

# HUSSMANN<sup>®</sup> Excel



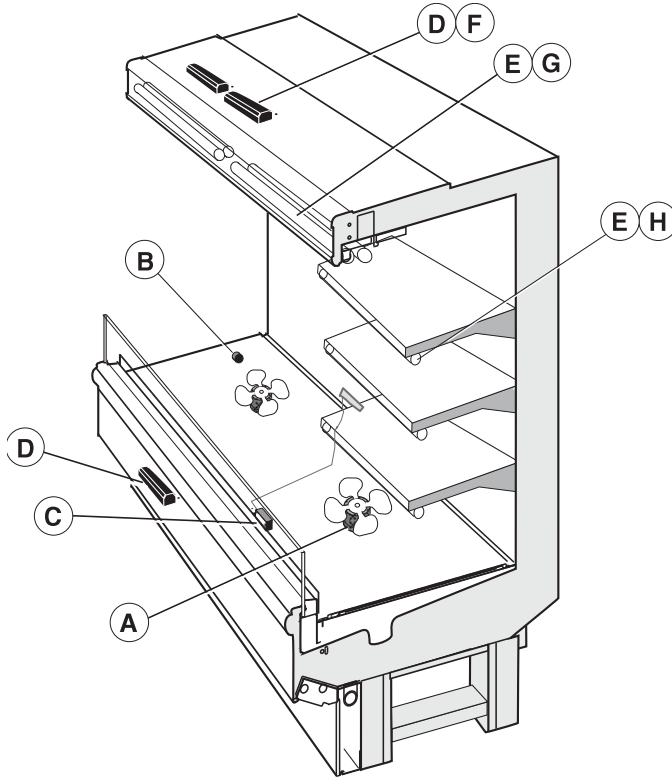
# M4X-GE

Technical Data Sheet  
P/N 0463866\_N

NSF<sup>®</sup> Certified

April 2017

**DOE 2017**  
Energy Efficiency  
Compliant



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 #	Description	Wiring Item #
<b>FAN ASSEMBLIES</b>				<b>LAMPS AND BALLASTS</b>			
<b>12 Ft</b>				D.		Ballast, Electronic	(4)
A.	<b>25W Standard Energy Efficient Fan Assembly</b>	(1)		0480130		2 lamps (BA.4481676)	
	0501485	Fan Motor, Evaporator (MO.4410701)		0480131		3 lamps (BA.4481654)	
	<b>0501484</b>	Fan Blade (FB.4780657)		0480132		4 lamps (BA.4481677)	
<b>6 Ft Only</b>				E.		Fluorescent Lamp	(5)
A.	<b>7W Standard Energy Efficient Fan Assembly</b>	(1)				<i>Replace with like fixtures</i>	
	<b>0477654</b>	Fan Motor, Evaporator (MO.4410545)		<b>LED FIXTURES AND POWER SUPPLY</b>			
	<b>0142780</b>	Fan Blade (FB.0142780)		F.	0501213	Power Supply (EP.4481861)	(6)
<b>THERMOSTATS</b>				G.		LED Canopy Fixture	(7)
B.	<b>0411744</b>	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(2)			<i>Replace with like fixtures</i>	
C.		Optional Adjustable Refrigeration Thermostat	(3)	H.		LED Shelf Fixture	(8)
						<i>Replace with like fixtures</i>	

