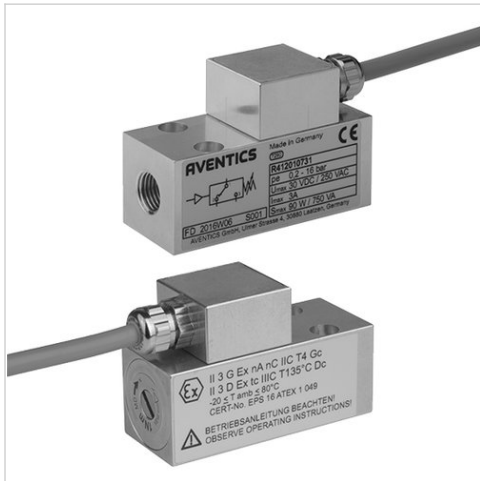


Pressure Switches, Series PM1

- Operating pressure 0,2 ... 16, -0,9 ... 1 bar
- mechanical
- Metal bellows, spring loaded, adjustable
- Electr. connection open cable ends
- Compressed air connection Internal thread, G 1/4, Flange with O-ring, Ø 5x1,5
- ATEX certified



Type	mechanical
Function	change-over contact
Mounting orientation	Any
Certificates	Cert-No. EPS 16 ATEX 1 049
Working pressure min./max.	See table below
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air, hydraulic oil
Measurement	Relative pressure
Switching element	microswitch (input/output)
Protection against overpressure	25 bar
Max. switching frequency	1,5 Hz
Shock resistance max.	15 g IEC 60068 - 2-64
Vibration resistance	10 g (60 - 500 Hz) IEC 60068 - 2-6
Repeatability (% of full scale value)	1%
Switching point	adjustable
DC operating voltage,min./max.	12 ... 125 V DC
Operational voltage AC,min./max.	12 ... 250 V AC
Mounting types	via through holes
Protection class	IP65
Electr. connection	open cable ends
Weight	0,16 kg



Technical data

Part No.		Type	Operating pressure range min./max.	Compressed air connection	Cable length	Fig.	
R412010731		PM1-M3-G014	0,2 ... 16 bar	Internal thread, G 1/4	3 m	Fig. 1	1)
R412024681		PM1-M3-G014	0,2 ... 16 bar	Internal thread, G 1/4	7 m	Fig. 1	1)
R412010730		PM1-M3-G014	-0,9 ... 1 bar	Internal thread, G 1/4	3 m	Fig. 1	-
R412024680		PM1-M3-G014	-0,9 ... 1 bar	Internal thread, G 1/4	7 m	Fig. 1	-
R412010732		PM1-M3-F001	0,2 ... 16 bar	Flange with O-ring, Ø 5x1,5	3 m	Fig. 2	1)
R412024682		PM1-M3-F001	0,2 ... 16 bar	Flange with O-ring, Ø 5x1,5	7 m	Fig. 2	1)
R412024760		PM1-M3-F001	-0,9 ... 1 bar	Flange with O-ring, Ø 5x1,5	3 m	Fig. 2	-
R412024761		PM1-M3-F001	-0,9 ... 1 bar	Flange with O-ring, Ø 5x1,5	7 m	Fig. 2	-

1) Min. switching pressure range 0.2 bar falling/0.5 bar rising

Technical information

PM1 series pressure switches are suitable for measuring the pressure or vacuum of non-aggressive gaseous or non-aggressive, non-high-viscosity fluid media.

Switching function increasing pressure: contact switches from 1-2 to 1-3. Switching function decreasing pressure: contact switches from 1-3 to 1-2.

