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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES				THERMOSTATS			
8 Ft, 10 Ft† & 12 Ft				B. Optional Adjustable Refrigeration Thermostat (2)			
A.	12W Standard	Fan Assembly	(1)	LAMPS AND BALLASTS			
	0047000	Fan Motor, Evaporator (MO.4410103)		C.	Ballast, Electronic		(3)
	0461805	Fan Blade (FB.4780446)			0480130	2 lamps (BA.4481676)	
	12W Energy Efficient	Fan Assembly	(1)		0480131	3 lamps (BA.4481654)	
	0477655	Fan Motor, Evaporator (MO.4410546)		D.	Fluorescent Lamp		(4)
	0461805	Fan Blade (FB.4780446)			<i>Replace with like fixtures</i>		
10 Ft† Only				LED FIXTURES AND POWER SUPPLY			
A.	7W Standard	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>		
	7W Energy Efficient	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)					

†10 Ft uses both.

Note: Revision E adds Btu note (page 3), EcoShine LED (page 4) and parts (page 5), and revises canopy wiring diagram (page 6). Other changes marked by bar, underline or circle.

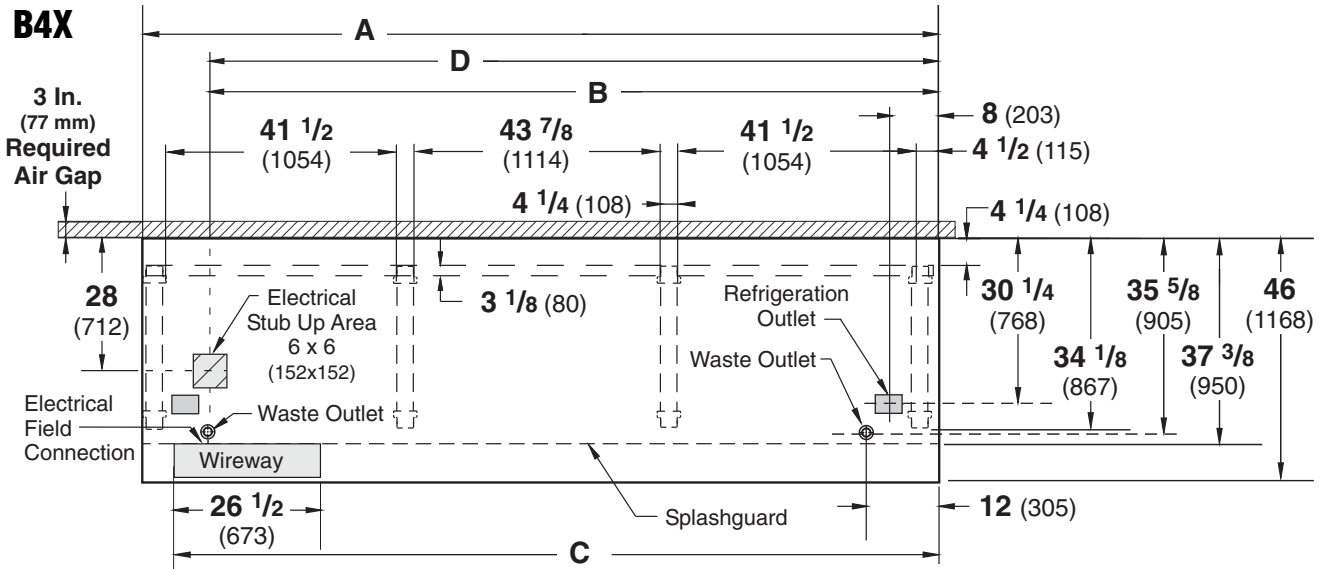


Engineering Plan Views

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





Bulk Convertible
01-2008

Dimensions shown as inches and (mm).

