

## Piston Type

### Model DS307/-

This model is a piston-spring type pressure switch. With pressure at zero the micro-switch remains pressed and will only be released when the adjusted switching pressure has been reached. The piston acts against an adjustable spring with travel mechanically limited to 0.5mm, giving minimum work of good resistance to overpressure. The design of the spring .. prevents overtightening. Adjustment by turning the screw top (or knurled knob) which can be fixed with a locking screw. The complete adjusting travel is approx. 9 mm.

### Standard Range

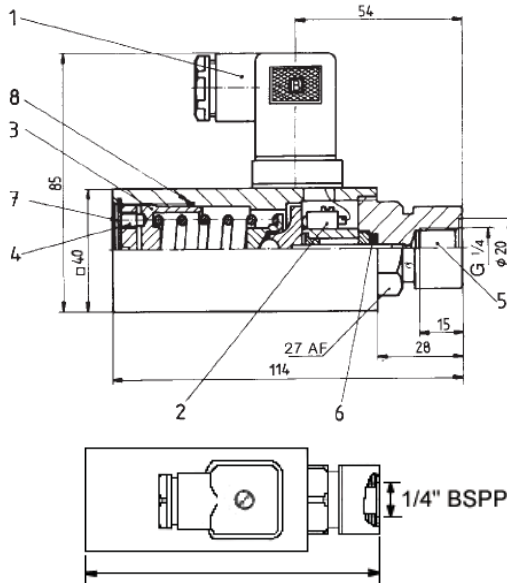
Model	Switching Pressure Range	Maximum Pressure	Piston Diameter
DS307/55	5 - 55 bar	300 bar	6 mm
DS307/100	10 - 100 bar	400 bar	6 mm
DS307/150	20 - 150 bar	500 bar	5 mm
DS307/240	40 - 420 bar	500 bar	4 mm
DS307/350	20 - 350 bar	600 bar	4 mm
DS307/420	50 - 420 bar	600 bar	3 mm
DS307/600	50 - 600 bar	800 bar	3 mm

shaded model available on special order



DS-307	Piston diameter mm						
	Ø3	Ø4	Ø5	Ø6	Ø6	Ø6	Ø6
<b>1. General</b>							
Design	Spring-loaded piston, spring overload protected						
Connection	Thread G 1/4 female or sub plate, pitch circle Ø 44 mm						
Adjustment	Adjustable screw top of knurled knob						
Safety	Locking screw or lock (E 10 H2[type AS])						
Mounting position	Variable						
<b>2. Hydraulic data</b>							
Switching pressure range	5-55 bar	10-100 bar	20-150 bar	40-240 bar	20-350 bar	50-420 bar	50-600 bar
Switching accuracy	Variations of less than 1%						
Ambient temperature	- 40°C up to + 90°C						
Fluid	Oil, oil-in-water-emulsion						
<b>3. Electric data</b>							
Switch	Electromechanical double-throw switch						
Current	AC - DC current (see table)						
Protection according to DIN 40050	IP 65						
Electrical connection	Appliance inlet according to DIN 43650						
<b>4. Features</b>							
Housing	Aluminium						
Standard body	Brass						
Switching travel	0.5mm - reducing wear of seal and ram to a minimum						
Sub plates	Valve mounting NG 6 and NG 10 (only for sub plate connection Type DS-307/F)						
<b>5. Options</b>							
Mounting	Sub plate mounting; panel mounting						
Body / Housing	Brass; intrinsically safe; and explosion proof						
Adjustment	Knurled screw; adjustment with key lock						
Hysteresis	Special low hysteresis versions						

## Dimensions - DS307/-



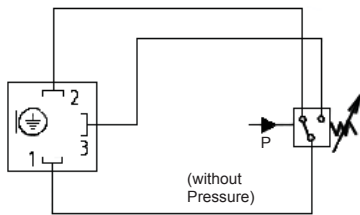
Item	No.	Description
1	1	Appliance inlet - DIN 43650
2	1	Micro switch (single-pole double-throw)
3	1	Adjustable screw top
4	1	Locking screw
5	1	Connection G 1/4-female
6	1	Set of seals (non-sticking, non-slipping)
7	1	Snap ring
8	1	O-ring

## Switching capacity

The switch contacts are gold plated silver and are designed to handle micro-currents. At higher currents, the gold is vaporized and therefore a switch which has operated above the micro-current limitations will not operate satisfactorily in the micro-current range.

