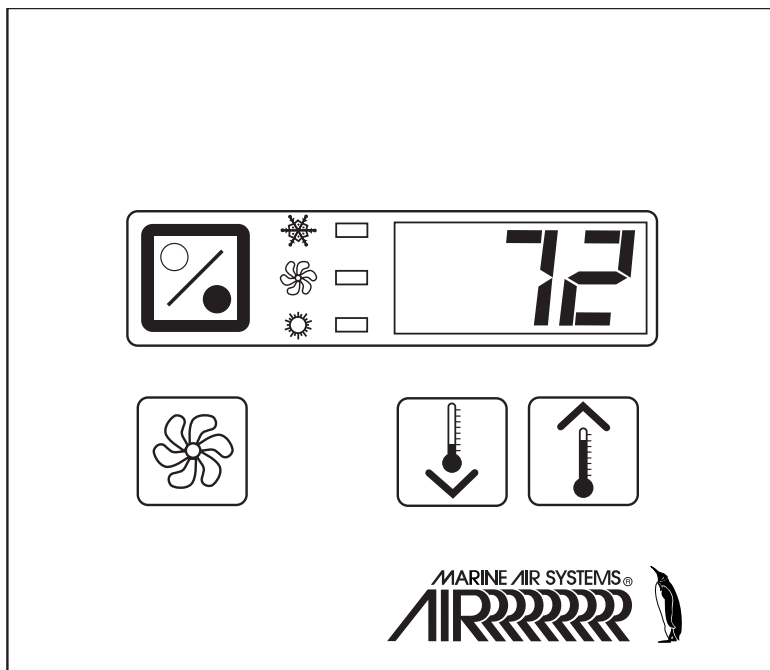


# ah-passport I/O

Operation

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Revised: 11-7-05  
L-2232





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# AH-Passport I/O Controls • Introduction

The AH-Passport I/O is designed for use with **Chilled Water** Air Conditioning Systems.

## Standard Features

- User friendly four button display panel requires no manual for basic operation.
- 5 volt logic microcontroller located in the display.
- 3-digit 7-segment display indicates degrees Fahrenheit or degrees Celsius.
- Room temperature sensor integrated into the display panel.
- Automatic fan speed reduction as set point is approached.
- 6 manual fan speeds.
- 13 programmable parameters for custom installations.
- Water In Sensor allowing individual cabin heating.
- Moisture Mode for controlling relative humidity.
- Universal AC power supply
- Nonvolatile memory retains settings without batteries.
- Programmable display brightness control for night use.

## Optional Features

The following optional items can be added by plugging the device into the appropriate jack and making the necessary programming changes.

- Outside air temperature sensor.
- Alternate air temperature sensor.
- Electric Heat Control Option.

This manual is intended to provide information necessary to insure proper installation and operation of the AH-Passport I/O Control. Poor installation and misunderstood operating parameters will result in unsatisfactory performance and possible premature failure of the control.

## Read This Manual Completely Before Proceeding!

If you have questions or require assistance with your AH-Passport I/O control, call Dometic Environmental Corporation.

The AH-Passport I/O Control is covered under existing Marine Air Systems Warranty Policy. Incorrect installation, neglect and system abuse are not covered under Marine Air Systems warranty policy.

**NOTE:** In order to continually improve the AH-Passport I/O Control, Marine Air Systems reserves the right to change this product's basic operation, specifications and design criteria without prior notice.

## System Overview

The AH-Passport I/O is a user friendly, easy to operate, programmable temperature control.

Press the ON/OFF button once to engage the system. The display indicates room temperature when the system is on and the display is blank when the system is off.

Set the room temperature by pressing the up or down button. The set point can be viewed by momentarily pressing and releasing the up or down button.

Fan speed operation is automatic allowing the fan speed to decrease as room temperature is approached in the Cool Mode. The fan will operate at low speed when set point is satisfied. Manual fan speeds can be selected by pressing the Fan Button and selecting the desired fan speed. The fan will operate at the speed selected and will not change with room temperature.

The fan can be programmed to cycle on and off with the Heating and Cooling demand. Normally the automatic fan speed operation is reversed in the heating mode; however, the fan speeds can be programmed to operate the same as in the cooling mode.

**Memory:** AH-Passport I/O Control has nonvolatile memory which requires no batteries or any form of backup power. When power is lost the operating parameters are retained indefinitely. When power is restored, the control resumes operating as last programmed. All operating and programming parameters are entered into nonvolatile memory instantly and are retained indefinitely.

## IMPORTANT PROGRAMMING NOTES TO INSTALLER AND END USER:

1. Air handler units can have either a Split Capacitor or a Shaded Pole fan motor. It is very important to identify the type of fan motor that your particular model has in order to properly program the P-16 parameter in the AH-Passport I/O display. Please refer to the P-16 parameter description in the Programmable Parameters section for further details on how to identify the type of fan motor and how to program the parameter.
2. Standard air handlers come equipped with chilled water bypass valves. However, for **“No-Valve”** air handlers, the fan must be set to **“cycle on demand”** via programming parameter P-14. Verify that installed air handlers have bypass valves; if not, change parameter P-14 to **“CYC”** for cycle on demand fan operation.
3. When powering on the AH-Passport I/O control, press and immediately release the Power button so as to not unintentionally enter Program Mode. Program Mode will be entered if the Power button is pressed and held for more than 5 seconds. If Program Mode is entered unintentionally, any subsequent presses of the Up or Down buttons will change the P-1 parameter setting since it is the first parameter shown after entering this mode. This will in turn change the operating mode to Cool Only, Heat Only, or Automatic, which could result in improper system operation. Please use care when using Program Mode and refer to the corresponding sections in this manual for further information.

## Normal Heating or Cooling Cycle

When heating or cooling is called for the water valve switches to the appropriate mode. Four (4) seconds later the automatic fan control adjusts the fan to the proper speed. When the demand is satisfied, the water valve cycles off and the fan returns to low speed. If cooling is required, the water valve will not open unless adequate cooling water is available. The fan will remain in low speed until adequate cooling water is available. If heating is required the valve will not open unless adequate heating water is available. The fan remains in low speed until adequate heating water is available. The water temperature can be viewed by simultaneously pressing the Up and On/Off Buttons. Heat will be supplied when no heating water is available if the Optional Electric Heater has been installed and programmed.

**NOTE:** Adequate cooling/heating water temperature, as described above, is defined by programmable parameter P-19; it is factory set at a 15°F/8.3°C differential from the ambient air temperature. While in a Heating or Cooling Mode the controller will maintain a 2°F/1.1°C temperature variation. A 4°F/2.2°C swing is required to cause the unit to shift to the opposite mode. Once in a new mode, Heating or Cooling, AH-Passport I/O Control will maintain a 2°F/1.1°C differential.

# AH-Passport I/O Controls • Basic Operation

Refer to figure 1 for the buttons locations and display functions listed on the following pages.

**ON/OFF BUTTON** Press and release to toggle between the On and Off Modes.

**FAN BUTTON** Press to advance through the available fan settings. One through six indicates Manual Fan Speeds. One is the lowest fan speed and six is the highest speed. The letter A indicates automatic fan operation selected.

**FAN LED INDICATOR** The Fan Indicator LED is on when a Manual Fan Speed is selected.

**DOWN BUTTON** Press and release to display the set point. Press and hold the Down Button to decrease the set point. Set point is decreased one degree each time the button is depressed.

**UP BUTTON** Momentarily press and the set point will appear in the display. Press and release the Up Button to increase the set point one degree.

**HEAT MODE LED** The Heat Mode LED is lit when the Heat Only Mode is selected or the unit is in a heating cycle.

**THREE-DIGIT 7-SEGMENT DISPLAY** The inside air temperature is displayed when the control on. The set point is displayed when either Up or Down Button is pressed. The display also indicates program information and fault codes.

When the control resumes operation after a power interruption all the display LEDs will turn on for one second. This is normal operating condition and is referred to as Power On Reset.

**COOL MODE LED** The Cool Mode LED is lit when Cool Mode is selected or when the unit is in a cooling cycle.

## Dual Button Functions

**Up & Down Buttons while in OFF mode...** Simultaneously press the Up and Down Buttons while in the OFF Mode to display the outside air temperature providing the optional outside air temperature sensor is installed.

**Up & Down Buttons while in ON mode...** Simultaneously press the Up and Down Buttons while in the ON Mode to display the chilled water temperature.

