



*Commercial Freezers & Refrigerators*

## **Upright Refrigerator & Freezer**

---

### **Service, Installation and Care Manual**

**Please read this manual completely before attempting to install or operate this equipment.  
Notify carrier of damage! Inspect all components immediately.**



IMPORTANT INFORMATION  
READ BEFORE USE  
PLEASE SAVE THESE INSTRUCTIONS!

## CONTENTS

RECEIVING & INSPECTING EQUIPMENT.....	2
SPECIFICATIONS.....	3
INSTALLATION.....	4
OPERATION.....	5
MAINTENANCE.....	7
WIRING DIAGRAM.....	9

**All rights reserved. Reproduction without written permission is prohibited.**

## SERIAL NUMBER INFORMATION

The serial number of all self-contained refrigerators and freezers is located inside the unit on the left hand side near the top on the wall.

Always have the serial number of your unit available when calling for parts or service.

This manual covers standard units only. If you have a custom unit, consult the customer service department at the number listed on the last page.

## RECEIVING AND INSPECTING THE EQUIPMENT

Even though most equipment is shipped crated, care should be taken during unloading so the equipment is not damaged while being moved into the building.

1. Visually inspect the exterior of the package and skid or container. Any damage should be noted and reported to the delivering carrier immediately.
2. If damaged, open and inspect the contents with the carrier.
3. In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment, notify the carrier. Notification should be made verbally as well as in written form.
4. Request an inspection by the shipping company of the damaged equipment. This should be done within 10 days from receipt of the equipment.
5. Be certain to check the compressor compartment housing and visually inspect the refrigeration package. Be sure lines are secure and base is still intact.
6. Freight carriers can supply the necessary damage forms upon request.
7. Retain all crating material until an inspection has been made or waived.

## SPECIFICATION

<b>MODEL#</b>	<b>V/Hz/Ph</b>	<b>AMPS</b>	<b>STORAGE CAPACITY Cu-ft</b>	<b>HP</b>	<b>BTU/H</b>	<b>CHARGE OZ</b>	<b>SHIP WEIGHT LBS</b>	<b>NEMA PLUG</b>
AWR25	115/60/1	4.5	25	1/4	830	11.99	232	5-15P
AWF25	115/60/1	10.5	25	3/4	1966	10.58	249	5-15P

## INSTALLATION

### Location

Units represented in this manual are intended for indoor use only. Be sure the location chosen has a floor strong enough to support the total weight of the cabinet and contents. A fully loaded unit can weigh as much as 1500 pounds. For the most efficient refrigeration, be sure to provide good air circulation inside and out.

### Inside cabinet:

Do not pack the units so full that air cannot circulate. The refrigerated air is discharged at the top rear of the unit. It is important to allow for proper air flow from the top rear to the bottom of the unit. Obstructions to this air flow can cause evaporator coil freeze ups and loss of temperature or overflow of water from the evaporator drain pan. The shelves have a rear turn up on them to prevent this. However, bags and other items can still be located to the far rear of the cabinet. Air is brought into the evaporator coil with fans mounted to the front of the coil.

### Outside cabinet:

Be sure that the unit has access to ample air. Avoid hot corners and locations near stoves and ovens.

**It is required that the unit be installed no closer than 3" from any wall including the back with at least 12" of clear space above the unit.**

### Leveling

A level cabinet looks better and will perform better because the doors will line up with the frames properly. Use a level to make sure the unit is level from front to back and side to side. If the unit is supplied with casters, no adjustments are available. Ensure the floor where the unit is to be located is level.

### Stabilizing

All models are supplied with casters for your convenience, ease of cleaning underneath and for mobility. Casters are mounted using 3 bolts in each. It is very important, however, that the cabinet be installed in a stable condition with the front wheels locked while in use.

Should it become necessary to lay the unit on its side or back for any reason, allow at least 24 hours before start-up to allow compressor oil to flow back into place. Failure to meet this requirement can cause compressor failure and unit damage.



