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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
<b>FAN ASSEMBLIES</b>				<b>THERMOSTATS</b>			
<b>8 Ft &amp; 12 Ft</b>				B. Optional Adjustable Refrigeration Thermostat (2)			
A.	<b>12W Standard</b>	Fan Assembly	(1)	<b>LAMPS AND BALLASTS</b>			
	0047000	Fan Motor, Evaporator (MO.4410103)		C.	Ballast, Electronic		(3)
	0461805	Fan Blade (FB.4780446)			0480130	2 lamps (BA.4481676)	
	<b>12W Energy Efficient</b>	Fan Assembly	(1)		0480131	3 lamps (BA.4481654)	
	0477655	Fan Motor, Evaporator (MO.4410546)			0480132	4 lamps (BA.4481677)	
	0461805	Fan Blade (FB.4780446)		D.	Fluorescent Lamp		(4)
					<i>Replace with like fixtures</i>		
<b>6 Ft Only</b>				<b>LED FIXTURES AND POWER SUPPLY</b>			
A.	<b>7W Standard</b>	Fan Assembly	(1)	E.	0501213	Power Supply (EP.4481861)	(5)
	0058698	Fan Motor, Evaporator (MO.4410102)		F.		LED Canopy Fixture	(6)
	0142780	Fan Blade (FB.0142780)			<i>Replace with like fixtures — See Page 5.</i>		
	<b>7W Energy Efficient</b>	Fan Assembly	(1)	G.		LED Shelf Fixture	(7)
	0477654	Fan Motor, Evaporator (MO.4410545)			<i>Replace with like fixtures — See Page 5.</i>		
	0142780	Fan Blade (FB.0142780)					

Note: Revision F adds EcoShine LED (page 4) and parts (page 5), and revises canopy wiring diagram (page 6). Other changes marked by bar, underline or circle.



