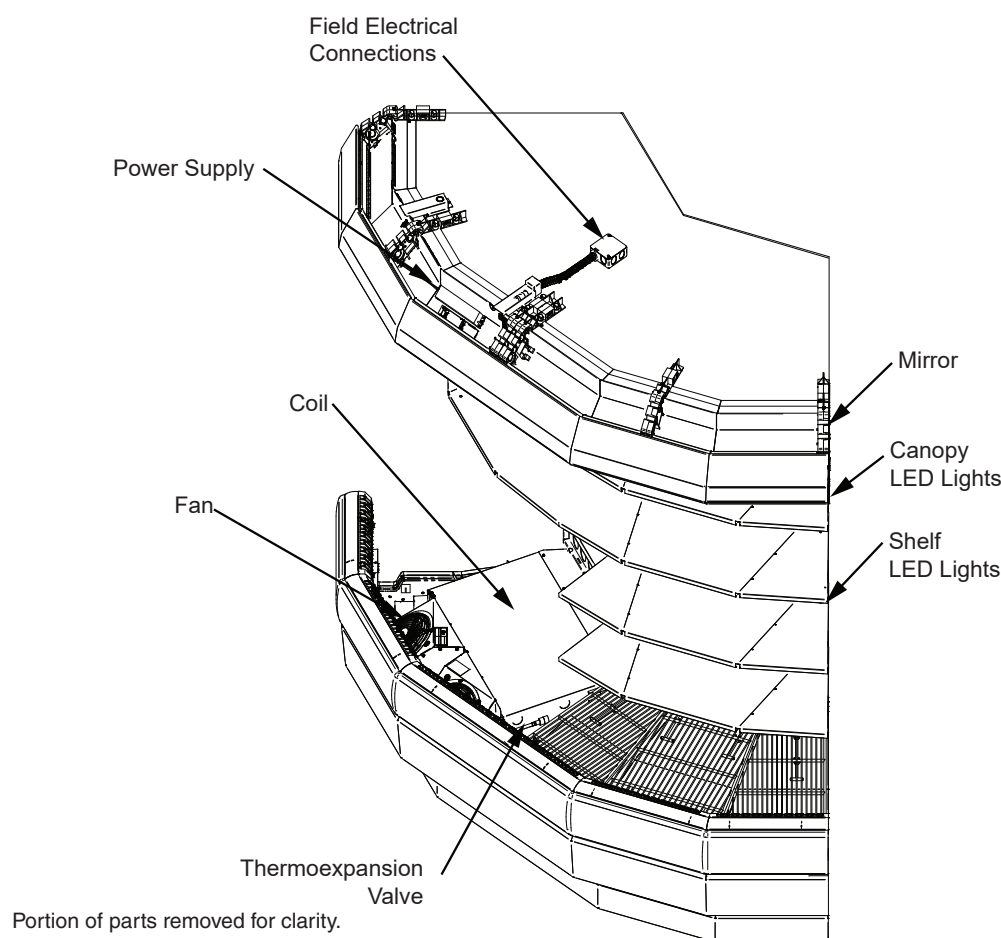




*Insight standard field electrical connections  
are at the top left of the merchandiser*



Portion of parts removed for clarity.

Outside 90° wedge 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	Wiring Diagrams	Page 7
Plan View	Page 4	Computing Refrigeration and Electrical Load	Page 10
Electrical Loads	Page 5	Revision History	Page 10

Data sheet-Insight ID5SMO90X

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 ID5SMO90X

## Dairy / Delicatessen

### Refrigeration Data <sup>1</sup>

ID5SMO90X Wedge		Optimal Shelf Life		Energy Comparison
Application		Dairy/Deli/ Beverage/ Produce	Convertible / Meat	AHRI 1200 Rating Point <sup>3</sup>
Unlit Shelves	Discharge Air °F (°C)	33 (0.6)	32 (0.0)	35 (1.7)
	Average Evaporator °F (°C) <sup>2</sup>	26 (-3.3)	24 (-4.4)	28 (-2.2)
	Parallel Btu/hr/case (Watts/case)	11403 (3342)	15455 (4529)	11000 (3224)
	Conventional Btu/hr/case (Watts/case)	12440 (3646)	16860 (4941)	12000 (3517)
Lit Shelves	Discharge Air °F (°C)	32 (0.0)	31 (-0.6)	34 (1.1)
	Average Evaporator °F (°C) <sup>2</sup>	25 (-3.9)	23 (-5.0)	27 (-2.8)
	Parallel Btu/hr/case (Watts/case) <sup>4</sup>	11513 (3374)	15822 (4637)	11110 (3256)
	Conventional Btu/hr/case (Watts/case) <sup>4</sup>	12560 (3681)	17260 (5058)	12120 (3552)
Fan Speed <sup>5</sup>	ID5SMO90X (8.25")	1600 <sup>5</sup>	1600 <sup>5</sup>	1600 <sup>5</sup>

