DIAPHRAGM PRESSURE GAUGES WITH ELECTRICAL ALARM CONTACTS, CASE IN STAINLESS STEEL

with or without damping

Diameter 100, 160
with magnatic snap-action
or inductive alarm contacts

Connection position radial bottom

Description

The design principle and material selection of the diaphragm pressure gauges allow them to meet the stringent demands occurring above all in industrial services. Special corrosion resistant materials are used for service with chemically aggressive media.

Open process connections ensure that the gauges are easy to clean with highly viscous or crystallizing process media, thus guaranteeing process reliability.

As a result of the high actuating forces, pressure gauges with diaphragms are particularly suitable for connection of electric alarm contacts. Electric alarm contacts open and close circuits in response to the position of the pressure gauge pointer.

Magnetic snap-action electric alarm contacts are used in adverse opening conditions. The high contact pressure and the selection of various contact materials result in reliable and cost-effective solutions, above all when high currents have to be switched. Signal output does however take place slightly in advance of or lagging slightly behind the motion of the actual value pointer.

If the electrical switching capacities of the alarm contacts are exceeded or not reached (see technical Information – chapter 8) is to be used to provide an appropriate current rating.

Inductive electrical alarm contacts have an almost unlimited service life, as the signal is switched without physical contact. Closing or opening takes place without any feedback effect on the measuring system, precluding any signal lead or lag. A corresponding control unit is always required for operation. Units with inductive contacts may be operated in areas with potentially explosive atmospheres, assuming compliance with existing specifications.

Features

- o Limit value signalling by magnetic snap-action or inductive contacts
- o With SVA-amplifier suitable for SPS- control units
- o Up to four alarm contacts possible
- o Can be used under Ex-conditions with inductive alarm contacts
- o Liquid dampening provides vibration-free display
- o Up to 10-fold overload capacity
- o Protection class IP 54 resp. IP 65

