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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.	0411744	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(2)
A.	<b>25W Standard</b>	Fan Assembly	(1)	C.		Optional Adjustable Refrigeration Thermostat	(3)
	0501486	Fan Motor, Evaporator (MO.4410702)		<b>LAMPS AND BALLASTS</b>			
	0501484	Fan Blade (FB.4780657)		D.		Ballast, Electronic	(4)
	<b>25W Energy Efficient</b>	Fan Assembly	(1)		0480130	2 lamps (BA.4481676)	
	0501485	Fan Motor, Evaporator (MO.4410701)			0480131	3 lamps (BA.4481654)	
	0501484	Fan Blade (FB.4780657)			0480132	4 lamps (BA.4481677)	
<b>6 Ft Only</b>				E.		Fluorescent Lamp	(5)
A.	<b>7W Standard</b>	Fan Assembly	(1)	<i>Replace with like fixtures</i>			
	0058698	Fan Motor, Evaporator (MO.4410102)		<b>LED FIXTURES AND POWER SUPPLY</b>			
	0142780	Fan Blade (FB.0142780)		F.	0501213	Power Supply (EP.4481861)	(6)
	<b>7W Energy Efficient</b>	Fan Assembly	(1)	G.		LED Canopy Fixture	(7)
	0477654	Fan Motor, Evaporator (MO.4410545)		<i>Replace with like fixtures — See Page 5.</i>			
	0142780	Fan Blade (FB.0142780)		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.

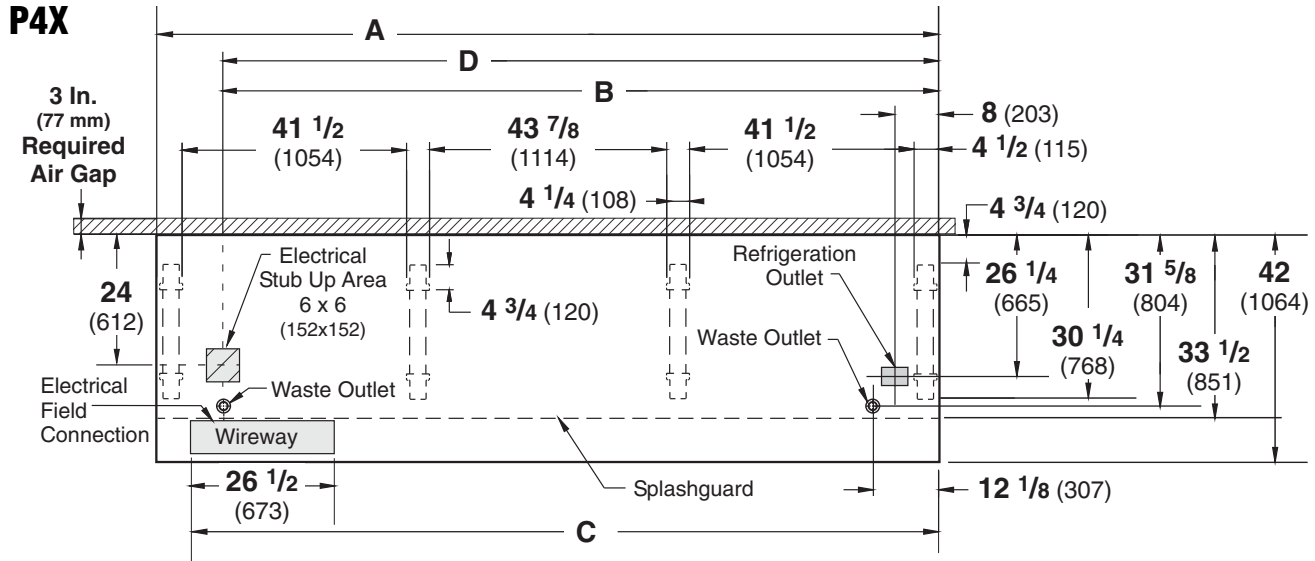


# Engineering Plan Views

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

**Produce**  
10-2004

Dimensions shown as inches and (mm).