**Unit repairs will not be subject to standard unit warranties if due to improper installation procedures.**

### Electrical connection

Refer to the amperage data on page 3, the serial tag, your local code or the National Electrical Code to be sure the unit is connected to the proper power source. All models must be on a dedicated 20 amp circuit. Units using a shared electrical circuit or outlet may not be subject to standard unit warranties. **Use of extension cords is prohibited and will immediately void the unit warranty.**



**The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.**

## OPERATION

### Refrigerated cycle

**Refrigerators:** During the refrigeration cycle, the evaporator fans will run continuously unless door is open.

1. Every 6 hours, the unit will turn off and to allow the evaporator coil to defrost. The controller now displays the defrost symbol. When the coil temperature reaches 41°F or after 20 minutes of defrost, the unit will turn on again.
2. The factory setting for the temperature range is 34 to 38° F.

**Freezers:** During the refrigeration cycle the controller supplies power to the condensing unit and evaporator fan motors. The evaporator fans will run at any time when the evaporator coil temperature is below 54° F.

1. Every 6 hours, the unit will turn off and electric heater will turn on to start the defrost cycle. The controller now displays the defrost symbol. When the coil temperature reaches 45°F or after 20 minutes of defrost, the unit will turn on again.
2. The factory setting for temperature range is -7 to -3°F

## SOLID-STATE THERMOSTAT DESCRIPTIONS

### 1. FRONT PANEL COMMANDS



**SET:** To display target set point; in programming mode it selects a parameter or confirms an operation.

**❄️ (DEF)** To start a manual defrost

**▲ (UP)** To view the latest alarm occurrence; in programming mode it browses the parameter codes or increases the display value

**▼ (DOWN)** To view the latest alarm occurrence; in programming mode it browses the parameter codes or decreases the display value

### KEY COMBINATION

**▲ + ▼** To lock & unlock the keyboard

**SET + ▼** To enter in programming mode

**SET + ▲** To return to the room temperature display

### 1.1 Function of LEDs

LED	MODE	FUNCTION
❄️	ON	Compressor enabled
❄️	Flashing	-Programming Phase (flashing with ❄️) - Anti-short cycle delay enabled
❄️	ON	Defrost enabled
❄️	Flashing	- Programming Phase (flashing with ❄️) - Drip time in progress
🌀	ON	Fans enabled
🌀	Flashing	Fans delay after defrost in progress.
🔊	ON	An temperature alarm happened

## 2. MAIN FUNCTIONS

### 2.1 HOW TO SEE THE SETPOINT

1. Push and immediately release the **SET** key: the display will show the set point value.
2. Push and immediately release the **SET** key or wait for 5 seconds to display the sensor value again.



### 2.2 HOW TO CHANGE THE SETPOINT

1. Hold the **SET** key for more than 2 seconds to change the set point value.
2. The value of the set point will be displayed and the ❄️ LED starts blinking.
3. To change the set value push the ▲ or ▼ key within 10s.
4. To set a new point value, push the SET key again or wait 10s.

### 2.3 HOW TO START A MANUAL DEFFROST

Hold the ❄️ key for more than 2 seconds and the manual defrost will start



### 2.4 HOW TO LOCK THE KEYBOARD

1. Hold the ▲ and ▼ keys for more than 3s.
2. The "POF" message will be displayed and the keyboard will be locked. At this point, it will be possible only to see the set point or the MAX or Min temperature stored.
3. If a key is pressed more than 3s the "POF" message will be displayed.



### 2.5 HOW TO UNLOCK THE KEYBOARD

Hold the ▲ and ▼ keys together for more than 3s, till the "POF" message is displayed.

## 3. ALARM SIGNALS

### HOW TO SEE THE ALARM AND RESET THE RECORDED ALARM

1. Hold the ▲ or ▼ key to display the alarm signals.
2. When the signal is displayed, hold the **SET** key until the "rst" message is displayed, and push the **SET** key again. The "rst" message starts blinking and the normal temperature will be displayed.

Message	Cause	Outputs
"P1"	Room probe failure	Compressor output according to par. "Con" and "COF"
"P2"	Evaporator probe failure	Defrost end is timed
"HA"	Maximum temperature alarm	Outputs unchanged.
"LA"	Minimum temperature alarm	Outputs unchanged.
"dA"	Door open	Compressor and fans restarts
"EA"	External alarm	Output unchanged.
"CA"	Serious external alarm (i1F=bAL)	All outputs OFF.
"CA"	Pressure switch alarm (i1F=PAL)	All outputs OFF

## MAINTENANCE



The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.

### Refrigerators and Freezers

The interior and exterior can be cleaned using soap and warm water. If this isn't sufficient, try ammonia and water or a **nonabrasive** liquid cleaner.