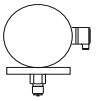
Ranges

0 ... 25 mbar to 0 ... 40 bar

Applications

Mechanical engineering,
Plant and apparatus construction,
Building services

Technical details

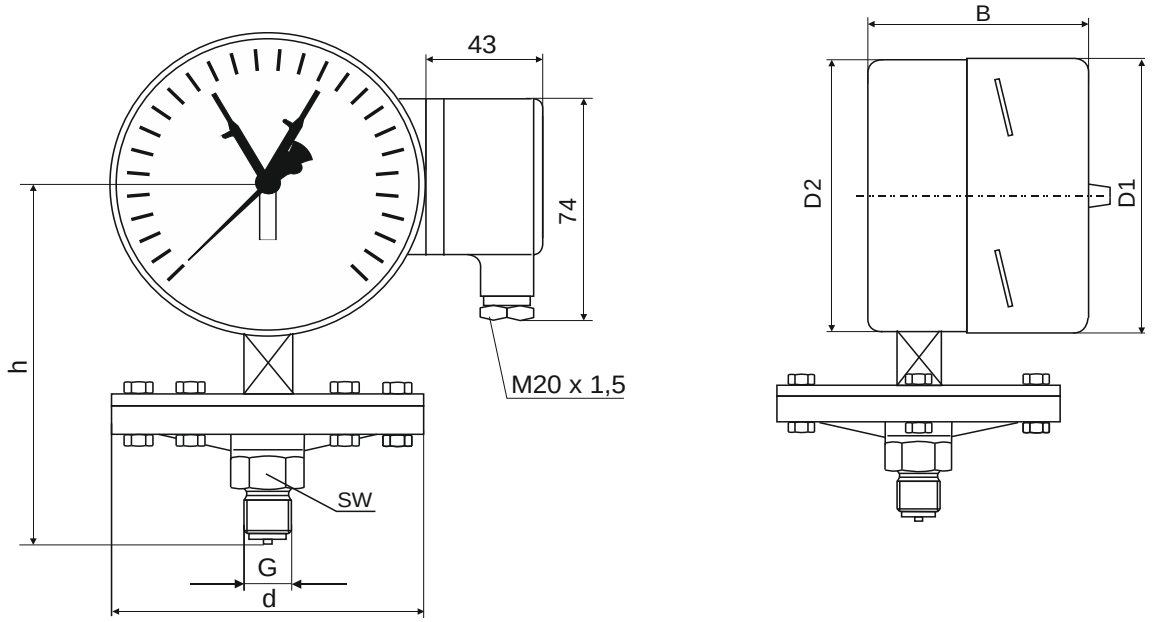
Type	6511	8311	6511	8311	6611	8411	6611	8411	Options
Diameter	**100**				**160**				
Symbol									
Type of contact	**mag. snap-act.**		**inductive**		**mag. snap-act.**		**inductive**		
Numbers of contacts	1 to 4 depending on measuring range		1 to 3 depending on measuring range		1 to 4 depending on measuring range		1 to 3 depending on measuring range		
Liquid filling	-	Ester oil	-	Ester oil	-	Ester oil	-	Ester oil	
Electrical connection	cable connector right hand side; 6 screw terminals + PE, cross section of the conducting wire max. 2,5 mm², screw type conduit fitting M 20x 1,5 outgoing downward								back (without pressure relief opening)
Accuracy class	cl. 1,6 according to EN 837-3, cl. 2,5 with liquid filling and ranges 0..25 mbar up to 0..100 mbar								
Ranges	0…25 mbar up to 0…250 mbar : flange Ø 160 mm 0…0,4 bar up to 0…40 bar: flange Ø 100 mm negative or positive /negative and positive overpressure								
Application	Constant load: up to full scale value Alternating load: up to 0,9-fold full scale value								
Overload capacity	≤ 0,25 bar: 5 x full scale value > 0,25 bar - ≤2,5 bar: 3 x full scale value > 2,5 bar: 5 x full scale value, max. 40 bar								10x full scale value ; max. 40 bar, vacuum proof up to - 1 bar
Case	Stainless steel, blank								
Upper flange	Steel, black								
Connection with upper flange **- position** **- thread**	Steel, black radial bottom G 1/2 B, SW 22								other threads or open flanges on request
Ring	Stainless steel, bayonet								
Window	Plexiglas								
Dial	Al white, scale and printing black								Dual scale
Pointer	Al black								
Movement	Cu-alloy, bearing parts nickel silver								
Elastic measuring element	≤ 2,5 bar: stainless steel 1.4571 > 2,5 bar: stainless steel (Duratherm 600)								
Seal to pressure chamber and filled internal chamber	NBR (Perbunan)								FPM (Viton) or PTFE
Medium temperature	T_{min}. -20°C, T_{max}. 100 °C								
Ambient temperature	T_{min}. -20°C, T_{max}. 60°C								
Temperature drift	0,5%/10K deviation of normal temperature 20°C								
Protection EN 60 529/ IEC 259	IP 54	IP 65	IP 54	IP 65	IP 54	IP 65	IP 54	IP 65	
Wetted parts	see process connection with lower flange and elastic measuring element								Special materials on request
Orifice									Ø 0,4; Ø 0,8 mm

Measuring range	Magnetic snap-action contact	Inductive contact
25 mbar	2	3
40 mbar up to 160 mbar	4	3
ab 250 mbar	4	3

Electrical details; see technical information - chapter 6
Electrical accessories: see technical information - chapter 6

Modifications reserved!

Dimensioned drawing



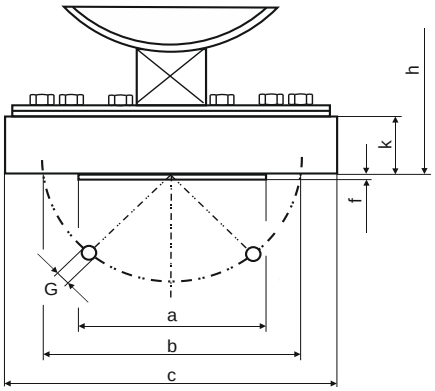
ND	Ranges (bar)	Dimensions (mm)								Approx. weight (kg)			
		d	a	B±1 with		D1	D2	G	h±2	SW	unfilled, with		filled, with	
				1+2 cont.	3 cont.						1+2 cont.	3 cont.	1+2 cont.	3 cont.
100	≤0,25	160	15,5	88	96	101	99	G1/2B	117	22	3,7	3,7	4,2	4,2
160						161	159		149		4,6	4,7	5,8	6
100	> 0,25	100	15,5	88	96	101	99	G1/2B	117	22	2,2	2,2	2,7	2,7
160						161	159		149		3,1	3,1	4,3	4,4

