

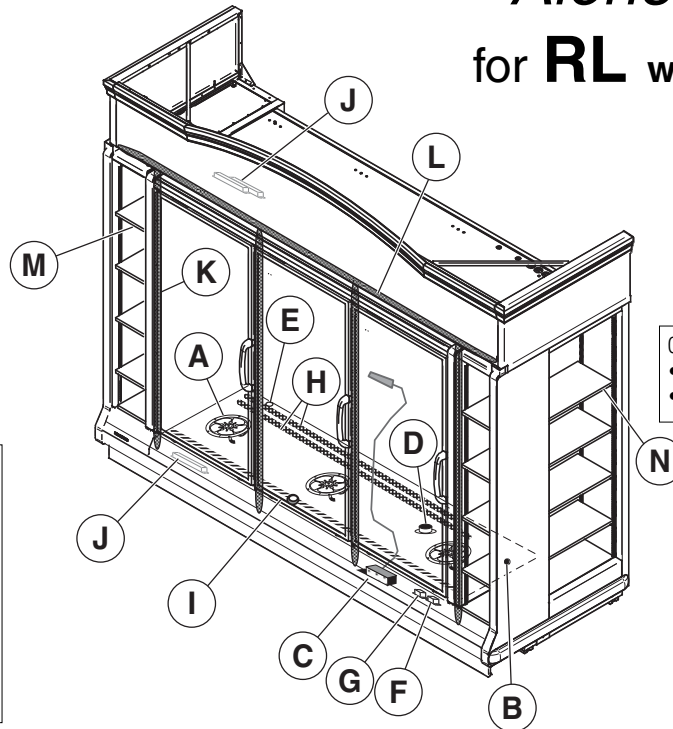


for **RL** with *INNOVATOR* Doors

**P/N 0512405\_A**

**NSF® Certified**

**October 2009**



**OPTIONS SHOWN:**

- Lighted Facades
- Arch Facade

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.

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

Item	Part #	Description	Wiring Item #	Item	Part #	(Qty)	Description	Wiring Item #
<b>FAN ASSEMBLIES, AND THERMOSTATS</b>				<b>HEATERS (CONTINUED)</b>				
A.	<b>12W Standard</b> Fan Assembly		(1)	I.	Drain Pan Heater — Electric & KoolGas (120V)			(9)
	MO.4410103	Fan Motor, Evaporator			HE.4850239	(1)	2 Door Models	
	FB.4780446	Fan Blade			HE.4850240	(1)	3 Door Models	
	<b>12W Optional Energy Efficient</b> Fan Assembly		(1)		HE.4850241	(1)	4 Door Models	
	MO.4410546	Fan Motor, Evaporator		<b>LED FIXTURES AND POWER SUPPLY</b>				
	FB.4780446	Fan Blade		J.	EP.4481668		Power Supply	(10)
B.	CT.4440726	Standard Non-adjustable Defrost Thermostat	(2)	K.	Door Lamp, LED			
C.	Optional Adjustable Refrigeration Thermostat		(3)		BU.4440875		3500K Center	(11)
D.	CT.4440261	Defrost Limit Thermostat	(4)		BU.4440877		4100K Center	(11)
E.	CT.4481296	Relay Control Thermostat or Fan and Anti-sweat Heater Thermostat	(5)		BU.4440876		3500K End	(12)
					BU.4440878		4100K End	(12)
				L.	Facade Lamp, LED			(13)
					BU.4441411		2900K 29.5 In. Length	
					BU.4441412		2900K 30.5 In. Length	
<b>RELAYS</b>				M.	Dry Goods Lamp, LED			(14)
F.	RL.4480238	Anti-Sweat Control Relay (120V)	(6)		BU.4441414		3500K	
G.	RL.4480237	Fan Control Relay (208V)	(7)	N.	Side Dry Goods Lamp, LED			(15)
					BU.4482721		3500K	
<b>HEATERS</b>				M.	SH.4991645		KLU9600	
H.	Electric Defrost Heaters — Front (208V)		(8)				Dry Goods Shelf, Lighted, Pearwood	
	HE.4850346	(1) 2 Door Models		N.	SH.4992632		KKV2500	
	HE.4850337	(1) 3 Door Models					Side Dry Goods Shelf, Lighted, Pearwood	
	HE.4850347	(1) 4 Door Models		<b>Refer to INNOVATOR REACH-IN GLASS DOOR</b>				
	Electric Defrost Heaters — Rear (208V)		(8)	<b>INSTALLATION AND SERVICE manual, P/N 0425683,</b>				
	HE.4850358	(1) 2 Door Models (HE.4850358)		<b>for Innovator and Innovator II door and frame</b>				
	HE.4850359	(1) 3 Door Models (HE.4850359)		<b>replacement parts.</b>				
	HE.4850360	(1) 4 Door Models (HE.4850360)						

