

Electronic pressure switch

with internal or front flush diaphragm
for gauge pressure and
absolute pressure,

1 or 2, NO or NC, output p- or n-switching



Special features

The pressure cells, featuring piezoresistive and thin-film technology, guarantee resistant pressure switches which are also highly accurate and extremely durable. PC programming enables individual adjustment of the switching points, whilst at the same time offering optimum protection against unauthorized intervention. The robust construction and the absence of external operating and display components enable this pressure switch to also be used in adverse conditions.

Areas of application

The pressure switch is suitable for almost all liquid and gaseous mediums and is used in vacuum technology (pump control), refrigeration technology (compressor control), gas technology (stock monitoring, leak detection), filter monitoring (dirt detection), level measurement (overflow protection, dry-running protection), as well as a whole variety of measurement tasks in hydraulics and pneumatics, in machine, equipment and plant construction, in process technology and in building technology. The front flush design also enables the switch to be used for highly viscous and crystallizing mediums.

Product features

The pressure switch offers one or two switching outputs, p-switching or n-switching and switching currents of up to 2A. The switching outputs can be programmed as break contacts, make contacts or switching windows.

As all wetted parts are made from stainless steel, these pressure switches can be used almost without reservation for media temperatures of up to 100 °C.

Adjustment ranges (in bar)

Adjustment range	max. working pressure	overload limit	burst pressure	Model No S2131	Model No S2133	Model No S2132	Model No S2134
				positive gauge pressure	absolute pressure	positive gauge pressure	absolute pressure
				internal diaphragm		front flush diaphragm	
0... 0,25	0... 0,25	2	2	P	P	P	P
0... 0,4	0... 0,4	2	2	P	P	P	P
0... 0,6	0... 0,6	4	4	P	P	P	P
0... 1	0... 1	5	5	P	P	P	P
0... 1,6	0... 1,6	10	10	P	P	P	P
0... 2,5	0... 2,5	10	10	P	P	P	P
0... 4	0... 4	17	17	P	P	P	P
0... 6	0... 6	35	35	P	P	P	P
0... 10	0... 10	35	35	P	P	P	P
0... 16	0... 16	80	80	P	P	P	P
0... 25	0... 25	50	250	D		D	
0... 40	0... 40	80	400	D		D	
0... 60	0... 60	120	550	D		D	
0... 100	0... 100	200	800	D		D	
0... 160	0... 160	320	1000	D		D	
0... 250	0... 250	500	1200	D		D	
0... 400	0... 400	800	1700	D		D	
0... 600	0... 600	1200	2400	D		D	
0... 1000	0... 1000	1500	3000	D		D	

P: piezoresistive cell; D: thin film cell

Model No. S2131, S2132, S2133, S2134

Technical data

model no	S2131	S2133	S2132	S2134	Option
execution	internal diaphragm		front flush diaphragm		
pressure	pos gauge pressure	absolute pressure	pos gauge pressure	absolute pressure	vacuum or compound ranges
process connection	G 1/2 B		G 1/2, up to 1,6 bar G 1 B		for 3131/3133: G 1/4 B, 1/4 NPT, 1/2 NPT
measuring principle	thin film cell, up to 16 bar		piezoresistive cell		
materials					
measuring element	stainless steel		stainless steel		other O-ring materials upon request Halocarbon oil for oxygen use FDA listed fluids for food applications
pressure port	stainless steel		stainless steel with NBR-O-ring		
internal filling	synthetic oil, only for adjustment ranges up to 16 bar		synthetic oil		
housing	stainless steel		stainless steel		
load cycles	1 Mio.				
supply voltage	10... 30 VDC, for programming min. 12 VDC				
switch outputs	NC, NO or window programmable				
number	1	2	1	2	
switch function	p-switching	p- switching	n- switching	n- switching	
power rating	4 A	2 A	0,3 A	0,3 A	
response time	≤ 6 ms	≤ 6 ms	≤ 10 ms	≤ 10 ms	
power consumption	≤ 20 mA				
adjustment	PC programmable				
switch point	0... 100 % of full scale, set point or window				
hysteresis	1... 99 % of full scale				
dampening	0... 500 ms				
accuracy	1 % of full scale (terminal point adjustment)				
repeatability	0,25 % of full scale				
stability per year	0,2 % of full scale @ reference conditions				
temperature ranges					
storage	-40... + 100°C				
media	-30... + 100°C				
ambient	-20... + 80°C				
temperature compensated range	0... + 80°C				
temperature influence	± 1 % of full scale, for the compensated range				
electrical connection	round connector M 12x1; 5 pin				cable outlet, for versions with 1 switch output additional: connector acc. to DIN EN 175301-803
protection class	IP 67 for round connector and cable outlet IP 65 for connector acc. to DIN EN 175301-803				
CE-sign	emission and interference acc. to EN 61 326 declaration of conformity upon request				
electrical protection	reverse polarity, over voltage and short circuit protection				
Loading capacity					
Shock (mechanical shock)	500g according to IEC 60068-2-27				
Vibration (under resonance)	20g according to IEC 60068-2-6				
Weight	approx. 0,2 kg				

