

HUSSmann®

EcoShine Quick Connect LED Lights for Service Cases Canopy and Shelf Lights



Upgrade Installation Manual

P/N 0547701_C
June 2015

MANUAL- KIT INSTALLATION QUICK CONNECT LED




Spanish 0547702
French 0547703



BEFORE YOU BEGIN
 Read these instructions completely and carefully.



ANSI Z535.5 DEFINITIONS

-  • **DANGER** – Indicate[s] a hazardous situation which, if not avoided, will result in death or serious injury.
-  • **WARNING** – Indicate[s] a hazardous situation which, if not avoided, could result in death or serious injury.
-  • **CAUTION** – Indicate[s] a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE** – *Not related to personal injury* – Indicates[s] situations, which if not avoided, could result in damage to equipment.

REVISION HISTORY

- REVISION C — New part numbers, Page 6 & 7
- REVISION B — updated color temperature in 48 in.
- REVISION A — Original Issue October 2014

 **WARNING**

TO PREVENT WIRING DAMAGE OR ABRASION, DO NOT EXPOSE WIRING TO EDGES OF SHEET METAL OR OTHER SHARP OBJECTS.

 **WARNING**

RISK OF FIRE OR ELECTRICAL SHOCK. INSTALL THIS KIT ONLY IN THE LUMINAIRES THAT HAVE THAT HAVE THE CONSTRUCTION FEATURES AND DIMENSIONS SHOWN IN THE PHOTOGRAPHS AND / OR DRAWINGS.

 **WARNING**

RISK OF FIRE OR ELECTRIC SHOCK. LED RETROFIT KIT INSTALLATION REQUIRES KNOWLEDGE OF LUMINAIRES' ELECTRICAL SYSTEMS. IF NOT QUALIFIED, DO NOT ATTEMPT INSTALLATION. CONTACT A QUALIFIED ELECTRICIAN.

 **WARNING**

RISK OF FIRE OR ELECTRICAL SHOCK. INSPECT ALL LIGHTING COMPONENTS SUCH AS TOMBSTONES, WIRE LEADS, ELECTRICAL WIRING AND CONNECTIONS BEFORE REPLACING LED LIGHTING.

IMPORTANT
KEEP IN STORE FOR FUTURE REFERENCE
Quality that sets industry standards!

HUSSMANN®

12999 St. Charles Rock Road • Bridgeton, MO 63044-2483
 U.S. & Canada 1-800-922-1919 • Mexico 01-800-890-2900
www.hussmann.com

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SAFETY

There are two main hazard areas that service technicians may encounter on a day-to-day basis. They are: working within close proximity to the public and personal safety. Before starting work, review these hazards by completing the following checklist:

WORKING NEAR THE PUBLIC

KEEPING THE PUBLIC OUT:

The following techniques reduce the risk of injury to third parties (shoppers, store employees, etc.):

Cordon off all work areas with cones, caution tape, warning signs and/or barricades. Maintain a work area of at least five feet from the public. Is a second person required to prevent the public from entering the work area when the work area cannot be adequately cordoned off?

HAZARDOUS MATERIALS

Can the public be exposed to any chemicals, refrigerants or fumes? If yes, can steps be taken to eliminate or reduce the risk of exposure? to guard against accidental release of refrigerants, make sure the work area is adequately cordoned off (instead of posting a *WET FLOOR* sign, use *CAUTION* tape to prevent the public from entering the area).

Are wet floors going to create a slip hazard for pedestrians? If yes, be sure to post *WET FLOOR* signs and establish a schedule for clean up as soon as the work is complete.

ELECTRICAL HAZARDS

Are all live electrical hazards protected from public access; i.e., de-energized/locked out or cordoned off? Is proper signage in place? Do light bulbs need to be replaced: If yes, will high work be conducted from a ladder or a scissor lift? Make sure the work area is cordoned off as shown below.

PERSONAL SAFETY

Over 90% of accidents are due to human error or from complacency about the job. This checklist is provided to remind you of the potentially hazardous conditions at the jobsite.

WORKING AT HEIGHT

Will you be working more than six feet off the ground? If yes, have you received appropriate training (i.e., ladder, scissor lifts and personal fall-arrest systems)?

Do you have the appropriate personal protective equipment (PPE) for working at height (safety harness/lanyard)?

Will you be working on roofs with unprotected edges? If yes, make sure actions are taken to prevent a fall (i.e., identification of **adequate** anchor points for safety harnesses).