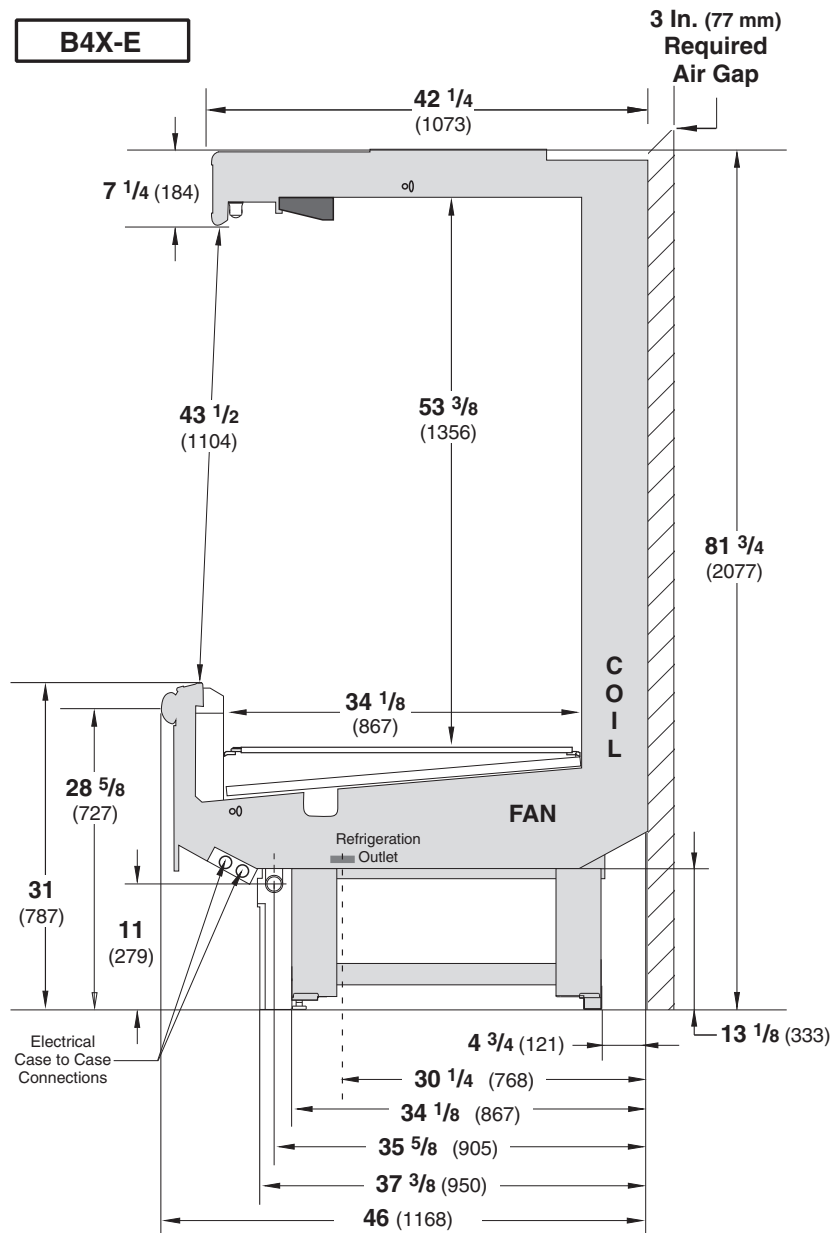


NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

FRONT (12 Ft shown)

	8 ft	10 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.) Maximum O/S dimension of case back to front (includes bumper)	96 3/8 (2448)	120 1/2 (3061)	144 1/2 (3670)
Back of case to front of splashguard	46 (1168)	46 (1168)	46 (1168)
Back of case to O/S edge of front leg	37 3/8 (950)	37 3/8 (950)	37 3/8 (950)
Distance between edges of external legs and center legs	34 1/8 (867)	34 1/8 (867)	34 1/8 (867)
Distance between edges of external legs and center legs	41 1/2 (1054)	29 1/2 (750)	41 1/2 (1054)
Distance between edges of center legs	NA	43 7/8 (1114)	43 7/8 (1114)
Distance between front legs and splashguard	2 5/8 (66)	2 5/8 (66)	2 5/8 (66)
Electrical Service  (Electrical Field Wiring connection point)			
(B) RH End of case to center of stub up area	84 1/4 (2140)	108 1/4 (2750)	132 3/8 (3363)
Back of case to center of stub up area	28 (712)	28 (712)	28 (712)
Length of electrical wireway 	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
(C) RH End of case to LH end of wireway	90 1/8 (2289)	114 1/4 (2902)	138 1/4 (3511)
Waste Outlets (One each end) 			
(D) RH End of case to the center of LH waste outlet	84 3/8 (2143)	108 1/4 (2750)	132 1/2 (3366)
RH End of case to the center of RH waste outlet	12 (305)	12 (305)	12 (305)
Back O/S of case to center of waste outlets	35 5/8 (905)	35 5/8 (905)	35 5/8 (905)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
Refrigeration Outlet 			
Back of case to center of refrigeration outlet	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

Dimensions shown as inches and (mm).



B4X-E

**Impact *Excel* B4X-E
Bulk Convertible**

REFRIGERATION DATA

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

B4X-E	DAIRY/DELI/PRODUCE†	
	UNLIT	LIT
Discharge Air °F	32	30
Evaporator °F	26	24
Unit Sizing °F	24	22

† For red meat application, lower evaporator temperature and unit sizing 3°F. increase Btu 5%.