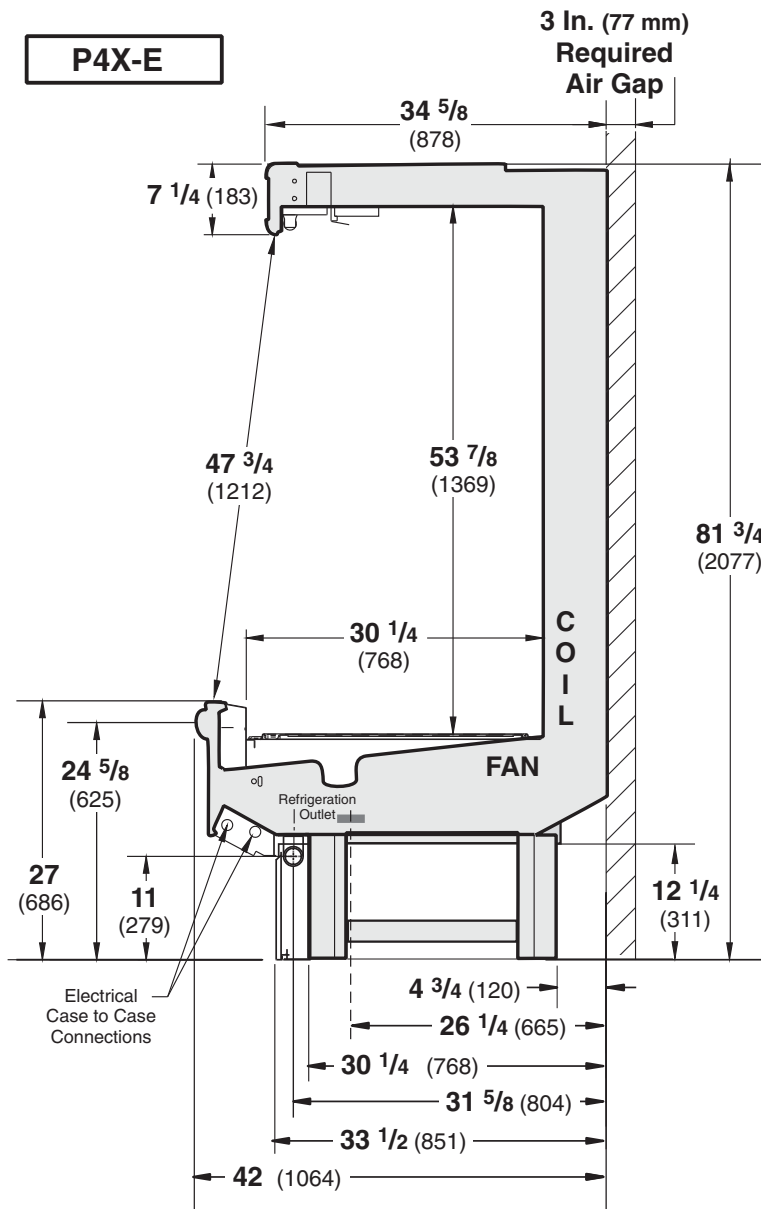
**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

**FRONT**

	6 ft	8 ft	12 ft
<b>General</b>			
<b>(A)</b> Case Length ( <i>without ends or partitions</i> ) (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> ( <i>Electrical Field Wiring connection point</i> )			
<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	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C)</b> RH End of case to LH end of wireway	66 1/8 (1680)	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets</b> ( <i>One each end</i> )			
<b>(D)</b> 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)
<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 P4X-E**  
All Produce

Dimensions shown as inches and (mm).



**REFRIGERATION DATA**

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

	P4X-E
Discharge Air °F	31
Evaporator °F	24
Unit Sizing °F	22

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

P4X-E	Parallel	Conventional
UNLIT	1455	1585

<sup>‡</sup>Optional energy efficient motors reduce the refrigeration load by 46 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**

	P4X-E
Frequency (hr)	6
Defrost Water (lb/ft/day)	9
<i>(± 15% based on case configuration and product loading).</i>	

OFFTIME	P4X-E
Temp Term °F	48°F
Failsafe Minutes	30

*ELECTRIC OR GAS* Not Recommended

**Standard Defrost Thermostat**

Close on rise: close 48°F – open 33°F

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control**

	P4X-E
CI/CO*	17°F / 7°F

**Indoor Unit Only, Pressure Defrost**

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

Estimated Charge (lb)**	P4X-E		
6 ft	2.3 lb	37 oz	1.0 kg
8 ft	3.2 lb	51 oz	1.5 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.