**NOTE:** Revision A is original issue.



# Engineering Plan Views

Reach-In  
2, 3 & 4 Door

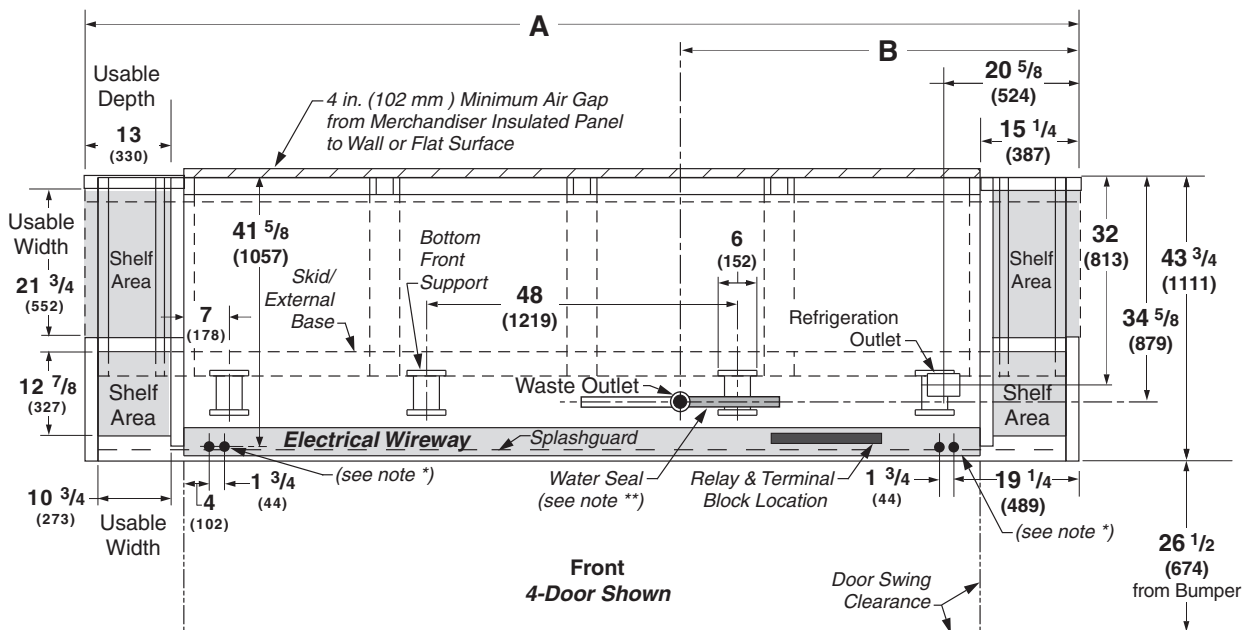
## Plan View LifeLine Premier Stand Alone Dry Goods Kit Applied to RL / RM 08-2009

### PHYSICAL DATA





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

Illustrated below is a 4-door merchandiser with Stand Alone Dry Goods cabinets.  
Refer to chart on Page 3 for detailed dimensional information on options.

Dimensions shown as in. & (mm).

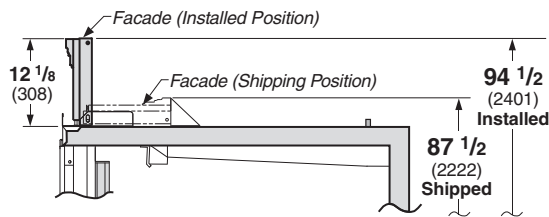


**Plan View Dimensions for**  
**LifeLine Premier Stand Alone Dry Goods Kit Options**

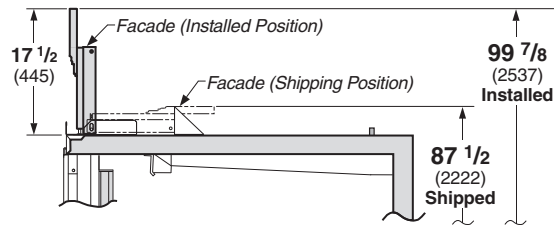
Abbreviations: DG = Dry Goods section				
General	2 Dr	3 Dr	4 Dr	5 Dr
<b>(A)</b> Merchandiser Length <b>DG</b> includes 4 ends and dry goods cabinets	92 1/2 (2350)	123 (3124)	153 3/8 (3896)	<b>The Stand Alone Dry Goods Cabinet is not offered in the 5-door length.</b>
Maximum O/S dimension of merchandiser back to front ***	43 3/4 (1111)	43 3/4 (1111)	43 3/4 (1111)	
*** Includes bumper. Add 26 1/2 in. (673 mm) for door swing.				
Interior width of front dry goods cabinet	10 3/4 (273)	10 3/4 (273)	10 3/4 (273)	
Interior depth of front dry goods cabinet	12 7/8 (327)	12 7/8 (327)	12 7/8 (327)	
Interior width of each side dry goods cabinet	22 (559)	22 (559)	22 (559)	
Interior depth of each side dry goods cabinet	10 3/4 (273)	10 3/4 (273)	10 3/4 (273)	
Back of merchandiser to rear of splashguard	39 7/8 (1013)	39 7/8 (1013)	39 7/8 (1013)	
Width of Skid rail	3 3/4 (95)	3 3/4 (95)	3 3/4 (95)	
Width of Bottom Front Support	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)	
<b>Electrical Service</b> 				
RH end of merchandiser to the center of nearest knockout <b>DG</b>	19 1/4 (489)	19 1/4 (489)	19 1/4 (489)	
RH end of merchandiser to the center of LH knockout	58 (1473)	88 1/2 (2248)	118 7/8 (3019)	
Back O/S of merchandiser to center of knockout	41 5/8 (1057)	41 5/8 (1057)	41 5/8 (1057)	
<i>* NOTE: Electrical Field Wiring Connection Point is at terminal.</i>				
<b>Waste Outlet</b> 				
<b>(B)</b> Right end of merchandiser to center of waste outlet <b>DG</b>	39 (991)	69 1/2 (1765)	61 1/2 (1562)	
Back O/S of merchandiser to center of waste outlet	34 5/8 (879)	34 5/8 (879)	34 5/8 (879)	
Back O/S of merchandiser with bump-out to center of waste outlet †	46 5/8 (1184)	46 5/8 (1184)	46 5/8 (1184)	
<b>Water Seal</b> 				
Edge of water seal to center of waste outlet	13 (330)	13 (330)	13 (330)	
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	
<i>** NOTE: Field installed water seal outlets, tees, and connectors are shipped with merchandiser.</i>				
<b>Refrigeration Outlet</b> 				
RH end of merchandiser to center of RH refrigeration outlet <b>DG</b>	20 5/8 (524)	20 5/8 (524)	20 5/8 (524)	
Back O/S of merchandiser to center of refrigeration outlet	32 (813)	32 (813)	32 (813)	
Back O/S of merchandiser with bump-out to center of refrigeration outlet †	44 (1118)	44 (1118)	44 (1118)	
Outside bottom front supports from end of merchandiser	6 3/4 (170)	6 3/4 (170)	6 3/4 (170)	
Outside bottom front supports from end of merchandiser <b>DG</b>	6 3/4 (170)	6 3/4 (170)	6 3/4 (170)	
Center bottom front support from Centerline	24 (610)	24 (610)	24 (610)	
Center bottom front support from Centerline <b>DG</b>	19 (483)	24 (610)	24 (610)	
<i>Distance between Center and Outside supports will vary</i>				

