

Diaphragm-Seal Type Pressure Switch

(CB13 · 33, CD75 Bellows type for low- and middle-pressure ranges)



MANUFACTURING SPECIFICATION

Measured fluid :

Highly corrosive fluid, High-viscosity fluid

Type :

Remote type

Mounting method :

Screw type, Flange type

Accuracy :

±0.5%F.S./Room temperature (constant)

Response speed :

Within 15 seconds

Working temperature range :

-5 to 40°C

INDICATOR SECTION

Pressure switch :

Pressure switch (Model : CB13 · 33)

Explosion-proof pressure switch (Model : CD75)

Mounting :

Panel mounting, 2B pipe mounting

Material of main parts :

Socket SUS316

Bellows SUS316L

Number of contacts :

1 or 2

Setting method :

Internal adjustment type

Explosion-proof pressure switch :

ADC12 or AC7A

· Crystalline gray paint or blue-gray two-tone paint.

Construction :

Drip-proof or outdoor type

* For details, see the catalog for the desired pressure gauge with switch.

SENSOR SECTION · FILLED LIQUID

Diaphragm diameter :

φ60, φ110

* Determined by pressure range and the temperature of measured fluid.

Material of diaphragm :

For the material of upper/lower flange and diaphragm, see the page for SENSOR SECTION 2.

Filled liquid :

Silicone oil

-30 to 100°C

Maximum length of capillary tube :

2m to 8m (depends on pressure range)

Diaphragm-Seal Type Pressure Switch (Bellows type)

MANUFACTURING SPECIFICATION

Pressure range · Diaphragm diameter · Relationship between diaphragm diameter and withstand pressure and temperature coefficient (for reference only) :

Pressure range MPa	Diaphragm diameter	Withstand pressure of diaphragm part (MPa) *	Maximum length of capillary tube	Ambient temperature coefficient of pressure switch part (including capillary tube) (%max. P./°C)	Temperature coefficient of wet part (Pa/°C)
0.04 ~ 0.4	φ110	3	2m	-0.1	-50
0.06 ~ 0.6	φ110	3	3m	-0.1	
0.1 ~ 1	φ110	3	8m	-0.1	
0.15 ~ 1.5	φ110	3	8m	-0.07	
0.2 ~ 2	φ110	3	8m	-0.07	
0.3 ~ 3	φ110	3	8m	-0.07	
0.5 ~ 5	φ60	15	5m	-0.07	-250
0.7 ~ 7	φ60	15	5m	-0.07	
1 ~ 10	φ60	15	5m	-0.07	

* When low-strength material such as titanium is used or when the temperature of the part coming in contact with liquid is high, the withstand pressure of diaphragm part may be lower than these figures.

* Whichever is lower of the withstand pressure of pressure of pressure switch part (1.5 times the pressure range) and that of the diaphragm part becomes the withstand pressure of the entire pressure gauge.

* Specify the length of capillary tube by the meter.

Relationship between the size of flange/screw and the diameter of diaphragm :

Mounting method	Flange type				Screw type
Diaphragm diameter	φ60		φ110		φ60, φ110
Nominal size	Model 200 (HH2□)	Model 300 (HH3□)	Model 200 (HH2□)	Model 300 (HH3□)	Model 100 (HH1□)
10A (3/8")	○	—	○	—	G3/8B G1/2B R3/8 R1/2 1/2NPT 3/8NPT
15A (1/2")	○	—	○	—	
20A (3/4")	○	—	○	—	
25A (1")	○	—	○	—	
32A (1 1/4")	○	—	○	—	
40A (1 1/2")	○	—	○	—	
50A (2")	○	—	○	—	
65A (2 1/2")	—	○	○	—	
80A (3")	—	○	○	—	
100A (4")	—	○	○	○ *	
125A (5")	—	○	—	○	
150A (6")	—	○	—	○	

* Nominal size 100A is available only for 30k or higher nominal pressure.

