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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES				LAMPS AND BALLASTS			
4 Ft, 8 Ft & 12 Ft				C.		Ballast, Electronic	(3)
A.		25W Standard Energy Efficient Fan Assembly (1)		0491389		1 lamp (BA.4481689)	
	0501485	Fan Motor, Evaporator (MO.4410701)		0480130		2 lamps (BA.4481676)	
	0501484	Fan Blade (FB.4780657)		0480131		3 lamps (BA.4481654)	
				0480132		4 lamps (BA.4481677)	
6 Ft Only				D.		Fluorescent Lamp	(4)
A.		7W Standard Energy Efficient Fan Assembly (1)				<i>Replace with like fixtures</i>	
	0477654	Fan Motor, Evaporator (MO.4410545)		LED FIXTURES AND POWER SUPPLY			
	0142780	Fan Blade (FB.0142780)		E.	0501213	Power Supply (EP.4481861)	(5)
THERMOSTATS				F.		LED Canopy Fixture	(6)
B.		Optional Adjustable Refrigeration Thermostat (2)				<i>Replace with like fixtures</i>	
				G.		LED Shelf Fixture	(7)
						<i>Replace with like fixtures</i>	

Data sheet-Excel-P4X-EP

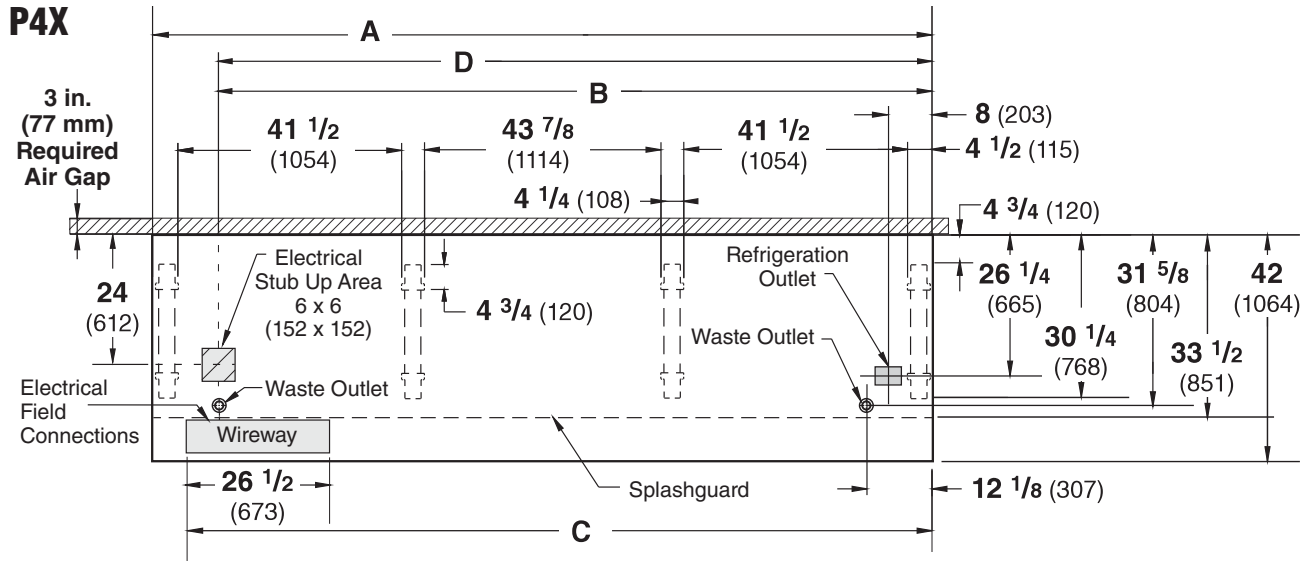
Note: Revision N: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

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 (<i>without ends or partitions</i>)	48 3/8 (1229)	72 3/8 (1838)	96 3/8 (2448)	144 1/2 (3670)
<i>(Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.)</i>				
Maximum O/S dimension of case back to front <i>(includes bumper)</i>	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 (<i>Electrical Field Wiring connection point</i>)				
(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 (<i>One each end</i>)				
(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)

Multi-deck, 5 Display Levels



Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.



