



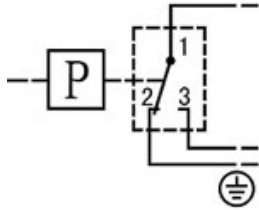
Pressure Switches
Model: D502/7D、D502/7DK



上海远仪控制器厂有限公司

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Switching Function:
Microswitch SPDT
Terminals 1-3:Contacts
close on rising pressure
Terminals 1-2:Contacts
open on rising pressure

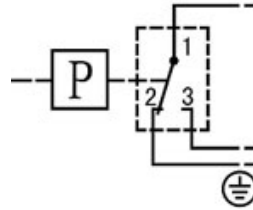
Explosion-proof Pressure Switches
Model: D502/7D (EX)



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Switching Function:
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Description:

Pressure switch for air、 gas、 water、 steam、 refrigerants、 oil etc;
Working viscosity up to 1000mm²/s
The Set Point is adjustable, and its adjustable range is from -0.1 to 2.5Mpa.

Main Technical Performance

	General Type	Explosion-proof Type
Working viscosity	<1×10 ⁻³ m ² /s	<1×10 ⁻³ m ² /s
Switching element	Micro-switches	Micro-switches
Explosion Class	—	ExedIICT5 Certificate No: 2073002X
Protection Class	IP65	IP54
Ambient temperature	-40~50℃	-40~50℃
Fluid temperature	0~120℃	0~120℃
Mounting position		Vertical down
Vibrations	20m/s ²	Max: 20m/s ²
Repeatability	≤1.5%	≤1.5%
Electrical rating	AC 220V 6A	AC 250V 5A

Features

- Suited for vacuum-and overpressure range
- Excellent sealing properties(better than 10⁻⁷mbar . s-1)
- Works in extreme temperature ranges
- High accuracy (deviation less than 1%)

Characteristic date

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● **D502/7D -- Switching pressure difference no adjustable**

Adjustable Range (Mpa)	Switching pressure difference(Mpa)		Max. Allowable Pressure ²⁾ (Mpa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Total Weight (kg)	Dimensional Drawing No.		Cat No.	
	Lower range	Upper range			Housing	Bellows			General Type	proof type	General Type	Proof type
-0.1~0	0.06	0.07	1	20 max. (no sudden pressure changer)	Brass 2.0401	St.st. 1.4401 (soft-soldered)	R1/4	1.0	01	03	0810100	0850180
-0.1~0.1	0.07	0.08	1				R1/4	1.0	01	03	0810200	0850280
-0.1~0.16	0.08	0.09	1				R1/4	1.0	01	03	0810300	0850380
-0.1~0.25	0.09	0.12	1				R1/4	1.0	01	03	0810400	0850480
0-0.1	0.07	0.08	1				R1/4	1.0	01	03	0811100	0851180
0-0.16	0.08	0.09	1				R1/4	1.0	01	03	0811200	0851280
0.01~0.25	0.09	0.1	1				R1/4	1.0	01	03	0811300	0851380
0.02~0.4	0.3	0.3	2				R1/4	1.0	02	04	0811400	0851480
0.03~0.6	0.3	0.35	2				R1/4	1.0	02	04	0811500	0851580
0.03~1	0.3	0.4	2				R1/4	1.0	02	04	0811600	0851680
0.05~1.6	0.7	0.8	5				R1/4	1.0	03	05	0811700	0851780
0.05~2.5	0.7	0.9	5				R1/4	1.0	03	05	0811800	0851880

