



Model No. DVSA



Pump Alternator System Installation Instructions

Features:

- Prolongs pump life by alternating two primary pumps
- Runs one pump at a time
- If one pump fails the other pump will take over and an audible alarm will sound
- Flashing light will indicate which pump is failing
- Remote terminal allows the unit to connect to any security system, auto dialer or other device
- Includes two vertical float switches
- If one float switch fails the other float switch will take over and an audible alarm will sound
- Angled receptacles to accept a standard or right angled pump plugs
- 15 Amps max.
- 9V battery back-up for "High Water Alarm" alarm
- Plug and play for easy installation
- 9 foot long power cord

The PHCC Pro Series Pump Alternator is designed to operate two primary pumps. Every time the float switch is activated, it will automatically alternate the pump that turns on. This will prolong the life of both pumps. If one of the pumps fails to turn on, the Alternator will automatically switch to the other pump. If this occurs three times in a row, a light will start flashing indicating exactly which pump is failing.

For added reliability, the system features two separate vertical float switches. They are both mounted at different levels in the sump pit. Should the lower float switch fail, the higher float switch will turn the pump on and will sound a High Water Alarm.

Pro Series Pump Alternator includes:

- Control unit
- Two vertical float switches
- Two hose clamps for mounting the float switches

You will also need to supply:

- **Two (2) Primary pumps** Consider one of our strong and dependable primary pumps. All PHCC Pro Series primary pumps are built to run continuously 24 hours a day, 365 days a year. Using them in this application will greatly extend their life. (Visit www.StopFlooding.com for more information)
- **9V heavy duty-alkaline battery**
- **Proper mounting hardware**
- **1½" rigid PVC pipe and fittings**
- **PVC primer and cement**
- **A union with hose clamps or a "Y" connector and two (2) check valves**, depending on the installation method you use
- **PHCC Pro Series Sump Foot** is recommended which provides a platform for both pumps, keeping them elevated and away from pit debris

⚠ WARNING ELECTRICAL SHOCK HAZARD
 Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠ WARNING EXPLOSION OR FIRE HAZARD
 Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

Pump & Pipe Installation Instructions

There are two basic methods that can be used to install both pumps together, a direct discharge to the outside of the building, or a connection to an existing discharge pipe. It is highly recommended to install the second pump with a direct discharge to outside (Diagram A). By using this method, there will always be an outlet for the water from the sump. For this, you will need to drill a hole through the wall to the outside of the house.

If the direct discharge method is not possible or convenient, both pumps can be connected to the same discharge pipe by installing a "Y" connector and two (2) check valves (Diagram B).

When a check valve is used, a 1/8 in. (3.2mm) air bleed hole must be drilled in the PVC pipe above the pump. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. Make sure the hole is above the water line, and below the check valve. If a hole is not drilled above the pump, an air lock may prevent the pump from operating.

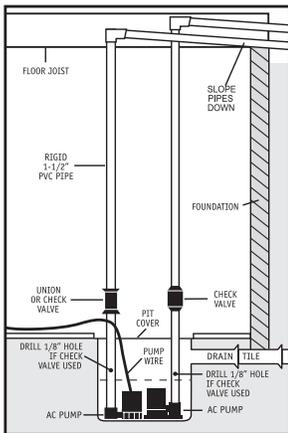


Diagram A

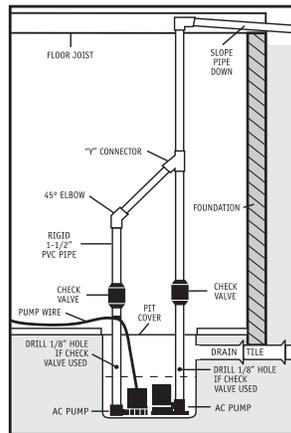


Diagram B

Installing the Float Switches

Determine desired activation level and pumping range as shown in Diagram C. Pump range can be adjusted by moving the float stop up or down on the rod.

Do not install either float switch in direct flow of incoming water.

1. Insert the hose clamp through slots in the mounting bracket as shown in Diagram D.

2. Position the hose clamp around the discharge pipe.

Note: cable should remain outside of the hose clamp. Tighten the hose clamp securely.

