HUSSMANN®

RLT with INNOVATOR Doors

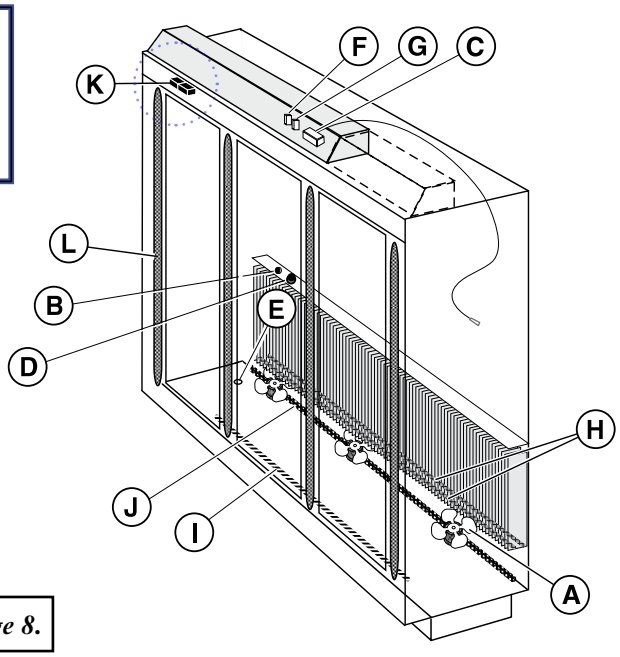
Technical Data Sheet

P/N 0445823_L

NSF® Certified

June 2015

Refrigeration and electrical connections are on top. Overhead piping and electrical circuits are required.



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

220V Parts List is on Page 8.

Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES, AND THERMOSTATS			
(A)		Fan Assembly	(1)
	0477658	Standard Energy Efficient Motor	
	0315470	Fan Blade	
(B)	0331798	Standard Non-adjustable Defrost Thermostat	(2)
(C)		Optional Adjustable Refrigeration Thermostat	(3)
(D)	0440423	Defrost Limit Thermostat	(4)
(E)	0446007	Relay Control Thermostat or Fan and Anti-sweat Heater Thermostat	(5)
RELAYS			
(F)	0342598	Control Relay (120V KoolGas)	(6)
(G)	0342599	Control Relay (208V)	(7)
HEATERS			
(H)		Electric Defrost Heaters (208V)	(8)
	0461938 (1)	2 Door Models	
	0461939 (1)	3 Door Models	
	0461940 (1)	4 Door Models	
	0461941 (1)	5 Door Models	
(I)		Drain Pan Heater (Electric & Kool Gas) (120V)	(9)
	0508199 (1)	2 Door Models	
	0508200 (1)	3 Door Models	
	0508201 (1)	4 Door Models	
	0508202 (1)	5 Door Models	

Item	Part #	(Qty)	Description	Wiring Item #
HEATERS (CONTINUED)				
(J)			Koolgas Supplemental Heater – Plenum (120V)	(10)
	0452980	(1)	2 Door Models	
	0452981	(1)	3 Door Models	
	0452982	(1)	4 Door Models	
	0452983	(1)	5 Door Models	
LED FIXTURES AND POWER SUPPLY				
K.	0499399		LED Power Supply	
L.			LED Fixture	
			Replace with like fixtures	

***NOTE: For LED lighting parts contact your Hussmann service representative at 1-800-922-1919. Please have your model and serial number available. Descriptions including size and color are at* WWW.HUSSMANN.COM/SERVICEANDPARTS.**

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

Data sheet-Reach-in RLT

NOTE: Revision L adds NOTE on page 2. Other changes marked by bar, underline or circle.