Btu/hr/ft² — Unlit Shelves‡‡

B4X-E	DAIRY/DELI/PRODUCE	
	Parallel	Conventional
UNLIT‡‡	1105	1245

‡ Optional energy efficient motors reduce the refrigeration load by 27 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

	B4X-E
Frequency (hr)	6
Defrost Water (lb/ft/day)	7.5

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

OFFTIME	B4X-E
Temp Term °F	48
Failsafe Minutes	40

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*	
B4X-E	DAIRY/DELI/PRODUCE‡
Temp (°F)	17°F / 7°F

Indoor Unit Only,
Pressure Defrost Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

† For red meat application, reduce low pressure backup control by 3°F.

Estimated Charge **	B4X-E		
8 ft	2.7 lb	43 oz	1.2 kg
10 ft	3.2 lb	51 oz	1.5 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* B4X-E

Bulk Convertible

Electrical Data

	8 ft	10 ft	12 ft	Watts		
	Amperes			8 ft	10 ft	12 ft
	8 ft	10 ft	12 ft			
Number of Fans—12W	2	1	3			
Number of Fans—7W	—	2	—			
Evaporator Fan						
120V 60Hz Standard	1.30	1.65	1.95	100	128	150
120V 50Hz Standard	1.50	1.85	2.25	114	141	171
230V 60Hz Export	0.66	0.80	0.99	100	128	150
230V 50Hz Export	0.76	0.94	1.14	114	141	171
120V 60Hz Energy Efficient	0.60	0.68	0.90	36	46	54
230V 60Hz Energy Efficient	0.30	0.35	0.45	36	46	54
Minimum Circuit Ampacity						
120V 60Hz Standard	1.50	1.85	2.15			
120V 50Hz Standard	1.70	2.05	2.45			
230V 60Hz Export	0.86	1.00	1.19			
230V 50Hz Export	0.96	1.14	1.34			
120V 60Hz Energy Efficient	0.80	0.88	1.10			
230V 60Hz Energy Efficient	0.50	0.55	0.65			
Maximum Over Current Protection 120V	20	20	20			
Maximum Over Current Protection 230V	15	15	15			
Standard Lighting (T-8 fluorescent)						
1 Row Canopy	0.51	0.77	0.77	59	85	85
Optional Lighting (T-8 fluorescent)						
Additional 1 Row Canopy	0.51	0.77	0.77	59	85	85
Additional 2 Row Canopy	1.02	1.54	1.54	118	170	170
Additional 3 Row Canopy	1.53	2.31	2.31	177	255	255
1 Row Rail Light	0.51	0.77	0.77	59	85	85
1 Row of Shelves	0.51	0.77	0.77	59	85	85
2 Rows of Shelves	1.02	1.54	1.54	118	170	170
3 Rows of Shelves	1.53	2.31	2.31	177	255	255
EcoShine Multi-deck Canopy Normal CRI — 120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)	0.55	0.68	0.82	66	82	98
1 Row of Shelves	0.20	0.24	0.29	24	29	35
2 Rows of Shelves	0.39	0.48	0.58	47	58	70
3 Rows of Shelves	0.58	0.73	0.88	70	87	105
EcoShine Multi-deck Canopy High CRI — 120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)	0.63	0.78	0.93	75	93	112
1 Row of Shelves	0.23	0.29	0.35	28	35	42
2 Rows of Shelves	0.47	0.58	0.70	56	70	84
3 Rows of Shelves	0.70	0.88	1.05	84	105	126
Optional Always*Bright Multi-deck Canopy — 120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)	0.71	0.95	1.08	85	114	130
1 Row of Shelves	0.23	0.30	0.38	28	36	45
2 Rows of Shelves	0.47	0.60	0.67	56	72	80
3 Rows of Shelves	0.74	0.90	1.11	89	108	133

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

Recommended Usable Cube ¹ (Cu Ft/Ft)	5.51 ft ³ /ft (0.51 m ³ /m)
AHRI Total Display Area ² (Sq Ft/Ft)	3.88 ft ² /ft (1.18 m ² /m)
Shelf Area ³ (Sq Ft/Ft)	6.70 ft ² /ft (2.04 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 (3) rows of 22-inch shelves.

ESTIMATED SHIPPING WEIGHT ⁴

Case				Solid End
	<i>8 ft</i>	<i>10 ft</i>	<i>12 ft</i>	<i>(each)</i>
Ib (kg)	1000 (454)	1100 (499)	1200 (544)	100 (45)

⁴ Actual weights will vary according to optional kits included.

