

## Hydraulic or pneumatic pressure switch

for water and oil  
in 2/2 and  
3/2 way-seat valve design DN 3 and DN 6  
max. 320 bar for water, oil and air  
max. 100 bar for gas  
for plate mounting  
max. 320 bar

- Protection against accidental operation
- Each switching element can be rotated through 90°

### Application

As a single unit and in combination with our available directional control valves, the pressure switch can take on monitoring and protection tasks in water and oil hydraulics as well as in pneumatics up to a max. pressure of 320 bar. A second version type series can be used in gas plant up to 100 bar.

### Function

The pressure switch consists of a switching element with a mounted pilot-control valve from our standard hydraulic or pneumatic range. The switching element operates the pilot control valve as soon as the control pressure increases above the preset pressure or falls below the preset pressure. After operation the pressure switch does not return automatically into its basic position. It can only be switched back manually if the control pressure is again within the permissible pressure range. The pilot-control valve is operated by the switching element precisely by means of a jump switch process. This prevents a centre position of the valve.

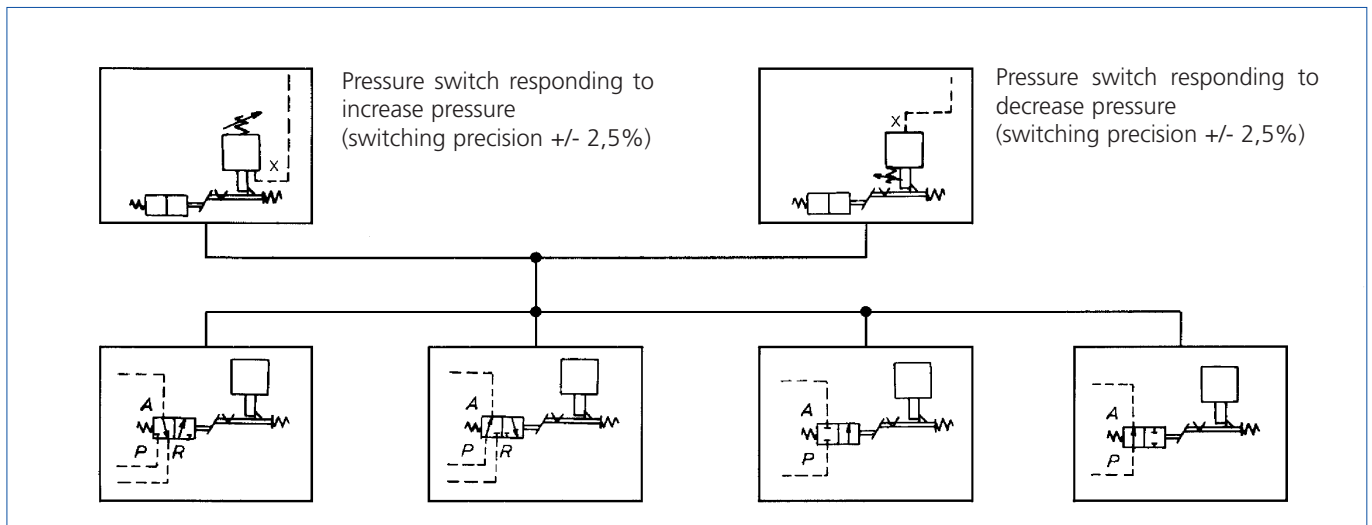
- Lockable version available on request
- Wear parts easy to access and fast to replace
- High switching precision

### Special features:

The switching element responds without delay. It can be driven hydraulically or pneumatically at different pressure levels. Within each pressure level it can be adjusted continuously and finely. A possible lead-seal protects against any unauthorized tampering with the adjustment. The pilot-control valve has a lockable manual operation. It can also be provided with a locking device so that it cannot be switched manually by unauthorized persons, and also cannot be switched back into its basic position even after responding to and being triggered by the switching element. On request the pressure switches can also be fitted with manual vent levers to allow excess pressure or pressure drop conditions to be simulated for test purposes. A further separate and externally located manual adjustment provides for any operator to switch back the pressure switch after this has responded and once operating pressure has again been reached. There is a DVGW reg. No. for the pressure switch in combination with a use as a high pressure safety shut off device.