**NSF Certification**

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

**Impact Excel P4X-E**  
All Produce

**Electrical Data**

			<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>			
<b>Number of Fans—25W</b>			—	2	3			
<b>Number of Fans—7W</b>			4	—	—			
			<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	2.00	2.46	3.69	156	180	270
120V	50Hz	Standard	2.20	2.66	3.99	168	206	309
230V	60Hz	Export	1.00	1.32	1.98	156	200	300
230V	50Hz	Export	1.12	1.52	2.28	168	228	342
120V	60Hz	Energy Efficient	0.76	1.20	1.80	56	72	108
230V	60Hz	Energy Efficient	0.40	0.60	0.90	56	72	108
<b>Minimum Circuit Ampacity</b>								
120V	60Hz	Standard	2.20	2.66	3.89			
120V	50Hz	Standard	2.40	2.86	4.19			
230V	60Hz	Export	1.20	1.52	2.18			
230V	50Hz	Export	1.32	1.72	2.48			
120V	60Hz	Energy Efficient	0.96	1.40	2.00			
230V	60Hz	Energy Efficient	0.60	0.80	1.10			
<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 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
3 Rows of Shelves			1.53	1.53	2.31	177	177	255
4 Rows of Shelves			2.04	2.04	3.08	236	236	340
<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 Rows of Shelves			0.29	0.39	0.58	35	47	70
3 Rows of Shelves			0.44	0.58	0.88	53	70	105
4 Rows of Shelves			0.58	0.78	1.17	70	93	140
<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 Rows of Shelves			0.35	0.47	0.70	42	56	84
3 Rows of Shelves			0.53	0.70	1.05	63	84	126
4 Rows of Shelves			0.70	0.93	1.40	84	112	168
<b>Always*Bright Multi-deck Lighting — 120VAC, 50/60Hz</b>								
2 Row Canopy (Front & Rear)			0.55	0.71	1.08	66	85	130
2 Rows of Shelves			0.34	0.47	0.67	41	56	80
3 Rows of Shelves			0.53	0.74	1.11	63	89	133
4 Rows of Shelves			0.68	0.93	1.40	82	112	168

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)	7.29 ft <sup>3</sup> /ft (0.68 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	4.40 ft <sup>2</sup> /ft (1.34 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	6.88 ft <sup>2</sup> /ft (2.10 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.

<b>ESTIMATED SHIPPING WEIGHT <sup>4</sup></b>				
Case				Solid End
	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<i>(each)</i>
<b>Ib (kg)</b>	900 (408)	1100 (499)	1400 (635)	100 (45)

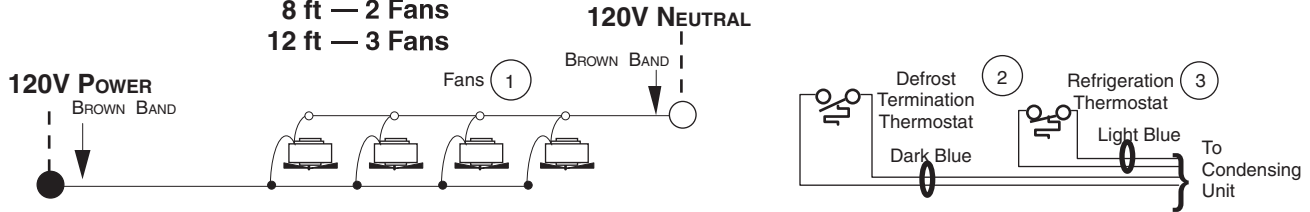
<sup>4</sup> Actual weights will vary according to optional kits included.

