

# 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.

### 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. For emergency operation, ELC models may only be connected to Sigtex Lighting Inc Series CBM or CBL central battery systems, which include an automatic transfer switch Part No. 300BXC1-24D manufactured by Magnecraft, UL/CSA Recognized under UL Standard 508.
3. Type 6 is plenum rated. (For applications that require compliance to the UL2043 standard for "Discrete Products and Their Accessories Installed in Air-Handling Spaces")
4. 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](http://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 lumen output = ELC Power Rating x Luminaire Efficacy Lumens (Lm)**

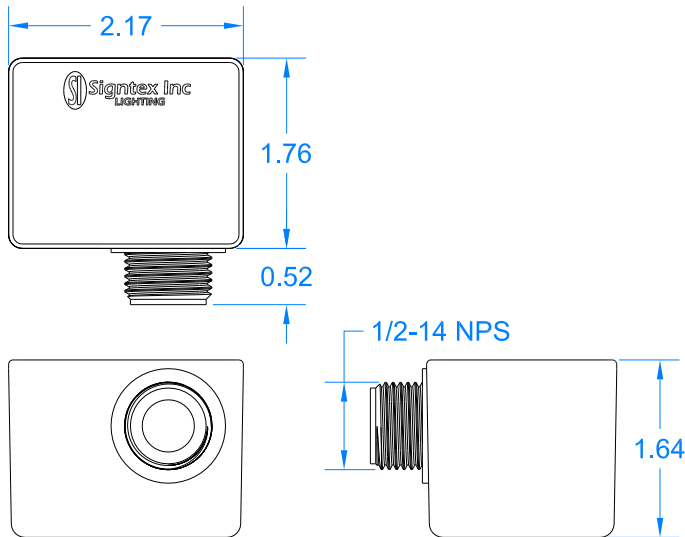
4. Download available IES photometric files for the luminaire. Use the calculated emergency lumen output to determine minimum illuminance when the fixture is mounted at the specified height above floor level.
5. The National Fire Protection Association minimum standard is 1 Foot Candle (Fc) average, 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.

**RATINGS**

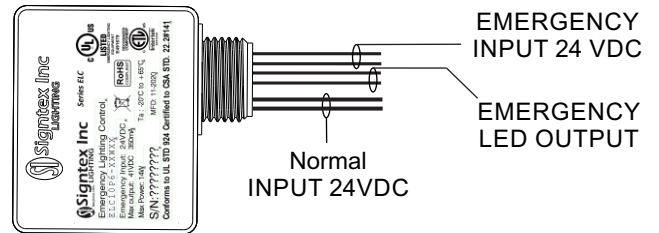
| MODEL                                   | INPUT     |        | OUTPUT            |        |
|---|-----------|--------|-------------------|--------|
|   | EMERGENCY | NORMAL | EMERGENCY         | NORMAL |
| STANDARD                                | 24 VDC    | 24VDC  | 21-41 Vdc;        | NA     |
|   | 600 mA    | 6 A    | 100-350 mA; 14 W  |        |
| HIGH POWER<br>(HP OPTION)               | 24 VDC    | 24VDC  | 5-24 VDC          | NA     |
|   | 1050 mA   | 6 A    | 200-1000 mA; 22 W |        |
| HIGH VOLTAGE<br>& POWER<br>(HVP OPTION) | 24 VDC    | 24VDC  | 5-40 VDC          | NA     |
|   | 900 mA    | 6 A    | 200-500 mA; 21 W  |        |