● **D502/7D -- Switching pressure difference adjustable**

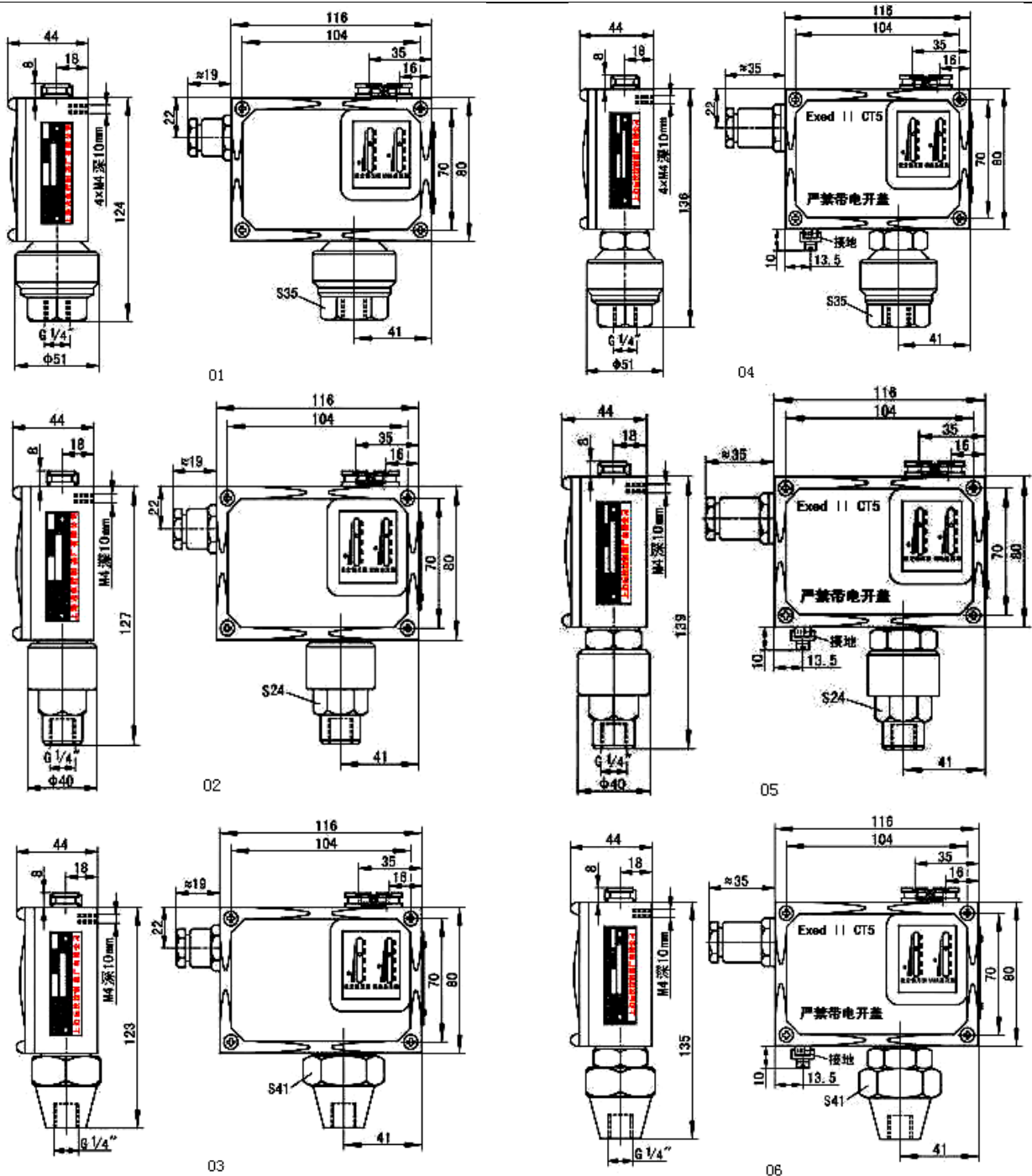
Adjustable Range (Mpa)	Switching pressure difference(Mpa)		Max. Allowable Pressure ²⁾ (Mpa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Total Weight (kg)	Dimensional Drawing No.		Cat No.	
	Min. ¹⁾	Max.			Housing	Bellows			General Type	proof type	General Type	Proof type
-0.1~0	0.018~0.019	0.08	1	20 max. (no sudden pressure changer)	Brass 2.0401	St.st. 1.4401 (soft-soldered)	R1/4	1.0	01	03	0800100	0840180
-0.1~0.1	0.019~0.021	0.10	1				R1/4	1.0	01	03	0800200	0840280
-0.1~0.16	0.020~0.022	0.20	1				R1/4	1.0	01	03	0800300	0840380
-0.1~0.25	0.022~0.024	0.25	1				R1/4	1.0	01	03	0800400	0840480
0-0.1	0.015~0.016	0.08	1				R1/4	1.0	01	03	0801100	0841180
0-0.16	0.018~0.02	0.1	1				R1/4	1.0	01	03	0801200	0841280
0.01~0.25	0.02~0.024	0.2	1				R1/4	1.0	01	03	0801300	0841380
0.02~0.4	0.08~0.08	0.25	2				R1/4	1.0	02	04	0801400	0841480
0.03~0.6	0.08~0.09	0.5	2				R1/4	1.0	02	04	0801500	0841580
0.03~1	0.09~0.1	0.8	2				R1/4	1.0	02	04	0801600	0841680
0.05~1.6	0.17~0.19	1.2	5				R1/4	1.0	03	05	0801700	0841780
0.05~2.5	0.18~0.2	2.0	5				R1/4	1.0	03	05	0801800	0841880

