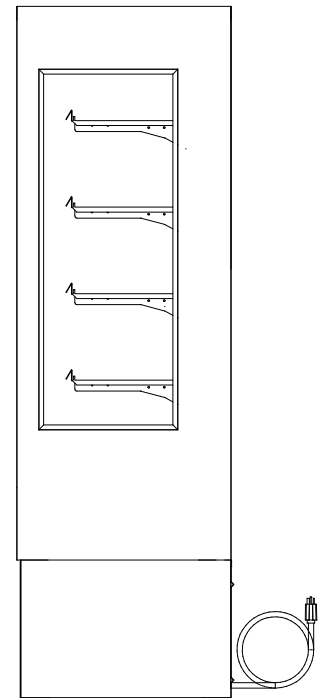
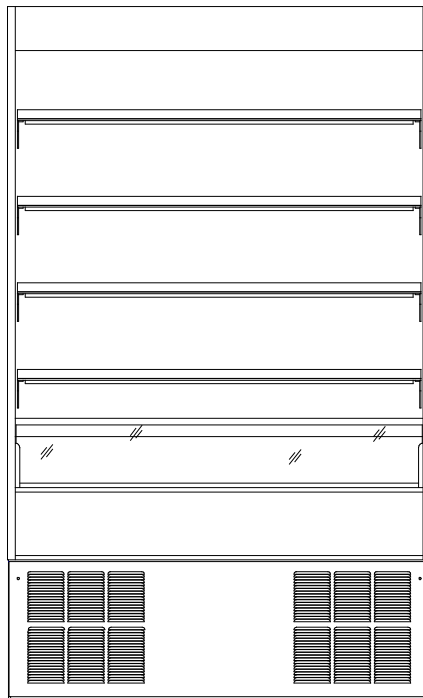
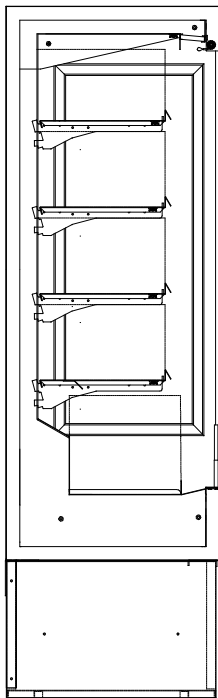


RSSL378, RSSL478, RSSL578, RSSL678
RSSL360, RSSL460, RSSL560, RSSL660
Self-Contained & Remote Models
NSSL378, NSSL478, NSSL578, NSSL678
Non-Refrigerated

**INSTALLATION & OPERATION
INSTRUCTIONS**



KEEP THIS MANUAL FOR FUTURE REFERENCE

Engineering and technical data are subject to change without notice.

FEDERAL INDUSTRIES
Toll Free 1(800) 356-4206

215 FEDERAL AVE
WI Phone (608) 424-3331

Belleville, WI 53508
Fax: (608) 424-3234

CONTENTS

INTRODUCTION	4
WARNING LABELS & SAFETY INSTRUCTIONS.....	5
PRE-INSTALLATION PROCEDURES	6
Inspection For Shipping Damage	6
INSTALLATION INSTRUCTIONS.....	6
Locating The Display Case	6
Grill Removal.....	6
Removing Case From Shipping Skid	7
Removing Packaging Material	7
Leveling The Case.....	7
Condensate Evaporator.....	7
Lights.....	8
ELECTRICAL CONNECTION & GROUNDING INSTRUCTIONS.....	9
Electrical Supply Wiring	9
Grounding Requirements	9
Optional permanent connection	9
OPERATING INSTRUCTIONS.....	10
Initial Start-Up	10
Light Switch & Lights.....	10
LED Light Replacement	10
Digital Display.....	10
Placing Product in Case.....	10
Energy Saving Night Curtain.....	10
Electronic Temperature Control	11
Powering On Control.....	11
Adjusting Set Point.....	12
Error Codes.....	13
Optional Electronic Temperature Control	14
Powering On Control.....	14
Adjusting Set Point.....	15
Error Codes.....	15
Temp Probe Common Resistance Chart	16
ELECTRONIC CONTROL FUNCTIONALITY	17
Electronic Control.....	17
Operation	17
Defrost Cycle.....	18
Control Factory Setting	18
Control Display.....	19
Minimum Run Timer Feature	19
Maximum Run Timer Feature	19

REFRIGERATION OPERATION	19
Self-Contained Refrigeration Operation	19
Dual Pressure Control (Self-Contained Models Only)	19
Remote Refrigeration	20
Electronic Expansion Valve (EEV)	20
Remote Refrigeration Operation	21
CLEANING INSTRUCTIONS	22
Cleaning The Condenser Coil	22
Cleaning The Condensate Pump	22
Cleaning The Acrylic Air Deflector.....	23
Daily Cleaning.....	23
Weekly Cleaning.....	24
SHELVES	25
Installation & Removal.....	25
SERVICE INFORMATION.....	26
Pre-Service Checklist	27
Special Service Situations	28
SALE & DISPOSAL	28
Owner Responsibility	28
REFRIGERATION & ELECTRICAL DATA	29
RSSL378/360	29
RSSL478/460	30 & 31
RSSL578	32 & 33
RSSL678	34 & 35
NSSL378, NSSL478, NSSL578, NSSL678	36
REPLACEMENT PARTS	37 thru 44
RSSL DISPLAY AREA & VOLUME.....	45
WIRING DIAGRAMS.....	46 thru 56

INTRODUCTION

Thank you for purchasing a Federal Industries Merchandiser. This manual contains important instructions for installing and servicing the RSSM, Refrigerated Self-Service Merchandisers. A repair parts list is also included in the manual. Read all of these documents carefully before installing or servicing your case.



NOTICE

Read this manual before installing your case. Keep this manual and refer to it before doing any service on the equipment. Failure to do so could result in personal injury or damage to the case.



NOTICE

Installation and service of the electrical components in the case must be performed by a licensed electrician.

The portions of this manual covering components contain technical instructions intended only for persons qualified to perform electrical work.



DANGER

Improper or faulty hookup of electrical components in the case can result in severe injury or death.

All electrical wiring hookups must be done in accordance with all applicable local, regional, or national standards.

NOTE: UNIT MUST BE GROUNDED

REGISTRATION & SERIAL NUMBER

It's important to keep a record of the model and serial number of your merchandiser for warranty and part identification. Please write them here for your quick reference.

Register your product online! Visit our website at www.federalindustries.com and register your product today.

Case Model _____ Serial Number _____

We're here to provide you with the best possible experience with your new product, however, we cannot cover everything about your merchandiser in this manual, so if you have any additional questions or issues, please see the SERVICE INFORMATION PAGE to find who you should contact.

WARNING LABELS AND SAFETY INSTRUCTIONS



This is the safety-alert symbol. When you see this symbol on your case or in the manual, be alert to the potential for personal injury or damage to your equipment.

Be sure you understand all safety messages and always follow recommended precautions and safe operating procedures.



NOTICE TO EMPLOYERS

You must make sure that everyone who installs, uses, or services your case is thoroughly familiar with all safety information and procedures.

Important safety information is presented in this section and throughout the manual. The following signal words are used in the warning and safety messages:

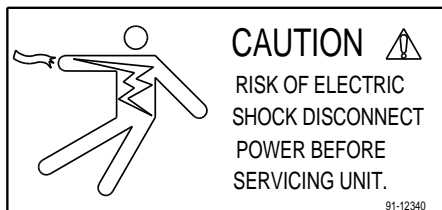
DANGER: Severe injury or death will occur if you ignore the message.

WARNING: Severe injury or death can occur if you ignore the message.

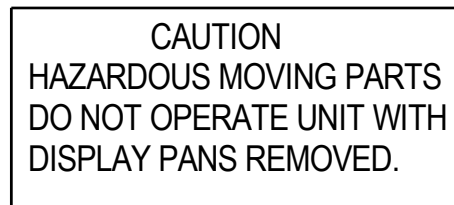
CAUTION: Minor injury or damage to your case can occur if you ignore the message.

NOTICE: This is important installation, operation, or service information. If you ignore the message, you may damage your case.

The warning and safety labels shown throughout this manual are placed on your Federal Industries case at the factory. Follow all warning label instructions. If any warning or safety labels become lost or damaged, call our customer service department at 1(800) 356-4206 for replacements.



This label is located on the back of the display case and on the front of the case behind the access panel.



This label is located below the display pan.

PRE-INSTALLATION PROCEDURES

Inspection For Shipping Damage

You are responsible for filing all freight claims with the delivering truck line. Inspect all cartons and crates for damage upon arrival. If there is damage to shipping crates, cartons, or if a shortage is found, note this on (all copies) of the Bill Of Lading prior to signing.

If damage is discovered when the case is uncrated, immediately call the delivering truck line and follow-up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damaged item. Crating material must be retained and shown to the inspector from the truck line.

INSTALLATION INSTRUCTIONS

Locating the Display Case NOTE: This case is designed for indoor use only.

The case should be **located** where it is not subjected to the direct rays of the sun, heating ducts, grills, radiators, or ceiling fans, nor should it be located near open doors or main door entrances. Avoid locations where there is excessive air movement or air disturbances and avoid high humidity locations such as near cases with water misting or fogging devices.

The condenser air inlet is located in the front of the case. Do not block this inlet and do not locate the air inlet near a source of heat. Clearance of 6" minimum must be maintained at the back of the case for condenser discharge air. Clearance at the top of the case should also be at least 8".

Do not build this unit into an alcove and do not locate where condenser discharge air cannot escape or where warm condenser air is allowed to re-circulate.

Grill Removal



WARNING: Electrical shock hazard. Do not operate unit with panels removed.

Must remove front and rear base grills for merchandiser installation. The front base grill is secured with fast lead captive screws, and the rear base grill is secured with self threading screws.

Both base grills must be replaced after merchandiser installation. Base grills must be in place for proper operation of the merchandiser.

Removing Case From Shipping Skid



CAUTION: If a Johnson bar or pry bar is used to move the case, make certain that the case is lifted under the welded steel frame, and not by the end panels of the case. Damage to the ends will result from lifting under the end panels.

Move the case as near as possible to the final location before removing it from the shipping skid. Having removed the front and rear compressor compartment grills. Remove the (three or four sets of bolts, nuts, and washers depending on case size) that secure the case to the shipping skid. Discard these bolts, nuts, and washers.

Removing Packaging Material

Remove bubble wrap and packing material for all shelves, etc. If it is necessary to remove tape residue from various materials, use cleaning compounds recommended in the cleaning section of this manual.

Leveling the Case

The case must be level for proper drainage of defrost water to the condensate evaporator or condensate pump.

Check the level of the case along the front rail and along the top of the display pan. Shim under the case frame as needed to level the case. It is recommended that the leveled case be sealed to the floor with an NSF Listed Sealant.

Condensate Evaporator



NOTICE: Steam from the condensate evaporator may be visible around the base of the merchandiser during normal operation.

This merchandiser may be furnished with an electric condensate evaporator, or a electric condensate pump. Plumbing connections are not required, unless merchandiser is specifically ordered without a condensate evaporator or pump.

The condensate evaporator can be removed from the merchandiser and the condensate drain can be plumbed to a external drain to conserve energy. To remove the condensate evaporator, disconnect the wires at the condensate evaporator. This must be done by a qualified electrician.

This is an open merchandiser and can produce a large amount of condensate water. To ensure that adequate evaporator capacity is available, a high wattage heater is used.

Make sure that the condensate drain line has not been dislodged during shipment and that the drain trap terminates properly over the water reservoir.

Lights

Standard Top Light

The case comes with one standard top light which is internally wired to the power source. The light switch is located on the left top ceiling behind the air discharge honey comb.

Optional Shelf Lights

If optional shelf lights are furnished, make certain that the shelf light cords are completely inserted into the sockets in the back panel and end of led lights or lights will not work

The power supply used on this case allows for removal of one or more shelf lights without affecting the remaining lights.

When plugging or unplugging light cords, turn the light switch to the "off" position.

ELECTRICAL CONNECTION AND GROUNDING INSTRUCTIONS

Electrical Supply Wiring

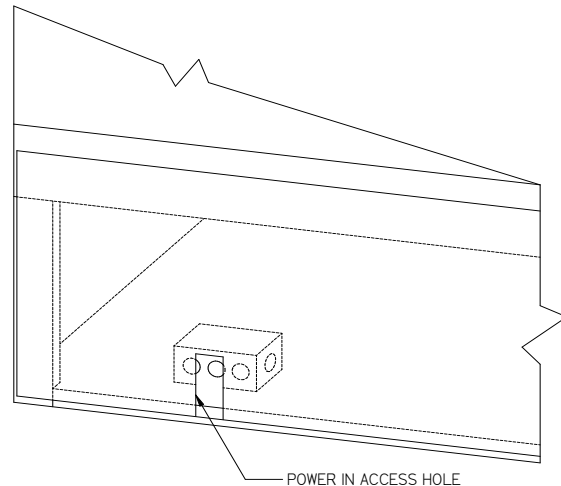
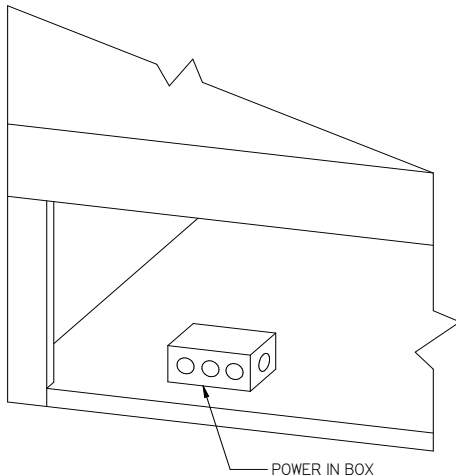


DANGER: Improper or faulty hookup of electrical components in the display case can result in severe injury or death.

THIS CASE MUST BE GROUNDED

Optional Permanent Connection

- Only a licensed electrician must perform all case electrical connections.
- All electrical wiring hookups must be done in accordance with all applicable local, regional, or national electrical standards.
- A separate circuit for each display case is required to prevent other appliances on the same circuit from overloading the circuit and causing malfunction.
- The electrical service must be grounded upon installation.
- See the electrical data plate located at the rear of the case for circuit load and wire current capacity.
- Standard Base Electrical Connection: The electrical connection box is accessible from the rear of the case. Power Supply Wiring can be routed through the floor of the base frame or through the access hole in the rear of the unit. Remove electrical box cover to access electrical connections.



