

Heavy Duty contact pressure gauges

with or without dampening

Nominal size ND 100

with magnetic snap-action contacts
or inductive alarm contacts

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

Features

- o Modular construction system ensures high reliability and long service life
- o Liquid dampening provides vibration-free display
- o Overload capacity up to 2,5 x
- o Protection to IP 65
- o Accuracy class 1,0
- o Case, steel black
- o Copper alloy measuring system
- o Up to four alarm contacts possible
- o Suitable for programmable controller

Ranges

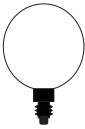
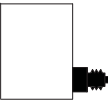
0 ... 1 bar to 0 ... 1000 bar

Applications

Mechanical engineering and plant construction,
water treatment,
hydraulic and pneumatic systems

Model : P1601, P1603, P1611, P1613
P1791, P1793, P1801, P1803

Technical data

Models	P1601	P1791	P1603	P1793	P1611	P1801	P1613	P1803	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 ² Screw type conduit fitting M20x1,5, outgoing downwards								back (without pressure relief opening)
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 ... 1000 bar negative or positive / negative and positive gauge pressure								to 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 (depending on measuring range)
Case	Steel, black finish, pressure relief opening								Stainless steel 1.4301
Bezel	Steel, black finish								Stainless steel 1.4301
Mounting flange	none								Steel, black finish or stainless steel 1.4301 Front or rear flange
Window	Plastic cover	Safety glass	Plastic cover	Safety glass	Plastic cover	Safety glass	Plastic cover	Safety glass	
Dial	Aluminium, white, scale and imprint black								Dual scale
Pointer	Aluminium, black								
Movement	Copper alloy								
Measuring element	Bourdon tube, copper alloy up to 40 bar Stainless steel from 60 bar to 1000 bar								
Pressure connection	Copper alloy								
- position	radial, bottom				back, eccentric				
- thread	G 1/2 B to DIN ISO 228								Other threads on request
Temperatures	- Medium Tmin. -20°C, Tmax. 80° C - Ambient 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 65	IP 54	IP 65	IP 54	IP 65	IP 54	IP 65	
Orifice									∅ 0,3 ; ∅ 0,4 ; ∅ 0,8
Weight approx..kg	0,9	1,2	0,9	1,2	0,9	1,2	0,9	1,2	

* Number of contacts

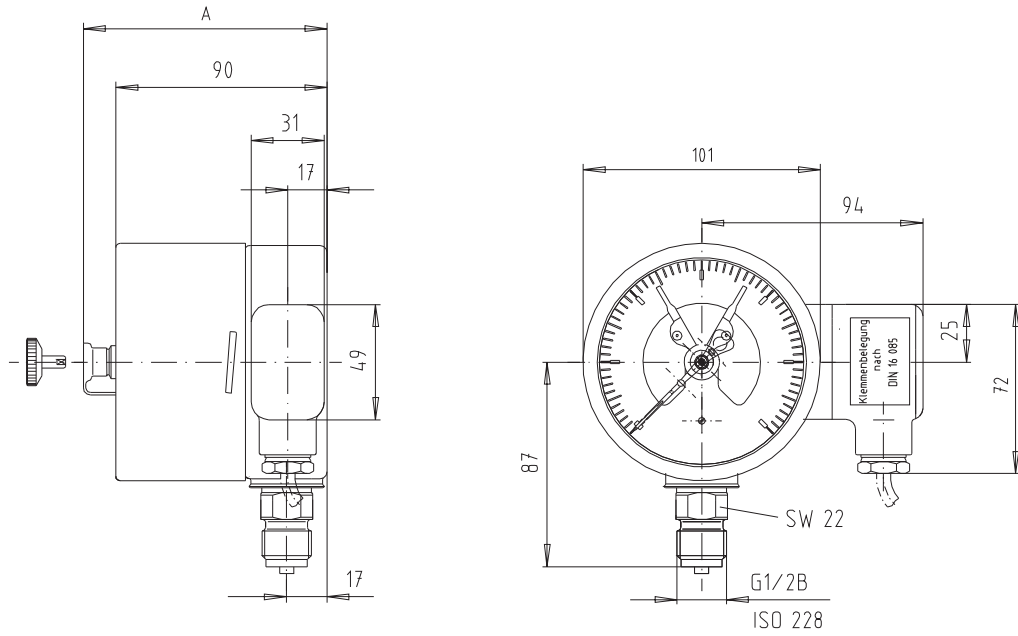
Measuring range	Magnetic snap-action contact	Inductive contact
to 1 bar	2	2
1,6 bar	2	3
above 4 bar	4	--

