

BALT5-500

LOW-PROFILE FLUORESCENT EMERGENCY BALLAST



APPLICATION

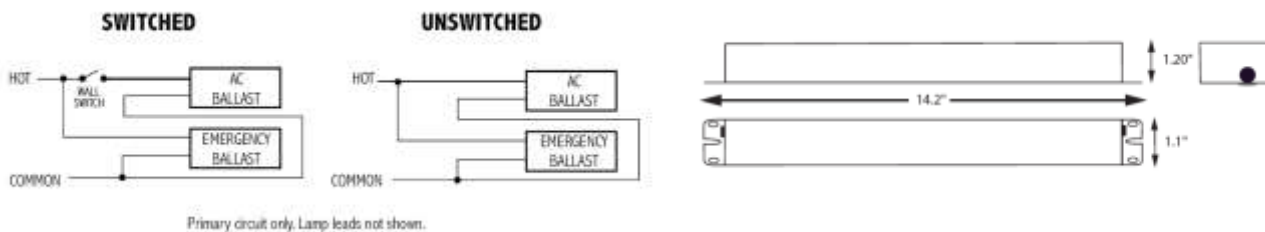
The BALT5-500 low-profile fluorescent emergency ballast works in conjunction with the AC ballast to convert new or existing fluorescent fixtures into emergency lighting. The emergency ballast consists of a high-temperature nickel cadmium battery, charger and electronic circuitry in one compact case. The BALT5-500 can be used with one (1) 14W-32W (2' - 4') T5 or T8 fluorescent lamps without integral starters. It is also compatible with most electronic and dimming AC ballasts. If used in an emergency-only fixture, no AC ballast is necessary. This ballast is not suitable for use in air handling heated air outlet fixtures, and wet or hazardous location fixtures. For information about specific lamp and ballast compatibility, please consult the factory. This ballast has additional features, such as time-delay enhancement and open circuit isolation that enables the emergency battery pack to function smoothly with 'End-of-Lamp-Life' circuitry in newer AC ballasts. This would provide an additional level of unit production from over-voltage caused by an absence of lighting load.

OPERATION

When AC power fails, the BALT5-500 immediately switches to the emergency mode, keeping one lamp illuminated at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the ballast automatically returns to the charging mode.

INSTALLATION

The BALT5-500 does not affect normal fixture operation and may be used with either a switched or unswitched fixture. If a switched fixture is used, an unswitched hot lead must be connected to the emergency ballast. The emergency ballast must be fed from the same branch circuit as the AC ballast. The BALT5-500 may be installed inside or on top of the fixture. Installation is not recommended with fixtures where the ambient temperature may fall below 0°C for extended periods.



UL AND CODE COMPLIANCE

The BALT5-500 has been tested by Underwriters Laboratories in accordance with the standards set forth in UL924, "Emergency Lighting and Power Equipment," and is UL Listed for factory and field installation. Emergency illumination time exceeds the National Electrical Code (NEC), Life Safety Code (NFPA-LSC) and UL 90-minute requirements.

BATTERY

Since high temperatures exist in fluorescent fixtures, the BALT5-500 uses a specifically constructed, high-temperature nickel cadmium battery. This battery requires no maintenance and has a life expectancy of 7 – 10 years.

EMERGENCY ILLUMINATION

The BALT5-500 produces 450-500 lumens initial emergency light output. During illumination, one lamp is illuminated, even if with a multi-lamp AC ballast. Emergency lumen output will be less with a compact fluorescent lamp.

Specifications subject to change without notice

HOWARD
LIGHTING PRODUCTS

Lighting for life.

Visit us online at HowardLightingProducts.com or call us at 800.956.3456.