Data sheet-Excel M4X-GE

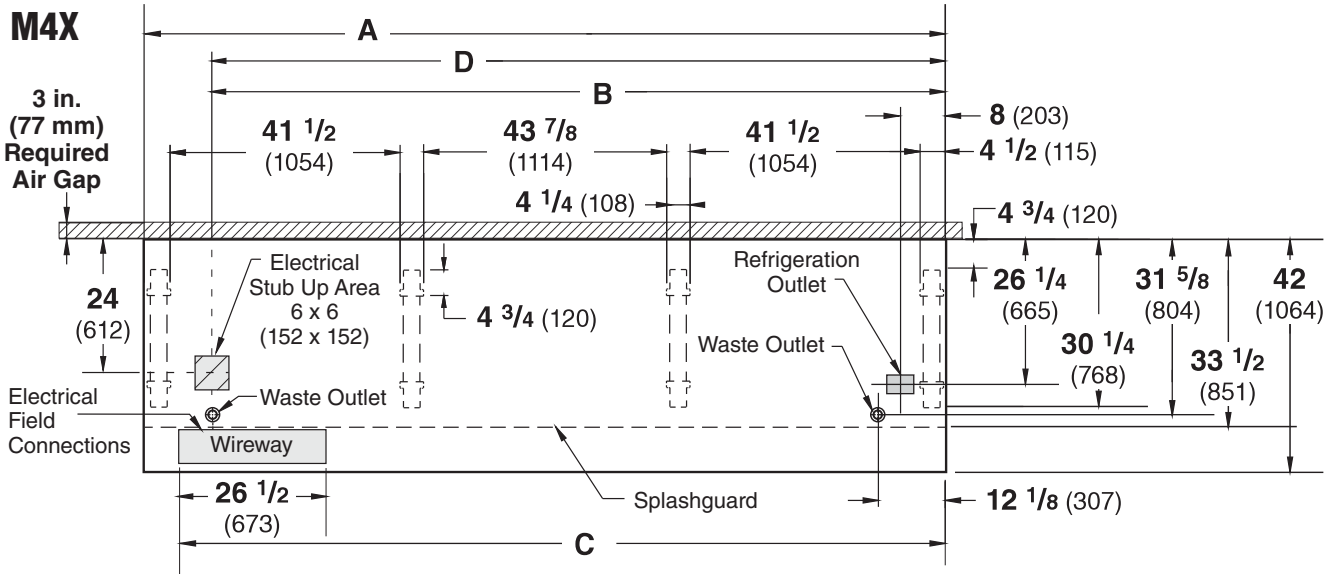
Note: Revision N: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

# Engineering Plan Views

PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	7/8

**Meat and Produce**  
10-2004

Dimensions shown as inches and (mm).



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

**FRONT**

	6 ft	12 ft
<b>General</b>		
<b>(A) Case Length</b> (without ends or partitions) (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)	72 3/8 (1838)	144 1/2 (3670)
Back of case to front of splashguard	42 (1064)	42 (1064)
Back of case to O/S edge of front leg	33 1/2 (851)	33 1/2 (851)
Distance between edges of external legs and center legs	30 1/4 (768)	30 1/4 (768)
Distance between edges of center legs	29 1/2 (750)	41 1/2 (1054)
Distance between front legs and splashguard	NA	43 7/8 (1114)
	2 3/4 (70)	2 3/4 (70)
<b>Electrical Service</b> (Electrical Field Wiring connection point)		
<b>(B) RH End of case to center of stub up area</b>	60 1/4 (1530)	132 3/8 (3363)
Back of case to center of stub up area	24 (612)	24 (612)
Length of electrical wireway	26 1/2 (673)	26 1/2 (673)
<b>(C) RH End of case to LH end of wireway</b>	66 1/8 (1680)	138 1/4 (3511)
<b>Waste Outlets</b> (One each end)		
<b>(D) RH End of case to the center of LH waste outlet</b>	60 1/4 (1530)	132 3/8 (3363)
RH End of case to the center of RH waste outlet	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)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)
<b>Refrigeration Outlet</b>		
Back of case to center of refrigeration outlet	26 1/4 (665)	26 1/4 (665)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)

Multi-deck, 4 Display Levels, and Front Glass



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

**Excel M4X-GE**  
Meat and Delicatessen

**REFRIGERATION DATA**

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

	M4X-GE <sup>§</sup>
<b>Discharge Air °F</b>	29
<b>Evaporator °F</b>	21
<b>Unit Sizing °F</b>	19

<sup>§</sup> 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 †**

M4X-GE	Parallel	Conventional
UNLIT	1114	1204

† Add 10 Btu/hr/ft *per shelf row* for LED fixtures.  
Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

