### Installation Instructions for the Sure-Lites Fluorescent Emergency Ballast

### WARNING

#### Risk of Fire/Electric Shock

If not qualified, consult an electrician.

### **▲ WARNING**

#### Risk of Electric Shock

Disconnect power at fuse or circuit breaker before installing or servicing.

#### IMPORTANT SAFEGUARDS

WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE OBSERVED INCLUDING THE FOLLOWING.

# 1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- 2. Do not use outdoor
- 3. Do not use near gas or electric heaters.
- Do not use in air handling heated air outlets, sealed and gasketed fixtures, wet or hazardous location fixtures.
- 5. Do not let power supply cords touch hot surfaces.
- 6. Do not use this equipment for other than the intended
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
   Servicing should only be performed by qualified service personnel.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- Prior to installation, battery connector must be open to prevent high voltage from being present on output leads (red & yellow).
- This unit can operate commonly used linear and compact fluorescent lamps. Please refer to the "lamps list" label on the ballast for specific lamp information.
- To avoid electric shock, please disconnect normal and emergency power supplies, and battery connector of the emergency ballast before servicing.
- 12. This device is designed for field installation in either the ballast channel, or on top of the lighting fixture.

- Unswitched AC power source of 120 VAC or 277 VAC is required.
- 14. The battery is sealed, non-maintenance, and is not replaceable in the field. Please contact manufacturer for information on service. Do not attempt to service the battery.
- Install in accordance with National Electric Code and local regulatory agency requirements Installation is to be performed only by qualified personnel.
- 16. DO NOT EXCEED TOTAL OUTPUT RATING of source power equipment

#### 11. SAVE THESE INSTRUCTIONS

CAUTION: Verify that all replacement lamp types marked on the installed luminaire are also identified as suitable for use with this charger pack.

#### INSTALLATION INSTRUCTIONS

CAUTION: Before installing, make certain the A.C. power is off

- Please follow the instruction listed below to install the EMERGENCY BALLAST based on the type of mounting required.
  - 1a) Integrated mount option
    - a. Remove the ballast channel cover.
    - b. Mount the EMERGENCY BALLAST in the ballast channel at least ½" away from the A.C. Ballast(s).
  - 1b) Remote mount option.
    - a. Mount the EMERGENCY BALLAST so that the remote distance cannot exceed ½ 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 feet remote distance, then the battery pack should not exceed 12 ½ feet.

**Note:** Under no circumstances should the battery pack exceed 50 feet from the lamp.



- Refer to the wiring diagrams for the appropriate wiring of lamp(s) and ballast. Install in accordance with the National Electrical Code and local regulations. For additional wiring diagrams consult Customer Service.
- Please follow the instructions listed below to install the LED COMBOTEST SWITCH (LCTS) based on the type of fixture that the Emergency Ballast is being installed with.

#### 3a) Recessed Troffer Fixture

- a. Select a convenient location with the proper clearance in the ballast cover and drill or punch a 7/8" hole (1/2" knockout).
- b. Insert the 7/8" bushing into the hole.
- c. Push the plastic tube through the bushing.
- d. Route the leads of the LCTS through the plastic tube.
- e. Connect the wires from the unit to the LCTS (VIOLET to VIOLET, BROWN to BROWN).
- f. 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 LCTS is within 1/4" of the fixture lens. The LCTS must be visible after installation. Refer to Figure 1.

#### 3b) Strip Fixture

- a. Select a convenient location with the proper clearance in the ballast cover and drill or punch a 1/2" hole.
- b. Remove the nut from the LCTS.
- c. Push the LCTS housing into the 1/2" hole and secure with the nut.
- d. Connect the wires from the unit to the LCTS (VIOLET to VIOLET, BROWN to BROWN). Refer to Figure 2.
- The EMERGENCY BALLAST requires an unswitched A.C. Power source of either 120V or 277V. Select the proper voltage lead and cap the unused lead.

Note: The EMERGENCY BALLAST and A.C. Ballast must be on the same branch circuit. When the EMERGENCY BALLAST is used with a switched fixture, the A.C. Input to the BALLAST must be connected ahead of the fixture switch. Refer to Figure 3 for switched and unswitched fixture wiring diagrams.

Attach the appropriate labels adjacent to the LCTS.
 Annotate Re-lamping labels for lamp type and wattage.

