



**Pressure Switches**

**Model: D500/7D、D500/7DK**



上海远仪控制器厂有限公司

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**Explosion-proof Pressure Switches**

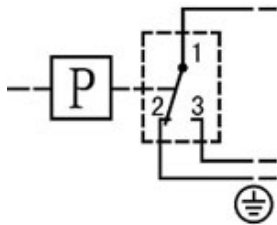
**Model: D500/7D (EX)**



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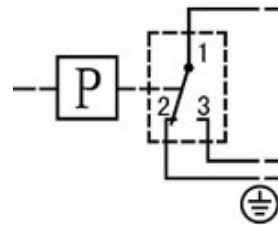


**Switching Function:**

**Micro-switch SPDT**

**Terminals 1-3:Contacts close on rising pressure**

**Terminals 1-2:Contacts open on rising pressure**



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**Micro-switch SPDT**

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**Description:**

**Diaphragm-actuated;**

**For neutral gaseous and liquid fluids;**

**Working pressure range 0...2.5Mpa;**

**Main Technical Performance**

	General Type	Explosion-proof Type
Working viscosity	$<1 \times 10^{-3} \text{ m}^2/\text{s}$	$<1 \times 10^{-3} \text{ m}^2/\text{s}$
Switching element	Micro-switches	Micro-switches
Explosion Class	—	ExedIICT5 Certificate No: 2073002X
Protection Class	IP65	IP54
Ambient temperature	-5~40℃	-5~40℃
Fluid temperature	0~90℃	0~90℃
Mounting position		Vertical down
Vibrations	D500/7D: 40m/s <sup>2</sup> D500/7DK: 20m/s <sup>2</sup>	Max: 20m/s <sup>2</sup>
Repeatability Error	≤1.5%	≤1.5%
Electrical rating	AC 220V 6A	AC 250V 5A

**Features**

◎ Sensitive control    ◎ Long life



**Characteristic date**

● **D500/7D -- Switching pressure difference no adjustable**

Adjustable Range MPa (kPa)	Switching pressure difference		Max. Allowable Pressure <sup>1)</sup> MPa (kPa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Weight (kg)	Drawing No		Cat No.			
	Lower range MPa (kPa)	Upper range MPa (kPa)			Housing	Diaphragm			General Type	Explosion proof type	General Type	Explosion proof type		
(0...2.5) (0...6) (0...16) (0...25)	(0.3) (0.4) (0.4) (0.4)	(0.4) (0.6) (0.8) (0.9)	(50) (50) (50) (50)	10	Alum-inum		G1/4"	1.0	01	04	0812200	0852280		
									G1/4"	1.0	01	04	0812500	0852580
									G1/4"	1.0	01	04	0812700	0852780
									G1/4"	1.0	01	04	0812800	0852880
0.005...0.06 0.005...0.1 0.005...0.16 0.005...0.25	0.003 0.003 0.003 0.004	0.006 0.009 0.012 0.015	1.5 1.5 1.5 1.5	40	Brass	NBR	G1/4"	1.15	02	05	0814100	0854180		
									G1/4"	1.15	02	05	0814200	0854280
									G1/4"	1.15	02	05	0814300	0854380
									G1/4"	1.15	02	05	0814400	0854480
0.03...0.4 0.03...0.6 0.05...1	0.02 0.03 0.03	0.04 0.05 0.06	4 4 4				G1/4"	0.85	03	06	0814500	0854580		
									G1/4"	0.85	03	06	0814600	0854680
									G1/4"	0.85	03	06	0814700	0854780
0.1...1.6 0.1...2.5	0.04 0.04	0.12 0.15	5 5				G1/4"	0.85	03	06	0814800	0854880		
							G1/4"	0.85	03	06	0814900	0854980		

