

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

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

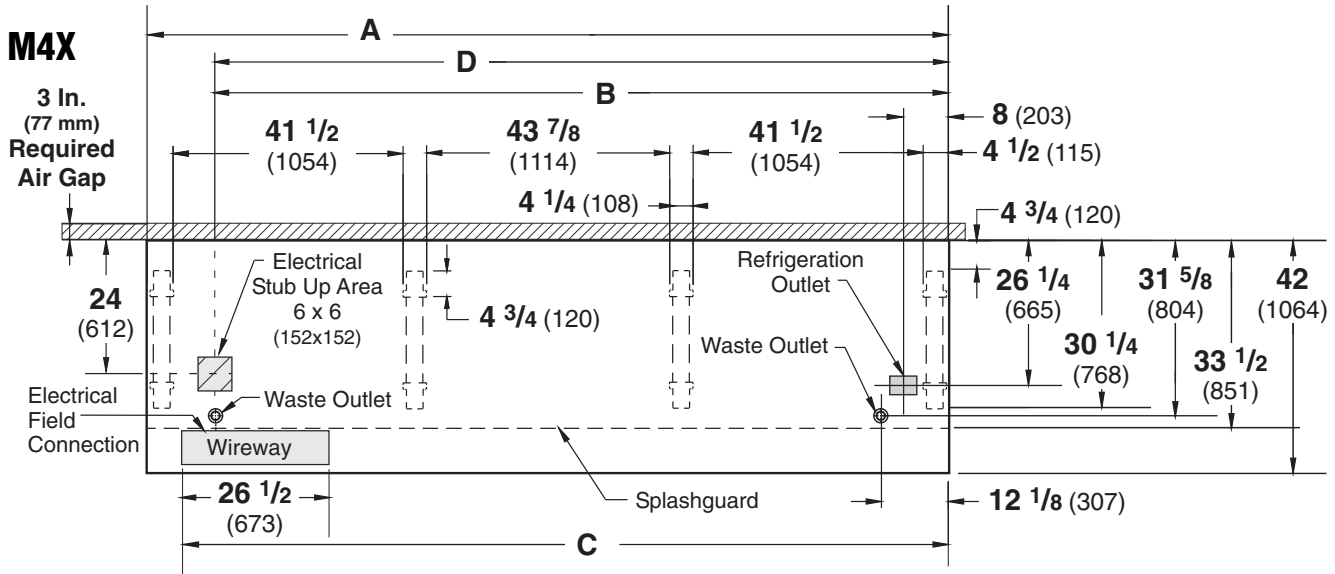


Engineering Plan Views

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





Meat and Produce
10-2004

Dimensions shown as inches and (mm).