**Note:** The CAUTION and the Re-lamping labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.

 When the installation is complete, switch the A.C. Power on and join the unit connector of the EMERGENCY BALLAST.

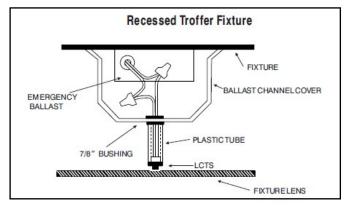


Figure 1

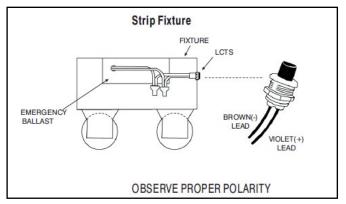


Figure 2

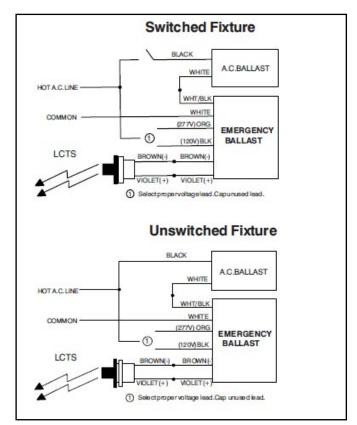




Figure 3

#### **OPERATION**

**Normal Mode** - A.C. Power is present. The A.C. ballast operates the fluorescent lamp(s) as intended. The LCTS will be lit providing a visual indication that the EMERGENCY BALLAST is in the standby charging mode.

Emergency Mode - A.C. Power fails. The EMERGENCY BALLAST senses the A.C. Power failure and automatically switches to the Emergency Mode. One or two\* lamp(s) is illuminated at reduced output for a minimum of 90 minutes. When the A.C. Power is restored, the EMERGENCY BALLAST switches the system back to the Normal Mode and resumes battery charging.

\*Only with EBP1400

#### **TESTING AND MAINTENANCE**

Pressing the red lens on the LCTS turns off the light on the LCTS and forces the unit into emergency mode. This interrupts power to the emergency lamps only. The emergency lamp is now being lit by the EMERGENCY BALLAST unit and will be less bright than the other lamps in the system. To simulate a "BLACK OUT" use the circuit breaker to turn off A.C. Power.

Initial Testing - Allow the unit to charge approximately 1 hour, then press the LCTS to conduct a short discharge test. Allow 24 hours to charge the EMERGENCY BALLAST before conducting a 90-minute test.

The EMERGENCY BALLAST is a maintenance free unit; however periodic inspection and testing is required as per NFPA 101, Life Safety Code, which outlines the following schedule:

**Monthly** - Insure that the LCTS is illuminated. Conduct a 30 second discharge test by depressing the LCTS. One lamp should operate at reduced output.

**Annually** - Insure that the LCTS is illuminated. Conduct a full 90-minute discharge test. The unit should operate as intended for the duration of the test.

**Note:** As per NFPA 101, written records of testing shall be kept by the owner for inspection by the authority having jurisdiction.

CAUTION: Servicing should be performed by qualified personnel only.

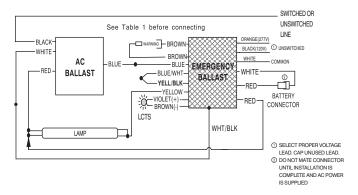


#### WIRE DIAGRAMS FOR ONE LAMP EMERGENCY OPERATION

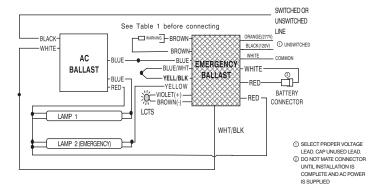
#### EMERGENCY BALLAST AND AC BALLAST MUST BE FED FROM THE SAME BRANCH CIRCUIT

TYPICAL SCHEMATICS ONLY. MAY BE USED WITH OTHER BALLASTS. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

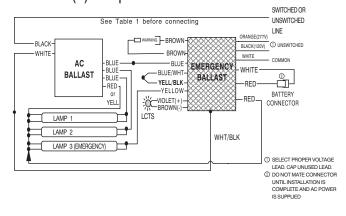
### A. One (1) Lamp Instant Start AC Ballast



