

Medium Temperature

Technical Data Sheet
P/N 3056469_E

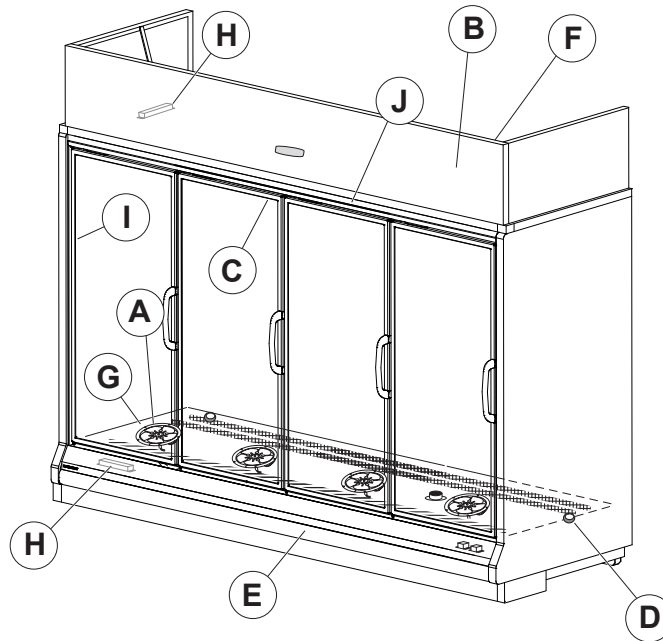
NSF® Certified

August 2019

Freedom Line merchandisers are top mount refrigeration ready

OPTIONS SHOWN:
• Lighted Facades

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



**DOE 2017
Energy Efficiency
Compliant**

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					LED FIXTURES AND POWER SUPPLY			
A.	12W Standard Energy Efficient Fan Assembly			(1)	H.	0499399	Power Supply	(7)
	0477655		Fan Motor, Evaporator		I.	BU.4440877	4100K Center	(8)
	0461805		Fan Blade			BU.4440878	4100K End	(9)
CONTROL PANEL					J.	BU.4441411	2900K 29.5 In. Length	(10)
B.	3007825		Dixell XR75 Control	(2)		BU.4441412	2900K 30.5 In. Length	(11)
C.	0334802		Dixell Discharge Air Sensor	(3)				
D.	0334802		Dixell Defrost Sensor	(4)				
REFRIGERATION								
E.	0516897		Condensate Pump	(5)				
F.	0538255		Condensate Pan with Heater (Evapoway)	(6)				
G.	0460993		TEV 3-4-5 Door Models					

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

Note: Revision E: Updated condensing unit refrigerant charges.

Data sheet - Freedom Line RFM

Engineering Plan Views

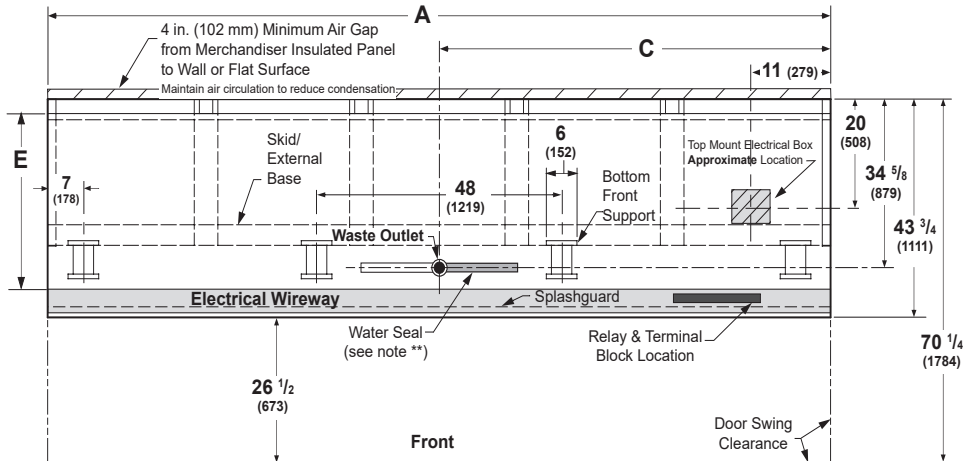
Reach-In
2, 3, 4 & 5 Door

Freedom Line RFM Plan View

PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8

Dimensions shown as inches and (mm).

