

# Standard system contact pressure gauges for the chemical industry, with or without dampening

with magnetic snap-action contacts or inductive alarm contacts

Nominal sizes ND 100

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.

Our 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. 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. The location of the pressure connection at the bottom or back allows different methods of installation.

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 DD 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. Contact pressure gauges with inductive alarm contacts can be used in potentially explosive atmospheres, provided that the appropriate regulations are complied with.

These pressure gauges are especially suited for monitoring Gas density inclosed SF<sub>6</sub> gas tanks. Because of the hermetically sealed, they are applicable for outdoor installation. One or max. 3 snap-action contacts are non-adjustable and secured by fabrication. The used measurement system were tested with Helium leakage rate <math>< 1 \times 10^{-8}</math> mbar l s<sup>-1</sup>.

## Features

- o Modular construction system ensures high reliability and long service life
- o Liquid dampening provides vibration-free display
- o Chemical resistant due to stainless steel design
- o Case, stainless steel 1.4301
- o Stainless steel measuring system 1.4571
- o Overload capacity up to 2.5 x
- o Protection to IP 65
- o Accuracy class 1.0
- o Up to four alarm contacts possible
- o Suitable for programmable controller (inductiv E-contacts)
- o For SF<sub>6</sub> gas applications snap-actions max. 3x contact, alternatively 2x contact with galvanic isolation non adjustable

## Ranges

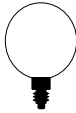

0 ... 1 bar to 0 ... 1600 bar

## Applications

Process engineering, water treatment,  
Mechanical engineering and plant construction

**Models: 2351, 2353, 2361, 2363  
2371, 2373, 2381, 2383**

## Technical data

Models	2351	2361	2353	2363	2371	2381	2373	2383	Options
Nominal size	100								
Symbol									
Contact type	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		
Liquid filling	--	Poly-butene	--	Poly-butene	--	Poly-butene	--	Poly-butene	
Electrical connection	Cable connector right hand side. 6 screw terminals + PE, cross section of the conducting wire 2.5 mm <sup>2</sup> Screw type conduit fitting M20x1.5, outgoing downwards								back (without pressure relief opening in case)
Accuracy class	≤ 1.6 bar : Class 1.6 to EN 837-1 > 1.6 bar : Class 1.0 to EN 837-1								
Ranges	0 ... 1 bar to 0 ... 1600 bar negative or positive / negative and positive gauge pressure								2100 bar
Application	Constant load: up to full scale value Alternating load: up to 0.9 x full scale value short-time: overload capacity 1.3 x								up to 2.5 x (dependent on measuring range)
Case	Stainless steel 1.4301. pressure relief opening								
Bezel	Stainless steel 1.4301								
Mounting flange	none								Stainless steel 1.4301, front flange, rear flange
Window	Laminated safety glass								
Dial	Aluminium, white, scale and imprint black								Dual scale
Pointer	Aluminium, black								
Movement	Stainless steel								
Measuring element	Stainless steel 1.4571, <100 bar Bourdon tube / ≥100 bar helical tube								
Pressure connection	Stainless steel 1.4571								
- position	radial bottom				back eccentric				
- thread	G 1/2 B to DIN ISO 228								1/2"-14 NPT Other threads on request
Temperatures	- Medium Tmin. -20°C, Tmax. 80° C - Ambient Tmin. -25°C, Tmax. 60° C								
Temperature drift	0.4%/10K if deviation from normal temperature 20°C								
Protection to EN 60 529/IEC 529	IP 43	IP 65	IP 43	IP 65	IP 54	IP 65	IP 54	IP 65	
Orifice	ø 0.5 ; ø 0.8								
Weight approx.	0.9 kg	1.2 kg	0.9 kg	1.2 kg	0.9 kg	1.2 kg	0.9 kg	1.2 kg	

