Altra™ Control Switch

5 Amp and 5 Amp or 1mA, 4VDC Minimum | 120/240VAC

MODELS: A5 SERIES (standard) and A5G SERIES (gold)

ALDERON™ Industries

Leading Edge Control Products

TECHNICAL DATA SHEET

DESCRIPTION OF OPERATION

The Altra™ Control Switch is used for the activation of alarms and controls 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 only in 120/240VAC bare lead models.

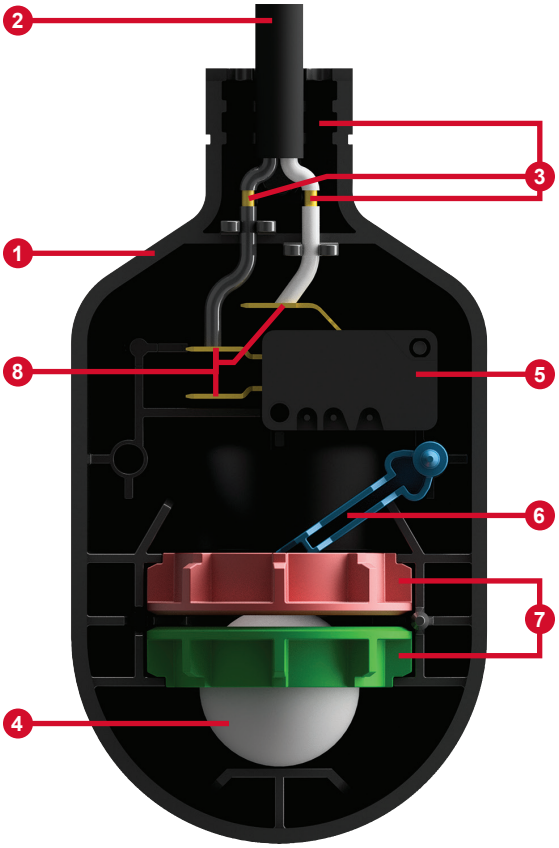
The control switches are mechanically operated using a microswitch and are activated by the ball inside the float housing. Available models include: A5 Series for standard applications or A5G Series with gold plated contacts for milliamp, PLC, or intrinsically rated applications with narrow, medium, and wide angle switching differentials. For use as high level (normally open/empty tank) or low level (normally closed/fill tank) configuration with multiple types of float attachments for mounting and various cable lengths.

NOTE: Check to make sure the correct control 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 high level alarms and empty tank applications.

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

STANDARD FEATURES



(1) Polypropylene Housing - Designed for temperatures up to 140° F, resistant to harsh chemicals, and withstands high impact. The ridgeless housing design creates optimum operation of the control float switch and prevents materials from adhering to the housing.

(2) Cable Type - SJOOW (UL/CSA), 18 gauge, 2-conductor, flexible, and water/oil resistant. Available only in 120/240VAC bare lead models.

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

(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 - Narrow angle (20°), medium angle (60°), and wide angle (90°) models for a variety of applications. Optional collars are included to create the switching differentials: two collars for narrow angle, one collar for medium angle, and no collars for wide angle.

(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™ Control Switch

Primary Voltage
120/240VAC

Amperage
5 Amps *(standard)*
5 Amps or 1mA, 4VDC minimum *(gold)*

Float Housing Material
Polypropylene

Float Housing Size
2.6 inches *(diameter)* x 4.8 inches *(length)*

Cable Type
SJOOW *(UL/CSA)*, 18 gauge, 2-conductor, flexible, and water/oil resistant

Connection Types
Bare Leads *(120/240VAC)*

Operating Temperature
0 - 140° F

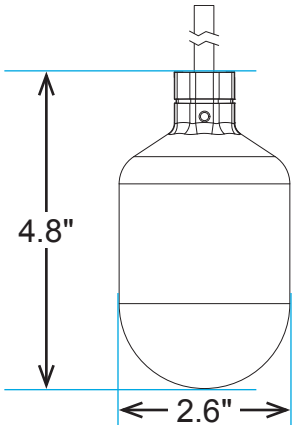
Switching Differential
20° total *(narrow angle)*
60° total *(medium angle)*
90° total *(wide angle)*

Switch Configuration
Single Pole, Single Throw *(NO or NC)*
Single Pole, Double Throw *(NO/NC; both)*

Certifications
CSA *(US and Canada)*

Three-Year Limited Warranty

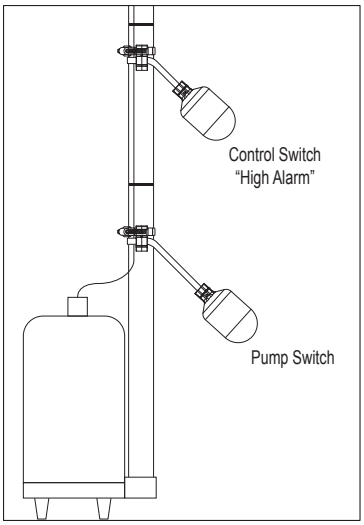
MECHANICAL DRAWING



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"	2.7"	2.9"	3.5"	4.5"	5.5"	9.0"	16.0"	NR
Medium Angle	5.5"	5.75"	7.5"	9.0"	13.0"	16.5"	20.0"	27.0"	NR
Wide Angle	9.0"	9.5"	11.0"	13.5"	16.0"	19.0"	23.5"	29.5"	37.0"
Control 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

A5NHPS30BAG
1 2 3 4 5 6 7

Customized Model Number:						
MODEL # BOX 1	MODEL # BOX 2	MODEL # BOX 3	MODEL # BOX 4	MODEL # BOX 5	MODEL # BOX 6	MODEL # BOX 7
A						

NUMBER	CATEGORY	TYPE / EXAMPLE
1	Housing Material and Cable	A = Altra™ Float Switch
2	Voltage/Amperage Rating	5 = 120/240VAC, 5 Amps (standard) 5G = 120/240VAC, 5 Amps or 1mA, 4VDC Minimum (gold)
3	Activation Angle (range)	N = Narrow Angle (20° total switching differential) M = Medium Angle (60° total switching differential) W = Wide Angle (90° total switching differential)
4	Activation Type	H = High Level, Normally Open (NO) L = Low Level, Normally Closed (NC) B = Both, Normally Open and Normally Closed (NONC)
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	Cable Length (feet)	30 = Cable Length in Feet (standard lengths: 10, 15, 20, 25, 30, 50, 75, and 100; custom lengths available)
7	Packaging Method	BAG = Bagged (individual packaging) BOX = Boxed (individual packaging) BLK = Bulk (bulk packaging; when "XX" mounting method is selected)