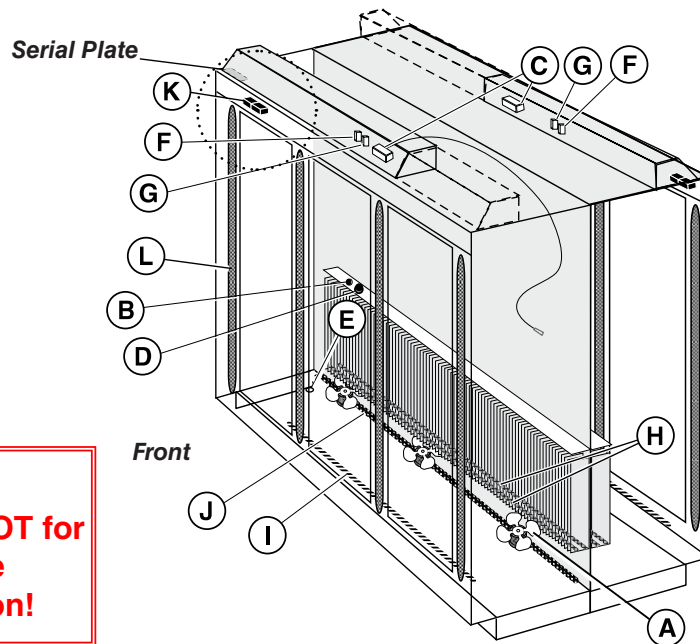


We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.



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

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

| Item | Part # | Description | Wiring Item # | Item | Part # | Description | Wiring Item # |
|--|--|---|---------------|--|---|-------------------|---------------|
| FAN ASSEMBLIES, AND THERMOSTATS | | | | HEATERS (CONTINUED) | | | |
| A. | Fan Assembly | | | J. | Koolgas Supplemental Heater Plenum (120V) | (10) | |
| (1) | | | | | 0452980 | (2) 2 Door Models | |
| | 0477658 | Standard Energy Efficient motor | | | 0452981 | (2) 3 Door Models | |
| | 0315470 | Fan Blade | | | 0452982 | (2) 4 Door Models | |
| B. | 0331798 | Standard Non-adjustable Defrost Thermostat | (2) | | 0452983 | (2) 5 Door Models | |
| C. | | Opt. Adj. Refrigeration Thermostat | (3) | LED FIXTURES AND POWER SUPPLY | | | |
| D. | 0440423 | Defrost Limit Thermostat | (4) | <i>Innovator Doors Standard</i> | | | |
| E. | 0446007 | Relay Control Thermostat or Fan and Anti-sweat Heater Thermostat (CT.4440353) | (5) | K. | 0499399 | Power Supply | |
| | | | | L. | | LED Fixture | |
| RELAYS | | | | <i>Replace with like fixtures</i> | | | |
| F. | 0342598 | Anti-Sweat Control Relay (120V Koolgas) | (6) | 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. | | | |
| G. | 0342599 | Fan Control Relay (208V) | (7) | | | | |
| HEATERS | | | | | | | |
| H. | Electric Defrost Heaters (208V) | | (8) | | | | |
| | 0461938 | (2) 2 Door Models | | | | | |
| | 0461939 | (2) 3 Door Models (| | | | | |
| | 0461940 | (2) 4 Door Models | | | | | |
| | 0461941 | (2) 5 Door Models | | | | | |
| I. | Drain Pan Heater Electric & Koolgas (120V) | | (9) | | | | |
| | 0508199 | (2) 2 Door Models | | | | | |
| | 0508200 | (2) 3 Door Models | | | | | |
| | 0508201 | (2) 4 Door Models | | | | | |
| | 0508202 | (2) 5 Door Models | | | | | |

