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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES				THERMOSTATS			
8 Ft & 12 Ft				B. Optional Adjustable Refrigeration Thermostat (2)			
A.	25W Standard	Fan Assembly	(1)	LAMPS AND BALLASTS			
	0501486	Fan Motor, Evaporator (MO.4410702)		C.	Ballast, Electronic		(3)
	0501484	Fan Blade (FB.4780657)		0491389	1 lamp (BA.4481689)		
	25W Energy Efficient	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)		
6 Ft Only				D.	Fluorescent Lamp		(4)
A.	7W Standard	Fan Assembly	(1)	<i>Replace with like fixtures</i>			
	0058698	Fan Motor, Evaporator (MO.4410102)		LED FIXTURES AND POWER SUPPLY			
	0142780	Fan Blade (FB.0142780)		E.	0501213	Power Supply (EP.4481861)	(5)
	7W Energy Efficient	Fan Assembly	(1)	F.		LED Canopy Fixture	(6)
	0477654	Fan Motor, Evaporator (MO.4410545)		<i>Replace with like fixtures — See Page 5.</i>			
	0142780	Fan Blade (FB.0142780)		G.		LED Shelf Fixture	(7)
				<i>Replace with like fixtures — See Page 5.</i>			

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



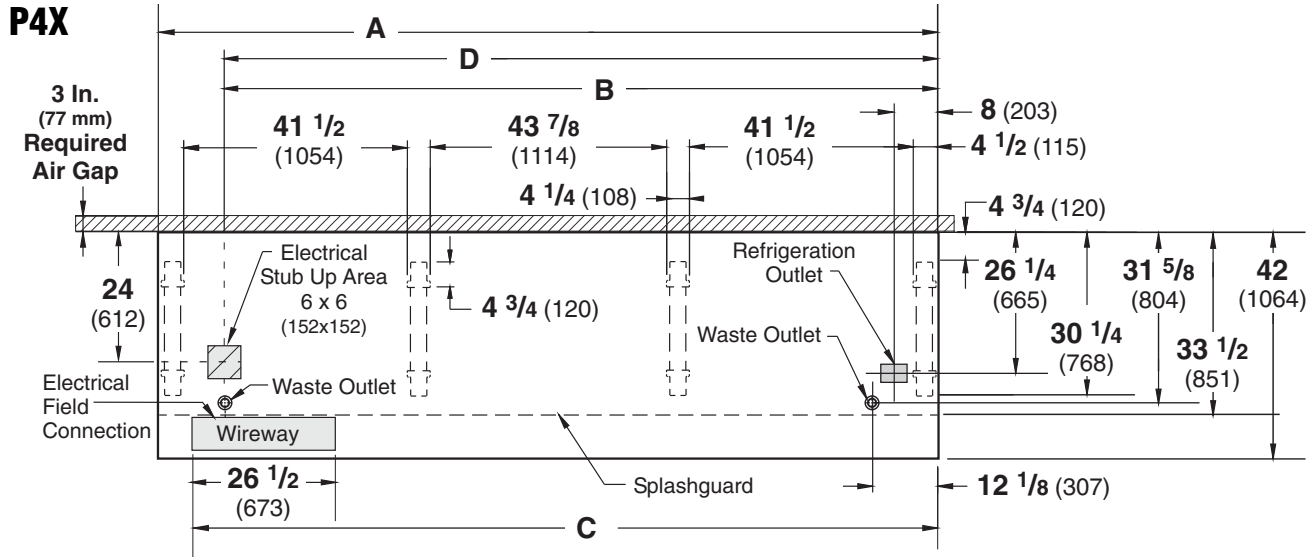
Engineering Plan Views

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).



