

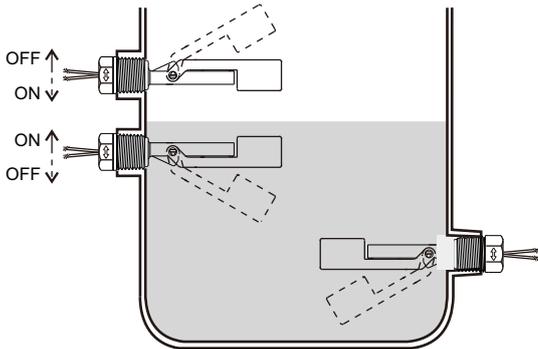


Application

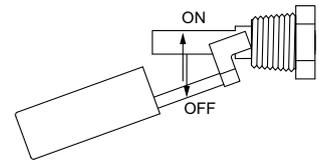
Water and wastewater
Hot water boilers and steam generator tanks
Chemical tanks, fuel tanks and other
Commercial and food processing
Food grade fluid level control
Industrial equipment
Medical heating / equipment
Specialty Vehicles
Marine
HVAC



Installation / NC / NO Action Position

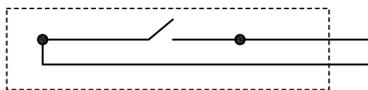
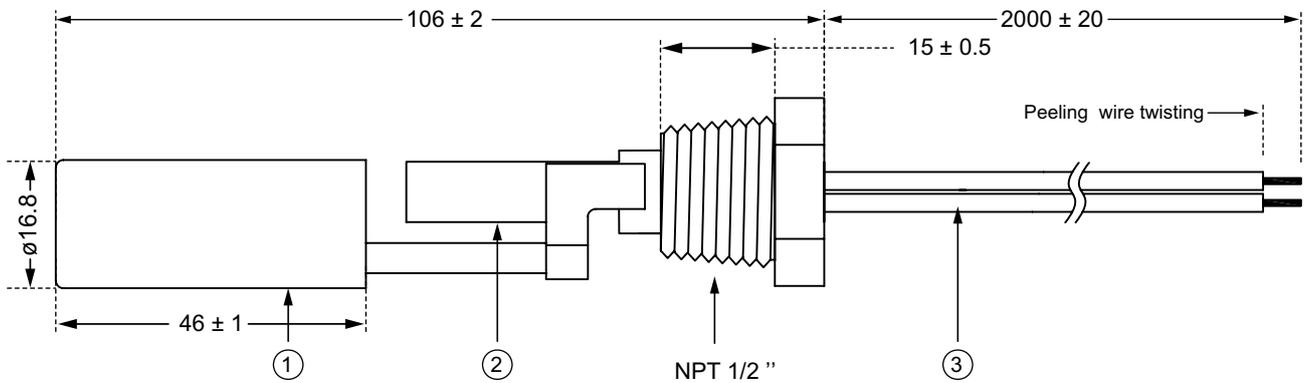


Rugged construction suitable for most corrosive liquids, and for high temperatures and pressures. Stainless steel is generally recognized as safe (GRAS) with FDA for food contact regulations.



Order code

Model	Type	Material
PSAZ-100	Horizontal	SS Stainless Steel



Internal schematic diagram

1. Float Materials : SS 304
2. Float Body : SS 304
3. Wire : UL1 430 24AWG Black line

Mounting

Install with float positioned as shown for the required switch operation. Be sure that markings on wrench flats show the arrow head in vertical position: At the top for N.O. operation and at the bottom for N.C. operation.

Operation

Depending on the mounting position, the float on these switches can either rise or lower with the liquid level. By rotating the switch 180°, the switch operation can be normally open or normally closed.

Maintenance

Normally, no maintenance of any kind is required. When excessive contamination is present in the liquid, an occasional wipe-down cleaning is all that is needed. Horizontal mount switch stems must be mounted with the vertically either up or down depending on switch operation.

Care should be taken that switches are always operated within electrical ratings.



Material Description

1. Reed : 10W
2. Magnet : Ferrite
3. Resin : Black high temperature resin

Characteristics

1. Operation Life: 1×10^6 (DC: 5V, 10mA)
2. Insulation resistance : $\geq 100M\Omega$
3. Contact resistance : $\leq 0.4\Omega$
4. Max. limiting current : 1.0A
5. Max. switching current : 0.5A
6. Max. switching voltage : 100V
7. Max. contact power : 10W
8. Function type : Normally open

Material Properties

1. Min. Shock Resistance : 30G
2. Suitable temperature : $-20^{\circ}\text{C} \sim 120^{\circ}\text{C}$
(Non-condensing)
3. Min. vibration : 30G (10~50Hz)
4. Humidity : 95%RH (80°C)
5. For : Water / Oil

INTRODUCTION

The reed relies on two basic scientific principles namely: buoyancy and magnetism. Buoyancy causes the float (which contains a magnet) to rise with the liquid and magnetism helps open and close the switch. Since this product has been introduced to the market, it has seen significant improvement and advances with regards to convenience, safety and lowering costs. The float switches are extremely compact, simple and are easy to install on any small locations. These switches are not affected by electrical interference and can withstand chemicals, high temperatures and pressures if the correct material of float switch is selected.

