

HUSSMANN®

microDS™

RL-W

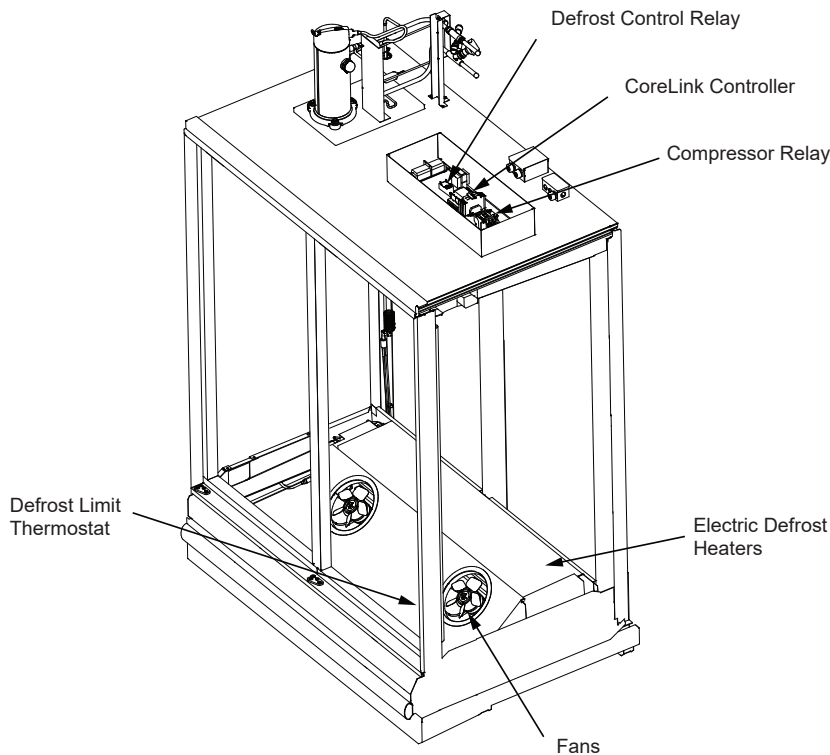
with INNOVATOR Doors
or INNOVATOR III Doors
Water-cooled
Self-Contained
R290 (Propane)

Merchandise Data Sheet

P/N 3041586_F

UL EPH® Certified

February 2019



*Coils and fans are modular with one per 2 or 3 door section.

Portion of parts removed for clarity.

2 door merchandiser shown.

UL EPH Certification

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



IMPORTANT

ONE FLOOR DRAIN IS
REQUIRED FOR EACH CASE.

Performance Data	Page 2	Shelf Options	Page 6
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Data sheet-Reach-in-RL-W

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.

RL-W

Frozen Food / Ice Cream

Refrigeration Data ¹

RL-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 41 to 118°F (5 to 48°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

Defrost Data

Frequency (hours between defrost) 24

	RL-W
Time (minutes)	45
Temp Termination (°F)	48

ELECTRIC OR GAS Electric

Defrost Water ³ 1.2 lb/dr/day
(0.5 kg/m)

³ (± 15% based on case configuration and product loading).

RL-W

Cooling Water Pressure Drop ⁴

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

Cooling Water Design TD 10°F

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

RL-W

Glycol/Water Flow Rate ⁵

	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

Charge per unit ⁶

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

⁵ 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).

⁶ Maximum R290 charge per condensing unit = 150 g.

⁶ Charge per unit per coil section.

Product Data

Gross Refrigerated Volume ⁷ (Cu Ft/Ft)	23.46 ft ³ /ft (0.66 m ³ /m)
AHRI Total Display Area ⁸ (Sq Ft/Ft)	13.31 ft ² /ft (1.24 m ² /m)
Shelf Area ⁹ (Sq Ft/Ft)	29.32 ft ² /ft (2.72 m ² /m)

⁷ AHRI Gross Refrigerated Volume: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]

⁸ Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]

⁹ Shelf surface area is composed of bottom deck plus standard shelf complement for this model: (5) 26-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 R290 Propane

RL-W
 Frozen Food / Ice Cream

DOE 2017
 Energy Efficiency
 Compliant

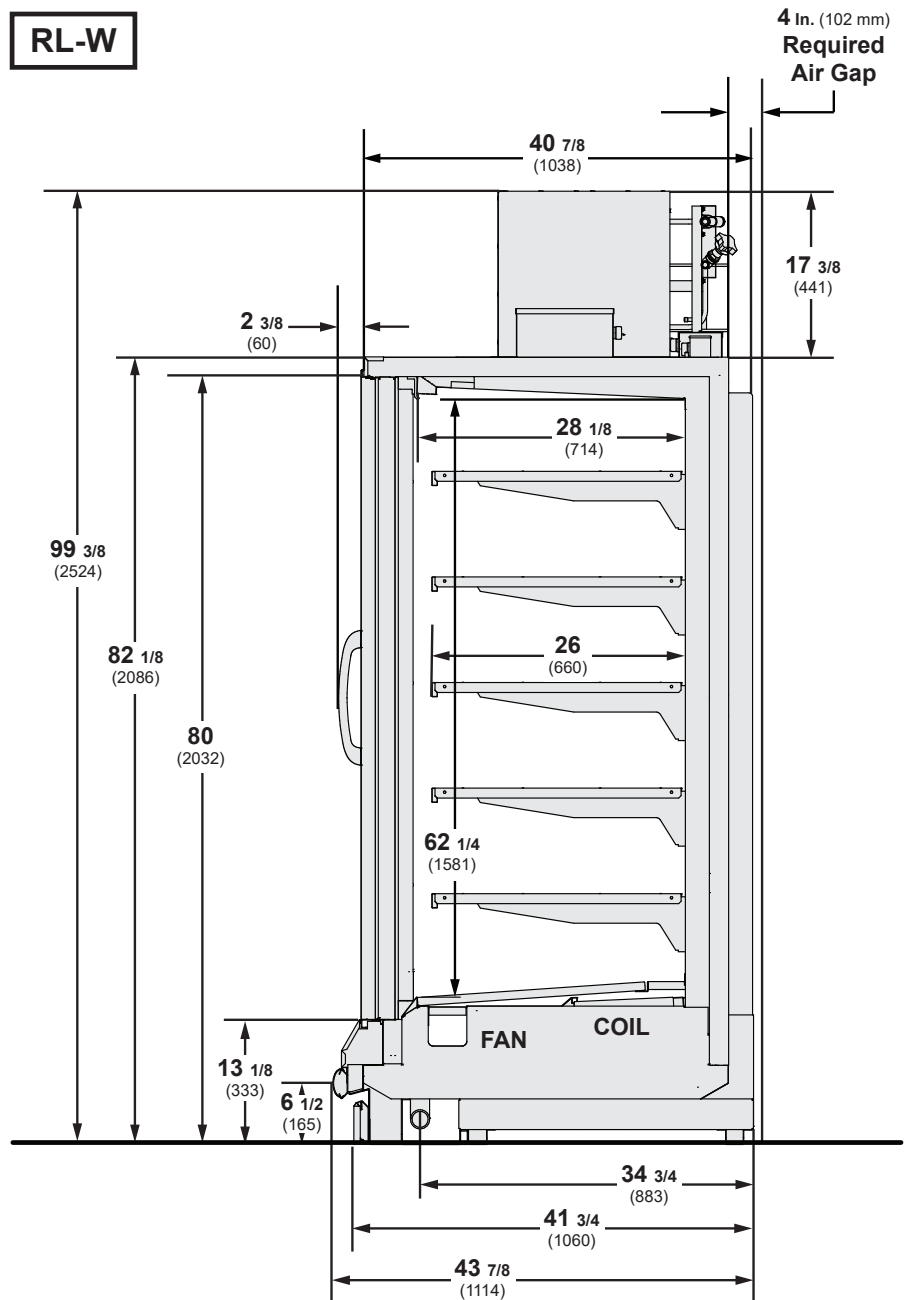
Husmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

Shelf complement shown as tested:
 Five rows of shelves (26-in) spaced
 equally between bottom display pan
 and interior top panel.

