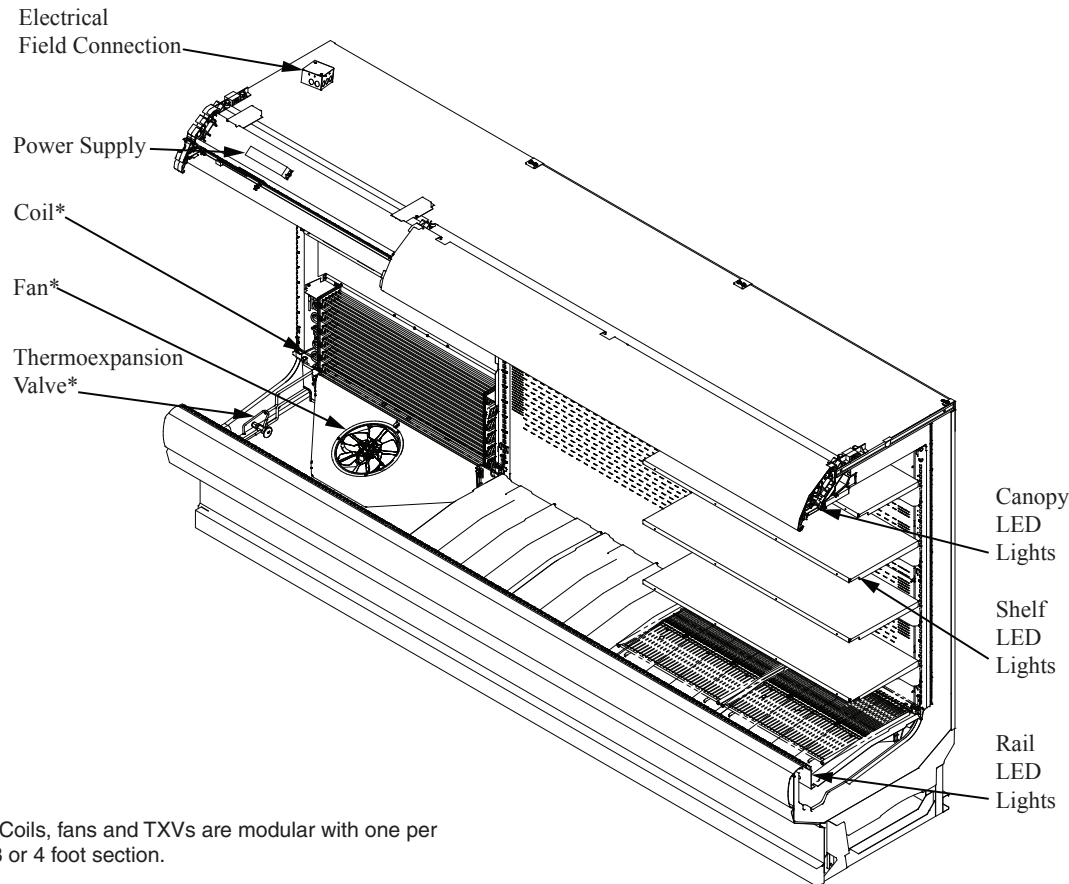


*Insight standard field electrical connections
are at the top left of the merchandiser*



*Coils, fans and TXVs are modular with one per 3 or 4 foot section.

Portion of parts removed for clarity.

8 foot merchandiser shown.



NSF Certification

This merchandiser model is manufactured to meet NSF/ANSI (National Sanitation Foundation) Standard #7 requirements for construction, materials and cleanability.

| | | | |
|--------------------------------|--------|---|---------|
| Performance Data | Page 2 | Estimated Shipping Weights | Page 6 |
| Product Data (AHRI Statistics) | Page 2 | Shelf Options | Page 6 |
| Cross Section | Page 3 | Replacement Parts List | Page 7 |
| Plan View | Page 4 | Wiring Diagrams | Page 8 |
| Electrical Loads | Page 5 | Computing Refrigeration and Electrical Load | Page 11 |
| | | Revision History | Page 11 |

