

LITETRONICS®

LED Emergency Battery Backup Installation Instructions

Ordering Code: EB23UQ



PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLATION

SAFETY INSTRUCTIONS AND WARNINGS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- In all installations, the EB23UQ wires labeled "0-10V Retrofit or Luminaire" **must be connected to the Retrofit or Luminaire 0-10V wires before power is restored.**
- Voltage could be present in battery. **To prevent high voltage from being present on output leads, do not connect Battery connector until installation is complete.**
- This Emergency Battery Backup **must be installed into an UL/CUL Listed Luminaire with a steel enclosure.** Do not install this Emergency Battery Backup into luminaires with non-ferrous metal or polymeric enclosures.
- This product contains a rechargeable Ni-MH battery. The battery must be recycled or disposed of properly.
- Make sure that the necessary branch circuit wiring is available. An un-interrupted AC source of power is required.
- Maximum mounting height of retrofit should not exceed more than 23 feet.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Can be used with and without a switch.
- Battery is replaceable with Litetronics's ordering code EBA45-12V. Contact the manufacturer for information on replacement battery.
- Easy front access to Dip Switch for adjustments to control output power of 23 watts for 0-10V to various LED Retrofit models
- Compatible with non-dimmable LED Retrofit 120V-277V up to 23W with full power light output.
- Do not use with non-dimmable 32W or 50W or more than 23W LED Retrofit.
- To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.
- Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of Emergency Battery Backup. Check for enclosed wiring and components.
- Do not use outdoors.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- 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.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.
- Installation should be in accordance with NEC and any relevant local codes.
- Risk of fire or electric shock. Emergency Battery Backup installation requires knowledge of electrical system. If not qualified, do not attempt installation. Contact a qualified electrician.
- Improperly installed electrical wiring can be dangerous and cause electrical fires. This product must be used in accordance with the current rating and wire sizes listed. Consult local building code before doing any electrical work.
- COPPER to COPPER ONLY. Do not use on Aluminum. Temperature rating: 105° C (221° F) maximum. Flame Rated UL94V-0.

SAVE THESE INSTRUCTIONS

PREVENTING MALFUNCTION AND DAMAGE TO EBB UNIT

Before restoring power:

- The "0-10V Retrofit or Luminaire" wires (purple and gray) from the Emergency Battery Backup **need to be connected to the Luminaire 0-10V dimming.**
- The **Dip Switch position** (inside the EBB) **needs to be set as specified in these instructions.** Refer to the Retrofit Compatibility Table on page 3.

NOTE: If the above is not properly done, and if the power is restored to the EBB, then some of the components inside the EBB will get hot and lead to early failure. This is not covered by warranty.

EB23UQ MISCELLANEOUS OPERATING INSTRUCTIONS

TESTING PROCEDURES

- When AC power is applied, charge indicator light illuminates green. That indicates the battery is charging.
- Press and hold "PUSH to TEST" button for 10 seconds to simulate power failure and confirm LED Retrofit is functioning in emergency mode. During test, the charge indicator light will be off and the light will dim.

OPERATION

- When power fails, the Emergency Battery Backup automatically switches to emergency power. The charge indicator light goes off and the Retrofit will operate at up to 23W.
- When AC power is restored, the emergency battery automatically returns to charge mode.
- EB23UQ must be charged for 24 hours before 90 minute test can be completed.

MAINTENANCE

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

- Visually inspect the charge indicator light monthly. It should be illuminated.
- Test the emergency operation of the fixture at 30-day intervals for a minimum of 30 seconds.
- Conduct a 90-minute discharge test once a year. LED tubes should operate at up to 23W for at least 90 minutes.

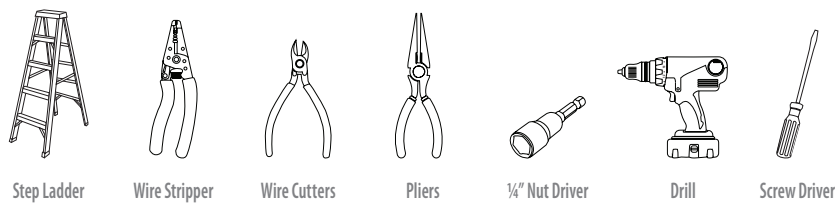
SERVICE

Should be performed as indicated above by qualified personnel.