**DEFROST DATA**

	M4X-GE
<b>Frequency (hr)</b>	6
<b>Defrost Water (lb/ft/day)</b>	8

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

OFFTIME	M4X-GE
<b>Temp Term °F</b>	48°F
<b>Failsafe Minutes</b>	35

**ELECTRIC OR GAS** Not Recommended

**Standard Defrost Thermostat**

Close on rise: close 48°F – open 33°F

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control**

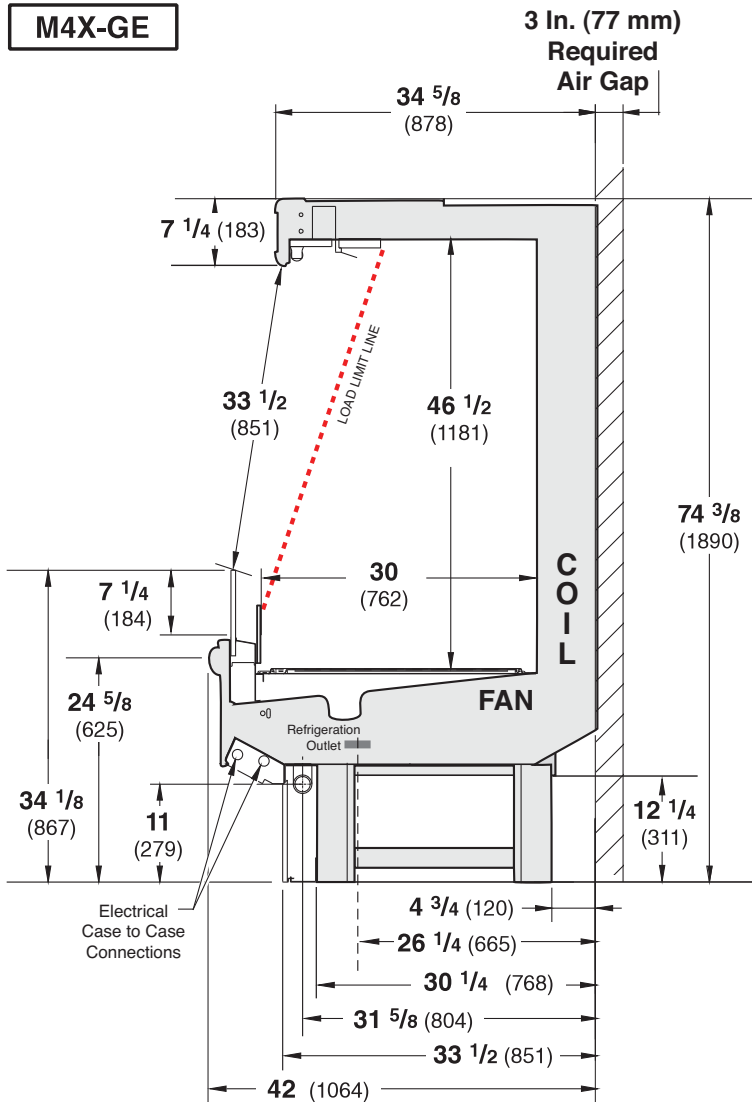
CI/CO*	M4X-GE
	14°F / 4°F

**Indoor Unit Only, Pressure Defrost**

**Termination\*** 48°F

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

Dimensions shown as inches and (mm).



Estimated Charge ***	M4X-GE			
<b>6 ft</b>	1.9 lb	30 oz	0.9 kg	
<b>12 ft</b>	3.9 lb	62 oz	1.8 kg	

\*\*\*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.

<b>Excel M4X-GE</b> <b>Meat and Delicatessen</b>
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**Electrical Data**

	6 ft	12 ft		
Number of Fans—25W	—	3		
Number of Fans—7W	4	—		
	Amperes		Watts	
	6 ft	12 ft	6 ft	12 ft
<b>Evaporator Fan</b>				
120V 50/60Hz Standard Energy Efficient	0.76	1.80	56	108
230V 50/60Hz Standard Energy Efficient	0.40	0.90	56	108
230V 60Hz Export	1.00	1.98	156	300
230V 50Hz Export	1.12	2.28	168	342
<b>Minimum Circuit Ampacity</b>				
120V 50/60Hz Standard Energy Efficient	0.96	2.00		
230V 50/60Hz Standard Energy Efficient	0.60	1.10		
230V 60Hz Export	1.20	2.18		
230V 50Hz Export	1.32	2.48		
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>		
Maximum Over Current Protection 230V	15	15		

**Standard Lighting (T-8 fluorescent)**

1 Row Canopy	0.51	0.77	59	85
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ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2012 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.

