

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>8 Ft &amp; 12 Ft</b>				D.	Ballast, Electronic		(4)
A.	<b>12W Standard</b> Fan Assembly		(1)	0480130	2 lamps (BA.4481676)		
	0047000	Fan Motor, Evaporator (MO.4410103)		0480131	3 lamps (BA.4481654)		
	0461805	Fan Blade (FB.4780446)		0480132	4 lamps (BA.4481677)		
	<b>12W Energy Efficient</b> Fan Assembly		(1)	E.	Fluorescent Lamp		(5)
	0477655	Fan Motor, Evaporator (MO.4410546)			<i>Replace with like fixtures</i>		
	0461805	Fan Blade (FB.4780446)		<b>LED FIXTURES AND POWER SUPPLY</b>			
<b>THERMOSTATS</b>				F.	0501213	Power Supply (EP.4481861)	(6)
B.	0411744	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(2)	G.	LED Canopy Fixture		(7)
					<i>Replace with like fixtures — See Page 5.</i>		
C.		Optional Adjustable Refrigeration Thermostat	(3)	H.	LED Shelf Fixture		(8)
					<i>Replace with like fixtures — See Page 5.</i>		

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

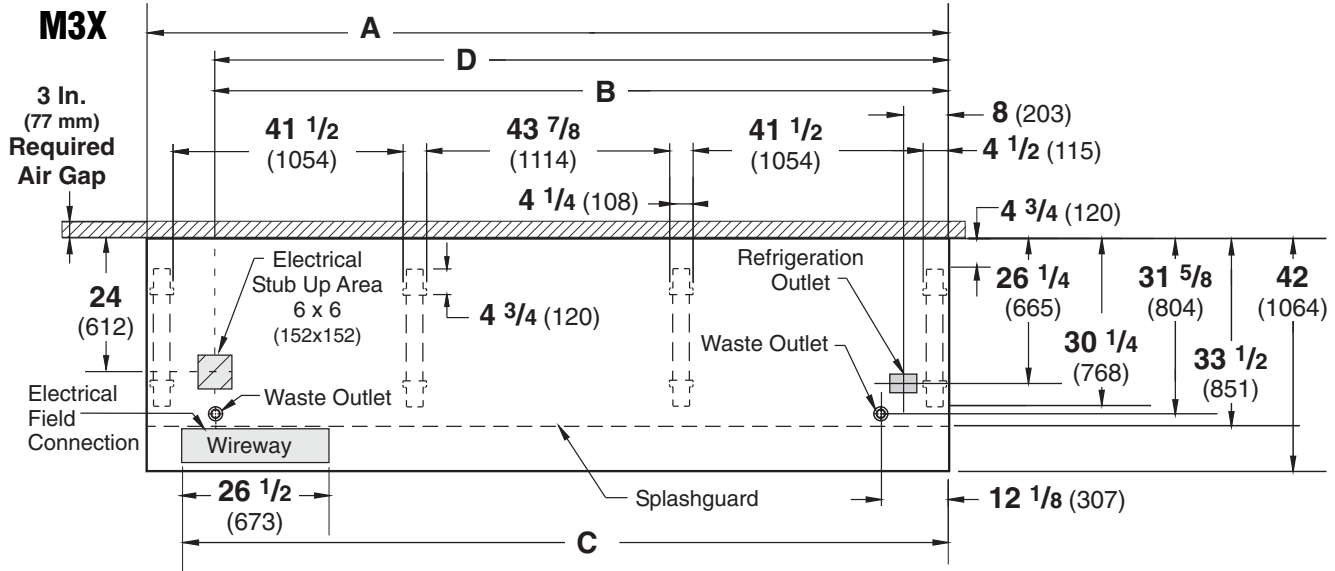
## PHYSICAL DATA

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.