U.S. & CANADA 1-800-922-1919 • MEXICO 1-800-890-2900 • WWW.HUSSMANN.COM

English P/N 0445823
Spanish P/N 0527096

Engineering
Plan Views

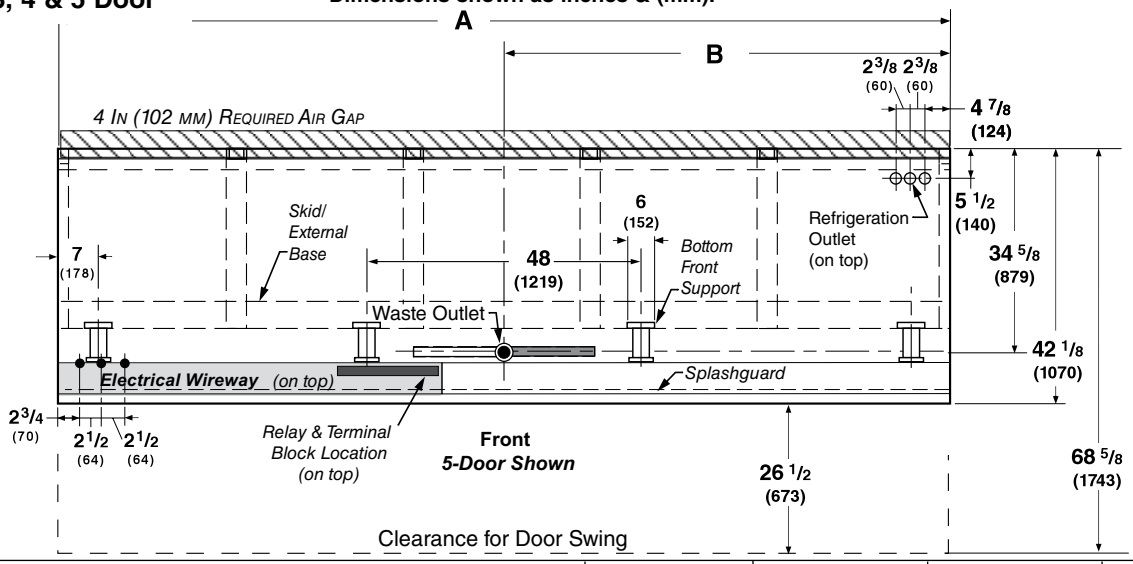
Refrigeration and electrical connections are on top.
Overhead piping and electrical circuits are required.

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

Tall Reach-In
2, 3, 4 & 5 Door

06-2009

Dimensions shown as inches & (mm).



