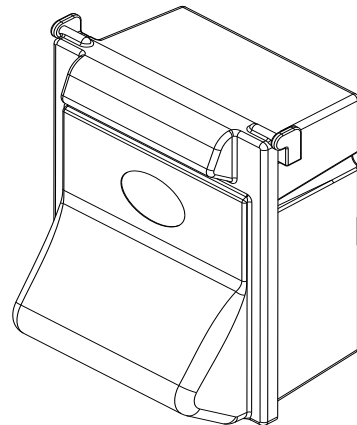
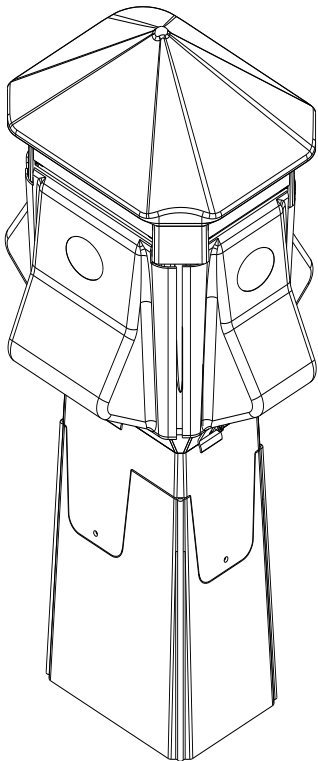


# **POWERPORT & ENERGY MATE INSTALLATION & MAINTENANCE MANUAL**



# POWERPORT Installation Instructions

## 1. Site Preparation

- All wiring and plumbing must be performed by certified/licensed electricians and plumbers. This work must meet all local building codes.
- PowerPort can be installed on any solid surface such as concrete, wood or steel. The utilities to be connected through PowerPort (electricity, water, phone, TV) enter the unit through the bottom. Custom Base Plate geometries are available by “Special Order”.

**Important:** In marine applications if the PowerPort is mounted on a surface that is of open construction that would allow water to pass through; it is necessary to provide shielding against water intrusion into the PowerPort. Failure to do so could result in the possibility of electrical shorting and ultimate damage to the PowerPort.

The PowerPort should be held down to its mounting surface by four 3/8” bolts. These Mounting Bolts as well as the Conduit, Conduit Nuts, Conduit Reducing Plates and plumbing connections are supplied by others (usually the contractor).

- Install electric feeder circuits according to local Electrical Code. PowerPort will accept 350 MCM-4 AWG wire for terminal feed or loop feed. For the standard *Ring Connect* PowerPort, the contractor will need to provide and attach the Ring Terminals for 1/2” studs (feed lines & neutral) and for a 1/4” stud (ground). Wires for the optional *Snap Connect* PowerPort only require stripping: 1 1/8” (feed lines & neutral) and 5/8” (ground). Wires for the *Snap Connect* should extend 15” above the mounting plane. The center of the Ring Terminals for the *Ring Connect* should be 16” above the mounting plane.

**Note:** It is recommended that an oxide inhibitor be used with all aluminum mechanical lugs to prevent the formation of oxides on these mechanical lugs and their conductors.