Freedom Line — Standard Plan View 4 Door



General	2 Dr	3 Dr	4 Dr	5 Dr
(A) Case Length (without ends or partitions)	62 (1575)	92 1/2 (2350)	122 7/8 (3121)	153 3/8 (3896)
**NOTE: Each solid end adds approximately 2 3/8 in (60 mm) to length of line up; each partition add approximately 2 3/4 in (70 mm); case to case joints can add approximately 1/8 in (3 mm) for gasket material.				
Maximum O/S dimension of case back to front (Includes bumper. Add 26 1/2 in. (673 mm) for door swing.)	43 3/4 (1111)	43 3/4 (1111)	43 3/4 (1111)	43 3/4 (1111)
Back of case to rear of splashguard	39 7/8 (1013)	39 7/8 (1013)	39 7/8 (1013)	39 7/8 (1013)
Width of Skidrail	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)
Stub-up area between front support and splashguard	3 1/8 (79)	3 1/8 (79)	3 1/8 (79)	3 1/8 (79)
Electrical Service				
(B) RH end of case to the center of nearest knockout	4 (102)	4 (102)	4 (102)	4 (102)
RH end of case to the center of LH knockout	58 (1473)	88 1/2 (2248)	118 7/8 (3019)	149 3/8 (3794)
Back O/S of case to center of knockout	41 5/8 (1058)	41 5/8 (1058)	41 5/8 (1058)	41 5/8 (1058)
* NOTE: Electrical Field Wiring Connection Point is at terminal.				
Waste Outlet				
(C) Right end of case to center of waste outlet	23 7/8 (606)	54 1/4 (1378)	46 1/4 (1175)	76 5/8 (1946)
Back O/S of case to center of waste outlet	34 5/8 (879)	34 5/8 (879)	34 5/8 (879)	34 5/8 (879)
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 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
** NOTE: Field installed water seal outlets, tees, and connectors are shipped with case				
Refrigeration Outlet				
RH end of case to center of RH refrigeration outlet	5 3/8 (137)	5 3/8 (137)	5 3/8 (137)	5 3/8 (137)
Back O/S of case to center of refrigeration outlet	32 (813)	32 (813)	32 (813)	32 (813)
Outside bottom front supports from end of case	6 3/4 (170)	6 3/4 (170)	6 3/4 (170)	6 3/4 (170)
Center bottom front support from Centerline	24 (610)	24 (610)	24 (610)	24 (610)
Distance between Center and Outside supports will vary				

