

icm fart#	Description	Willing Item #	Tem Tare	Description wiring I	.tcm π
FAN ASSEMBLIES 8 Ft & 12 Ft A. 7W Standar 0477654 0142780	d Energy Efficient F Fan Motor, Evapor (MO.4410545) Fan Blade (FB.014	rator	LAMPS AND BALLA C. Ballast, Ele 0480130 0480131 0480132 D.		(3)
0477653 0382383 Thermostats	d Energy Efficient F Fan Motor, Evapor (MO.4410545) Fan Blade (FB.478 ustable Refrigeration	ator (20617)	LED FIXTURES AN E. 0501213 F. G.	POWER SUPPLY Power Supply (EP.4481861) LED Canopy Fixture Replace with like fixtures LED Shelf Fixture Replace with like fixtures	(5) (6) (7)

Data sheet-Excel-P2X-EP

**Note:** Revision J: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

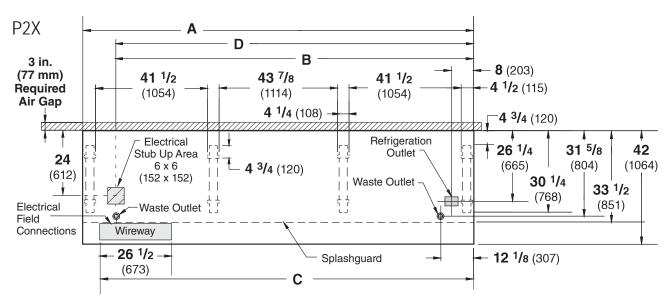
# Engineering Plan Views

PHYSICAL DATA

Merchandiser Drip Pipe (in.) 1 \(^{1}/4\)
Merchandiser Liquid Line (in.) 3/8
Merchandiser Suction Line (in.) 7/8

**Produce** 10-2004

Dimensions shown as inches and (mm).



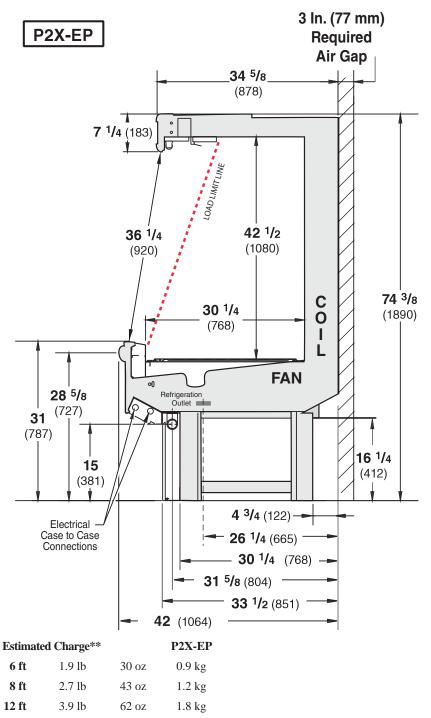
NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

**FRONT** 

	6 ft	8 ft	12 ft
General			
(A) Case Length (without ends or partitions)	72 3/8 (1838)	96 <sup>3</sup> /8 (2448)	144 <sup>1</sup> / <sub>2</sub> (3670)
(Each end and insulated partition adds $1^{-1}/2$ in. (38 mm) to case line up.)			
Maximum O/S dimension of case back to front			
(includes bumper)	42 (1064)	42 (1064)	42 (1064)
Back of case to front of splashguard	33 1/2 (851)	33 1/2 (851)	33 1/2 (851)
Back of case to O/S edge of front leg	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)
Distance between edges of external legs and center legs	29 1/2 (750)	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	NA	43 7/8 (1114)
Distance between front legs and splashguard	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
Electrical Service (Electrical Field Wiring connection point)			
<b>(B)</b> RH End of case to center of stub up area	60 1/4 (1530)	84 1/4 (2140)	132 3/8 (3363)
Back of case to center of stub up area	24 (612)	24 (612)	24 (612)
Length of electrical wireway Wireway	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
(C) RH End of case to LH end of wireway	66 1/8 (1680)	90 1/8 (2289)	138 1/4 (3511)
Waste Outlets (One each end)			
(D) RH End of case to the center of LH waste outlet	60 1/4 (1530)	84 1/4 (2140)	132 3/8 (3363)
RH End of case to the center of RH waste outlet	12 1/8 (307)	12 1/8 (307)	12 1/8 (307)
Back O/S of case to center of waste outlets	31 5/8 (804)	31 5/8 (804)	31 5/8 (804)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
Refrigeration Outlet			
Back of case to center of refrigeration outlet	26 1/4 (665)	26 1/4 (665)	26 1/4 (665)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

