

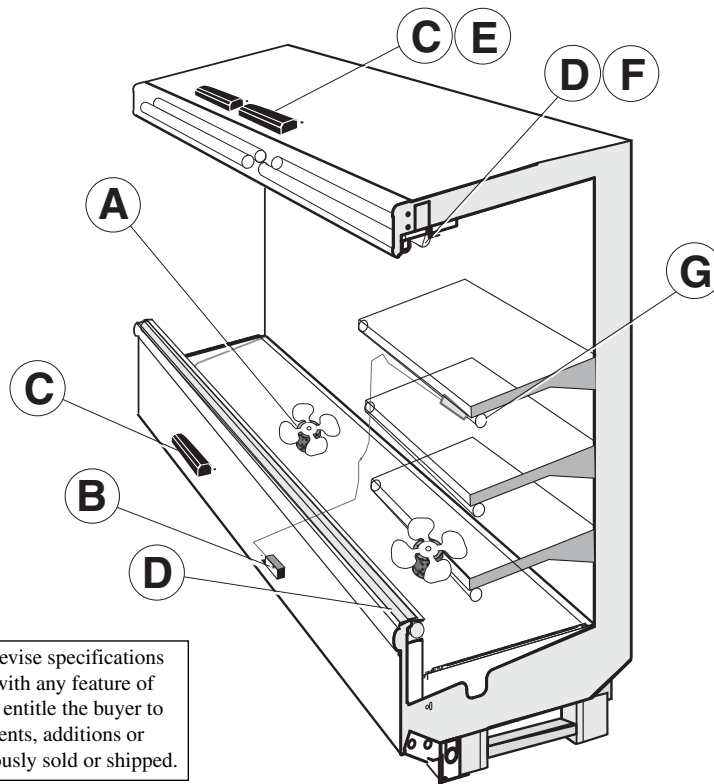
HUSSMANN® Excel

FL4NX-EP

Technical Data Sheet

P/N 0496537_F

March 2010



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				THERMOSTATS			
4 Ft, 8 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)			0480132	4 lamps (BA.4481677)	
	0461805	Fan Blade (FB.4780446)		D.	Fluorescent Lamp		(4)
					<i>Replace with like fixtures</i>		
6 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)					

Note: Revision F updates EcoShine values on page 4, LED parts on page 5, and canopy wiring diagram on page 6.