OPERATING INSTRUCTIONS

Initial Start-Up

-After completing the items in the installation section of this manual. The case is ready to be put into service. On self-contained models, the service valves on the refrigeration system are back-seated when the unit leaves the factory.

-RSSL cases are designed to operate at 40° to 41° F. under ambient conditions not to exceed 75° F. and 55% relative humidity.

-Nearly all open refrigerated merchandisers operate better when loaded with product than when empty. If a check is made of the case operating temperatures, perform this check with product in the case.

-Open refrigerated merchandisers are not intended as storage refrigerators and will not “pull down” room temperature products efficiently. Load case interior with pre-chilled product only.

Light Switch And Lights

The light switch is located in the ceiling. This switch operates the interior lights only. If optional shelf lights are installed, they are also controlled by this switch.

Led Light Replacement

The light is attached to the shelf with plastic spring clips. To remove a light, un plug cord from end of bulb and pull down.

When replacing lights, use direct equivalents to the original bulbs.

Digital Display

This unit is equipped with an electronic temperature control with Digital Display.

The Display show a number 1 thru 9 to indicate temperature level.

Placing Product In Case

Do not overload the case with product to a point where the top air discharge grill or the bottom air intake grill are blocked, or where the air curtain created by the discharge air is blocked.

LOAD CASE INTERIOR WITH PRE-CHILLED 38deg OR COLDER PRODUCT ONLY.

Energy Saving Night Curtain

This unit is equipped with an energy saving night curtain.

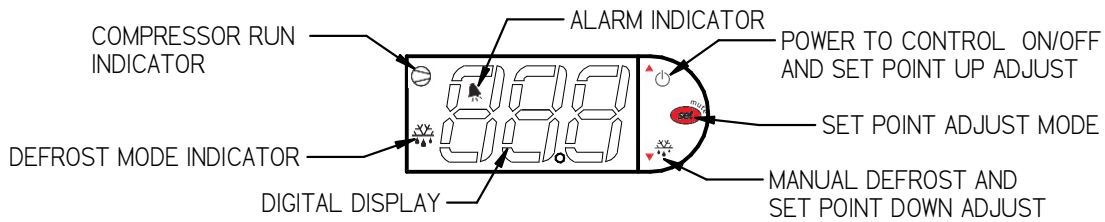
The night curtain is located in the top inside front of the canopy.

To use the night-curtain pull down and latch on front panel just below the clear acrylic air deflector when case is not in use.



NOTICE: This refrigerated display case is designed to operate in a maximum environment of 75 DEG. F and 55% relative humidity. Exceeding these limits will cause poor case



Electronic Temperature Control





Button Overview

	Press and hold this button for three seconds to turn system on (if off) or off (if on). Also used to adjust set point when in set point adjust mode
	Press to enter set point adjust mode, confirm set point changes, and mute alarms.
	Press and hold this button for three seconds to initiate a manual defrost (and cancel defrost if initiated), also adjusts set point down when in set point adjust mode





Powering on control

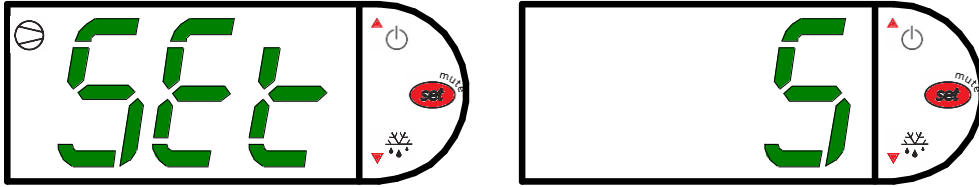
To turn refrigeration control power on, press and hold  for approx. three seconds. The display will read "On" while the button is depressed. When the control powers on, the display will read the current set point (a number "1" thru "9"). The compressor run indicator  will illuminate on the display, meaning that the compressor is running. (Note: the control may already be in the on mode when shipped from factory).

To turn refrigeration control power to off, press and hold  for approx. three seconds. The display will read "Off" while the button is depressed. When the control powers off the display will flash back and forth between the relative current case temperature and "Off". The compressor run indicator  will be off on the display. When refrigeration control is in the off-mode cabinet lights and evaporator fans will still operate, but the compressor will not turn on causing the case to gradually reach room temperature.







Adjusting the set point

The set point is what determines how cold the display case will hold food and beverage. To adjust the set point press and hold the  button approx. three seconds until the display begins to flash a number. Then press the  button to scroll number up (colder) or press the  button to scroll number lower (warmer). There are nine (9) available set point numbers, the higher the number of the set point, the colder the display case will run, with setting “9” being the coldest and setting “1” being the warmest. Once you have chosen your desired setting press the  button again to confirm your choice.




Entering manual defrost mode

The control is programmed to automatically initiate a defrost by two different methods, involving time and temperature, as outlined in the “Defrost Cycle” section (Pg. **Error! Bookmark not defined.**) of “ELECTRONIC CONTROL PARAMETERS AND EXPLANATION OF OPERATION.” While it is uncommon that the automatic defrost cycles would insufficiently defrost the case, a Manual Defrost mode is available if this situation arises. Note: The control will not allow the initiation of a manual defrost within 30 minutes of completion of another defrost cycle, manual or automatic.

To initiate a manual defrost press and hold the  button approx. three seconds. The control will read “dEF” while the button is being held. The defrost is initiated when the defrost mode indicator  illuminates on the display. The control display will then return to reading the case temperature. When the defrost mode indicator  turns off the defrost is complete and the compressor will turn back on illuminating the compressor run indicator .



Error codes

It is possible for error codes to be displayed on the control screen. In the event of a malfunction an alarm will sound and the alarm indicator  will be displayed on the display. An error code or codes will flash intermittently on the display. If there are multiple codes, the display will continuously cycle through them. The following photo shows error code “E0” as an example.



Mute: You may mute the alarm by pressing and releasing the wrench button. The red ringing bell and all error codes will still be displayed. When the fault is remedied the control will return to normal operation and will automatically clear the codes from the display.






Carel Control

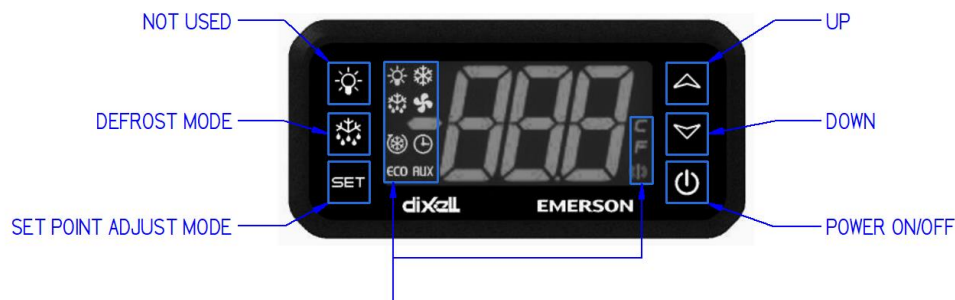
E0 = Air sensing probe - Open or shorted

E1 = Evap. coil probe - Open or shorted






Code	Description	Cause	Resolution
E0	Temperature probe error	Probe signal is interrupted or short-circuited	Check to ensure probe wires and quick disconnect are secure in control.
E1	Defrost probe error	See E0	Check probe resistance to table below. If 0 resistance is present check wiring insulation. If infinite resistance is present check for breaks in wiring (meter will likely read overload or very high in the mega-ohm range). Ensure that probes are wired per the wiring diagram provided. Replace probe if other remedies fail, or if probe resistance deviates from “Table 3” below
EE	Unit parameter reading error	Operating conditions	Remedy abnormal operating conditions. The control is rated to operate in a range of 14 to 122°F (-10 to 50°C) and less than 90%RH non-condensing.
EF	Operating parameter reading error	See EE	Replace control if problem persists.

Alternate Electronic Temperature Control

	Power on/off: Press and hold to turn system on or off.
	Set: Press and hold to enter the set point adjustment menu.
	Defrost: Press and hold to initiate a manual defrost.
	Up: Change set points when in set point adjustment menu. When not in set point menu, shows maximum temperature of air discharge probe.
	Down: Change set points when in set point adjustment menu. When not in set point menu, shows minimum temperature of air discharge probe.



Display indication symbols

	On	Compressor on
	Flashing	Minimum compressor off time in progress
	On	Unit in defrost mode
	Flashing	Defrost delay
	On	Condenser fan running
	Flashing	Minimum condenser fan off time in progress
	On	Alarm occurring. See error code section below.
	On	Indicates temperature unit of measure.

Powering on control

To turn refrigeration control power on, press and hold “⏻” for approx. three seconds. The display will read the probe temperature when on. When the control powers on, the display will read the current probe temperature. The compressor and condenser fan run indicators (* & ♻️) will illuminate on the display, meaning that the compressor and condenser fan are running. (Note: the control may already be in the on mode when shipped from factory).

To turn refrigeration control power to off, press and hold “⏻” for approx. three seconds. When the control powers off the display will read “OFF”. When refrigeration control is in the off-mode cabinet lights and evaporator fans will still operate, but the compressor will not turn on causing the case to gradually reach room temperature.

Adjusting the set point

The set point is what determines how cold the display case will hold food and beverage. To adjust the set point press the “SET” button. Then press “^” button to increase the set point number (colder) or press the “v” button to decrease the set point number (warmer). There are nine (9) available set points numbers, the higher the number of the set point, the colder the display case will run, with setting “9” being the coldest and setting “1” being the warmest. Once you have chosen your desired setting press the “SET” button again to confirm your choice. The control cutout temperature for the selected setpoint will briefly be displayed if the setpoint was changed.

Entering manual defrost mode

The control is programmed to automatically initiate a defrost by two different methods, involving time and temperature, as outlined in the “Defrost Cycle” section (Pg.15) of “ELECTRONIC CONTROL FUNCTIONALITY.” While it is uncommon that the automatic defrost cycles would insufficiently defrost the case, a Manual Defrost mode is available if this situation arises.

Note: The control will not allow the initiation of a manual defrost within 30 minutes of completion of another defrost cycle, manual or automatic.

To initiate a manual defrost press and hold the “❄” button approx. three seconds. The defrost is initiated when the defrost mode indicator ❄ illuminates on the display. The control display will then return to reading the probe temperature. When the defrost mode indicator ❄ turns off the defrost is complete and the compressor will turn back on automatically and the compressor and condenser fan indicator will be shown (* & ❄).

Control Alarms

It is possible for error codes to be displayed on the control screen. In the event of a malfunction an alarm will sound and the alarm indicator (🔔) will be displayed. An error code or codes will flash intermittently on the display. If there are multiple codes, the display will continuously cycle through them.

Mute: You may mute the alarm by pressing any button. The red alarm symbol (🔔) and all error codes will still be displayed. When the fault is remedied, the control will return to normal operation and will automatically clear the codes from the display.

Error Codes

<u>Display</u>	<u>Description</u>	<u>Cause</u>	<u>Resolution</u>
“P1”	Air discharge temperature probe failure	Probe signal is interrupted or short-circuited	<ul style="list-style-type: none">• Check to ensure probe wires and quick disconnect are secure in control.• Check probe resistance to table below. If 0 resistance is present, check wiring insulation. If infinite resistance is present, check for breaks in wiring (meter will likely read overload or very high in the mega-ohm range).• Ensure that probes are wired per the wiring diagram provided. Replace probe if other remedies fail, or if probe resistance deviates from “Table 3” below.
“P2”	Defrost temperature probe failure		

TEMPERATURE PROBE COMMON RESISTANCE CHART			
Probe Temp	Maximum Resistance [Ω]	Normal Resistance [Ω]	Minimum Resistance [Ω]
32°F(0°C)	27.83	27.28	26.74
77°F(25°C)	10.1	10	9.9
212°F(100°C)	1	0.97	0.94

ELECTRONIC CONTROL FUNCTIONALITY

Electronic Control

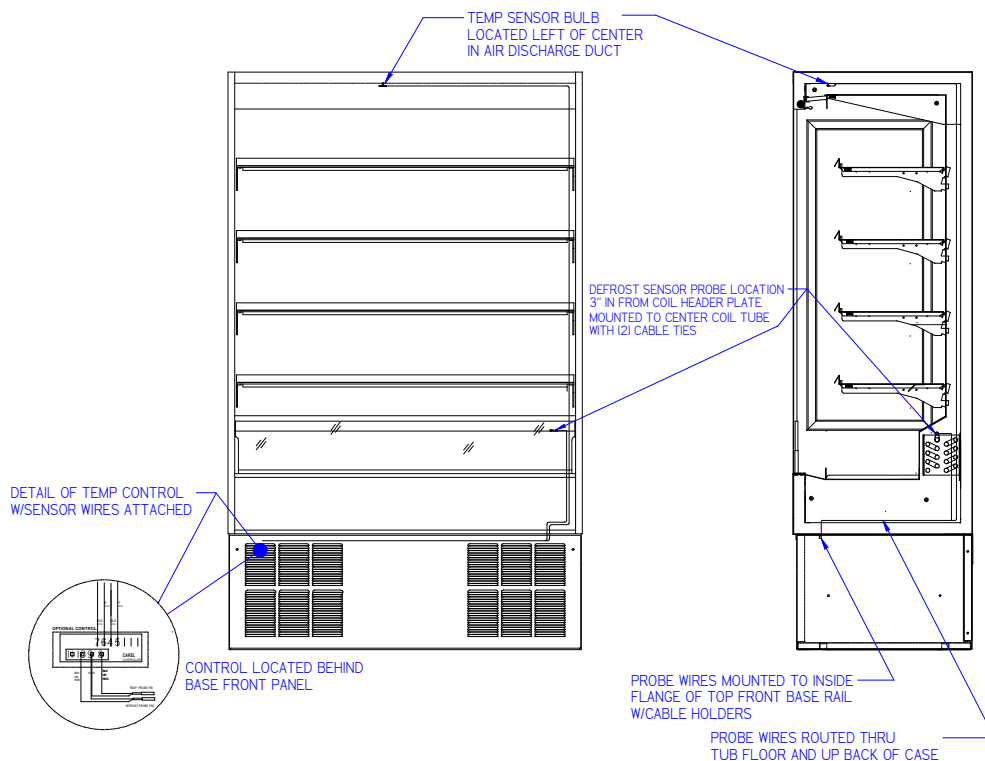
This unit is equipped with an electronic temperature control. The control parameters are set at the factory and cannot be manually changed in the field. Control parameter changes can only be made by downloading a new set of parameters using a program chip supplied by Federal Industries. The pre-set control parameters are listed on the chart in the Settings Chart below.