Diaphragm-Seal Type Pressure Switch (Bellows type)

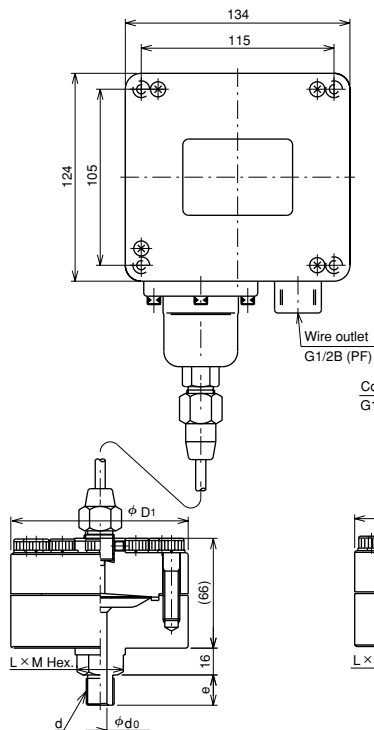
OUTSIDE DIMENSIONS

High withstand pressure type (Model : HH□□)

[Screw type]

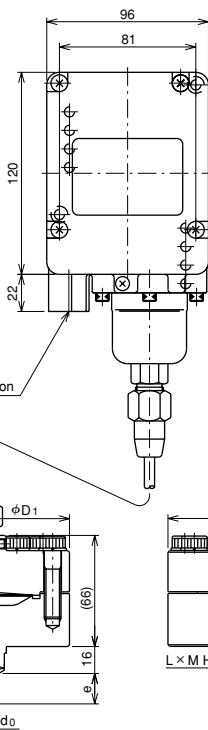
Model 100 · Scerw

CB13 Pressure switch



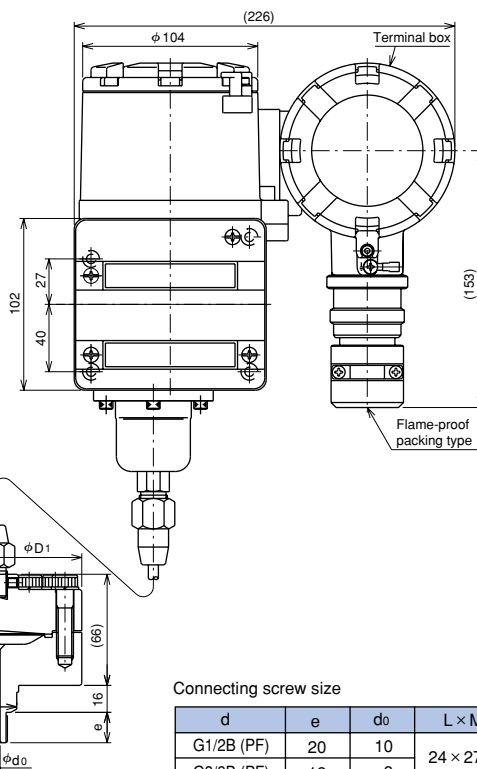
HH10-□□□

CB33 Pressure switch



HH10-□□□

CD75 Explosion-proof pressure switch

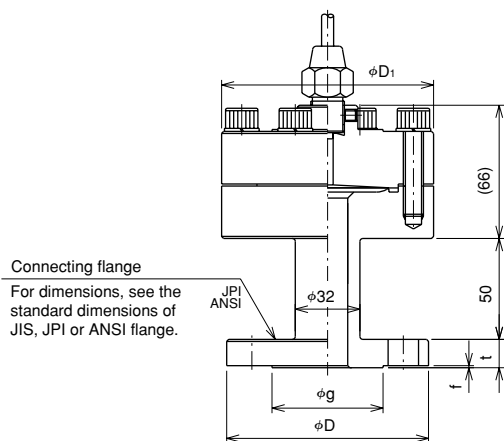


Connecting screw size

d	e	d ₀	L × M
G1/2B (PF)	20	10	24 × 27.7
G3/8B (PF)	18	8	
G3/4B (PF)	24	15	36 × 41.6
G1B (PF)	28	20	

[Flange type]

Model 200 · Flange

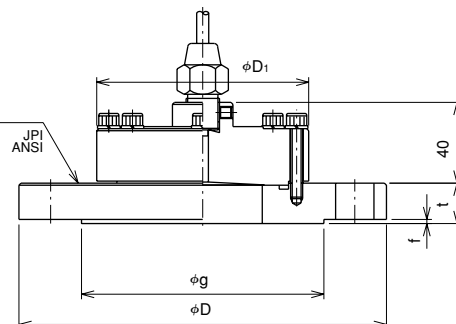


HH2□-□□□

Model 300 · Flange

Connecting flange

For dimensions, see the standard dimensions of JIS, JPI or ANSI flange.



HH3□-□□□

Dimensions of indicator section

Type No. (indicator section)	Mounting
CB13-□□3	Panel mounting
CB33-□□3	Panel mounting
CD75-3□□	Panel mounting
CD75-7□□	2B pipe mounting

Outside diameter of sensor section (φD1)

Diaphragm dia.	φD1
φ60	φ105
φ110	φ155

* For detailed outside dimensions of indicator section, see the catalog.