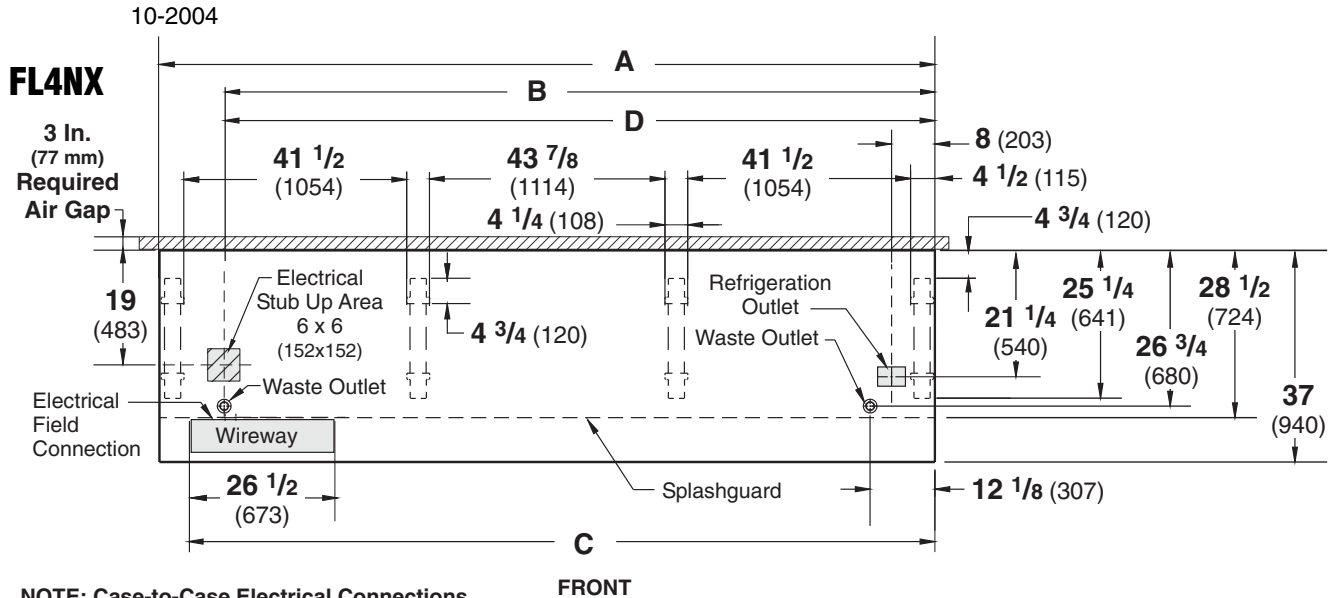
Engineering Plan Views

PHYSICAL DATA





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

Narrow Floral

Dimensions shown as in. and (mm).

