

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				D.		Ballast, Electronic	(4)
A.	12W Standard	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)	
	12W Energy Efficient	Fan Assembly	(1)	E.		Fluorescent Lamp	(5)
	0477655	Fan Motor, Evaporator (MO.4410546)				<i>Replace with like fixtures</i>	
	0461805	Fan Blade (FB.4780446)		LED FIXTURES AND POWER SUPPLY			
THERMOSTATS				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.



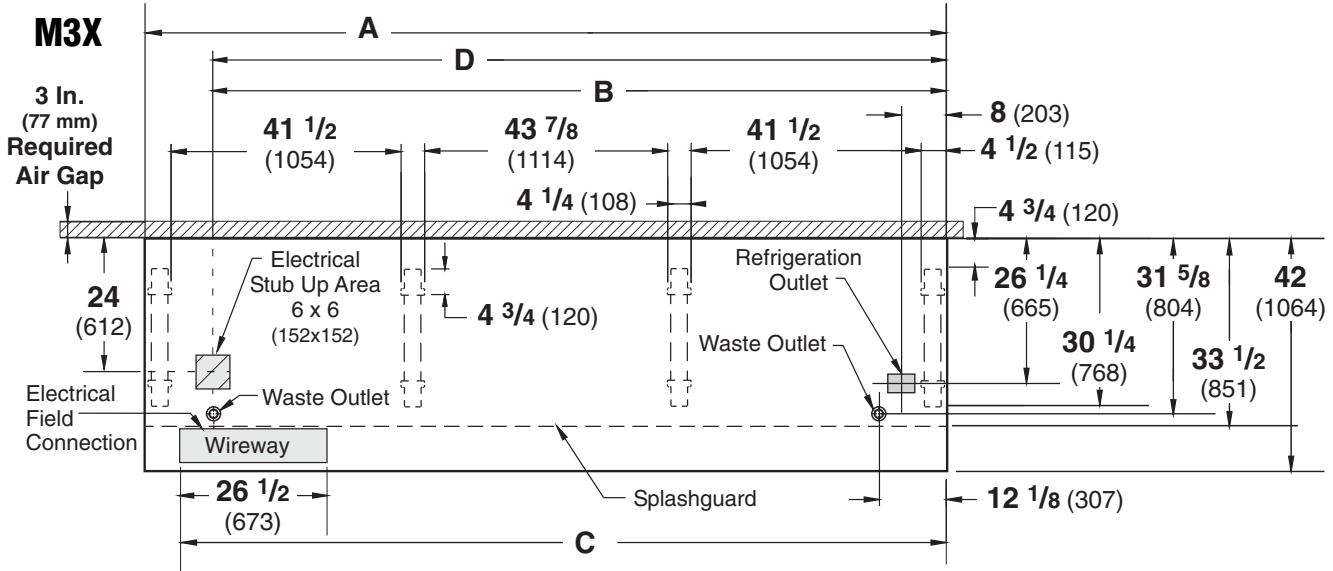
Engineering Plan Views

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).