CONFINED SPACE WORK

Will you be working in any confined spaces? If yes, have you received appropriate training?

A confined space has limited means of entry/egress, is not designed for human occupancy, and is large enough for bodily entry.

Is permit-required confined space entry required? If yes, have appropriate steps been taken for safe entry, such as permit issuance.

If in doubt, DO NOT ENTER and inform the client.

GENERAL

This instruction explains how to remove fluorescent lamp fixtures and replace them with Hussmann LED light bars for service and specialty merchandisers.

FOR YOUR SAFETY

- Read and observe all CAUTIONS and WARNINGS shown throughout these instructions.
- Each person working on or near the installation described must wear safety glasses or goggles..
- Block access to the work area by customers or other personnel to prevent injury.
- Read and follow all industry safety recommendations and established procedures.
- Wiring must be 2 wire with ground and rated for 75°C (176°F).

ELECTRICAL CONNECTIONS

All wiring must be in compliance with NEC and local codes. All electrical connections are to be made in the wireway at the power supply.

IDENTIFICATION OF WIRING

Leads for all electrical circuits are identified by colored plastic bands. These bands correspond to the *color code sticker* (shown below) located inside the merchandiser's wireway cover. Anthony doors may not conform to this chart. Refer to the manufacturer's manual for their information.

WIRING COLOR CODE

Leads for all electrical circuits are identified by a colored plastic band: neutral wire for each circuit has either White insulation or a White plastic sleeve in addition to the color band.

PINK	REFRIG. THERMOSTAT LOW TEMP.	ORANGE OR	
LIGHT BLUE.	REFRIG. THERMOSTAT NORM TEMP.	TAN	LIGHTS
DARK BLUE.	DEFROST TERM. THERMOSTAT	MAROON ..	RECEPTACLES
PURPLE	CONDENSATE HEATERS	YELLOW ...	DEFROST HEATERS 120V
BROWN	FAN MOTORS	RED	DEFROST HEATERS 208V
GREEN*	GROUND	*EITHER COLORED SLEEVE OR COLORED INSULATION	

**ELECTRICIAN NOTE: Use copper conductor wire only.
CASE MUST BE GROUNDED**

THESE ARE MARKER COLORS WIRES MAY VARY.

SHIPPING DAMAGE

All equipment should be thoroughly examined for shipping damage before and during unloading.

This equipment has been carefully inspected at our factory. Any claim for loss or damage must be made to the carrier. The carrier will provide any necessary inspection reports and/or claim forms.

Apparent Loss Or Damage

If there is an obvious loss or damage, it must be noted on the freight bill or express receipt and signed by the carrier's agent; otherwise, carrier may refuse claim.

Concealed Loss Or Damage

When loss or damage is not apparent until after equipment is uncrated, retain all packing materials and submit a written request to the carrier for inspection, within 15 days.

Missing Parts

Every effort is made to ship all parts for the kit. The Hussmann Service Center can be reached by calling

- from U.S. & Canada 1-800-922-1919
- from Mexico 01-800-890-2900 •

Fluorescent Lamp Disposal: The United States Environmental Protection Agency has information regarding environmentally-safe fluorescent lamp waste management programs.

On the Net: EPA Web site:
<http://www.epa.gov/osw/hazard/wastetypes/universal/lamps/recycle.htm>

Lighting**IP65 Rated:**

These bulbs are IP65 rated. IP stands for ingress protection. The lights are totally protected from dust ingress — (6) and from the effects of fluid immersion between 5.9 in (15cm) and 3.28 ft (1m) — (7).

Color Temperature:

Color temperature is measured in kelvins (K). Higher color temperatures produce bright, white light hues. Neutral White (4000K) has a cooler hue than Warm Neutral (3500K) or Warm White 3000K.


CAUTION

Fluorescent lamps contain mercury vapor. Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system of people of all ages. Do not break or puncture fluorescent lamps. Dispose of, or store, all fluorescent lamps in accordance with Federal (40 CFR 273), State, and local hazardous waste requirements. Refer to <http://www.epa.gov/mercury/about.htm>