**Optional Lighting (T-8 fluorescent)**

Additional 1 Row Canopy	0.51	0.77	59	85
Additional 2 Row Canopy	1.02	1.54	118	170
Additional 3 Row Canopy	1.53	2.31	177	255
1 Row Rail Light	NA	— Glass front does not accept rail light		
3 Rows of Shelves	1.53	2.31	177	255
4 Rows of Shelves	2.04	3.08	236	340

**EcoShine II Canopy**

EcoShine II	0.26	0.48	31.6	58.0
EcoShine II HO	0.33	0.66	39.5	79.4

**EcoShine II Shelves**

3 Rows of Shelves	0.35	0.74	42.3	89.0
4 Rows of Shelves	0.47	0.99	56.4	118.6

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

120V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting

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

*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.*

**Product Data**

<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Ft)	6.06 ft <sup>3</sup> /ft (0.56 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	3.39 ft <sup>2</sup> /ft (1.03 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	6.69 ft <sup>2</sup> /ft (2.04 m <sup>2</sup> /m)

- <sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft<sup>3</sup>/ft [m<sup>3</sup>/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 (1) row of 18-inch shelf.

**ESTIMATED SHIPPING WEIGHT<sup>4</sup>**

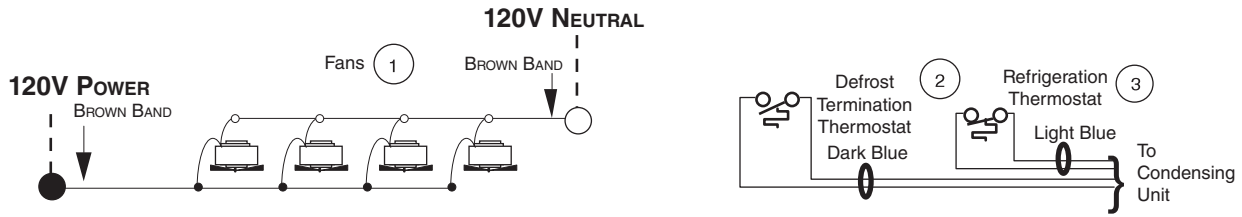
<b>Case</b>	<b>6 ft</b>	<b>12 ft</b>	<b>Solid End</b>
			<i>(each)</i>
<b>lb (kg)</b>	900 (408)	1400 (635)	100 (45)

<sup>4</sup> Actual weights will vary according to optional kits included.

