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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES				LAMPS AND BALLASTS			
8 Ft & 12 Ft				D.		Ballast, Electronic	(4)
A.		7W Standard Energy Efficient Fan Assembly	(1)		0480130	2 lamps (BA.4481676)	
	0477654	Fan Motor, Evaporator (MO.4410545)			0480131	3 lamps (BA.4481654)	
	0142780	Fan Blade (FB.0142780)			0480132	4 lamps (BA.4481677)	
6 Ft Only				E.		Fluorescent Lamp	(5)
A.		4W Standard Energy Efficient Fan Assembly	(1)			<i>Replace with like fixtures</i>	
	0477653	Fan Motor, Evaporator (MO.4410544)		LED FIXTURES AND POWER SUPPLY			
	0382383	Fan Blade (FB.4780617)		F.	0501213	Power Supply (EP.4481861)	(6)
THERMOSTATS				G.		LED Canopy Fixture	(7)
B.	0411744	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(2)			<i>Replace with like fixtures</i>	
C.		Optional Adjustable Refrigeration Thermostat	(3)	H.		LED Shelf Fixture	(8)
						<i>Replace with like fixtures</i>	

^c
NOTE: For LED lighting parts contact your Hussmann service representative at 1-800-922-1919. Please have your model and serial number available. Descriptions including size and color are at WWW.HUSSMANN.COM/SERVICEANDPARTS.

Note: Revision J adds optional EcoShine II LED rail light, pages 4 and 8; removes discontinued LED data; and revises optional LED shelf light wiring diagram, page 9. Other changes marked by bar, underline or circle.

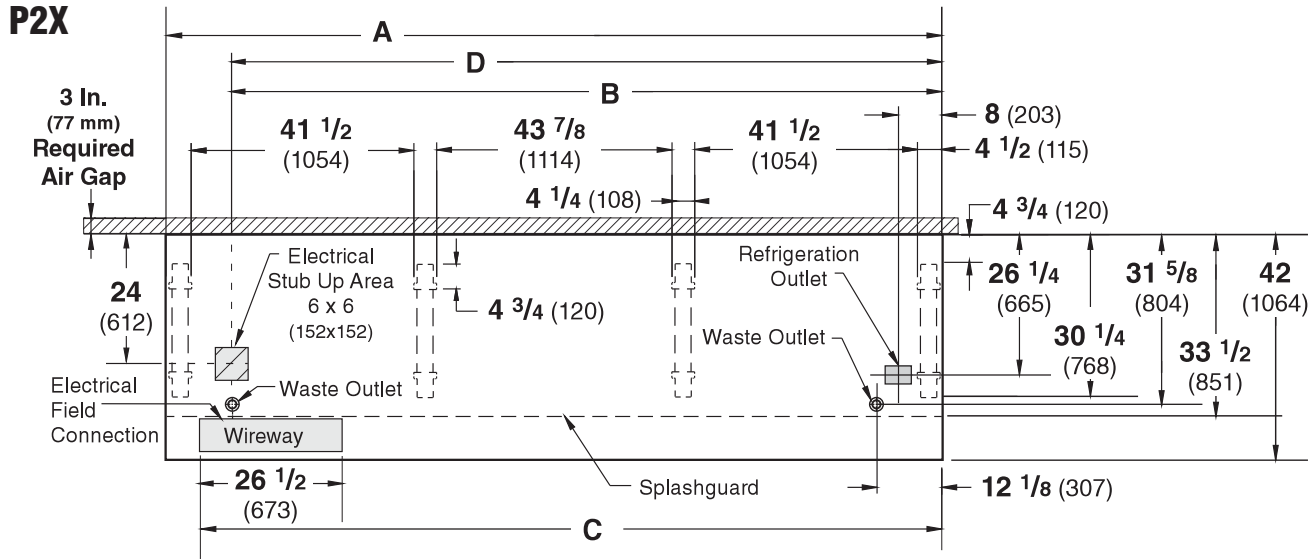


Engineering Plan Views

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

Bulk 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
General			
(A) 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)
Electrical Service <input checked="" type="checkbox"/> (<i>Electrical Field Wiring connection point</i>)			
(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 <input type="checkbox"/> Wireway	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
(C) RH End of case to LH end of wireway	66 1/8 (1680)	90 1/8 (2289)	138 1/4 (3511)
Waste Outlets (<i>One each end</i>) <input checked="" type="checkbox"/>			
(D) 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)
Refrigeration Outlet <input type="checkbox"/>			
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)

