

Portion of parts removed for clarity.  
5-door merchandiser shown.

### Certifications



#### UL EPH Certification

This merchandiser model is manufactured to meet ANSI/SCC Standards requirements for construction, materials, and cleanability.

**⚠ WARNING**

Component parts shall be replaced with like components, and servicing shall be done by factory authorized service personnel only, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

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.

### Technical Data Sheet

#### RLN-W

R-290, Water-cooled

Self-Contained Reach-in Merchandiser with Innovator or Innovator III Doors

#### Applications

Frozen Food, Ice Cream

P/N 3081716 Rev E  
June 2024

#### Models Covered:

RLN2W, RLN3W, RL4NW, RLN5W

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# RLN-W

Frozen Food / Ice Cream

## Refrigeration Data <sup>1</sup>

RLN-W		Optimal Shelf Life	
Application		Frozen Food (FF)	Ice Cream (IC)
Temperature	Discharge Air °F (°C)	-3 (-19.5)	-10 (-23)

### Notes:

1. All data based on store temperature and humidity that does not exceed NSF Type 1 ambient conditions of 75°F and 55% relative humidity, except where noted.
2. Water supply design conditions are 50 to 115°F (10 to 40°C).

### Compressor Data

Total Heat of Rejection	BTU/Hr
2 Dr	5,742
3 Dr	7,848
4 Dr	11,484
5 Dr	12,534

### RLN-W

#### Cooling Water Pressure Drop <sup>4</sup>

	PSI
2 Dr	4
3 Dr	4
4 Dr	5
5 Dr	5

### RLN-W

#### Glycol/Water Flow Rate <sup>5</sup>

	GPM	LPM
2 Dr	1.5	5.7
3 Dr	2.0	7.6
4 Dr	2.5	9.5
5 Dr	3.0	11.4

### Defrost Data

Frequency (hours between defrost)	24
	RLN-W
Time (minutes)	45
Temp Termination (°F)	48
<b>ELECTRIC OR GAS</b>	Electric
Defrost Water <sup>3</sup>	1.2 lb/dr/day (0.5 kg/m)

#### Cooling Water Design TD

10°F

<sup>4</sup> Auto-Balancing Valve requires a minimum of 2 PSI to operate. Subtract 2 PSI if the Auto-Balancing Valve is not supplied.

#### Charge per unit <sup>6</sup>

2 Dr	0.33 lb	5.3 oz	150 g
3 Dr	0.33 lb	5.3 oz	150 g
4 Dr	0.33 lb	5.3 oz	150 g
5 Dr	0.33 lb	5.3 oz	150 g

<sup>5</sup> Use a pre-mixed inhibited glycol solution. If the mixing is to be done on site, use only distilled or de-ionized water (do not use city water).

<sup>6</sup> Maximum R290 charge per condensing unit = 150 g.

<sup>6</sup> Charge per unit per coil section.

### Water Connections Size

A 3/4" female NPT fitting is required to connect to the 3/4" male NPT fitting that is provided on top of the case for inlet and outlet water connections. Optional hose kits are available that include two 6' hoses with 3/4" female NPSM fittings. Maximum working pressure of water side components: 100 psig

### Product Data

<b>Gross Refrigerated Volume<sup>7</sup> (Cu Ft/Dr)</b>	31.17 ft <sup>3</sup> /dr (0.88 m <sup>3</sup> /dr)
<b>AHRI Total Display Area<sup>8</sup> (Sq Ft/Dr)</b>	13.04 ft <sup>2</sup> /dr (1.21 m <sup>2</sup> /dr)
<b>Shelf Area<sup>9</sup> (Sq Ft/Dr)</b>	28.50 ft <sup>2</sup> /dr (2.65 m <sup>2</sup> /dr)

<sup>7</sup> AHRI Gross Refrigerated Volume: Refrigerated Volume/Unit of Length, ft<sup>3</sup>/dr [m<sup>3</sup>/dr]

<sup>8</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, door

<sup>9</sup> Shelf surface area is composed of bottom deck plus standard shelf complement for this model: (5) 22-inch shelves, evenly distributed vertically.

Self-Contained R290 Propane Reach-in Merchandiser,  
 2, 3, 4 & 5 Door Models, 6 Display Levels,  
 Water-cooled, Self-Contained R-290