<b>PARTS LIST (Continued from Page 1)</b>						
Item	Part #	Description	Item	Part #	Description	
<b>LED FIXTURES AND POWER SUPPLY</b>						
F.	0501213	Power Supply (EP.4481861)	(6)	G.	(CONTINUED) EcoShine LED Canopy Fixture	
				4441713	Rear 36-inch	<b>2900K</b> HCRI
				4441715	Rear 36-inch	<b>3500K</b> HCRI
				4441717	Rear 36-inch	<b>3500K</b>
				4441719	Rear 36-inch	<b>4100K</b>
G.		<b>EcoShine LED Canopy Fixture</b>	(7)	H.	<b>EcoShine LED Shelf Fixture</b>	(8)
	4441720	Front 48-inch		4441590	48-inch	<b>2900K</b> HCRI
	4441722	Front 48-inch		4441591	48-inch	<b>3500K</b> HCRI
	4441724	Front 48-inch		4441592	48-inch	<b>3500K</b>
	4441726	Front 48-inch		4441593	48-inch	<b>4100K</b>
	4441721	Rear 48-inch				
	4441723	Rear 48-inch		4441586	36-inch	<b>2900K</b> HCRI
	4441725	Rear 48-inch		4441587	36-inch	<b>3500K</b> HCRI
	4441727	Rear 48-inch		4441588	36-inch	<b>3500K</b>
				4441589	36-inch	<b>4100K</b>
	4441712	Front 36-inch				
	4441714	Front 36-inch				
	4441716	Front 36-inch				
	4441718	Front 36-inch				

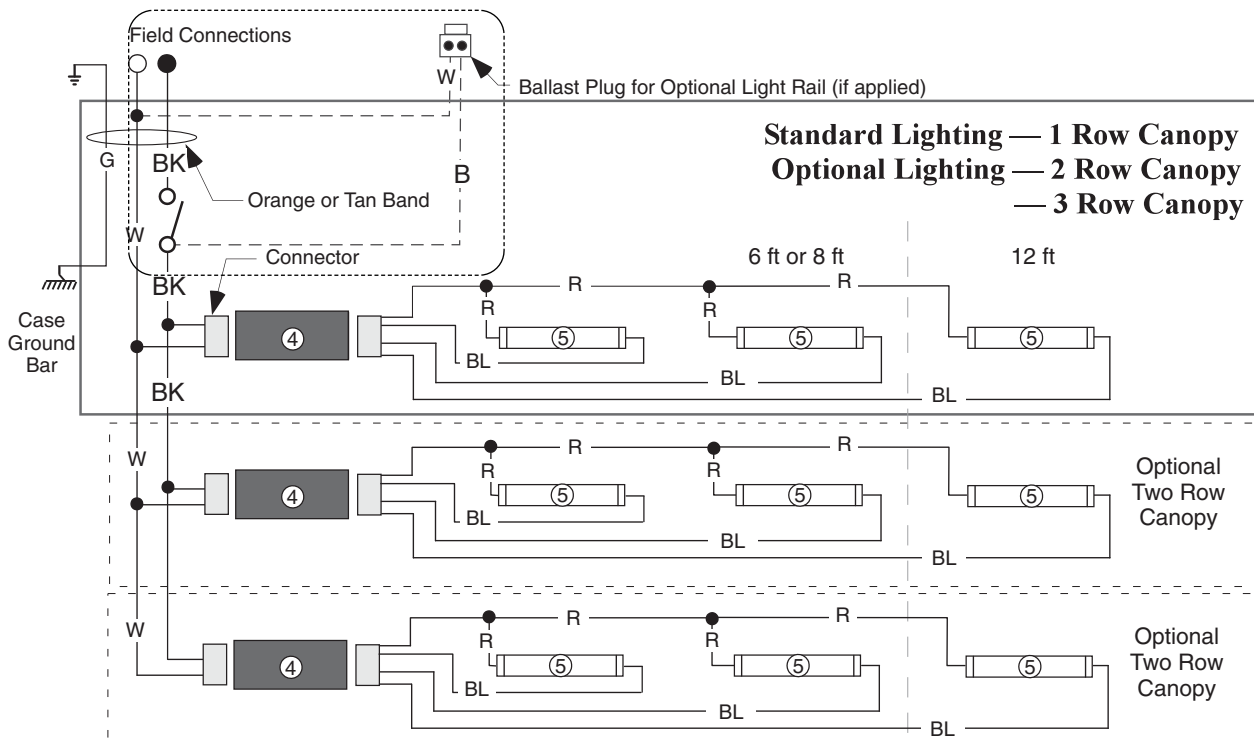
Note: Always\*Bright lamps will be replaced with the latest generation of EcoShine lamps.