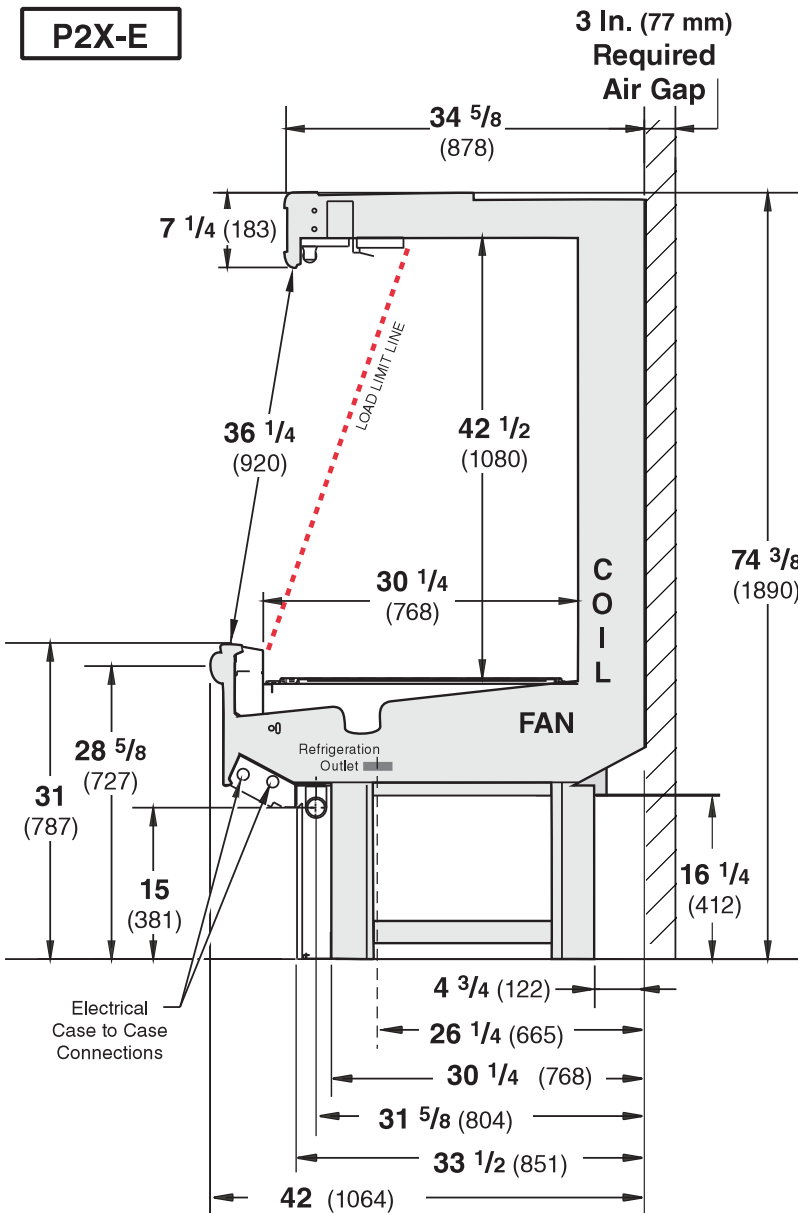
DOE 2012 Energy Efficiency Compliant Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2012 energy efficiency standards.

Excel P2X-E
Bulk Produce

REFRIGERATION DATA

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

Dimensions shown as inches and (mm).



	P2X-E
Discharge Air °F	33
Evaporator °F	24
Unit Sizing °F	22

Btu/hr/ft — Unlit Shelves[‡]

P2X-E	Parallel	Conventional
UNLIT	949	1029

[‡] Add 10 Btu/hr/ft per shelf row for LED fixtures.
Add 20 Btu/hr/ft per shelf row for fluorescent lamps.