● **D500/7D -- Switching pressure difference adjustable**

Adjustable Range MPa (kPa)	Switching pressure difference		Max. Allowable Pressure <sup>1)</sup> MPa (kPa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Total Weight (kg)	Drawing No		Cat No.			
	Lower range MPa (kPa)	Upper range MPa (kPa)			Housing	Diaphragm			General Type	Explosion proof type	General Type	Explosion proof type		
(0...2.5) (0...6) (0...16) (0...25)	(0.8...2.5) (0.9...4) (1.1...12) (1.1...20)	(1.1...2.5) (1.5...4) (2.3...12) (2.8...20)	(50) (50) (50) (50)	10	Aluminum		G1/4"	1.05	01	04	0802200	0842280		
									G1/4"	1.05	01	04	0802500	0842580
									G1/4"	1.05	01	04	0802700	0842780
									G1/4"	1.05	01	04	0802800	0842880
0.005...0.06 0.005...0.1 0.005...0.16 0.005...0.25	0.009...0.05 0.011...0.08 0.013...0.12 0.014...0.2	0.016...0.05 0.018...0.08 0.025...0.12 0.025...0.2	1.5 1.5 1.5 1.5	40	Brass	NBR	G1/4"	1.20	02	05	0814100	0844180		
									G1/4"	1.20	02	05	0814200	0844280
									G1/4"	1.20	02	05	0814300	0844380
									G1/4"	1.20	02	05	0814400	0844480
0.03...0.4 0.03...0.6 0.05...1	0.05...0.2 0.06...0.4 0.06...0.6	0.05...0.2 0.06...0.4 0.06...0.6	4 4 4				G1/4"	0.9	03	06	0804500	0844580		
									G1/4"	0.9	03	06	0804600	0844680
									G1/4"	0.9	03	06	0804700	0844780
0.1...1.6 0.1...2.5	0.12...1.2 0.12...2	0.12...1.2 0.12...2	5 5				G1/4"	0.9	03	06	0804800	0844880		
							G1/4"	0.9	03	06	0804900	0844980		

● **D500/7DK -- Small switching difference (No Explosion-proof Type)**

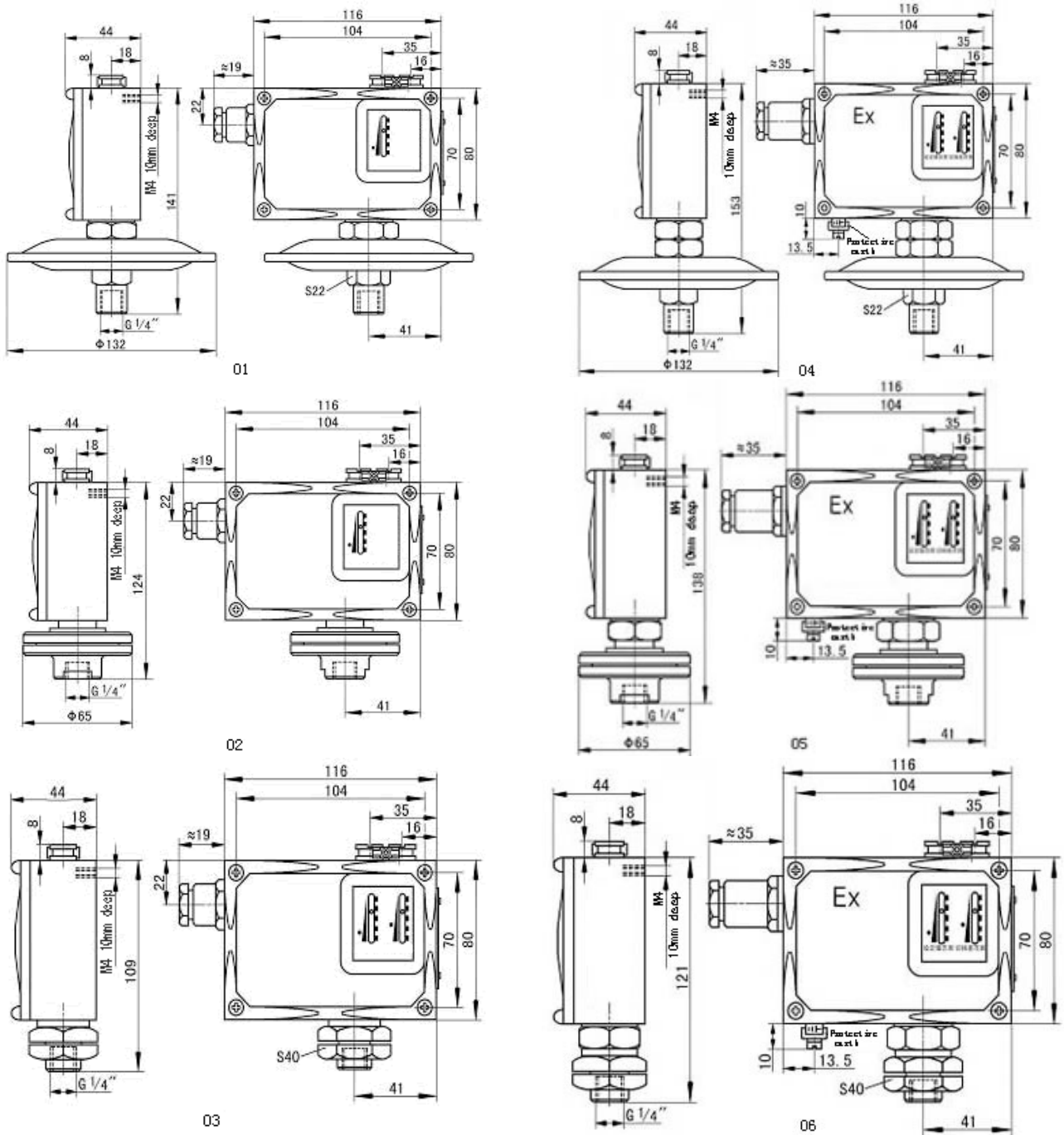
Adjustable Range MPa (kPa)	Switching pressure difference		Max. Allowable Pressure <sup>1)</sup> MPa (kPa)	Number of switching cycles Z(1/min)	Pressure sensor materials		Connection (internal thread)	Total Weight (kg)	Drawing No	Cat No		
	Lower range MPa (kPa)	Upper range MPa (kPa)			Housing	Diaphragm						
(0...2.5) (0...6) (0...16) (0...25)	(0.15) (0.18) (0.2) (0.25)	(0.2) (0.45) (0.5) (0.6)	(50) (50) (50) (50)	10	Aluminum		G1/4"	1.0	01	0812207		
									G1/4"	1.0	01	0812507
									G1/4"	1.0	01	0812707
									G1/4"	1.0	01	0812807
0.005...0.06 0.005...0.1 0.005...0.16 0.005...0.25	0.002 0.002 0.0025 0.0025	0.004 0.006 0.075 0.01	1.5 1.5 1.5 1.5	40	Brass	NBR	G1/4"	1.15	02	0814107		
									G1/4"	1.15	02	0814207
									G1/4"	1.15	02	0814307
									G1/4"	1.15	02	0814407
0.03...0.4 0.03...0.6 0.05...1	0.015 0.015 0.018	0.02 0.02 0.038	4 4 4				G1/4"	0.85	03	0814507		
									G1/4"	0.85	03	0814607
									G1/4"	0.85	03	0814707
0.1...1.6 0.1...2.5	0.02 0.02	0.08 0.1	5 5				G1/4"	0.85	03	0814807		
							G1/4"	0.85	03	0814907		