Dimensions shown as in. and (mm).

RL-W

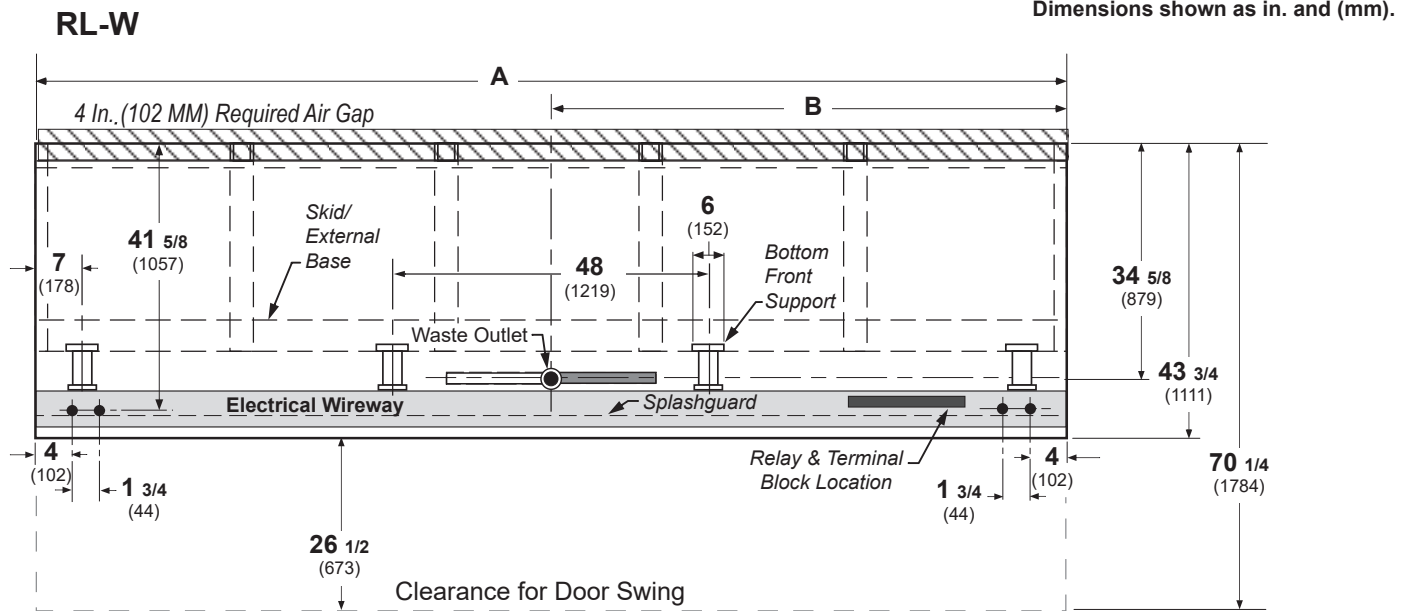
4-in. between back to back cases.



UL EPH Certification

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

Engineering Plan View



(4 Door Model shown above)

	2 Dr	3 Dr	4 Dr	5 Dr
General				
(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.)	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 (Field Electrical Wiring Connection)				
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)
Waste Outlets (with required drain extension)				
(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	34 5/8 (879)	34 5/8 (879)	34 5/8 (879)	34 5/8 (879)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
Water Seal				
Edge of water seal to center of waste outlet	13 (330)	13 (330)	13 (330)	13 (330)
<i>**NOTE: Field installed water seal outlets, tees, and connectors are shipped with the case.</i>				

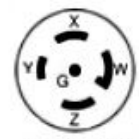
Electrical Data

Number of Fans		2 dr	3 dr	4 dr	5 dr				
8.25-in.		2	3	4	5				
		Amperes				Watts			
Evaporator Fan	2 dr	3 dr	4 dr	5 dr	2 dr	3 dr	4 dr	5 dr	
120V 50/60Hz	0.60	0.90	1.20	1.50	36	54	72	90	
Door Anti-sweat Heaters (on fan circuit)									
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	
Frame Anti-sweat Heaters (on fan circuit)									
120V 50/60Hz	0.78	1.18	1.57	1.97	94	141	188	236	
Condensing Unit (208V/230V, 3 ph, 60 Hz) Standard									
NOTE: One compressor can start at a time.									
Compressor RLA	4.6	4.6	9.2	9.2					
Compressor LRA	58/unit	58/unit	58/unit	58/unit					
Merchandise Circuit Requirements (208V/230V, 3 Ph, 60 Hz)									
Total Amps	7.8	10.1	15.7	17.3					
MCA	9.8	12.6	17.6	21.0					
Maximum Over Current Protection	20	20	20	30					
Defrost									
Drain Heaters (120V)	0.63	1.25	2.00	2.57	75	150	240	300	
Plenum Heaters (120V)	1.30	1.92	2.60	3.22	156	230	312	386	
Electric Defrost (208V)	6.72	10.08	13.46	16.82	1400	2100	2800	3500	

NEMA Plug



L21-20P



L21-30P

Optional Electrical Plug - NEMA

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

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.

STANDARD LIGHTING

EcoShine II	2 Dr	3 Dr	4 Dr	5 Dr	2 Dr	3Dr	4 Dr	5 Dr
120V	0.31	0.46	0.62	0.77	37.1	55.6	74.2	92.7
220V Export	0.17	0.25	0.34	0.42	37.1	55.6	74.2	92.7

OPTIONAL LIGHTING

EcoShine II	2 Dr	3 Dr	4 Dr	5 Dr	2 Dr	3Dr	4 Dr	5 Dr
[22 W] 120V	0.36	0.52	0.68	0.84	43.2	62	81	100
[22 W] 220V Export	0.20	0.28	0.37	0.46	43.2	62	81	100

GE Illumination	2 Dr	3 Dr	4 Dr	5 Dr	2 Dr	3Dr	4 Dr	5 Dr
120V	0.30	0.45	0.60	0.75	36	54	72	90
220V Export	0.16	0.25	0.33	0.41	36	54	72	90

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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)
lb (kg)	1047 (475)	1345 (610)	1595 (769)	1874 (895)	55 (25)

† Actual weights will vary according to optional kits included.