# Fan Wiring Offtime Defrost

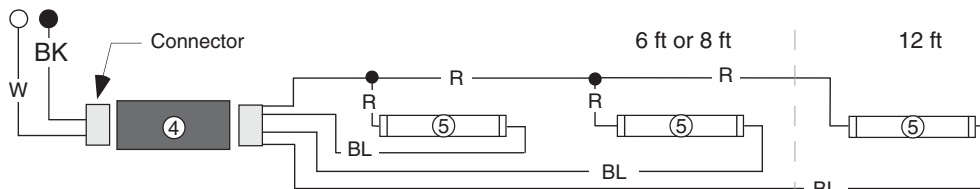
**2, 3 & 4 Fans**    6 ft — 4 Fans  
                           8 ft — 2 Fans  
                           12 ft — 3 Fans



# Light Circuits — Fluorescent Fixtures



## Optional Lighting — 1 Row Rail



### WARNING

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

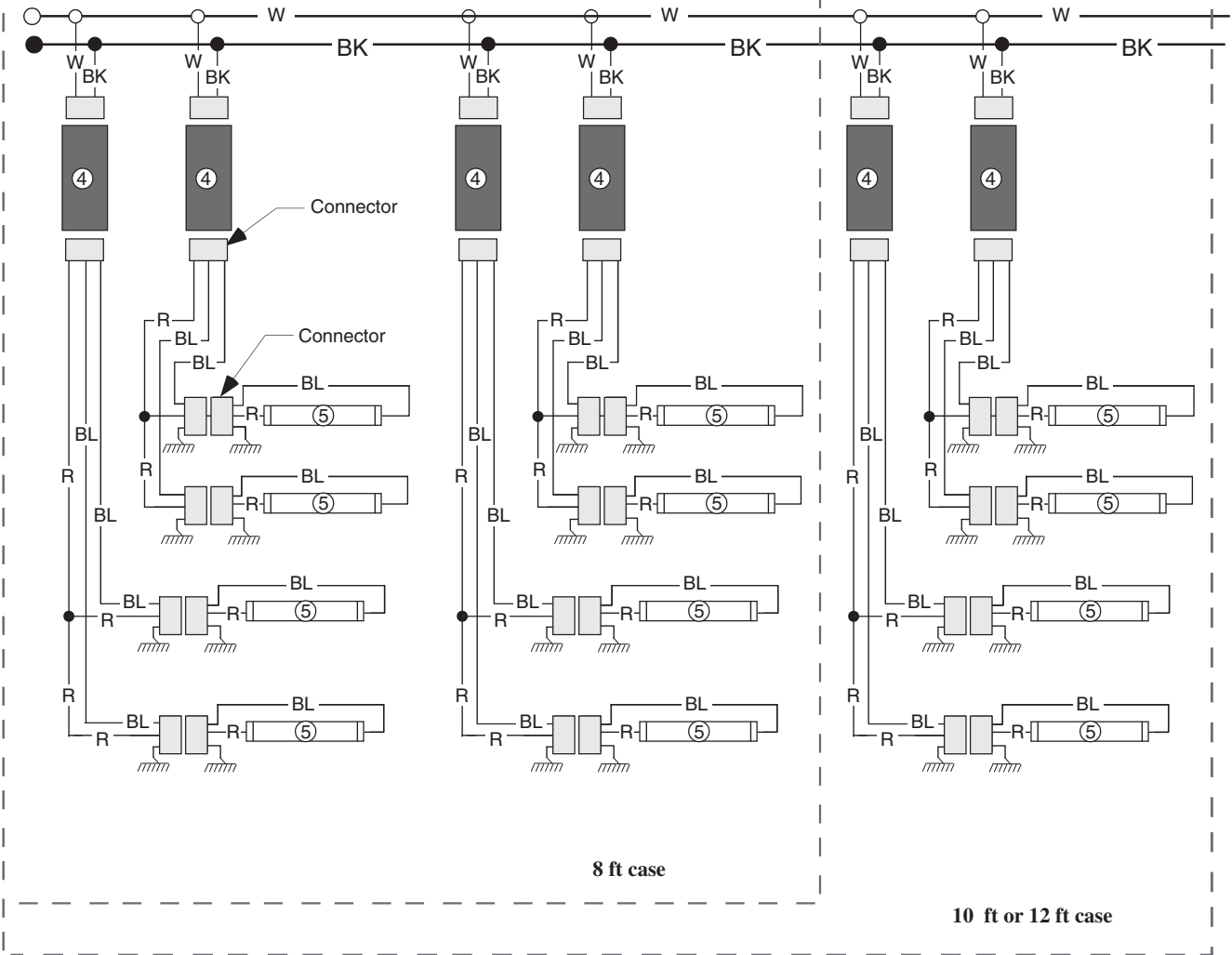
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

