

HUSSMANN®



Freedom Line RFMNS

with INNOVATOR Doors

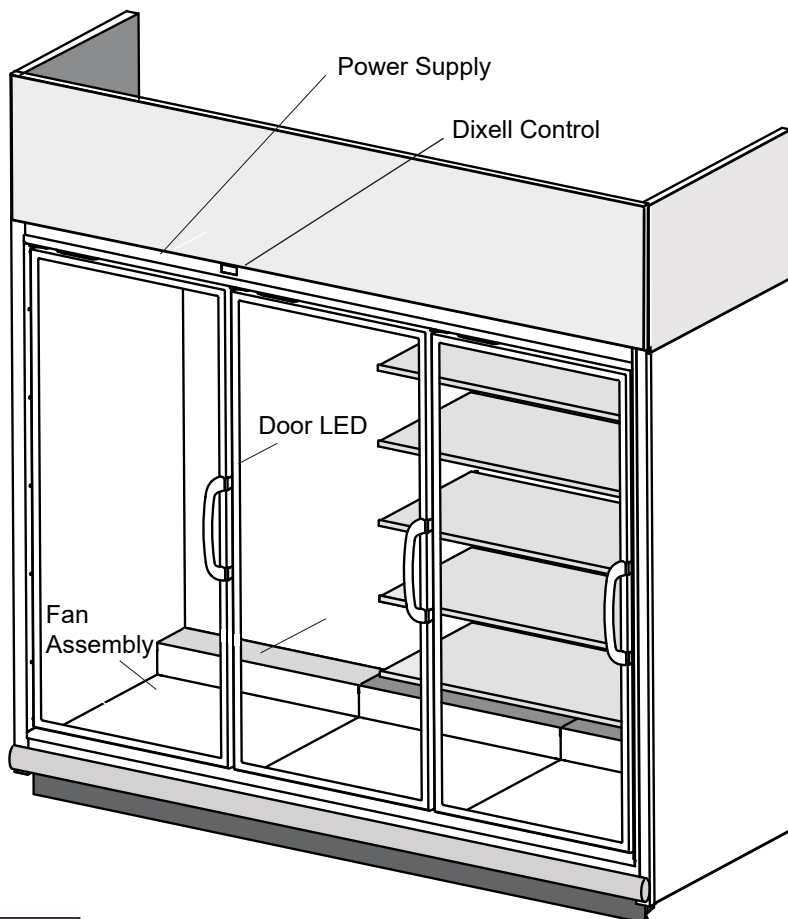
Technical Data Sheet

P/N 0541256_M

NSF® Certified

April 2020

Freedom Line merchandisers are top mount refrigeration ready



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

Refer to INNOVATOR REACH-IN GLASS DOOR INSTALLATION AND SERVICE manual, P/N 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: reformatted data sheet per updated requirements, updated estimated charges, electrical, product data and wiring diagrams.

Data sheet-Freedom Line RFMNS

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Engineering Plan Views

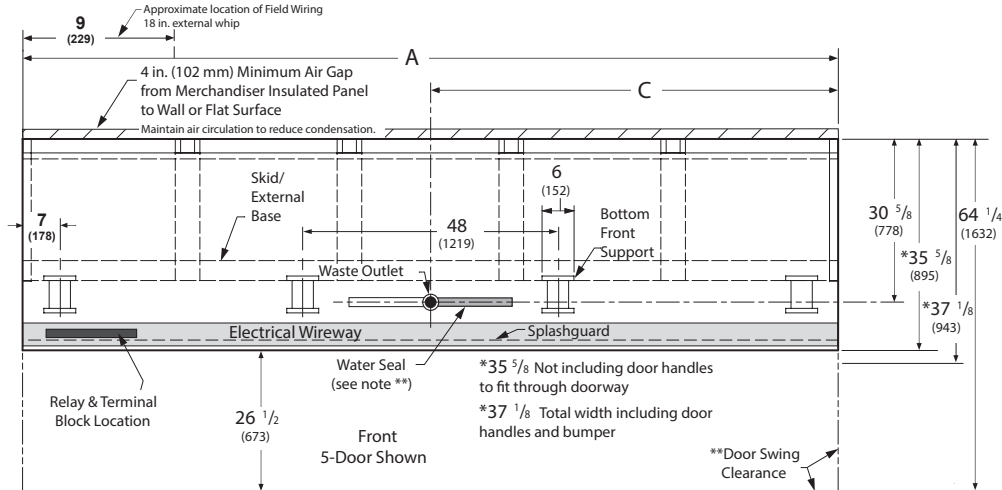
Freedom Line RFLNS - RFMNS Plan View 01-2014