REFRIGERATION DATA

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

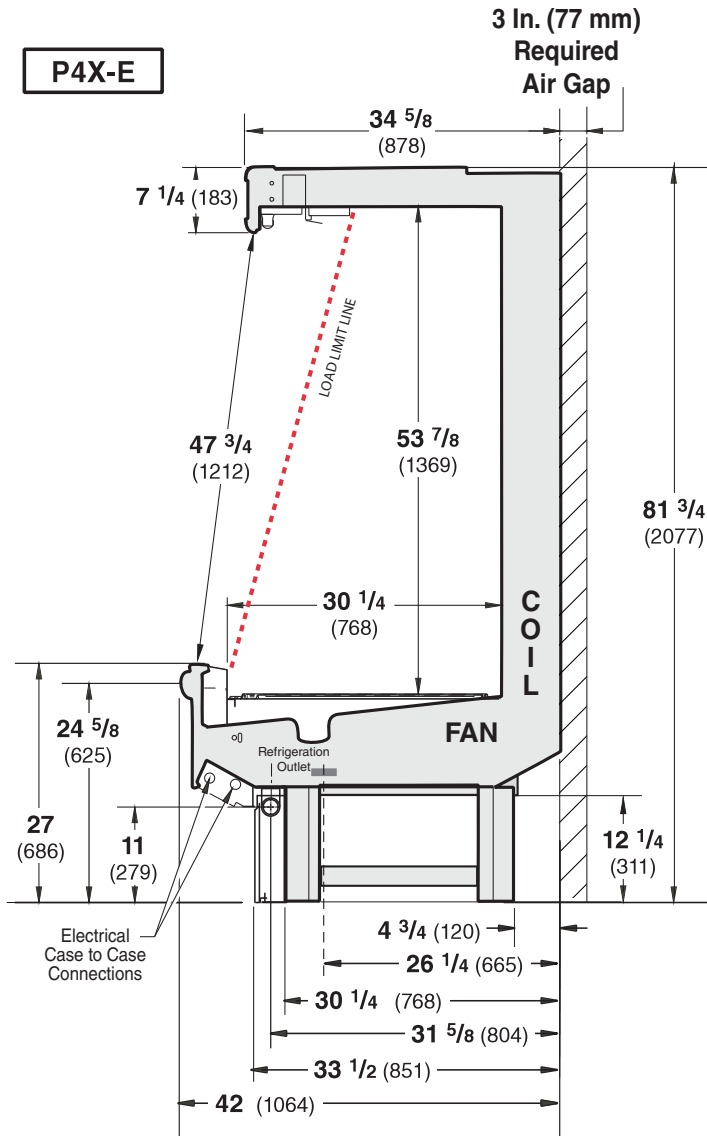
P4X-EP [§]	MODULAR PRODUCE		
	UNLIT	LIT	INSERT*†
Discharge Air °F	33	31	33
Evaporator °F	30	28	30
Unit Sizing °F	28	26	28

* All display levels must use baffles.
 § Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.

P4X-EP	Btu/hr/ft — Unlit Shelves‡	
	Parallel	Conventional
UNLIT	1229	1344
INSERT†	1114	1219

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

Dimensions shown as inches and (mm).



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 (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.