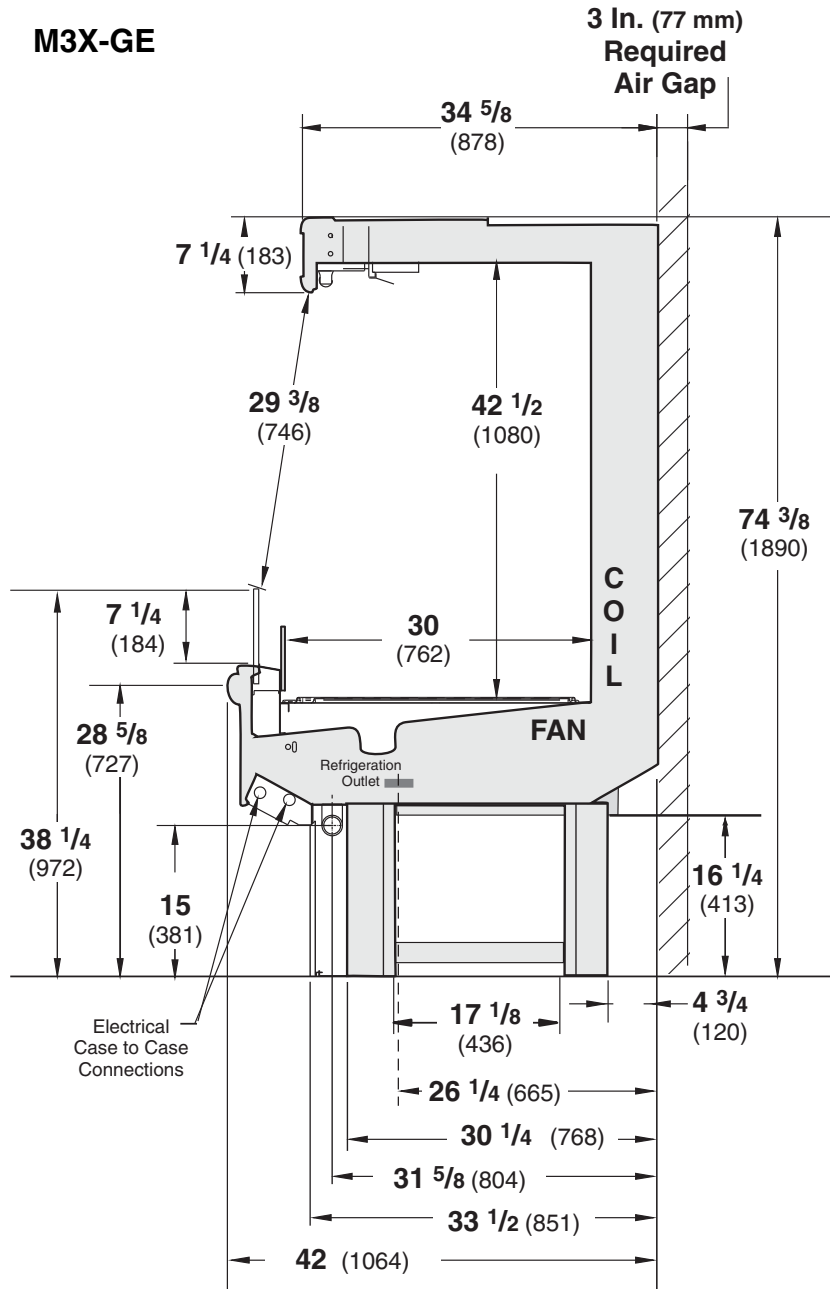
FRONT

	8 ft	12 ft
<b>General</b>		
<b>(A)</b> Case Length (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)	96 3/8 (2448)	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	41 1/2 (1054)	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)</b> RH End of case to center of stub up area	84 1/4 (2140)	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)</b> RH End of case to LH end of wireway	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets</b> (One each end) 		
<b>(D)</b> RH End of case to the center of LH waste outlet	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)
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, 3 Display Levels, and Glass Front

Dimensions shown as inches and (mm).

**M3X-GE**



**Impact Excel M3X-GE**

**Meat, Delicatessen**

**Pre-cut and Packaged Produce**

**REFRIGERATION DATA**

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

	M3X-GE
Discharge Air (°F)	28
Evaporator (°F)	21
Unit Sizing (°F)	19

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

M3X-GE	Parallel	Conventional
UNLIT	935	1020

<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**

	M3X-GE
Frequency (hr)	8
Defrost Water (lb/ft/day)	7
(± 15% based on case configuration and product loading).	

