



ELS Electronic Lighting System

Ballast Replacement

99-20367-I001

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Anthony products identified in this manual are designed and certified to meet UL or UL for safety, and UL for sanitation standards.

European products meet CE requirements.

Each customer is responsible for final site approval.

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1. Preliminary Considerations for Door and Frame Servicing Procedures

1.1. Safety

Proper safety equipment includes:



Safety Glasses



Work Gloves



Work Shoes



NOTE: Turn off all electrical power prior to beginning work on the door or on any electrical equipment. Use extra caution when working with or around the door glass package.

NOTE: Do Not use power tools for the following procedures.

1.2. Tools

Tools required for this procedure include:

- #2 Phillips-head screwdriver
- Needle-nose pliers
- 7/16" and 1/2" Hand Wrench
- Wire stripper and cutter
- Heat Gun
- Flat-head screwdriver
- Rubber or plastic mallet
- 5/32" Hex Key
- Soldering iron
- Razor Knife

1.3. Tips

- Complete replacement of wire assemblies is recommended whenever required. Splice wires only if necessary, using proper materials: such as electrical tape, wire nuts, flux core solder and heat shrink.
- Apply liquid soap to rail plastic covers and gaskets upon installation to facilitate insertion into mounting grooves.
- Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Whenever binding gasket or plastic parts, use food grade silicone.
- Whenever replacing fluorescent lamps, always replace lamp covers as well.
- Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.
- If there is any doubt about the work to be performed, consult with a certified technician or Anthony representative.
- Preventative maintenance is recommended to ensure product longevity.

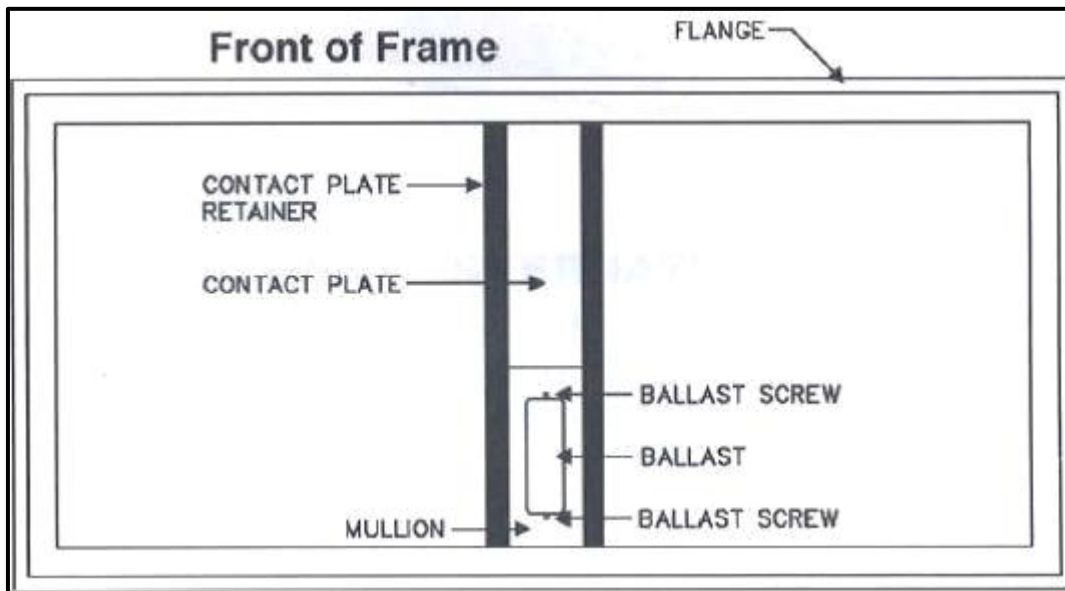
2. ELS Ballast Replacement Instructions

1. Turn off power to the frame.
2. Refer to the following drawings for ballast location and wiring.
3. Remove the contact plate and retainer at the front of the frame mullion by inserting a flat head screwdriver under the back of the black contact plate retainer.



