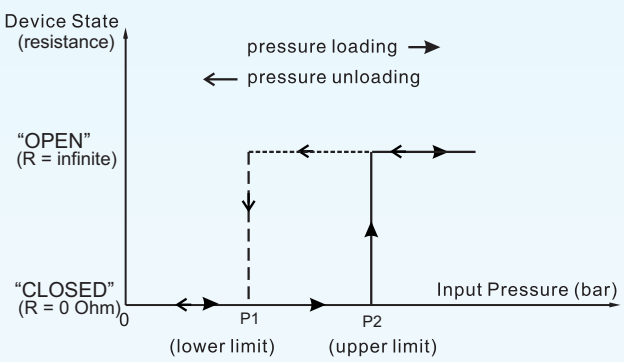
Model 322
Low-Cost Pressure Switches

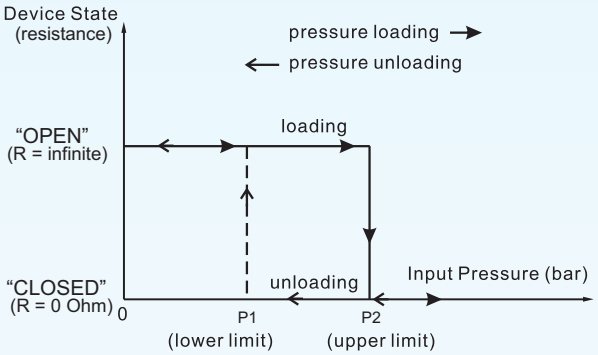
Description:

BCM 322 series pressure switch is a low-cost device of general purpose for industrial automation or process control application. The 322 pressure switch is composed of a common spring tube and associated with moving parts of relevant electrical contacts. These parts are isolated and located inside the housing.

Two types of 322 pressure switches are available: initially open (type O) and initially closed (type C). Take type C as an example (refer to the left diagram below), when there is no pressure input (zero pressure), the electrical contacts of 322 are connected to each other, which is corresponding to an “CLOSED” state of the device, and the electrical resistance is zero between the associated contacts of 322. If the input pressure increases gradually the upper limit of pressure (P2), the moving parts enables switching and results in the electrical contacts disconnected, referred to an “OPEN” state of the device. In the “OPEN” state, the electrical resistance is infinite between the associated electrical contacts of 322. Once the input pressure decreases gradually from P2 down to the lower limit of the pressure (P1), the moving parts of the device is switched back to its initial position, having the electrical contacts connected again. Therefore, the 322 comes back to its initial “CLOSED” state, restoring the zero electrical resistance between the associated electrical contacts of 322. As the electrical contacts of 322 can be disconnected and connected again by the variation of input pressure, with 322 series pressure switches, one can disconnect and connect an actuator in an industrial automation system.



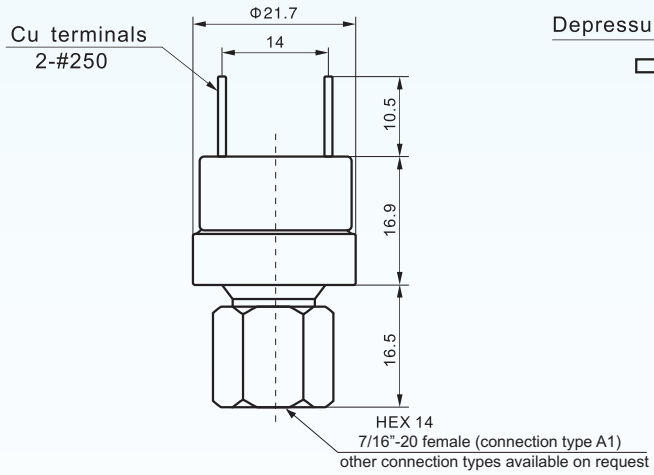
initial state = “closed”, type (c)

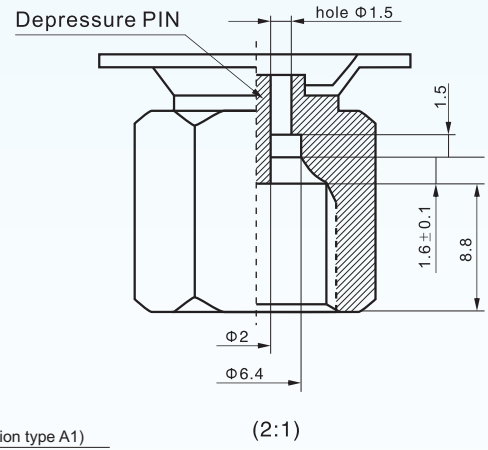


initial state = “open”, type (o)

working characteristics of 322

Dimensions:





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Model 322
Low-Cost Pressure Switches

