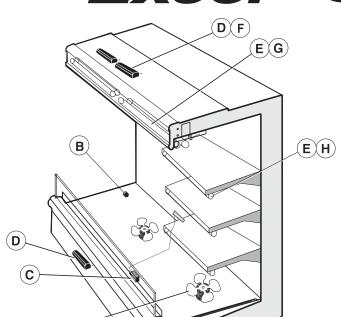
# HUSSMANN<sup>®</sup> *Excel*





### M5X-GE

Technical Data Sheet P/N 0463868\_L

NSF® Certified
April 2017

DOE 2017
Energy Efficiency
Compliant



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

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.

Item	Part #	Description	Wiring Item #	Item	Part #	<b>Description</b> V	Wiring Item #
FAN A	ASSEMBLIES			FLUC	DRESCENT LAI	MPS AND BALLASTS	
A.	25W Standard	d Energy Efficient Fa	n Assembly (1)	D.	Ballast, Ele	ectronic	(4)
	0501485	Fan Motor, Evapor	rator		0480130	2 lamps (BA.4481676)	)
		(MO.4410701)			0480131	3 lamps (BA.4481654)	)
	0501484	Fan Blade (FB.4780	657)		0480132	4 lamps (BA.4481677)	)
		`	ŕ	E.		Fluorescent Lamp	(5)
THER	MOSTATS					Replace with like fixtur	res
B.	0411744	Standard Non-adju	stable (2)			1	
		Defrost Thermosta		LED	FIXTURES AN	D POWER SUPPLY	
		(CT.0411744)		F.	0501213	Power Supply (EP.44	81861) (6)
C.	Optional Adj	ustable Refrigeration	Thermostat (3)	G.		LED Canopy Fixture	/ \ /
	1 3	C				Replace with like fixtu	
				Н.		LED Shelf Fixture	(8)
						Replace with like fixtu	` ′

Data sheet-Excel-M5X-GE

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

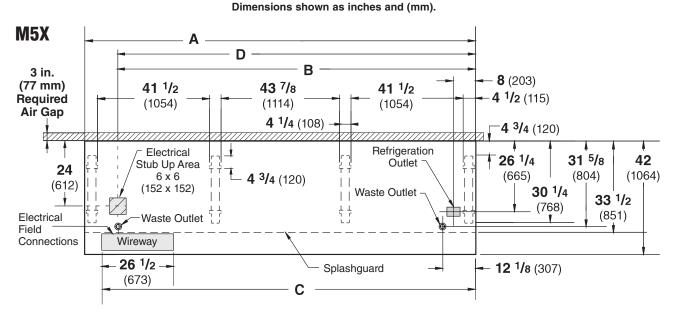
# Engineering Plan Views

Meat and Produce

### PHYSICAL DATA

Merchandiser Drip Pipe (in.) Merchandiser Liquid Line (in.) Merchandiser Suction Line (in.)

1 <sup>1</sup>/<sub>4</sub> 3/<sub>8</sub> 7/<sub>8</sub>



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

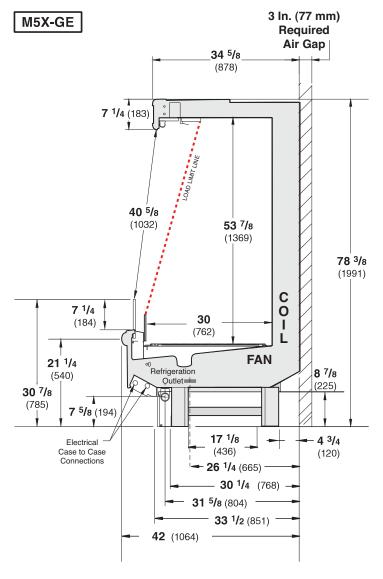
**FRONT** 

	4 ft	8 ft	12 ft
General			
(A) Case Length (without ends or partitions)	48 3/8 (1229)	96 3/8 (2448)	144 1/2 (3670)
(Each end and insulated partition adds 1 ½ 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	NA	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	36 1/4 (921)	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	42 1/8 (1070)	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	36 <sup>1</sup> / <sub>4</sub> (921)	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).



Estimat	ted Charge**		M5X-GE
4 ft	1.6 lb	26 oz	0.7 kg
8 ft	2.7 lb	43 oz	1.2 kg
12 ft	3.9 lb	62 oz	1.8 kg

<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 M5X-GE Meat & Delicatessen

### **REFRIGERATION DATA**

Note: This data is based on store temperature and humidity that does not exceed  $75^{\circ}F$  and 55% R.H.