3. Mount the float switch labeled LOWER below the UPPER float switch.

4. They should be approximately 2" apart (Diagram C). The LOWER float switch will operate the pump on a daily basis. The UPPER float switch will only be used if the LOWER float switch or one the pumps were to fail.

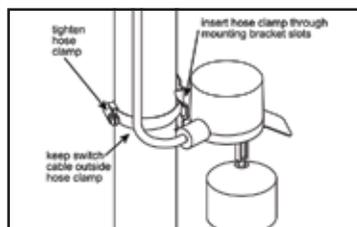
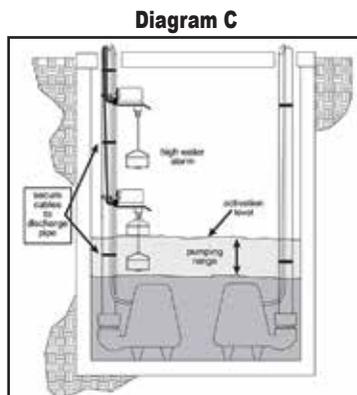


Diagram D

Installing the Alternator Control Unit

1. Mounting the Control Unit

Mount the controller to the wall through four (4) holes on the cabinet using the proper mounting hardware for the application.

Do not mount the control unit anywhere that it will be susceptible to moisture or flooding.

2. Install 9V Battery

Open the battery compartment on the front panel of the unit. Install a 9V battery and close the battery compartment.

Note: Battery is not included, use a heavy-duty alkaline battery.

3. Connect AC Power Cord

Plug the AC power cord into a properly grounded, 3-prong receptacle.

4. Connect Pumps

Plug both pumps into receptacles located on the left side of the control unit (Diagram E)

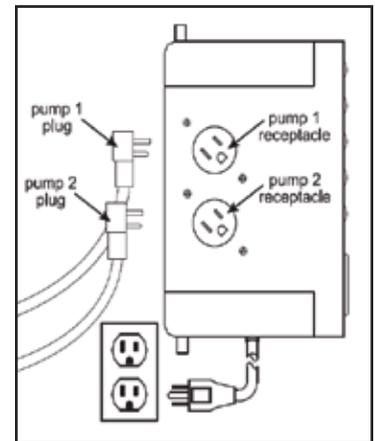


Diagram E

Understanding the Operation of the Alternator

The Pro Series Alternator features two float switches and is designed to alternate the operation of two primary pumps. It also has a remote terminal on the side of the control unit that can be connected to an auto dialer, security system or other devices.

The pumps will alternate with every activation of the float switch. The pumps will not operate together in any case. Should one pump fail to turn on, the water level will rise higher and activate the UPPER float switch. This float switch will automatically turn on the other pump. If this happens 3 times in a row, you will receive a flashing light next to the pump that is failing.

Should the LOWER float switch fail, the water level will rise and activate the UPPER float switch, which will operate the pumps during this failure. When the UPPER float switch activates for any reason, the High Water Alarm will sound.



Understanding the Warning Lights

The Pro Series Alternator features a series of lights that either pinpoint potential problems or give you the status of the system. In addition, an alarm will sound to alert of a problem.



1 High Water Alarm

If this warning light and alarm is on, it means that the UPPER float switch has been activated. This means there is a failure with the LOWER float switch or one of the pumps. Check the list below before you replace the pump or the float switch.

- Manually activate the LOWER float switch
- If no green Pump lights come on, the LOWER float switch may be bad
- If one of the green Pump lights comes on but the pump doesn't turn on, one of the pumps may be bad

2 Alarm Silenced

This light will flash yellow when the alarm is silenced.

3 Pump 1 & 2

These lights will come on green when the one of the pumps is running. The light will indicate which pump is running. Only one light will be on at a time since both pumps can't run at the same time. When the light is on steady green, it means that the pump is operating. If the light is flashing green, it means that pump is failing. Check the list below before you replace the pump.