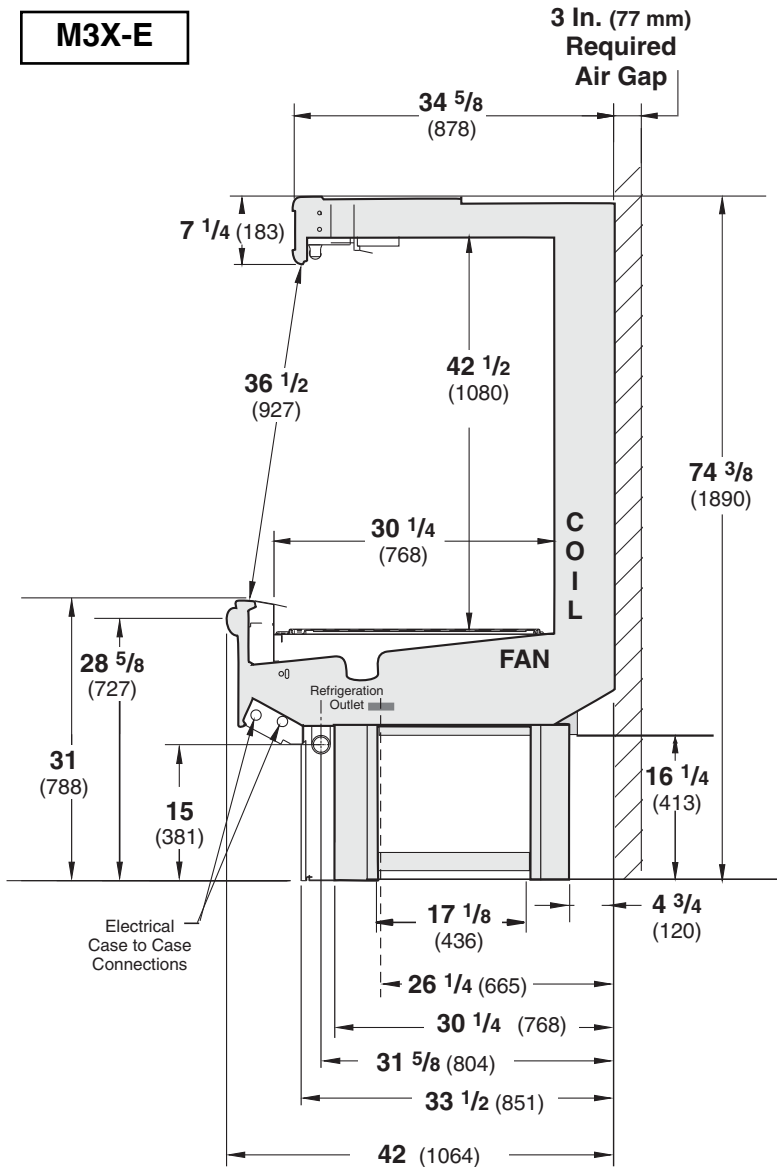
NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

FRONT

	8 ft	12 ft
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)

Multi-deck, 3 Display Levels

Dimensions shown as inches and (mm).



M3X-E

Impact *Excel* M3X-E
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-E
Discharge Air (°F)	28
Evaporator (°F)	21
Unit Sizing (°F)	19

Btu/hr/ft² — Unlit Shelves^{‡‡}

M3X-E	Parallel	Conventional
UNLIT	1055	1155

[‡]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

	M3X-E
Frequency (hr)	6
Defrost Water (lb/ft/day)	7
<i>(± 15% based on case configuration and product loading).</i>	
OFFTIME	M3X-E
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-E
CI/CO*	14°F / 4°F

Indoor Unit Only, Pressure Defrost

Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

	M3X-E		
Estimated Charge**			
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-E
Meat, Delicatessen
Precut and Packaged Produce

Electrical Data

			8 ft	12 ft		
Number of Fans—12W			2	3		
			Amperes		Watts	
Evaporator Fan			8 ft	12 ft	8 ft	12 ft
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
Minimum Circuit Ampacity						
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		
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
2 Rows of Shelves			1.02	1.54	118	170
2 Row Canopy			0.71	1.08	85	130
EcoShine Multi-deck — Normal CRI—120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)			0.55	0.82	66	98
2 Row of Shelves			0.39	0.58	47	70
EcoShine Multi-deck — High CRI —120VAC, 50/60Hz						
2 Row Canopy (Front & Rear)			0.63	0.93	75	112
2 Row of Shelves			0.47	0.70	56	84
AlwaysBright Multi-deck Lighting — 120VAC, 50/60Hz						
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> ¹ (Cu Ft/Ft)	6.04 ft ³ /ft (0.56 m ³ /m)
<i>AHRI Total Display Area</i> ² (Sq Ft/Ft)	3.49 ft ² /ft (1.06 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	5.37 ft ² /ft (1.64 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 (1) row of 16-inch shelf and (1) row of 18-inch shelf.

ESTIMATED SHIPPING WEIGHT ⁴			
Case	8 ft		Solid End
	12 ft		(each)
lb (kg)	1000 (454)	1300 (590)	75 (34)

⁴ Actual weights will vary according to optional kits included.