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

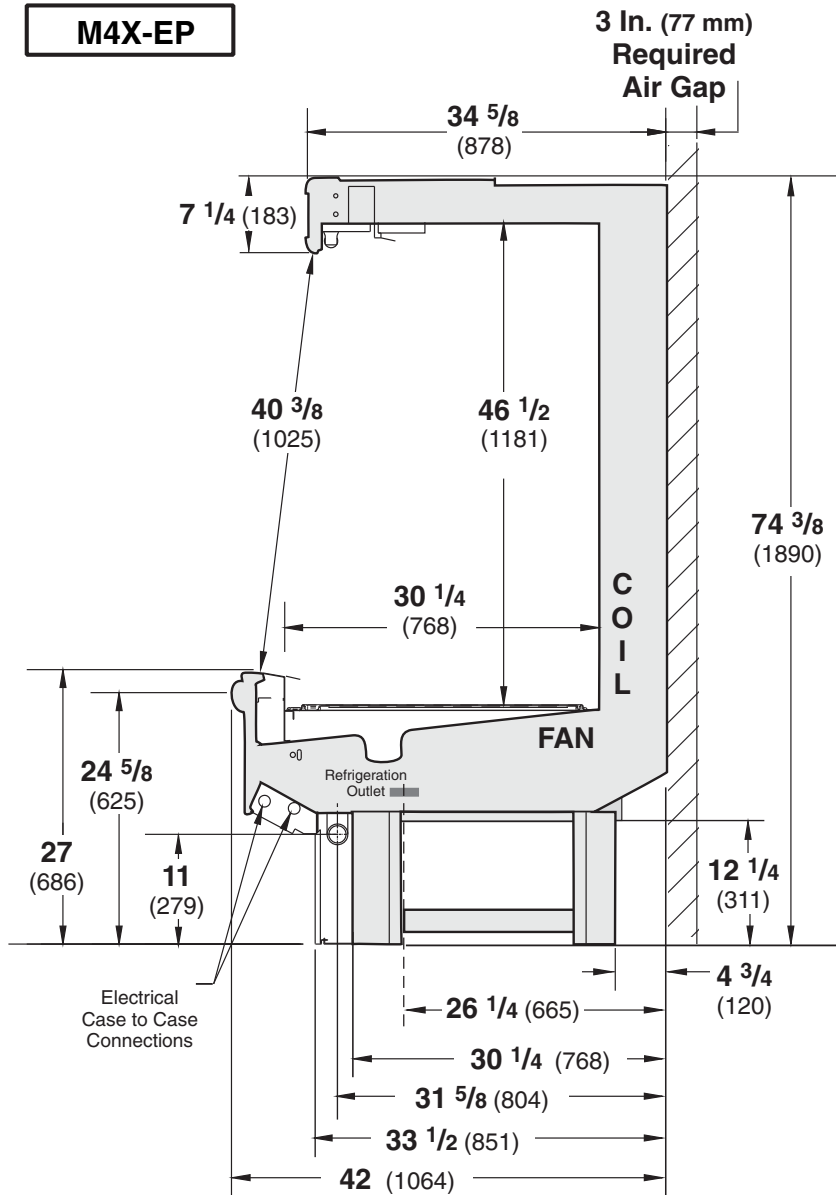
FRONT

	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.) 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)
Electrical Service  (Electrical Field Wiring connection point)		
(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)
(C) RH End of case to LH end of wireway	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	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)
Refrigeration Outlet 		
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)

Impact *Excel* M4X-EP
Meat and Delicatessen

Dimensions shown as inches and (mm).

M4X-EP



REFRIGERATION DATA

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

M4X-EP	UNLIT	LIT
Discharge Air °F	31	29
Evaporator °F	28	26
Unit Sizing °F	26	24

Btu/hr/ft[‡] — Unlit Shelves^{‡‡}

M4X-EP	Parallel	Conventional
UNLIT	1095	1190

[‡]Optional energy efficient motors reduce the refrigeration load by 43 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

Frequency Hr	6
Defrost Water (lb/ft/day)	8

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

OFFTIME	M4X-EP
Time (minutes)	30
ELECTRIC OR GAS	Not Recommended

CONVENTIONAL CONTROLS

Low Pressure Backup Control	
CI/CO*	M4X-EP 19°F / 9°F

Indoor Unit Only,

Pressure Defrost Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge**	M4X-EP
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.

NSF Certification

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

Impact <i>Excel</i> M4X-EP Meat and Delicatessen

Electrical Data

			8 ft	12 ft		
Number of Fans—7W			4	6		
			Amperes		Watts	
			8 ft	12 ft	8 ft	12 ft
Evaporator Fan						
120V	60Hz	Standard	2.00	3.00	156	234
120V	50Hz	Standard	2.20	3.30	168	252
230V	60Hz	Export	1.00	1.50	156	234
230V	50Hz	Export	1.12	1.68	168	252
120V	60Hz	Energy Efficient	0.76	1.14	56	84
230V	60Hz	Energy Efficient	0.40	0.60	56	84
Minimum Circuit Ampacity						
120V	60Hz	Standard	2.20	3.20		
120V	50Hz	Standard	2.40	3.50		
230V	60Hz	Export	1.20	1.70		
230V	50Hz	Export	1.32	1.88		
120V	60Hz	Energy Efficient	0.96	1.34		
230V	60Hz	Energy Efficient	0.60	0.80		
Maximum Over Current Protection 120V			20	20		
Maximum Over Current Protection 230V			15	15		
Standard Lighting (T-8 fluorescent)						
1 Row Canopy			0.51	0.77	59	85
Optional Lighting (T-8 fluorescent)						
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			0.51	0.77	59	85
3 Rows of Shelves			1.53	2.31	177	255
4 Rows of Shelves			2.04	3.08	236	340
EcoShine Multi-deck — Normal CRI—120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)			0.55	0.82	66	98
3 Rows of Shelves			0.58	0.88	70	105
4 Rows of Shelves			0.78	1.17	93	140
EcoShine Multi-deck — High CRI — 120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)			0.63	0.93	75	112
3 Rows of Shelves			0.70	1.05	84	126
4 Rows of Shelves			0.93	1.40	112	168
Always*Bright Multi-deck Lighting — 120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)			0.71	1.08	85	130
3 Rows of Shelves			0.74	1.11	89	133
4 Rows of Shelves			0.93	1.40	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