Shelf Options

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

22-inch
24-inch
26-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) 26-inch shelves, evenly distributed vertically

Replacement Parts List

Part #	Description	Part #	Description
FAN ASSEMBLIES		CORELINK CONTROL	
2-Dr & 4 Dr		0554376	CoreLink Controller
Standard HE Fan Assembly		3017903	XEV20D Expansion Board
0529672	Fan Assembly	3013759	Discharge Air Sensor
0527610	Fan Motor	3013760	Defrost Termination
0461805	Fan Blade	3047275	Fan / Light Relay
0344662	Defrost Limit Thermostat	0005226	Compressor Discharge Sensor
		3051962	Pressure Switch
LED FIXTURES AND POWER SUPPLY		REFRIGERATION SYSTEM	
0499399	Power Supply	3061753	Capillary Tube 2, 4 & 5 Door
	LED Fixture	3036087	Compressor 2, 4 & 5 Door
	<i>Replace with like fixtures.</i>	3026484	Compressor 3 Door
COILS		0530462	Filter/drier
0530400	2 Door & 4 Door	3026481	Heat Exchanger
0530429	3 Door & 5 Door	3074881	Capillary Tube 3 Door
HONEYCOMB - WHITE		WATER LINE	
0495287	2 Door & 4 Door	0527748	Strainer, Water
0495261	3 Door	0527742	Balancing Valve (Adjustable)
0495262	5 Door	3042623	2 Door Auto-Balancing Valve 1.5 GPM (Optional)
RELAYS		3042965	3 Door Auto-Balancing Valve 2.0 GPM (Optional)
3048148	Compressor Relay	3065648	4 Door Auto-Balancing Valve 2.5 GPM (Optional)
3047276	2 & 3 Door Defrost Relay	3081748	5 Door Auto-Balancing Valve 3.0 GPM (Optional)
3047277	4 & 5 Door Defrost Relay	HEATERS	
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 HTTP://WWW.HUSSMANN.COM/EN/PRODUCTS/LED-LIGHTING/PAGES/DEFAULT.ASPX.		3020841	Electric Defrost Heaters, 208V, (Front & Rear) 2 Door & 4 Door
		3020842	Electric Defrost Heater, 208V, (Front & Rear) 3 Door & 5 Door
		0387036	Drain Pan Heater, 2 Door
		0387037	Drain Pan Heater, 3 Door
		0387038	Drain Pan Heater, 4 Door
		0387039	Drain Pan Heater, 5 Door
		3063723	Plenum Heater, 2 Door & 4 Door
		3063724	Plenum Heater, 3 Door & 5 Door
FOR ADDITIONAL PARTS INFORMATION, VISIT HTTP://WWW.HUSSMANN.COM/EN/PAGES/AFTERMARKET-PARTS.ASPX			

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Frozen Food / Ice Cream

CoreLink Propane

Wiring - 2 & 3 Door

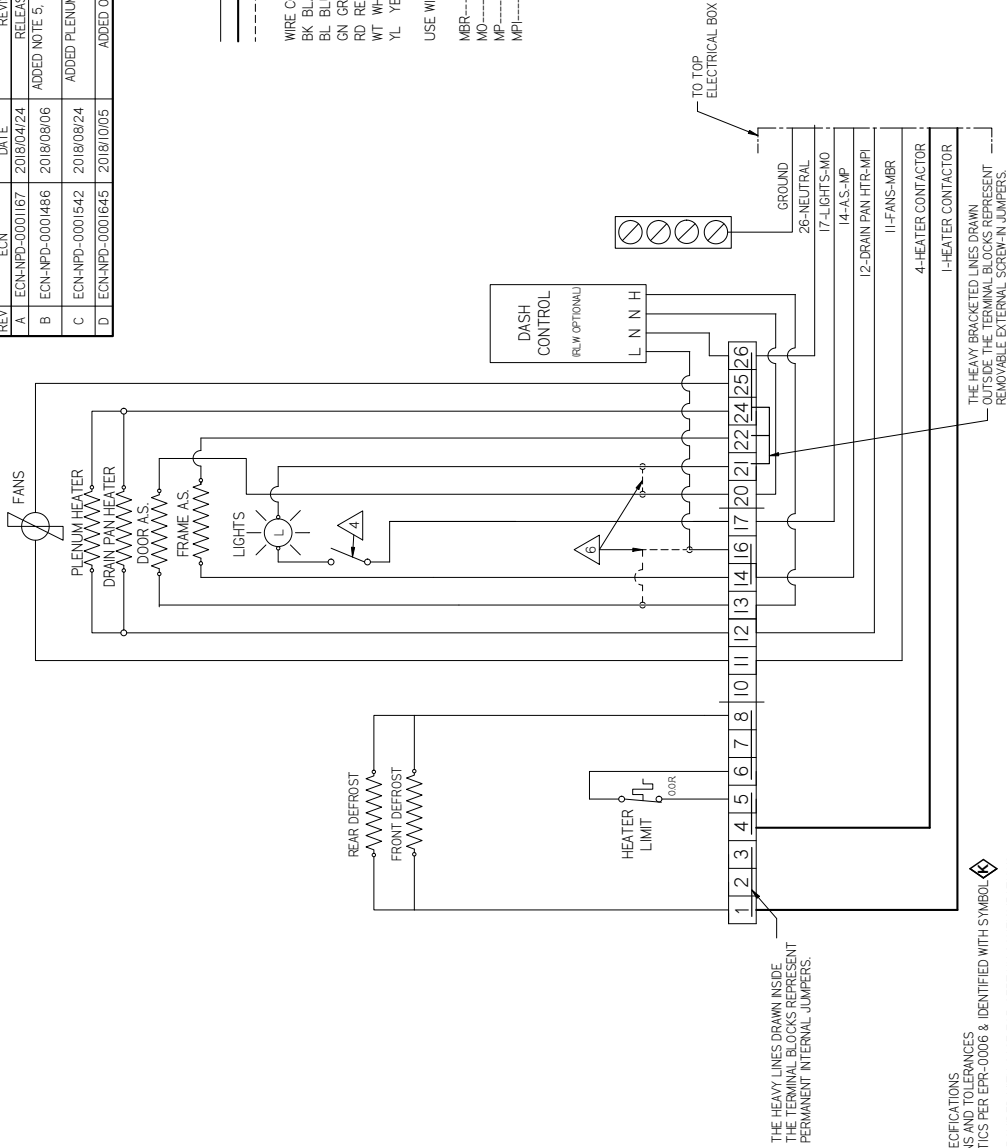
REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-NPD-0001167	2018/04/24	RELEASED TO PRODUCTION	MDL	AGA	MDL
B	ECN-NPD-0001486	2018/08/06	ADDED NOTE 5, 6, & 3067844; 6X-4X WAS 3X 2X	MDL	AGA	MDL
C	ECN-NPD-0001542	2018/08/24	ADDED PLENUM HEATERS & UPDATED WIRE ROUTING	MDL	AGA	MDL
D	ECN-NPD-0001645	2018/10/05	ADDED OPERATION REFERENCE	MDL	MDL	MDL

