

BAL500TD



Assurance

Emergency Lighting
a division Assurance Engineering LLC

FLUORESCENT EMERGENCY BALLAST

**500 LUMENS
(TIME DELAY)**

INSTALLATION INSTRUCTIONS

**When using this lighting device
safety precautions should be followed at all times**

PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS FOR YOUR OWN SAFETY

1. This device is designed for indoor use. Do not use outdoors.
2. Prior to installation, battery connector must be open to prevent high voltage from being present on out put leads (red & yellow).
3. 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.
4. Please ensure the electricity connections conforms to the National Electrical Code and local regulations if applicable.
5. To avoid electric shock, please disconnect normal and emergency power supplies, and battery connector of the emergency ballast before servicing.
6. This device is designed for factory or field installation in either the ballast channel, or on top of the lighting fixture, except air handling heated air outlets, wet or hazardous location fixtures. Do not install this device near gas or electric heaters.
7. Unswitched AC power source of 120 VAC or 277 VAC is required.
8. 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.
9. Do not use accessory equipment that is not recommended by manufacturer. Failure to do so may cause unsafe conditions. Servicing should only be performed by qualified service personnel.
10. Do not use the product for other than it's intended use.

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

PLEASE SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

CAUTION: Before installing, make certain the A.C. Power is off and the battery connector is disconnected.

1. MOUNTING THE EMERGENCY BALLAST

Remove the ballast channel cover. Mount the **EMERGENCY BALLAST** in the ballast channel at least $\frac{1}{2}$ " away from the A.C. Ballast(s).

When battery packs are remote mounted, the remote distance can not exceed $\frac{1}{2}$ 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' remote distance, then the battery pack should not exceed $12\frac{1}{2}$ '. Under no circumstances should the battery pack exceed a distance of 50' from the lamp.

2. WIRING

Refer to the wiring diagrams on the back page 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.

3. INSTALLING THE LED COMBO TEST SWITCH(LCTS)

Recessed Troffer Fixture - Select a convenient location with proper clearance in the ballast cover and drill or punch a $\frac{7}{8}$ " hole ($\frac{1}{2}$ " knockout). Insert the $\frac{7}{8}$ " bushing into the hole. Push the plastic tube through the bushing. Route the leads of the **LCTS** through the plastic tube. Connect the wires from the unit to the **LCTS** (VIOLET to VIOLET, BROWN to BROWN). 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 $\frac{1}{4}$ " of the fixture lens. The **LCTS** must be visible after installation. Refer to *Illustration 1*.

Strip Fixture - Select a convenient location on the fixture so the **LCTS** can be seen after installation. Allow for proper clearance inside the fixture and drill or punch a $\frac{1}{2}$ " hole. Remove the nut from the **LCTS**. Push the **LCTS** housing into the $\frac{1}{2}$ " hole and secure with the nut. Connect the wires from the **LCTS** (VIOLET to VIOLET, BROWN to BROWN). Refer to *Illustration 2*.

Illustration 1

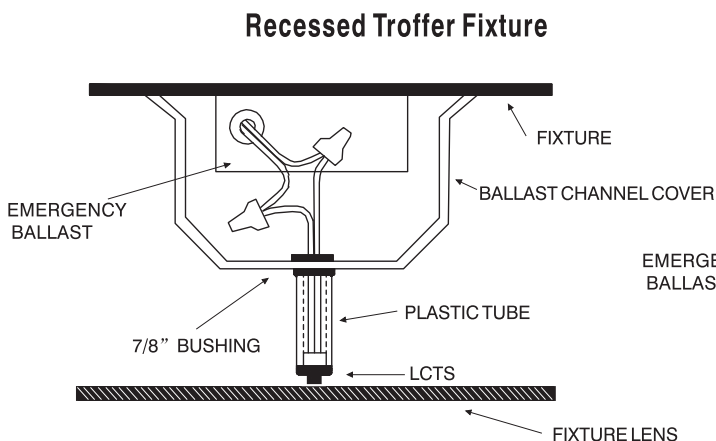
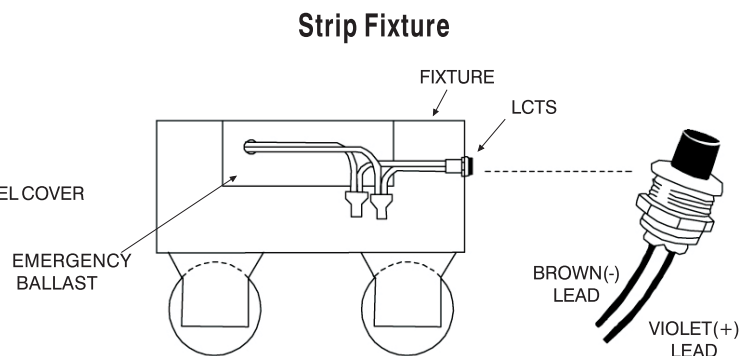