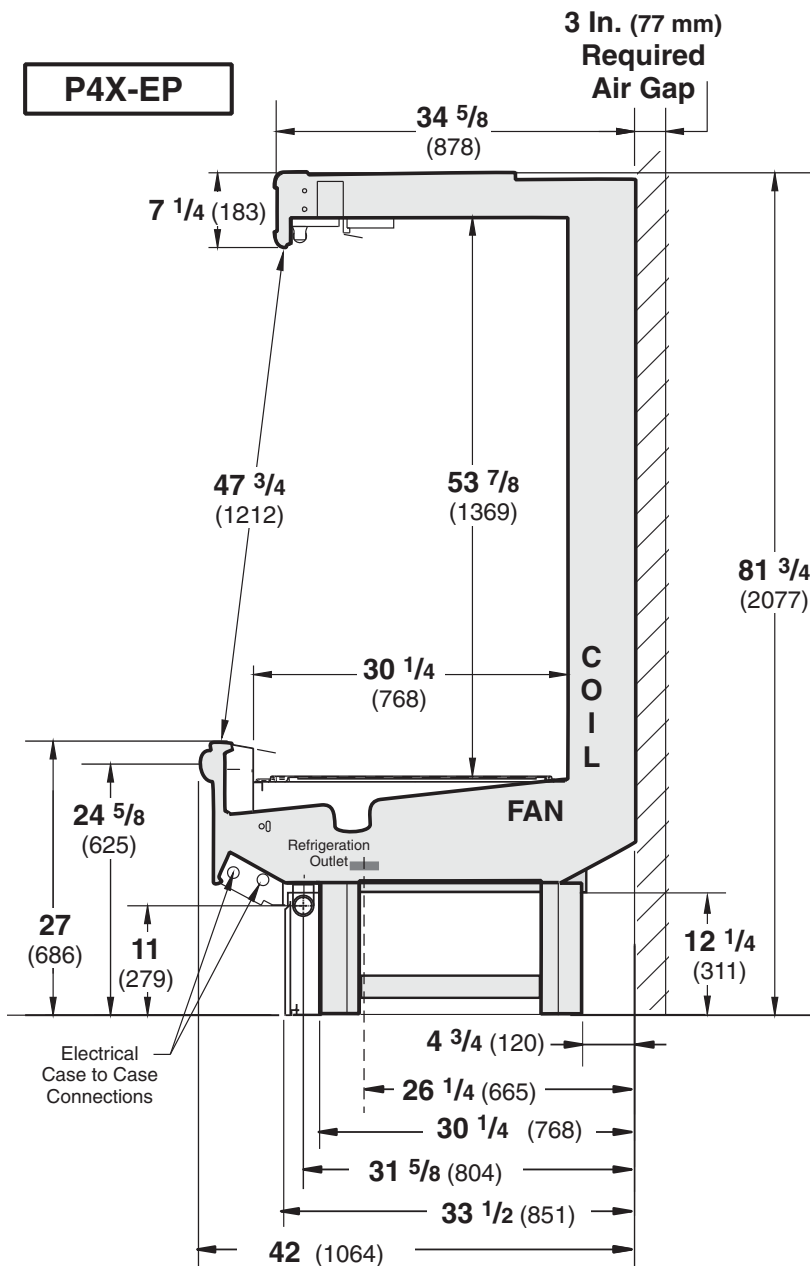
NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

FRONT

	4 ft	6 ft	8 ft	12 ft
General				
(A) Case Length (without ends or partitions) (Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.)	48 3/8 (1229)	72 3/8 (1838)	96 3/8 (2448)	144 1/2 (3670)
Maximum O/S dimension of case back to front (includes bumper)	42 (1064)	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)	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)	30 1/4 (768)
Distance between edges of external legs and center legs	NA	29 1/2 (750)	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	NA	NA	43 7/8 (1114)
Distance between front legs and splashguard	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
Electrical Service (Electrical Field Wiring connection point)				
(B) RH End of case to center of stub up area	36 1/4 (921)	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)	24 (612)
Length of electrical wireway	26 1/2 (673)	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)	66 1/8 (1680)	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 1/4 (921)	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)	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)	31 5/8 (804)
Schedule 40 PVC drip pipe	1 1/4 (32)	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)	26 1/4 (665)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)	8 (203)

Impact *Excel* P4X-EP
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-EP	MODULAR PRODUCE		
	UNLIT	LIT	INSERT††
Discharge Air °F	33	31	33
Evaporator °F	30	28	30
Unit Sizing °F	28	26	28

* All display levels must use baffles.