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

Reach-In 2, 3, 4 & 5 Door

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)
<i>(Each solid end adds approximately 2 3/8 in (60 mm) to length of line up; each partition adds approximately 2 3/4 in (70 mm); case to case joints can add approximately 1/8 in (3 mm) for gasket material).</i>				
** 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 3/8 (86)	3 3/8 (86)	3 3/8 (86)	3 3/8 (86)
Width of Bottom Front Support	6 (152)	6 (152)	6 (152)	6 (152)
<i>Fork lift pocket spacing (center to center) is 11 in. and the max blade width is 4 in. for all cases.</i>				
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.				
Waste Outlet				
(C) Right end of merchandiser to center of waste outlet	23 3/4 (602)	54 1/4 (1378)	46 1/4 (1175)	76 5/8 (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 Interface				
(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 point is at top.				
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)
<i>Distance between Center and Outside supports will vary</i>				

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

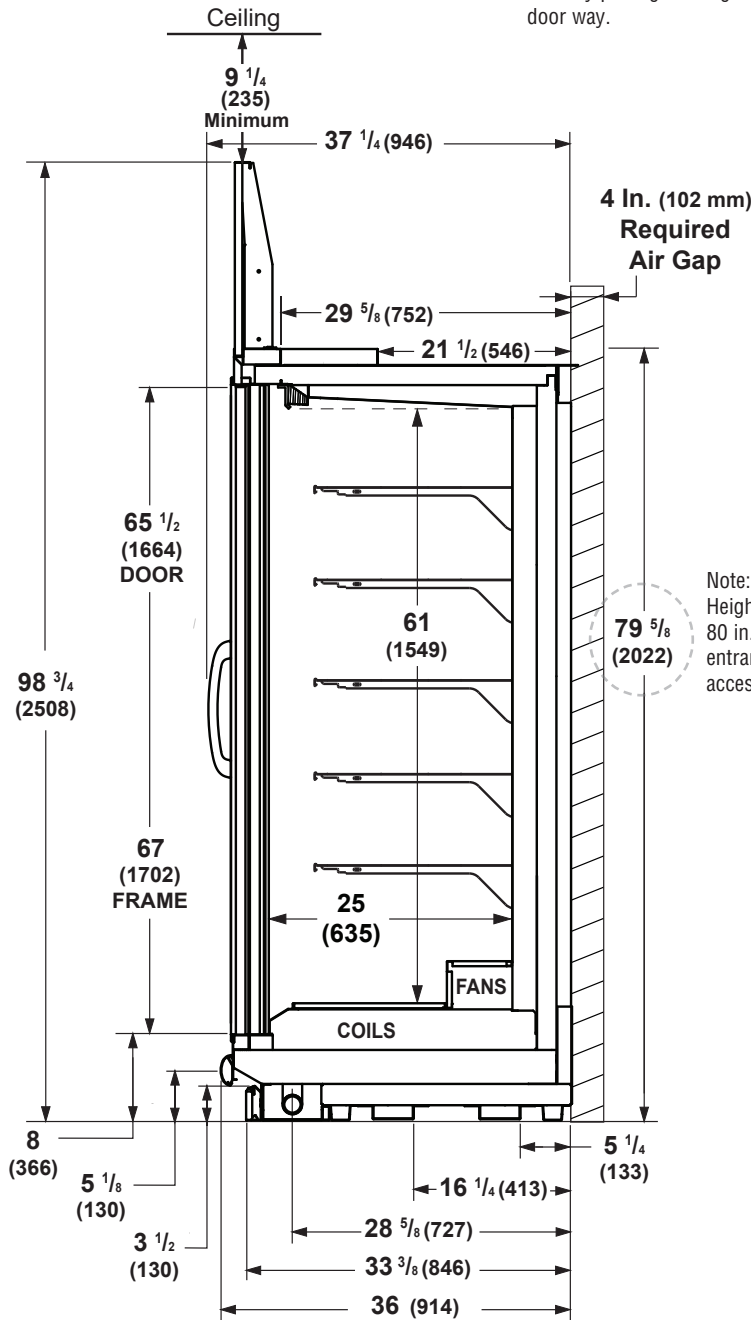
Freedom Line RFMNS
With Innovator Doors Medium
Temperature

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.