Illustration 2



OBSERVE PROPER POLARITY

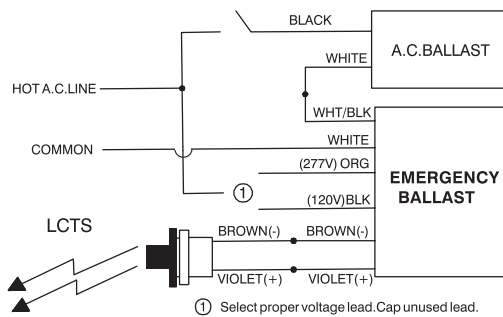
4. WIRING THE A.C.INPUT

- The **EMERGENCY BALLAST** and A.C. Ballast **must** be on the same branch circuit.
- The **EMERGENCY BALLAST** requires an **unswitched** A.C. Power source of either 120 or 277 volts. Select the proper voltage lead and cap the unused lead.
- 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 *Illustration 3* for switched and unswitched fixture wiring diagrams.

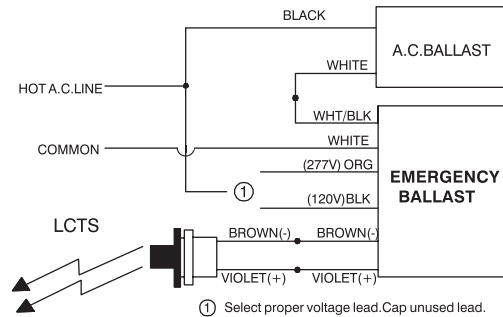
5. BALLAST WIRING BLOCK DIAGRAM

Illustration 3

Switched Fixture



Unswitched Fixture



6. LABELS

Attach the appropriate labels adjacent to the **LCTS**. Annotate Re-lamping label for lamp type and wattage. The Caution and the Re-lamping labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.

7. COMPLETING INSTALLATION

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

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 - The A.C. power fails. The **EMERGENCY BALLAST** senses the A.C. Power failure and automatically switches to the *Emergency Mode*. One lamp 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. See page 1 of the Instruction Manual.

TESTING & 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 a 24 hour charge before conducting a 90-minute test.

The **EMERGENCY BALLAST** is a maintenance free unit, however, periodic inspection and testing is required. NFPA 101, Life Safety Code, 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.

“Written records of testing shall be kept by the owner for inspection by the authority having jurisdiction.”

SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.

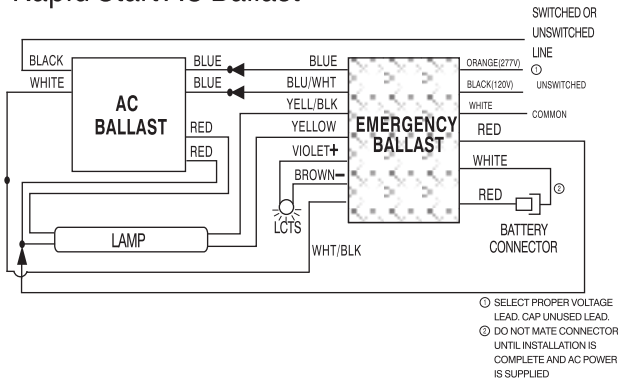
WIRE DIAGRAMS FOR LAMP EMERGENCY OPERATION