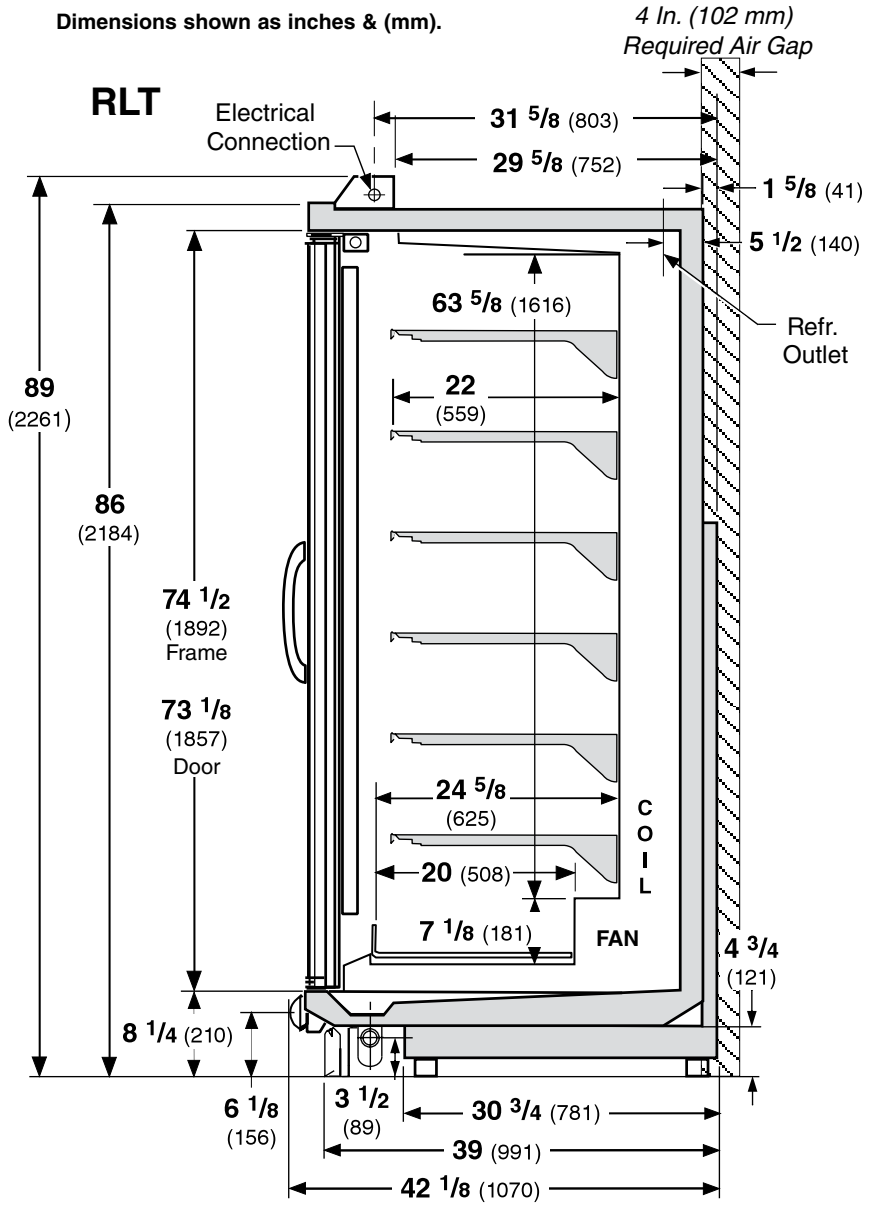
	2 Dr	3 Dr	4 Dr	5 Dr
General				
(A) Case Length (without ends or partitions)	62 (1575)	92 1/2 (2350)	122 7/8 (3121)	153 3/8 (3896)
NOTE: Each solid end adds approximately 2 3/8 in (60 mm) to length of line up; each partition add approximately 2 3/4 in (70 mm); case to case joints can add approximately 1/8 in (3 mm) for gasket material.				
Maximum outside dimension of case back to front *(Includes bumper)*	42 1/8 (1070)	42 1/8 (1070)	42 1/8 (1070)	42 1/8 (1070)
Back of case to front of splashguard	39 (991)	39 (991)	39 (991)	39 (991)
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)
Stub-up area between front Skid rail and splashguard	6 1/2 (165)	6 1/2 (165)	6 1/2 (165)	6 1/2 (165)
Electrical Service				
Left hand end of case to the center of nearest knockout	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
Right hand end of case to the center of center knockout	56 3/4 (1441)	87 1/4 (2216)	117 5/8 (2988)	148 1/8 (3762)
Back outside of case to center of knockout	31 5/8 (803)	31 5/8 (803)	31 5/8 (803)	31 5/8 (803)
Raceway Length	62 (1575)	62 (1575)	62 (1575)	62 (1575)
***NOTE:** *Electrical Field Wiring Connection Point is at terminal.*				
Waste Outlet				
(B) 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 outside 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 drip piping	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 *(TOP OF MERCHANDISER)*				
RH end of case to center of RH refrigeration outlet	7 1/4 (184)	7 1/4 (184)	7 1/4 (184)	7 1/4 (184)
Back outside of case to center of refrigeration outlet	5 1/2 (140)	5 1/2 (140)	5 1/2 (140)	5 1/2 (140)
Outside bottom front supports from end of case	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. *Top piping is standard in the RLT case.*				

RLT

With Innovator Doors
Low Temperature

Refrigeration and electrical connections are on top. Overhead piping and electrical circuits are required.

Dimensions shown as inches & (mm).



NSF Certification

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

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

Btulhr/Door*

INNOVATOR		
Parallel	1105	1295
Conventional	1130	1320

* Optional Ecoshine 27W LED's add 20 Btu/hr/door.