Recommended Usable Cube ¹ (Cu Ft/Ft)	6.08 ft ³ /ft (0.56 m ³ /m)
AHRI Total Display Area ² (Sq Ft/Ft)	3.80 ft ² /ft (1.16 m ² /m)
Shelf Area ³ (Sq Ft/Ft)	6.71 ft ² /ft (2.05 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.

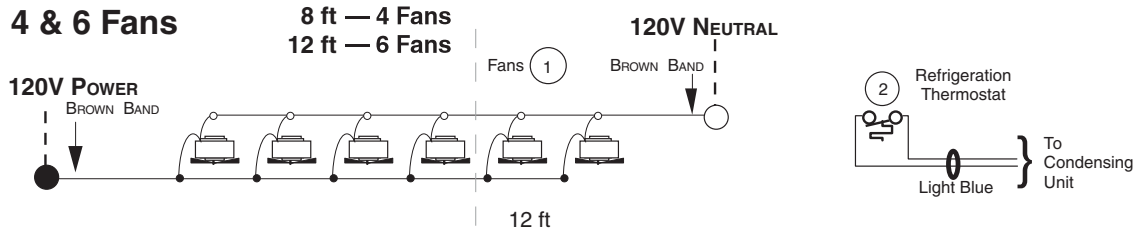
ESTIMATED SHIPPING WEIGHT ⁴			
Case			Solid End
	<i>8 ft</i>	<i>12 ft</i>	<i>(each)</i>
lb (kg)	1000 (454)	1400 (635)	100 (45)

⁴ Actual weights will vary according to optional kits included.

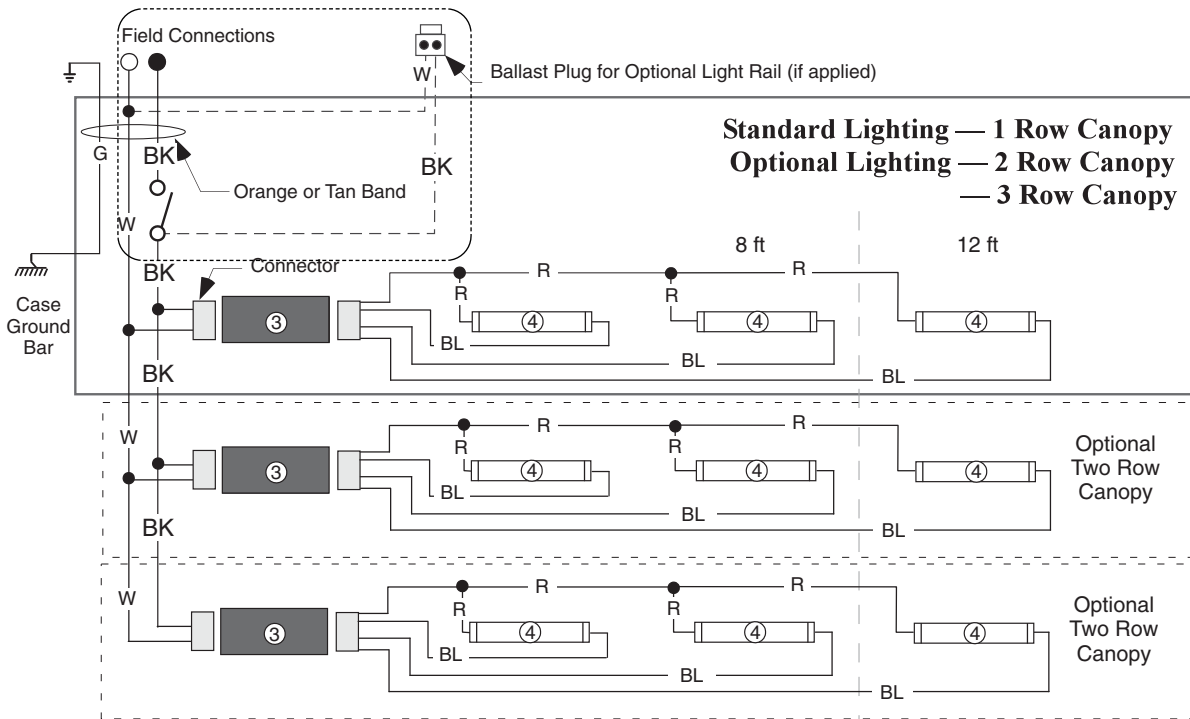
PARTS LIST (Continued from Page 1)					
Item	Part #	Description	Item	Part #	Description
LED FIXTURES AND POWER SUPPLY					
E.	0501213	Power Supply (EP.4481861) (5)	G.	EcoShine LED Shelf Fixture (7)	
F.	EcoShine LED Canopy Fixture (6)		4441590	48-inch	2900K HCRI
	4441720	Front 48-inch	4441591	48-inch	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.

