

## Electronical pressure switch MagSwitch

One or two adjustable switching outputs  
or  
One adjustable switching output  
with adjustable hysteresis

### Discription

The compact electronic pressure switch MagSwitch provides pressure monitoring. Adjusting screws are used to set the switching point under pressure. Integrated LEDs indicate the current switching state. The principle of non-impact measurement based on the Hall-effect ensures a pressure switch with high level of repeatability and durability, even in case of a high number pressure cycles.

The contact functions (normally open / normally closed) and the contact types (p-switching / n-switching) are available as optional extras. Switching currents ranging from a few micro amps to 100 mA allow the MagSwitch to be easily integrated into almost any control system. The adjustable hysteresis enables to build up 2 point controllers easily without any additional external components.

A pressure connection free of elastomers qualifies the MagSwitch for many liquid and gaseous media. The metal diaphragm can also be used without any problem for simultaneously occurring pressure and vacuum.



### Features

- non - contact measurement
- long - life cycle
- very good repeatability
- one or two switching outputs
- simple adjustment of the set points
- status LED indication
- compact design
- pressure connection in brass
- p- or n-switching

### Measuring ranges

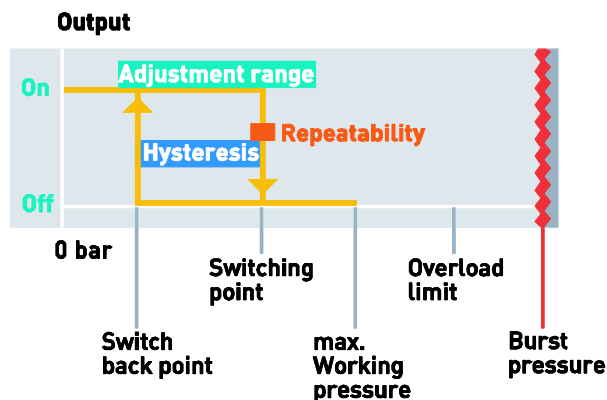
- positive adjustment ranges  
from 0.01 up to 600 bar
- vacuum ranges up to -900 mbar

### Applications

- mechanical engineering
- vacuum technology
- refrigeration technology
- filter monitoring
- level measurement
- building technology

## Adjustment ranges

Type	Adjustment range [bar]	Switching point [bar] increasing pressure	Reset point [bar] decreasing pressure	Hysteresis [%]	Overrange limit [bar]	Burst pressure [bar]	Sensor element
PTS1012	<b>Negative overpressure</b>						Diaphragm
	-0.1 ... 0	-0.095...0	-0.1 ...-0.005	5	0.4	4	
	-0.16 ... 0	-0.152 ...0	-0.16...-0.008	5	0.6	6	
	-0.25 ... 0	-0.237 ...0	-0.25...-0.013	5	1.0	10	
	-0.4 ... 0	-0.38 ...0	-0.4 ...-0.020	5	1.6	16	
	-0.6 ... 0	-0.57 ...0	-0.6 ...-0.030	5	2.4	24	
	-0.9 ... 0	-0.85 ...0	-0.9 ...-0.050	5	4.0	40	
	<b>positive gauge pressure</b>						
	0 ... 0.1	0.005...0.1	0 ... 0.0995	5	0.4	4	
	0 ... 0.16	0.008...0.16	0 ... 0.152	5	0.6	6	
	0 ... 0.25	0.013...0.25	0 ... 0.237	5	1.0	10	
	0 ... 0.4	0.02 ... 0.4	0 ... 0.38	5	1.6	16	
	0 ... 0.6	0.03 ... 0.6	0 ... 0.57	5	2.4	24	
	0 ... 1	0.05... 1	0 ... 0.95	5	4.0	40	
	0 ... 1.6	0.08... 1.6	0 ... 1.52	5	6.0	60	
	0 ... 2.5	0.13... 2.5	0 ... 2.37	5	10	100	
	0 ... 4	0.2 ... 4	0 ... 3.8	5	16	160	
	0 ... 6	0.3 ... 6	0 ... 5.7	5	24	240	
	0 ... 10	0.5 ... 10	0 ... 9.5	5	30	300	
	0 ... 16	1.6 ... 16	0 ... 14.4	10	32	320	
	0 ... 25	2.5 ... 25	0 ... 22.5	10	40	400	
	0 ... 40	2 ... 40	0 ... 38	5	80	120	
	0 ... 60	3 ... 60	0 ... 57	5	120	180	
	0 ... 100	5 ... 100	0 ... 95	5	200	300	
	0 ... 160	8 ... 160	0 ... 152	5	320	480	
	0 ... 250	13 ... 250	0 ... 237	5	500	750	
	0 ... 400	20 ... 400	0 ... 380	5	800	1200	
	0 ... 600	30 ... 600	0 ... 570	5	1000	1500	

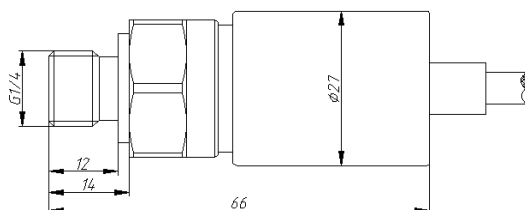


The contact switches when the switching point is reached. The hysteresis determines the switch back point. The switching point can be modified within the adjustment range. Both the switching point and the switch back point have to be within the adjustment range. If there are several pressure cycles, all switching points are within the specified reproducibility. Dynamic loads up to the overload limit may be applied to the pressure switches. If the overload limit is exceeded, the pressure switch will be damaged. If the burst pressure is exceeded, even for short periods, the pressure switch will be destroyed.

## Technical data

<b>model</b>	<b>PTS1012</b>	
<b>Execution</b>	Diaphragm	
<b>Pressure type</b> Standard Optional	Positive or negative gauge pressure Positive and negative gauge pressure	
<b>Pressure connection</b> Standard Optional	G1/4 B G1/8 B, 1/4NPT, 1/2NPT,	
<b>Measuring principle</b>	Hall - effect	
<b>Materials</b> Measuring element Pressure connection Housing Electronic insert	Ni - and Cu - alloy Brass Brass Plastic	Stainless steel Brass Anodized aluminium Plastic
<b>Load cycles</b>	1 million pressure cycles	
<b>Supply voltage</b>	10 ... 30 V DC	
<b>Power consumption</b>	≤ 25 mA (without load current)	
<b>Switching outputs</b> Power rating	0.1 A	
<b>Adjustment</b> Set point Hysteresis Standard	Locally by adjustment screw (0) 10 ... 100% of full scale  ≤ 5 % of full scale	
<b>Accuracy</b>	0.5 % of full scale ( limit point calibration)	
<b>Repeatability</b>	1 % of full scale	
<b>Temperature ranges</b> Storage Media Ambient	-30 ... + 80 °C -20 ... + 80 °C -20 ... + 70 °C	
<b>Temperature compensated range</b>	0 ... + 80 °C	
<b>Temperature influence</b>	+ 0.4 % of full scale per 10 K	
<b>Electrical connection</b>	Round connector M12x1; 4 - pin	
<b>Protection class</b>	IP65	
<b>CE</b>	Emission and interference acc. to EN 61 326	
<b>Electrical protection</b>	Reverse polarity and over voltage protection	
<b>Weight</b>	Approx. 0.1 kg	

## Dimensions [mm]



## Connection for plug and cable outlet

Signal	Cable outlet
Supply: UB	Red
Supply: 0V	Black
Switching output: S 1	Blue
Switching output: S 2	Green
Ground Shield	Grey