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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
<b>FAN ASSEMBLIES</b>				<b>LAMPS AND BALLASTS</b>			
<b>8 Ft, 10 Ft† &amp; 12 Ft</b>							
A.	<b>12W Standard Energy Efficient Fan Assembly</b>	(1)		C.	Ballast, Electronic		(3)
	0477655	Fan Motor, Evaporator (MO.4410546)			0480130	2 lamps (BA.4481676)	
	0461805	Fan Blade (FB.4780446)			0480131	3 lamps (BA.4481654)	
					0480132	4 lamps (BA.4481677)	
				D.	Fluorescent Lamp		(4)
						<i>Replace with like fixtures</i>	
<b>10 Ft† Only</b>				<b>LED FIXTURES AND POWER SUPPLY</b>			
A.	<b>7W Standard Energy Efficient Fan Assembly</b>	(1)		E.	0501213	Power Supply (EP.4481861)	(5)
	0477654	Fan Motor, Evaporator (MO.4410545)		F.		LED Canopy Fixture	(6)
	0142780	Fan Blade (FB.0142780)				<i>Replace with like fixtures</i>	
<b>THERMOSTATS</b>				G.		LED Shelf Fixture	(7)
	B.	Optional Adjustable Refrigeration Thermostat	(2)			<i>Replace with like fixtures</i>	

†10 Ft uses both.

Data sheet-Excel-B4X-E

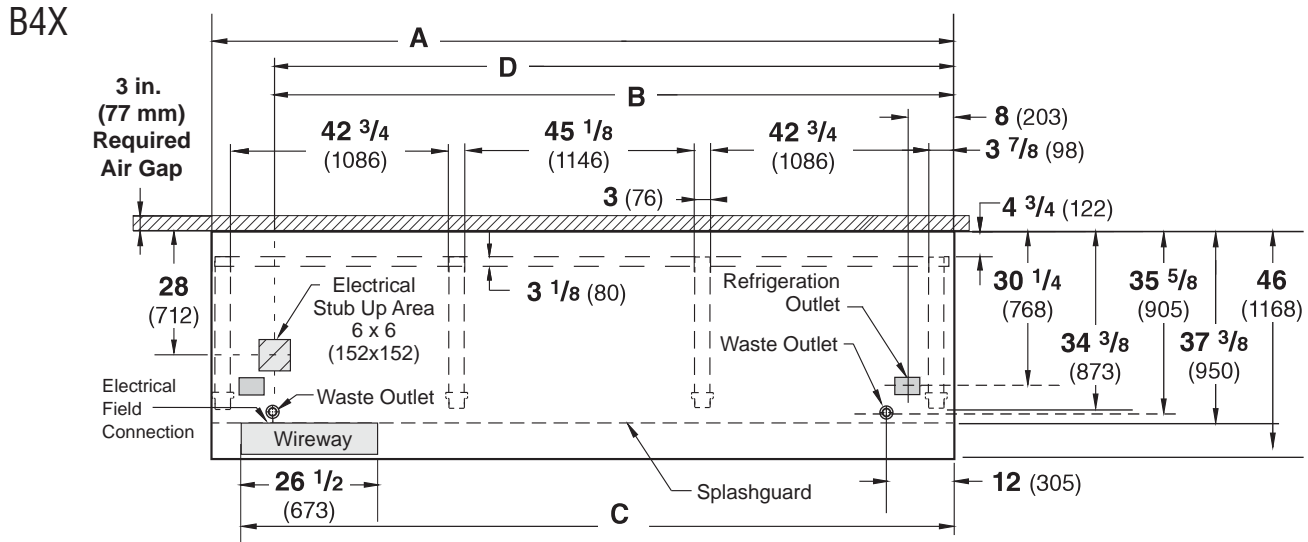
Note: Revision L: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

# Engineering Plan Views

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

**Bulk Convertible**  
01-2008

Dimensions shown as inches and (mm).