REFRIGERATION DATA

Note: This data is based on store temperature and humidity levels that do not exceed NSF guidelines.

MEDIUM TEMP		
Discharge Air °F	36	
Average Evaporator* °F	30	
Unit Sizing °F	28	
BTU/HR/DOOR	NSF TYPE I	NSF TYPE II
Temp (°F) /R.H.	75°/55%	80°/55%
INNOVATOR		
Parallel	415	470
Conventional	430	490

§ 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

Frequency (hr)	24
Defrost Water (lb/Dr/day)	0.36
(± 15% based on case configuration and product loading.)	

OFFTIME

Temp Term (°F)	48
Failsafe (minutes)	40

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 RFMNS
With Innovator Doors Medium Temperature

REFRIGERATION DATA (CONTINUED)

WORKING REFRIGERANT CHARGE ¹

Air-Cooled

Working Refrigerant Charge with recommended Condensing Unit installed:

2 Dr	2 lb, 8 oz	/	1.13 kg
3 Dr	3.0 lb	/	1.36 kg
4 Dr	3 lb, 5 oz	/	1.50 kg
5 Dr	3 lb, 8 oz	/	1.59 kg

Water-Cooled

Working Refrigerant Charge with recommended HMDSMT Condensing Unit installed:

2 Dr	2.0 lb	/	0.91 kg
3 Dr	3.0 lb	/	1.36 kg
4 Dr	3 lb, 14 oz	/	1.77 kg
5 Dr	4 lb, 6 oz	/	2.00 kg

¹ The total refrigerant charge includes the case and condensing unit. Both ship precharged 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 RFMNS
With Innovator Doors Medium Temperature

Electrical Data

	2Dr	3Dr	4Dr	5Dr				
Number of Fans — 4W	2	3	4	5				
	Amperes				Watts			
Merchandiser	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr
Evaporator Fan								
120V / 60Hz Standard Energy Efficiency	0.24	0.36	0.48	0.60	16	24	32	48
Door Anti-sweat Heaters (on fan circuit)	NA							
Frame Anti-sweat Heaters (on fan circuit)								
120V 50/50Hz Standard	0.39	0.59	0.79	0.99	47	71	94	118
Condensate Pan Heater 120V	5.0	5.0	5.0	5.0	600	600	600	600
Condensate Pump 120V	0.20	0.20	0.20	0.20	8.7	8.7	8.7	8.7
Defrost	NA							
	Amperes				Watts			
Standard Vertical Lighting	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr
120V	0.35	0.50	0.65	0.80	42	60	78	96
220V Export	0.19	0.27	0.35	0.43	42	60	78	96

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. Single point electrical input for RFMNS Freedom cases requires one 120V supply for RFMNS2 and 3, and one 208/230V 4 wire supply for RFMNS4 and 5 for the case components and optional field-installed condensing unit. Electrical connection is at the top of the case.
2. External whip is provided for 208/230V 4 wire, and 120V connection.
3. For total electrical circuit requirements refer to the condensing unit datasheet and include any optional components.

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 RFMNS
 With Innovator Doors Medium Temperature

Product Data

<i>AHRI Total Display Area</i> ¹ (Sq Ft/Dr)	12.66 ft ² /Dr (1.18 m ² /Dr)
<i>Recommended Usable Cube</i> ² (Cu Ft/Dr)	20.95 ft ³ /Dr (0.59 m ³ /Dr)
<i>Shelf Area</i> ² (Sq Ft/Dr)	27.20 ft ² /Dr (2.53 m ² /Dr)