## Switching symbols of the available pressure switch combinations



## Valve versions

3/2 directional control seat valve positive, the valve in basic position: the path from "P" to "A" is closed and from "A" to "R" is open.

3/2 directional control seat valve negative, the valve in basic position: the path from "P" to "A" is open and from "A" to "R" is closed.

2/2 directional control seat valve positive, the valve in basic position: the path from "P" to "A" is closed.

2/2 directional control seat valve negative, the valve in basic position: the path from "P" to "A" is open.

Please state type and order numbers as listed in the table:

Medium:	water, oil and air up to 320 bar				gas up to 100 bar, -20°C up to +60°C*			
3/2 way model	positive		negative		positive		negative	
pressure stages in bar	acting on pressure				acting on pressure			
	rise	decrease	rise	decrease	rise	decrease	rise	decrease
3 – 12	Vp . 3-111	Vp . 3-112	Vn . 3-111	Vn . 3-112	Vp . 3-121	Vp . 3-122	Vn . 3-121	Vn . 3-122
10 – 25	Vp . 3-211	Vp . 3-212	Vn . 3-211	Vn . 3-212	Vp . 3-221	Vp . 3-222	Vn . 3-221	Vn . 3-222
20 – 50	Vp . 3-311	Vp . 3-312	Vn . 3-311	Vn . 3-312	Vp . 3-321	Vp . 3-322	Vn . 3-321	Vn . 3-322
45 – 100	Vp . 3-411	Vp . 3-412	Vn . 3-411	Vn . 3-412	Vp . 3-421	Vp . 3-422	Vn . 3-421	Vn . 3-422
80 – 160	Vp . 3-511	Vp . 3-512	Vn . 3-511	Vn . 3-512	Vp . 3-521	Vp . 3-522	Vn . 3-521	Vn . 3-522
130 – 320	Vp . 3-611	Vp . 3-612	Vn . 3-611	Vn . 3-612	Vp . 3-621	Vp . 3-622	Vn . 3-621	Vn . 3-622
2/2 way model	positive		negative		positive		negative	
pressure stages in bar	acting on pressure				acting on pressure			
	rise	decrease	rise	decrease	rise	decrease	rise	decrease
3 – 12	Vp . 2-111	Vp . 2-112	Vn . 2-111	Vn . 2-112	Vp . 2-121	Vp . 2-122	Vn . 2-121	Vn . 2-122
10 – 25	Vp . 2-211	Vp . 2-212	Vn . 2-211	Vn . 2-212	Vp . 2-221	Vp . 2-222	Vn . 2-221	Vn . 2-222
20 – 50	Vp . 2-311	Vp . 2-312	Vn . 2-311	Vn . 2-312	Vp . 2-321	Vp . 2-322	Vn . 2-321	Vn . 2-322
45 – 100	Vp . 2-411	Vp . 2-412	Vn . 2-411	Vn . 2-412	Vp . 2-421	Vp . 2-422	Vn . 2-421	Vn . 2-422
80 – 160	Vp . 2-511	Vp . 2-512	Vn . 2-511	Vn . 2-512	Vp . 2-521	Vp . 2-522	Vn . 2-521	Vn . 2-522
130 – 320	Vp . 2-611	Vp . 2-612	Vn . 2-611	Vn . 2-612	Vp . 2-621	Vp . 2-622	Vn . 2-621	Vn . 2-622

Other temperatures available on request.

