Installation Instructions & Users Manual

IMPORTANT SAFEGUARDS
READ AND FOLLOW ALL SAFETY INSTRUCTIONS

When using electrical equipment , basic safety precautions should always be followed including the following:

1. **CAUTION:** This unit has more than one power supply connection point. To reduce the risk of electric shock disconnect both the branch circuit-breakers or fuses and emergency power supplies before servicing.

2. **CAUTION:** This equipment provides more than one power supply output source. To reduce the risk of electric shock disconnect both normal and emergency sources within this unit before servicing any equipment connected to this unit.

3.**CAUTION:** Sealed unit. components are not replaceable. Replace entire unit when necessary.

4.**CAUTION:** Installation and Servicing should be performed by qualified personnel only. De-energize before opening.

5. Do not use outdoors.

6. Do not mount near gas or electric heaters.

7. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.

8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

9. Do not use this equipment for other than its intended use.

10. Install in accordance with the National Electrical Code and local regulations.

11. Approved for field or factory installation.

12. Lighting fixture manufacturers, electricians, and end-users need to ensure product compatibility before final installation.

13. **Model ELC P7 24-57VDC:** The output of these devices qualifies as a low voltage, limited energy (LVLE) source, defined by UL 924 as having comparable output current and voltage limits as a Class 2 source. Most luminaire standards permit polymeric enclosure materials containing only circuits limited to Class 2 values to be flammability rated HB or better.

LIMITATIONS

1. The output voltage and current of the ELC as marked on the data label must not exceed the maximum output voltage and current of the normal driver, as marked on the data label.

2. ELC package P7 may only be installed within a rated fire and electrical enclosure with sufficient volume to accommodate the ELC device and all required wiring connections.

3. ELC output to the LED array may not be connected by soldering direct to a circuit board. All connections from the ELC to the normal driver and the LED array should be made using standard wire nuts or terminal blocks.

SAVE THESE INSTRUCTIONS

EMERGENCY LIGHT OUTPUT

To verify compliance with required minimum light output defined by Federal, state and local municipal codes for emergency illumination of the path of egress, emergency light output may be calculated as follows:

1. Refer to luminaire specification data and locate the efficacy of the fixture (lumens delivered per watt).

2. If not available on data sheets, if necessary log onto the DesignLights Consortium website at www.designlights.org, click on “search by keyword”, enter luminaire manufacturer name and part number, then click on “Search” tab to open the “Qualified Products List”. Look up under “RATED DATA” the efficacy level in lumens per watt.

3. Note the ELC power rating on the data label. Then:

Emergency light output = ELC Power Rating x Luminaire Efficacy Lumens (Lm)

4. Download available IES photometric files for the luminaire. Use the calculated emergency lumen output to determine minimum illuminance when the fixture is mounted at the specified height above floor level.

5. The National Fire Protection Association minimum standard is 1 Foot Candle (Fc) average, and 0.1 Fc minimum at any point, on the path of egress. Verification of minimum lighting standards for emergency lighting for a single luminaire does not imply that a complete installation will meet all required codes. That responsibility remains with the specifying engineer or designer.

ELC OPERATION

When normal AC branch circuit power is ON, ELC passes LINE voltage to the normal LED driver through normally closed relay contacts, and emergency battery power to the ELC is OFF. When AC power to a central battery system is lost, emergency power from a single battery source is transferred to the ELC, causing the relay to open and the normal driver turns OFF. Emergency power from the ELC output bypasses the normal driver and any associated lighting controls, powering the LED array at the precise current and voltage required for emergency lighting.

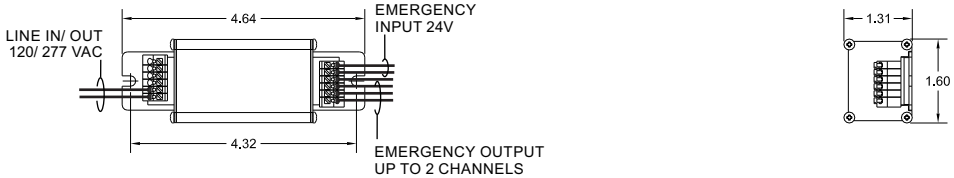
RATINGS

MODEL	INPUT		OUTPUT	
P7	EMERGENCY	NORMAL	EMERGENCY	NORMAL
STANDARD	24 VDC; 2.6 A	120/277 VAC; 6 A	32-54 VDC; 100-1050 mA	NA
			60 W	
HIGH VOLTAGE	24 VDC; 2.6 A	347/480 VAC; 15 A	60-210 VDC; 100-290 mA	
(HV OPTION)			60 W	