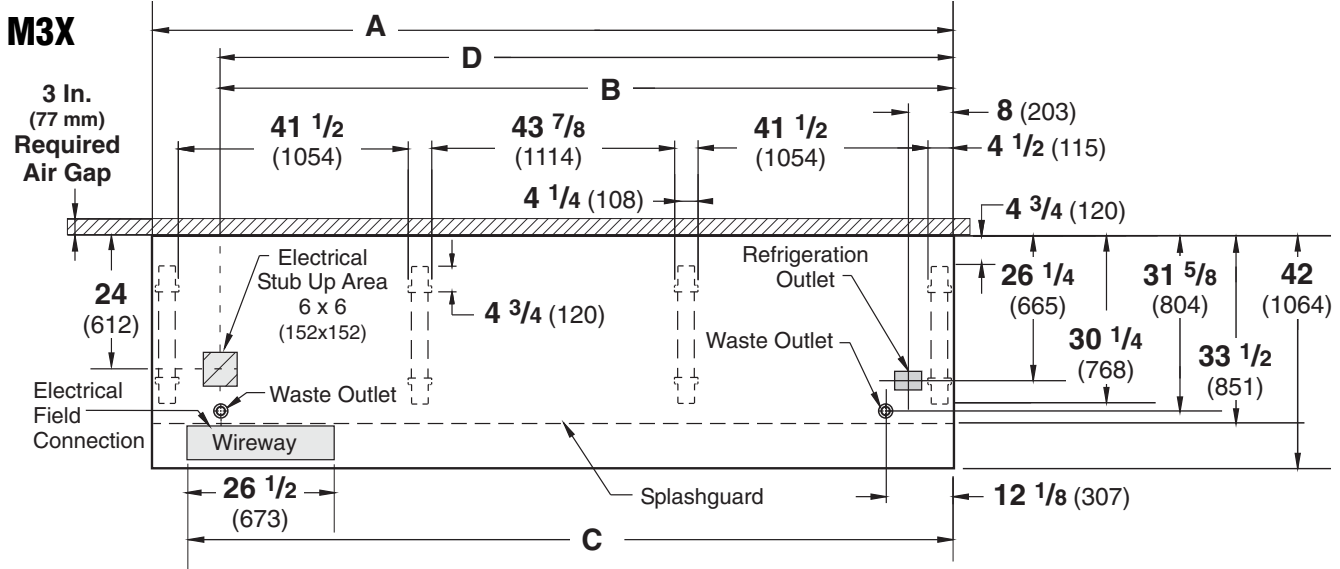
# Engineering Plan Views

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

## Meat, Delicatessen & Produce





10-2004

Dimensions shown as in. and (mm).



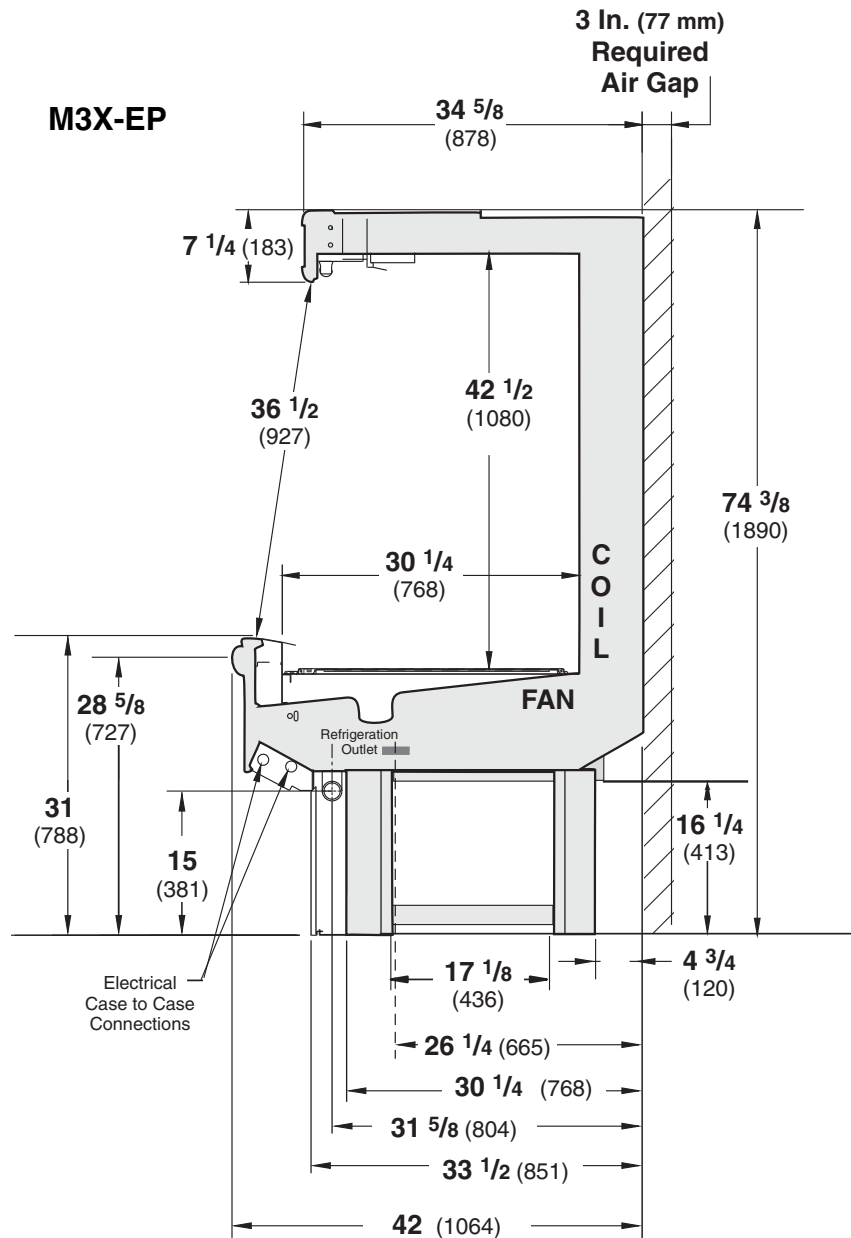
**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