Operation

The control uses two sensors, one located in the air stream and one located on the evaporator coil. The sensor located in the air stream is referred to as the temperature control sensor. The sensor located on the evaporator coil is referred to as the coil sensor.

The temperature control sensor is located inside the top air duct behind the honeycomb material and is labeled (TEMP). The sensor location is critical for proper operation on the unit. Do not move or relocate this sensor.

The coil sensor is strapped to the evaporator coil and is labeled (DEFROST). This sensor location is critical for proper operation of the unit. Do not move or relocate this sensor.



The temperature control is set to cut in at 39 degrees F. The Temp control cuts out at 24 degrees F at the coldest setting 'COLD' and 34 degrees F at the warmest setting, '1' on the control readout.

Defrost Cycle

The electronic control is programmed to initiate defrost by two different methods. There are (3) programmed defrost cycles in the control which will initiate a defrost cycle every 8 hours. The unit does not have a time clock so the defrost cycles cannot be set for any specific time of day.

The electronic controller uses time to initiate the defrost cycle, and temperature to terminate the defrost cycle. The controller also has an 'On demand' defrost feature that will initiate a defrost cycle when the temperature differential between the evaporator temperature and the air temperature is more than 15 degrees for 5 minutes after 30 minutes into the refrigeration cycle.

Control Factory Settings

The control parameters are set at the factory and cannot be manually changed in the field. Control parameter changes can only be made by downloading a new set of parameters using a program chip supplied by Federal Industries

TAB	PARAMETER DESCRIPTION	RSSM
CONFIGURATION	Controller Operation Temperature Units	Degrees Fahrenheit
	Defrost Termination Method	Evaporator Sensor
SET-POINTS	Setting "1" Cut-In (Warmest Setting)	39°F
	Setting "1" Cut-Out (Warmest Setting)	34°F
	Setting "2" Cut-In	39°F
	Setting "2" Cut-Out	32°F
	Setting "3" Cut-In	39°F
	Setting "3" Cut-Out	31°F
	Setting "4" Cut-In	39°F
	Setting "4" Cut-Out	27°F
	Setting "5" Cut-In	39°F
	Setting "5" Cut-Out	25°F
	Setting "6" Cut-In	39°F
	Setting "6" Cut-Out	23°F
	Setting "7" Cut-In	39°F
	Setting "7" Cut-Out	22°F
	Setting "8" Cut-In	39°F
	Setting "8" Cut-Out	21°F
	Setting "9" Cut-In (Coldest Setting)	39°F
	Setting "9" Cut-Out (Coldest Setting)	20°F
COMPRESSOR	Compressor Minimum On Time	5 minutes
	Compressor Maximum On Time	60 minutes
DEFROST	Defrost Termination Temperature	45°F
DEFROST	Time to First Defrost (hh:mm)	8 hr
	Time to subsequent Defrost	8 hr
	Defrost Max Duration	30 minutes

Control Display

The control display is located in the unit base. It is programmed to display the current set point associated with the control sensor located inside the air duct at the top of the case.

Minimum Run Timer Feature

The unit controller is programmed to have the condensing unit run a minimum of 5 minutes, regardless of the control temp being satisfied. If the temperature control reaches the cut out set point before 5 minutes, the minimum run time setting in the control will keep the unit in a run cycle mode until the timer reaches 5 minutes. The refrigeration cycle will be off until the temperature control cut in temperature is reached.

This timer typically comes into effect in low ambient conditions where the unit may cycle too frequently to maintain proper product temperature.

Maximum Run Timer Feature

The unit controller is programmed to have the condensing unit run a maximum of 60 minutes. If the unit has not reached cut out temperature setting in 60 minutes, the unit goes into on off cycle. This typically comes into effect in high ambient temperature and relative humidity conditions.

REFRIGERATION OPERATION

Self-Contained Models

Refrigeration R404A Charge Prior To 01/01/2020	See Refrigeration And Electrical Data Pages
Refrigeration R449a Charge After 01/01/2020	See Refrigeration And Electrical Data Pages

The self-contained models are shipped from the factory with a completely operational 404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control outlined in the control section of this manual.

Note: The condenser fan is factory wired to run continuously.

Dual Pressure Control (Self-Contained Models Only)

The dual pressure control is used as a safety device and is factory set. The pressure control works on a differential. The low-pressure side is a safety to protect the compressor in the case of refrigerant loss. The high-pressure side is a safety to protect from system failure causing too high of system pressure.

The high side of the pressure control is factory set to 400psi and is not adjustable.

Low side setting for the R404a cases are set at 40psi differential for the cutout and 60psi for the cut-in.

Remote Operation

Electronic Expansion Valve (EEV) After 1/20

A traditional TXV uses springs and a temperature bulb to open and close a valve port that controls the flow of refrigerant entering the evaporator coil. An electronic expansion valve (EEV) controls the refrigerant flow much more precisely, increasing the performance and efficiency of the refrigeration system. The EEV controls the flow of Refrigerant by opening and closing the valve port based on the response to signals sent to the EEV by an electronic controller. The electronic Control bases these signals by processing information provided from a temperature sensor and pressure transducer located on the discharge side of the evaporator coil.

These sensors monitor the evaporator superheat and protects the compressor from any liquid flood back under low superheat conditions.

EEV Controller Settings

The electronic expansion valve controller also allows the use of different types of refrigerants without the need to change the expansion valve.

The controller is set from the factory to run on R449a refrigerant and will not need any changes to the control unless another refrigerant is used.

Note: Check your State and Local regulations for approved refrigerants for your install location. Federal Industries is not liable for any alternate refrigerants used.

The control is located on the base floor on the left-hand side front view .

Note: Never change any of the other setting other than the refrigerant type. It may also be necessary to change the superheat setting only when using a different refrigerant.



Indicator lights	
Red light	- critical alarm (system is NOT running)
Yellow light	- non-critical alarm (system running)
Green light	- compressor on
Green blinking	- compressor waiting on timer to start/stop

Changing Refrigerant

- Access the set point mode by pressing and holding the **ENTER** button until Ctl displays on the screen.
- Use the **▲** up or **▼** down arrows to advance through the available set points until rFG displays on the screen and press the **ENTER** button.
- Use the **▲** up or **▼** down arrows until the desired refrigeration displays on the screen and press and hold the **ENTER** button until rFG once again displays on the screen.
- Press the **BACK** to return to escape the settings menue.

Changing Superheat

- Access the set point mode by pressing and holding the **ENTER** button until Ctl displays on the screen.
- Use the **▲** up or **▼** down arrows to advance through the available set points until SSP displays on the screen and press the **ENTER** button.
- Use the **▲** up or **▼** down arrows to set the desired superheat displays on the screen and press and hold the **ENTER** button until SSP once again displays on the screen.
- Press the **BACK** to return to escape the settings menue.

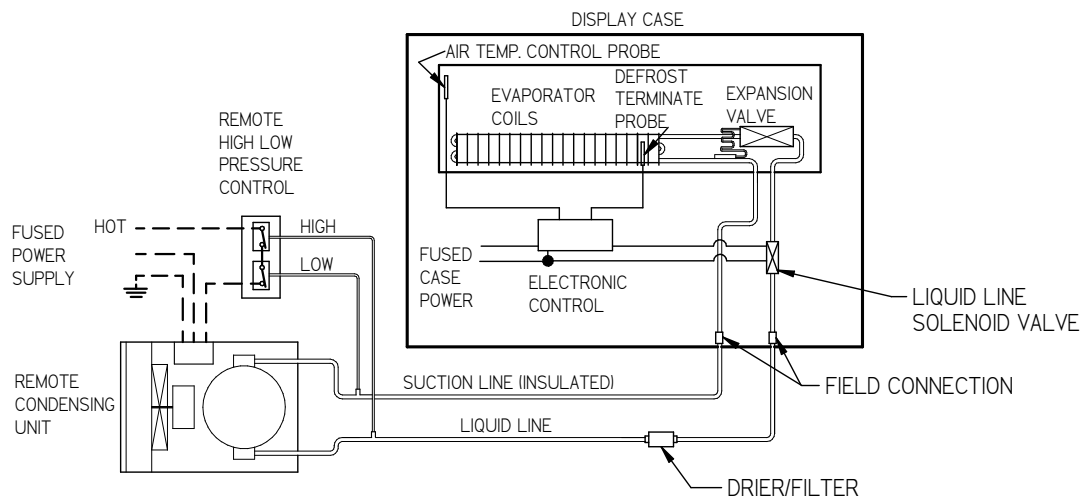
Remote Refrigeration Operation Use pressure gauges to set pressure control.

Refrigeration R449A Charge	CHARGED IN FIELD
Remote Low Press. Switch Cut In	50 psi
Remote Low Press. Switch Cut Out	15 psi
Adjustable Head Master	200 psi
Remote High Press. Switch Cut Out	400 psi

The remote models are designed to use 449A refrigerant and shipped from the factory with the evaporator coil, expansion valve, and refrigerant solenoid valve. Filter Drier must be installed in the field. The electronic control runs identical to the Self-Contained models except the electronic control opens and closes a refrigeration solenoid valve located on the liquid line instead of turning on and off a compressor. The solenoid valve closes and shuts off the refrigeration flow to the unit and initiates a pump down cycle. This will allow the remote low-pressure switch at the condensing unit to open and shut off the remote compressor.

The condensing unit and pressure controls may be supplied from the factory for remote location installation. The condensing unit must be mounted and wired by the installer. The high low-pressure switch must be wired in series with the compressor power supply as shown in wiring diagram below.

1. Mount condensing unit as close to the remote display case as practical. The refrigeration line should be as short as possible and should not exceed 100 feet.
2. Refrigeration parts between condensing unit and case are typically supplied by installing contractor.
3. Route properly sized and designed refrigeration lines from the condensing unit to the cabinet. Horizontal suction lines should be pitched downward towards the condensing unit at least 1/2" per 10' run to aid the oil drainage. A "P" trap must be installed in the suction line at the foot of every riser to insure oil return. Dry nitrogen should be used through tubing while brazing refrigeration lines.
4. Suction line must be insulated the entire length with Armaflex (or equivalent). Do not run liquid line inside insulation with suction line.
5. If remote control is not supplied by Federal Industries, the remote high/low-pressure control must be mounted, wired and pressures set by the installer.
6. Leak check condensing unit, cabinet, and all connecting tubing. Cabinet and condensing unit tubing should be checked to insure no leaks occurred during shipping or from rough handling. Make certain all refrigeration valves are opened and evacuate system to 500 microns. Charge the system with refrigerant type specified on the data plates.



CLEANING INSTRUCTIONS

Cleaning Condenser Coil



NOTICE:

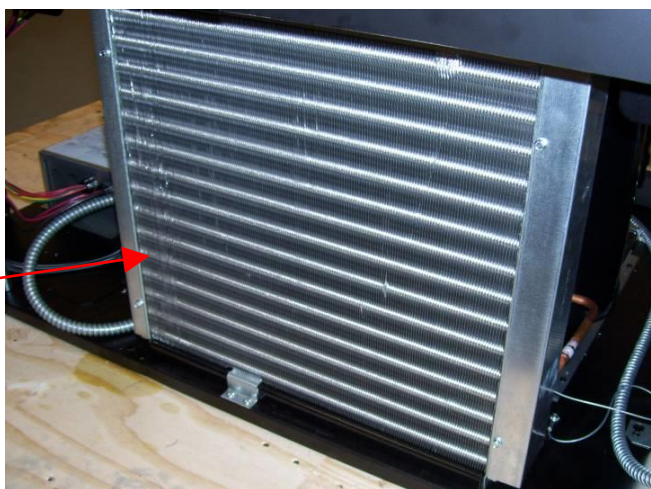
Condenser coil or optional air filter must be cleaned a minimum of twice per month to insure proper refrigeration performance and prevent compressor failure. In some environments, it may be necessary to clean more frequently. **FAILURE TO CLEAN CONDENSER COIL WILL VOID COMPRESSOR WARRANTY.**

It is very important that the Condenser coil or optional air filter is cleaned twice per month to insure proper refrigeration performance and to prevent compressor failure. In some environments, it may be necessary to clean more frequently. Failure to clean condenser coil will void condenser warranty. This procedure is for Self-Contained models. The remote condenser coil must also be cleaned at same intervals.

Cleaning Condenser Coil

Disconnect power to the unit.
Remove the front grill and vacuum the front surface of the condenser coil.
This should be done every two weeks.

VACUUM FRONT
SURFACE OF
CONDENSER COIL

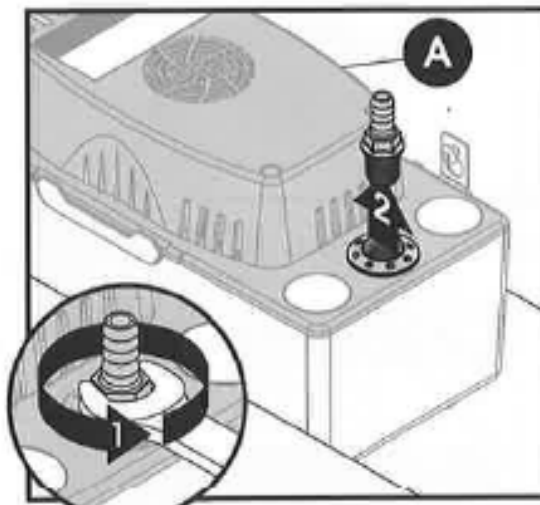


MAINTENANCE AND DISASSEMBLY OF CONDENSATE PUMP

Always disconnect power before performing maintenance. Pump and deck may be removed from tank by pushing tabs located on tank sides away from deck while lifting on pump cover.

Periodically inspect the condensate pump tank to assure it is free of accumulated dirt or sludge. **DO NOT** use solvent cleaners. Clean tank with soap and warm water only. Check valve may be removed for cleaning or replacement by unscrewing with a 9/16" wrench.

Clean inlet and outlet piping.
Reassemble system and check for correct operation.



Acrylic Air Deflector Cleaning



NOTICE: Clear acrylic air deflector requires special washing procedures to prevent hazing and yellowing of material.

NEVER USE paper towels (wet or dry) for cleaning or drying and never use a dry towel.

NEVER USE glass cleaner of any kind.

Lightly dust (not wipe) surface with a damp Micro Fiber towel or chamois. The surface can then be washed using a small amount of dishwashing detergent such as Dawn or Joy and lukewarm water. Use a Micro Fiber towel or chamois, applying only light pressure. The cloth or chamois must be kept free of grit by frequently rinsing. Rinse surface with clear water and dry by blotting with a damp Micro Fiber towel or chamois.