Btu/hr/ft‡ — Unlit Shelves‡‡

P4X-EP	Parallel	Conventional
UNLIT	1275	1390
INSERT†	1160	1265

‡ Optional energy efficient motors reduce the refrigeration load by 46 Btu/hr/ft.
 ‡‡ 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-EP
Frequency (hr)	6
Defrost Water (lb/ft/day)	9
(± 15% based on case configuration and product loading).	
OFFTIME	P4X-EP
Time (minutes)	30
ELECTRIC OR GAS	Not Recommended

CONVENTIONAL CONTROLS

	P4X-EP
Low Pressure Backup Control	
CI/CO**	21°F / 11°F

Indoor Unit Only,

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

Estimated Charge* P4X-EP**

4 ft	1.9 lb	30 oz	0.9 kg
6 ft	2.6 lb	42 oz	1.2 kg
8 ft	3.7 lb	59 oz	1.7 kg
12 ft	5.1 lb	82 oz	2.3 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.

† This is test data for one third-party insert. Contact your Hussmann representative for further information.

Impact *Excel* P4X-EP

All Produce

FANS	4 ft	6 ft	8 ft	12 ft
Number of Fans—25W	1	—	2	3
Number of Fans—7W	—	4	—	—

Electrical Data

			Amperes				Watts			
			4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
Evaporator Fan										
120V	60Hz	Standard	1.23	2.00	2.46	3.69	90	156	180	270
120V	50Hz	Standard	1.33	2.20	2.66	3.99	103	168	206	309
230V	60Hz	Export	0.66	1.00	1.32	1.98	100	156	200	300
230V	50Hz	Export	0.76	1.12	1.52	2.28	114	168	228	342
120V	60Hz	Energy Efficient	0.60	0.76	1.20	1.80	36	56	72	108
230V	60Hz	Energy Efficient	0.30	0.40	0.60	0.90	36	56	72	108

Minimum Circuit Ampacity

120V	60Hz	Standard	1.43	2.20	2.66	3.89
120V	50Hz	Standard	1.53	2.40	2.86	4.19
230V	60Hz	Export	0.86	1.20	1.52	2.18
230V	50Hz	Export	0.96	1.32	1.72	2.48
120V	60Hz	Energy Efficient	0.80	0.96	1.40	2.00
230V	60Hz	Energy Efficient	0.50	0.60	0.80	1.10

Maximum Over Current Protection 120V

Maximum Over Current Protection 120V	20	20	20	20
Maximum Over Current Protection 230V	15	15	15	15

Standard Lighting (T-8 fluorescent)

1 Row Canopy	0.26	0.51	0.51	0.77	30	59	59	85
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Optional Lighting (T-8 fluorescent)

Additional 2 Row Canopy	0.26	0.51	0.51	0.77	30	59	59	85
Additional 3 Row Canopy	0.51	1.02	1.02	1.54	59	118	118	170
1 Row Rail Light	0.26	0.51	0.51	0.77	30	59	59	85
2 Rows of Shelves	0.51	1.02	1.02	1.54	59	118	118	170
3 Rows of Shelves	0.77	1.53	1.53	2.31	89	177	177	255
4 Rows of Shelves	1.02	2.04	2.04	3.08	118	236	236	340

EcoShine Multi-deck — Normal CRI — 120VAC, 50/60Hz

2 Row Canopy (Front & Rear)	0.28	0.41	0.55	0.82	33	49	66	98
1 Row of Shelves	0.10	0.15	0.20	0.29	12	18	24	35
2 Rows of Shelves	0.20	0.29	0.39	0.58	24	35	47	70
3 Rows of Shelves	0.29	0.44	0.58	0.88	35	53	70	105
4 Rows of Shelves	0.39	0.58	0.78	1.17	47	70	93	140

EcoShine Multi-deck — High CRI — 120VAC, 50/60Hz

2 Row Canopy (Front & Rear)	0.32	0.47	0.63	0.93	38	56	75	112
1 Row of Shelves	0.12	0.18	0.23	0.35	14	21	28	42
2 Rows of Shelves	0.23	0.35	0.47	0.70	28	42	56	84
3 Rows of Shelves	0.35	0.53	0.70	1.05	42	63	84	126
4 Rows of Shelves	0.47	0.70	0.93	1.40	56	84	112	168

Always*Bright Multi-deck — 120VAC, 50/60Hz

2 Row Canopy (Front & Rear)	0.38	0.55	0.71	1.08	45	66	85	130
1 Row of Shelves	0.15	0.19	0.23	0.38	18	23	28	45
2 Rows of Shelves	0.26	0.34	0.47	0.67	31	41	56	80
3 Rows of Shelves	0.38	0.53	0.74	1.11	45	63	89	133
4 Rows of Shelves	0.47	0.68	0.93	1.40	56	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> ¹ (Cu Ft/Ft)	7.29 ft ³ /ft (0.68 m ³ /m)
<i>AHRI Total Display Area</i> ² (Sq Ft/Ft)	4.40 ft ² /ft (1.34 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	6.88 ft ² /ft (2.10 m ² /m)

