

## PRODUCT DESCRIPTION

The **Elite™** Environmental Control Unit is a microprocessor-based controller designed for the precise monitoring of marine air conditioning systems, and is now available in retrofit kits for both direct expansion and chilled water applications. The **Elite Retrofit Kit** is used for direct expansion (DX) A/C units, while the **AH-Elite Retrofit Kit** is used for chilled water (CW) air handlers. All kits utilize the new Passport® I/O circuit board and either DX or CW software. The control operates at 115 or 230 volts, each operable at 50 or 60 cycles.

**Elite Retrofit Kits** have everything necessary to upgrade existing direct expansion systems. Kits are available to replace the *MCP 3-knob*, *Passport II*, *ECU*, and *ECU-Maxx* controls. Specify either self-contained (SC) or split Central System (CS) when ordering.

Each kit contains the Elite display, a Vimar® Black Poly Rondo bezel, the Passport I/O circuit board mounted in an electrical box, alternate air sensor and display cables, wiring harness, operation manual, quick reference card and mounting plate. Specify either a horizontal or vertical mounting plate when replacing an ECU or a 3-knob mechanical control (see illustration).

The **AH-Elite Retrofit Kit** is used to replace an existing *AH-Passport* digital display. This kit includes the Elite display, a Vimar Black Poly Rondo bezel, the AH-Passport I/O circuit board mounted in an electrical box, operation manual, quick reference card and mounting plate.

The entire assembly is grounded and protected against static interference and RF noise. The circuit board is conformally coated to provide high resistance to external damage or corrosion. Internal self-diagnostic programs provide complete electronic checks of all lights, sensors, keys and circuits. M.O.V.s (metal oxide varistors) provide component and board protection. Non-volatile memory stores all user-selectable parameters indefinitely during operation or any power failure situation.

The **Elite** Environmental Control meets or exceeds applicable ABYC, U.S. Coast Guard Regulations and CE Directives. Please see the Elite specifications sheet L-2237 for more details.

## FEATURES

### User Selectable Functions

- Automatic humidity control - moisture levels can be controlled when boat is unattended.
- Cool only, heat only, dehumidify, or automatic mode selection.
- Temperature displayed in Fahrenheit or Celsius.
- Multiple fan speed selections - automatic or three manual speeds.
- Cycle fan with compressor or continuous fan operation.
- Compressor time delay staging for multiple unit applications.
- Calibration of fan speed settings and temperature display to maintain precise control.
- Blank display lights when desired.
- Controls shaded pole and split capacitor fan motors.
- Programmable de-icing cycle.
- New "Pump Sentry" protects system if seawater pump fails, (sensor cable ordered separately).

### Design Features

- Low voltage for optimum safety.
- Built-in air sensor, and remote air sensor also included.
- Universal symbols on backlit switches provide international recognition.
- Cabin temperature is continuously displayed.

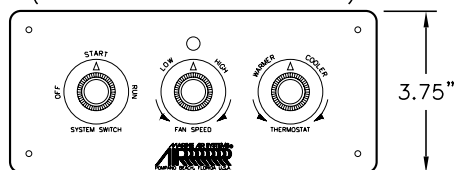
### Installation

- Circuit board and 15' display cable are factory installed in the electrical box.
- Mounting plate with Elite display replaces 3-knob mechanical control panel.
- Easy connections using phone-type modular jacks which are shielded and grounded.
- Polarized plug for easy connection to existing self-contained A/C unit.

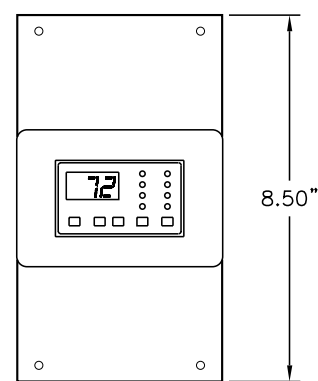
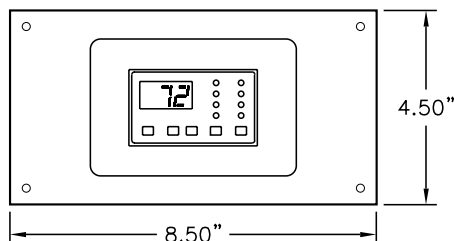