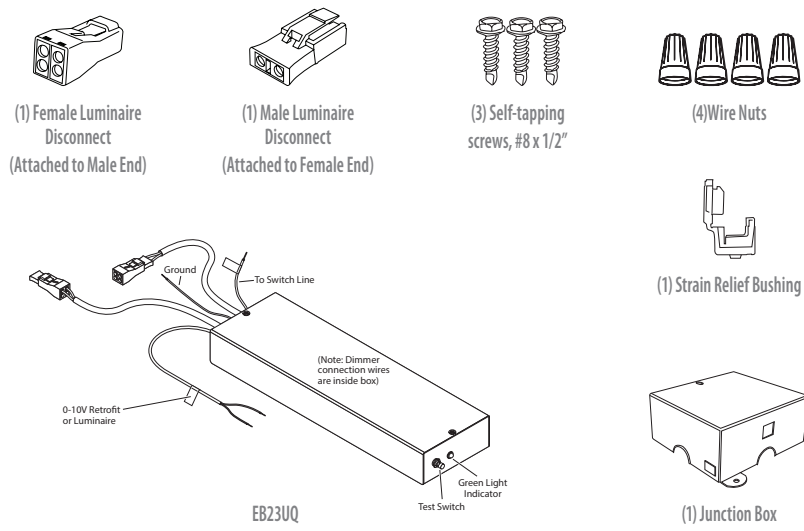
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TOOLS AND MATERIALS NEED FOR INSTALLATION



WHAT COMES IN THE BOX



AVAILABLE ACCESSORIES

Emergency battery backup from Litetronics comes with a rechargeable battery installed. Replacement batteries are also available for purchase.



Battery accessory (EBA45-12V)

RETROFIT COMPATABILITY TABLE

EB23UQ (23W 120-277V QC WH) is compatible with all Litetronics 0-10V dimmable retrofits. It is also compatible with Litetronics non-dimmable retrofits (up to 23 Watts) and bi-level retrofits.

NOTES:
Please set dip switch position before wiring LED Emergency Battery Backup.

In default factory setting, position 2 is set to ON.

Dip switch must be setup according to the corresponding part number on this table.

If no settings are specified as ON for your part number, set all dip switches to OFF.

If your part # is not listed, please contact the Litetronics Customer Service team.

customerservice@litetronics.com

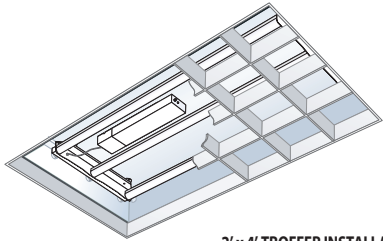
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DIP SWITCH SETUP FOR EB23UQ							
LITETRONICS' MODEL NUMBER	EMERGENCY OUTPUT WATTS	DIP SWITCH POSITION					
		1	2	3	4	5	6
0-10V DIMMABLE							
RF16UQT1XXDL	16W						
RF16UQT1XXCDL	16W						
(2) RF16UQT1XXCDL	23W			ON			
RF32UQT1XXDL	23W			ON			
RF32UQT1XXCDL	23W			ON			
(2) RF32UQT1XXCDL	23W	ON					
RF32UHT1XXDL	16W			ON			
RF32UQT2XXDL	16W						ON
RF32UQT4XXDL	23W						ON
RF50UQT4XXDL	23W					ON	
NON-DIMMABLE							
MODEL NUMBER	WATTS	1	2	3	4	5	6
RFM131T1XX	13W		ON				
RF16UQT1XXC	16W		ON				
RF22UQT2XX	22W		ON				
RFM262T1XX	23W		ON				
RFM131T1XX	13W		ON				
BI-LEVEL							
MODEL NUMBER	WATTS	1	2	3	4	5	6
RF32UQT2XXB	18W		ON				
RF50UQT4XXB	18W		ON				
ADJUSTABLE WATTAGE							
MODEL NUMBER	WATTS	1	2	3	4	5	6
RFM2T4XXA	22W						ON
RFM3T2XXA	22W						ON
RFM3T4XXB	22W						ON
*BYPASS T8 LED TUBES							
MODEL NUMBER	WATTS	1	2	3	4	5	6
LT09T828XXB1	9W		ON				
LT18T848XXB1	18W		ON				
LT14T848XXB2	14W		ON				
SWITCH DIMMABLE							
MODEL NUMBER	WATTS	1	2	3	4	5	6
RFM3T2XXCW	20W						ON
RFM3T4XXDW	22W						ON