# Optional Shelf Lighting Fluorescent Fixtures

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



### WARNING

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

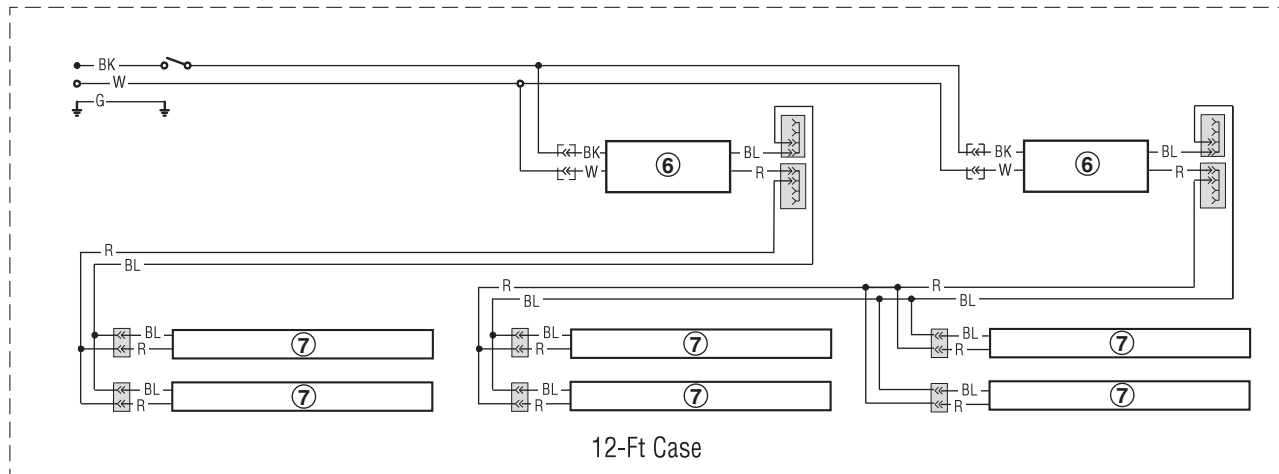
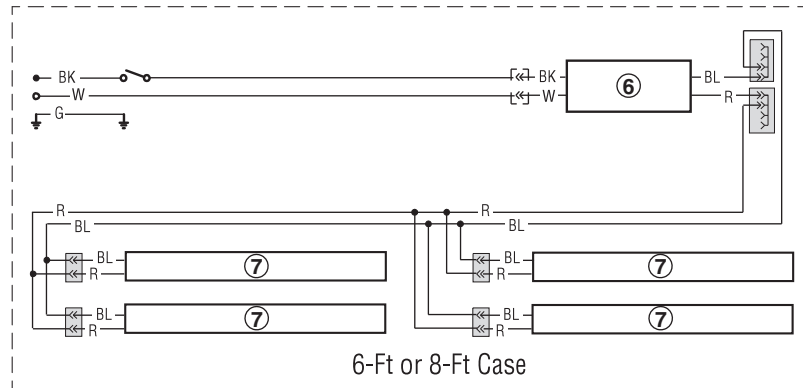
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