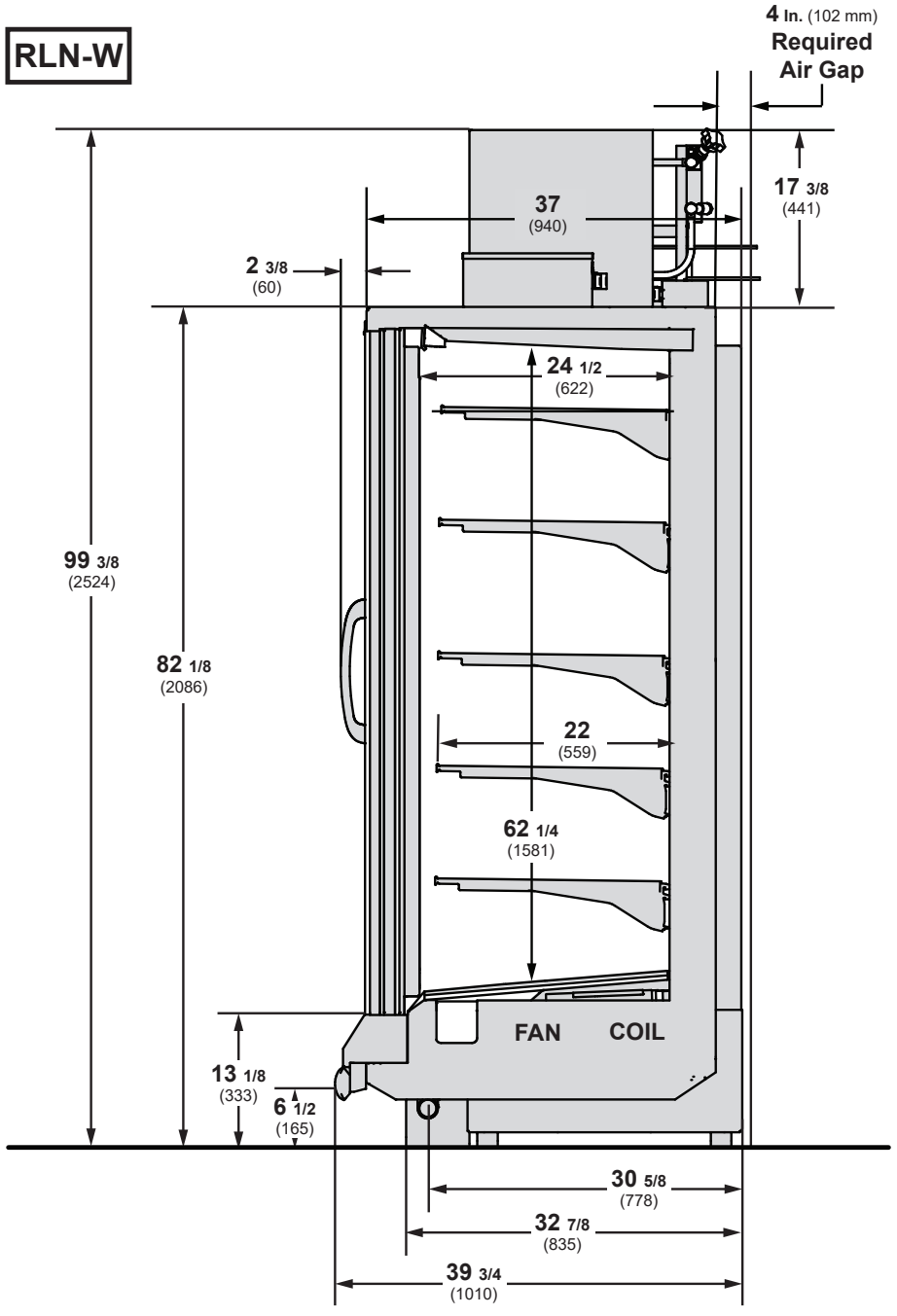
**RLN-W**  
 Frozen Food / Ice Cream

**DOE 2017**  
 Energy Efficiency  
 Compliant

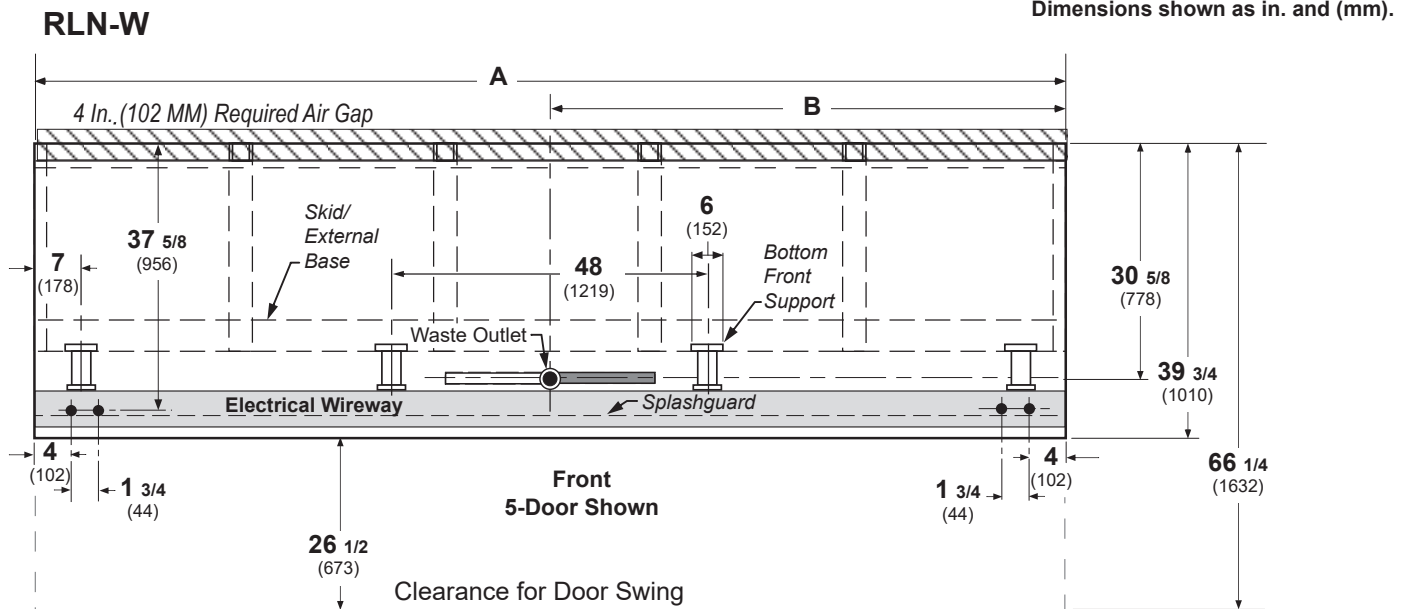
Husmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

Shelf complement shown as tested:  
 Five rows of shelves (22-in) spaced  
 equally between bottom display pan  
 and interior top panel.

Dimensions shown as in. and (mm).



4-in. between back to back cases.



(5 Door Model shown above)

	2 Dr	3 Dr	4 Dr	5 Dr
<b>General</b>				
(A) Case Length (without ends or partitions) Each end and insulated partition adds 2 in. (51 mm) to case line up; each window end or insulated partition adds 1 1/2 in. (38 mm).	62 (1575)	92 1/2 (2350)	122 7/8 (3121)	153 3/8 (3896)
Maximum O/S dimension of case back to front (includes bumper) (Add 26 1/2 in (673 mm) for door swing.)	39 3/4 (1010)	39 3/4 (1010)	39 3/4 (1010)	39 3/4 (1010)
Back of case to rear of splashguard	35 3/4 (908)	35 3/4 (908)	35 3/4 (908)	35 3/4 (908)
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)
<b>Electrical Service (Field Electrical Wiring Connection)</b>				
RH End of case to center of Electrical Wiring Connection (top of case)	13 3/4 (349)	13 3/4 (349)	13 3/4 (349)	13 3/4 (349)
Back outside of case to center of Electrical Wiring Connection	5 1/2 (140)	5 1/2 (140)	5 1/2 (140)	5 1/2 (140)
<b>Waste Outlets (with required drain extension)</b>				
(B) RH End of case to the 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	30 5/8 (778)	30 5/8 (778)	30 5/8 (778)	30 5/8 (778)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
<b>Water Seal</b>				
Edge of water seal to center of waste outlet	13 (330)	13 (330)	13 (330)	13 (330)
**NOTE: Field installed water seal outlets, tees, and connectors are shipped with the case.				

## Electrical Data

<b>Number of Fans</b>		<b>2 dr</b>	<b>3 dr</b>	<b>4 dr</b>	<b>5 dr</b>				
8.25-in.		2	3	4	5				
		<b>Amperes</b>				<b>Watts</b>			
<b>Evaporator Fan</b>	<b>2 dr</b>	<b>3 dr</b>	<b>4 dr</b>	<b>5 dr</b>	<b>2 dr</b>	<b>3 dr</b>	<b>4 dr</b>	<b>5 dr</b>	
120V 50/60Hz	0.60	0.90	1.20	1.50	36	54	72	90	
<b>Door Anti-sweat Heaters (on fan circuit)</b>									
120V 50/60Hz Innovator	1.50	2.30	3.00	3.80	182	273	364	455	
120V 50/60Hz Innovator III	0.90	1.30	1.70	2.20	104	156	208	260	
<b>Frame Anti-sweat Heaters (on fan circuit)</b>									
120V 50/60Hz	0.78	1.18	1.57	1.97	94	141	188	236	

### Condensing Unit (208V, 3 ph, 60 Hz) Standard

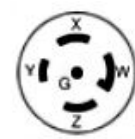
**NOTE:** One compressor can start at a time.

Compressor RLA	6.3	7.0	11.2	11.9				
Compressor LRA	58/unit	58/unit	58/unit	58/unit				

### NEMA Plug



L21-20P



L21-30P

### Merchandise Circuit Requirements (208V, 3 ph, 60 Hz)

Total Amps	7.8	10.1	15.7	17.3				
Maximum Current Capacity (MCA)	9.6	12.6	18.0	21.0				
Maximum Over Current Protection (MOPD)	20	20	20	25				

### Optional Electrical Plug - NEMA

L21-20P (2, 3, 4 dr) L21-30P (5 dr)

**NOTE:** MOPD for RLN5W is 25 amps for hard-wired cases. Cord-connected cases use a 30 amp plug, and must be connected to a 30 amp receptacle.

### Defrost

Drain Heaters (120V)	0.63	1.25	2.00	2.5	75	150	240	300
Electric Defrost (208V)	6.72	10.08	13.46	16.82	1400	2100	2800	3500

**Only lighting configurations that are compliant with the U.S. Dept. of Energy (DOE) 2017 regulation are available for sale for use in the U.S.A.**

		<b>Amperes</b>				<b>Watts</b>			
<b>STANDARD LED LIGHTING</b>	<b>2 Dr</b>	<b>3 Dr</b>	<b>4 Dr</b>	<b>5 Dr</b>	<b>2 Dr</b>	<b>3 Dr</b>	<b>4 Dr</b>	<b>5 Dr</b>	
Ultra (120V)	0.35	0.50	0.65	0.80	42	60	78	96	
Ultra (220V Export)	0.19	0.27	0.35	0.43	42	60	78	96	

# RLN-W

Frozen Food / Ice Cream

## ENDS or PARTITIONS

Each standard end and each insulated partition adds 2 in. (38 mm) to case line up.

## PHYSICAL DATA

Merchandiser Drip Pipe (in.) 1 1/4  
Schedule 40 PVC

## ESTIMATED SHIPPING WEIGHT †

Case	2 Dr	3 Dr	4 Dr	5 Dr	Solid End (each)
<b>lb (kg)</b>	945 (429)	1172 (532)	1645 (746)	1924 (873)	55 (25)

† Actual weights will vary according to optional kits included.

## Shelf Options

Approved shelf sizes for standard (horizontal, 2-3 position brackets) displays:

20-inch  
22-inch

Contact engineering for non-standard display recommendations.