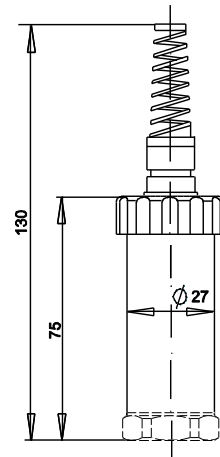
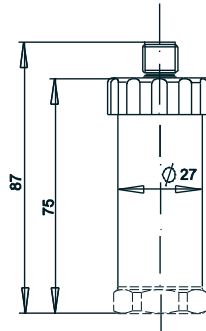
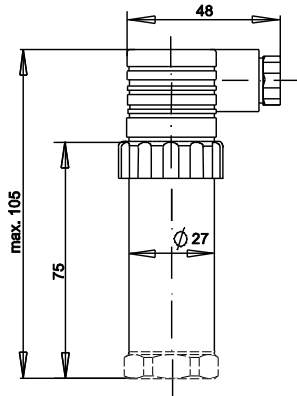
Dimensions electronical pressure switch

Case model no S2131 – S2134 (in mm)

Plug acc to DIN EN 175 301-803

plug M 12 x 1

cable outlet



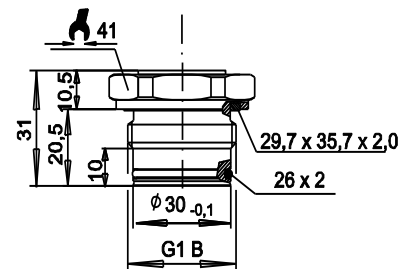
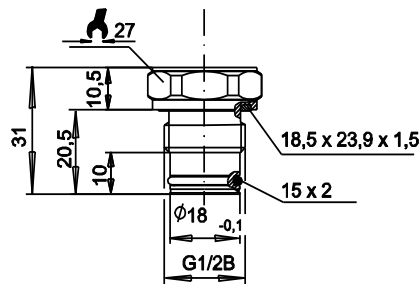
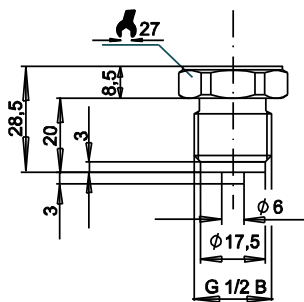
Pressure connection