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.

#### Dimensions shown as inches and (mm).



<sup>\*\*</sup>This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz/0.2 kg).

#### **NSF** Certification

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

## Excel P2X-EP Bulk Produce

#### REFRIGERATION DATA

**Note:** This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H.

P2X-EP§	UNLIT	Lit
Discharge Air °F	39	39
Evaporator °F	34	34
Unit Sizing °F	32	32

§ 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.

Btu/hr/ft —	Unlit	Shel	ves‡
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P2X-EP	Parallel	Conventional
Unlit	889	889

Add 10 Btu/hr/ft *per shelf row* for LED fixtures.

Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

#### **DEFROST DATA**

P2X-EP

Frequency (hr) NONE

Defrost Water (lb/ft/day) 6

( $\pm\,15\%$  based on case configuration and product loading).

OFFTIME P2X-EP
Time (minutes) NONE

ELECTRIC OR GAS Not Recommended

#### CONVENTIONAL CONTROLS

**Low Pressure Backup Control** 

P2X-EP

CI/CO\* 27°F / 17°F

Indoor Unit Only, Pressure Defrost
Termination\* 48°F

\*Use a Temperature Pressure Chart to determine PSIG conversions.

### Excel P2X-EP **Bulk Produce**

**Electrical Data** 

230V

230V

60Hz

50Hz

Export

Export

**Maximum Over Current Protection 120V** 

- 10	of Fans—7W of Fans—4W	6 ft  2	8 ft 2 	12 ft 3 			
			Amperes			Watts	
		6 ft	8 ft	12 ft	6 ft	8 ft	12 ft
Evaporat	or Fan						
120V	50/60Hz Standard Energy Efficient	0.24	0.38	0.57	16	28	42
230V	50/60Hz Standard Energy Efficient	0.12	0.20	0.30	16	28	42
230V	60Hz Export	0.30	0.50	0.75	48	78	117
230V	50Hz Export	0.36	0.56	0.84	54	84	126
Minimun	n Circuit Ampacity						
120V	50/60Hz Standard Energy Efficient	0.44	0.58	0.77			
230V	50/60Hz Standard Energy Efficient	0.32	0.40	0.50			

50 8	<b>85</b>
	59

0.50

0.56

**20** 

0.70

0.76

20

0.95

1.04

20

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.

Optional Lighting (T-8 fluorescent)						
Additional 1 Row Canopy	0.51	0.51	0.77	54	59	85
Additional 2 Row Canopy	1.02	1.02	1.54	118	118	170
Additional 3 Row Canopy	1.53	1.53	2.31	177	177	255
1 Row Rail Light	0.51	0.51	0.77	59	59	85
1 Row of Shelves	0.51	0.51	0.77	59	59	85
2 Rows of Shelves	1.02	1.02	1.54	118	118	170
3 Rows of Shelves	1.53	1.53	2.31	177	177	255
EcoShine II Canopy						
EcoShine II	0.26	0.32	0.48	31.6	38.6	58.0
EcoShine II HO	0.33	0.44	0.66	39.5	53.0	79.4
EcoShine II Rail Light —1 Row	0.12	0.16	0.25	14.1	19.8	29.7
<b>EcoShine II Shelves</b>						
1 Row of Shelves	0.12	0.16	0.25	14.1	19.8	29.7
2 Rows of Shelves	0.23	0.33	0.49	28.2	39.5	59.3
3 Rows of Shelves	0.35	0.49	0.74	42.3	59.3	89.0

<sup>120</sup>V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

Please note: some combinations of fluorescent lights on this case model may not be compliant with DOE 2017 and may not be available to order in the US and Canada. More lighting options are available with LED lights. The Hussmann Product Configurator will not allow lighting options that do not comply with the DOE 2017 standards.