#### 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. AHRI 1200 Rating Point for energy consumption comparison only.
4. Add 10 Btu/hr/case (2.9 Watts/case) per shelf row for LED shelf light fixtures.
5. Some lengths and/or applications require optional fan motor kits applied by the Hussmann Product Configurator (HPC).

### Defrost Data

Frequency (hours between defrost) 4

OFFTIME ID5SMO90X  
Time (minutes) 20

ELECTRIC OR GAS Not Available

Defrost Water <sup>6</sup> 92.2 lb/day  
(41.8 kg/day)

<sup>6</sup> (± 15% based on case configuration and product loading).

### Conventional Controls

ID5SMO90X  
Low Pressure Backup  
Control CI/CO <sup>7</sup>  
20°F / 10°F  
-6.67°C / -12.2°C

Indoor Unit Only,  
Pressure Defrost  
Termination <sup>7</sup>  
48°F (8.89°C)

<sup>7</sup> Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge <sup>8</sup> ID5SMO90X  
O90X 1.2 lb 19.2 oz 0.6 kg

<sup>8</sup> This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound.

### Product Data

Gross Refrigerated Volume <sup>9</sup> (Cu Ft) 87.92 ft<sup>3</sup> (2.48 m<sup>3</sup>)

AHRI Total Display Area <sup>10</sup> (Sq Ft) 40.54 ft<sup>2</sup> (3.76 m<sup>2</sup>)

Shelf Area <sup>11</sup> (Sq Ft) 77.74 ft<sup>2</sup> (7.22 m<sup>2</sup>)

<sup>9</sup> AHRI Gross Refrigerated Volume: Refrigerated Volume, ft<sup>3</sup> [m<sup>3</sup>]

<sup>10</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]

<sup>11</sup> Shelf surface area is composed of bottom deck plus standard shelf complement for this model: (5) rows of 20-inch shelves



Insight Multideck Merchandiser, 5 Display Levels,  
Standard Bottom, Medium Height Front, Wedge

**Insight ID5SMO90X**  
Dairy / Delicatessen

**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:

Five rows of 20-in. shelves spaced equally between bottom display pan and interior top panel.

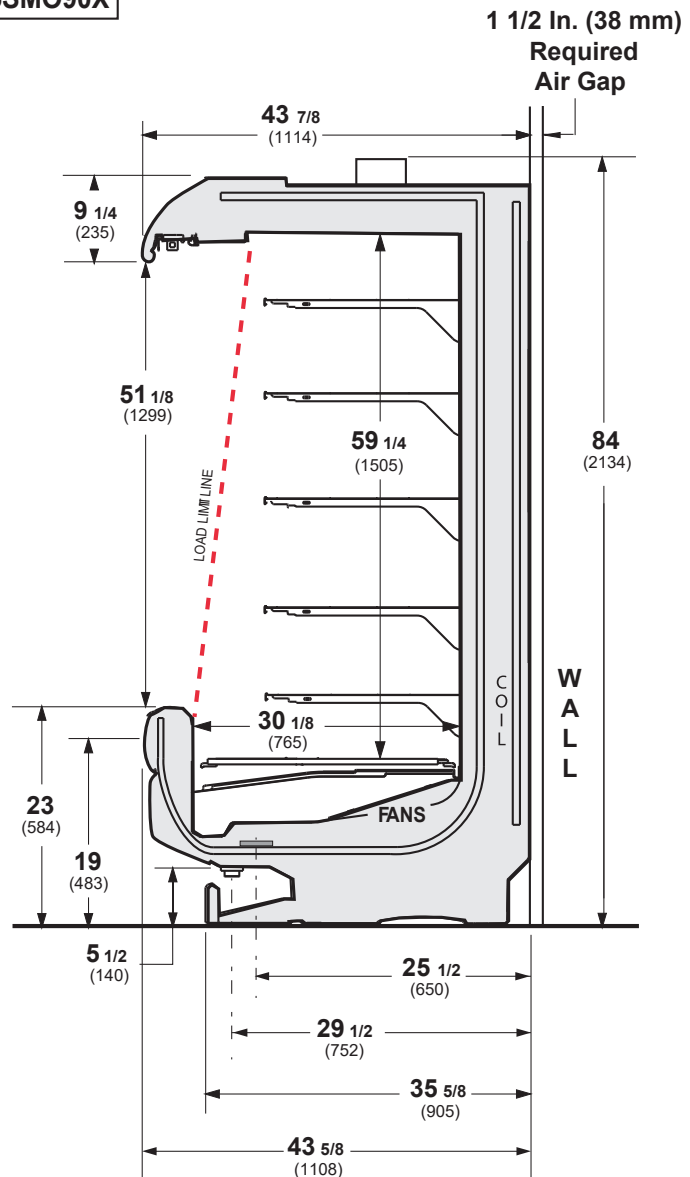
Other optional kits (top piping and vent fans) add to the overall case height.