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

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

Low Pressure Backup Control

P4X-EP	
CI/CO*	21°F / 11°F

Indoor Unit Only,

Pressure Defrost Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

Excel P4X-EP

All Produce

Electrical Data

	4 ft	6 ft	8 ft	12 ft					
Number of Fans—25W	1	—	2	3					
Number of Fans—7W	—	4	—	—					
		Amperes					Watts		
	4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft	
Evaporator Fan									
120V 50/60Hz Standard Energy Efficient	0.60	0.76	1.20	1.80	36	56	72	108	
230V 50/60Hz Standard Energy Efficient	0.30	0.40	0.60	0.90	36	56	72	108	
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	
Minimum Circuit Ampacity									
120V 50/60Hz Standard Energy Efficient	0.80	0.96	1.40	2.00					
230V 50/60Hz Standard Energy Efficient	0.50	0.60	0.80	1.10					
230V 60Hz Export	0.86	1.20	1.52	2.18					
230V 50Hz Export	0.96	1.32	1.72	2.48					
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	
ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2017 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.									
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 II Canopy									
EcoShine II	0.16	0.26	0.32	0.48	19.3	31.6	38.6	58.0	
EcoShine II HO	0.22	0.33	0.44	0.66	26.5	39.5	53.0	79.4	
EcoShine II Rail Light —1 Row	0.08	0.12	0.16	0.25	9.9	14.1	19.8	29.7	
EcoShine II Shelves									
1 Row of Shelves	0.08	0.12	0.16	0.25	9.9	14.1	19.8	29.7	
2 Rows of Shelves	0.16	0.23	0.33	0.49	19.8	28.2	39.5	59.3	
3 Rows of Shelves	0.25	0.35	0.49	0.74	29.7	42.3	59.3	89.0	
4 Rows of Shelves	0.33	0.47	0.66	0.99	39.5	56.4	79.1	118.6	

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

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

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

Please note: some combinations of fluorescent lights on this case model may not be compliant with DOE 2017 and may not be available to order in the US and Canada. More lighting options are available with LED lights. The Hussmann Product Configurator will not allow lighting options that do not comply with the DOE 2017 standards.

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)	3.98 ft ² /ft (1.21 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	6.88 ft ² /ft (2.10 m ² /m)

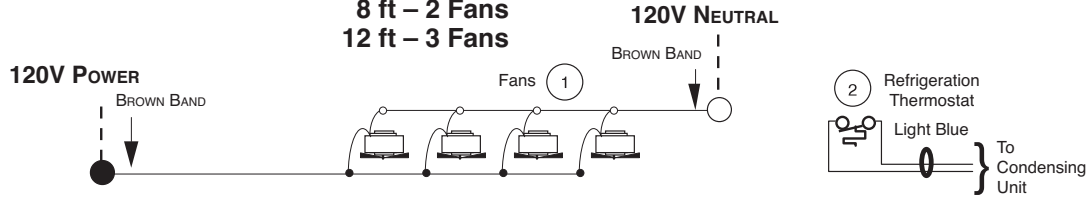
- ¹ AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
² Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]
³ Shelf surface area is composed of bottom deck plus standard shelf complement, as 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	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	Solid End
					<i>(each)</i>
lb (kg)	700 (318)	900 (408)	1100 (499)	1400 (635)	100 (45)