Data sheet-Insight IP4NL

We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

Insight IP4NL

Cut and Bulk Produce

Refrigeration Data ¹

| IP4NL | | Optimal Shelf Life | | | Energy Comparison |
|------------------------|---|--------------------|-------------------|---------------------------------|-------------------------------------|
| Application | | Cut Produce | Bulk Produce | NSF Type 2 Ambient ³ | AHRI 1200 Rating Point ⁴ |
| Unlit Shelves | Discharge Air °F (°C) | 35 (1.66) | 42 (5.55) | 31 (-0.55) | 35 (1.66) |
| | Average Evaporator °F (°C) ² | 29 (-1.66) | 37 (2.77) | 27 (-2.77) | 29 (-1.66) |
| | Parallel Btu/hr/ft (Watts/m) | 1100 (1058) | 798 (767) | 1398 (1344) | 1100 (1058) |
| | Conventional Btu/hr/ft (Watts/m) | 1200 (1154) | 870 (837) | 1525 (1466) | 1200 (1154) |
| Lit Shelves | Discharge Air °F (°C) | 34 (1.11) | 41 (5.55) | 30 (-1.11) | 34 (1.11) |
| | Average Evaporator °F (°C) ² | 28 (-2.22) | 36 (2.77) | 26 (-3.33) | 28 (-2.22) |
| | Parallel Btu/hr/ft (Watts/m) ⁵ | 1114 (1071) | 807 (776) | 1416 (1362) | 1114 (1071) |
| | Conventional Btu/hr/ft (Watts/m) ⁵ | 1215 (1168) | 880 (846) | 1545 (1486) | 1215 (1168) |
| Fan Speed ⁶ | IP4NL6 (8.25") | 1400 ⁶ | 1400 ⁶ | 1600 ⁶ | 1400 ⁶ |
| | IP4NL4, 8, 12 (10.3") | 1050 | 1050 | 1300 ⁶ | 1050 |

Notes:

1. All data based on store temperature and humidity that does not exceed NSF Type 1 ambient conditions of 75°F and 55% relative humidity except where noted.
2. Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.
3. Data for operation in NSF Type 2 ambient of 80°F and 55% relative humidity.
4. AHRI 1200 Rating Point for energy consumption comparison only.
5. Add 10 Btu/hr/ft (9.6 Watts/m) per shelf row for LED shelf light fixtures.
6. Some lengths and/or applications require optional fan speed control kits applied by the Hussmann Product Configurator.

Defrost Data — Cut Product

Frequency (hours between defrost) 4

OFFTIME IP4NL
Time (minutes) 20

ELECTRIC OR GAS Not Available

Defrost Water ⁷ 7.8 lb/ft/day
(11.6 kg/m)

⁷ (± 15% based on case configuration and product loading).

Conventional Controls

IP4NL
Low Pressure Backup
Control CI/CO ⁸
20°F / 10°F
-6.67°C / -12.2°C

Indoor Unit Only,
Pressure Defrost
Termination ⁸
48°F (8.89°C)

⁸ Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge ⁹

| | IP4NL |
|-------|---------------------|
| 4 ft | 0.6 lb 10 oz 0.3 kg |
| 6 ft | 1.1 lb 18 oz 0.5 kg |
| 8 ft | 1.5 lb 24 oz 0.7 kg |
| 12 ft | 2.9 lb 46 oz 1.3 kg |

⁹ This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound.

Product Data

Gross Refrigerated Volume ¹⁰ (Cu Ft/Ft) 7.85 ft³/ft (0.73 m³/m)

AHRI Total Display Area ¹¹ (Sq Ft/Ft) 3.94 ft²/ft (1.20 m²/m)

Shelf Area ¹² (Sq Ft/Ft) 5.94 ft²/ft (1.81 m²/m)

¹⁰ AHRI Gross Refrigerated Volume: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]

¹¹ Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]

¹² Shelf surface area is composed of bottom deck plus standard shelf complement for this model: (3) rows of shelves: 14-in., 16-in., 16-in.

Insight Multideck Merchandiser, 4 Display Levels,
Narrow Bottom, Low Height Front

Insight IP4NL
Cut and Bulk Produce

DOE 2017
Energy Efficiency
Compliant

Husmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

Shelf complement shown as tested:

Three rows of shelves (14-in., 16-in., 16-in.), spacing between each row of shelves is 12-in., all vertical with a 16-in. mirror installed in the top, rear corner of the case.

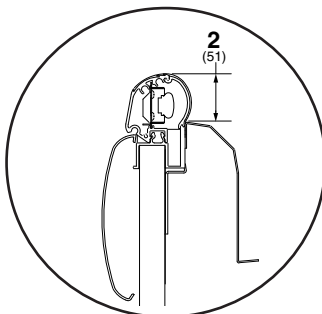
Other optional kits
(top piping and vent fans)
add to the overall case
height.

A minimum 1 1/2-in.
clearance required to
remove raceway cover,
6 1/2-in. for full access. See
the Installation manual for
instructions.

3-in. between back to back
cases.

Shown with Ellipse Option
Canopy and Bumper.

