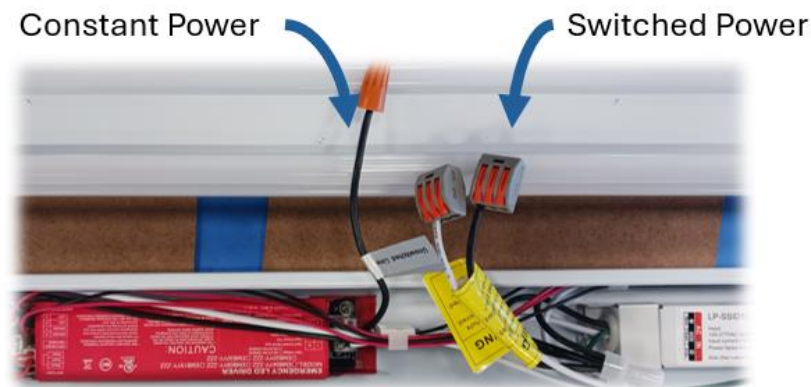
During emergency battery operation, the Emergency Battery will override any incoming signal from the 0-10V dimming system. In this mode, the fixture is programmed to deliver a constant light output of 500 lumens for 90 minutes. This ensures sufficient illumination during power outages, regardless of the dimming level that was set before the emergency event. Once AC power is restored, the fixture will return to its normal operation and respond to the 0-10V dimming signals as programmed.

### Single Fixture Hardwire Installation with Constant Hot and Switched Hot

When hardwiring the LBI MAX as a single fixture, the emergency battery can be wired using the traditional method, which includes constant hot and switched hot wiring. This is ideal when individual control of the fixture is desired and is common in standalone applications. The Constant Hot and Switched Hot must be from the same electrical phase.

#### Installation Details:

- **Constant Hot:** A constant hot wire is used to provide uninterrupted AC power to the emergency battery backup.
- **Switched Hot:** A switched hot wire allows for normal operation of the fixture, enabling it to be controlled via a wall switch or other external control systems. This wire controls when the fixture is turned on or off in normal circumstances.



Inside View LBI MAX with Emergency Battery

## Continuous Run Installation with Seamless Connectors or Linking Cables

For larger installations, the LBI MAX fixtures can be installed in continuous runs using seamless connectors or linking cables. In this configuration, the fixtures do not have the additional conductors for separate constant hot and switched hot wires. Instead, the entire fixture run is controlled using 0-10V dimming with Dim to Off capability, while being powered by a constant AC power connection.

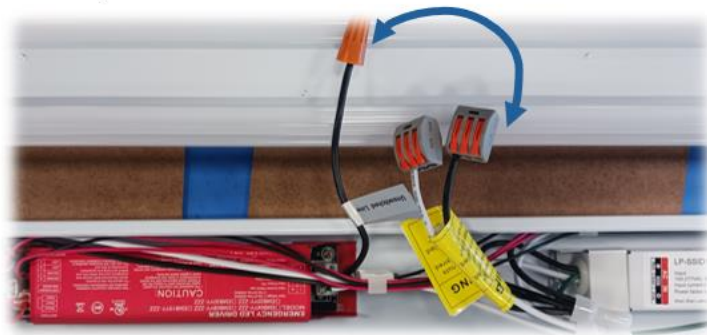
### Installation Details:

**Install LBI incoming power cable with constant Power:** All LBI MAX fixtures in the continuous run are wired to constant AC power, ensuring that the power supply is always maintained to both the fixtures and the emergency battery backup.

**0-10V Dimming with Dim to Off:** The fixtures are controlled using a 0-10V dimming system, which adjusts the brightness level and can turn the fixtures completely off using Dim to Off control. This eliminates the need for a separate switched hot wire to control the on/off functionality of the lights.

**Emergency Battery Integration:** Any fixture in the continuous row can be equipped with an emergency battery backup. To install the battery, the LBI MAX fixture with EM is opened, and the constant power connection from the emergency battery is connected to the inline power via the latch-style connector. This setup allows the battery to operate on constant power provided through the seamless connectors or linking cables.

