HUSSMANN®

Insight® IM5NL

Meat & Delicatessen

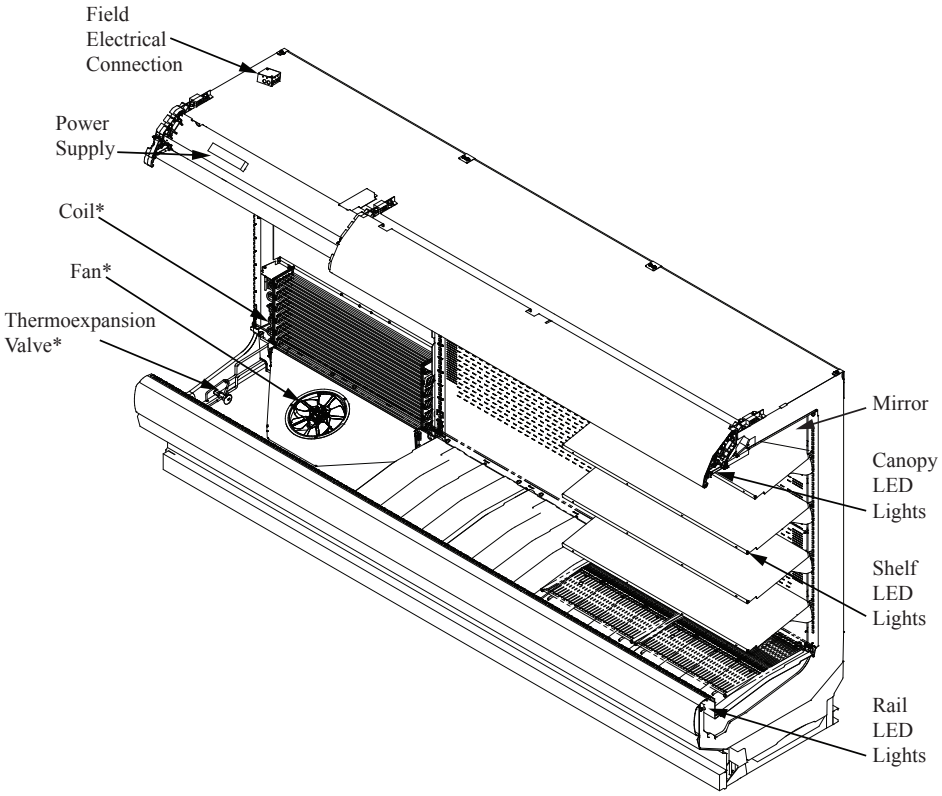
Merchandiser Data Sheet

P/N 0551266_G

NSF® Certified

January 2023

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



DOE 2017 Energy Efficiency Compliant

*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.

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Spanish P/N 0551267

Insight **IM5NL**
Meat & Delicatessen

Refrigeration Data [1]

IM5NL		Optimal Shelf Life		Energy Comparison
Application		Meat	NSF Type 2 Ambient[4]	AHRI 1200 Rating Point[5]
Unlit Shelves	Discharge Air °F (°C)	32 (0)	31 (-0.55)	33 (0.55)
	Average Evaporator °F (°C) [2, 3]	28 (-2.22)	27 (-2.77)	29 (-1.66)
	Parallel Btu/hr/ft (Watts/m) [6]	1068 (1027)	1398 (1344)	1004 (965)
	Conventional Btu/hr/ft (Watts/m) [6]	1165 (1120)	1525 (1466)	1095 (1053)
Lit Shelves	Discharge Air °F (°C)	31 (-0.55)	30 (-1.11)	32 (0)
	Average Evaporator °F (°C) [2, 3]	27 (-2.77)	26 (-3.33)	28 (-2.22)
	Parallel Btu/hr/ft (Watts/m) [6, 7]	1082 (1040)	1416 (1362)	1018 (978)
	Conventional Btu/hr/ft (Watts/m) [6, 7]	1180 (1135)	1545 (1486)	1110 (1067)
Fan Speed[8]	IM5NL6 (8.25")	1400[8]	1600[8]	1400[8]
	IM5NL4, 8, 12 (10.3")	1050	1300[8]	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. For DX CO_2 applications the average evaporator temperature may be lowered by 2°F but not more than 5°F. An EPR valve should be used if the system suction temperature is more than 5 degrees below the published case evaporator temperature. A 31°F flash tank temperature with a 24°F evaporator temperature is used when sizing default EEV selections to provide a minimum pressure drop across the valve of approximately 50 psig. For operating conditions that provide a pressure drop across the valve above 65 psig or below 35 psig, the electronic expansion valve size should be determined using the valve vendor sizing program and selected from the pull down list in the Hussmann Product Configurator (HPC).
4. Data for operation in NSF Type 2 ambient of 80°F and 55% relative humidity.
5. AHRI 1200 Rating Point for energy consumption comparison only.
6. Subtract 120 Btu/hr/ft (115.4 Watts/m) for front glass (on applicable models).
7. Add 10 Btu/hr/ft (9.6 Watts/m) per shelf row for LED shelf light fixtures.
8. Some lengths and/or applications require optional fan speed control kits applied by the Hussmann Product Configurator.

