

Installation Guide for Vertical Refrigeration Display Products



This installation guide outlines instructions for proper mechanical and electrical installation of the linear vertical refrigeration line. This document should never be considered a substitute for any provision of a regulation or state and/or legal code.



Tools Required:

- Philips and/or flat blade screwdrivers
- Needle nose pliers
- Wire cutters/strippers
- Hex keys
- Tape measure
- Eye protection
- Work gloves



Case Identification:

Typically, case manufacturers offer specific installation, repair and replacement documents or instructions online. To identify the case, look for the case brand label. Generally these are located near the top of the case, at the frame header.

This installation guide is written such that any removal or access instructions are dictated by the manufacturer's provisions. This document is written to guide the installer regarding any ElectraLED product specific instructions. It is recommended that the case manufacturer's instructions are used in conjunction with this document.

WARNING: ONLY QUALIFIED PERSONNEL SHOULD PERFORM INSTALLATION

TO AVOID ELECTRICAL SHOCK OR COMPONENT DAMAGE, DISCONNECT POWER BEFORE ATTEMPTING INSTALLATION OF THE POWER SUPPLIES AND/OR MODULES.

Failure to install the fixture in accordance with the National Electric Code (NEC), all applicable Federal, State and local electric codes as well as the specific Underwriter's Laboratories (UL) safety standards for the installation, location and application may cause serious personal injury, death, property damage and/or product malfunction.

These instructions are guidelines for installation of LED fixtures. Installation requirements may vary depending on the application. Licensed electricians should provide all installation services for connection for both primary and secondary (input/output) of the power supplies.

WARNING: Risk of fire or electric shock. Luminaires, wiring, ballasts, or other electrical parts may be damaged when drilling for installation of reflector kit hardware. Check for enclosed wiring and components.

WARNING: Risk of fire or electric shock. Fixture kit installation requires knowledge of LED lighting luminaires electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

1.0 Mechanical Instructions for Raceway Fed Cases

1.1 Preparing the Case for Installation

- 1.1.1 Turn off the power to the case and turn case lighting toggle switch to the off position. (Fig.1)
- 1.1.2 Remove the lensing and lamps. (Fig. 2)
- 1.1.3 Cut the lamp sockets from the wires leading to the ballast. Wires may be used for rewiring.
- 1.1.4 Open raceway. Raceway may be located at the top or the bottom of the case. (Fig. 3)
- 1.1.5 Remove ballasts. Be sure to leave as much primary wire as possible and be sure to cap them off. Leave as much ballast wire as possible for wiring.



Fig. 1



Fig. 2



Fig. 3

1.2 Installing the Fixture

- 1.2.1 Attach LED fixtures to their respective mullions using 1/2" tech screws. (Fig.4)
- 1.2.2 New wiring can be fed directly to the raceway if there is access (Fig. 5a) or it can be connected to the existing ballast wires using the appropriate code rated connector. Note: Pictured connector is an ideal connector Model 62105 No. 22 to 112 AWEG. (Fig. 5b)
- 1.2.3 If the fixture wire is connected to the existing ballast wire, the connection shall be tucked and secured properly. Caution: Be sure to note which existing ballast wires are connected to each fixture.



Fig. 4



Fig. 5a



Fig. 5b

1.3 Installing Optional Sensors in a Raceway Case



Fig. 6

L-Bracket Mount

Wall Mount

Case Mount

- 1.3.1 Locate the center of the case and install the sensor using 1/2" tech screws
- 1.3.2 If the raceway is located on the bottom of the case, feed the sensor wire behind the case. Use a wire pulling rod or fish tape to pull the sensor wire underneath the case. Feed the sensor wire through an existing hole (or drill a 1/4" hole) into the raceway to the closest driver location.
- 1.3.3 If the raceway is located on the top of the case, feed the sensor wire through an existing hole (or drill a 1/4" hole) to the closest driver location.
- 1.3.4 Cut the sensor wire with at least 8 inches of slack near the right side of the driver to ensure you have enough for wiring.
- 1.3.5 Remove about 3-4 inches of the housing and cut all wires except the black, yellow and red. This will enable you to identify the sensor wire as the main sensor wire that comes directly from the sensor. Note: The red wire will power the sensor.
- 1.3.6 Plug the main sensor wire into the back of the sensor.
- 1.3.7 Use the remaining wire to run a junction from the location of the main sensor wire to each driver.
- 1.3.8 Remove about 3-4 inches of the housing on the junction wires and cut all wires except the black and yellow. The red wire is not needed for junction.
- 1.3.9 Remove all burrs from any drilled hole and be sure to apply a liberal amount of clear silicone in and around the hole that was drilled for the sensor wire. By not doing so, cold air will escape and compromise the product in the case. (Fig. 7)