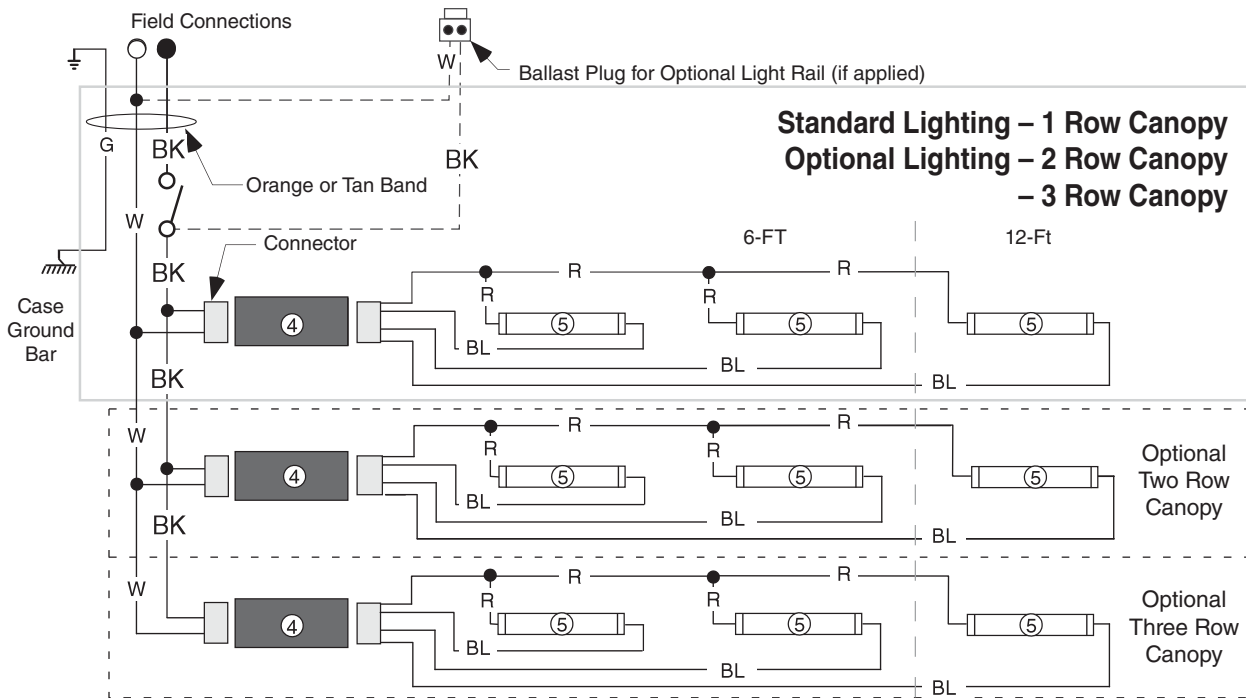
# Fan Wiring Offtime Defrost

2, 3 & 4 Fans

6 ft – 4 Fans  
12 ft – 3 Fans



# Light Circuits — Fluorescent Fixtures



## WARNING

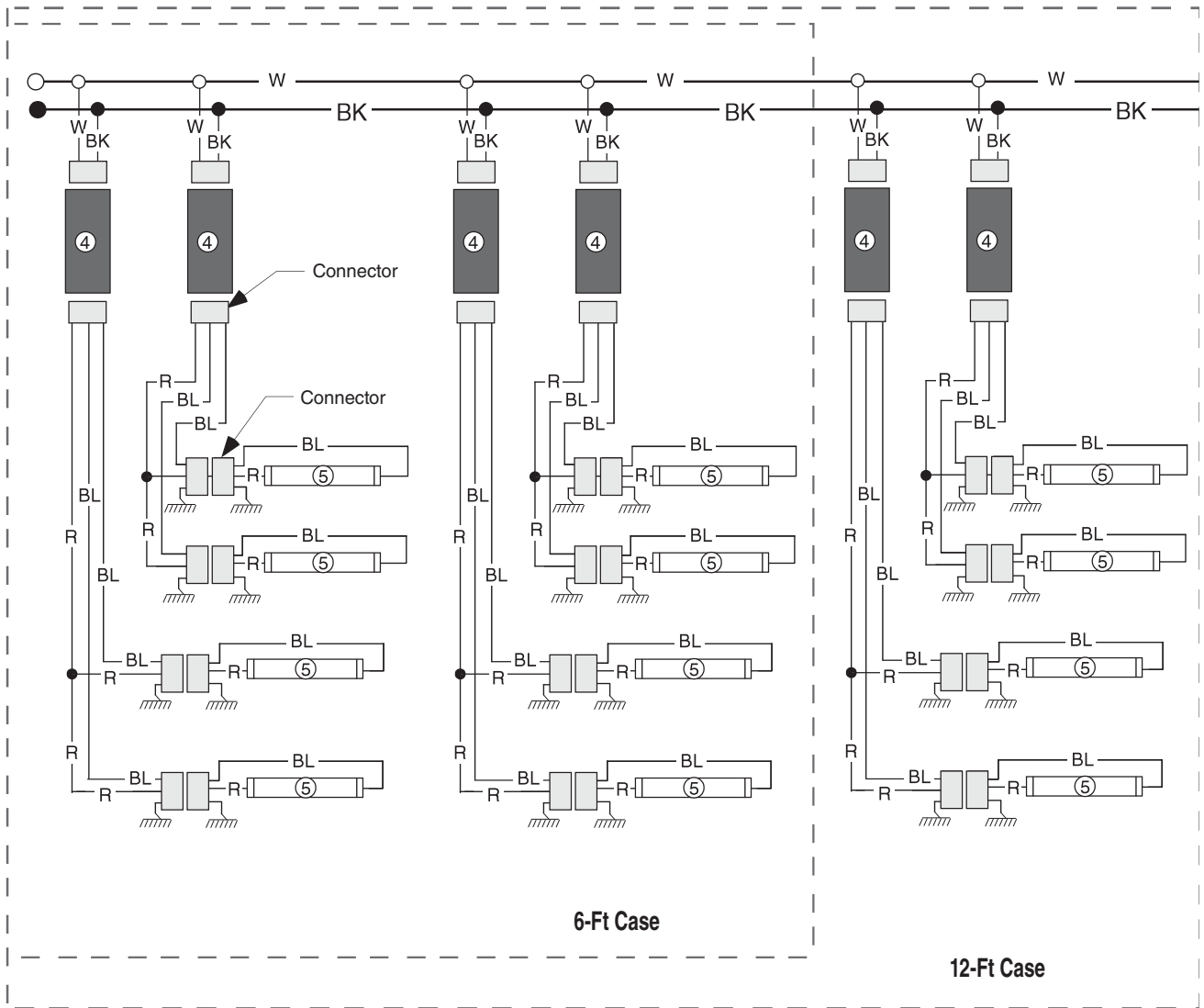
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