**FRONT**

	6 ft	8 ft	12 ft
<b>General</b>			
<b>(A) Case Length (without ends or partitions)</b> (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)	96 3/8 (2448)	144 1/2 (3670)
Back of case to front of splashguard	42 (1064)	42 (1064)	42 (1064)
Back of case to O/S edge of front leg	33 1/2 (851)	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)	30 1/4 (768)
Distance between edges of center legs	29 1/2 (750)	41 1/2 (1054)	41 1/2 (1054)
Distance between front legs and splashguard	NA	NA	43 7/8 (1114)
	2 3/4 (70)	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)	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 	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C) RH End of case to LH end of wireway</b>	66 1/8 (1680)	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets (One each end)</b> 			
<b>(D) RH End of case to the center of LH waste outlet</b>	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)
<b>Refrigeration Outlet</b> 			
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)

**Impact *Excel* M3X-EP**  
**Meat, Delicatessen**  
**Pre-cut and Packaged Produce**

Dimensions shown as inches and (mm).



**NSF Certification**

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

**REFRIGERATION DATA**

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

M3X-EP	UNLIT	LIT
Discharge Air °F	31	29
Evaporator °F	28	26
Unit Sizing °F	26	24

*Btu/hr/ft<sup>3</sup> — Unlit Shelves<sup>‡‡</sup>*

M3X-EP	Parallel	Conventional
UNLIT	930	1010

<sup>‡</sup>Optional energy efficient motors reduce the refrigeration load by 27 Btu/hr/ft.  
<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)	8
(± 15% based on case configuration and product loading).	

OFFTIME	M3X-EP
Time (minutes)	30
<i>ELECTRIC OR GAS</i>	Not Recommended

**CONVENTIONAL CONTROLS**

Low Pressure Backup Control	M3X-EP
CI/CO*	19°F / 9°F

**Indoor Unit Only,**

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

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

Estimated Charge**	M3X-EP
6 ft	2.2 lb 35 oz 1.0 kg
8 ft	3.1 lb 50 oz 1.4 kg
12 ft	4.5 lb 72 oz 2.0 kg

\*\*This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound.

**Impact *Excel* M3X-EP**  
**Meat, Delicatessen**  
**Precut and Packaged Produce**

**Electrical Data**

			<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>			
<b>Number of Fans—12W</b>			—	2	3			
<b>Number of Fans—7W</b>			2	—	—			
			<b>Amperes</b>			<b>Watts</b>		
			<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>	<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>
<b>Evaporator Fan</b>								
120V	60Hz	Standard	1.00	1.30	1.95	78	100	150
120V	50Hz	Standard	1.10	1.50	2.25	84	114	171
230V	60Hz	Export	0.50	0.66	0.99	78	100	150
230V	50Hz	Export	0.56	0.76	1.14	84	114	171
120V	60Hz	Energy Efficient	0.38	0.60	0.90	28	36	54
230V	60Hz	Energy Efficient	0.20	0.30	0.45	28	36	54
<b>Minimum Circuit Ampacity</b>								
120V	60Hz	Standard	1.20	1.50	2.15			
120V	50Hz	Standard	1.30	1.70	2.45			
230V	60Hz	Export	0.70	0.86	1.19			
230V	50Hz	Export	0.76	0.96	1.34			
120V	60Hz	Energy Efficient	0.58	0.80	1.10			
230V	60Hz	Energy Efficient	0.40	0.50	0.65			
<b>Maximum Over Current Protection 120V</b>			<b>20</b>	<b>20</b>	<b>20</b>			
Maximum Over Current Protection 230V			15	15	15			
<b>Standard Lighting (T-8 fluorescent)</b>								
1 Row Canopy			0.51	0.51	0.77	59	59	85
<b>Optional Lighting (T-8 fluorescent)</b>								
Additional 1 Row Canopy			0.51	0.51	0.77	59	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
2 Rows of Shelves			1.02	1.02	1.54	118	118	170
<b>EcoShine Multi-deck — Normal CRI—120VAC, 50/60Hz</b>								
2 Row Canopy (Front & Rear)			0.41	0.55	0.82	49	66	98
2 Row of Shelves			0.29	0.39	0.58	35	47	70
<b>EcoShine Multi-deck — High CRI —120VAC, 50/60Hz</b>								
2 Row Canopy (Front & Rear)			0.47	0.63	0.93	56	75	112
2 Row of Shelves			0.35	0.47	0.70	42	56	84
<b>Optional Always*Bright LED Canopy Lighting</b>								
2 Row Canopy (Front & Rear)			0.55	0.71	1.08	66	85	130
2 Row of Shelves			0.34	0.47	0.67	41	56	80