Daily Cleaning

The case should be cleaned thoroughly, as described in the weekly cleaning section, before it is used for the first time.



NOTICE: Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.



NOTICE: Shut off lights and power switches and remove all products from case. Allow sufficient time for the unit to reach room temperature before proceeding with cleaning.



NOTICE: Remove all products from the case before proceeding with cleaning procedure.



NOTICE: Acrylic air deflector requires special washing procedures to prevent hazing and yellowing of material. Clean as described in “Acrylic Air Deflector Cleaning” section of this manual.

Note: For major spills or foreign material buildup use complete weekly cleaning instructions.

Note: Detergents are not recommended and do not use abrasive cleaners or pads to prevent scratching of surfaces.

1. Dip rag in warm soapy water and ring out thoroughly. Wipe complete interior of case and dry with soft dry towel.
2. The remaining exterior surface should be wiped down using any ammoniated cleaners or soapy warm water and dried with soft dry towel.
3. **IMPORTANT:** Cleaning the clear acrylic plastic front air deflector requires special care to prevent hazing and yellowing of material. Clean as described in “Acrylic Air Deflector Cleaning” section of this manual.

Weekly Cleaning

**NOTICE:**

Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.

**NOTICE:**

Shut off lights and power switches and remove all products from case. Allow sufficient time for the unit to reach room temperature before proceeding with cleaning.

**NOTICE:**

Remove all products from case before proceeding with cleaning procedure.

**NOTICE:**

Acrylic front air deflector requires special washing procedures to prevent hazing and yellowing of material.

Note: Detergents are not recommended and do not use abrasive cleaners or pads to prevent scratching of surfaces.

1. Remove interior shelving from unit as described in the “Shelving Installation and Removal” section of this manual.
2. Dip rag in warm soapy water and ring out thoroughly. Clean all shelves and shelf brackets and dry with soft dry towel.
3. Lift the display decks up and out of evaporator tub.
4. Clean the display deck(s) using warm soapy water and a brush. Rinse thoroughly and allow dry. Wipe off fan shroud assembly (do not rinse or submerge fan motors).
5. Clean the entire interior of the case using warm soapy water. Wipe off all soapy water with a damp cloth and allow to dry. (DO NOT use solvents such as Acetone, Benzene, Carbon Tetrachloride, and Lacquer Thinners)
- 6. IMPORTANT: Cleaning the clear acrylic plastic front air deflector requires special care to prevent hazing and yellowing of material. Clean as described in “Acrylic Air Deflector Cleaning” section of this manual.**
7. Reassemble all components in reverse order.

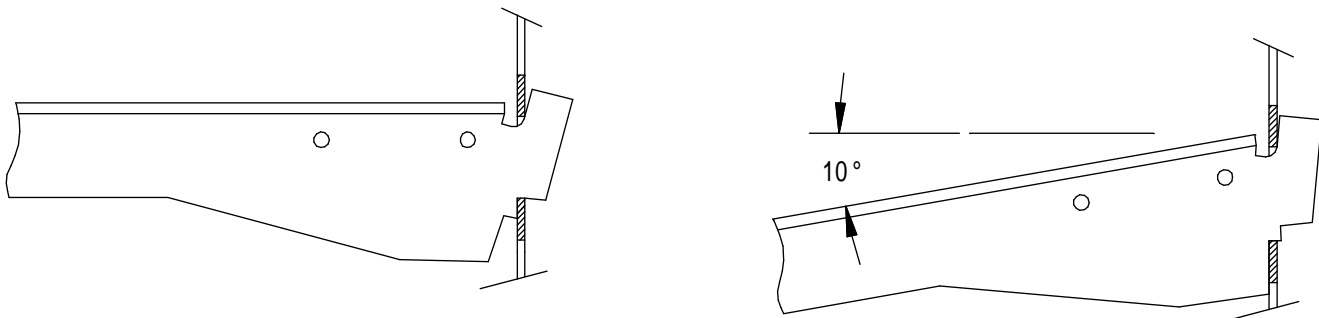
NOTE: Depending on the amount of usage and spillage of foreign material, some fasteners may have to be removed and parts disassembled to allow proper cleaning of the unit.

Shelves

The RSSL has 14" solid metal shelves as standard. These shelves are installed at the factory.

The shelves are adjustable in 1-5/8" increments. To adjust the shelves, first remove the shelf from the shelf brackets. Remove the shelf bracket from the shelf standard and reposition as desired. If optional shelf lights are installed, it will be necessary to unplug the shelf light cord before repositioning the shelf brackets.

The shelves can be installed horizontally or slanted at a 10° downward angle. To change the shelf slant, first remove the shelf from the shelf support. Lift the shelf supports up at the back until the brackets can be repositioned in the shelf standard slots. See diagram below



CAUTION:



Do not place more than 100 lbs. of product on a RSSL3 or RSSL4 Shelf.

Do not place more than 80 lbs. of product on a RSSL5 or RSSL6 Shelf.

Damage to the Shelf Standard may occur if the Shelf is overloaded.

SERVICE INFORMATION

CAUTION
RISK OF ELECTRIC SHOCK

DISCONNECT POWER
BEFORE SERVICING UNIT

Before any service work is performed on the case, make sure all power is disconnected to the case.

To find a service company in your area, please visit our website at www.federalindustries.com. There you can also find self-service tools to help you get the answers you need faster!

For Warranty Service Requests & ALL Technical Support please contact:

- Phone: (800) 356-4206 and choose the Tech Support/Warranty Option
- Email: Service@federalind.com

For Warranty Compressors please contact the Parts Department:

- Phone: (800) 356-4206 and choose the Warranty Parts Option
- Email: Parts@Federalind.com



Federal Industries has partnered with Parts Town for ALL Non-Warranty Part Identification, Pricing, Lead Times, Orders & Freight Quotes. Please contact Parts Town directly if you need parts:

- Website: PartsTown.com
- Email: CustomerService@PartsTown.com
- Phone: 833-809-8188



Pre-Service Checklist

You may avoid the cost and inconvenience of an unnecessary service call by first reviewing this checklist of frequently encountered situations that can cause unsatisfactory case performance.



CAUTION: Before servicing case turn off power at the main breaker of fuse box.

Case Does Not Operate

- Check for disconnected power supply.
- Check for tripped breaker or blown fuse.

Case Temperature Too Warm

- Check that top air discharge grill and/or bottom air intake grill are not blocked.
- Check for a blocked or dirty condenser coil.
- Check that there are no outside air disturbances in or around cases. These disturbances can be caused by nearby doors or entrances, overhead ceiling fans or air diffuser vents, direct sunlight, or other heat sources. The location of open refrigerated merchandisers is critical to case performance.
- Make sure that warm product is not being installed inside the case. All product must be pre-chilled prior to loading for proper case performance.
- Check temperature/pressure control for proper settings.
- Check cold air flow. Lack of or no air flow may indicate a blocked evaporator coil or defective evaporator fan motor. Contact a qualified service company if there is no air flow inside case.

Lights Do Not Operate

- Check that light switch located in top light housing is “on”.
- Check that all optional shelf light cords are securely plugged into sockets in back panel.
- Check that all light bulbs are properly seated in the light holders.

Overflow of Condensate Evaporator

- Check that drain line is properly located over the water reservoir.
- Check that store conditions do not exceed 75° and/or 55% relative humidity for prolonged periods of time.
- Check that condensate pan heaters are operating. Exterior base of condensate pan should be evenly warm on both long sides of pan.

Special Service Situations

There are rare occasions when the refrigerant charge must be evacuated from a case in order to perform service work. In those situations, Federal Industries recommends that the refrigerant charge be evacuated into a recovery system to prevent the possibility of hydrofluorocarbons (HFC's) from being released into the atmosphere. The release of HFC's into the atmosphere is a source of greenhouse gases.

If moisture or liquid is observed around or under a Federal Industries case, an immediate investigation should be made by qualified personnel to determine the source of the moisture or liquid. The investigation made should determine if the case is malfunctioning or if there is a simple housekeeping problem.

Moisture or liquid around or under a case is a potential slip/fall hazard for persons walking by or working in the general area of the case. Any case malfunction or housekeeping problem that creates a slip/fall hazard around or under a case should be corrected immediately.

SALE & DISPOSAL

Owner Responsibility

If you sell or give away your Federal Industries case, you must make sure that all safety labels and the Installation-Service Manual are included with it. If you need replacement labels or manuals, Federal Industries will provide them free of charge. Contact the Customer Service Department at Federal Industries at (800) 356-4206.

The Customer Service Department at Federal Industries should be contacted at the time of sale or disposal of your case so records may be kept of its new location.

If you sell or give away your Federal Industries case and you evacuate the refrigerant charge before shipment, Federal Industries recommends that the charge be evacuated into a recovery system to reduce the possibility of HFC's from being released into the atmosphere. The release of HFC's into the atmosphere is a source of greenhouse gases.

REFRIGERATION AND ELECTRICAL DATA

Model	RSSL378SC	RSSL378R	RSSL378SC
<u>ELECTRICAL</u>	RSSL360SC	RSSL360R	RSSL360SC
Power Supply, Volts	120Volts	120Volts	208-240Volts
Frequency	60 Hertz	60 Hertz	60 Hertz
Phase	1 Phase	1 Phase	1 Phase
Number of Wires	2 + ground	2 + ground	2 + ground
	AMPS VOLTS	AMPS VOLTS	AMPS VOLTS
Compressor			
RLA	9.2 120	---- ----	4.3 208-240
LRA	58.8 120	---- ----	31.0 208-240
Condenser Fan Motor	2.0 120	---- ----	0.6 208-240
Evaporator Fan Motor	0.4 120	0.4 120	0.7 208-240
Lights (Includes Optional Shelf Lights)	0.7 120	0.7 120	0.3 208-240
Condensate Pan Heater	5.0 120	---- ----	5.0 208-240
Condensate Pump	1.0 120	1.0 120	0.5 208-240

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Refrigeration R449a Charge Self-Contained After 01/01/2020	3 Pounds
Refrigeration R404A Charge Self-Contained Before 01/01/2020	3 Pounds

The self-contained models are shipped from the factory with a completely operational R404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R404A Before 01/01/18	5400 BTU'S @20°F Evap/90° Ambient
Refrigerant R449A After 01/01/18	5400 BTU'S @20°F Evap/90° Ambient

REFRIGERATION AND ELECTRICAL DATA

After 01/01/2020

Model	RSSL478SC	RSSL478SC	RSSL478R	RSSL478R
<u>ELECTRICAL</u>	RSSL460SC	RSSL460SC	RSSL460R	RSSL460R
Power Supply, Volts	120 Volts	208-240 Volts	120Volts	208-240 Volts
Frequency	60 Hertz	60 Hertz	60 Hertz	60 Hertz
Phase	1 Phase	1 Phase	1 Phase	1 Phase
Number of Wires	2 + ground	2 + ground	2 + ground	2 + ground
	AMPS VOLTS	AMPS VOLTS	AMPS VOLTS	AMPS VOLTS
Compressor				
RLA	9.2 120	5.7 208-240	-----	-----
LRA	58.8 120	31.0 208-240	-----	-----
Condensar Fan Motor	2.0 120	0.7 208-240	-----	-----
Evaporator Fan Motor (2)	0.4 120	0.2 208-240	0.4 120	0.2 208-240
Lights (includes optional Shelf lights)	0.7 120	0.3 208-240	0.7 120	0.3 208-240
Condensate Pan Heater	5.0 120	5.0 208-240	-----	-----
Condensate Pump	1.0 120	.5 208-240	1.0 120	0.5 208-240

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Refrigeration R449a Charge Self Contained	4 Pounds
---	-----------------

The self-contained models are shipped from the factory with a completely operational R449a refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R449A After 01/01/20	7500 BTU'S @20°F Evap/90° Ambient
----------------------------------	--

REFRIGERATION AND ELECTRICAL DATA

Before 01/01/2020

Model	RSSL478SC	RSSL478-R	RSSL478SC
ELECTRICAL			
Power Supply, Volts	120Volts	120 Volts	208-240 Volts
Frequency	60 Hertz	60 Hertz	60 Hertz
Phase	1 Phase	1 Phase	1 Phase
Number of Wires	2 + ground	2 + ground	2 + ground
	AMPS	VOLTS	AMPS VOLTS
Compressor			AMPS VOLTS
RLA	12.1	120	---- ---- 5.7 208-240
LRA	68.0	120	---- ---- 31.0 208-240
Condensar Fan Motor	2.0	120	---- ---- 0.7 208-240
Evaporator Fan Motor (2)	0.4ea	120	0.4ea 120 0.2ea. 208-240
Lights (includes optional Shelf lights)	0.7	120	0.7 120 0.3 208-240
Condensate Pan Heater	5.0	120	---- ---- 5.0 208-240
Condensate Pump	1.0	120	1.0 120 0.5 208-240

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Refrigeration R404A Charge Self Contained	4 Pounds
---	-----------------

The self-contained models are shipped from the factory with a completely operational R404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R404A Before 01/01/18	7500 BTU'S @20°F Evap/90° Ambient
Refrigerant R449A After 01/01/18	7500 BTU'S @20°F Evap/90° Ambient

REFRIGERATION AND ELECTRICAL DATA

After 01/01/2020

Model	RSSL578SC	RSSL578R		
<u>ELECTRICAL</u>	RSSL560SC	RSSL560R		
Power Supply, Volts	208-240 Volts	208-240 Volts		
Frequency	60 Hertz	60 Hertz		
Phase	1 Phase	1 Phase		
Number of Wires	2 + ground	2 + ground		
	AMPS	VOLTS	AMPS	VOLTS
Compressor				
RLA	7.7	208-240	----	----
LRA	54.0	208-240	----	----
Condenser Fan Motor	0.7	208-240	----	----
Evaporator Fan Motor (2)	0.2ea	208-240	0.2ea	208-240
Lights (includes optional Shelf lights)	0.3	208-240	0.3	208-240
Condensate Pan Heater	5.0	208-240	----	----
Condensate Pump	0.5	208-240	0.5	208-240

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Before 11/24/2021, Refrigeration R449a Charge Self-Contained	4 Pounds
After 11/24/2021, Refrigeration R449a Charge Self-Contained	3.25 Pounds

The self-contained models are shipped from the factory with a completely operational R449a refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R449A After 01/01/18	9000 BTU'S @20°F Evap/90° Ambient
----------------------------------	--

