MS10 || Contact Pressure Vacuum Gauge

Application

Overpressure and vacuum proof contact pressure gauge for control and supervising purposes in vacuum processes.

Application Fields

- winning of drinking water, water economy
- process technology
- terotechnology
- pneumatic transporter

Construction and Operation

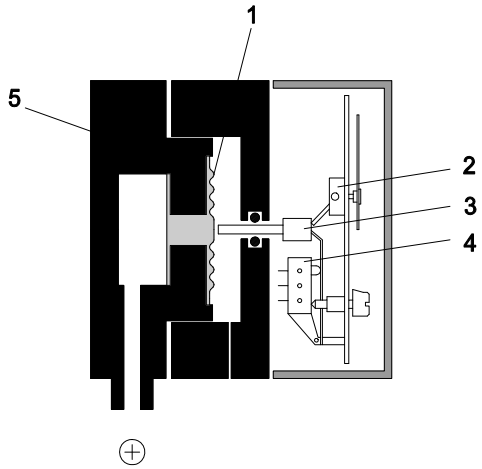
The measuring system consists of two encapsulated and hydraulically coupled metal diaphragm. When subjected to pressure it causes a deflection proportional to the strength of pressure. Opposite of the medium-touched diaphragm a tappet returns the deflection to a motion work and the operating elements of the micro switches.

When subjected to excessive pressure each metal diaphragm based oneself on the chassis of the capsule. Therefore the device is prevented from damage.

Main Features

- 2 change-over microswitches
- high repeatability
- switching function indipendent of the indication
- vibration resistant
- long service life
- rugged diaphragm system
- all measuring ranges overpressure proof to 25 bar

