

Pressure ranges from 0...1 bar to 0...25 bar



Advantages / Benefits

- ▶ Easy LINK to Burkert systems
- ▶ Mechanical construction with high operational safety
- ▶ No power supply necessary
- ▶ Two functions: 2 switching points and local display
- ▶ High reliability
- ▶ Easy installation

Design

Bourdon tube pressure gauge for industrial applications. Suitable for all gaseous and liquid mediums which do not obstruct copper alloy.

The high-contrast dial offers a comfortable local read out. The instrument is equipped with two switching point outputs that offers

the connection to valves (easy link) and other equipment.

Copper alloy is used as a base material for wetted parts. Innovative manufacturing processes and high quality components guarantee consistency and longterm stability.

The pressure gauge can be equipped with different chemical seals according to the application requirements to prevent the pressure gauge from aggressive or viscous media.

Application

Industrial applications
Monitoring

- compressed gases
- hydrogen / oxygen
- corrosive, radioactive or toxic processes (requires a chemical seal)
- hydraulic systems

Machine industry

Process plant

Refrigeration

burkert
Easy Fluid Control Systems

Bourdon Tube Pressure Gauge

for industrial applications

Type 8302

Switching contacts

These alarm contacts are fitted into the box of the pressure gauge to make or break an electric control circuit relative to the position of the instruments pointers. Points of contact actuation are adjustable over the full extension of the scale graduation. Pointer deflection is not obstructed by the contact mechanism. The contact assembly is normally arranged behind the dial plate such as to enable clear observation of the gauge. Wiring is done with a junction box or plug mounted on the side of the case with terminals for leads of up to 2.5 mm² cross section.

Contact setting

Round case gauges features a hub in the window into which a key inserts. Normally all contacts may be set at exactly the same scale value. Contact actuation is made when the instrument pointer sweeps the contact indicator from either side.

Type of contacts

Magnetic snap-action contacts

This is the universal type of contacts to provide reliable service to all instruments. The magnetically assisted contact features a small magnet attached to the setting hand. The magnet provides for a snap-action characteristic which considerably improves contact rating and service life, and also makes this typeless sensitive to vibration. The force required to

break the attraction of the magnet results in a certain hysteresis of the switch point when the same contact is alternatively approached with rising and falling pressure. The value of this hysteresis reflects a minimum of the 2% and a maximum of 5%, depending on scale range and instrument.

Specifications

Nominal size	100 mm
Accuracy	Class 1.0 according to EN 837-1 Class 1.6 for scale range 0... 1.6 bar
Design	according to EN 837-1
Scale ranges	0... 1, 2.5, 6, 10, 25 bar according to EN 837-1
Working pressure	Steady: full scale value Fluctuating: 0.9 x full scale value Short time: 1.3 x full scale value
Operating temperature	Ambient: -40... +60 °C Medium: +60 °C max.
Temperature error	Additional error when temperature of the pressure element deviates from +20 °C: <ul style="list-style-type: none">• Rising temperature: +0.3% / 10 K of true scale value• Falling temperature: -0.3% / 10 K of true scale value
Rating	IP 54 according to EN 60 529/IEC 529
Port connection	Material: Cu-alloy Threaded entry (radial) according to EN 837-1 G1/2 B, 1/2" NPT
Pressure element	Cu-alloy, C-type, soft soldered
Movement	Cu-alloy, wear parts argentan
Dial	White aluminium with black lettering according to EN 837-1
Pointer	Black aluminium
Case	Stock finish stainless steel
Window	Instrument glass
Bezil ring	Cam ring /bayonet type, stock finish stainless steel
Weight	950 g
Electrical connection	Screw terminals 2,5 mm ² , PG 13.5

Specifications (continued)

Maximum contact rating with non-inductive (resistive) load	Magnetic snap-action contact Dry gauges
Maximum voltage (MSR) U_{eff} max.	250 V
Current ratings:	
Make rating	1.0 A ¹⁾
Break rating	1.0 A ¹⁾
Continuous load	0.6 A ¹⁾
Maximum load	30 W 50 VA
Material of contact points	Silver-Nickel Alloy (80% Ag / 20% Ni)
Ambient operating temperature	-20... +70 °C
No. of contacts	4

¹⁾ For scale range 0...1 bar half of these values are valid

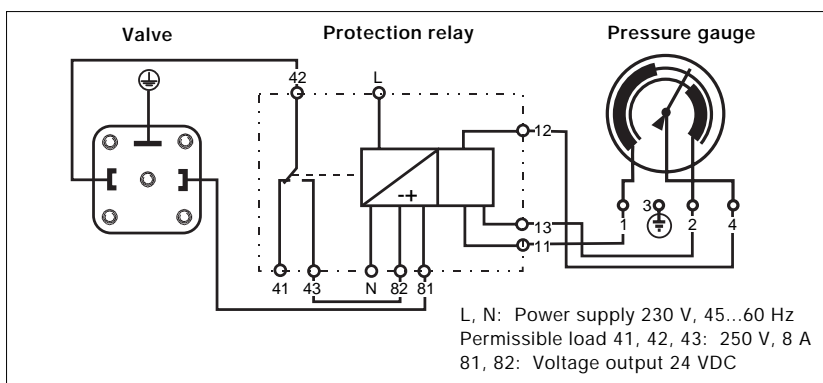
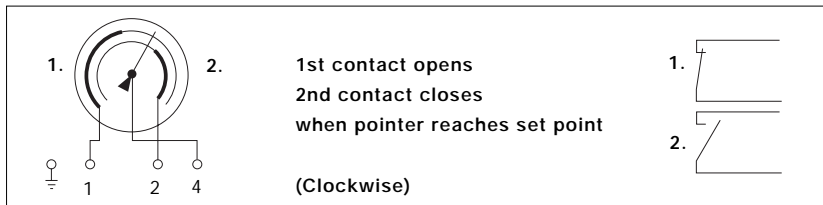
Recommended contact ratings