OPTIONAL RAIL LIGHT

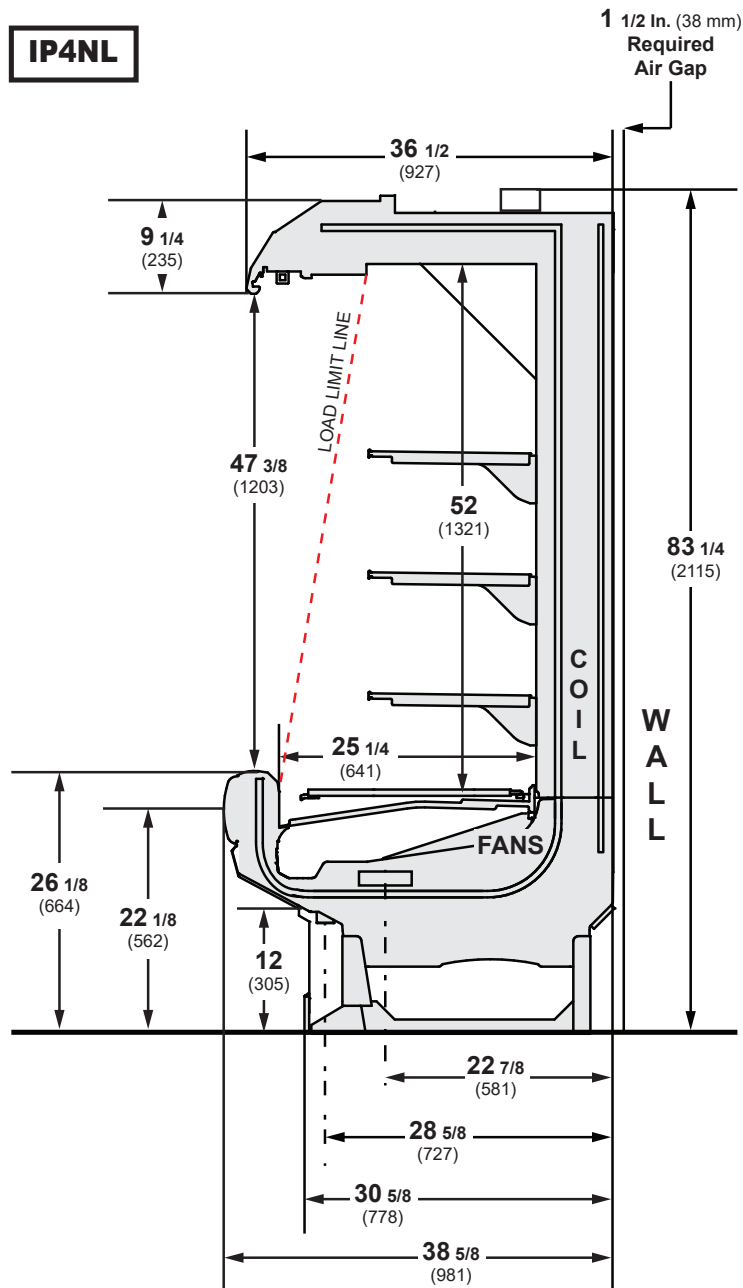


*Rail light cannot be used
with glass front option.*

NSF Certification

This merchandiser model is manufactured to meet NSF/ANSI (National Sanitation Foundation) Standard #7 requirements for construction, materials and cleanability.

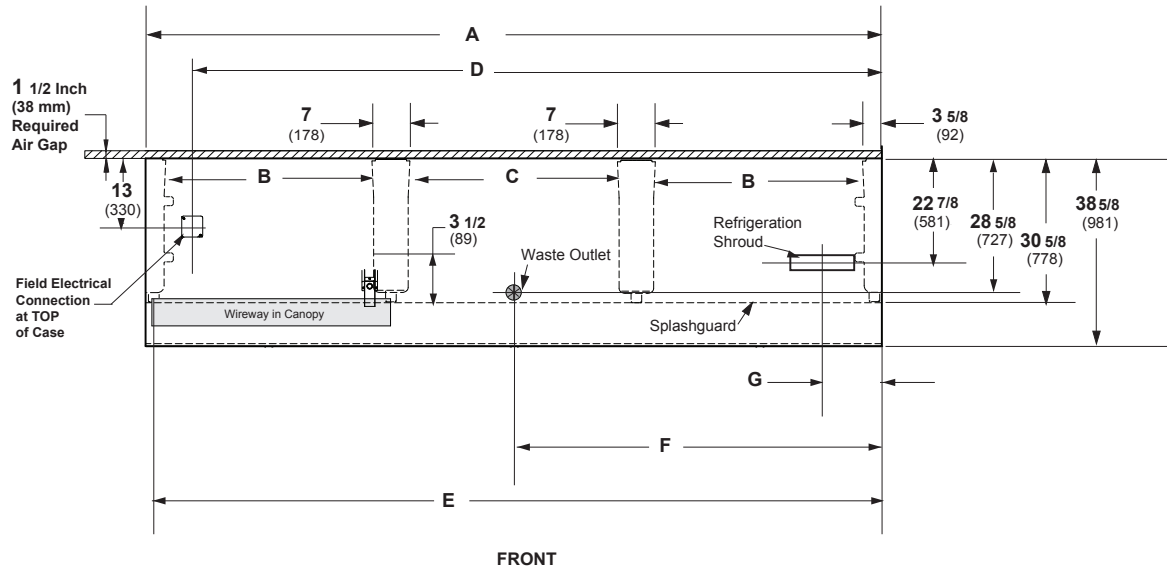
Dimensions shown as in. and (mm).