**LifeLine Premier Stand Alone Dry Goods Kit**

**RL** With INNOVATOR Doors  
Frozen Food & Ice Cream

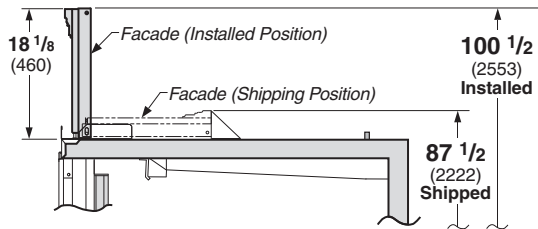


12 in. Straight Facade

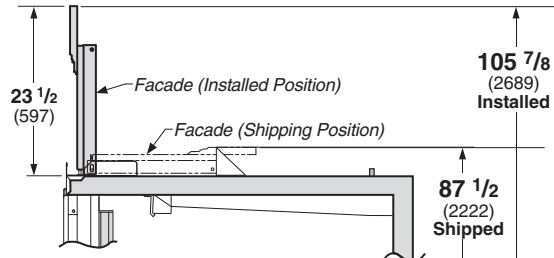


12 in. Arch Facade

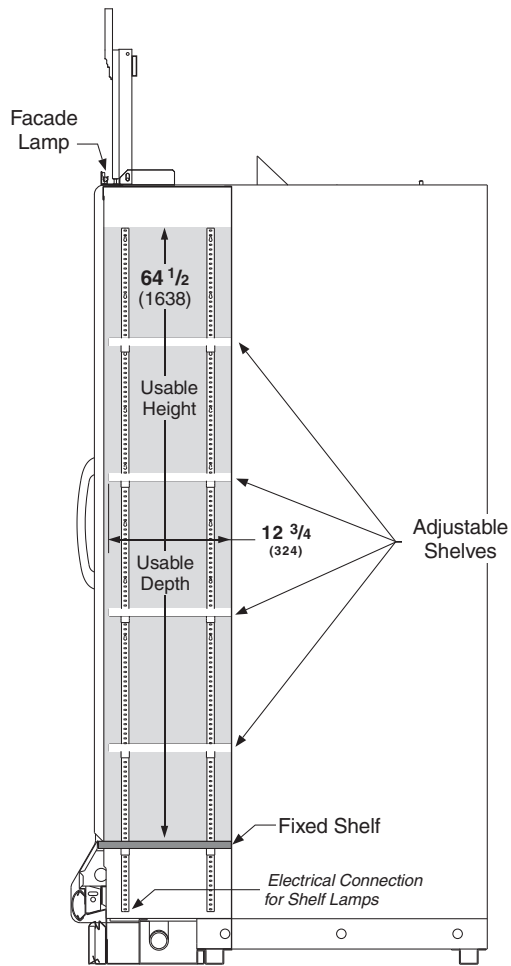
**Facade Options in Cross Section**



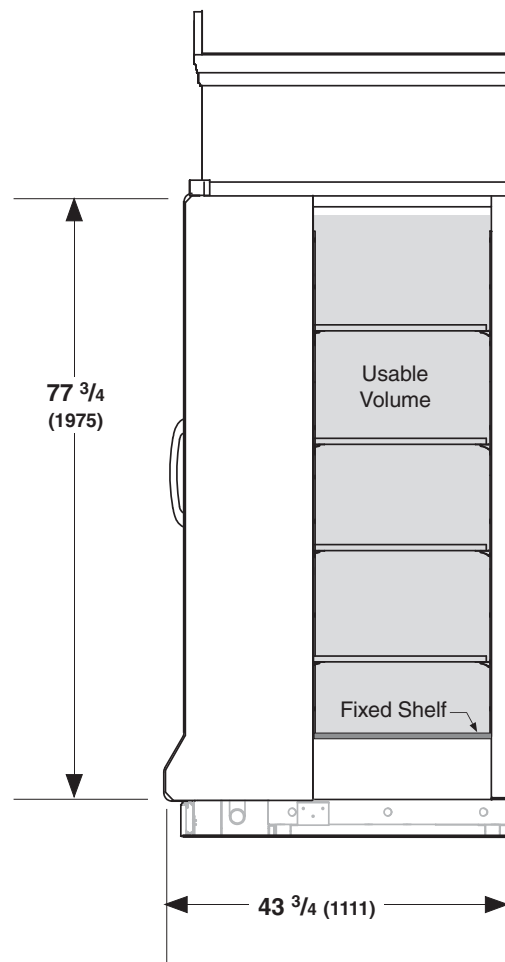
18 in. Straight Facade



18 in. Arch Facade



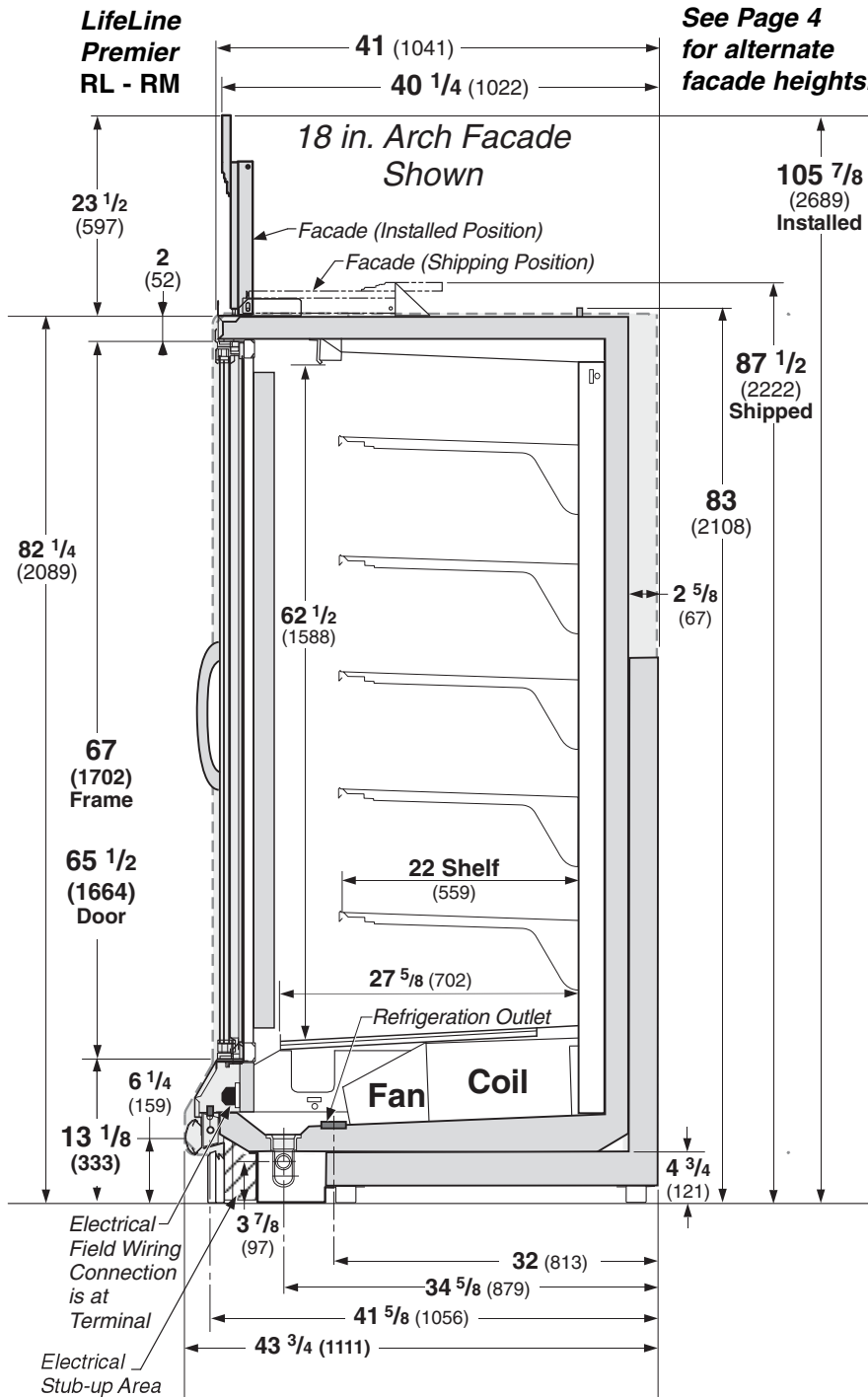
**Dry Goods Cross-Section**



**End Profiles**

# LifeLine Premier Reach-in 2, 3 and 4 Door Models

Dimensions shown as in. & (mm).



## NSF Certification

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

**LifeLine Premier**  
**Stand Alone Dry Goods Kit**  
**RL** With INNOVATOR Doors  
 Frozen Food & Ice Cream

## REFRIGERATION DATA

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

	FF	IC
Discharge Air (°F)	-5	-12
Evaporator (°F)	-11	-19
Unit Sizing (°F)	-14	-22
<i>Btu/hr/Door*</i>		
Parallel	1200	1270
Conventional	1225	1300

\*Optional Energy Efficient Fan motors reduce refrigeration load by 109 Btu/hr/Door.

## 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.)

<i>ELECTRIC</i>	FF	IC
Temp Term (°F)	48°	48°
Failsafe (minutes)	45	45

<i>GAS</i>	FF	IC
Duration (minutes)	20	20

*OFFTIME* Not Recommended

## CONVENTIONAL CONTROLS

### Low Pressure Backup Control

	FF	IC
CI/CO (Temp °F)**	-18°/-34°	-26°/-45°

### Indoor Unit Only, Pressure Defrost

Termination (Temp °F)\*\*  
 Not Recommended

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

### Estimated Charge (lb)\*\*\*

2Dr	1.8
3Dr	2.7
4Dr	3.6

\*\*\*This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound.