**DIMENSIONS & MOUNTING**

**DIMENSIONS:**



**STANDARD MOUNT : VOLUME 7.0 CU INCH**

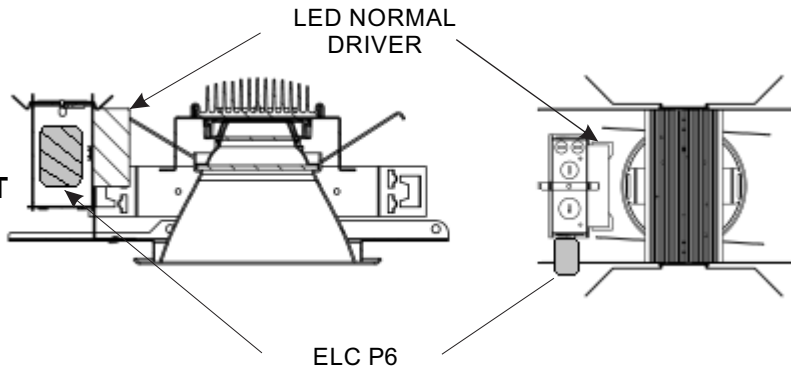


**KEY:**

**Emergency 24V Input:** RED+ , BLK-  
**Normal 24VDC Input:** RED+ , BLK-  
**LED Output:** YEL+ , BLU-

**Operating Temperature:** -40° to +65° C  
**Max Ambient Temperature (Ta)** 65° C  
**Max Case Temperature (Tc)** 80° C

**TYPICAL J-BOX MOUNT**



## DC LUMINAIRE INSTALLATION

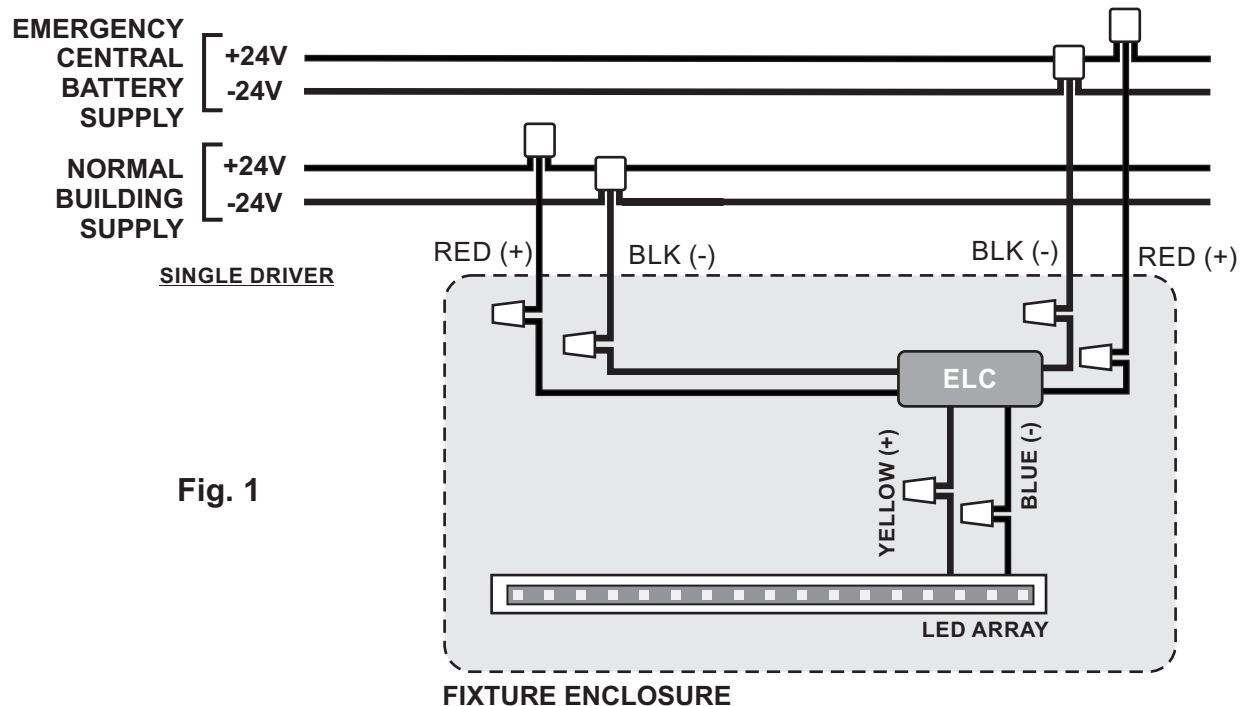
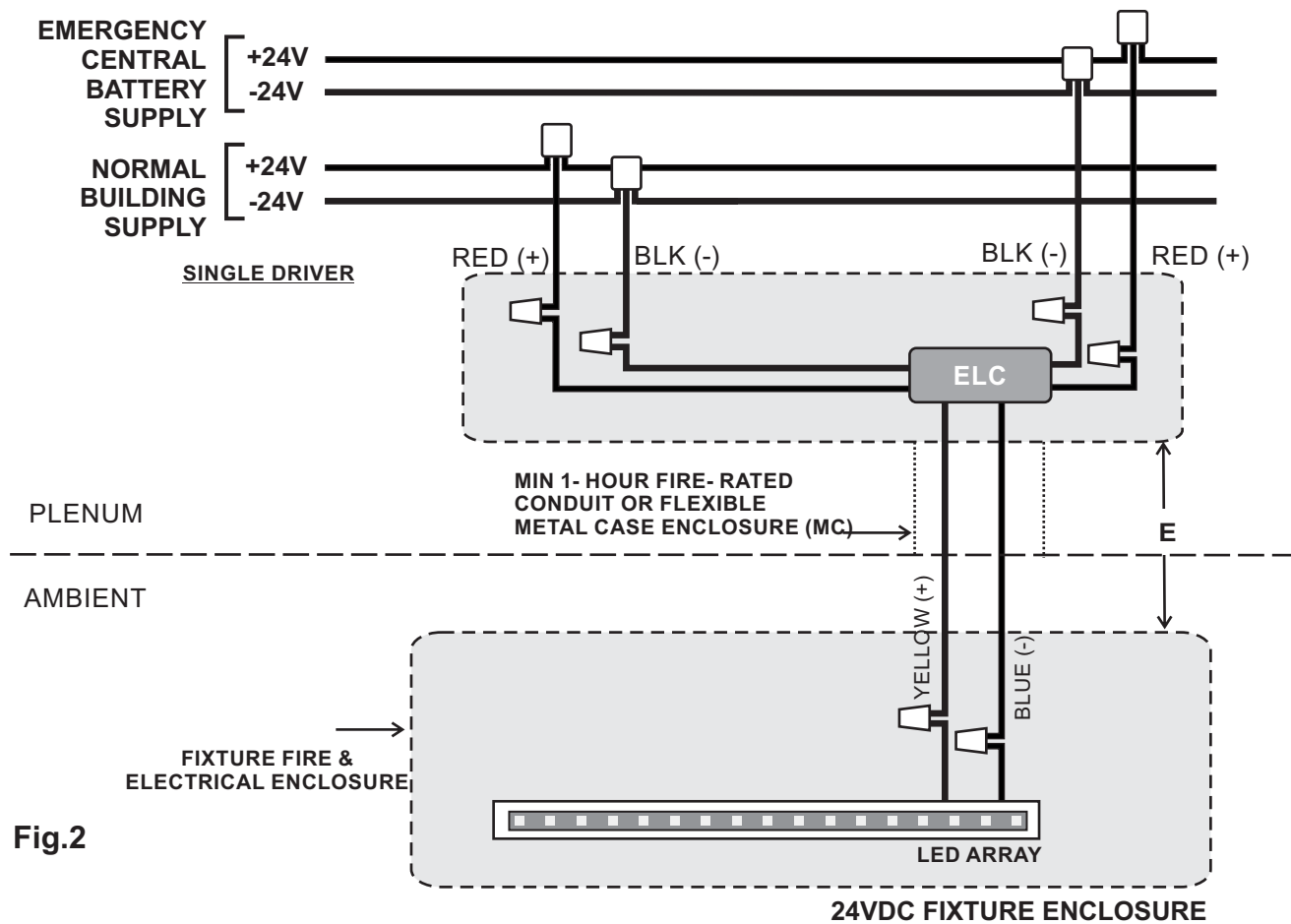