Do not use an abrasive cleaner because it will scratch the paint and plastic and can damage the breaker strips and gaskets.

### Cleaning the Condenser Coil

**The condenser coil requires regular cleaning, and is recommended every 90 days. In some instances, you may find that there is a large amount of debris and dust or grease accumulated prior to the 90 day time frame. In these cases the condenser coil should be cleaned every 30 days.**

If the build up on the coil consists of only light dust and debris, the condenser coil can be cleaned with a simple brush. Heavier dust build-up may require a vacuum or even compressed air to blow through the condenser coil.

If heavy grease is present, there are de-greasing agents available for refrigeration use and specifically for the condenser coils. The condenser coil may require cleaning with the de-greasing agent and then blown through with compressed air.

Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with dirty or clogged condenser coils can result in compressor failures. **Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor.**



Never use a high pressure water wash for this cleaning procedure as water can damage the electrical components located near or at the condenser coil.

In order to maintain proper refrigeration performance, the condenser fins must be cleaned of dust, dirt and grease regularly. It is recommended that this be done at least every three months. If conditions are such that the condenser is totally blocked in three months, the frequency of cleaning should be increased. Clean the condenser with a vacuum cleaner or stiff brush. If extremely dirty, a commercial-grade condenser cleaner may be required.



**NEVER USE STEEL PADS, WIRE BRUSHES OR SCRAPERS!**

Cleaning solutions need to be alkaline based or non-chloride based. Chlorides are also commonly found in hard water, salts, and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse and dry thoroughly.

Routine cleaning of exterior can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stainless steel cleaners available which can restore and preserve the finish of the steels protective layer.

## MAINTENANCE



**CAUTION**

**Never use an acid based cleaning solution! Many food products have an acidic content which can deteriorate the finish. Be sure to clean the steel surfaces of ALL food products.**

### **Gasket Maintenance**

Gaskets require regular cleaning to prevent mold and mildew build up and also to keep the elasticity of the gasket. Gasket cleaning can be done with the use of warm soapy water. Avoid full strength cleaning products on gaskets as this can cause them to become brittle and prevent proper seals. Do not use

sharp tools or knives to scrape or clean the gasket which could possibly tear the gasket and rip the bellows.

Gaskets can easily be replaced and don't require the use of tools or authorized service technicians. The gaskets are "Dart" style and can be pulled out of the groove in the door and replaced by pressing the new one back into place.

### **Doors/Hinges**

Over time and with heavy use, door hinges may become loose. If the door is beginning to sag, tighten the screws that mount the hinge brackets to the frame of the unit. If the doors are loose or sagging, this can cause the hinge to pull out of the frame which may damage both the doors and the door hinges.