See data sheet - DE 1231 for electrical data

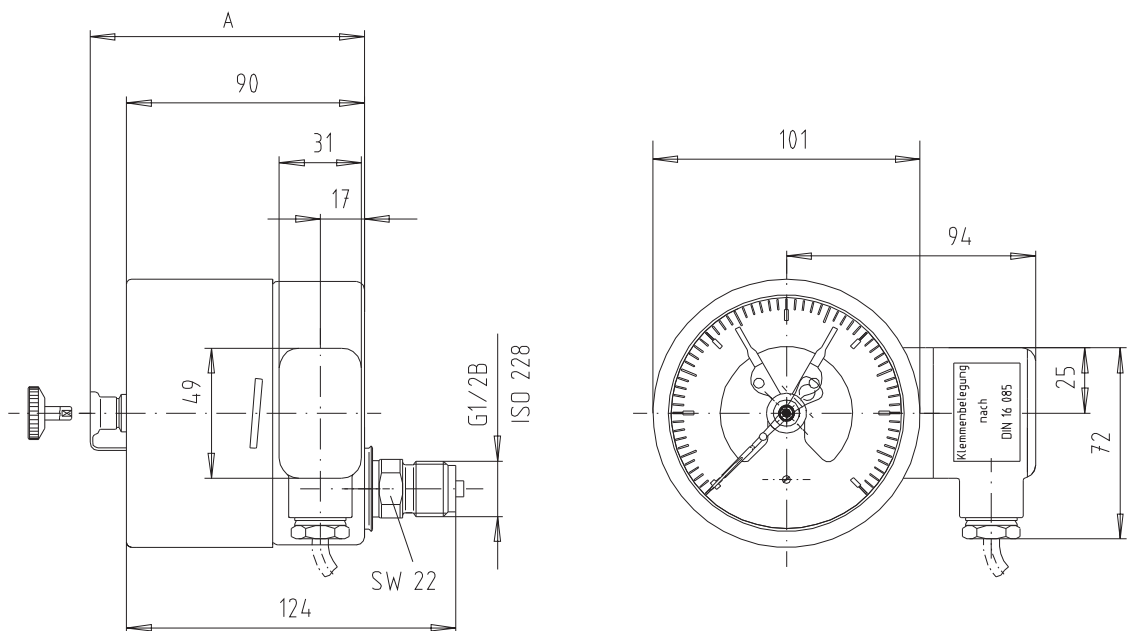
See data sheet - DE 1230 for electrical data

Dimensions

Bottom radial connection, models: P1601, P1603, P1791, P1793.



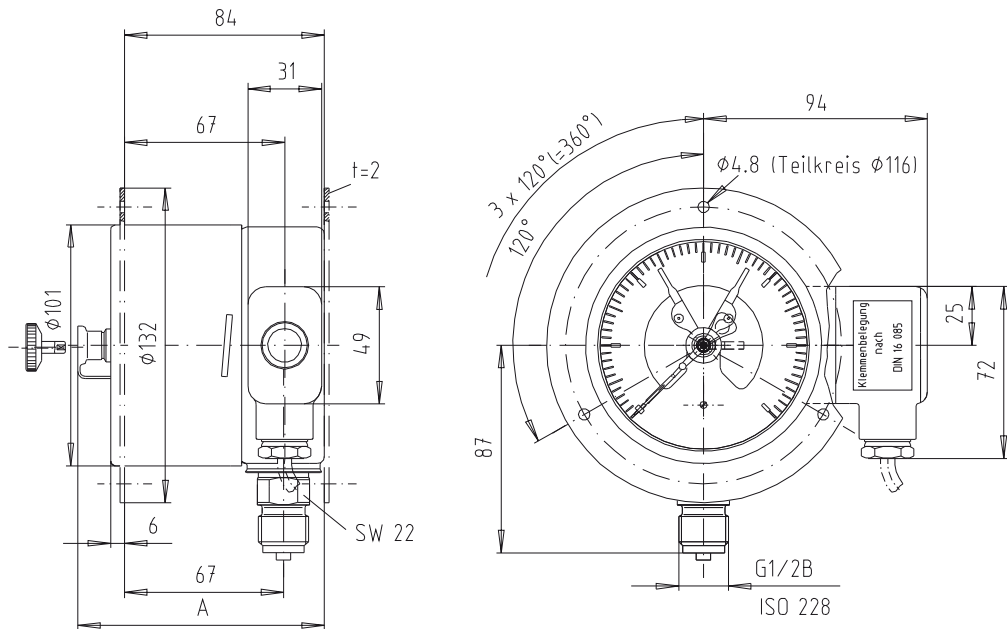
Back eccentric connection, models: P1611, P1613, P1801, P1803.