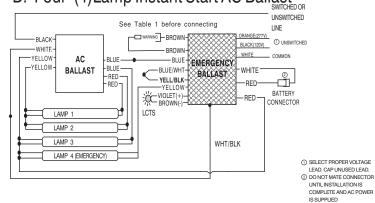
### B. Two (2) Lamp Instant Start AC Ballast



### C. Three (3) Lamp Instant Start AC Ballast



D. Four (4)Lamp Instant Start AC Ballast



NOTE: Use the proper tap to cap unswitched AC lead

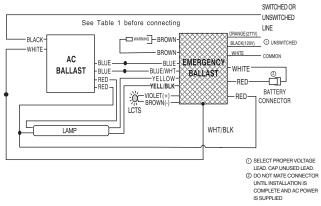


#### WIRE DIAGRAMS FOR ONE LAMP EMERGENCY OPERATION

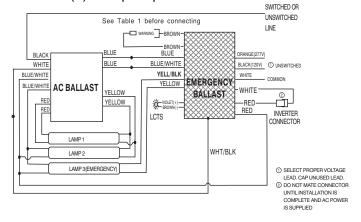
#### EMERGENCY BALLAST AND AC BALLAST MUST BE FED FROM THE SAME BRANCH CIRCUIT

TYPICAL SCHEMATICS ONLY, MAY BE USED WITH OTHER BALLASTS. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

### E. One (1) Lamp Rapid Start AC Ballast

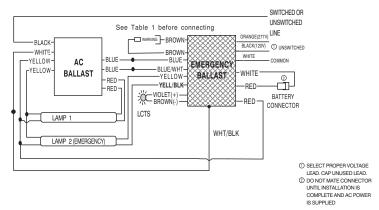


### G.Three (3) Lamp Rapid Start AC Ballast

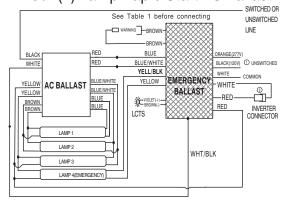


NOTE: Use the proper tap to cap unswitched AC lead

### F. Two (2) Lamp Rapid Start AC Ballast



### H.Four (4) Lamp Rapid Start AC Ballast



- ① SELECT PROPER VOLTAGE
- DO NOT MATE CONNECTOR
  UNTIL INSTALLATION IS
  COMPLETE AND AC POWER
  IS SUPPLIED

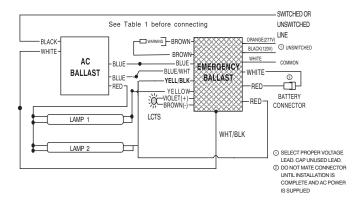


### WIRE DIAGRAMS FOR TWO LAMP EMERGENCY OPERATION (EBP1400 model only)

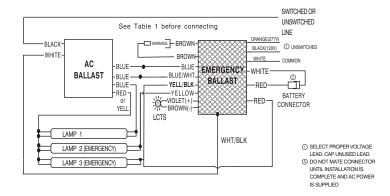
#### EMERGENCY BALLAST AND AC BALLAST MUST BE FED FROM THE SAME BRANCH CIRCUIT

TYPICAL SCHEMATICS ONLY, MAY BE USED WITH OTHER BALLASTS, CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

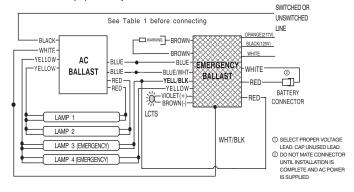
### A. Two (2)Lamp Instant Start AC Ballast



### B. Three (3) Lamp Instant Start AC Ballast



### C. Four (4)Lamp Instant Start AC Ballast



NOTE: Use the proper tap to cap unswitched AC lead

#### D. Two (2)Lamp Rapid Start AC Ballast UNSWITCHED See Table 1 before connecting LINE BLACK ① UNSWITCHED BLACK(120V) -WHITE - BROWN COMMON \_YELLOW AC -BLUE EMERGENCY \_YFIIOW -BLUE/WHT-BALLAST BLUE BALLAST -RED -YELL/BLK-BATTERY CONNECTOR VIOLET(+)-

WHT/BLK

LCTS

LAMP

 SELECT PROPER VOLTAGE LEAD. CAP UNIVSED LEAD.
 DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.