OFFTIME	M3X-GE
Temp Term (°F)	48°F
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**

	M3X-GE
CI/CO*	14°F / 4°F

**Indoor Unit Only, Pressure Defrost**

Termination*	48°F
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\*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge**	M3X-E		
8 ft	2.7 lb	43 oz	1.2 kg
12 ft	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.

**NSF Certification**

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

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

**Electrical Data**

			<b>8 ft</b>	<b>12 ft</b>		
<b>Number of Fans—12W</b>			<b>2</b>	<b>3</b>		
			<b>Amperes</b>		<b>Watts</b>	
			<b>8 ft</b>	<b>12 ft</b>		<b>8 ft 12 ft</b>
<b>Evaporator Fan</b>						
120V 60Hz Standard			1.30	1.95	100	150
120V 50Hz Standard			1.50	2.25	114	171
230V 60Hz Export			0.66	0.99	100	150
230V 50Hz Export			0.76	1.14	114	171
120V 60Hz Energy Efficient			0.60	0.90	36	54
230V 60Hz Energy Efficient			0.30	0.45	36	54
<b>Minimum Circuit Ampacity</b>						
120V 60Hz Standard			1.50	2.15		
120V 50Hz Standard			1.70	2.45		
230V 60Hz Export			0.86	1.19		
230V 50Hz Export			0.96	1.34		
120V 60Hz Energy Efficient			0.80	1.10		
230V 60Hz Energy Efficient			0.50	0.65		
<b>Maximum Over Current Protection 120V</b>			<b>20</b>	<b>20</b>		
Maximum Over Current Protection 230V			15	15		
<b>Standard Lighting (T-8 fluorescent)</b>						
1 Row Canopy			0.51	0.77	59	85
<b>Optional Lighting (T-8 fluorescent)</b>						
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				
2 Rows of Shelves			1.02	1.54	118	170
<b>EcoShine Multi-deck — Normal CRI—120VAC, 50/60Hz</b>						
2 Row Canopy (Front & Rear)			0.55	0.82	66	98
2 Row of Shelves			0.39	0.58	47	70
<b>EcoShine Multi-deck — High CRI —120VAC, 50/60Hz</b>						
2 Row Canopy (Front & Rear)			0.63	0.93	75	112
2 Row of Shelves			0.47	0.70	56	84
<b>Optional Always*Bright LED Canopy Lighting</b>						
2 Row Canopy			0.71	1.08	85	130
2 Row of Shelves			0.47	0.67	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)	6.02 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)	5.35 ft <sup>2</sup> /ft (1.63 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.

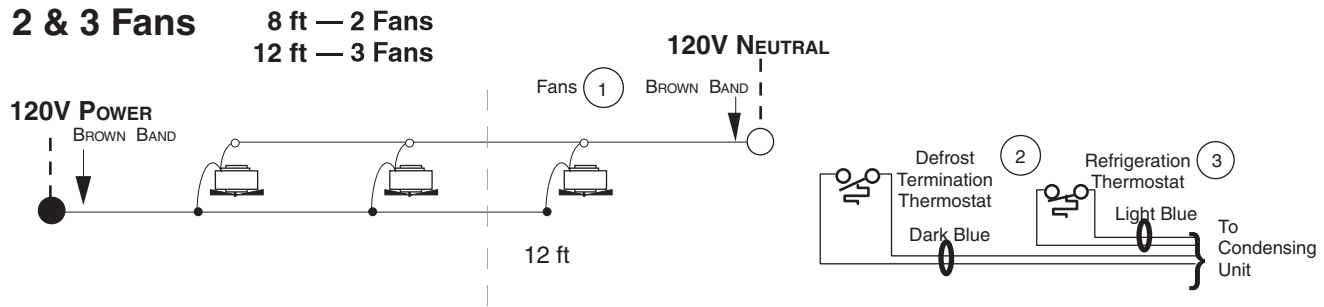
<b>ESTIMATED SHIPPING WEIGHT <sup>4</sup></b>			
Case			Solid End
	<i>8 ft</i>	<i>12 ft</i>	<i>(each)</i>
<b>lb (kg)</b>	1000 (454)	1300 (590)	75 (34)

