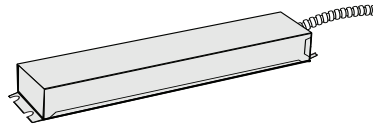


BTB15D

DIMMING INVERTER



bodine

Installation Instructions

BTB15 SERIES EMERGENCY LIGHTING INVERTERS



! IMPORTANT SAFEGUARDS !

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. For use with 120V, 60Hz phase-cut dimmable light sources up to 15 W. Delivers up to 12.5 VA to the load in the emergency mode.
2. Make sure all connections are in accordance with the National Electrical Code or Canadian Electrical Code and any local regulations.
3. To reduce the risk of electric shock, disconnect both normal and auxiliary power supplies and unit enable connector of the backup dimming inverter before servicing.
4. This backup dimming inverter is for factory or field installation.
5. An AC power source (120 through 277 VAC, 50/60 Hz) ahead of any wall switch is required to provide battery charging current.
6. Do not install near gas or electric heaters.
7. This product is for use in indoor or damp locations where the ambient temperature is 0°C to 45°C. Not suitable for outdoor, wet, or hazardous locations.
8. This is a sealed unit. Integral battery is not replaceable. Replace entire unit when necessary.
9. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
10. Do not use this product for other than intended use.
11. Servicing should be performed by qualified service personnel.
12. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
13. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.
14. This product must be grounded.

SAVE THESE INSTRUCTIONS

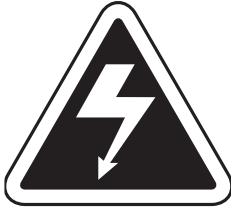


Lithium Ion

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

07/07/2021

INSTALLATION



WARNING: TO PREVENT HIGH VOLTAGE FROM BEING PRESENT ON THE RED/BLACK AND RED/WHITE OUTPUT LEADS PRIOR TO INSTALLATION, BLUE UNIT ENABLE CONNECTOR MUST BE OPEN. JOIN BLUE UNIT ENABLE WIRES AFTER INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.

NOTE: Make sure that the necessary branch circuit wiring is available. An unswitched source of power is required. The unswitched and switched power source must be fed from the same branch circuit.

This product has been designed to reliably interface with a wide selection of luminaires which are electrically compatible with 120 through 277 VAC at 50/60Hz. However, compatibility cannot be guaranteed with all current and future luminaire systems.

Compatibility testing of the end-use system is recommended. Please contact the factory with any questions. After installation, it will be necessary to measure the egress lighting illumination levels to ensure it complies with national, state, and local code requirements.

INSTALLING THE BACKUP DIMMING INVERTER

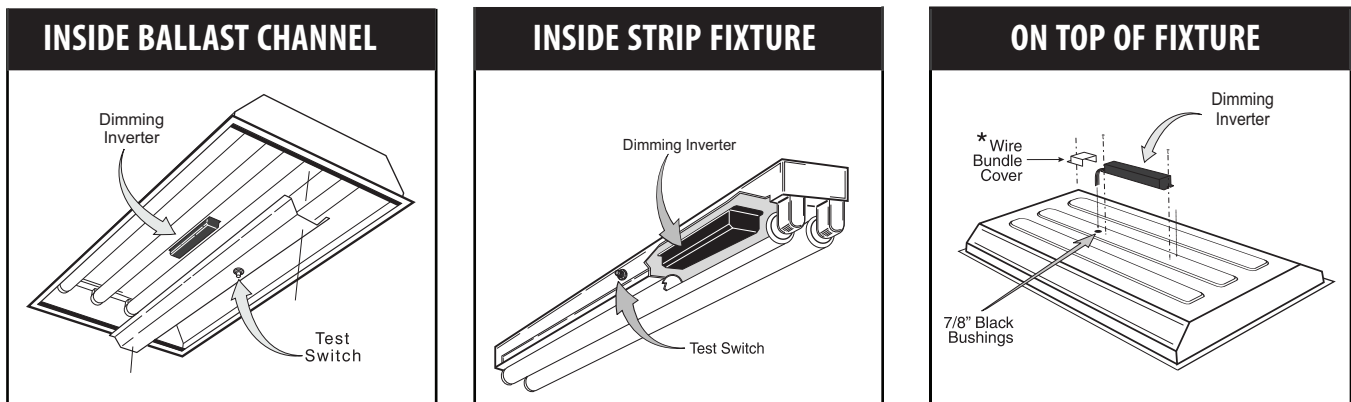
- The backup dimming inverter will be located between the AC power sources and dimmable light sources as shown in the Wiring Diagrams section of instructions.
- **NOTE:** The backup dimming inverter may be installed in close proximity to the fixture or remote from the fixture. The maximum remote distance using is 250 feet. Contact the factory for more information.
- The dimmable light source receives power from the backup dimming inverter. Identify the output wires of the backup dimming inverter by the presence of the red/black and red/white leads.