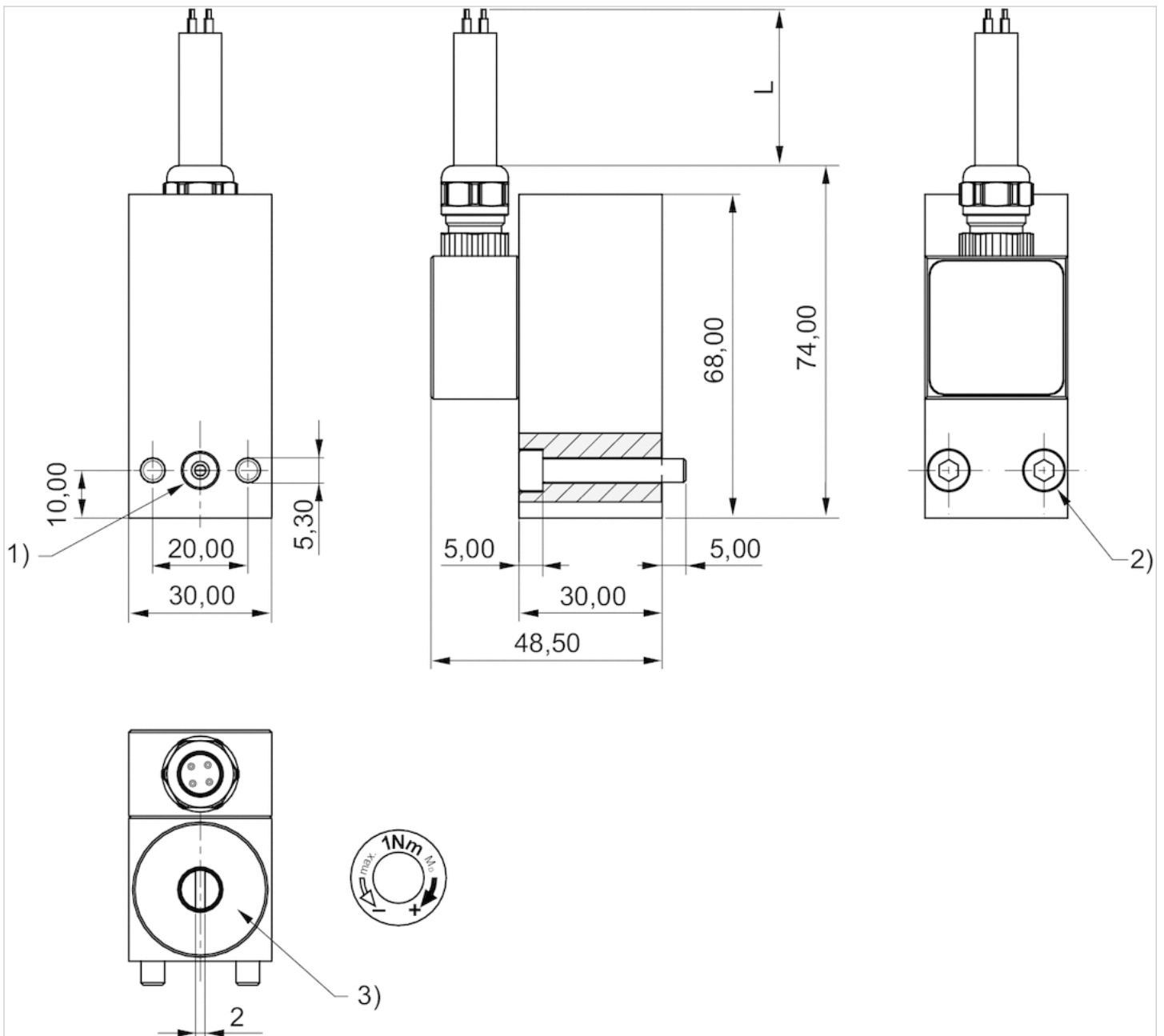
Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching! The microswitch has silver-plated contacts.

The pressure range is set via the adjustment screw.

Technical information

Material	
Housing	Aluminum
Seals	Nitrile butadiene rubber
Bellows sensor	Brass
Electr. connection	Copper/brass, nickel-plated

