

Standard system contact pressure gauges for the chemical industry for special safety

with or without dampening

with inductive contacts

Nominal sizes ND 160

Connection position bottom, radial



Description

Contact pressure gauges with electrical alarm contacts are suitable for controlling or regulating process sequences. The contacts open or close electrical circuits in relation to the position of the pointer on the pressure gauge.

Contact pressure gauges with the Bourdon tube system are used at process pressures of approximately 1 bar and upwards. The materials used make the gauges suitable for chemically aggressive gases or liquids, although these may not be too viscous or be susceptible to crystallization. A laminated safety pane, unbreakable partition between the measuring system and dial and a blow-off back cover help to prevent accidents caused by escaping media or projected parts and thus injuries to employees if a pressure overload of the gauge occurs.

The inexpensive tried and tested Bourdon tube system coupled with a modern modular principle provides a very reliable yet inexpensive contact pressure gauge.

Gauges with liquid filling are damped if pressure pulses or mechanical vibrations arise. This extends the service life and the gauge display remains largely vibration free.

Electrical alarm contacts are used as inductive alarm contacts and operate without physical contact. They have no unfavourable effects on the pressure measuring system while having an unlimited service life. A control unit is always needed to operate these contacts. Contact pressure gauges with inductive alarm contacts can be used in potentially explosive atmospheres, provided that the appropriate regulations are complied with.

Special features

- o Modular construction system ensures high reliability and long service life
- o Liquid dampening provides vibration-free display
- o Chemical resistant due to measuring system, stainless steel 1.4571, case, stainless steel 1.4301
- o Special safety to EN837-1/S3
- o Protection IP 65
- o Accuracy class 1.0
- o Up to three alarm contacts possible

Measuring ranges


0 ... 1 bar to 0 ... 1000 bar

Applications

Process engineering, water treatment
mechanical engineering and plant construction.

Models: **P2183, P2193**

Technical Data

Models	P2183	P2193	Options
Nominal size	160		
Symbol			
Contact type	Inductive	Inductive	
Number of contacts *	1 to 3 depending on measuring range	1 to 3 depending on measuring range	
Liquid filling	-	Polybutene	
Electrical connection	Cable connector right hand side. 4 screw terminals + PE, cross section of the conducting wire 2.5 mm ² Screw type conduit fitting M20x1.5, outgoing downwards		
Accuracy class	class 1.0 to EN 837-1		
Ranges	0 ... 1 bar to 0 ... 1000 bar negative or positive / negative and positive gauge pressure		0.6 bar or 1600 bar
Application	Constant load: up to full scale value Alternating load: up to 0.9 x full scale value short-time: overloadable 1.3 x		
Bottom cover	Stainless steel 1.4301		
Case	Stainless steel 1.4301		Fastening angle
Bezel	Stainless steel 1.4301		
Mounting flange			Stainless steel 1.4301, Front flange, bayonet ring
Window	Laminated safety glass		
Dial	Aluminium, white, scale and imprint black		
Pointer	Aluminium, black		
Movement	Stainless steel, <100 bar Bourdon tube / ≥100 bar helical tube		
Measuring element	Stainless steel 1.4571		
Pressure connection - Position - thread	Stainless steel 1.4571 bottom, radial G 1/2 B, SW22		1/2-14 NPT Other threads on request
Temperatures - Medium - Ambient	Tmin. -20°C, Tmax. 100° C Tmin. -20°C, Tmax. 80° C Tmin. -40°C, Tmax. 60° C Tmin. -20°C, Tmax. 60° C		
Temperature drift	0.4%/10K if deviation from normal temperature 20°C		
Protection to EN 60529/IEC 529	IP 54	IP 65	
Orifice			ø 0.5 ; ø 0.8
Weight approx.	2.3 kg	3.9 kg	

