



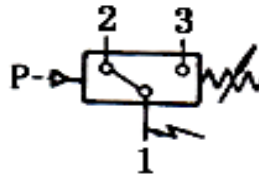
## Pressure Switches Model: D518/7D

The sensor is Diaphragm Flange. It is suitable for Corrosive or viscous fluids and medium Containing dust matter or easy to crystallize. The point of setting is adjustable, and the range is from 0.02 to 0.6MPa.



### □ Main Technical Performance

Switching element	Micro-switches
<b>Protection Class:</b>	IP65
<b>Ambient temperature:</b>	-10°C~+55°C
<b>Fluid temperature:</b>	0~+120°C
<b>Mounting position</b>	Vertical down (a slope of 15° is allowed)
<b>Vibrations:</b>	10m/s <sup>2</sup>
<b>Repeatability:</b>	≤1.5%
<b>Electrical rating:</b>	AC 220V 6A Resistance



**Switching Function:**  
Micro-switch SPDT  
Terminals 1-3: Contacts close on rising pressure  
Terminals 1-2: Contacts open on rising pressure

### □ Features

Suitable for Corrosive or viscous fluids and medium Containing dust matter or easy to crystallize.

### □ Characteristic date

- Switching pressure difference no adjustable

Adjustable Range MPa	Switching pressure difference		Max. Allowable Pressure *) MPa	Number of switching cycles Z(1/min)	Pressure sensor materials		Flange Interface Dimensions D1 (mm)	Weight kg	Drawing No.	Cat No.																		
	Lower range MPa	Upper Range MPa			Housing	Diaphragm																						
0.02...0.1	0.02	0.03	1.2	10	1Cr18Ni9Ti Stainless steel	316L stainless steel	∅ 120	1.7	01	0813321																		
							∅ 140																					
							∅ 150																					
0.02...0.16	0.02	0.03					1.2			10	1Cr18Ni9Ti Stainless steel	316L stainless steel	∅ 120	1.7	01	0813421												
													∅ 140															
													∅ 150															
0.05...0.25	0.02	0.035											1.2			10	1Cr18Ni9Ti Stainless steel	316L stainless steel	∅ 120	1.7	01	0813521						
																			∅ 140									
																			∅ 150									
0.05...0.4	0.02	0.04																	1.2			10	1Cr18Ni9Ti Stainless steel	316L stainless steel	∅ 120	1.7	01	0813621
																									∅ 140			
																									∅ 150			
0.05...0.6	0.035	0.055	1.2	10	1Cr18Ni9Ti Stainless steel	316L stainless steel		∅ 120	1.7																01			0813721
								∅ 140																				
								∅ 150																				



● **Switching pressure difference adjustable**

Adjustable Range MPa	Switching pressure difference		Max. Allowable Pressure *) MPa	Number of switching cycles Z(1/min)	Pressure sensor materials		Flange Interface Dimensions D1 (mm)	Weight kg	Drawing No.	Cat No.	
	Lower range MPa	Upper Range MPa			Housing	Diaphragm					
0.02...0.1	0.06...0.08	0.07...0.08	1.2	10	1Cr18Ni9Ti Stainless steel	316L Stainless steel	∅ 120	1.75	02	0803321	
0.02...0.16	0.065...0.14	0.075...0.14					∅ 140				0803421
							∅ 150				
							∅ 120				
0.05...0.25	0.07...0.18	0.09...0.18					∅ 140			0803521	
							∅ 150				
							∅ 120				
0.05...0.4	0.07...0.3	0.1...0.3					∅ 140			0803621	
							∅ 150				
							∅ 120				
0.05...0.6	0.08...0.45	0.12...0.45					∅ 140			0803721	
							∅ 150				
			∅ 120								

Remark: \*)Even shot pressure peaks must not exceed this value (=max.test pressure)

**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.

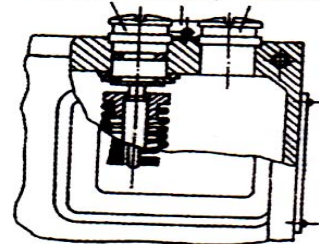
For outdoor installation sufficient protection has to be provided for Critical conditions are: Aggressiveness of air, high or low temperatures, drastic changes in temperature, solar radiation, penetration of water.