Fig. 7

2.0 Mechanical Instructions for Mullion Fed Cases

2.1 Preparing the Case for Installation

- 2.1.1 Turn off the power to the case lights using the toggle switch located on the right, left or at the top of the mullion. (Fig. 8)
- 2.1.2 To gain access to the power supply and wiring inside the mullion, completely remove the contact plate retainer(s) (zipper strip) from the contact plate facing the door side of the mullion. (Fig. 9)



Fig. 8



Fig. 9

- 2.1.3 Disconnect the line and load side splice connectors from the ballast. Unscrew the ballast mounting screws and carefully remove the ballast from the mullion. (Fig. 10)
- 2.1.4 Remove the lensing and lamps. (Fig. 11)
- 2.1.5 Remove the top and bottom lamp spring clamps. Retain the screws and reuse for end mullion lighting. (Fig. 12)



Fig. 10



Fig. 11



Fig. 12

2.2 Installing the SELS Fixture

- 2.2.1 Drill two 5/16" holes on the center mullions. One 8" up from the bottom and the 2nd 8" down from the top of the mullion. (Fig.13) Remove all burrs.
- 2.2.2 Install center mullion fixtures upside down with fixture wire feeding through the existing hole where the former socket leads were run. (Fig. 14)
- 2.2.3 Use bolts provided (1/4-20 x 0.5" Hex head type F bolt) to attach light fixture to mullion. Bolts screw into the groove on the back of the light fixture. (Fig. 15)



Fig. 13



Fig. 14



Fig. 15

- 2.2.4 When installing left and right end fixtures, check to see if existing wiring is fed from the bottom of the case. If not, drill a 1/4" hole in the bottom corner of the mullion to feed new fixture wiring through. (Fig. 16) The fixture will need to be turned upside down for bottom of case wiring. (Fig. 17) By doing this the Right End fixture now becomes the Left and visa-versa. Note: Fixtures are normally oriented for top of case wire feed.



Fig. 16



Fig. 17

2.2 Installing Optional Sensors in a Mullion Case

- 2.3.1 Remove top center mullion face plate on the center door
- 2.3.2 Measure and locate the center of the case to mount the sensor. (Fig. 18)
- 2.3.3 Drill $\frac{1}{4}$ " hole through the top of the case into the mullion cavity. Be VERY careful not to harm any existing wires or door warmers. Remove all burrs. Plug the sensor wire into the sensor. (Fig. 19)
- 2.3.4 Feed the cut end of the sensor wire through the $\frac{1}{4}$ " hole. Run the wire down to the center mullion where the ballast will be installed. Cut the excess wire.™



Fig. 18

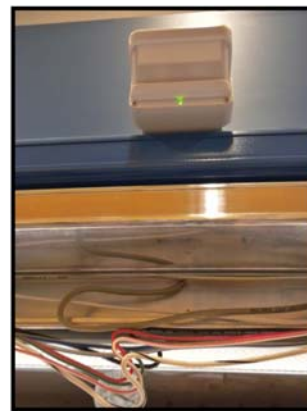


Fig. 19

- 2.3.5 Use the remaining wire to junction to the other drivers on either side of the case running the wire through the bottom horizontal mullions. (Fig. 20)
- 2.3.6 There should be enough wire to install bottom face plates after wire has been run. (Fig. 21)
- 2.3.7 Remove all burrs from any drilled holes and be sure to apply a liberal amount of clear silicone in and around the hole that was drilled for the sensor wire. By not doing so, cold air will escape and compromise the product in the case. (Fig. 22)



Fig. 20



Fig. 21



Fig. 22

3.0 Electrical Instructions

3.1 General Instructions

It is the responsibility of the installer to provide additional wiring if this becomes necessary. Installer shall ensure that additional wiring meets all applicable state and local electrical codes as pertains to the installation.