DEFROST DATA

	P2X-E
Frequency (hr)	8
Defrost Water (lb/ft/day)	6
(± 15% based on case configuration and product loading).	

OFFTIME	P2X-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

	P2X-E
CI/CO*	17/7°F

Indoor Unit Only,

Pressure Defrost Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge**	P2X-E		
6 ft	1.6 lb	26 oz	0.7 kg
8 ft	2.3 lb	37 oz	1.0 kg
12 ft	3.3 lb	53 oz	1.5 kg

**This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz/0.2 kg)

NSF Certification

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

Excel P2X-E
Bulk Produce

Electrical Data

	6 ft	8 ft	12 ft			
Number of Fans—7W	—	2	3			
Number of Fans—4W	2	—	—			
		Amperes			Watts	
	6 ft	8 ft	12 ft	6 ft	8 ft	12 ft
Evaporator Fan						
120V 50/660Hz Standarrd Energy Efficient	0.24	0.38	0.57	16	28	42
230V 50/660Hz Standarrd Energy Efficient	0.12	0.20	0.30	16	28	42
230V 60Hz Export	0.30	0.50	0.75	48	78	117
230V 50Hz Export	0.36	0.56	0.84	54	84	126
Minimum Circuit Ampacity						
120V 50/660Hz Standarrd Energy Efficient	0.44	0.58	0.77			
230V 60Hz Export	0.50	0.70	0.95			
230V 50Hz Export	0.56	0.76	1.04			
230V 50/660Hz Standarrd Energy Efficient	0.32	0.40	0.50			
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	0.51	0.77	59	59	85
ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2012 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.						
Optional Lighting (T-8 fluorescent)						
Additional 1 Row Canopy	0.51	0.51	0.77	59	59	85
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
1 Row of Shelves	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
Ecoshine II Canopy						
Ecoshine II	0.37	0.51	0.77	44.2	61.6	92.4
Ecoshine II Plus	0.35	0.46	0.70	41.4	55.6	83.4
Ecoshine II Plus HO	0.42	0.56	0.84	50.5	67.2	100.8
Ecoshine II Plus Rail Light —1 Row	0.13	0.17	0.26	15.3	20.5	30.7
Ecoshine II Plus Shelves						
1 Row of Shelves	0.13	0.17	0.26	15.3	20.5	30.7
2 Rows of Shelves	0.26	0.34	0.51	30.7	40.9	61.4
3 Rows of Shelves	0.38	0.51	0.77	46.0	61.4	92.1

120V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

120V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting + Optional Rail Lighting

230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

Product Data

<i>Recommended Usable Cube</i> ¹ (Cu Ft/Ft)	6.69 ft ³ /ft (0.62 m ³ /m)
<i>AHRI Total Display Area</i> ² (Sq Ft/Ft)	3.06 ft ² /ft (0.93 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	3.87 ft ² /ft (1.18 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]

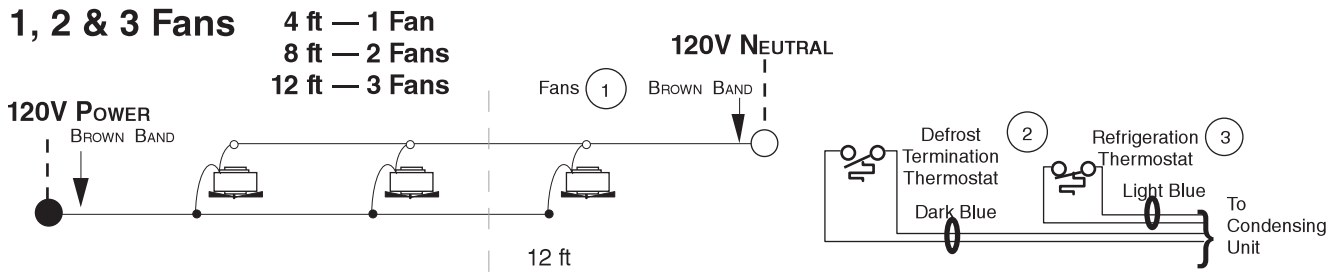
³ Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (1) row of 16-inch shelf.