Defrost Data

Offtime	IM5NL
Time (minutes)	20
Electric or Gas	Not Available
Frequency (hours between defrost)	4
Defrost Water (lb/ft/day) [9]	7.8 lb/ft/day (11.6 kg/m)

[9] **(± 15%** based on case configuration and product loading).

Conventional Controls

	IM5NL
Low Pressure Backup Control CI/CO [10]	20°F / 10°F –6.67°C / –12.2°C
Indoor Unit Only, Pressure Defrost Termination [10]	48°F (8.89°C)

[10] Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge [11]

			IM5NL
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

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

Product Data

Gross Refrigerated Volume [12] (Cu Ft/Ft)	7.85 ft^3/ft (0.73 m^3/m)
AHRI Total Display Area [13] (Sq Ft/Ft)	3.94 ft^2/ft (1.20 m^2/m)
Shelf Area [14] (Sq Ft/Ft)	7.27 ft^2/ft (2.22 m^2/m)

[12] AHRI Gross Refrigerated Volume: Refrigerated Volume/Unit of Length, ft^3/ft [m^3/m]
[13] Computed using AHRI 1200 standard methodology: Total Display Area, ft^2 [m^2]/Unit of Length, ft [m]
[14] Shelf surface area is composed of bottom deck plus standard shelf complement for this model: (4) rows of shelves: 14-in., 16-in., 16-in., 16-in.

Insight Multideck Merchandiser, 5 Display Levels,
Standard Bottom, Low Height Front

Insight IM5NL
Meat & Delicatessen

DOE 2017
Energy Efficiency Compliant

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

A minimum 1 ½-in. clearance required to remove raceway cover, 6 ½-in. for full access. See the Installation manual for instructions.

3-in. between back to back cases.