Optimal number of Shelves: 5 per door

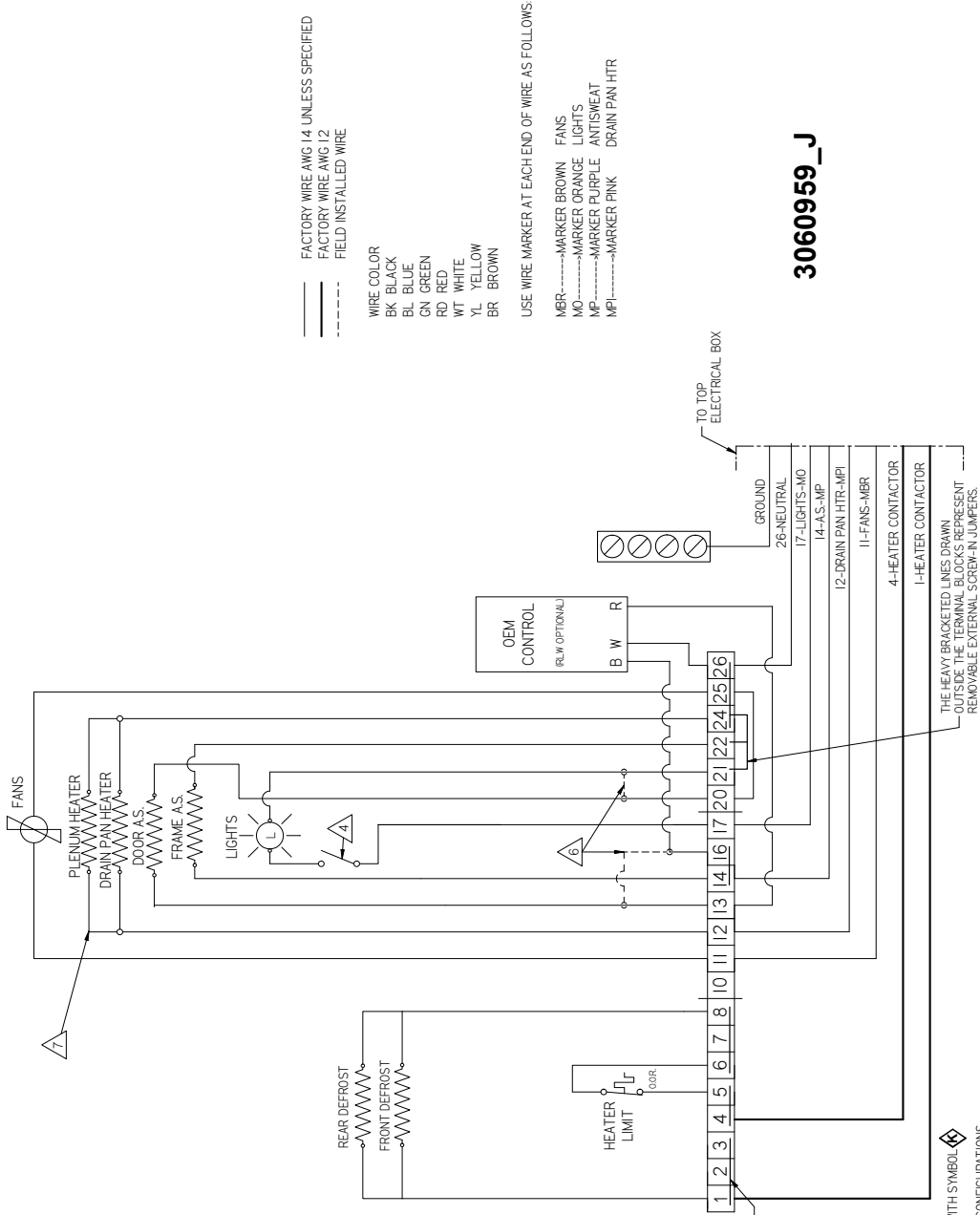
Maximum number of Shelves: 5 per door

Standard shelf complement for test purposes: (5 per door) 22-inch shelves, evenly distributed vertically

# CoreLink Propane Wiring - 2 & 3 Door

# RLN-W Frozen Food / Ice Cream

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FACTORY WIRE AWG 14 UNLESS SPECIFIED  
FACTORY WIRE AWG 12  
FIELD INSTALLED WIRE

WIRE COLOR  
BK BLACK  
BL BLUE  
GN GREEN  
RD RED  
WT WHITE  
YL YELLOW  
BR BROWN

USE WIRE MARKER AT EACH END OF WIRE AS FOLLOWS:  
MBR----->MARKER BROWN FANS  
MO----->MARKER ORANGE LIGHTS  
MP----->MARKER PURPLE ANTISWEAT  
MPT----->MARKER PINK DRAIN PAN HTR

- NOTES:
1. APPLICABLE STANDARDS / SPECIFICATIONS  
ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
  2. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
  3. REF: 3038431
  4. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
  5. ALL WIRES GETTING IN CONTACT WITH THE CONTACTOR MUST USE FORK TERMINALS 0383151 OR 0383152
  6. DOOR A.S. SWITCH IS NOT USED IN THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21
  7. IF OEM CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21
  8. PLENUM HEATERS ARE ONLY USED IN RLM CASES

THE HEAVY LINES DRAWN INSIDE THE TERMINAL BLOCKS REPRESENT PERMANENT INTERNAL JUMPERS.

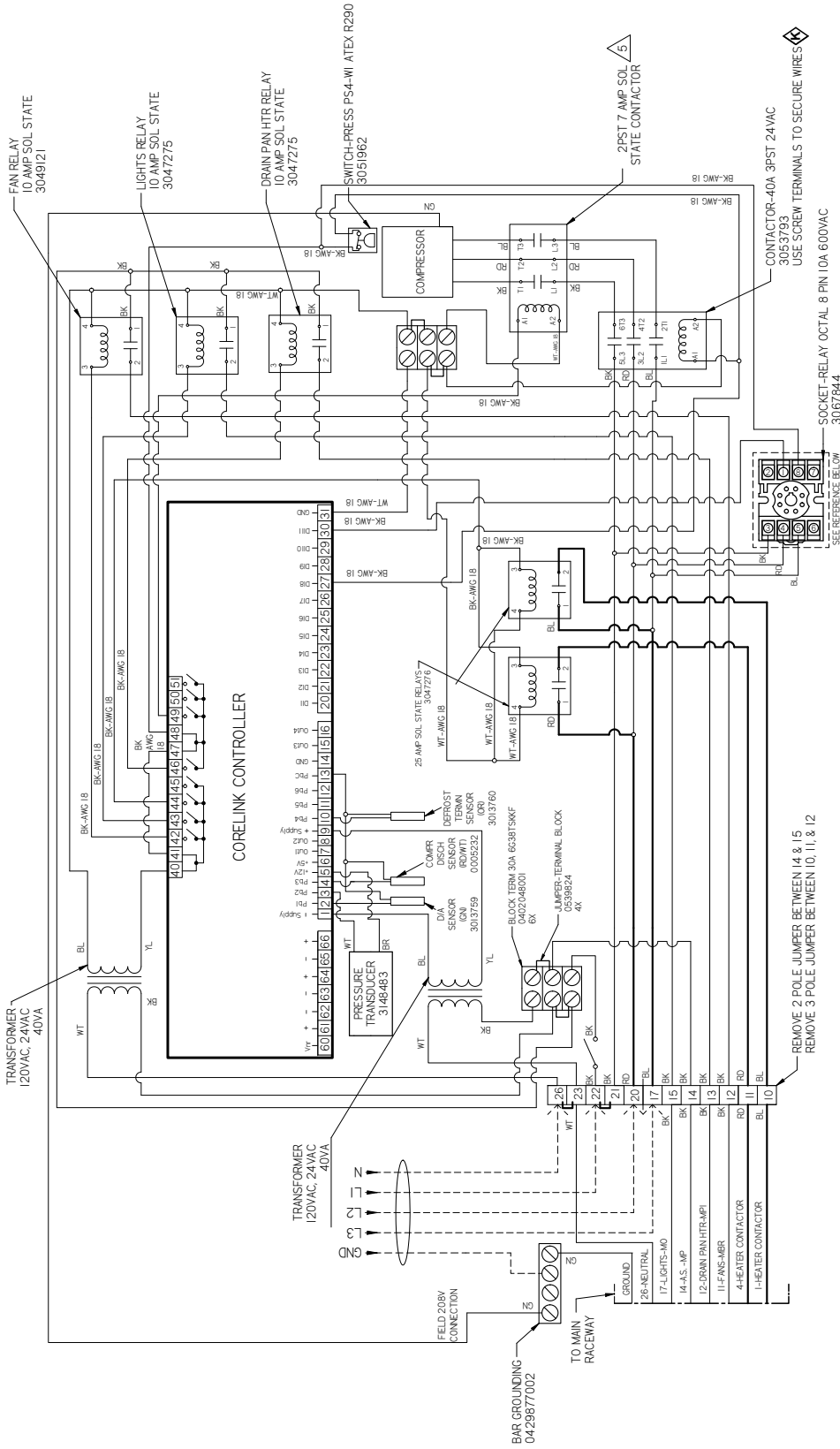
THE HEAVY BRACKETED LINES DRAWN OUTSIDE THE TERMINAL BLOCKS REPRESENT REMOVABLE EXTERNAL SCREW-IN JUMPERS.

