

## 683 Floatswitch for Atmospheric Vessels up to 2 psig

### Application

The Model 683 Floatswitch is a float type control which completes an electrical circuit to a pump, valve, alarm or other device, when the liquid level in the vessel rises (or lowers) to a predetermined point.

### Features

- **Corrosion Proof:** Float and Arm are 304 S.S., Cad Plated Steel Vessel Connection (Other materials available for more corrosive liquids).
- **No Wearing Parts:** Due to the pivoting action of the float arm on the diaphragm, sticking does not occur in thick or corrosive liquids.
- **Variety of Switch Outputs:** The 683 can be obtained with mercury or micro switch output and in various combinations, ie. SPST, SPDT, DPDT, etc.
- **Adjustments:** Nothing to adjust or get out of calibration on the mercury switches. Micro switches can be adjusted from the outside when the floatswitch is installed on the vessel.
- **Simple Installation:** On an INTERNAL MOUNT, the float passes through a 2" nipple. On an EXTERNAL MOUNT, install on 2" external pipe riser connected to the pressure vessel above the high level and below the low level control points.
- **Longer Life:** Since there are no wearing parts, the replacement of stuffing boxes, etc. is eliminated.

### Operation

The float arm passes through a nylon reinforced diaphragm with a special nut on each side of the diaphragm; the switches are attached to the float arm by means of stainless steel supports. The diaphragm acts as a pivot point for the float arm, and as a seal between the vessel and the explosion proof switch housing. The maximum travel of the float between the switch "make" and "break" is 1" for mercury switches and 1/4" for micro switches.

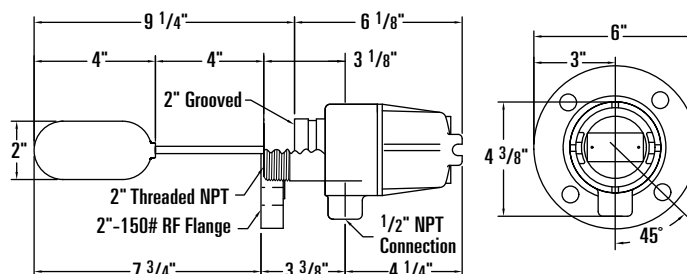
### Specifications

Switch Housing	Cast Aluminum
Operating Pressure	Atmospheric to 2 psig
Operating Temperature	-20°F to +225°F
Electrical Connection	1/2" Female Pipe Thread

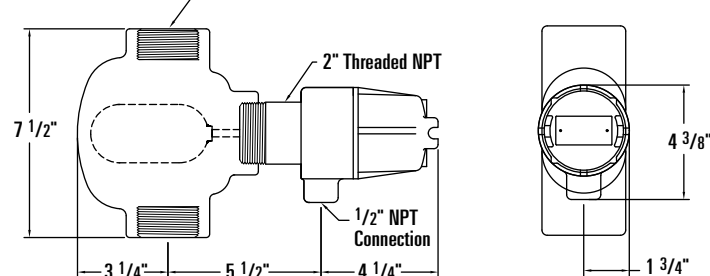


### Dimensional Data

#### Internal Type



#### External Type



### Switch Ratings

683SA, 683SB	SPST Mercury
	10 A @ 120 VAC, 5 A @ 240 VAC
	3 A @ 440 VAC
683SC	SPDT Mercury
	4 A @ 120 VAC, 2 A @ 240 VAC
	1 A @ 440 VAC
683SF	SPDT Micro Switch
	15 A @ 125, 250 or 480 VAC
	1/8 HP-125 VAC, 1/4 HP-250 VAC
	1/2 A @ 125 VDC, 1/4 A @ 250 VDC
683SG	DPDT Micro Switch
	10 A @ 125 or 250 VAC
	0.3 A @ 125 VDC; 0.15 A @ 250 VDC

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### Determining the Model Number

Example given: Standard Model 683-A1A1-IN Floatswitch for Atmospheric (Vented) Vessels with, SPST (N.O.) Mercury Switch Output, 2" NPT (Cad Plated Steel) Vessel Connection, 304 S.S. Float and Float Arm, Buna-N Diaphragm, for Internal Vessel Mounting.

### MODEL 683S-A 1 A 1-I N,X

\*For variations, change code to match requirements.

- A • SPST Mercury (N.O.)
- B • SPST Mercury (N.C.)
- C • SPDT Mercury
- F • SPDT Micro Switch
- G • DPDT Micro Switch

Type of Switch

- 1 • 2" NPT, Cad Plated Steel
- 2 • 2" NPT, 304 S.S.
- 3 • 2" NPT, 316 S.S.
- 4 • 2"-150# RF Flange, Cad Plated Steel
- 5 • 2"-150# RF Flange, 304 S.S.
- 6 • 2"-150# RF Flange, 316 S.S.
- 7 • 2" Grooved, Cad Plated Steel

Connection

- A • 304 S.S.
- B • 316 S.S.

Float & Arm Material

Options & Additions

- a • Ext. Float Housing, Epoxy Coated
- b • Ext. Float Housing, Teflon® Coated
- g • Float Arm, (Non-Std.) 304 S.S.
- h • Float Arm, (Non-Std.) 316 S.S.
- s • Tag, Stainless Steel

Type of Coating

- N • None Required
- E • Epoxy
- T • Teflon®

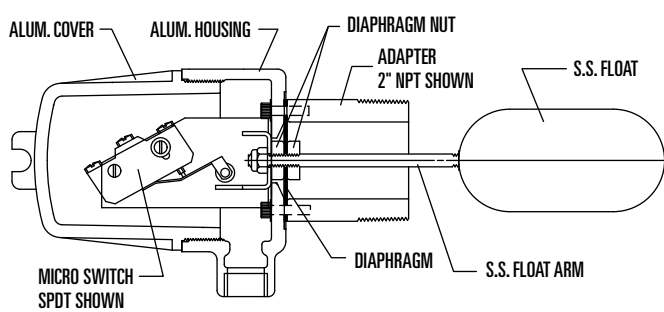
Float Control Housing

- I • Internal (None)
- X • External (Cad Plated Ductile) ASTM A-536-GR65-45-12

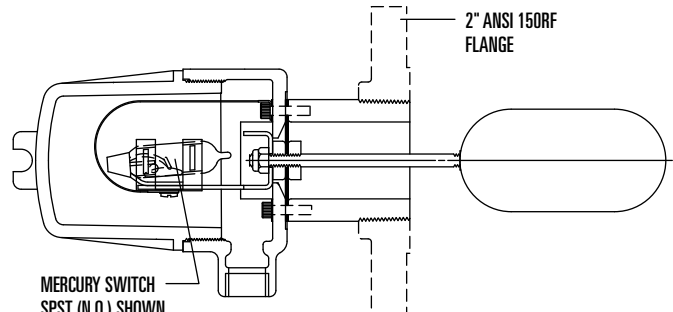
Diaphragms Material

- 1 • Buna-N
- 2 • Teflon®
- 3 • Viton®

### Typical Assembly



683 WITH MICRO SWITCH



683 WITH MERCURY SWITCH