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

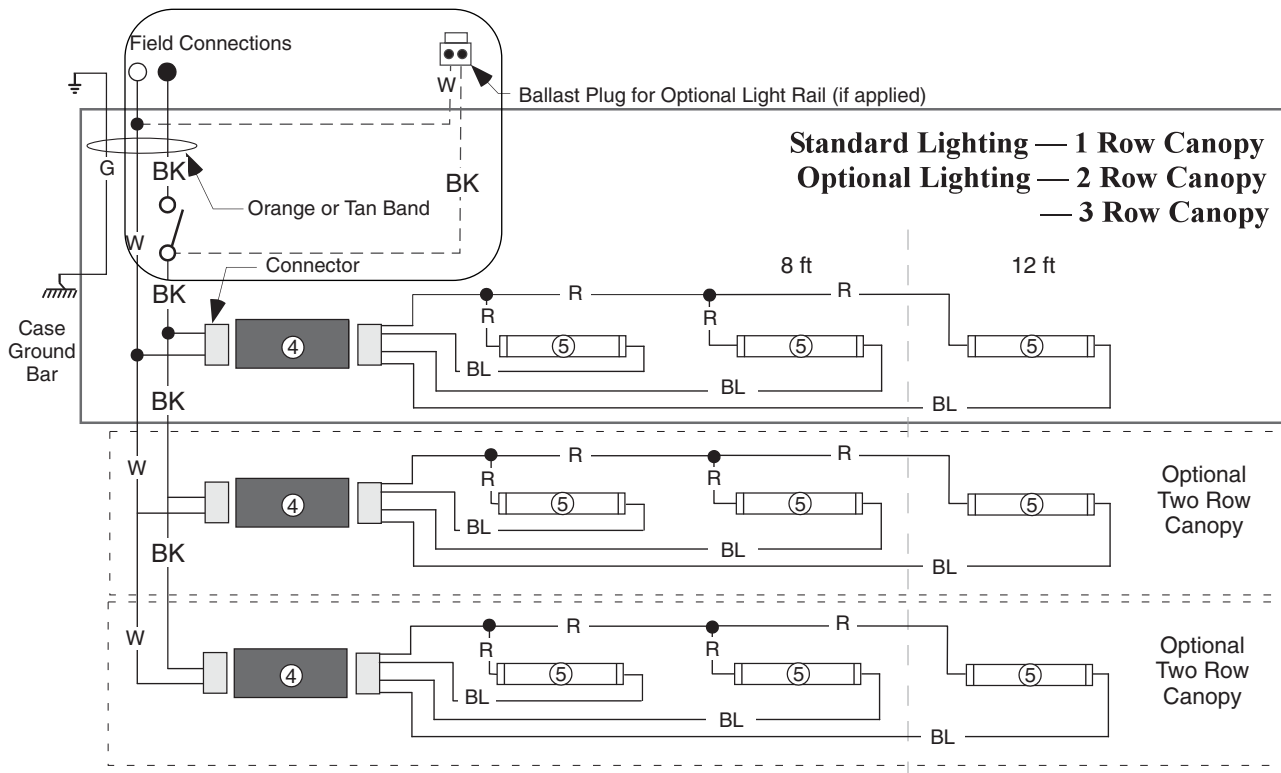
PARTS LIST (Continued from Page 1)					
Item	Part #	Description	Item	Part #	Description
<b>LED FIXTURES AND POWER SUPPLY</b>					
F.	0501213	Power Supply (EP.4481861) (6)	H.	<b>EcoShine LED Shelf Fixture (8)</b>	
G.	<b>EcoShine LED Canopy Fixture (7)</b>		4441590	48-inch	<b>2900K</b> HCRI
	4441720	Front 48-inch <b>2900K</b> HCRI	4441591	48-inch	<b>3500K</b> HCRI
	4441722	Front 48-inch <b>3500K</b> HCRI	4441592	48-inch	<b>3500K</b>
	4441724	Front 48-inch <b>3500K</b>	4441593	48-inch	<b>4100K</b>
	4441726	Front 48-inch <b>4100K</b>			
	4441721	Rear 48-inch <b>2900K</b> HCRI			
	4441723	Rear 48-inch <b>3500K</b> HCRI			
	4441725	Rear 48-inch <b>3500K</b>			
	4441727	Rear 48-inch <b>4100K</b>			

