# mcPhilben<sup>®</sup> emergency lighting

\_\_\_\_\_

Job Name: \_\_\_\_\_

Type:

Voltage: \_

### **CODES AND STANDARDS**

UL listed in accordance with the standards set forth in UL924 NFPA 101 (Life Safety Code) NFPA 70 (NEC) UL listed for use in damp locations.

### APPLICATION

The DEB-5W Series provides 90 minutes of emergency illumination by utilizing existing fluorescent lighting, and produces 1100-1400 lumens initial emergency light output. The DEB-5W can be used with most 17W through 215W (2'-8') T8, T9, T10 or T12 fluorescent lamps without integral starters, including Ushaped, HO, VHO, circline, energy saving, and 4-pin twin guad, and triple twin-tube compacts. One or two lamp operation may be selected. It is also compatible with standard, energy saving, dimming and electronic AC ballasts. The DEB-5W Series is a dual voltage device rated for use on 120 or 277 volt 60-Hertz circuits. The appropriate line lead (black for 120v or orange for 277v) will be selected and the unused lead will be capped. Since the DEB-5W Series senses when power is lost, an un-switched power source must be provided to the luminaire. If used in an emergency only luminaire, no AC ballast is necessary.

- Damp location listed.
- End-of-lamp-life compatible.
- One or two lamp operation

### OPERATION

Normal lamp lumen output is provided by the lamp when DEB-5W Series is not in the emergency mode. When AC power fails, the DEB-5W Series automatically switches to the emergency mode, keeping one or two lamps illuminated at reduced output for a minimum of 90 minutes. When factory installed it will be wired for two lamp emergency operation when possible. When AC power is restored, the DEB-5W Series 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.

# BATTERY

DEB-5W uses a high temperature nickel-cadmium battery. This battery requires no maintenance and has a life expectancy of 7 to 10 years. The suggested operating temperature range is 32°F (0°C) to 122°F (50°C).

# RESTRICTIONS

Suitable for indoor and damp locations and for sealed and gasketed fixtures including installation inside of fixtures rated for wet locations. It is not suitable for installation in wet locations, hazardous locations or for air handling air outlet applications.



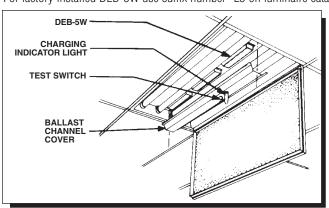
The DEB-5W Series produces a total of 1100 to 1400 lumens (depending on the type of lamp) initial emergency light output.

# INSTALLATION

The DEB-5W Series does not affect normal luminaire operation. It requires an unswitched source of power; therefore, in switched luminaires, an unswitched source of power must be provided (see wiring diagram). Installation is not recommended in luminaires where the ambient ballast channel temperature may fall below 0°C (32°F) for extended periods. Before installing the DEB-5W Series, make sure that the necessary branch circuit wiring is available. The DEB-5W Series requires an unswitched source of power and must be fed from the same branch circuit as the AC ballast; therefore, in switched luminaires the DEB-5W Series must be connected ahead of any local switching (see wiring diagram). Installation instructions (including internal wiring diagrams for retrofit installation) are supplied with each ballast. To prevent high voltage from being present on the DEB-5W Series output leads (red and yellow), do not join the battery connector until installation is complete and AC power is supplied to the DEB-5W Series.

# **ORDERING INFORMATION**

DEB-5W - 1400 Lumen Max Output Emergency Ballast with Damp Location Listing.



For factory installed DEB-5W use suffix number -E5 on luminaire catalog number

Accessories MCCAPS - Wire Bundle Kit for External Mounting PL-SP - Single-Pole Remote Test Switch



PHILIPS



# **DEB-5W** Fluorescent Emergency Ballast 1100 - 1400 Lumens

# SUGGESTED SPECIFICATION

Emergency lighting shall be provided by using a standard fluorescent luminaire equipped with a DEB-5W emergency ballast. This emergency ballast shall consist of a high temperature, maintenance-free nickel cadmium battery, charger and electronic circuitry contained in one 13-3/8" x 2-3/8" x 1-1/2" black 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 threee seconds to prevent false tripping of AC ballast end-of-lamp-life shutdown cirucuits. The emergency ballast shall be capable of operating (one or two) fluorescent lamps(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 DEB-5W shall have 4 watts of input power and a 24 watt-hour battery capacity and shall exceed emergency standards set forth by the current NEC. The emergency ballast shall be UL Listed for installations inside, on top of or remote from the fixture.

**Table 2 - Initial Lumen Output** 

# **ELECTRICAL & MECHANICAL**

- Dual input voltage 120/277
- Electrical rating—4.0 watts
- AC input current—280mA
- Recharge time—24 hours
- Test switch provided
- Charging indicator light provided—LED
- Ballast case dimensions— 13-3/8" x 2-3/8" x 1-1/2"
- Battery is a high temperature nickel cadmium type requiring no maintenance and life expectancy of 5 to 10 years.
- Weight-3.4 lbs

### WARRANTY

Five year warranty on unit from date of purchase.

#### Table 1 - Lamp Compatibility

<b>Lamp</b> (T8, T10, T12)	Base	Wattage (Length)	No. of Lamps (EMERGENCY)
1" (TO)		17-24W	1
1" (T8)	Single or Bipin		2
1-1/4" (T10)		32-40W (2' - 4')	1
			2
1-1/2" (T12)		40-215W (5'-8')	1

Notes:

1. Maximum non-emergency lumen output can vary based on lamp manufacturer, ambient operating temperature, and ballast manufacturer.

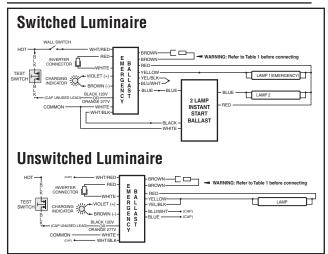
 Maximum emergency lumen output is based on total output of one or two lamps, and can vary based on lamp manufacturer and ambient operating temperature.

 Maximum emergency lumen output is supported for a full 90 minutes of operation.
Consult factory for compatibility, operation and performance of lamp types not

Consult factory for compatibility, operation and performance of lamp types not listed.

	LUMENS	
Lamp	1 Lamp	2 Lamps
F025, FB024 T8	1250	1100
F032, FB031 T8	1350	1350
F096 T8	1400	
F017, FB016	1050	950*
F40T12, F40/U	1100	1100
F48T12/H0	1200	
F96T12, HO, VHO	1100	
F39/368X, PL-L 36 W, DULUX L39W	1100	1100
F28 2D/4P	1100	1100
F38 2D/4P	1000*	1100
F27/248X, PL-L 24 W, DULUX L 27 W		1000
F40T12/ES (34W)	975*	975
PL-L 40 W, F40/30BX, F50BX, PL-L 50W, DULUX L55 W	900*	

# WIRING DIAGRAM



# DIMENSIONS

