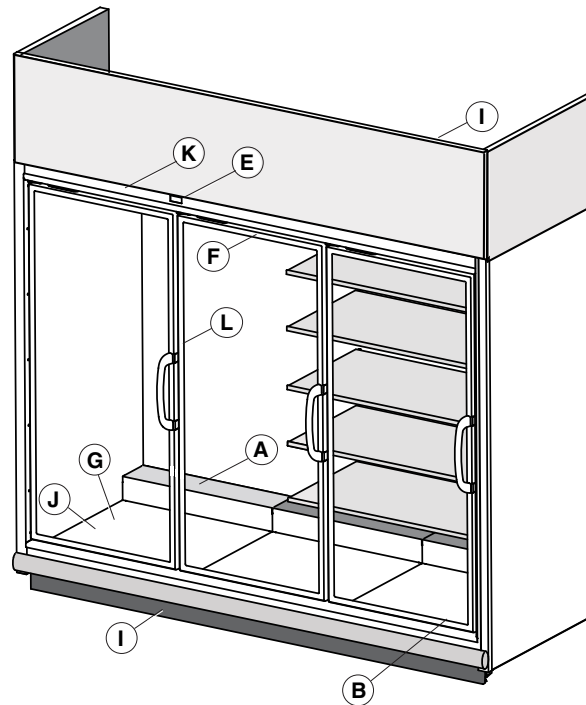


Freedom Line merchandisers are top mount refrigeration ready



DOE 2017
Energy Efficiency
Compliant

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

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 #	(Qty)	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES, AND THERMOSTATS					CONTROL PANEL			
A.	13W Standard Energy Efficient Fan Assembly	(1)			E.	3007825	Dixell XR75 Control	(5)
	0527610		Fan Motor, Evaporator		F.	0334802	Dixell Discharge Air Sensor	(6)
	0461805		Fan Blade		G.	0334802	Dixell Defrost Sensor	(7)
RELAYS					REFRIGERATION			
B.	0440423		Defrost Limit Thermostat	(2)	H.	0551016	Condensate Pump	(8)
HEATERS							0551018	Condensate Float Switch
C.	Electric Defrost Heaters – (208V)	(3)			I.	0538255	Condensate Pan with Heater	(9)
	3015381	(1)	3 Door Models		J.	0460992	TEV 3 Door Models	
	3015382	(1)	4 Door Models			0460993	TEV 4 and 5 Door Models	
	3015383	(1)	5 Door Models		LED FIXTURES AND POWER SUPPLY			
D.	Electric Drain Pan Heaters – (120V)	(4)			K.	0499399	Power Supply	(10)
	0508200	(1)	3 Door Models		L.	Door Lamp, LED		
	0508201	(1)	4 Door Models			BU.4440877	Center	(11)
	0508202	(1)	5 Door Models			BU.4440878	End	(12)

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

Note: Revision K: Updated refrigerant charges.

Engineering Plan Views

Reach-In
3, 4 & 5 Door

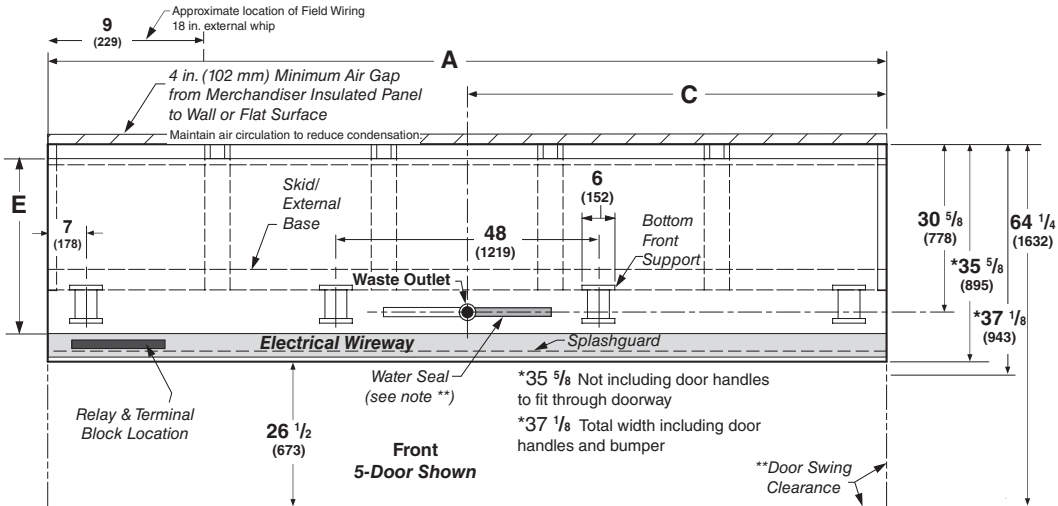
Freedom Line RFLNS - RFMNS Plan View

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 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
3, 4 and 5 Door Models