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

**FRONT**  
(12 Ft shown)

	8 ft	10 ft	12 ft
<b>General</b>			
<b>(A)</b> 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)	96 3/8 (2448)	120 1/2 (3061)	144 1/2 (3670)
Back of case to front of splashguard	46 (1168)	46 (1168)	46 (1168)
Back of case to O/S edge of front leg	37 3/8 (950)	37 3/8 (950)	37 3/8 (950)
Distance between edges of external legs and center legs	34 1/8 (867)	34 1/8 (867)	34 1/8 (867)
Distance between edges of center legs	41 1/2 (1054)	29 1/2 (750)	41 1/2 (1054)
Distance between front legs and splashguard	NA	43 7/8 (1114)	43 7/8 (1114)
	2 5/8 (66)	2 5/8 (66)	2 5/8 (66)
<b>Electrical Service</b> ( <i>Electrical Field Wiring connection point</i> )			
<b>(B)</b> RH End of case to center of stub up area	84 1/4 (2140)	108 1/4 (2750)	132 3/8 (3363)
Back of case to center of stub up area	28 (712)	28 (712)	28 (712)
Length of electrical wireway <b>Wireway</b>	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C)</b> RH End of case to LH end of wireway	90 1/8 (2289)	114 1/4 (2902)	138 1/4 (3511)
<b>Waste Outlets</b> ( <i>One each end</i> )			
<b>(D)</b> RH End of case to the center of LH waste outlet	84 3/8 (2143)	108 1/4 (2750)	132 1/2 (3366)
RH End of case to the center of RH waste outlet	12 (305)	12 (305)	12 (305)
Back O/S of case to center of waste outlets	35 5/8 (905)	35 5/8 (905)	35 5/8 (905)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
<b>Refrigeration Outlet</b>			
Back of case to center of refrigeration outlet	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

Multi-deck, 4 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.

Dimensions shown as inches and (mm).

**Excel B4X-E**  
**Bulk Convertible**

**REFRIGERATION DATA**

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

B4X-E	DAIRY/DELI/PRODUCE†§	
	UNLIT	LIT
Discharge Air °F	32	30
Evaporator °F	26	24
Unit Sizing °F	24	22

† For red meat application, lower evaporator temperature and unit sizing 3°F increase Btu 5%.

§ 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.

*Btu/hr/ft — Unlit Shelves‡*

B4X-E	DAIRY/DELI/PRODUCE	
	Parallel	Conventional
UNLIT‡‡	1078	1218

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

**DEFROST DATA**

	B4X-E
Frequency (hr)	6
Defrost Water (lb/ft/day)	7.5

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

	B4X-E
OFFTIME	
Temp Term °F	48
Failsafe Minutes	40

**ELECTRIC OR GAS** Not Recommended

**Standard Defrost Thermostat**

Close on rise: close 48°F — open 33°F

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control**

C/CO\*

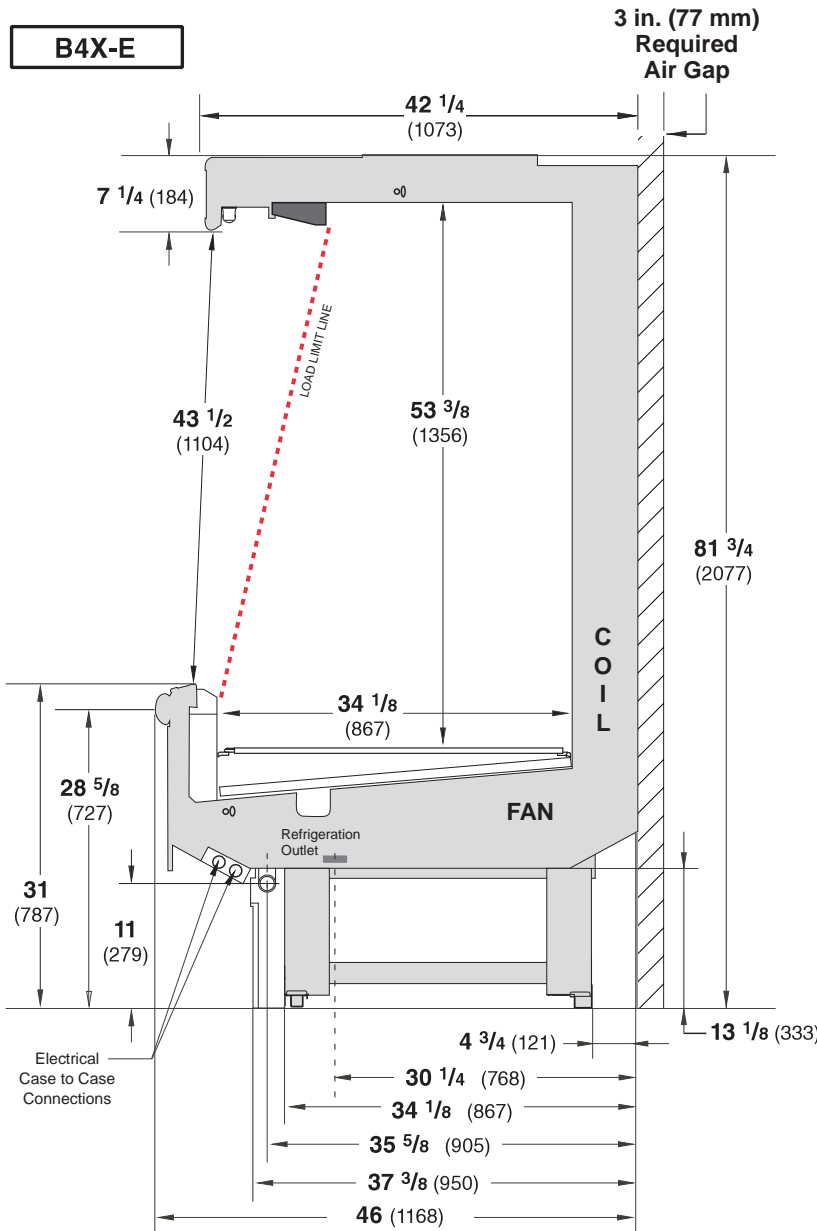
B4X-E	DAIRY/DELI/PRODUCE‡
Temp (°F)	17°F / 7°F