Engineering Plan View

IP4NL

Dimensions shown as in. and (mm).



(12 Foot Model shown above)

| | 4 ft | 6 ft | 8 ft | 12 ft |
|---|---------------|---------------|---------------|----------------|
| General | | | | |
| (A) Case Length (without ends or partitions) (Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.) | 48 1/8 (1222) | 72 1/4 (1835) | 96 1/4 (2445) | 144 3/8 (3668) |
| Maximum O/S dimension of case back to front (includes bumper) | 38 5/8 (981) | 38 5/8 (981) | 38 5/8 (981) | 38 5/8 (981) |
| Back of case to front of splashguard | 30 5/8 (778) | 30 5/8 (778) | 30 5/8 (778) | 30 5/8 (778) |
| (B) Distance between edges of external legs and center legs | NA | 29 (737) | 41 (1041) | 41 (1041) |
| (C) Distance between edges of center legs | 41 1/8 (1045) | NA | NA | 41 1/8 (1045) |
| Distance between front legs and splashguard | 3 1/4 (83) | 3 1/4 (83) | 3 1/4 (83) | 3 1/4 (83) |
| Electrical Service (Field Electrical Wiring Connection) | | | | |
| (D) RH End of case to center of Field Electrical Wiring Connection (top of case) | 39 3/8 (1000) | 63 1/2 (1613) | 87 1/2 (2223) | 135 1/2 (3442) |
| Back of case to center of Field Electrical Wiring Connection | 11 1/8 (283) | 11 1/8 (283) | 11 1/8 (283) | 11 1/8 (283) |
| Length of electrical wireway | 44 5/8 (1133) | 33 1/2 (851) | 45 7/8 (1191) | 45 7/8 (1191) |
| (E) RH end of case to LH end of electrical wireway (top of case) | 46 1/2 (1181) | 70 1/2 (1791) | 94 1/2 (2400) | 142 5/8 (3623) |
| Waste Outlets | | | | |
| (F) RH End of case to the center of waste outlet | 24 1/8 (613) | 24 1/8 (613) | 24 1/8 (613) | 72 1/4 (1835) |
| Back O/S of case to center of waste outlet(s) | 28 5/8 (727) | 28 5/8 (727) | 28 5/8 (727) | 28 5/8 (727) |
| Schedule 40 PVC drip pipe | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) |
| Refrigeration Shroud | | | | |
| (G) Back of case to center of refrigeration shroud | 22 7/8 (581) | 21 1/8 (537)* | 22 7/8 (581) | 22 7/8 (581) |
| *6 foot case at 42° angle parallel to the plenum | | | | |
| End of case to center of refrigeration shroud | 9 1/2 (241) | 7 5/8 (194) | 9 1/2 (241) | 9 1/2 (241) |

Electrical Data

| | | | 4 ft | 6 ft | 8 ft | 12 ft | | | | |
|--------------------------------------|---------|------------------|---------|------|------|-------|-------|------|------|-------|
| Number of Fans | | | | | | | | | | |
| 8.25-in. | | | - | 2 | - | - | | | | |
| 10.3-in. | | | 1 | - | 2 | 3 | | | | |
| | | | Amperes | | | | Watts | | | |
| Evaporator Fan | | | 4 ft | 6 ft | 8 ft | 12 ft | 4 ft | 6 ft | 8 ft | 12 ft |
| 120V | 60Hz | Energy Efficient | 0.40 | 0.60 | 0.80 | 1.20 | 24 | 36 | 48 | 72 |
| 230V | 50/60Hz | Energy Efficient | 0.21 | 0.31 | 0.42 | 0.62 | 24 | 36 | 48 | 72 |
| Minimum Circuit Ampacity | | | | | | | | | | |
| 120V | 60Hz | Energy Efficient | 0.60 | 0.80 | 1.00 | 1.40 | | | | |
| 230V | 50/60Hz | Energy Efficient | 0.41 | 0.51 | 0.62 | 0.82 | | | | |
| Maximum Over Current Protection 120V | | | 20 | 20 | 20 | 20 | | | | |
| Maximum Over Current Protection 230V | | | 15 | 15 | 15 | 15 | | | | |

ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2017 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.