DEFROST DATA

	FF	IC
Frequency (hr)	24	24
Defrost Water (lb/Dr/day)	1.2	1.3

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

ELECTRIC	FF	IC
Temp Term (°F)	54°	54°
Failsafe (minutes)	48	48

GAS		
Duration **(minutes)**	22	22

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 * **			**RLT**
2 Dr	2.3 lb	37 oz	1.0 kg
3 Dr	3.2 lb	51 oz	1.4 kg
4 Dr	4.1 lb	66 oz	1.8 kg
5 Dr	5.1 lb	82 oz	2.3 kg

***This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz / 0.2 kg).

RLT
With Innovator Doors
Low Temperature

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	5Dr				
Number of Fans				**2**	**3**	**4**	**5**				
					Amperes				**Watts**		
				2Dr	**3Dr**	**4Dr**	**5Dr**	**2Dr**	**3Dr**	**4Dr**	**5Dr**
Energy Efficient Evaporator Fan											
120V	50/60Hz	Innovator		1.65	2.5	3.3	4.1	125	188	250	313
220V	50/60Hz	Export Innovator		0.9	1.4	1.8	2.3	125	188	250	313
Door Anti-sweat Heaters (on fan circuit)											
120V	50/60Hz	Innovator		1.1	1.7	2.2	2.8	134	200	267	334
220V	50/60Hz	Export Innovator		0.7	1.1	1.5	1.8	153	230	306	382
Frame Anti-sweat Heaters (on fan circuit)											
120V	50/60Hz	Innovator		0.96	1.43	1.92	2.4	115	172	230	288
220V	50/60Hz	Export Innovator		0.5	0.8	1.1	1.3	115	172	230	288
Minimum Circuit Ampacity											
120V	50/60Hz	Innovator Electric Defrost		5.7	7.2	9.3	11.6				
120V	50/60Hz	Innovator Koolgas Defrost		5.5	8.7	11.7	14.8				
220V	50/60Hz	Exp Innovator Electric Defrost		3.2	4.2	5.5	6.8				
220V	50/60Hz	Exp. Innovator Koolgas Defrost		3.8	6.0	8.1	10.1				
Maximum Over Current Protection 120V				20	20	20	20				
Maximum Over Current Protection 220V				20	20	20	20				
Defrost											
Drain Heaters (Kool-Gas or Electric)											
120V	50/60Hz	Standard		2.5	2.6	3.1	3.5	297	317	366	419
220V	50/60Hz	Export		1.35	1.44	1.6	1.9	297	317	366	419
Kool-Gas Supplemental Heaters											
120V	50/60Hzz	Standard		2.3	3.8	5.2	6.6	276	456	624	792
220V	550/60Hz	Export		1.8	2.9	3.9	5.0	404	633	861	1090
Electric Defrost Heater											
208V	50/60Hzz	Standard		7.7	11.5	15.4	19.2	1600	2400	3200	4000
220V	50/60Hz	Export		7.0	10.4	13.9	17.4	1600	2400	3200	4000

ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2012 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.

Standard Vertical LED Lighting 4100K	**2Dr**	**3Dr**	**4Dr**	**5Dr**	**2Dr**	**3Dr**	**4Dr**	**5Dr**
Hussmann EcoShine II ™ [22 W] (120V)	0.36	0.54	0.72	0.90	43	65	86	108
Hussmann EcoShine II ™ [22 W] (220V Export)	0.20	0.29	0.39	0.49	43	65	86	108
Optional Vertical LED Lighting								
EcoShine II Plus [24 W] (120V)	0.36	0.52	0.68	0.84	43	62	81	100
EcoShine II Plus [24 W] (220V) Export	0.18	0.26	0.34	0.42	43	62	81	100
GE Illumination (120V)	0.30	0.45	0.60	0.75	36	54	72	90
GE Illumination (220V Export)	0.16	0.25	0.33	0.41	36	54	72	90

Product Data

Recommended Usable Cube [1] ***(Cu Ft/Dr)***	24.95 ft^3/Dr (0.71 m^3/Dr)
AHRI Total Display Area [2] **(*Sq Ft/Dr*)**	13.59 ft^2/Dr (1.26 m^2/Dr)
Shelf Area [3] ***(Sq Ft/Dr)***	32.38 ft^2/Dr (3.01 m^2/Dr)

[1] AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft^3/ft [m^3/m]

[2] Computed using AHRI 1200 standard methodology: Total Display Area, ft^2 [m^2]/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 (6) rows of 22-inch shelves.