**LifeLine Premier Stand Alone Dry Goods Kit****RL** With INNOVATOR Doors  
Frozen Food & Ice Cream**Hussmann recommends against frame heater cycling with Innovator doors to prevent door seals from freezing to the frames and tearing.****Electrical Data**

	2Dr	3Dr	4Dr			
Number of Fans—12W	2	3	4			
	<b>Amperes</b>			<b>Watts</b>		
<b>Merchandiser</b>	<b>2Dr</b>	<b>3Dr</b>	<b>4Dr</b>	<b>2Dr</b>	<b>3Dr</b>	<b>4Dr</b>
<b>Evaporator Fan</b>						
120V 60Hz Standard	1.30	1.95	2.60	100	150	200
120V 50Hz Standard	1.50	2.25	3.00	114	171	228
220V 60Hz Export	0.66	0.99	1.32	100	150	200
220V 50Hz Export	0.76	1.14	1.52	114	171	228
120V 60Hz Energy Efficient	0.60	0.90	1.20	36	54	72
220V 60Hz Energy Efficient	0.30	0.45	0.60	36	54	72
<b>Door Anti-sweat Heaters (on fan circuit)</b>						
120V 50/60Hz Standard	1.54	2.31	3.08	185	278	370
220V 50/60Hz Export	0.84	1.26	1.68	185	278	370
<b>Frame Anti-sweat Heaters (on fan circuit)</b>						
120V 50/60Hz Standard	0.78	1.18	1.57	94	141	188
220V 50/60Hz Export	0.43	0.64	0.85	94	141	188
<b>Minimum Circuit Ampacity</b>						
120V 60Hz Standard	3.82	5.64	7.45			
120V 50Hz Standard	4.02	5.94	7.85			
220V 60Hz Export	2.13	3.09	4.05			
220V 50Hz Export	2.23	3.24	4.25			
120V 60Hz Energy Efficient	3.12	4.59	6.05			
220V 60Hz Energy Efficient	1.77	2.55	3.33			
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>	<b>20</b>			
<b>Maximum Over Current Protection 220V</b>	<b>15</b>	<b>15</b>	<b>15</b>			
<b>Defrost</b>						
Drain Heaters (120V)	0.63	1.25	2.00	75	150	240
(Export: 220V 50 hz)	0.39	0.76	1.22	84	168	269
<b>208V 1Ø Electric Defrost</b>	<b>6.72</b>	<b>10.08</b>	<b>13.46</b>	<b>1400</b>	<b>2100</b>	<b>2800</b>
(Export: 220V 50 hz)	7.11	10.66	14.24	1564	2345	3133
<b>Standard Vertical Lighting*</b>						
<b>Hussmann EcoShine™</b>	<b>2Dr</b>	<b>3Dr</b>	<b>4Dr</b>	<b>2Dr</b>	<b>3Dr</b>	<b>4Dr</b>
	0.45	0.68	0.90	54	81	108
<b>Optional LED Lighting</b>						
<b>Facade Lamps</b>	0.18	0.28	0.36	22	33	43
<b>Dry Goods Lamps</b>	0.63	0.63	0.63	137	137	137
(11 per front, 11 per side — 44 total)						

\* Innovator or Innovator II.

\*\* Dry Goods sections are not available on 5-Door models.

<p><b>LifeLine Premier</b>  <b>Stand Alone Dry Goods Kit</b>  <b>RL</b> With INNOVATOR Doors  <b>Frozen Food &amp; Ice Cream</b></p>
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**Product Data (Refrigerated Area Only)**

<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Dr)	23.46 ft <sup>3</sup> /Dr (0.66 m <sup>3</sup> /Dr)
<i>ARI Total Display Area</i> <sup>2</sup> (Sq Ft/Dr)	13.31 ft <sup>2</sup> /Dr (1.24 m <sup>2</sup> /Dr)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Dr)	29.32 ft <sup>2</sup> /Dr (2.72 m <sup>2</sup> /Dr)

- <sup>1</sup> ARI 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 ARI 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 (5) rows of 22-inch shelves.