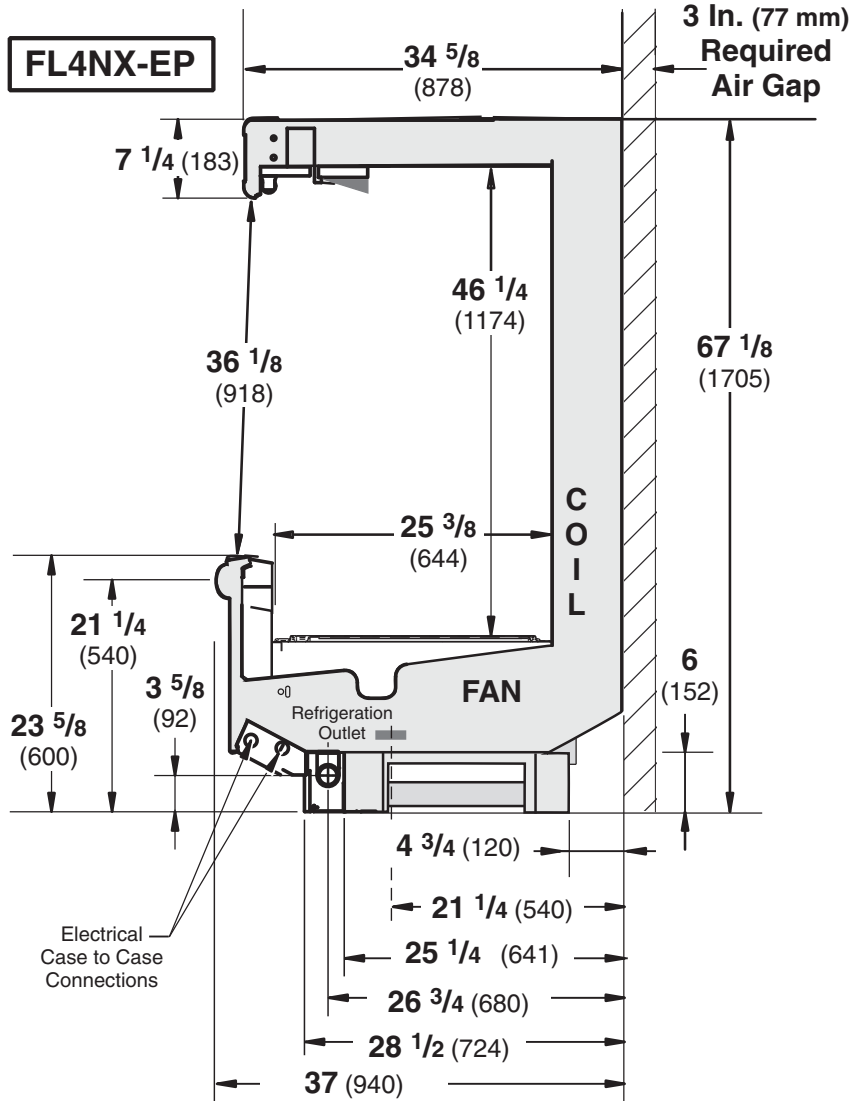


NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

	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>	37 (940)	37 (940)	37 (940)	37 (940)
Back of case to front of splashguard	28 1/2 (724)	28 1/2 (724)	28 1/2 (724)	28 1/2 (724)
Back of case to O/S edge of front leg	25 1/4 (641)	25 1/4 (641)	25 1/4 (641)	25 1/4 (641)
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	19 (483)	19 (483)	19 (483)	19 (483)
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	26 3/4 (680)	26 3/4 (680)	26 3/4 (680)	26 3/4 (680)
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	21 1/4 (540)	21 1/4 (540)	21 1/4 (540)	21 1/4 (540)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)	8 (203)

Impact Excel FL4NX-EP
Floral

Dimensions shown as in. and (mm).



REFRIGERATION DATA

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

FL4NX-EP	UNLIT
Discharge Air °F	34
Evaporator °F	27
Unit Sizing °F	25

Btu/hr/ft² — Unlit Shelves^{‡‡}

FL4NX-EP	Parallel	Conventional
UNLIT	1200	1250

[‡]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

Frequency Hr	8
Defrost Water (lb/ft/day)	3.5
(± 15% based on case configuration and product loading).	

OFFTIME	FL4NX-EP
Time (minutes)	20

ELECTRIC OR GAS Not Recommended

CONVENTIONAL CONTROLS

Low Pressure Backup Control	
CI/CO*	FL4NX-EP
	18°F / 8°F

Indoor Unit Only, Pressure Defrost

Termination* 48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge**	FL4NX-EP		
4 ft	1.6 lb	26 oz	0.7 kg
6 ft	2.2 lb	35 oz	1.0 kg
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.

Impact Excel FL4NX-EP
Floral

Electrical Data

	4 ft	6 ft	8 ft	12 ft
Number of Fans—12W	1	—	2	3
Number of Fans—7W	—	2	—	—

			Amperes				Watts			
			4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
Evaporator Fan										
120V	60Hz	Standard	0.65	1.00	1.30	1.95	50	78	100	150
120V	50Hz	Standard	0.75	1.10	1.50	2.25	57	84	114	171
230V	60Hz	Export	0.33	0.50	0.66	0.99	50	78	100	150
230V	50Hz	Export	0.38	0.56	0.76	1.14	57	84	114	171
120V	60Hz	Energy Efficient	0.30	0.38	0.60	0.90	18	28	36	54
230V	60Hz	Energy Efficient	0.15	0.20	0.30	0.45	18	28	36	54

Minimum Circuit Ampacity

120V	60Hz	Standard	0.85	1.20	1.50	2.15
120V	50Hz	Standard	0.95	1.30	1.70	2.45
230V	60Hz	Export	0.53	0.70	0.86	1.19
230V	50Hz	Export	0.58	0.76	0.96	1.34
120V	60Hz	Energy Efficient	0.50	0.58	0.80	1.10
230V	60Hz	Energy Efficient	0.35	0.40	0.50	0.65

Maximum Over Current Protection 120V

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
--------------	------	------	------	------	----	----	----	----

Optional Lighting (T-8 fluorescent)

Additional 1 Row Canopy	0.26	0.51	0.51	0.77	30	59	59	85
Additional 2 Row Canopy	0.51	1.02	1.02	1.54	59	118	118	170
Additional 3 Row Canopy	0.77	1.53	1.53	2.31	89	177	177	255
1 Row Rail Light	0.26	0.51	0.51	0.77	30	59	59	85
2 Row Canopy	0.37	0.55	0.71	1.08	45	66	85	130

HUSSMANN RECOMMENDS AGAINST FLUORESCENT SHELF LIGHTING IN FLORAL APPLICATIONS.