*PLEASE USE WIRING DIAGRAM B ON PAGE 11 OF INSTRUCTION MANUAL V21(3/21/18). ONLY 1 TUBE SHOULD BE CONNECTED

EB23UQ TROFFER FIXTURE INSTALLATION

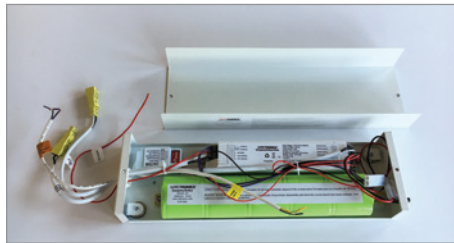
READ ALL INSTRUCTION BEFORE BEGINNING INSTALLATION



2' x 4' TROFFER INSTALLATION

1. To get started, turn off the power at the circuit breaker. Then open the cover of the existing fixture.

2. Unscrew and remove the lid of the Emergency Battery Backup.



3. Adjust Dip Switch settings to position specified by your product part number. Locate part number and reference the chart on page 3 for the correct Dip Switch settings.

Caution: If switch is mis-configured, damage to the EBB will occur. Backup battery time will be less than 90 minutes and brightness will be less than specified.



4. Unscrew junction box cover of existing Retrofit from luminaire troffer. Discard this junction box.

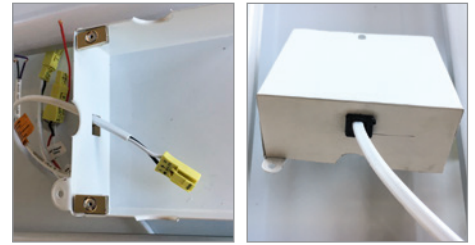


EB23UQ TROFFER FIXTURE INSTALLATION

5. Place unit, magnet side up, into the fixture and position as needed. Recommended placement is close to the junction box and input power wires.



6. Before wiring, insert the retrofit power lines through hole in the provided EBB junction box. Length inside should be 2-3" (enough to make connection with EBB power lines). Lock the strain relief bushing on to the wire and push the bushing through the hole until it snaps into place.

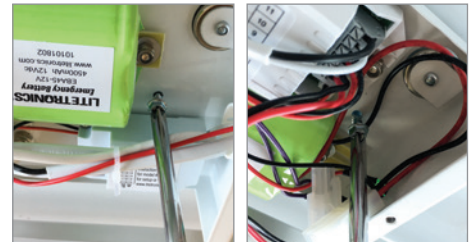


7. To make electrical connections, refer to the wiring diagrams on pages 10-12.

Note: Wiring is based on specific application.

In all installations for 0-10V Dimmable LED Retrofit, the EB23UQ jacketed wires labeled "0-10V Retrofit or Luminaire" must be connected to the purple and gray wires of the retrofit or luminaire before power is restored.

8. Secure EBB with two of the provided self-tapping screws. Screws should be inserted through existing holes on bottom of EBB casing.



EB23UQ TROFFER FIXTURE INSTALLATION

9. Connect the halves of the white multi-pin battery connectors.



10. Restore the lid on the EBB and secure screw on the opposite side of wiring



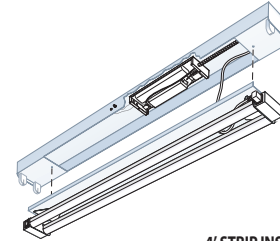
11. Tuck all wiring into the junction box and affix box to the fixture using magnets. Secure the junction box and EBB cover with shared screw. Then screw the junction box to the fixture using self-tapping screw.