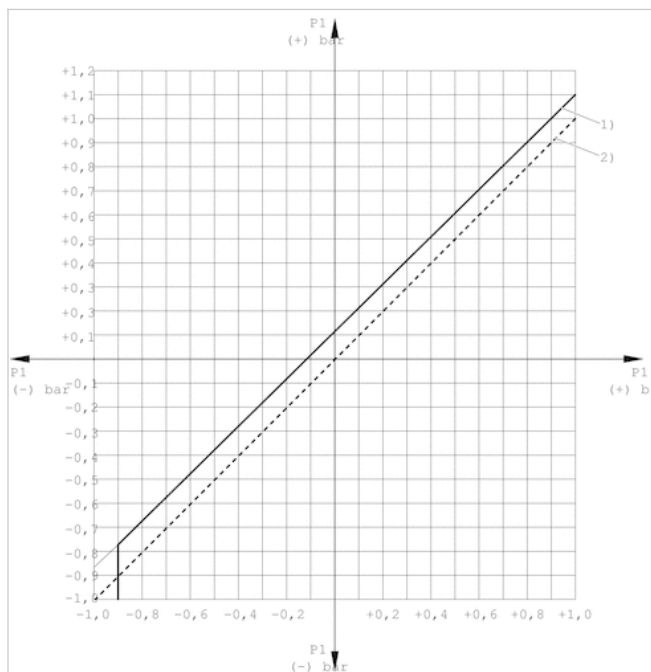
Fig. 2



1) O-ring Ø5x1,5 (included) 2) cylinder screw M5x30 (included in scope of delivery) 3) Adjustment sticker (with screw cut-out)

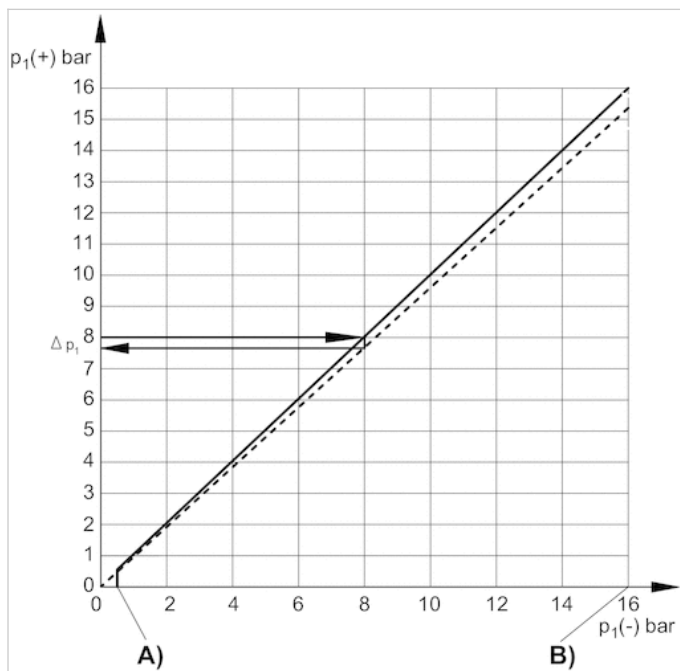
Diagrams

differential switching pressure characteristic curve (-09 - 1 bar)



1) Rising 2) Falling
 $p_1 (+)$ = upper switching pressure with increasing pressure
 $p_1 (-)$ = lower switching pressure with decreasing pressure

differential switching pressure characteristic curve (02 - 16 bar)



A) $p_1 (-)$, min. B) $p_1 (-)$, max.
 $p_1 (+)$ = upper switching pressure with increasing pressure
 $p_1 (-)$ = lower switching pressure with decreasing pressure
 Δp_1 = max. operating pressure difference or hysteresis

Example:

$p_1 (+) = 8 \text{ bar} > p_1 (-) = 7.6 \text{ bar}$

$\Delta p_1 = 0.4 \text{ bar}$

Diagrams

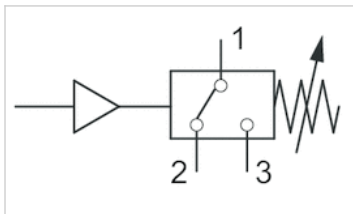
U [V]	I [A] 1)	I [A] 2)
30-250	3A	
30 / 48 / 60 / 125		3 / 1,2 / 0,8 / 0,4

Diagrams

U [V]	I [A] 1) 3)	I [A] 2) 4)
30-250	3A	
30 / 48 / 60 / 125		2 / 0,55 / 0,4 / 0,2

Pin assignments

Electrical connection open cable ends number coded



Yellow-green: protective conductor