EcoShine Multi-deck — Normal CRI—120VAC, 50/60Hz

2 Row Canopy (Front & Rear)	0.28	0.41	0.55	0.82	49	49	66	98
3 Rows of Shelves	0.29	0.44	0.58	0.88	35	53	70	105
4 Rows of Shelves	0.39	0.58	0.78	1.17	47	70	93	140

EcoShine Multi-deck — High CRI —120VAC, 50/60Hz

2 Row Canopy (Front & Rear)	0.32	0.47	0.63	0.93	38	56	75	112
3 Rows of Shelves	0.35	0.53	0.70	1.05	42	63	84	126
4 Rows of Shelves	0.47	0.70	0.93	1.40	56	84	112	168

Optional Always*Bright LED Canopy Lighting

2 Row Canopy (Front & Rear)	0.38	0.55	0.71	1.08	45	66	85	130
3 Rows of Shelves	0.38	0.53	0.74	1.11	45	63	89	133
4 Rows of Shelves	0.47	0.68	0.93	1.40	56	82	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

<i>Recommended Usable Cube</i> ¹ (Cu Ft/Ft)	6.89 ft ³ /ft (0.64 m ³ /m)
<i>AHRI Total Display Area</i> ² (Sq Ft/Ft)	3.27 ft ² /ft (1.00 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	7.64 ft ² /ft (2.33 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 16-inch shelves.

ESTIMATED SHIPPING WEIGHT ⁴					
Case					Solid End
	4 ft	6 ft	8 ft	12 ft	(each)
lb (kg)	700 (318)	900 (408)	1200 (544)	1500 (680)	100 (45)

⁴ Actual weights will vary according to optional kits included.

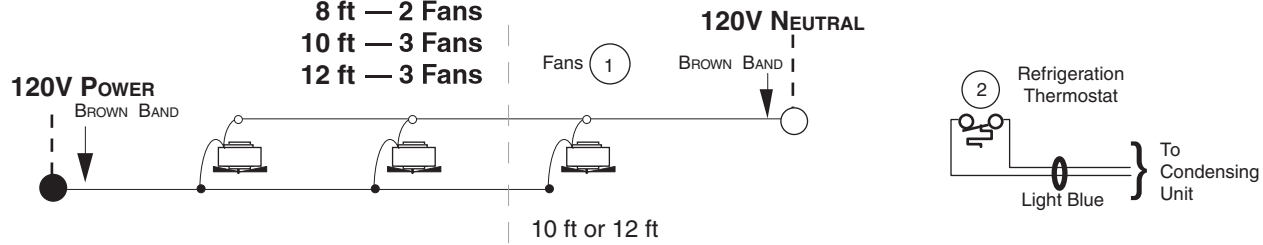
PARTS LIST (Continued from Page 1)							
Item	Part #	Description			Item	Part #	Description
LED FIXTURES AND POWER SUPPLY							
E.	0501213	Power Supply (EP.4481861)			(5)		
F.	EcoShine LED Canopy Fixture			(6)	F.	(CONTINUED) EcoShine LED Canopy Fixture	
	4441720	Front	48-inch	2900K	4441713	Rear	36-inch 2900K HCRI
	4441722	Front	48-inch	3500K	4441715	Rear	36-inch 3500K HCRI
	4441724	Front	48-inch	3500K	4441717	Rear	36-inch 3500K
	4441726	Front	48-inch	4100K	4441719	Rear	36-inch 4100K
	4441721	Rear	48-inch	2900K	G. EcoShine LED Shelf Fixture (7)		
	4441723	Rear	48-inch	3500K	4441590	48-inch	2900K HCRI
	4441725	Rear	48-inch	3500K	4441591	48-inch	3500K HCRI
	4441727	Rear	48-inch	4100K	4441592	48-inch	3500K
					4441593	48-inch	4100K
	4441712	Front	36-inch	2900K	4441586	36-inch	2900K HCRI
	4441714	Front	36-inch	3500K	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.