Page 1 of 6

SPECIFICATION

Emergency lighting shall be provided by using a standard fluorescent fixture equipped with Howard BALT5-500 emergency ballast. This emergency ballast shall consist of a high-temperature, maintenance-free nickel cadmium battery, charger and electronic circuitry contained in one 14.2" x 1.1" x 1.2" metal case. A solid-state charging indicator light to monitor the charger and battery, a single-pole test switch, and installation hardware shall be provided. The emergency ballast shall be capable of operating one (1) 14W-32W (2' - 4') T5 or T8 fluorescent lamps without integral starters at reduced illumination in the emergency mode for a minimum of 90 minutes. The BALT5-500 shall produce 450 to 500 lumens initial emergency light output, have 2.5 Watts of input power, a 9 Watt-hour battery capacity, and comply with emergency standards set forth by the current NEC. The emergency ballast shall be UL Listed for installation inside, on top of, or remote from the fixture.

WARRANTY

Model BALT5-500 is warranted for five (5) full years from date of purchase. This warranty covers only properly installed Howard emergency ballasts use under normal conditions. For the warranty period Howard will, at its option, repair or replace without charge, a defective emergency ballast provided it is returned to the factory transportation and our inspection determines it to be defective under terms of the warranty. Repair or replacement, as stated above, shall constitute the purchaser's exclusive warranty, which does not extend to transportation, installation, labor, or any other charges; nor does it apply to any equipment of another manufacturer used in conjunction with the emergency ballast.

PRODUCT SUMMARY

UL LISTED Factory or Field Installation	DUAL VOLTAGE INPUT 120/277VAC 60 Hz	BATTERY High Temperature Maintenance-Free Nickel-Cadmium Battery 7-10 Year Life Expectancy	TEMPERATURE RATING (AMBIENT) 0°C TO 50°C (32°F TO 112°F)
ILLUMINATION 90 Minutes	AC INPUT CURRENT 127mA/120mA	BATTERY CHARGING CURRENT 127mA/120mA	DIMENSIONS 14.2" X 1.1" X 1.2" Mounting center 13.5"
INITIAL LIGHT OUTPUT 450-500 Lumens	AC INPUT POWER RATING 2.5 Watts	RECHARGE TIME 24 Hours	WEIGHT 1.36 lbs (0.6 kg)
FULL WARRANTY 5 Years (NOT pro-rata)	TEST SWITCH Single pole	CHARGING INDICATOR LIGHT LED	



CAUTION :Contains nickel-cadmium rechargeable battery. Must be recycled or disposed of properly.



When using Electrical Equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Caution – To prevent Electrical shock, do not mate unit connector until installation is complete and A.C. power is supplied to the unit.
2. Caution – This fixture provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency sources by turning off the A.C. branch circuit and by disconnecting the unit connector.
3. Caution – This is a sealed unit. The integral, high temperature Ni-Cad battery is not replaceable. Replace the entire unit when necessary and recycle or dispose of the Nickel-Cadmium battery properly.
4. The BALT5-500 is for use with grounded, UL listed, indoor fixtures except in heated air outlets or hazardous locations. This unit cannot be used outdoors.
5. The BALT5-500 requires an unswitched A.C. power source of either 120 or 277V. Properly cap the unused A.C. lead.
6. Do not mount near gas or electric heaters.
7. The BALT5-500 should be mounted in locations and heights where it will not readily be subjected to tampering by unauthorized personnel.
8. The BALT5-500 will cold strike and operate for 90 minutes one 2' to 4' 14-32W T5 or T8 linear lamp in the emergency mode. It is compatible with all A.C. magnetic and electronic ballasts including multiple lamp ballasts.
9. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition. Do not use this equipment for other than its intended use.
10. Install in accordance with the National Electrical Code and local regulations. Installation and servicing should be performed by qualified personnel.



CAUTION :Contains nickel-cadmium rechargeable battery. Must be recycled or disposed of properly.