Connect constant power connection to the inline power via latch connector



Inside View LBI MAX with Emergency Battery

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## LBIMAX Materials Selection for Continuous Run Installation Emergency Battery. (Silvair BLE Mesh 0-10V control)

**LBI-G1 Plug and Play:** simply plug in-line with the LBI or LBIMAX.

- **RP-LBI-BLE-OC** Silvair Bluetooth Node with Microwave Sensor
- **RP-LBI-BLE-PIR-A** Silvair Bluetooth Node with Passive Inferred Sensor
- **RP-LBI-BLE-A** Silvair Bluetooth Node only (no sensor)

**LBIMAX Ordering Codes:** internally installed Silvair hardware into LBIMAX.

- **RP-LBIMAX-2F-25W-40K-WC [-EM1]** 2FT LBIMAX fixture only [w/ EM included]
- **RP-LBIMAX-2F-25W-40K-WC-BT [-EM1]** 2FT LBIMAX w/ Bluetooth Node only (no sensor) [w/ EM included]
- **RP-LBIMAX-2F-25W-40K-WC-OCBT [-EM1]** 2FT LBIMAX w/ Bluetooth Microwave Sensor [w/ EM included]
- **RP-LBIMAX-4F-48W-40K-WC [-EM1]** 4FT LBIMAX fixture only [w/ EM included]
- **RP-LBIMAX-4F-48W-40K-WC-BT [-EM1]** 4FT LBIMAX w/ Bluetooth Node only (no sensor) [w/ EM included]
- **RP-LBIMAX-4F-48W-40K-WC-OCBT [-EM1]** 4FT LBIMAX w/ Bluetooth Microwave Sensor [w/ EM included]

**Wireless Wall Switches:** communicate wirelessly to the mesh, adjust light levels and more.

- **RP-PSC-DM-WS-100-BLE-SR:** Bluetooth Dim Wall Switch, 120-277V AC
- **RP-PSC-DM-I-WS-100-BLE-SR:** Bluetooth Dim Wall Switch w/ PIR sensor, 120-277V AC
- **RP-ENOCEAN-ESRPB-W-EO:** Bluetooth Dim Wall Switch, Kinetic Powered, Single Zone
- **RP-EDRPB-W-EO:** Bluetooth Dim Wall Switch, Kinetic, Single Zone, Scene Selection



## Conclusion

The LBI MAX offers flexible installation options, both for single fixtures with traditional constant and switched hot wiring, and for continuous runs controlled via 0-10V dimming.

By utilizing Dim to Off functionality, the need for switched hot wiring is eliminated in continuous runs, simplifying installation and ensuring constant power to both the fixture and the emergency battery backup. This flexibility makes the LBI MAX an ideal solution for a wide range of commercial and industrial lighting applications where both reliable performance and emergency lighting are required.

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## Resources

Remphos Technical Support email: [remphos-ts@led-llc.com](mailto:remphos-ts@led-llc.com)

Silvair user sign up / log in: <https://platform.silvair.com/>

## Silvair commissioning video links:

Overview: <https://youtu.be/fX0sIXi4AA0?si=McS5dSz9F7JLlhPa>

Part 1: [https://youtu.be/8KWPK7z\\_Tng?si=bR9mpahYt65lBO-X](https://youtu.be/8KWPK7z_Tng?si=bR9mpahYt65lBO-X)

Part 2: <https://youtu.be/POXafAkn2PU?si=jkfMVFqQBANTS1WW>

Mobile App: <https://youtu.be/rK3qHc1vnL8?si=YBExGHCsxWl8tqli>

In-Node Scheduling: [https://youtu.be/73eMrWqYqFw?si=gjakS\\_0lgiaCGrh9](https://youtu.be/73eMrWqYqFw?si=gjakS_0lgiaCGrh9)