- Verify by manually activating the float switch or by pressing the test button that the pump is failing
- If one of the pumps fails to turn, replace it

4 System Operating

This light should be on as long as there is power coming from the outlet and the 9V battery. If it is slowly flashing, it means there is no power coming into the unit. Make sure it's plugged in all the way and the outlet is good. If it's flashing fast, it means that the 9V battery is not installed or dead. Replace the 9V battery.

Understanding the Buttons

The Pro Series Alternator features 4 buttons. These buttons are designed for your convenience to test different features of the system and to silence the audible alarm.

A Test Alarm

Press and hold this button to test the audible alarm. The alarm will sound and the High Water Alarm light will be on as long as you hold the button.

B Silence Alarm

Press this button to silence the audible alarm. This is used in a case when you have a failure with the LOWER float switch or one of the pumps. Alarm Silenced light will flash yellow when the alarm is silenced. Press again to enable the alarm and the Alarm Silenced light should stop flashing.

C Test Pump

Press this button to test your pumps. Only one pump will run with every press and will run as long as you are holding the button. The pumps will alternate with every press. A green light next to Pump 1 or Pump 2 will come on depending on which pump is running. If a pump doesn't run, check the pump for failure.

D Test/Reset

Press this button to reset the pump failure green flashing light. Keep in mind that the High Water Alarm will go off by itself when the UPPER float switch deactivates. This button resets the flashing green light that comes on when a pump is failing next to Pump 1 or Pump 2.

This button is also used to test the 9V battery. Press and hold this button to test the 9V battery. Use the lights on the front panel as a gauge for battery charge level (see picture below).

Hold button to test the 9V battery. Use lights on front panel as a gauge for battery charge level.

Full Good Low Replace Replace

Testing the Float Switches

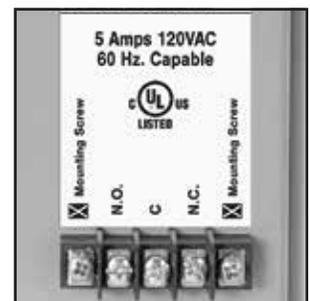
It is important to manually test both float switches periodically or after any maintenance.

Lift the LOWER float switch all the way up and let it go. This will activate the pump. The pump will run until the float switch drops all the way down. While the pump is running, there should be a green light coming on next to either Pump 1 or Pump 2. After the pump shuts off, activate the float switch again. The other pump should turn on with the green pump light.

Perform the same operation on the UPPER float. Keep in mind that every time this float switch is activated, the HIGH WATER ALARM will sound. The alarm and the light should go off after the float switch deactivates.

Remote Terminal

The Pro Series Alternator can be connected to an auto dialer, security system, or other devices. The terminal block is located on the right side of the control unit. There are three (3) positions for wire connections on the terminal: N.C. – normally closed, N.O. – normally open, and common.



Only the three (3) middle screws are used on the terminal block. DO NOT unscrew the screws on either end. These screws are used to mount the remote terminal.

Check your security system to determine whether an open (no contact) or closed (making contact) connection is needed to activate the alarm.

The security system will provide two connection terminals. You will need to extend wires from the security system to the Pro Series Alternator. Follow these steps on how to connect the wire to the remote terminal:

1. Strip the two wires, 1/2" each
2. Unscrew N.O. terminal screw
3. Wrap the exposed part of the wire around the screw
4. Tighten the screw back in N.O. terminal
5. Repeat steps 1 - 4 for Common terminal

If the security system requires a closing of a contact to activate the alarm, secure the other wire in the terminal labeled N.O. (normally open). If the security system requires an opening of a contact, secure the wire in the terminal labeled N.C. (normally closed).

Maintenance Check List

Maintenance should be performed 1-2 times per year

1. Make sure both pumps are plugged in securely on the side of the controller
2. Lift LOWER float switch and make sure the pump activates
3. Lift UPPER float switch, make sure the other pump activates, and the High Water Alarm comes on
4. Remove all debris from the bottom of the pit and pump strainer
5. Remove all debris from the water
6. Remove all debris from the float switch
7. Test the 9V battery by pressing the Test/Reset button on the controller
8. Replace 9V battery as needed

LIMITED WARRANTY

By opening this package and using this GLENTRONICS, INC. product, you are agreeing to be bound by the terms of the GLENTRONICS, INC. limited warranty ("warranty") as set out below. Do not use your product until you have read the terms of the warranty. If you do not agree to the terms of the warranty, do not use the product and return it within the return period stated on your purchase receipt from the retail store or authorized distributor where you purchased it for a refund.