ESTIMATED SHIPPING WEIGHT⁴

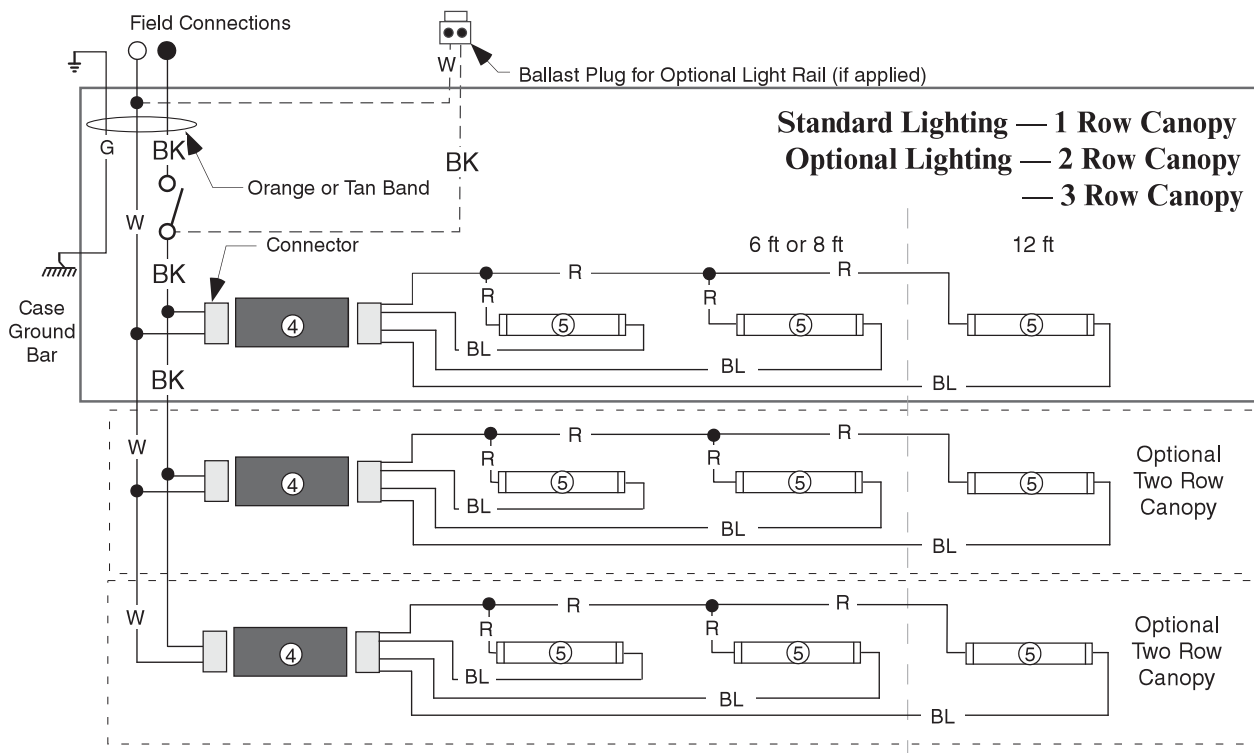
Case	6 ft	8 ft	12 ft	Solid End
				(each)
lb (kg)	800 (363)	1000 (454)	1200 (544)	75 (34)

⁴ Actual weights will vary according to optional kits included.