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

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

**Product Data**

<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Ft)	6.04 ft <sup>3</sup> /ft (0.56 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	3.49 ft <sup>2</sup> /ft (1.06 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	5.37 ft <sup>2</sup> /ft (1.64 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 (1) row of 16-inch shelf and (1) row of 18-inch shelf.

ESTIMATED SHIPPING WEIGHT <sup>4</sup>				
Case	6 ft	8 ft	12 ft	Solid End
				(each)
<b>lb (kg)</b>	800 (363)	1000 (454)	1300 (590)	75 (34)

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

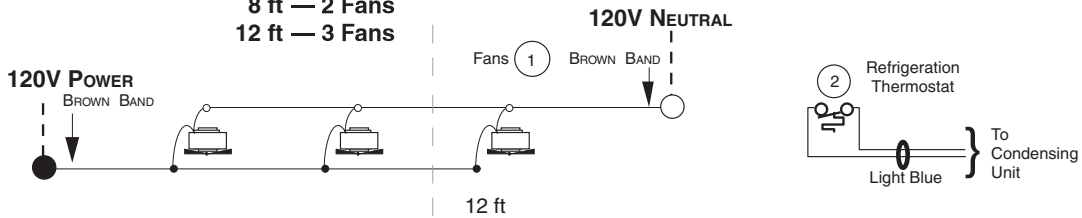
PARTS LIST (Continued from Page 1)										
Item	Part #	Description				Item	Part #	Description		
<b>LED FIXTURES AND POWER SUPPLY</b>										
E.	0501213	Power Supply (EP.4481861)			(5)	F.	<b>(CONTINUED) EcoShine LED Canopy Fixture</b>			
F.	<b>EcoShine LED Canopy Fixture</b>				(6)	4441713	Rear	36-inch	<b>2900K</b>	HCRI
	4441720	Front	48-inch	<b>2900K</b>	HCRI	4441715	Rear	36-inch	<b>3500K</b>	HCRI
	4441722	Front	48-inch	<b>3500K</b>	HCRI	4441717	Rear	36-inch	<b>3500K</b>	
	4441724	Front	48-inch	<b>3500K</b>		4441719	Rear	36-inch	<b>4100K</b>	
	4441726	Front	48-inch	<b>4100K</b>		G.	<b>EcoShine LED Shelf Fixture</b>			
	4441721	Rear	48-inch	<b>2900K</b>	HCRI	4441590	48-inch	<b>2900K</b>	HCRI	(7)
	4441723	Rear	48-inch	<b>3500K</b>	HCRI	4441591	48-inch	<b>3500K</b>	HCRI	
	4441725	Rear	48-inch	<b>3500K</b>		4441592	48-inch	<b>3500K</b>		
	4441727	Rear	48-inch	<b>4100K</b>		4441593	48-inch	<b>4100K</b>		
	4441712	Front	36-inch	<b>2900K</b>	HCRI	4441586	36-inch	<b>2900K</b>	HCRI	
	4441714	Front	36-inch	<b>3500K</b>	HCRI	4441587	36-inch	<b>3500K</b>	HCRI	
	4441716	Front	36-inch	<b>3500K</b>		4441588	36-inch	<b>3500K</b>		
	4441718	Front	36-inch	<b>4100K</b>		4441589	36-inch	<b>4100K</b>		