Gently pull up to unsnap the retainer from the mullion. Repeat for the other side of the mullion and remove the contact plate.

4. With the ballast now exposed, remove the screws located at the bottom and the top of the ballast and remove the ballast.

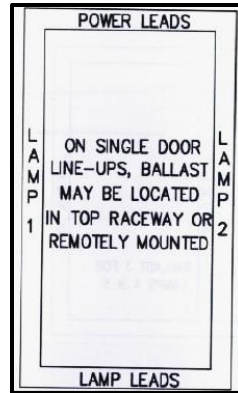


5. Disconnect or cut all lead wires. If cut, leave enough lead wire to re-connect the new ballast with the wire nut.
6. Re-install the ballast using the two (2) screws removed in Step 4.
7. Re-connect the new ballast lead wires. Refer to the following drawings for the ballast location and wiring.

8. Lay the contact plate flat on the mullion. Starting at the top, insert the contact plate retainer into the front edge of the mullion. Snap the retainer on the back edge of the mullion. Repeat the instructions for the opposite side.

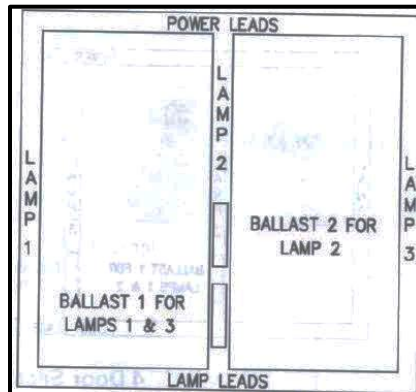
3. ELS Lighting System, 120V Component Layout from Front