PARTS LIST (Continued from Page 1)

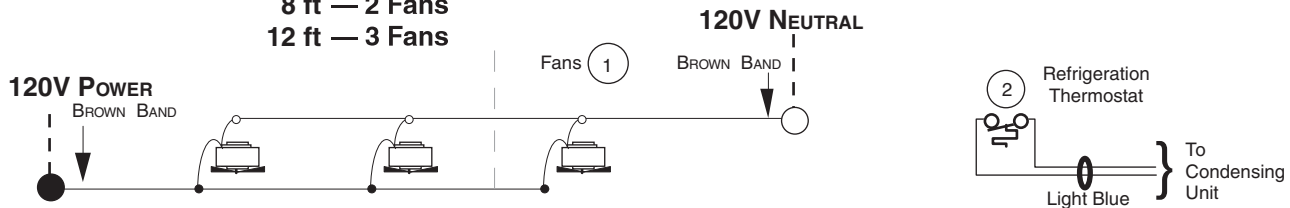
Item	Part #	Description	Item	Part #	Description
LED FIXTURES AND POWER SUPPLY					
E.	0501213	Power Supply (EP.4481861) (5)	G.	EcoShine LED Shelf Fixture (7)	
F.	EcoShine LED Canopy Fixture (6)		4441590	48-inch	2900K HCRI
	4441720	Front 48-inch	4441591	48-inch	3500K HCRI
	4441722	Front 48-inch	4441592	48-inch	3500K
	4441724	Front 48-inch	4441593	48-inch	4100K
	4441726	Front 48-inch			
	4441721	Rear 48-inch			
	4441723	Rear 48-inch			
	4441725	Rear 48-inch			
	4441727	Rear 48-inch			

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

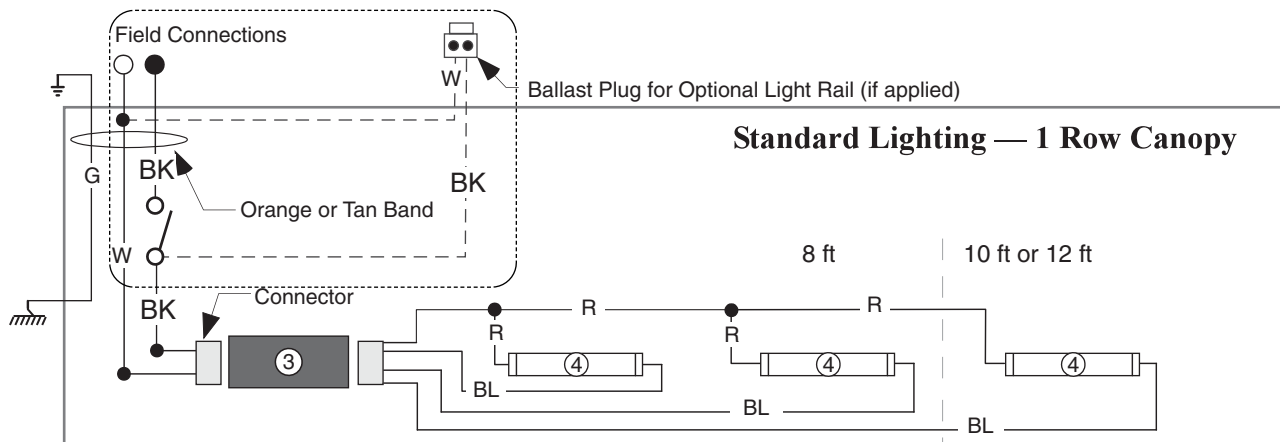
Fan Wiring Offtime Defrost

2 & 3 Fans

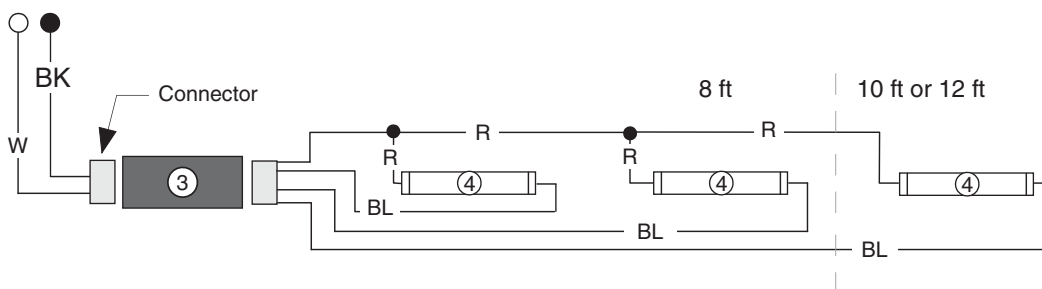
6 ft — 2 Fans
8 ft — 2 Fans
12 ft — 3 Fans