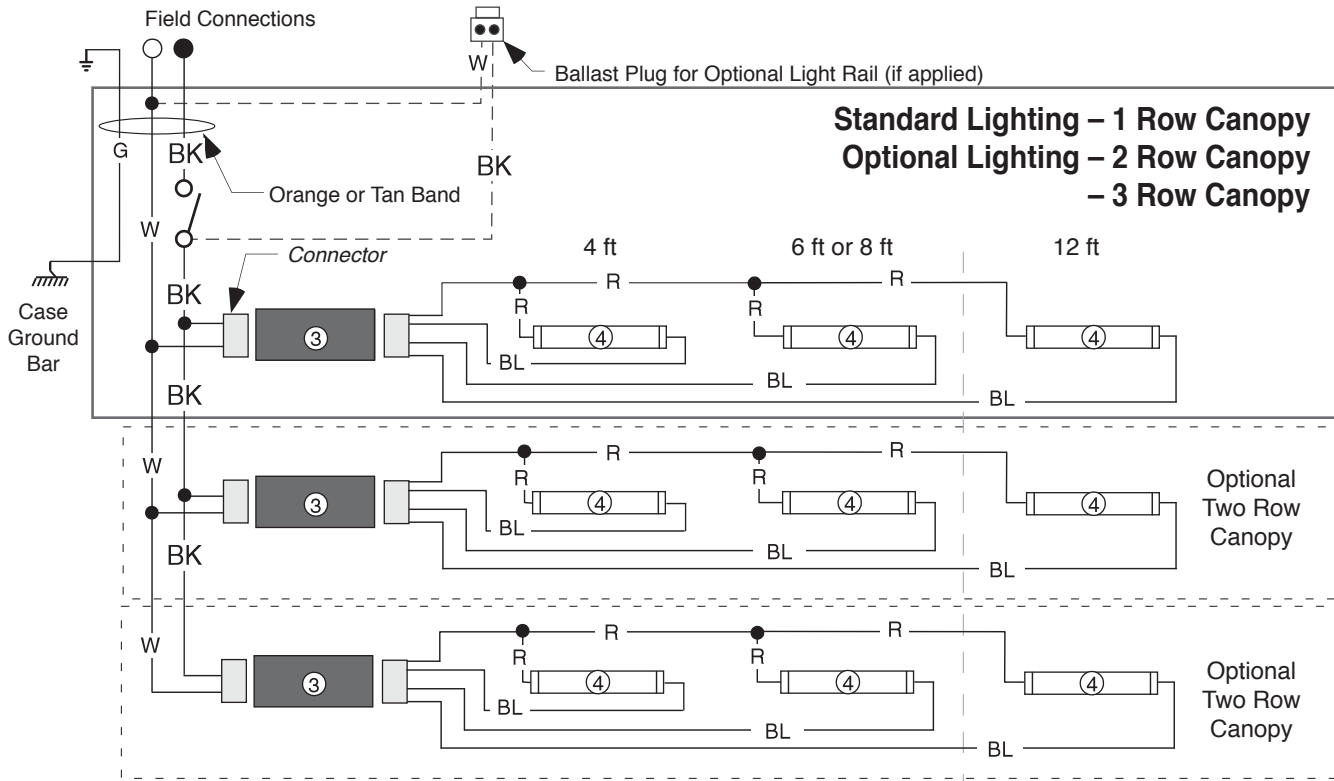
⁴ Actual weights will vary according to optional kits included.

Fan Wiring Offtime Defrost

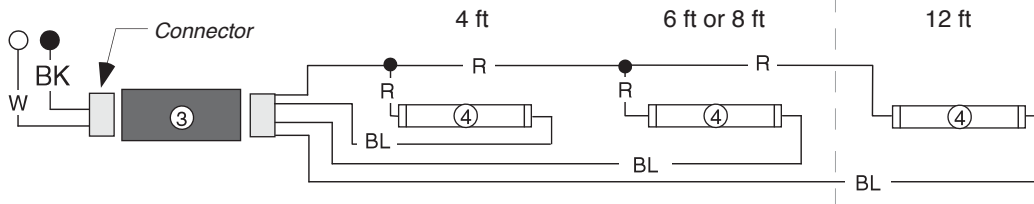
1, 2, 3 & 4 Fans
 4 ft – 1 Fan
 6 ft – 4 Fans
 8 ft – 2 Fans
 12 ft – 3 Fans



