

# ARCTIC AIR

## DC OLED

### Digital Control Operations Manual



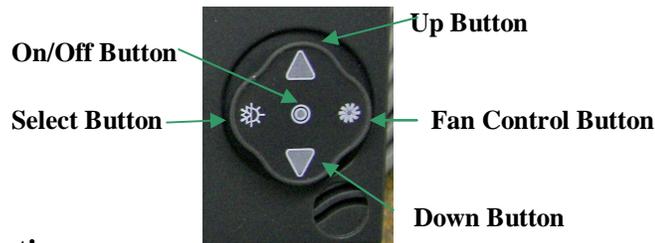
**Micro Air Corporation**  
**124 Route 526**  
**Allentown NJ 08501**

**Phone (609) 259-2636**  
**WWW.Microair.net**  
**Fax (609) 259-6601**

## 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

### Screen Saver

In screen saver, the display will appear dim and operation will continue in the mode selected. Screen saver is activated after two minutes without any button press in any mode. To exit screen saver, press any button.

### Off Mode

When the display is in the off mode, only the temperature will show in the center of the screen. The fan may be operated in this mode by pressing the joystick to the right. Program mode is accessed from this mode. See programmable parameters for details on adjusting system parameters. 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 to reduce the system current draw. Press the up or down button to change the speed. If the system is turned off then on again during a cooling cycle, the compressor will not restart for at least 60 seconds.

## View mode

Press and hold the mode button to view compressor and fan currents separately. Press any button to return to the cool mode display view.

## Programmable Parameters:

Descriptions of programmable parameters, factory default values, 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	°F	°F or °C
Display brightness	15	4=Minimum 15=Maximum
Screen saver brightness	4	- and 1 to 8
Temperature calibration	0	Ambient +/- 10°F
Staging delay	15	5 to 135 Seconds
Failsafe Level	Not active or operational	
Masterflux model	027	027 or 072
Current limit	60	0 to 70
De-Ice time	Off	Not Available
Reset Parameters	No	No or Yes

## 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.
- **System units:** Degrees Fahrenheit (°F) or degrees Celsius (°C) can be selected
- **Display brightness:** Display brightness can be set from 4 to 15 to suit user preference.
- **Screen saver brightness:** If set for (-) then a single bar will blink sequentially in the four corners of the display. Values from 1 to 8 can be set to suit user preference.
- **Temperature calibration:** This parameter allows the user to calibrate the air temperature sensor. The ambient temperature will be displayed and can be adjusted +/-10 °F or +/-5°C
- **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.
- **Fail safe level:** Not active or operational.
- **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 over current indication. The display will flash the current reading in the top left corner when it exceeds this value. Pressing the up or down arrows while this is flashing will change the operating current.
- **De-Ice time:** Not available.
- **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 show the room temperature in the off mode. Reset parameters will not change the Masterflux model set by the factory.

## Fault indication

The display will detect 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:

These controllers will only show a **general system fault**. This fault can be caused by a stalled motor, overheated heat sink or an overheated motor.

025A072 controller:

These controllers will provide indication of:

**Battery voltage**

**Low speed**

**Locked rotor**

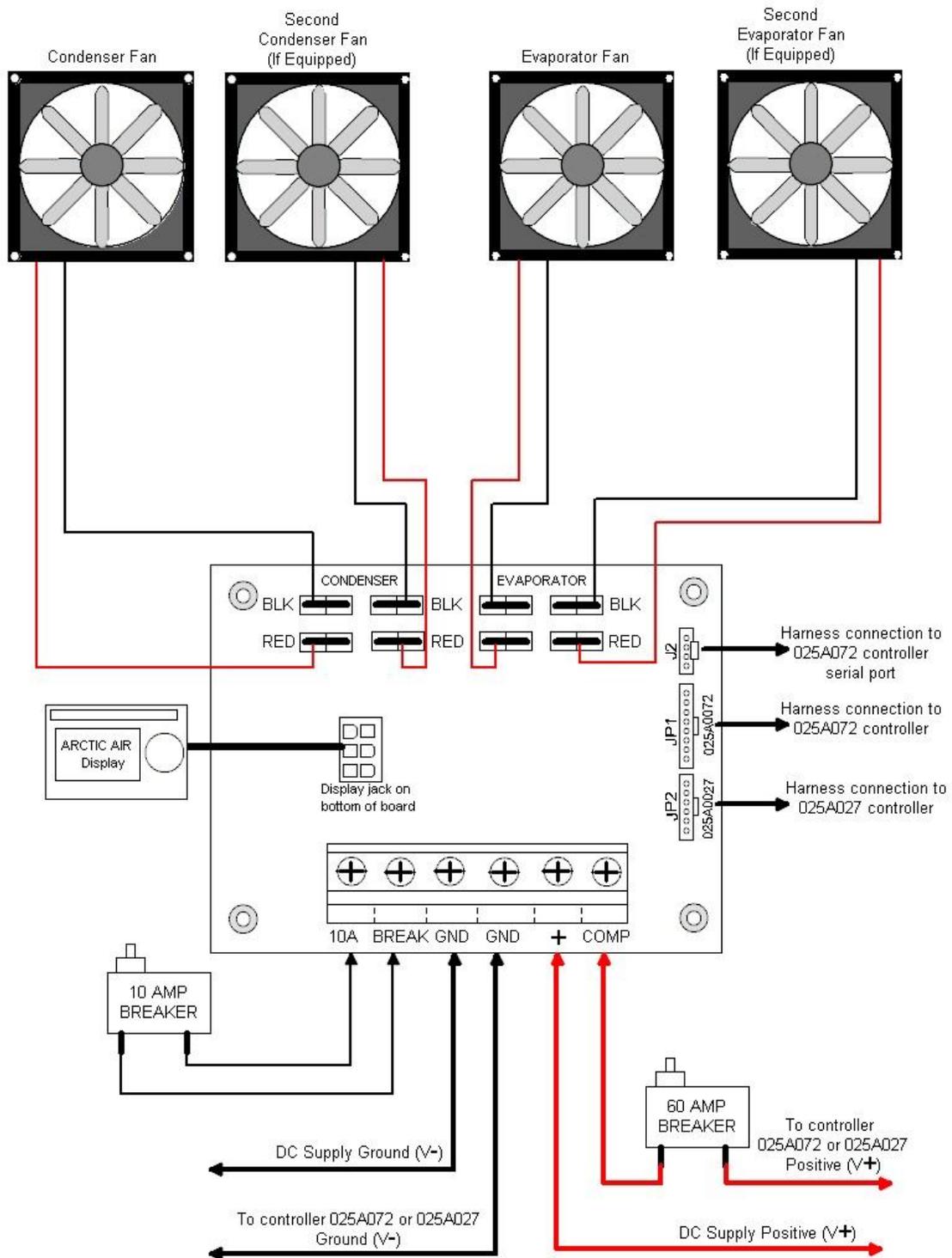
**Heat sink temperature**

**Motor Shell temperature**

Users of either controller can attempt to 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

Set point range	55°F to 85°F 12.7°C to 29.4°C
Ambient temperature range displayed	5°F to 150°F
Sensor accuracy	+/-2°F at 77°F
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

COPYRIGHT © 2010 Micro Air Corporation, All Rights Reserved

No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without prior written consent by Micro Air Corporation.

Every precaution has been taken in the preparation of this manual to insure its accuracy. However, Micro Air Corporation assumes no responsibility for errors and omissions. Neither is any liability assumed nor implied for damages resulting from the use or misuse of this product and information contained herein.