**Indoor Unit Only,**

**Pressure Defrost Termination\*** 48°F

\*Use a Temperature Pressure Chart to determine PSIG conversions.

‡ For red meat application, reduce low pressure backup control by 3°F.



**NSF Certification**

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

Estimated Charge **			B4X-E
8 ft	2.7 lb	43 oz	1.2 kg
10 ft	3.2 lb	51 oz	1.5 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 (8 oz/0.2 kg).

# Excel B4X-E

## Bulk Convertible

### Electrical Data

	8 ft	10 ft	12 ft			
Number of Fans—12W	2	1	3			
Number of Fans—7W	—	2	—			
		Amperes			Watts	
	8 ft	10 ft	12 ft	8 ft	10 ft	12 ft
<b>Evaporator Fan</b>						
120V 50/60Hz Standard Energy Efficient	0.60	0.68	0.90	36	46	54
230V 50/60Hz Standard Energy Efficient	0.30	0.35	0.45	36	46	54
230V 60Hz Export	0.66	0.80	0.99	100	128	150
230V 50Hz Export	0.76	0.94	1.14	114	141	171
<b>Minimum Circuit Ampacity</b>						
120V 50/60Hz Standard Energy Efficient	0.80	0.88	1.10			
230V 50/60Hz Standard Energy Efficient	0.50	0.55	0.65			
230V 60Hz Export	0.86	1.00	1.19			
230V 50Hz Export	0.96	1.14	1.34			
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>	<b>20</b>			
<b>Maximum Over Current Protection 230V</b>	15	15	15			

### Standard Lighting (T-8 fluorescent)

1 Row Canopy	0.51	0.77	0.77	59	85	85
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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 1 Row Canopy	0.51	0.77	0.77	59	85	85
Additional 2 Row Canopy	1.02	1.54	1.54	118	170	170
Additional 3 Row Canopy	1.53	2.31	2.31	177	255	255
1 Row Rail Light	0.51	0.77	0.77	59	85	85
1 Row of Shelves	0.51	0.77	0.77	59	85	85
2 Rows of Shelves	1.02	1.54	1.54	118	170	170
3 Rows of Shelves	1.53	2.31	2.31	177	255	255

### EcoShine II Canopy

EcoShine II	0.32	—	0.48	38.6	—	58.0
EcoShine II HO	0.44	—	0.66	53.0	—	79.4

### EcoShine II Rail Light —1 Row

	0.16	—	0.25	19.8	—	29.7
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### EcoShine II Shelves

1 Row of Shelves	0.16	—	0.25	19.8	—	29.7
2 Rows of Shelves	0.33	—	0.49	39.5	—	59.3
3 Rows of Shelves	0.49	—	0.74	59.3	—	89.0

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

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.

**Excel B4X-E**  
**Bulk Convertible**

**Product Data**

<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Ft)	5.51 ft <sup>3</sup> /ft (0.51 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	3.64 ft <sup>2</sup> /ft (1.11 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	6.70 ft <sup>2</sup> /ft (2.04 m <sup>2</sup> /m)

- <sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft<sup>3</sup>/ft [m<sup>3</sup>/m]  
<sup>2</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, ft [m]  
<sup>3</sup> 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 22-inch shelves.

**ESTIMATED SHIPPING WEIGHT<sup>4</sup>**

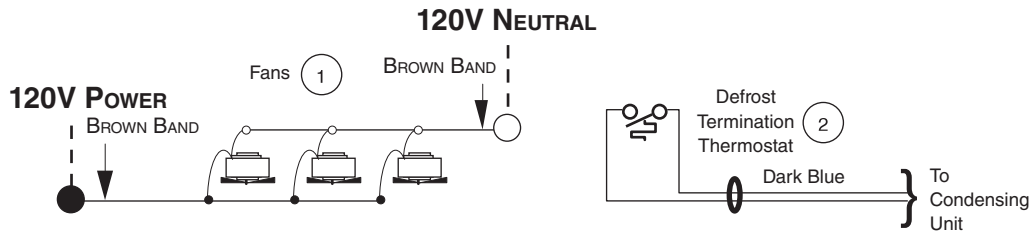
<b>Case</b>	<i>8 ft</i>	<i>10 ft</i>	<i>12 ft</i>	<b>Solid End</b>
				<i>(each)</i>
<b>lb (kg)</b>	1000 (454)	1100 (499)	1200 (544)	100 (45)

<sup>4</sup> Actual weights will vary according to optional kits included.