STANDARD LIGHTING

EcoShine II Canopy

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| 1 Row EcoShine II | 0.16 | 0.26 | 0.32 | 0.48 | 19.3 | 31.6 | 38.6 | 58.0 |
|-------------------|------|------|------|------|------|------|------|------|

OPTIONAL LIGHTING

EcoShine II Canopy

| | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|------|
| 1 Row EcoShine II HO | 0.22 | 0.33 | 0.44 | 0.66 | 26.5 | 39.5 | 53.0 | 79.4 |
|----------------------|------|------|------|------|------|------|------|------|

EcoShine II Shelf

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|-------|
| 1 Row of Shelves | 0.08 | 0.12 | 0.16 | 0.25 | 9.9 | 14.1 | 19.8 | 29.7 |
| 2 Rows of Shelves | 0.16 | 0.23 | 0.33 | 0.49 | 19.8 | 28.2 | 39.5 | 59.3 |
| 3 Rows of Shelves | 0.25 | 0.35 | 0.49 | 0.74 | 29.7 | 42.3 | 59.3 | 89.0 |
| 4 Rows of Shelves | 0.33 | 0.47 | 0.66 | 0.99 | 39.5 | 56.4 | 79.1 | 118.6 |
| 5 Rows of Shelves | 0.41 | 0.59 | 0.82 | 1.24 | 49.4 | 70.5 | 98.9 | 148.3 |

EcoShine II Rail Light

| | | | | | | | | |
|-------|------|------|------|------|-----|------|------|------|
| 1 Row | 0.08 | 0.12 | 0.16 | 0.25 | 9.9 | 14.1 | 19.8 | 29.7 |
|-------|------|------|------|------|-----|------|------|------|

120V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

ENDS or PARTITIONS

Each standard end and each insulated partition adds 1 1/2 in. (38 mm) to case line up. Optional view end with end bumper adds 3 3/4 in. (95 mm).

PHYSICAL DATA

| | |
|---------------------------------|-------|
| Merchandiser Drip Pipe (in.) | 1 1/4 |
| Schedule 40 PVC | |
| Merchandiser Liquid Line (in.) | 3/8 |
| Merchandiser Suction Line (in.) | 5/8 |

ESTIMATED SHIPPING WEIGHT †

| Case | 4 ft | 6 ft | 8 ft | 12 ft | Solid End (each) |
|----------------|-----------|-----------|-----------|------------|---------------------|
| lb (kg) | 700 (318) | 850 (386) | 950 (431) | 1200 (544) | 70 (32) |

† Actual weights will vary according to optional kits included.

Shelf Options

Approved shelf sizes for standard (horizontal, 2-3 position brackets) displays:

14-inch
16-inch
18-inch

Contact engineering for non-standard (4 position brackets or other) display recommendations.

Minimum number of Shelves: 1 (for bulk produce)

Optimal number of Shelves: 3

Maximum number of Shelves: 6

Maximum number of Lighted Shelves: 5

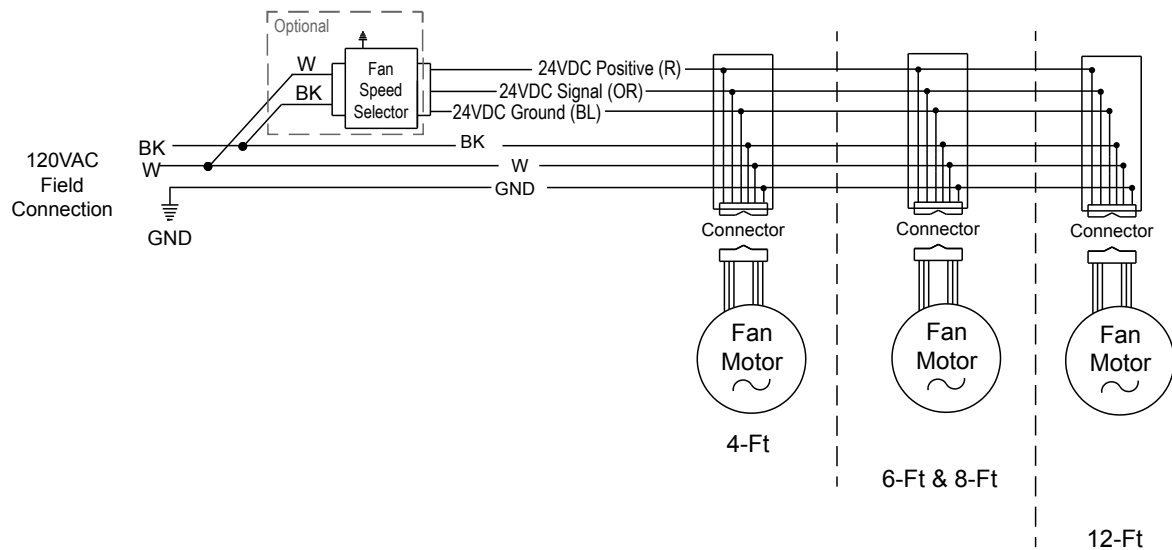
Standard shelf complement for test purposes: (3) rows of shelves (14-in., 16-in., 16-in.), spacing between each row of shelves is 12-in., all vertical with a 16-in. mirror installed in the top, rear corner of the case.