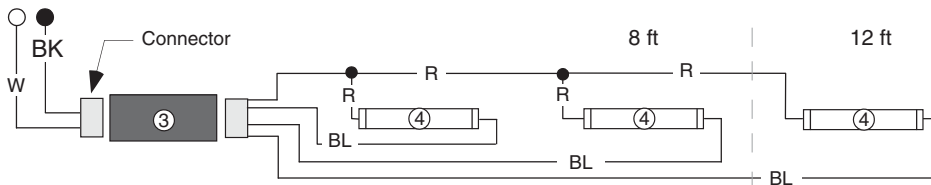
Fan Wiring Offtime Defrost



Light Circuits — Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

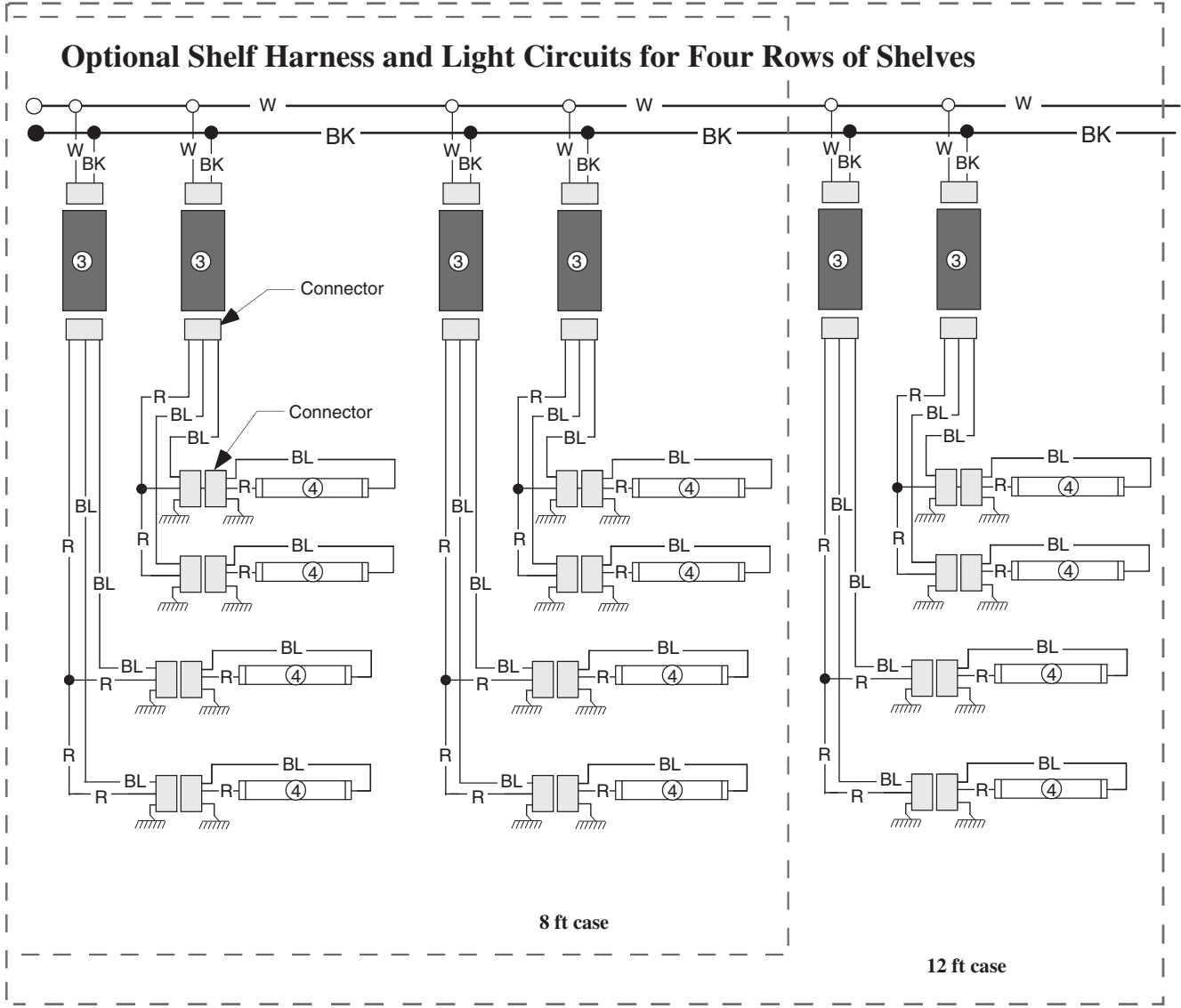
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