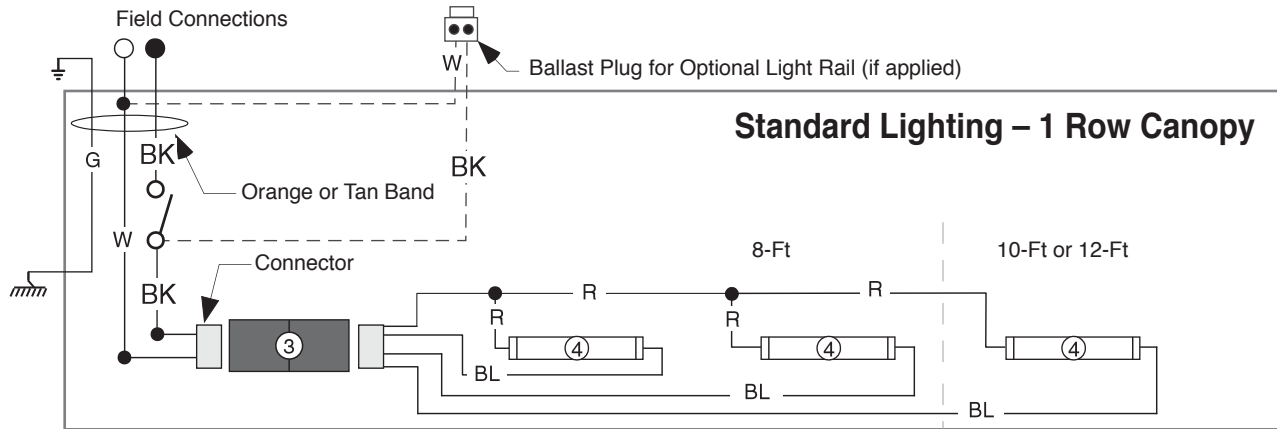
# Fan Wiring Offtime Defrost

## 2 & 3 Fans

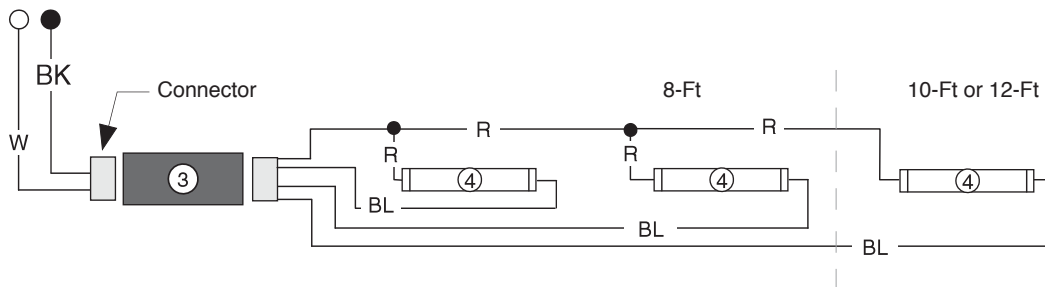
8 ft – 2 Fans  
10 ft – 3 Fans  
12 ft – 3 Fans



