

# bodine

## Emergency Ballast

Linear fluorescent

B30ST



Project: \_\_\_\_\_  
Location: \_\_\_\_\_  
Cat.No: \_\_\_\_\_  
Type: \_\_\_\_\_  
Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
Notes: \_\_\_\_\_

Automatic Code-Compliant Testing  
High Lumen Output  
AC/DC Output for T5 or T8 lamps  
Universal Input (120 through 277)

Product order number: B30ST (galvanized metal case)

### Specifications

**UL Listed For US and Canada**  
Factory or Field Installation  
(Indoor and Damp)

**Illumination Time**  
90 Minutes

**Initial Light Output**  
900 - 3500 Lumens

**Full Warranty**  
5 Years (NOT pro-rata)

**Universal Input Voltage**  
120-277 VAC, 50/60 Hz

**AC Input Current**  
110 mA

**AC Input Power Rating**  
8.5 Watts

**Test Switch/Charging Indicator Light**  
Two-Wire Illuminated Test Switch (2W-ITS)

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

**Battery Charging Current**  
280 mA

**Recharge Time**  
24 Hours

**Charging Indicator Light**  
LED

**Temperature Rating (Ambient)**  
0°C to +50°C (32°F to 122°F)

**Dimensions**  
16.6" x 2.8" x 2.85"  
(422 mm x 71 mm x 73 mm)  
2' (610 mm) Flexible Conduit  
Mounting Center 16.05" (408mm)

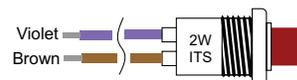
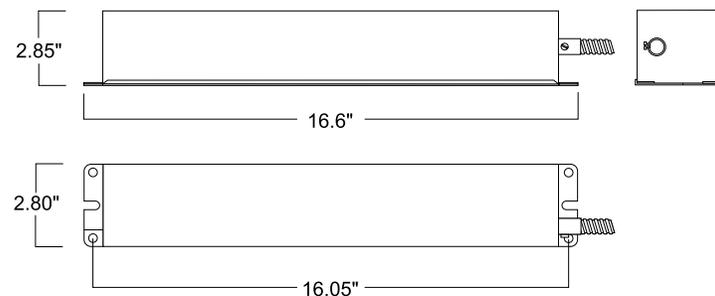
**Weight**  
7.5 lbs. (3.41 kg)

### Benefits:

- Automatic code-compliant testing - 30 mins monthly, 90 mins annually
- Emergency mode lumen output up to 3500 lumens
- AC or DC output for T5 or T8 lamps
- Compatible with TLED lamps (see chart on page 2)
- One- or Two-lamp operation
- Universal input (120 through 277 VAC 50/60 Hz)
- End-of-Lamp Life Compatible
- Two-wire illuminated test switch

### Dimensions

16.6" x 2.8" x 2.85" (mounting center - 16.05")



An illuminated test switch/charging indicator light is provided.

# B30ST Fluorescent emergency ballast, self-testing, full lumen output

## Application

The B30ST emergency ballast works in conjunction with an 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 case. The B30ST can be used with most 17 - 215 W (2' - 8') T5, T8, T9, T10 or T12 fluorescent lamps without integral starters, including U-shaped, HO, VHO, circline, energy-saving and rapid-start (4-pin) compact fluorescent lamps. B30ST also operates Philips InstantFit LED 2' to 4' 8.5W - 16.5 W T8 and InstantFit LED U Bend 6" 16.5 W T8 lamps. One- or two-lamp operation may be selected for some lamps (see Table 1). It is also compatible with most one-, two-, three- and four-lamp electronic, standard, energy-saving and dimming AC ballasts. If used in an emergency-only fixture, no AC ballast is necessary. The B30ST is suitable for indoor and damp 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.

## Operation

During normal operation, the B30ST constantly monitors charging current and battery voltage. When AC power fails, the B30ST immediately switches to the emergency mode, operating either one or two lamps at high lumen output for a minimum of 90 minutes. When AC power is restored, the emergency ballast automatically returns to the charging mode and delays AC ballast operation for approximately three seconds to prevent false tripping of the AC ballast end-of-lamp-life shutdown circuits. During automated testing, the B30ST simulates an AC power failure, causing the emergency ballast to switch to emergency mode and conduct a discharge test to monitor battery voltage and discharge current. If the B30ST detects a problem, the status indicator light flashes. When testing is complete, the B30ST returns

to the charging mode. The B30ST automatically tests emergency lighting for 30 seconds every 28 days and 90 minutes once a year.