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

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

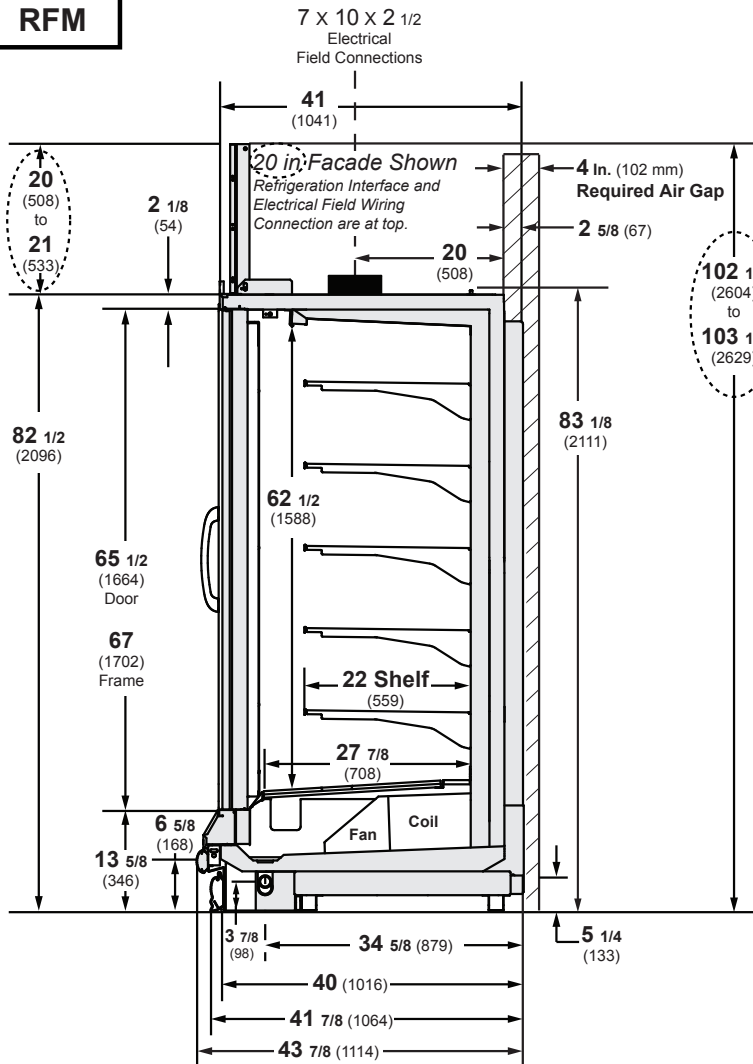
Provide adequate clearance for air circulation at rear to reduce condensation.

Dimensions shown as inches and (mm).

**Freedom
Line
RFM**

Note: Facade is field-installed. Electrical connection box, external supports, door handle and front raceway may be removed to facilitate passage through door way.

RFM



Freedom Line RFM

With Innovator Doors
Medium Temperature

REFRIGERATION DATA

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

	MEDIUM TEMP	AHRI Rating
Discharge Air °F	32	36
Evaporator °F	27	32
Unit Sizing °F	25	30

BTU/HR/DOOR

	NSF TYPE I	NSF TYPE II	AHRI RATING
Temp (°F) / R.H. 75° / 55%			
Temp (°F) / R.H. 80° / 55%			
INNOVATOR			
Parallel	480	505	470
Conventional	500	525	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

Working charge with recommended Condensing Unit installed:

2Dr	2.5 lb	40.0 oz	1.13 kg
3Dr	3.4 lb	54.4 oz	1.54 kg
4Dr	4.3 lb	68.8 oz	1.95 kg
5Dr	3.5 lb	56.0 oz	1.59 kg

based on 27°F (-2.8°C) Evaporator temperature for medium temperature applications.

NSF Certification

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

Freedom Line RFM

With Innovator Doors
Medium Temperature

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

Electrical Data

	2Dr	3Dr	4Dr	5Dr				
Number of Fans—12W	2	3	4	5				
	Amperes				Watts			
Merchandiser	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr
Energy Efficient Evaporator Fan								
120V 50/60Hz Innovator	0.60	0.90	1.20	1.50	36	54	72	90
Door Anti-sweat Heaters (on fan circuit)								
120V 50/60Hz Innovator	N/A							
Frame Anti-sweat Heaters (on fan circuit)								
120V 50/60Hz Innovator	0.39	0.59	0.79	0.99	47	71	94	118
Heated Condensate Pan	5.0	5.0	5.0	5.0	600	600	600	600
Condensate Pump	1.9	1.9	1.9	1.9	87	87	87	87
Defrost								
Drain Heaters (120V)	N/A							
120V Circuit								
(Fans, anti-sweat heaters, drain pan heater, condensate pan heater, condensate pump, and standard Ecoshine 2 LED's)								
With Innovator Doors (standard)	8.0	8.8	9.6	10.5	813	877	939	1003
Maximum Overcurrent								
Protection Device (MOPD)	20	20	20	20				
Standard Vertical LED Lighting	2Dr	3Dr	4Dr	5Dr	2Dr	3Dr	4Dr	5Dr
Hussmann EcoShine II™ - A (120V)	0.31	0.46	0.62	0.77	37.1	55.6	74.2	92.7

† Notes:

1. Electrical input for the RFM Freedom cases require two electrical connections at the top of the case: one 120V connection for the RFM and one 208/230V or 120V connection for the condensing unit.
2. The condensing unit amps must be used to calculate the total electrical load. Refer to the condensing unit data sheet.