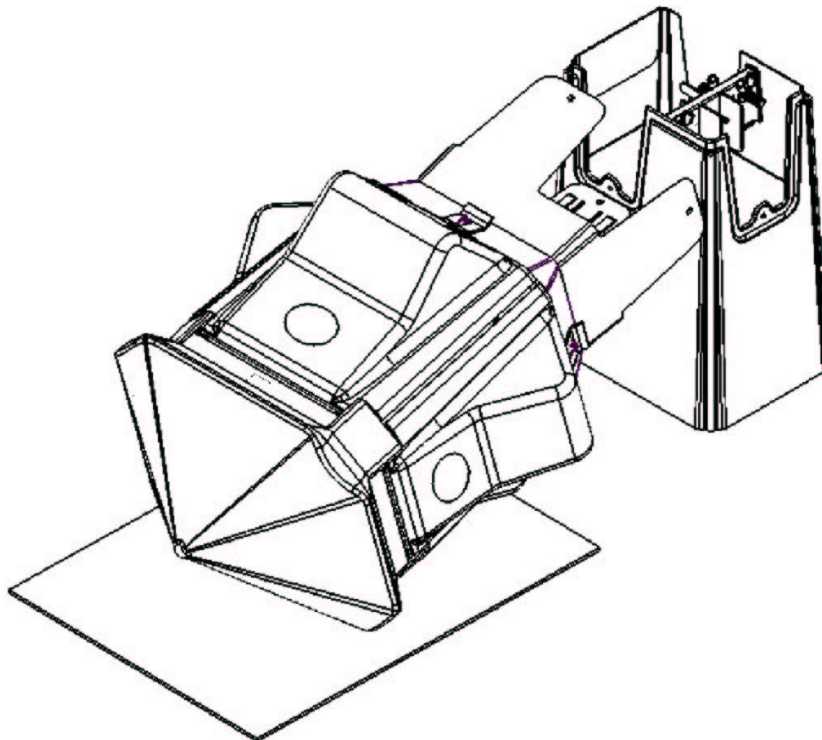
- Optional – install water lines per local Plumbing Code to connect to individual (single or dual) hydrants (1/2” NPT-female) 15” above the mounting plane.
- Optional – install telephone wire per local Electrical Code to connect to self-stripping terminals ~16” above the mounting plane.
- Optional – install coaxial TV cable per local Electrical Code to connect to a 2-way splitter ~16” above the mounting plane.
- Optional – install Light Block cable per local Electrical Code to connect to a lug (12 AWG max.) ~17” above the mounting plane.

**NOTE:** Leave an additional 4” min. for each of the above ‘optional’ wires. These attach to the Base Shield and extra length will allow moving the Shield aside.

## 2. CONNECTION

*Snap Connect Base* Separate the Base from the Top Section. Remove and save the 3 machine screws in the Base and lift off the Top Section. The lower (Base) section may need to be held down, i.e., between your feet, to accomplish this. Set the Top Section aside for now – leave it upright, it will set on its three legs.

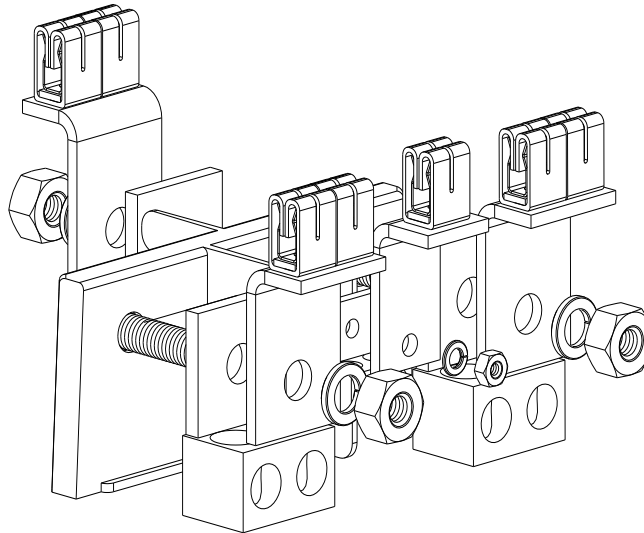
*Ring Connect Base* Separate the Base from the Top Section. But first, lay some of the packing carton on one side of the Pedestal to cushion the Lid when the Top Section is laid over. Remove and save the 3 machine screws in the Base and lift off the Top Section. Lay this on the cushion with the Leg propped up in the cutout as shown below



*All models* Remove the Base Shield from the Terminal Bracket. It is held in place with a wing nut. The wiring diagrams for Installation are on this part.

*All models* The Terminal Bracket can be removed from the Base by removing and saving the 4 screws holding the Bracket. Twist the Bracket clockwise while pulling the Base out at the ends of the Bracket. With the Bracket removed there is nothing to impede attaching the Base to its mounting surface or to conflict with installing the plumbing. Depending of the flexibility of the electrical service wire, it may be easier to connect these wires with the Bracket removed and then reinstall the Bracket in the Base.