Light Circuits — Fluorescent Fixtures



Optional Lighting – 1 Row Rail



WARNING

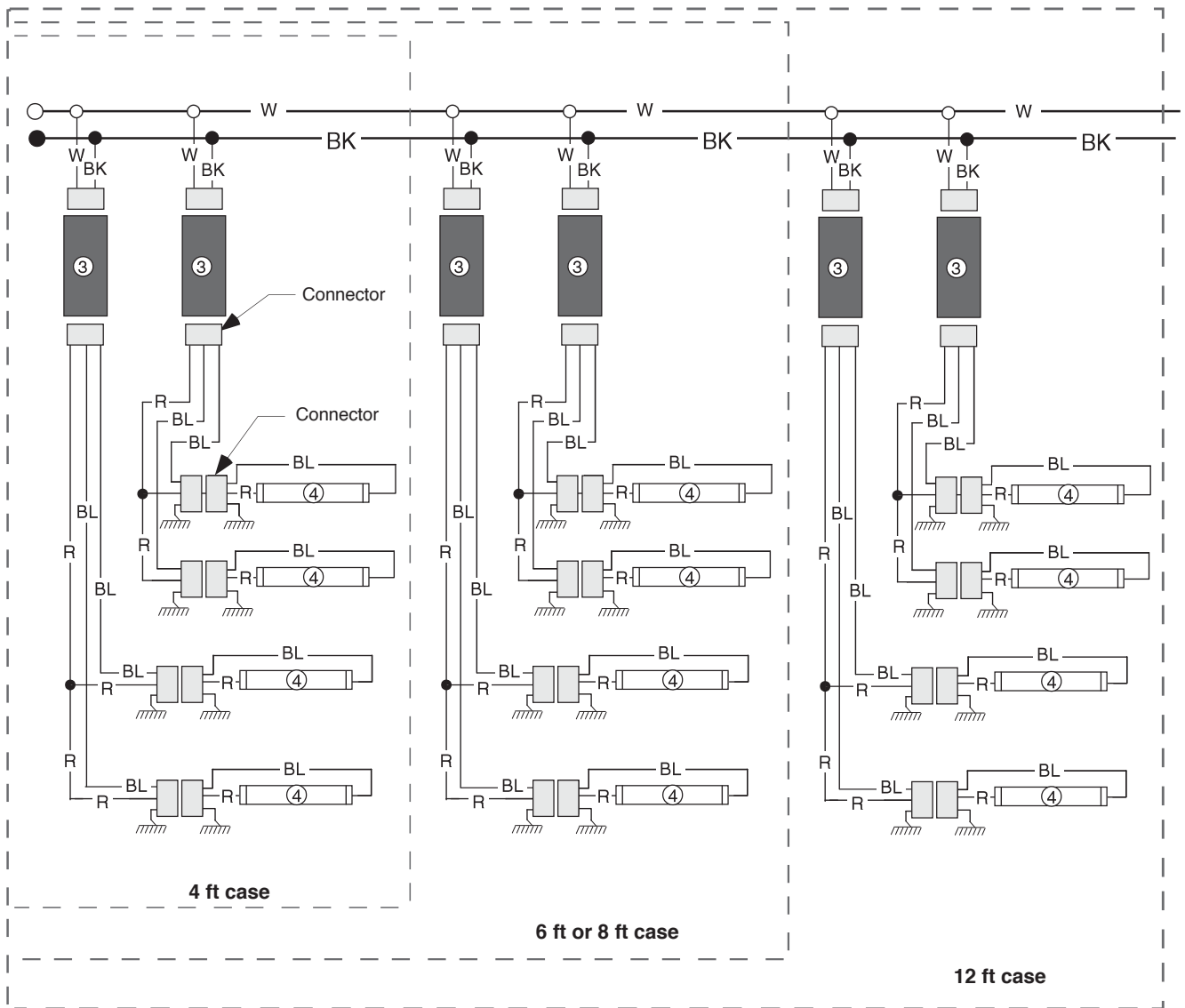
All components must have mechanical ground, and the merchandiser must be grounded.