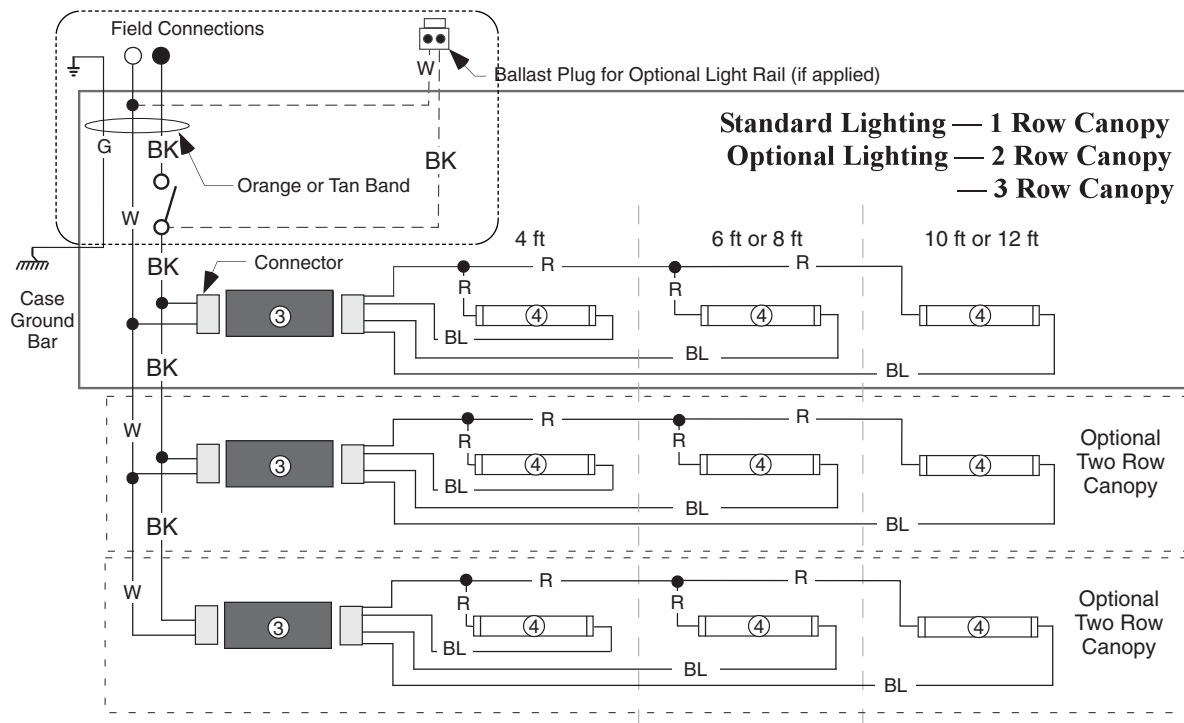
Fan Wiring Offtime Defrost

1, 2 & 3 Fans

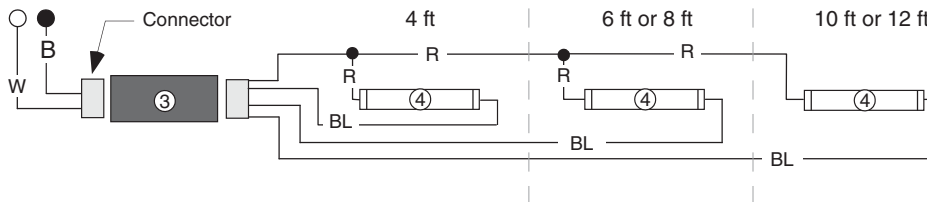
4 ft — 1 Fan
6 ft — 2 Fans
8 ft — 2 Fans
10 ft — 3 Fans
12 ft — 3 Fans