# RLN-W

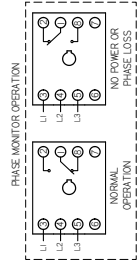
Frozen Food / Ice Cream

# CoreLink Propane

## Wiring - 2 & 3 Door



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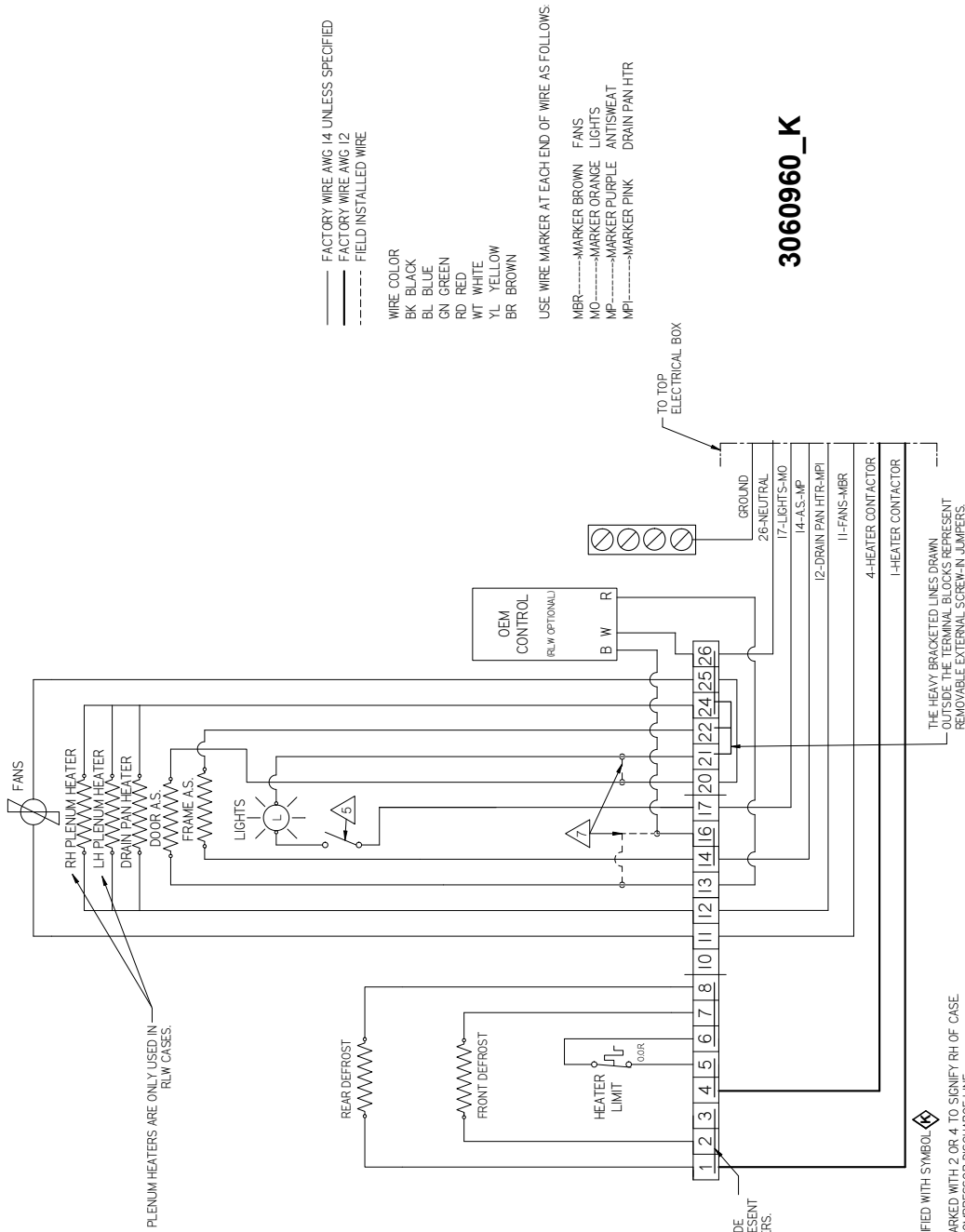


- REMOVE 2 POLE JUMPER BETWEEN 14 & 15  
REMOVE 3 POLE JUMPER BETWEEN 10, 11, & 12
- NOTES:
1. APPLICABLE STANDARDS / SPECIFICATIONS  
ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
  2. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
  3. REF 3038431
  4. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
  5. ALL WIRES GETTING INSERTED INTO THE CONTACTOR MUST USE FORK TERMINALS 0383151 OR 0383152 TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS
  6. IF OEM CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21
  7. PLENUM HEATERS ARE ONLY USED IN RLW CASES



# CoreLink Propane Wiring - 4 Door

# RLN-W Frozen Food / Ice Cream



FACTORY WIRE AWG 14 UNLESS SPECIFIED  
 FACTORY WIRE AWG 12  
 FIELD INSTALLED WIRE

WIRE COLOR  
 BK BLACK  
 BL BLUE  
 GN GREEN  
 RD RED  
 WT WHITE  
 YL YELLOW  
 BR BROWN

USE WIRE MARKER AT EACH END OF WIRE AS FOLLOWS  
 MBR----->MARKER BROWN FANS  
 MO----->MARKER ORANGE LIGHTS  
 MP----->MARKER PURPLE ANTISWEAT  
 MPI----->MARKER PINK DRAIN PAN HTR

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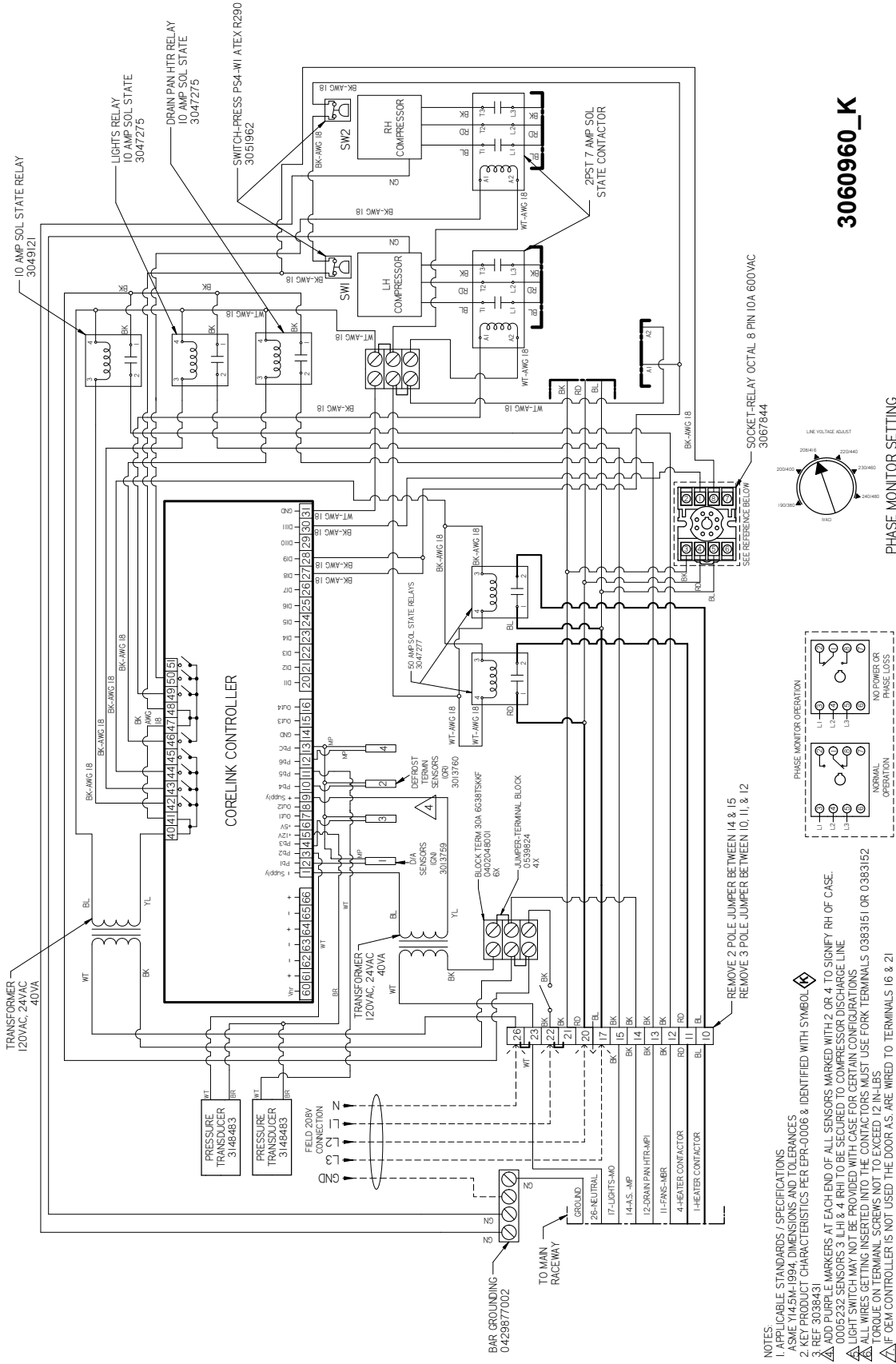
- NOTES
1. ALL CABLE STANDARDS / SPECIFICATIONS.
  2. ALL WIRE Y (4 IN.) OR 1/2 (1/2 IN.) DIMENSIONS AND TOLERANCES.
  3. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL.
  4. ADD PURPLE MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE.
  5. REF. 3038431.
  6. 0005232 SENSORS 3 (LH) & 4 (RH) TO BE SECURED TO COMPRESSOR DISCHARGE LINE.
  7. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS.
  8. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 0383151 OR 0383152.
  9. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS.
  10. IF OEM CONTROLLER IS NOT USED THE DOOR AS ARE WIRED TO TERMINALS 16 & 21.