- ¹ AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
² Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]
³ 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 ⁴			
Case			Solid End
	8 ft	12 ft	(each)
lb (kg)	1100 (499)	1400 (635)	100 (45)

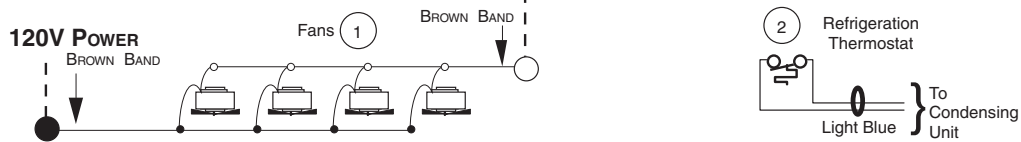
⁴ Actual weights will vary according to optional kits included.

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

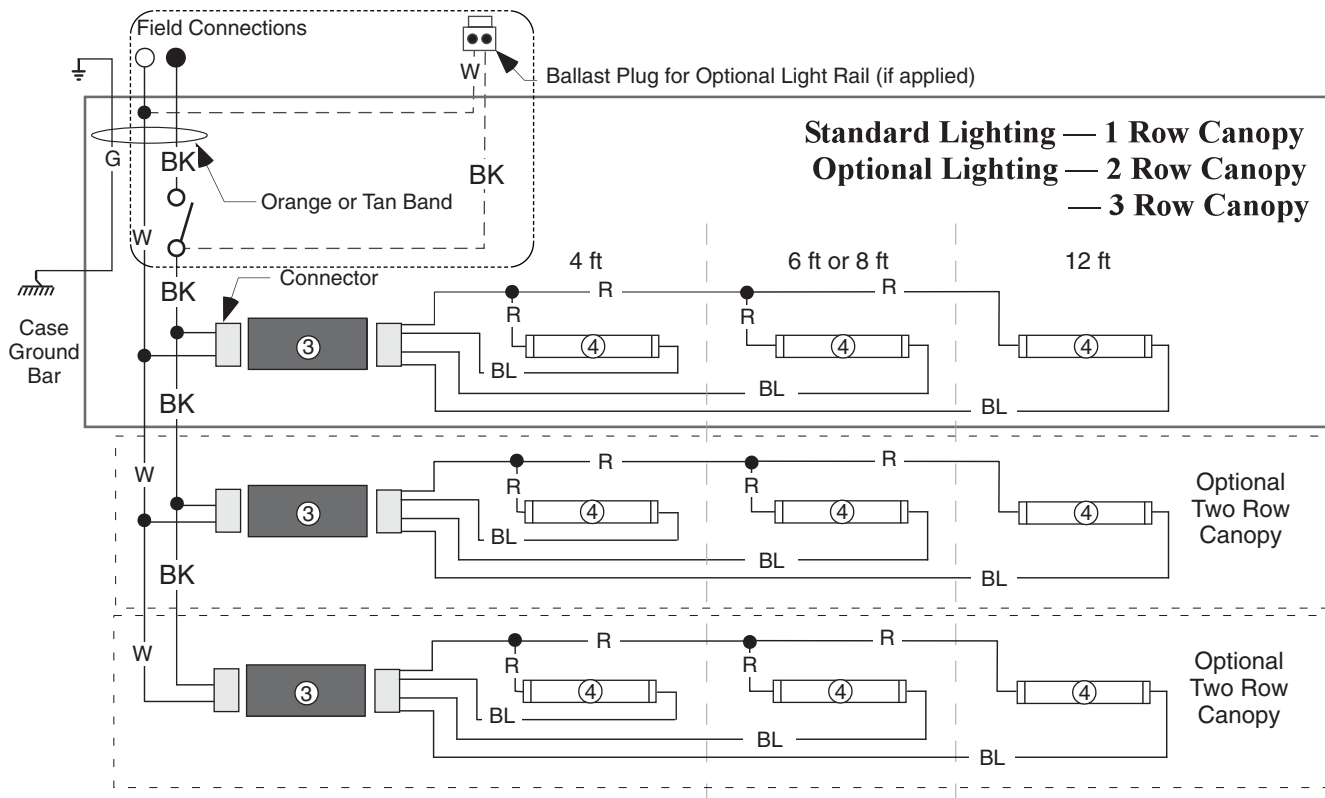
Note: Always*Bright lamps will be replaced with the latest generation of EcoShine lamps.

