

CL13

Differential pressure switch



OUTLINE

This pressure switch mainly senses the differential pressure caused by the pressure losses of an air conditioning air filter, detecting the clogging of an air filter and issuing warning, controlling air conditioning system. Additionally, this pressure switch is applied to the observation and control of pressure in the filter of a clean room and a bioclean room and in a clean room and bioclean room themselves.

FEATURES

- This pressure switch is highly sensible and highly reliable, and the pressure resistance has been increased by the application of silicone rubber to the diaphragm.
- The setting of activating pressure is simply performed by turning the setting knob to set the setting pressure to the graduations of the setting pressure.
- The setting lock mechanism has been applied to the setting knob, eliminating the error due to vibration, etc.
- A highly reliable and high capacity microswitch has been applied, increasing setting precision.
- Small type light weight.

SPECIFICATION 1

Fluid:

Air or non-corrosive gas

Operating condition:

Under the normal condition, where there is no inflammable gas or liquid which cause the ignition or explosion.

Mounting posture:

Horizontal mounting, vertical mounting

* When this differential pressure switch is applied to a differential pressure range of 0.5kPa or smaller, an error due to installation posture will occur. So, it is certainly requested that the installation posture be informed.

* A differential pressure gauge equipped in a box is also manufactured on request.

Connection:

5.5 DIA. Barb connection (For vinyl tube with 4mm inner DIA.)

Gas contact part:

Diaphragm Silicone rubber

Differential pressure range:

0.02 ~ 0.1 → 1 ~ 5kPa (2 ~ 10 → 100 ~ 500mmH₂O)

Base pressure:

200kPa (2kgf/cm²) or less

One side proof-pressure:

30kPa (0.3kgf/cm²)

Operating temperature:

-20 ~ 60°C (But fluid should not be frozen)

Setting accuracy:

Within ±5% max.P.

Repeatability:

Within 5% F.S.

Dead band:

Fixed 0.02 ~ 1kPa or less (2 ~ 100mmH₂O or less)
(Depending on differential pressure range)

Switch:

Micro switch

Number of contact:

One contact

Setting system:

External adjustment type With setting lock

Case material·Efinishing:

Plastic·black

Weight:

Approx. 240g

SPECIFICATION 2

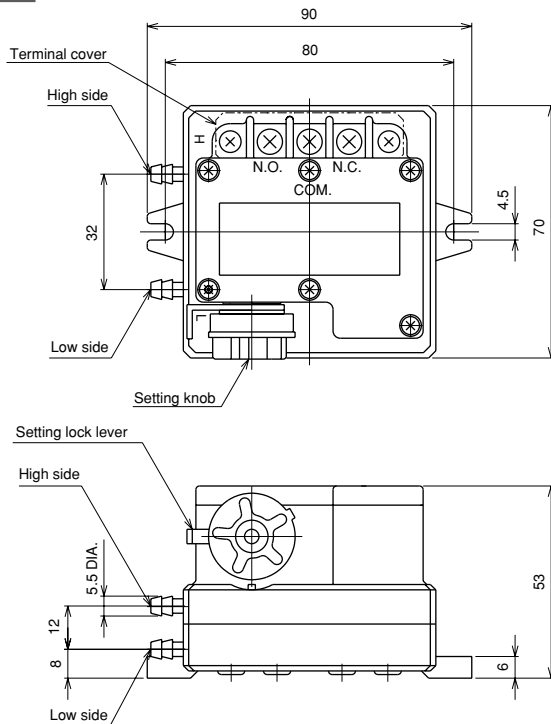
Dead band:

Differential pressure range kPa (mmH ₂ O)	Dead band kPa (mmH ₂ O)
0.02 ~ 0.1 (2 ~ 10)	0.02 or less (2)
0.04 ~ 0.2 (4 ~ 20)	0.04 or less (4)
0.06 ~ 0.3 (6 ~ 30)	0.06 or less (6)
0.1 ~ 0.5 (10 ~ 50)	0.1 or less (10)
0.2 ~ 1 (20 ~ 100)	0.2 or less (20)
0.4 ~ 2 (40 ~ 200)	0.4 or less (40)
0.6 ~ 3 (60 ~ 300)	0.6 or less (60)
1 ~ 5 (100 ~ 500)	1 or less (100)