Functional Scheme

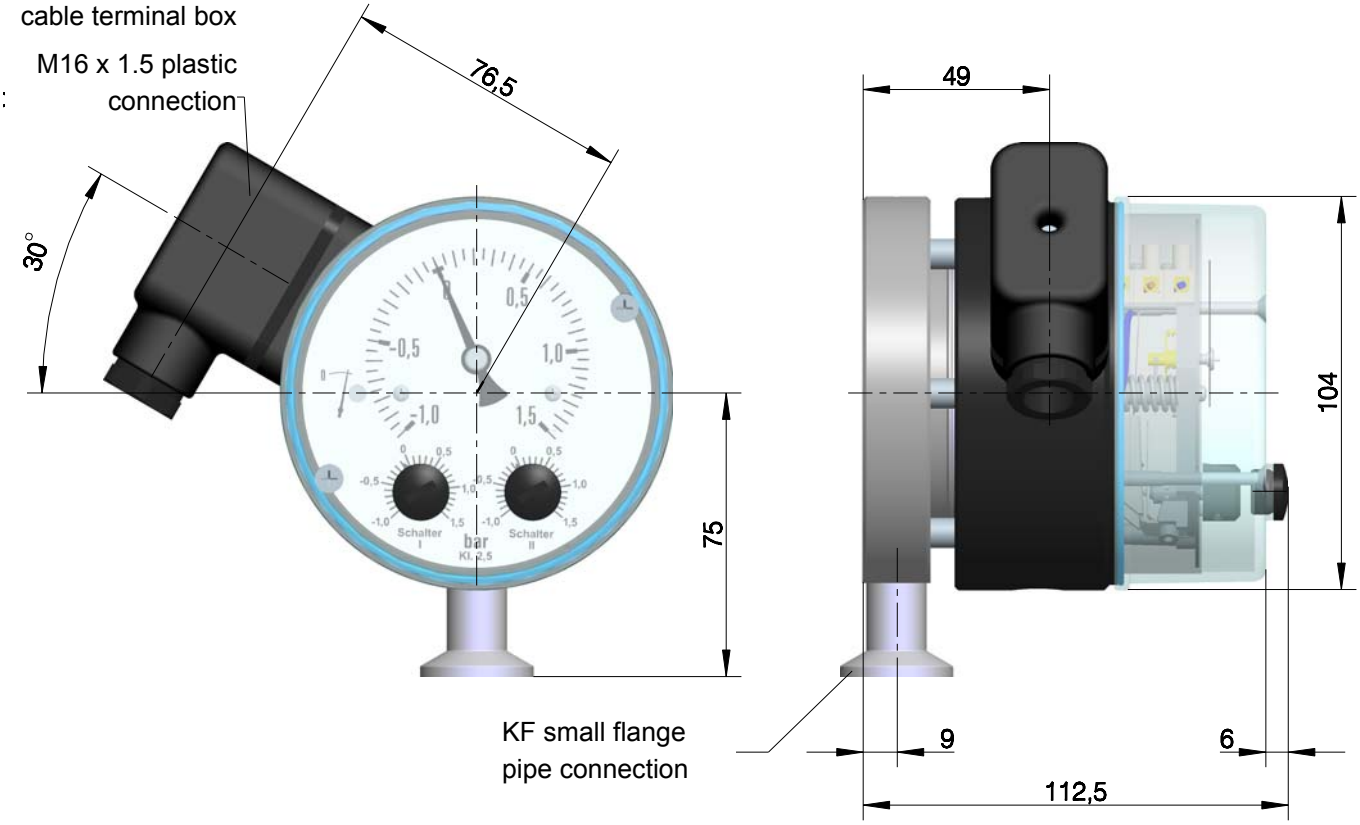


1. Measuring diaphragm
2. Motion work
3. Tappet
4. Micro switches, Operating elements
5. Pressure chamber

Specifications

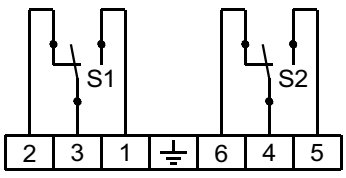
General	
Measuring range	(s. Ordering Code)
Nominal pressure	25 bar
Max. pressure	overpressure proof to nominal pressure (all measuring ranges), vacuum proof up to fine vacuum 10^{-2} mbar
Leakage rate	$\leq 10^{-7}$ Pa · m³/s $\leq 10^{-6}$ mbar · l/s
Perm. ambient temperature	-10 ... +70°C
Perm. media temperature	70°C
Degree of protection	IP54 per DIN EN 60529
Mounting position	vertical, pressure port downward
Accuracy	± 2.5% FS
Adjustment of zero point	located in the dial
Switching Points	
Output contacts	1 or 2 micro switches, 1-pole changing contacts
Setting of switching points	adjustable by reference value scale smallest adjustable value: approx. 5% FS
Switching hysteresis	approx. 2.5% FS
Load / contact	**U ~ max. = 250 V AC, I max. = 5 A, P max. = 250 VA** **U = max. = 30 V DC, I max. = 0,4 A, P max. = 10 W**
Connections	
Electrical Connection	cable terminal box
Pressure Connection	KF10 small flange pipe connection DIN 28403 and ISO 2861
Measuring System	metal diaphragm measuring system, welded
Materials	
Pressure chamber	stainless steel 1.4404
Measuring diaphragm	1.4571, Duratherm®
Materials, wetted inner parts	stainless steel 1.4404, 1.4571
Materials, housing	aluminium, eloxadized in black
Materials, front cover	macrolon
Weight	2,6 kg
Mounting	pipe mounting by KF10 small flange pipe connection per DIN 28403 / ISO 2861

Dimensions (all units in mm unless stated otherwise)



Wiring

device depressurized and dead



Ordering Code

Contact Pressure Vacuum Gauge **MS10**

		E	A	0	K		K	0	0	0	0

Measuring range

-200 . . . 200 mbar	B	5
0 . . . 400 mbar	8	3
-1 . . . . . 0,6 bar	3	2
-1 . . . . . 1,5 bar	3	3
-1 . . . . . 3 bar	3	4
-1 . . . . . 5 bar	3	5
-1 . . . . . 9 bar	3	6
-1 . . . . 15 bar	3	7
-1 . . . . 24 bar	3	8
Other ranges upon request	9	9

Wetted Parts

1.4404/1.4571 > E

Pressure Chamber

Aluminium, eloxadized in black > A

Type

Bottom connection, KF small flange pipe connection > K

Switching Elements

1 adjustable microswitch > A

2 adjustable microswitches > B

Electrical Connection

cable terminal box > K

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