# RLN-W

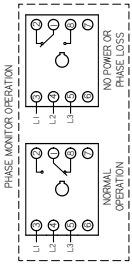
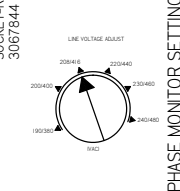
## Frozen Food / Ice Cream

# CoreLink Propane

## Wiring - 4 Door



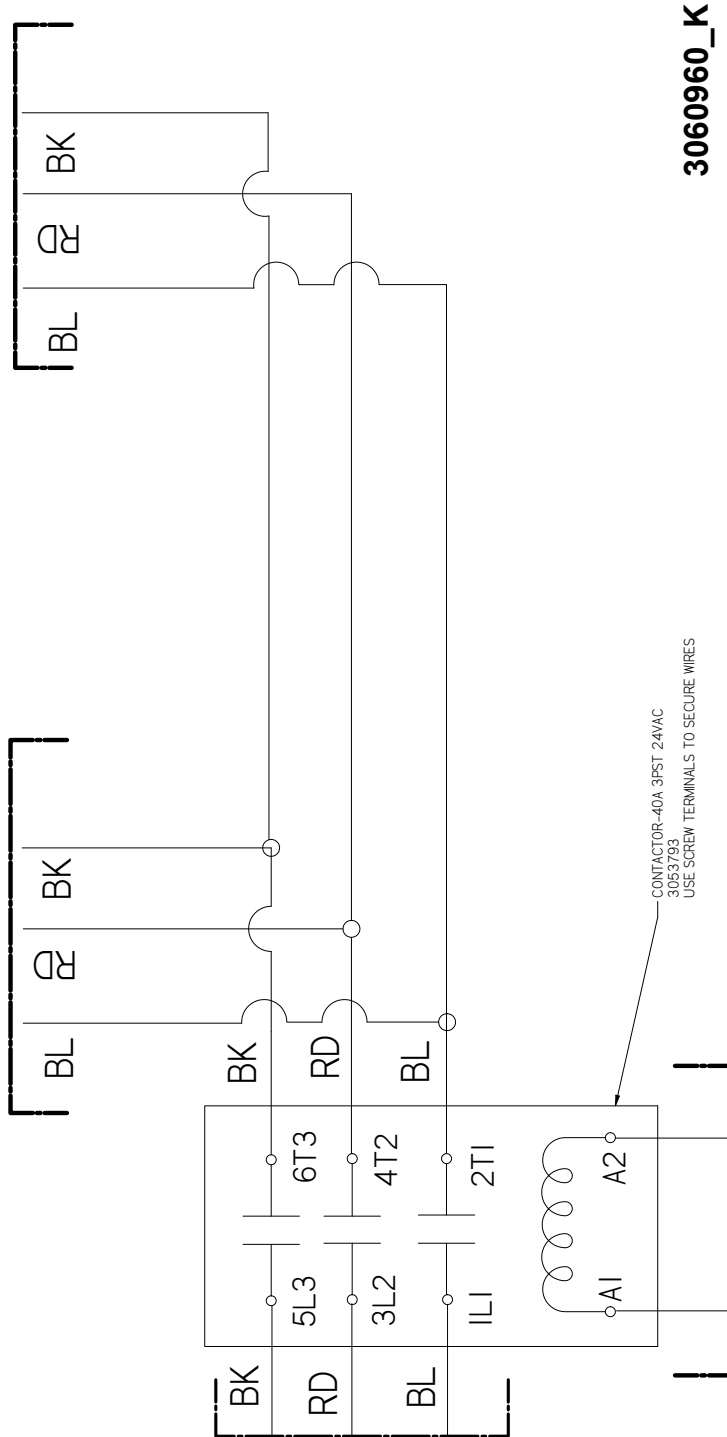
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- REMOVE 2 POLE JUMPER BETWEEN 14 & 15  
REMOVE 3 POLE JUMPER BETWEEN 10, 11 & 12
- NOTES:  
 1. APPLICABLE STANDARDS / SPECIFICATIONS  
 2. ASSEY/ASSEMBLY DIMENSIONS ONLY AND TOLERANCES  
 3. REF 3038431  
 4. ADD PURP. E. MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE.  
 5. 0005232 SENSORS 3, LH & 4, RH TO BE SECURED TO COMPRESSOR DISCHARGE LINE.  
 6. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS.  
 7. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 0383151 OR 0383152.  
 8. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN.-LBS.  
 9. IF OEM CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21.

# CoreLink Propane Wiring - 4 Door

# RLN-W Frozen Food / Ice Cream



- NOTES
1. APPLICABLE STANDARDS / SPECIFICATIONS  
ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
  2. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
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  4. ADD PURPLE MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE
  5. 0005232 SENSORS 3 (LH) & 4 (RH) TO BE SECURED TO COMPRESSOR DISCHARGE LINE
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  8. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS
  9. IF OEM CONTROLLER IS NOT USED THE DOOR AS ARE WIRED TO TERMINALS 16 & 21