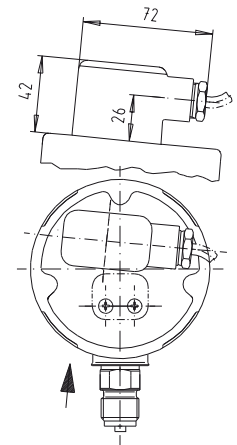
Model	P1601, P1603, P1611, P1613	P1791, P1793, P1801, P1803
Dimension " A "	104 mm	108 mm

Dimensions

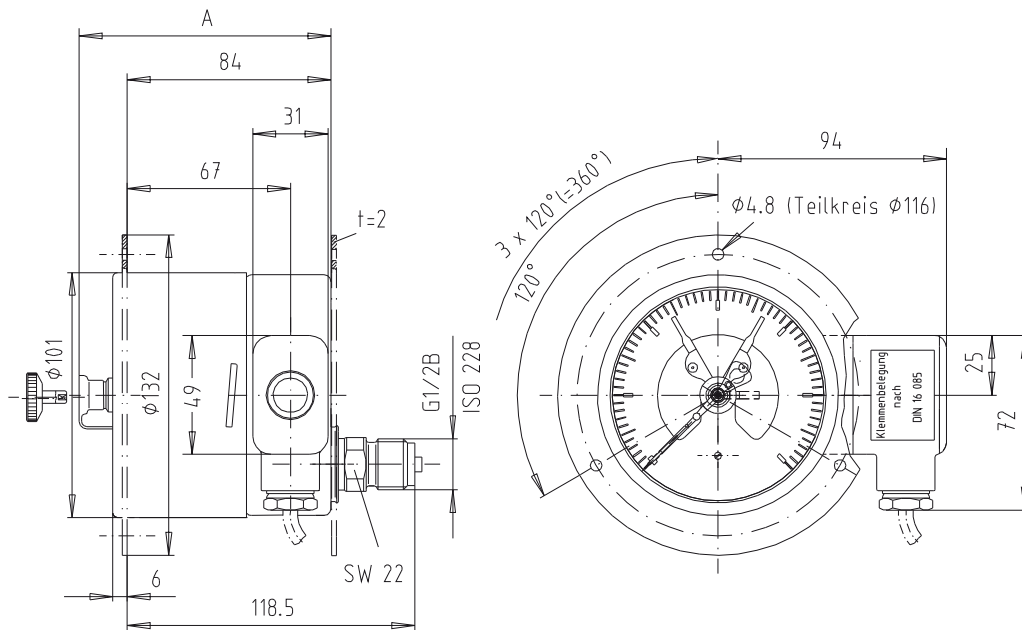
Bottom radial connection, models P1601 , P1603 , P1791 , P1793 .
Front/rear mounting flange



Cable junction on box, back



Back eccentric connection, models : P1611 , P1613 , P1801 , P1803 .
Front/rear mounting flange



Models	P1601 , P1603 , P1611 , P1613	P1791 , P1793 , P1801 , P1803
Dimension " A "	104 mm	108 mm