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

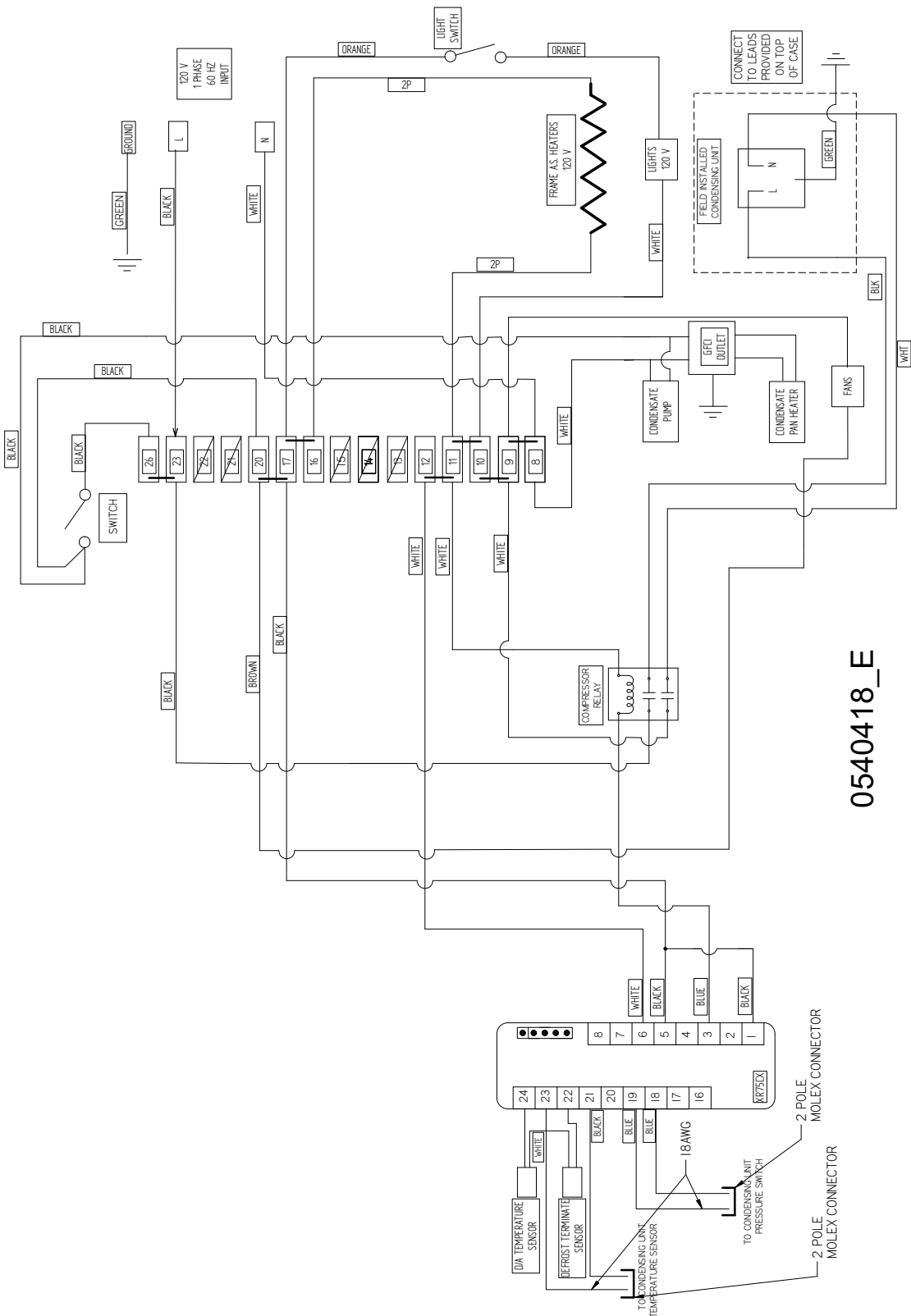
² Shelf Surface Area and Recommended Usable Cube are composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (5) rows of 21-inch wire shelves.

ESTIMATED SHIPPING WEIGHT⁴

	<i>2 Dr</i>	<i>3 Dr</i>	<i>4 Dr</i>	<i>5 Dr</i>	<i>Solid End (each)</i>
Standard Freedom Line Merchandiser (20-Inch Facade)					
lb (kg)	1005 (456)	1262 (572)	1688 (766)	2070 (939)	74 (34)

⁴ Actual weights will vary according to optional kits included.