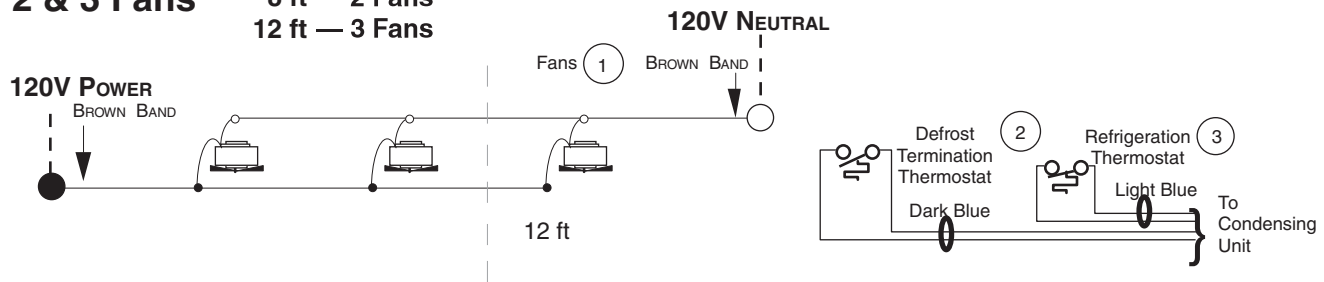
PARTS LIST (Continued from Page 1)								
Item	Part #	Description			Item	Part #	Description	
LED FIXTURES AND POWER SUPPLY								
F.	0501213	Power Supply (EP.4481861)		(6)	G.	(CONTINUED) EcoShine LED Canopy Fixture		
					4441713	Rear	36-inch	2900K HCRI
					4441715	Rear	36-inch	3500K HCRI
G.	EcoShine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