### \* Number of contacts

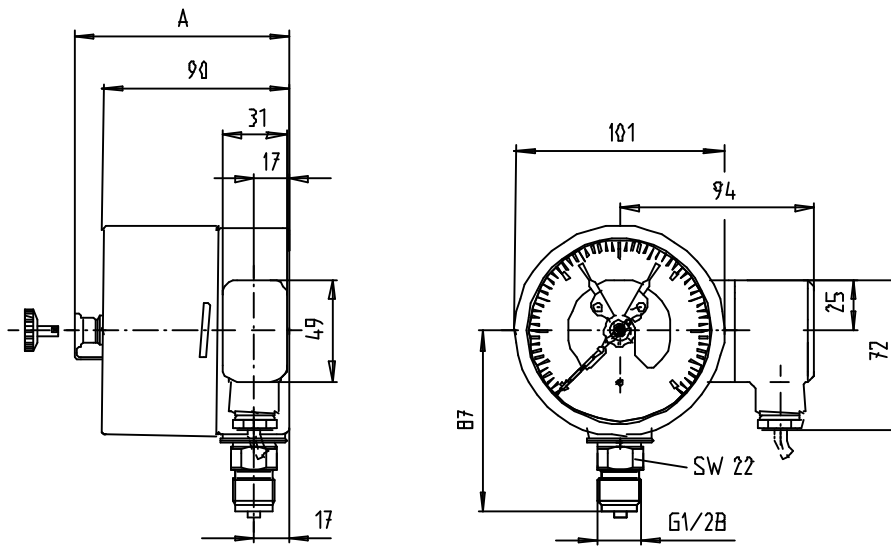
Measuring range	Magnetic snap-action contact	Inductive contact
up to 1 bar	2	2
1.6 bar	2	3
above 4 bar	4	3

See data sheet - DE 1231 for electrical data

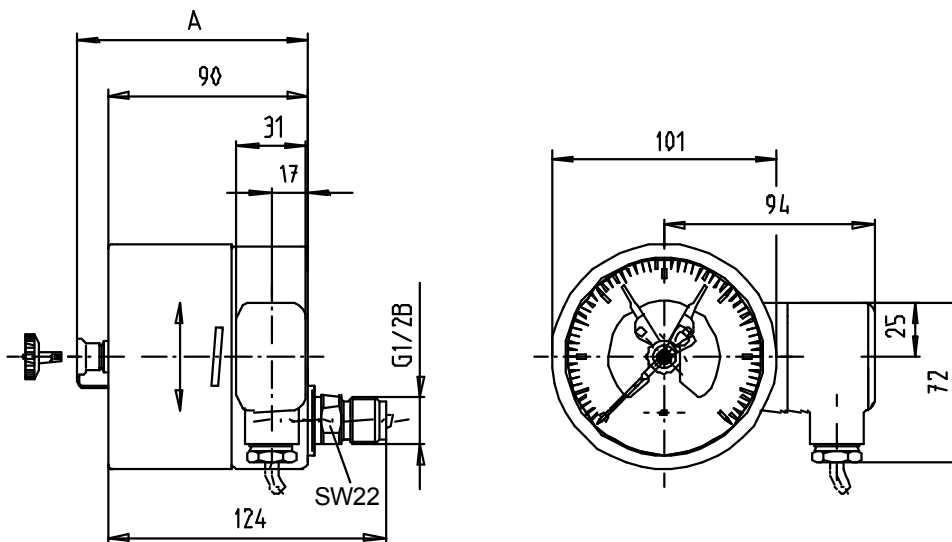
See data sheet - DE 1230 for electrical data

## Dimensions

Connection position bottom, radial Model : 2351 , 2353 , 2361 , 2363.



Connection position back, eccentric Model : 2371 , 2373 , 2381 , 2383.