Fan Wiring Offtime Defrost

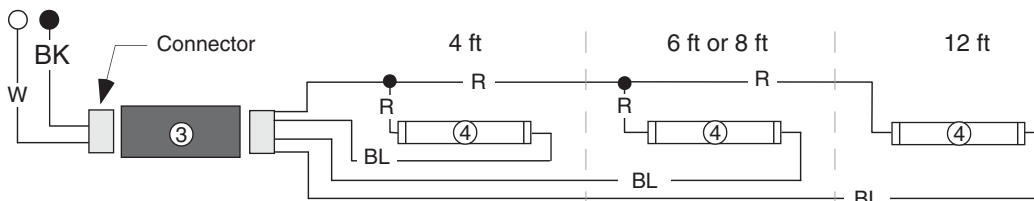
1, 2, 3 & 4 Fans 4 ft — 1 Fan
 6 ft — 4 Fans
 8 ft — 2 Fans
 12 ft — 3 Fans 120V NEUTRAL



Light Circuits — Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

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

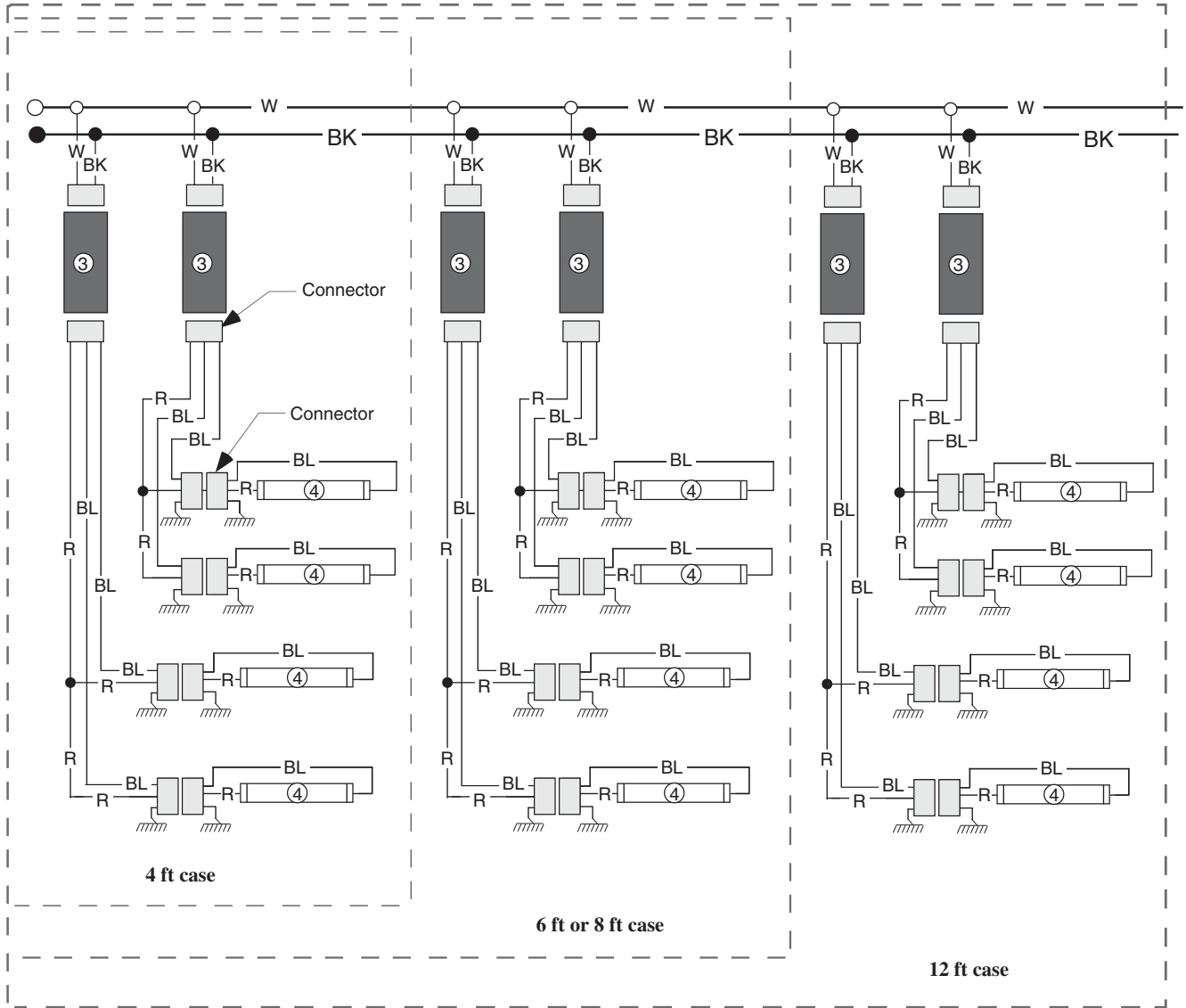
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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.

