

# B74CST REDITEST®

Fluorescent Emergency Ballast

# PHILIPS bodine

Automatic code compliance testing;  
One- or two-lamp emergency illumination

A Division Of Philips Electronics North America Corporation

## Product Summary

### UL LISTED

Factory or Field Installation  
(Indoor and Damp)



### Illumination Time

90 Minutes

### Initial Light Output

Up to 1350 Lumens

### Full Warranty

5 Years (NOT pro-rata)

### Dual Input Voltage

120/277 VAC, 60 Hz

### AC Input Current

320 mA

### AC Input Power Rating

4.0 Watts

### Test Switch

Single Pole

### Battery

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

### Battery Charging Current

320 mA

### Recharge Time

24 Hours

### Charging Indicator Light

LED

### Temperature Rating (Ambient)

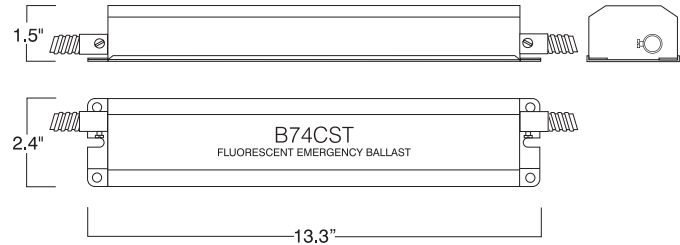
0°C to + 50°C  
(32°F to 122°F)

### Dimensions

13.3" x 2.4" x 1.5"  
(339 mm x 60 mm x 38 mm)  
2' (610 mm) Flex Conduit Each End  
Mounting Center 12.8" (325 mm)

### Weight

4.6 lbs. (2.1 kg)



## APPLICATION

The REDiTEST® B74CST fluorescent 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 compact red case. The REDiTEST® B74CST can be used with most 16-55 W twin, quad or triple twin-tube lamps, 4-pin compact fluorescent lamps without integral starters and most 17-215 W linear fluorescent lamps, including T8, T12, standard, energy-saving, HO, VHO, circline and U-shaped lamps. It is also compatible with most electronic, magnetic and dimming single- and multi-lamp ballasts. If used in an emergency-only fixture, no AC ballast is necessary. The REDiTEST® B74CST 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, REDiTEST® B74CST constantly monitors charging current and battery voltage. When AC power fails, the REDiTEST® B74CST immediately switches to the emergency mode, operating one or two lamps at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the REDiTEST® B74CST automatically returns to the charging mode and, using a patented circuit, delays AC ballast operation for approximately 3 seconds to prevent false tripping of the AC ballast end-of-lamp-life shutdown circuits. During automated testing, REDiTEST® B74CST simulates an AC power failure causing the emergency ballast to switch to emergency mode and run a discharge test to monitor battery voltage and discharge current. If REDiTEST® B74CST detects a problem, the status indicator light flashes, and, if selected, the audible alarm sounds. When testing is complete, the REDiTEST® B74CST returns to the charging mode. REDiTEST® B74CST automatically tests emergency lighting for 30 seconds every 30 days and 90 minutes once a year.

## INSTALLATION

The REDiTEST® B74CST 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 REDiTEST® B74CST 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. For simple visual inspection of the charging indicator light and easy operational testing, the test/monitor plate can be installed near the fixture wall switch. The test/monitor may also be installed in the ceiling near the fixture to ensure an unobtrusive installation. Installation is not recommended with fixtures where the ambient temperature may fall below 0°C.

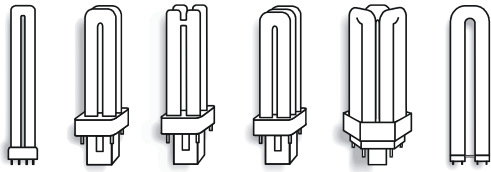
## Specifiers Reference

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

Comments \_\_\_\_\_

L2000115

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## EMERGENCY ILLUMINATION

Depending on the number (one or two), wattage and type of lamps selected, the REDITEST® B74CST produces up to 1350 lumens initial emergency light output (see Table 1). 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 REDITEST® B74CST self-testing/self-diagnostic fluorescent emergency ballast. Electronic circuitry shall be self-testing in design and automatically test emergency lighting for a minimum of 30 seconds every 30 days and 90 minutes once a year. An embedded microcontroller will continually monitor the battery charging current and voltage. 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 REDITEST® B74CST 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 with 2' of flexible conduit at each end. A solid-state status indicator light and audible alarm (selectable) 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. The emergency ballast shall be capable of operating one or two \_\_\_\_\_ fluorescent lamps (see Table 1) at \_\_\_\_\_ lumens (see Table 1) initial light output in the emergency mode for a minimum of 90 minutes. It shall be suitable for indoor and damp locations. The REDITEST® B74CST shall have 4.0 Watts of input power and a 24.0 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 and shall be warranted for a full five years from date of purchase.

## WARRANTY

Model REDITEST® B74CST 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.

## UL and CODE COMPLIANCE

The B74CST has been tested by Underwriters Laboratories in accordance with the standards set forth in UL 924, "Emergency Lighting and Power Equipment," and 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.

Table 1 - Initial Lumen Output

LAMP (4-PIN)	LUMENS	
	1 Lamp	2 Lamp
F42QBX, Dulux T/E 42W	1250	
REDUCED MERCURY 42W/4P	850	
32 W/4P, F32TBX, Dulux T/E 32 W	1250	1250
REDUCED MERCURY 32W/4P	1100	1100
PL-T 26 W/4P, F26DBX, Dulux T/E 26 W	700	700
PL-T 18 W/4P, F18DBX, Dulux T/E 18 W	900	900
PL-L 36 W, PHILIPS	1100	1100
F39/3BX, Dulux L 36 W	1250	1250
PL-L 24 W, F27/24BX, Dulux L 27 W	800	800
PL-L 18 W, F18BX Dulux L 18 W	775	775
F32T8	1350	1350

Table 2 - Compatibility Chart

LAMP (DIAMETER)	BASE TYPE	WATTAGE (Length)	NO. of LAMPS (EMERGENCY-MODE)	BROWN CONNECTOR
T8,T9,T10,T12 (1", 1¼", 1½")	Single or Bipin	17 - 40 W (2'-4')	1	CLOSED
		40 - 215 W (5'-8')	2	OPEN
			1	OPEN
LONG COMPACT	4-PIN (2G11)	18 - 39 W	1	CLOSED
		40 - 55 W	2	OPEN
TWIN/QUAD/ TRIPLE TWIN/ QUADRUPLE TWIN-TUBE COMPACT	4-PIN (G24q,GX24q)	18 - 32 W	1	CLOSED
			2	OPEN
		42 W	1	CLOSED
2D	4-PIN (GR10q)	16 - 38 W	1	CLOSED
			2	OPEN
		55 W	1	OPEN

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