_____ 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

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



3060959 D

- NOTES
- 1- APPLICABLE STANDARDS / SPECIFICATIONS
 - 2- ASME Y14.5M-1994 DIMENSIONS AND TOLERANCES
 - 3- ALL DIMENSIONAL CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
 - 4- REF. 306943
 - 5- LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
 - 6- ALL WIRES GETTING INSERTED INTO THE CONTACTOR MUST USE FORK TERMINALS 0383151 OR 0383152
 - 7- TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 N-LBS
 - 8- F DASH CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRE TO TERMINALS 16 & 21

RL-W

Frozen Food / Ice Cream

CoreLink Propane

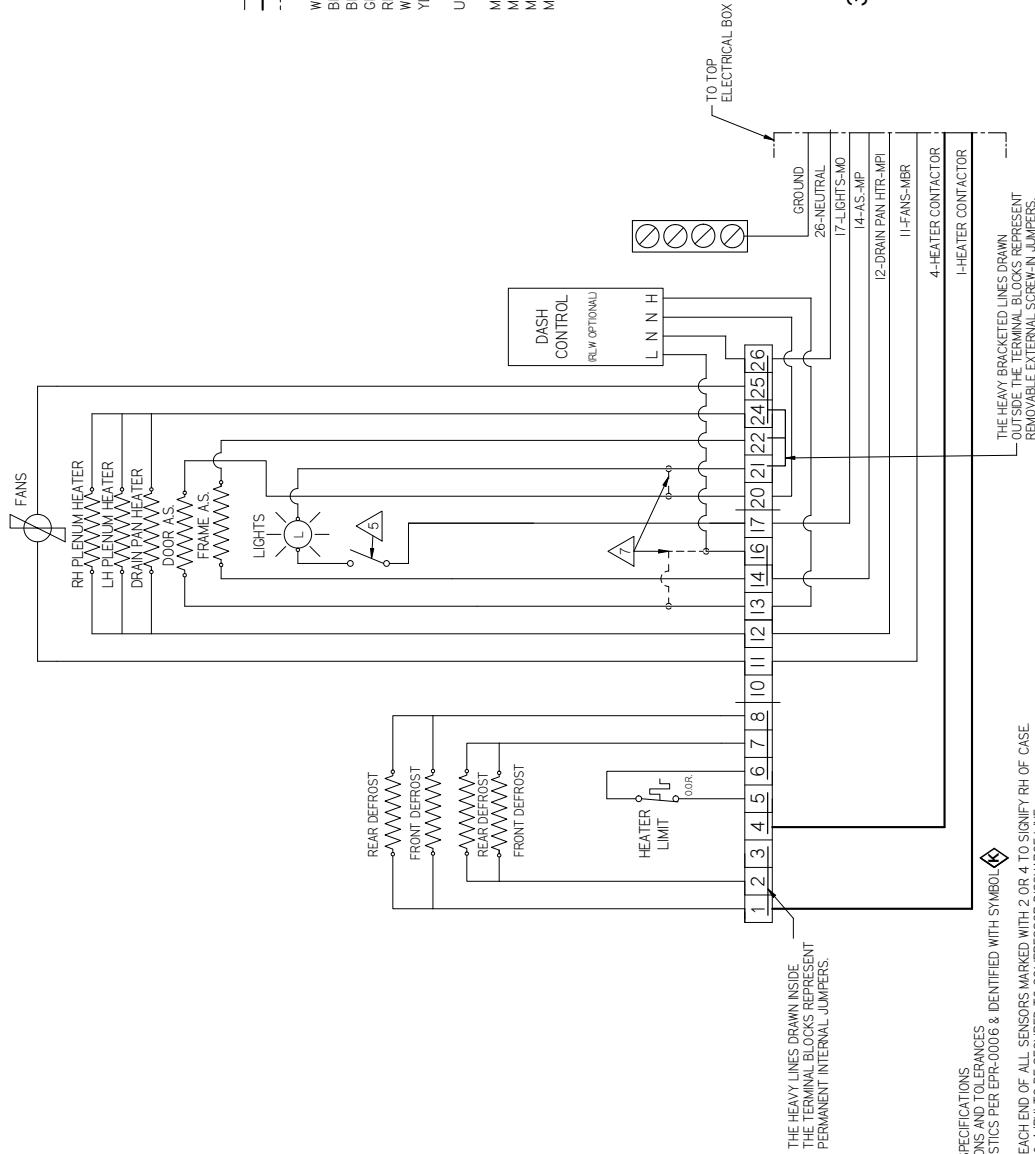
Wiring - 4 Door

_____ 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

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

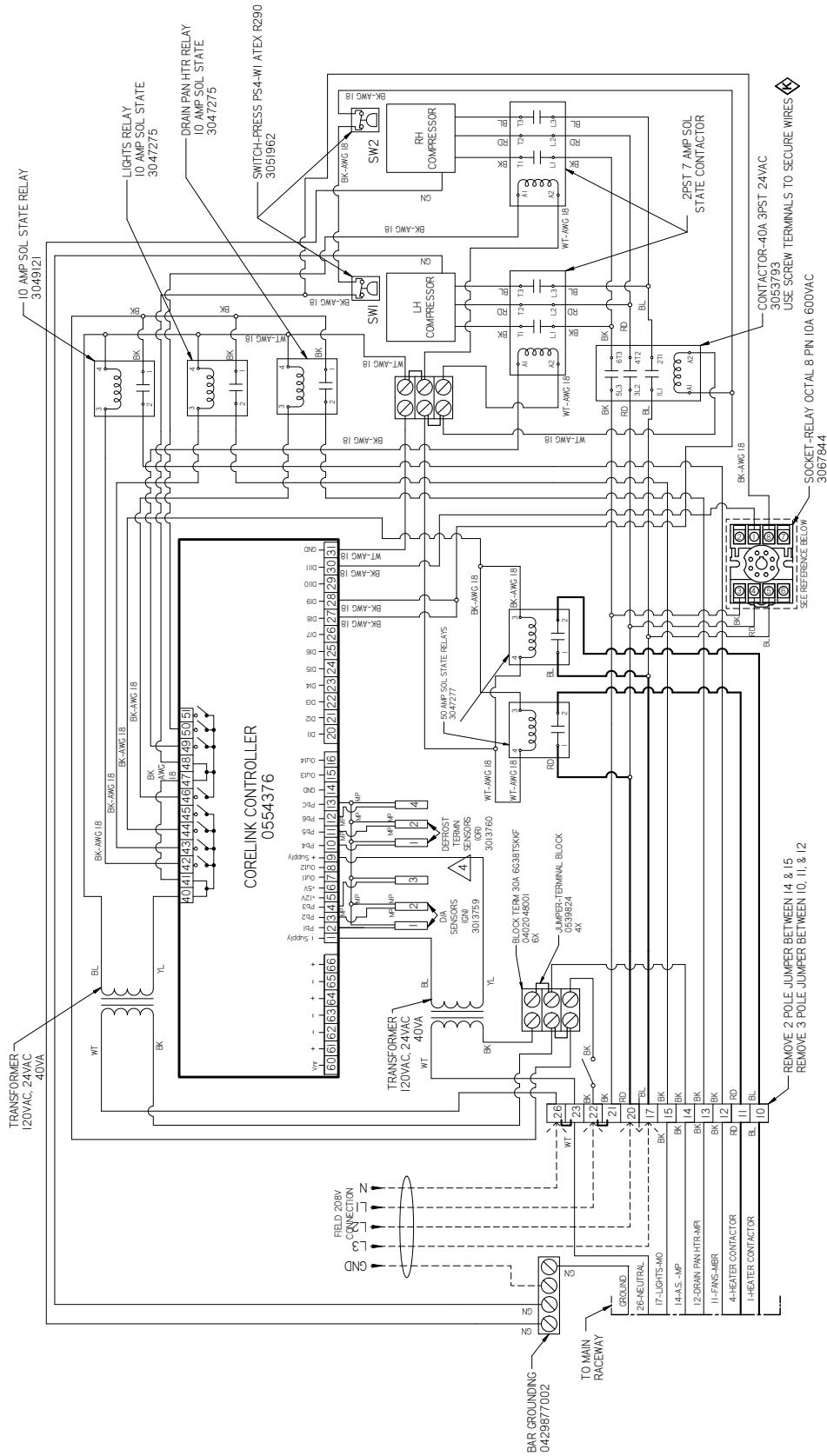


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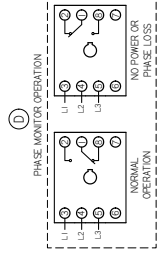
- NOTES
1. REFER TO APPLICABLE STANDARDS / SPECIFICATIONS
 2. REFER TO ASSE Y14.5M-1994, DIMENSIONS AND TOLERANCES
 3. REFER TO KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
 4. ADD PURPLE MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE
 5. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
 6. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 0383151 OR 0383152
 7. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN.-LBS.
 8. IF DASH CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21

CoreLink Propane Wiring - 4 Door

RL-W Frozen Food / Ice Cream



1. APPLICABLE STANDARDS / SPECIFICATIONS
ASME Y14.5M-1994, DIMENSIONS AND TOLERANCES
2. KEY PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
3. REF. 3038431
ADD PURPLE MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE
0005232 SENSORS 3 LH1 & 4 RH1 TO BE SECURED TO COMPRESSOR DISCHARGE LINE
LIGHTS/HEAT CH MARKERS PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
LIGHTS/HEAT CH MARKERS NOT PROVIDED WITH CASE FOR OTHER CONFIGURATIONS
TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS
IF DASH CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21