Connection according to EN 837 / 3

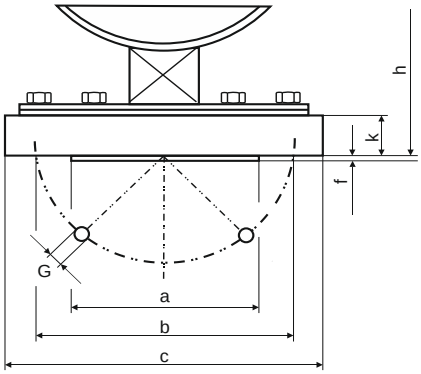
Dimensioned drawing

Options with DIN-flange connection DN 25, PN 10 up to PN 40

Ranges 0…25 up to 0...250 mbar



Ranges 0…0,4 up to 0…40 bar

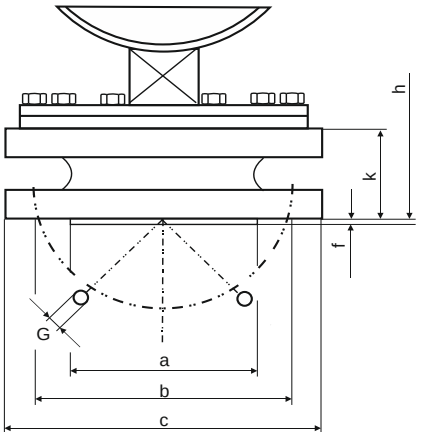


ND	DIN-flange DN 25 PN 10 up to 40 [1]	Dimesions (mm)							Approx weight (kg) [2]
		c	b	a	k	f	G	h±2	
100	≤0,25 bar	160	85	68	36	2	4 x M12	122	3,0
160								152	3,0
100	> 0,25 bar	115	85	68	25	2	4x M12	111	0,9
160								141	0,9

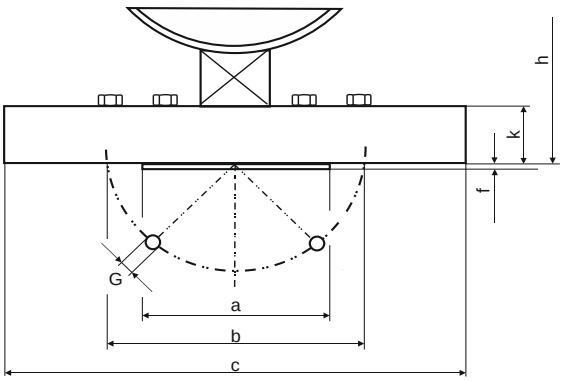
other dimensions as standard version

Options with DIN-flange DN 50, PN 10 up to PN 40

Ranges 0…25 up to 0...250 mbar



Ranges 0…0,4 up to 0…40 bar



ND	DIN-flange DN 50 PN 10 bis 40 [1]	Dimensions (mm)							Approx weight (kg) [2]
		c	b	a	k	f	G	h±2	
100	≤0,25 bar	165	125	102	54	3	4 x Ø 18	140	2,6
160								170	2,6
100	> 0,25 bar	165	125	102	30	3	4 x Ø 18	106	2,5
160								136	2,5

other dimensions as standard version

1) Suitable for mounting flange according to DIN, sealing face form D acc. to DIN 2526.

2) The listed weights are additional mass, which must be added to the weight of the standard version (connection G1/2 B acc. to DIN 16 288).

Modifications reserved!