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.

Product Data

<i>Recommended Usable Cube</i> ¹ (Cu Ft/Dr)	23.46 ft ³ /Dr (0.66 m ³ /Dr)
<i>AHRI Total Display Area</i> ² (Sq Ft/Dr)	13.31 ft ² /Dr (1.24 m ² /Dr)
<i>Shelf Area</i> ³ (Sq Ft/Dr)	29.32 ft ² /Dr (2.72 m ² /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 22-inch 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 (18-Inch Facade, no Arch)					
lb (kg)	997 (453)	1295 (589)	1595 (725)	1874 (852)	55 (25)

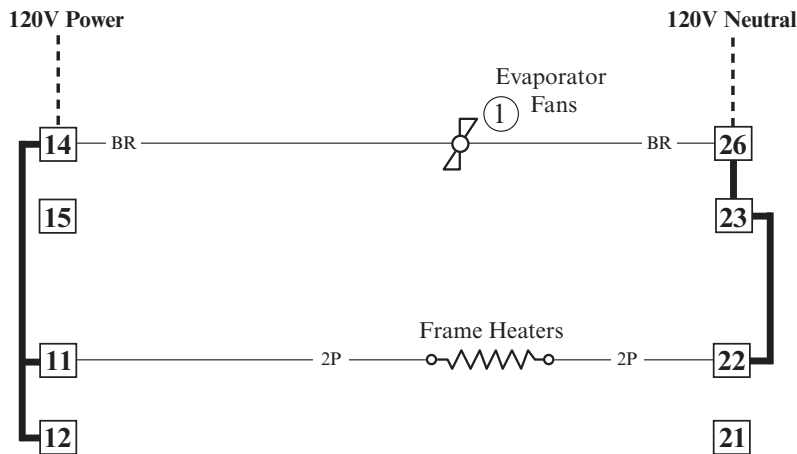
⁴ Actual weights will vary according to optional kits included.

Freedom Line RFM

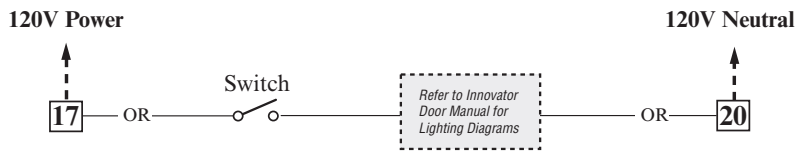
With Innovator Doors
Medium Temperature

Fan and Heater Circuits – Offtime Defrost (Standard) Medium Temperature

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS
 R = Red P = Purple 2P = Purple (2 Bands) DB = Dark Blue BK = Black
 LB = Light Blue Pink = Pink BR = Brown Y = Yellow OR = Orange W = White
THESE ARE MARKER COLORS (WIRE MAY VARY).

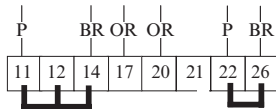


Refer to *Innovator Reach-In Glass Door, Installation and Service* manual, P/N 0425683, for *Innovator* door and frame replacement parts.



