Altra™ Pump Switch

13 and 15 Amp | 120/240VAC

MODELS: A13 and A15 SERIES

Alderon™ INDUSTRIES

TECHNICAL DATA SHEET

DESCRIPTION OF OPERATION



The Altra™ 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 120/240VAC bare lead (no plug), 120VAC piggyback plug, and 240VAC piggyback plug, 13 or 15 Amp models.

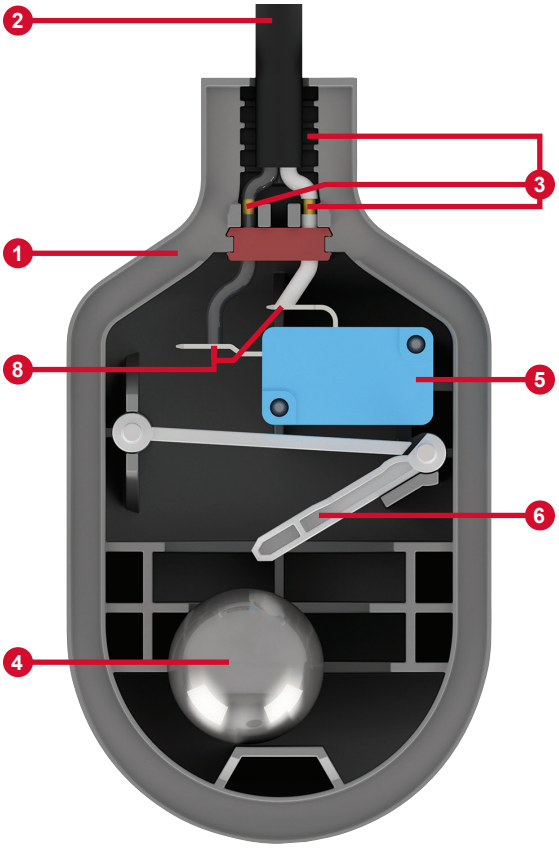
The pump switches are mechanically operated using a microswitch and are activated by the ball inside the float housing. Available models include: A13 and A15 Series with narrow and wide angle switching differentials. For use as empty tank (normally open) or fill tank (normally closed) configuration with 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) Polypropylene Housing - Designed for temperatures up to 140° F, resistant to harsh chemicals, and withstands high impact.

(2) Cable Type - SJOOW (UL/CSA), 16 or 14 gauge, 2-conductor, flexible, and water/oil resistant. Available in 120/240VAC bare lead (no plug), 120VAC piggyback plug, and 240VAC piggyback plug, 13 or 15 Amp models.

(3) Internal Wiring - Solder dipped wiring with an epoxy filled chamber for moisture seal technology and protection from water intrusion (solder dipped wiring on bare lead models only).

(4) Ball - Located inside the float housing and used to actuate the microswitch.

(5) Microswitch - 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 microswitch to turn on/off.

(7) Switching Differential (not shown) - Narrow angle (20°) and wide angle (90°) models for a variety of applications.

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

(9) 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

Altra™ Pump Switch

Primary Voltage
120VAC or 240VAC, 60 Hz
(voltage depends on model/part number)

Amperage
13 Amps, 120VAC 0.5HP or 240VAC 1.5HP
15 Amps, 120VAC 0.5HP or 240VAC 2.0HP

Float Housing Material
Polypropylene

Float Housing Size
2.72 inches *(diameter)* x 4.9 inches *(length)*

Cable Type
SJOOW *(UL/CSA)*, 16 or 14 gauge, 2-conductor, flexible, and water/oil resistant

Connection Types
Bare Lead *(no plug; 120/240VAC)*
Piggyback Plug *(120VAC or 240VAC)*

Operating Temperature
0 - 140° F

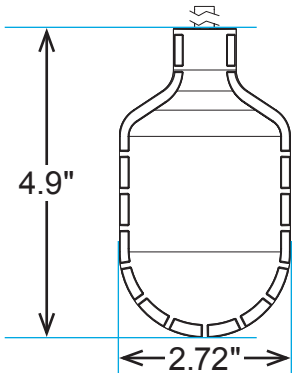
Switching Differential
20° total *(narrow angle)*
90° total *(wide angle)*

Switch Configuration
Single Pole, Single Throw *(NO or NC)*
Single Pole, Double Throw *(NO/NC*)*
(*) 13A, bare lead models only

Certifications
CSA *(US and Canada)*

Three-Year Limited Warranty

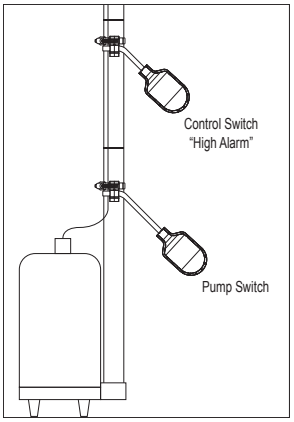
MECHANICAL DRAWING



TETHER LENGTH GUIDE

CAUTION: USE AS 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"
Activation Range (inches) | NR = Not Recommended									
Narrow Angle	2.5"	3.0"	4.0"	4.6"	5.6"	7.0"	10.0"	18.0"	NR
Wide Angle	7.5"	8.25"	9.75"	13.3"	15.8"	20.0"	25.5"	32.0"	40.0"
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

A13WDPS1WP30BOX
1 2 3 4 5 6 7 8

Customized Model Number:

MODEL # BOX 1	MODEL # BOX 2	MODEL # BOX 3	MODEL # BOX 4	MODEL # BOX 5	MODEL # BOX 6	MODEL # BOX 7	MODEL # BOX 8
A							

NUMBER	CATEGORY	TYPE / EXAMPLE
1	Housing Material and Cable	A = Altra™ Float Switch
2	Amperage Rating	13 = 13 Amps, 16 AWG Cable 15 = 15 Amps, 14 AWG Cable
3	Activation Angle (range)	N = Narrow Angle (20° total switching differential) W = Wide Angle (90° total switching differential)
4	Activation Type	D = Pump Down, Normally Open (NO) U = Pump Up, Normally Closed (NC) B* = Both, Normally Open and Normally Closed (NONC; (*) 13A, bare lead models only)
5	Mounting Method (float attachment)	PS = Pipe Clamp, Stainless Steel PR = Pipe Clamp, RubberLox™ WC = Cable Weight, Cast Iron WP = Cable Weight, Plastic XX* = No Mounting Method (float only; (*) must choose bulk packaging method)
6	Termination Type	WOP = 120/240VAC, Without Plug (bare lead) 1WP = 120VAC, Piggyback Plug 2WP = 240VAC, Piggyback Plug
7	Cable Length (feet)	30 = Cable Length in Feet (standard lengths: 10, 15, 20, 25, 30, and 50; custom lengths available)
8	Packaging Method	BAG = Bagged (individual packaging) BOX = Boxed (individual packaging) BLK = Bulk (bulk packaging; when "XX" mounting method is selected)