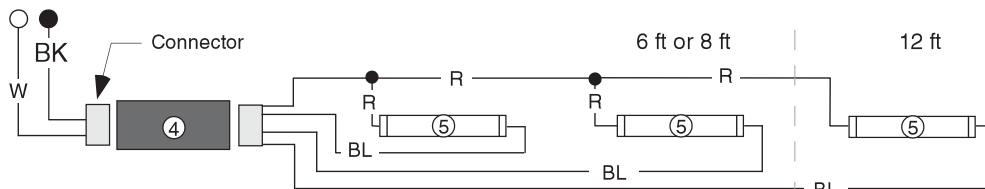
Fan Wiring Offtime Defrost



Light Circuits — Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

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

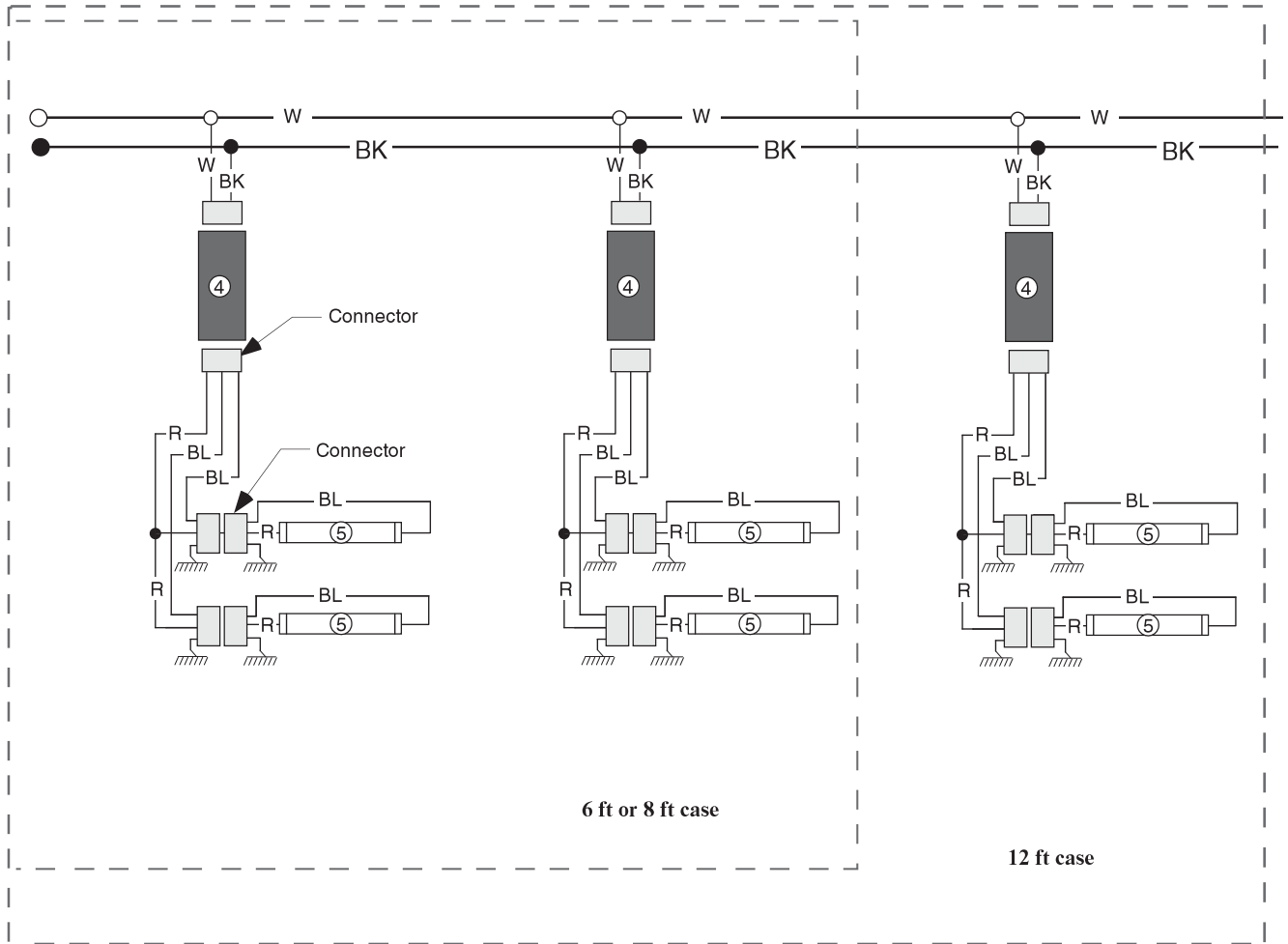
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Shelf Lighting Fluorescent Fixtures