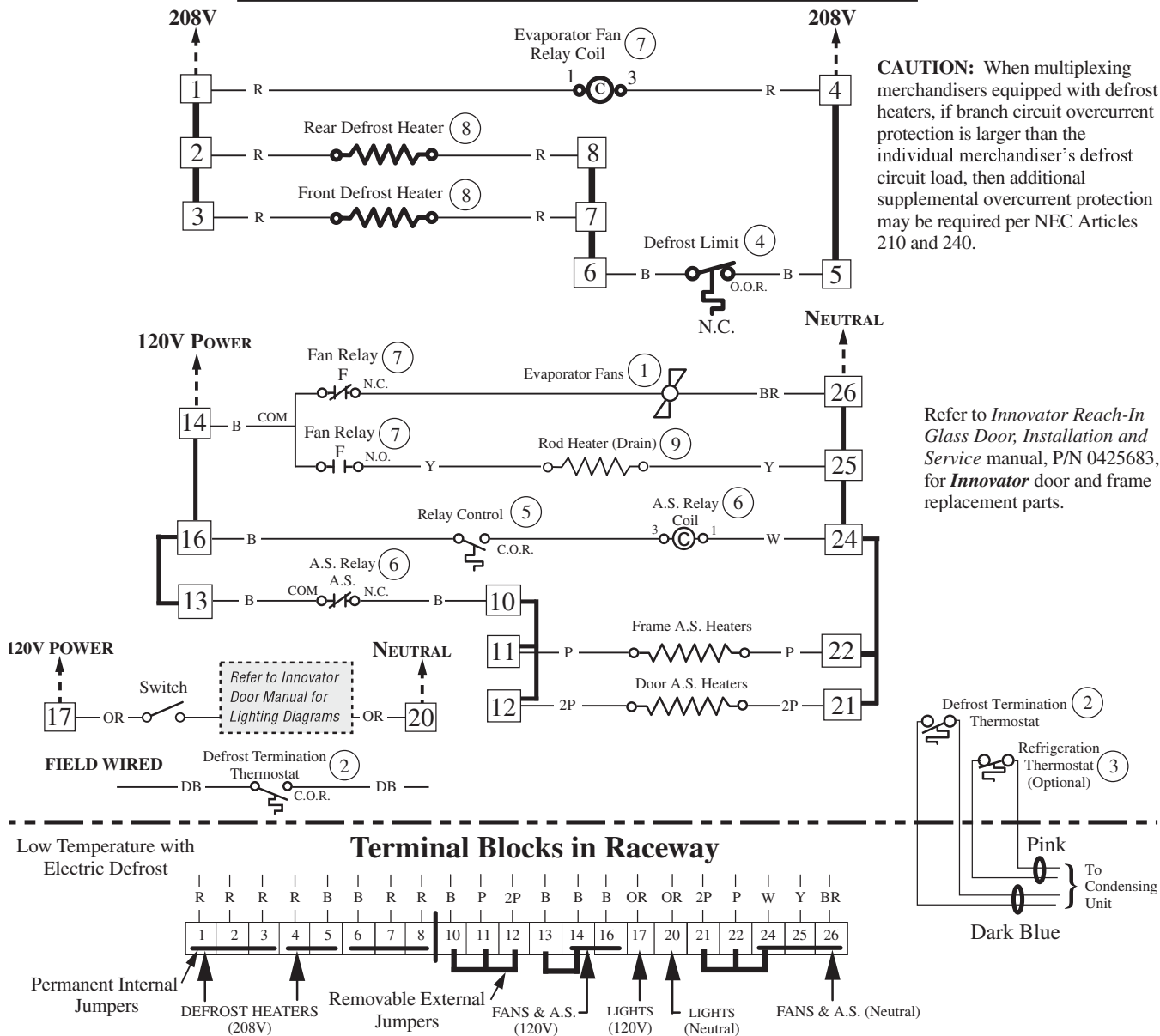
**Product Data (Dry Goods Area Only)**

<i>Front DG TOTAL Gross Usable Cube</i> (2 DG per merchandiser)	10.77 ft <sup>3</sup> / (0.30 m <sup>3</sup> )
<i>Side DG TOTAL Gross Usable Cube</i> (2 DG per merchandiser)	10.77 ft <sup>3</sup> / (0.30 m <sup>3</sup> )

ESTIMATED SHIPPING WEIGHT <sup>4</sup>					
	2 Dr	3 Dr	4 Dr	5 Dr	Solid End (each)
<b>LifeLine Premier Stand Alone Dry Goods Merchandiser (12-Inch Facade, no Arch)</b>					
<b>lb (kg)</b>	1507 (684)	1820 (826)	2135 (968)	NA	NA
<b>LifeLine Premier Stand Alone Dry Goods Merchandiser (18-Inch Facade, no Arch)</b>					
<b>lb (kg)</b>	1537 (697)	1855 (841)	2175 (987)	NA	NA
Add 10 lb (5 kg) for Arch					
<sup>4</sup> Actual weights will vary according to optional kits included.					

# Fan and Heater Circuits - Electric Defrost (standard) Low Temperature

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



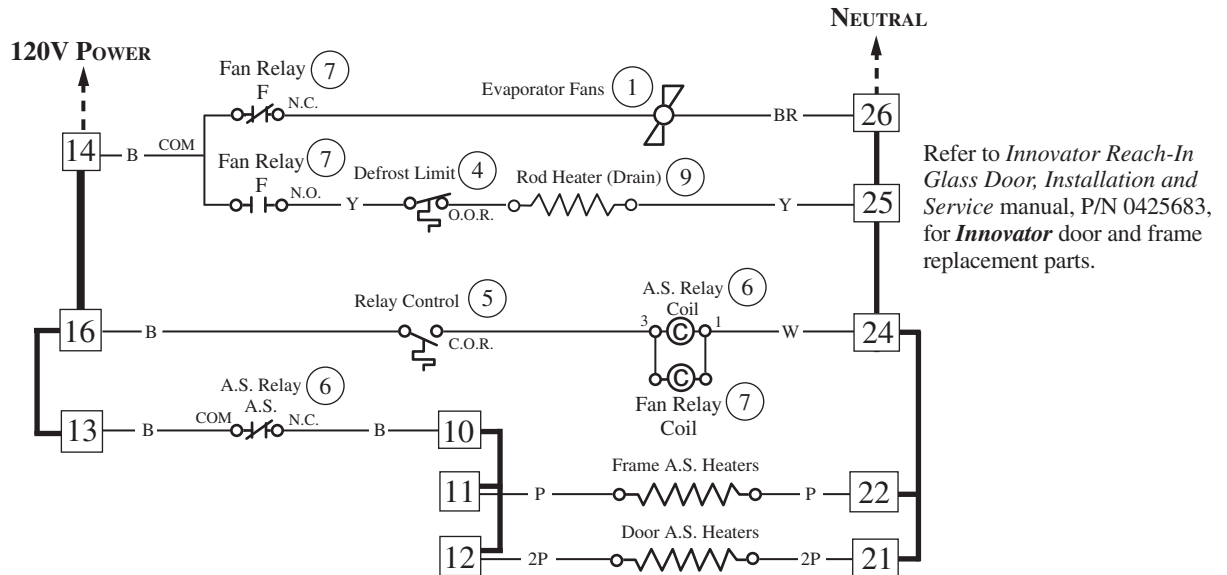
## Electric Defrost Sequence - Low Temperature

1. Power from the defrost contactor energizes Defrost Heaters and 208V Evaporator Fan Relay Coil (7). Relay Contacts open the fan circuit and energizes the Drain Pan Heater.
2. If the Defrost Heater raises internal air temperature above 90°F, the Defrost Limit Thermostat (4) will open.
3. Temperature rise of the evaporator closes the Relay Control Thermostat (5) at about 35°F, energizing 120V A.S. Relay Coil (6). This relay's contacts open the Frame and Door Heater Circuits.
4. When Defrost Termination Thermostat ends defrost period, the defrost contactor opens the Defrost Heater and Evaporator Fan Relay Coil Circuits. The Drain Pan Heater goes off and fans are on.
5. Temperature fall of the evaporator opens the Relay Control Thermostat (5) at about 20°F, de-energizing 120V A.S. Relay Coil (6). A.S. Relay Contacts close the Frame and Door Heater Circuits.