● = 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

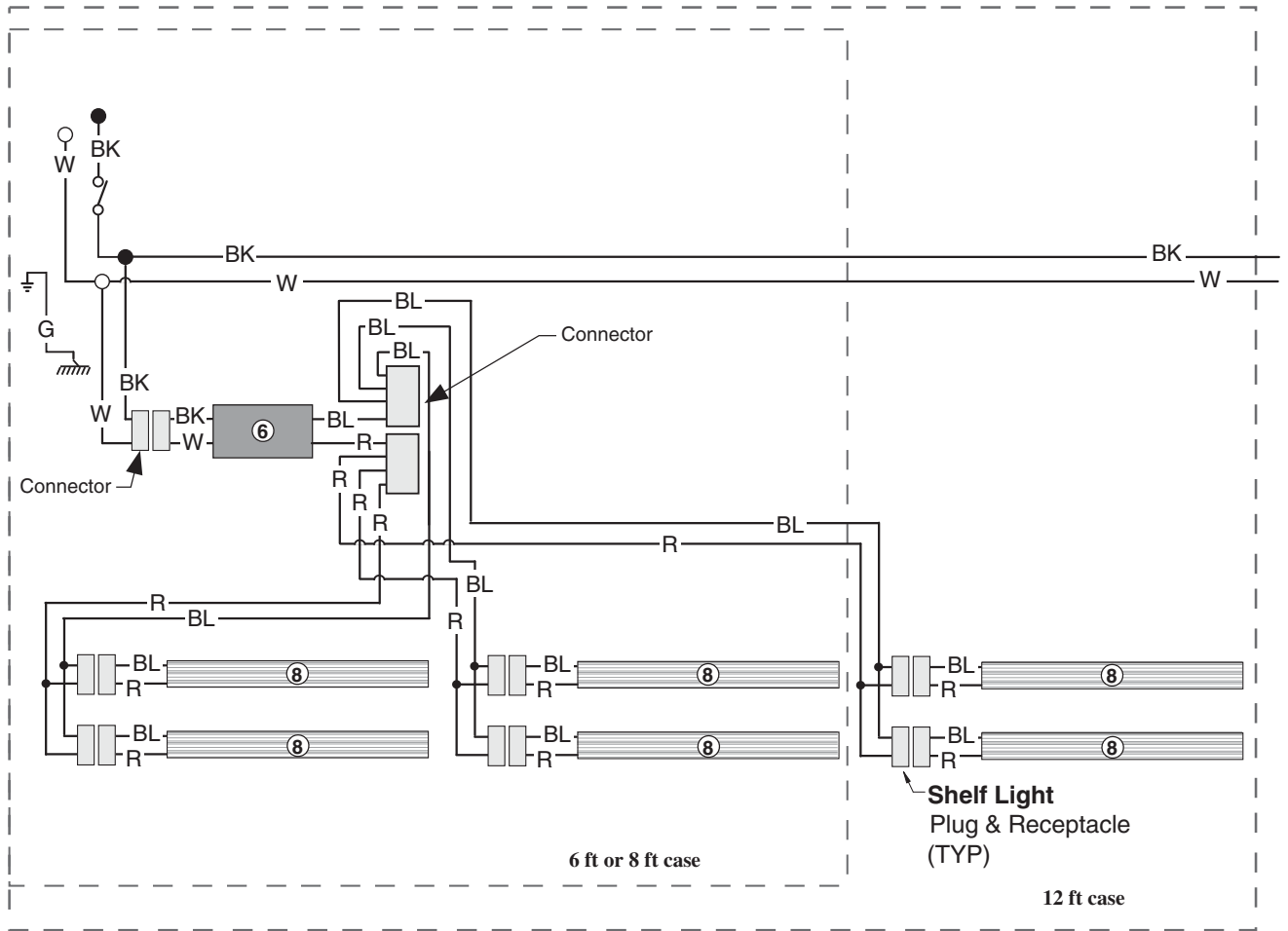
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

● = 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.