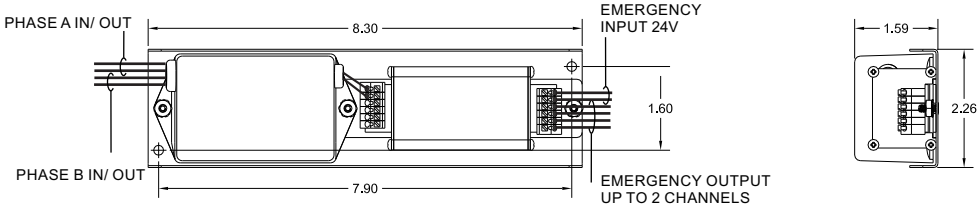
Note: ELC Package Type P7 output 32-54 has ratings of Class 2 levels. All others P7 models are above Class2 ratings.

DIMENSIONS & MOUNTING

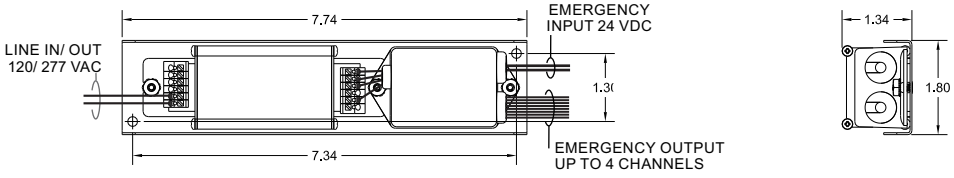
1-2 CHANNELS
120/ 277 VAC INPUT
VOLUME: 9 CU INCH



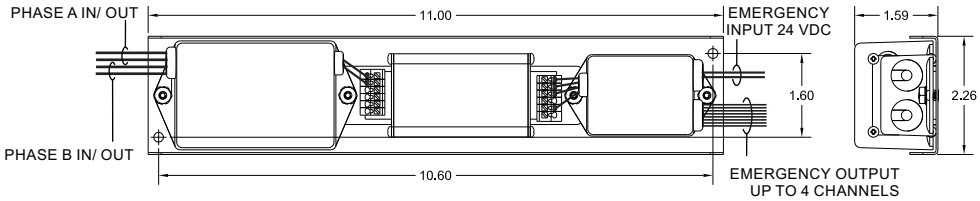
1-2 CHANNELS
347/ 480 VAC INPUT
VOLUME: 29 CU INCH