● **D502/7D – Small switching difference (No Explosion-proof Type)**

Adjustable Range (Mpa)	Switching pressure difference(Mpa)		Max. Allowable Pressure ²⁾ (Mpa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Total Weight (kg)	Drawing No.	Cat No.
	Lower range	Upper range			Housing	Bellows				
-0.1~0	0.003	0.0045	1	20 max. (no sudden pressure changer)	Brass 2.0401	St.st. 1.4401 (soft-soldered)	R1/4	1.0	01	0810107
-0.1~0.1	0.003	0.005	1				R1/4	1.0	01	0810207
-0.1~0.16	0.003	0.0065	1				R1/4	1.0	01	0810307
-0.1~0.25	0.0045	0.01	1				R1/4	1.0	01	0810407
0-0.1	0.003	0.0045	1				R1/4	1.0	01	0811107
0-0.16	0.003	0.006	1				R1/4	1.0	01	0811207
0.01~0.25	0.0045	0.007	1				R1/4	1.0	01	0811307
0.02~0.4	0.012	0.016	2				R1/4	1.0	02	0811407
0.03~0.6	0.015	0.02	2				R1/4	1.0	02	0811507
0.03~1	0.018	0.03	2				R1/4	1.0	02	0811607
0.05~1.6	0.03	0.05	5				R1/4	1.0	03	0811707
0.05~2.5	0.03	0.06	5				R1/4	1.0	03	0811807

1) These switching pressure differences are maximum value. The first one refers to the beginning-, the second one to the end of the switching pressure range.
 2) Even shot pressure peaks must not exceed this value (=max.test pressure)

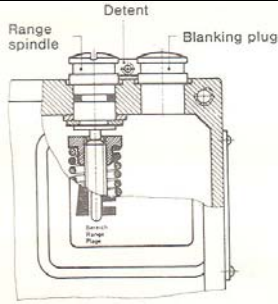
Dimensional drawing Units: mm



Switch selection and mounting instructions

The switching points should normally be in about the middle of the adjustable range. Observe switching pressure during normal operation. Do not exceed electrical ratings. Electrical connection by a M18x1.5 cable gland, in accordance with local regulations. For outdoor installation sufficient protection has to be provided for Critical conditions are: Aggressiveness of air, high or low temperatures, drastic changes in temperature, solar radiation, penetration of water. For liquid media with pressure peaks and/or pulsating pressure, install surge damper upstream to eliminate scattering of switching points and excessive wear. If working fluid is steam, install condenser coil upstream. Avoid twisting of pressure sensor, hold it tight when connecting the switch.

Setting of the switching points



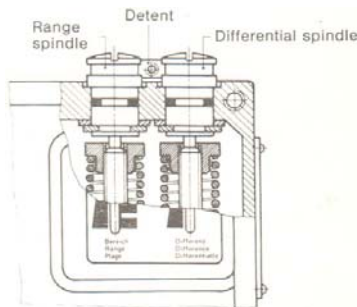
Use range spindle to set the upper or lower switching point on design with **fixed** switching pressure difference. The opposite one is determined by the fixed switching pressure difference.

On designs with adjustable switching pressure difference. Use range spindle to set the lower switching point, then use differential spindle to set the upper switching point by adding the desired switching pressure difference.

Turning the range spindle anticlockwise shifts both switching points upwards. Turning the differential spindle anticlockwise shifts only the upper switching point upwards, i.e. the switching pressure difference (distance between the upper and lower switching points) increases.

Example :

Desired : Lower switching point 0.6Mpa
Upper switching point 0.8MPa
(Switching pressure difference=0.2Mpa)



To set precise switching points a pressure gauge is required.(The pressure switch is a switching and regulating device and not a measuring instrument even if has a scale to assist in the setting.)

The setting can be changed at any time, even during operation.

Range and differential spindle are provided with a releasable detent; if desired, switch can also be leadsealed.