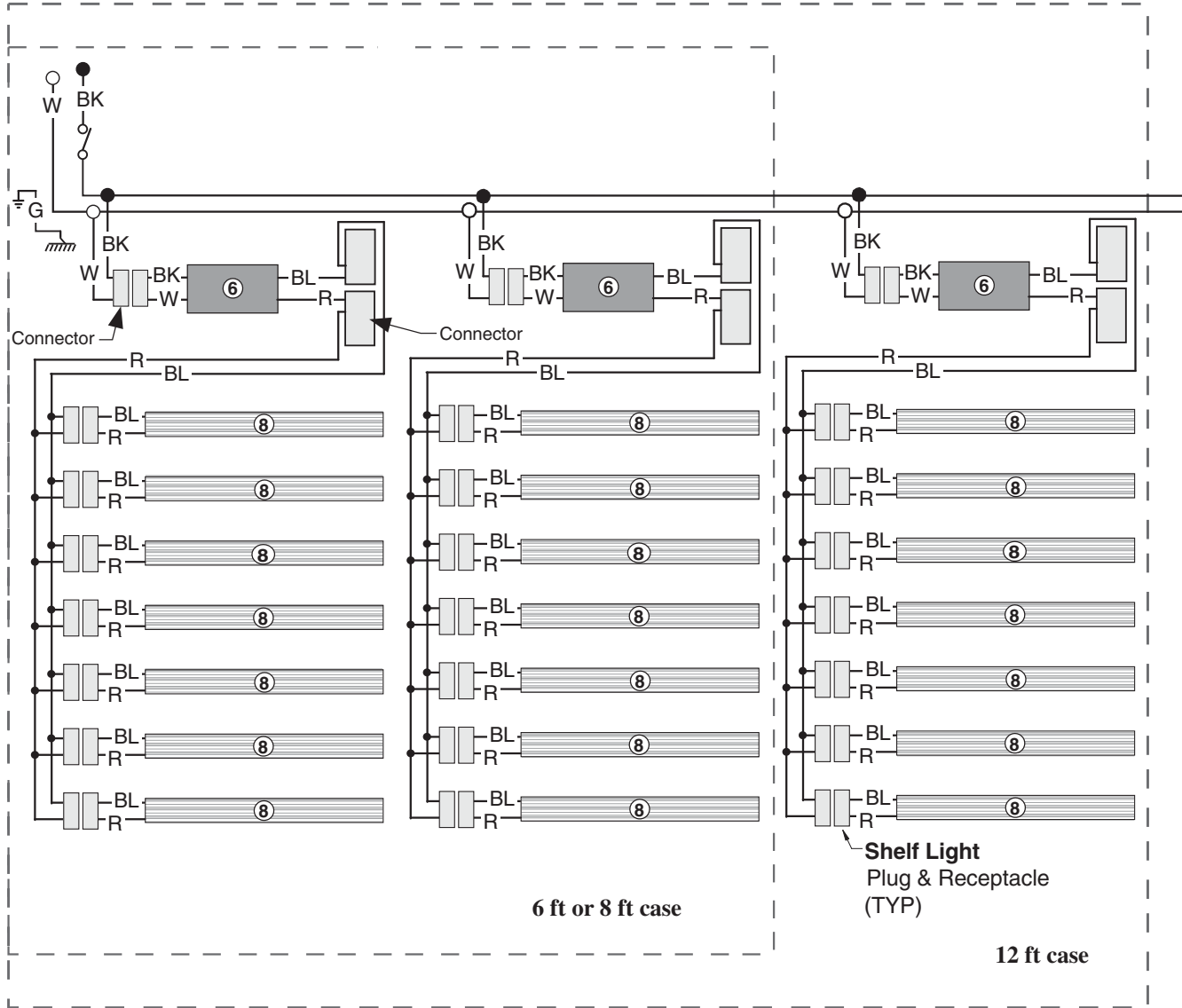
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

● = 120V POWER      ○ = 120V NEUTRAL      ⚡ = FIELD GROUND      mmm = CASE GROUND

# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED Light Circuits for 3, 4, 5, 6 & 7 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     $\overline{mm}$  = CASE GROUND