REFRIGERATION AND ELECTRICAL DATA

Before 01/01/2020

Model	RSSL578SC		RSSL578R	
<u>ELECTRICAL</u>				
Power Supply, Volts	208-240 Volts		120 Volts	
Frequency	60 Hertz		60 Hertz	
Phase	1 Phase		1 Phase	
Number of Wires	2 + ground		2 + ground	
	AMPS	VOLTS	AMPS	VOLTS
Compressor				
RLA	7.7	208-240	----	----
LRA	54.0	208-240	----	----
Condenser Fan Motor	0.7	208-240	----	----
Evaporator Fan Motor (2)	0.2ea	208-240	0.4ea	120
Lights (includes optional Shelf lights)	0.3	208-240	0.7	120
Condensate Pan Heater	5.0	208-240	7	120
Condensate Pump	0.5	208-240	1.0	120

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Refrigeration R404A Charge Self Contained	4 Pounds
---	-----------------

The self-contained models are shipped from the factory with a completely operational R404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R404A Before 01/01/18	9000 BTU'S @20°F Evap/90° Ambient
Refrigerant R449A After 01/01/18	9000 BTU'S @20°F Evap/90° Ambient

REFRIGERATION AND ELECTRICAL DATA

After 01/01/2020

Model <u>ELECTRICAL</u> Power Supply, Volts Frequency Phase Number of Wires	RSSL678SC RSSL660SC		RSSL678R RSSL660R	
	AMPS	VOLTS	AMPS	VOLTS
Compressor				
RLA	7.7	208-240	----	----
LRA	54.0	208-240	----	----
Condensar Fan Motor	0.7	208-240	----	----
Evaporator Fan Motor (3)	0.2ea	208-240	0.2ea	208-240
Lights (includes optional Shelf lights)	0.3	208-240	0.3	208-240
Condensate Pan Heater	5.0	208-240	----	----
Condensate Pump	0.5	208-240	0.5	208-240

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Before 11/24/2021, Refrigeration R449a Charge Self-Contained	4.25 Pounds
After 11/24/2021, Refrigeration R449a Charge Self-Contained	3.25 Pounds

The self-contained models are shipped from the factory with a completely operational R449a refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R449A After 01/01/18	7500 BTU'S @20°F Evap/90° Ambient
----------------------------------	--

REFRIGERATION AND ELECTRICAL DATA

Before 01/01/2020

Model	RSSL678SC		RSSL678R	
	AMPS	VOLTS	AMPS	VOLTS
Power Supply, Volts	208-240 Volts		120 Volts	
Frequency	60 Hertz		60 Hertz	
Phase	1 Phase		1 Phase	
Number of Wires	2 + ground		2 + ground	
Compressor				
RLA	7.7	208-240	----	----
LRA	54.0	208-240	----	----
Condenser Fan Motor	0.7	208-240	----	----
Evaporator Fan Motor (3)	0.2ea	208-240	0.4ea	120
Lights (includes optional Shelf lights)	0.3	208-240	0.7	120
Condensate Pan Heater	5.0	208-240	10	120
Condensate Pump	0.5	208-240	1.0	120

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION

Self-Contained Models

Refrigeration R404A Charge Self Contained	4.25 Pounds
---	--------------------

The self-contained models are shipped from the factory with a completely operational R404A refrigeration system and require no modifications or adjustments upon installation. Case must be installed as per the installation section of this manual to provide proper condensing air cooling.

Self-Contained Refrigeration Operation

The unit temperature is controlled by the Electronic control and timers outlined in the control section of this manual.

Note: The condenser fan runs continuously.

Remote Models

Refrigerant & BTU Requirements

Refrigerant R404A Before 01/01/18	7500 BTU'S @20°F Evap/90° Ambient
Refrigerant R449A After 01/01/18	7500 BTU'S @20°F Evap/90° Ambient

ELECTRICAL DATA

NSSL378, NSSL478, NSSL578, NSSL678

Model	NSSL ALL	or	NSSL ALL
<u>ELECTRICAL</u>			
Power Supply, Volts	120Volts	or	208-240Volts
Frequency	60 Hertz		60 Hertz
Phase	1 Phase		1 Phase
Number of Wires	2 + ground		2 + ground
	AMPS VOLTS		AMPS VOLTS
Lights	0.7	120	0.3 208-240
(Includes Optional Shelf Lights)			

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REPLACEMENT PARTS

MODEL RSSL378, RSSL360, NSSL378

After 01/01/2020

Part Description	RSSL378SC NSSL378 RSSL360SC <u>Part # 120V</u>	RSSL378R RSSL360R <u>Part #120V</u>	RSSL378SC RSSL360SC <u>208-240V</u>
Refrigeration System			
Condensing Unit (Tecumseh RSSL378 Only)	30-20461	-----	30-20512
Condensing Unit (Embraco RSSL360/378)	30-21316	-----	-----
Compressor (Tecumseh Replacement RSSL378SC)	30-20679	-----	30-18052
Evaporator Coil	33-13283	33-13283	33-13283
Expansion Valve (Self-Contained R449a)	32-21172	-----	32-21172
Expansion Valve Electronic (Remote R449a)	-----	32-21228	-----
Evaporator Fan Motor	41-11628	41-11628	41-15925
Evaporator Fan Blade	72-32507	72-32507	72-32507
Filter Drier	32-12626	-----	32-12626
Dual Pressure Control	32-51009	-----	32-51009
Solenoid Valve	-----	32-14325	-----
Coil Solenoid Valve	-----	41-14324	-----
Electronic Expansion Valve Control (Remote)	-----	32-21223	-----
Temperature Sensor (Remote)	-----	32-21224	-----
Pressure Transducer (Remote)	-----	32-21225	-----
Electrical Components			
Sensor Defrost	32-19094	32-19094	32-19094
Sensor Temp	32-19866	32-19866	32-19866
Temperature Control (carel)	32-19864-1	32-19864-1	32-19865-1
Optional Temperature Control (Dixell) RSSL360	32-21341-20	32-21341-20	-----
Condensate PTC Heater	40-19331	40-19331	40-19392
Light Led	<u>42-20871-25C35</u>	42-20871-25C35	42-20871-25C35
Power Supply Led 24V.	<u>39-20986</u>	39-20986	39-20986
Light Switch (On/Off)	<u>41-11066</u>	41-11066	41-11066
Heater Wire Assembly	43-14892	43-14892	43-19467
Obs Condensate Pan	SA5406-1	SA5406-1	SA5406-2
Condensate Pan w/Bracket Qty 2 M19017-4	SA5406-4	SA5406-4	SA5406-5
Condensate Pump	47-15686	47-15686	47-15687
Cord & Plug RSSL378	43-30818	-----	43-19090
Cord & Plug NSSL378	<u>43-11302</u>	-----	-----
Miscellaneous Components			
Price Tag Molding	<u>W11329-21</u>	W11329-21	W11329-21
Clip Led Light	<u>67-20869</u>	67-20869	67-20869
Shelf Bracket, Left Side 14" S/S	<u>M19850-L</u>	M19850-L	M19850-L
Shelf Bracket, Right Side 14" S/S	<u>M19850-R</u>	M19850-R	M19850-R
Shelf 14" S/S	<u>M19851-1</u>	M19851-1	M19851-1
Light deflector S/S	<u>M20881-1C</u>	M20881-1C	M20881-1C
Thermometer	32-13662	32-13662	32-13662
Air Deflector	15-19336-3	15-19336-3	15-19336-3
End Glass Clear 78" Tall Case	<u>50-19495</u>	50-19495	50-19495
End Glass Reflective 78" Tall Case	<u>50-19495-1</u>	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1	50-19532-1
Optional Parts			
White Shelf Lamp Cord	<u>43-20862-3W</u>	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	<u>43-20996-W</u>	43-20996-W	43-20996-W
Black Shelf Lamp Cord	<u>43-20862-3B</u>	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	<u>43-20996-B</u>	43-20996-B	43-20996-B
Energy Savings Night Curtain	65-19300	65-19300	65-19300
Security Night Cover	<u>701-918</u>	701-918	701-918

Parts for the NSSL378 are highlighted in bold and underlined

REPLACEMENT PARTS

MODEL RSSL378, NSSL378

Before 01/01/2020

<u>Part Description</u>	<u>RSSL378SC</u> <u>Part # 120V</u>	<u>RSSL378R</u> <u>Part #120V</u>	<u>RSSL378SC</u> <u>208-240V</u>
<u>Refrigeration System</u>			
Condensing Unit (Self-Contained Only)	30-20461	-----	30-20512
Compressor (Replacement)	30-20679	-----	30-18052
Evaporator Coil	33-13283	33-13283	33-13283
Expansion Valve	32-19419	32-20877	32-19419
Evaporator Fan Motor	41-11628	41-11628	41-15925
Evaporator Fan Blade	72-32507	72-32507	72-32507
Filter Drier	32-12626	-----	32-12626
Dual Pressure Control	32-51009	-----	32-51009
Solenoid Valve	-----	32-14325	-----
Coil Solenoid Valve	-----	41-14324	-----

Electrical Components

Sensor Defrost	32-19094	32-19094	32-19094
Sensor Temp	32-19866	32-19866	32-19866
Temperature Control	32-19864-1	32-19864-1	32-19865-1
Condensate PTC Heater	40-19331	40-19331	40-19392
Light Led	42-20871-25C35	42-20871-25C35	42-20871-25C35
Power Supply Led 24V.	39-20986	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066	41-11066
Heater Wire Assembly	43-14892	43-14892	43-19467
Obs Condensate Pan	SA5406-1	SA5406-1	SA5406-2
Condensate Pan w/Bracket Qty 2 M19017-4	SA5406-4	SA5406-4	SA5406-5
Condensate Pump	47-15686	47-15686	47-15687
Cord & Plug RSSL378	43-30818	-----	43-19090
Cord & Plug NSSL378	43-11302	-----	-----

Miscellaneous Components

Price Tag Molding	W11329-21	W11329-21	W11329-21
Clip Led Light	67-20869	67-20869	67-20869
Shelf Bracket, Left Side 14" S/S	M19850-L	M19850-L	M19850-L
Shelf Bracket, Right Side 14" S/S	M19850-R	M19850-R	M19850-R
Shelf 14" S/S	M19851-1	M19851-1	M19851-1
Light deflector S/S	M20881-1C	M20881-1C	M20881-1C
Thermometer	32-13662	32-13662	32-13662
Air Deflector	15-19336-3	15-19336-3	15-19336-3
End Glass Clear 78" Tall Case	50-19495	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1	50-19532-1

Optional Parts

White Shelf Lamp Cord	43-20862-3W	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B	43-20996-B
Energy Savings Night Curtain	65-19300	65-19300	65-19300
Security Night Cover	701-918	701-918	701-918

REPLACEMENT PARTS

MODEL RSSL478, RSSL460, NSSL478

After 01/01/2020

Part Description	NSSL478	RSSL478SC	RSSL478R	RSSL478R	RSSL478SC
		RSSL460SC	RSSL460R	RSSL460R	RSSL460SC
	<u>120V</u>	<u>120V</u>	<u>120V</u>	<u>208-240V</u>	<u>208-240V</u>
<u>Refrigeration System</u>					
Condensing Unit (Self-Contained RSSL478 Only)	-----	-----	-----	-----	30-17888
Condensing Unit (Self-Contained RSSL460 Only)	-----	30-21316	-----	-----	-----
Compressor (Replacement RSSL478 240V Only)	-----	-----	-----	-----	30-18052
Evaporator Coil	-----	33-11541	33-11541	33-11541	33-11541
Expansion Valve (Self-Contained R449a)	-----	32-20887	-----	-----	32-20887
Expansion Valve Electronic (Remote R449a)	-----	-----	32-21228	32-21228	-----
Evaporator Fan Motor	-----	41-11628	41-11628	41-15925	41-15925
Evaporator Fan Blade	-----	72-12254	72-12254	72-13316	72-13316
Filter Drier	-----	32-12626	-----	-----	32-12626
Dual Pressure Control	-----	-----	-----	-----	32-51009
Solenoid Valve	-----	-----	32-14325	32-14325	-----
Coil Solenoid Valve	-----	-----	41-14324	41-14324	-----
Electronic Expansion Valve Control (Remote)	-----	-----	32-21223	32-21223	-----
Temperature Sensor (Remote)	-----	-----	32-21224	32-21224	-----
Pressure Transducer (Remote)	-----	-----	32-21225	32-21225	-----
<u>Electrical Components</u>					
Sensor Defrost	-----	32-19094	32-19094	32-19094	32-19094
Sensor Temp	-----	32-19866	32-19866	32-19866	32-19866
Temperature Control (Carel)	-----	32-19864-20	32-19864-20	32-19865-1	32-19865-1
Optional Temperature Control (Dixell)	-----	32-21341-20	32-21341-20	-----	-----
Condensate PTC Heater	-----	40-19331	-----	-----	40-19392
Light Led	42-20871-38C35	42-20871-38C35	42-20871-38C35	42-20871-38C35	42-20871-38C35
Power Supply Led 24V.	39-20986	39-20986	39-20986	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066	41-11066	41-11066	41-11066
Heater Wire Assembly	-----	43-14891	43-14891	43-15926	43-15926
OBS Condensate Pan	-----	-----	-----	-----	SA5406-2
Condensate Pan bracket qty 2 M19017-4	-----	-----	-----	-----	SA5406-5
Condensate Pump	-----	47-15686	47-15686	47-15687	47-15687
Cord & Plug	43-11302	43-30818	-----	-----	43-19090
<u>Miscellaneous Components</u>					
Price Tag Molding	W11329-22	W11329-22	W11329-22	W11329-22	W11329-22
Clip Led Light	67-20869	67-20869	67-20869	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L	M19850-L	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R	M19850-R	M19850-R	M19850-R
Shelf 14" S/S	M19851-2	M19851-2	M19851-2	M19851-2	M19851-2
Light deflector S/S	M20881-C	M20881-C	M20881-C	M20881-C	M20881-C
Thermometer	-----	32-13662	32-13662	32-13662	32-13662
Air Deflector	-----	15-19336-6	15-19336-6	15-19336-6	15-19336-6
End Glass Clear 60"	-----	50-19532	50-19532	50-19532	50-19532
End Glass Reflective 60"	-----	50-19532-1	50-19532-1	50-19532-1	50-19532-1
End Glass Clear 78"	50-19495	50-19495	50-19495	50-19495	50-19495
End Glass Reflective 78"	50-19495-1	50-19532-1	50-19532-1	50-19495-1	50-19495-1
<u>Optional Parts</u>					
White Shelf Lamp Cord	43-20862-3W	43-20862-3W	43-20862-3W	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W	43-20996-W	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B	43-20862-3B	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B	43-20996-B	43-20996-B	43-20996-B
Energy Savings Night Curtain	-----	65-19460	65-19460	65-19460	65-19460
Security Night Cover	-----	703-918	702-918	703-918	703-918