Canopy Light Circuits — Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

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

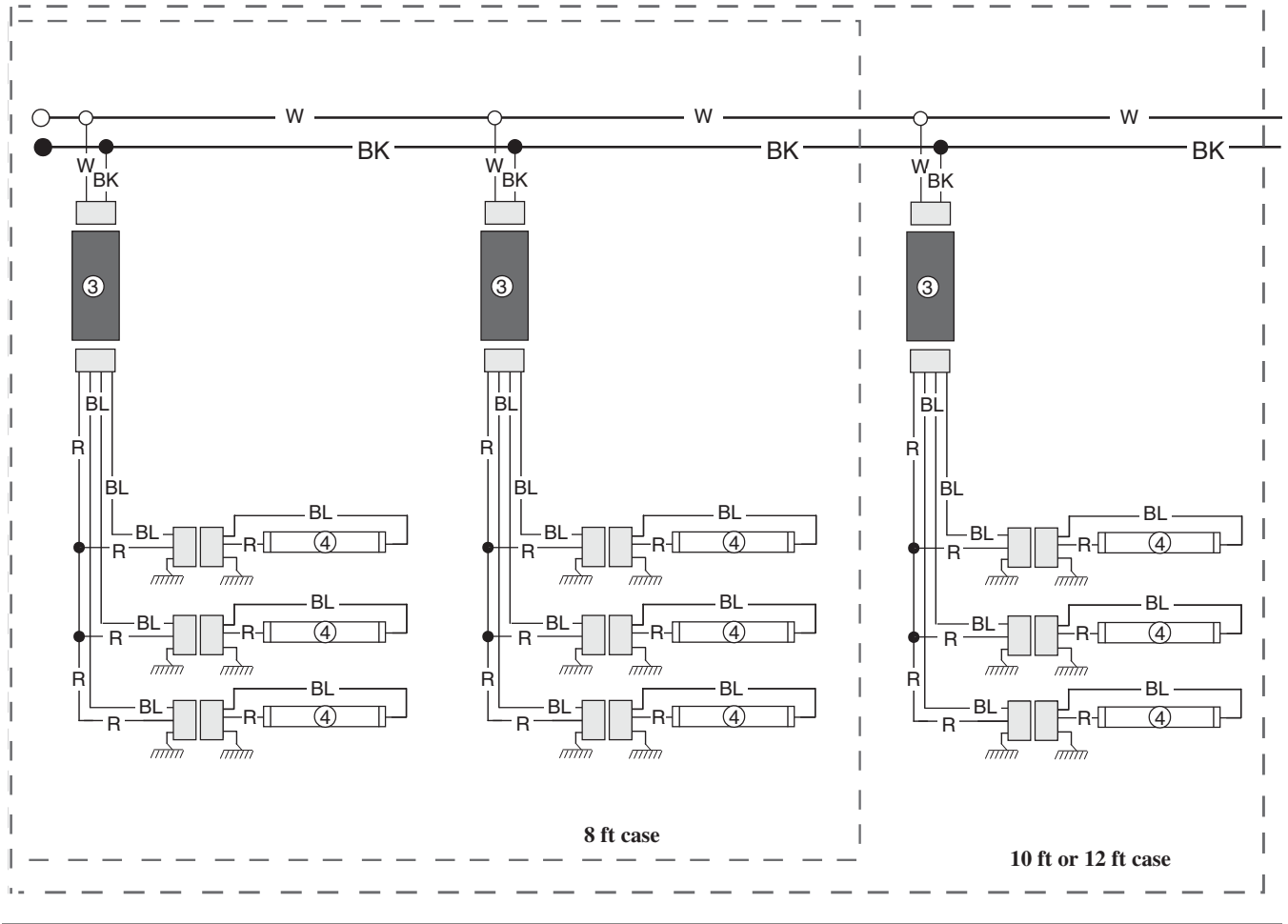
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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 Three Rows of Shelves