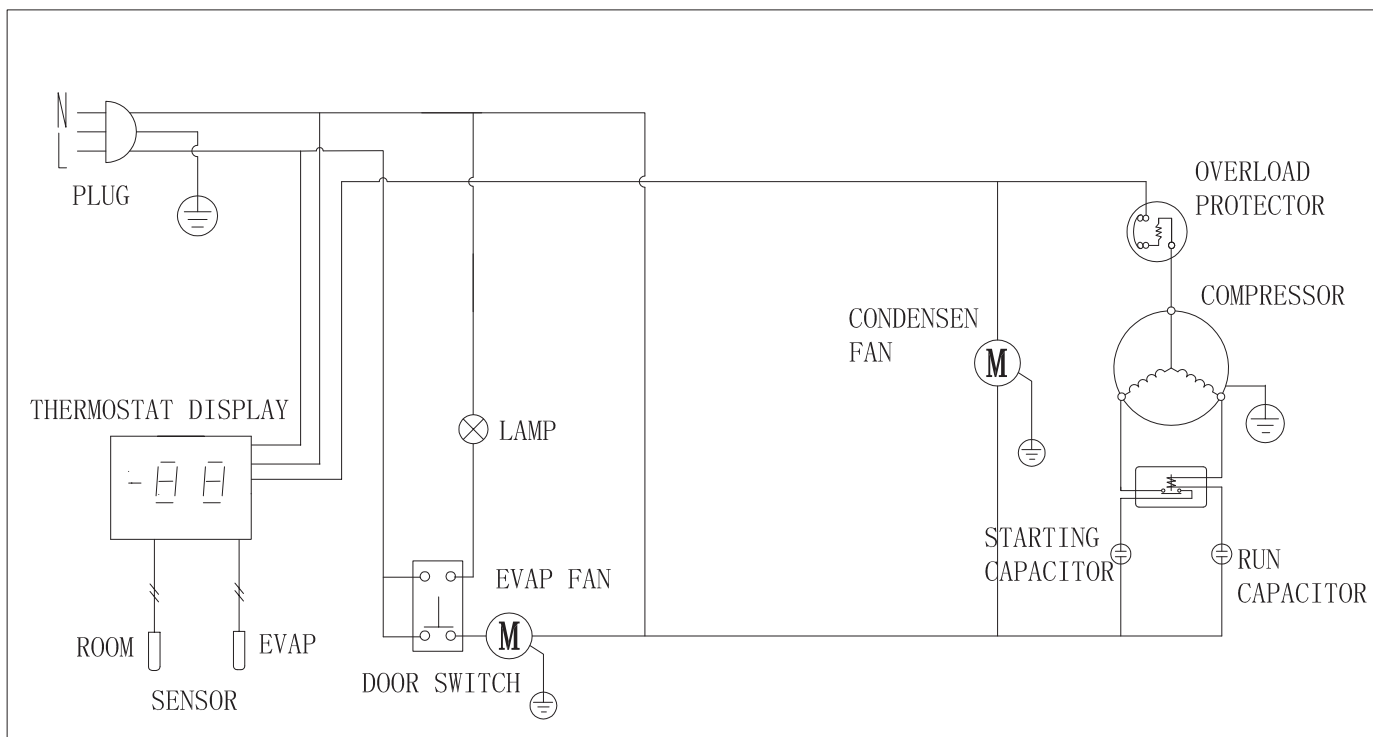
### **Drain Maintenance**

Each unit has a drain located inside the unit which removes the condensation from the evaporator coil and evaporates it into an external condensate evaporator pan. Each drain can become loose or disconnected from moving or bumping the drain. If you notice excessive water accumulation on the inside of the unit, be sure the drain tube is connected from the evaporator housing to the condensate evaporator drain pan. **If water starts to collect underneath the unit, you may want to check the condensate evaporator drain tube to be sure it is still located inside the drain pan.** The leveling of the unit is important as the units are designed to drain properly when on a level surface. If your floor is not level this can also cause drain problems. Be sure all drain lines are free of obstructions because this can cause water to back up and overflow the drain pans. **Warranty service calls for water issues that are not a result of manufacturing issue will not be covered and will be responsibility of customer.**

