

HUSSMANN®



Freedom Line RFLNS

with INNOVATOR Doors

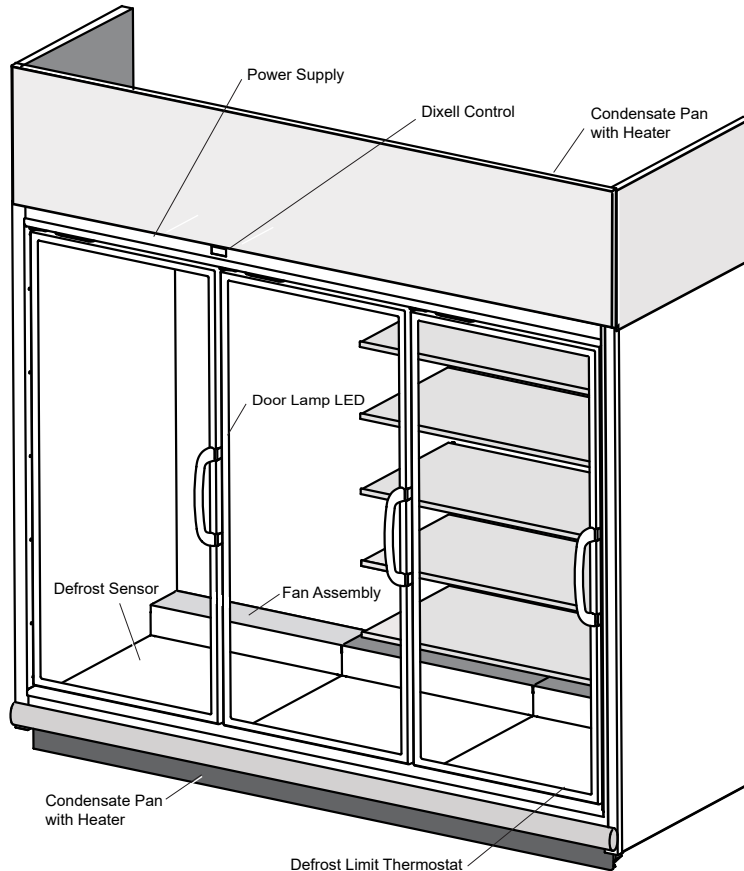
Technical Data Sheet

P/N 0541253_M

NSF® Certified

February 2021

Freedom Line merchandisers are top mount refrigeration ready



DOE 2017
Energy Efficiency
Compliant

Warning:
Terminal block
NOT for
case-to-case
wire connection!

Refer to INNOVATOR REACH-IN GLASS DOOR INSTALLATION AND SERVICE manual, PIN 0425683, for Innovator, and Innovator II door and frame replacement parts.



Scan the QR code on your mobile device to access additional product information or order parts.

Parts may also be ordered at:

parts.hussmann.com

Call toll free: 1.855.487.7778

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.

Note: Revision M: Updated wiring diagrams.