3-in. between back to back cases.

Shown with Ellipse Option Canopy and Bumper.

Dimensions shown as in. and (mm).

**ID5SMO90X**



**NSF Certification**

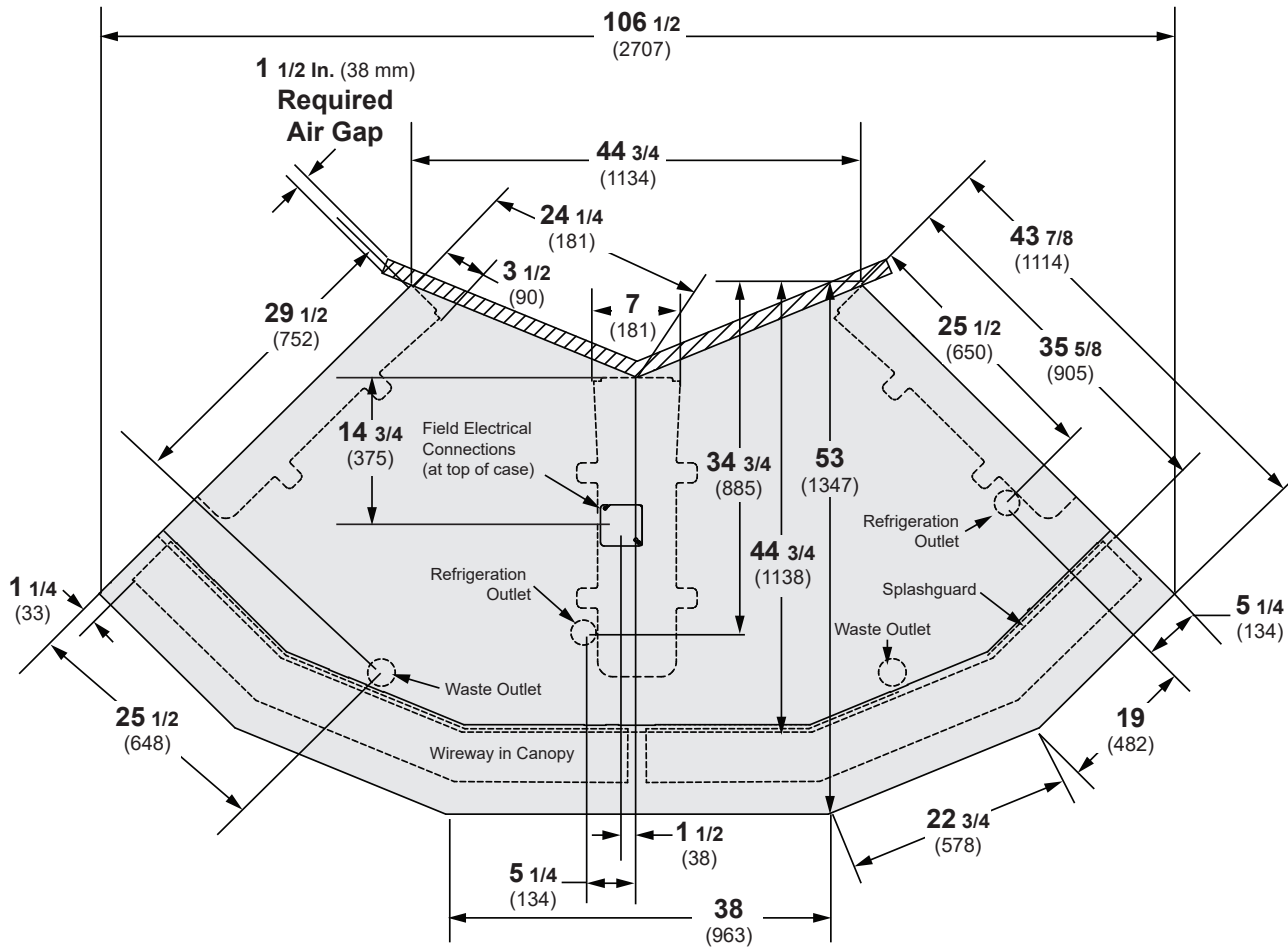
This merchandiser model is manufactured to meet NSF/ANSI (National Sanitation Foundation) Standard #7 requirements for construction, materials and cleanability.