To the extent permitted by law, this warranty and the remedies set forth are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. GLENTRONICS, INC. disclaims all statutory and implied warranties, including without limitation, warranties of merchantability and fitness for a particular purpose and warranties against hidden or latent defects, to the extent permitted by law. GLENTRONICS, INC. will not be liable for any incidental, special or consequential damages for breach of any express or implied warranties on this product. In so far as such warranties cannot be disclaimed, GLENTRONICS, INC. limits the duration and remedies of such warranties to the duration of this express warranty and, AT GLENTRONICS, INC.'s option, the repair or replacement services described below. Some states (countries and provinces) do not allow limitations on how long an implied warranty (or condition) may last, so the limitation described above may not apply to you.

Any and all causes of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be governed by and construed under the laws of the State of Illinois. Any cause of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be filed only in the Circuit Court of the 18th Judicial District, Lake County, Waukegan, Illinois, or in the Northern District of Illinois if filed in Federal Court. The maximum liability for any product described in this warranty shall be the cost of product replacement only.

If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.

What is Covered by this Warranty?

GLENTRONICS, INC. warrants to the end purchaser that its pumps, switch and control unit products are free from defective materials and workmanship for the periods indicated below:

All parts and labor (excluding installation) for a period of:

- 3 years from the date of installation, when used as a sump pump controller

The defective product must be returned directly to the factory, postage prepaid with the original bill of sale or receipt to the address listed below. GLENTRONICS, INC., at its option, will either repair or replace the product and return it postage prepaid.

What is NOT Covered by this Warranty?

This warranty does not cover the cost or value of damaged property, including expressly any property that has been affected by water overflow, seepage or flooding. If GLENTRONICS, INC. determines that a product is deemed defective under this warranty agreement, it will repair or replace the PRODUCT ONLY. GLENTRONICS, INC. will not cover the cost to reinstall the product, nor will GLENTRONICS, INC. pay the cost of having a plumber or contractor repair or replace the product.

GLENTRONICS, INC. will not repair or replace a product that was installed incorrectly. A product shall be considered "installed incorrectly" when it deviates in any way from the instructions described in this manual.

This warranty does not cover product problems resulting from handling liquids hotter than 104 degrees Fahrenheit, handling inflammable liquids, solvents, strong chemicals or severe abrasive solutions; user abuse; misuse, neglect, improper maintenance, commercial or industrial use; improper connection or installation, damages caused by lightning strikes; excessive surges in AC line voltage; water damage to the controller; other acts of nature, or failure to operate in accordance with the enclosed written instructions.

How to Obtain Warranty Service

Within thirty (30) days of the product's defective performance, the unit must be shipped, freight prepaid, or delivered to GLENTRONICS, INC. to provide the services described hereunder in either its original carton and inserts, or a similar package affording an equal degree of protection. Products not received by GLENTRONICS, INC. at the address indicated below within thirty (30) days of the product's defective performance will not be considered for warranty service. Products received after three (3) years from the date of installation, fall outside of the timeframe for warranty service and will not be eligible for warranty service. The product must be returned to GLENTRONICS, INC. for inspection in order to be considered for warranty service. If the product is not returned to GLENTRONICS, INC. or the product is inspected by any person, plumber, contractor or business other than GLENTRONICS, INC., this warranty shall no longer be valid. Prior to defective operation, the unit must not have been previously altered, repaired or serviced by anyone other than GLENTRONICS, INC., or its agent; the serial number on the unit must not have been altered or removed; the unit must not have been subject to accident, misuse, abuse or operated contrary to the instructions contained in the accompanying manual. The dealer's dated bill of sale, or installer's invoice must be retained as evidence of the date of purchase and to establish warranty eligibility.

Where are Products Sent for Warranty Service?

Glentronics, Inc., 645 Heathrow Drive, Lincolnshire, IL 60069

How Can I Obtain More Information?

By calling 800-991-0466.