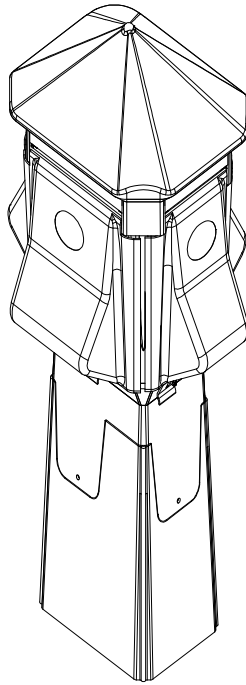


POWERPORT INSTALLATION & MAINTENANCE MANUAL



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.

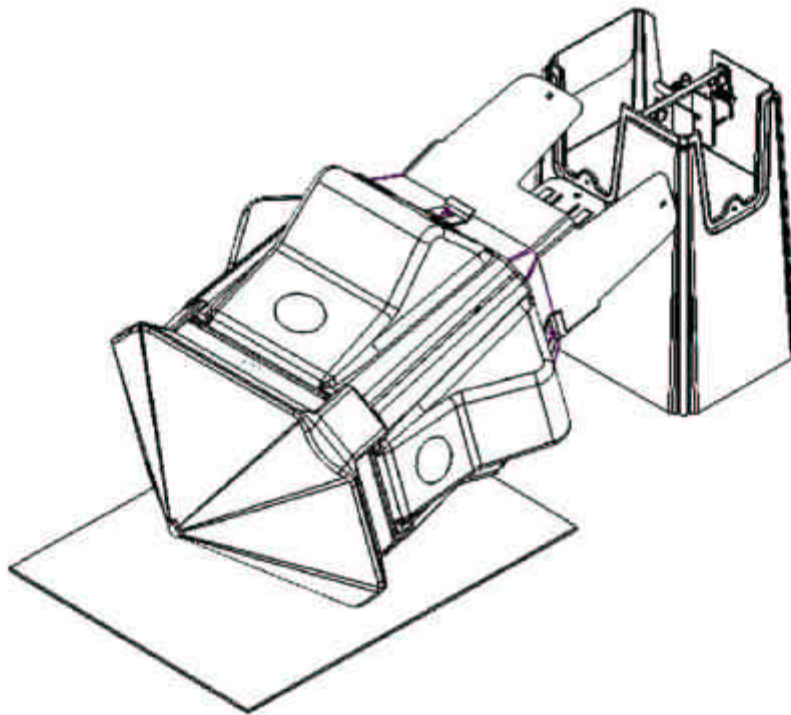
- Optional – install water lines per local Plumbing Code to connect to individual (single or dual) hydrants (1/2” NPT-female) 15” above the mounting plane.
- Optional – install telephone wire per local Electrical Code to connect to self-stripping terminals ~16” above the mounting plane.
- Optional – 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.

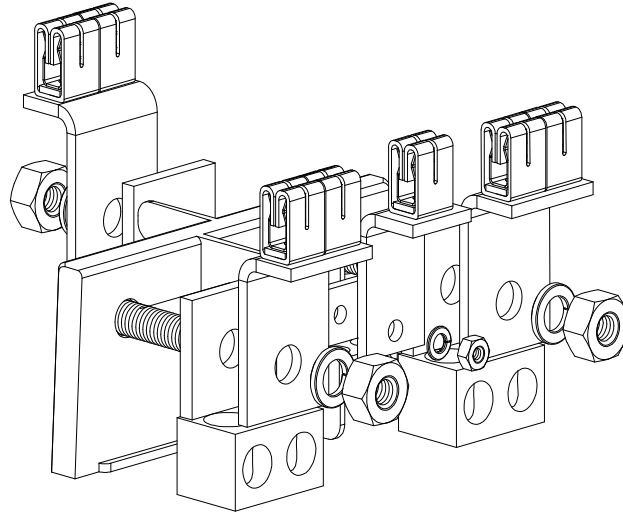
Ring Connect Base Separate the Base from the Top Section. But first, lay some of the packing carton on one side of the Pedestal to cushion the Lid when the Top Section is laid over. Remove and save the 3 machine screws in the Base and lift off the Top Section. Lay this on the cushion with the Leg propped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

3. PANEL REPLACEMENT

Disconnect electric power feeding the PowerPort 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 and 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.

Maintenance

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.

INITIAL _____ DATE _____