Termination Bracket for Snap Connect Base

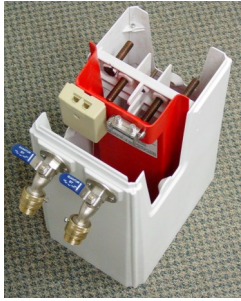


Set the Base in place with all utilities running through the bottom Plate and attached to it as appropriate. Tighten the 4 hold down bolts to secure the Base in place. These should be as tight as the mounting pad material and bolt system will allow. The PowerPort materials and method of construction will support as much hold down force as your bolt system can provide.

Complete the connection of electricity and of other (optional) field utilities. Refer to the diagrams on the (removed) Base Shield. For the *Ring Connect* system the internal wires will be firmly connected between the studs in the Bracket and the top of the Pedestal.

*All models* Replace the Base Shield. Tighten the wing nut securely.

*All models* Set the Top Section on the Base by twisting the Top Section 45 degrees so that the 3 feet rest on top of the Base. In this position there is easy access to connect the (optional) Phone and TV cables and Light Block cable to the mating receptacles on the Base Shield. As the Base and Top Section are slid together take care that none of the wires are pinched.

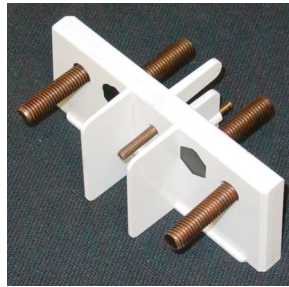


The PowerPort can be installed in less than 20 minutes. It's as easy as 1, 2, 3.

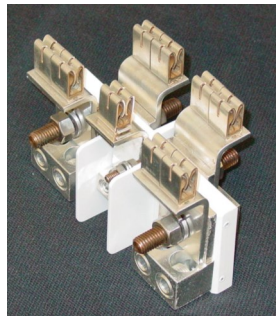
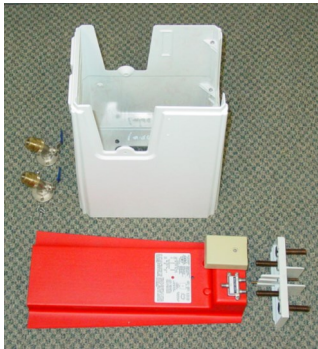
1. Remove the wing nut holding the red shield in place and remove the shield.

2. Remove the four screws holding the line termination bracket in place and remove the bracket.

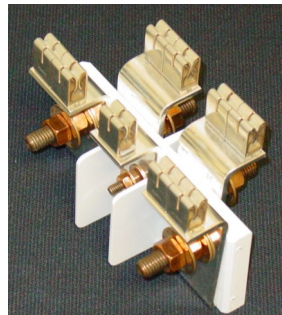
3. Drill holes in dock as required. Install the four bolts/screws to mount the base to the deck.



Standard base, 1/2" Silicon-Bronze studs for loop feed with compression ring terminals on service feeders.



Optional PowerSnap™ base, 1/2" Silicon-Bronze studs for loop feed with compression ring terminals on service feeders.



Optional PowerSnap™ base, Aluminum mechanical lugs will accept 350 MCM loop feed service feeders.

See page 8 for Panel Replacement Information  
See page 9 for Maintenance and Cleaning Information

# EnergyMate Installation Instructions

## 1. Site Preparation

- All wiring must be performed by certified/licensed electricians. This work must meet all local building codes.
- The EnergyMate can be mounted on a optional stand provided by HyPower, or with the optional mounting bracket, to a post, railing or wall as the user requires. If the unit is to be mounted on something other than a HyPower stand or along with the optional mounting bracket, four (4) mounting holes need to be provided for 1/4" bolts in a rectangular pattern 10" high by 6" wide. These mounting points are evident when looking inside the EnergyMate enclosure.  
  