Specifications:

parameters	units	model 322 (type C)		model 322 (type O)	
initial state	/	CLOSED		OPEN	
pressure type		absolute (A), gauge (G)			
working pressure range	bar	0.2 ~ 45		0.2 ~ 17.2	
working pressure deviation	bar	± 0.1 ~ ± 2			
maxium working pressure	bar	45		17.2	
burst pressure	bar	345		172	
switching pressures* P2: upper limit of the switching pressure P1: lower limit of the switching pressure	bar	P2	P1	P2	P1
		2.5±0.05	2.0±0.05	0.15±0.03	0.05±0.03
		3.0±0.05	2.4±0.05	0.30±0.03	0.15±0.03
		3.3±0.05	2.4±0.05	0.40±0.03	0.30±0.03
life time	cycle	100000			
ambient temperature (temp.) range	°C	-30 ~ + 80			
medium temp. range	°C	-50 ~ +120			
power supply (pilot duty**)	V	24 (pilot duty = 125 VA) 120 (pilot duty = 375 VA) 240 (pilot duty = 375 VA)			
contact capacity	/	240VAC/3A, 120VAC/6A			
contact resistance	MΩ	≤ 50			
insulation resistance	MΩ	> 100			
dielectric strength	/	1500 VAC RMS			
electrical connetion	/	Cu terminals			
process connection	/	7/16"-20 female (connection type A1, standard) 1/4" female flare (connection type A2) other connection types available on request (refer to next page)			

The listed specifications are subject to change without prior notice.
*: Other switching pressures can be set at any points within the working pressure range upon request.
**: Pilot duty is used to define the relation between the rated current and the supplied voltage.

How to order: model - P2/P1 - pressure type - power supply - process connection type
ordering code example: 322(type C) - 20bar/18bar - G - 120V - A1

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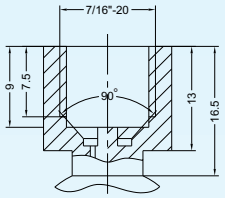
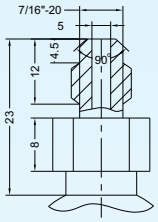
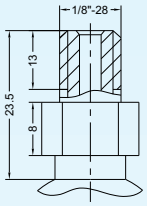
Process connection types:



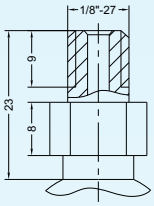
- A1: 7/16"-20 female
- A2: 1/4" female flare



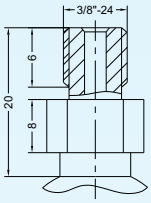
- B1: 7/16"-20 male
- B2: 1/4" male flare



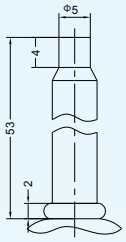
- C1: 1/8"-28 male
- C2: NPT 1/8" male



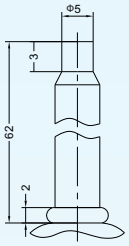
- D1: 1/8"-27 male
- D2: NPT 1/8" male



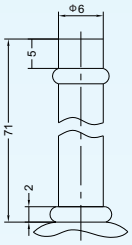
- E1: 3/8"-24 male
- E2: 3/8" male O-Ring fitting



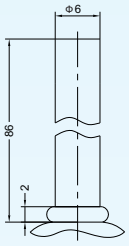
- F
Φ5 x 53 copper tube



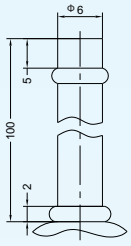
- G
Φ5 x 62 copper tube



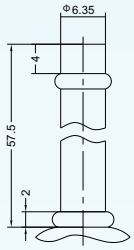
- H
Φ6 x 71 copper tube



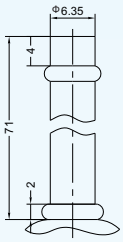
- I
Φ6 x 86 copper pipe



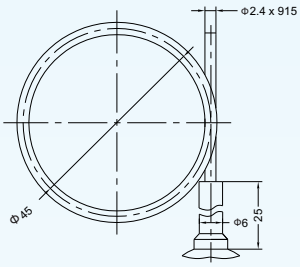
- J
Φ 6 x 100 copper tube



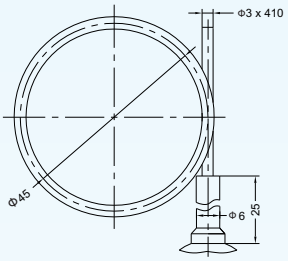
- K
Φ6.35 x 57.5 copper tube



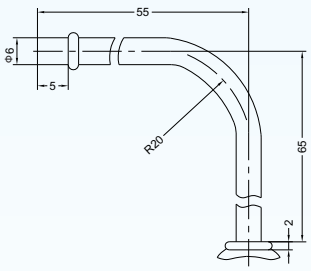
- L
Φ6.35 x 71 copper tube



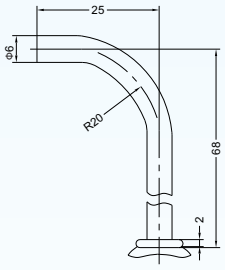
- M
Φ 2.4 x 915 copper capiliary tube



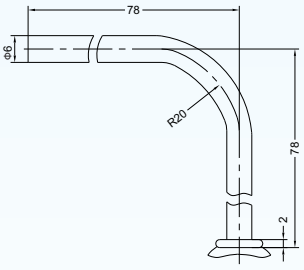
- N
Φ3 x 410 capillary copper tube



- O
Φ 6 x 65 x 55 right-angled bending copper tube



- P
Φ 6 x 68 x 25 right-angled bending copper tube



- Q
Φ 6 x 78 x 78 right-angled bending copper tube

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