Note: Always\*Bright lamps will be replaced with the latest generation of EcoShine lamps.

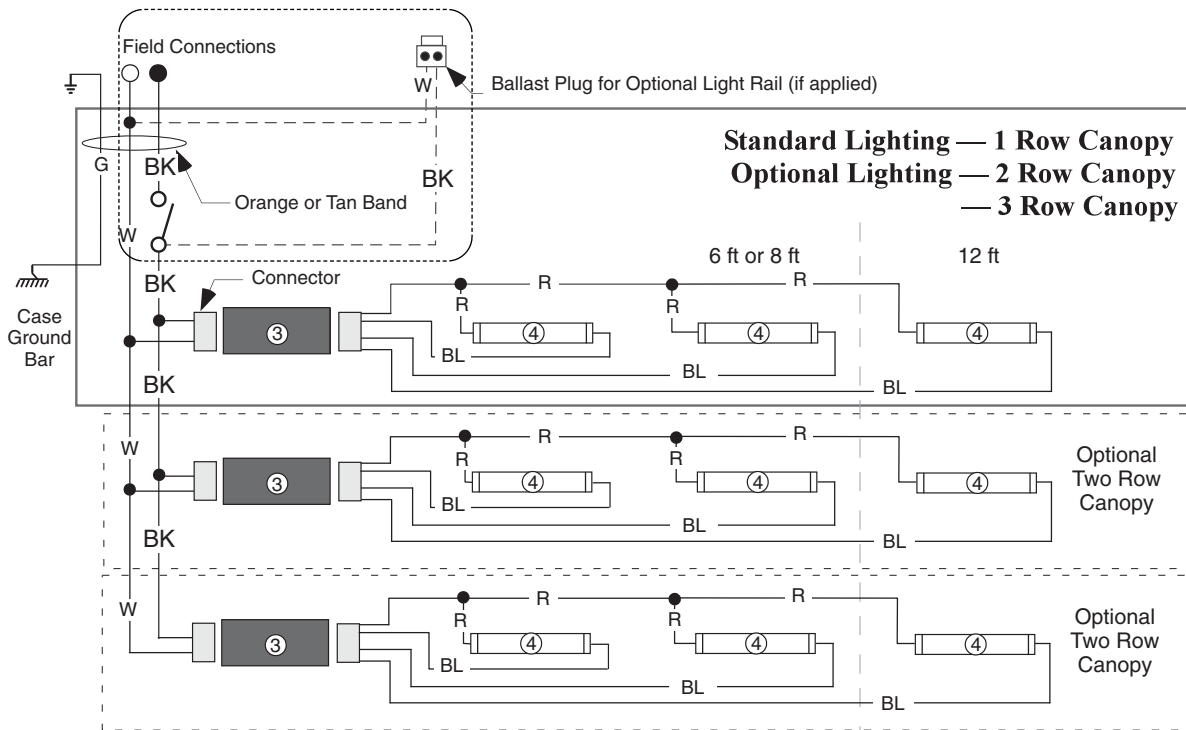
# Fan Wiring Offtime Defrost

2 & 3 Fans

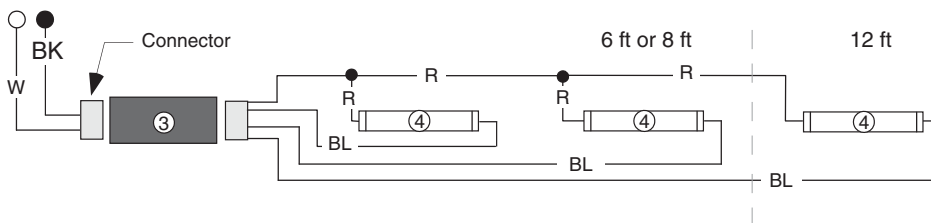
6 ft — 2 Fans  
8 ft — 2 Fans  
12 ft — 3 Fans