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.

设定值调节螺杆 锁紧器 密封头



图一

不可调切换差控制器调整示意图

**Setting of the switching points**

Switching pressure difference no adjustable

**Example 1:**

Choose a switch of pressure difference from 0.05 to 0.4MPa.As follows:

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.

Desired : Lower switching point 0.16Mpa

Upper switching point 0.2MPa

(Switching pressure difference=0.04Mpa)

Setting: 0.2MPa (with **Range spindle**)

0.04MPa (with **Differential spindle**)



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.). Switches can be adjusted even during operation. Range- and differential spindle are provided with a releasable detent; switch can also be lead-sealed.

### Example 2:

Choose a switch of pressure difference from 0.05 to 0.6MPa. As follows:

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.

Desired : Lower switching point 0.3Mpa

Upper switching point 0.345MPa

(Switching pressure difference=0.045Mpa)

Setting: 0.3MPa (with **Range spindle**)

0.045MPa (with **Differential spindle**)

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.). Switches can be adjusted even during operation. Range- and differential spindle are provided with a releasable detent; switch can also be lead-sealed.

### Switching pressure difference adjustable

### Example 3:

Choose a switch of pressure difference from 0.05 to 0.6MPa. As follows:

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.

Desired : Lower switching point 0.2Mpa

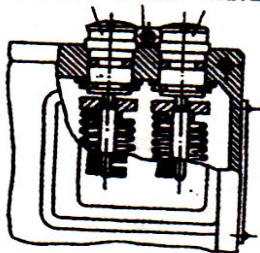
Upper switching point 0.5MPa

Setting: 0.2MPa (with **Range spindle**)

0.5MPa (with **Differential spindle**)

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.). Switches can be adjusted even during operation. Range- and differential spindle are provided with a releasable detent; switch can also be lead-sealed.

设定值调节螺钉 锁紧器 切换差调节螺钉



图二

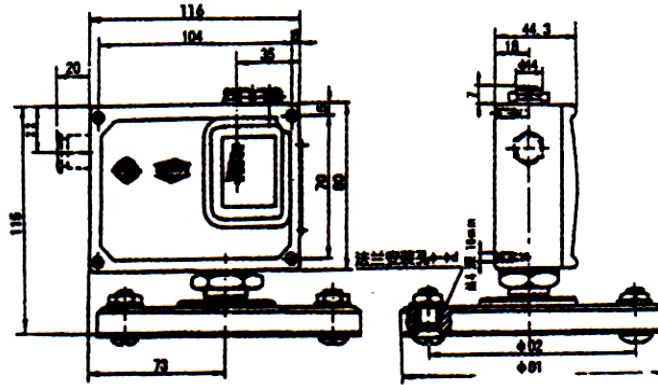
可调切换差控制阀调整示意图



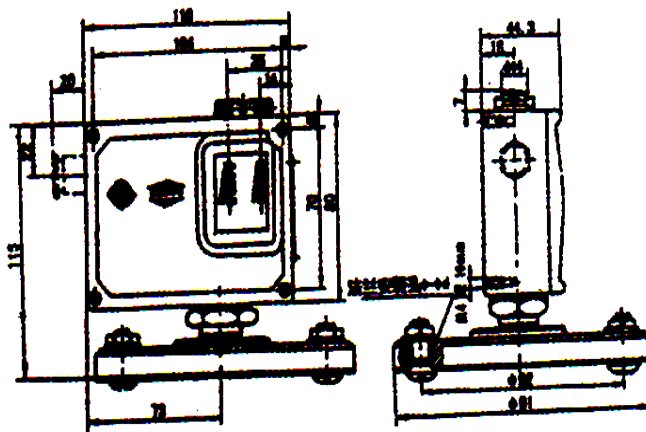
Dimensional drawing

Units: mm

01



02



Note: Pay attention when installing or dismantling:  
Absolutely prevent the sensor (flange) and the switch from being relative rotation.  
If the user has specific requirements for flange sizes, a consultation can be made.

150	125±0.20	16
140	110±0.20	14
120	90±0.175	14
D <sub>1</sub>	D <sub>2</sub>	d