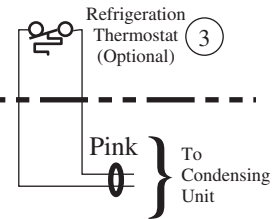
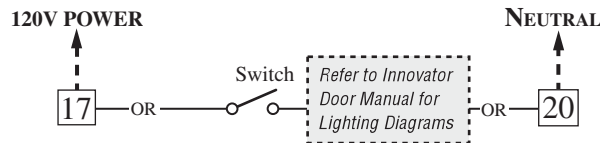


# Fan and Heater Circuits - Gas Defrost (optional) Low Temperature

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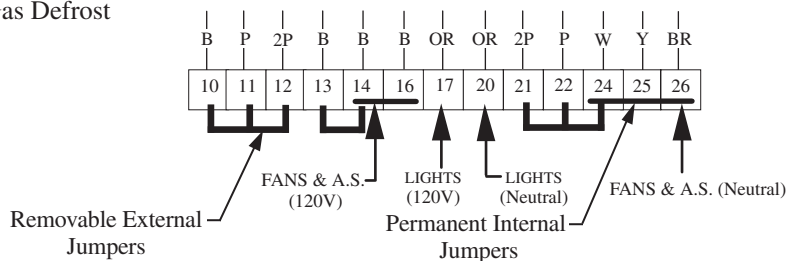


Refer to *Innovator Reach-In Glass Door, Installation and Service manual*, P/N 0425683, for *Innovator* door and frame replacement parts.



Low Temperature with Gas Defrost

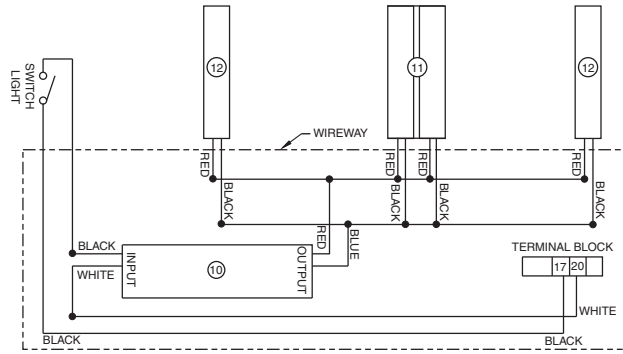
## Terminal Blocks in Raceway



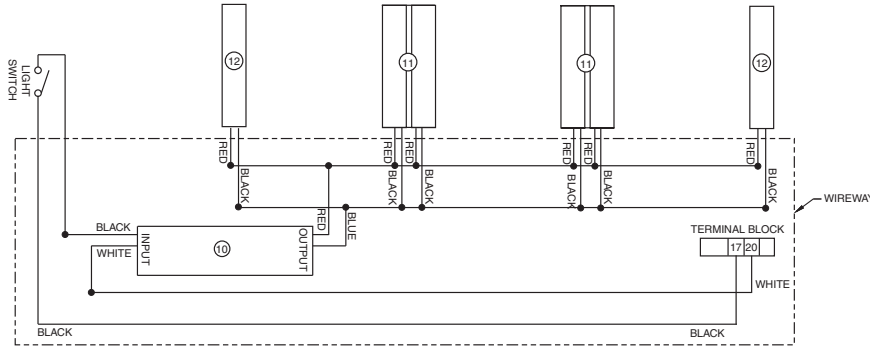
### Gas Defrost Sequence - Low Temperature

1. Defrost vapor enters evaporator causing a rise in temperature. At about 35°F the Control Relay Thermostat (5) closes the Fan Relay Coil (7) and Control Relay Coil (6) circuit. The Coil opens the Fan, Door Heater, and Frame Heater circuits, while energizing the Drain Pan Heater (9).
2. If the Drain Pan Heater (9) raises internal air temperature above 90°F, the Heater Limit Thermostat (4) will open.
3. When the defrost timer ends a defrost period, the evaporator temperature will start to fall. At about 20°F, the Control Relay Thermostat will open, de-energizing the Control Relay Coil and Fan Relay Coil (7). Control and Fan Relay's will open the Drain Pan Heater circuits, and will close the Fan, Door Heater, and Frame Heater circuits.

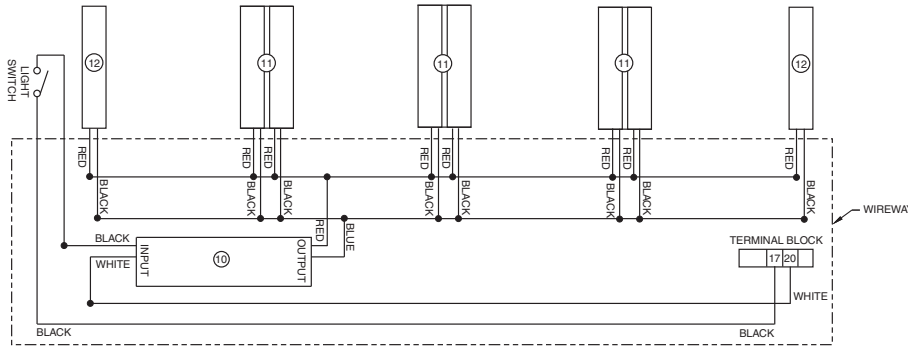
**Standard  
Vertical  
Lighting  
Husmann  
EcoShine™  
LED  
Fixtures**