INSTALLATION INSTRUCTIONS

Specifications subject to change without notice

HOWARD
LIGHTING PRODUCTS

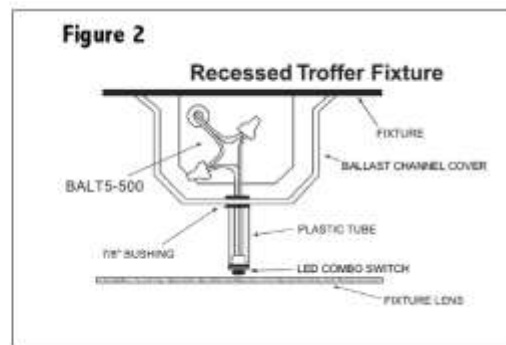
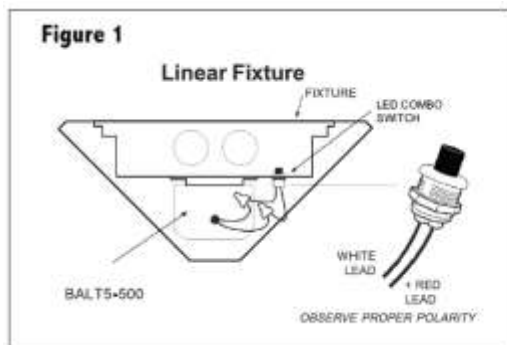
Lighting for life.

Page 3 of 6

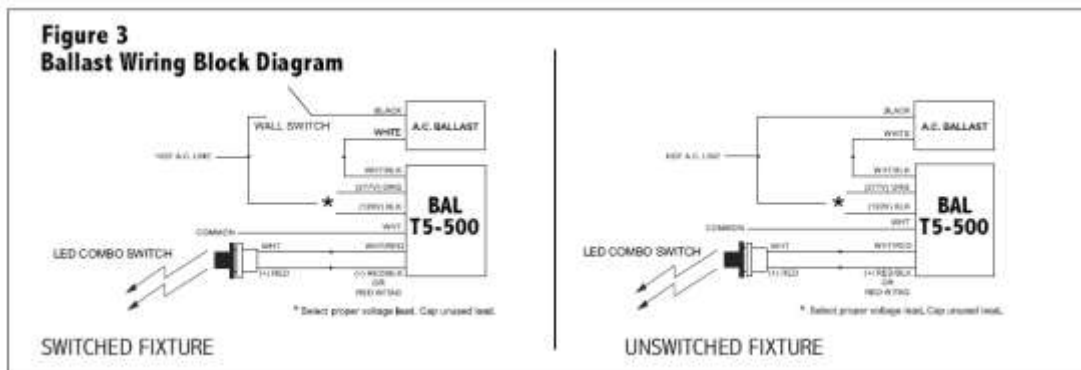
Visit us online at HowardLightingProducts.com or call us at 800.956.3456.

Caution – Before installing, turn off the main circuit breaker to avoid any possible shock. Also make sure that the inverter connector is disconnected.

1. Mounting the BALT5-500: Remove the ballast channel cover. Mount the BALT5-500 in the ballast channel at least $\frac{1}{2}$ " away from the A.C. ballast(s). When battery packs are remote mounted, the remote distance can not exceed $\frac{1}{2}$ of the distance from ballast to lamp specified by the A.C. ballast manufacturer. For example, if the A.C. ballast manufacturer recommends no more than 25' remote distance, then the battery pack should not exceed 12 $\frac{1}{2}$ '. Under no circumstances should the battery pack exceed a distance of 50' from the lamp.
2. Wiring: Refer to the wiring diagrams on the back page for the appropriate wiring of lamp(s) and allast. Install in accordance with the National Electrical Code and local regulations. For additional wiring diagrams consult Customer Service.
3. Installing the LED COMBO SWITCH:
 Linear Fixture – Select a convenient location on the fixture so that the LED COMBO SWITCH can be seen after installation. Allow for proper clearance inside the fixture and drill or punch a $\frac{1}{2}$ " hole. Remove the nut from the LED COMBO SWITCH. Push the switch housing into the $\frac{1}{2}$ " hole and secure with the nut. Connect the LED wires from the unit to the LED COMBO SWITCH (Red to Red, White/Red to White). Refer to figure 1.
 Recessed Troffer Fixture – Select a convenient location with proper clearance in the ballast channel and drill or punch a $\frac{7}{8}$ " bushing into the hole. Push the plastic tube through the bushing. Route the leads of the LED COMBO SWITCH through the plastic tube. Connect the LED wires from the unit to the switch (Red to Red, White/Red to White). Push the entire assembly back into the tube until the lens collar rests against the plastic tube. The plastic tube should be adjusted so that the LED COMBO SWITCH is within $\frac{1}{4}$ " of the fixture lens. The switch must be visible after installation. Refer to figure 2.