# Light Circuits — Fluorescent Fixtures



## Optional Lighting — 1 Row Rail



## WARNING

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

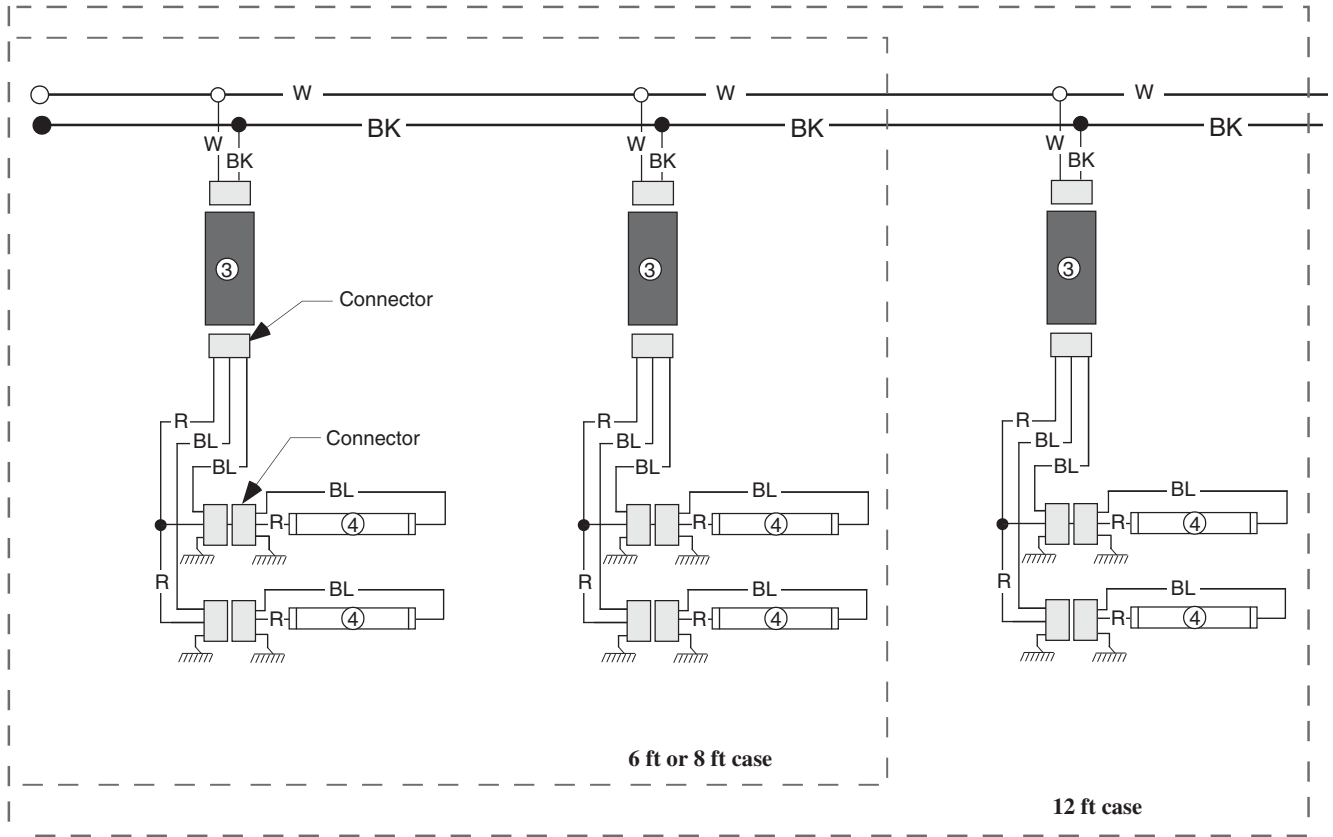
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