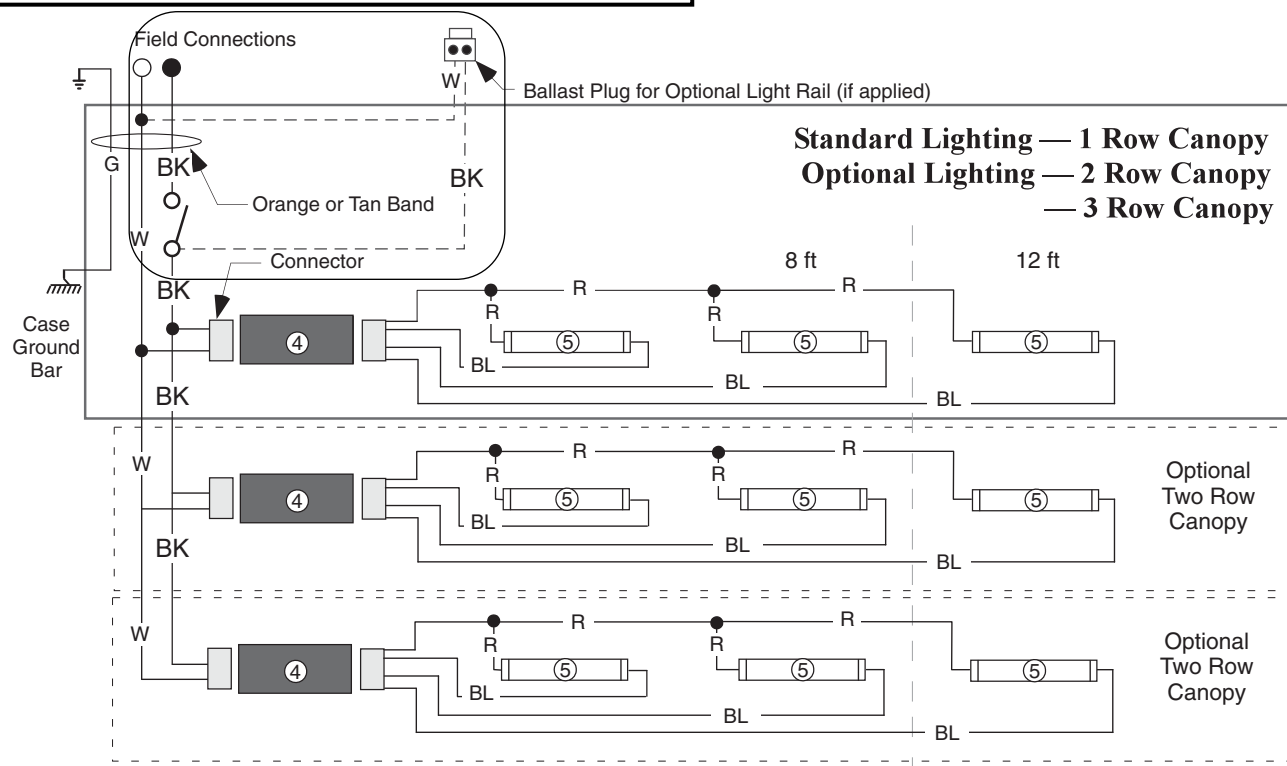
Fan Wiring Offtime Defrost

2 & 3 Fans

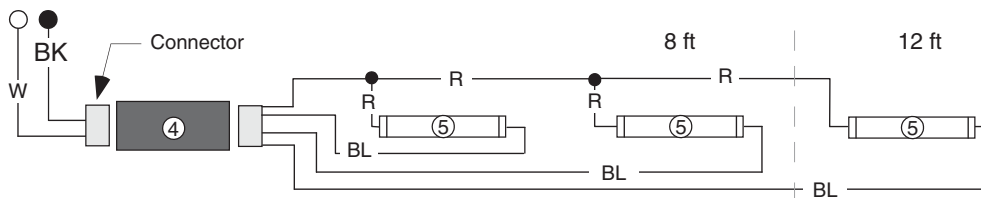
8 ft — 2 Fans
12 ft — 3 Fans



Light Circuits — Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

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

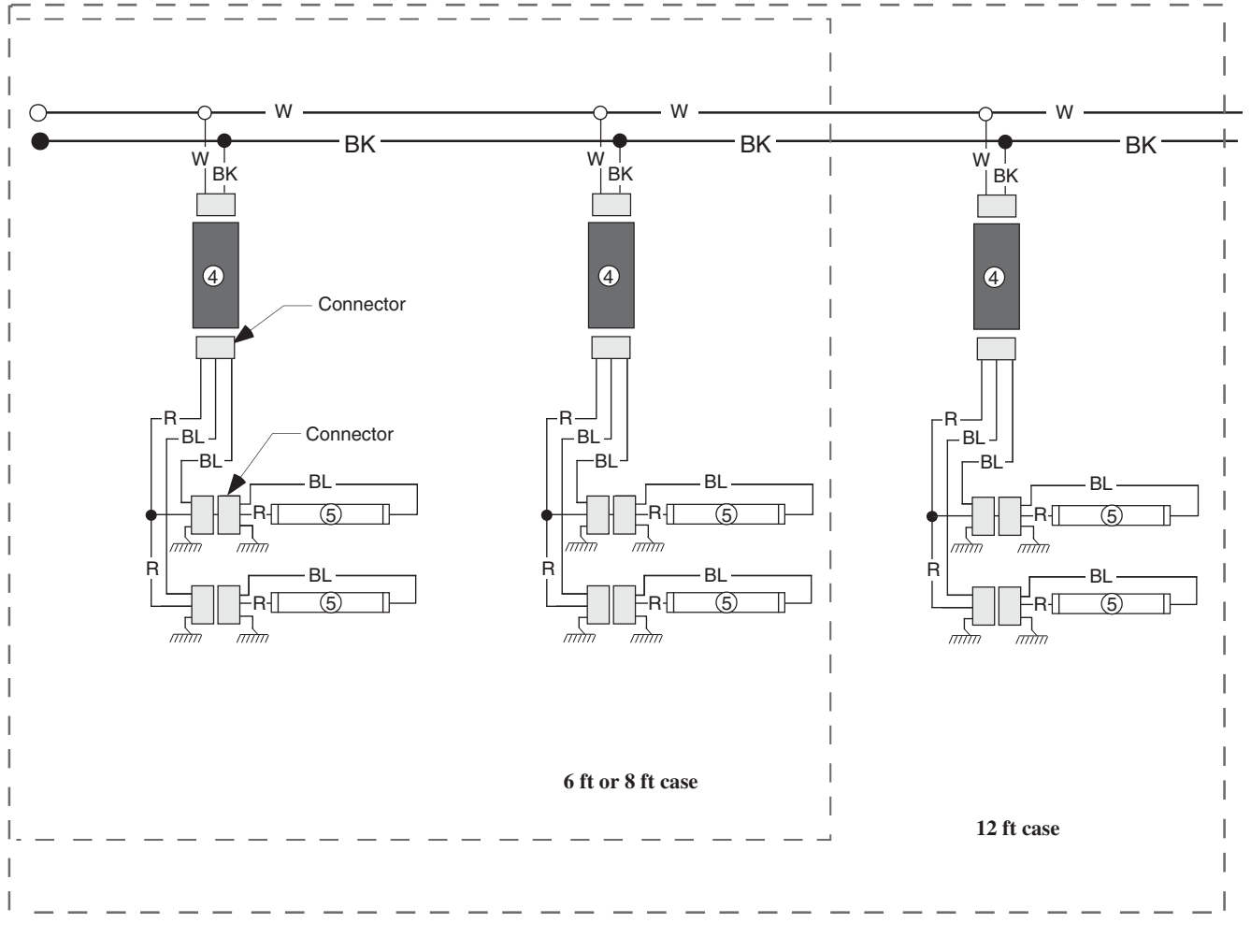
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Shelf Lighting Fluorescent Fixtures