Replacement Parts List

| Part # | Description | Part # | Description |
|--------------------------------------|------------------------------------|--------------------------|--------------------------|
| FAN ASSEMBLIES | | COILS | |
| Standard HE Fan Assembly | | 0534323 | 4 ft, 8 ft, 12 ft |
| 4 Ft, 8 Ft & 12 Ft | | 0534322 | 6 ft only |
| 0535564 | 10.3-in. Fan Assembly | HONEYCOMB - WHITE | |
| 6 Ft | | 0536831 | 4 ft, 8 ft, 12 ft |
| 0535563 | 8.25-in. Fan Assembly | 0536829 | 6 ft only |
| THERMOSTATS | | OTHER | |
| OPTIONAL | | 0534357 | Fan Speed Key 1300 RPM |
| LED FIXTURES AND POWER SUPPLY | | 0534359 | Fan Speed Key 1400 RPM |
| 0501213 | Power Supply | 0534363 | Fan Speed Key 1600 RPM |
| | LED Canopy Fixture | 0534013 | Fan Speed Selector |
| | <i>Replace with like fixtures.</i> | | (Standard on 6 ft model) |
| | LED Shelf Fixture | Varies | Thermo-expansion Valve |
| | <i>Replace with like fixtures.</i> | | |
| | LED Rail Fixture | | |
| | <i>Replace with like fixtures.</i> | | |

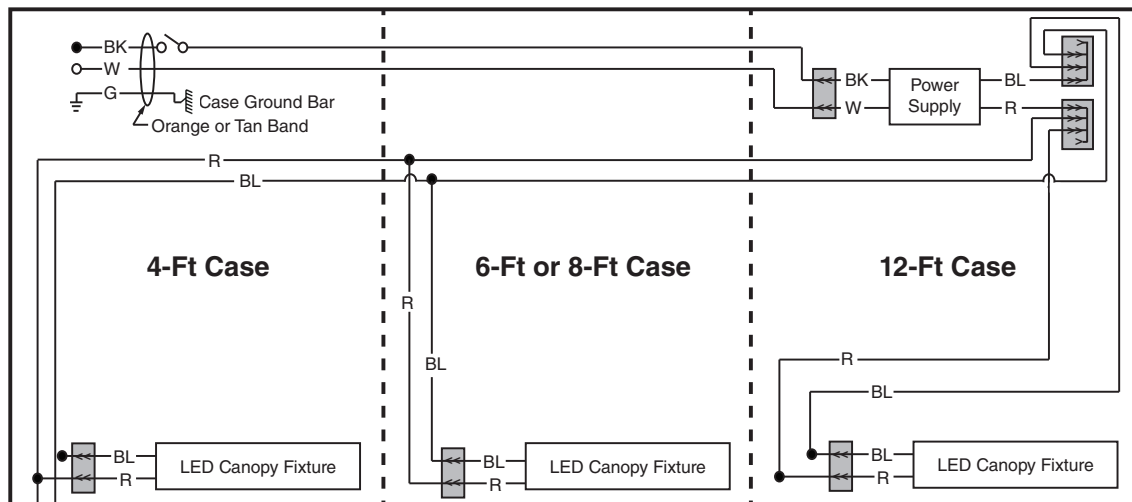
NOTE: For LED lighting parts contact your Hussmann service representative at 1-800-922-1919. Please have your model and serial number available. Descriptions including size and color are at [HTTP://WWW.HUSSMANN.COM/EN/PRODUCTS/LED-LIGHTING/PAGES/DEFAULT.ASPX](http://www.hussmann.com/en/products/led-lighting/pages/default.aspx).

FOR ADDITIONAL PARTS INFORMATION, VISIT
[HTTP://WWW.HUSSMANN.COM/EN/PAGES/AFTERMARKET-PARTS.ASPX](http://www.hussmann.com/en/pages/aftermarket-parts.aspx)