# Optional Shelf Lighting Fluorescent Fixtures

## Optional Shelf Harness and Light Circuits for Four Rows of Shelves



### WARNING

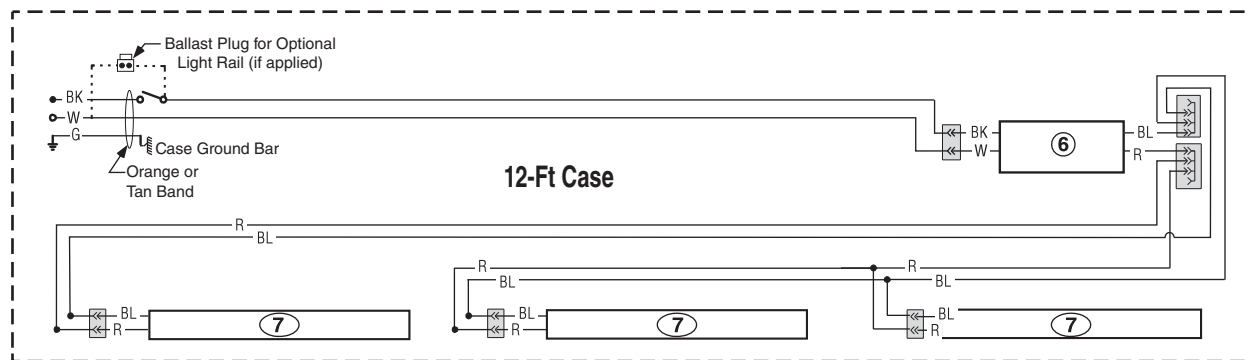
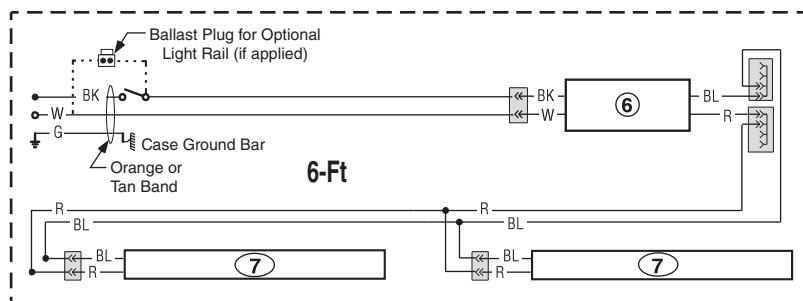
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# Optional Canopy Light Circuits — LED Fixtures