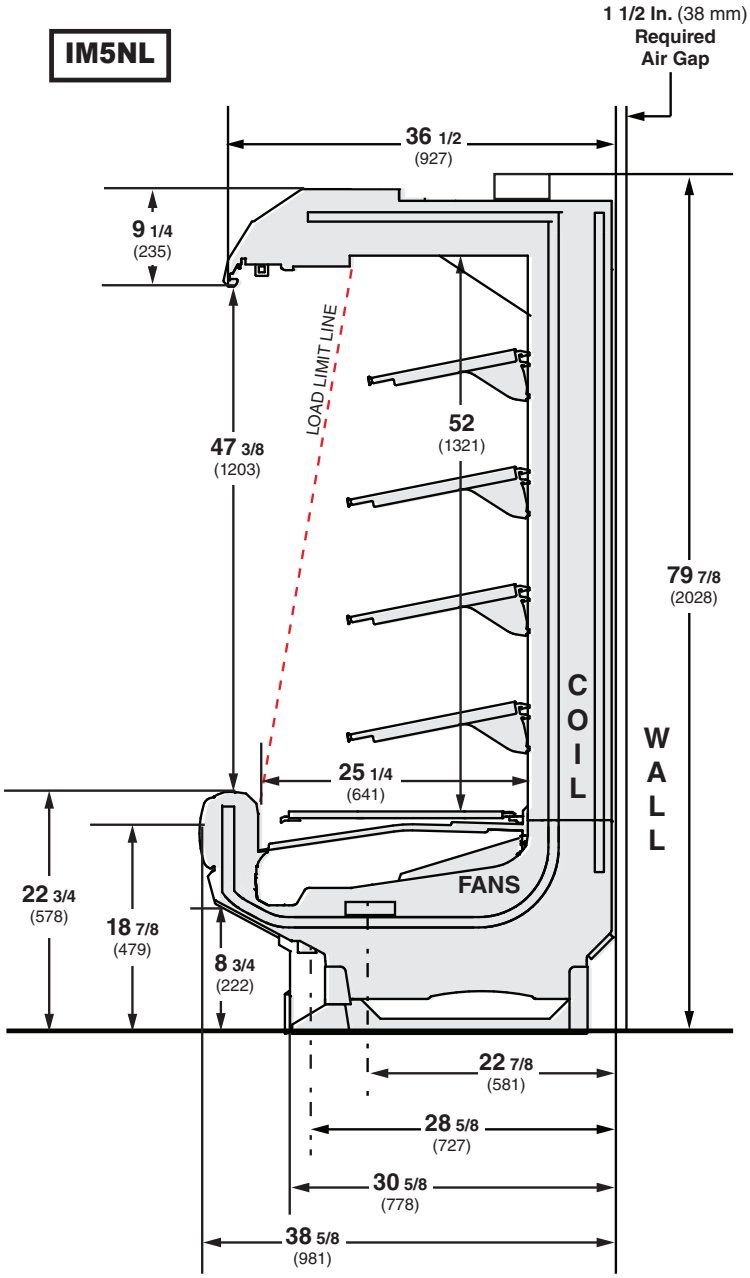
Shelf complement shown as tested:

Four rows of shelves (14-in., 16-in., 16-in., 16-in.), spacing between each row of shelves is 9-in., all down-tilted at 10° with a 12-in. mirror installed in the top, rear corner of the case.

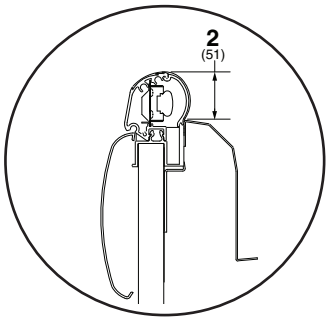
Other optional kits (for example, top piping and vent fans) add to the overall case height.

Shown with Ellipse Option Canopy and Bumper.

Dimensions shown as in. and (mm).

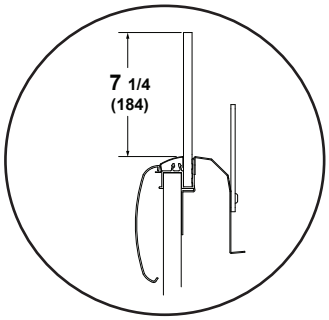


OPTIONAL RAIL LIGHT



Rail light cannot be used with glass front option.

OPTIONAL GLASS FRONT



Glass front cannot be used with rail light option.