STEP #1 ► DISCONNECT AC POWER FROM FIXTURE

- > Disconnect all power sources to the lighting fixture and ensure they are locked out during installation or maintenance.
- > The dimmable light source must be powered from the backup dimming inverter.
- > Select a suitable location for the backup dimming inverter and install such that its output leads can connect to the input leads of the dimmable light source.
- > See Illustration 1 for typical installation and select appropriate mounting method.



ILLUSTRATION 1



- For installation on top of the fixture, wire bundle covers (RMC- 60) may be required by state or local codes. These covers are available from the manufacturer as an accessory kit and must be ordered separately. Call your local distributor or the factory for complete information.

INSTALLATION

NOTE: Considerations must be made to protect the wires of the BTB15D if installed outside of the luminaire.

STEP #2 **CONNECT THE BACKUP DIMMING INVERTER TO THE PROPER LINE VOLTAGE**

- > Verify that the blue unit enable connector is disconnected. Note that the unswitched hot connects to the red input lead of the backup dimming inverter.

STEP #3 **WIRING THE BACKUP DIMMING INVERTER**

- > Use the wiring diagrams found on page 4 as reference.
- > Connect the AC power source leads (Switched and Unswitched) to the input of the backup dimming inverter.
- > Connect the output leads of backup dimming inverter to the dimmable light source.
- > Wire the AC dimmable light source in accordance with manufacturer' installation instructions.
- > Make sure all connections are in accordance with the National Electrical Code, Canadian Electrical Code and any local regulations.
- > Connect the Test Switch/Charging Indicator Light by matching violet/white and brown/white leads to the violet and brown leads, respectively, of the Test Switch/Charging Indicator. See wiring diagrams for proper connections. Mount in a readily visible location.
- > 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 DC Power Supply (Backup Ballast Inverter Connector) Before Servicing."

STEP #4 **JOIN THE UNIT ENABLE INVERTER CONNECTOR & APPLY POWER**

- > After installation is complete, apply AC power and join the Blue Unit Enable connector.
- > At this point, power should be connected to both the dimmable light source and the backup dimming inverter, and the Charging Indicator Light should illuminate indicating the battery is charging.
- > A short-term discharge test may be conducted after the backup dimming inverter has been charging for one hour. Charge for 24 hours before conducting a long-term discharge test. **Refer to OPERATION.**

OPERATION

During normal operation, AC power is supplied to the dimmable light source through the backup dimming inverter and the inverter charges its internal battery. Connecting the Blue Enable Unit Connector wires enables the emergency circuit and supplies power to the control/monitor circuit.

When AC power fails, the backup dimming inverter automatically switches to emergency mode, keeping the load illuminated for a minimum of 90 minutes. The dimming inverter supplies a 120V, 60Hz with reverse phase dimming to power the light source at a dimmed level. When AC power is restored, the backup dimming inverter returns to charging mode. The backup dimming inverter consists of a low-battery voltage disconnect which is reset when AC power is restored. The unit can also detect an abnormal load condition (open or shorted load) during emergency mode operation and will protect the backup dimming inverter from damage.

MAINTENANCE

Although no routine maintenance is required to keep the backup dimming inverter 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.
3. Conduct a 90-minute discharge test once a year. The lamp should operate for at least 90 minutes.

