

Sensor

SFS-050-M1

Water pressure differential switch

【Description】

This water pressure differential switch is for measure liquid pressure of a center air condition system or an industrial process. It helps an operate administrator to know pressure status and to control of ice water pump, cooling water system frequency conversion control or boiler system pressure control.

【Features】

This switch combines a "EPDM diaphragm isolates pressure chamber" and a "limit switch". The magnetic force driven the limit switch, This feature makes the device not leak water and last for a long time.

- The limit switch is driven by magnetic force, has no direct water contact, so has no leak problem.

【Specification】

Model	Actions pressure/ flow rate	Reverts pressure/ flow rate	Maximum static press	Max. Diff. Pressure	IP	Output point
SFS-050-M1	50±9 mbar (500±90 mmWC)	27±9 mbar (270±90 mmWC)	10 bar	5 bar	IP40	1 SPDT,10(3)A,250Vac

Note: 1 BAR = 100 Kpa ≈ 1 Kg/ cm2

Body material : Copper

Body cover : Polyphenylene ether (NORYL)

Diaphragm : EPDM

Spring material : Stainless steel

Switch box : Nylon reinforced glass fiber

Conduit : G 1/4"

Cable : H05 VVF

Fluid temperature : 5°C ~95°C

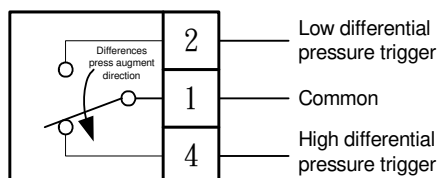
Temperature Range : Maximum 80°C

Moisture Range : 10~90% RH (no condensation)

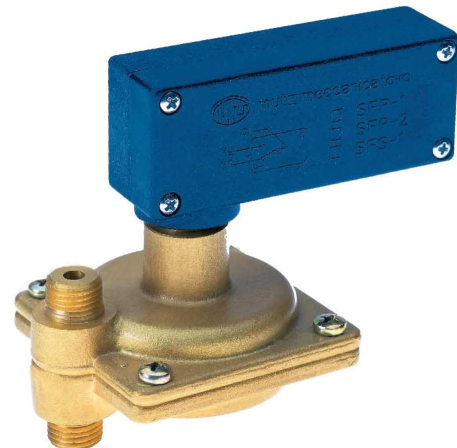
【Installation】

- Do not install this device at an air turbulence and vibration place to get the best sense accuracy.
- Install an isolation valve with the pressure sensor for the convenience of maintenance in the future. See Installs Sketch.
- Please do not transmit power when installation to avoids personnel get an electric shock or result in equipment damage.

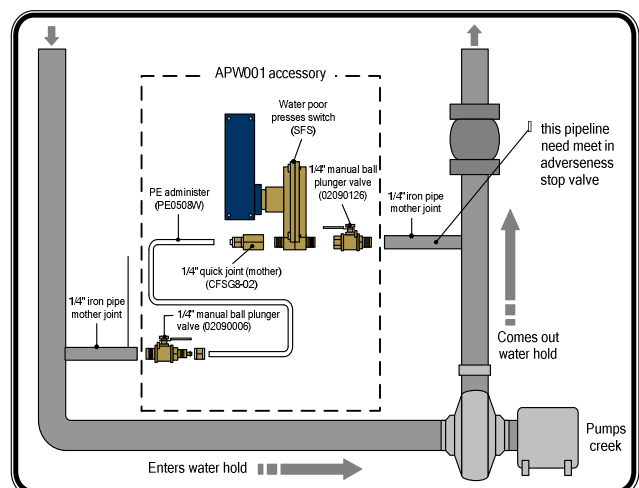
【Wiring】



Pictures 1 : SFP and SFS wiring



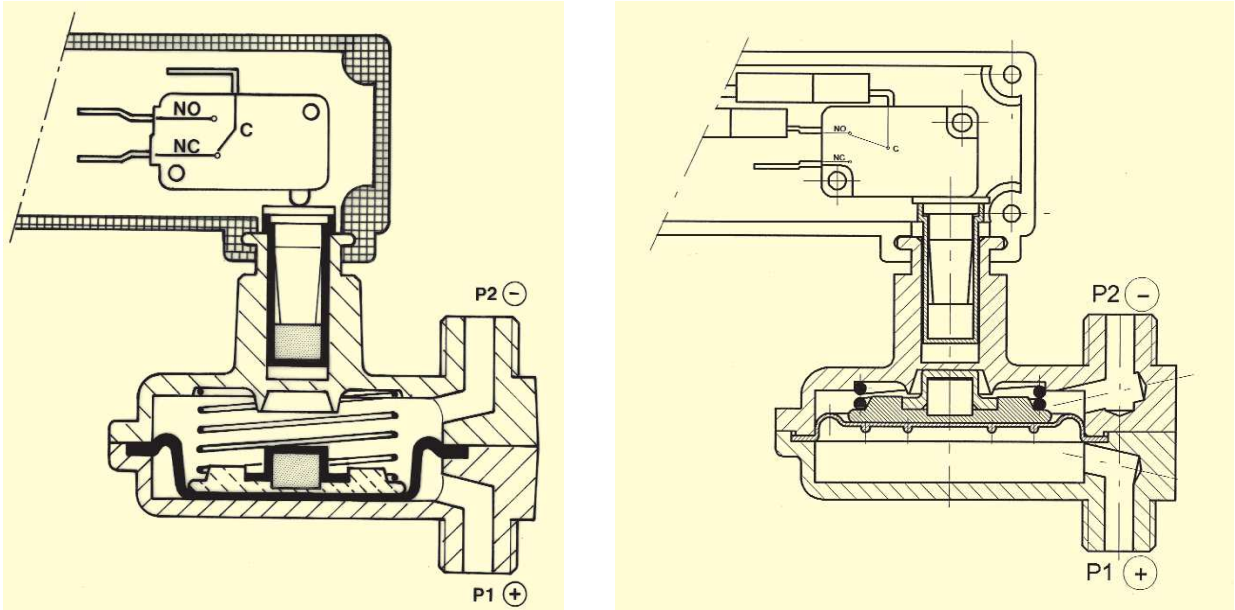
【Installs sketch】



Pictures 2 : SFP and SFS install sketch

【Description】

The differential pressure switch uses $\Delta P = P1 - P2$ to generate a differential pressure, which pushes the diaphragm and pulls the permanent magnet inside the small upper cover of the body. The stroke of the diaphragm is restricted by the reverse spring. Its size will depend on the cut-in characteristics of the pressure switch. The other magnet is located in the micro switch. When the pressure difference ΔP is higher than the action value, the diaphragm stroke will make the two magnets close to a distance, so that the mutual repulsion force between them can be higher than the distance of the push-in button of the micro switch. The switch will Action (Figure 2), when the pressure difference ΔP decreases below the reset value, the two magnets will separate from each other, and the push button of the switch will return to the normal position (Figure 1).



【Dimensions】 Unit : mm