Terminal Blocks in Wireway

Medium Temperature
with
Offtime Defrost

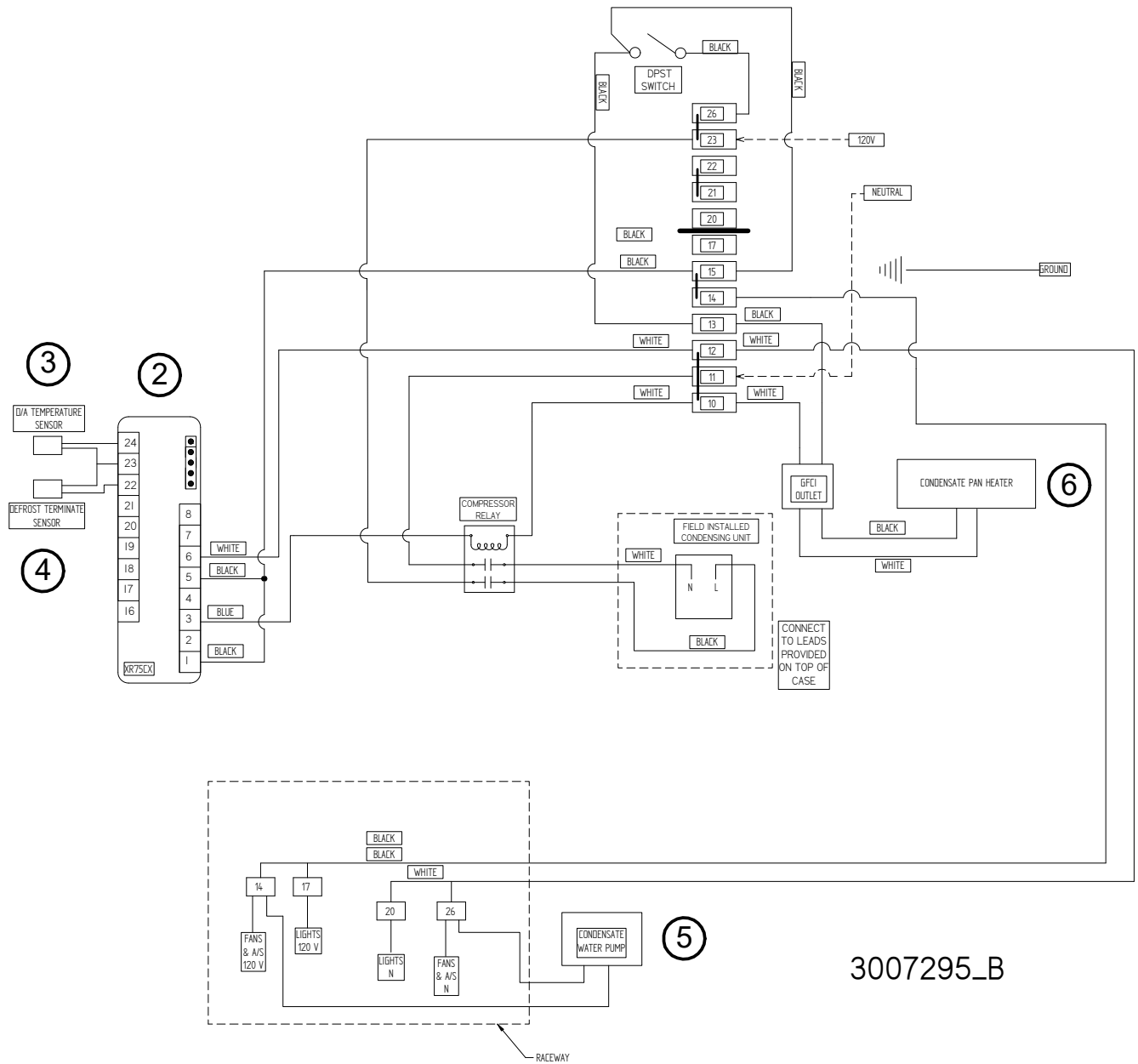


WARNING

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

● = 120V Power ○ = 120V Neutral ⊥ = Field Ground *m̄m̄* = Case Ground

Freedom Line RFM
 With Innovator Doors
 Medium Temperature