# RLN-W

Frozen Food / Ice Cream

# CoreLink Propane

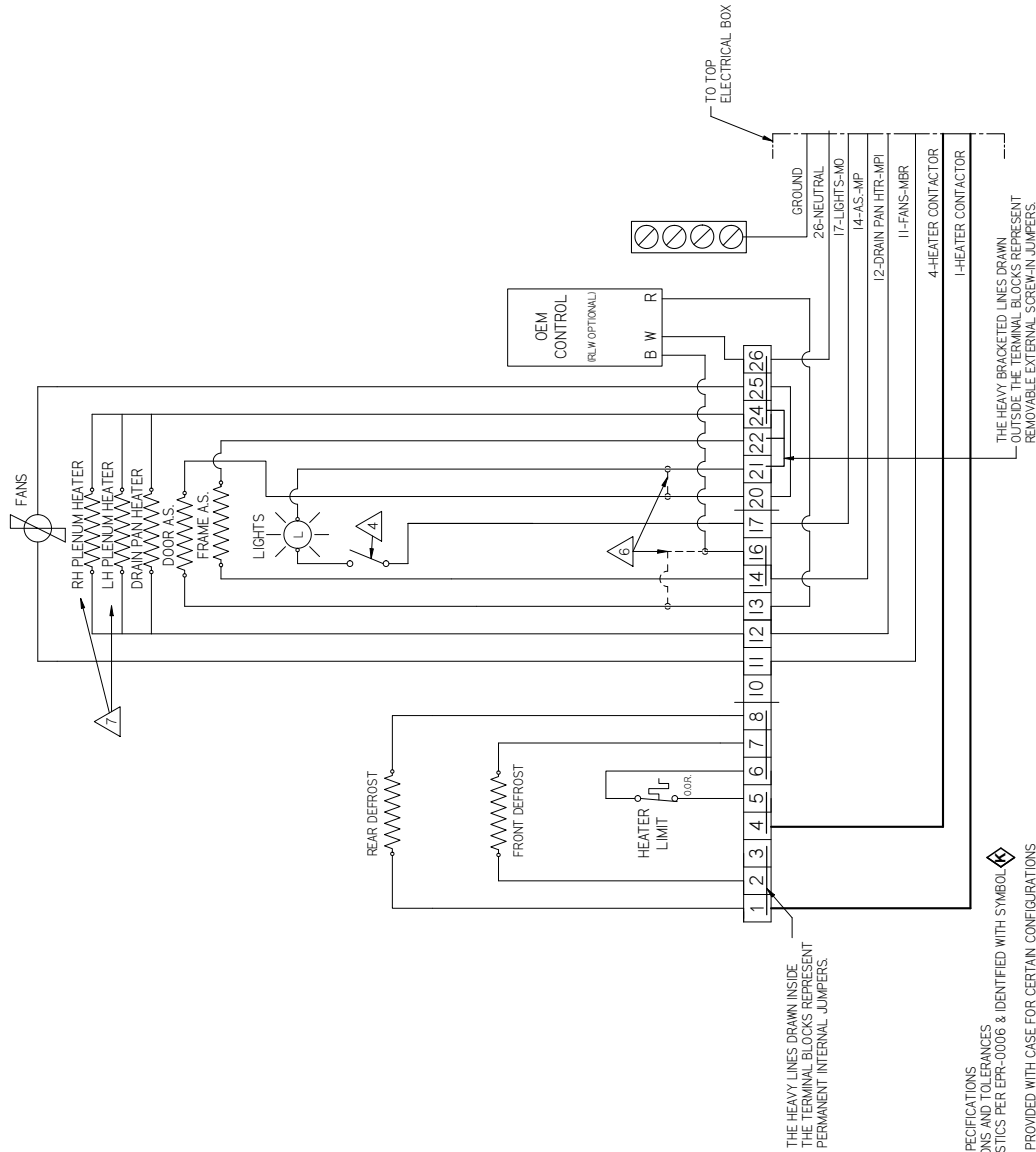
## Wiring - 5 Door

\_\_\_\_\_ FACTORY WIRE AWG 14 UNLESS SPECIFIED  
 \_\_\_\_\_ FACTORY WIRE AWG 12  
 - - - - - FIELD INSTALLED WIRE

**WIRE COLOR**  
 BK BLACK  
 BL BLUE  
 GN GREEN  
 RD RED  
 WT WHITE  
 YL YELLOW  
 BR BROWN

USE WIRE MARKER AT EACH END OF WIRE AS FOLLOWS:

MBR-----MARKER BROWN    FANS  
 MO-----MARKER ORANGE    LIGHTS  
 MP-----MARKER PURPLE    ANTISWEAT  
 MPI-----MARKER PINK    DRAIN PAN HTR

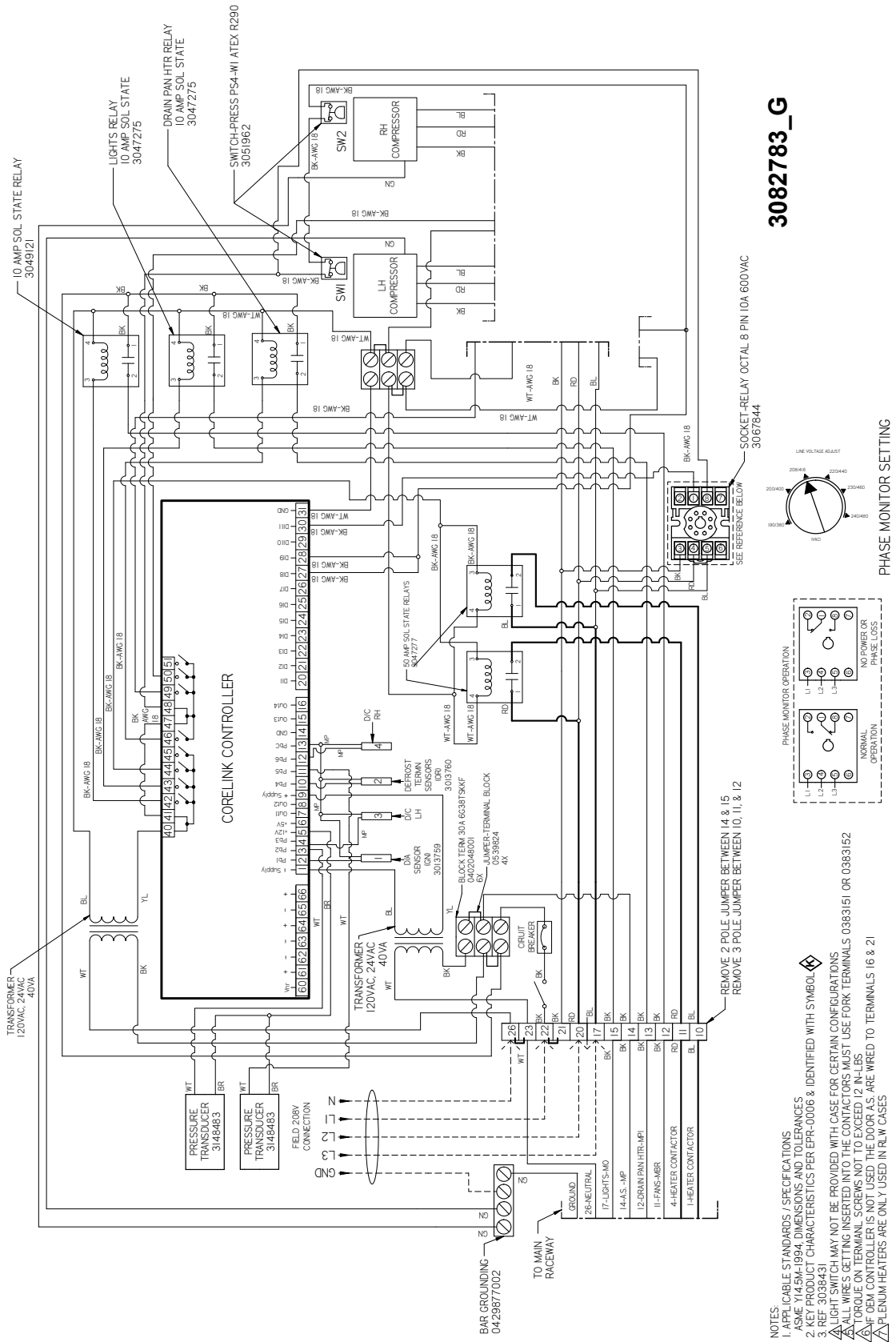


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- NOTES:
1. APPLICABLE STANDARDS / SPECIFICATIONS
  2. ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
  3. REF 3038431
  4. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
  5. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 0363151 OR 0363152
  6. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS
  7. IF OEM CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21
  8. PLENUM HEATERS ARE ONLY USED IN RLW CASES