Optional Shelf Harness and Light Circuits for Two Rows of Shelves



WARNING

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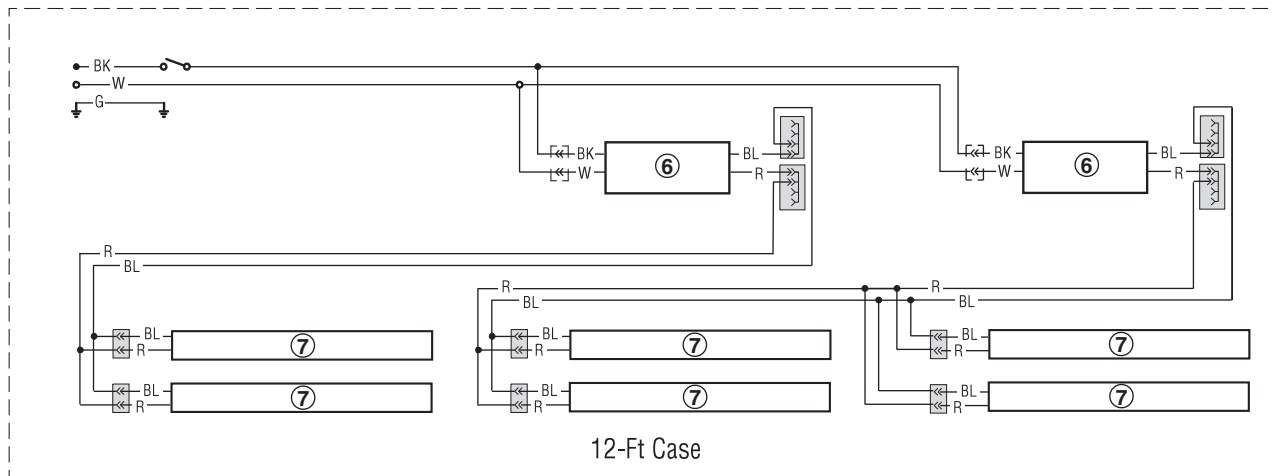
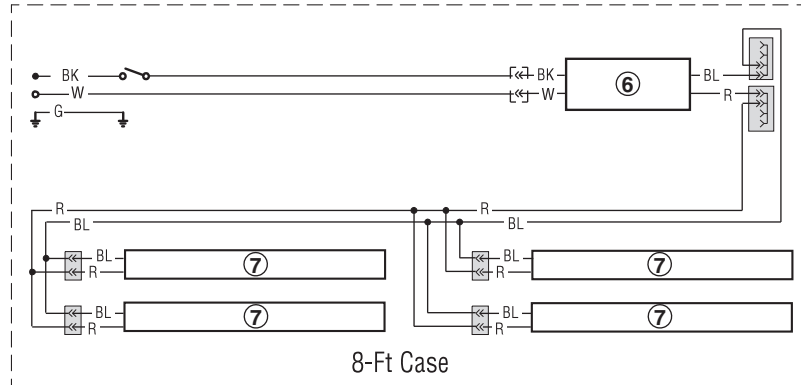
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Optional Canopy Lighting LED Fixtures