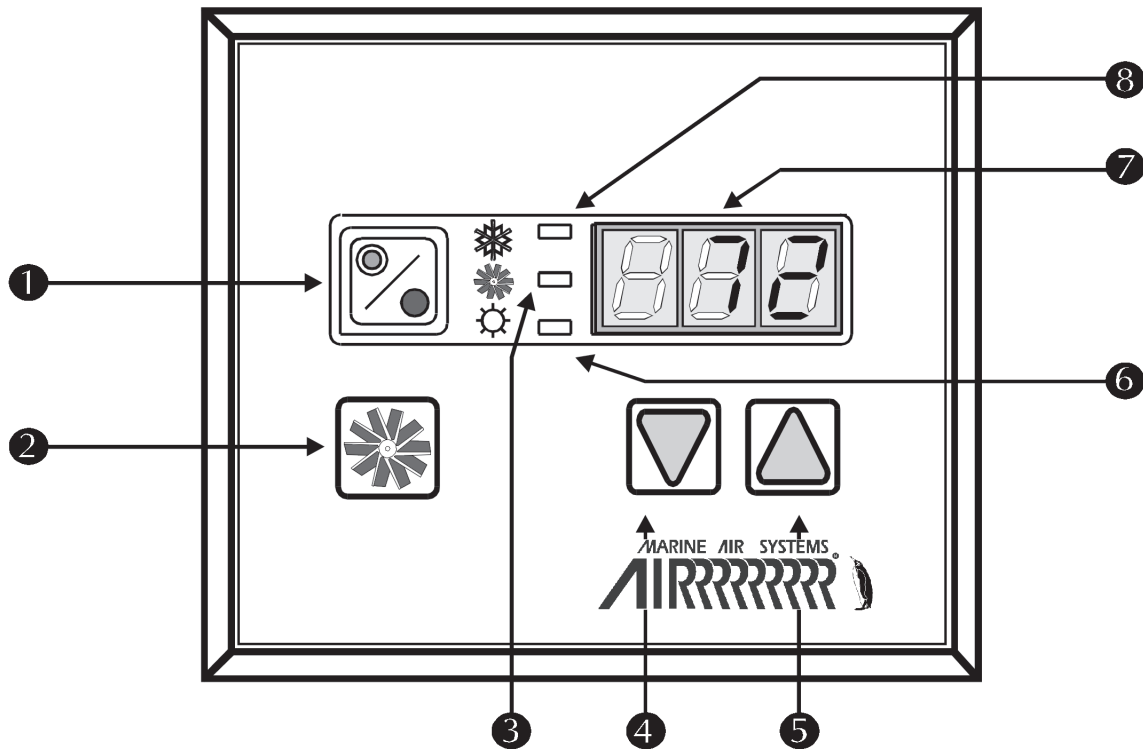


Figure 1. Passport I/O Control Buttons and Indicator Displays

### **Up & Down Buttons while in PROGRAM mode...**

Simultaneously press the Up and Down Buttons while in the Program Mode to set new program defaults.

**Fan & Down Buttons...** Simultaneously press the Fan and Down Buttons to blank the display for night operation.

**On/Off & Down Buttons...** Simultaneously press the On/Off and Down Buttons while in the ON mode to enter Moisture Mode.

## **Modes of Operation**

### **Off Mode**

When the Passport I/O is in the Off Mode, all control outputs are turned off. Program parameters and user settings are saved in nonvolatile memory. The Program Mode can only be accessed from the Off Mode.

### **On Mode**

When the control is in the On Mode power is supplied to the appropriate outputs and the display indicates the current state of operation. The operating and program parameters resume based on those stored the last time the unit was operating.

### **Cooling Mode**

When Cool Mode is selected the cooling systems are operated as required. When the temperature drops below the set point, the system will not automatically switch to the Heat Mode.

### **Heat Mode**

When the Heat LED is on, only the heating systems are selected and operated as required. Should the temperature rise above the set point, the system will not automatically switch to the Cool Mode.

### **Automatic Mode**

Automatic Mode provides both heating and cooling as required. The Heat or Cool LED will be lit according to the mode required. Temperature in a given mode is maintained within 2°F (1.1°C) of set point; however, a 4°F (2.2°C) difference is required to allow the control to change modes. Once the mode changes, the temperature will be maintained within 2°F (1.1°C) of set point.

### **Manual Fan Mode**

Press and hold the Fan Button during normal operation to select one of the six manual fan speeds available. The fastest fan speed is represented by "6", the slowest represented by "1". Manual Fan Mode allows the user to select the desired fan speed manually.

When a manual fan speed has been selected, the fan LED will be lit. Manual Fan Mode is sometimes preferred when room temperature is constantly changing due to varying heat loads.

### **Circulation Mode**

When the system is off at the display panel the fan can be used to only circulate the air. Press and hold the Fan Button when the display is off until the desired speed number appears in the window. Release the Fan Button and the fan will run at the selected speed circulating the air without heating or cooling. Press the Power Button once to cancel the Circulation Mode and enter the On Mode.

### **Moisture Mode**

While in the On Mode simultaneously press the Power and Down Buttons. The first cycle will start in one minute. Every four hours, the fan is started and air circulated for thirty minutes. During this time the air temperature is sampled and entered into memory. The cooling cycle is started and continues until the temperature is lowered 2°F (1.1°C). The compressor is allowed a maximum of one hour running time to reach the desired temperature. Four hours after the temperature is satisfied or the compressor times out, the cycle is repeated. The "HU1" mnemonic code is displayed while in the Moisture Mode.

Press the Power Button to end the Moisture Mode.

### **Program Mode**

The Program Mode is used to adjust the systems operating parameters to suit the particular needs of individual users. The Program Mode is also used to tailor the air conditioning system for the most efficient operation within an installation. Variables such as, ducting, sensor location and system layout affect the system operation. Passport I/O is shipped with factory default settings which are stored in permanent memory and can be recalled at any time.

### **Entering Program Mode**

The program mode can only be entered from the Off Mode. Press and hold the Power Button while in the Off Mode until the letter "P" appears in the display. The characters "P 1" followed by the parameter setting appear in the display. The Passport I/O control is now in the Program Mode. NOTE: The control will exit the Program Mode and return to the Off Mode if no programming is attempted for one minute.

## Restore Memorized Default Settings

**IMPORTANT!** The memorized default settings can be restored by entering the Program Mode and setting P-17 to “rSt”. Exit the Program Mode and the software version number (“A12”) appears in the display. The memorized default settings are restored and the Passport I/O control returns to the Off Mode.

## Using the Program Mode

To increment from one program parameter to the next, press the Fan Button while in the Program Mode. Press and release the Fan Button to advance to the desired parameter. The programmable parameters range from P-1 through P-19.

## Up and Down Buttons

The Up and Down Buttons are used to select the data or set the desired limits for the parameter being programmed.

## Saving New Program Parameters

Simultaneously press the Up and Down Buttons while in the Program Mode to save the new program parameters. This will also set the new program defaults. Factory defaults shown in the table may be reset manually.

## Exiting the Program Mode

There are two methods to exit the Program Mode. Press the Power Button and the control will return to the Off Mode. Not pressing any buttons or attempting any program changes for one minute will exit the Program Mode.

## Software Identification

The software version of the control is identified for one second prior to the exit from the Program Mode. The software identification number, i.e. (“A12”) will appear in the display for one second, then the control will return to the Off Mode.

### **NOTE:**

Should there be any reason to contact Dometic about the system or programming Passport I/O be sure to have the software identification number and air conditioning unit serial number available. The serial number may be found on the dataplate label.

## Programmable Parameters

There are 13 programmable parameters with Factory Default Settings listed in this section. The Programmable Parameters Table indicates what these parameters are, along with the permitted values and the original Factory Default Settings.

Should any programming problems or confusion occur, reset the Memorized Default Settings by entering the program mode and setting P-17 to rSt.

### **P-1: Operating Mode**

The following operating modes can be selected: Automatic Mode by programming “0”, Cool Mode by selecting “1” and Heat Mode by selecting “2”.

### **P-2: High Fan Limit**

The upper fan speed limit can be adjusted for various motors. The high fan limit is adjusted with the system installed and operating. The values range from 65 through 95 arbitrary units. Set a higher number for a higher fan speed. Set lower number to lower the fan speed. Use the Up and Down Buttons to select the desired speed.

### **P-3: Low Fan Limit**

The low fan limit determines the lowest output allowed for the low fan speed. The values range from 30 through 64 arbitrary units. Use the Up and Down Buttons to select the low fan limit. Set a higher number, for higher fan speed. Setting lower numbers lowers the fan speed.

**IMPORTANT!** Once the high and low fan speed limits are set, the unit will automatically readjust the remaining speeds to produce three equally spaced fan speeds in both Automatic and Manual Fan Modes.

### **P-5: Temperature Calibration**

Use this feature to calibrate the ambient sensor. Select P-5 and the ambient temperature appears in the display. Use the Up and Down Buttons to set the correct reading. The temperature in the display will increase or decrease as required.

### **P-10: Display Brightness Control**

The display brightness can be adjusted from 4 to 13, with 4 being the dimmest and 13 the brightest.

### **P-11: Fahrenheit or Celsius Selection**

The default setting is °F. Select °C for Celsius. (Celsius readings are displayed in tenths, example 22.2°).