ESTIMATED SHIPPING WEIGHT [4]

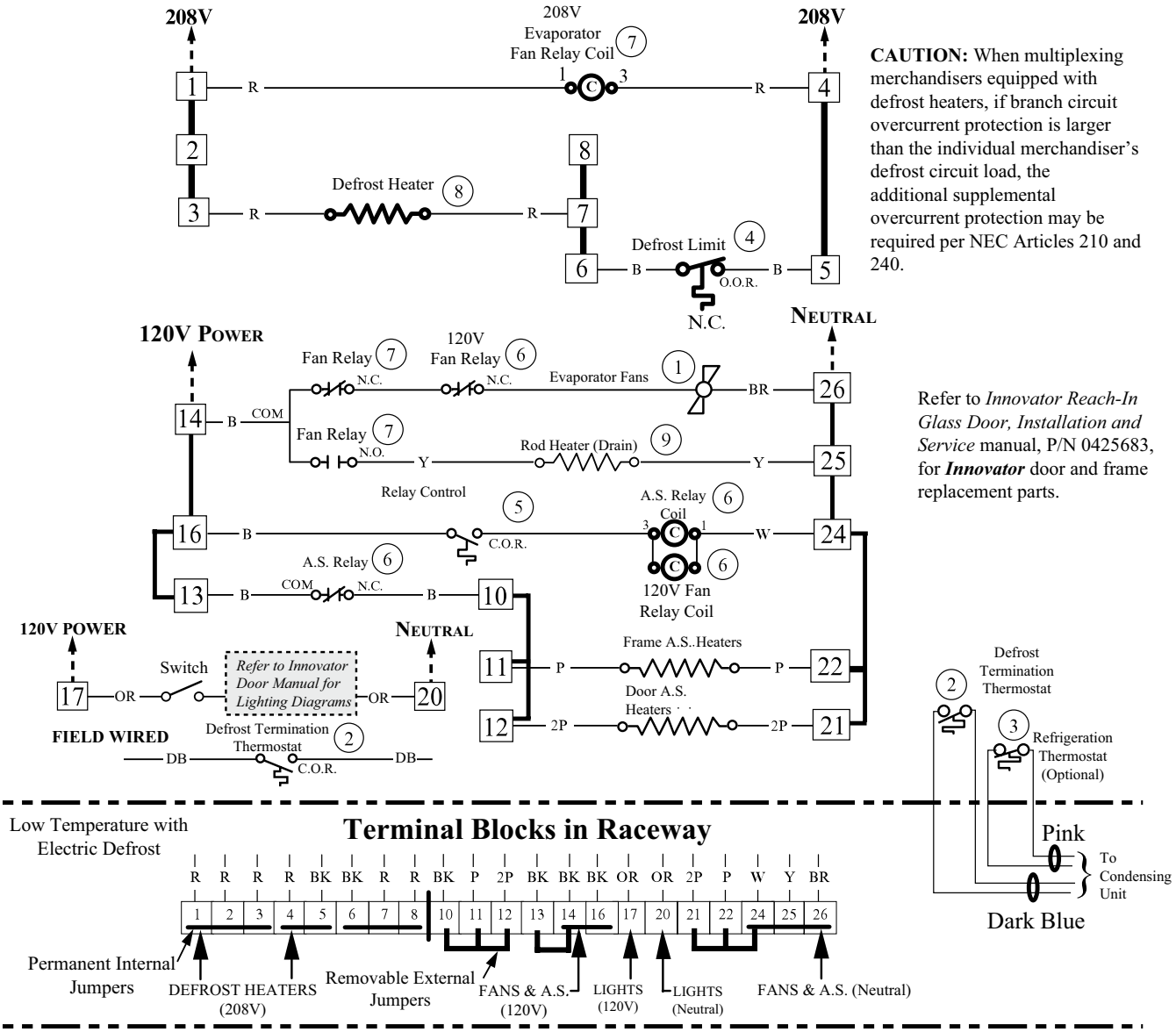
Case						**Solid End**
	1 Dr	***2 Dr***	***3 Dr***	***4 Dr***	***5 Dr***	***(each)***
lb *(kg)*	NA (NA)	926 (420)	1290 (585)	1637 (743)	2006 (910)	60 (27)

4 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 BK = Black
LB = Light Blue Pink = Pink BR = Brown Y = Yellow OR = Orange W = White

THESE ARE MARKER COLORS (WIRE MAY VARY.)