Conduit, Conduit Nuts, Conduit Reducing Plates, and Mounting Bolts are supplied by others (usually the contractor).
- Electric, phone and TV lines can be brought into the unit through Knockouts provided in the bottom and in the lower back. These 2" diameter holes allow for up to 1 1/2" conduit. If smaller conduit will be used, holes should be drilled in these locations instead of removing the knockouts.

## 2. EnergyMate Preparation

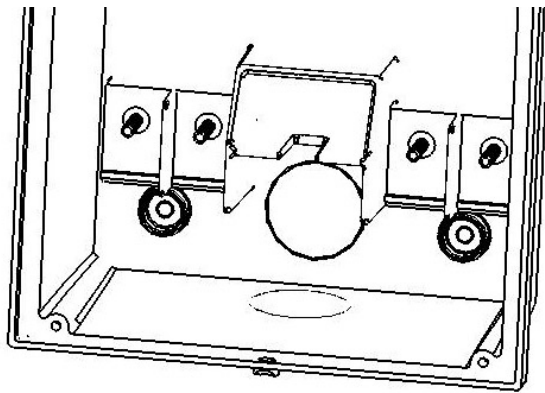
- Open the Cover and remove the two 1/4" and two #10 screws from the Receptacle Panel and set aside. Pull the Panel straight out.
- Drill out the four mounting holes referred to above with a 5/16" bit. These can be drilled from the outside by turning the EnergyMate on its face (with the Cover full open). *Be careful to limit the travel of the drill to prevent damaging anything inside the unit when the bit is through the box wall.*
- Provide the proper size hole for the conduit to be used at the site of the Knockout(s).
- Remove all plastic debris from these cutting operations.

### 3. Mounting

- Either Hex Head or Phillips Head 1/4" machine screws work well for mounting the EnergyMate.
- The Phillips Head screws may be easier to use because the top two mounting holes are slightly congested with the internal parts.
- Use a flat washer and a lock washer under the head of each mounting screw.
- Attach the conduit with a suitable washer and locknut or bushing. *The conduit must be aligned such that no significant stress will be put on the enclosure wall.*

### 4. Wiring the Equipment

- If mechanical lugs are used strip the electrical power wires as required. If mechanical lugs are not used, attach ring terminals for 1/4" studs on the electrical power wires (refer to the picture below).
- Connect the incoming wires (either loop feed or tap feed) to the Post or Lug with the matching color.
- Torque the terminal stud nuts to 45 in/lbs.
- If there is (the optional) telephone or TV connections, make them directly on the respective connector on the Receptacle Panel. These wires should enter the EnergyMate through the boxed area just above the knockout on the lower back wall. This area has no predefined knockouts so that holes can be drilled to meet the needs of the specific installation.
- Reinsert the Receptacle Panel and secure it with the removed screws. The Panel will need to go in flat until the circuit breakers clear the bottom of the Light Panel. Once clear the Panel can be pivoted from the bottom edge onto the breaker stabs.



See page 8 for Panel Replacement Information  
See page 9 for Maintenance and Cleaning Information

### 3. PANEL REPLACEMENT FOR POWERPORT AND ENERGYMATE

Disconnect electric power feeding the unit when any of the panels are to be removed, added or exchanged.

#### General Information:

- a. The hasp tab at the bottom of the Doors that cover the Panels are built to mechanically lock shut and prevent wind lift on the doors. The easiest way to release the catch is to pull the Tab *down (not out)*.
- b. The Doors can be held open with a loop of string or light cord 64" in circumference. Arrange this Loop under the Door Tab and over the top of the pedestal and just under the Lid on the opposite side.

Remove all cords attached to Panels that are to be removed. This includes Phone and TV cables as well as electric power.

Remove and set aside the two 1/4" machine screws on the outer edges of the Panel and the two #10 machine screws at the bottom of the Panel. They hold the panel in the pedestal.