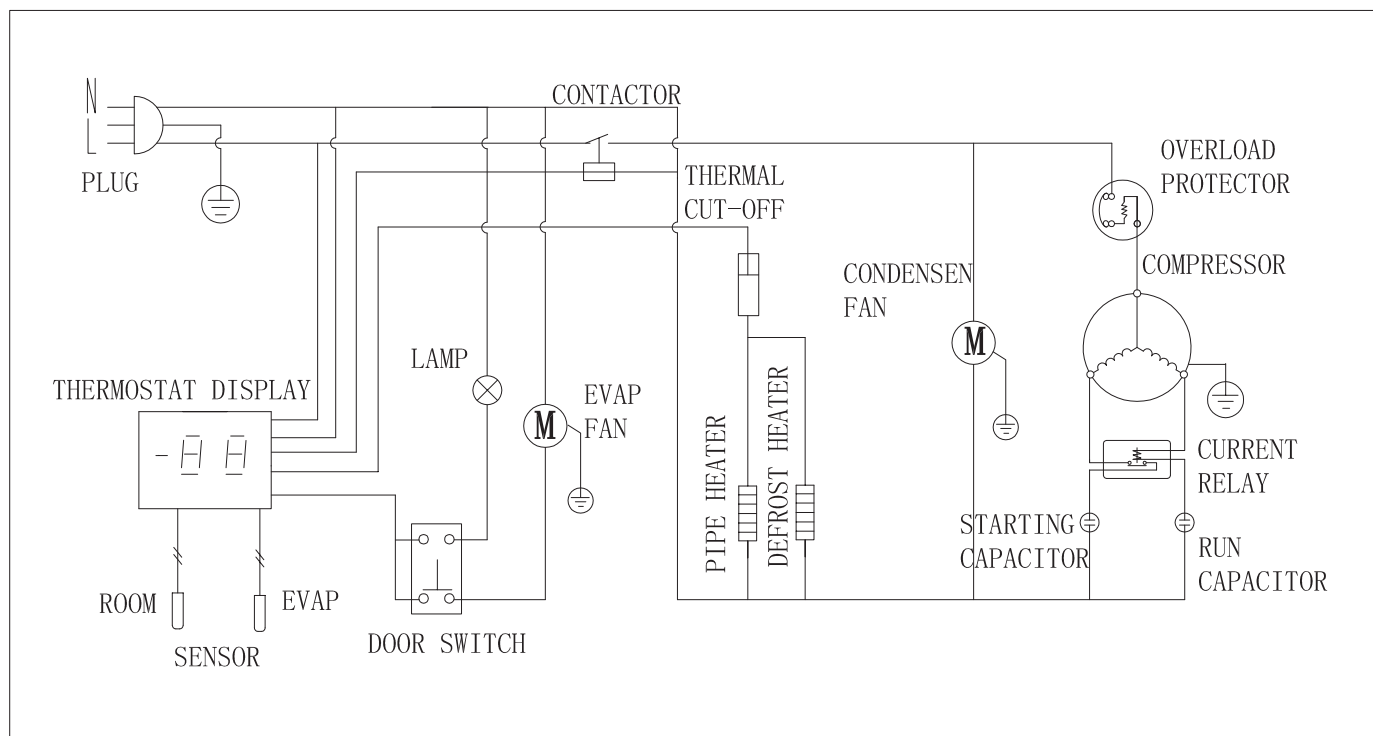


# WIRING DIAGRAM

MODEL: AWR25

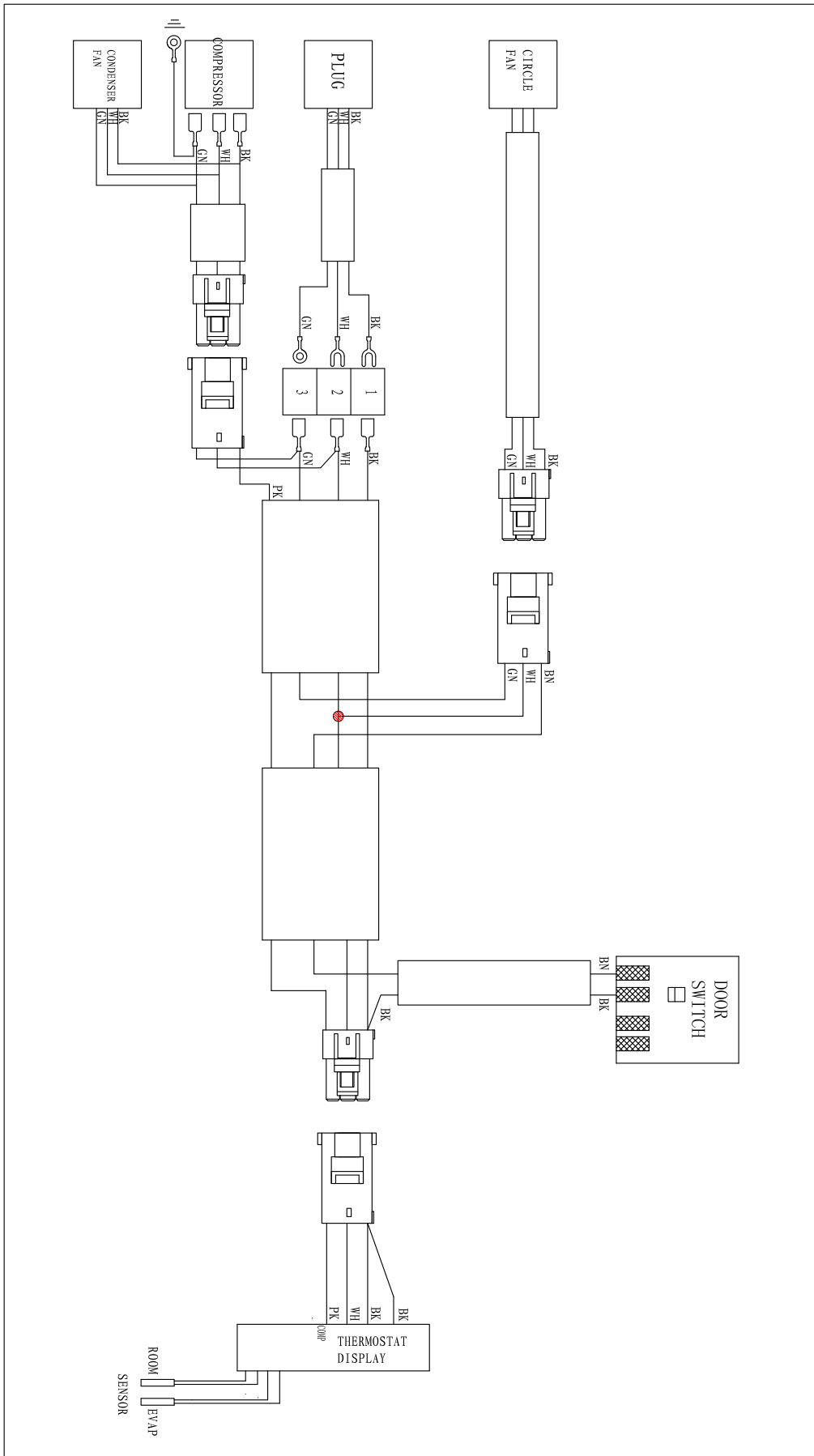


MODEL: AWF25



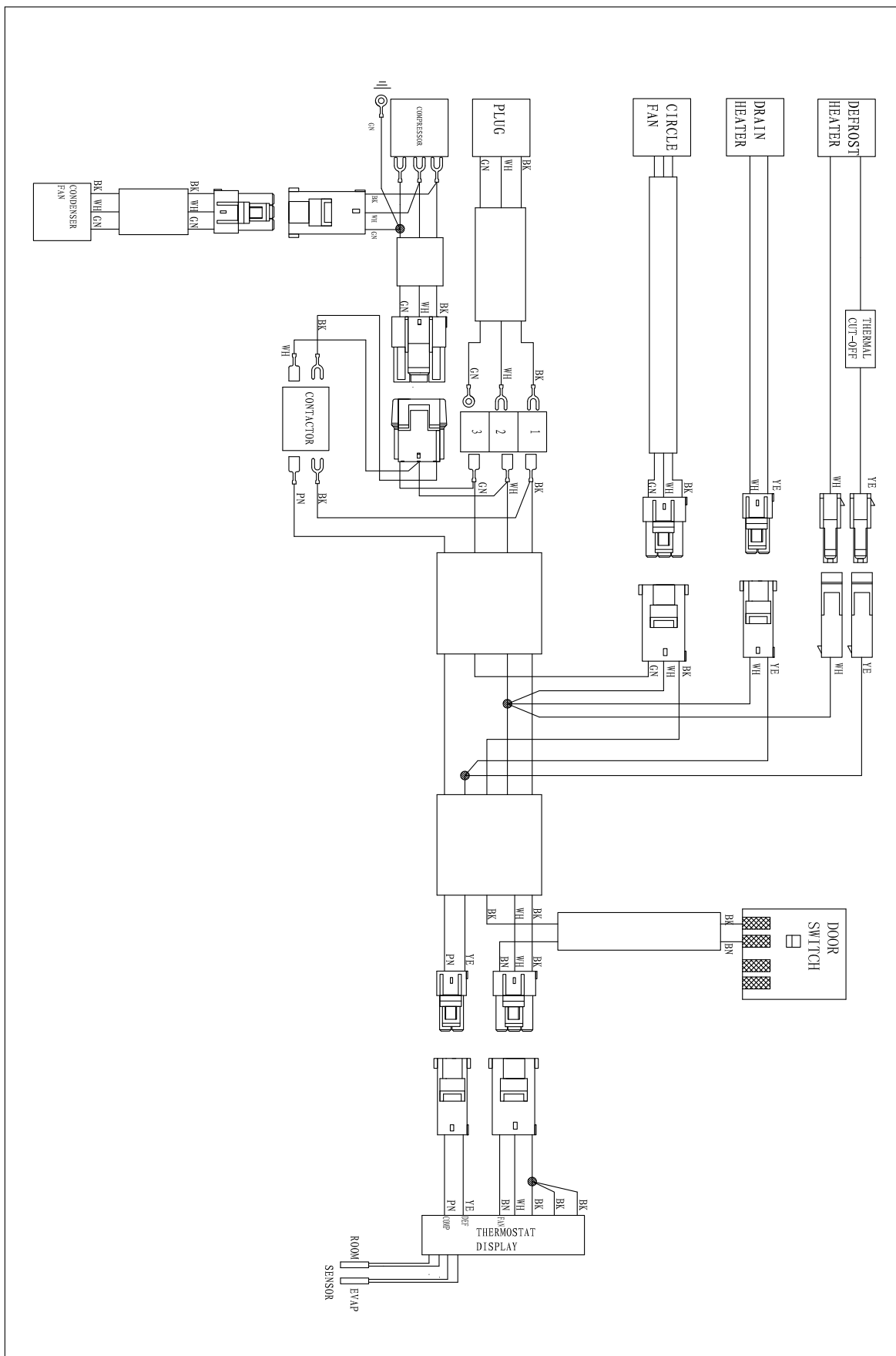
# WIRING DIAGRAM

MODEL: AWR25



# WIRING DIAGRAM

MODEL: AWF25





### **Two-year parts & labor warranty\***

Arctic Air warrants, to the original purchaser, all qualifying models of its new equipment to be free from defects in material or workmanship, under normal use and maintenance service, for a period of two (2) years from the date of original purchase or 30 months after shipment date from the manufacturer, whichever occurs first. Warranty coverage is limited to the repair and/or replacement, including labor charges, of defective parts and/or assemblies. The labor warranty shall include straight time labor charges and travel charges within 100 miles roundtrip.

#### **\* Exclusions:**

- Any Arctic Air model installed in mobile application such as concession trailers, food trucks, etc. or in an outdoor venue shall be limited to one (1) year parts, labor, & compressor warranty only.
- **Models AWR25, AWF25, ACP40, ACP55, ACP4SQ, & ACPSQ are limited to one (1) year parts & labor coverage.**
- **Light bulbs and door gaskets are limited to 90-day warranty period & door hinges to one (1) year period.**