WARNING

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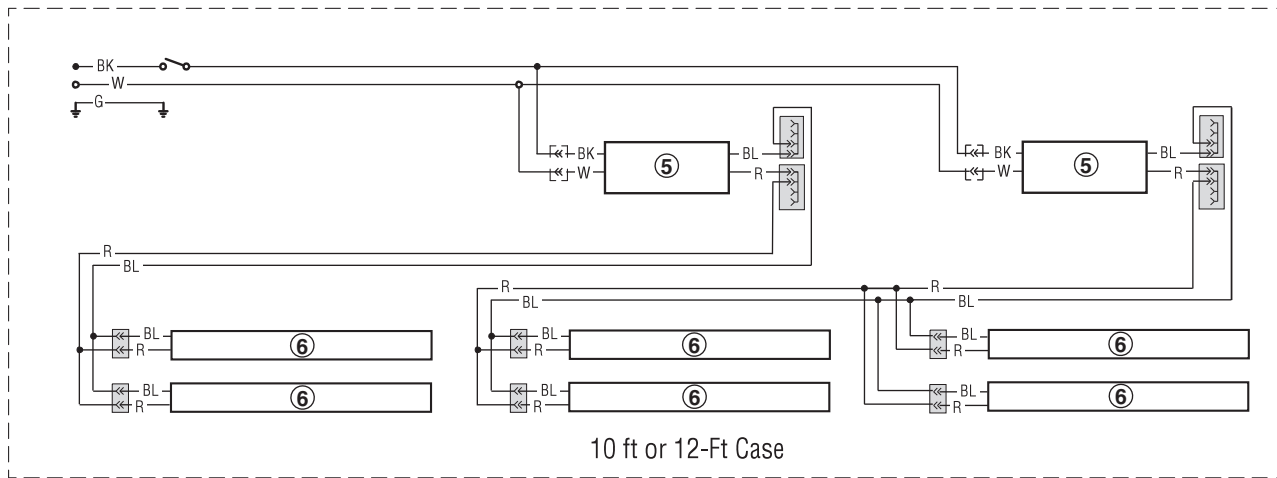
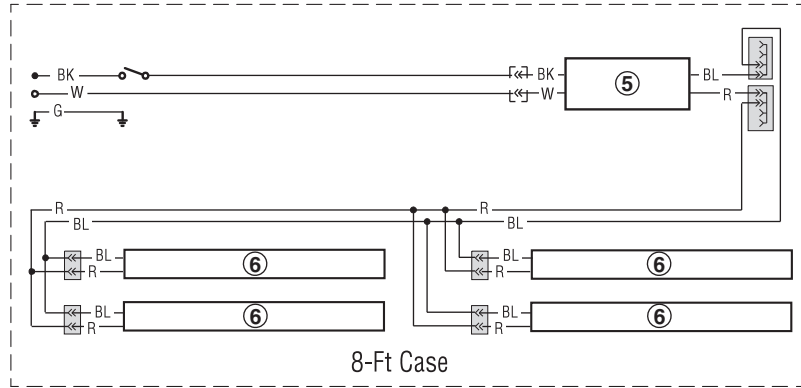
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

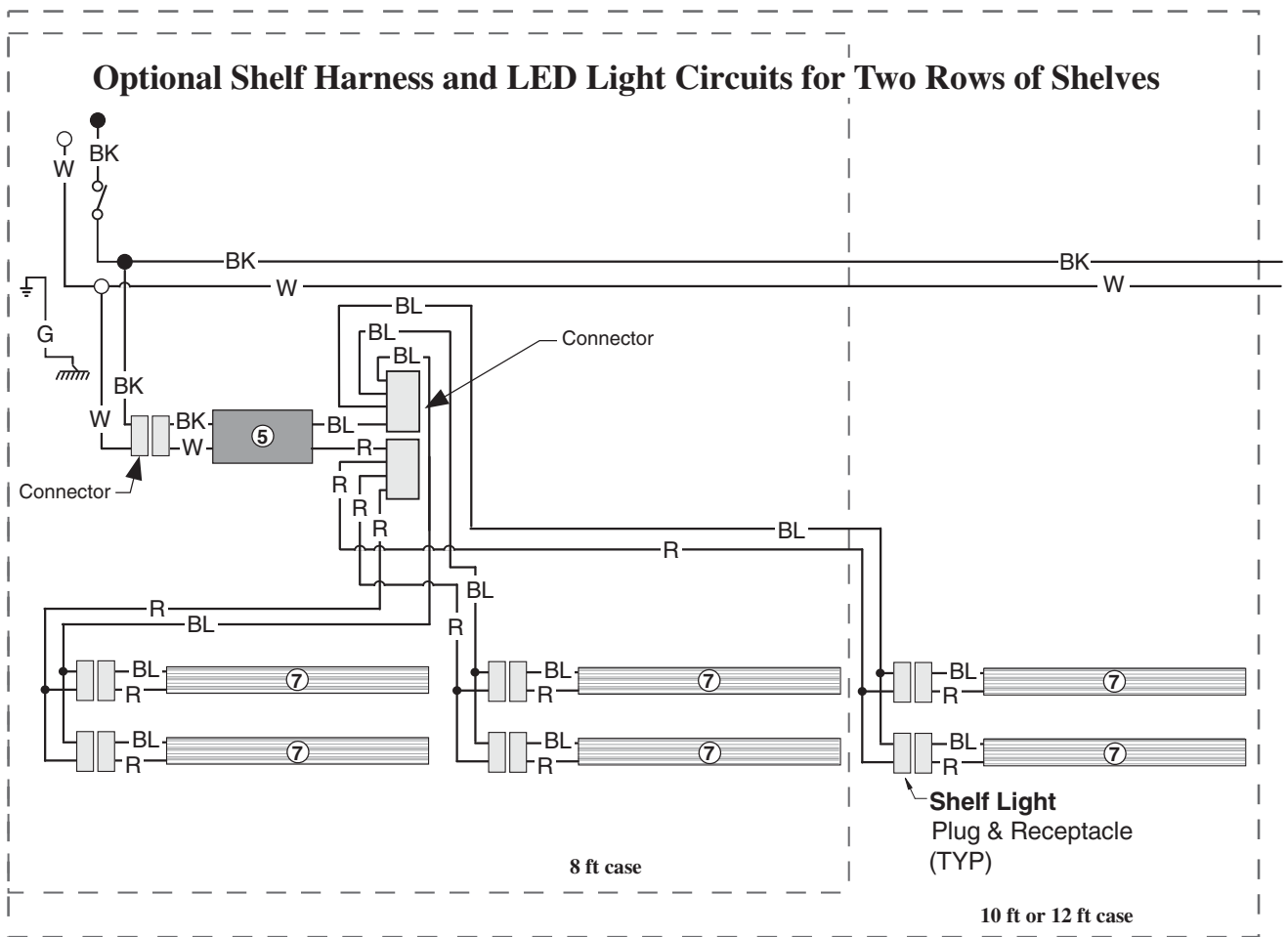
All components must have mechanical ground, and the merchandiser must be grounded.