REMOVE 2 POLE JUMPER BETWEEN 14 & 15
REMOVE 3 POLE JUMPER BETWEEN 10, 11, & 12

CONTRACTOR-40A 3PST 24VAC
3053793
USE SCREW TERMINALS TO SECURE WIRES

SOCKET-RELAY OCTAL 8 PIN 10A 600VAC
3067844
SEE REFERENCE BELOW

3060960 D

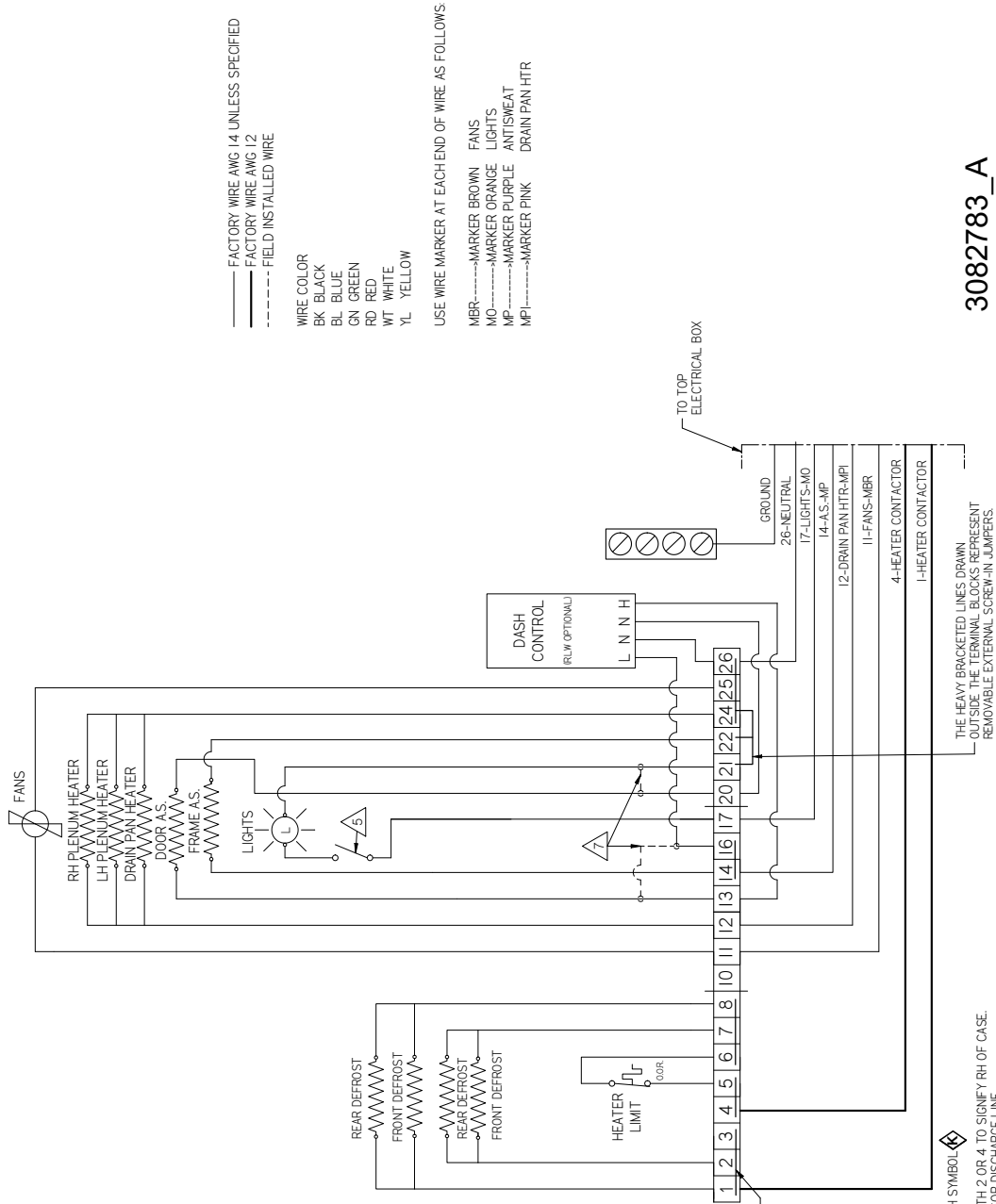
RL-W

Frozen Food / Ice Cream

CoreLink Propane

Wiring - 5 Door

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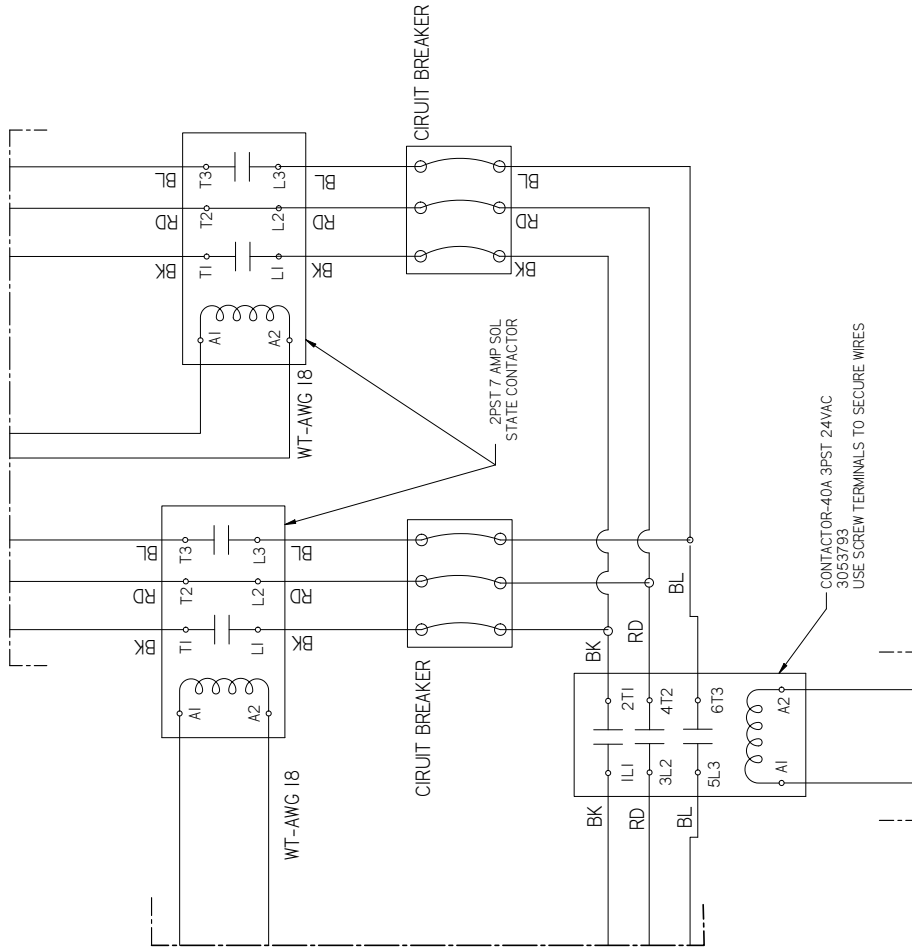
- FACTORY WIRE AWG 14 UNLESS SPECIFIED
 - FACTORY WIRE AWG 12
 - - - - - FIELD INSTALLED WIRE
- WIRE COLOR
- BK BLACK
 - BL BLUE
 - GN GREEN
 - RD RED
 - WT WHITE
 - YL YELLOW
- USE WIRE MARKER AT EACH END OF WIRE AS FOLLOWS
- MBR----->MARKER BROWN FANS
 - MO----->MARKER ORANGE LIGHTS
 - MP----->MARKER PURPLE ANTISWEAT
 - MPI----->MARKER PINK DRAIN PAN HTR

- NOTES:
1. APPLICABLE STANDARDS / SPECIFICATIONS AS IN 174.5/WH-1894, DIMENSIONS AND TOLERANCES
 2. SEE 3082783 FOR PRODUCT CHARACTERISTICS PER EPR-0006 & IDENTIFIED WITH SYMBOL
 3. ADD PURPLE MARKERS AT EACH END OF ALL SENSORS MARKED WITH 2 OR 4 TO SIGNIFY RH OF CASE.
 4. ADD PURPLE MARKERS 3, LH & 4, RH TO BE SECURED TO COMPRESSOR DISCHARGE LINE.
 5. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS.
 6. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 0383151 OR 0383152
 7. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN.-LBS.
 8. IF DASH CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21

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.