## EcoShine II LED Canopy Lighting – 1 Row




### WARNING

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

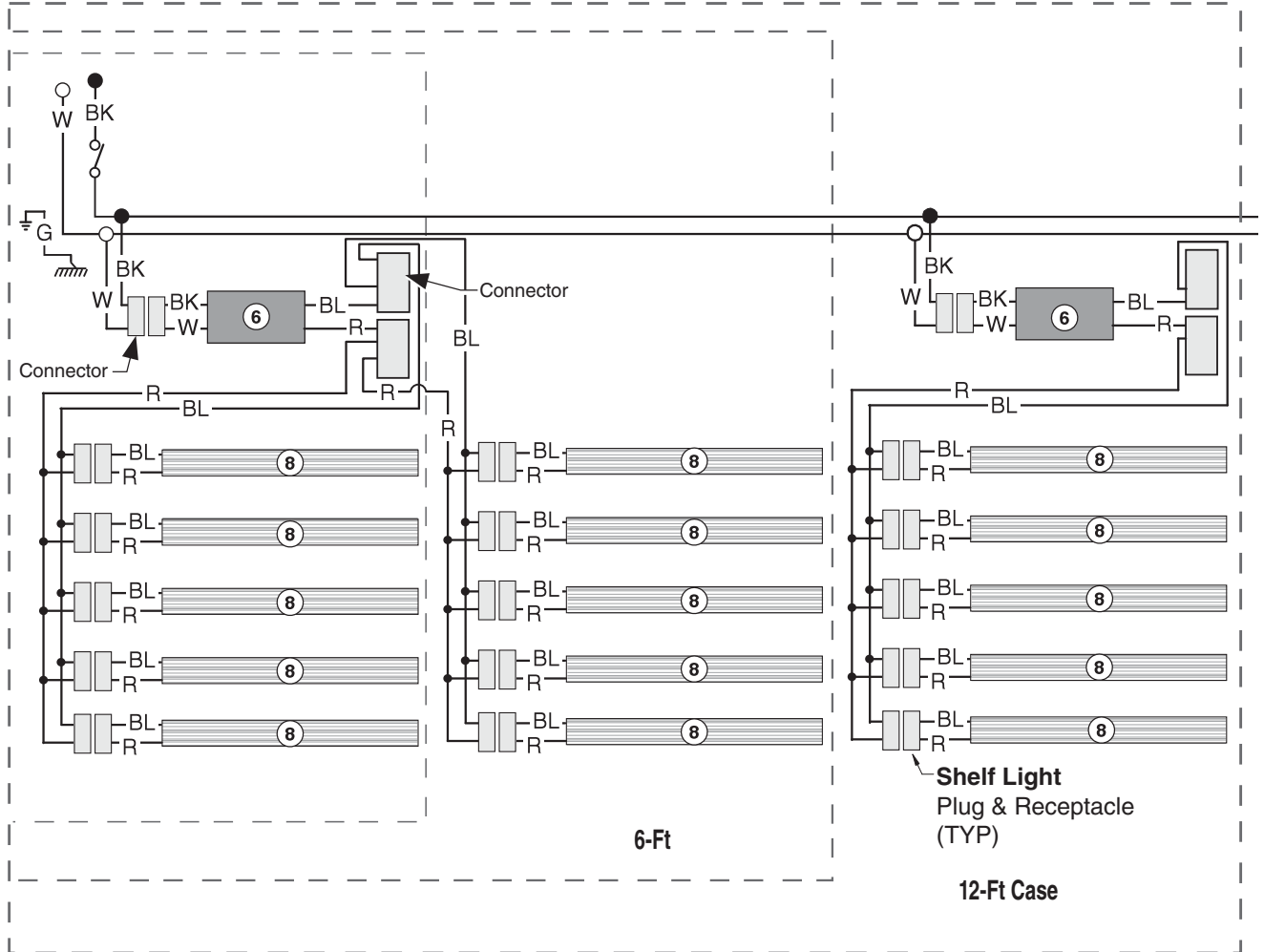
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● = 120V POWER    ○ = 120V NEUTRAL    ⊥ = FIELD GROUND     = CASE GROUND

