

## 686 Floatswitch for Pressure Vessels up to 200 psig

### Application

The Model 686S Floatswitch is a float type control which completes an electrical circuit to a pump, valve, alarm or other device, when the liquid in the vessel rises (or lowers) to a pre-determined point.

### Features

- **Corrosion Proof:** Float and Arm are 304 S.S., Cad Plated Steel Vessel Connection (Other materials available for more corrosive liquids).
- **Explosion Proof:** CSA Approved  
Class I Group D  
Class II Group E, F and G  
Hazardous Locations
- **Variety of Switch Outputs:** The 686 can be obtained with mercury or micro switch outputs and in various combinations, i.e.: SPDT, SPST, DPDT, etc.
- **Adjustments:** Nothing to adjust or get out of calibration on the mercury switch. 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.
- **Long Life:** Permanently dry-film lubricated S.S. shaft and Teflon® bearing comprise the only pivot point. Due to large bearing surface area, wear is negligible.

### Operation

The Float and Arm are rigidly attached to the dry-film lubricated shaft which rotates in the shaft housing. A bracket at the other end of the shaft actuates the switch. A Viton® O-Ring seals against pressure and leakage along the shaft.

A Teflon® washer separates the metal parts and provides lubricity. If leakage ever occurs, the liquid in the vessel seeps out of the safety vent hole. Thus, it is impossible for the liquid to ever enter the 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.

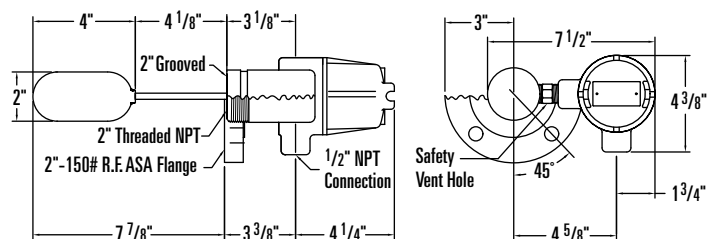
### Specifications

Switch Housing	Explosion Proof Cast Aluminum
Operating Pressure	0 to 200 psig
Proof Pressure	400 psig
Operating Temperature	-40°F to +400°F
External Float Housing	Ductile Iron
Electrical Connection	1/2" Female Pipe Thread

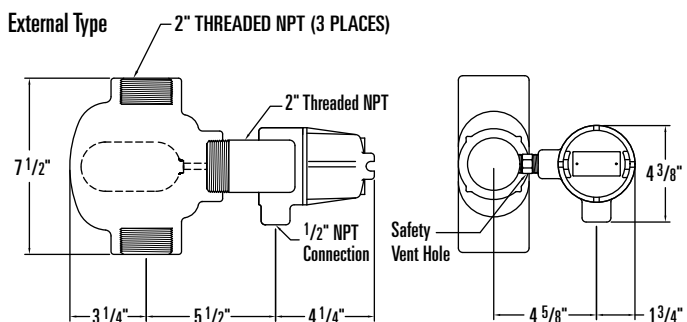


### Dimensional Data

#### Internal type



#### External Type



### Switch Ratings

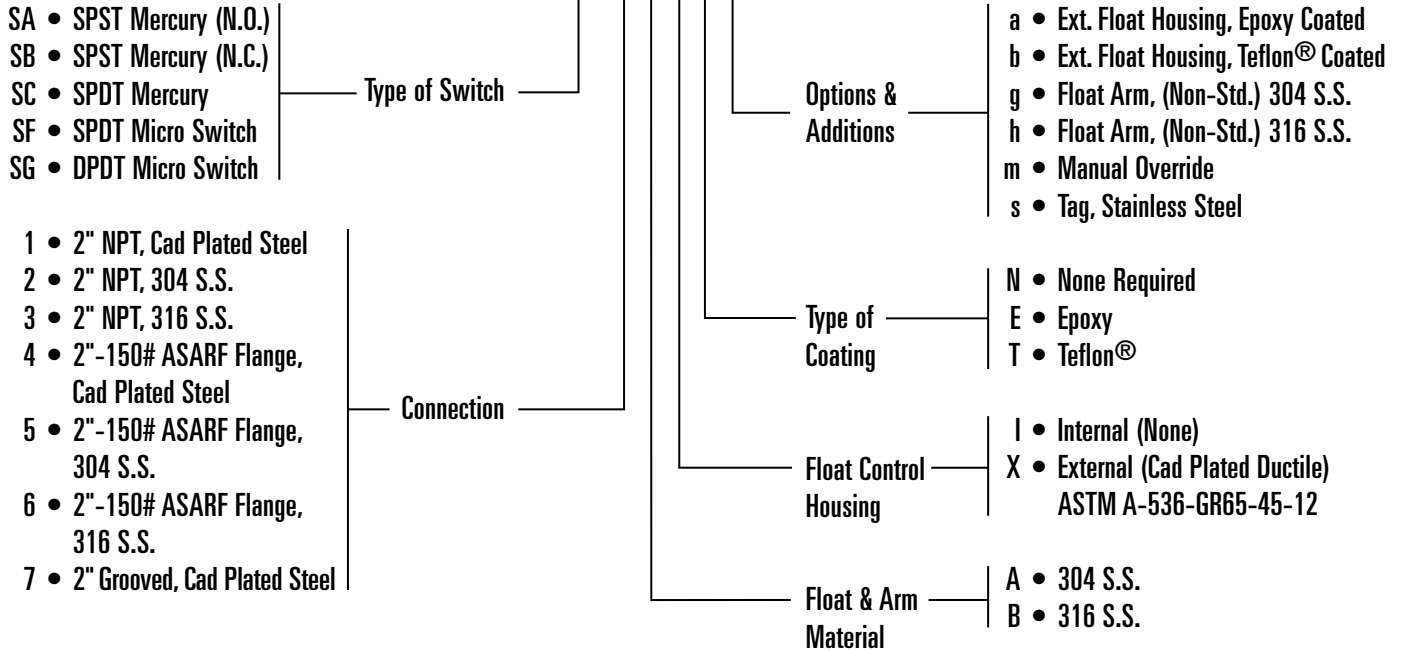
686SA, 686SB	..... SPST Mercury
	10 A @ 120 VAC, 5 A @ 240 VAC
	3 A @ 440 VAC
686SC	..... SPDT Mercury
	4 A @ 120 VAC, 2 A @ 240 VAC
	1 A @ 440 VAC
686SF	..... SPDT Micro Switch
	15 A @ 125, 250 or 480 VAC
	1/8 HP-125 VAC, 1/4 HP-250 VAC
	1/2 A @ 125 VDC, 1/4 A @ 250 VDC
686SG	..... DPDT Micro Switch
	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 686SA-1A-IN Float Control for Vented Vessels up to 200 psig with, SPST (N.O.) Mercury Switch Output, 2" NPT (Cad Plated Steel) Vessel Connection, 304 S.S. Float and Float Arm, for Internal Vessel Mounting.

### MODEL 686 SA-1 A-I N,X



### Typical Assembly