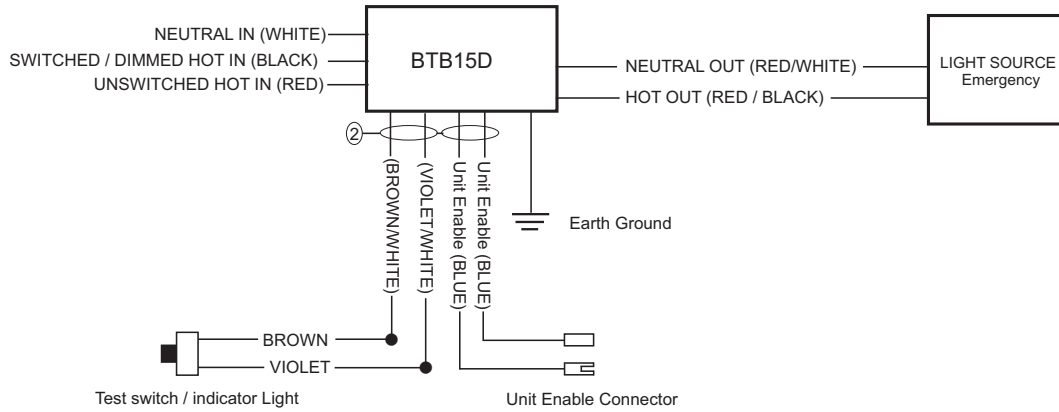
! REFER ANY SERVICING INDICATED BY THESE CHECKS TO QUALIFIED PERSONNEL !

WIRING DIAGRAMS

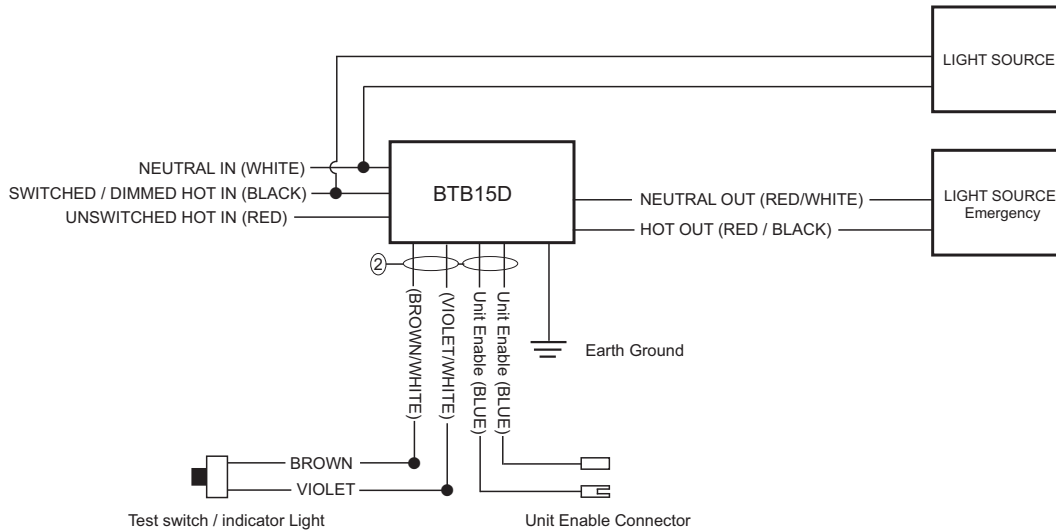
TYPICAL SCHEMATICS ONLY. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

SWITCHED AND UNSWITCHED SOURCE FEEDING THE DIMMING INVERTER AND LIGHT SOURCE MUST BE FED FROM THE SAME BRANCH CIRCUIT

FIG A. INVERTER WITH SINGLE EMERGENCY LIGHT SOURCE



FIB B. INVERTER WITH SINGLE EMERGENCY LIGHT SOURCE AND OPTIONAL NON-EMERGENCY LIGHT SOURCE



② These connections have been evaluated to comply with requirements for UL1310 Class 2 Power Units.