

Heavy Duty contact pressure gauges

with magnetic snap-action contacts
or inductive contacts

Nominal sizes ND 160

Connection position bottom, radial
or back, eccentric



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 media (gases or liquids) may not attack the copper alloy materials used. Liquids may not be too viscous or be susceptible to crystallization. The inexpensive and tried and tested Bourdon tube system coupled with a modern modular principle provides a very reliable yet inexpensive contact pressure gauge.

Electrical alarm contacts are used as magnetic snap-action contacts, especially in harsh industrial conditions. The high contact pressure and the choice of different electrical contact materials enable high currents to be switched reliably. If the electrical switching capacities of the alarm contacts are exceeded or not reached (see DE 1231), a relay is to be used to provide an appropriate current rating (see DE 1230).

Inductive alarm contacts operate without physical contact and thus 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. An integrated switch amplifier (SVA) allows direct connection of the contact to a PLC system. 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 Up to four alarm contacts possible
- o Protection to IP 54
- o Accuracy class 1,0
- o Case, stainless steel
- o Measuring system, copper alloy
- o Suitable for programmable controller

Measuring ranges



0 ... 1 bar to 0 ... 1600 bar

Applications

Mechanical engineering, plant construction,
Building systems, water treatment
compressed air supply

Models: P1621, P1623, P1631, P1633

Technical data

Models	P1621	P1623	P1631	P1633	Options
Nominal size	160				
Symbol					
Type of contact	Magnetic snap-action	Inductive	Magnetic snap-action	Inductive	
Number 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	
Electrical connection	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				back
Accuracy class	class 1,0 to EN 837-1				
Ranges	0 ... 1 bar to 0 ... 1600 bar negative or positive / negative and positive gauge pressure				0,6 bar
Applications	Constant load: up to full scale value Alternating load: up to 0,9 x full scale value short-time: Overload capacity 1.3 x				
Case	Stainless steel				
Bezel	Stainless steel				
Mounting flange	none				Front / rear flange
Window	Plastic cover, Makrolon 2800				
Dial	Aluminium, white, scale and imprint black				
Pointer	Aluminium, black				
Movement	Copper alloy				
Measuring element	Copper alloy, < 100 bar, bourdon tube, soft soldered Stainless steel, ≥ 100, helical tube				
Pressure connection	Copper alloy (≥ 1000 bar Stainless steel)				
- position	radial bottom		back eccentric		
- thread	G ½ B to DIN ISO 228				1/2 - 14 NPT, other threads on request
Temperatures	Tmin. -20°C, Tmax. 80° C Tmin. -25°C, Tmax. 60° C				
Temperature drift	0,3%/10K if deviation from normal temperature 20°C				
Protection to EN 60 529/IEC 529	IP 54	IP 54	IP54	IP 54	
Orifice					ø 0,4 ; ø 0,8
Weight approx.	1,8 kg	1,8 kg	1,7 kg	1,7 kg	

* Number of contacts

Measuring range	Magnetic snap-action contact	Inductive contact
1,0 bar	1	2
1,6 bar	2	3
above 2,5 bar	4	3

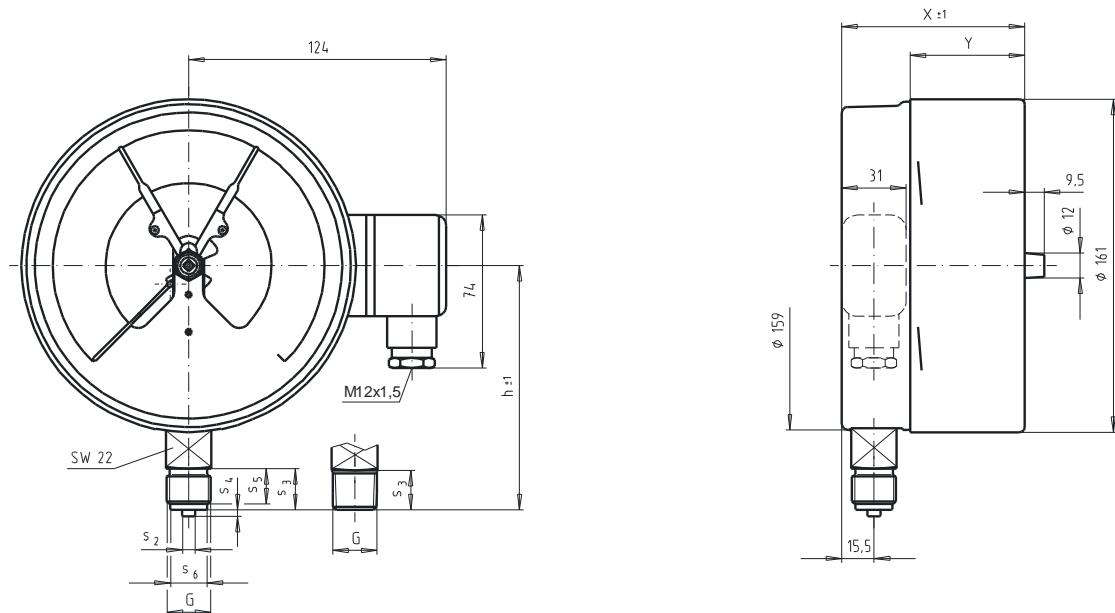
See data sheet - DE 1231 for electrical data

See data sheet - DE 1230 for electrical data

Dimensions

Connection position bottom, radial

Models: P1621, P1623.