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 RLTI

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

Engineering Plan Views

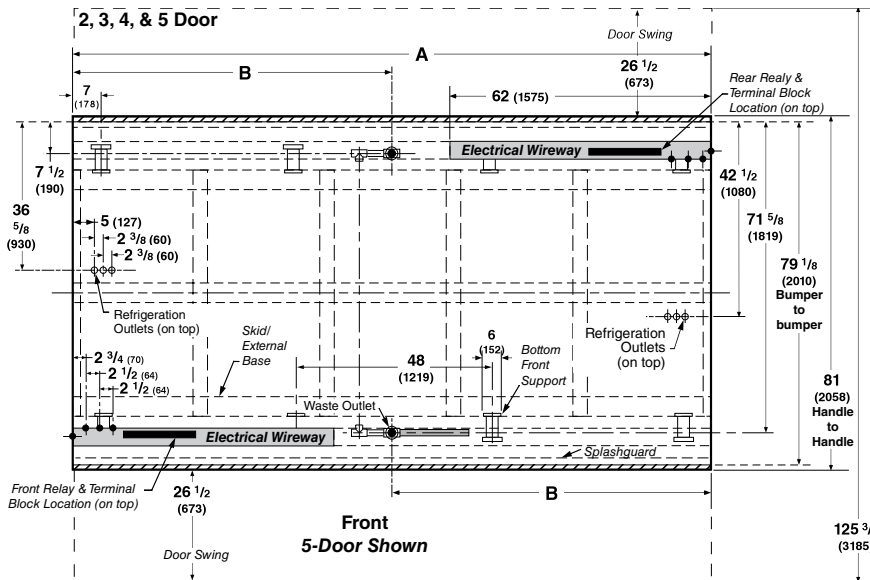
RLTI Plan View 2, 3, 4, & 5 Door

Dimensions shown as in. & (mm).

PHYSICAL DATA

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

05-2011



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

| Serial Plate attached to top left front of each case. | 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 O/S dimension of case back to front <i>(Includes bumpers and handles)</i> | 81 (2068) | 81 (2068) | 81 (2068) | 81 (2068) |
| Back of case to rear of splashguard | 74 3/4 (1899) | 74 3/4 (1899) | 74 3/4 (1899) | 74 3/4 (1899) |
| 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 3/8 (161) | 6 3/8 (161) | 6 3/8 (161) | 6 3/8 (161) |
| 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 O/S of case to center of front knockout | 43 1/4 (1099) | 43 1/4 (1099) | 43 1/4 (1099) | 43 1/4 (1099) |
| Back O/S of case to center of rear knockout | 10 3/8 (264) | 10 3/8 (264) | 10 3/8 (264) | 10 3/8 (264) |
| *NOTE: Electrical Field Wiring Connection Point is at terminal. Front and rear are wired separately. | | | | |
| 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 O/S of case to center of waste outlet | 71 3/8 (1814) | 71 3/8 (1814) | 71 3/8 (1814) | 71 3/8 (1814) |
| 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 front refrigeration outlet | 7 1/4 (184) | 7 1/4 (184) | 7 1/4 (184) | 7 1/4 (184) |
| RH end of case to center of rear refrigeration outlet | 54 3/4 (1391) | 85 1/4 (2166) | 115 5/8 (2937) | 146 1/8 (3712) |
| Back O/S of case to center of front refrigeration outlet | 43 1/4 (1099) | 43 1/4 (1099) | 43 1/4 (1099) | 43 1/4 (1099) |
| Back O/S of case to center of rear refrigeration outlet | 35 1/8 (892) | 35 1/8 (892) | 35 1/8 (892) | 35 1/8 (892) |
| 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) |
| <i>Distance between Center and Outside supports will vary</i> | | | | |

