Big Switch™ Pump Switch

15 Amp | 120/230VAC

MODEL: WIDE ANGLE ONLY

ALDERON™ Industries

Leading Edge Control Products

TECHNICAL DATA SHEET

DESCRIPTION OF OPERATION



The Big Switch™ Pump Switch is used to turn a pump on and off in environments with temperatures up to 140° F. This product can be used for a variety of applications, including but not limited to: septic tanks, sump pits, holding tanks, pump chambers, water tanks, and any other liquid tanks. Available in 120/230VAC bare lead (no plug), 120VAC piggyback plug, and 230VAC piggyback plug, 15 Amp models.

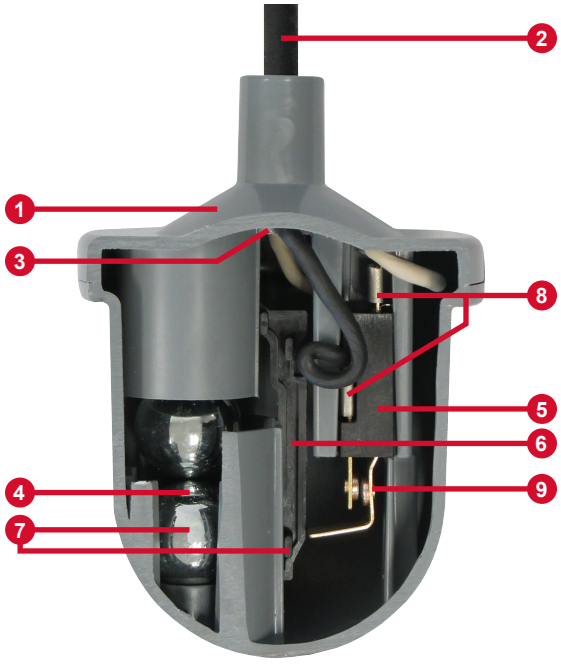
The pump switches are mechanically operated using a mechanical switch and are activated by the ball inside the float housing. Available only in wide angle switching differential. For use as empty tank (normally open) or fill tank (normally closed) configuration with multiple types of float attachments for mounting and various cable lengths.

NOTE: Check to make sure the correct pump switch is being used for the application:

Normally Open - Contacts are open while hanging down and will close on a rising liquid level. Typically used for empty tank applications.

Normally Closed - Contacts are closed while hanging down and will open on a rising liquid level. Typically used for fill tank applications.

STANDARD FEATURES



(1) Polyvinyl Chloride (PVC) Housing - Designed for temperatures up to 140° F, resistant to harsh chemicals, and withstands high impact.

(2) Cable Type - SJOOW (UL/CSA), 14 gauge, 2-conductor, flexible, and water/oil resistant. Available in 120/230VAC bare lead (no plug), 120VAC piggyback plug, and 230VAC piggyback plug, 15 Amp models.

(3) Internal Wiring - Epoxy moisture seal technology for protection from water intrusion.

(4) Ball - Located inside the float housing and used to actuate the mechanical switch, this model uses two balls to operate the pump switch.

(5) Mechanical Switch - Activated by the ball inside the float housing causing the contacts to open or close.

(6) Actuator Arm - As the float tilts above/below horizontal, the ball inside the housing will activate or deactivate the actuator arm causing the mechanical switch to turn on/off.

(7) Switching Differential - Wide angle (90°) models for a variety of applications. The wide angle switching differential is created by using two balls to activate or deactivate the actuator arm.

(8) Innovative Mechanical Design - Using mechanically activated snap action contacts eliminates the hazardous mercury for an environmentally safe product.

(9) Switching Contacts - Heavy duty switching contacts will open or closed when the mechanical switch is activated or deactivated.

(10) Omni-Directional (not shown) - Not sensitive to either rotation or turbulence. The float switch will operate at the designed angle regardless of the direction of the tilt.