LIQUID PROPERTIES AND FLOATS

The float should always have a specific gravity (SG) less than the liquid that holds the float. ($\text{SG}_{\text{float}} < \text{SG}_{\text{liquid}}$) When the liquid level rises the float will rise up due to its buoyancy. The float's upward movement will actuate the switch and close the circuit. Different float materials can be used to ensure the float's SG level is less than the liquid. (Water's SG level is 1 while gasoline SG levels tend to be less than 1). Because the float switches are activated by the magnetic field inside the float, make sure the liquid contains no iron traces or substances that can induce magnetic interference.

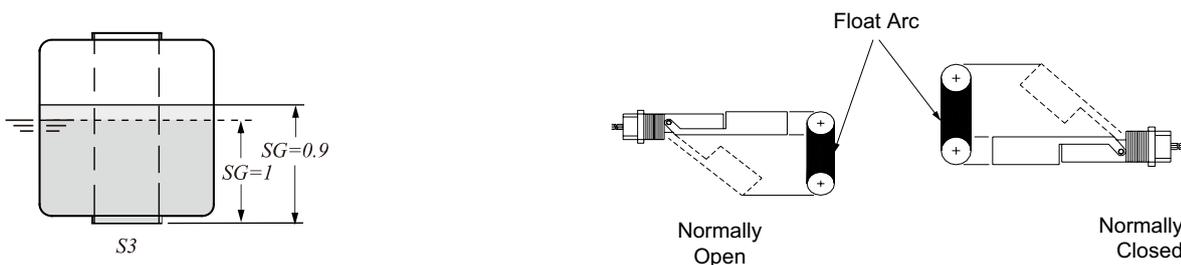
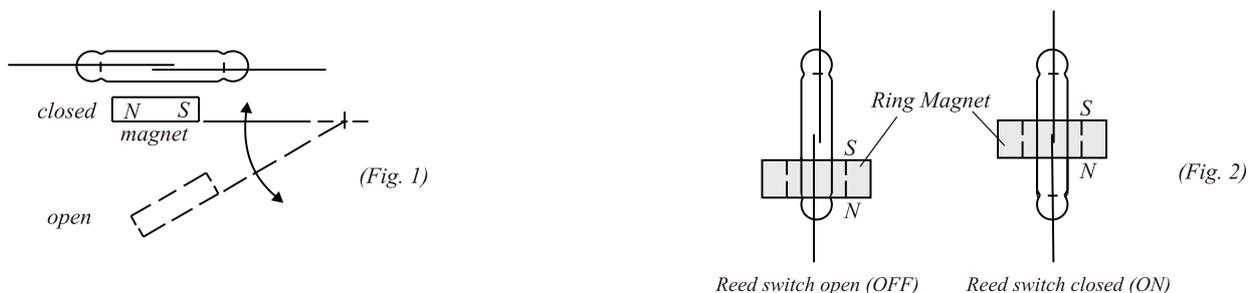


Fig. 1 illustrates the pivot activation of reed sensor. When float's magnet is moved close to the switch's stationary stem, the float magnet pushes the stem's switch circuit together and closes the electrical circuit. When the float magnet is moved away from the stem, the switch circuit separates and the circuit is opened.

Fig. 2 illustrates perpendicular activation of reed sensor. When the liquid level rises and pushes the float up, the float's ring magnet (sealed in the float) moves close to the switch's stationary stem. The magnet pushes the circuit together and when it makes contact, it closes the electrical circuit. When the float magnet moves away from the switch, the circuit contact is released and the switch is opened.



Installation of Horizontal Level Sensors

Depending on the mounting position, the float on these sensor can either rise or lower with the liquid level by rotating the switch operation can be normally open or normally closed, install with float positioned as shown for the required switch operator.

When threading metal threads into a metal coupling sealant or teflon tape is recommended. Due to potential compatibility problems, when sealing plastic threaded units, a compatible pipe sealant is recommended.

Tightening Plastic to metal when threading a plastic level switch into a metal coupling, the installer should use suitable wrench and tighten the threads 1 to 1½ additional turns past hand-tight. Over torturing of the threads will result in damage to the plastic mounting plug.