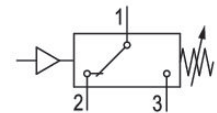


AVENTICS Series PM1 Pressure switches

The AVENTICS Series PM1 is a compact pressure switch for measuring compressed air and hydraulic oil. The Series PM1 allows users to select between different pressure ranges from -0.9 to 16 bar.

- Robust housing
- Available with the pressure ranges -0.9 to 0 bar, -0.9 to 1 bar, -0.9 to 3 bar or 0.2 to 16 bar
- Various process connections
- ATEX version available



Technical information

Industry

Type

Type

Mounting orientation

Operating pressure min

Operating pressure max

Protection against overpressure

Operational voltage

Max. shock resistance

Vibration resistance

Precision (% of full scale value)

Measurement

Compressed air connection

Compressed air connection type

Min. medium temperature

Max. medium temperature

Medium

Certificates

Industrial

Mechanical

Diaphragm, spring loaded, adjustable

Any

0.2 bar

16 bar

60 bar

12-125 V DC

12-250 V AC

15 g IEC 60068 - 2-64

10 g (60 - 500 Hz) IEC 60068 - 2-6

± 2 %

Relative pressure

G 1/4

Internal thread

-10 °C

80 °C

Compressed air

Hydraulic oil

ATEX

Electrical connection type	open cable ends
ATEX ID	Ex II 3G ec nC IIC T4 Gc Ex II 3D tc IIIC T135° Dc
Min. ambient temperature	-20 °C
Max. ambient temperature	80 °C
Switching element	microswitch (input/output)
Max. switching frequency	100/min.
Switching point	adjustable
Protection class	IP65
Mounting types	via through holes
Weight	0.37 kg

Material

Housing material	Aluminum
Seal material	Acrylonitrile butadiene rubber
Material electrical connection	Copper/brass
Part No.	R412010731

Technical information

PM1 series pressure switches are suitable for measuring the pressure or vacuum of air and hydraulic oil.

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.

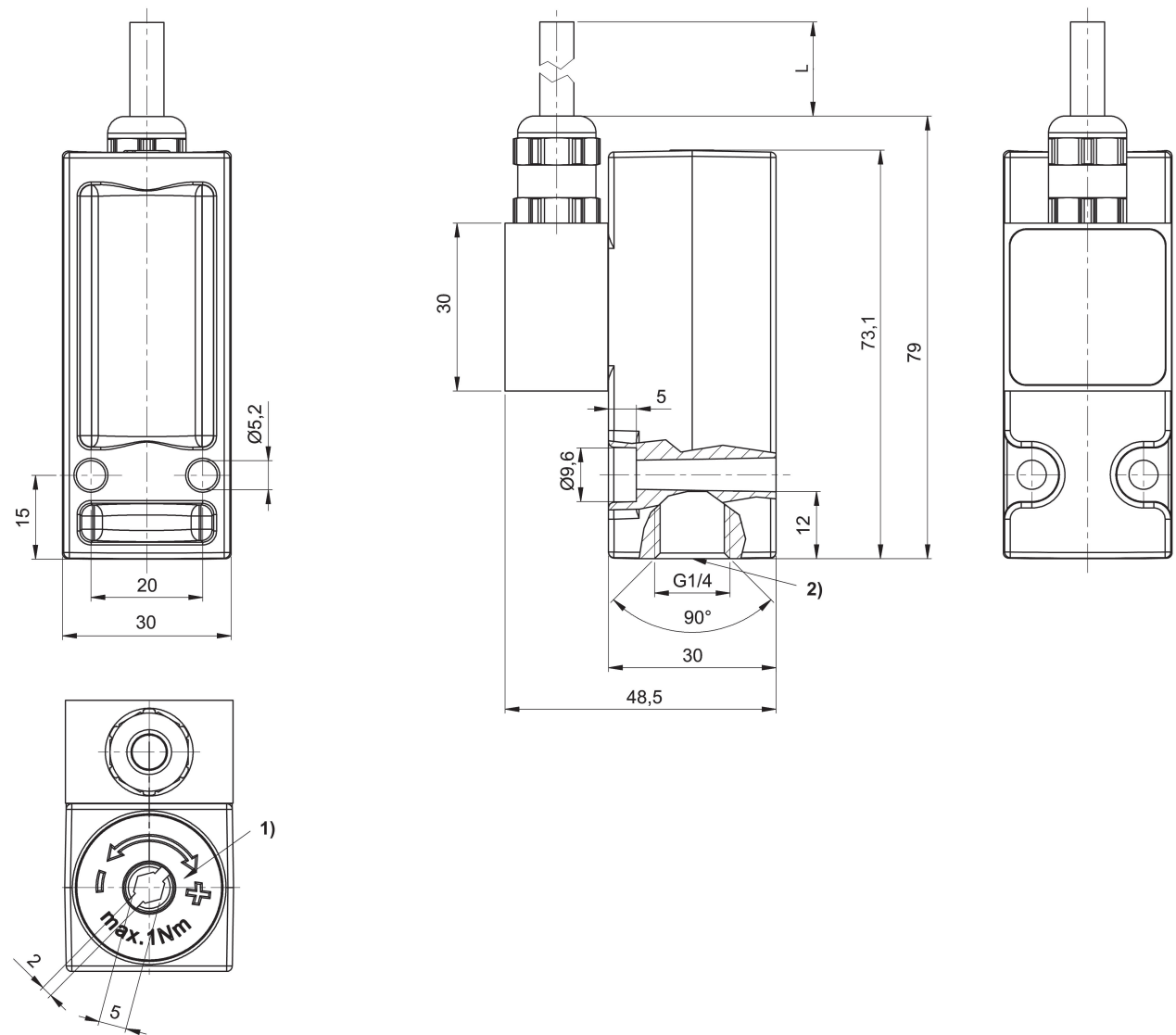
The pressure range is set via the adjustment screw.

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Dimensions in mm



1) Adjustment screw, self-holding
2) Tightening torque MA = 12 + 1 Nm

Max. permissible continuous current I max. [A] with ohmic load

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

reference cycle: 30/min., reference temperature: +30 °C

1) AC
2) DC

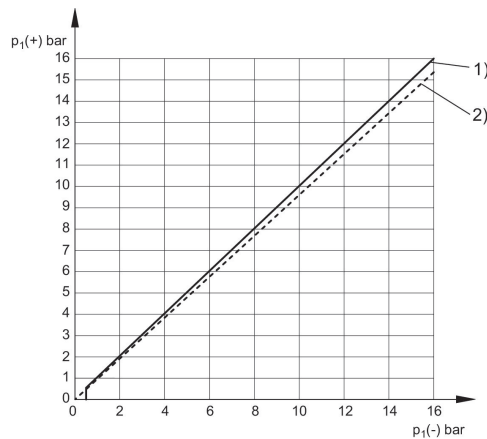
Max. permissible continuous current I max. [A] with inductive load

U [V]	I [A] 1) 3)	I [A] 2) 4)
30-250	3	-
30 / 48 / 60 / 125	-	2 / 0,55 / 0,4 / 0,05

reference cycle: 30/min., reference temperature: +30 °C

- 1) AC
- 2) DC
- 3) $\cos \approx 0,7^\circ$
- 4) $L/R \approx 10 \text{ ms}$

Differential switching pressure
characteristic curve (0,2 - 16 bar)



- p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure
1) Rising
2) Falling