Optional Shelf Harness and Light Circuits for Two Rows of Shelves



WARNING

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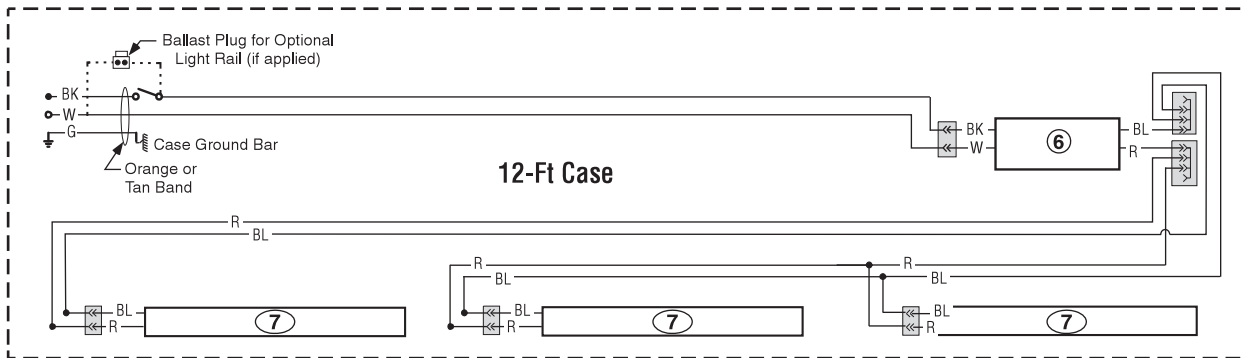
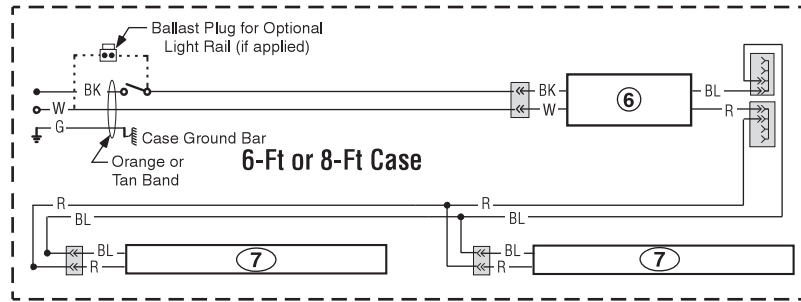
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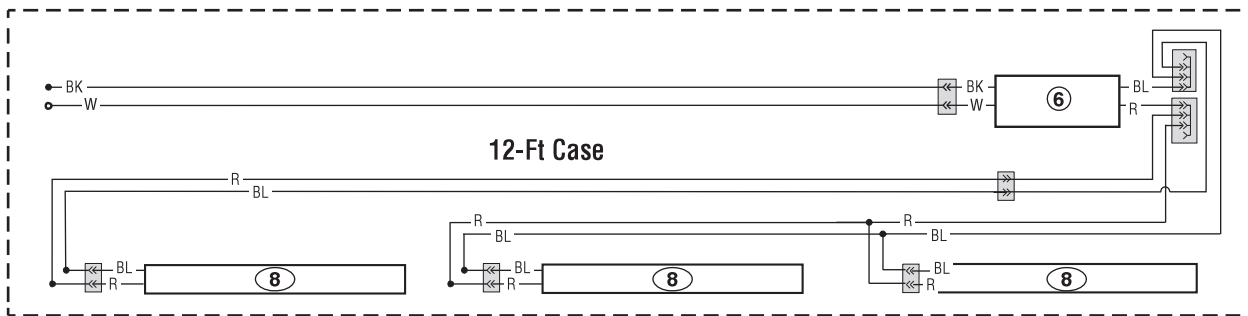
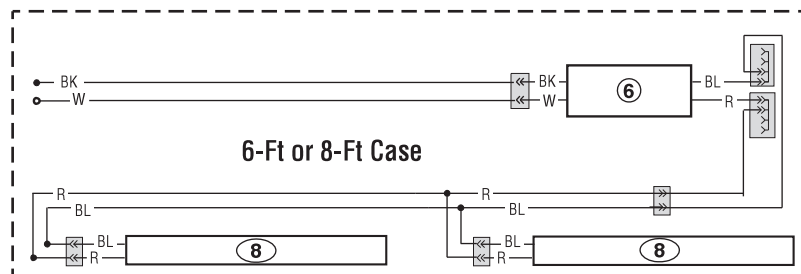
● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND ≡ = CASE GROUND