# Engineering Plan View

ID5SMO90X

Dimensions shown as in. and (mm).



(ID5SMO90X Wedge shown  
above)



## Electrical Data

### Number of Fans

8.25-in.

### O90X

4

### Evaporator Fan

120V	60Hz	Energy Efficient
230V	50/60Hz	Energy Efficient

### Amperes

### O90X

1.48
0.78

### Watts

### O90X

108
108

### Minimum Circuit Ampacity

120V	60Hz	Energy Efficient
230V	50/60Hz	Energy Efficient

1.68
0.98

### Maximum Over Current Protection 120V

20

Maximum Over Current Protection 230V

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.**

### LED Lighting

### Amperes

### Watts

### Standard LED Canopy Lights

### O90X

### O90X

1 Row

0.32

38.6

### Optional LED Shelf Lights

1 Row of Shelves
2 Rows of Shelves
3 Rows of Shelves
4 Rows of Shelves
5 Rows of Shelves
6 Rows of Shelves

0.08
0.16
0.25
0.33
0.41
0.49

9.9
19.8
29.7
39.5
49.4
59.3

### LED Rail Light

1 Row

0.13

15.6

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

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



**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**

**O90X**

**lb (kg)**

1300 (591)

† Actual weights will vary according to optional kits included.

## Shelf Options

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

18-inch  
20-inch  
22-inch  
24-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: 8

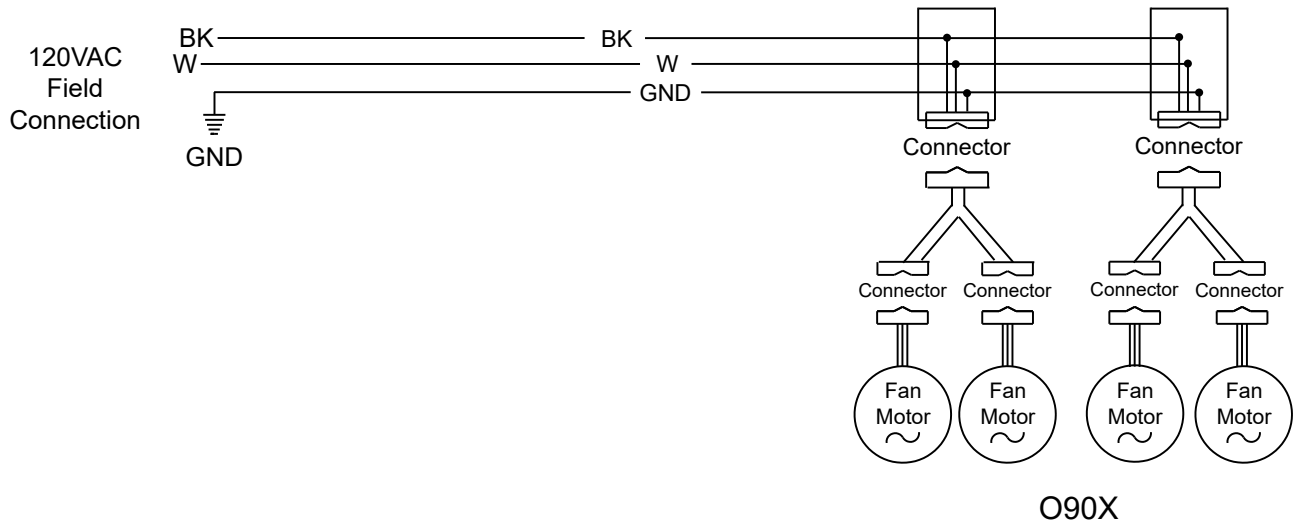
Maximum number of Lighted Shelves: 6

Standard shelf complement for test purposes: (5) 20-in. shelves, evenly distributed vertically