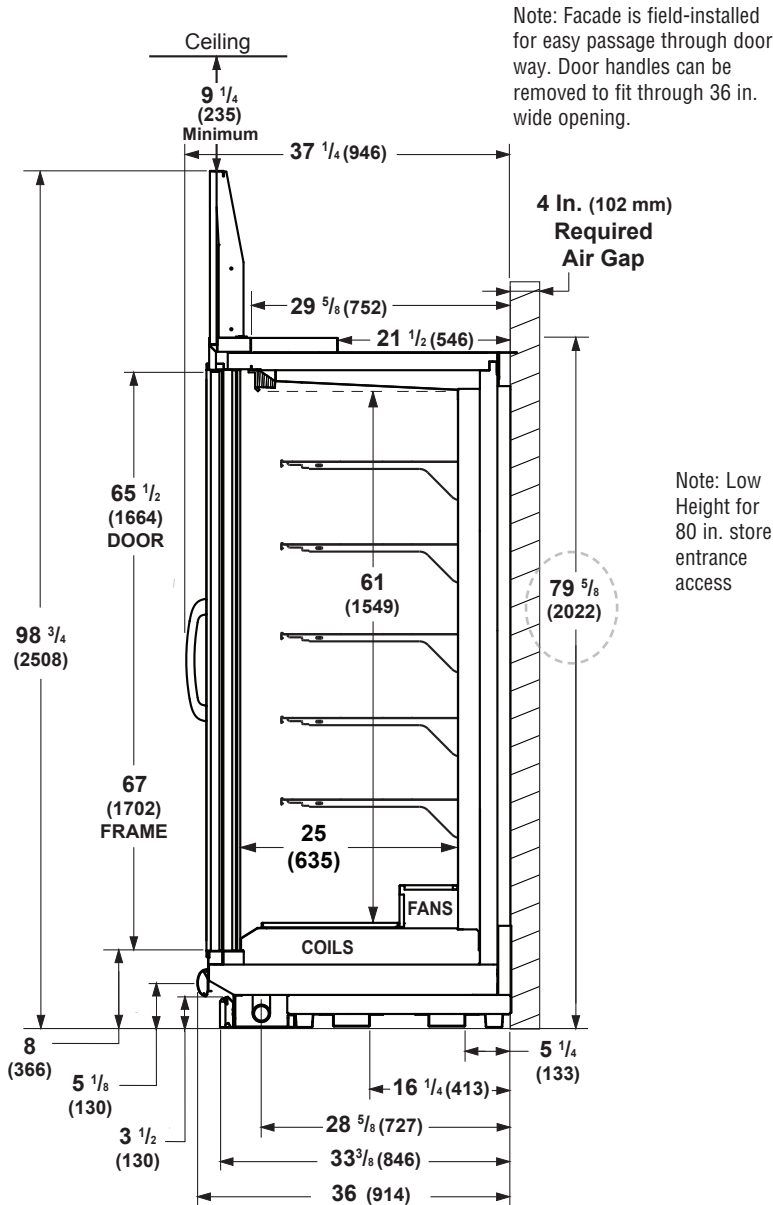
Standard Reach-in configuration consists of Innovator I doors, energy efficient fan motors, and EcoShine II LED vertical lighting.

DOE 2017 Energy Efficiency Compliant 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).



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 §

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

Working charge with recommended Condensing Unit installed:

2Dr	6 lb	96 oz	2.72 kg
3Dr	6.45 lb	103.2 oz	2.93 kg
4Dr	6.9 lb	110.4 oz	3.13 kg
5Dr	7.4 lb	118.4 oz	3.36 kg

Freedom Line RFLNS

With Innovator Doors
Low Temperature

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

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	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr		
Husmann EcoShine II™ - A (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*¹ (Cu Ft/Dr)

*AHRI Total Display Area*² (Sq Ft/Dr)

*Shelf Area*³ (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 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 (5) rows of 21-inch deep shelves.