12. Restore the power. At this point, LED indicator should illuminate indicating the battery is charging. Perform "TESTING" procedures (found on page 1).

EB23UQ STRIP FIXTURE INSTALLATION

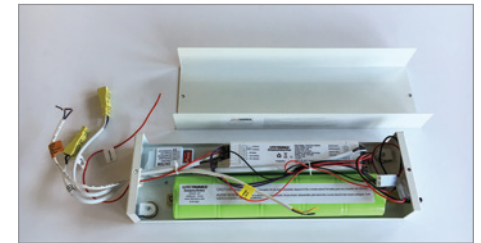
READ ALL INSTRUCTION BEFORE BEGINNING INSTALLATION



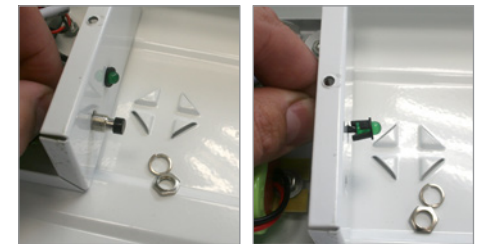
4' STRIP INSTALLATION

1. To get started, turn off the power at the circuit breaker. Then open the cover of the existing fixture.

2. Unscrew and remove the lid of the Emergency Battery Backup. You will not need to replace the lid for this installation.



3. Remove push button tester and LED indicator with LED holder from their positions in the EBB wall.



4. Place unit, magnet side up, into the fixture and position as needed. Recommended placement is close to the junction box and input power wires.



EB23UQ STRIP FIXTURE INSTALLATION

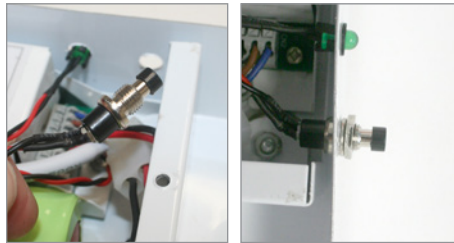
5. Extend wires for push button tester and LED indicator from unit. Mark position for emergency battery backup and holes in strip fixture wall. Remove EBB from fixture. Drill two holes in fixture wall for the LED indicator light 1/4" (6.3mm) and push button tester 9/32" (7.2mm). Replace EBB when finished.



6. Insert the LED indicator light through hole in the side of strip and secure with LED holder.



7. Insert the push button tester through hole in the side of strip. Secure with lock washer and nut.



8. Adjust Dip Switch settings to position specified by your product part number. Locate part number and reference the chart on page 3 for the correct Dip Switch settings.

Caution: If switch is mis-configured, damage to the EBB will occur. Backup battery time will be less than 90 minutes and brightness will be less than specified.



EB23UQ STRIP FIXTURE INSTALLATION

9. Secure emergency battery backup to strip fixture with two of the self-tapping screws. The holes are located inside on the bottom frame of case.



10. To make electrical connections, refer to the wiring diagrams on pages 10-11.

Note: Wiring is based on specific application.

In all installations for 0-10V Dimmable LED Retrofit, the EB23UQ jacketed wires labeled "0-10V Retrofit or Luminaire" must be connected to the purple and gray wires of the retrofit or luminaire before power is restored.