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



WARNING

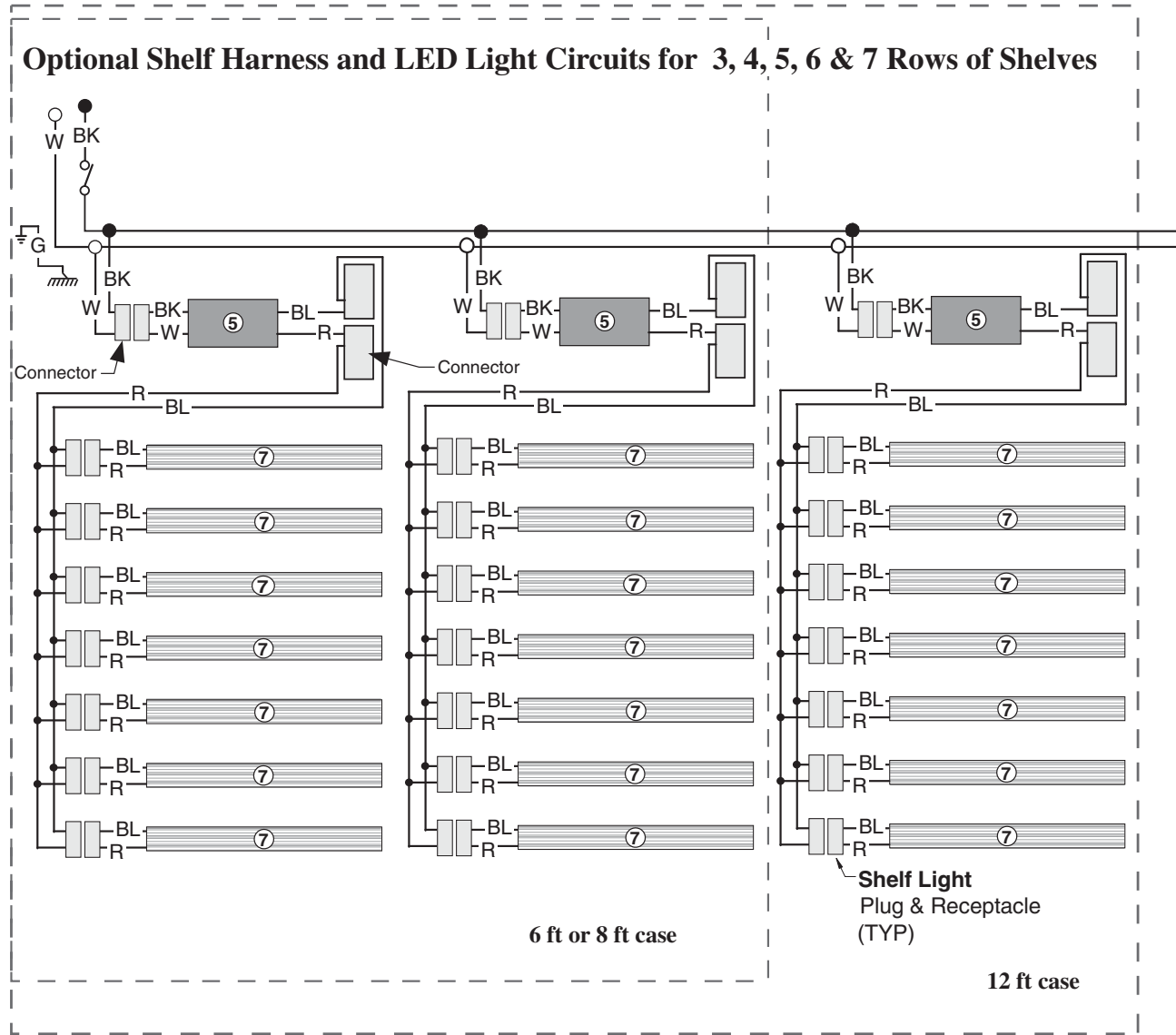
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CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Shelf Lighting LED Fixtures