(in mm)

internal diaphragm
G 1/2 B

front flush diaphragm
G 1/2 B

G 1 B



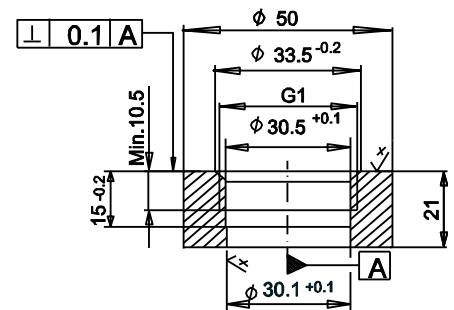
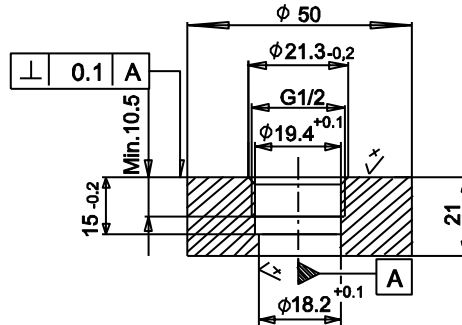
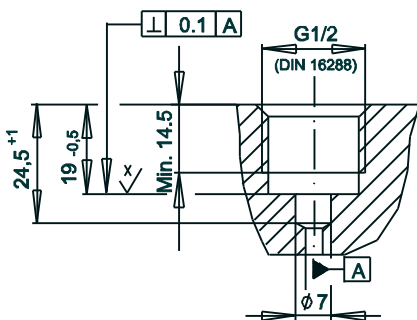
A-012

Screw in aperture resp. weld on adaptor

internal diaphragm
G 1/2 B

front flush diaphragm
G 1/2 B

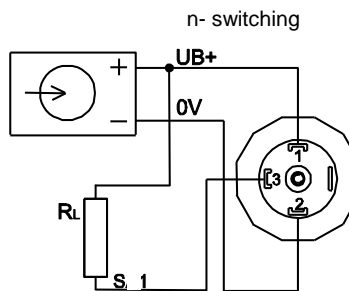
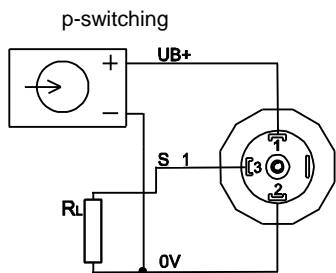
G 1 B



Electrical connection

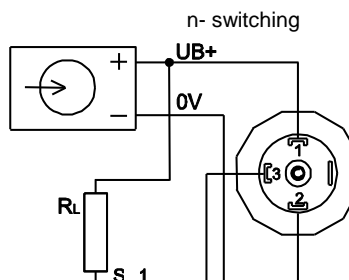
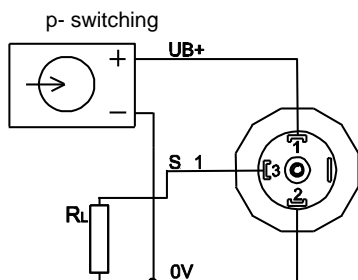
Plug acc to DIN EN 175301-803

1 switching output

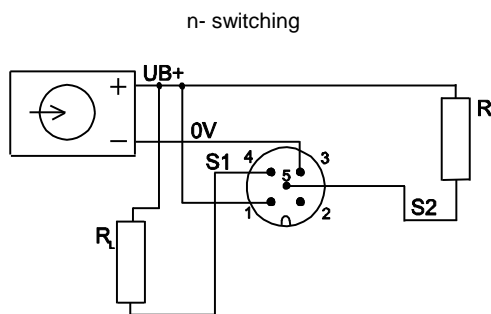
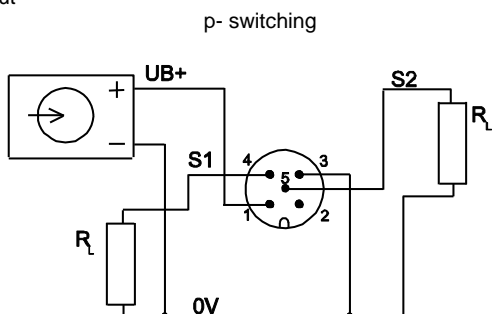


plug M12 x 1

1 switching output



2 switching output



Connection

for plug or cable outlet

	plug acc to DIN EN 175301-803	plug M12 x 1	cable outlet
Supply UB+	1	1	brown
Supply 0V	2	3	green
Switching output S1	3	4	white
Switching output S2		5	yellow

Subject to technical alternations