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

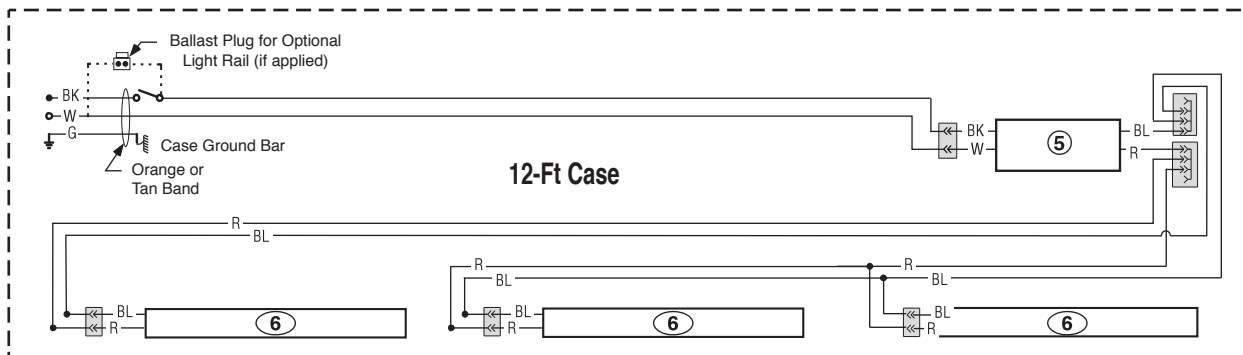
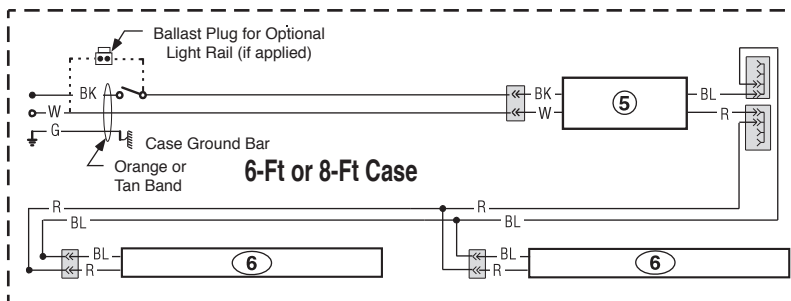
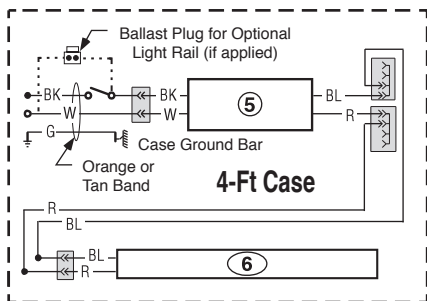
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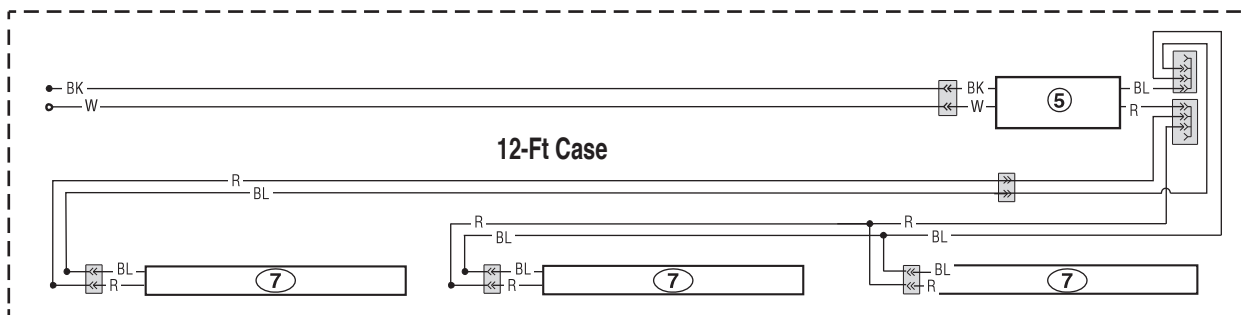
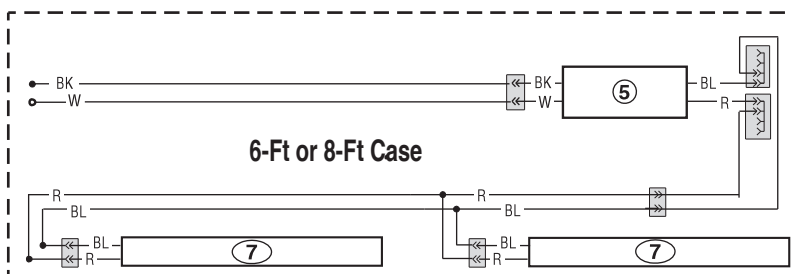
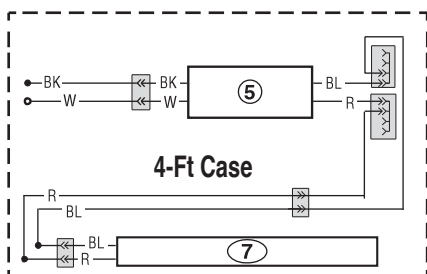
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 ● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND ≡ = CASE GROUND