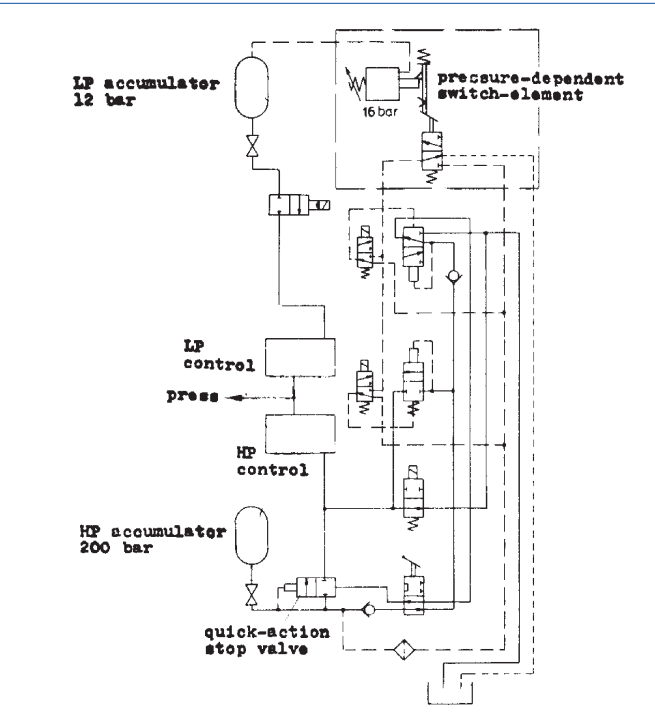
# Type code:

V. . . . .

- Designation number for special versions
- 1=switches at pressure increase  
2=switches at pressure decrease
- 1=Medium: Water, oil and air up to 320 bar  
2=Medium: Gas up to 100 bar
- 1=Pressure level: 003 - 012 bar  
2=Pressure level: 010 - 025 bar  
3=Pressure level: 020 - 50 bar  
4=Pressure level: 045 - 100 bar  
5=Pressure level: 080 - 160 bar  
6=Pressure level: 130-320 bar
- 2=2/2 directional control seat valve  
3=3/2 directional control seat valve
- 3=nominal valve size NW 3  
6=nominal valve size NW 6
- p=valve version: positiv  
n=valve version: negativ