# Canopy Light Circuits — Fluorescent Fixtures



## Optional Lighting – 1 Row Rail



### WARNING

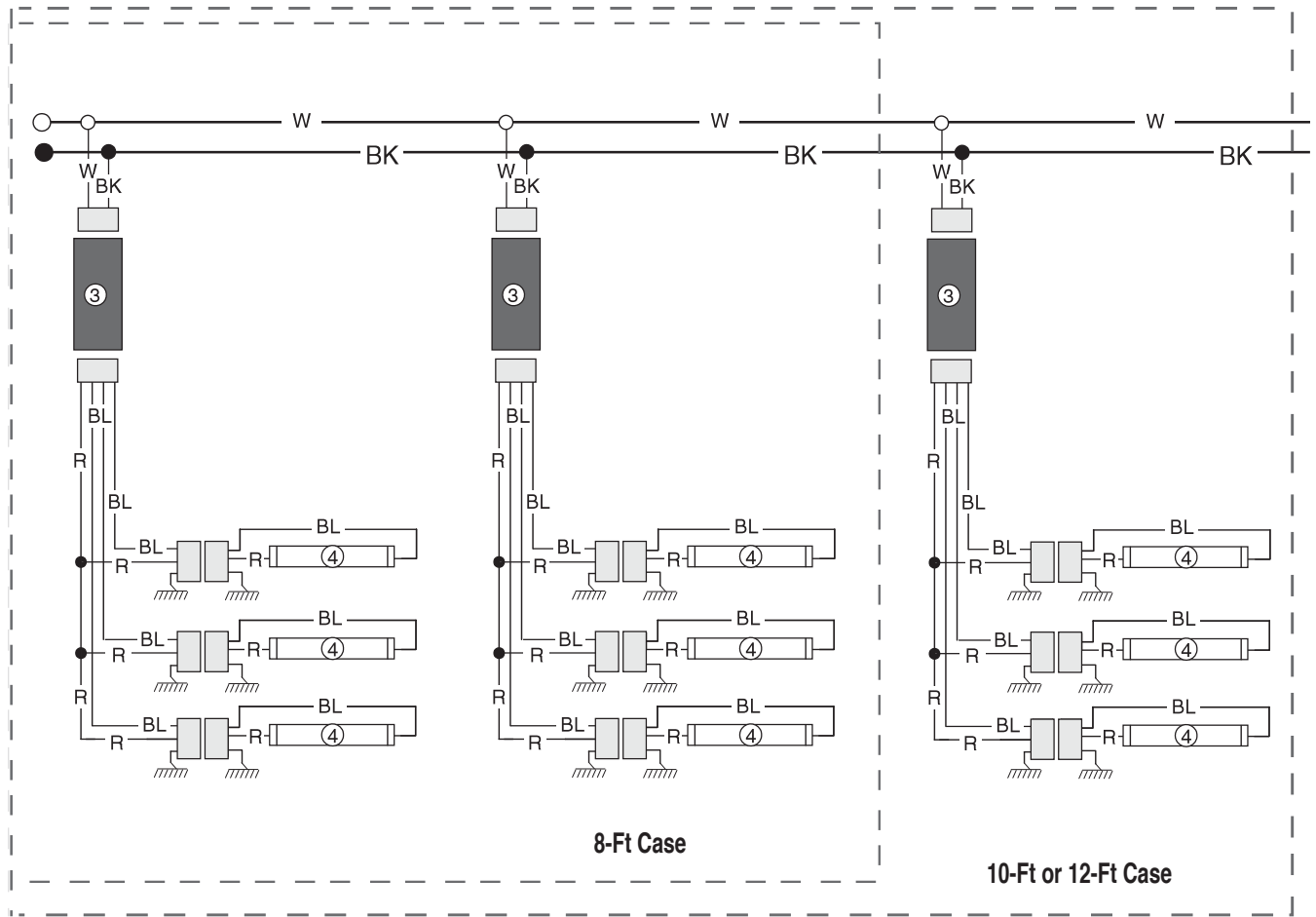
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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