Datasheet - Freedom Line RFLNS

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Spanish P/N 0541254

Engineering Plan Views

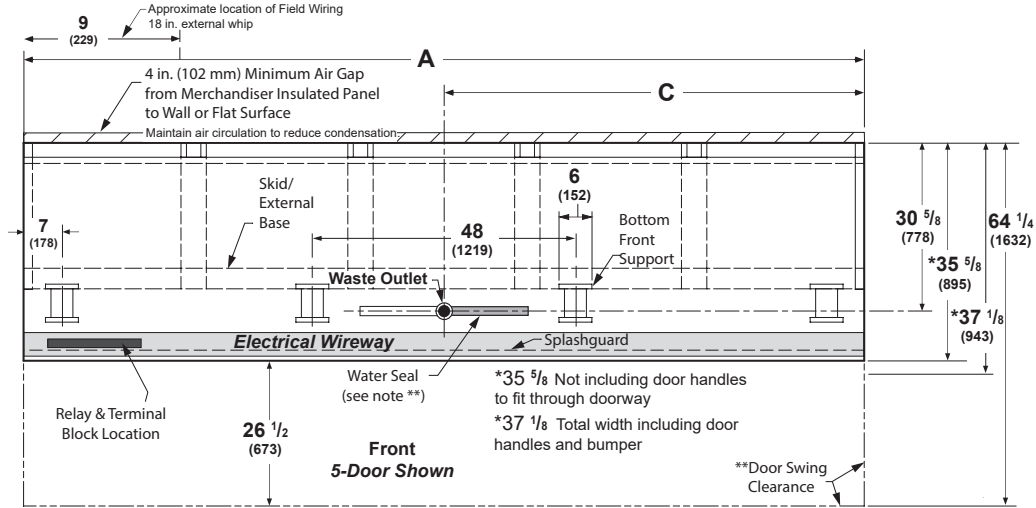
Reach-In
2, 3, 4 & 5 Door

Freedom Line RFLNS - RFMNS Plan View



PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8

Dimensions shown as inches and (mm).

Freedom Line — Standard Narrow Footprint Plan View 2, 3, 4 & 5 Door



Plan View Dimensions for Freedom Line Options

	2 Dr	3 Dr	4 Dr	5 Dr
General				
(A) Merchandiser Length	62 (1575)	92 1/2 (2350)	122 7/8 (3121)	153 3/8 (3896)
Maximum O/S dimension of merchandiser back to front *	37 1/8 (943)	37 1/8 (943)	37 1/8 (943)	37 1/8 (943)
** Add 26 1/2 in. (673 mm) for door swing.				
Back of merchandiser to rear of splashguard	32 7/8 (835)	32 7/8 (835)	32 7/8 (835)	32 7/8 (835)
Width of Skid rail	3 3/4 (95)	3 3/4 (95)	3 3/4 (95)	3 3/4 (95)
Width of Bottom Front Support	6 (152)	6 (152)	6 (152)	6 (152)
Electrical Service (dimensions are approximate)				
(B) LH end of merchandiser to field wiring connection	9 (229)	9 (229)	9 (229)	9 (229)
NOTE: Electrical Field Wiring Connection Point is at top of merchandiser.				
Waste Outlet 				
(C) Right end of merchandiser to center of waste outlet	23 7/8 (606)	54 1/4 (1378)	46 1/4 (1175)	76 3/8 (1946)
Water Seal 				
Edge of water seal to center of waste outlet	13 (330)	13 (330)	13 (330)	13 (330)
Schedule 40 PVC drip pipe	1 (25)	1 (25)	1 (25)	1 (25)
NOTE: Field installed condensate removal system shipped with merchandiser.				
Refrigeration Outlet				
(D) RH end of merchandiser to center of refrigeration interface	5 3/8 (136)	5 3/8 (136)	5 3/8 (136)	5 3/8 (136)
NOTE: Refrigeration interface is at top of merchandiser.				
Outside bottom front supports from end of merchandiser	7 (178)	7 (178)	7 (178)	7 (178)
Center bottom front support from Centerline	24 (610)	24 (610)	24 (610)	24 (610)
Distance between Center and Outside supports will vary				

Freedom Line Narrow, Short Footprint Reach-in
Top-Mount-Refrigeration Ready
2, 3, 4 and 5 Door Models

Standard Reach-in configuration consists of Innovator I doors, energy efficient fan motors, and LED vertical lighting.