Canopy Light Circuits— Fluorescent Fixtures



Optional Lighting — 1 Row Rail



WARNING

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

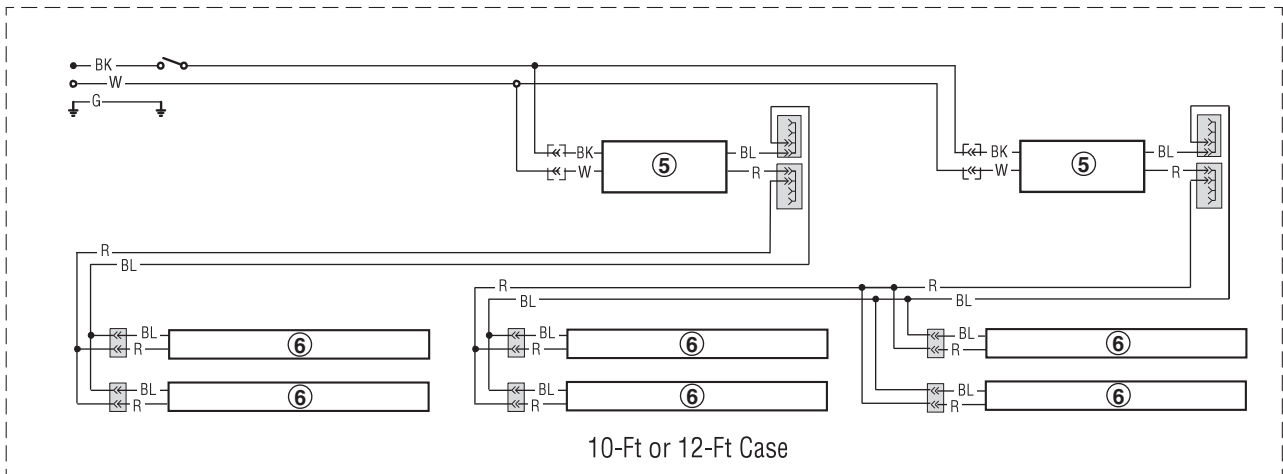
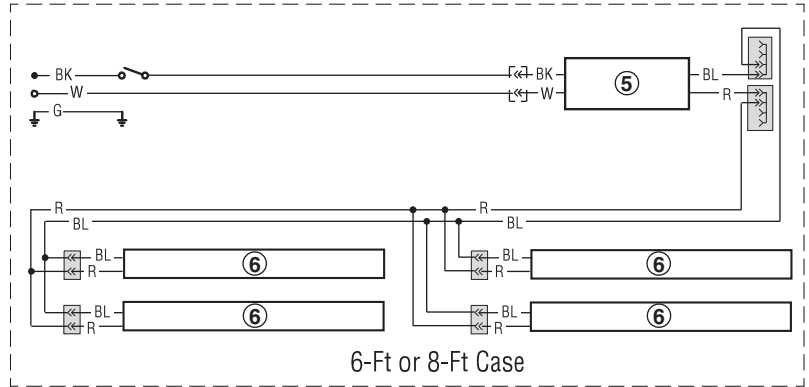
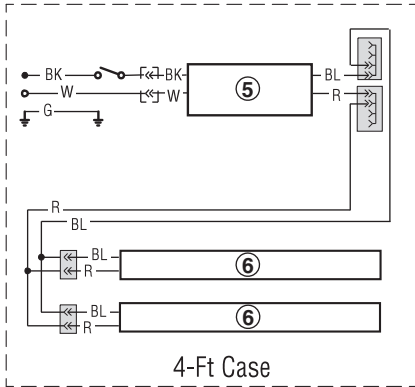
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

● = 120V POWER ○ = 120V NEUTRAL ⊥ = FIELD GROUND mm = 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.