REPLACEMENT PARTS

MODEL RSSL478, NSSL478

Before 01/01/2020

Part Description	RSSL478SC NSSL478 120V	RSSL478R 120V	RSSL478SC 208-240V
Refrigeration System			
Condensing Unit (Self-Contained Only)	30-20462	-----	30-17888
Compressor (Replacement)	30-18051	-----	30-18052
Evaporator Coil	33-11541	33-11541	33-11541
Expansion Valve (Before 01/01/18)	32-19419	32-19419	32-19419
Expansion Valve (After 01/01/18)	32-19419	32-20877	32-19419
Evaporator Fan Motor	41-11628	41-11628	41-11628
Evaporator Fan Blade	72-13316	72-13316	72-13316
Filter Drier	32-12626	-----	32-12626
Dual Pressure Control	32-51009	-----	32-51009
Solenoid Valve	-----	32-14325	-----
Coil Solenoid Valve	-----	41-14324	-----

Electrical Components

Sensor Defrost	32-19094	32-19094	32-19094
Sensor Temp	32-19866	32-19866	32-19866
Temperature Control	32-19864-1	32-19864-1	32-19865-1
Condensate PTC Heater	40-19331	40-19331	40-19392
Light Led	42-20871-38C35	42-20871-38C35	42-20871-38C35
Power Supply Led 24V.	39-20986	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066	41-11066
Heater Wire Assembly	43-14891	43-14891	43-15926
OBS Condensate Pan	SA5406-1	SA5406-1	SA5406-2
Condensate Pan w/brackets qty 2 M19017-4	SA5406-4	SA5406-4	SA5406-5
Condensate Pump	47-15686	47-15686	47-15687
Cord & Plug RSSL478	43-30818	-----	43-19090
Cord & Plug NSSL478	43-11302	-----	-----

Miscellaneous Components

Price Tag Molding	W11329-22	W11329-22	W11329-22
Clip Led Light	67-20869	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R	M19850-R
Shelf 14" S/S	M19851-2	M19851-2	M19851-2
Light deflector S/S	M20881-C	M20881-C	M20881-C
Thermometer	32-13662	32-13662	32-13662
Air Deflector	15-19336-6	15-19336-6	15-19336-6
End Glass Clear 78" Tall Case	50-19495	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1	50-19495-1
End Glass Clear 60" Tall Case	50-19532	50-19532	50-19532
End Glass Reflective 60" Tall Case	50-19532-1	50-19532-1	50-19532-1

Optional Parts

White Shelf Lamp Cord	43-20862-3W	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B	43-20996-B
Energy Savings Night Curtain	65-19460	65-19460	65-19460
Security Night Cover	703-918	703-918	703-918

REPLACEMENT PARTS

MODEL RSSL578, RSSL560, NSSL578

After 01/01/2020

Part Description	NSSL578	RSSL578SC RSSL560SC	RSSL578R RSSL560R
<u>Refrigeration System</u>			
	<u>120V</u>	<u>208-240V</u>	<u>208-240V</u>
Condensing Unit (Self-Contained Only, Before 11/24/2021)	-----	30-21493	-----
Compressor (Replacement, Before 11/24/2021)	-----	30-18054	-----
Condensing Unit (Self-Contained Only, After 11/24/2021)	-----	30-21392	-----
Compressor (Replacement, After 11/24/2021)	-----	30-21515	-----
Evaporator Coil	-----	33-18024	33-18024
Expansion Valve (Self-Contained R449a)	-----	32-20877	-----
Expansion Valve Electronic (Remote R449a)	-----	-----	32-21228
Evaporator Fan Motor 240V	-----	41-15925	41-15925
Evaporator Fan Blade	-----	72-32507	72-32507
Filter Drier	-----	32-12626	-----
Dual Pressure Control	-----	32-51009	-----
Solenoid Valve	-----	-----	32-14325
Coil Solenoid Valve	-----	-----	41-14324
Electronic Expansion Valve Control (Remote)	-----	-----	32-21223
Temperature Sensor (Remote)	-----	-----	32-21224
Pressure Transducer (Remote)	-----	-----	32-21225
<u>Electrical Components</u>			
Sensor Defrost	-----	32-19094	32-19094
Sensor Temp.	-----	32-19866	32-19866
Temperature Control	-----	32-19865-1	32-19864-1
Condensate PTC Heater	-----	40-19392	40-19331
Light Led	42-20871-48C35	42-20871-48C35	42-20871-48C35
Power Supply Led 24V.	39-20986	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066	41-11066
Heater Wire Assembly	-----	43-20356	43-18043
OBS Condensate Pan	-----	SA5406-2	SA5406-12
Condensate Pan bracket qty 2 M19017-4	-----	SA5406-5	SA5406-15
Condensate Pump	-----	47-15687	47-15686
Cord & Plug RSSL578	-----	43-19090	-----
Cord & Plug NSSL578	43-11302	-----	-----
<u>Miscellaneous Components</u>			
Price Tag Molding	W11329-23	W11329-23	W11329-23
Clip Led Light	67-20869	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R	M19850-R
Shelf 14" S./S	M19851-3	M19851-3	M19851-3
Light deflector S/S	M20881-2C	M20881-2C	M20881-2C
Thermometer	-----	32-13662	32-13662
Air Deflector	-----	15-19336-9	15-19336-9
End Glass Clear 78" Tall Case	50-19495	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1	50-19532-1
<u>Optional Parts</u>			
White Shelf Lamp Cord	43-20862-3W	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B	43-20996-B
Energy Saving Night Curtain	-----	65-19458	65-19458

REPLACEMENT PARTS

MODEL RSSL578, NSSL578

Before 01/01/2020

Part Description

Refrigeration System

RSSL578SC

208-240V

RSSL578R

PART# 120V

Condensing Unit (Self-Contained Only)	30-17889	-----
Compressor (Replacement)	30-18054	-----
Evaporator Coil	33-18024	33-18024
Expansion Valve	32-19416	32-20876
Evaporator Fan Motor	41-15925	41-11628
Evaporator Fan Blade	72-32507	72-32507
Filter Drier	32-12626	-----
Dual Pressure Control	32-51009	-----
Solenoid Valve	-----	32-14325
Coil Solenoid Valve	-----	41-14324

Electrical Components

Sensor Defrost	32-19094	32-19094
Sensor Temp.	32-19866	32-19866
Temperature Control	32-19865-1	32-19864-1
Condensate PTC Heater	40-19392	40-19331
Light Led	42-20871-48C35	42-20871-48C35
Power Supply Led 24V.	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066
Heater Wire Assembly	43-20356	43-18043
OBS Condensate Pan	SA5406-2	SA5406-12
Condensate Pan bracket qty 2 M19017-4	SA5406-5	SA5406-15
Condensate Pump	47-15687	47-15686
Cord & Plug RSSL578	43-19090	-----
Cord & Plug NSSL578	-----	43-11302

Miscellaneous Components

Price Tag Molding	W11329-23	W11329-23
Clip Led Light	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R
Shelf 14" S./S	M19851-3	M19851-3
Light deflector S/S	M20881-2C	M20881-2C
Thermometer	32-13662	32-13662
Air Deflector	15-19336-9	15-19336-9
End Glass Clear 78" Tall Case	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1

Optional Parts

White Shelf Lamp Cord	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B
Energy Saving Night Curtain	65-19458	65-19458
Security Night Cover	705-918	705-918

REPLACEMENT PARTS

MODEL RSSL678, RSSL660, NSSL678

After 01/01/2020

Part Description	NSSL678	RSSL678SC RSSL660SC	RSSL678R RSSL660R
<u>Refrigeration System</u>			
	<u>120V</u>	<u>208-240V</u>	<u>208-240V</u>
Condensing Unit (Self-Contained Only, Before 11/24/2021)	-----	30-21493	-----
Compressor (Replacement, Before 11/24/2021)	-----	30-18054	-----
Condensing Unit (Self-Contained Only, After 11/24/2021)	-----	30-21392	-----
Compressor (Replacement, After 11/24/2021)	-----	30-21515	-----
Evaporator Coil	-----	33-11542	33-11542
Expansion Valve (Self-Contained)	-----	32-20877	-----
Expansion Valve Electronic (Remote R449A)	-----	-----	32-21226
Evaporator Fan Motor	-----	41-15925	41-15925
Evaporator Fan Blade	-----	72-13316	72-13316
Filter Drier	-----	32-12626	-----
Dual Pressure Control	-----	32-51009	-----
Solenoid Valve	-----	-----	32-14325
Coil Solenoid Valve	-----	-----	41-14324
Electronic Expansion Valve Control (Remote)	-----	-----	32-21223
Temperature Sensor (Remote)	-----	-----	32-21224
Pressure Transducer (Remote)	-----	-----	32-21225
<u>Electrical Components</u>			
Sensor Defrost	-----	32-19094	32-19094
Sensor Temp.	-----	32-19866	32-19866
Temperature Control	-----	32-19865-1	32-19865-1
Condensate PTC Heater	-----	40-19392	40-19392
Light Led top	42-20871-60C35	42-20871-60C35	42-20871-60C35
Light Led shelf	42-20871-25C35	42-20871-25C35	42-20871-25C35
Power Supply Led 24V.	39-20986	39-20986	39-20986
Light Switch (On/Off)	41-11066	41-11066	41-11066
Heater Wire Assembly	-----	43-19113	43-19113
OBS Condensate Pan	-----	SA5406-2	SA5406-2
Condensate Pan 220V/1200W bracket qty 2 M19017-4	-----	SA5406-5	SA5406-5
Condensate Pan 1800W OPTIONAL	-----	SA5406-3	SA5406-3
Condensate Pump	-----	47-15687	47-15687
Cord & Plug RSSL678	-----	43-19090	-----
Cord & Plug NSSL678	43-11302	-----	-----
<u>Miscellaneous Components</u>			
Price Tag Molding	W11329-24	W11329-24	W11329-24
Clip Led Light	67-20869	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R	M19850-R
Shelf 14" S/S	M19851-4	M19851-4	M19851-4
Light deflector S/S	M20881-3C	M20881-3C	M20881-3C
Thermometer	-----	32-13662	32-13662
Air Deflector	-----	15-19336-12	15-19336-12
End Glass Clear 78" Tall Case	50-19495	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1	50-19532-1
<u>Optional Parts</u>			
White Shelf Lamp Cord	43-20862-3W	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B	43-20996-B

REPLACEMENT PARTS MODEL RSSL678, NSSL678

Before 01/01/2020

<u>Part Description</u>	<u>RSSL678SC</u>	<u>RSSL678R</u>
<u>Refrigeration System</u>	<u>208-240V</u>	<u>PART# 120V</u>
Condensing Unit (Self-Contained Only)	30-17889	-----
Compressor (Replacement)	30-18054	-----
Evaporator Coil	33-11542	33-11542
Expansion Valve	32-19416	32-20876
Evaporator Fan Motor	41-15925	41-11628
Evaporator Fan Blade	72-13316	72-13316
Filter Drier	32-12626	-----
Dual Pressure Control	32-51009	-----
Solenoid Valve	-----	32-14325
Coil Solenoid Valve	-----	41-14324

Electrical Components

Sensor Defrost	32-19094	32-19094
Sensor Temp.	32-19866	32-19866
Temperature Control	32-19865-1	32-19864-1
Condensate PTC Heater	40-19392	40-19331
<u>Light Led top</u>	42-20871-60C35	<u>42-20871-60C35</u>
<u>Light Led shelf</u>	42-20871-25C35	<u>42-20871-25C35</u>
<u>Power Supply Led 24V.</u>	39-20986	<u>39-20986</u>
<u>Light Switch (On/Off)</u>	41-11066	<u>41-11066</u>
Heater Wire Assembly	43-19113	43-14893
OBS Condensate Pan	SA5406-2	SA5406-12
Condensate Pan bracket qty 2 M19017-4	SA5406-5	SA5406-15
Condensate Pan 1800W OPTIONAL	SA5406-3	SA5406-13
Condensate Pump	47-15687	47-15686
Cord & Plug RSSL678	43-19090	-----
<u>Cord & Plug NSSL678</u>	-----	<u>43-11302</u>

Miscellaneous Components

Price Tag Molding	W11329-24	W11329-24
Clip Led Light	67-20869	67-20869
Shelf Bracket, Left Side S/S	M19850-L	M19850-L
Shelf Bracket, Right Side S/S	M19850-R	M19850-R
Shelf 14" S/S	M19851-4	M19851-4
Light deflector S/S	M20881-3C	M20881-3C
Thermometer	32-13662	32-13662
Air Deflector	15-19336-12	15-19336-12
End Glass Clear 78" Tall Case	50-19495	50-19495
End Glass Reflective 78" Tall Case	50-19495-1	50-19495-1
End Glass Clear 78" Tall Case	50-19532	50-19532
End Glass Reflective 78" Tall Case	50-19532-1	50-19532-1

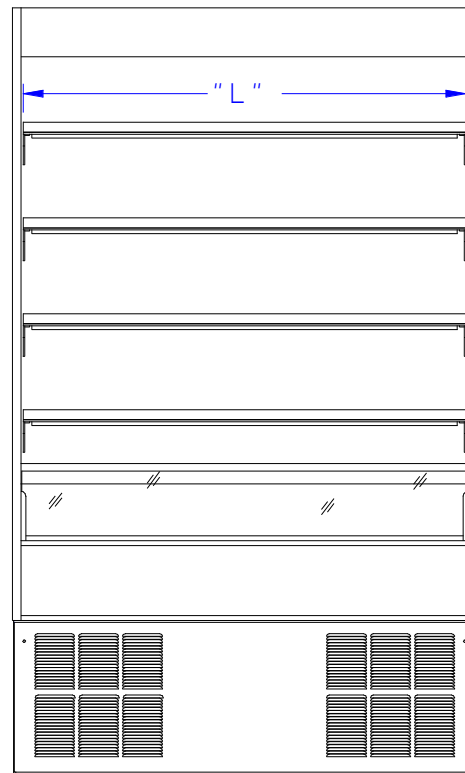
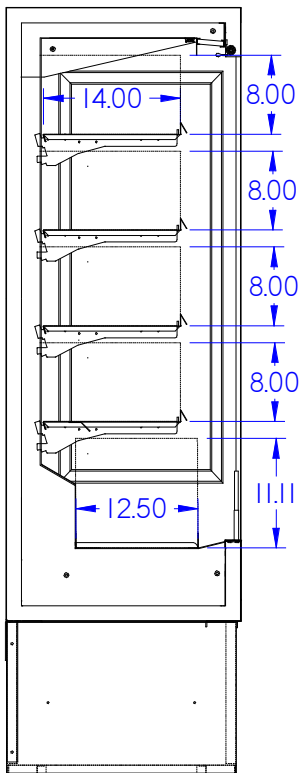
Optional Parts