## Installation

The B30ST 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 must be connected to the emergency ballast. The emergency ballast must be fed from the same branch circuit as the AC ballast. The B30ST may be installed 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. A 2-wire illuminated test switch is provided.

## Emergency Illumination

Depending on the number (one or two), wattage and type of lamps selected, the B30ST produces 900 to 3500 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 Bodine B30ST self-testing/self-diagnostic emergency ballast. Electronic circuitry shall be self-testing in design and automatically test emergency lighting for a minimum of 30 seconds every 28 days and 90 minutes once a year. An embedded microcontroller will continuously monitor the battery charging current and voltage. The emergency lighting equipment, shall delay AC ballast operation for approximately three (3) seconds to prevent false tripping of AC ballast end-of-lamp-life shutdown

circuits. The B30ST shall consist of a high-temperature, maintenance-free nickel-cadmium battery, charger and electronic circuitry contained in one 16.6" x 2.8" x 2.85" metal case with a 2' length of flexible conduit. A solid-state status indicator light to monitor the charger and battery and to indicate test results and status conditions; a single-pole test switch; and installation hardware shall be provided. A test/monitor plate is available to order upon request. 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. The B30ST shall have 8.5 Watts of input power and a 57.6 Watt-hour battery capacity and shall exceed emergency standards set forth by the current NEC. The emergency ballast shall be UL Listed for installation on top of or remote from the fixture.

## Warranty

Model B30ST is warranted for five (5) full years from date of purchase. Please see detailed warranty information on our web site.

**Table 2 Lumen Output**

LAMP	LUMENS	
	1 Lamp	2 Lamp
F14T5/HE	1630	
F21T5/HE	2421	
F28T5/HE	2400	
F35T5/HE	3000	
F39T5/HO	3000	
F49T5/HO	2700	
F54T5/HO	3000	
TL5C22W/840 Circline	2800	
TL5C40W Circline	2900	
FC12T5 55W Circline	3300	
F17T8	2050	1814
F25T8	2800	2721
F32T8	2420	3470
F40T8	3232	
F96T12/D/HO-O 110W	2098	
PL-L 24W	1936	
PL-L 36W	2013	
PL-L 40W	2658	
PL-L 55W	2834	
PL-T 18W	1295	
PL-T 26W	1670	
PL-T 42W	2395	
PL-Q (2D) 28W	1695	
PL-Q (2D) 38W	1995	
TLED T8 8.5W	886	
TLED T8 16.5W	1347	
TLED U T8 16.5W	1935	

Partial listing of lamps operated.

**Table 1 Lamp Compatibility**

LAMP DIAMETER (T5, T8, T9, T10, T12)	BASE	WATTAGE (Length)	NO. of LAMPS (EMERGENCY)	BROWN CONNECTOR	VIOLET CONNECTOR
1", 1¼", 1½" (T8, T9, T10, T12)	Single or Bipin	17 - 40 W (2' - 4')	1	CLOSED	OPEN
			2	OPEN	CLOSED
		40 - 215 W (5' - 8')	1	OPEN	CLOSED
Long Compact	4-PIN (2G11)	18 - 55 W	1	CLOSED	OPEN
Twin/Quad/Triple Twin-Tube Compact	4-PIN (G24q, GX24q)	18 - 42 W	1	CLOSED	OPEN
Philips InstantFit LED T8	Bipin	8.5 - 16.5W (2'-4')	1	CLOSED	OPEN
Philips InstantFit LED T8 U Bend 6"	Bipin	16.5 W	1	CLOSED	OPEN
Philips InstantFit LED Twin-Tube Compact	4-PIN	16.5W 22"	1	CLOSED	OPEN
2D	4-PIN (GR10q)	16 - 55 W	1	CLOSED	OPEN
T5 HO	HO Circline 4-PIN (2GX13)	22 - 55 W	1	CLOSED	OPEN
	Miniature Bipin	24 - 54W (2' - 4')	1	CLOSED	OPEN
T5	Miniature Bipin	14 - 35W (2' - 5')	1	CLOSED	OPEN

