

# ARCTIC AIR

## DIGITAL CONTROL OPERATIONS MANUAL

Rev. B 3-16-11



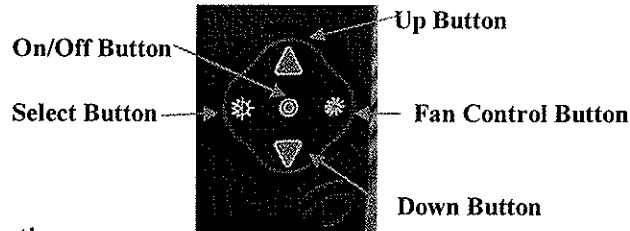
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## Before you start:

### 1. Applying power:

When power is first applied, the display will show "ARCTICAIR" and the software revision. The display will then return to the last mode the unit was in when power was removed.



### 2. Joystick operation:

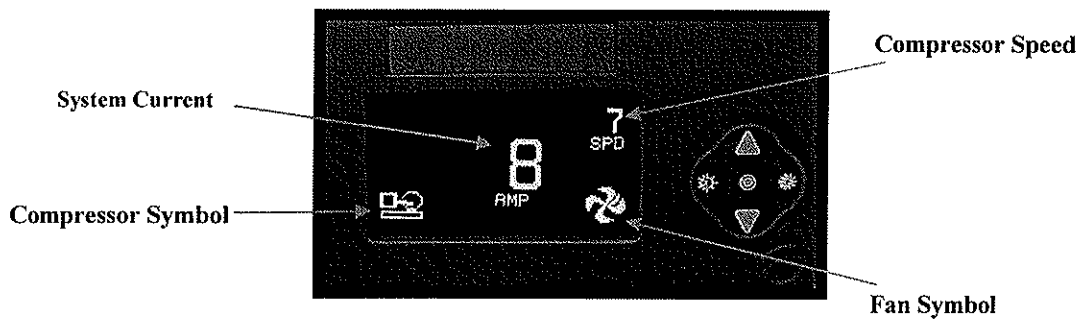
The four position joystick may be tapped up, down, right, left or in the center to make changes to the operation of the control.

## Operating modes

### Off Mode

The fan may be operated in this mode by pressing the joystick to the right. The system current and fan symbol will appear whenever the fan is running. Program and view modes are accessed from this mode. Press the On/Off button to enter the Cooling mode.

### Display view as shown in cool mode



### Cool mode

Press the On / Off button to select between cooling and off modes. The compressor symbol will appear when system is cooling. Compressor speed may be adjusted from 0 to 20 to control the system current draw. Press the up or down button to change the speed. Speed setting increases are not allowed if the system is running at the maximum system current limit.

## View mode

Press and hold the mode button to enter the “View” mode and view compressor and fan currents separately. Press any button to exit the “View” mode.

## Programmable Parameters:

Descriptions of programmable parameters, factory default and allowable values are shown in the table below.

### Entering the program mode:

To enter the program mode first put the unit in the off mode. Press the following sequence of buttons: **Select, Up, Down, Select**. CONTINUOUS FAN will appear as the first program parameter. Use the fan button to advance to the next parameter and the select button to go back to the last parameter. Use the up and down buttons to change the parameters value. Exit the program mode when finished by pressing and releasing the On/Off button. The program mode will exit to the off mode if no button is pressed for 60 seconds.

**Programmable Parameter Table**

<b>Description</b>	<b>Default</b>	<b>Value</b>
Continuous fan	Continuous	Cycled or Continuous
System units	* See note below	
Display brightness	15	4=Minimum 15=Maximum
Screen saver brightness	* See note below	
Temperature calibration	* See note below	
Staging delay	10	5 to 135 Seconds
Failsafe Level	* See note below	
Masterflux model	027	027 or 072
Current limit	60	0 to 70
De-Ice time	Off	5-90 Seconds
Reset Parameters	No	No or Yes

\* Note: Changing these parameters does not affect the operation of the control.

## Parameter description:

- **Cycled fan:** When this parameter is set for “Cycled” and the display is in the ON mode, the fan will operate whenever the compressor is running. When set for “Continuous”, the fan will always operate when the system is in the ON mode.
- **Display brightness:** Display brightness can be set from 4 to 15 to suit user preference.
- **Staging delay:** This parameter sets the length of time to wait before starting the compressor after power is applied if there is an immediate demand.
- **Masterflux model:** Selects Masterflux controller interface. 027 for 025A0027 or 072 for the 025A0072. **THIS SETTING IS SET BY FACTORY BASED ON THE CONTROLLER INSTALLED. DO NOT CHANGE THIS SETTING.**
- **Current limit:** This parameter allows the user to set the maximum system running current. If the system current exceeds this value during operation, the compressor speed will be reduced. If this limit is set too low, the compressor may only operate at minimum speed.
- **De-Ice time:** 5-90 Seconds.
- **Reset parameters:** To reset all parameters to factory defaults, select YES and then exit the program mode by pressing the joystick center button. The display will show “EEPROM RESET”, and then return to the off mode. Reset parameters will not change the Masterflux model set by the factory.