White Shelf Lamp Cord	43-20862-3W	43-20862-3W
White Shelf Lamp Socket/Receptacle	43-20996-W	43-20996-W
Black Shelf Lamp Cord	43-20862-3B	43-20862-3B
Black Shelf Lamp Socket/Receptacle	43-20996-B	43-20996-B
Energy Saving Night Curtain	65-19300	65-19300
Security Night Cover	707-918	707-918

RSSL/NSSL DISPLAY AREA AND VOLUME

	RSSL378/360	RSSL478/460	RSSL578/560	RSSL678/660
CUBIC FT. PER SHELF	2.2	2.9	3.7	4.5
CUBIC FT. DISPLAY DECK	2.7	3.6	4.6	5.5
TOTAL CUBIC FT.	11.5/7.1	15.2/9.4	19.4/12	23.5/14.5
SQUARE INCHES PER SHELF	468.0	622.0	790.0	958.0
SQUARE INCHES DISPLAY DECK	418.0	555.0	705.0	855.0
TOTAL SQUARE INCHES	2290/1354	3043/1799	3865/2285	4687/2771
SHELF WIDTH " L "	33.44	44.44	56.44	68.44

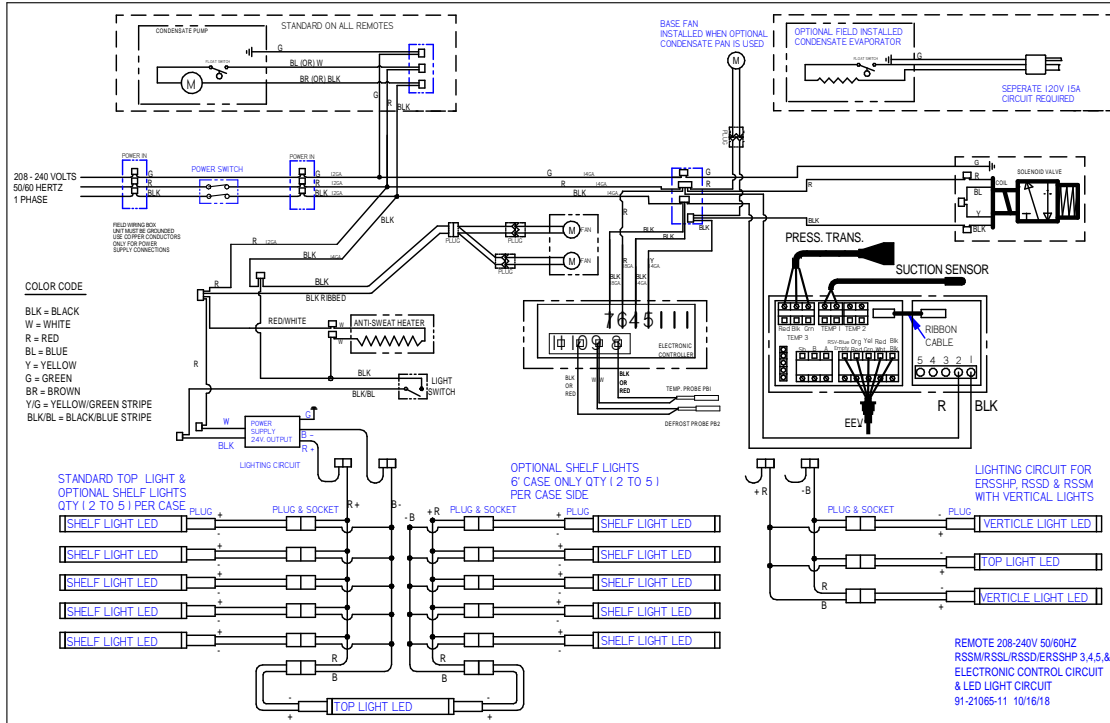
NOTE: CUBIC FEET IS MEASURED WITH 2" CLEARANCE BETWEEN SHELVES



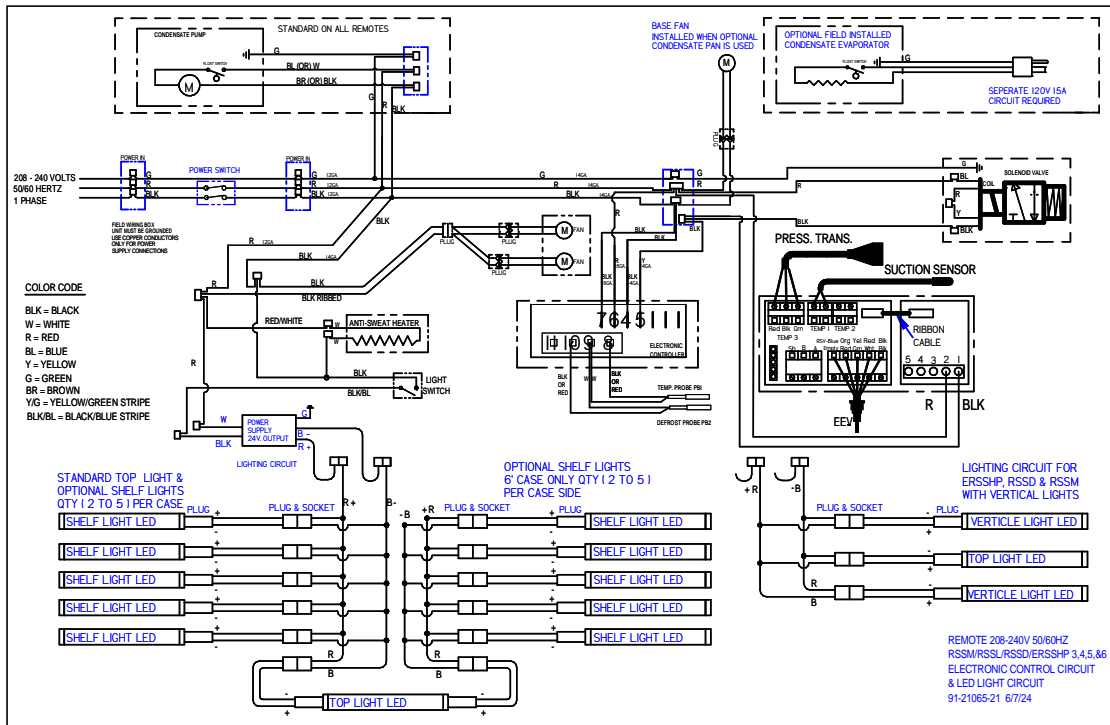
WIRING DIAGRAM 208-240V - REMOTE