Standard LED Canopy Lighting — 2 Row Canopy



WARNING

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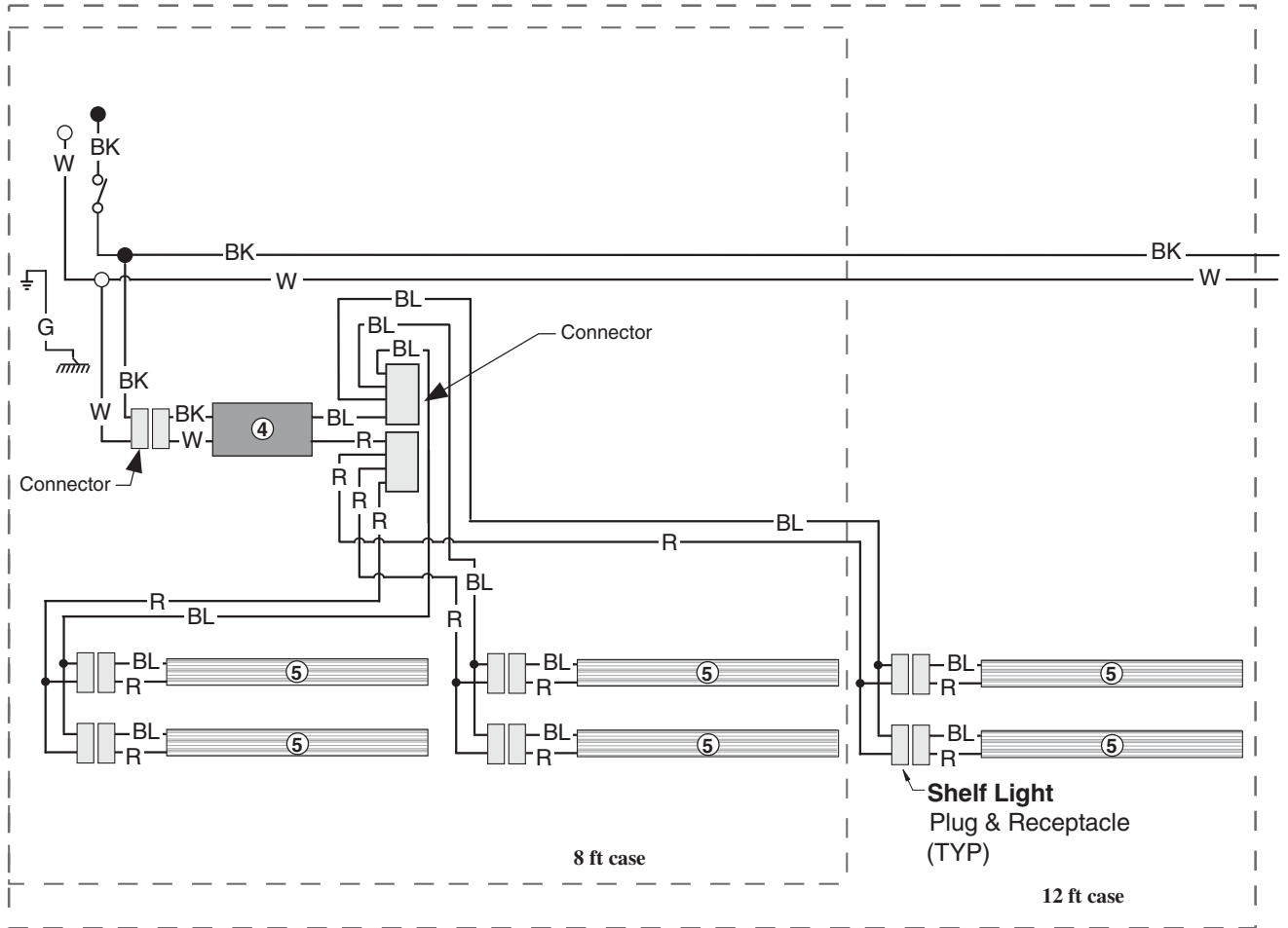
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Optional Shelf Lighting LED Fixtures

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