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

# Fan Wiring Offtime Defrost



# Light Circuits — Fluorescent Fixtures



## WARNING

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

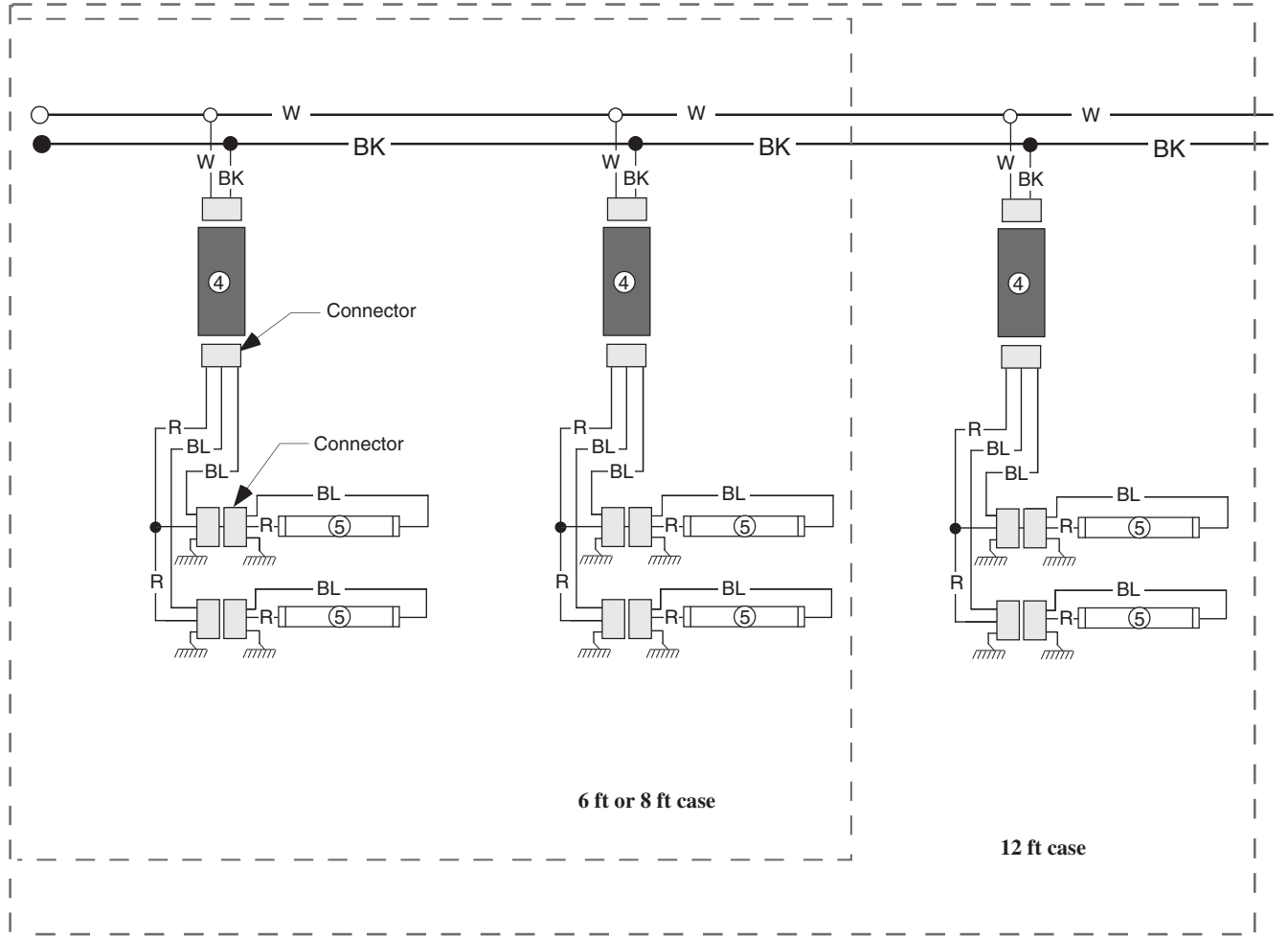
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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 Two Rows of Shelves**



