

Electronic Pressure Switch „MagSwitch“

on hall effect principle

1 or 2 contacts

semiconductor relay p-switching
or n-switching



Description

The new electronic pressure switches „MagSwitch“ on hall effect principle are applicable in all fields that require the reliability of semiconductor relays. This switching principle without mechanical contact ensures a long working life.

By means of an elastic measuring element and by applying the hall effect a switching output is generated at a given pressure value. The switch is available with a NO or NC contact.

The switching points can be set on site via the turning screws.

The pressure ranges from 1 bar up to 600 bar graded in accordance with EN offer a wide range of possible applications. The overload limit up to 10 bar is 5-times, at 10 bar 4-times and above 10 bar 2-times the nominal pressure.

The variety of pressure connections allows to use the electronic pressure switch „MagSwitch“ for many different applications. Special connections for refrigeration applications are available. Quick couplings for hoses can be delivered on request.

The electrical connection is made through a 4-pin connector (M 12x1) or a cable outlet.

Features

- switching point adjustable on site
- pressure ranges from 1 bar to 600 bar
- finely graded selection of nominal pressure ranges according to EN
- high switching security by solid state relays
- 1 or 2 setpoints
- NO or NC contact function
- integrated LED for indication
- suitable for direct connection to PLC inputs
- case: brass respectively aluminium anodized
- variety of process connections

Pressure ranges

Gauge pressure

positive	0 ... 0.1 bar	to 0 ... 600 bar
negative	-1 ... 0 bar	to -0.1 ... 0 bar

Applications

Mechanical engineering,
Apparatus construction,
Hydraulics and fluid technology,
Refrigeration systems.

Model: 3140, 3141

Technical data

Model	3140	3141	Options
Ranges according to EN	0 ... 0.1 bar to 0 ... 25 bar	0 ... 60 bar to 0 ... 600 bar	other ranges on request
Pressure type	positive gauge pressure		neg., neg. and pos. gauge pressure
Overload limit	≤ 10 bar 5x 10 bar 4x ≤ 25 bar 2x	2x	
Operations	1·10 ⁶		
Pressure connection ¹⁾	G 1/4, G 1/8, 1/4 NPT M 10x1, M 12x1.5	G 1/4, G 1/4 female, G 1/2	other on request
Materials - measuring element - pressure connection - case - top	nickel or copper alloy brass brass plastic	stainless steel 1.4571 brass aluminium anodized plastic	wetted parts: stainless steel
Switching function ²⁾	1 NO, 1 NC, 2 NO, 2 NC or 1 NO + 1 NC contact p-switching or n-switching		
Adjustability - switching point	via turning screw on site 5 ... 100% of F. S. ³⁾		
Repeatability	< 1% of F. S.		
Switching hysteresis	≤ 5% of F. S. ⁴⁾		other on request
Power supply	10 ... 30 VDC ⁵⁾		
Contact rating	max. 100 mA (max. 30 VDC)		other on request
Temperature compens. range Temperature influence	0 ... 80 °C 0.4%/10K		
Temperature ranges - storage - media - ambient	-30 ... 80 °C -20 ... 80 °C -20 ... 80 °C		-40 ... 110 °C
Electrical connection	round connector M 12x1 (4-pin), cable outlet with 1.5 m cable		
Protection type	IP65 according to EN 60 529 IP67 for cable outlet		
Emission	according to EN 61 326		
Interference	according to EN 61 326		
Electrical protection types	reverse polarity and overvoltage protection		
Weight	approx. 0.09 kg	approx. 0.27 kg	

¹⁾ G 1/4 without spigot.

of F. S. = of full scale value

²⁾ At increasing pressure.

³⁾ 10 ... 100% of F.S. for ranges 16 and 25 bar

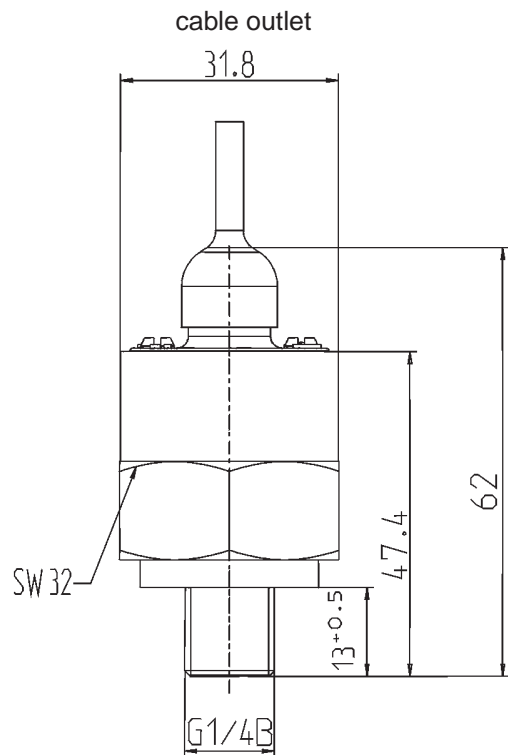
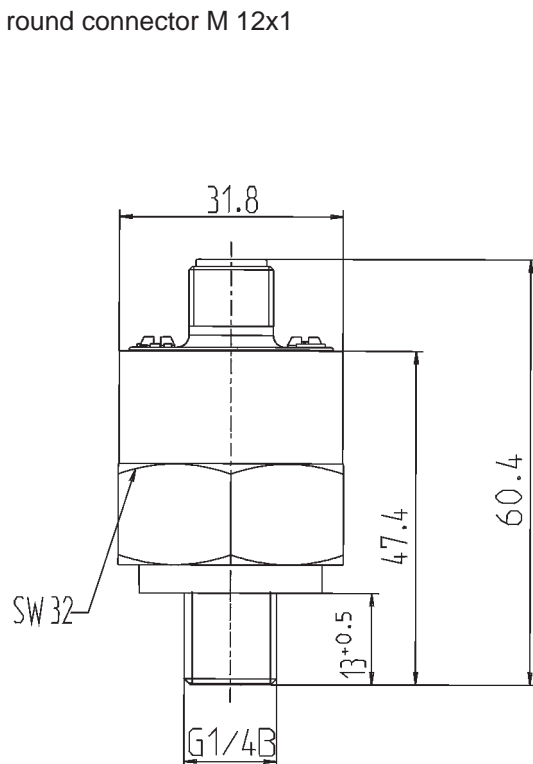
⁴⁾ ≤ 10% of F.S. for ranges 16 and 25 bar