Optional Canopy and Rail Light Circuits — LED Fixtures

EcoShine II LED Canopy Lighting – 1 Row



EcoShine II LED Rail Lighting – 1 Row



WARNING

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

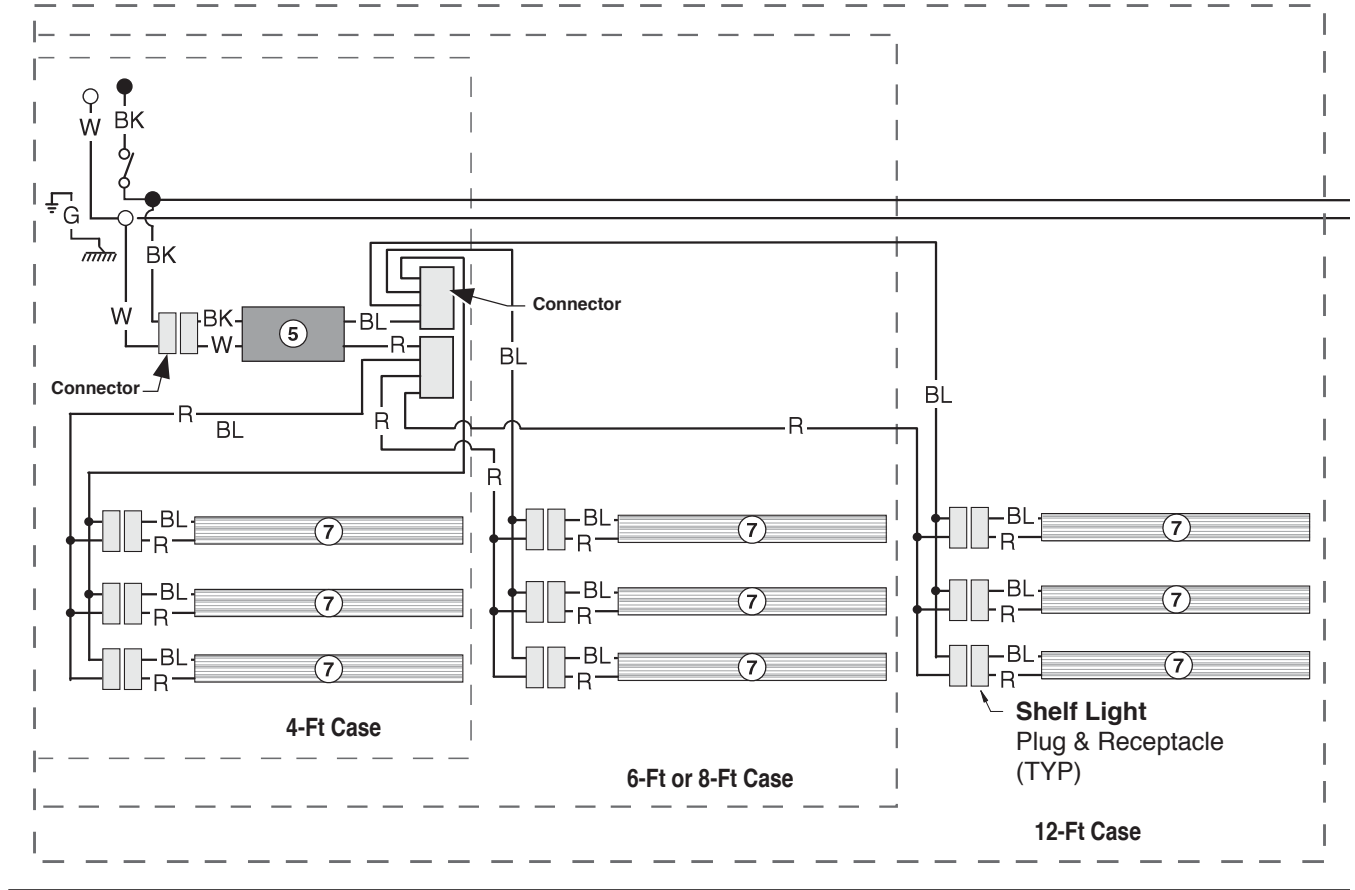
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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 2 or 3 Rows of Shelves