1) Even shot pressure peaks must not exceed this value (=max.test pressure)



Dimensional drawing

Units: mm

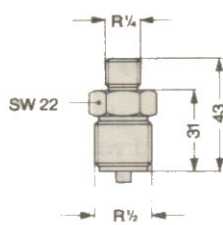
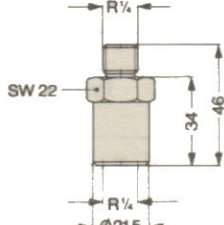
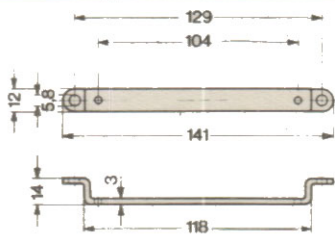
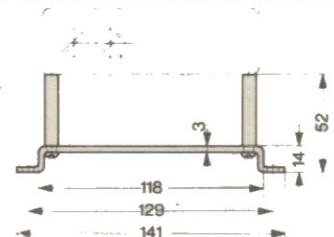


Switch selection and mounting instructions

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.



□ **Accessories**

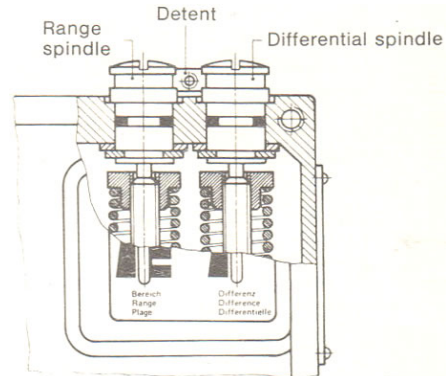
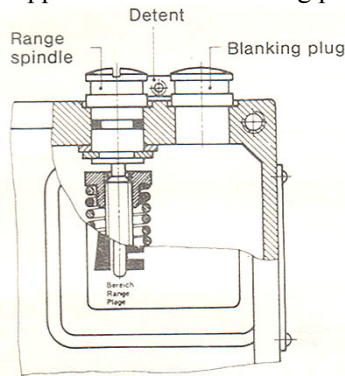
<p><b>Reducer</b> R 1/2 to R 1/4 external thread Cat. No. <b>0574767</b></p> 	<p><b>Surge damper R 1/4</b> Cat. No. <b>0574773</b></p> 
<p><b>7 D mounting support</b> (2 brackets and 4 screws) Cat. No. <b>0574772</b></p> 	<p><b>7 D mounting support</b> (2 brackets, 4 screws and 4 threaded unions). Only for low pressure switches 0802200 to 0802800 0812200 to 0812800 Cat. No. <b>0574771</b></p> 

□ **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)  
Setting: 0.6MPa (with **Range spindle**)  
0.2MPa (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 leadsealed.