NSF Certification

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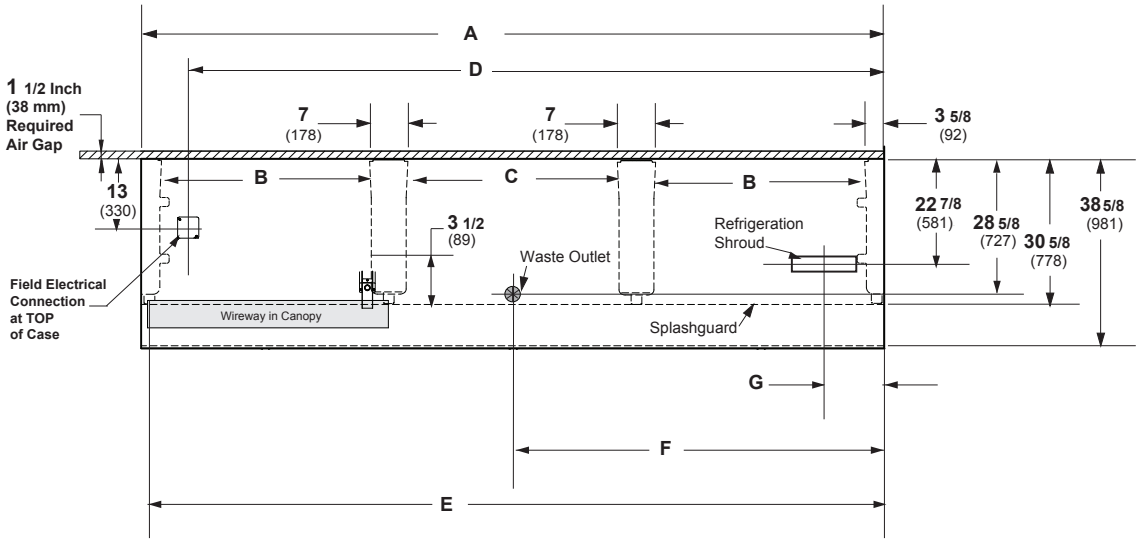
Engineering
Plan View

IM5NL

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 **6 foot case at 42° angle parallel to the plenum*	22 7/8 (581)	21 1/8 (537)*	22 7/8 (581)	22 7/8 (581)
	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.) Schedule 40 PVC	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8

ESTIMATED SHIPPING WEIGHT †

Case					Solid End
	4 ft	***6 ft***	***8 ft***	***12 ft***	***(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: 3

Optimal number of Shelves: 4

Maximum number of Shelves: 6

Maximum number of Lighted Shelves: 5

Standard shelf complement for test purposes: (4) rows of shelves (14-in., 16-in., 16-in., 16-in.), spacing between each row of shelves is 9-in., all down-tilted at 10° with a 12-in. mirror installed in the top, rear corner of the case.

Replacement Parts List

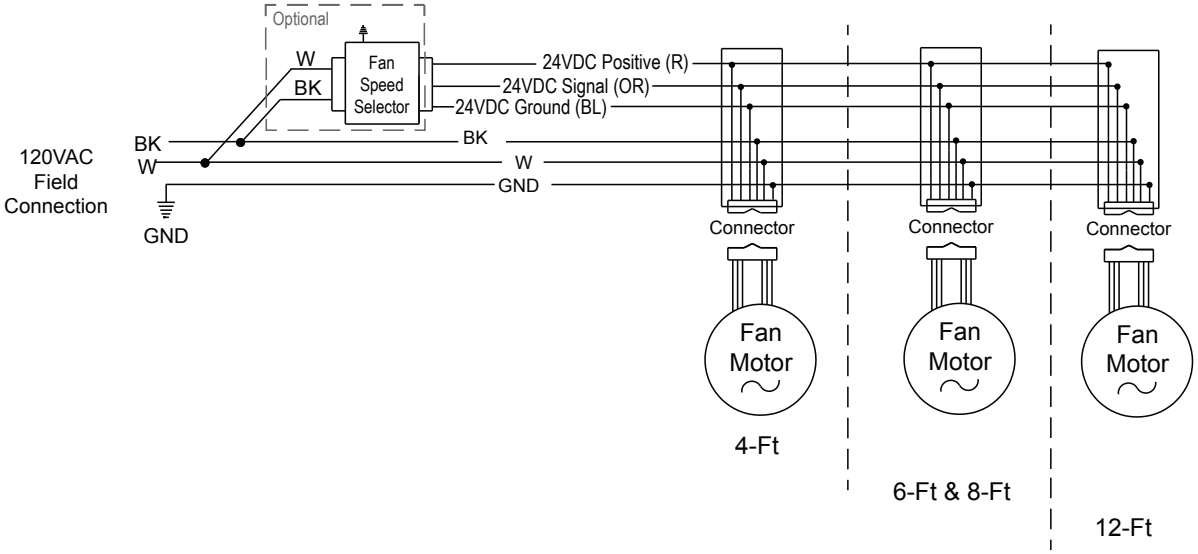
Part #	Description
Fan Assemblies	
Standard HE Fan Assembly	
4 Ft, 8 Ft & 12 Ft	
0535564	10.3-in. Fan Assembly
6 Ft	
0535563	8.25-in. Fan Assembly
Thermostats	
Optional	
LED Fixtures and Power Supply	
0501213	Power Supply
	LED Canopy Fixture
	Replace with like fixtures.
	LED Shelf Fixture
	Replace with like fixtures.
	LED Rail Fixture
	Replace with like fixtures.