**WARNING**

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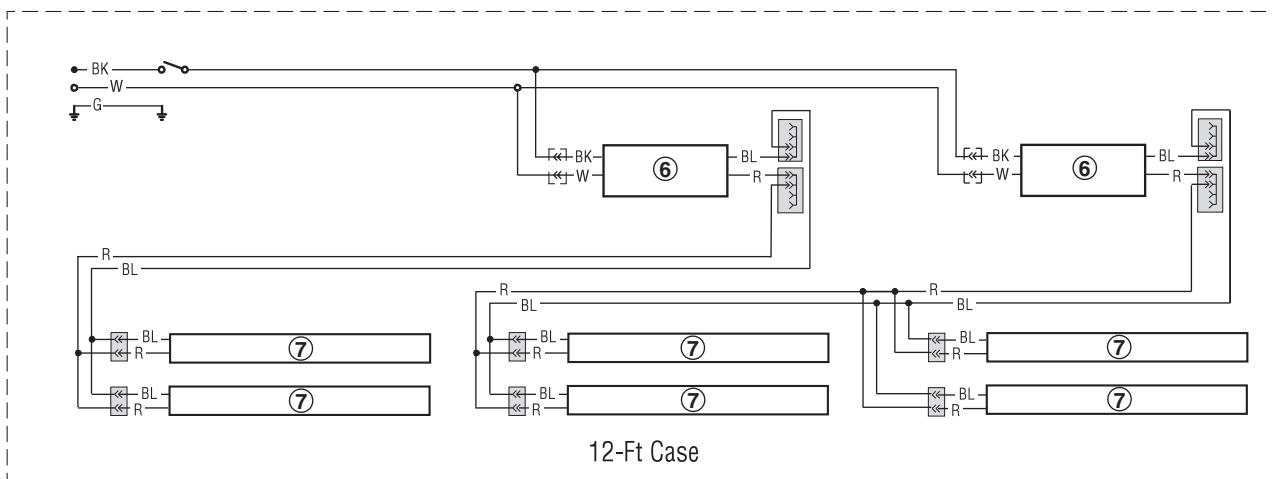
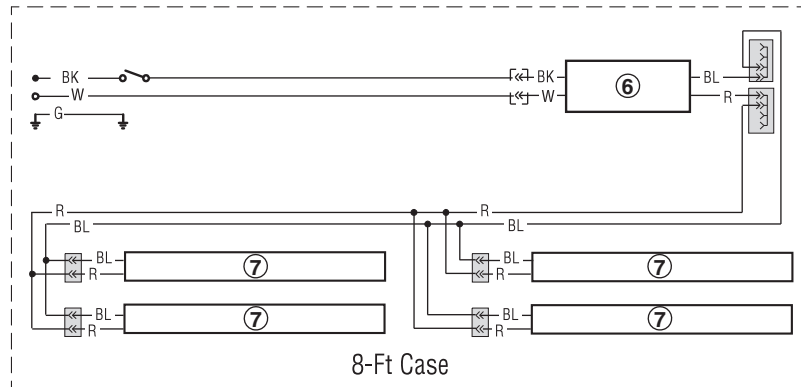
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# Optional Canopy Lighting LED Fixtures