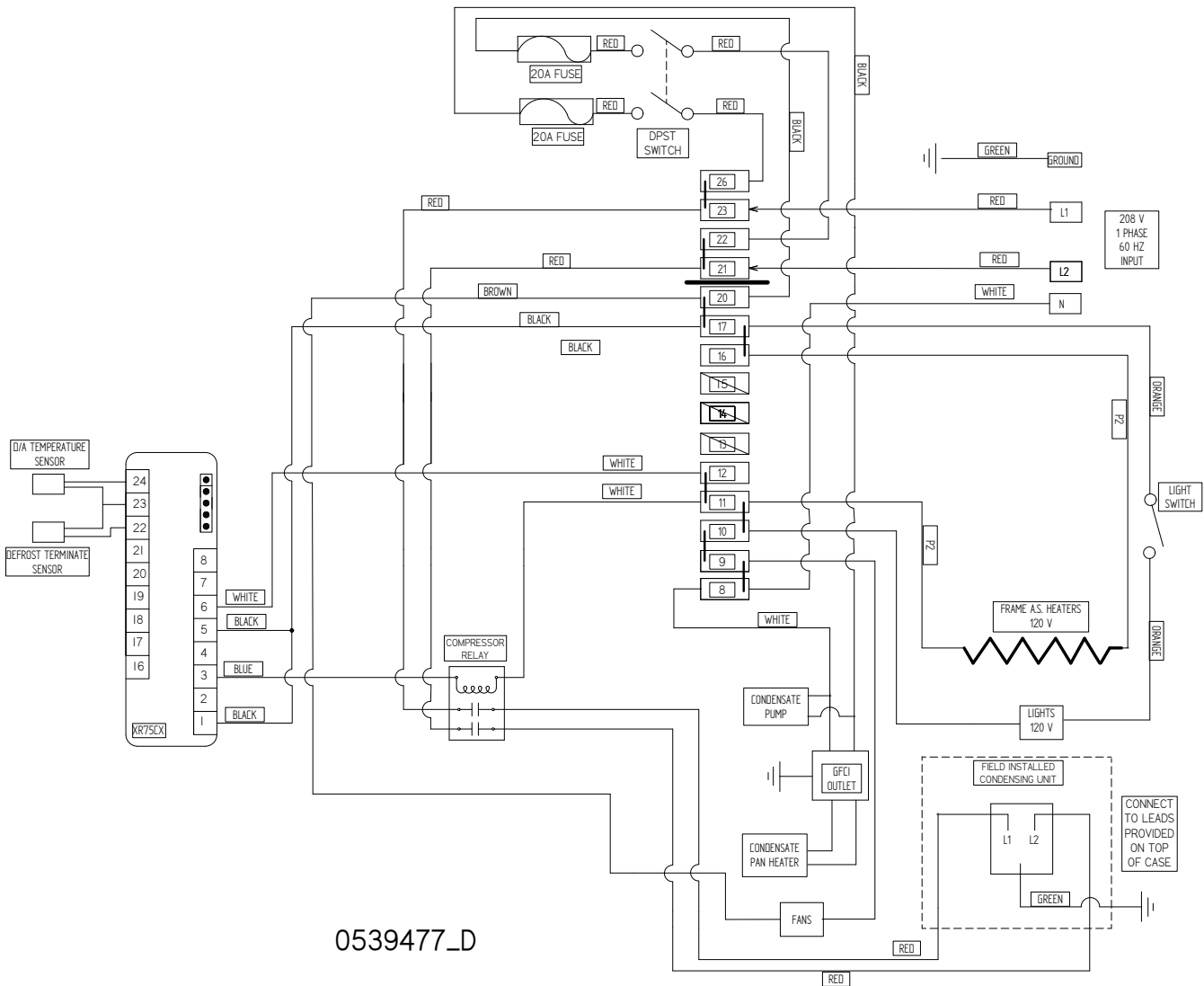
Freedom Line RFMNS
 With Innovator Door Medium
 Temperature



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Dixell Wiring Diagram — Medium Temperature Reach-in with 2 or 3 Doors 120V