Part #	Description
Coils	
0534323	4 ft, 8 ft, 12 ft
0534322	6 ft only
Honeycomb - White	
0536831	4 ft, 8 ft, 12 ft
0536829	6 ft only
Other	
0534013	Fan Speed Selector (Standard on 6 Ft only)
0534357	Fan Speed Key 1300 RPM
0534359	Fan Speed Key 1400 RPM
0534363	Fan Speed Key 1600 RPM
Varies	Thermoexpansion Valve

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.**

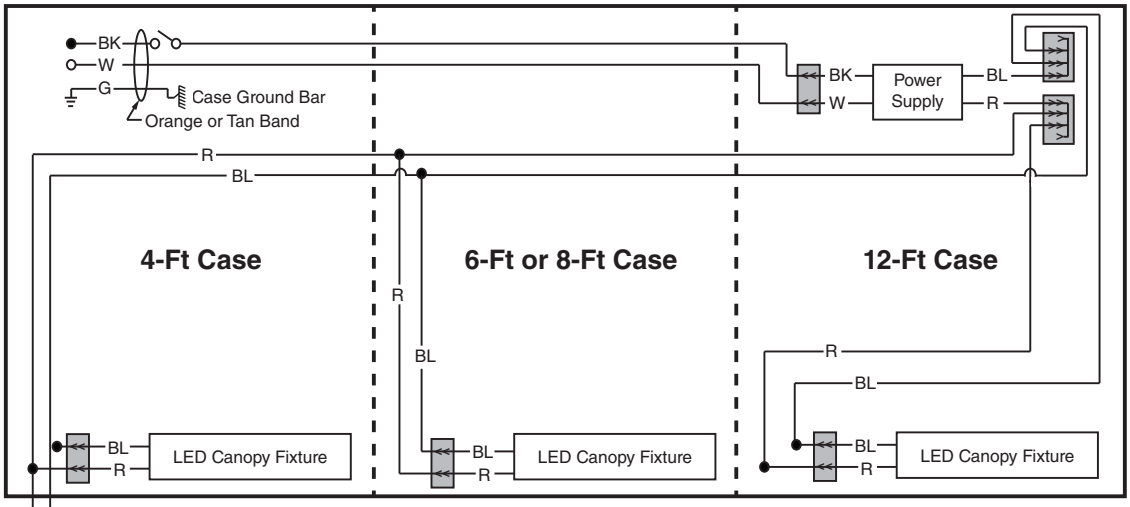
For additional parts information, visit http://www.hussmann.com/en/Pages/Aftermarket-Parts.aspx