3-4 CHANNELS
120/ 277 VAC INPUT
VOLUME: 17 CU INCH



3-4 CHANNELS
347/ 480 VAC INPUT
VOLUME: 38 CU INCH



FIXTURE MOUNT

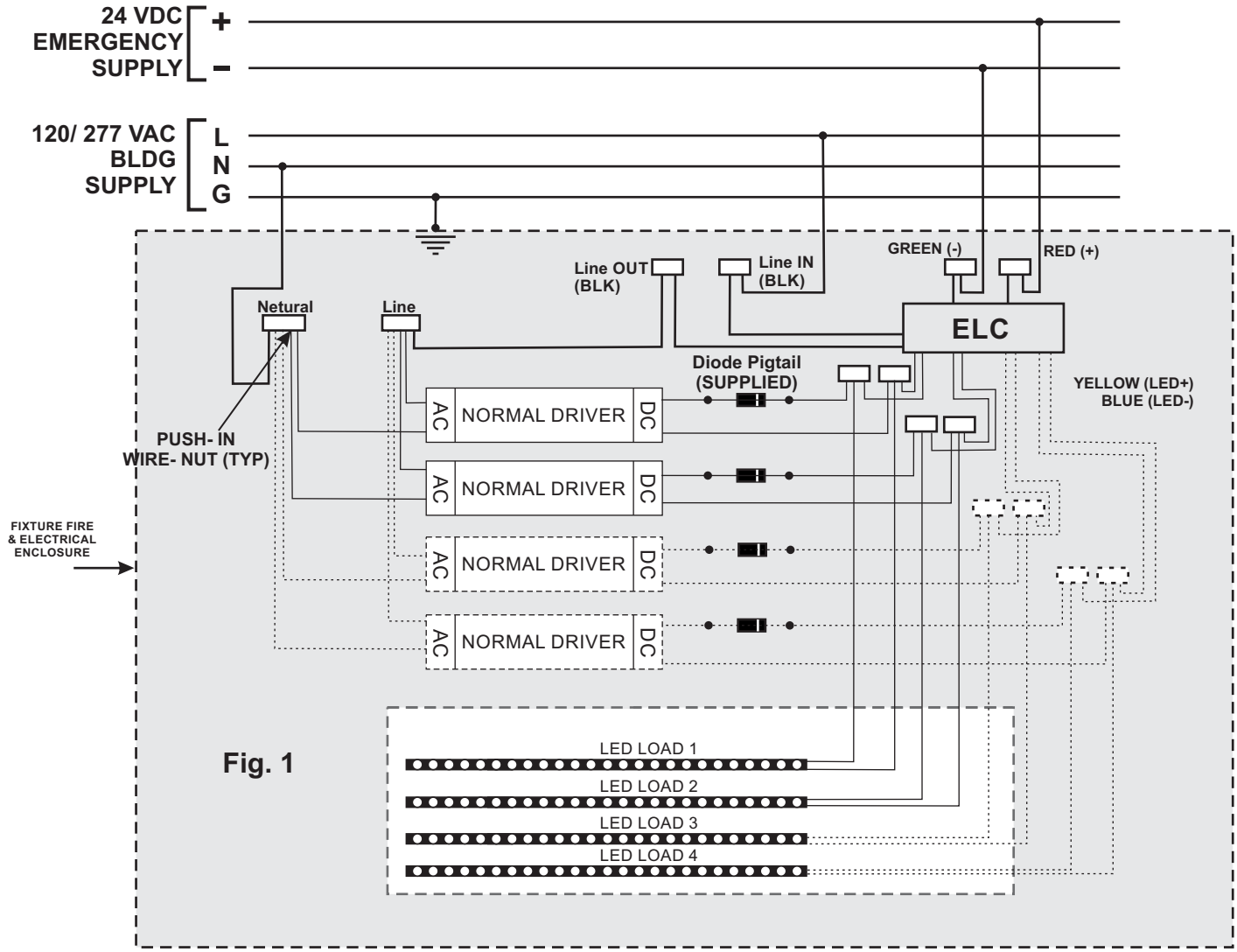


Fig. 1

1. Open luminaire driver compartment to enable access to all input/output wiring.
2. Mount ELC package within the fixture driver enclosure or other fire and electrical enclosure which is part of the fixture assembly. (NOTE: If supplied, comply with ELC location and mounting instructions for specific fixture types). Complete all wiring connections shown in above diagram and secure wiring inside driver compartment.
3. See Fig 1. Output has a POSITIVE (Yellow) and NEGATIVE (Blue) wire. Using push-in wire nuts , connect output from the ELC as shown to LED LOAD NEGATIVE and LED LOAD POSITIVE. DO NOT CROSS POLARIZE LED WIRING.
4. Add diode pigtail (supplied) in series on the output + of the normal driver. The RED side of the pigtail is on the driver output+ wire and Yellow pigtail wire to the Load+. DO NOT CROSS POLARIZE WIRING.
5. Connect 24V Emergency Supply from CB POSITIVE (RED) and NEGATIVE (BLK) branch circuit wiring to ELC POSITIVE INPUT (Red) and NEGATIVE (GREEN).
6. Replace compartment cover and close fixture. Activate AC normal branch circuit power to confirm LED lamp operation. Activate the CB and check Emergency Power Operation (AC power can remain ON).

NOTE: Building AC supply and Emergency DC supply from CB must be routed through separate cable openings (K.O.).

