Techtrol Air Operated Diaphragm Switch - "ADS"

Techtrol
SINCE 1984

Is especially designed for high-viscosity liquids, sewage, dirty oil and similar applications under atmospheric conditions. The switch gives trouble free operation with minimal maintenance when installed properly.

Special Features :

- Easy to install, maintenance free, no moving parts.
- Very economical
- Most suited for highly viscous liquid where conventional switch is not suitable

Construction & Operation : (Fig 1)

It consists of an air pipe connected to diaphragm, which is held between the retainer and enclosure through a set of screws. The enclosure contains microswitch, which can be actuated through the vertical motion of the diaphragm. The rising liquid level reaching the air pipe enters it, through its lower open end and in the process compresses the captive air column within the air pipe, which in turn initiates an upward movement of the diaphragm to operate the microswitch. Conversely, during falling liquid level, the microswitch is set-off. The length of liquid head (mm) above the air pipe open end at which the switch operates, is defined as "Actuation Point" and liquid level (mm) at which the switch is set-off, is defined as "Release Point" and the difference between the two gives the "Switch Differential".

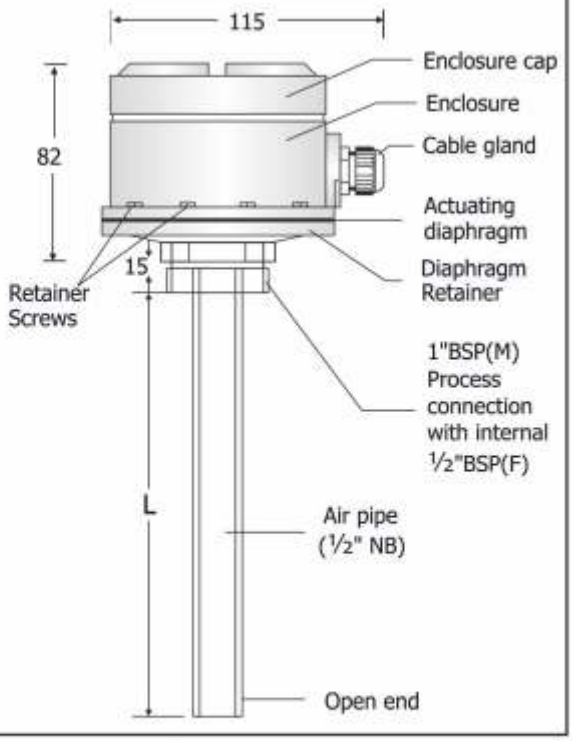
Specifications:

Enclosure	:	Cast Al, W Proof IP 66
Conduit conn	:	Polyamide, PG 9
Contact type	:	Micro switch (1SPDT)
Contact rating	:	5A, 250VAC
Terminals	:	To suit 1.5 cm² conductor
Actuating Diaphragm	:	Neoprene
Process conn	:	Screwed, 1" BSP(M) with internal ½" BSP(F) to hold air pipe
Max Temp	:	0 - 60°C
Max Pressure	:	Atmospheric
Air pipe	:	PP or SS316, ½" NB with ½"BSP(M) threads at in upper end
Actuation point	:	40±10mm from the bottom of air pipe
Release point	:	15±10mm from the bottom of air pipe
Differential	:	25±5mm
Range	:	200 ~ 2000mm

Service / Applications :

Highly viscous liquids, sewage, slurry, waste water, heavy oil / lubricant tanks, air conditioning / transportation / marine / chemicals equipments.

Fig. 1



Termination

Installation : (Fig 2a, 2b, & 2c)

Can be directly installed vertically (Fig 2a) or through an elbow (Fig 2b), when side installation is desired. Standard pipe bore is suitable for low viscosity liquids, however for highly viscous liquids the air pipe should be enlarged at the lower open end (Fig 2c). During installation, ensure that switch is mounted in plumb and there are no kinks in the air pipe. Moreover, ensure that there is zero leakage in the " Captive Air Column " which actuates the diaphragm i.e. no leakage thro` the threads joining air pipe to enclosure. Also ensure that, the air pipe does not have any surface pinholes, which may cause air leakage. Incase of leakage, the switch may not operate / malfunction.