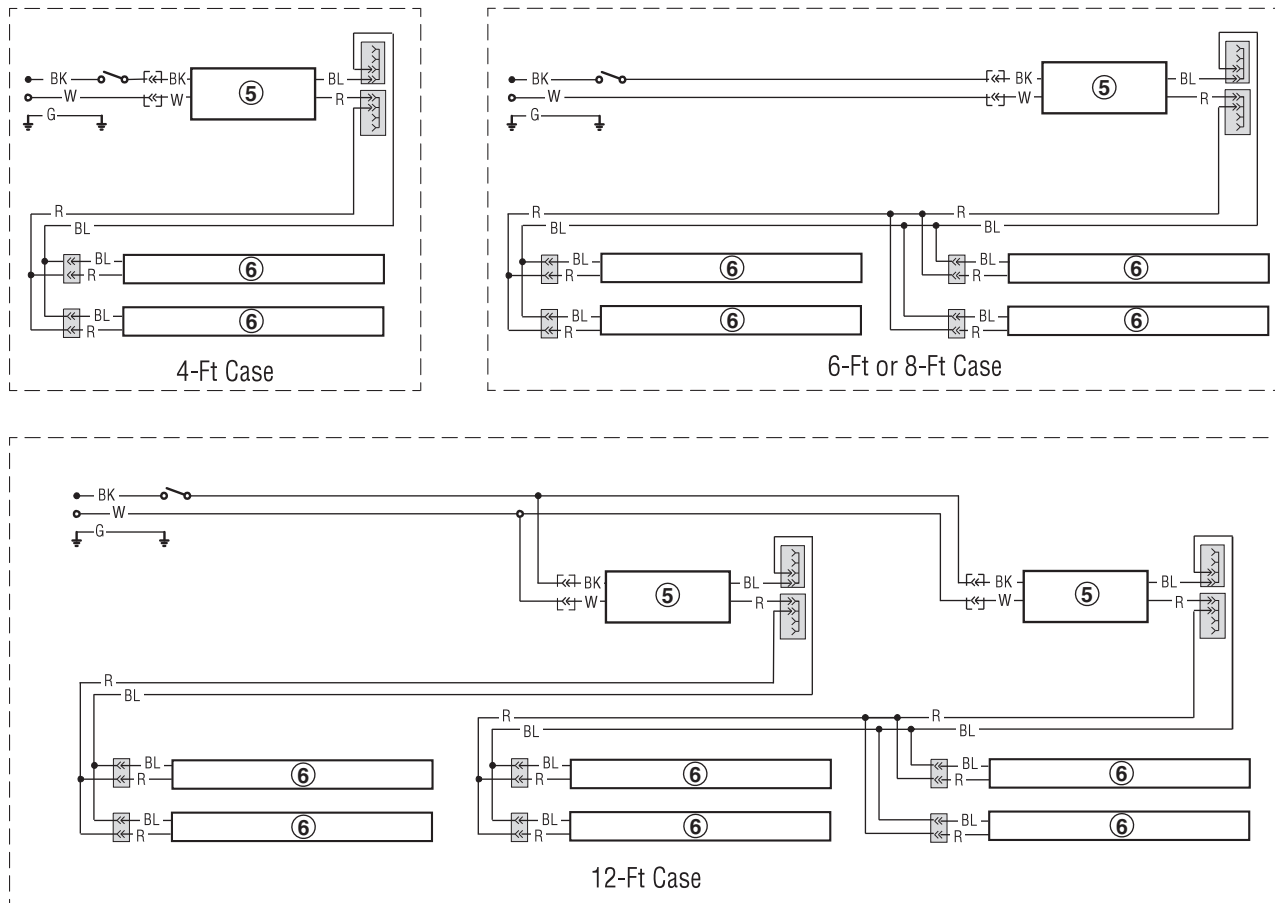
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Optional Canopy Lighting LED Fixtures