CAUTION: When multiplexing merchandisers equipped with defrost heaters, if branch circuit overcurrent protection is larger than the individual merchandiser's defrost circuit load, the additional supplemental overcurrent protection may be required per NEC Articles 210 and 240.

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

Low Temperature with Electric Defrost

Terminal Blocks in Raceway

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 Coils (6). These relays' contacts open the Frame and Door Heater Circuits, and prevent the Fan Circuit from energizing upon defrost termination.
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.
5. Temperature fall of the evaporator opens the Relay Control Thermostat (5) at about 20°F, de-energizing 120V A.S. Relay Coils (6). A.S. Relay Contacts close the Frame and Door Heater Circuits, and Fan Circuit.

Fan and Heater Circuits – Gas Defrost (optional)
Low Temperature

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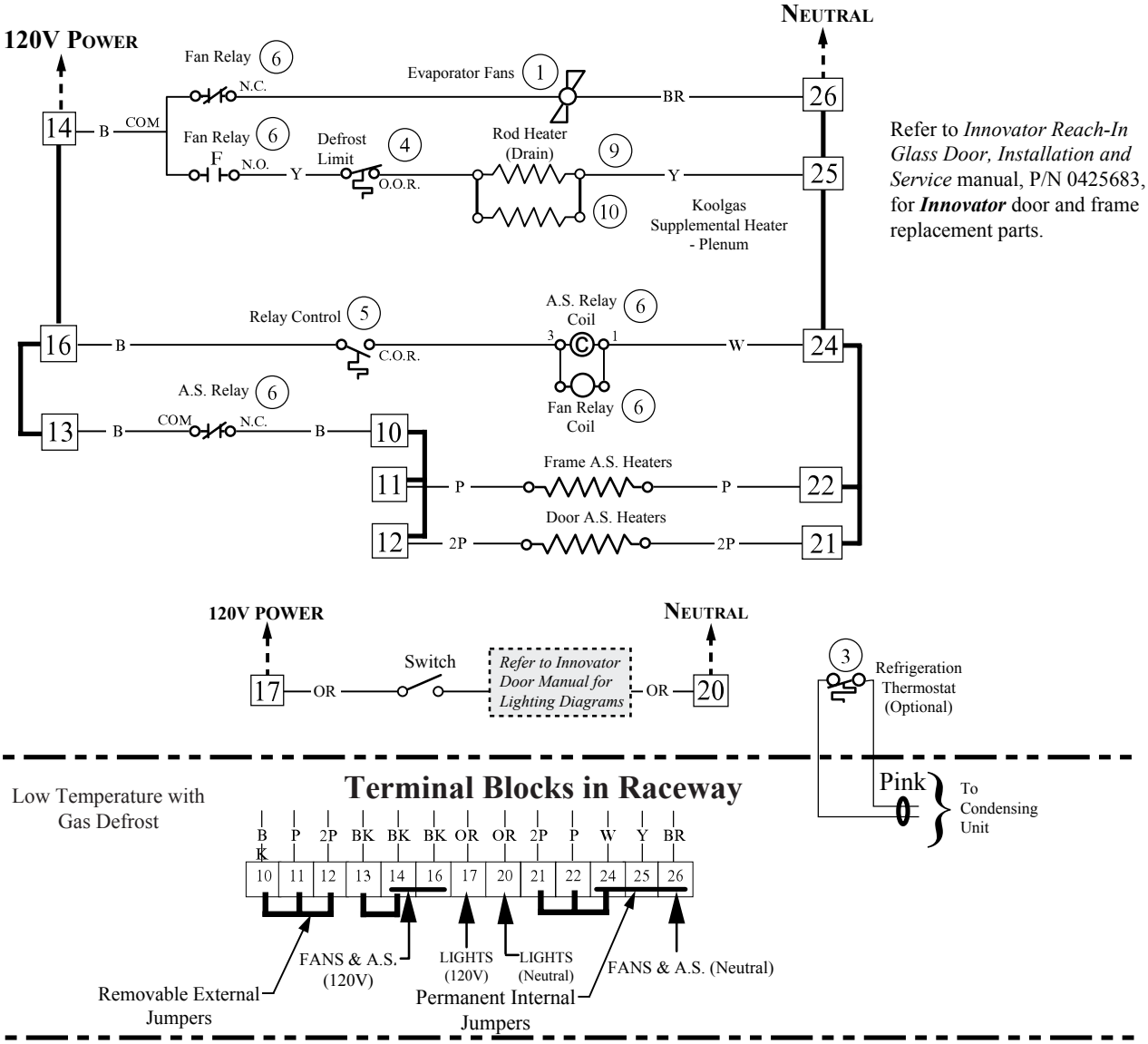