TO TOP ELECTRICAL BOX

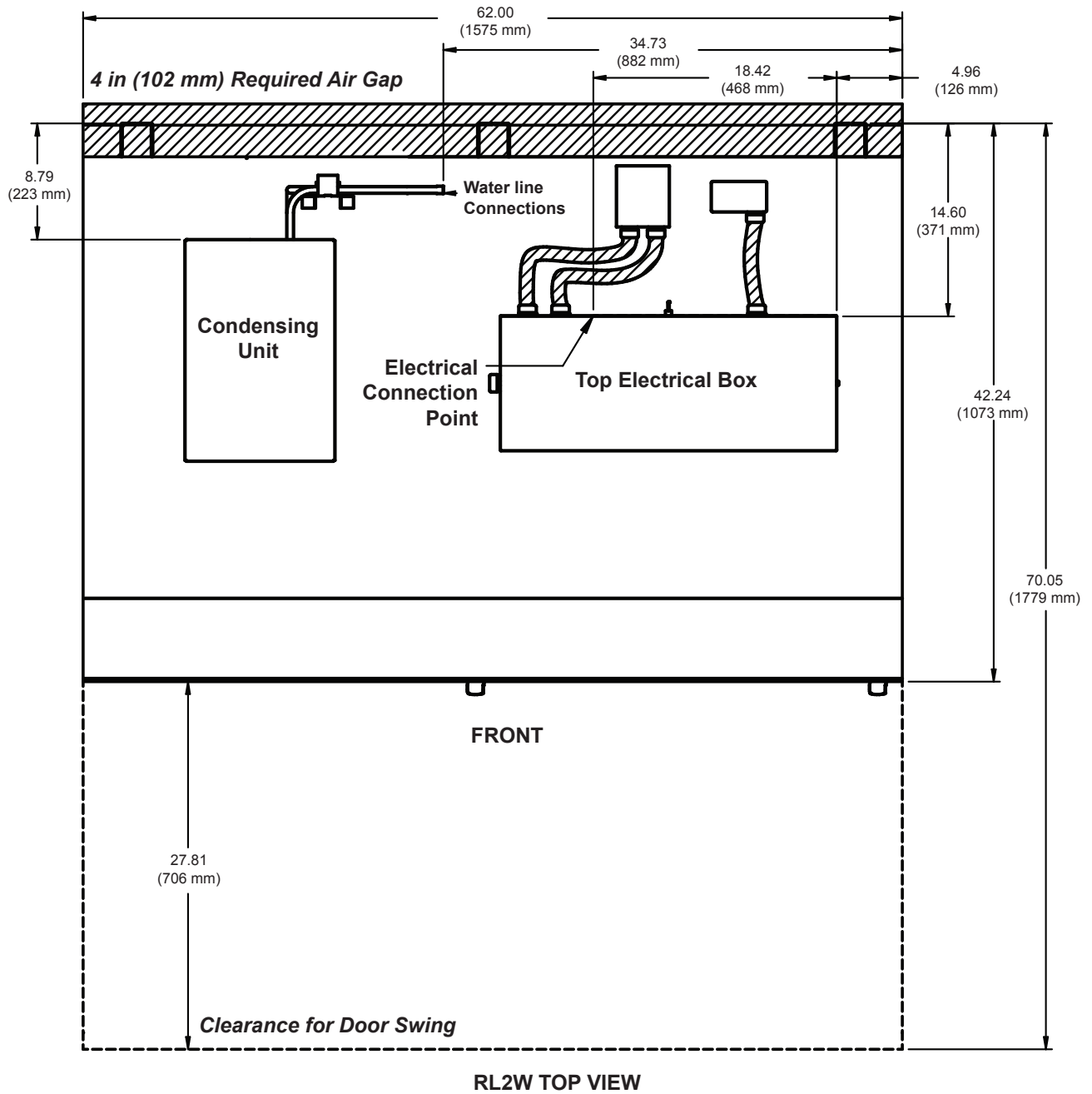


3082783_A

- NOTES
1. APPLICABLE STANDARDS / SPECIFICATIONS
ASME Y14.5M-1984, DIMENSIONS AND TOLERANCES
 2. KEY PRODUCT CHARACTERISTICS PER EPR-00068 & IDENTIFIED WITH SYMBOL
 3. REF. 3038431
 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
 6. LIGHT SWITCH MAY NOT BE PROVIDED WITH CASE FOR CERTAIN CONFIGURATIONS
 7. ALL WIRES GETTING INSERTED INTO THE CONTACTORS MUST USE FORK TERMINALS 03883151 OR 03883152
 8. TORQUE ON TERMINAL SCREWS NOT TO EXCEED 12 IN-LBS
 9. IF DASH CONTROLLER IS NOT USED THE DOOR A.S. ARE WIRED TO TERMINALS 16 & 21