WARNING

— **LOCK OUT / TAG OUT** —

To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

EcoShine Quick Connect LEDs Canopy for Service Cases

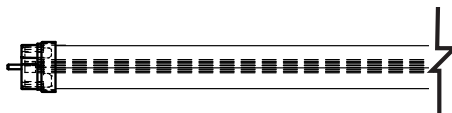
Upgrade Parts

	Hussmann Part Number	Description	Energy Watts (DC) Per Bulb	CRI Rating (typical)	Length (inches)	Light Output (Lumens) Typical
WARM WHITE	0547053	ES Quick Connect LED Canopy 3000K 36 in	6.7	93	36	600
	0547059	ES Quick Connect High Output LED Canopy 3000K 36 in.	13.3	93	36	1200
WARM NEUTRAL	0547054	ES Quick Connect LED Canopy 3500K 36 in	6.7	93	36	600
	0547060	ES Quick Connect High Output LED Canopy 3500K 36 in.	13.3	93	36	1200
NEUTRAL WHITE	0547055	ES Quick Connect LED Canopy 4000K 36 in	6.7	93	36	600
	0547062	ES Quick Connect High Output LED Canopy 4000K 36 in.	13.3	93	36	1200
WARM WHITE	0547056	ES Quick Connect LED Canopy 3000K 48 in.	8.9	93	48	800
	0547063	ES Quick Connect High Output LED Canopy 3000K 48 in.	17.8	93	48	1600
WARM NEUTRAL	0547057	ES Quick Connect LED Canopy 3500K 48 in.	8.9	93	48	800
	0547064	ES Quick Connect High Output LED Canopy 3500K 48 in.	17.8	93	48	1600
NEUTRAL WHITE	0547058	ES Quick Connect LED Canopy 4000K 48 in.	8.9	93	48	800
	0547065	ES Quick Connect High Output LED Canopy 4000K 48 in.	17.8	93	48	1600

EcoShine II Plus LED lights are covered by a limited 5 year parts and labor warranty. See Hussmann warranty policy for additional details.

Color Temperature:

Color temperature is measured in kelvins (K). Higher color temperatures produce bright, white light hues. Neutral White (4000K) has a cooler hue than Warm Neutral (3500K) or Warm White 3000K.



QUICK CONNECT LED
CANOPY LIGHT LENGTHS
36 in. (914 mm) 48 in. (1219 mm)

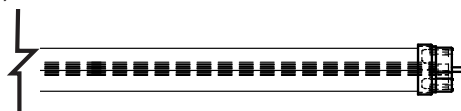
EcoShine Quick Connect LEDs Shelves for Service Cases

Upgrade Parts			Energy Watts (DC) Per Bulb	CRI Rating (typical)	Length (inches)	Light Output (Lumens) Typical
	Hussmann Part Number	Description				
WARM WHITE	0547066	ES Quick Connect LED Shelf 3000K 36 in	6.7	93	36	600
	0552987	ES Quick Connect High Output LED Shelf 3000K 36 in.	13.3	93	36	1200
WARM NEUTRAL	0547067	ES Quick Connect LED Shelf 3500K 36 in	6.7	93	36	600
	0552988	ES Quick Connect High Output LED Shelf 3500K 36 in.	13.3	93	36	1200
NEUTRAL WHITE	0547068	ES Quick Connect LED Shelf 4000K 36 in	6.7	93	36	600
	0552989	ES Quick Connect High Output LED Shelf 4000K 36 in.	13.3	93	36	1200
WARM WHITE	0547069	ES Quick Connect LED Shelf 3000K 48 in.	8.9	93	48	800
	0552992	ES Quick Connect High Output LED Shelf 3000K 48 in.	17.8	93	48	1600
WARM NEUTRAL	0547070	ES Quick Connect LED Shelf 3500K 48 in.	8.9	93	48	800
	0552988	ES Quick Connect High Output LED Shelf 3500K 48 in.	13.3	93	36	1200
NEUTRAL WHITE	0547072	ES Quick Connect LED Shelf 4000K 48 in.	8.9	93	48	800
	0552994	ES Quick Connect High Output LED Shelf 4000K 48 in.	17.8	93	48	1600

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Color Temperature:

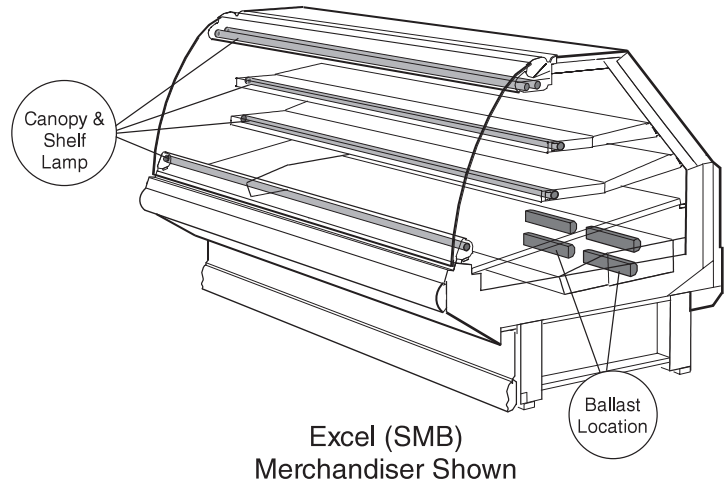
Color temperature is measured in kelvins (K). Higher color temperatures produce bright, white light hues. Neutral White (4000K) has a cooler hue than Warm Neutral (3500K) or Warm White 3000K.