3.1. One Door Section



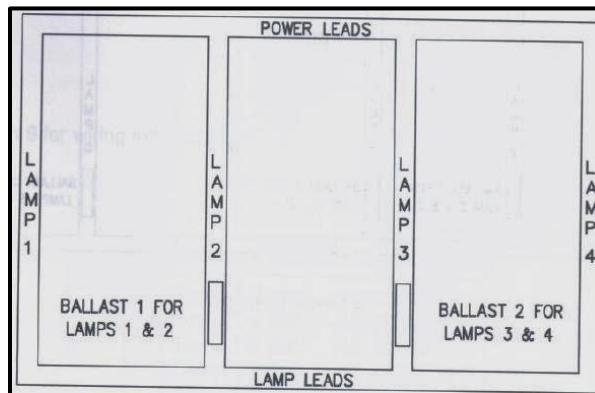
1 Door Section

3.2. Two Door Section



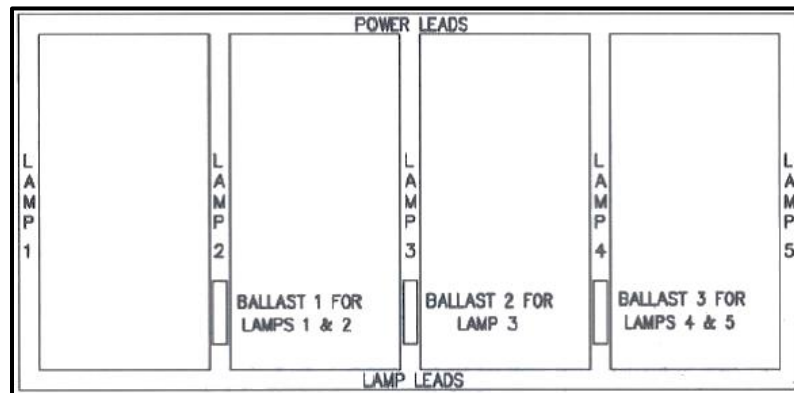
2 Door Section

3.3. Three Door Section



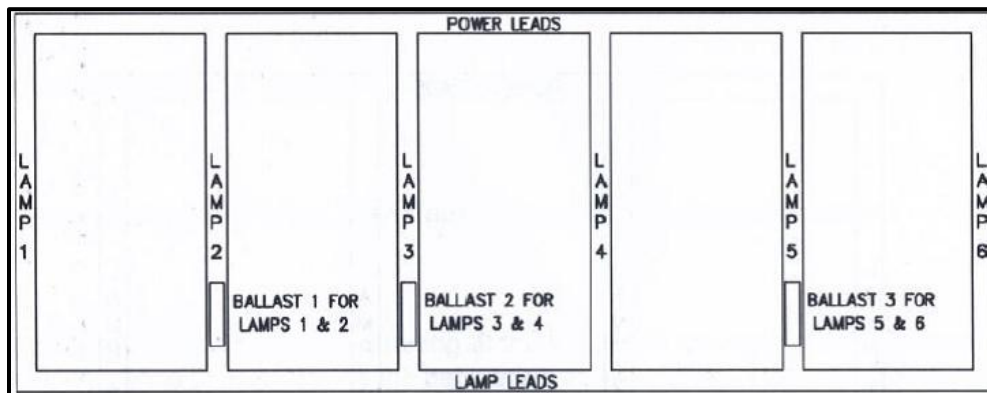
3 Door Section

3.4. Four Door Section



4 Door Section

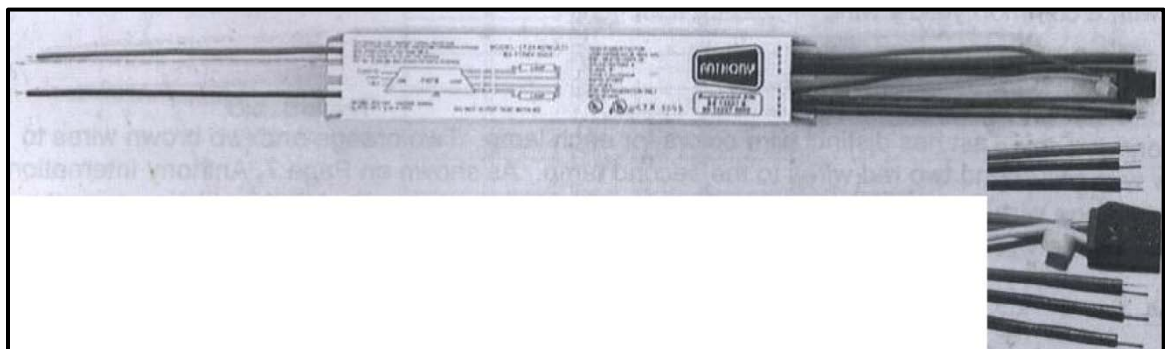
3.5. Five Door Section



4. Replacement Ballast prior to March 20, 1997



1-Lamp Ballast



2-Lamp Ballast with Splice

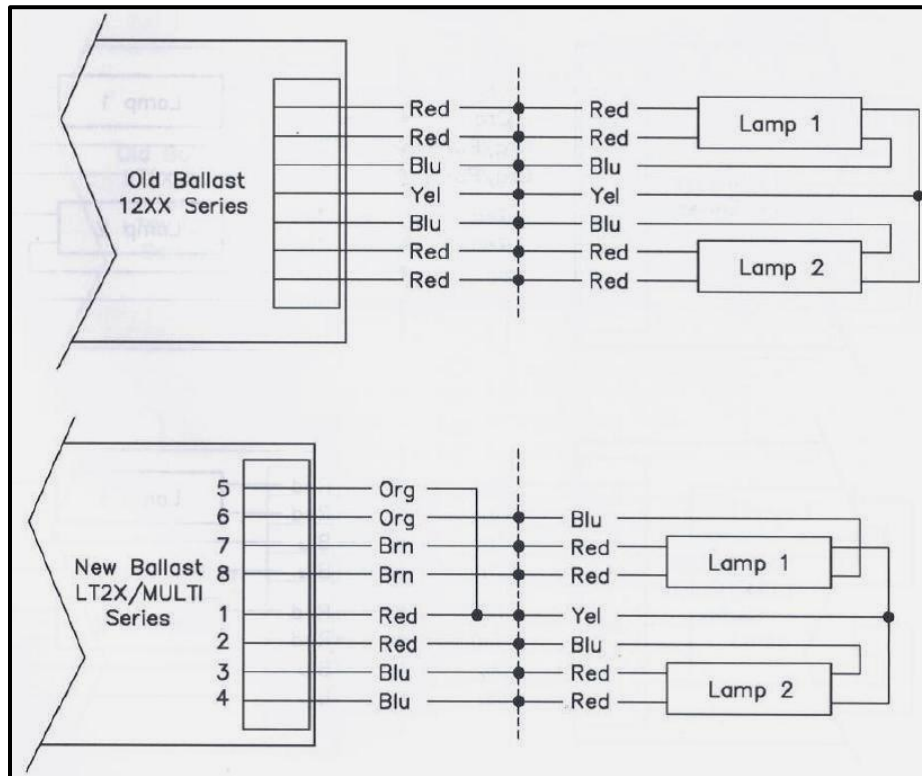
Replacement Ballast Part Numbers	
1-Lamp T-8 48"	AE-12242
2-Lamp T-8 48"	AE-12243-S
1-Lamp T-8 60"	AE-12226
2-Lamp T-8 60"	AE-12227-S
1-Lamp T-8 72"	AE-12272
2-Lamp T-8 72"	AE-12273-S