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

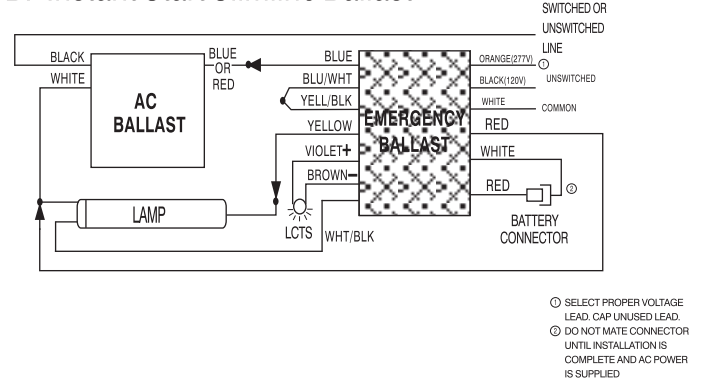
TYPICAL SCHEMATICS ONLY. MAY BE USED WITH OTHER BALLASTS. CONSULT THE FACTORY FOR OTHER WIRING DIAGRAMS.

For 1 Lamp Fixture

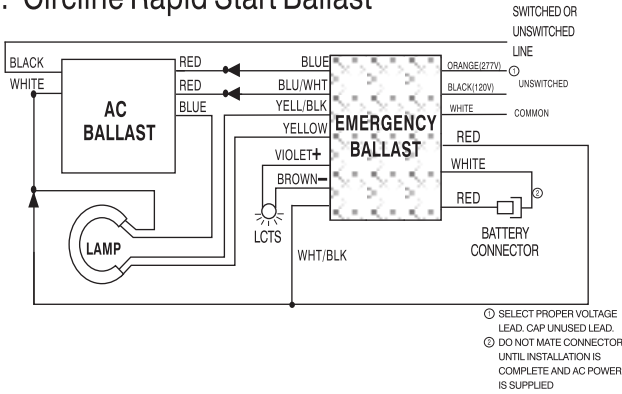
A. Rapid Start AC Ballast



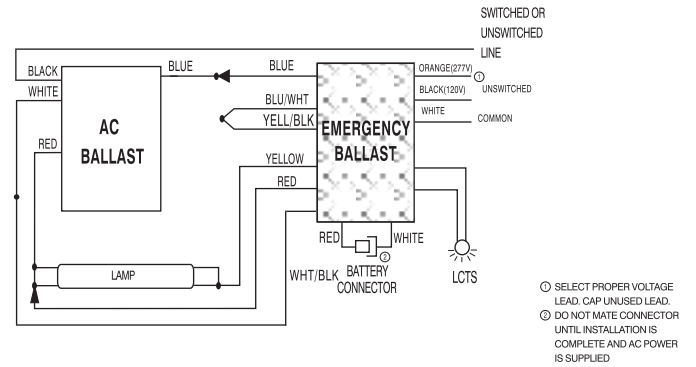
B. Instant Start Slimline Ballast



C. Circline Rapid Start Ballast

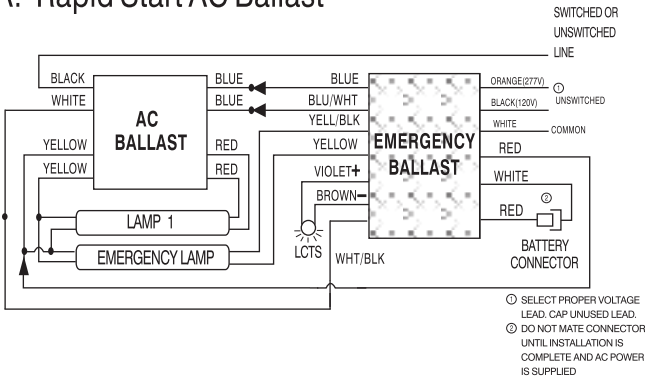


D. Instant Start Ballast