## Programmable Parameters Table

Program Number	Description	Default	Range
P-1	Operating Mode	0	0 = Automatic    2 = Heat 1 = Cool
P-2	High Fan Speed Limit (arbitrary units)	95	65 - 95
P-3	Low Fan Speed Limit (arbitrary units)	55	30 - 64
P-5	Temperature Sensor Calibration	Ambient	Ambient $\pm$ 10° F
P-10	Display Brightness Control	9	4 = Low 13 = Max
P-11	Display ° Fahrenheit or ° Celsius	°F	°F = Fahrenheit Displayed °C = Celsius Displayed
P-13	Reverse Fan Speeds During Heating Mode	rEF	nor = Normal Fan Operation rEF = Reversed Fan In Heating
P-14	Continuous Fan or Cycle Fan with Demand	con	CYC = Cycle Fan On Demand con = Continuous Fan Operation
P-15	Chill Water Heating or Electric Heat Only	nor	nor = Chill Water Heat Only ELE = Electric Heater Installed
P-16	Fan motor type selection... Shaded pole or split capacitor.	SC	SP = Shaded Pole Fan Motor SC = Split Cap. Fan Motor
P-17	Reset Memorized Programming Defaults	nor	rSt = Reset Defaults nor = Normal
P-18	Water Valve Forced Open 4 Hours to Bleed the Chill Water System	nor	nor = Normal Operation OPn = Valve Forced Open
P-19	Ambient Air to Chillwater Temperature Differential	15°F	5°F to 25° Fahrenheit

### P-13: Reverse Automatic Fan Speeds

The automatic fan speeds can be reversed during the Heat Mode to improve heat output in cooler climates. The fan speed is decreased as the temperature spread increases. The fan will speed up as the set point is approached. The fan switches to low speed when the set point is satisfied and the water valve cycles off. The fan can be programmed to operate the same as in cooling by programming P-13 “nor”.

### P-14: Cycle Fan with the Cooling or Heating Demand

The fan can be programmed to run continuously when the system is on or can be allowed to cycle with the cooling or heating demand. To cycle the fan, select “CYC”. The default is “con”, for continuous fan operation.

### Important !

When used with optional electric heat the fan will remain on four minutes after the heater cycles off.

### P-15: Electric Heat Option

Units may be equipped with an electric heater, which are used when the main chiller system is in cooling mode and a particular cabin requires heating. Electric heaters are also used to supplement the circulated water heating (via the hydronic valve) when necessary. Set this parameter to “ELE” to enable the electric heat option, or set to “nor” to disable.

**NOTE:** For AH-Passport I/O software revision A12 and older, when this parameter is programmed for electric heat, only the electric heat relay located towards the middle of the AH-Passport I/O circuit board is energized during a heating cycle (see Sample Wiring Diagram at the back of this manual). For

AH-Passport I/O software revision A13 and newer, when programmed for electric heat, both the electric heater relay and the compressor relay are energized. This change was made to support the future elimination of the electric heater relay. Therefore, AH-Passport I/O circuit boards that do not have electric heater relays will require an AH-Passport I/O display with software revision A13 or newer to properly energize the compressor relay. Also, when using configuration, the electric heater L1 connection must be connected to the COMP L1 terminal on the AH-Passport I/O circuit board (see Sample Wiring Diagram). If you require further assistance, please consult with Dometic Customer Service or with an authorized service technician.

## P-16: Fan Motor Selection

### **IMPORTANT NOTE TO END USER:**

Air handler units can have either a Split Capacitor (SC) or a Shaded Pole (SP) fan motor; the factory default parameter setting "SC" is correct for most units. However, many models have Shaded Pole blowers. For example, an AT12FZ is a Shaded Pole model, whereas an AT12HVZ is a Split Capacitor model. A Split Capacitor fan motor, also referred to as a "High Velocity" unit, does not have a blower motor overhang, the motor is inside the blower, and there is an "HV" in the model number. A Shaded Pole fan motor does have a blower motor overhang, the motor is external to the blower, and there is an "F" in the model number. **If your air handler model is this Shaded Pole type, then you must change parameter P-16 to "SP" prior to operating the equipment.** Save this change as a new default by simultaneously pressing and releasing the Up and Down Buttons prior to exiting the program mode. Make note of new default in the Programmable Parameters table.

## P-17: Reset Memorized Defaults

The default programming parameters can be reset by entering the program mode and selecting "rSt". This restores the programmable parameters to the default values. The default parameters listed in the Programming Parameters Table may be altered by the installing dealer or end user. Once new defaults are entered and memorized the factory defaults will be overwritten. The original factory program parameters as listed in the table may be restored manually.

## Why Memorize New Defaults?

Once the desired programming changes have been made and the system tests satisfactorily your work can be saved as new factory defaults. The new defaults are initiated by simultaneously pressing and releasing the up and down buttons prior to exiting the program mode.

## P-18: Hydronic Water Valve Forced Open

The parameter opens the water valve to bleed air from the system. "OPn" forces the valve open for 4 hours while the AH-Passport I/O control is turned off.

**Important Note:** If you wish to utilize the system in its normal operating mode prior to the completion of the 4 hour period, prior to turning on the AH-Passport I/O control, the valve must be returned to its normal operation by changing P-18 back to "nor" manually.

## P-19 - Water Temperature Differential

The difference between ambient air temperature and hydronic water temperature is used to control the water valve. Selecting 10°F opens the valve when water temperature is ten degrees less than ambient in cooling mode and 10°F greater than ambient in the heating mode.

Careful selection of the temperature differential can fully utilize the ships heating and cooling resources. For example, while in the cooling mode and using a ten degree value, the valve will open to allow some cooling while the hydronic system is coming down to temperature.

## Fault Handling Code

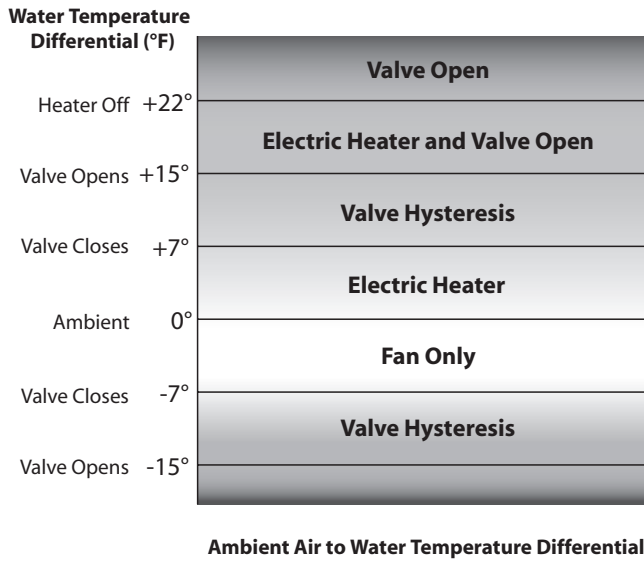
When a fault is detected, the AH-Passport I/O will display the following mnemonic fault code.

"ASF"... Indicates failed air sensor.

## Ambient Air Temperature to Water Temperature Differential

The optional electric heater will overlap with the chilled water heat by 22°F/12.2°C. The heater will turn on when heat is required and remain on until the chilled water temperature exceeds the ambient by 22°F/12.2°C or until the room temperature is satisfied. Electric heat overlaps the chilled water heat supplementing heating during very cold conditions. Note that parameter P-19 setting increments are in °F even when the control is set to display °C.

Note: Chart uses the Default Values! P-17



### IMPORTANT!

The system's air sensor is located in the display panel. The display **MUST** be located on an inside wall at eye level. It must **NOT** be located in direct sunlight or inside a cabinet.

If these conditions cannot be met, the Optional Remote Air Sensor must be purchased and installed in the return air stream.

## Display Panel Installation

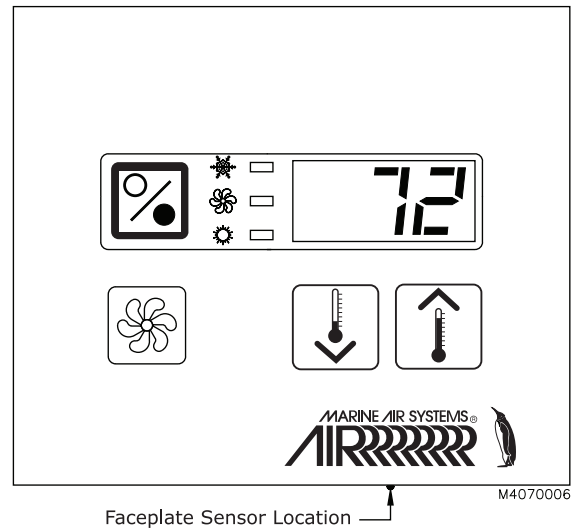
Before mounting the Passport I/O or AH-Passport I/O digital display panel touch pad, consider the location. The air sensor built into the display panel will provide excellent room air temperature sensing given a proper installation. The display panel should be mounted on an inside wall, slightly higher than mid-height of the cabin, in a location with freely circulating air where it can best sense average temperature. The cut out size for the display panel is 3.375" (86mm) wide by 2.875" (73mm) high. Do not mount the display in direct sunlight, near any heat producing appliances or in a bulkhead where temperatures radiating from behind the panel may affect performance. **Do not mount the display in the supply air stream.** Do not mount the display above or below a supply or return air grille. Do not mount the display behind a door, in a corner, under a stairwell or any place where there is no freely circulating air.