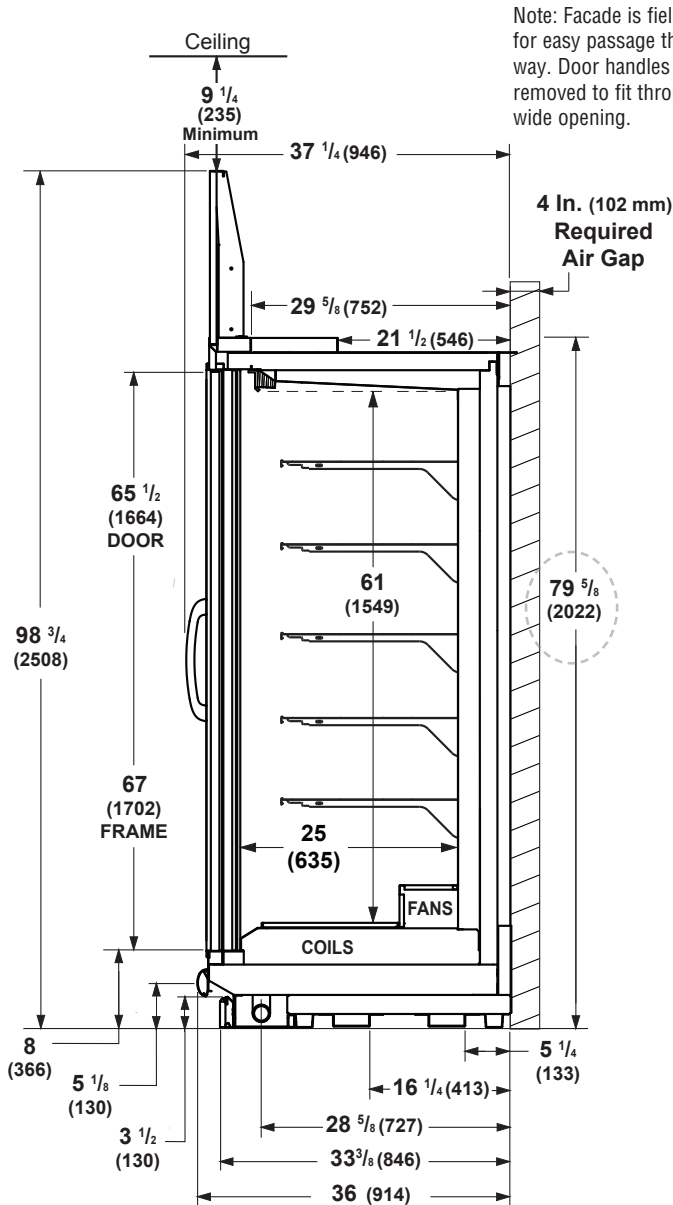


Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

Provide adequate clearance for air circulation at rear to reduce condensation.

Note: An optional Louvered Facade Panel kit is available that will allow for the top spacing minimum clearance of 3 inches (76 mm).

Dimensions shown as inches and (mm).



Note: Facade is field-installed for easy passage through door way. Door handles can be removed to fit through 36 in. wide opening.

Note: Low Height for 80 in. store entrance access

Freedom Line RFLNS

With Innovator Doors
Low Temperature

REFRIGERATION DATA §

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

	FF	IC	AHRI Rating*
Discharge Air (°F)	-3	-12	-3
Evaporator (°F)	-9	-17	-9
Unit Sizing (°F)	-12	-20	-12

* With door A/S controller

Btu/hr/Door

INNOVATOR

Parallel	1020	1080	900
Conventional	1040	1100	930

§ 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.

DEFROST DATA

	FF	IC
Frequency (hr)	24	24
Defrost Water (lb/Dr/day)	1.2	1.2

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

ELECTRIC

	FF	IC
Temp Term (°F)	48°	48°
Failsafe (minutes)	45	45

GAS

Not Available

OFFTIME

Not Recommended

CONVENTIONAL CONTROLS

	Cut In	Cut Out
HPC (psig)	320	395
LPC (psig)	15	5

Refrigeration data continued on page 4.

NSF Certification

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

Freedom Line RFLNS

With Innovator Doors

Low Temperature

REFRIGERATION DATA CONTINUED

Working Charge¹

Total working charge with recommended Hussmann Air-Cooled condensing unit installed:

1 dr	2 lbs, 5 oz	/	1.04 kg
2 dr	6 lbs	/	2.72 kg
3 dr	6 lbs, 8 oz	/	2.95 kg
4 dr	6 lbs, 14 oz	/	3.13 kg
5 dr	7 lbs, 6 oz	/	3.36 kg

Total working charge with recommended HMDSLMT Water-Cooled condensing unit installed:

1 dr	1 lbs, 14 oz	/	0.86 kg
2 dr	2 lbs, 6 oz	/	1.09 kg
3 dr	3 lbs, 8 oz	/	1.59 kg
4 dr	4 lbs	/	1.81 kg
5 dr	6 lbs, 10 oz	/	2.99 kg

¹ The total refrigerant charge includes the case and condensing unit. Both ship pre-charged with a portion of the total refrigerant.