## DIMENSIONAL DRAWINGS

EXISTING MCP 3-KNOB CONTROL  
(HORIZONTAL CONFIGURATION)



NEW ELITE DISPLAY WITH BEZEL  
ON HORIZONTAL MOUNTING PLATE



ELITE WITH BEZEL  
ON VERTICAL PLATE

## SPECIFICATIONS

### Model<sup>(1)</sup> RETRO SC /CS/AH - ELITE HRZ / VRT

#### Dimensions in (cm)

Display Panel	4.41(11.2) W x 2.96(7.5) H x 1.08(2.7) D
Bezel Size <sup>(2)</sup>	4.85(12.3) W x 3.25(8.3) H
Mounting Plate	See drawing above for MCP 3-knob kits.

#### Cables Included<sup>(3)</sup>

Display ft(m) VCD: 15(4.6) CMCD: 10(3.0) CSD: 30(9.1) Chilled Water: 15(4.6)

#### Other Cables Available<sup>(3)</sup> Most Cables Available in 5' Increments

Display ft(m)	10' - 75' (3.0 - 22.9)
Alternate/Remote Air (optional) <sup>(4)</sup>	7' - 60' (2.1 - 18.3)
Outside Air Sensor (optional)	7' - 50' (2.1 - 15.2)
Pump Sentry (optional-DX)	7' - 60' (2.1 - 18.3)
Water Inlet Sensor (AH-Elite)	7' - 60' (2.1 - 18.3)

<sup>(1)</sup> For model number, specify SC for Self-Contained, CS for central system, or AH for a chilled water air handler. Specify HRZ for horizontal or VRT for vertical when replacing MCP 3-knob or ECU controls only.

<sup>(2)</sup> Retrofit kits include a Black Poly Rondo type bezel (335441). Other Idea® type bezels from Vimar are available in Rondo or Classica styles and are sold separately. Dimensions may vary slightly depending on style.

<sup>(3)</sup> Maximum length for display and air sensor cables is 75'. Maximum length for water inlet sensor cable is 75'.

<sup>(4)</sup> Air sensor cables longer than 7' require a remote air sensor card.

# Installation Guidelines for Elite Environmental Control Unit Retrofit Kit

To install the **Elite Environmental Control Unit Retrofit Kit**, first turn the A/C unit's circuit breaker off. Disconnect the existing control wire harness from the A/C unit. When replacing a 3-knob control on a self-contained model, disconnect the polarized plug. Remove the old control/display panel from the bulkhead. Connect the wiring harness from the retrofit kit to the a/c unit's electrical box, or simply connect the polarized plug if applicable. Mount the retrofit kit electrical box in a dry, accessible area with the screws provided.

**Note:** Mechanically controlled self-contained (SC) units use polarized plugs, while central system (CS) units are connected to their controls by a terminal strip (see illustration). To retrofit a CS unit, cut the wires at the MCP, splice and connect these wires to the Passport I/O circuit board as shown in the wiring diagram provided inside the electrical box.

Allow adequate access for all wiring connections. Wiring and circuit breakers must be sized according to marine design standards. Only stranded tinned copper wire should be used. Make sure all components are properly grounded and bonded.

The mounting plate shown in the illustrations is designed to take the place of the MCP 3-knob panel. Kits to replace digital displays have smaller mounting plates designed for those controls. After mounting the plate, connect the display cable from the retrofit electrical box to the Elite display panel. Then mount the display panel onto the plate using the screws provided.

There is an air temperature sensor built into the left edge of the Elite display panel. In order for this sensor to operate properly, the display should not be located in direct sunlight or near any other heat source. The display should not be mounted in the supply air stream.