Mount the display within display cable length (custom lengths available) of the air conditioner. Plug one end of the display cable (8-pin connector) into the upper right-hand socket on the circuit board in the electric box and the other end into the back of the display panel. Secure the display panel to a bulkhead with the

adhesive strips provided. Clean the mounting surface with **isopropyl alcohol only** prior to placement (test alcohol on hidden portion of surface first). If the adhesive strips cannot be used directly on the bulkhead then use the plastic bulkhead adapter. The bulkhead adapter (sold separately) is mounted to the bulkhead with screws and the display panel is secured to the adapter with adhesive strips. Do not use a screw gun and do not over-tighten screws when mounting adapter.

If a proper location for room temperature sensing cannot be found for the display, an optional remote air sensor may be used. Mount the remote air sensor in the return air stream behind the return air grille/opening and plug its cable (7'2.1m standard length with 6-pin connector) into the "ALT AIR" socket #J4 in the upper left-hand corner of the circuit board. Installing the remote air sensor will override the faceplate sensor. An optional outside air temperature sensor and cable may also be used. Plug that cable into the "OAT" socket #J3 (next to #J4). Mount the sensor outside but not in direct sunlight. Air sensor cables are available in various lengths. Do not staple any cables when mounting.

When using the AH-Passport I/O with a chilled water air handler, plug the water inlet sensor cable into the "SERVICE/H2O" socket #J5.



# AH-Passport I/O Controls • Troubleshooting

Also see specific chiller system manual for additional troubleshooting information.

## Fault: AH System will not start.

### *Possible Reason/Correction*

- 1. Air handler circuit breaker is off.**  
Turn circuit breaker on at ship's panel.
- 2. Digital Control is not turned on.**  
See Basic Operation section for more information.
- 3. Wrong wiring at terminal strip.**  
Check wiring diagram and correct if necessary.
- 4. Push-on butt connectors became disconnected during installation.**  
Disconnect power supply and open electric box, check wiring diagram, correct if necessary.
- 5. Input line voltage is insufficient.**  
Check power source (shore/generator) for proper voltage. Check wiring and terminals for proper sizes and connections. Verify with a voltmeter that the power at the unit is the same as the power source.

## Fault: Digital display panel is not lit.

### *Possible Reason/Correction*

- 1. 8-pin display cable plugs are not making contact (unplugged, dirty, bent, or broken pins).**  
With POWER OFF at the circuit breaker, remove connector and inspect. If damaged, replace connector or entire display cable.

## Fault: Fan is not running or runs continuously.

### *Possible Reason/Correction*

- 1. Digital control is programmed for either cycled or continuous fan operation.**  
Change programmable parameter P-14 to "con" so the fan will stay on continuously or to "CYC" so the fan cycles with the cooling/heating demand.
- 2. Passport I/O Circuit Board Triac or fan motor is faulty.**  
Attempt to run the fan in manual mode by pressing the Fan button to select a specific speed. If the fan does not function, contact an authorized service technician to further troubleshoot the problem.

## Fault: No cooling or heating.

### *Possible Reason/Correction*

- 1. Temperature set point is satisfied.**  
Lower or raise set point.
- 2. Fan is not running.**  
See previous section.
- 3. Digital control is set for Cool only or Heat only mode.**  
See programmable parameter P-1 for more information on how to change the operating mode.
- 4. Chilled water loop is inadequately cooled or heated, chiller system is not in the proper mode of operation, or Electric Heater is disabled.**  
If the air handler system is equipped with water temperature sensors, check the water temperature at the digital control by pressing the Up and On/Off buttons simultaneously. If the water temperature is not at least 15°F warmer (for heat mode) or cooler (for cool mode), the water valve will not open. See Ambient Air Temperature to Water Temperature Differential section and the P-19 programmable parameter for more information. If the air handler system is equipped with an electric heater, insure that programmable parameter P-15 is set to "ELE".

## Fault: Low airflow.

### *Possible Reason/Correction*

- 1. Airflow is blocked.**  
Remove any obstructions in return air stream. Clean return air filter and grille. Check for crushed or restricted ducting, ducting must be as straight, smooth and taut as possible.
- 2. Fan speed is set to manual low.**  
If the fan speed is set to manual low, press and release the Fan button until the desired fan speed and airflow is reached. If automatic fan speed control is desired, press and release the Fan button until the letter "A" is shown in the LED display.

## **Fault: System heats or cools continuously.**

### ***Possible Reason/Correction***

- 1. Set point temperature is improperly set: too low for cooling or too high for heating.**

Raise or lower set point.

- 2. Porthole or hatches open.**

Close all port holes and hatches.

- 3. Inaccurate room temperature reading due to improper air sensor location.**

If using an alternate air sensor, insure that the sensor is located directly in the system's return air path to obtain an accurate reading. If an alternate air sensor is not being used, insure that the digital control display is located out of direct sunlight and away from open doors or hatches. See Display Location section for more information.

## **Fault: "ASF" is displayed.**

### ***Possible Reason/Correction***

- 1. Indicates failed display air sensor, alternate air sensor or display cable.**

Unplug alternate air sensor if installed or plug in alternate air sensor if not installed. Try another display cable.

- 2. Damaged jack/socket in display head or on circuit board.**

Visually check to see that pins inside socket are not bent or corroded. Repair or replace display or circuit board if needed.

# AH-Passport I/O Controls • Specifications

Set Point Operating Range .....	65°F to 85°F
Ambient Temperature Operating Range Displayed .....	5°F to 150°F
Sensor Accuracy .....	± 2°F at 77°F
Low Voltage Limit 115 volt units .....	75 VAC
Low Voltage Limit 220 volt units .....	175 VAC
Low Voltage Processor Reset .....	50 VAC
Line Voltage .....	115 Through 240 VAC
Frequency .....	50 or 60 Hz
Fan Output.....	6 Amps @ 115 VAC and 6 Amps @ 230 VAC
Valve Output.....	1/4 Amps @ 115/230 VAC
Minimum Operating Temperature .....	0°F
Maximum Operating Temperature .....	180°F
Maximum Rh conditions .....	99% Non-Condensing
Power Consumption .....	Less Than 5 Watts
Electric Heater Output .....	30 Amps @ 115 VAC and 20 Amps @ 230 VAC

## Dimensions

Display Panel .....	4.50" (114 mm) X 3.86" (98 mm)
Panel Cut Out .....	3.375" (86 mm) X 2.875" (73 mm)

## Cable Lengths

Display .....	15' Standard
Air Sensor .....	7' Standard
Water Sensor .....	7' Standard
All custom cable lengths supplied in standard 5' increments .....	75' Maximum

**NOTES:** Maximum length of display and sensor cable is 75 feet. The **outside air sensor** and **alternate air sensors** are optional items and are not included with the standard control package.

## System Inputs

Ambient or Inside Air Temperature .....	1
Water Inlet Temperature Sensor .....	1
Outside Air Temperature Sensor (Optional) .....	1
Alternate Air Temperature Sensor (Optional) .....	1

# AH-Passport I/O Controls • Manufacturers Limited Warranty Agreement

The following warranty is extended to cover marine air conditioners manufactured or supplied by Dometic Environmental Corporation, and is subject to qualifications indicated. Dometic warrants for the periods set forth below that products manufactured or supplied by it will be free from defects in workmanship and material, provided such products are installed, operated, and maintained in accordance with Dometic's written instruction.

ALL IMPLIED WARRANTIES INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE TERMS AND PERIODS OF WARRANTY SET FORTH BELOW AND, TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED.

**Warranty with the Elite or Passport I/O digital controls** (Coverage applies to units manufactured on or after 03/01/03 and applies only to units equipped with Elite or Passport I/O digital controls at the Dometic factory.): Components comprising of the Passport I/O circuit boards, Elite or Passport I/O digital displays, and associated cables are warranted for a period of three (3) years from the date of installation, but not to exceed four (4) years from the date of manufacture at the Dometic factory. All other components comprising a complete system (excluding pumps and pump relay panels) on a new installation are warranted for a period of two (2) years from the date of installation, but not to exceed three (3) years from the date of manufacture at the Dometic factory. Pumps and pump relay panels are warranted for a period of one (1) year from the date of installation, but not to exceed two (2) years from the date of purchase. OEM installed equipment warranties begin with the purchase of the vessel, not from the date of installation.

## **Warranty with MCP (Mechanical Control Panel) control:**

Components comprising a complete system on a new installation are warranted for a period of one (1) year from the date of installation, but not to exceed two (2) years from the date of manufacture at the Dometic factory. OEM installed equipment warranties begin with the purchase of the vessel, not from the date of installation.

In addition, Dometic will pay labor costs and travel as outlined in its **Schedule of Limited Warranty Allowances** for removal and reinstallation of such components for a period of one (1) year from the date of installation, but not to exceed two (2) years from the date of manufacture at the Dometic factory. OEM installed equipment warranties begin with the purchase of the vessel, not from the date of installation. Warranty will be paid in accordance with our established schedule of allowances. Compensation for warranty repairs is only made to Dometic authorized service companies.