ESTIMATED SHIPPING WEIGHT ⁴

	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.

Freedom Line RFLNS

With Innovator Doors
Low Temperature

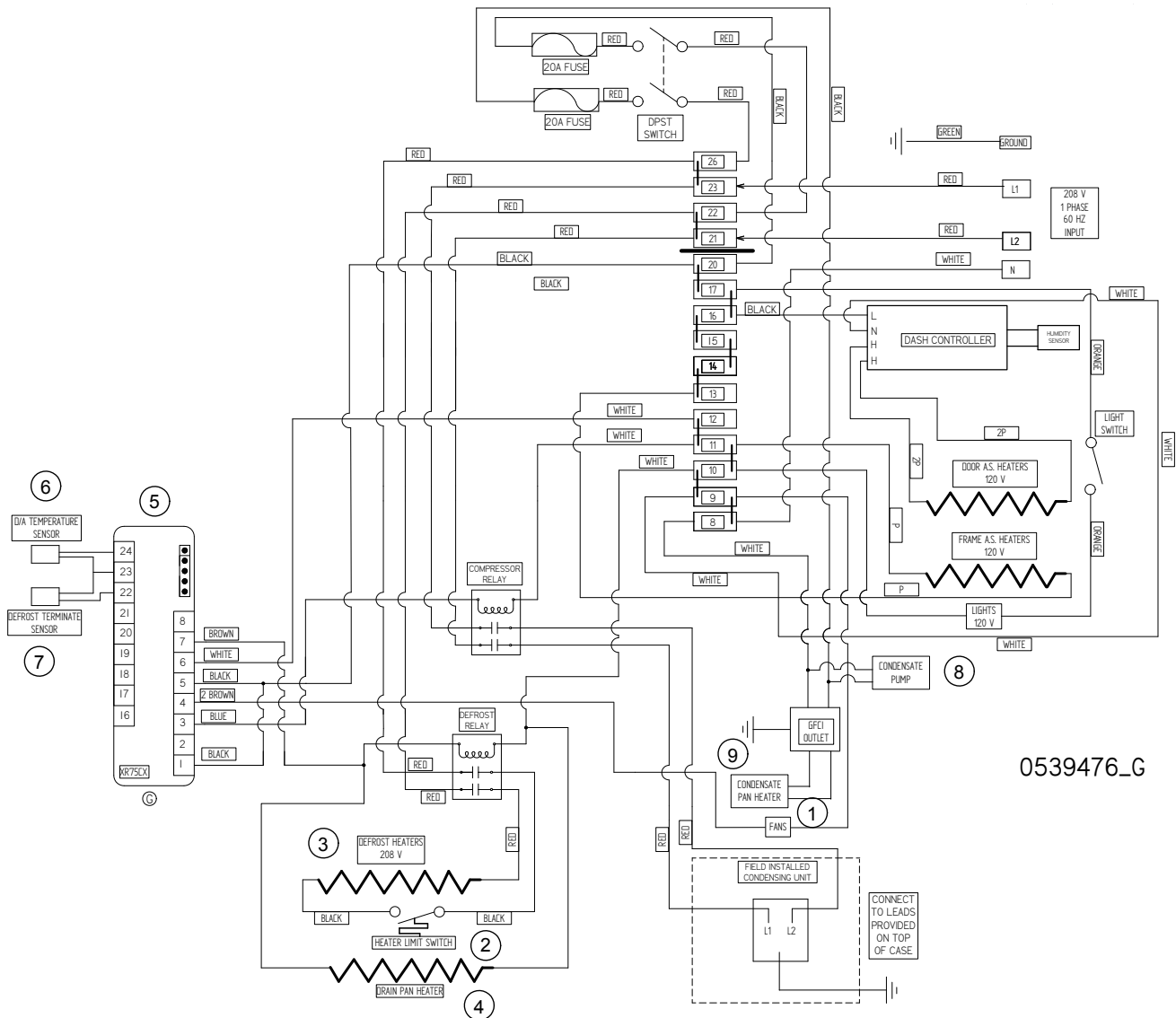
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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).