# Optional Shelf Lighting LED Fixtures

## 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.

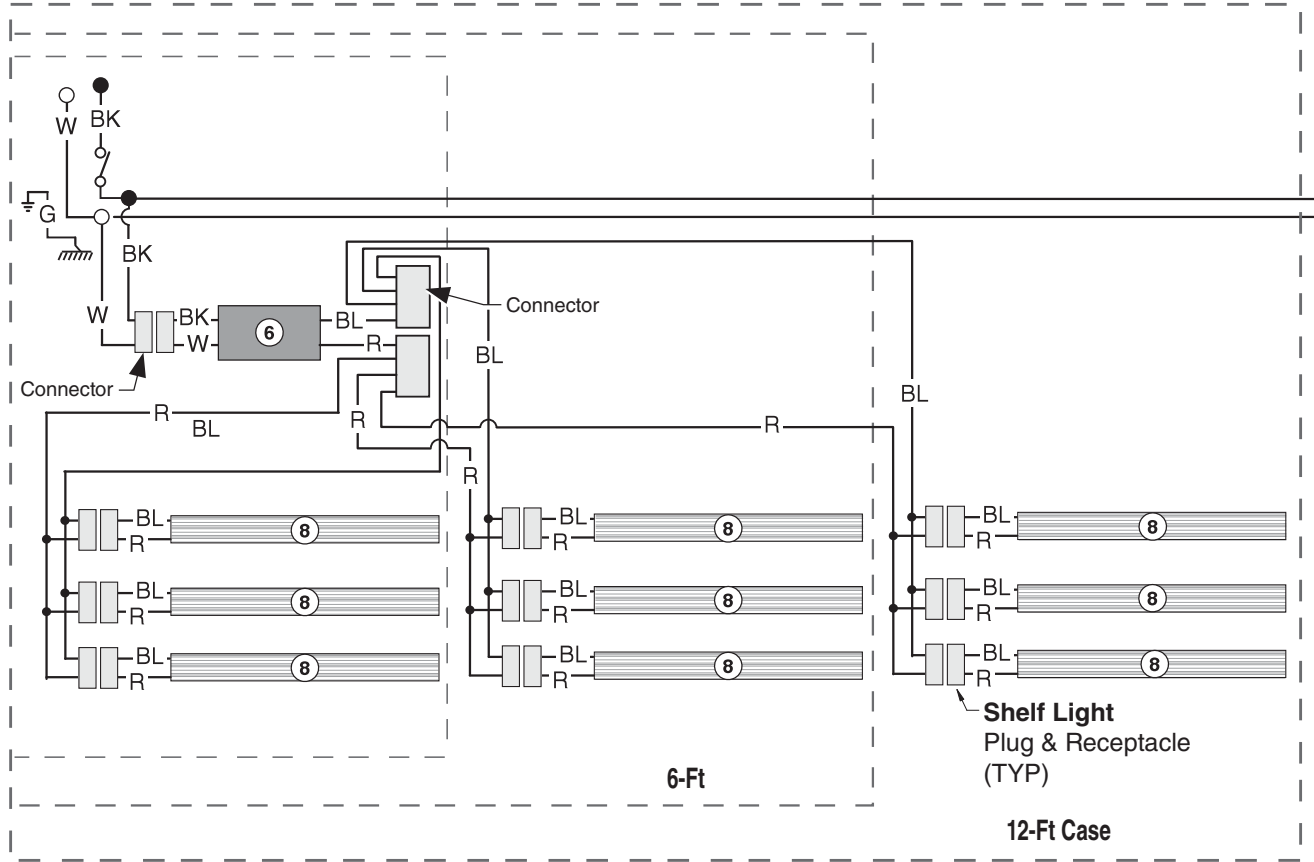
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R = Red      G = Green      BL = Blue      BK = Black      W = White

● = 80V POWER      ○ = 80V NEUTRAL      ⊥ = FIELD GROUND      ≡ = 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      ○ = 80V NEUTRAL      ⊥ = FIELD GROUND      ≡ = CASE GROUND