WARNING

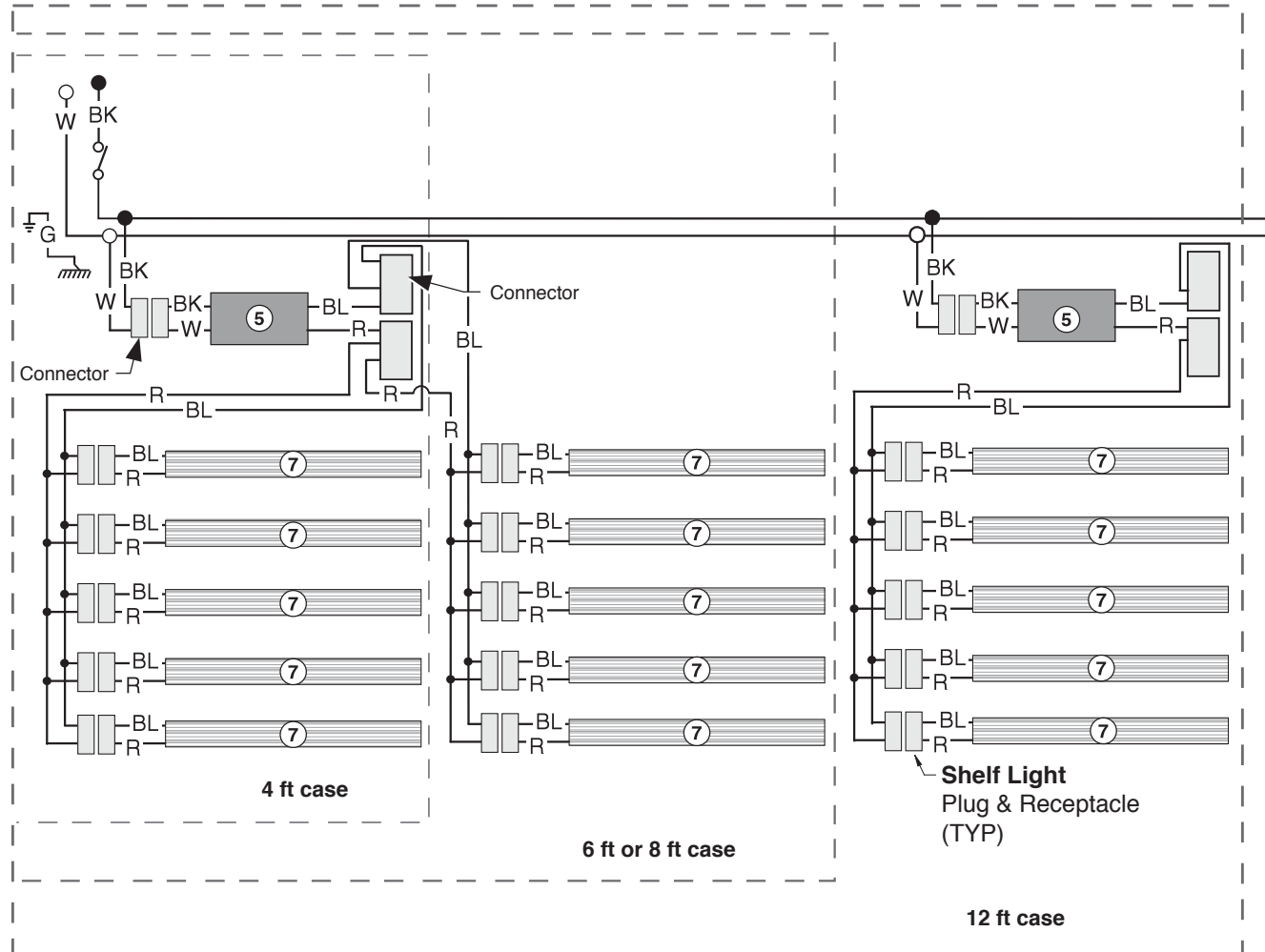
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red G = Green BL = Blue BK = Black W = White
 ● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND ⏏ = CASE GROUND

Optional Shelf Lighting LED Fixtures

Optional Shelf Harness and LED Light Circuits for 4 or 5 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

● = 70V POWER ○ = 70V NEUTRAL ⊥ = FIELD GROUND $\overline{\overline{\overline{\text{m}}}}$ = CASE GROUND