## Fault indication

The display will indicate faults as provided by the controller it is connected to. Indicated faults will depend on the type of controller installed on the system.

025A027 controller:

This controller will only indicate a **general system fault**. This fault can be caused by a stalled or overheated motor, or high heat sink temperature.

025A072 controller:

This controller will indicate the following conditions:

**Battery voltage**

**Low speed**

**Locked rotor**

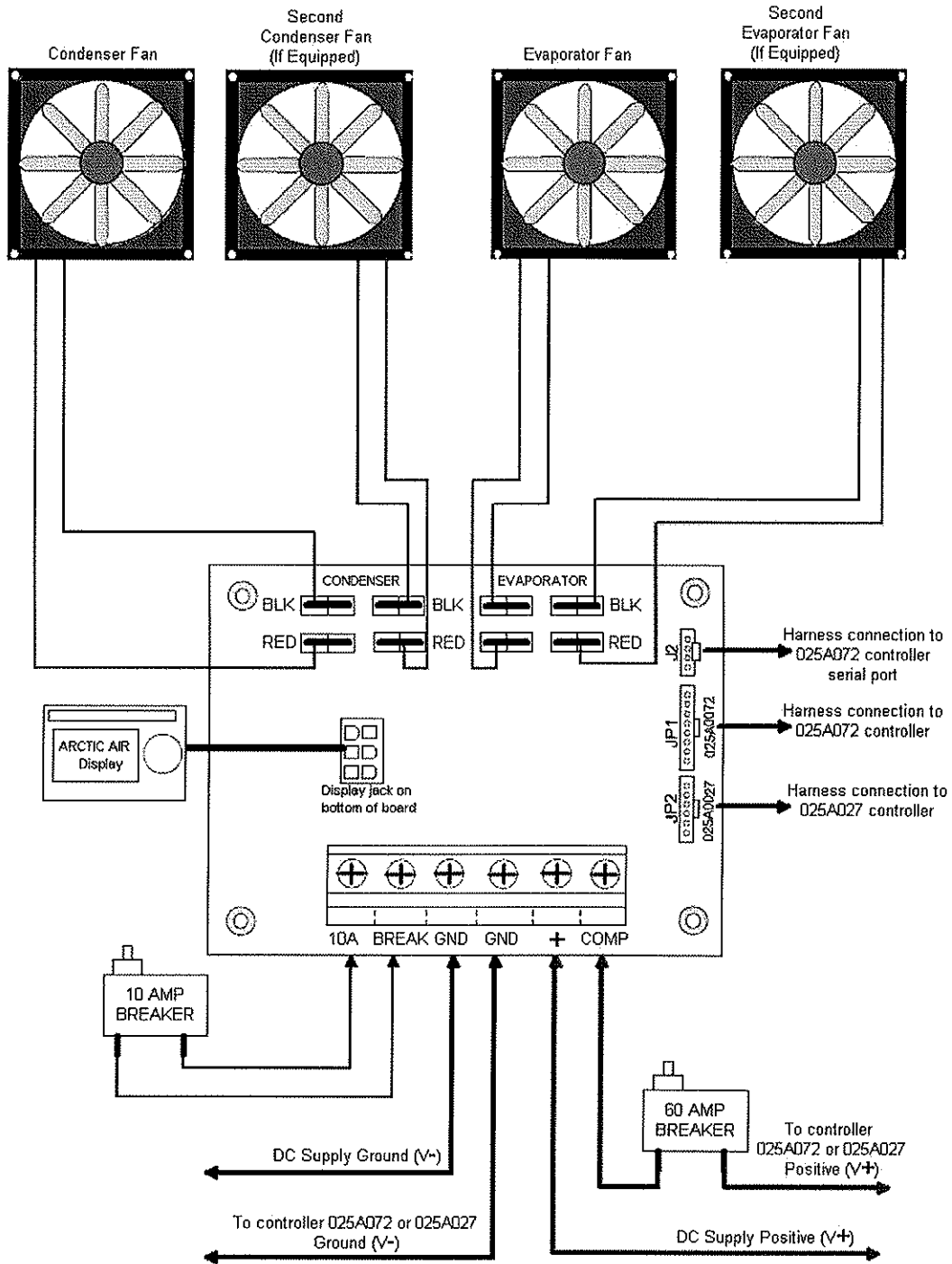
**Heat sink temperature**

**Motor Shell temperature**

Users of either controller may reset the system by pressing the on / off button twice to turn the system off and then on again.

**Air sensor trouble** occurs if the air sensor inside the display fails. The display would need to be repaired to correct this problem.

# ARCTIC AIR DC OLED wiring



## Specifications

Input Voltage	9-35 VDC
Minimum operating temperature	0°F
Maximum operating temperature	180°F
Maximum RH conditions	95% Non-condensing
Maximum length of the display cable	35 Feet

The display is designed for use with Vimar Idea series modular support panels and bezels

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