Optional Canopy and Rail Light Circuits — LED Fixtures

EcoShine II LED Canopy Lighting — 1 Row



EcoShine II LED Rail Lighting — 1 Row



WARNING

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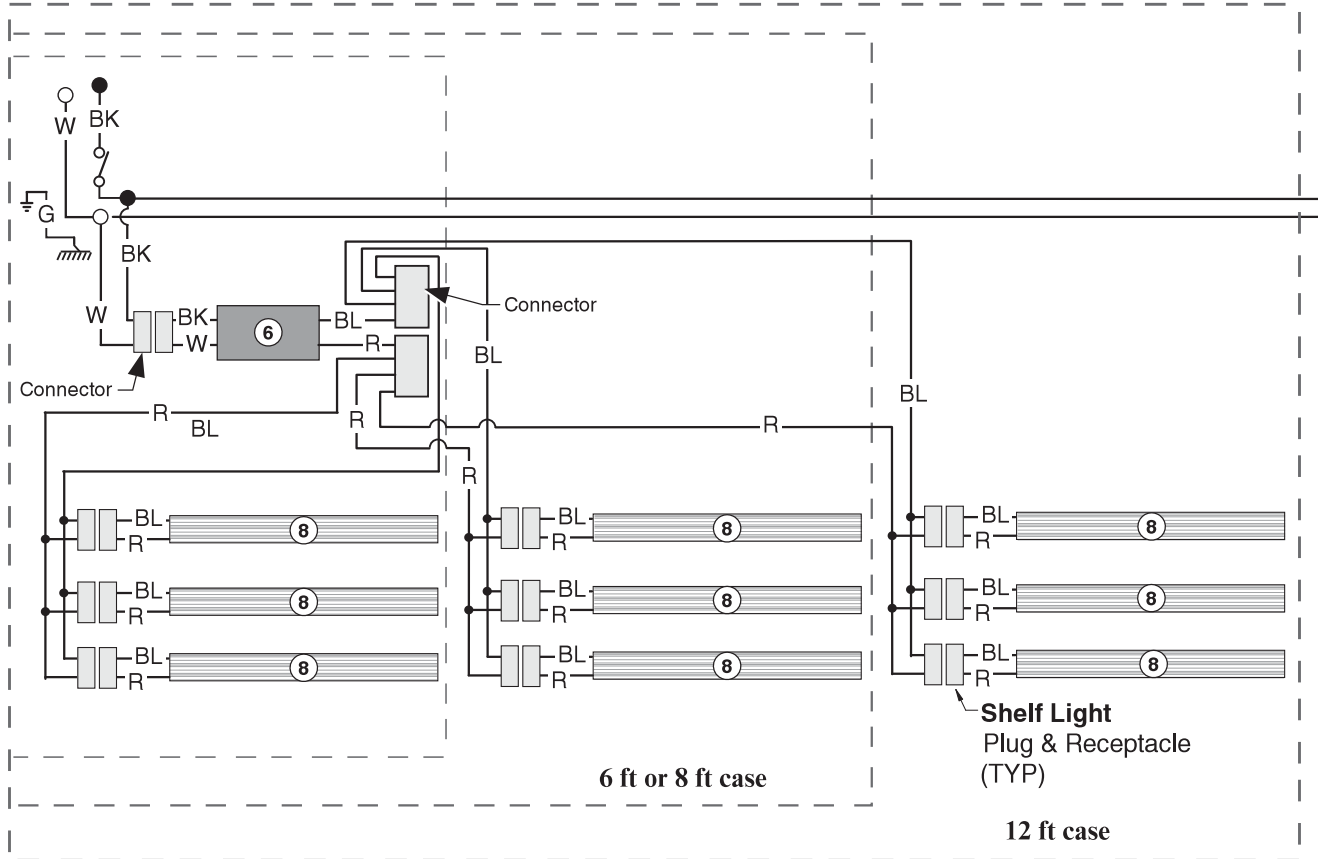
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Shelf Lighting LED Fixtures

Optional Shelf Harness and LED Light Circuits for 2 or 3 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
 ● = 80V POWER ○ = 80V NEUTRAL ⚡ = FIELD GROUND Ⓜ = CASE GROUND