Fig. 1

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. ELC output has a POSITIVE (Yellow) and NEGATIVE (Blue) wire. Using push-in wire nuts connect each output from the ELC as shown to LED LOAD NEGATIVE and LED LOAD POSITIVE output wiring from the normal driver. DO NOT CROSS POLARIZE LED WIRING.
4. Connect 24V Emergency Supply from CB POSITIVE (Red) and NEGATIVE (Black) branch circuit wiring to ELC POSITIVE INPUT (Red) and NEGATIVE (Black).
5. Replace compartment cover and close fixture. Activate DC normal branch circuit power to confirm LED lamp operation. Activate the CB and check Emergency Power Operation (DC Normal power can remain ON).

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

**REMOTE INSTALLATION WITH NORMAL DC POWER SUPPLY**



**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 (Black) and 24VDC building supply inputs to the ELC in the J-Box as shown.
3. Route DC wiring from J-Box to luminaire through conduit or MC flexible cables on luminaire housing.
4. Using standard wire nuts or approved push-in type connectors, connect Normal DC supply as shown in Fig.2.
5. Connect ELC POSITIVE OUTPUT (Yellow) and NEGATIVE OUTPUT (Blue) to LED LOAD NEGATIVE and POSITIVE output wiring from DC fixture. DO NOT CROSS POLARIZE LED WIRING.
6. Activate DC normal branch circuit power to confirm LED lamp operation. Activate the CB and check emergency power operation (DC Normal power can remain ON).