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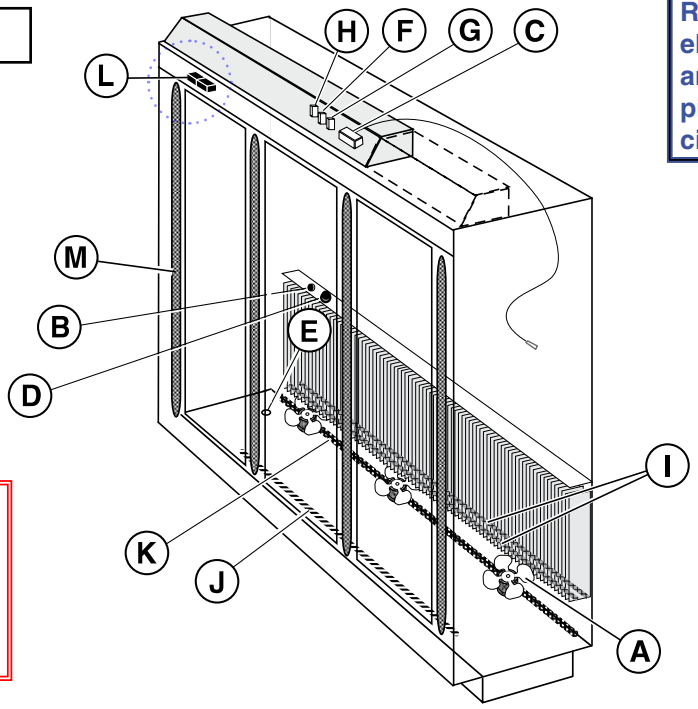
Gas Defrost Sequence - Low Temperature

1. Defrost vapor enters evaporator causing a rise in temperature. At about 35°F the Control Relay Thermostat (5) closes the Fan Relay Coil and Control Relay Coil (6) circuit. The Coil opens the Fan, Door Heater, and Frame Heater circuits, while energizing the Drain Pan, Bottom, and Plenum Heaters (9), (10) and (11).
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.

RLT (220V) with INNOVATOR Doors

June 2015

120V Parts List is on Page 1.



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	0315470	Fan Blade	
(B)	0331798	Standard Non-adjustable Defrost Thermostat	(2)
(C)		Optional Adj. Refrigeration Thermostat	(3)
(D)	0440423	Defrost Limit Thermostat	(4)
(E)	0446007	Relay Control Thermostat or Fan and Anti-sweat Heater Thermostat	(5)
RELAYS			
(F)	0342599	Control Relay (220V)	(6)
(G)	0342599	Control Relay (220V)	(7)
(H)	0460133	Transformer	
HEATERS			
(I)		Electric Defrost Heaters (208V)	(8)
	0460114 (1)	2 Door Models	
	0460115 (1)	3 Door Models	
	0460116 (1)	4 Door Models	
	0460117 (1)	5 Door Models	

Item	Part #	(Qty)	Description	Wiring Item #
HEATERS (CONTINUED)				
(J)			Drain Pan Heater (220V) Electric & Kool Gas	(9)
	0460110	(1)	2 Door Models	
	0460111	(1)	3 Door Models	
	0460112	(1)	4 Door Models	
	0460113	(1)	5 Door Models	
(K)			Koolgas Supplemental Heater (220V) – Plenum	(10)
	0460118	(1)	2 Door Models	
	0460119	(1)	3 Door Models	
	0460120	(1)	4 Door Models	
	0460121	(1)	5 Door Models	
LED FIXTURES AND POWER SUPPLY				
L.	0499399		LED Power Supply (EP.4481668)	
M.			LED Fixture *Replace with like fixtures*	

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