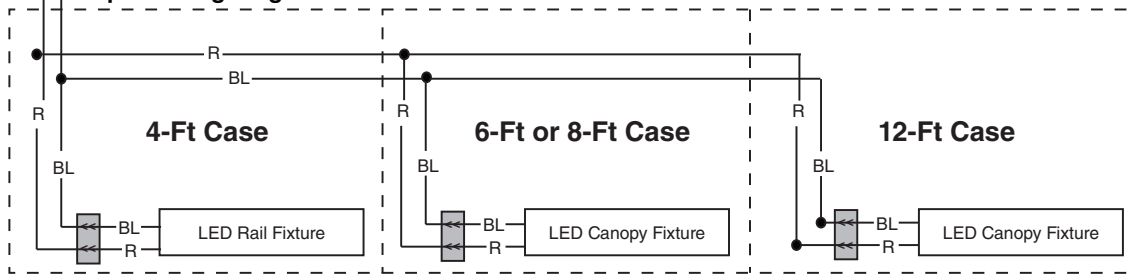


LED Canopy Light Circuits

EcoShine II LED Canopy Lighting - 1 Row




Optional Lighting - EcoShine II LED Rail - 1 Row

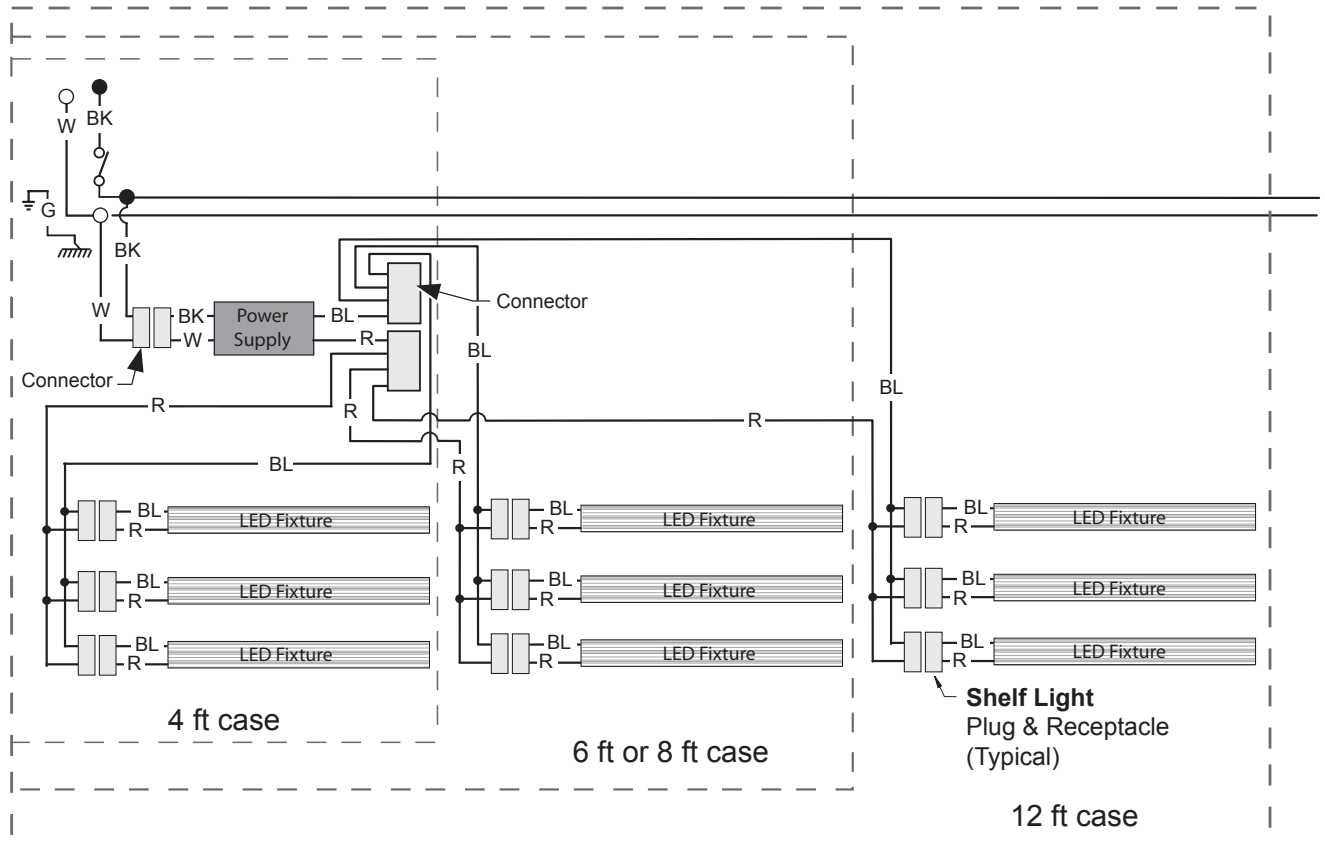


WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White
 ● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND  = CASE GROUND