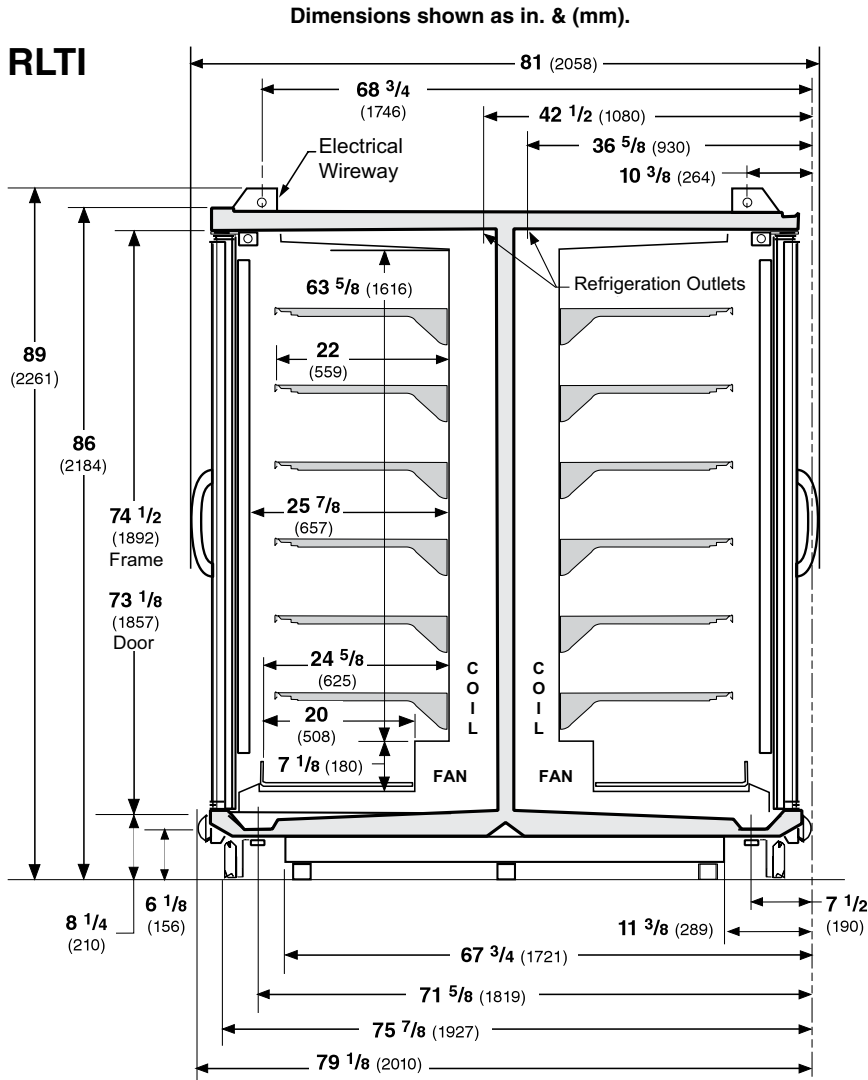
Tall Reach-in Island 2, 3, 4 and 5 Door Models



Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2012 energy efficiency standards.

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

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



NSF Certification

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

RLTI

With Innovator Doors
Low Temperature

Refrigeration data is PER SIDE.

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 |

| Btu/hr/door/side* | FF | IC |
|-------------------|------|------|
| INNOVATOR | | |
| Parallel | 995 | 1060 |
| Conventional | 1010 | 1085 |

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

DEFROST DATA

| | FF | IC |
|--------------------------------|-----|-----|
| Frequency (hr) | 24 | 24 |
| Defrost Water (lb/Dr/side/day) | 1.2 | 1.2 |

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

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

| GAS | FF | IC |
|--------------------|-----------------|----|
| 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 per Side ***

| | | | |
|------|--------|-------|--------|
| 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).

RLTI

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 is per side — two circuits required per case.

Electrical Data

| Number of Fans | 2Dr | 3Dr | 4Dr | 5Dr | Watts | | | |
|--|------|------|------|------|-------|-----|-----|-----|
| | 2 | 3 | 4 | 5 | 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 |
|---|------|------|------|------|-----|-----|-----|-----|
| Husmann EcoShine II™ [24 W] (120V) | 0.36 | 0.54 | 0.72 | 0.90 | 43 | 65 | 86 | 108 |
| Husmann EcoShine II™ [24 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 is PER SIDE.

Product Data

| | |
|--|---|
| <i>Recommended Usable Cube</i> ¹ (Cu Ft/Dr) | 24.95 ft ³ /Dr (0.71 m ³ /Dr) |
| <i>AHRI Total Display Area</i> ² (Sq Ft/Dr) | 13.59 ft ² /Dr (1.26 m ² /Dr) |
| <i>Shelf Area</i> 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, 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 (6) rows of 22-inch shelves.

| ESTIMATED SHIPPING WEIGHT ⁴ | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|------------------|
| Case | <i>1 Dr</i> | <i>2 Dr</i> | <i>3 Dr</i> | <i>4 Dr</i> | <i>5 Dr</i> | Solid End |
| | | | | | | <i>(each)</i> |
| lb (kg) | NA (NA) | 1667 (756) | 2322 (1053) | 2945 (1336) | 3611 (1637) | 120 (55) |

⁴ Actual weights will vary according to optional kits included.

