

Model HC7000

Electronic Utility Pump Switch

Patents Pending



Installation Instructions

Operational Overview

The HC7000 Electronic Utility Pump Switch is specially designed to control the on and off operation of small utility pumps.

The HC7000 will turn on the pump when the water level reaches the sensor. It will keep the pump running until the water level drops to the point where the pump loses suction. **Note that it must take at least 5 seconds of running before losing suction for the pump to shut off correctly.** It then turns the pump off and waits for the next cycle to begin. To help protect the pump from damage due to air lock conditions, the HC7000 will turn the pump off for 10 seconds if the water level doesn't drop below the level of the sensor after running for 60 seconds. An alarm will sound (3 beep pattern) if this occurs.

Step-by-Step Installation

Step 4
Important! Test your installation before leaving it for unattended operation. For best results, make sure to use a high quality hose that is as short as possible, kink resistant and is at least 5/8" in diameter.

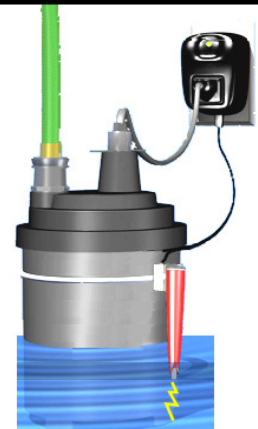
Step 1
Plug the HC7000's control module into the 120VAC outlet. It will beep once to tell you it's ready to go and the LED will illuminate RED. RED indicates the output is off. GREEN, or flashing GREEN, indicates the output is on. **Note that this product is not rated for outdoor use.**

Step 3
Attach the sensor to the pump with the supplied tie-wrap at the level where you want the pump to turn on. The sensor can be set at any level, but most pumps need a minimum water depth before they should be turned on. Consult your pump's owner's manual for this requirement. **The sensor should be positioned so that the pump will run for at least 5 seconds before sucking air.**

Step 2
Plug the pump motor into control module. Note that the HC7000's output is rated for a maximum of 120 VAC, 3/4 HP/13.8 Amps (standard for most utility pumps).

How the Sensor Works:

The sensor detects the presence of water by using a continuity circuit, which, when the tip of the sensor is in water, allows a small voltage to flow from the sensor, through the water, to ground. When no water is present, the circuit is broken and no voltage flows. Normally, the pump provides the ground needed for the continuity circuit, but occasionally it won't. When this happens, it is necessary to provide a ground for the sensor to work. This can be done by taking a length of wire (14 AWG) with a couple of inches of insulation stripped off at both ends. Secure one end of the wire around a water pipe or electrical conduit. Place the other end under the pump, which will hold it in place.



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HC7000 Utility Pump Switch Troubleshooting Chart

The Model HC7000 Utility Pump Switch has a number of built in alarms that warn of problems with the pump or discharge plumbing. The available alarms, along with possible operation problems, are described in the table below.

To Disable All Alarms

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Unplug pump from control module. 2. Lift sensor out of water. 3. Unplug control module from 120 VAC outlet. Wait 10 seconds. 4. Plug control module back into outlet and wait for unit to beep. | <ol style="list-style-type: none"> 5. Unplug control module from 120 VAC outlet. Wait 10 seconds. 6. Plug control module back into outlet and wait for unit to beep. 7. Plug pump back into control module 8. Place sensor back into water |
|--|---|

| Alarm/Indicator/Problem | Description | Possible Causes |
|-------------------------|--|---|
| 2 Beeps | Can't turn pump on | 1. Pump not plugged in |
| 3 Beeps | High Level Alarm* * Disabled on 1 st cycle after reset | 1. Pump can't keep up with water coming in 2. Discharge hose blocked 3. Debris on sensor |
| Steady Slow Beep* | Motor current above normal | 1. High motor current. Replace pump and/or perform Master Reset as described below |
| Steady Fast Beep* | Motor current too high | 1. Very high motor current. Replace pump and/or perform Master Reset as described below |
| Steady Red LED | Pump off, no water detected | 1. Normal operation |
| Steady Green LED | Pump on, water detected by sensor | 1. Normal operation |
| Flashing Green LED | Pump on, water below sensor | 1. Normal operation |
| Pump doesn't turn on | Sensor in water but pump doesn't start. LED is steady Red and switch isn't beeping | 1. Sensor isn't getting good ground from pump. Install ground wire as described in "How Sensor Works" on front of sheet |
| Pump turns off too soon | Pump starts okay, but shuts off before it starts to suck air | 1. Problem with pump's discharge path. Refer to Step 4 of installation instructions. |

*Master Reset Procedure:

1. Unplug the pump from the HC7000
2. Unplug the HC7000 from the 120 VAC outlet
3. Wait 5 seconds then plug the HC7000 back into the 120 VAC outlet
4. **Wait for the HC7000 to beep once and the light on the front of unit to turn on**, then plug the pump back in.

Model HC7000 Utility Pump Switch Limited Lifetime Warranty

STAK Enterprises Inc. warrants the **Model HC7000 Utility Pump Switch** to be free from defects in materials and workmanship for its normal, useful life, from the date of purchase. STAK Enterprises Inc. makes no other express warranty for this device. No agent, representative, dealer, or employee of STAK Enterprises Inc. has the authority to increase or alter the obligations or limitations of the warranty. The company's obligation of this warranty shall be limited to the repair or replacement of any part of the HC7000 which is found to be defective in materials or workmanship under normal use and service during the duration of product use by original product owner commencing with the date of purchase. Owner must pay all shipping charges necessary to replace product covered by this warranty. This warranty shall not apply to acts of God, nor shall it apply to products which, in the sole judgment of STAK Enterprises, Inc. have been subject to negligence, abuse, accident, tampering, alteration, misapplication, or improper installation. Units in need of repair should be returned, shipping prepaid, to

Customer Service Department
STAK Enterprises, Inc.
2413 West Algonquin Road
#309
Algonquin, IL 60102

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