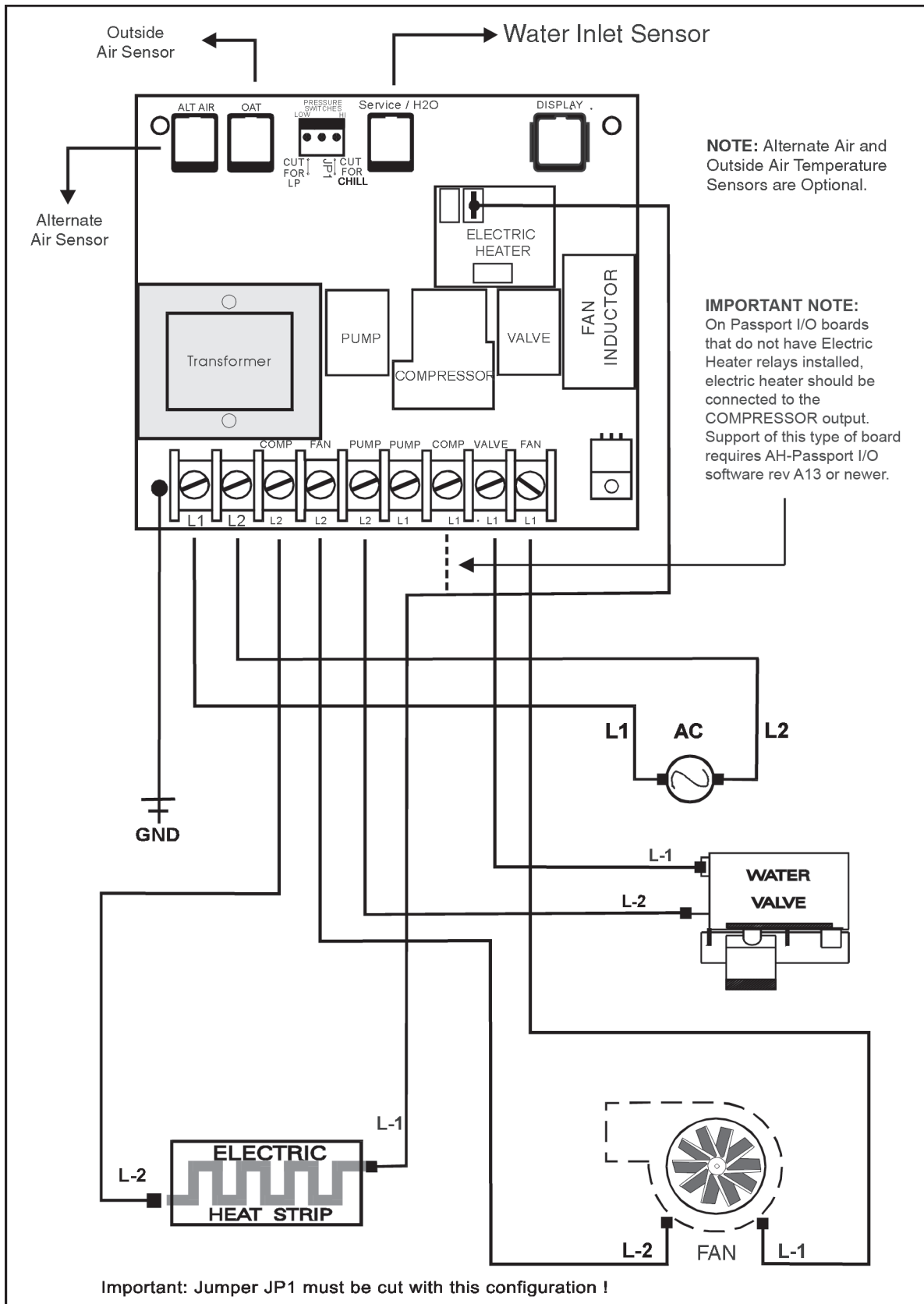
**Dometic will repair, or replace at its option, components found to be defective due to faulty materials or workmanship, when such components, examined by an authorized service dealer or a factory service representative, are found to have a defect for which the company is responsible. Refer to Manufacturer's Limited Warranty Policy for complete coverage and exclusions. Replacement components are warranted for the duration of the remaining warranty period in effect on the original component. In the event that a unit has to be returned to the factory, it must be properly packaged to prevent shipping damages. If packaging is not available, Dometic will provide it at no charge. The warranty may be voided on any piece of equipment or component that is damaged due to improper packaging.**

This limited warranty is extended in lieu of all other warranties, agreements or obligations, expressed or implied, concerning Dometic's components. This warranty is extended only to the original purchaser and is not transferable. This warranty shall be governed by the laws of the State of Florida and gives the original first end user definite legal rights.

This warranty does not cover damages incidental and/or consequential to the failure of Dometic's equipment including but not limited to; normal wear, accident, misuse, abuse, negligence, improper installation, lack of reasonable and necessary maintenance, alteration, civil disturbance or acts of God. No person or dealer is authorized to extend any other warranties or to assume any other liabilities on Dometic's behalf, unless made or assumed in writing by an officer of Dometic.

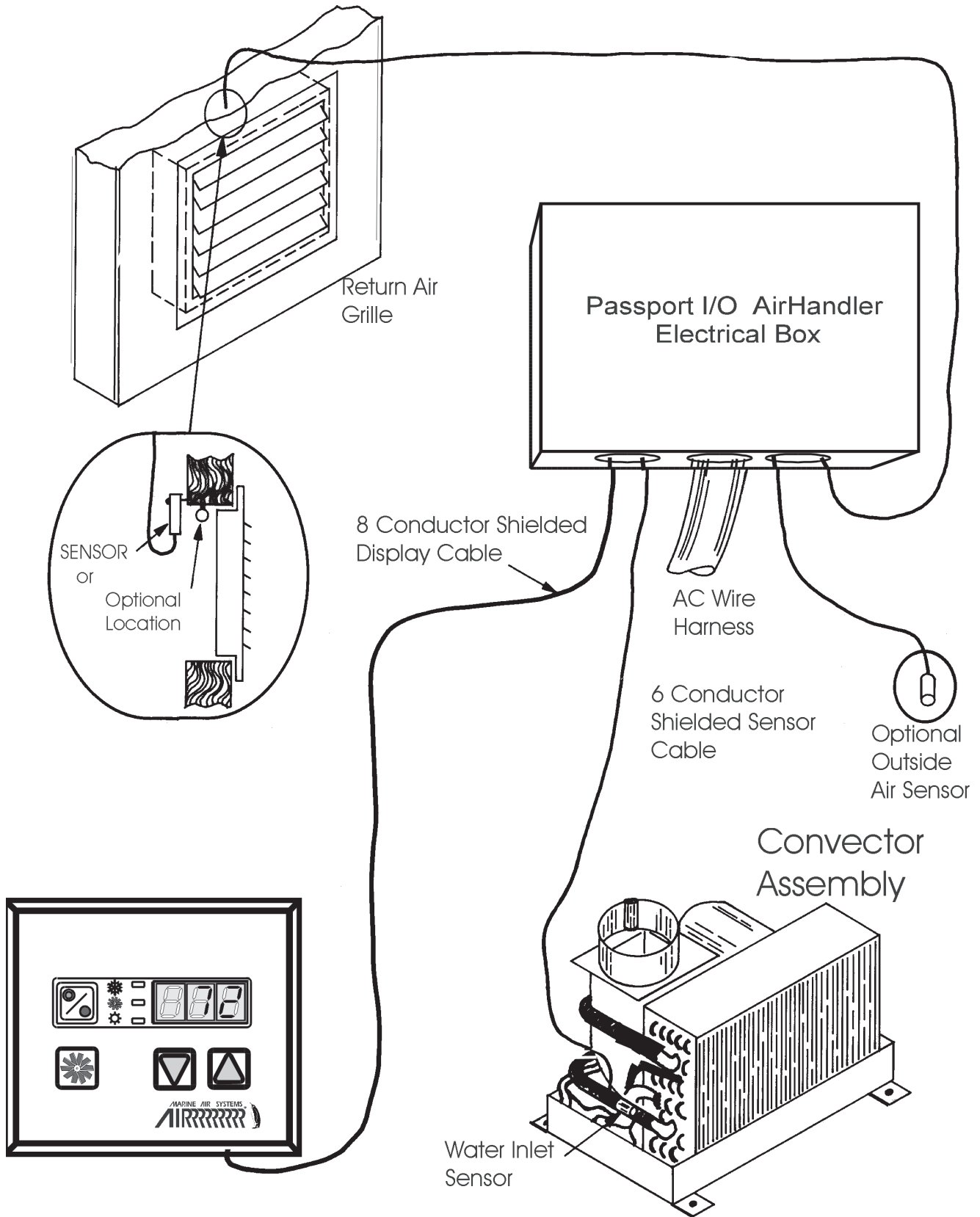
# Sample Wiring Diagram

**NOTE: THIS IS A SAMPLE DIAGRAM. WIRE COLORS MAY VARY. SEE UNIT SPECIFIC DIAGRAM LOCATED IN ELECTRICAL BOX OR IN AIR CONDITIONING UNIT MANUAL. TURN POWER OFF BEFORE OPENING ELECTRICAL BOX.**





# Sample Application



# Marine Air Worldwide Service Dealer Locator

The majority of the service listings displayed for the United States are key members of the national Marine Air distributor network. If you need service, please contact the closest company shown. In most cases they will direct you to a local dealer or service port. We have over 500 Marine Air dealers in the national Marine Air network, and one should be convenient to you.