# Mounting example:

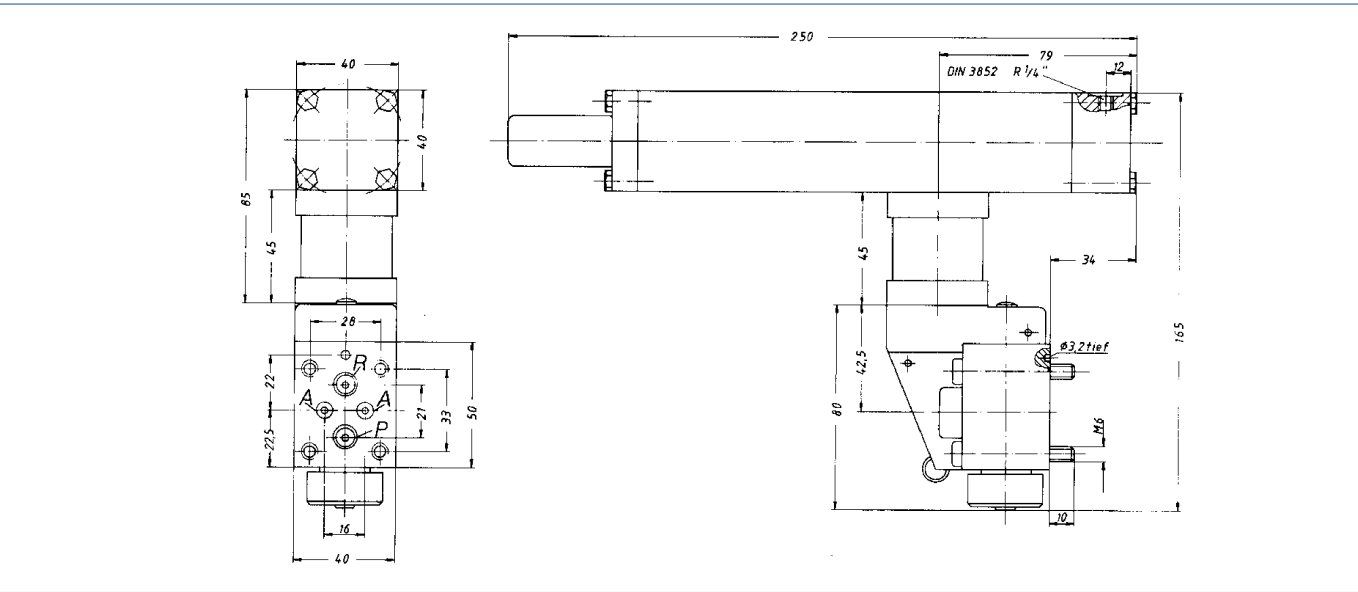
Protection against pressure increase



Additional protection of low pressure reservoir overpressure. By driving the high pressure fast closure valve an overflowing of high pressure into the low pressure reservoir is prevented.

# Dimensional diagram:

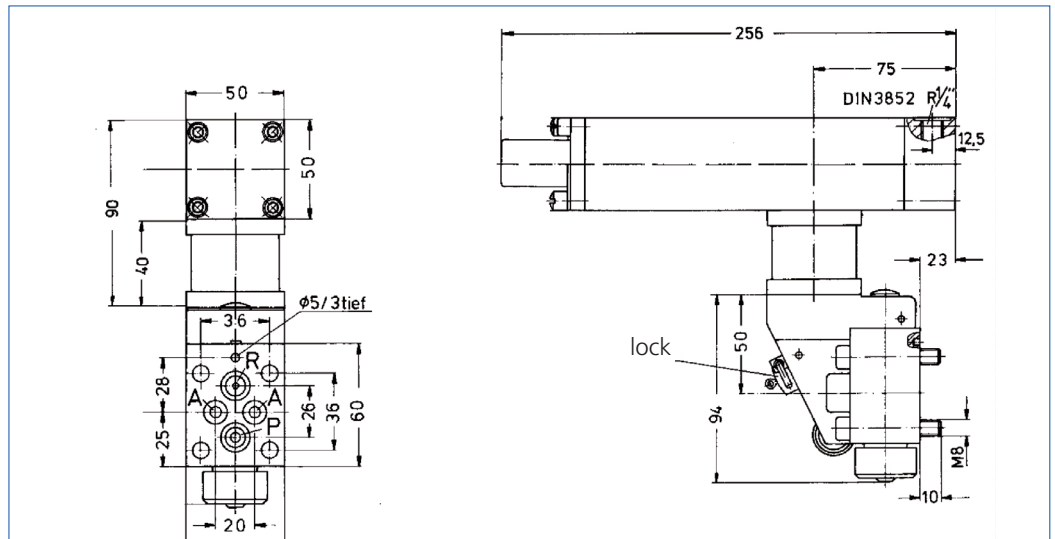
Pressure switch DN 3



	P	R	A
connection bore	3 mm	3 mm	3 mm
O-ring	9,25*1,78	9,25*1,78	6,07*1,78

For 2/2 directional valves, the bores designated by "A" are not required. Port "R" becomes "A".

**Dimensional diagramm:**  
Pressure switch DN 6



	P	R	A
connection bore	6 mm	6 mm	6 mm
O-ring	12*2,5	12*2,5	8*2

For 2/2 directional valves, the bores designated by "A" are not required. Port "R" becomes "A".

**Special version:**

Order example:

Vn63-412-..

- 01 = Vent lever
- 02 = Manual reset located externally
- 03 = Manual reset by operating lever fed through to the outside. For several special features on the pressure switch all code numbers required must be stated in the order designation.  
Example: Vn63-412-01/02