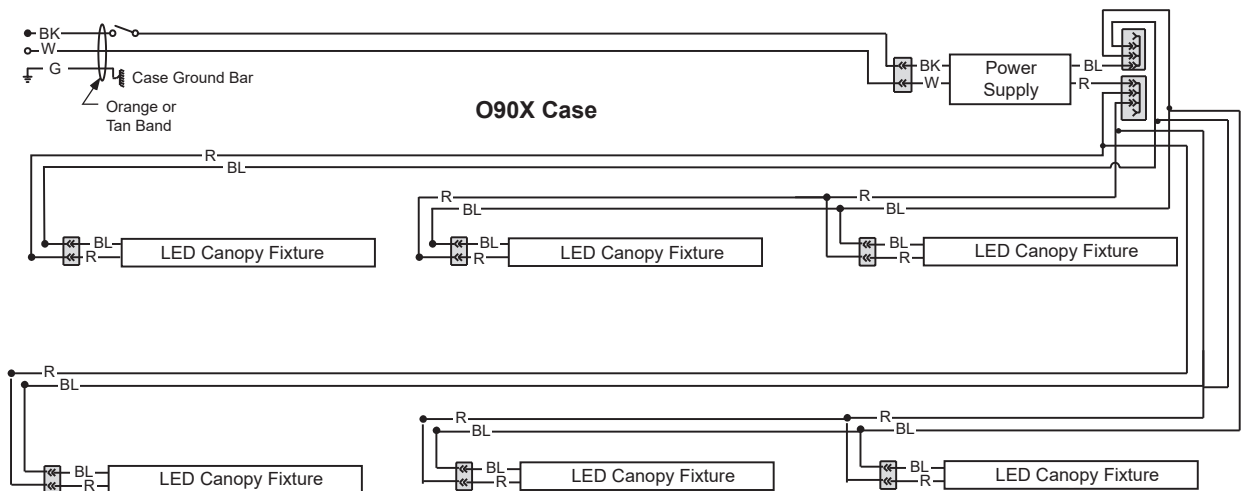
**Insight ID5SMO90X**  
Dairy / Delicatessen