The **international** companies listed are, in many cases, distributors and are capable of managing the majority of service requests for the countries listed. In some cases they will refer you to a local dealer.

You may also contact us directly via the web site or call us in the US at (954) 973-2477.

**For a complete and up-to-date Dealer locator list, please visit our website at <http://www.marineair.com/locator/index.html>**

## USA

### Alabama

#### **AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

### Alaska

#### **American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

### Arizona

#### **Southern California Marine Enterprises**

Location: San Diego, CA, USA  
Phone: 619-224-2869  
Fax: 619-226-0496  
E-mail: sales@southernmarine.com  
Web: www.southernmarine.com

### Arkansas

#### **AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

### California

#### **Southern California Marine Enterprises**

Location: San Diego, CA, USA  
Phone: 619-224-2869  
Fax: 619-226-0496  
E-mail: sales@southernmarine.com  
Web: www.southernmarine.com

### Colorado

#### **AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

### Connecticut

#### **Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

### Delaware

#### **Ocean Options - Mid Atlantic**

Location: Annapolis, MD, USA  
Phone: (410) 268-9365  
Fax: (410) 268-8199  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

### Florida (North)

#### **Beard Marine Savannah - Distributor**

Location: Savannah, GA, USA  
Phone: (912) 356-5222  
Fax: (912) 692-1006  
E-mail: beardsav@aol.com  
Web: www.beardmarine.com

### Florida (South)

#### **ARW Maritime - Dealer**

Location: Ft. Lauderdale, Florida, USA  
Territory: Fort Lauderdale  
Phone: (954) 463-0110  
Fax: (954) 522-1139  
E-mail: arwgroup@earthlink.net

#### **Beard Marine - Ft. Lauderdale - Dealer**

Location: Ft. Lauderdale, Florida, USA  
Territory: Fort Lauderdale  
Phone: (954) 463-2288  
Fax: (954) 527-0362  
E-mail: info@beardmarine.com  
Web: www.beardmarine.com

#### **Beard Marine of the Palm Beaches - Dealer**

Location: Riviera Beach, Florida, USA  
Territory: Riviera Beach  
Phone: (561) 881-9598  
Fax: (561) 881-9599  
E-mail: bmpb@beardmarine.com

#### **Cable Marine - Dealer**

Location: Ft. Lauderdale, Florida, USA  
Territory: Fort Lauderdale  
Phone: (954) 462-2840  
Fax: (954) 523-3686  
Web: www.cablemarine.com

#### **Comfort Marine - Dealer**

Location: Ft. Lauderdale, FL, USA  
Territory: Ft. Lauderdale  
Phone: (954) 257-9848  
Fax: (954) 689-7332

#### **Cowherd Marine - Dealer**

Location: Lake Park, Florida, USA  
Territory: West Palm Beach  
Phone: (561) 844-1666  
Fax: (561) 844-1628

#### **Dometic Corporation-Environmental Systems, Distributor**

Location: Pompano Beach, FL, USA  
Territory: South Florida  
Phone: (954) 973-2477  
Fax: (954) 979-4414  
E-mail: sales@dometicenviro.com  
Web: www.dometicenviro.com

#### **Edd Helms Marine Air Conditioning - Dealer**

Location: Miami, Florida, USA  
Territory: Ft. Lauderdale, Miami  
Phone: 954 522 2520  
Fax: 954 522 1331  
E-mail: srogers@eddhelms.com

### Florida (South)

#### **IYS Marine - Dealer**

Location: Pinellas Park, Florida, USA  
Territory: Tampa-St Petersburg  
Phone: (727) 521-6650  
Fax: (727) 520-0844  
E-mail: iysmarine2002@aol.com

#### **Jim's Marine A/C - Dealer**

Location: Port Charlotte, Florida, USA  
Territory: Port Charlotte  
Phone: (941) 629-8788

#### **Marine Air Conditioning - Dealer**

Location: Ft. Pierce, Florida, USA  
Territory: Port St. Lucie  
Phone: (772) 464-7896  
Fax: (772) 464-8697

#### **Masters Marine Center, Inc. - Dealer**

Location: Miami, Florida, USA  
Territory: Miami  
Phone: (305) 891-1236  
Fax: (305) 891-8700

#### **Neptune Air Corporation - Dealer**

Location: Ft. Lauderdale, Florida, USA  
Territory: Fort Lauderdale  
Phone: (954) 792-6550  
Fax: (954) 792-6551

#### **Palm Beach Aqua Air - Dealer**

Location: West Palm Beach, Florida, USA  
Territory: West Palm Beach  
Phone: (561) 832-8820  
Fax: (561) 659-7918

#### **Sea Air Land Technologies - Dealer**

Location: Marathon, Florida, USA  
Territory: Florida Keys  
Phone: (305) 289-1150  
Fax: (305) 359-5272  
E-mail: saltmail@salt-systems.com  
Web: www.salt-systems.com

#### **Sea Breeze Marine - Dealer**

Location: Lighthouse Point, Florida, USA  
Territory: Lighthouse Point  
Phone: (954) 427-3843  
Fax: (561) 368-0463

#### **Tropica Boats & Marine, Inc. - Dealer**

Location: Fort Myers, Florida, USA  
Territory: Fort Myers  
Phone: (239) 694-5259  
Fax: (239) 694-5243  
E-mail: info@tropica.net  
Web: www.tropica.net

#### **Ty Cobb Services, Inc. - Dealer**

Location: Sebastian, Florida, USA  
Territory: Sebastian  
Phone: (772) 388-5966  
Fax: (772) 581-0056

Georgia

**Beard Marine Savannah - Distributor**

Location: Savannah, GA, USA  
Phone: (912) 356-5222  
Fax: (912) 692-1006  
E-mail: beardsav@aol.com  
Web: www.beardmarine.com

Hawaii

**Southern California Marine Enterprises**

Location: San Diego, CA, USA  
Phone: 619-224-2869  
Fax: 619-226-0496  
E-mail: sales@southernmarine.com  
Web: www.southernmarine.com

Idaho

**American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

Illinois

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Indiana

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Iowa

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Kansas

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

Kentucky

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Louisiana

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

Maine

**Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

Maryland

**Ocean Options - Mid Atlantic**

Location: Annapolis, MD, USA  
Phone: (410) 268-9365  
Fax: (410) 268-8199  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

Massachusetts

**Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

Michigan

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Minnesota

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Mississippi

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

Missouri

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

Montana

**American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

Nevada

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

New Hampshire

**Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

New Jersey

**Marine Specialists**

Location: Ronkonkoma, NY, USA  
Territory: New York, New Jersey  
Phone: (631) 580-0545  
Fax: (631) 580-0551  
E-mail: Sales@marinespecialists.com  
Web: www.marinespecialists.com

New Mexico

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

New York

**Marine Specialists**

Location: Ronkonkoma, NY, USA  
Territory: New York, New Jersey  
Phone: (631) 580-0545  
Fax: (631) 580-0551  
E-mail: Sales@marinespecialists.com  
Web: www.marinespecialists.com

North Carolina

**Beard Marine Savannah - Distributor**

Location: Savannah, GA, USA  
Phone: (912) 356-5222  
Fax: (912) 692-1006  
E-mail: beardsav@aol.com  
Web: www.beardmarine.com

North Dakota

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Ohio

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Oklahoma

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

Oregon

**American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

Pennsylvania

**Ocean Options - Mid Atlantic**

Location: Annapolis, MD, USA  
Phone: (410) 268-9365  
Fax: (410) 268-8199  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

Rhode Island

**Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

South Carolina

**Beard Marine Savannah - Distributor**

Location: Savannah, GA, USA  
Phone: (912) 356-5222  
Fax: (912) 692-1006  
E-mail: beardsav@aol.com  
Web: www.beardmarine.com

South Dakota

**Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

Tennessee

**Beard Marine Savannah - Distributor**

Location: Savannah, GA, USA  
Phone: (912) 356-5222  
Fax: (912) 692-1006  
E-mail: beardsav@aol.com  
Web: www.beardmarine.com

Texas

**AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

## Utah

### **AER Marine Supply**

Location: Seabrook, TX, USA  
Phone: (281) 474-3276  
Fax: (281) 474-2714  
E-mail: rsmiller@aersupply.com

## Vermont

### **Ocean Options**

Location: Tiverton, RI, USA  
Phone: (401) 624-7334  
Fax: (401) 624-8050  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

## Virginia

### **Ocean Options - Mid Atlantic**

Location: Annapolis, MD, USA  
Phone: (410) 268-9365  
Fax: (410) 268-8199  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