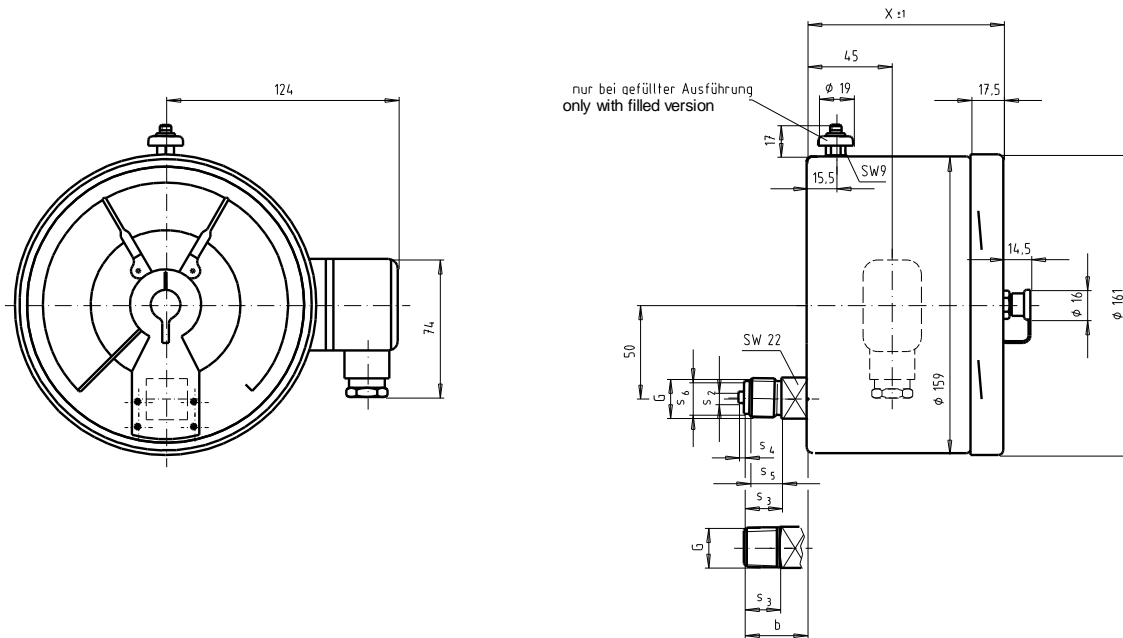
G	h ±1	s2	s3	s4	s5	s6
G½ B	118	ø6	20	3	17	ø17,5
G½ B JIS	118	ø5	20	3	-	-
G¼ B	111	ø5	13	2	11	ø9,5
G¾ B	114	ø5,5	16	3	14	ø13
M20x1,5	118	ø6	20	3	17	ø17,5
M12x1,5	111	ø5	13	2	11	ø13
½ NPT	117	-	19	-	-	-
¼NPT	111	-	13	-	-	-
R½ -2999	117	-	19	-	-	-
R¼ -2999	111	-	13	-	-	-

Contacttyp	X	Y
1+2-single and double contact	88	55
3-triple contact	96	63
2- double contact separate circuit		
4-quadruple contact	113	80
3- triple contact separate circuit		

Dimensions

Connection position back, eccentric

Models: P1631, P1633.



G	h ±1	s2	s3	s4	s5	s6
G½ B	118	ø6	20	3	17	ø17,5
G½ B JIS	118	ø5	20	3	-	-
G¼ B	111	ø5	13	2	11	ø9,5
G¾ B	114	ø5,5	16	3	14	ø13
M20x1,5	118	ø6	20	3	17	ø17,5
M12x1,5	111	ø5	13	2	11	ø13
½ NPT	117	-	19	-	-	-
¼NPT	111	-	13	-	-	-
R½ -2999	117	-	19	-	-	-
R¼ -2999	111	-	13	-	-	-

Contacttyp	X	Y
1+2-singel and double contact	88	55
3-triple contact	96	63
2- double contact separate circuit		
4-quadruple contact	113	80
3- triple contact separate circuit		

Modifications reserved