5. Replacing the 12xx Ballast with the LT2X/MULTI Series Ballast

1. Turn off power to the ballast.
2. Identify which wires come from which lamp. The existing wire consists of two red and two blue wires coming from each set of lamp sockets. Both red wires and one blue wire from each lamp go to the ballast. The other blue wire splices to one blue wire from the second lamp and is then taken to the ballast with a common yellow wire.
3. The replacement ballast has distinct wire colors for each lamp. Two orange and two brown wires to one lamp; two blue and two red wires to the second lamp. As shown in the following wiring information, Anthony has connected one orange and one red wire as a common to be connected to the existing common yellow wire from the lamps. The replacement ballast has no wire numbers and it is imperative that the proper orange wire and the proper red wire are connected together. Permanent damage to the ballast will result if the wrong wires are connected together.
4. It does not matter which lamp is connected to the brown and orange wires or the blue and red wires from the ballast. However, it is important that the blue wires from the lamp sockets be grouped with the red wires from the same lamp.
5. Once the above steps have been verified, simply connect the lamp wires to the ballast as shown in the following wiring diagram.
6. Ensure that the lamps have been rotated 90 degrees and are properly secured, in position, in the lamp sockets. Turn the power back on and the lamps should light. If there is any problem with the lamps lighting, please confirm that the lamps are good before contacting Anthony.

Ballast Replacement Wiring Information
Replacing the 12xx Series Ballast with a LT2X/MULTI Series Ballast

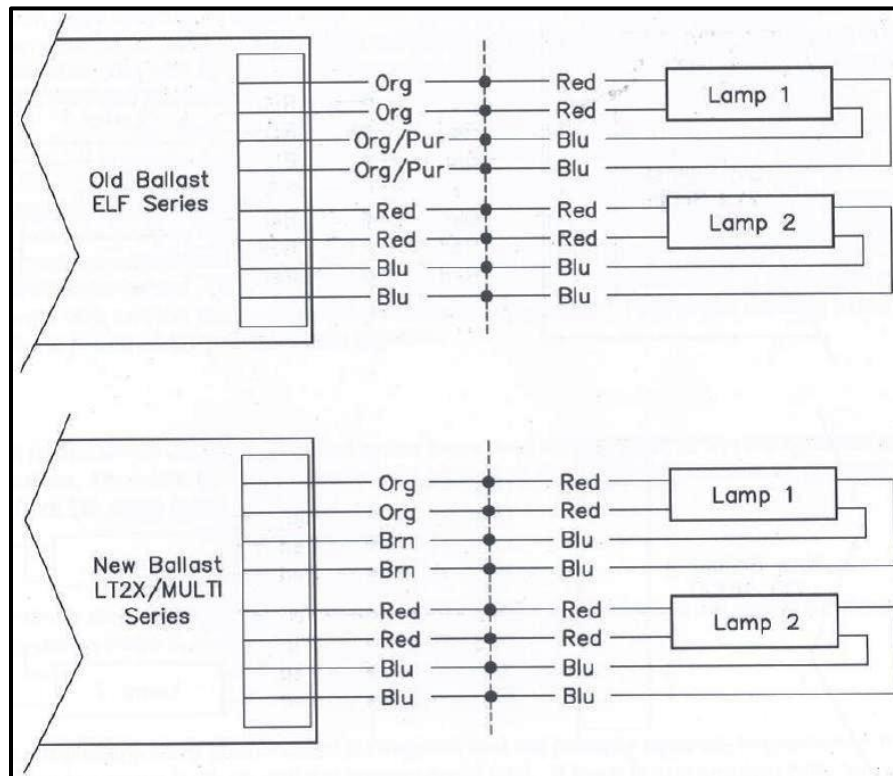
12xx Series	LT2X/MULTI Series Ballast
Lamp 1	Lamp 1
Yel	Org
Blu	Org
Red	Brn
Red	Brn
Lamp 2	Lamp 2
Yel	Red
Blu	Red
Red	Blu
Red	Blu