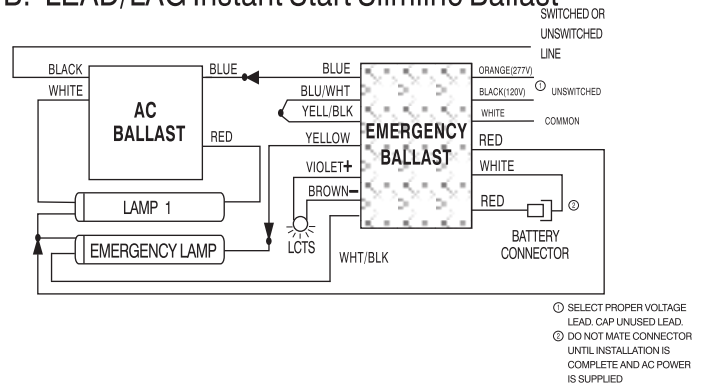


For 2 Lamp Fixture

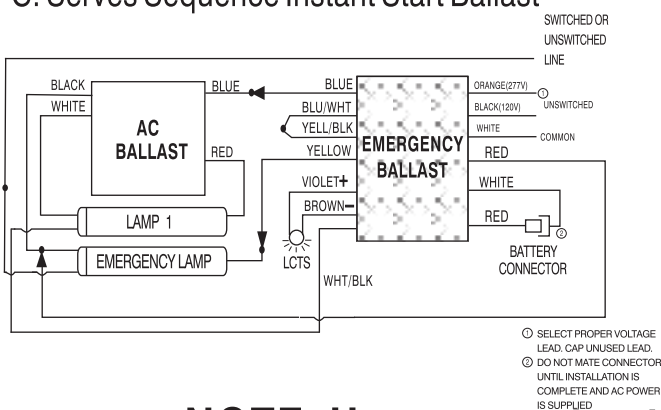
A. Rapid Start AC Ballast



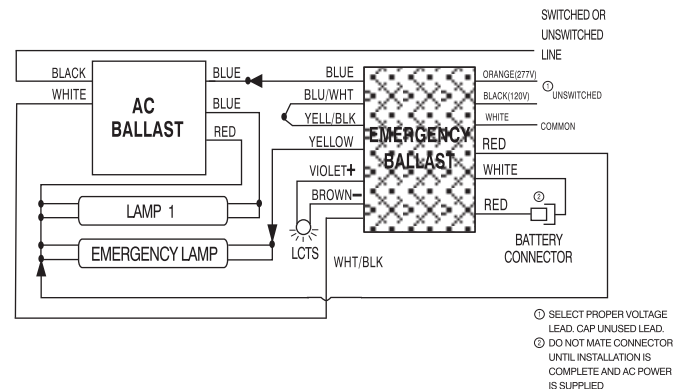
B. LEAD/LAG Instant Start Slimline Ballast



C. Serves Sequence Instant Start Ballast



D. Instant Start Electronic Ballast



NOTE: Use proper tap to cap unswitched AC lead

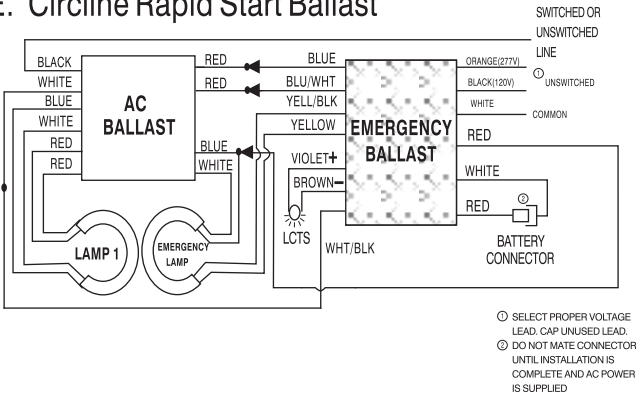
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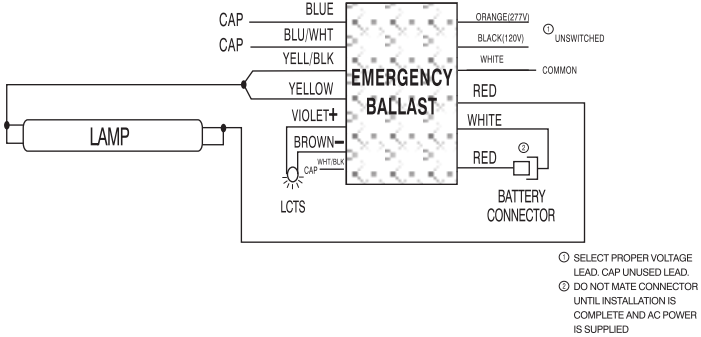
For 2 Lamp Fixture