* Number of contacts

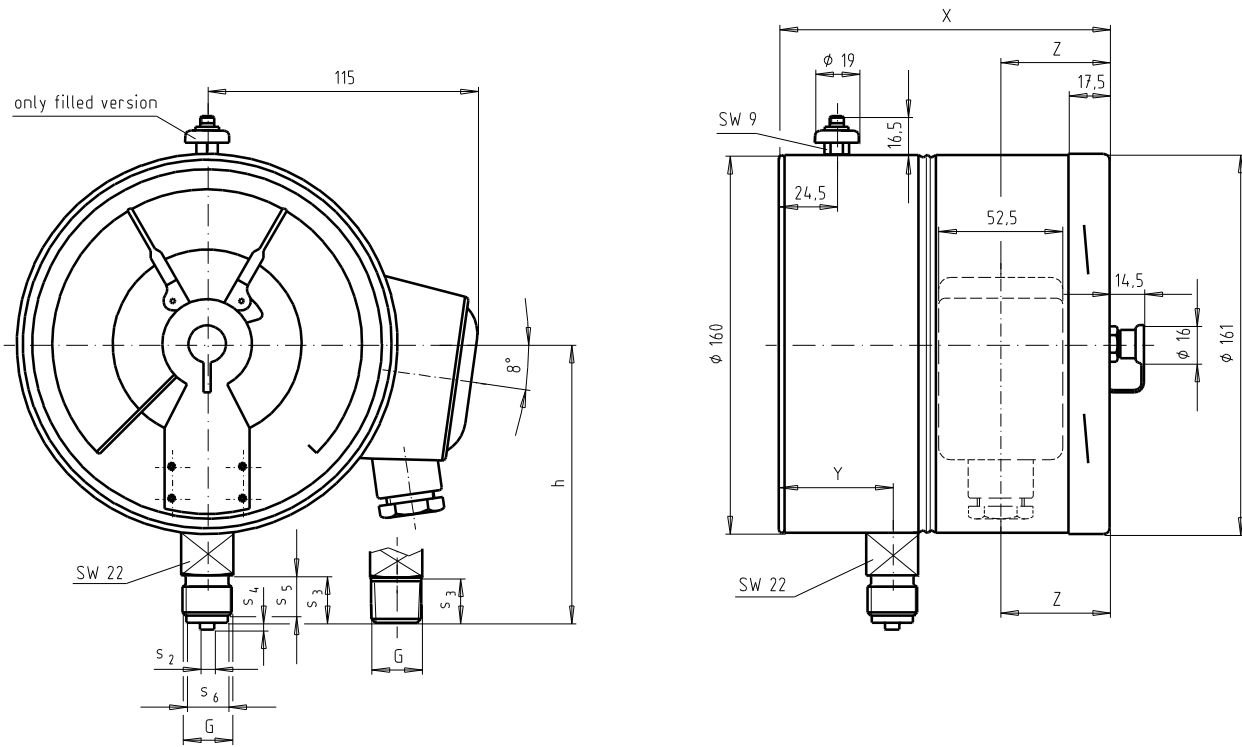
Measuring range	Inductive contact
0.6 bar	1
1.0 bar	2
above 1.6 bar	3

See data sheet - **DE 1230** and **DE 1231** for electrical data

Dimensions

Connection position bottom, radial

Model: P2183, P2193



G	S ₂	S ₃	S ₄	S ₅	S ₆	h
G1/2 B JIS	$\phi 5$	20	3	-	-	118
1/2NPT	-	19	-	-	-	117
R1/2-2999	-	19	-	-	-	117
G1/2 B	$\phi 6$	20	3	17	$\phi 17,5$	118
M20x1,5	$\phi 6$	20	3	17	$\phi 17,5$	118

Singel or double contacts	X (mm)	Y (mm)	Z (mm)
Bourdon tube	141	47,5	48
Helical tube	141	30,5	48
Triple contacts			
Bourdon tube	153,5	47,5	60,5
Helical tube	153,5	30,5	60,5

Modifications reserved