Hussmann recommends against frame heater cycling with *Innovator doors* to prevent door seals from freezing to the frames and tearing.

Freedom Line RFLNS

With Innovator Doors
Low Temperature

Electrical Data

	2Dr	3Dr	4Dr	5Dr					
Number of Fans—13W	2	3	4	5					
	Amperes				Watts				
Merchandiser	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr	
Evaporator Fan									
120V / 60Hz Standard Energy Efficiency	0.76	1.14	1.52	1.9	50	75	100	125	
Door Anti-sweat Heaters (on fan circuit)									
120V / 50/50Hz Standard Innovator I	1.5	2.3	3.0	3.8	182	273	364	455	
120V / 50/60Hz Innovator III	0.9	1.3	1.7	2.2	104	156	208	260	
Frame Anti-sweat Heaters (on fan circuit)									
120V 50/50Hz Standard	0.78	1.18	1.57	1.97	94	141	188	236	
Condensate Pan Heater 120V	5.0	5.0	5.0	5.0	600	600	600	600	
Condensate Pump 120V	0.19	0.19	0.19	0.19	8.7	8.7	8.7	8.7	
Defrost									
208V 1Ø Electric Defrost	6.72	10.08	13.46	16.82	1400	2100	2800	3500	
120V Drain Pan Heater	0.63	1.25	2.00	2.50	75	150	240	300	
Standard Vertical LED Lighting									
120V	0.31	0.46	0.62	0.77	37.1	55.6	74.2	92.7	

Case electrical data only shown for reference. For total electrical circuit requirements (MCA and MOPD) refer to condensing unit data sheet, part number 0541774.

† Notes:

1. Electrical input requirements: The RFLNS Freedom case requires one 208/230V 60Hz single phase 4-wire connection.
2. External whip provided for 208 / 230 Volt 4-wire 60Hz connection.

A qualified electrician should perform all wiring in accordance with the NEC code and/ or all local codes. Wire sizing must take into account the total distance from the electrical panel to the Freedom case.

Freedom Line RFLNS

With Innovator Doors

Low Temperature

Product Data

*Recommended Usable Cube*² (Cu Ft/Dr)

*AHRI Total Display Area*¹ (Sq Ft/Dr)

*Shelf Area*² (Sq Ft/Dr)

20.95 ft³/Dr (0.59 m³/Dr)

12.66 ft²/Dr (1.18 m²/Dr)

27.20 ft²/Dr (2.53 m²/Dr)

¹ Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]

² Shelf Surface Area and Recommended Usable Cube are composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (5) rows of 21-inch deep shelves.

ESTIMATED SHIPPING WEIGHT⁴

	2 Dr	3 Dr	4 Dr	5 Dr	Solid End (each)
Freedom Line Merchandiser (20-Inch Facade)					
lb (kg)	1085 (492)	1357 (616)	1828 (829)	2230 (1012)	74 (34)