Freedom Line RFMNS
 With Innovator Doors Medium Temperature

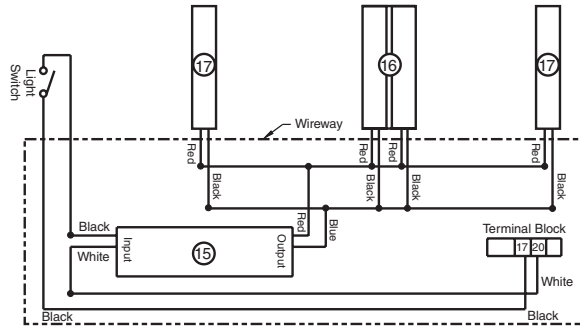


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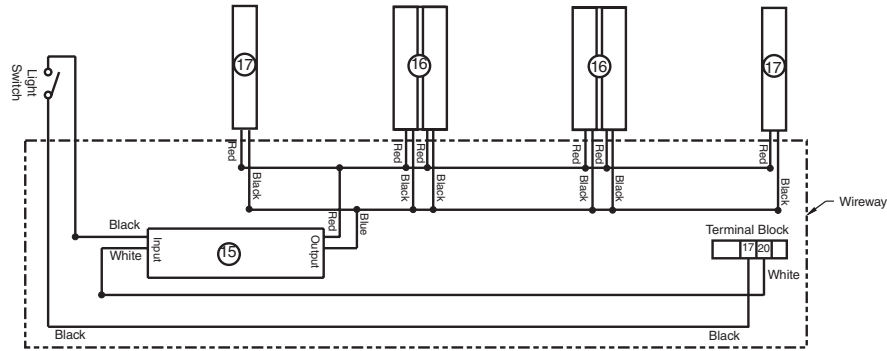
Dixell Wiring Diagram — Medium Temperature Reach-in with 4 or 5 Doors 208/230V

**Optional
Lighting
LED
Fixtures**

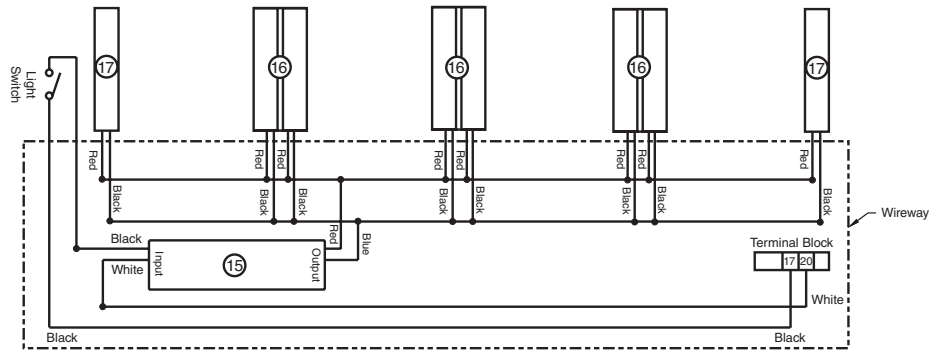
Freedom Line RFMNS
With Innovator Door Medium
Temperature



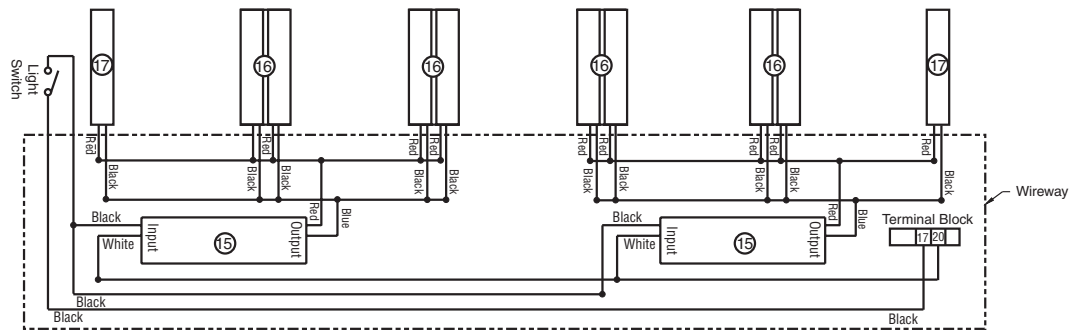
2 Door LED Light Wiring Diagram



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 $\overline{\overline{\overline{m}}}$ = Case Ground