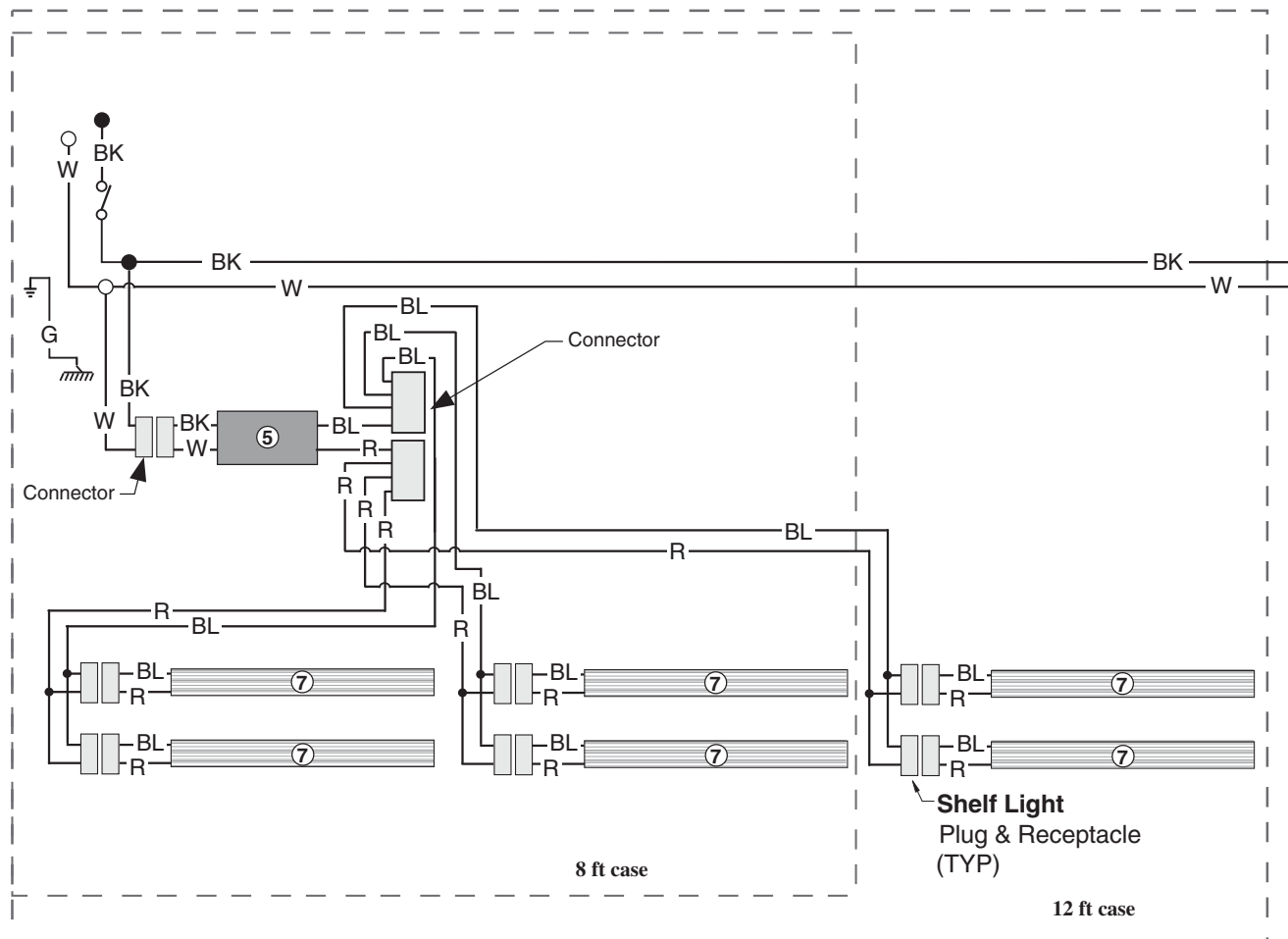
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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 Two Rows of Shelves



