Electronical pressure switch MagSwitch

One ore 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 whilst under pressure. Integrated LEDs indicate the current switching state. The principle of non-impact measurement based on the Hall-effect produces a pressure switch which has a high level of repeatability and durability, even in the 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 100mA allow the **MagSwitch** to be easily integrated into almost any control system. The adjustable hysteresis enables to build up 2-position 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

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

Measuring ranges

- O positive adjustment ranges
  from 0.005 up to 600bar
- O vacuum ranges up to -900mbar

Applications

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

Model: S1100, S1200

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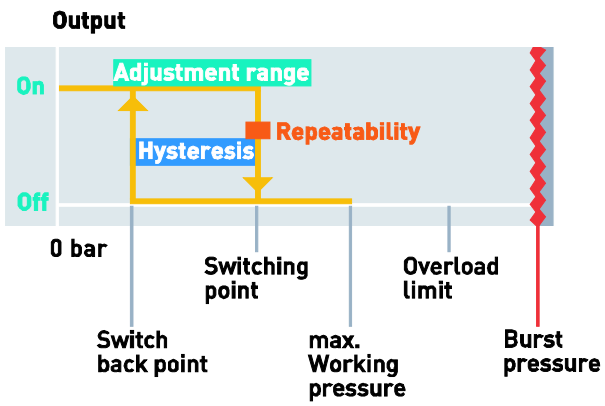
Adjustment ranges

Model	Adjustment range [bar]	Switching point [bar] increasing pressure	Reset point [bar] decreasing pressure	Hysteresis [%]	Overrange limit [bar]	Burst pressure [bar]	Sensor element
S1100	**Negative overpressure**						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	10	
	-0,4…0	-0,38 ... 0	-0,4…-0,02	5	1,6	16	
	-0,6…0	-0,57 ... 0	-0,6…-0,03	5	2,4	24	
	-0,9…0	-0,85 ... 0	-0,9…-0,05	5	4	40	
	Positive overpressure						
	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	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	40	
	0 ... 1,6	0,08 ... 1,6	0 ... 1,52	5	6	60	
	0 ... 2,5	0,13 ... 2,5	0 ... 2,377	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	
S1200	0…40	2…40	0…38	5	80	120	Bourdon tube
	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	1200	1500	



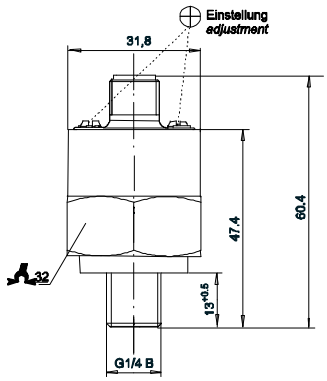
The contact switches when the switching point is reached. The hysteresis determines the switch back point. The switching point can be modified within the adjusting range. The adjusting range can be set such that the switching point and the switch back point are within the adjusting range. If there are several cycles, all switching points can be reproduced. Pressure switches may be subjected to dynamic loading up to the maxi mum working pressure. Isolated brief periods of peak pressure are permitted up to the overload limit. If the burst pressure is exceeded, even for short periods, the pressure switch will be destroyed.