#### **EMERGENCY ONLY OPERATION**

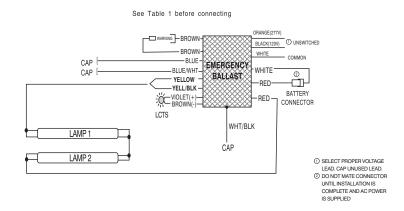
#### EMERGENCY BALLAST AND AC BALLAST MUST BE FED FROM THE SAME BRANCH CIRCUIT

TYPICAL SCHEMATICS ONLY. MAY BE USED WITH OTHER BALLASTS. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

### A. One (1) Lamp Without AC Ballast

#### See Table 1 before connecting BLACK(120V) ① UNSWITCHED BROWN CAP COMMON BLUE/WHT-**EMERGENCY** CAP WHITE BALLAST YELLOW--YELL/BLK BATTERY CONNECTOR WHT/BLK CAP LAMP ① SELECT PROPER VOLTAGE LEAD. CAP UNUSED LEAD. ② DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER

### B. Two (2) Lamp Without AC Ballast



NOTE: Use the proper tap to cap unswitched AC lead

Table 1 (For Brown Connectors on EBP1400)

IS SUPPLIED

LAMP DIAMETER	BASE TYPE	WATTAGE (LENGTH)	NO.OF LAMPS (EMERGENCY MODE)	BROWN CONNECTOR
Т5	SINGLE OR BIPIN	14,21,28,35W (2'-3'-4')	1	CLOSE
Т5 НО	SINGLE OR BIPIN	24,39,54W (3'-4')	1	CLOSE
Т5 НО	SINGLE OR BIPIN	24,39,54W (3'-4')	2	OPEN
T5	SINGLE OR BIPIN	14,21,28W (2'-3'-4')	2	OPEN
Т8	SINGLE OR BIPIN	17,25,28,32,40W (2'-3'-4'-4'/5')	1	CLOSE
T8	SINGLE OR BIPIN	51,59W (5'-8')	1	OPEN
Т8	SINGLE OR BIPIN	17,25,28,32,40W (2'-3'-4')	2	OPEN
Т8НО	SINGLE OR BIPIN	44W	1	CLOSE
Т8НО	SINGLE OR BIPIN	86W (8')	1	OPEN



### Installation Instructions for the Sure-Lites Fluorescent Emergency Ballast

# Table 1 (For Brown Connectors on EBP1400)

LAMP DIAMETER	BASE TYPE	WATTAGE (LENGTH)	NO.OF LAMPS (EMERGENCY MODE)	BROWN CONNECTOR
T12	SINGLE OR BIPIN	20,25,34,40W (2'-4')	2	OPEN
T12	SINGLE OR BIPIN	20,25,30,34,40W (2'-4')	1	CLOSE
T12	SINGLE OR BIPIN	75W (5'/8')	1	OPEN
Т12НО	SINGLE OR BIPIN	95,110,160,215W (8')	1	OPEN
Compact	G24q-1(4pin) G24q-2(4pin) G24q-3(4pin) G24q-4(4pin) G24q-5 (4pin)	13,18,21,26,32,42,57W	1	CLOSE
Compact	G24q-1(4pin) G24q-2(4pin) G24q-3(4pin) G24q-4(4pin)	13,18,21,26,32,42W	2	OPEN
Compact	2G11(4pin)	18,24,36,40,50,55W	1	CLOSE
Compact	2G11(4pin)	18,24,36,40,50W	2	OPEN
Compact	GR10q-4(4pin)	10,16,21,28,38,55W	1	CLOSE
Compact	GR10q-4(4pin)	10,16,21,28,38W	2	OPEN
Circular T9	4-pin	20,32,40W	1	CLOSE
Circular T9	4-pin	20,32,40W	2	OPEN
Circular T5	4-pin	22,40,55W	1	CLOSE
Circular T5	4-pin	22,40W	2	OPEN
U-bend T8	Bi <b>-</b> pin	32W	1	CLOSE
U-bend T8	Bi-pin	32W	2	OPEN
U-bend T12	Bi-pin	34,40W	1	CLOSE
U-bend T12	Bi <b>-</b> pin	34,40W	2	OPEN

## **Warranties and Limitation of Liability**

Please refer to www.cooperlighting.com for our terms and conditions.

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