WARNING

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

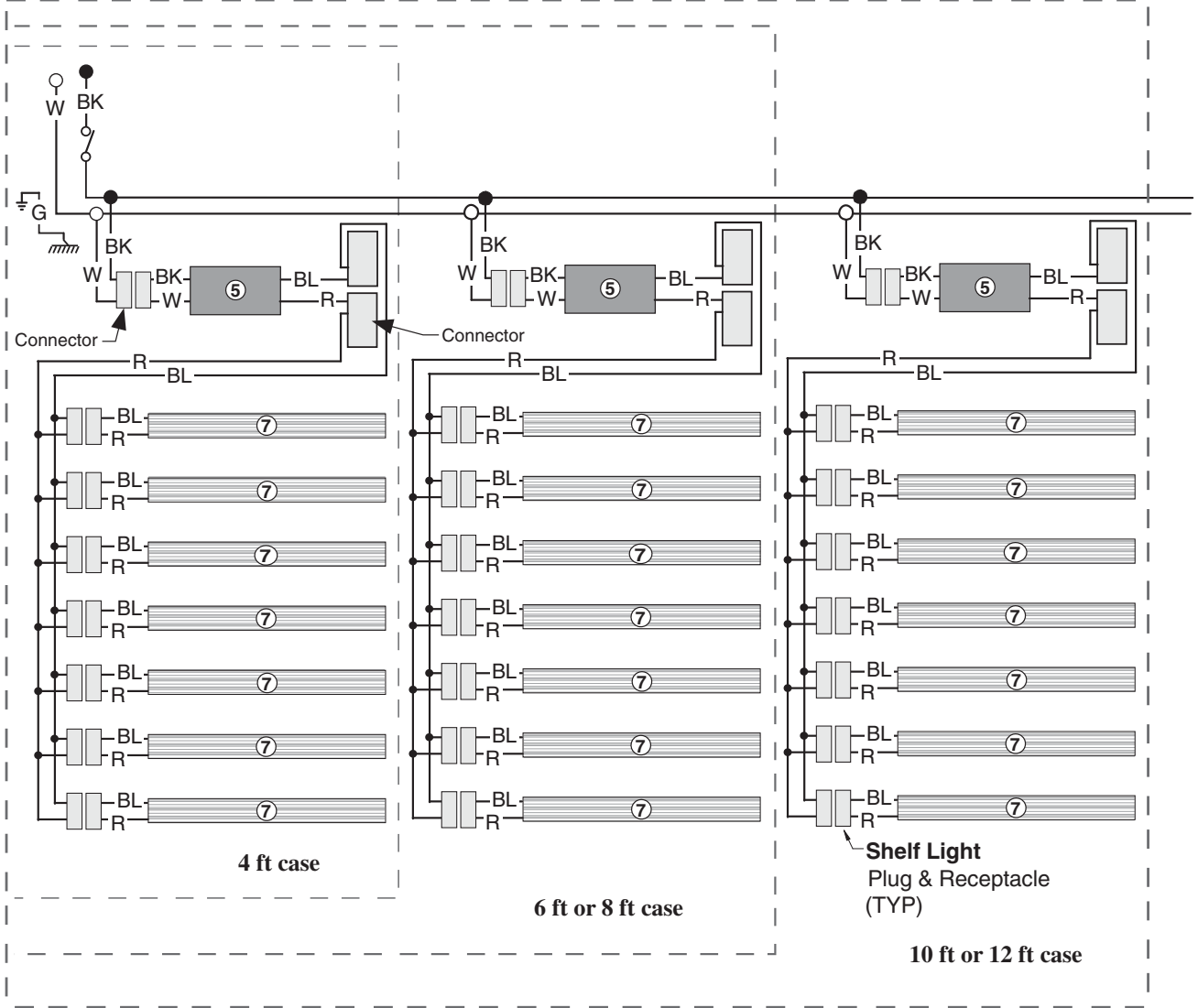
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

Optional Canopy 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 ≡ = CASE GROUND