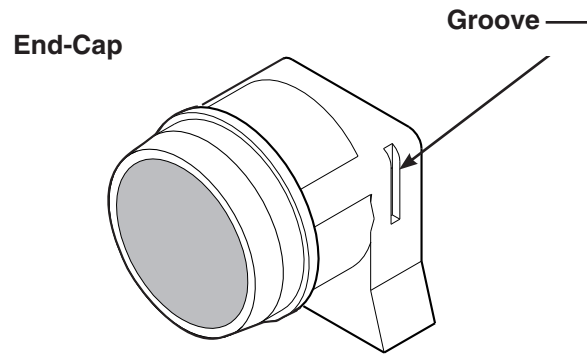
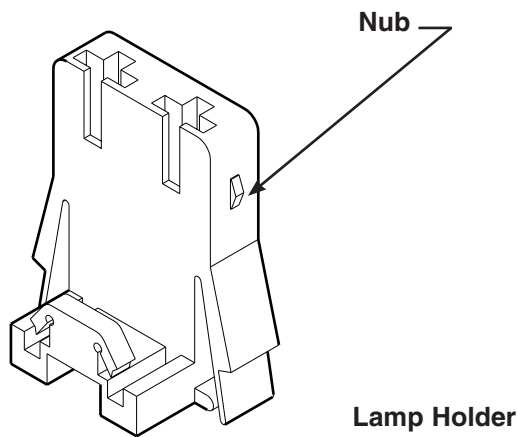
QUICK CONNECT LED
SHELF LIGHT LENGTHS
36 in. (914 mm) 48 in. (1219 mm)

REMOVE EXISTING FLUORESCENT LIGHTING (IF PREVIOUSLY INSTALLED)

1. Remove product from the merchandiser and store at appropriate product temperature.
2. Lock out and tag out the circuit breaker for the lighting circuit of the case where the LEDs are to be installed.
3. Remove the existing fluorescent lamps from luminaire.
4. Remove the fluorescent tubes.
5. Keep the end covers.
6. Remove and discard the lenses covering the fluorescent tubes.



Husmann fluorescent lamps are furnished with moisture resistant lamp holders, shields and end caps. Whenever a Quick Connect LED is replaced, be certain to reinstall the lamp shields and end caps.



IMPORTANT!

Always replace lamp holders and end caps with Husmann lamp holders and end caps.

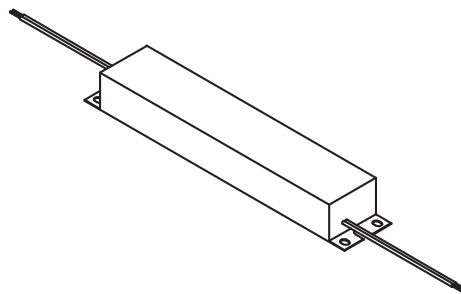
Use of non-Husmann parts may result in poor electrical contact and short lamp life.

LOCATE AND REMOVE BALLASTS — POWER SUPPLIES:**1. DISCONNECT POWER TO THE MERCHANDISER.**

2. LED power supplies are installed in the same location as existing ballasts. The ballast location is specific to the case model. If retrofitting a Hussmann case, refer to the technical data sheet for ballast location.

3. Disconnect wires from shelf and canopy ballasts. Note the color of power source wires.

4. Locate and remove the ballasts. Mount the LED power supply(s) in a secure location near where the ballast was located. Power supply has a 120V 50/60 Hz input and a 24VDC output.