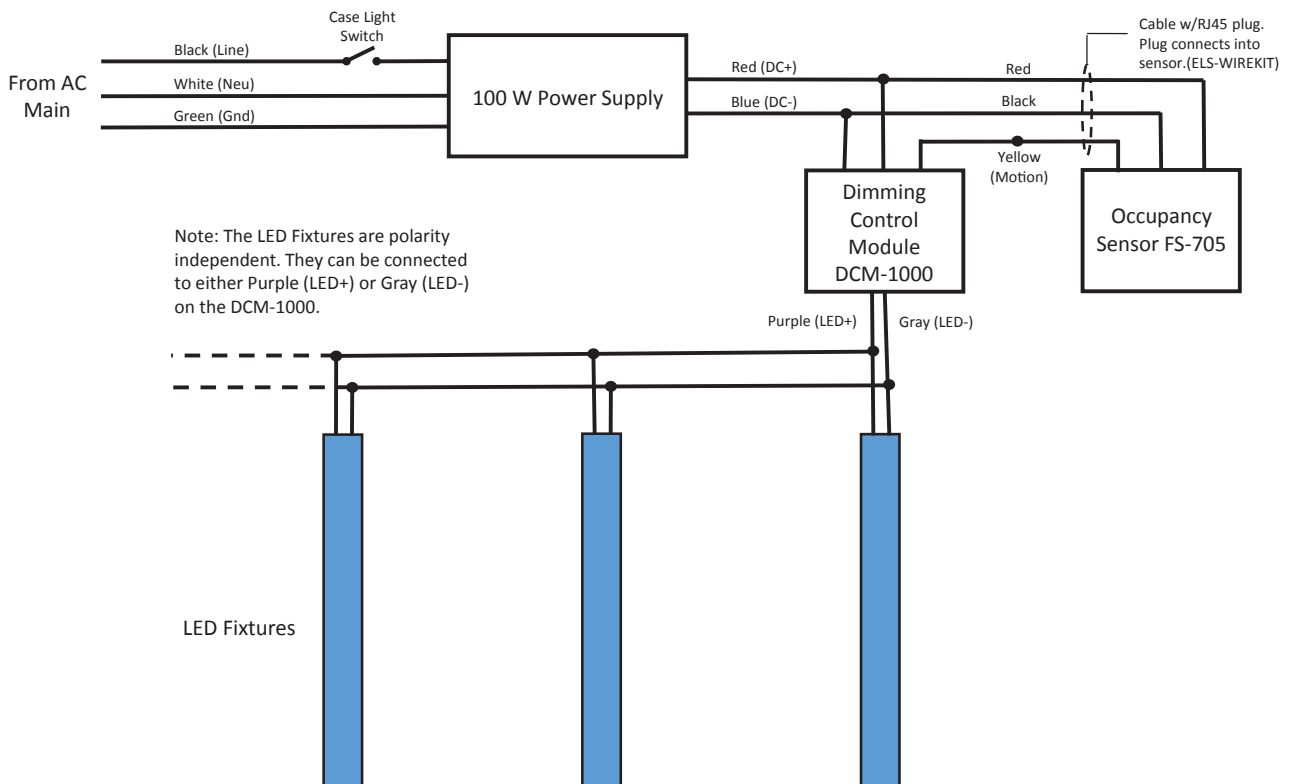
Electrostatic Discharge (ESD) precautions must be observed when installing the system.

Ensure that all connection points are sealed for damp location using the appropriate method.

Note: The power input leads from the light fixtures are polarity independent. They can be connected to either LED+ or LED- on the 24 Volt power supply or dimming control module.

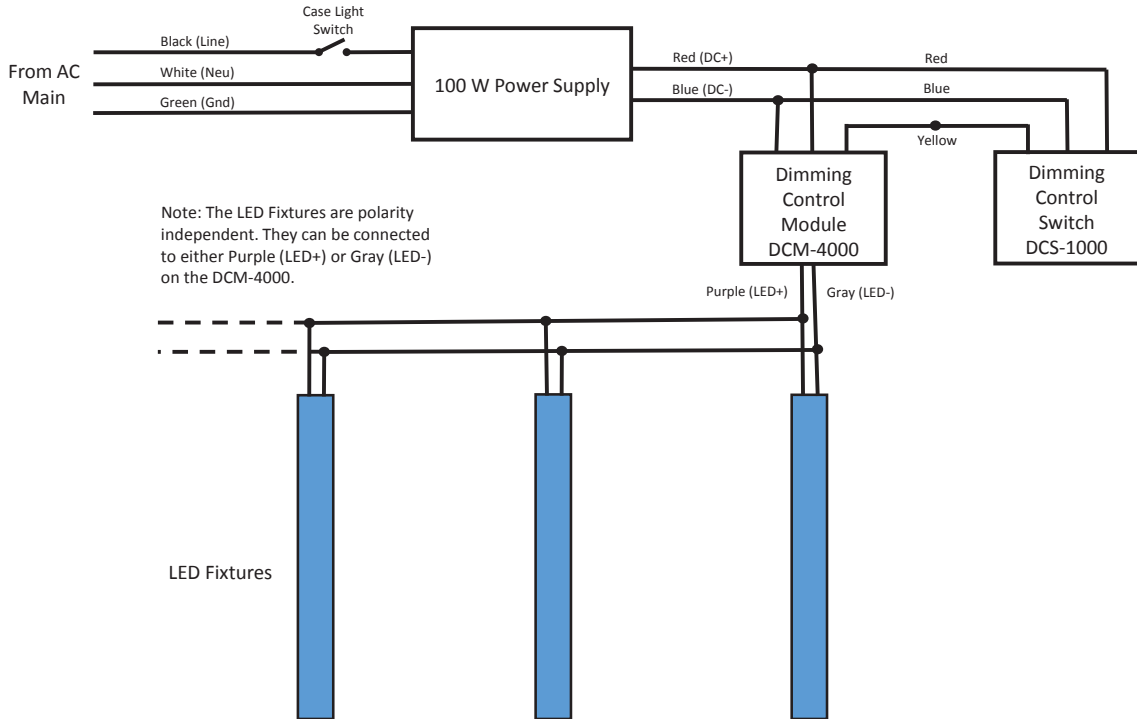
3.2 Wiring Diagrams and Door Load Charts