## Optional Shelf Lighting Fluorescent Fixtures



### WARNING

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

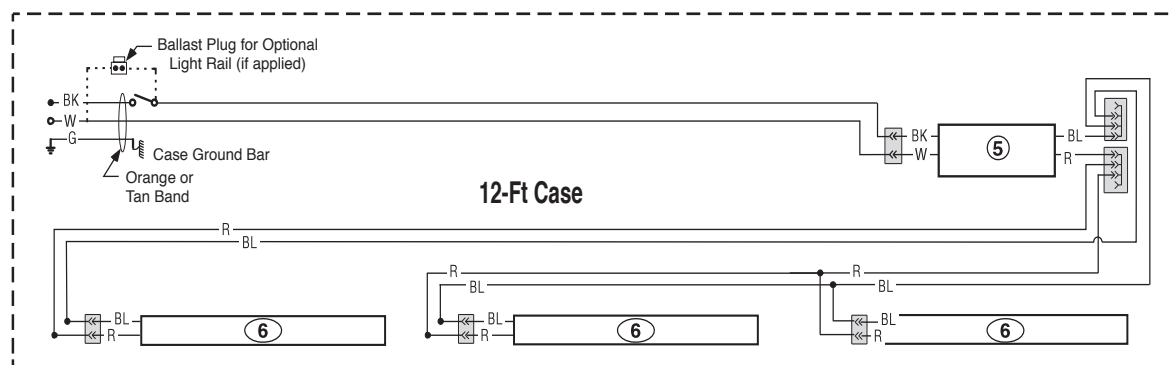
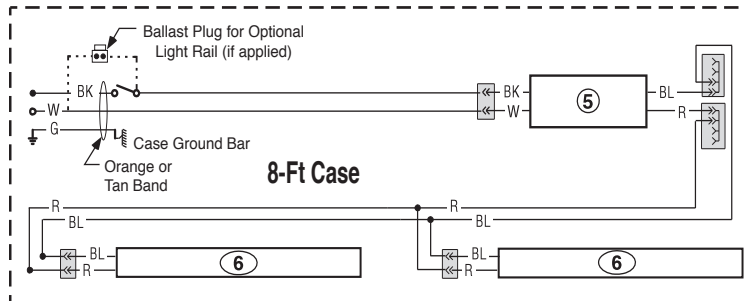
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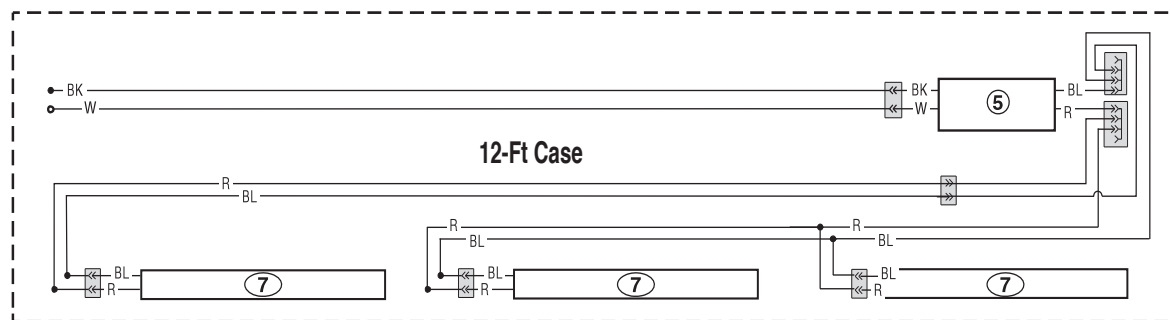
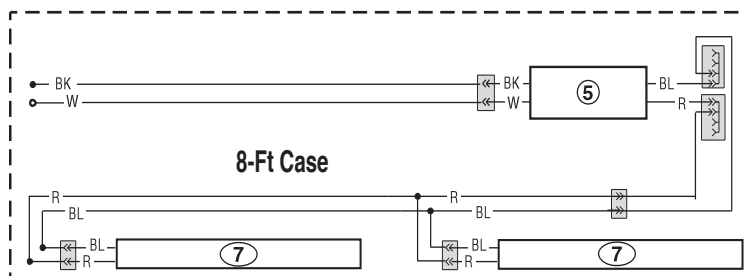
● = 120V POWER    ○ = 120V NEUTRAL    ⊥ = FIELD GROUND    ▨ = CASE GROUND

# 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

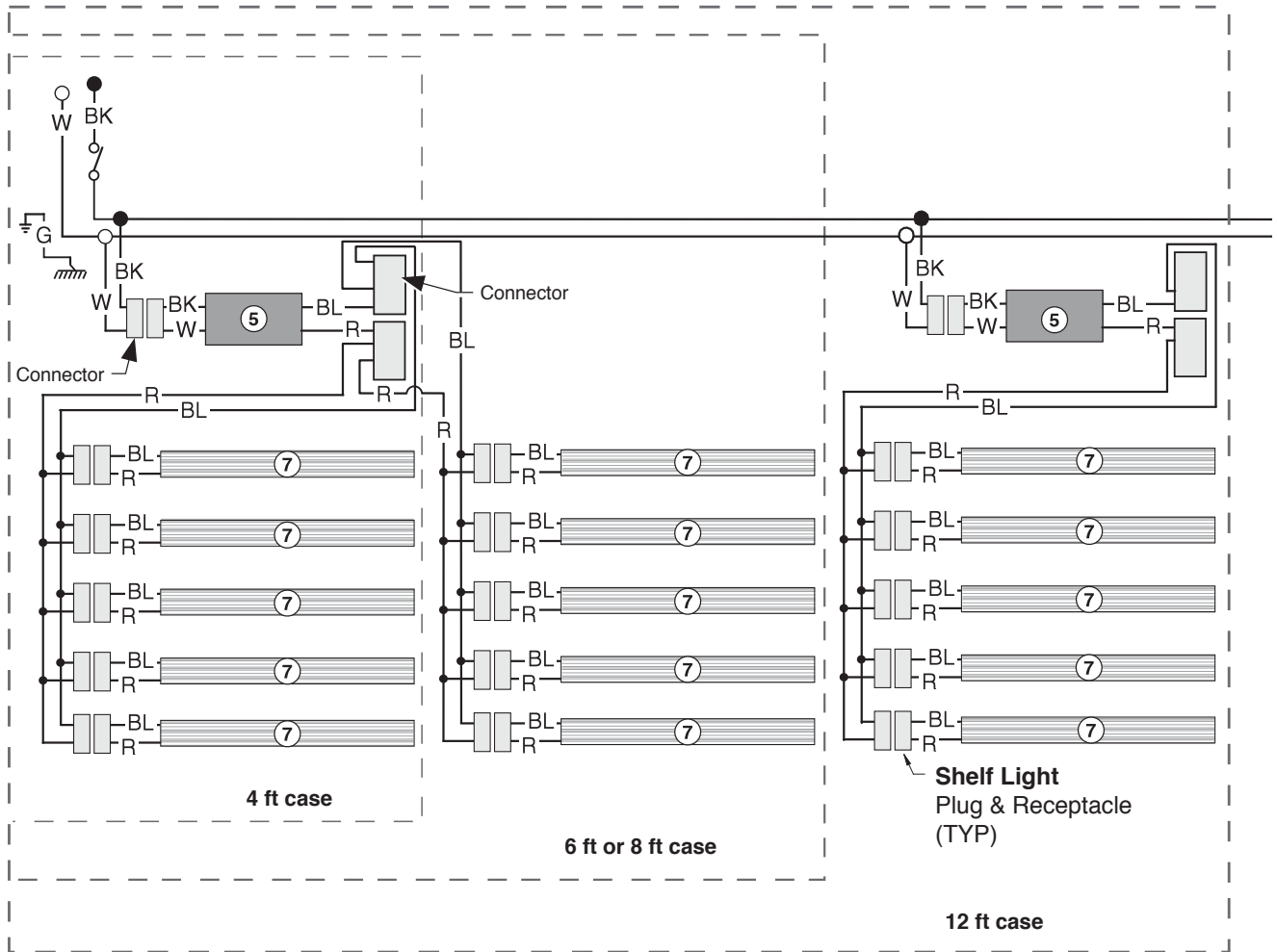
R = Red    Y = Yellow    G = Green    BL = Blue    BK = Black    W = White