<sup>120</sup>V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting

<sup>230</sup>V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52



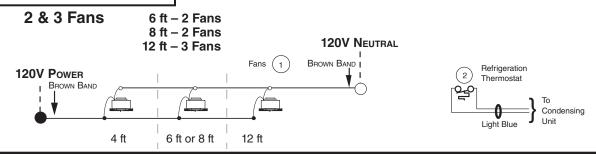
#### **Product Data**

Recommended Usable Cube <sup>1</sup> (Cu Ft/Ft) AHRI Total Display Area <sup>2</sup> (Sq Ft/Ft) Shelf Area <sup>3</sup> (Sq Ft/Ft)  $\begin{array}{l} 6.69 \ ft^3/ft \ (0.62 \ m^3/m) \\ 3.06 \ ft^2/ft \ (0.93 \ m^2/m) \\ 3.87 \ ft^2/ft \ (1.18 \ m^2/m) \end{array}$ 

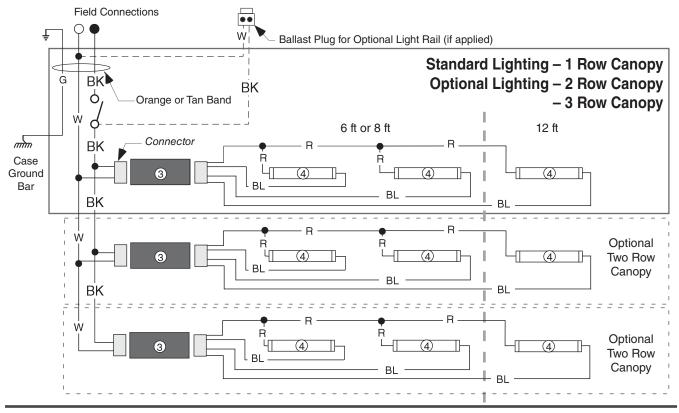
- <sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
- <sup>2</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, ft [m]
- <sup>3</sup> Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (1) row of 16-inch shelf.

ESTIMATED SHIPPING WEIGHT <sup>4</sup>								
Case				Solid End				
	6 ft	8 ft	12 ft	(each)				
<b>lb</b> ( <i>kg</i> )	800 (363)	1000 (454)	1200 (544)	75 (34)				
<sup>4</sup> Actual weights will	<sup>4</sup> Actual weights will vary according to optional kits included.							

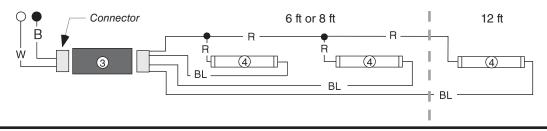
## Fan Wiring Offtime Defrost



## **Light Circuits — Fluorescent Fixtures**



### Optional Lighting – 1 Row Rail



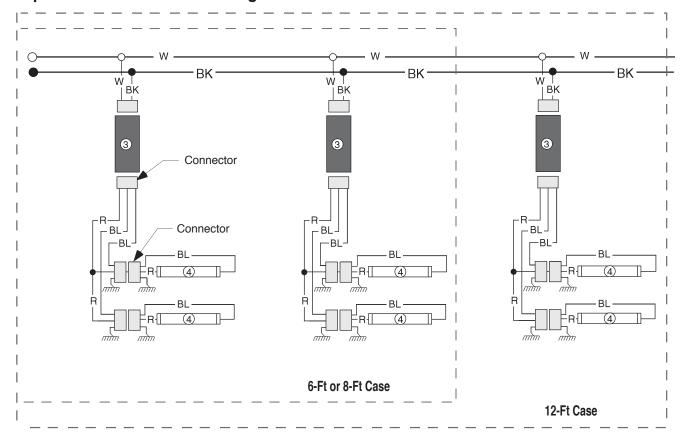
#### **WARNING**

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

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White  $\bullet$  = 120V Power  $\bigcirc$  = 120V Neutral  $\bot$  = Field Ground  $\longrightarrow$  = Case Ground