WARNING

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CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

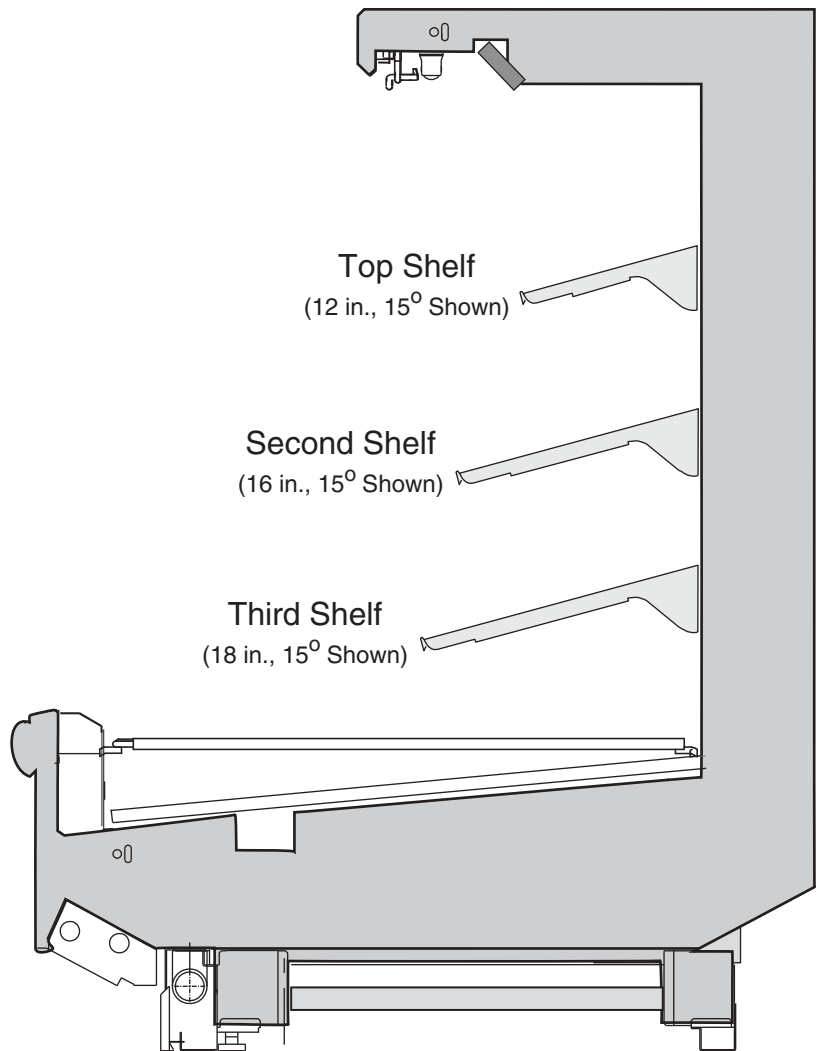
● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND m̄m̄ = CASE GROUND

SHELF CONFIGURATION

This case is designed for three (3) shelves.

The depth of each shelf is critical to case performance.

<p>Top Shelf Depth</p> <p>12 inches or 14 inches</p>
<p>Second Shelf Depth</p> <p>14 inches or 16 inches</p>
<p>Third Shelf Depth</p> <p>16 inches or 18 inches or 20 inches</p>



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Bulk Convertible

The ballast for the canopy and shelf lamps is located behind the canopy on the left-hand end (when facing case) of the merchandiser.

To access the ballast:

1. Remove screws at bottom edge of canopy and rear of light channel.
2. Lower light channel which will pivot on hinge.
3. Service or replace ballasts as required.
4. Reassemble items as they were originally installed.

NOTE: Rail lamp ballast is located in the electrical raceway.