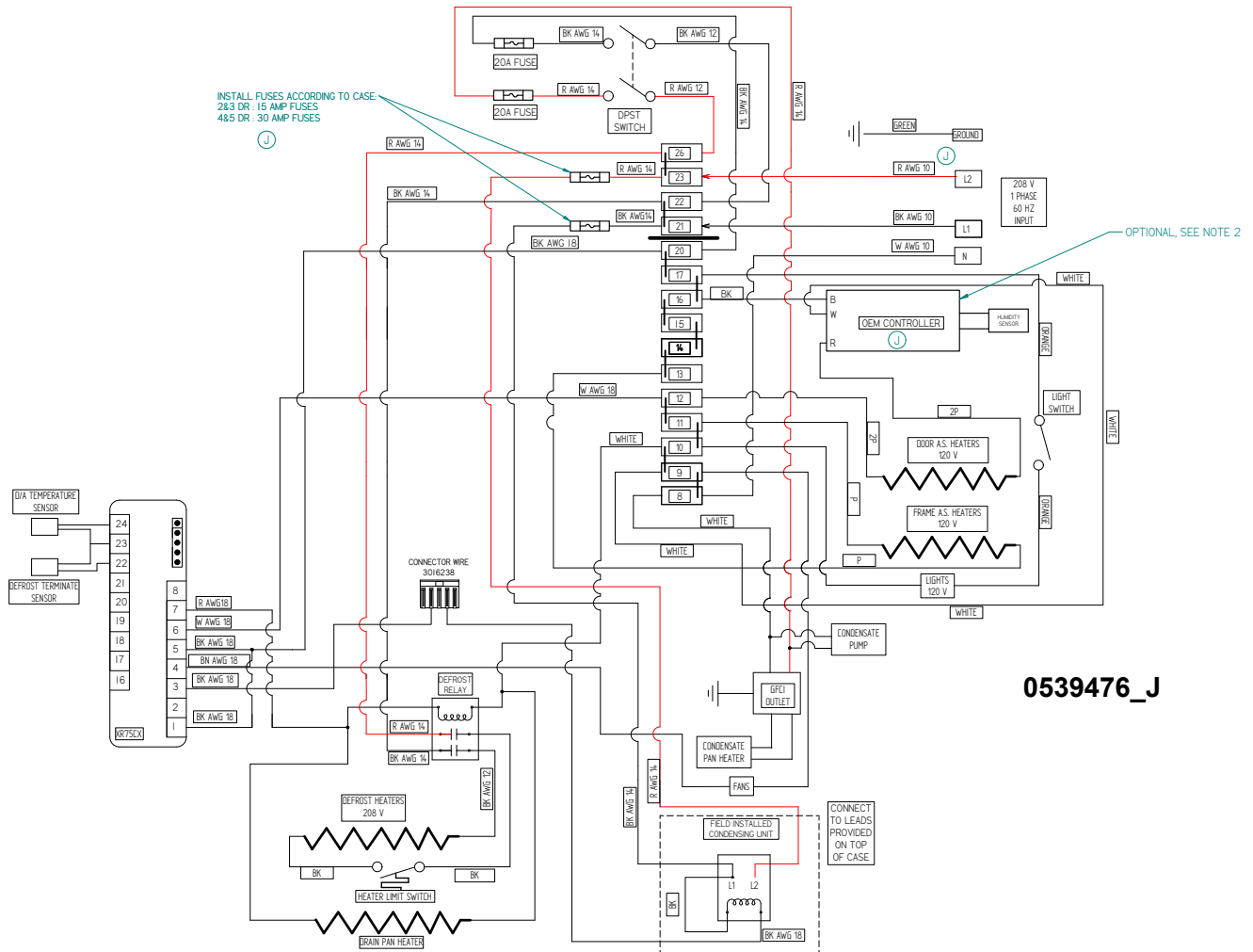
⁴ Actual weights will vary according to optional kits included.

R = Red P = Purple 2P = Purple (2 Bands)
 DB = Dark Blue BK = Black BL = Blue
 BR = Brown Y = Yellow OR = Orange W = White

THESE ARE MARKER COLORS (WIRE MAY VARY).