Installation :

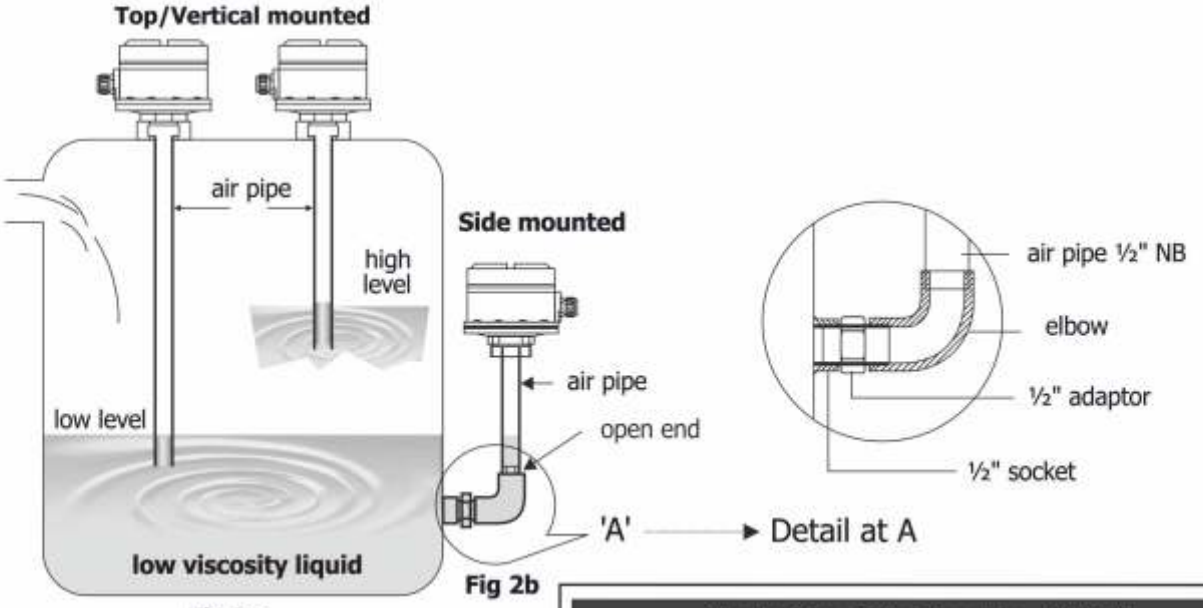


Fig 2a

Fig 2b

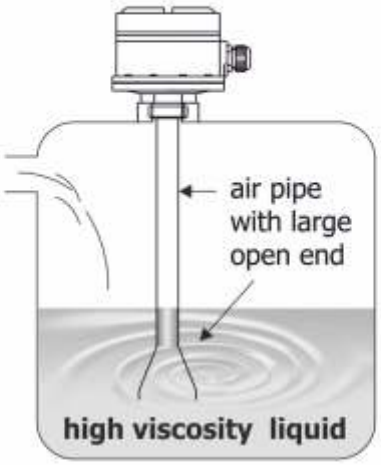


Fig 2c

Model Identification No. : 'ADS'

'ADS' [ ][ ][ ] x " L" (mm) Air pipe length

Air pipe MOC

Without	W
PP	P
SS316	S
Others	O

Air pipe type

Without	W
Regular open end	R
Large open end	L

Process conn

Screwed	S
Others	O

Ordering Information :

Specify Model No. x Process liquid x Viscosity x Optg. Temp.

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R A T E D
NSIC-CRISIL SE-1A

AREA REPRESENTATIVE

All dimensions in mm, except specified.