**Max. Load for gold contacts**                      **0.12A** with the additional limitations  
 Max Voltage    30V  
 Max Current    400mA

## Electrical diagram



1. Common
2. NC (normally closed)
3. NO (normally open)

Life in Switching Cycles	Volts max. (V)	Resist. Load Amps	Metal. Bulb Load Amps	Induct. Load Amps
5000	220 AC	10	0.5	5
1000000	220 AC	0.25	0.1	0.25
5000	30 DC	10	2	3
1000000	30 DC	0.5	0.25	0.5

**Caution:** When the switch is used with inductive loads, eg., solenoids, the back EMF generated by the solenoid switching off can be two to three times the input voltage. This voltage can arc across the switch contacts effectively destroying them. Some type of circuit protection should be employed to eliminate the problem.

## Hysteresis for DS-307/-

Pressure switch Type DS-307: For pressure settings of approximately 60-70% of the maximum. Adjustable pressure the Hysteresis is approximately 7-12% of end value.

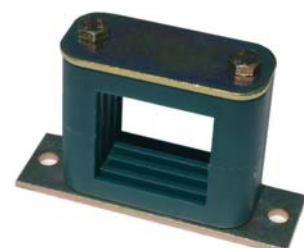
These values are dependant on the temperature and viscosity of working fluid.

Example:      DS-307/100                      Adjustable pressure:      70 bar  
                   Pressure range: 10-100 bar              Hysteresis:                      approx. 7-12 bar

## Accessory

Mounting clamp for piston type pressure switch.

Description	Part No.
Screw mount version	SPV 540x40 PP DP AS
Unistrut mount version	CRA 540x40 PP DP AS

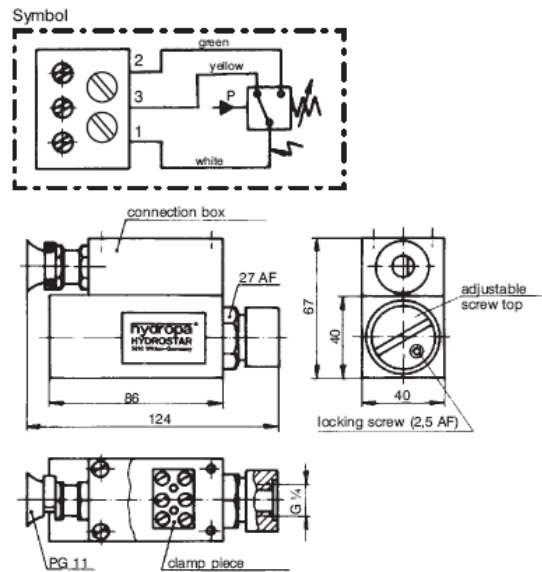


## Piston Type for the Mining Industry

**DS-103/ES/MS-\*\*\*** Weight: 1.5 kg

### Housing brass

Electrical production facilities  
or machines for mines with mine gas.  
Connection box:  
with 3-pole terminal board



Also with ATEX admittance  
**DMT 02 ATEX E 200**

Equipment identification: **EX**  
**I M2 EEx ia I**

Please indicate supplement "ATEX" at order!



### NOTE !

The unit may only be installed by technical specialists. Comply with the national regulations for the installation of electro-technical equipment. Ensure that the equipment is not energized before connecting the unit

## Other Switches Available



**DS307/\*\*\*/V2**  
knurled adjusting screw  
with scale



**DS307/\*\*\*/F**  
subplate mounting



**DS104/\*\*\*/EX**  
explosion-proof to EEX d II CT6

\*\*\* select pressure range from page 2