### **Optional Shelf Harness and Light Circuits for Two Rows of Shelves**



#### **WARNING**

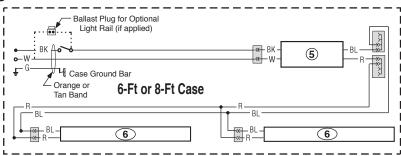
All components must have mechanical ground, and the merchandiser must be grounded.

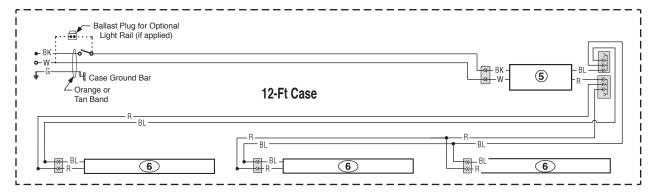
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White 
$$\bullet$$
 = 120V Power  $\circ$  = 120V Neutral  $\frac{1}{2}$  = Field Ground  $\stackrel{\text{min}}{}$  = Case Ground

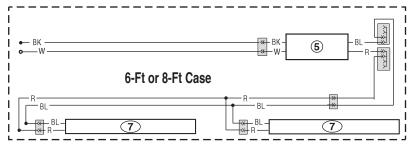
## Optional Canopy and Rail Light Circuits — LED Fixtures

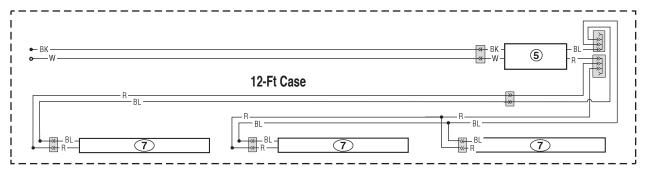
#### EcoShine II LED Canopy Lighting - 1 Row





#### EcoShine II LED Rail Lighting - 1 Row





#### **WARNING**

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

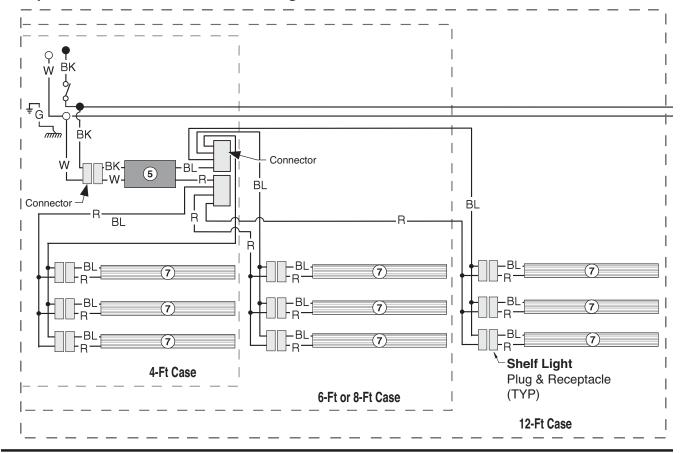
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

• = 120V Power  $\bigcirc$  = 120V Neutral  $\frac{1}{2}$  = Field Ground  $\stackrel{\text{min}}{\text{min}}$  = Case Ground

## Optional Shelf Lighting LED Fixtures

## 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.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red G = Green BL = Blue BK = Black W = White

• = 120V Power  $\bigcirc$  = 120V Neutral  $\frac{1}{7}$  = Field Ground  $\frac{1}{1000}$  = Case Ground