NOTE: When replacing 12xx Series with LT2X/MULTI Series, leave the factory splice of the orange and the red wires intact and connect the new ballast as shown in the table above.

Replacing ELF Series Ballast with a LT2X/MULTI Series Ballast

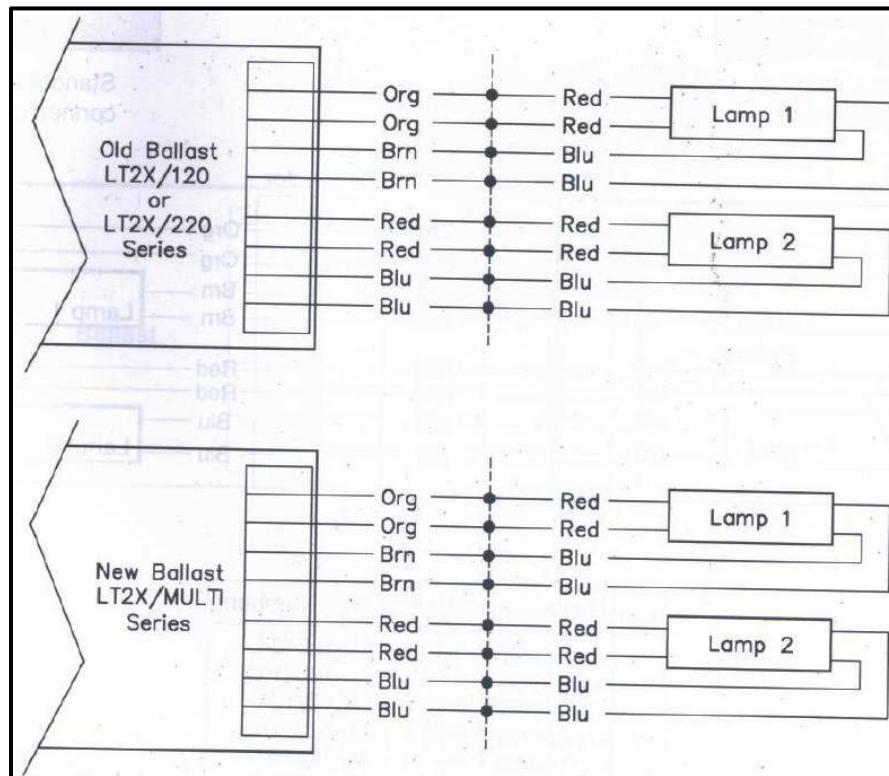
LT2X/120 & 220 Series	LT2X/MULTI Multi Series
Lamp 1	Lamp 1
Org	Org
Org	Org
Brn	Brn
Brn	Brn
Lamp 2	Lamp 2
Red	Red
Red	Red
Blu	Blu
Blu	Blu



NOTE: When replacing ELF Series with LT2X/MULTI Series, cut apart the factory splice of the orange and red wires and connect the new ballast as shown in the table above.