### **Additional three-year compressor warranty\***

In addition to the two (2) year warranty stated above, Arctic Air warrants its compressor units to be free from defects in both material and workmanship under normal and proper use and maintenance service for a period of three (3) additional years from the date of original installation but not to exceed five (5) years and three (3) months after shipment from Arctic Air.

The three (3) year extended compressor warranty applies only to the compressor part itself and does not apply to any other parts, components, or labor charges involved in replacement of compressor. In addition, shipping charges for replacement compressors in the extended three-year period are not covered by this warranty and compressor replacement is limited to one (1) compressor during the three-year period.

**\*(Not applicable for ACP counter-top models and/or any model being used in mobile/outdoor use application)**

### **Conditions**

**All service under this warranty, for either labor or parts, must be performed by a preferred service provider arranged by the Arctic Air Warranty Center at 1-855-431-5558. Proof of purchase will be required to validate warranty coverage dates. Service coverage is limited to units located in the United States and Canada only.**

### **Limitations & Exclusive Warranty**

This parts and labor warranty is the sole and exclusive warranty remedy offered by Arctic Air. Arctic Air's sole obligation under this warranty is limited to either repair or replacement of parts and is subject to the limitations listed below. Arctic Air will bear no responsibility or liability for any equipment which has been misapplied, mishandled, misused, subjected to harsh chemical action, or external causes such as the use of extension cords, electrical power fluctuations, lack of proper maintenance, non-factory approved revisions or modifications, or equipment damaged by fire, flood, or other acts of God.

1. Arctic Air will bear no responsibility for consequential loss or damages such as, including but not limited to, economic loss, profit loss, personal injury, property damage, damage during transit, losses or damages arising from food or product spoilage claims.
2. Arctic Air shall bear no responsibility for parts or labor coverage for component failure or other damages resulting from improper usage, installation, or maintenance as described in the owner's manual. In addition, charges that include but are not limited to ferry charges, city torch/burn permits, or labor time to access mobile units are not covered by this warranty.
3. Arctic Air equipment is intended for commercial use only and this warranty is void if the equipment is installed in other than commercial applications.
4. All other warranties, either express or implied, arising under law or equity or custom of the trade, including but not limited to, warranties or merchantability or fitness for a particular purpose are excluded.



*Commercial Freezers & Refrigerators*

**Broich Enterprises, Inc. / Arctic Air**

6440 City West Parkway

Eden Prairie, MN 55344

Phone: 952-941-2270

Fax: 952-941-3066

Website: [www.arcticairco.com](http://www.arcticairco.com)