	M5X-GE
Discharge Air °F	28
Evaporator °F	21
Unit Sizing °F	19

§ 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 Shelves ‡	
M5X-GE	Parallel	Conventional
Unlit	1274	1394

<sup>‡</sup> Add 10 Btu/hr/ft *per shelf row* for LED fixtures. Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

### **DEFROST DATA**

Frequency Hr	6
Defrost Water (lb/ft/day)	9

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

OFFTIME	M5X-GE
Temp Term °F	48
Failsafe Minutes	35

**ELECTRIC OR GAS** Not Recommended

### **Standard Defrost Thermostat**

Close on rise: close 48°F — open 33°F

#### CONVENTIONAL CONTROLS

**Low Pressure Backup Control** 

CI/CO\* M5X-GE 14°F / 4°F

Indoor Unit Only,

**Pressure Defrost Termination\*** 48°F

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

### Excel M5X-GE Meat & Delicatessen

Number o	f Fans—2	5W	4 ft 1	8 ft 2	12 ft 3			
				Amperes			Watts	
			4 ft	8 ft	12 ft	4 ft	8 ft	12 ft
Evaporato	r Fan							
120V	60Hz	Standard	1.23	2.46	3.69	90	180	270
120V	50Hz	Standard	1.33	2.66	3.99	103	206	309
230V	60Hz	Export	0.66	1.32	1.98	100	200	300
230V	50Hz	Export	0.76	1.52	2.28	114	228	342
120V	60Hz	Energy Efficient	0.60	1.20	1.80	36	72	108
230V	60Hz	Energy Efficient	0.30	0.60	0.90	36	72	108
Minimum	Circuit A	mpacity						
120V	60Hz	Standard	1.43	2.66	3.89			
120V	50Hz	Standard	1.53	2.86	4.19			
230V	60Hz	Export	0.86	1.52	2.18			
230V	50Hz	Export	0.96	1.72	2.48			
120V	60Hz	Energy Efficient	0.80	1.40	2.00			
230V	60Hz	Energy Efficient	0.50	0.80	1.10			
Maximum	over Cu	rrent Protection 120V	20	20	20			
Maximun	n Over Cu	arrent Protection 230V	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 (T-8 fluorescent)						
1 Row Canopy	0.26	0.51	0.77	30	59	85
Optional Lighting (T-8 fluorescent)						
,	0.26	0.51	0.77	20	<b>50</b>	0.5
Additional 1 Row Canopy	0.26	0.51	0.77	30	59	85
Additional 2 Row Canopy	0.51	1.02	1.54	59	118	170
Additional 3 Row Canopy	0.77	1.53	2.31	89	177	255
1 Row Rail Light	NA -	<ul><li>Glass f</li></ul>	front does not	accept rail light		
4 Rows of Shelves	1.02	2.04	3.08	118	236	340
5 Rows of Shelves	1.28	2.55	3.85	148	295	425
EcoShine II Canopy						
EcoShine II	0.16	0.32	0.48	19.3	38.6	58.0
EcoShine II HO	0.22	0.44	0.66	26.5	53.0	79.4
EcoShine II Shelf						
3 Rows of Shelves	0.25	0.49	0.74	29.7	59.3	89.0
4 Rows of Shelves	0.33	0.66	0.99	39.5	79.1	118.6
5 Rows of Shelves	0.41	0.82	1.24	49.4	98.9	148.3

120V Fluorescent 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 ¹ (Cu Ft/Ft)
 6.95 ft³/ft (0.65 m³/m)

 AHRI Total Display Area ² (Sq Ft/Ft)
 4.40 ft²/ft (1.34 m²/m)

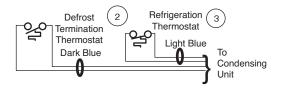
 Shelf Area ³ (Sq Ft/Ft)
 8.36 ft²/ft (2.55 m²/m)

- <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 (2) rows of 16-inch shelves and (2) rows of 18-inch shelves.

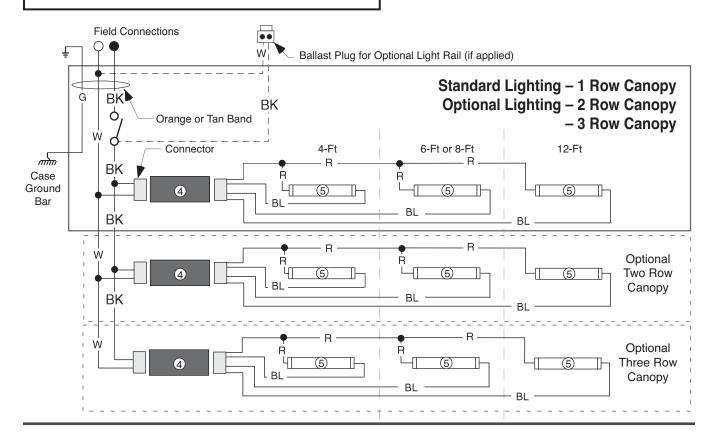
ESTIMATED SHIPPING WEIGHT 4					
Case					Solid End
	4 ft	6 ft	8 ft	12 ft	(each)
<b>lb</b> ( <i>kg</i> )	800 (363)	NA	1100 (499)	1500 (680)	100 (45)

# Fan Wiring Offtime Defrost

# 1, 2, 3 & 4 Fans 6 ft - 4 Fans 8 ft - 2 Fans 12 ft - 3 Fans 120V Power BROWN BAND BROWN BAND BROWN BAND BROWN BAND BROWN BAND BROWN BAND