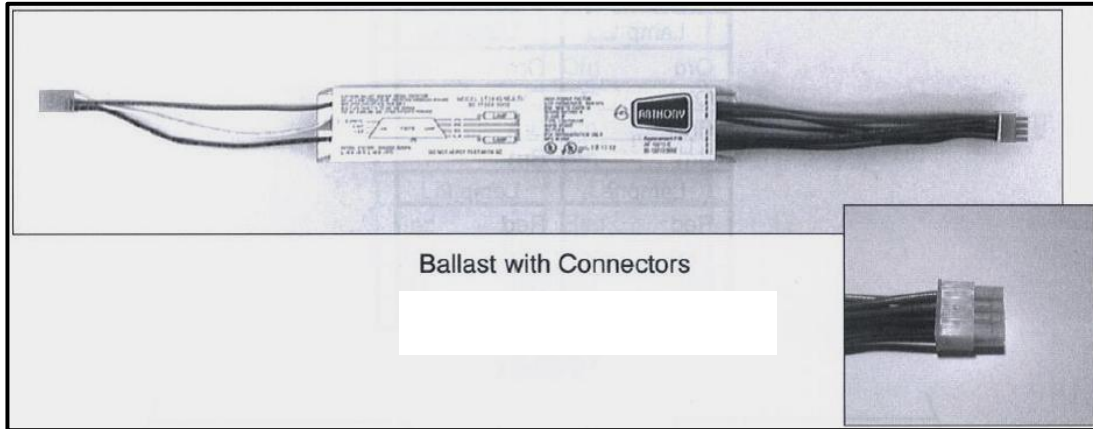
Replacing LT2X40/120, LT2X40/220 Series Ballast with a LT2X/MULTI Series Ballast

LT2X/120 & 220 Series	LT2X/MULTI Multi Series
Lamp 1	Lamp 1
Org	Org
Org	Org
Brn	Brn
Brn	Brn
Lamp 2	Lamp 2
Red	Red
Red	Red
Blu	Blu
Blu	Blu



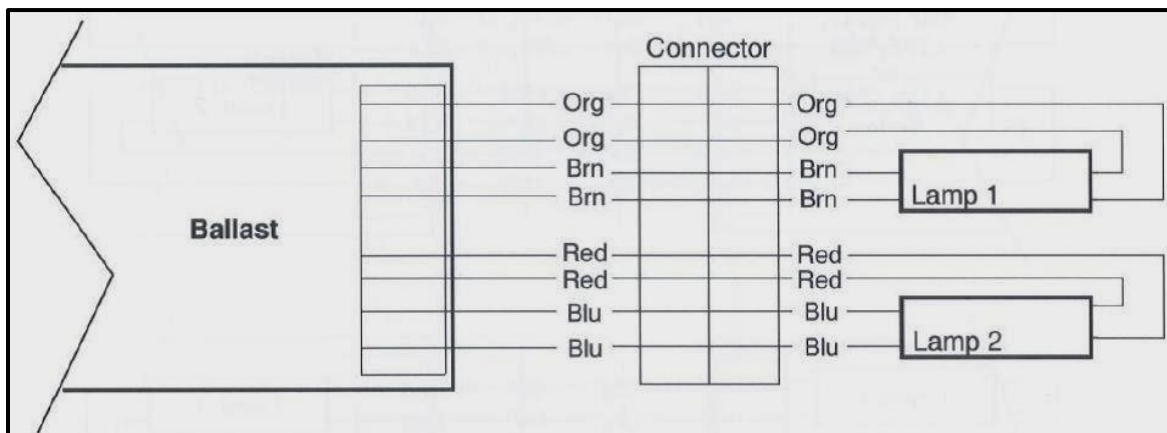
NOTE: When replacing LT2X40/120 or LT2X40/220 with LT2X/MULTI Series, cut apart the factory splice of the orange and red wires and connect the new ballast as shown in the table above.