Power Supply

24 VDC

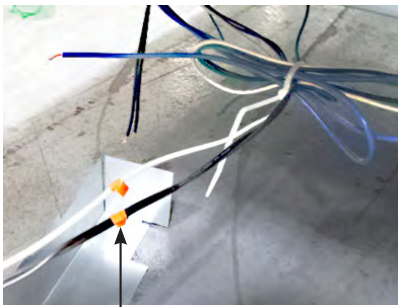
UL Class 2 Power Unit
18 AWG (100W) 120V-250VAC,
50-60Hz (for all lights)

Standard Part Number: 0547639

Slimline Part Number: 04483262

CONNECT WIRING TO POWER SUPPLY

1. Use existing ballast wiring to connect the leads to the power supply. Connect the original load (2 red wires) and ground (brown) to LED power supply input. Secure all wiring with approved wiring connectors.
2. Additional wiring may be needed to connect the power supply to existing wiring in the wireway. Use conductors of proper size and rating.



Orange Band

NOTE: Orange or tan band indicates light wiring for Hussmann cases. The photo above shows Hussmann Elite fluorescent shelf wiring. Canopy wiring has a separate outlet for these merchandisers.

3. The power supply case is grounded. Attach power supply to a ground point in the refrigerated merchandiser, either directly with a screw, or by using a green wire to attach to a remote ground point.

DO NOT LEAVE ANY EXPOSED WIRE NUTS OR CONNECTORS.

4. Place supplied sticker that states the case(s) has been upgraded with LED lighting.



WARNING

— LOCK OUT / TAG OUT —

To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

IMPORTANT

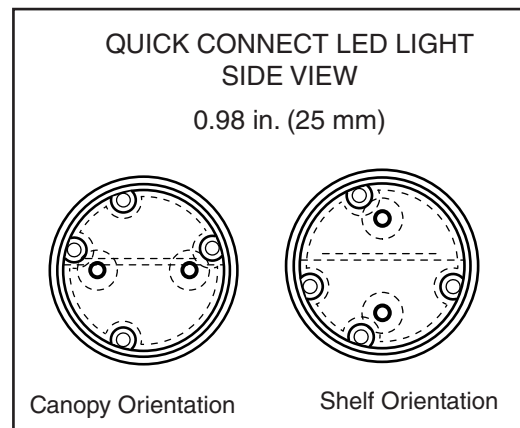
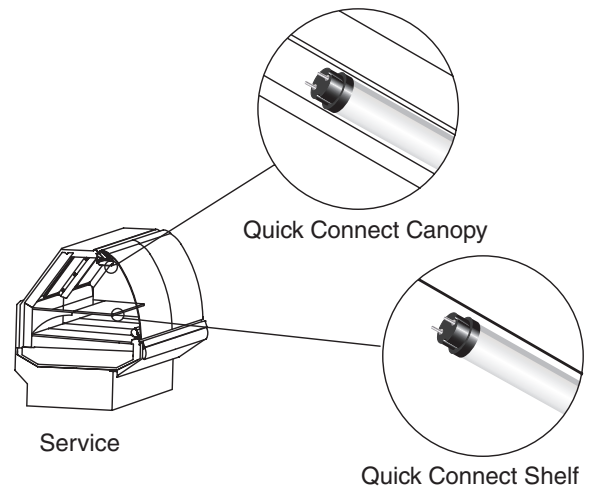
Ensure that all connection points are sealed for damp location using the appropriate method per the NEC or local electrical code.

INSTALL QUICK CONNECT LEDs

Install Quick Connect LED lighting is to be installed in place of all fluorescent bulbs, one for each fluorescent lamp removed. Follow the Steps below to install LEDs.