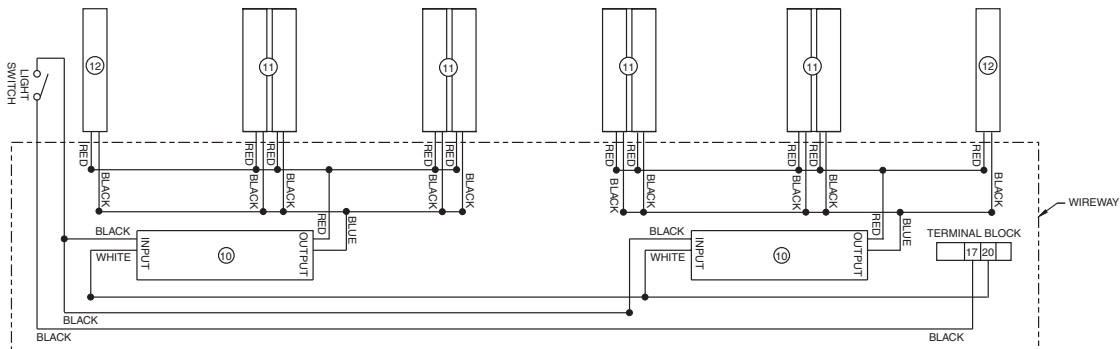
**2 DOOR LED LIGHT WIRING DIAGRAM**



**3 DOOR LED LIGHT WIRING DIAGRAM**



**4 DOOR LED LIGHT WIRING DIAGRAM**



**5 DOOR LED LIGHT WIRING DIAGRAM**

**WARNING**

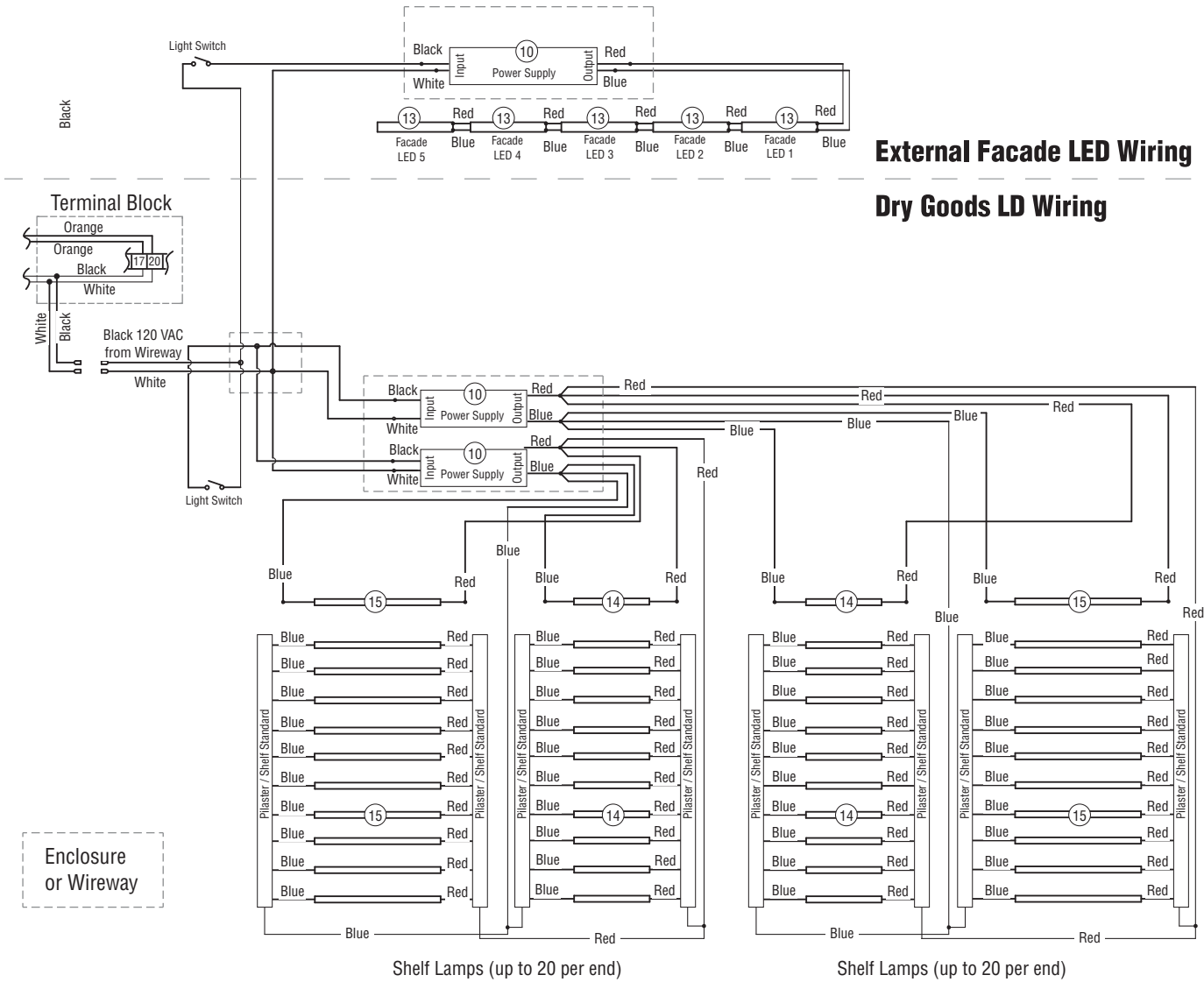
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

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 R = Red P = Purple 2P = Purple (2 Bands)  
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**THESE ARE MARKER COLORS (WIRE MAY VARY.)**

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**Stand Alone Dry Goods Kit**  
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 Frozen Food & Ice Cream



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