**Fan Wiring  
Offtime Defrost**



**LED Canopy Light Circuits**

**EcoShine II LED Canopy Lighting — 1 Row**



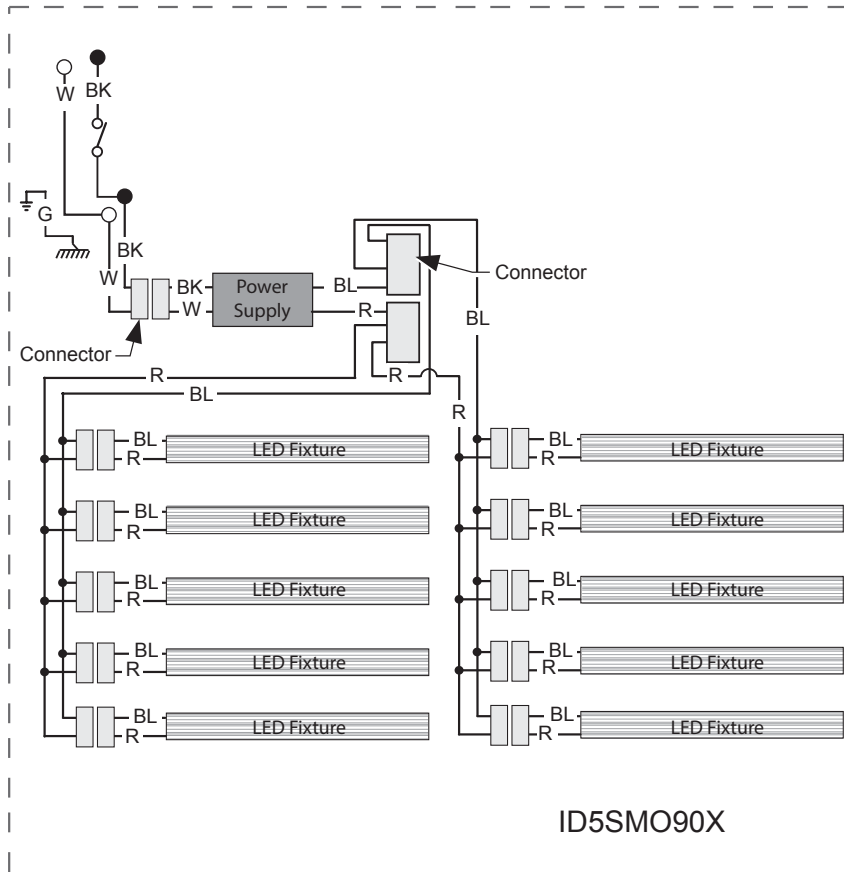
**WARNING**

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 4 or 5 Rows of Shelves



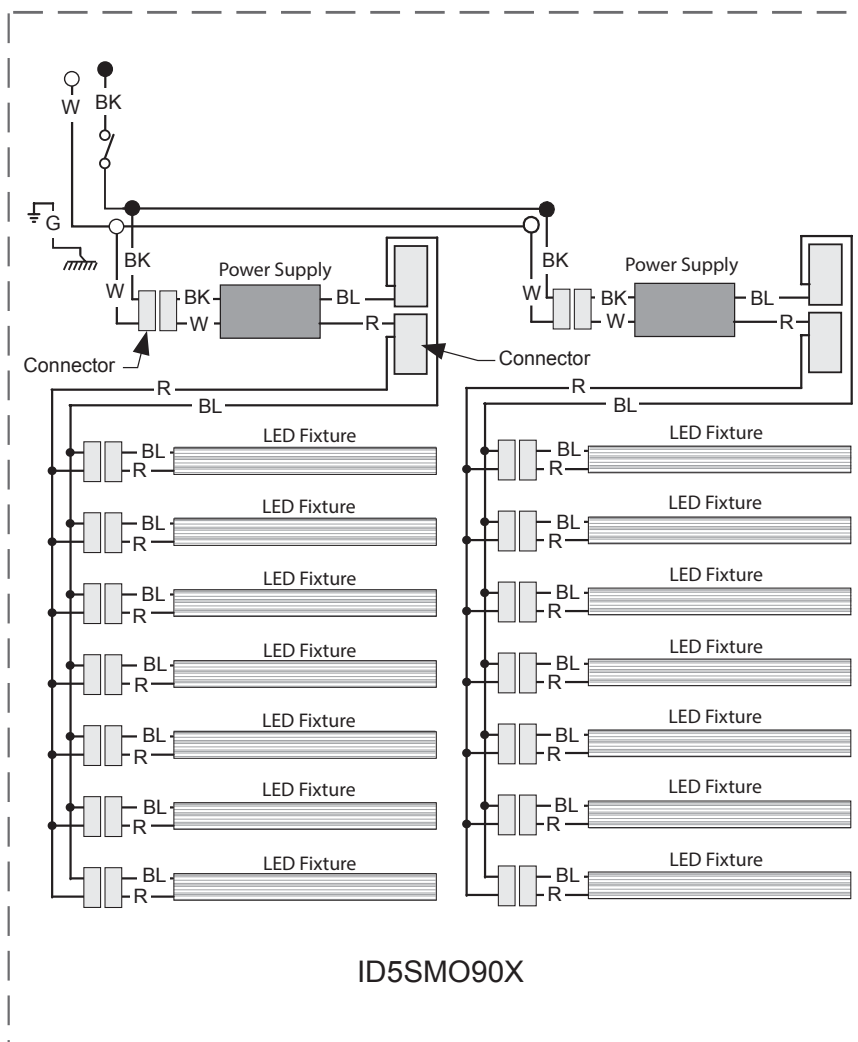
### WARNING

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



## Optional Shelf Harness and LED Light Circuits for 6 or 7 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/case. Add 10 BTU/HR/CASE 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 5. The store legend specifies fans on a 230V circuit. In this instance, fans use 0.78 Amps and the MCA is 0.98. 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 canopy lighting [standard or optional] (here 0.32 for standard), and shelf or rail lighting [maximum for which case is wired] (0.41 for five shelves); then add together  $[0.32 + 0.41 = 0.73 \text{ amps for } 120\text{V}]$  (for 230V, multiply  $0.73 * 0.52 = 0.38$ ).

### Line Sizing — Refer to store legend.

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



Scan the QR code with your mobile device to access additional product information or order parts.

Parts may also be ordered at:

**parts.hussmann.com**

**Call toll free: 1.855.487.7778**

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## Revision History

Revision A: December 2017: Original Issue

Revision B: December 2017: Updated cover image, cross section and plan view.

Revision C: August 2018: Updated cover image, cross section and plan view.

Revision D: January 2019: Updated lighting.

Revision E: December 2023: Updated fan and lighting information. Removed replacement parts page.