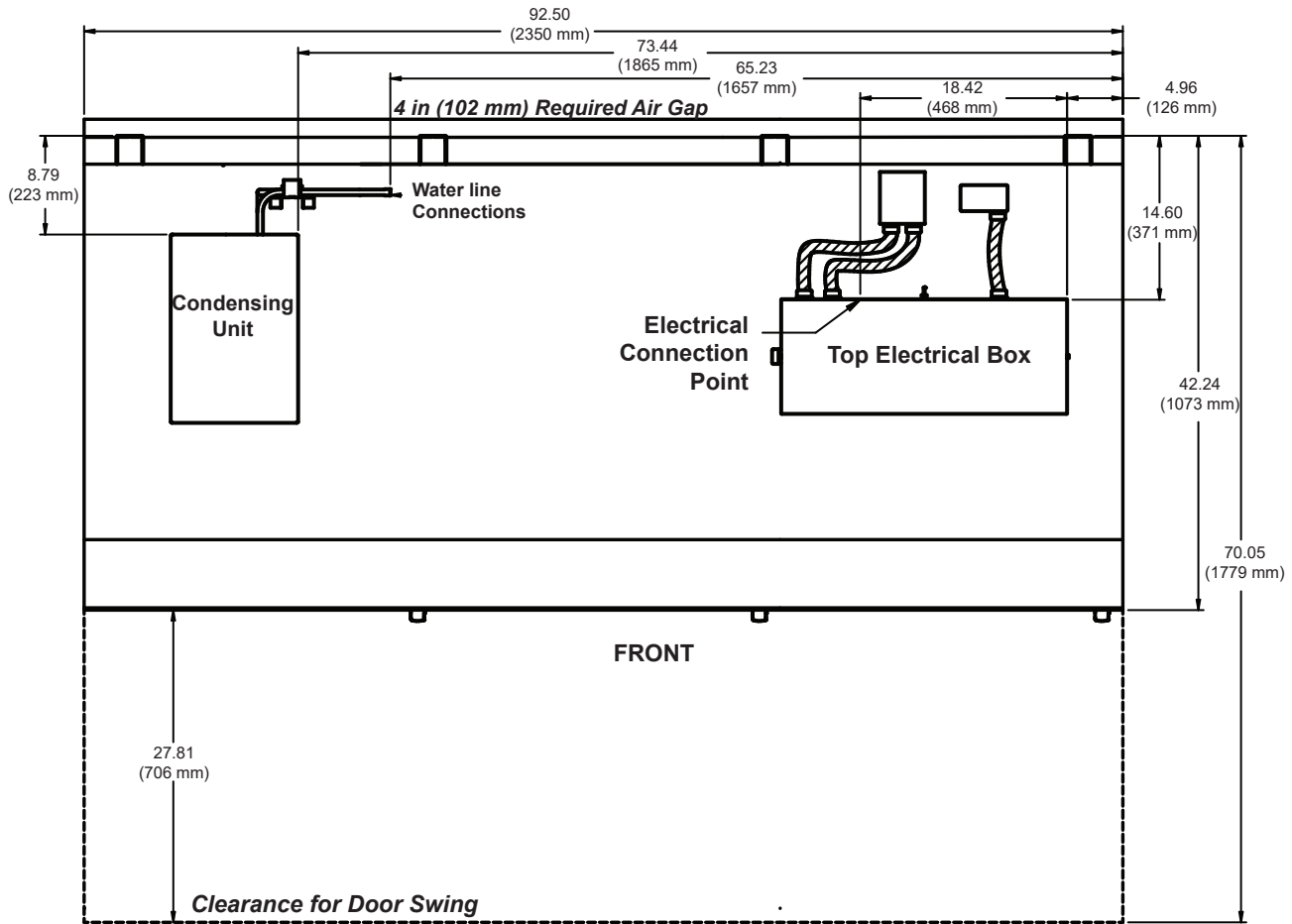
**RL-W
Top Views**

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



RL-W
Frozen Food / Ice Cream

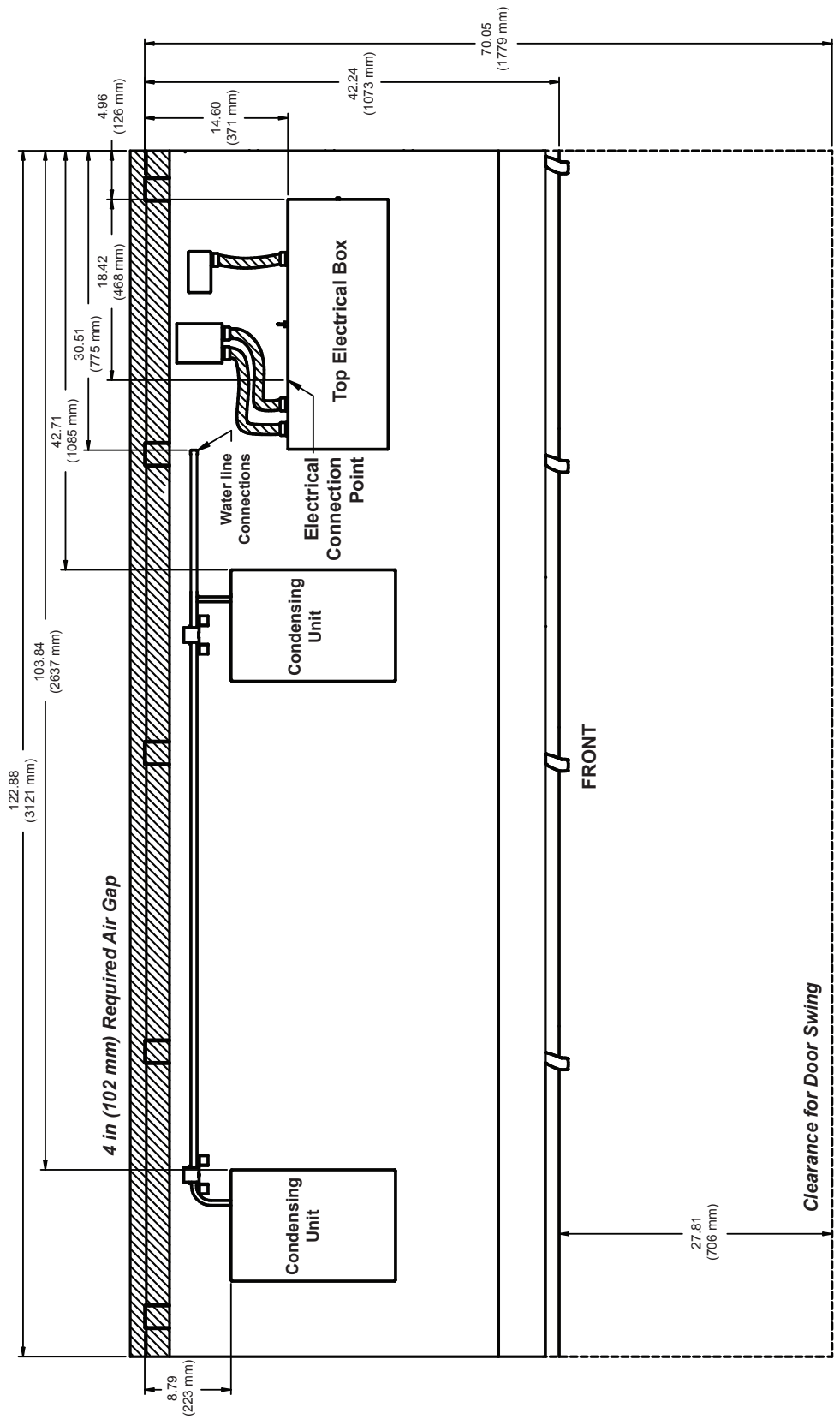
RL-W
Top Views



RL3W TOP VIEW

**RL-W
Top Views**

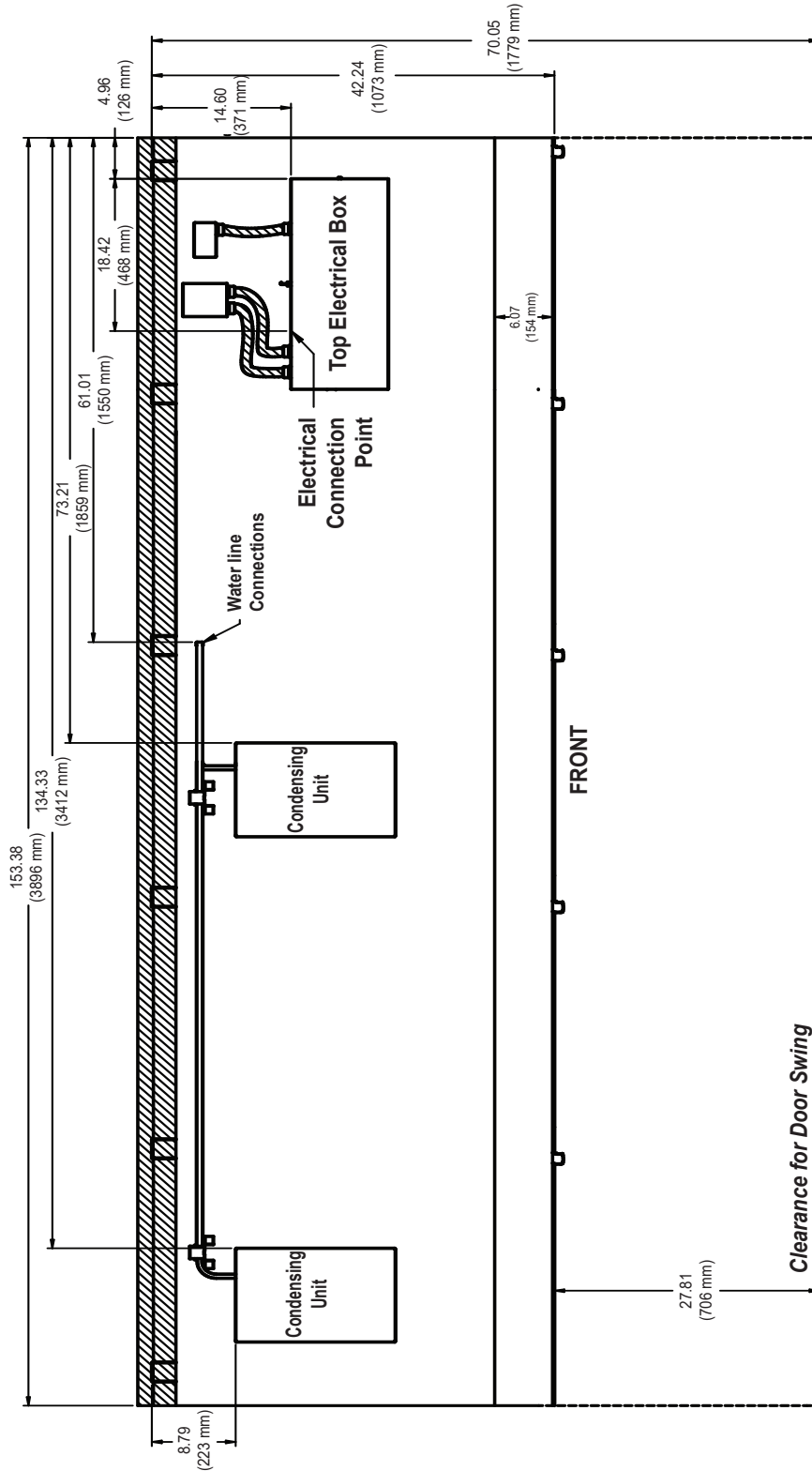
**RL-W
Frozen Food / Ice Cream**



RL4W TOP VIEW

RL-W
Frozen Food / Ice Cream

RL-W
Top Views



RL5W TOP VIEW



Scan QR code to
access product
information on your
mobile device.

Revision History

Revision C: May 2018: Updated document to new format.

Revision D: August 2018: Added 3 door 5 door data.

Revision E: January 2019: Updated refrigeration and electrical data. Added new part numbers to Replacement Parts List. Updated wiring diagrams.

Revision F: February 2019: Added wiring diagrams.