# CoreLink Propane Wiring - 5 Door

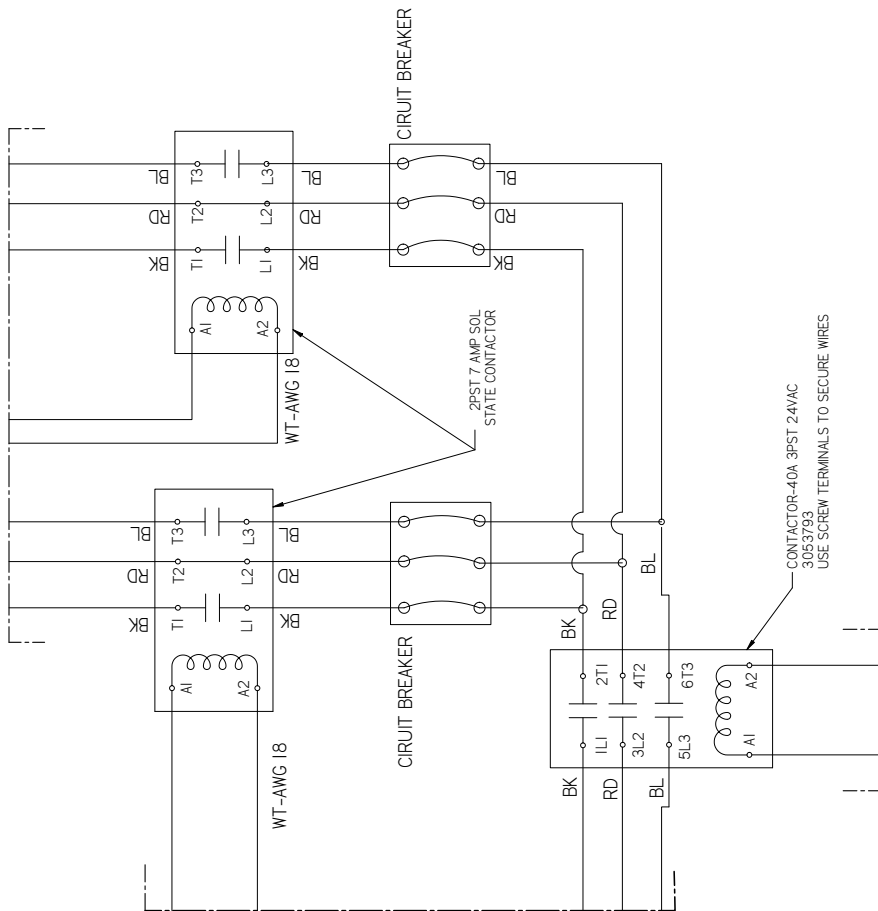
# RLN-W Frozen Food / Ice Cream



**RLN-W**  
Frozen Food / Ice Cream

**CoreLink Propane  
Wiring - 5 Door**

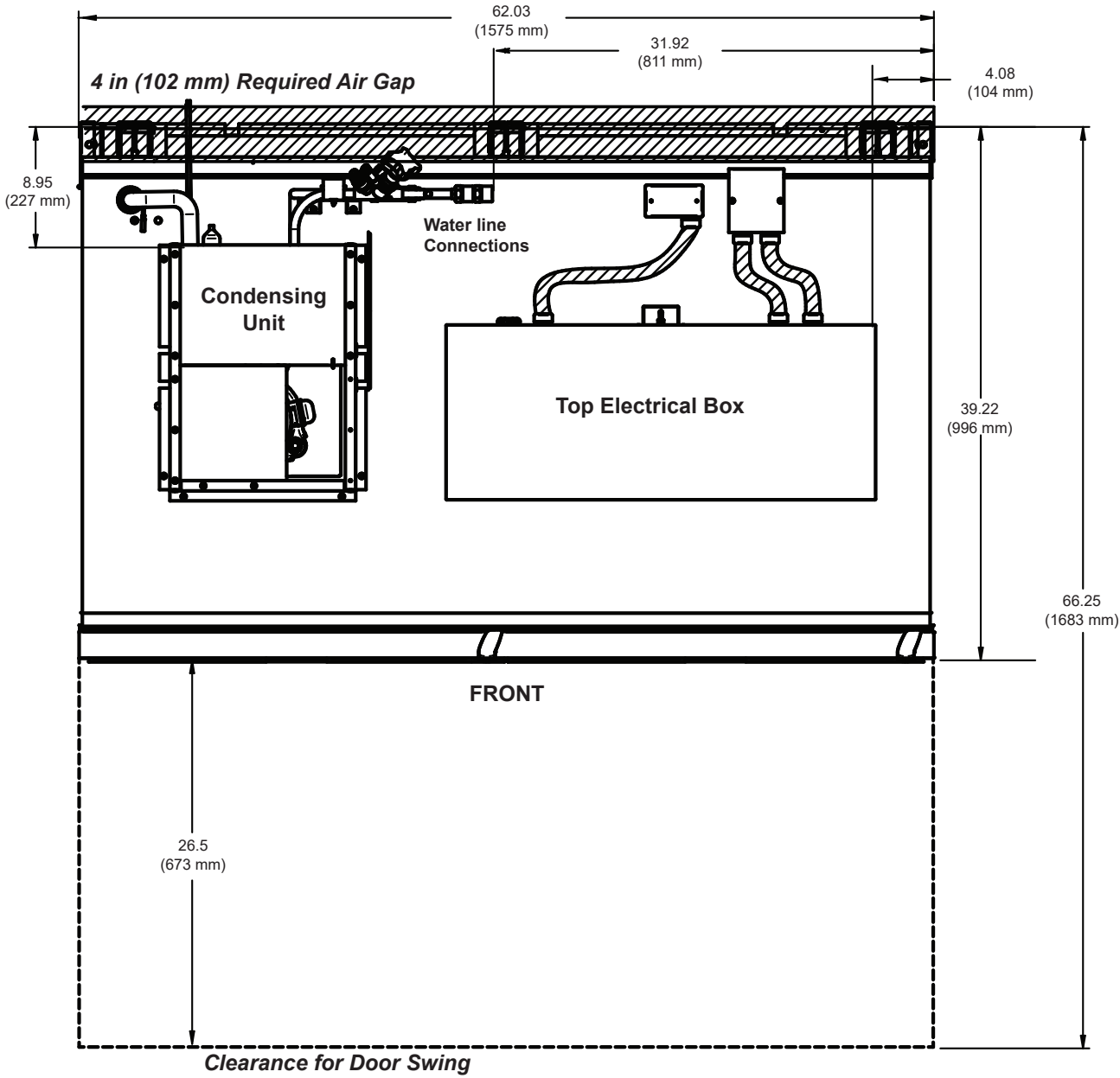
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- NOTES:
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ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
  2. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
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**RLN-W  
Top Views**