11. Connect halves of white multi-pin battery connector together.

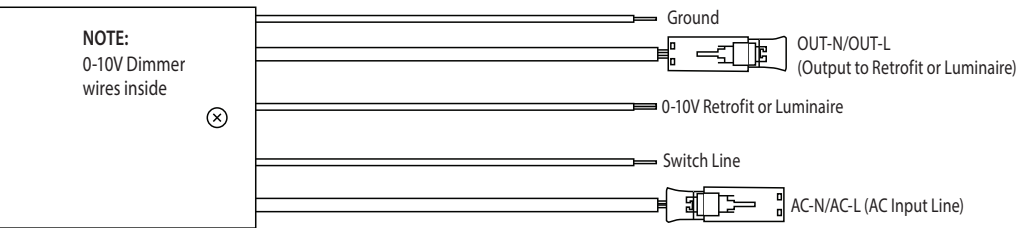


12. You do not need to replace the lid on the emergency backup. The strip fixture cover is all that is required.



13. Restore the power. At this point, LED indicator should illuminate indicating the battery is charging. Perform "TESTING" procedures (found on page 1).

EB23UQ WIRING DIAGRAM A



A (i) 0-10V LED RETROFIT WITH SWITCH

Connect wires by following wiring diagram A (i) below:

1. Connect purple (+) and gray(-) coming out of emergency backup to purple (+) and gray (-) from LED Retrofit using wire nuts.
2. Plug "Out-N" (blue) and "Out-L" (brown) of emergency backup connector together with LED Retrofit.
3. Connect "AC-N" (white) and "AC-L" (black) of emergency backup to un-interrupted power supply wires.
4. Connect "SW" (red) coming out of emergency backup to switch.
5. Connect ground (green) wire to fixture ground.

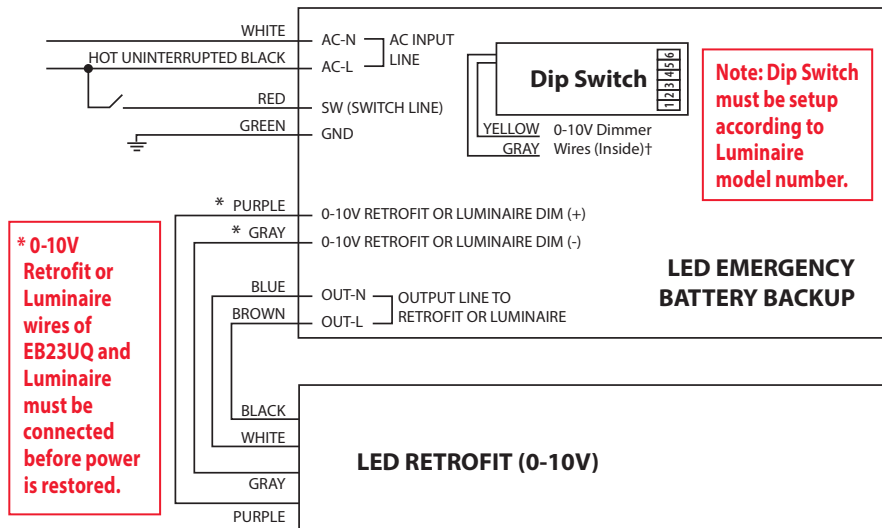


Fig. 1

A (ii) 0-10V LED RETROFIT WITHOUT SWITCH

FOLLOW WIRING DIAGRAM Fig. 1
BUT CONNECT AC-L (BLACK) AND SW (RED) TOGETHER.

† Follow dimmer manufacturer's installation instructions

EB23UQ WIRING DIAGRAM B

B (i) NON-DIMMABLE LED RETROFIT <23W WITH SWITCH.

Connect wires by following wiring diagram B (i) below:

1. Cover both the purple (+) and gray (-) coming out of emergency backup with 2 wire nuts.
2. Plug Out-N (blue) and Out-L (brown) of emergency backup connector with LED Retrofit together.
3. Connect AC-N (white) and AC-L (black) of emergency backup to un-interrupted power supply wires.
4. Connect SW (red) coming out of emergency back up to switch.
5. Connect ground (green) wire to fixture ground.