## Standard LED Canopy Lighting — 2 Row Canopy



### WARNING

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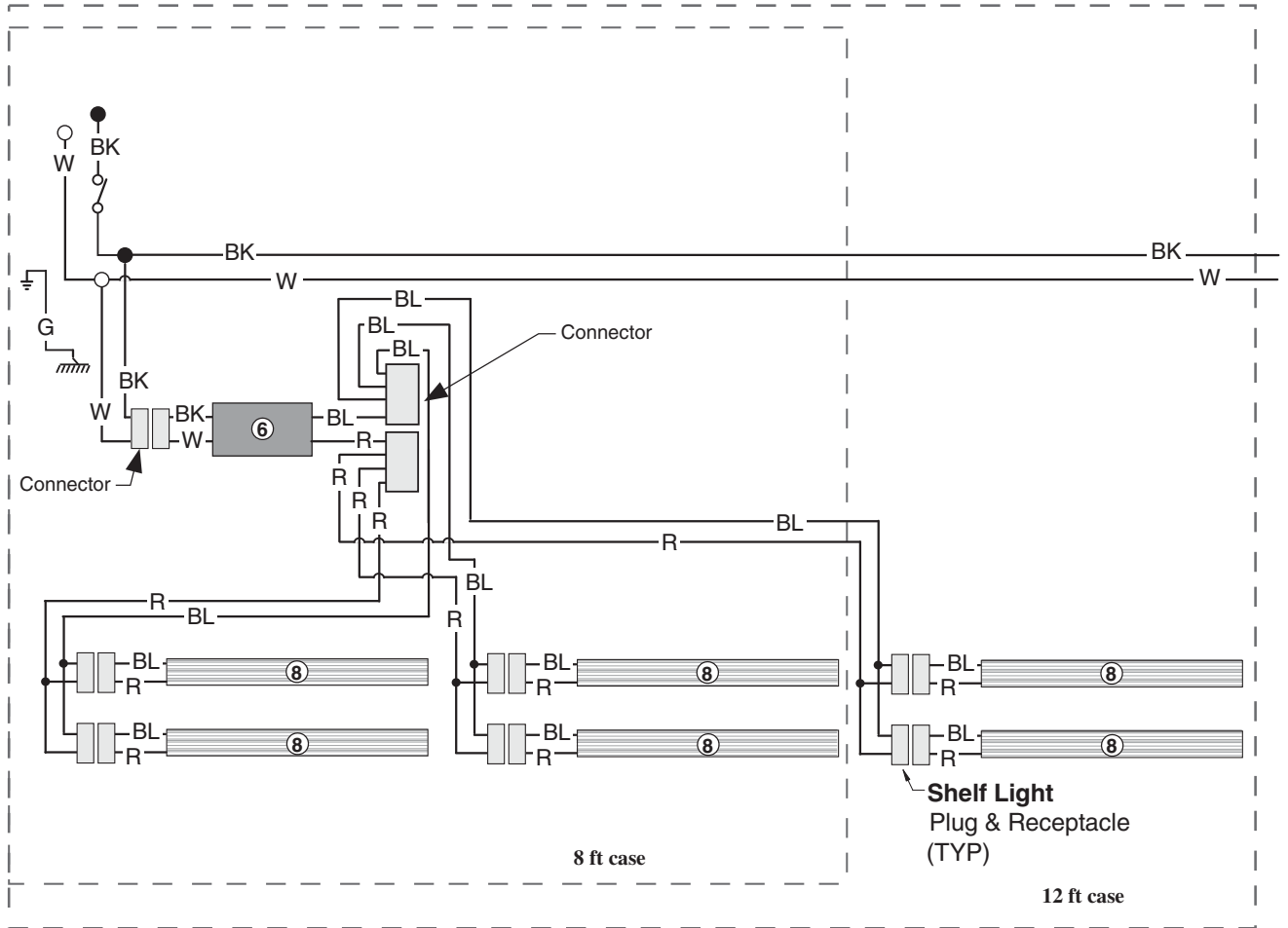
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# Optional Shelf Lighting LED Fixtures

## 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      mmm = CASE GROUND