Standard LED Canopy Lighting — 2 Row Canopy



WARNING

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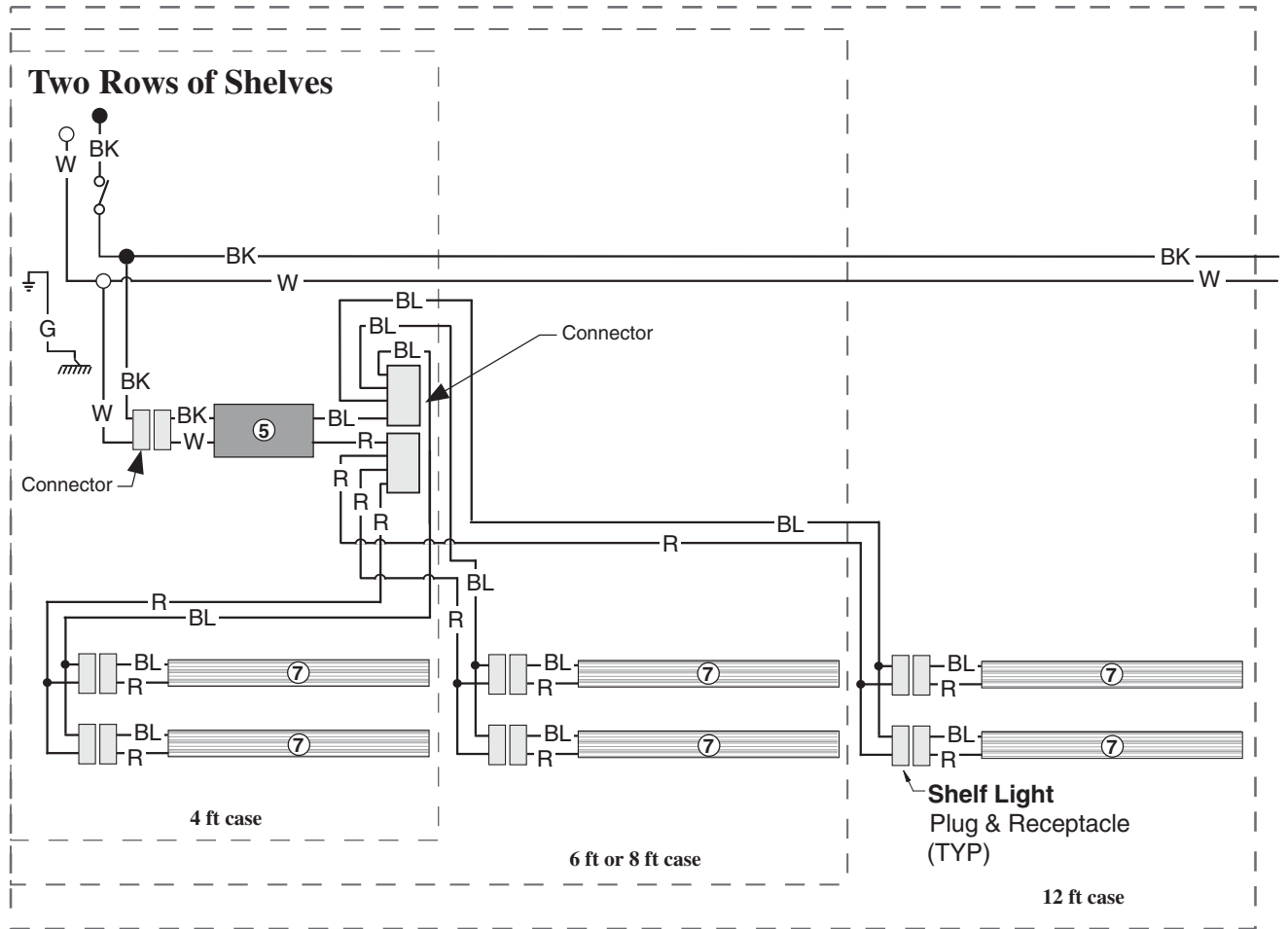
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● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND \overline{m} = CASE GROUND

