Absolute pressure gauges with diaphragm

New: as multifunctional pressure instrument

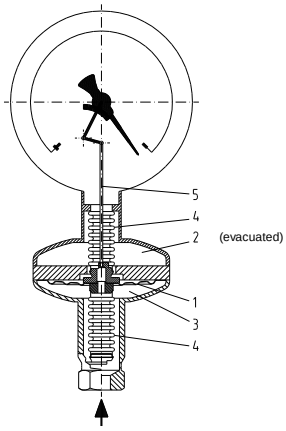
with or without electrical alarm contacts
Nominal size ND 100 , 160
Connection position bottom, radial

Description

Absolute pressure gauges are always used when - particularly with measurement of low pressures or vacuums - influence from atmospheric air pressure fluctuations which could falsify measurements has to be ruled out.
The design and materials are selected to allow the instruments to satisfy the stringent demands of the chemical industry. They are used with chemically aggressive media (fluids) and/or in aggressive environments. With highly viscous or crystallizing media, the instruments are fitted with open process connections, thus facilitating rapid and thorough cleaning.

Structure and function

The diaphragm element (1) separates the medium chamber (3) from the reference pressure chamber (2) at an absolute pressure of zero.
The differential pressure between the medium chamber (3) from the reference pressure chamber (2) causes the diaphragm element (1) to deflect, thus producing the measurement travel.
The measurement travel is transmitted out of the pressure chamber by bellows or corrugated tubes (4), applied by the push rod (5) to the movement, and displayed. The diaphragm is protected in overload conditions by support surfaces.



Features

- o Measuring system and case in stainless steel
- o Process connection with threaded spigot or open flange, both in stainless steel
- o Inductive alarm or magnetic snap-action contact
- o High resistance to overload
- o Possible with highly viscous and crystallizing media

Ranges

0 ... 25 mbar to 0 ... 25 bar absolute pressure

Applications

Chemical and petrochemical industry,
pharmaceutical and cosmetic industry,
food and beverage industry,
vaccuum, drying and bottling systems

Model: P2900, P2901, P2903, P2904
P2905, P2906, P2908, P2909

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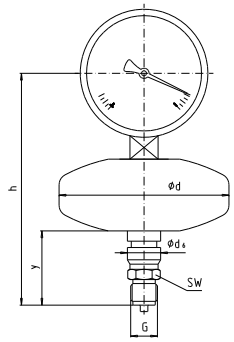
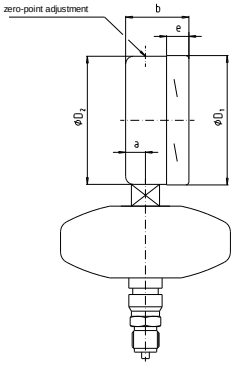
Technical data

Models	P2900	P2905	P2901	P2906	P2903	P2908	Options
Nominal size	100	160	100	160	100	160	
Symbol							
Contact type	none		magnetic snap-action		Inductive		Current output
Number of contacts	none		1 - 3		1 - 2		4 ... 20 mA
Electrical connection	none		Cable connector right hand side. 6 screw terminals + PE, cross section of the conducting wire 2.5 mm^2. Screw type conduit fitting M20x1.5, outgoing downwards				plug
Accuracy class	2.5 to EN 837-3						1.6; 1.0; 0.6
Ranges	0 ... 25 mbar to 0 ... 25 bar absolute pressure						
Overload capacity	min. 1 bar absolute pressure (atmospheric pressure), and above 10 x full scale value, max. 25 bar absolute pressure						>10 x full scale value
Application	Constant load: up to full scale value Alternating load: up to 0.9 x full scale value						
Case	Stainless steel 1.4301 with pressure relief opening						Liquid filling, EN 837-3/S3
Bezel	Bayonet ring, stainless steel 1.4301						
Window	Laminated safety glass						
Dial	Aluminium, white, scale and imprint black						Special scales
Pointer	Aluminium, black, micro-adjustment						
Movement	Copper alloy						Zero point adjustment
Measuring element	≤ 0.4 bar, Stainless steel, 1.4571 (medium wetted) > 0.4 bar, NiCrCo alloy, (Duratherm 600)						special materials
Pressure connection -position	Stainless steel 1.4571 (medium wetted) radial, bottom						
-thread	G 1/2 B, SW 22 , 1/2-14 NPT						Flange connection
Measuring chamber	Stainless steel, 1.4571 (medium wetted)						
Temperatures -Medium -Ambient	 Tmin. -20°C, Tmax. 100°C Tmin. -20°C, Tmax. 60°C						
Temperature drift	0.5%/10K if deviation from normal temperature 20°C						
Mounting	fixed measuring circuit						Instrument holder for wall or pipe mounting
Protection	IP 54 to EN 60 529 / IEC 529						IP 65

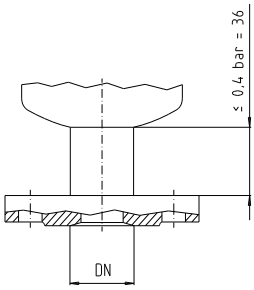
Electrical data and switching functions see data sheet DE 1231 and DE 728
Electrical accessories see data sheet DE 1230

Dimensions

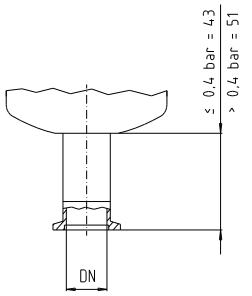




Open process connection
DN 15 ... 50, PN 6 / 40
Connection dimensions to DIN 2501



Miniature flange for vacuum systems
DN 10 ... 32
Connection dimensions to DIN 28 403



Model P2900 and P2905

ND	Ranges [bar]	Dimensions [mm] a	b	D_1	D_2	d	d_6	e	G	h ± 1	y	SW	Weight [kg]
100	≤ 0.4	15.5	49.5	101	99	133	26	17.5	G ½ B	185	58	22	1.8
	> 0.4	15.5	49.5	101	99	76	26	17.5	G ½ B	177	66	22	1.2
160	≤ 0.4	15.5	49.5	161	159	133	26	17.5	G ½ B	215	58	22	2.3
	> 0.4	15.5	49.5	161	159	76	26	17.5	G ½ B	207	66	22	1.6