- a. Use the two knobs on either side of the Circuit Breaker window to pull the Panel out from the electrical connections on the inside. The Panel will move about 1/2" and the force required to pull it loose will depend on the number of Circuit Breakers. You may need to pull first on one side, then on the other.
- b. Now the entire panel can be removed from the PowerPort window by bringing it straight out.
- c. If the optional phone and/or TV are connected, they must be unplugged inside the PowerPort from their respective connectors on the Base Shield. The connecting cables are sufficiently long to permit partially removing the Panel and reaching in to unplug these cables from the Base Shield.

The replacement Panel is installed by reversing the steps of disassembly. You may use the two 1/4" bolts to pull the Circuit Breakers onto the Stabs. Push on the front of the breakers to help them seat properly.

Be certain the Circuit Breakers are in the off position when electric power is turned on to the PowerPort.

**NOTE:** If you are increasing the total amperage due to larger receptacles verify that you have the proper sized feeder cable/wire and main/sub panel breakers to manage the new electrical demand load.



## 4. Maintenance and Cleaning

HyPower produces units that are designed to withstand the harsh marine exterior environment. Very little maintenance is required to keep the units looking new for many years and to keep the warranty effective.

### I. Exterior Maintenance:

- 1.) To remove dirt, grime and bird droppings, use a mild solution of dishwashing detergent at approximately one teaspoon per gallon of warm water.
- 2.) To remove spider webs and droppings, follow step one above. After step one has been completed, follow up with a **WATER BASED** insect spray to kill the spiders around the base of the unit and in the receptacle area. **DO NOT** use a petroleum based insect spray.
- 3.) **DO NOT USE ANY SOLVENT OR CORROSION INHIBITING PRODUCTS ON ANY PART OF THIS UNIT! THIS CAN CAUSE SERIOUS STRESS CRACKING TO OCCUR IN THE ENGINEERED RESINS.**

### II. Interior Maintenance:

- 1.) Before attempting the following maintenance procedures, turn off the power to the unit at the power supply panel (note: the breakers on the unit **DO NOT** turn the unit power supply off and the buss bars will be energized).
  - A. **EXPOSING THE KEY COMPONENTS:** PowerPort buss bar: **annually**, remove HyPower's patented snap-in/snap-out panels for visual inspection of **bus bar** and **panel** for excessive heating or loose connections, which should be tightened or replaced as necessary.
  - B. **MECHANICAL LUGS IN LIEU OF RING CONNECTORS:** In the cases where mechanical lugs are used instead of the ring connectors, it is very important that they be examined closely. Most mechanical lugs are made of aluminum and are very susceptible to **galvanic corrosion**. If the set screw cannot be tightened, replace the lug. If there appears to be corrosion around the copper to aluminum connection, remove the copper wire and clean. Coat the wire with an anti-corrosion grease and re-tighten the assembly.
- 2.) The receptacles and breakers should be examined **annually** and if any sign of heating is evident, the receptacles and/or breakers should be replaced.
- 3.) **DO NOT SPRAY ANY SOLVENTS ON THE ELECTRICAL COMPONENTS. SOLVENTS WILL CAUSE STRESS CRACKING OF THE POLYMERIC MATERIALS.**

### III. Lighting Assembly:

- 1.) To test the lighting assembly, the photo cell should be covered with a piece of black tape and in approximately 2-3 minutes the bulb should illuminate. If not, the following items should be checked: photo cell and/or bulb.

### IV. Winterizing:

- 1.) The water system should be purged with air and each ball valve should be opened and closed after the system has been drained. This will remove the slug of water that remains in the ball. No other winterizing functions are required.

### V. Recommendation:

- 1.) HyPower strongly recommends that the purchaser of this product discuss all aspects of this quote and this product with their electrical contractor and any other interested parties before ordering. Appropriate drawings and cut-sheets are included in this quote as an attachment.
- 2.) **NFPA 303 – 5.20.2 – An inspection of all electrical wiring, ground connections, conduit, hangers, supports, connections, outlets, appliances, devices and portable cables installed or used in a marina, boatyard, boat basin or similar establishment shall be made at regular intervals to ensure a complete inspection at least annually.**  
*For more information on this requirement, refer to complete code – 5.20.*

## HyPower®

### LIMITED WARRANTY

HydroHoist Marine Group, Inc. 915 W. Blue Starr Drive, Claremore, OK 74017 USA - Ph: 918-341-6811

(1) **What Is Covered By This Warranty.** HydroHoist Marine Group, Inc. (HydroHoist) warrants, to the original retail purchaser (Consumer) only, that the product sold by HyPower to you is free from defects in materials and/or workmanship.