## Washington

### **American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

## West Virginia

### **Ocean Options - Mid Atlantic**

Location: Annapolis, MD, USA  
Phone: (410) 268-9365  
Fax: (410) 268-8199  
E-mail: Sales@oceanoptions.com  
Web: www.oceanoptions.com

## Wisconsin

### **Midwest Marine Supply**

Location: St. Clair Shores, MI, USA  
Phone: (586) 778-8950  
Fax: (586) 778-6108

## Wyoming

### **American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

## Antigua

### **Aboard Refrigeration**

Location: , Antigua, West Indies  
Phone: (268) 460-1690  
Fax: (419) 858-0544  
E-mail: aboardrf@candw.aq  
Web: www.aboardrefrigeration.com

## Argentina

### **Baron SRL**

Location: San Fernando, Buenos Aires, Argentina  
Phone: (54) 11-4-580-5556  
Fax: (54) 11-4-746-1696  
E-mail: rosito@baron.com.ar  
Web: www.baron.com.ar

## Australia

### **Seairland Systems, Inc.**

Location: Brisbane, Queensland, Australia  
Phone: (61) 7-3268-7511  
Fax: (61) 7-3268-1445  
E-mail: hadvn@seairland.com.au

## Austria

### **Domestic Marine – Italy, Sales Company**

Location: Milano, Italy  
Phone: 390 26172583  
Fax: 390 266010223  
E-mail: marine.info@dometic.it  
Web: www.dometic.com

## Bahamas

### **Freezing Point, Ltd.**

Location: Nassau, Bahamas  
Territory: Nassau  
Phone: (242) 325-3589  
Fax: (242) 356-5271  
E-mail: rolandknowles@bahamas.net.bs

## Bahrain

### **International Agencies Co.**

Location: Manama, Bahrain  
Phone: 973-17728691  
Fax: 973-17728412

## Mantech

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

## Brazil

### **Marine Express**

Location: Sao Paulo, Brazil  
Phone: 55-11-5182-7166  
Fax: 55-11-5183-3636  
E-mail: fabrizio@marineexpress.com.br  
Web: www.marineexpress.com.br

## British Virgin Islands

### **BVI Marine Management**

Location: Roadtown, Tortola, British Virgin Islands  
Phone: (284) 494-2938  
Fax: (284) 494-5006

### **C & G Refrigeration**

Location: , Tortola, British Virgin Islands  
Phone: (284) 776-0038

## Canada

### British Columbia

### **American Marine Contractors**

Location: Seattle, WA, USA  
Phone: (206) 660-2240  
Fax: (206) 548-5008  
E-mail: gene@nwmarineair.com

### Ontario

### **Northland Supply Company**

Location: Queensville, Ontario, Canada  
Territory: Queensville  
Phone: (905) 478-2244  
Fax: (905) 478-2295  
E-mail: norsupco@aol.com  
Web: www.norsupco.com

### **Woodard and Company - Manufacturer's Rep.**

Location: Concord, Ontario, Canada  
Territory: All Canadian Provinces except BC  
Phone: (905)760-0245  
Fax: (905)760-0250  
E-mail: john.reid@woodardcompany.com

### Quebec

### **Kimpex, Inc.**

Location: Drummondville, Quebec, Canada  
Territory: Drummondville, Quebec  
Phone: (705) 721-0947  
Fax: (705) 721-1704  
E-mail: scott.pipher@kpx-kimpex.com  
Web: http://www.kpx-kimpex.com

## Caribbean Islands

### **Aboard Refrigeration**

Location: , Antigua, West Indies  
Phone: (268) 460-1690  
Fax: (419) 858-0544  
E-mail: aboardrf@candw.aq  
Web: www.aboardrefrigeration.com

### **BVI Marine Management**

Location: Roadtown, Tortola, British Virgin Islands  
Phone: (284) 494-2938  
Fax: (284) 494-5006

### **C & G Refrigeration**

Location: , Tortola, British Virgin Islands  
Phone: (284) 776-0038

### **Centro Cruisair de Puerto Rico**

Location: San Turce, Puerto Rico  
Phone: 787-727-3637  
Fax: 787-727-3637  
E-mail: fernan\_moreno@hotmail.com

### **Cool-Tech Air Condition**

Location: Fajardo, Puerto Rico  
Phone: (787) 860-2615  
Fax: (787) 801-2050  
E-mail: cooltech@isppr.com  
Web: www.isppr.net/cooltech

### **Enertech N.V.**

Location: Simpson Bay, St. Maarten/St. Martin, Netherland Antilles  
Phone: 599-551-2145  
Fax: 305-675-5857 (USA)  
E-mail: service@entertechnv.com

### **Freezing Point, Ltd.**

Location: Nassau, Bahamas  
Territory: Nassau  
Phone: (242) 325-3589  
Fax: (242) 356-5271  
E-mail: rolandknowles@bahamas.net.bs

### **May Day Marine**

Location: San Juan, Puerto Rico  
Phone: 787-751-0490  
Fax: 787-790-2551

### **Nau-T-Kol Marine Refrigeration**

Location: Chaguaramas, Trinidad  
Phone: 868-634-2174  
Fax: 868-634-2174  
E-mail: nautkol@cablenett.net  
Web: www.nautkol.com

### **Reefco, Inc.**

Location: , St. Thomas, US Virgin Islands  
Phone: (340) 776-0038  
Fax: (340) 776-0038  
E-mail: denny@reefco.net  
Web: www.reefco.net

### **Regis Electronics (St Lucia) LTD.**

Location: St. Lucia, West Indies  
Phone: 758-452-0205  
Fax: 758-452-0206  
E-mail: stlucia@regiselectronics.com

### **Sun Cool Air Conditioning**

Location: Carolina, Puerto Rico, Puerto Rico  
Territory: Carolina  
Phone: (787) 791-6971  
Fax: (787) 791-3885  
E-mail: suncool1@coqui.net

## China

### **Flash Marine Trading Pte.Ltd.**

Location: Shanghai, China  
Phone: (86 21) 509 04120  
Fax: (86 21) 509 04789  
E-mail: ffmtmasb@online.sh.cn

## Costa Rica

### Gato Frío

Location: Playa Jaco, Costa Rica  
Territory: Costa Rica, Panama  
Phone: 506-637-7181  
Fax: 506-637-7180  
E-mail: eric@yachtshare.net

## Croatia

### Dometic Marine – Italy, Sales Company

Location: Milano, Italy  
Phone: 390 26172583  
Fax: 390 266010223  
E-mail: marine.info@dometic.it  
Web: www.dometic.com

## Cyprus

### Dometic Marine - United Kingdom, Sales Company

Location: Poole, Dorset, England  
Phone: 44 (0) 870 3306101  
Fax: 44 (0) 870 3306102  
E-mail: sales@dometicmarine.com  
Web: www.dometic.com

## Dominican Republic

### May Day Marine

Location: San Juan, Puerto Rico  
Phone: 787-751-0490  
Fax: 787-790-2551

## Ecuador

### Quasar Nautica, S.A.

Location: P.O. Box 17-01-0069, Quito, Ecuador  
Phone: (593) 2-446-996/997  
Fax: (593) 2-436-625

## Egypt

### Engineering Air

Location: Abasia, Cairo, Egypt  
Phone: 202 4829341  
Fax: 202 4829341

## France

### Dometic Marine – France, Sales Company

Location: Plailly, France  
Phone: Cell: 0033 (0)680 415 543  
Fax: 0033 (0)344 633 518  
E-mail: marine.sales@dometic.fr  
Web: www.dometic.com

### PolyMarine Distribution (C/O Occas Marine)

Location: Le Cannet, Rocheville, France  
Phone: 0033 493463634  
Fax: 0033 493463634  
E-mail: polymarine.bavle@free.fr

## Greece

### Dometic Marine - United Kingdom, Sales Company

Location: Poole, Dorset, England  
Phone: 44 (0) 870 3306101  
Fax: 44 (0) 870 3306102  
E-mail: sales@dometicmarine.com  
Web: www.dometic.com

### Athens

### Aegean Diesel Electric Ltd.

Location: Athens, Piraeus, Greece  
Territory: Athens  
Phone: 0030-1-4222484  
Fax: 0030-1-4175201  
E-mail: info@ade-marine.gr

## Hong Kong

### Piercey Marine Limited

Location: Sai Kung, NT, Hong Kong  
Phone: (852) 2791-4106  
Fax: (852) 2791-4124  
E-mail: pmltd@attglobal.net

## Italy

### Condaria 87 SRL

Location: Nova Milanese (MI), Italy  
Phone: 39 0362 44182  
Fax: 39 0362 452226

### Dometic Marine – Italy, Sales Company

Location: Milano, Italy  
Phone: 390 26172583  
Fax: 390 266010223  
E-mail: marine.info@dometic.it  
Web: www.dometic.com

## Japan

### Tominaga & Company, Ltd.

Location: Osaka, Japan  
Phone: 816.6365.5010  
Fax: 816.6365.6294  
E-mail: nishi@mail.tomco.co.jp