### **Light Circuits — Fluorescent Fixtures**



### **WARNING**

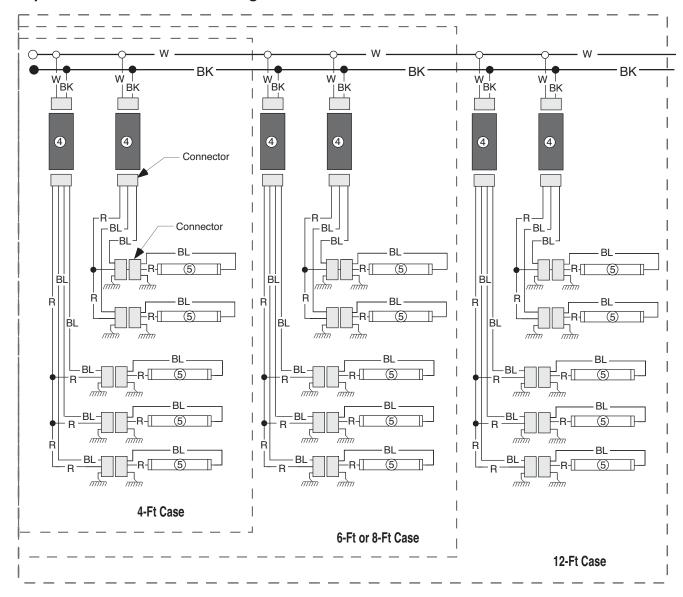
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

• = 120V Power  $\bigcirc$  = 120V Neutral  $\bot$  = Field Ground  $\longrightarrow$  = Case Ground

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



### **WARNING**

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

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

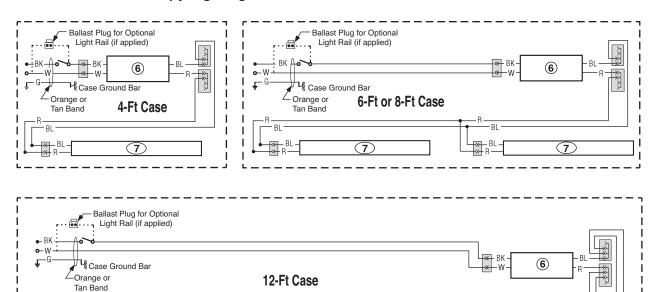
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White 
$$\bullet$$
 = 120V Power  $\circ$  = 120V Neutral  $\frac{1}{2}$  = Field Ground  $\stackrel{\text{min}}{}$  = Case Ground

### **Optional Canopy Light Circuits — LED Fixtures**

### EcoShine II LED Canopy Lighting - 1 Row

BI

(7)





- BL

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

-BL

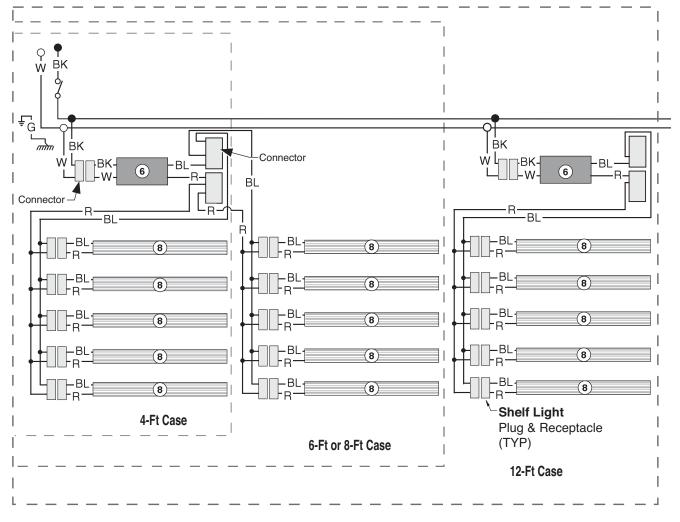
(7)

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  $\frac{1}{2}$  = 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.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

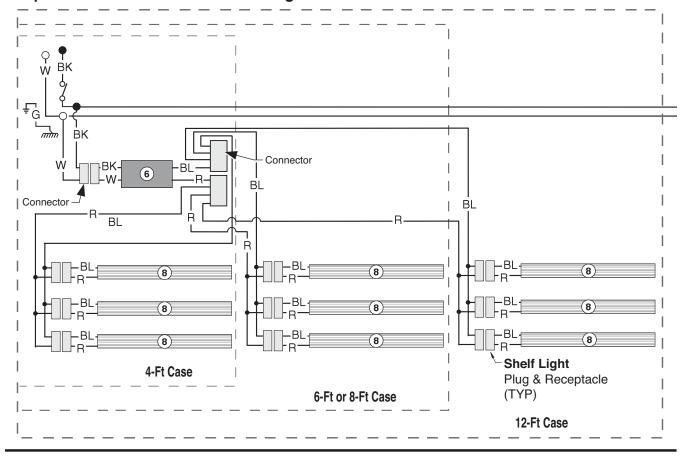
R = RedG = Green BL = Blue BK = Black

W = White

● = 80V Power ○ = 80V NEUTRAL mm = 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

• = 80V Power  $\bigcirc$  = 80V Neutral  $\frac{1}{2}$  = Field Ground  $\implies$  = Case Ground