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



# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED Light Circuits for 4 or 5 Rows of Shelves



### WARNING

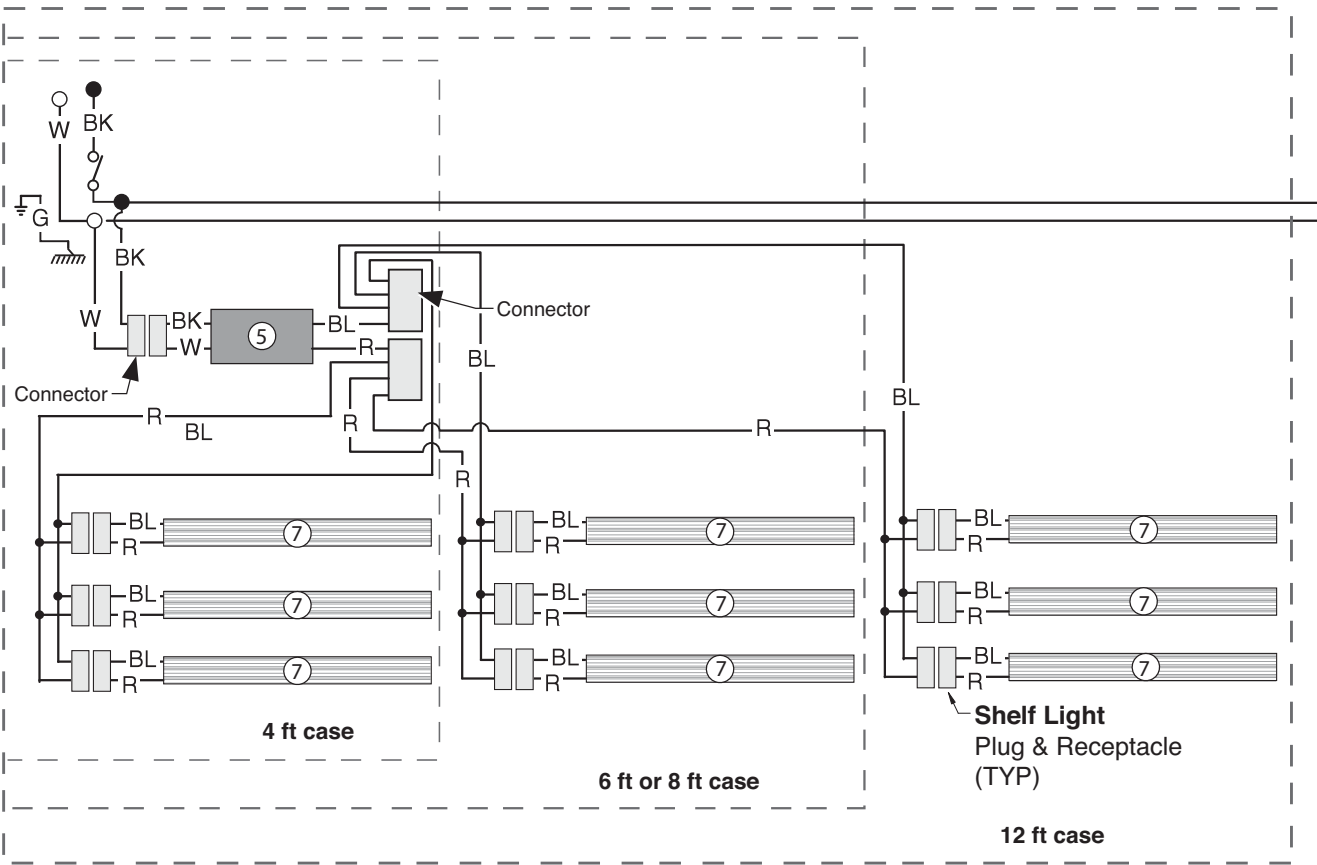
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