Voltage (IEC 38) AC/DC V	Magnetic snap-action contact Dry gauges		
	resistive load		inductive load
	DC mA	AC mA	$\cos \varphi > 0.7$ mA
220/230	100	120	65
110/110	200	240	130
48/48	300	450	200
24/24	400	600	250

Contact ratings

The contact rating values are given in consideration of many years of reliable service. Ratings below 24 V line voltage are to be individually established upon inquiry. For low ratings the current to be switched should not be less than 20 mA to maintain reliability. For lower switching powers, in storage programmable control units (PLS), for example, we recommend to contact us. For higher contact ratings up to 1760 VA: relays with 1 or 2 double throw contacts on request.

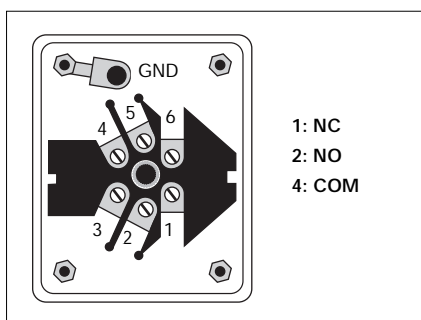
Contact function



Option

To realize a two-point control circuit or a pump controlling:
1 double throw with flip-flop characteristic Item-No. 430 663 D (in snap-mounting housing for DIN-rail, IP 40)

Electrical connection Terminal box



Ordering Chart

Type 8302 with G 1/2 B

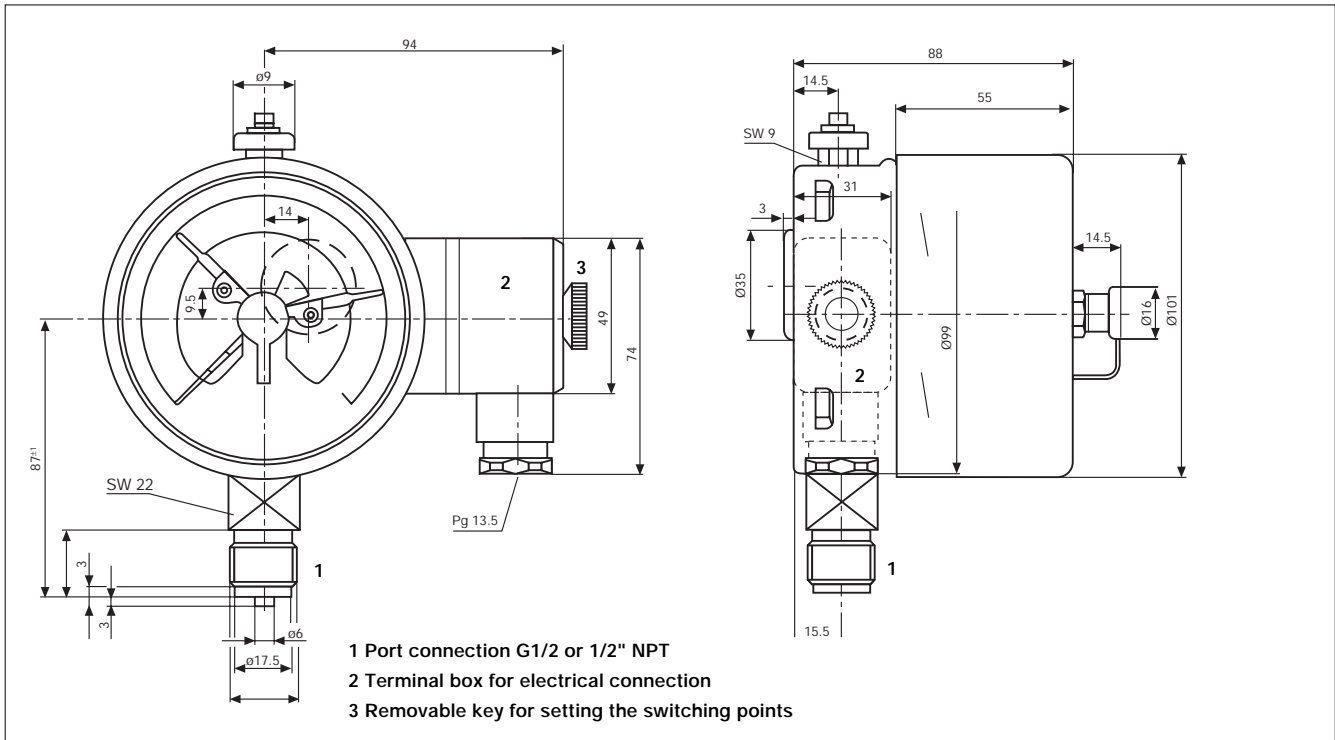
Measuring ranges [bar]	Item - No.
	Electrical connection DIN 43650 plug
0 - 1.0	429 984 K
0 - 2.5	429 985 L
0 - 6.0	429 986 M
0 - 10.0	429 987 N
0 - 25.0	429 988 X

Bourdon Tube Pressure Gauge for industrial applications

Type 8302

Dimensions in [mm]

Pressure gauge with switching contacts



In case of special application requirements,
please consult for advice.

We reserve the right to make technical changes without notice.
801-GB/ 1-0135

burkert