REMOTE MOUNT

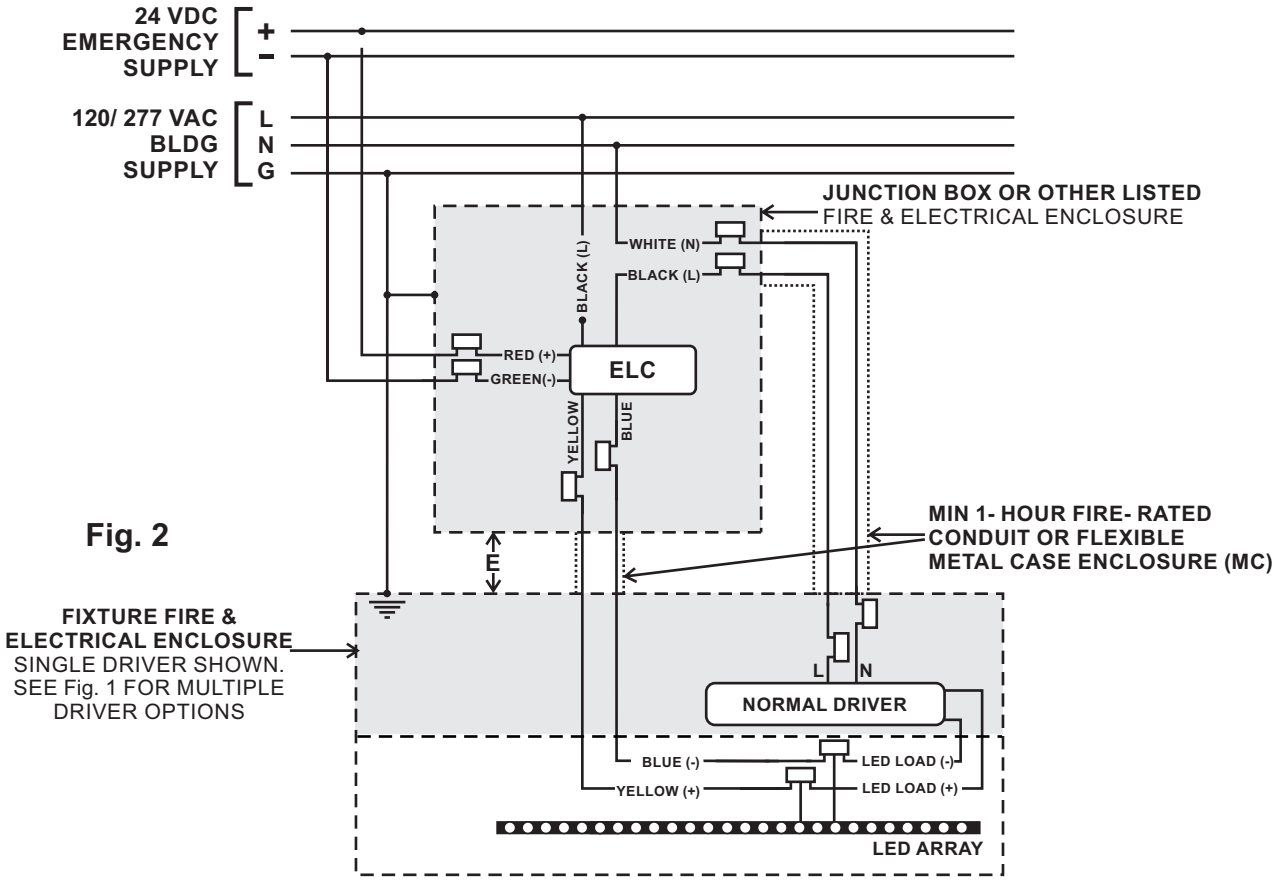


Fig. 2

1. See Fig. 2. Locate Junction Box of suitable size for required wiring and ELC unit. NOTE: Using wiring size #18 AWG for the low voltage output to the luminaire (BLUE and YELLOW connections to the ELC) maximum distance from ELC to the luminaire should not exceed 30 ft. (dimension E on Fig. 2).
2. Connect Emergency Supply from CB 24VDC POSITIVE and NEGATIVE emergency branch circuit wiring to ELC POSITIVE INPUT (Red) and NEGATIVE (GREEN) and 120/277VAC building supply LINE and GROUND inputs to the ELC in the J-Box as shown.
3. Route AC wiring and DC wiring from J-Box to luminaire through separate conduit or MC flexible cables, to separate connecters on luminaire housing.
4. Using standard wire nuts or approved push-in type connectors, connect Normal Driver AC LINE and NEUTRAL INPUT and connect GROUND to appropriate fixture terminal.
5. Connect ELC POSITIVE OUTPUT (Yellow) and NEGATIVE OUTPUT (Blue) to LED LOAD NEGATIVE and POSITIVE output wiring from Normal Driver. DO NOT CROSS POLARIZE LED WIRING.
6. Activate AC normal branch circuit power to confirm LED lamp operation. Activate the CB and check emergency power operation (AC power can remain ON).

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