6. ELS/Standard Ballast with Connectors as of 3/20/97



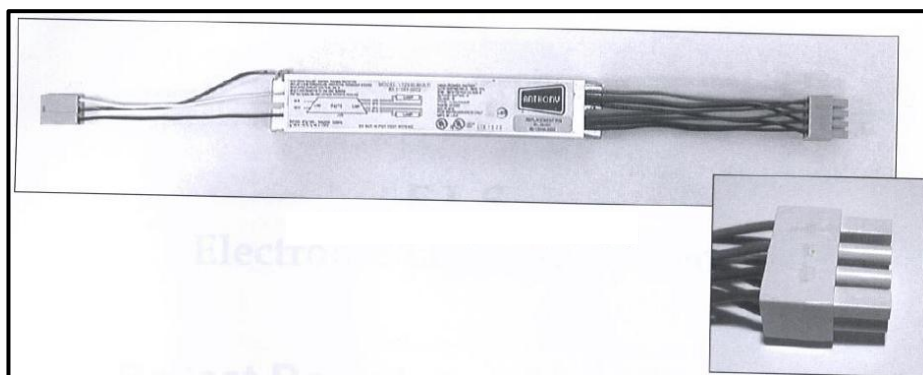
Ballast with Connectors

Ballast with Standard Size Connector

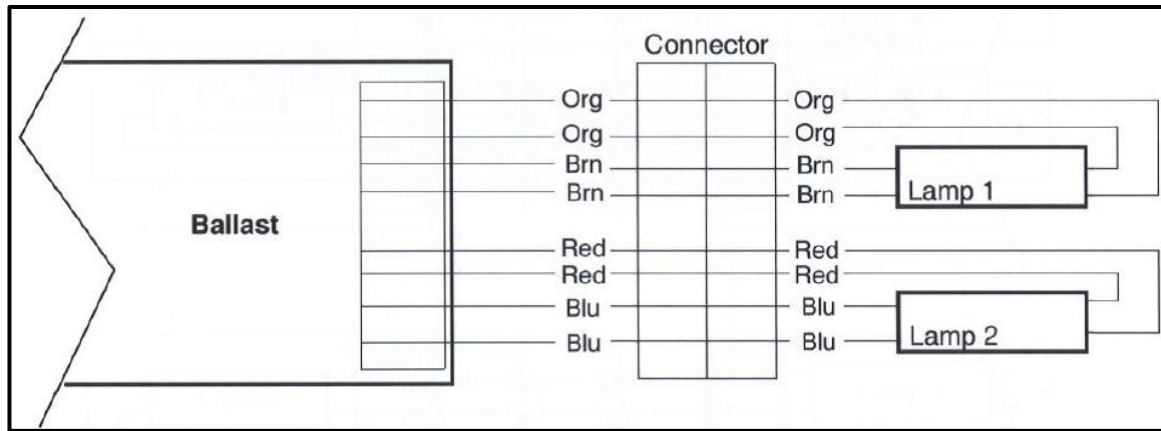


Replacement Ballast Part Numbers	
1-Lamp T-8 48"	AE-12240-C
2-Lamp T-8 48"	AE-12241-C
1-Lamp T-8 60"	AE-12212-C
2-Lamp T-8 60"	AE-12213-C
1-Lamp T-8 72"	AE-12270-C
2-Lamp T-8 72"	AE-12271-C

7. ELS/Connexion with 1000 Volt Connectors Available from July, 1998



Ballast with 1000 Volt Connectors



Replacement Ballast Part Numbers	
1-Lamp T-8 48"	EL-58148-A
2-Lamp T-8 48"	EL-58248-A
1-Lamp T-8 60"	EL-58160-A
2-Lamp T-8 60"	EL-58260-A
1-Lamp T-8 72"	EL-58172-A
2-Lamp T-8 72"	EL-58272-A

8. Revision History Page

REV	ORIGINATOR	DESCRIPTION OF CHANGE	EFFECTIVE DATE
A	-	Initial Release	-
B	-	Reformat	11/2012
C	S. Fisher	Reformat ted & added new logo	05/15/2013