Optional Shelf Lighting LED Fixtures

Optional Shelf Harness and LED Light Circuits for



WARNING

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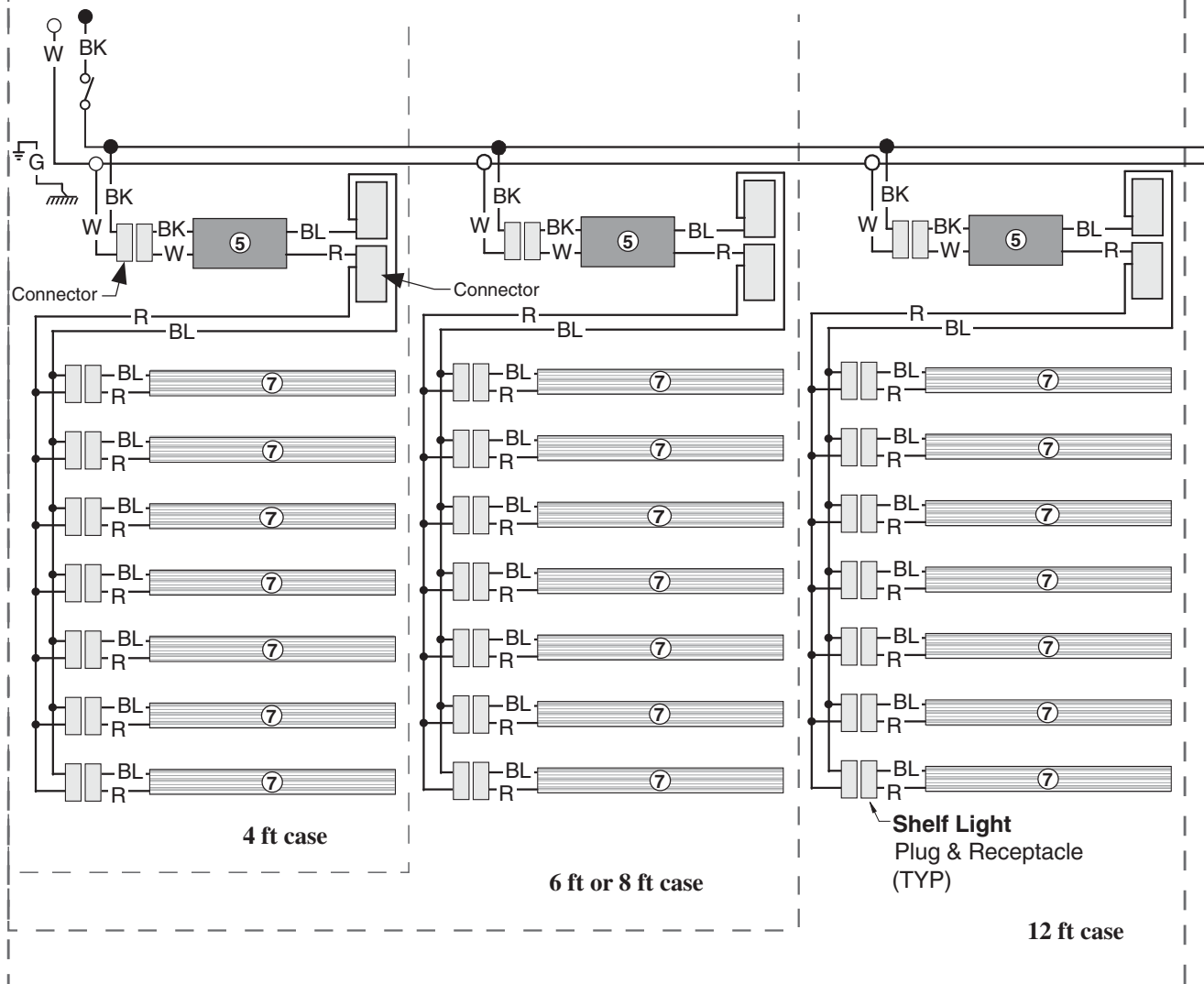
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

● = 120V POWER ○ = 120V NEUTRAL $\frac{1}{\perp}$ = FIELD GROUND \overline{mm} = 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 mmm = CASE GROUND