

# B50

EMERGENCY LIGHTING EQUIPMENT

# PHILIPS bodine

A Division Of Philips Electronics North America Corporation

Replaces models B50U & BDL500  
**One- or two-lamp operation;**  
**Universal input voltage:**  
**120 through 277 VAC, 50/60 Hz;**  
**End-of-lamp-life compatible**

## Product Summary

### UL LISTED FOR US AND CANADA

Factory or Field Installation  
(Indoor and Damp)



### Illumination Time

90 Minutes

### Initial Light Output

Up to 1400 Lumens

### Full Warranty

5 Years (NOT pro-rata)

### Voltage

120 Through 277 VAC, 50 or 60 Hz

### AC Input Current

55 mA

### AC Input Power Rating

5.0 Watts

### Test Switch

Single Pole

### Battery

High-Temperature, Maintenance-Free  
Nickel-Cadmium Battery  
7- to 10-Year Life Expectancy

### Battery Charging Current

300 mA

### Recharge Time

24 Hours

### Charging Indicator Light

LED

### Temperature Rating (Ambient)

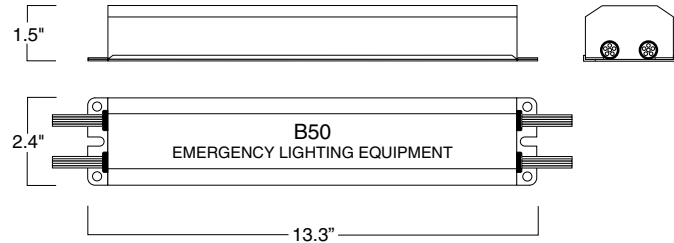
0°C to +50°C  
(32°F to 122°F)

### Dimensions

13.3" x 2.4" x 1.5"  
(339 mm x 60 mm x 38 mm)  
Mounting Center 12.8" (325 mm)

### Weight

3.5 lbs. (1.59 kg)



## APPLICATION

The B50 emergency ballast works in conjunction with an AC ballast to convert new or existing fluorescent fixtures into emergency lighting. The emergency ballast handles a wide range of input voltages and frequencies and consists of a high-temperature nickel-cadmium battery, charger and electronic circuitry in one compact red case. The B50 can be used with most 17 - 215 W (2' - 8') T8, T9, T10 or T12 fluorescent lamps without integral starters, including U-shaped, HO, VHO, circline and energy-saving, and (4-pin) long compacts. One- or two-lamp operation may be selected (see Table 1). It is also compatible with most single- and multi-lamp electronic and dimming AC ballasts. If used in an emergency-only fixture, no AC ballast is necessary. The B50 is suitable for indoor and damp locations and for sealed & gasketed fixtures, including fixtures rated for wet locations. It is not suitable for air handling heated air outlets or wet or hazardous locations. For information about specific lamp and ballast compatibility, please call the factory. Recommended applications include: international line voltages from 120 through 277 VAC (50 or 60 Hz); drilling rigs where generators are the primary source of power; and other applications requiring higher tolerance of line voltage variation or harmonic distortion.

## OPERATION

When AC power fails, the B50 immediately switches to the emergency mode, operating either one or two lamps at a reduced lumen output for a minimum of 90 minutes. When the AC power is restored, the emergency ballast automatically returns to the charging mode and, using a patented circuit, delays AC ballast operation for approximately three seconds to prevent false tripping of the AC ballast end-of-lamp-life shutdown circuits.

## INSTALLATION

The B50 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 B50 may be installed inside, on top of or remote from the fixture. The emergency ballast may be remotely installed up to half the distance the AC ballast manufacturer recommends removing the AC ballast from the lamp or up to 50 feet, whichever is less. Installation is not recommended with fixtures where the ambient temperature may fall below 0°C.

## UL AND CODE COMPLIANCE

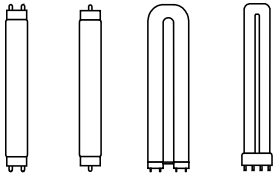
The B50 has been tested by Underwriters Laboratories in accordance with the standards set forth in UL 924, "Emergency Lighting and Power Equipment," and CSA C22.2 No. 141, "Emergency Lighting Equipment." The B50 is UL Listed for factory or field installation. Emergency illumination time exceeds the National Electrical Code (NEC), Life Safety Code (NFPA-LSC) and UL 90-minute requirements.

## Specifiers Reference

Project \_\_\_\_\_ Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Comments \_\_\_\_\_

L2300008

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**120 through 277 VAC, 50/60 Hz;**  
**End-of-lamp-life compatible**

### EMERGENCY ILLUMINATION

Depending on the number (one or two), wattage and type of lamps selected, the B50 produces up to 1400 lumens initial emergency light output (see Table 2). If two-lamp operation is selected, light output is evenly divided between the lamps for better distribution of emergency illumination.

### SPECIFICATION

Emergency lighting shall be provided by using a standard fluorescent fixture equipped with a Philips Bodine B50 emergency ballast. This emergency ballast shall consist of a high-temperature, maintenance-free nickel-cadmium battery, charger and electronic circuitry contained in one 1 3/8" x 2 3/8" x 1 1/2" red 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, using a patented circuit, shall delay AC ballast operation for approximately three seconds to prevent false tripping of AC ballast end-of-lamp-life shutdown circuits. The emergency ballast shall be capable of operating [one or two] \_\_\_\_\_ fluorescent lamp(s) (see Table 1) at \_\_\_\_\_ lumens (see Table 2) initial light output in the emergency mode for a minimum of 90 minutes. It shall be suitable for indoor and damp locations and for sealed & gasketed fixtures, including fixtures rated for wet locations. The B50 shall operate at any line voltage from 120 through 277 VAC at frequencies of 50 or 60 Hz. The B50 shall have 5.0 Watts of input power and a 24 Watt-hour battery capacity and shall exceed emergency standards set forth by the current NEC and CEC. The emergency ballast shall be UL Listed for installation inside, on top of or remote from the fixture and shall be warranted for a full five years from date of purchase.

### WARRANTY

Model B50 is warranted for five (5) full years from date of purchase. This warranty covers only properly installed Philips Bodine emergency ballasts used under normal conditions. For the warranty period, Philips Emergency Lighting will, at its option, repair or replace without charge a defective emergency ballast, provided it is returned to the factory transportation prepaid 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.

Table 1 - Lamp Compatibility

LAMP DIAMETER	BASE	WATTAGE (Length)	NO. of LAMPS (EMERGENCY)
1", 1¼", 1½" T8, T9, T10, T12	Single or Bipin	17-40 W (2'-4')	1
		40-215 W (5'-8')	2
Long Compact	4-pin (2G11)	18-55 W	1

Table 2 - Initial Lumen Output

LAMP	LUMENS	
	1 Lamp	2 Lamps
FO25, FBO24 T8	1250	1100
FO32, FBO31 T8	1350	1350
FO96 T8	1400	
F017, FBO16	1050	950
F40T12, F40/U	1100	1100
F48T12/HO	1200	
F96T12, HO, VHO	1100	
F39/36BX, PL-L 36W, Dulux L 39W	1100	1100
F28 2D/4P	1100	1100
F38 2D/4P	1000	1100
F27/24BX, PL-L 24W, Dulux L 27W		1000
F40T12/ES (34 W)	975	975
PL-L 40W, F40/30BX, F50BX, PL-L 50W, Dulux L 55W	900	

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