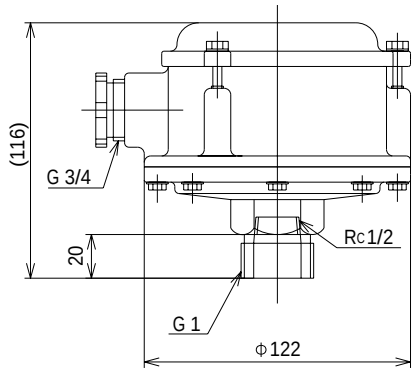
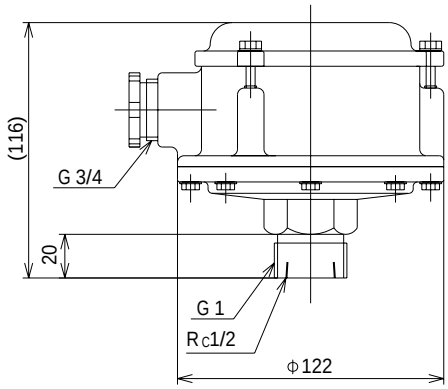
MODEL FP PNEUMATIC LIQUID LEVEL SENSOR

Features

- Low cost: Requires only a standard 1/2” pipe in a material compatible with the liquid
- Simple installation: Requires only a G1” connection at the top of the tank
- Reliable: The FP employs a minimum of moving parts. The diaphragm moves a maximum of 2mm. No moving parts are in contact with the liquids
- Long life expectancy: The FP is designed for over 200,000 operations

Specifications

Model		FP-1A	FP-1S
Drawing			
Application		Open Tanks or Vessels	
Mounting		G1 male	
Pipe Coupling		Rc1/2 female	
Switch Rating		250V 5A AC, 250V 0.25A DC (Resistive)	
Operating Temperature		0˚C to 70˚C	
Material	Housing	ADC12	ADC12
	Chamber	ADC12	304SS equivalent
	Diaphragm	CR	FPM
Cable Entry		JIS F 20a (G3/4)	
Protection		IP23	IP23
Construction			
Switch Operating Position		80±10mm	70 ±10mm
Switch Release Position		60±15mm	50 ±15mm
Pipe length		200 to 5000mm	
Life Expectancy		2×10^5 Operations	

*Operating and Release position are based on the condition of 1/2” and 300mm pipe at S.G. 1.0.

General Description

The FP series pneumatic liquid level sensor is a diaphragm actuated sensor. They are designed for use in high viscous liquids. The moving part is only diaphragm, which is not contact with the liquid, moved by the compressed air inside of pipe and chamber.

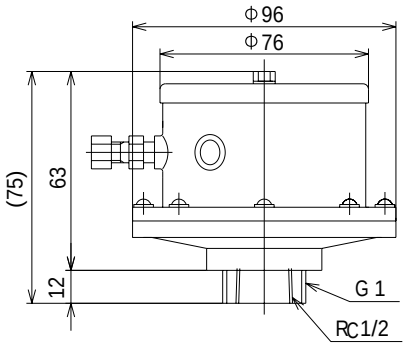
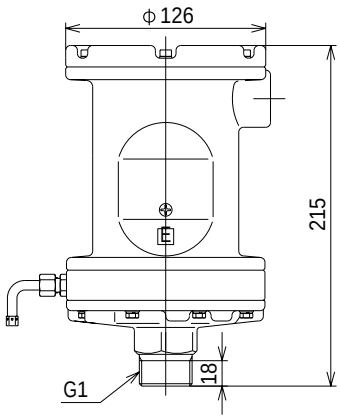
The FP series cover the wide range of applications. The FP-1A, with a neoprene diaphragm, is for general usage. The FP-1S, with a Viton diaphragm, is for corrosive atmosphere. The FP-3, with neoprene diaphragm, is for cost effective. The explosion proof, FP510, is also available, which is approved as flameproof construction (d2G4) by Technical Institute of Industrial Safety (TIIS), Japanese Ministry of Labor.

Operational Description

The SPDT micro switch in the FP is actuated by compression of a captive air column in the detecting pipe beneath the diaphragm.

Technical Notes

1. Pipe coupling shall be airtight by applying a sealing compound in paste form. Do not use a seal tape.
2. For low level detection, switch operating position may rise if the detecting pipe soaks long in liquid because pressurized air in the pipe is gradually dissolved into liquid.
3. For high viscous liquid, we recommend to cut the tip of the pipe at a slant or use the bigger pipe than usual 1/2".

FP-3	FP510
	
Open Tanks or Vessels	
G1 male	
Rc1/2 female	
250V 5A AC, 250V 0.25A DC (Resistive)	250V 4A AC, 250V 0.2A DC (Resistive)
0˚C to 60˚C	
Phenol	AC 4A
Phenol	AC 4A
CR	CR
Φ6 hole	G3/4
IP20	IP53
	d2G4
65 ±10mm	60 ±10mm
50 ±15mm	40 ±15mm
200 to 3000mm	
2×10^5 Operations	3×10^5 Operations