Wiring Diagram with Occupancy Sensor

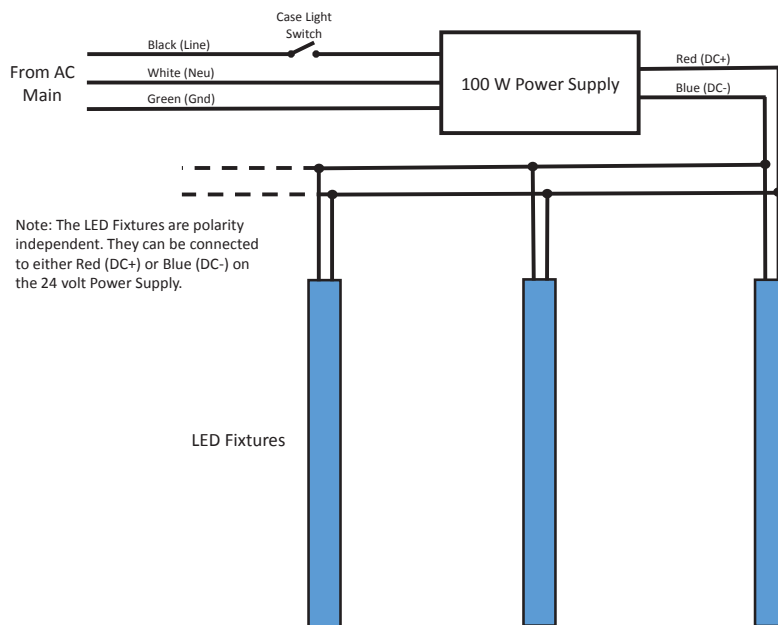


*All data subject to change without notice.

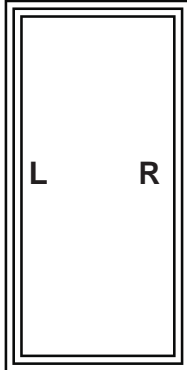
Wiring Diagram with Dimming Control Switch