Fan and Heater Circuits — Electric Defrost (standard)

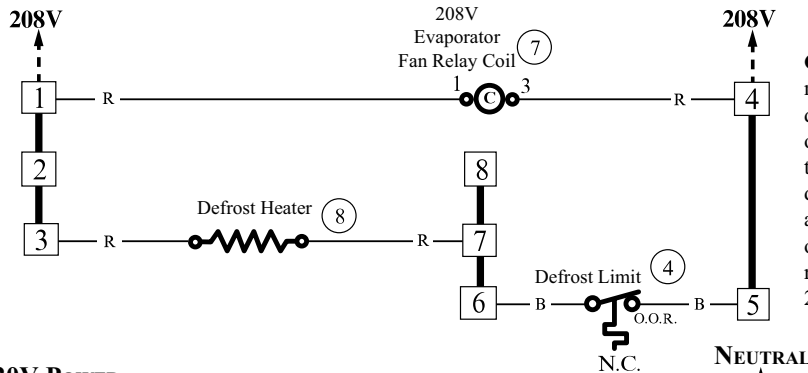
Low Temperature

Wiring Diagram is per side — two circuits required per case.

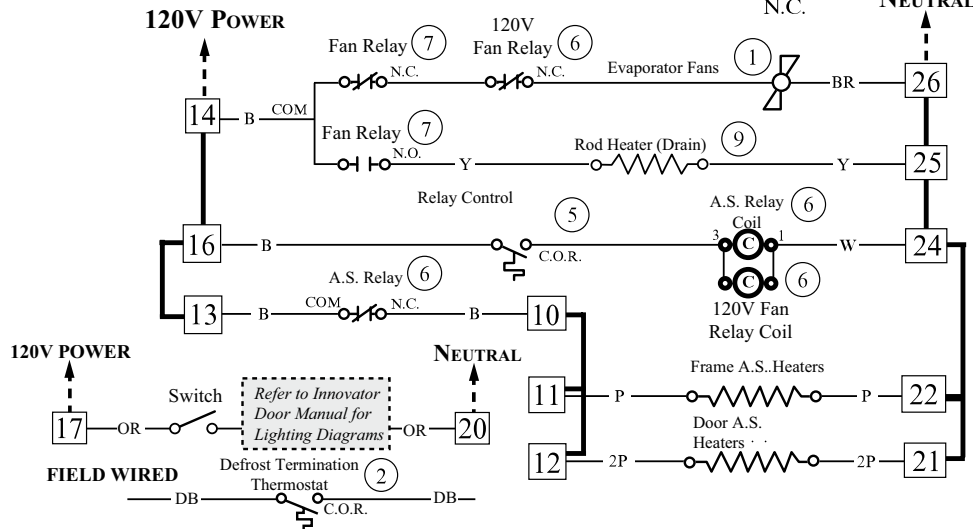
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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.)



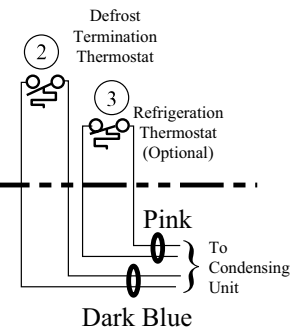
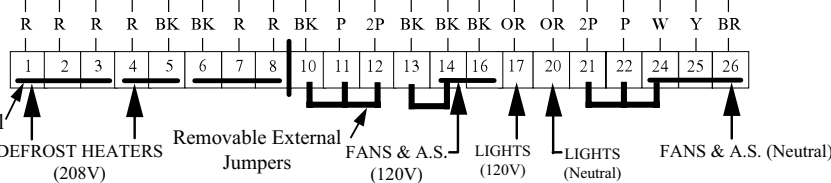
CAUTION: When multiplexing merchandisers equipped with defrost heaters, if branch circuit overcurrent protection is larger than the individual merchandiser's defrost circuit load, the additional supplemental overcurrent protection may be required per NEC Articles 210 and 240.