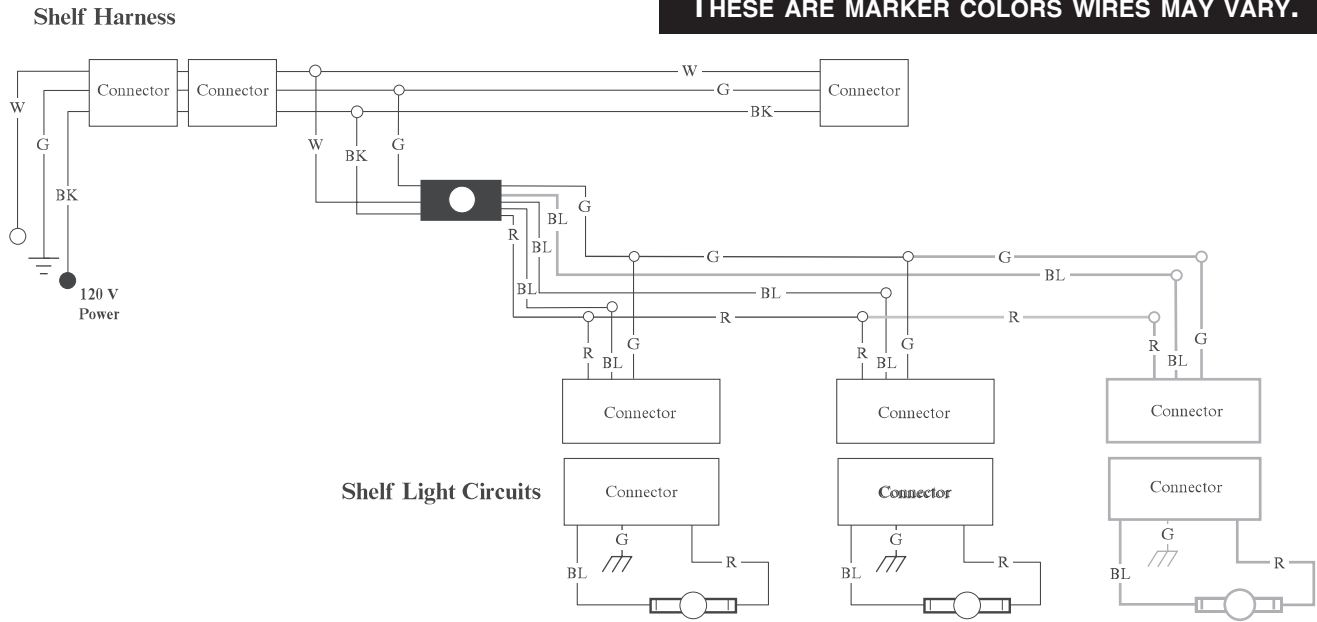
1. An ESQC LED bulb will be replaced for each T8 bulb that was removed in each assembly.
 - a. Insert the bulb into the shield.
 - b. Insert an end cap into one end of the shield.
 - c. Insert ESQC bulb, verify pins are located correctly and pass through the end cap.
 - d. Verify correct installed direction of LED (white lens facing product display area).
 - e. Insert second end cap in same orientation as first end cap.
 - f. Reinstall to case lamp holders

5. Turn on and verify operation after all lamps are retrofitted.



Optional Shelf Harness and Light Circuits for One Row of Shelves

THESE ARE MARKER COLORS WIRES MAY VARY.

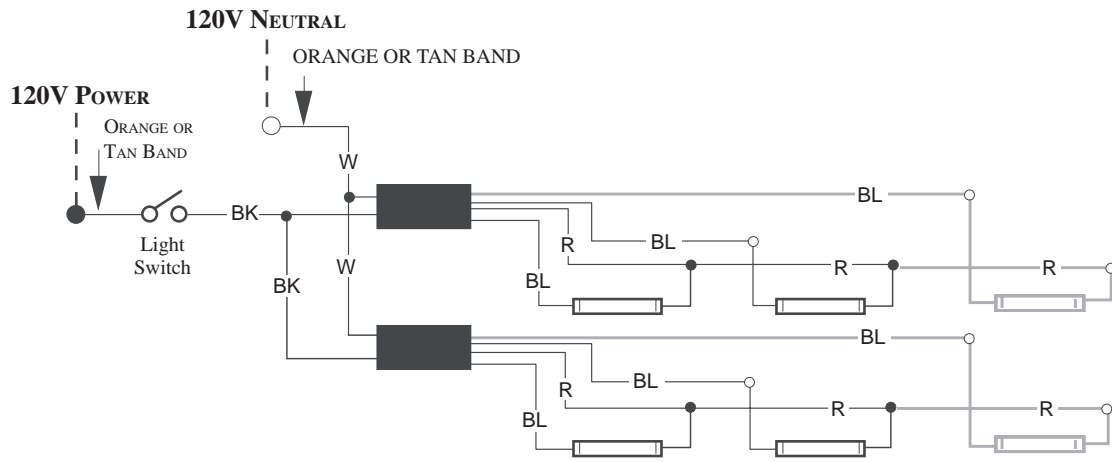


(Typical Hussmann Service Shelf Lighting Wiring Diagram)

If working on a case from a different manufacturer, refer to that models wiring diagrams. Hussmann wiring diagrams for specific models are located in the technical data sheets at Hussmann.com.

Light Circuits for Two Rows of Canopy LED

THESE ARE MARKER COLORS WIRES MAY VARY.



(Typical Hussmann Service Case Canopy Lighting Wiring Diagram)

If working on a case from a different manufacturer, refer to that models wiring diagrams. Hussmann wiring diagrams for specific models are located in the technical data sheets at Hussmann.com.