SPECIFICATIONS

Big Switch™ Pump Switch

Primary Voltage
120VAC or 230VAC, 60 Hz
(voltage depends on model/part number)

Amperage
15 Amps

Float Housing Material
Polyvinyl Chloride *(PVC)*

Float Housing Size
3.25 inches *(diameter)* x 4.55 inches *(length)*

Cable Type
SJOOW *(UL/CSA)*, 14 gauge, 2-conductor, flexible, and water/oil resistant

Connection Types
Bare Lead *(no plug; 120/230VAC)*
Piggyback Plug *(120VAC or 230VAC)*

Operating Temperature
0 - 140° F

Switching Differential
90° total *(wide angle)*

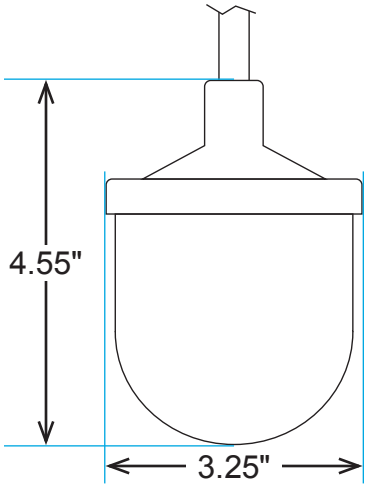
Switch Configuration
Single Pole, Single Throw *(NO or NC)*

Certifications
UL *(US and Canada)*

Three-Year Limited Warranty

NOTE: The Big Switch™ pump switch must be used with pumps that provide integral thermal overload protection.

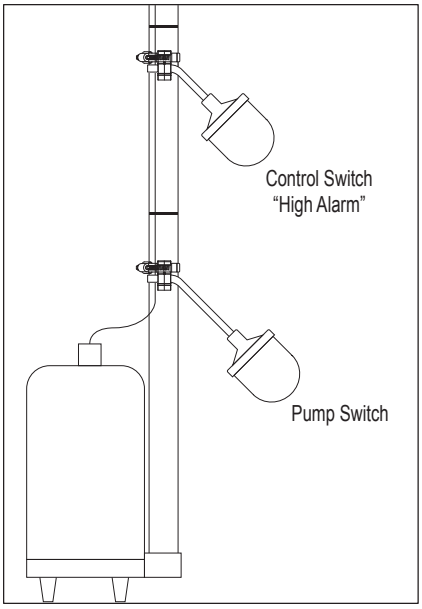
MECHANICAL DRAWING



TETHER LENGTH GUIDE

CAUTION: USE A GUIDE ONLY, ACTUAL RANGES MAY VARY (Reference Only - Testing Must Be Performed for Actual Ranges)									
Tether Length (inches)	3.5"	4.0"	6.0"	8.0"	10.0"	12.0"	16.0"	20.0"	24.0"
Pumping Range (inches) | N/A = Model Not Available									
Narrow Angle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medium Angle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wide Angle	7.5"	8.0"	10.0"	12.0"	14.0"	16.0"	20.0"	24.0"	28.0"
Pump Switches - MINIMUM Recommended Tether of 3.5"									

APPLICATION EXAMPLE



EMPTY TANK
(normally open example)

Multiple float switches with pipe clamps are used for a variety of applications to empty/fill a tank or use as high/low level alarms.

Normally Open (empty):

Control Switch / Top Float = High Alarm
Pump Switch / Bottom Float = Start/Stop Pump

Normally Closed (fill):

Pump Switch / Top Float = Start/Stop Pump
Control Switch / Bottom Float = Low Alarm

ORDERING INFORMATION

For a complete list of standard products with pricing, refer to the current year price sheet or visit alderonind.com for more information.

PART NUMBER	DESCRIPTION (120/230VAC, Bare Lead or Piggyback Plug | 15 Amp)
7054	15' Big Switch™ Wide Angle Pump Switch, 120VAC Piggyback Plug, Pump Down, Stainless Steel Pipe Clamp, Boxed
7063	15' Big Switch™ Wide Angle Pump Switch, 120VAC Piggyback Plug, Pump Up, Stainless Steel Pipe Clamp, Boxed
7057	15' Big Switch™ Wide Angle Pump Switch, 230VAC Piggyback Plug, Pump Down, Stainless Steel Pipe Clamp, Boxed
7066	15' Big Switch™ Wide Angle Pump Switch, 230VAC Piggyback Plug, Pump Up, Stainless Steel Pipe Clamp, Boxed
7060	15' Big Switch™ Wide Angle Pump Switch, 120/230VAC Bare Leads, Pump Down, Stainless Steel Pipe Clamp, Boxed
7069	15' Big Switch™ Wide Angle Pump Switch, 120/230VAC Bare Leads, Pump Up, Stainless Steel Pipe Clamp, Boxed