⁵⁾ Influence of the power supply ($\Delta U_B = 10V$) < 0.3% of F.S.

Dimensions (mm)

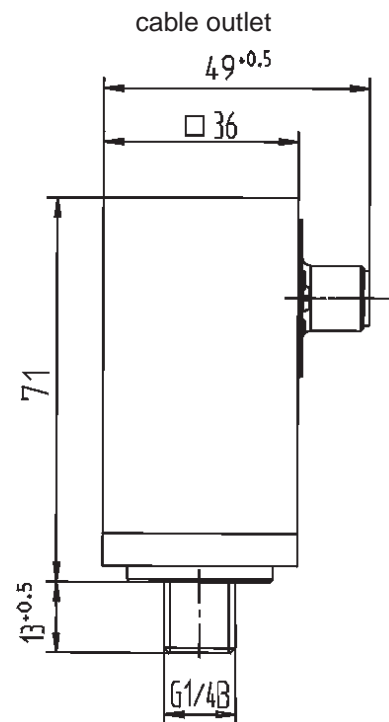
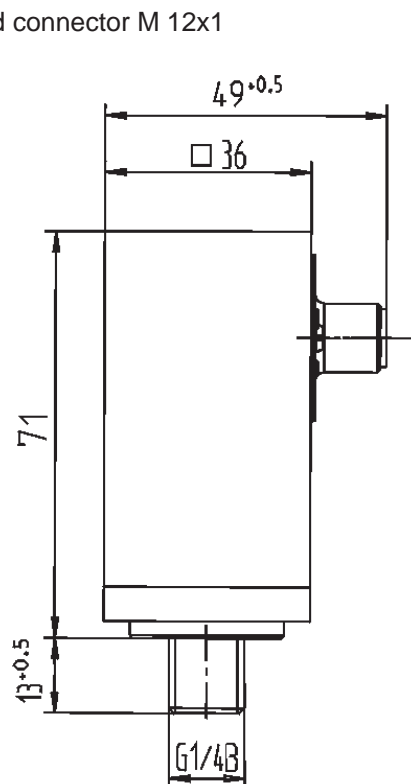
Case: Model 3140

round connector M 12x1



Case: Model 3141

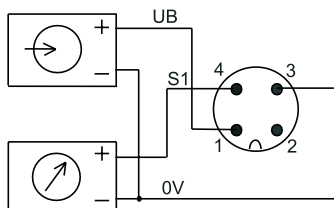
round connector M 12x1



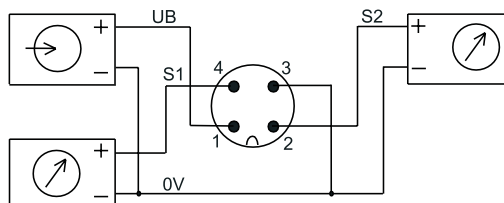
Electrical connection

round connector M 12x1 (4-pin)

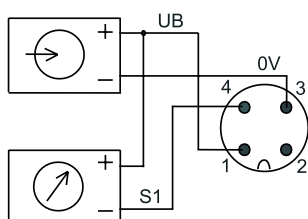
1 switching output
p-switching



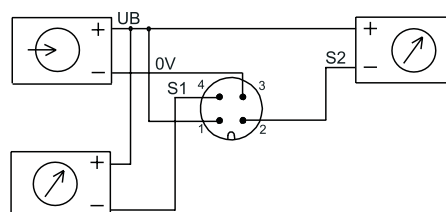
2 switching output
p-switching



n-switching

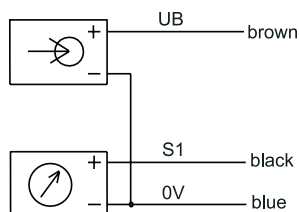


n-switching

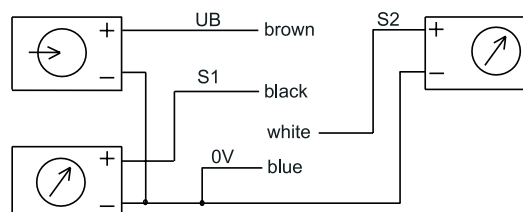


cable outlet

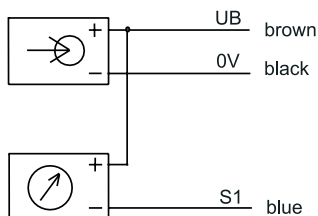
1 switching output
p-switching



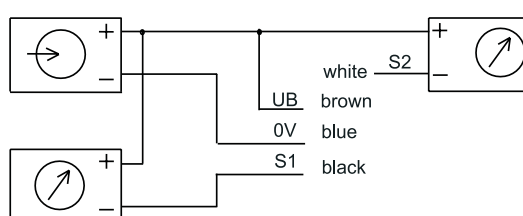
2 switching output
p-switching



n-switching



n-switching



Order details

Please use our check list for pressure switches.

Subject to technical changes