Fan Wiring
Offtime Defrost

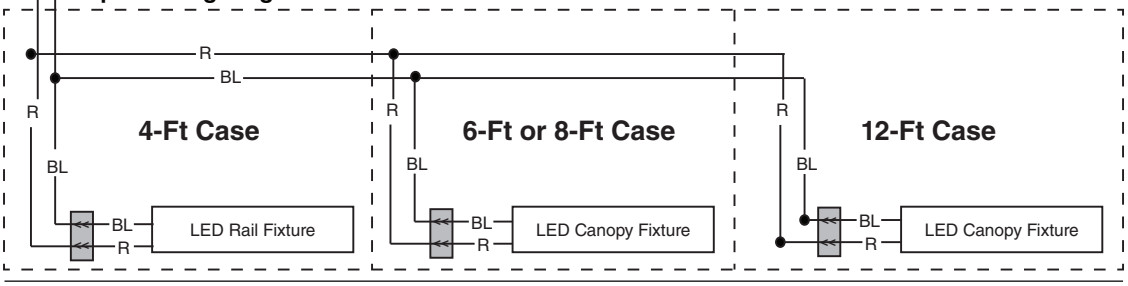


LED Canopy Light Circuits

EcoShine II LED Canopy Lighting - 1 Row



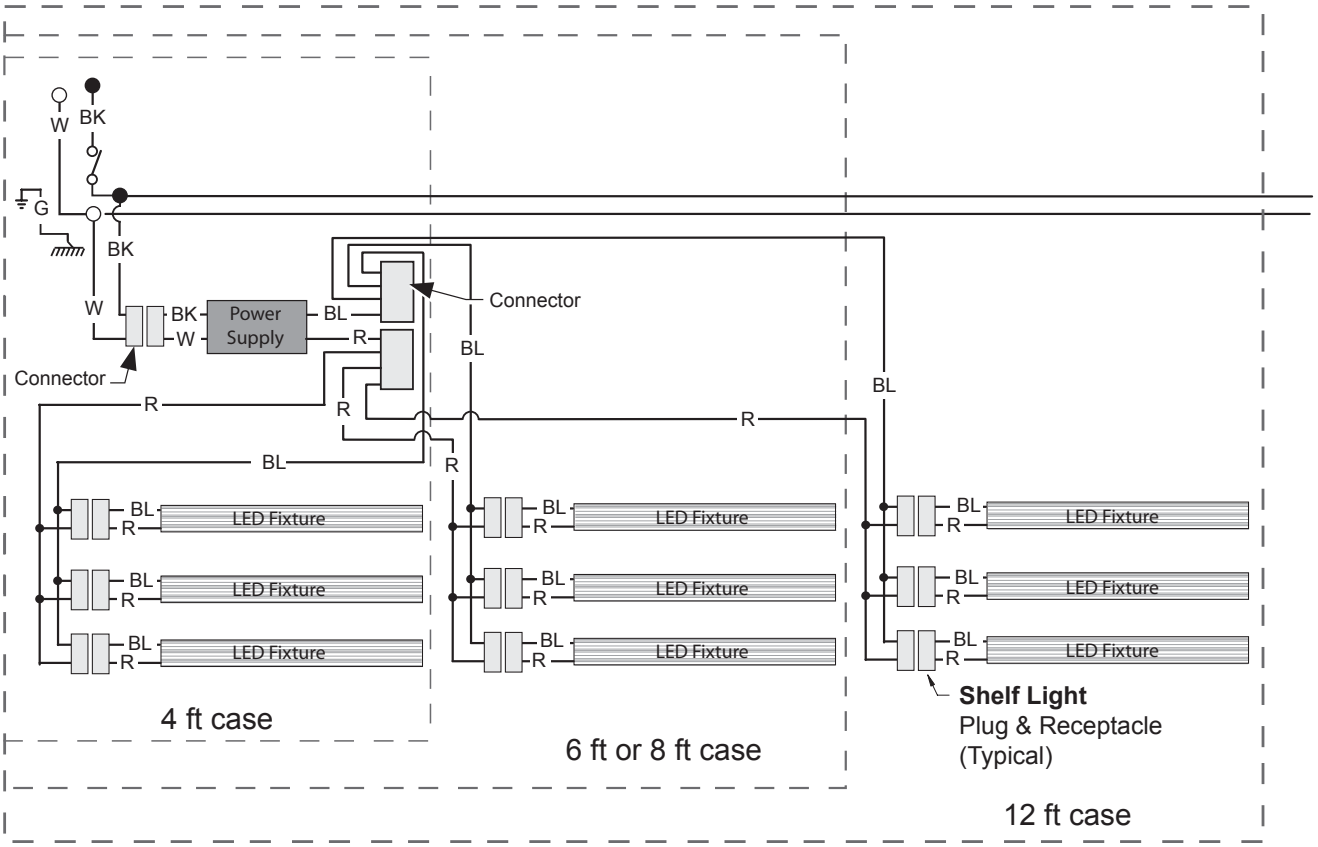
Optional Lighting - EcoShine II LED Rail - 1 Row