Electric characteristics:

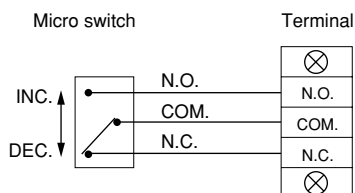
	Rating		Withstand voltage	Insulation resistance
	Resistance load	Inductive load		
125V AC	5A	4A	2000V AC Between terminal and case 50/60Hz 1 minute	500V DC 100MΩ over Between terminal and case
250V AC	5A	4A		
125V DC	0.4A	0.4A		
30V DC	5A	4A		
Inductive load : Power factor more (AC) Time-constant 7ms or less (DC)				

DIMENSIONS



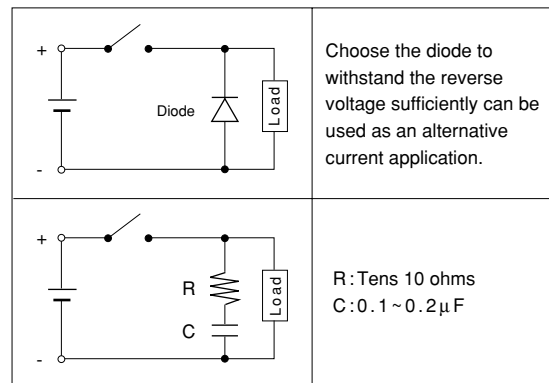
TYPE OF CONTACT AND WIRING SYSTEM

Type of contact	Mark	A figure of operation system and operation
Upper limit type with one contact	H	When differential pressure rises to a set value, contact points work to turn a circuit ON. <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">Pressure up →</div> <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between; width: 100%;"> OFF ON </div> <div style="text-align: center; margin-top: 2px;">0 SET max.</div> </div> </div>
Lower limit type with one contact	L	When differential pressure decreases to a set value, switch work to turn a circuit ON. <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">← Pressure down</div> <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between; width: 100%;"> ON OFF </div> <div style="text-align: center; margin-top: 2px;">0 SET max.</div> </div> </div>



Installation of protection circuit for contact:

In the inductive load open and close circuit, install the protection circuit to protect the contact. When you use the relay, choose the built-in protection circuit for the contact.



Choose the diode to withstand the reverse voltage sufficiently can be used as an alternative current application.

R : Tens 10 ohms
C : 0.1 ~ 0.2 μF

Type No. constitution

Please specify Type No., each specification and range, when ordering.

Note: For this Model, there is no applicable item for the figures X, but please specify X when ordering.

Differential pressure switch

CL 13 — 1 2 3 — 4 5 6 7 8 9 10 11 12 13 14 15

Type No.

1 Mounting
2 Screw mounting

2 Connection
9 5.5 DIA. Barb connection

3 Gas contact part
1 Diaphragm: silicone rubber

4 Differential pressure range (kPa)
(When ordering, please specify pressure range & unit)

1	0.02 ~ 0.1, 0.04 ~ 0.2, 0.06 ~ 0.3
2	0.1 ~ 0.5, 0.2 ~ 1, 0.4 ~ 2, 0.6 ~ 3, 1 ~ 5

5 Type of contact point

1	H: Upper limit type with one contact
2	L: Lower limit type with one contact

6 Switch
0 Micro switch

8 Treatment

0	Nil
1	Use no oil
2	Use no water
3	Use no oil & water

9 Other additional spec.

0	Nil
1	Please specify your requirement Accessory (Two pitot tubes, polyvinyl chloride tube 2 m)

15 Document

0	Nil
1	Please specify your requirement Drawing one sheet, Instruction manual, Inspection procedure, Mill sheet, Test report