Freedom Line RFLNS

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 Low Temperature



Dixell Wiring Diagram — Low Temperature Reach-in

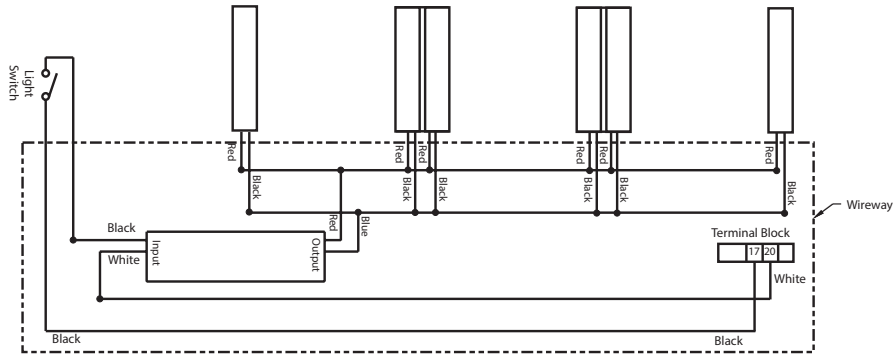
Electric Defrost Sequence - Low Temperature

1. Power from the defrost relay energizes Defrost Heaters. The Dixell control opens the fan circuit and energizes the drain pan heater.
2. Temperature rise of the evaporator closes the Relay Control Thermostat (3) at about 35°F, energizing 120V A.S. Relay Coil (4). This relay's contacts open the Frame and Door Heater Circuits.
3. When Defrost Termination Sensor reaches the termination temp, the defrost relay opens the Defrost Heater Circuit. The Dixell control turns off the drain pan heater and turns on the fans.
4. Temperature fall of the evaporator opens the Relay Control Thermostat (3) at about 20°F, de-energizing 120V A.S. Relay Coil (4). A.S. Relay Contacts close the Frame and Door Heater Circuits.

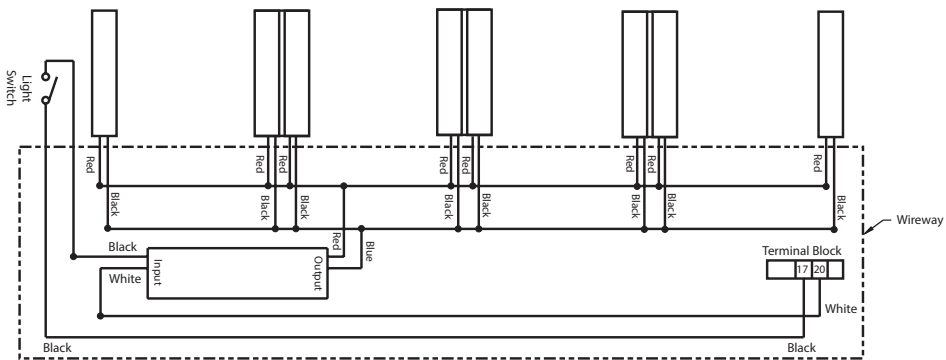
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Low Temperature

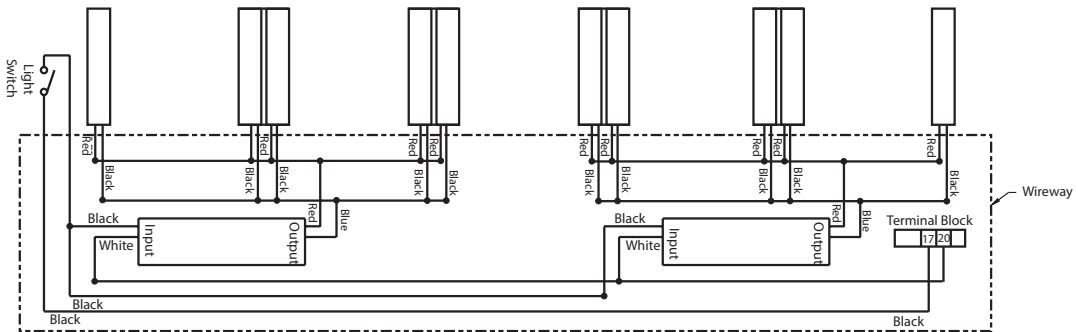
Standard Vertical Lighting LED Fixtures



3 Door LED Light Wiring Diagram



4 Door LED Light Wiring Diagram



5 Door LED Light Wiring Diagram

WARNING

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

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

● = 120V Power ○ = 120V Neutral \perp = Field Ground $\overline{\overline{\overline{\quad}}}$ = Case Ground