# Optional Shelf Lighting Fluorescent Fixtures

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



### WARNING

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

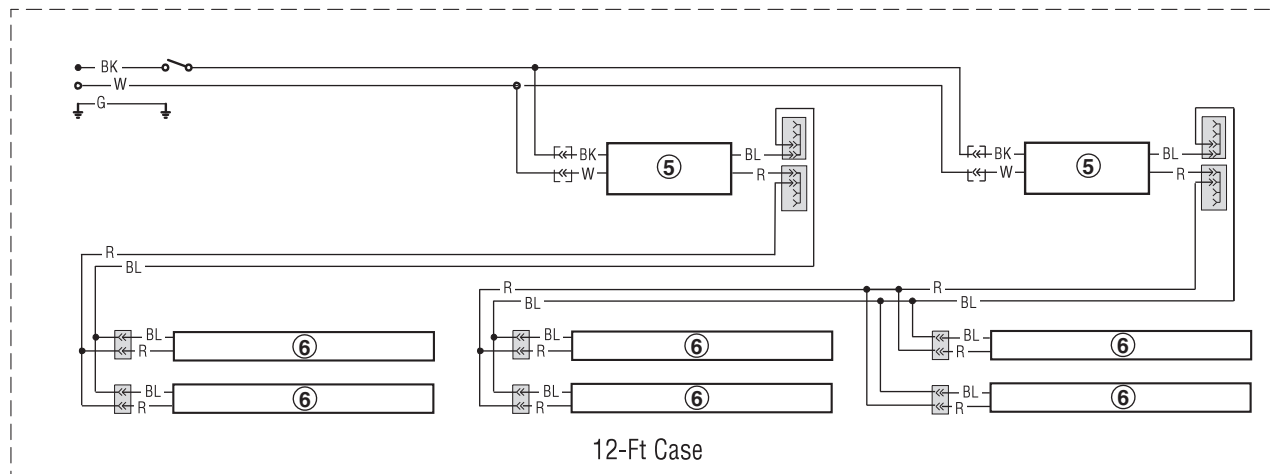
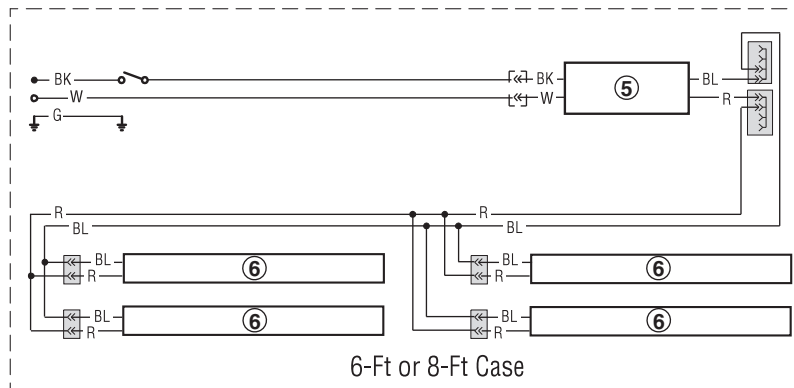
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● = 120V POWER    ○ = 120V NEUTRAL    ⊥ = FIELD GROUND    ≡ = CASE GROUND