Technical data

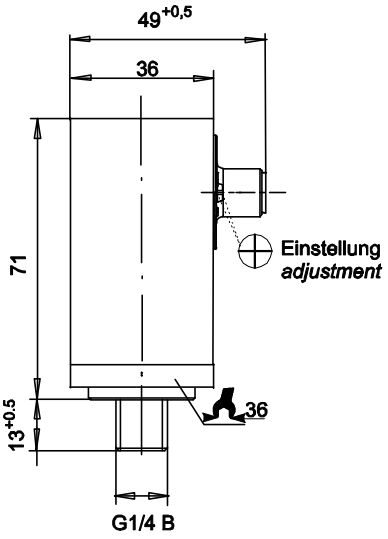
model	S1100	S1200
Execution	Diaphragm	Bourdon tube
Pressure type		
Standard	Positive or negative gauge pressure	
Optional	Positive and negative gauge pressure	
Pressure connection		
Standard	G1/4 B	
Optional	G1/8 B, 1/4NPT, M10x1,M12x1,5 G1/2 B, 1/2NPT, for S1200: flange type	
Measuring principal	Hall-effect	
Materials		
Measuring element	Ni- and Cu- alloy	Stainless steel
Pressure connection	Brass	Brass
Housing	Brass	Anodized aluminium
Electronic insert	Plastic	Plastic
Load cycles	1 M. pressure cycles	
Supply voltage	10... 30 VDC	
Power consumption	≤ 25mA (without load current)	
Switching outputs		
Number	1 or 2	
Switching function	Normally open, normally close	
Standard	p-switching	
Optional	n-switching	
Power rating	0.1 A	
Adjustment	Locally by adjustment screw	
Set point	(0) 5 ... 100 % of full scale value	
Hysteresis		
Standard	≤ 5 % of full scale value for adjustment ranges 16 and 25 bar ≤ 10% of full scale value	
Optional	Hysteresis adjustable: 5…95 % of full scale value	
Accuracy	1 % of full scale value (terminal point adjustment)	
Repeatability	1 % of full scale value	
Temperature ranges		
Storage	-30... + 80°C	
Media	-20... + 80°C	
Ambient		
Standard	-20... + 70°C	
Temperature compensated range	0... + 80°C	
Temperature influence	+ 0.4% of full scale value per 10 K	
Electrical connection		
Standard	Round connector M12x1; 4-pin	
Optional	Cable outlet	
Protection class		
Standard	IP 65;	
Optional	With cable outlet IP 67	
CE -sign	emission and interference acc. To EN 61 326 declarition of confirmity on request	
Electrical protection	Reverse polarity and over voltage protection	
Weight	Approx. 0.09 kg	Approx. 0.27 kg

Case dimensions [mm]

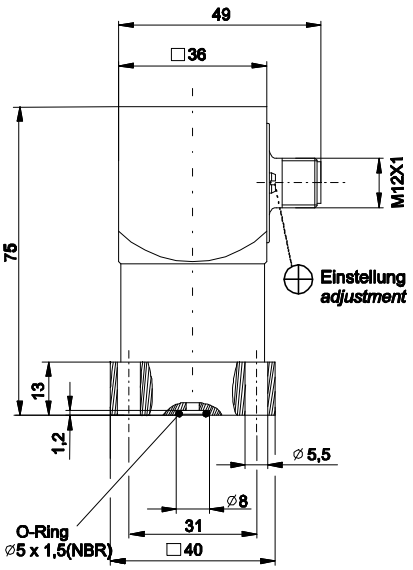
Model S1100:



Model S1200:



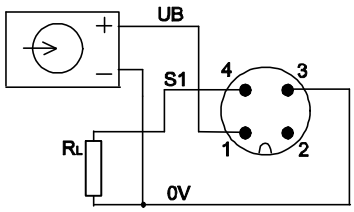
S1200: Flange type

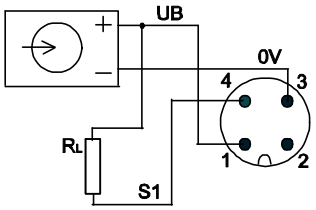


Electrical connections

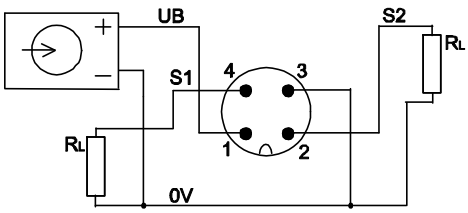
Round connector M12 x 1 (4-pin)

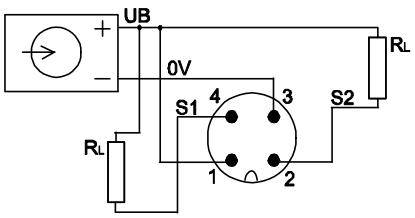
p-switching — 1 switching output — n-switching





p-switching — 2 switching output — n-switching





Connection for plug and cable outlet

Signal	Pin	Cable outlet
Supply: UB	1	Brown
Supply: 0V	3	Blue
Switching output: S 1	4	Black
Switching output: S 2	2	White

We recommend our accessories:

M12x1 cable socket with 2m wire
Straight version, order no.: EZE53X011010
Angled version, order no.: EZE53X011011

Subject to technical alterations