- |               |                 |                  |                 |           |
|---------------|-----------------|------------------|-----------------|-----------|
| R = Red       | G = Green       | BL = Blue        | BK = Black      | W = White |
| ● = 70V POWER | ○ = 70V NEUTRAL | ⊥ = FIELD GROUND | ⏏ = 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

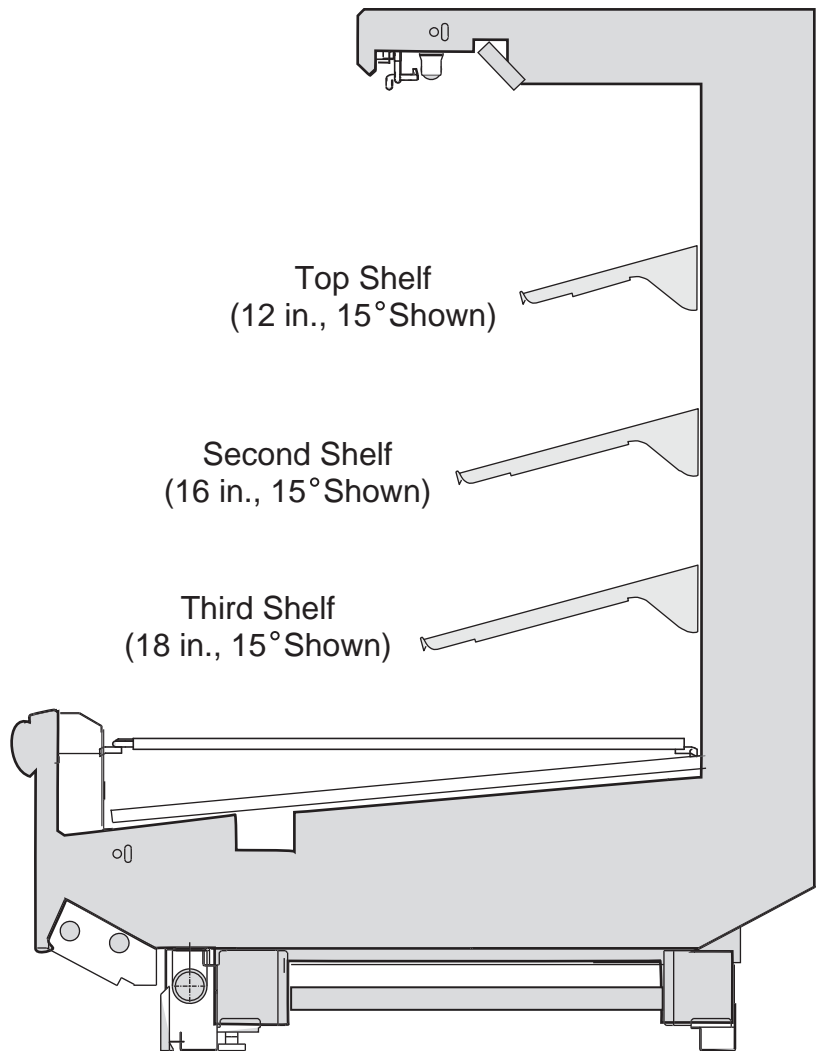
**Excel B4X-E**  
**Bulk Convertible**

**SHELF CONFIGURATION**

This case is designed for three (3) shelves.

The depth of each shelf is critical to case performance.

<p><b>Top Shelf Depth</b></p> <p>12 inches or 14 inches</p>
<p><b>Second Shelf Depth</b></p> <p>14 inches or 16 inches</p>
<p><b>Third Shelf Depth</b></p> <p>16 inches or 18 inches or 20 inches</p>



**Excel B4X-E**  
**Bulk Convertible**

The ballast for the canopy and shelf lamps is located behind the canopy on the left-hand end (when facing case) of the merchandiser.

To access the ballast:

1. Remove screws at bottom edge of canopy and rear of light channel.
2. Lower light channel which will pivot on hinge.
3. Service or replace ballasts as required.
4. Reassemble items as they were originally installed.

**NOTE:** Rail lamp ballast is located in the electrical raceway.