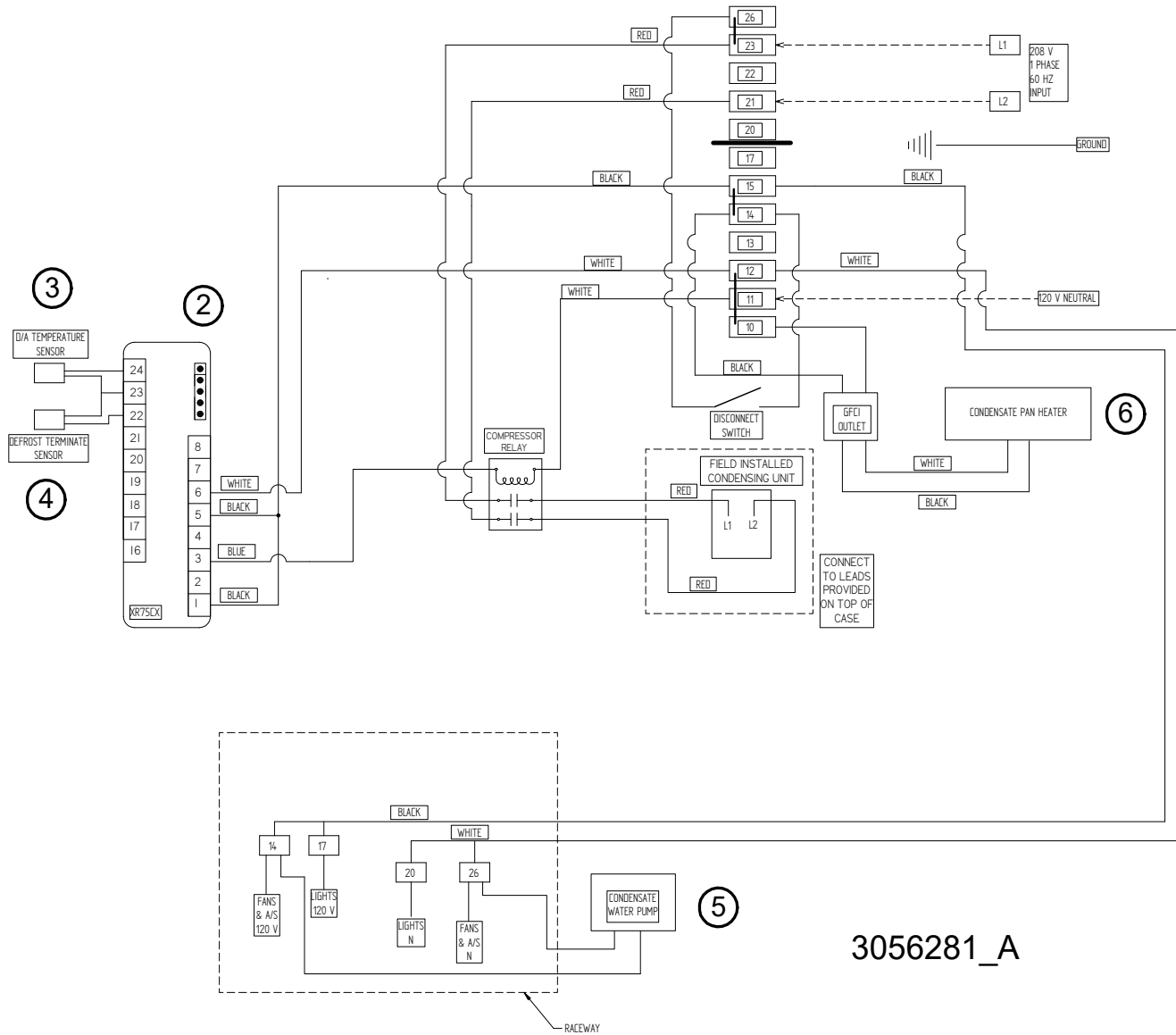
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Dixell Wiring Diagram — Medium Temperature Reach-in with 2 or 3 Doors

Freedom Line RFM

With Innovator Doors

Medium Temperature



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Optional Single Point Wiring Diagram