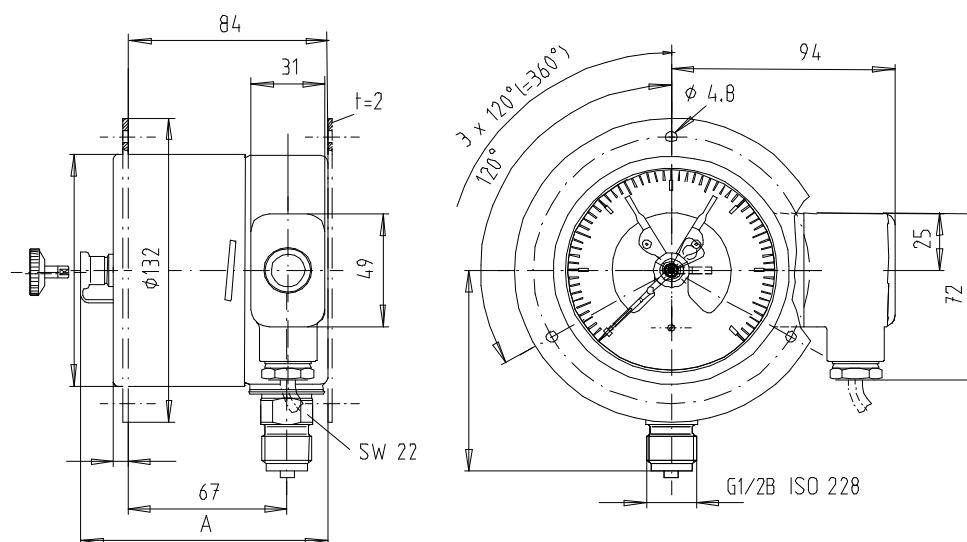


Model	2351, 2353, 2371, 2373	2361, 2363, 2381, 2383
Dimension: " A "	108 mm	

## Dimensions

Connection position bottom, radial  
Front/rear mounting flange

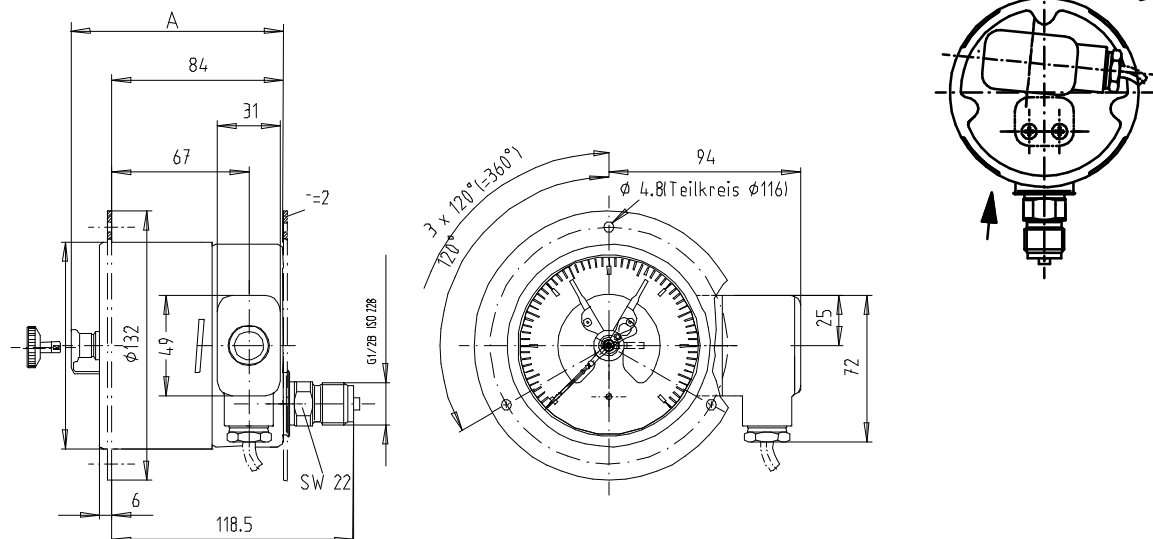
Model : 2351 , 2353 , 2361 , 2363.



Cable junction box, back:

Connection position back, eccentric  
Front/rear mounting flange

Model : 2371 , 2373 , 2381 , 2383.



Model	2351, 2353, 2371, 2373,	2361, 2363, 2381, 2383
Dimension " A "	108 mm	

Modifications reserved