**Optional Shelf Lighting
Fluorescent Fixtures**



WARNING

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

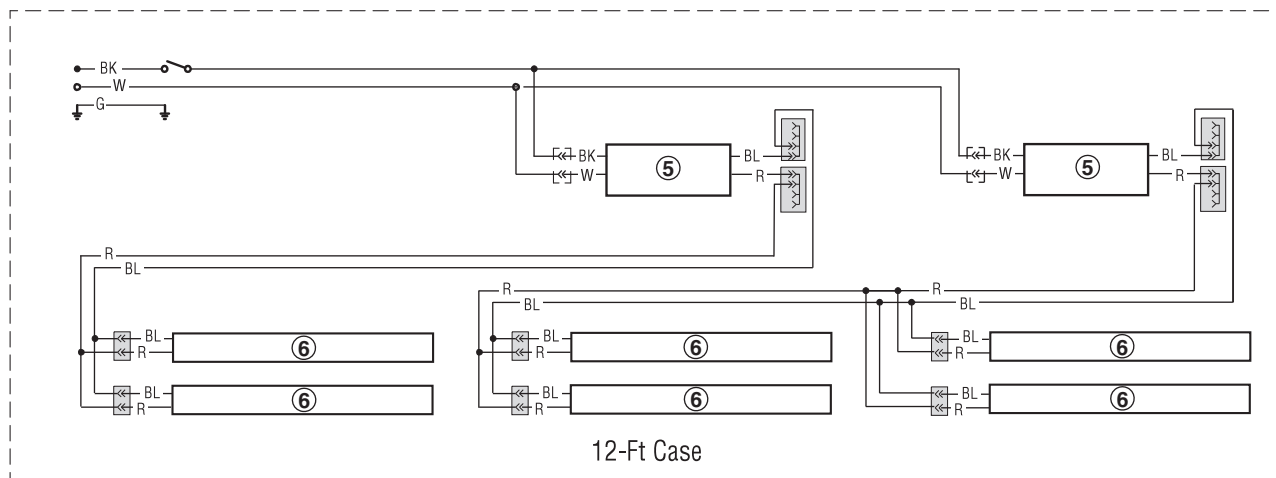
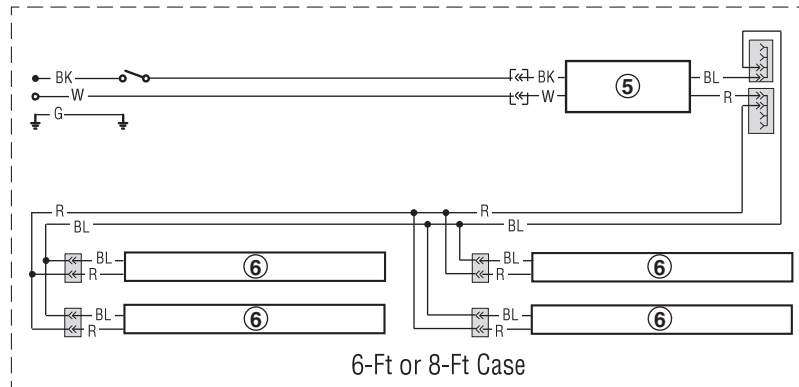
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Canopy Lighting LED Fixtures