# Optional Canopy Lighting LED Fixtures

## Standard LED Canopy Lighting — 2 Row Canopy



### WARNING

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

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

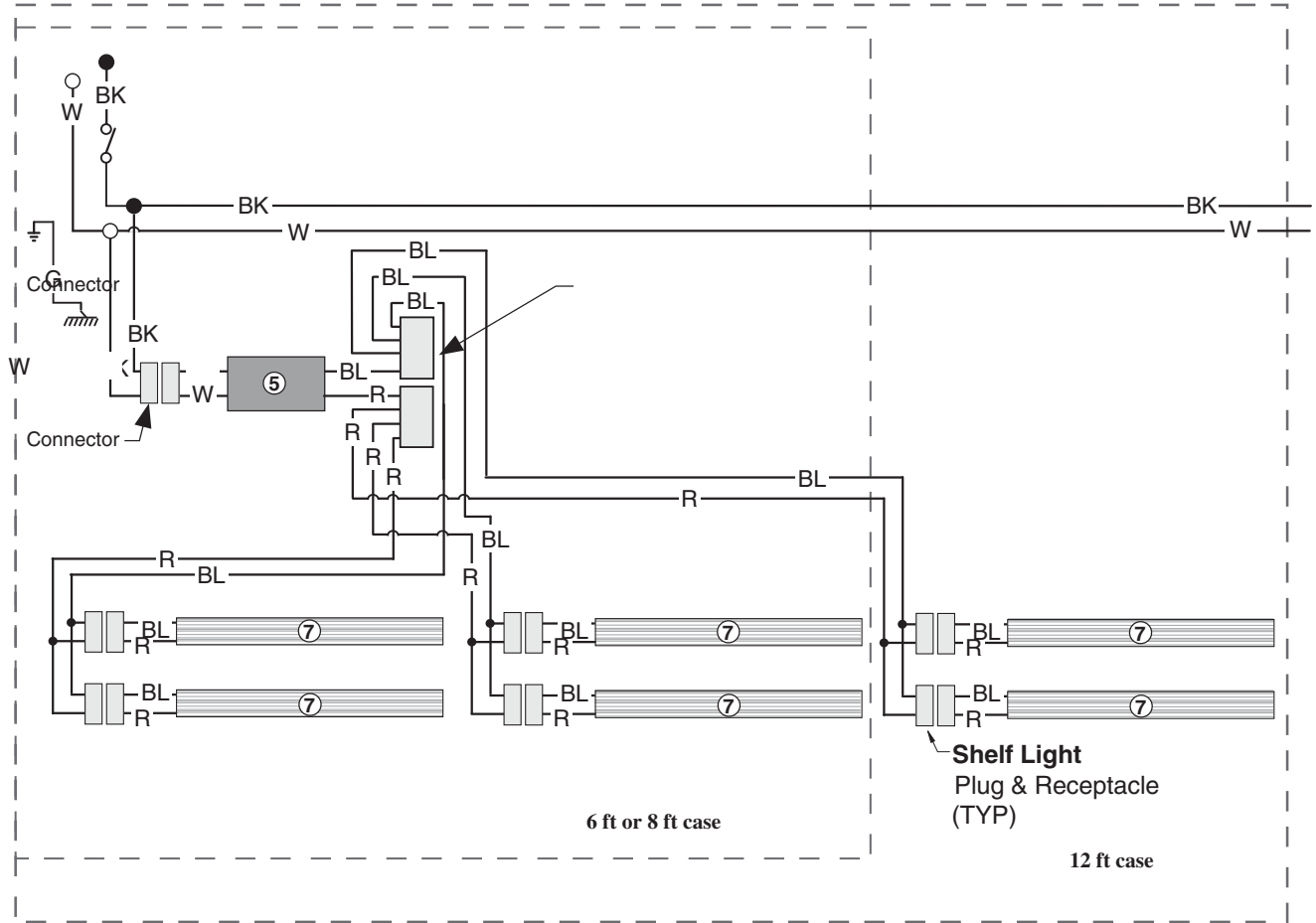
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

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



# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED 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      G = Green      BL = Blue      BK = Black      W = White

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