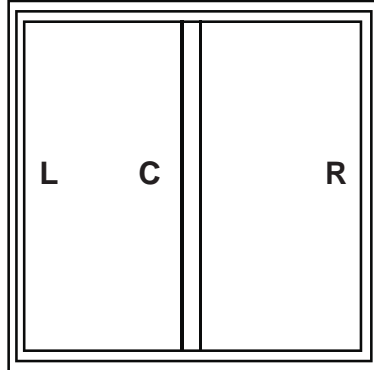
Wiring Diagram with No Dimming



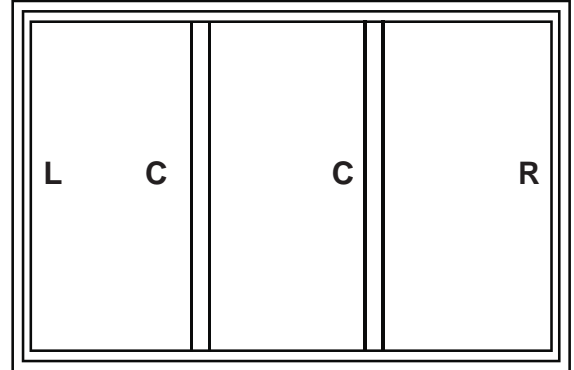
Single Door Case



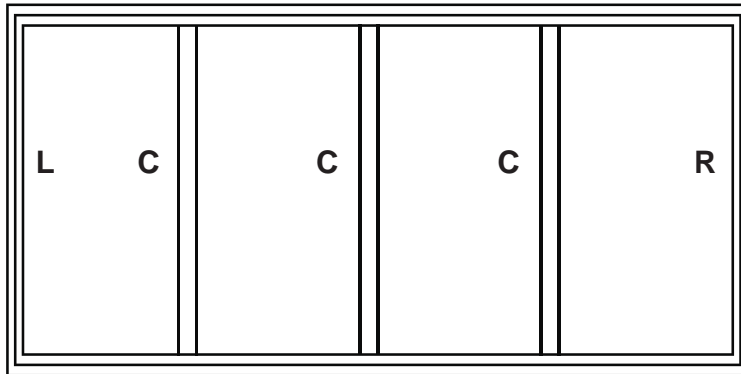
Two Door Case



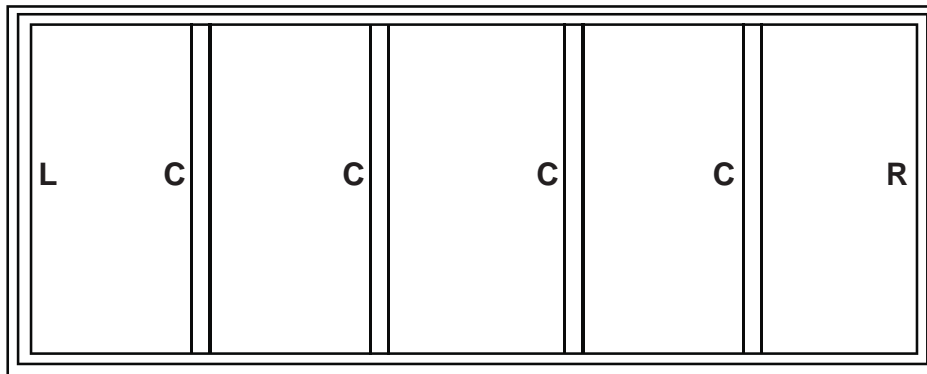
Three Door Case



Four Door Case



Five Door Case





| Freezer/ Cooler Case Size | Single Door | | | | | Two Door | | | | |
|------------------------------------|-------------|---|---|----|----------------------------|----------|---|---|----|----------------------------|
| | C | L | R | PS | Total System Wattage | C | L | R | PS | Total System Wattage |
| 4 ft. Case | 0 | 1 | 1 | 1 | 18 W | 1 | 1 | 1 | 1 | 36 W |
| 5 ft. Case | 0 | 1 | 1 | 1 | 23 W | 1 | 1 | 1 | 1 | 45 W |
| 6 ft. Case | 0 | 1 | 1 | 1 | 27 W | 1 | 1 | 1 | 1 | 52 W |

| Freezer/ Cooler Case Size | Three Door | | | | | Four Door | | | | |
|------------------------------------|------------|---|---|----|----------------------------|-----------|---|---|----|----------------------------|
| | C | L | R | PS | Total System Wattage | C | L | R | PS | Total System Wattage |
| 4 ft. Case | 2 | 1 | 1 | 1 | 51 W | 3 | 1 | 1 | 1 | 66 W |
| 5 ft. Case | 2 | 1 | 1 | 1 | 62 W | 3 | 1 | 1 | 1 | 83 W |
| 6 ft. Case | 2 | 1 | 1 | 1 | 74 W | 3 | 1 | 1 | 1 | 99 W |

| Freezer/ Cooler Case Size | Five Door | | | | |
|------------------------------------|-----------|---|---|----|----------------------------|
| | C | L | R | PS | Total System Wattage |
| 4 ft. Case | 4 | 1 | 1 | 1 | 82 W |
| 5 ft. Case | 4 | 1 | 1 | 1 | 103 W |
| 6 ft. Case | 4 | 1 | 1 | 2 | 126 W |

4.0 Related Information

4.1 List of Applicable Documents

- PB-SELS Product Brochure for the Solar Eclipse™ (SELS) Line
- SS-SELS Specification Sheet for the Solar Eclipse™ (SELS) Line
- WS-SELS Warranty Statement for the Solar Eclipse™ (SELS) Line

4.2 Owner/User Responsibilities and Considerations

4.2.1 The contractor, installer, purchaser, owner and/or user is responsible to install, maintain, and operate ElectraLED's systems in such a manner as to comply with all state and local laws, ordinances, regulation and the American National Standards Institutes Safety Code

4.2.2 Prior to planning an installation:

- Consult an Electrical Inspector for review and approval of all wiring plans
- Refer to local and state codes for installation compliance
- Consult ElectraLED's Customer Service Center 1-866-561-7610

*All data subject to change without notice.