E. Circline Rapid Start Ballast



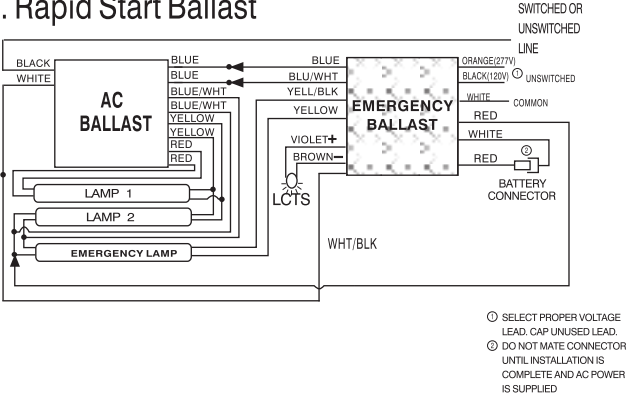
Emergency only

One (1) Lamp Without AC Ballast

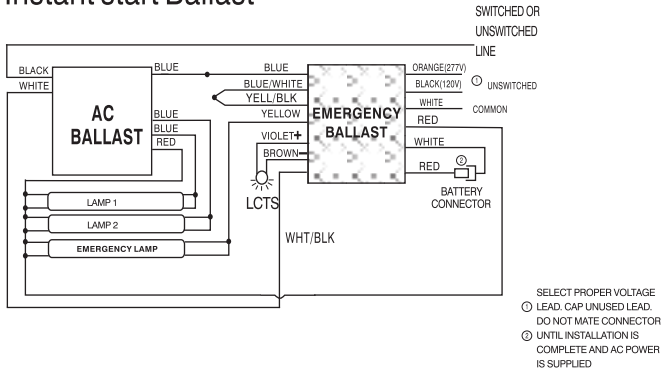


For 3 Lamp Fixture

A. Rapid Start Ballast

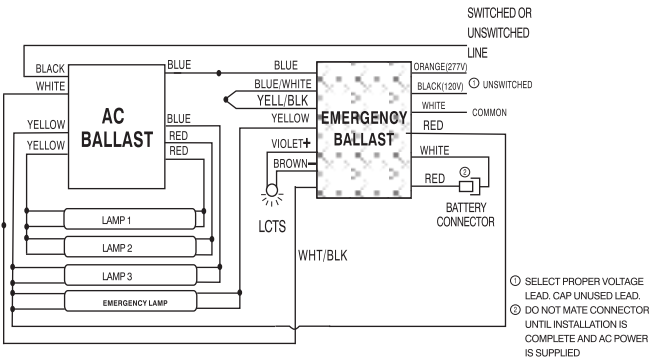


B. Instant start Ballast

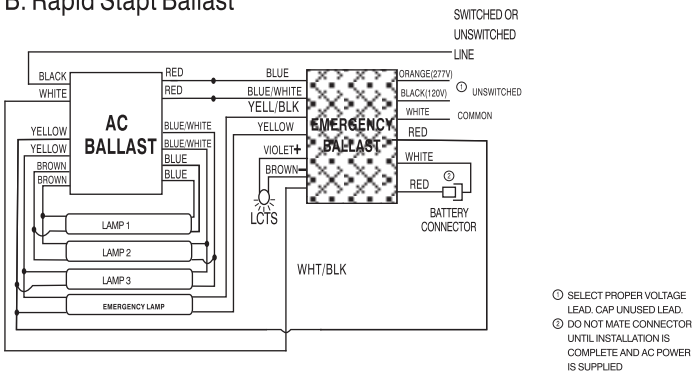


For 4 Lamp Fixture

A. Instant Start Ballast



B. Rapid Start Ballast



NOTE: Use proper tap to cap unswitched AC lead