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



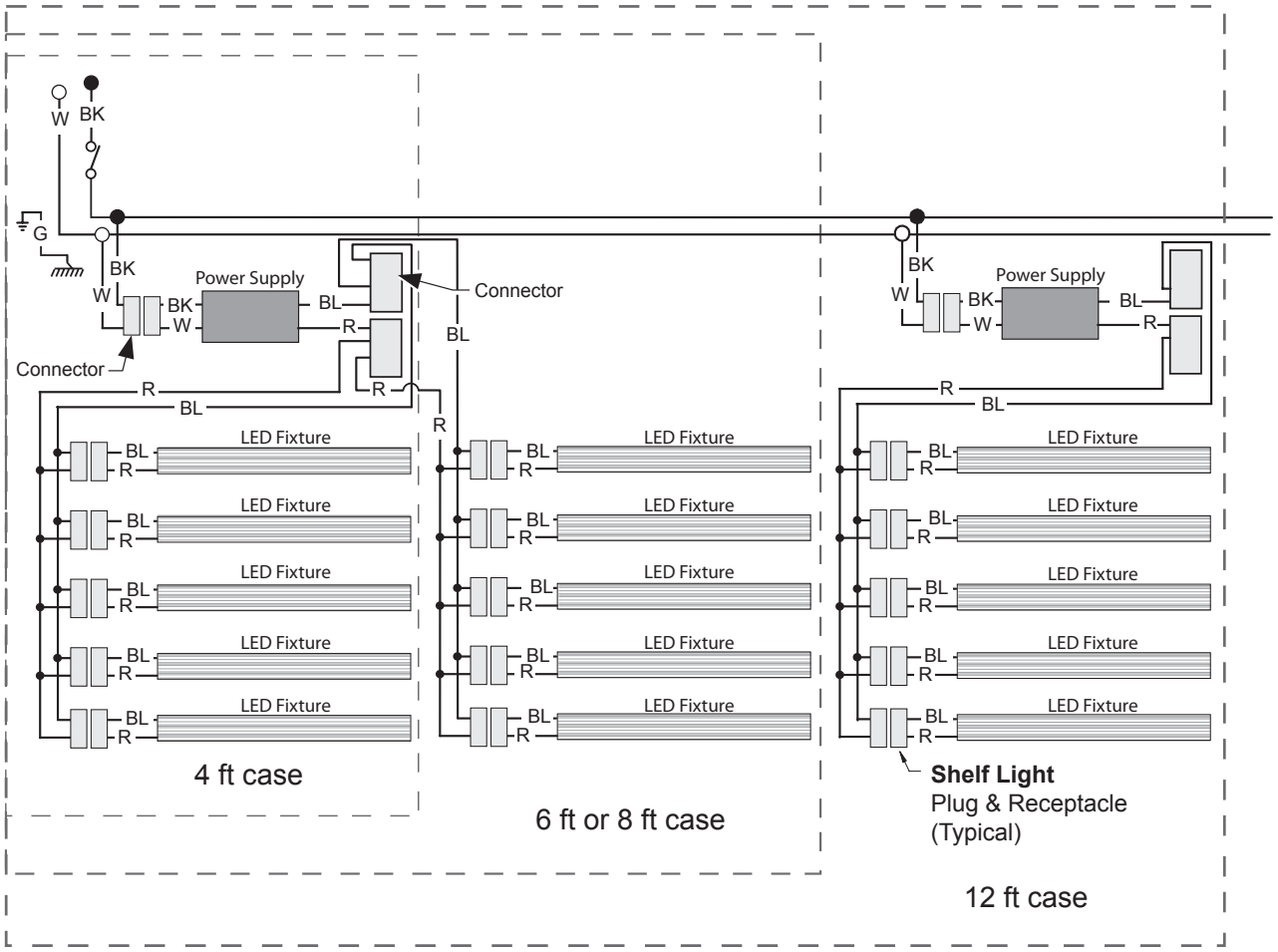
WARNING

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 ⏦ = 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 amps for 120V] (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 eletrical data.

Revision D: April 2017. Updated LED energy values.

Revision E: April 2017. Updated LED energy values.

Revision F: September 2017. Updated notes page. Other changes marked with a bar, circle or underline.

Revision G: January 2023. Added CO_2 note, Page 2.