## Kuwait

### Mantech

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

### Sammari Marine Trading

Location: Al-Shawikh, Kuwait  
Phone: 965-5740408  
Fax: 965-5715655

## Malta

### Dometic Marine - United Kingdom, Sales Company

Location: Poole, Dorset, England  
Phone: 44 (0) 870 3306101  
Fax: 44 (0) 870 3306102  
E-mail: sales@dometicmarine.com  
Web: www.dometic.com

### Inmartech Ltd.

Location: Swieqi, STJ 04, Malta  
Phone: 00356 21376476  
Fax: 00356 21376476

## Mexico

### Southern California Marine Enterprises

Location: San Diego, CA, USA  
Phone: 619-224-2869  
Fax: 619-226-0496  
E-mail: sales@southernmarine.com  
Web: www.southernmarine.com

## Netherlands

### Eberca

Location: , Netherlands  
Phone: 31 1866 21955  
Fax: 31 1866 21818  
E-mail: info@eberca.nl

### Heinen & Hopman Eng. Bv.

Location: Spakenburg, Netherlands  
Phone: (31) (0) 33 2992500  
Fax: (31) (0) 33 299 2599  
E-mail: info@heinenhopman.com  
Web: www.heinenhopman.com

## Netherlands Antilles

### Enertech N.V.

Location: Simpson Bay, St. Maarten/St. Martin, Netherlands Antilles  
Phone: 599-551-2145  
Fax: 305-675-5857 (USA)  
E-mail: service@entertechnv.com

## New Zealand

### Whiting Power Systems

Location: 192 Herne Bay, Auckland, New Zealand  
Phone: 649.358.2050  
Fax: 649.358.0285  
E-mail: sales@whiting.co.nz  
Web: www.whiting.co.nz

## Oman

### Mantech

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

### OHI Marine LLC

Location: Muscat, Oman  
Phone: 968-712240  
Fax: 968-712085

## Panama

### Gato Frío

Location: Playa Jaco, Costa Rica  
Territory: Costa Rica, Panama  
Phone: 506-637-7181  
Fax: 506-637-7180  
E-mail: eric@yachtshare.net

### Productos Marine Air

Location: La Chorrera, Panama  
Territory: Panama  
Phone: 507-232-5406  
Fax: 507-232-7648  
E-mail: masters@sinfo.net

## Portugal

### PowerCool Lda

Location: Portimao, Portugal  
Territory: Portugal  
Phone: 351 91 786 63 73  
Fax: 351 282 461 818  
E-mail: info@powercool.org  
Web: www.powercool.org

## Puerto Rico

### Centro Cruisair de Puerto Rico

Location: San Turce, Puerto Rico  
Phone: 787-727-3637  
Fax: 787-727-3637  
E-mail: ferman\_moreno@hotmail.com

### Cool-Tech Air Condition

Location: Fajardo, Puerto Rico  
Phone: (787) 860-2615  
Fax: (787) 801-2050  
E-mail: cooltech@isppr.com  
Web: www.isppr.net/cooltech

### May Day Marine

Location: San Juan, Puerto Rico  
Phone: 787-751-0490  
Fax: 787-790-2551

### Sun Cool Air Conditioning

Location: Carolina, Puerto Rico, Puerto Rico  
Territory: Carolin  
Phone: (787) 791-6971  
Fax: (787) 791-3885  
E-mail: suncool1@coqui.net

## **Qatar**

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### **Al-Badi Trading Co.**

Location: Doha, Qatar  
Phone: 974-4320715  
Fax: 974-4442888

### **Mantech**

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

## **Russia**

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### **Standarte**

Location: Starbeevo, Moscow region, Russia  
Phone: 7 095 575 67 23  
Fax: 7 095 575 39 77  
E-mail: info@standarte.ru  
Web: www.standarte.ru

## **Saudi Arabia**

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### **Mantech**

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

### **Samaco Marine Division**

Location: Alnahdah dis Jeddah, Saudi Arabia  
Territory: Saudi Arabia  
Phone: (966) 2-699-2300  
Fax: (966) 2-699-1024

## **Scandinavia**

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### **Dometic Marine – Nordic Sales, Sales Company**

Location: Halmstad, Sweden  
Phone: 46 35165700  
Fax: 46 35165710  
E-mail: marine.info@dometic.se  
Web: www.dometic.com

## **Singapore**

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### **Tritex Equipment PTE, Ltd.**

Location: , Singapore  
Territory: Singapore  
Phone: (65) 6861-1188  
Fax: (65) 6861-4263  
E-mail: angilene@tritex.com.sg

## **Slovenia**

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### **Dometic Marine – Italy, Sales Company**

Location: Milano, Italy  
Phone: 390 26172583  
Fax: 390 266010223  
E-mail: marine.info@dometic.it  
Web: www.dometic.com

## **South Africa**

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### **C-Dynamics cc**

Location: Cape Town, South Africa  
Phone: 27 21 555 3232  
Fax: 27 21 555 3230  
E-mail: info@c-dynamics.co.za  
Web: www.c-dynamics.co.za

## **Spain**

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### **Acastimar**

Location: Tarragona, Spain  
Phone: 349-77-362118  
Fax: 349-77-362687  
E-mail: acastimar@acastimar.com

### **Dometic Marine – France, Sales Company**

Location: Plailly, France  
Phone: Cell: 0033 (0)680 415 543  
Fax: 0033 (0)344 633 518  
E-mail: marine.sales@dometic.fr  
Web: www.dometic.com

## **Techno Electronica Naval, S.A.**

Location: Barcelona, Spain  
Phone: 34 (93) 664-49-70  
Fax: 34 (93) 665-76-26  
E-mail: ten@ten-sa.com  
Web: www.ten-sa.com

## **Sri Lanka**

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### **G&M Enterprises**

Location: Borella-Colombo 8, Sri Lanka  
Phone: 94 11 2691966  
Fax: 94 11 2691751  
E-mail: qandM@stinet.lk

## **Sweden**

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### **Dometic Marine – Nordic Sales, Sales Company**

Location: Halmstad, Sweden  
Phone: 46 35165700  
Fax: 46 35165710  
E-mail: marine.info@dometic.se  
Web: www.dometic.com

## **Thailand**

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### **Thai Kolon Co. Ltd.**

Location: Bangkok, Thailand  
Phone: 66-2-745-6468-77 (10 lines)  
Fax: 66-2-745-6152  
E-mail: thkolon@ji-net.com

## **Trinidad & Tobago**

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### **Nau-T-Kol Marine Refrigeration**

Location: Chaguaramas, Trinidad  
Phone: 868-634-2174  
Fax: 868-634-2174  
E-mail: nautkol@cablenett.net  
Web: www.nautkol.com

## **Turkey**

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### **Dometic Marine - United Kingdom, Sales Company**

Location: Poole, Dorset, England  
Phone: 44 (0) 870 3306101  
Fax: 44 (0) 870 3306102  
E-mail: sales@dometicmarine.com  
Web: www.dometic.com

### **Egemar Muhendiscik Ltd.**

Location: Tuzla, Istanbul, Turkey  
Phone: 90 216 494 2168  
Fax: 90 216 494 2218  
E-mail: sales@egemar.com.tr  
Web: www.egemar.com.tr

## **U.S. Virgin Islands**

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### **Reefco, Inc.**

Location: , St. Thomas, US Virgin Islands  
Phone: (340) 776-0038  
Fax: (340) 776-0038  
E-mail: denn@reefco.net  
Web: www.reefco.net

## **Ukraine**

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### **Standarte**

Location: Starbeevo, Moscow region, Russia  
Phone: 7 095 575 67 23  
Fax: 7 095 575 39 77  
E-mail: info@standarte.ru  
Web: www.standarte.ru

## **United Arab Emirates**

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### **Mantech**

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649

## **United Kingdom**

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### **Dometic Marine - United Kingdom, Sales Company**

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Phone: 44 (0) 870 3306101  
Fax: 44 (0) 870 3306102  
E-mail: sales@dometicmarine.com  
Web: www.dometic.com

## **Uruguay**

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### **Baron SRL**

Location: San Fernando, Buenos Aires, Argentina  
Phone: (54) 11-4-580-5556  
Fax: (54) 11-4-746-1696  
E-mail: rosito@baron.com.ar  
Web: www.baron.com.ar

## **Venezuela**

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### **Rich Marine Center**

Location: Complejo Turistico El Morro, Venezuela, South America  
Phone: (58) 281 2181630  
Fax: (58) 281-2811630  
E-mail: richmarine@telcel.net.ve  
Web: www.tuyate.net

## **West Indies**

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### **Aboard Refrigeration**

Location: , Antigua, West Indies  
Phone: (268) 460-1690  
Fax: (419) 858-0544  
E-mail: aboardrf@candw.aq  
Web: www.aboardrefrigeration.com

### **Regis Electronics (St Lucia) LTD.**

Location: St. Lucia, West Indies  
Phone: 758-452-0205  
Fax: 758-452-0206  
E-mail: stlucia@regiselectronics.com

## **Yemen**

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### **Mantech**

Location: Dubai, United Arab Emirates  
Phone: (971) 4-3332-542  
Fax: (971) 4-3330-649





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