Optional Shelf Harness and LED Light Circuits for 2 or 3 Rows of Shelves

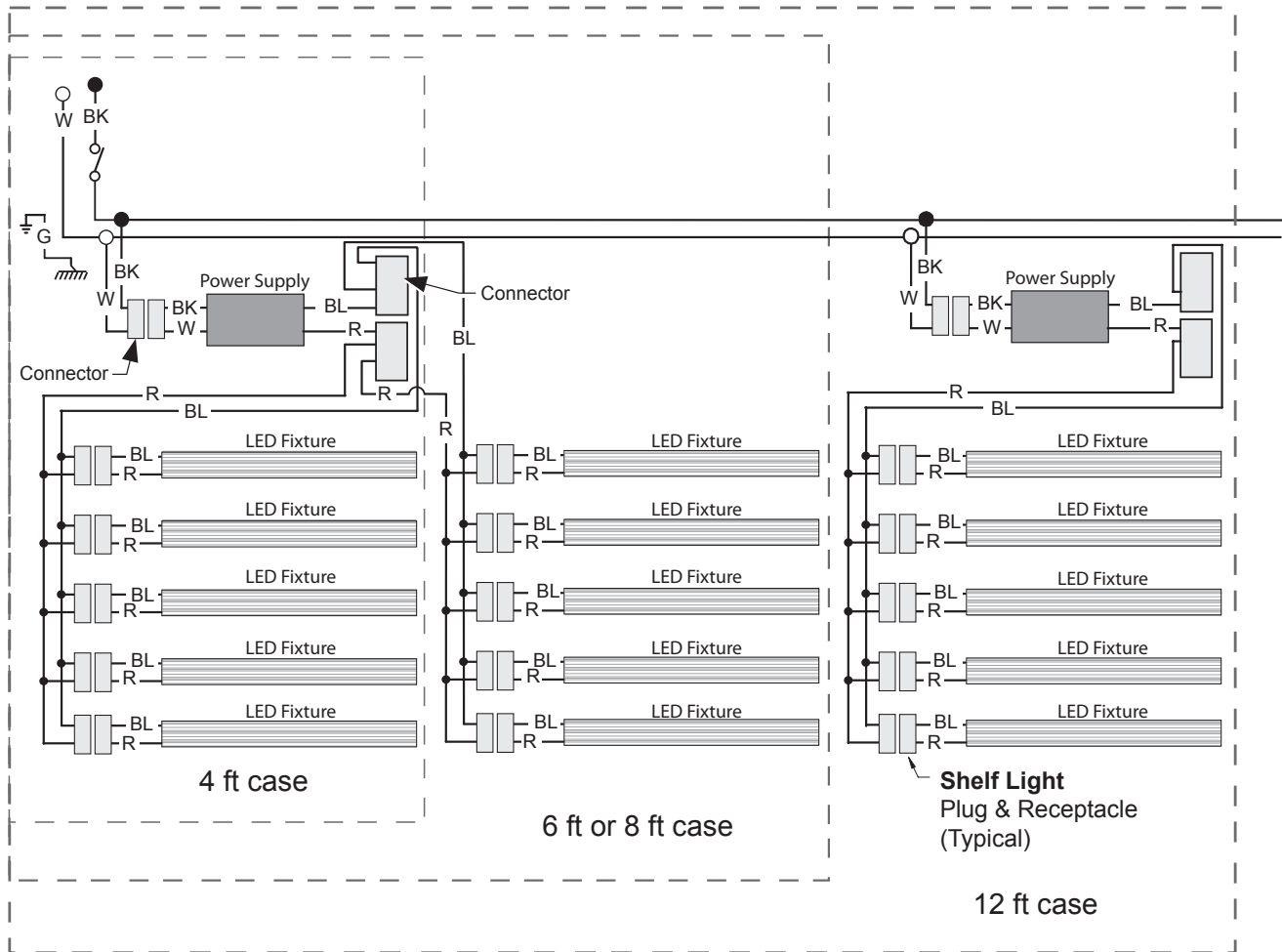


WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White
● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND ≡ = CASE GROUND

Optional Shelf Harness and LED Light Circuits for 4 or 5 Rows of Shelves



WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White
 ● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND $\overline{\text{mm}}$ = CASE GROUND

Estimating Refrigeration and Electrical Load (for comparison purposes only)

Case Btu

To determine Btu for a case, refer to the performance data chart on page 2. Select lit or unlit shelves, then select the type of remote refrigeration system (parallel or conventional), which will give Btu/hr/ft. Multiply this number by the length of the case to determine Btu per hour. Add 10 BTU/HR/FT for each row of LED shelf lights.

Case Electrical

Refer to store legend to determine number of circuits. Lighting should be specified in store legend.

Fan electrical load for a case is computed by selecting the case length and fan voltage on page 6. For example, a 12 ft case uses 3 fans. The store legend specifies fans on a 230V circuit. In this instance, fans use 0.62 Amps and the MCA is 0.82. When applied, ambient fans, anti-sweat heaters, controllers, etc. must be included in the MCA. Include lights in the MCA if lights are on same circuit.

Lights may be on a separate circuit. To estimate lighting load: select case length (12 ft), canopy lighting [standard or optional] (here 0.70 for standard), and shelf or rail lighting [maximum for which case is wired] (1.24 for five shelves); then add together $[0.48 + 1.24 = 1.72 \text{ amps for } 120\text{V}]$ (for 230V, multiply $1.72 * 0.52 = 0.89$).

Line Sizing — Refer to store legend.

Hussmann Line Sizing Charts are engineered for use with Hussmann refrigeration equipment.



Scan QR code to
access product
information on your
mobile device.

Revision History

Revision A: November 2016: Original Issue

Revision B: January 2017: Added rail light updates.

Revision C: March 2017: Updated electrical data.

Revision D: April 2017. Updated LED energy values.

Revision E: April 2017. Updated LED energy values.

Revision F: September 2017. Updated notes page.

Revision G: February 2018. Updated cross section.