RSSL378R, RSSL478R, RSSL578R & RSSL678R RSSL360R, RSSL460R, RSSL560R & RSSL660R

AFTER 01/01/2020



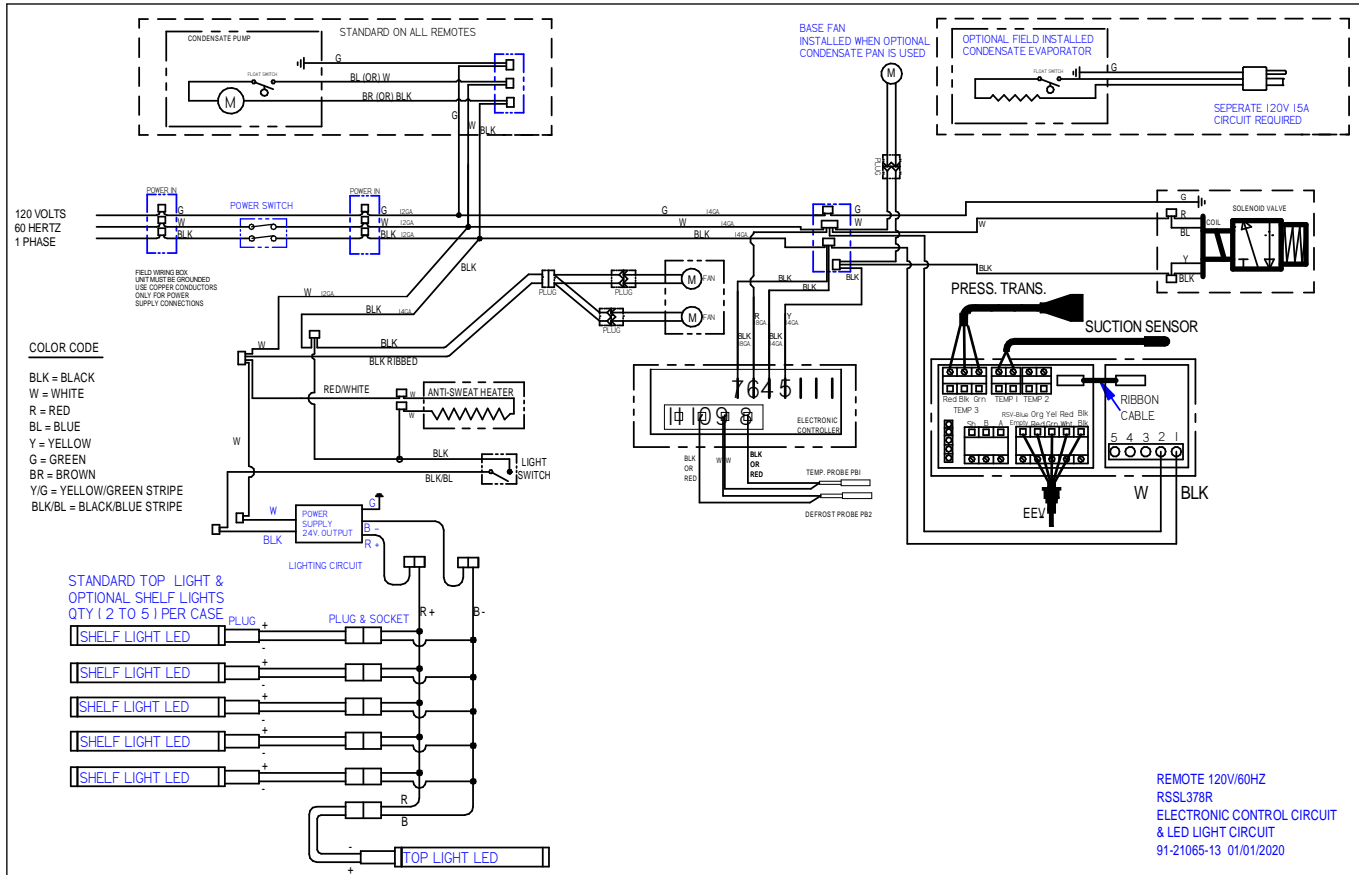
AFTER 7/1/24



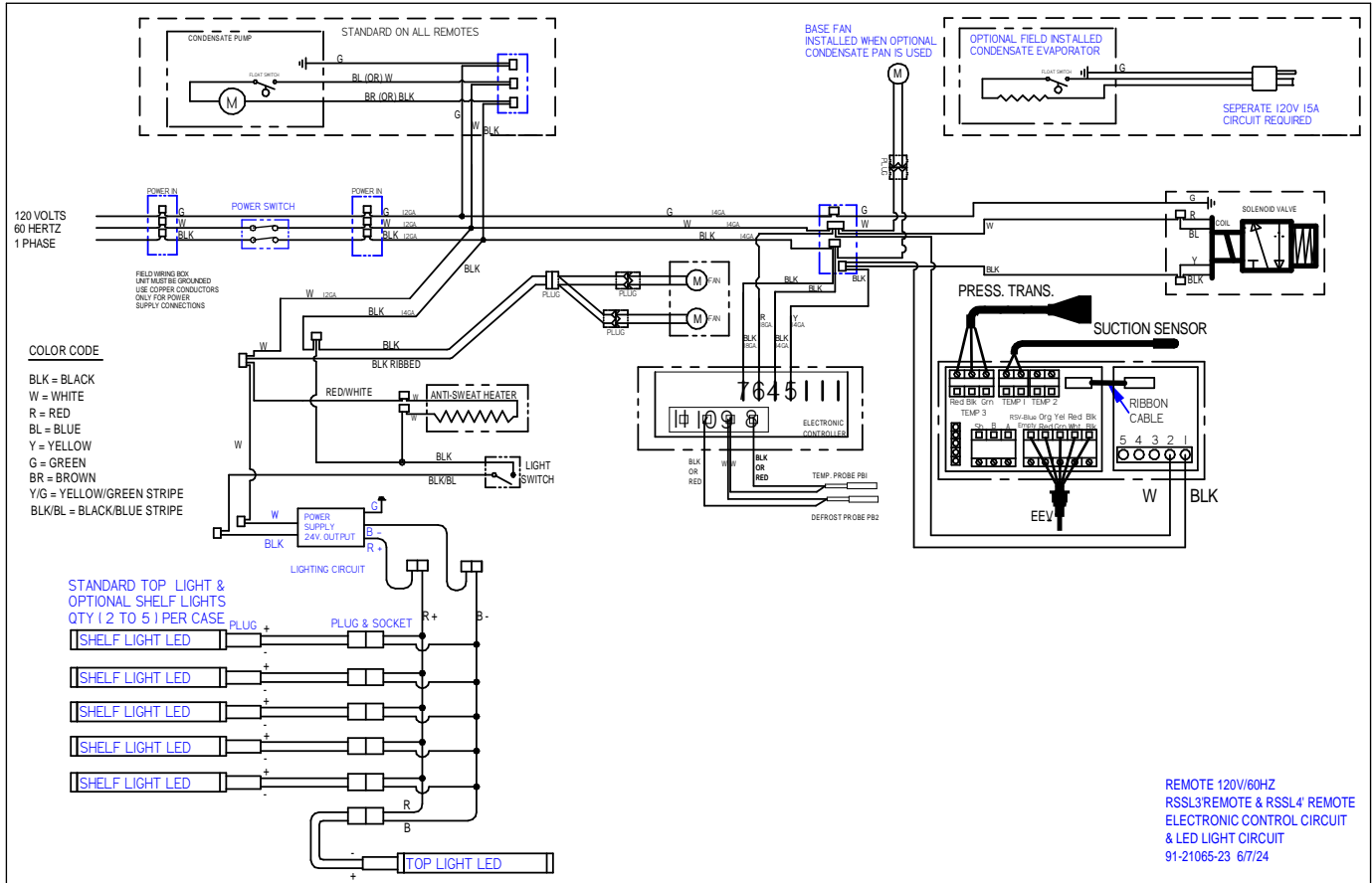
WIRING DIAGRAM 120V - REMOTE

RSSL378R, RSSL360R , RSSL460R, RSSL478R

AFTER 01/01/2020



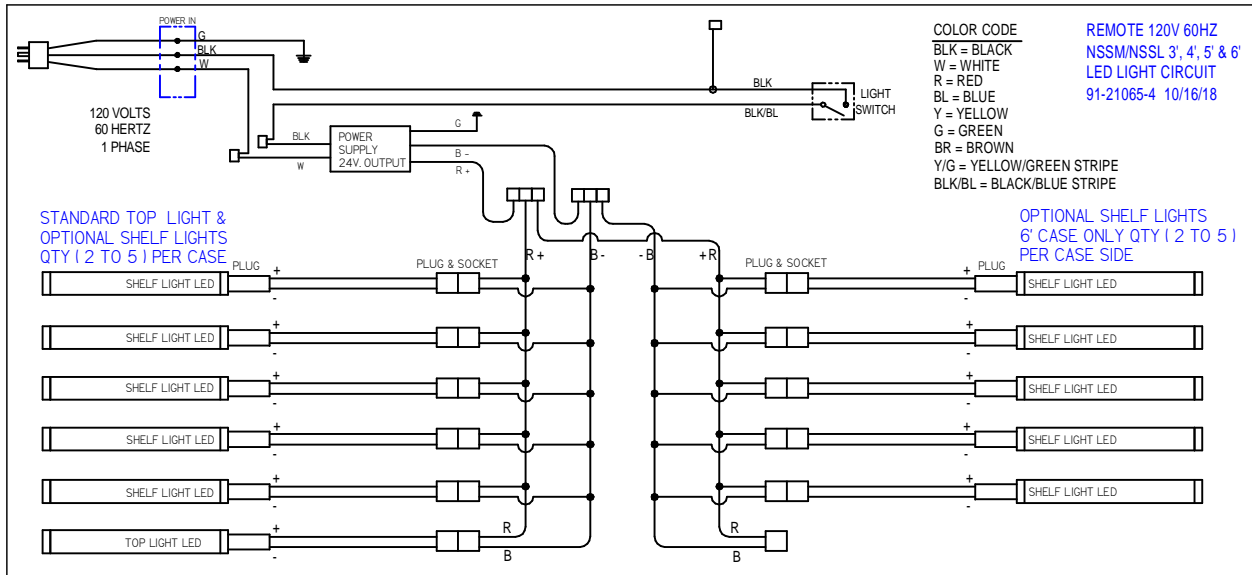
AFTER 07/01/24



WIRING DIAGRAM 120V

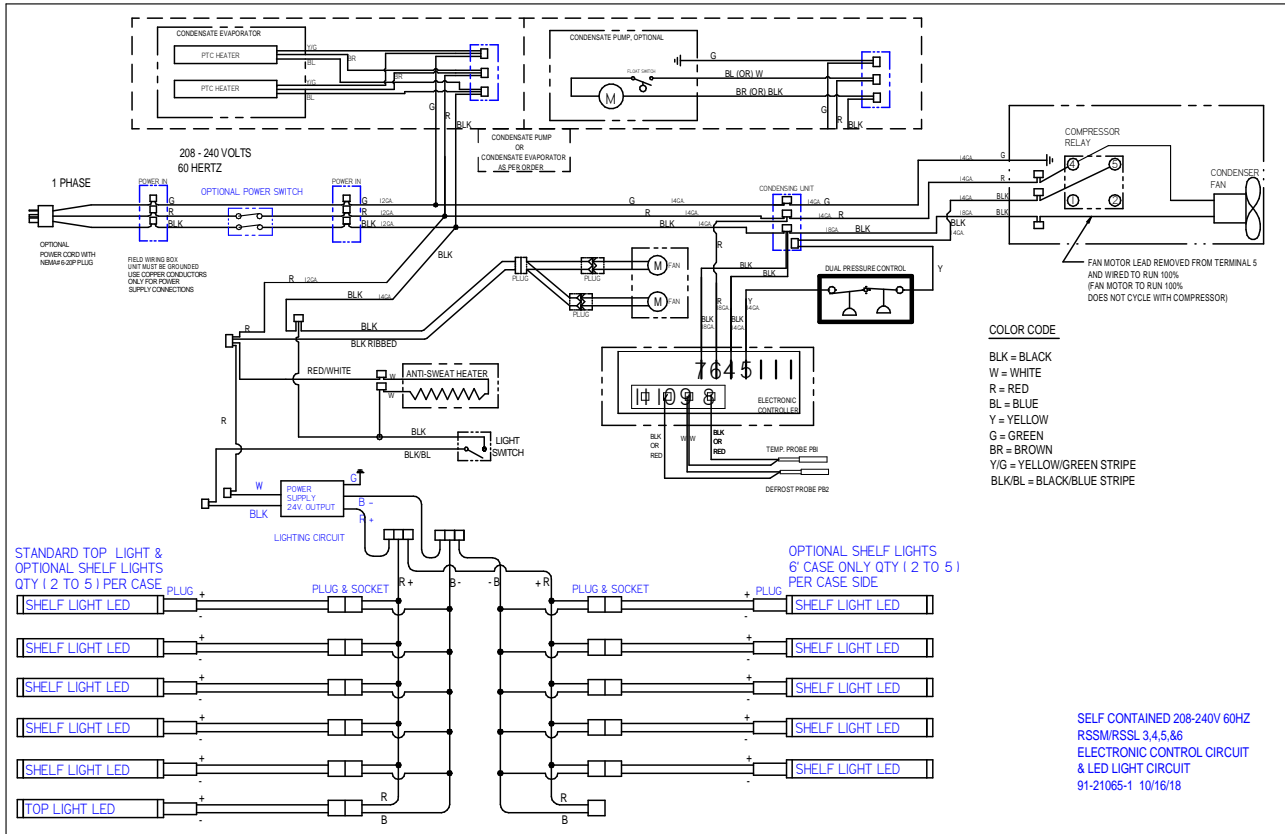
NSSL378, NSSL478, NSSL578, & NSSL678

ALL



WIRING DIAGRAM 208-240V - SELF CONTAINED RSSL378SC, RSSL478SC, RSSL578SC & RSSL678SC

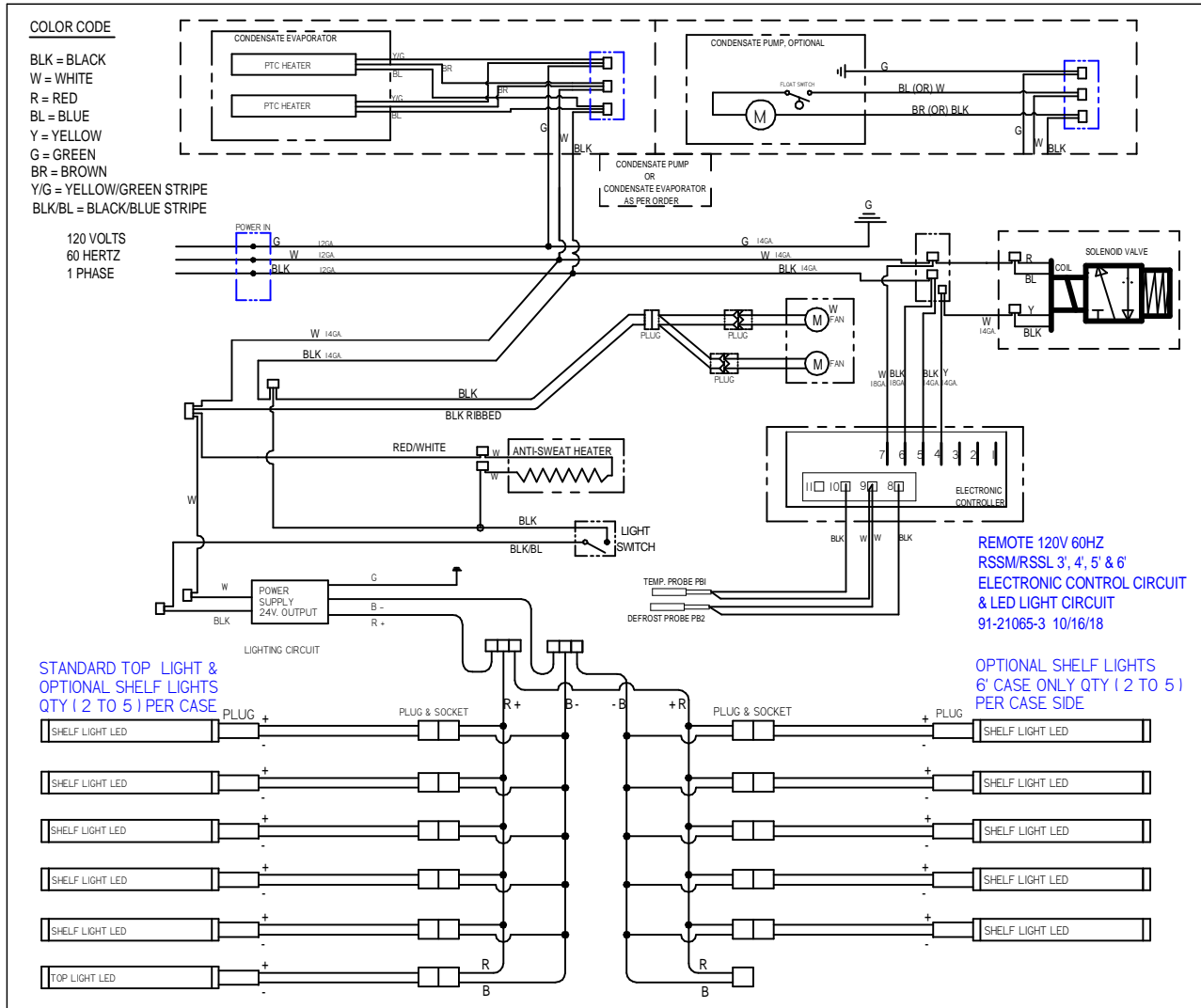
BEFORE 01/01/2020

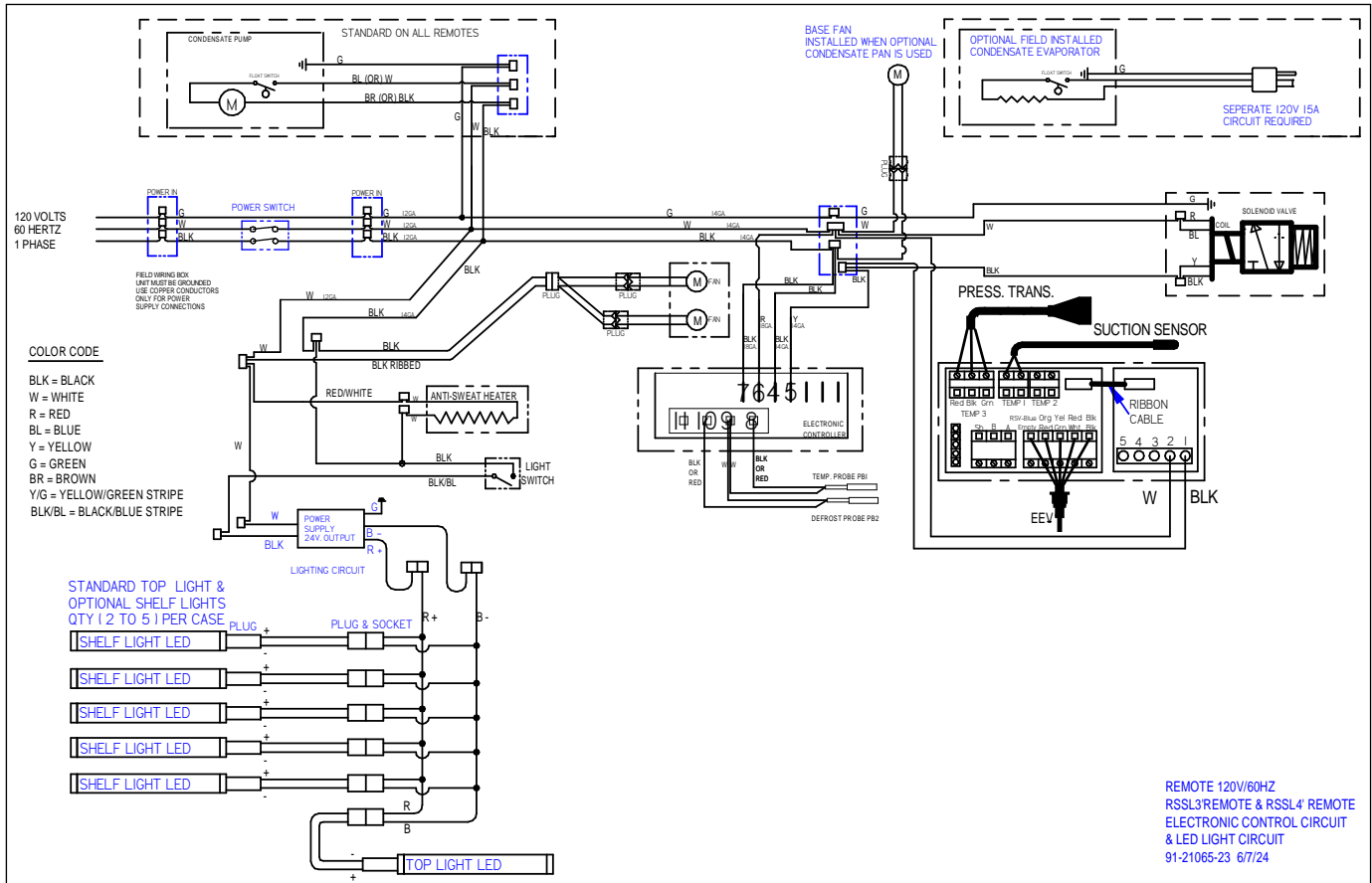


WIRING DIAGRAM 120V - REMOTE

RSSL378R, RSSL478R, RSSL578R, & RSSL678R

BEFORE 01/01/2020





California Residents Only.

 **WARNING**

This product can expose you to chemicals including chromium which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to

www.P65Warnings.ca.gov