Standard LED Canopy Lighting — 2 Row Canopy



WARNING

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

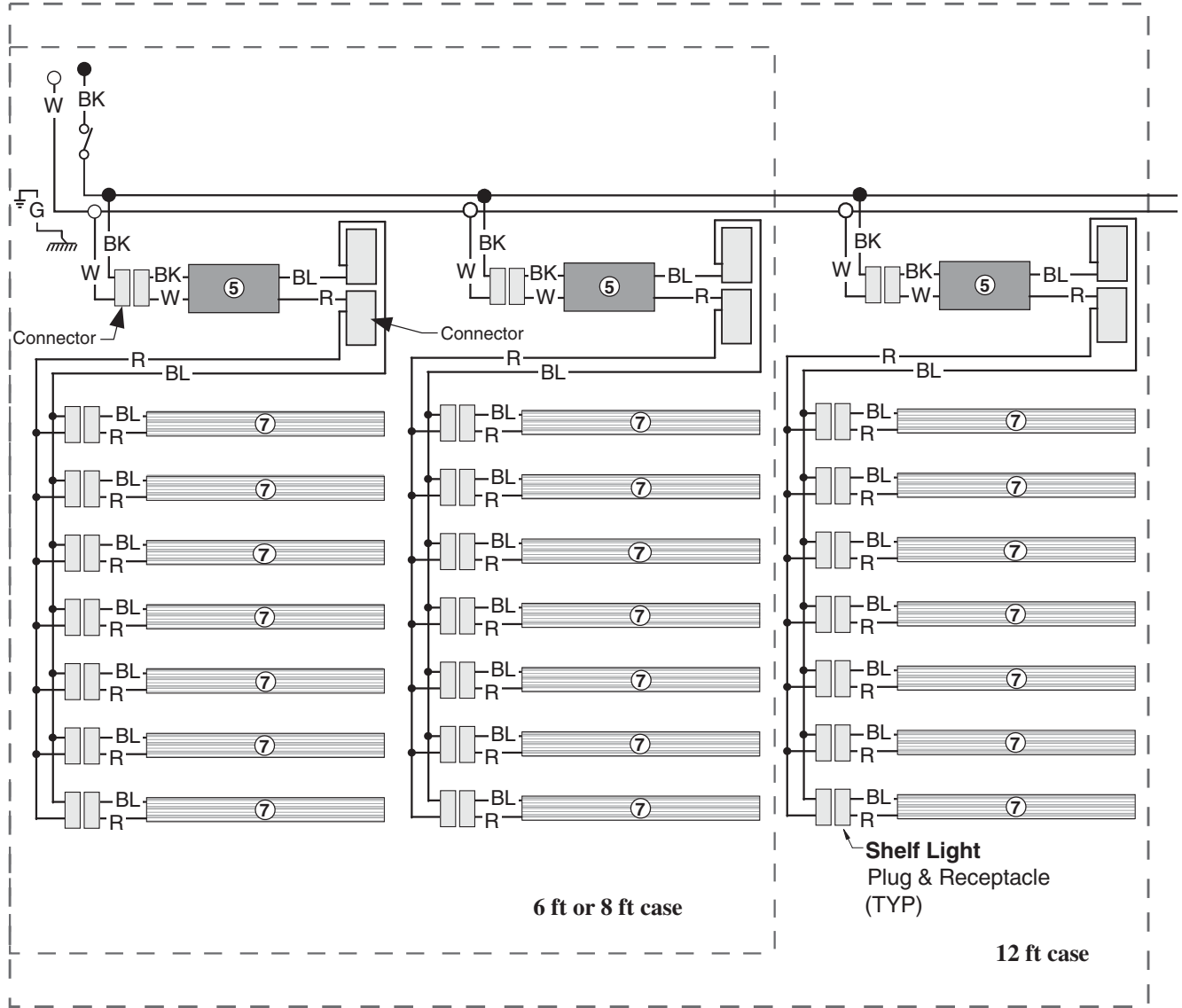
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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 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 mm = CASE GROUND