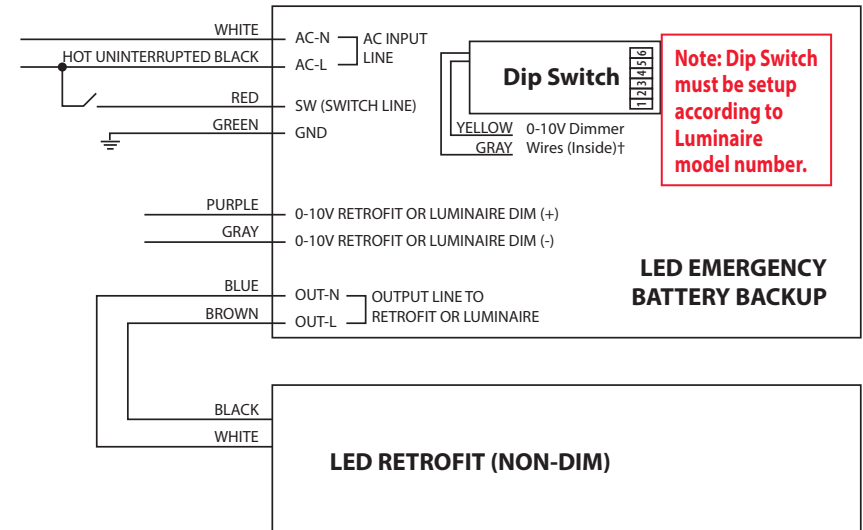


Fig. 2

B (ii) NON-DIM LED RETROFIT <23W WITHOUT SWITCH

FOLLOW WIRING DIAGRAM Fig. 2
CONNECT AC-L (BLACK) AND SW (RED) TOGETHER.

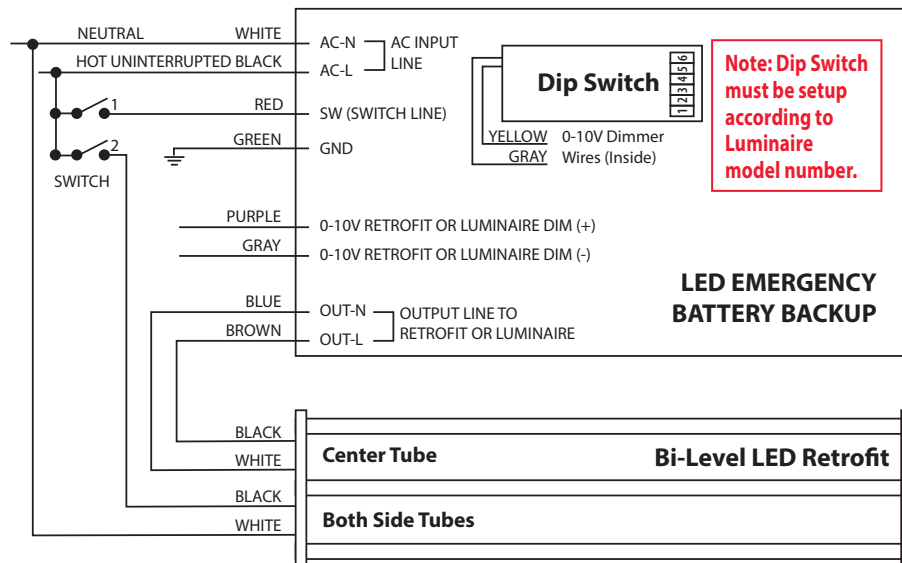
† Follow dimmer manufacturer's installation instructions

C. BI-LEVEL LED RETROFIT

CAUTION: For LED Retrofit Bi-Level connection, connect only "Center" tube of LED Retrofit to output of Emergency Battery Backup.

Connect wires by following wiring diagram below:

1. Cover both the purple (+) and gray (-) coming out of emergency backup with 2 wire nuts.
2. Plug Out-N (blue) and Out-L (brown) of emergency backup connector with "Center" tube of LED Retrofit together.
3. Connect AC-N (white) and AC-L (black) of emergency backup to un-interrupted power supply wires.
4. Connect SW (red) coming out of emergency back up to switch 1.
5. Connect both side tubes of LED Retrofit to Switch 2.
6. Connect ground (green) wire to fixture ground.



For questions related to your Emergency Battery Backup, please contact Litetronics Customer Service.

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Thank you for choosing

LITETRONICS®

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12/12/19