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.

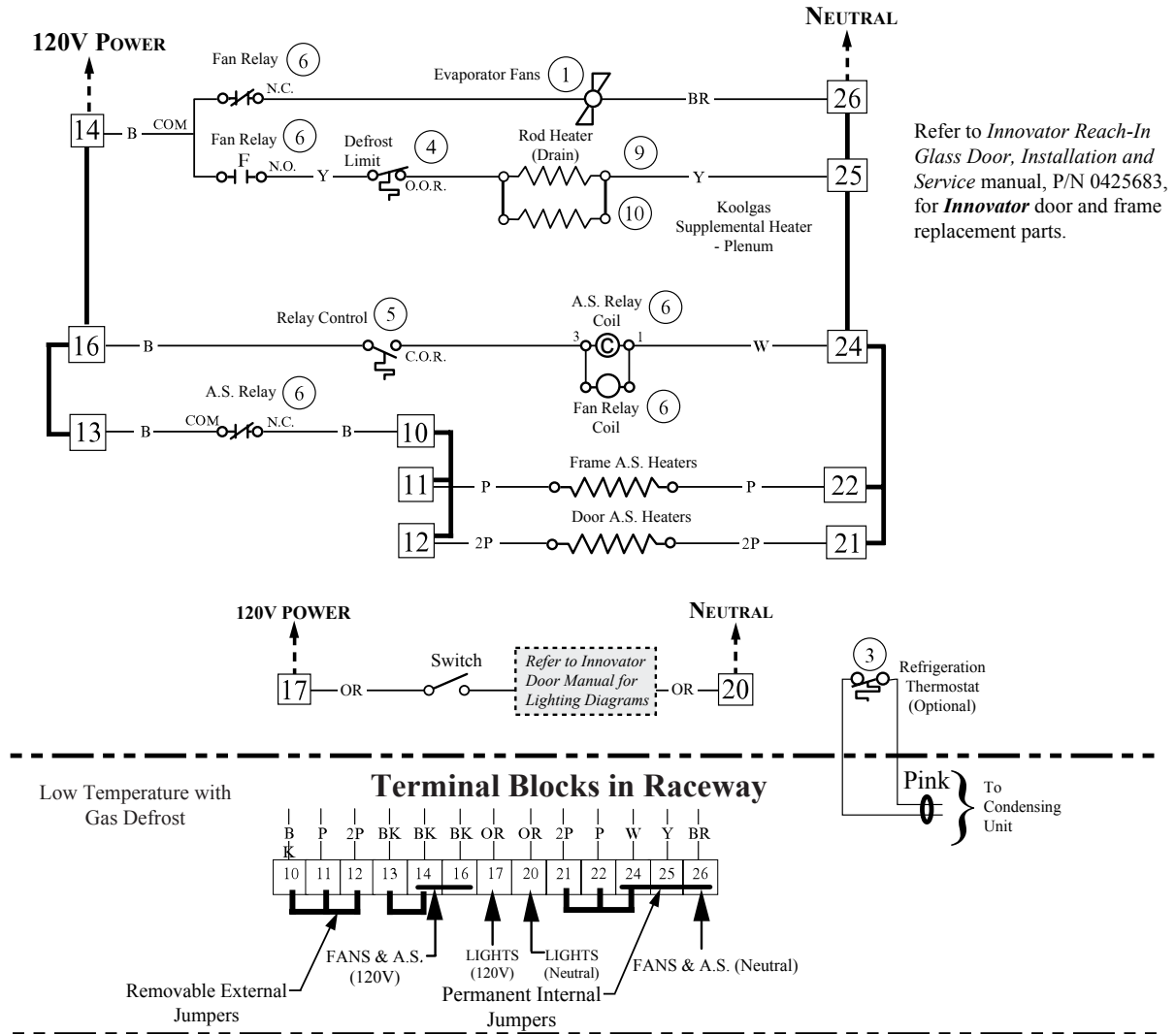
Wiring Diagram is per side — two circuits required per case.

Fan and Heater Circuits — Gas Defrost (optional)

Low Temperature

Wiring Diagram is per side — two circuits required per case.

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.)



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.

Wiring Diagram is per side — two circuits required per case.