4. Power Supply: The BALT5-500 and A.C. ballast must be on the same branch circuit. It requires an unswitched A.C. power source of either 120 or 277V. Select the proper voltage lead and cap the unused lead. When the BALT5-500 is used with a switched fixture, the A.C. input to the emergency ballast must be connected ahead of the fixture switch. Refer to the figure below for switched and unswitched fixture wiring diagrams.



INSTALLATION INSTRUCTIONS continued.

Specifications subject to change without notice

HOWARD
LIGHTING PRODUCTS

Lighting for life.

Visit us online at HowardLightingProducts.com or call us at 800.956.3456.

Page 4 of 6

5. Labels: Attach the appropriate labels adjacent to the LED COMBO SWITCH. The 'Caution' and the Re-lamping labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.
6. When Installation of the ballast is complete, switch the A.C. power on and join the BALT5-500 unit inverter connector.

OPERATION

Normal Mode – When A.C. power is present, the A.C. ballast operates the fluorescent lamp(s) as intended. The BALT5-500 is in the standby charging mode. The LED COMBO SWITCH will be lit providing a visual indication that the battery is being charged.

Emergency Mode – When A.C. power fails, the LED COMBO SWITCH senses the A.C. power failure and automatically switches to the Emergency mode. One lamp is illuminated, at reduced output, for a minimum of 90 minutes. When the A.C. power is restored, the BALT5-500 switches the system back to the Normal mode and resumes battery charging.

GENERAL INSTRUCTIONS

The BALT5-500 can be used with most 2'-4' lamps. Refer to the chart below for the type of lamp(s) operated and the number of lamps to be operated in emergency mode.

OPTION	LAMP TYPE	EMERGENCY OPERATION	VIOLET LEADS
1	2ft. T5-T12 Single, Bi-Pin	One Lamp	Connected
2	4ft. T5(28W) T8-T12 Single, Bi-Pin	One Lamp	Disconnected

TESTING AND MAINTENANCE

Pushing the red lens on the LED COMBO SWITCH turns off the light (on the switch itself) and forces the unit into emergency mode, interrupting power to the designated A.C. ballast. The emergency lamp is now being lit by the BALT5-500 ballast. After releasing the LED COMBO SWITCH, the fixture returns to normal operation after a momentary delay. To simulate a 'BLACK OUT' use the circuit breaker to turn off AC power.

Allow the unit to charge approximately 1 hour, and then press the switch to conduct a short discharge test. The ballast needs to be charged for at least 24 hrs before conducting a one hour test.

The BALT5-500 is a maintenance-free unit, however, periodic inspection and testing is required. Per NFPA 101 and Life Safety Codes, a monthly and annual inspection needs to be done on the ballast. Servicing should always be performed by qualified personnel. Written records of the testing shall be kept by the owner for inspection by the authority having jurisdiction.

Monthly – Insure that the LED COMBO SWITCH is illuminated. Conduct a 30-second discharge test by depressing the switch. One lamp should operate at reduced output.

Annually – Insure that the LED COMBO SWITCH is illuminated. Conduct a full 1 ½ hr discharge test. The unit should operate as intended for the duration of the test.



CAUTION : Contains nickel-cadmium rechargeable battery. Must be recycled or disposed of properly.



TYPICAL WIRING DIAGRAMS

For wiring diagrams of ballasts not shown, consult our Customer Service.

1. ONE LAMP RAPID START BALLAST



6. FOUR LAMP RAPID START BALLAST