This limited warranty runs from the date of original installation (or without proof of installation, from three (3) months after the date of manufacture) for a period of three (3) years on all molded plastic parts manufactured by HyPower and for a period of one year on all remaining parts supplied by HyPower. If the Consumer discovers within this period a defect in material or workmanship, the Consumer must promptly notify HyPower in writing with proof of purchase. In no event shall such notification be received by HyPower later than one (1) month following expiration of the three (3) year warranty period. Within a reasonable time after such notification, HyPower will correct any defect in material and/or workmanship with either new or used replacement parts (at HyPower's discretion). Such repair, including both parts and labor, is at HyPower's expense. All warranty service will be performed at HyPower's option either on site or at HyPower's plant in Claremore, Oklahoma, with freight charges prepaid by Consumer. These remedies are the Consumer's exclusive remedies for breach of warranty.

(2) **What Is Not Covered By This Warranty.** HyPower does not warrant any product, component or part (a) that is not manufactured or provided by HyPower; (b) damage caused by failure to provide a suitable installation environment for the product; (c) damage caused by the use of the product for purposes other than those for which it was designed; (d) damage caused by disaster such as fire, flood, wind and lightning; (e) damage caused by unauthorized attachments or modification; (f) damage caused by operation, maintenance or repair of the product contrary to written instructions from HyPower; (g) damage during shipment; (h) damage caused by any other abuse or misuse by the Consumer; or (i) product which has an altered or defaced service number.

(3) **Warranty Of Title, Patents, And Copyrights.** In addition to the warranties set forth in the previous paragraphs, HyPower warrants that it has good title, to the product free of any encumbrance, and that the product shall be delivered free from the rightful claim of any third person for infringement of patent or copyright. If a claim arises, the Consumer will allow HyPower, at HyPower's option and expense, to procure the right for the Consumer to continue using the product to replace or modify it so that it becomes non-infringing, or to grant the Consumer a refund of the purchase price in exchange for return of the infringing product.

(4) **Implied Warranty.** ANY IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE UNDER APPLICABLE STATE LAW ARE LIMITED TO A DURATION OF ONE (1) YEAR FROM DATE OF MANUFACTURE.

(5) **Limitation Of Remedies.** In no case shall HyPower be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of savings or revenue, loss of use of product or any associated equipment, cost of capital, cost of any substitute equipment, facilities or services, downtime, the claims of third parties including customers, and injury to property. This limitation does not apply to damages caused by breach of the warranty of title against infringement under paragraph (3).

(6) **Time Limit To Bring Suit.** Any action for breach of warranty must be commenced within (3) months following expiration of the relevant warranty period.

(7) **No Other Warranties.** Unless modified in writing signed by both parties, this agreement is understood to be the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement. Only HyPower's President and Chief Financial Officer, and no other employee or agent of HyPower (including franchisees, jobbers, distributors, or any other party) are authorized to make any warranty binding on HyPower in addition to those made in this agreement.

(8) **State Law.** Some states do not allow (a) limitations on how long a warranty lasts or (b) limitations on incidental or consequential damages. Therefore, the limitations set forth above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

(9) **Allocation Of Risks.** This agreement allocates the risk of products failure between HyPower and you. This allocation is recognized by both parties and is reflected in the price of the goods. **YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND ARE BOUND BY ITS TERMS.**

(10) **IF YOU HAVE A WARRANTY CLAIM, PLEASE CONTACT HYPower AT 915 W. BLUE STAR DRIVE, CLAREMORE, OKLAHOMA 74017, OR BY PHONE NUMBER 918-341-6811.**

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