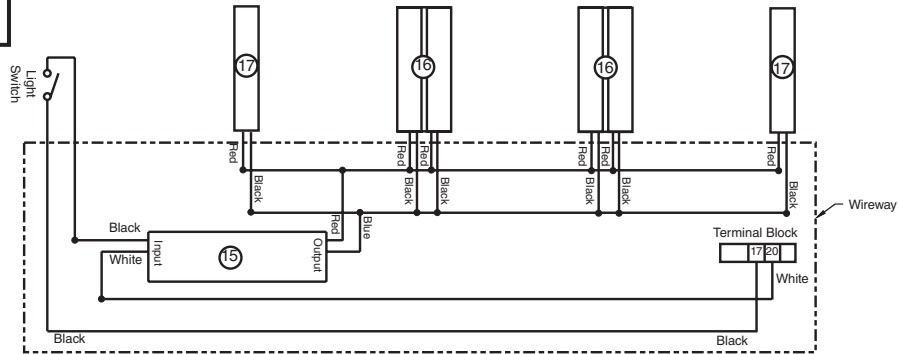
Dixell Wiring Diagram — Low Temperature Reach-in

Electric Defrost Sequence - Low Temperature

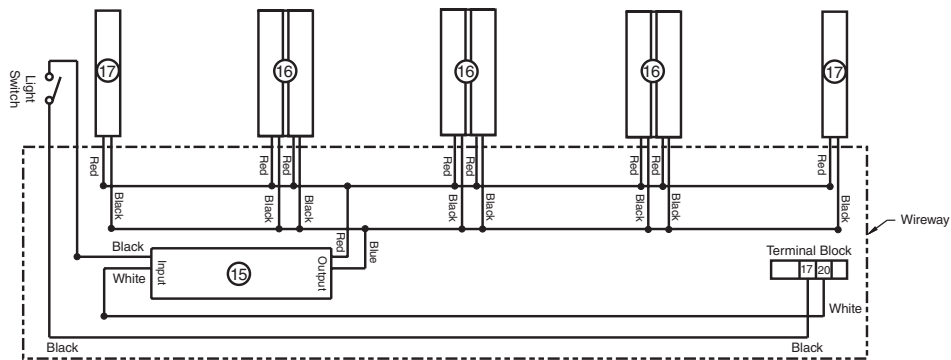
1. Power from the defrost relay energizes Defrost Heaters. The Dixell control opens the fan circuit and energizes the drain pan heater.
2. Temperature rise of the evaporator closes the Relay Control Thermostat (3) at about 35°F, energizing 120V A.S. Relay Coil (4). This relay's contacts open the Frame 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.

**Standard
Vertical
Lighting
Husmann
EcoShine™
LED
Fixtures**

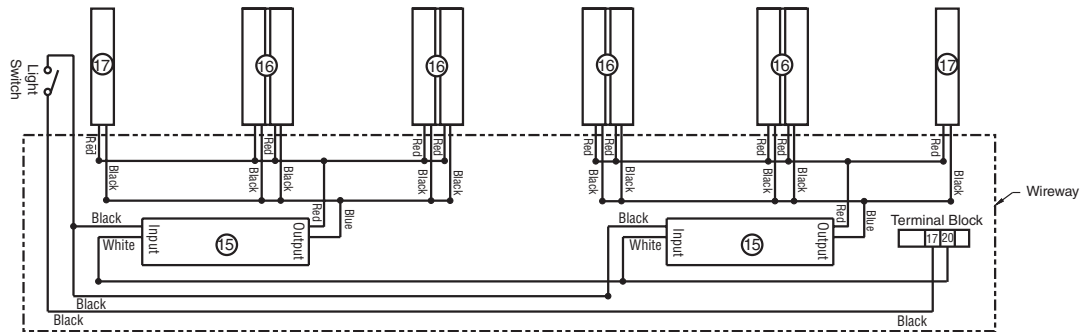
Freedom Line RFLNS
With Innovator Doors
Low Temperature



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.

Circled numbers = Parts List Item Numbers

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

● = 120V Power ○ = 120V Neutral \perp = Field Ground $\text{---} \text{---} \text{---}$ = Case Ground