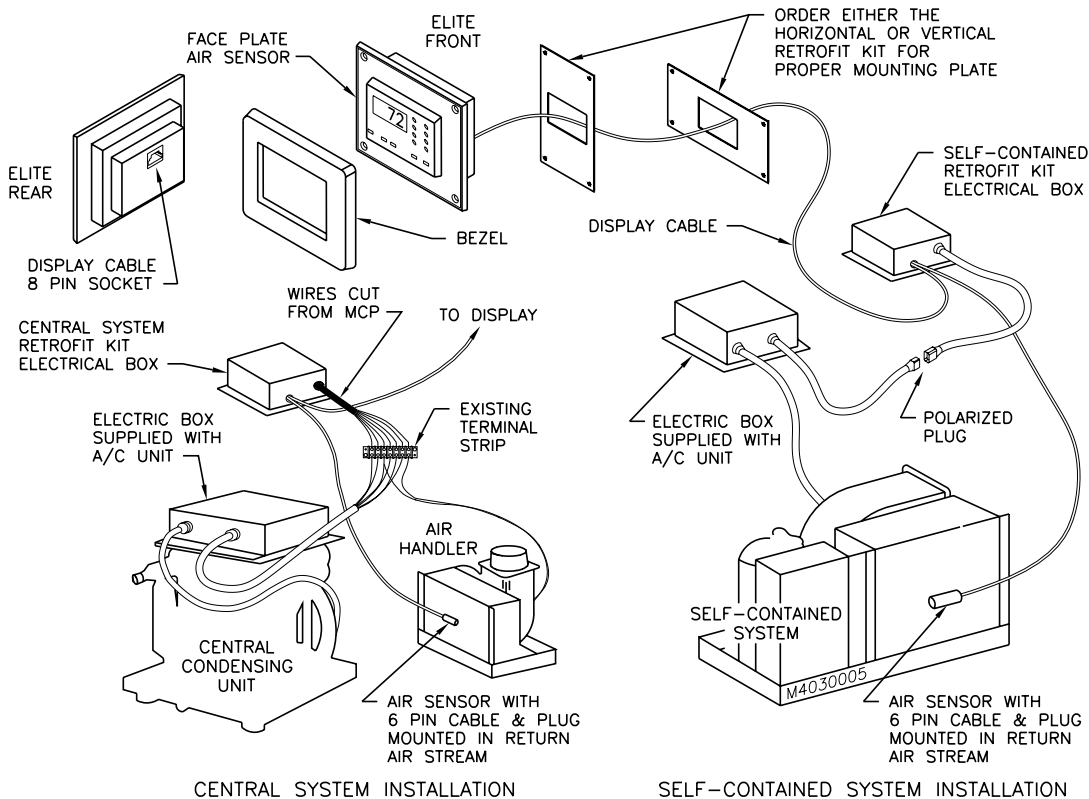
The display panel should be mounted on an inside wall, slightly higher than mid-height of the cabin, in a location with freely circulating air where it can best sense average temperature. See more specific mounting instructions in the Elite or AH-Elite manual.

If the above guidelines for mounting the Elite display cannot be followed, then a remote air sensor and cable must be used. Open the retrofit electrical box and plug the air sensor cable into the 6-pin socket marked "J4" (ALT AIR). Mount the remote air sensor in the return air stream behind the return air grille/opening. Utilizing the remote air sensor cable will automatically override the display panel air sensor.

The new optional "Pump Sentry" feature monitors condenser coil temperature in direct expansion units; it shuts the system down if the coil gets too hot due to loss of seawater flow. The 6-pin water sensor must be plugged into socket "J5" (SERVICE/H2O) on the Passport I/O circuit board. Connect the water sensor to the condenser coil seawater outlet and insulate it. When using the AH-Elite with a chilled water air handler, plug the existing water inlet sensor cable into socket "J5" (SERVICE/H2O). The water inlet sensor should be connected to the chilled water inlet pipe and insulated.

An optional outside air sensor cable is available if needed. Plug that cable into the other 6-pin socket marked "J3" (OAT). Mount the sensor outside but not in direct sunlight. **Do not stretch cable or staple when mounting.**

Refer to the Operations Manual and Quick Reference Card for a thorough explanation of programming and operating of the Elite Environmental Control Unit. Ensure that the power supply is turned off before opening electrical box.



In the interest of product improvement, specifications and design as outlined herein are subject to change without prior notice.

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