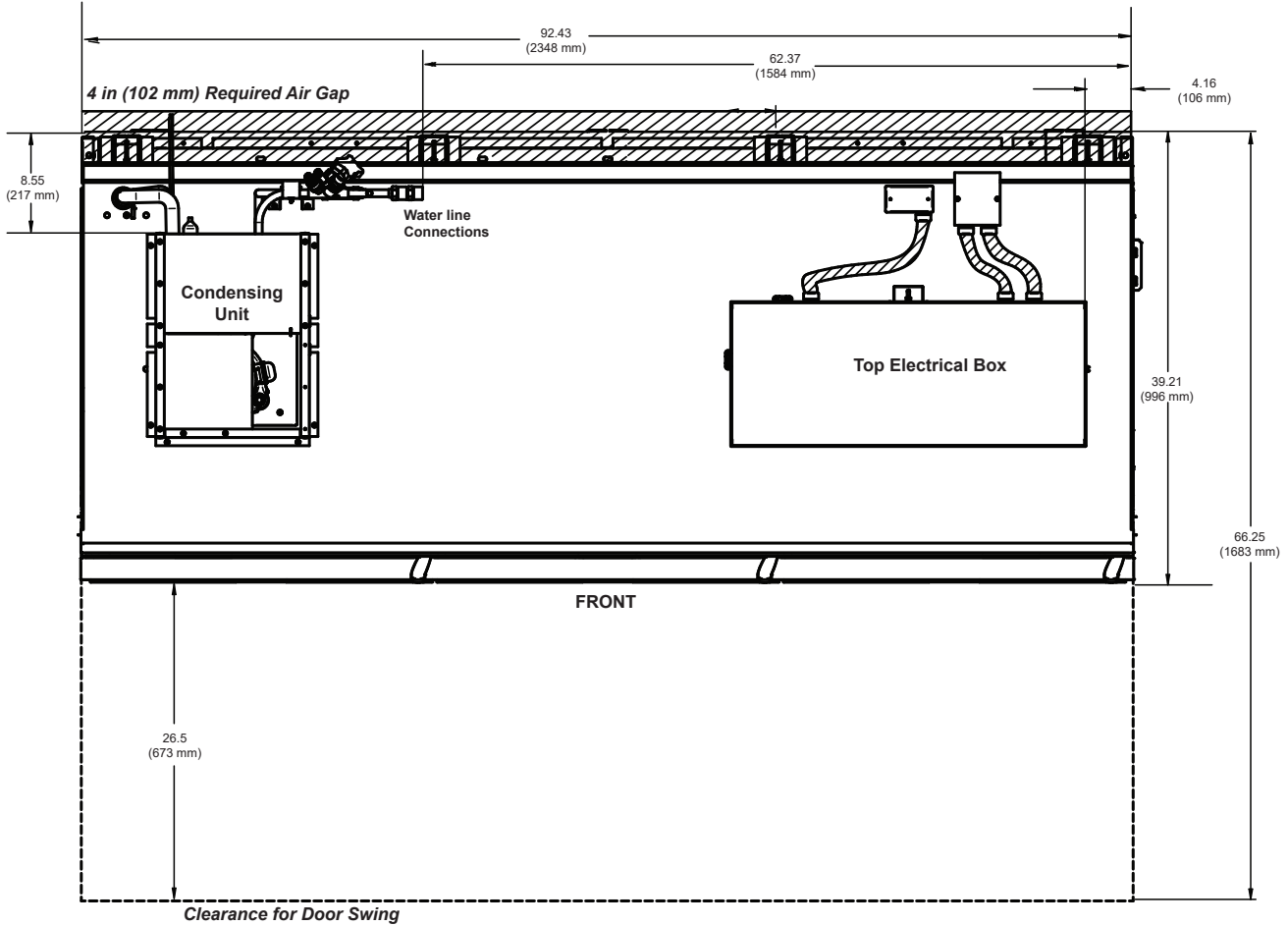
**RLN-W  
Frozen Food / Ice Cream**



RLN2W TOP VIEW

**RLN-W**  
Frozen Food / Ice Cream

**RLN-W**  
Top Views

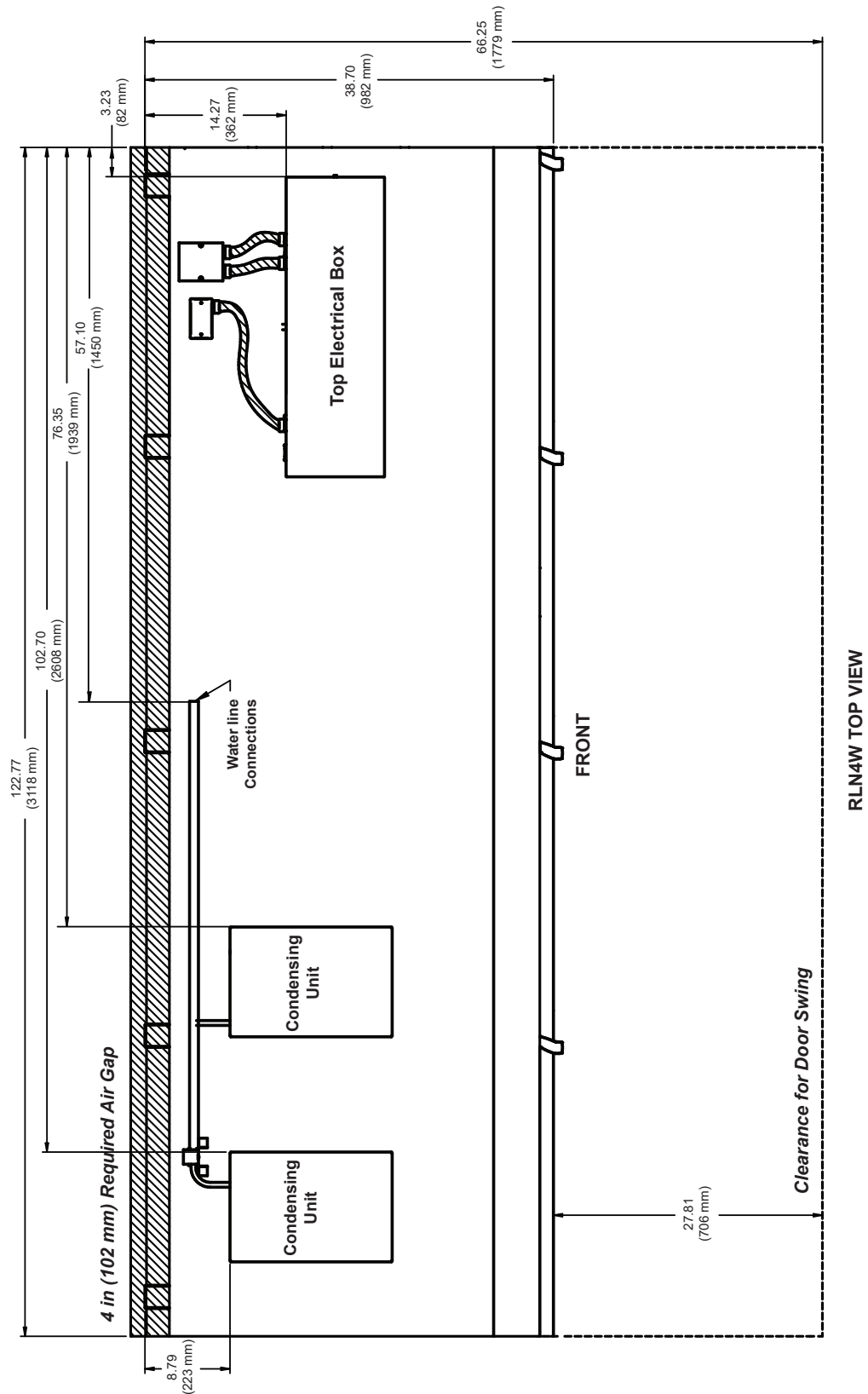


RLN3W TOP VIEW



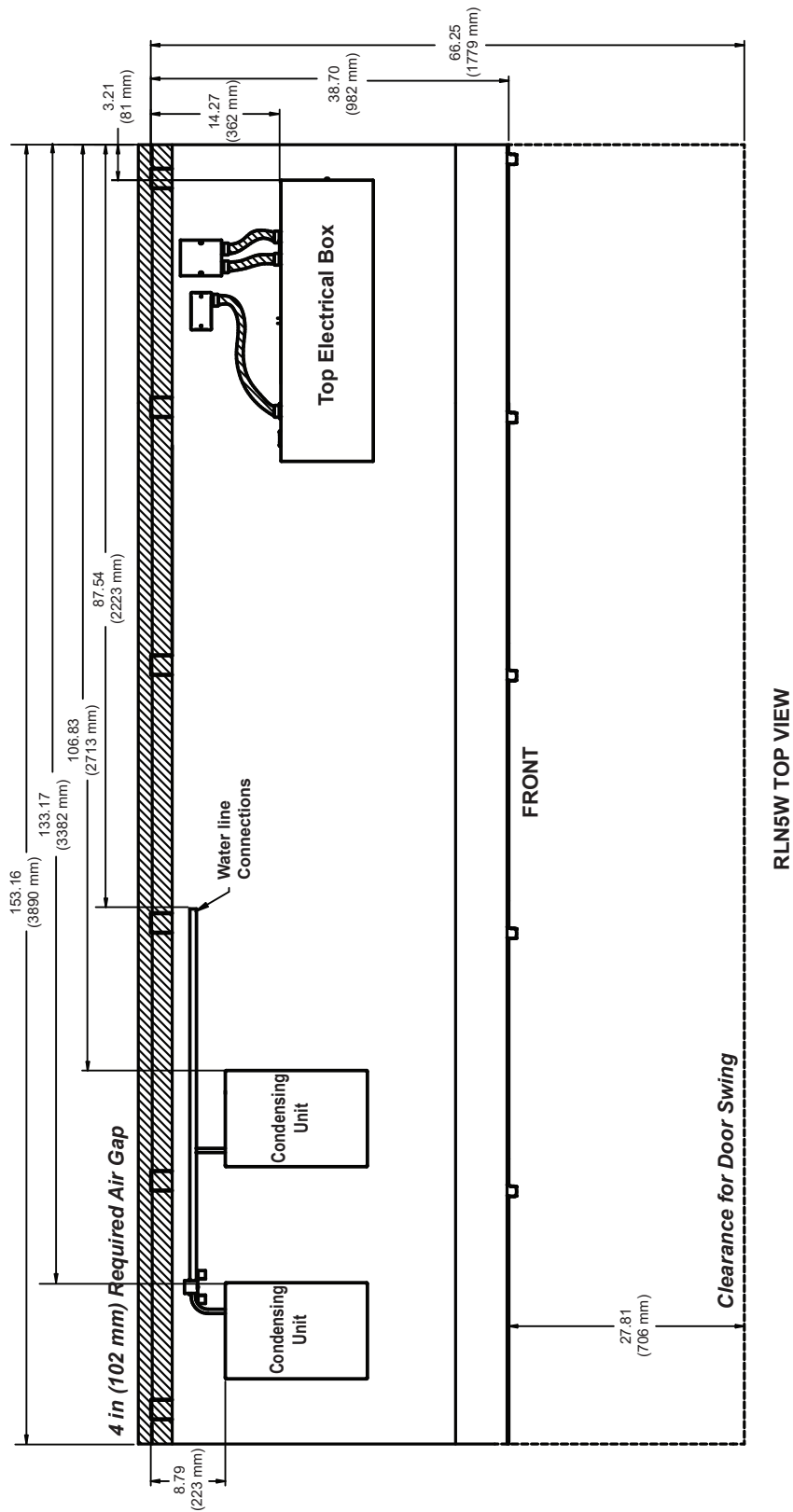
**RLN-W  
Top Views**

**RLN-W  
Frozen Food / Ice Cream**



**RLN-W**  
Frozen Food / Ice Cream

**RLN-W**  
Top Views



## Revision History

Revision A: January 2019: New Document

Revision B: February 2020: Updated ISO, refrigeration data, electrical data, wiring diagrams and top views, and removed replace parts page

Revision C: June 2020: Updated electrical data on page 5.

Revision D: April 2022: Removed note on page 10; updated wiring diagrams.

Revision E: June 2024: Updated cover logos.



Scan the QR code on your mobile device to access additional product information or order parts.

Parts may also be ordered at:

[parts.husmann.com](https://parts.husmann.com)

Call toll free: 1.855.487.7778