Magnetic piston type pressure gauges for differential pressure – high overload protection

Application
For differential pressure measurements with very high static pressures. For gaseous and liquid, non-adhesive media which are not highly viscous. Particularly suitable for monitoring filters, pumps, pipe systems and cooling circuits.

Type
MAG 80/100 Dif D312

Nominal size
80–100 mm

Function
The pressures act on two pressure chambers separated by a piston magnet. If there are different pressures in the chambers, the piston magnet is axially displaced against a pressure spring. This displacement is transmitted from the piston magnet to the pointer via a rotary magnet mounted to the pointer hub. The differential pressure is directly displayed. The complete mechanical separation of pressure chamber and display excludes the possibility of leaks.

Accuracy of measurement
±3 % of full scale value (at increasing differential pressure)

Ranges (EN 837-3/5)
0/0.25 bar to 0/10 bar

Maximum static pressure
100 bar

Overpressure safety
Up to the maximum static pressure on both sides

Operating temperature range
Medium: \( T_{\text{max}} = 100 \, ^\circ\text{C} \)
Ambient: \( T_{\text{min}} = 0 \, ^\circ\text{C} \)
\( T_{\text{max}} = 80 \, ^\circ\text{C} \)

Protection
IP 65 (EN 60529)

Standard version
Connection (wetted parts)
Stainless steel 316, on left and right hand side (directly opposite each other)
2 x G1/4 female thread – spanner size 17 (EN 837-3/7.3)

Connection cover
Plastic, glass-fibre reinforced, black

Measuring element (wetted part)
Pressure spring
Stainless steel 1.4310

Magnetic piston (wetted part)
Stainless steel 1.4401/Strontium ferrite

Seal (wetted part)
NBR

Dial
Aluminium, white
Dial marking black/red (bar/psi)
Scale angle 90°

Pointer
Aluminium, black

Housing
Stainless steel 304 with rubber sealing ring at the front

Front glass
Instrument glass

Mounting
Wall mounting via a back mounting plate (optional) or pipe mounting by a combination of back plate and fixing clamp for 2” pipe (optional).

Options
• Back mounting plate with fixing clamp
• 3-hole fixing, panel mounting bezel
• Max. static pressure PN 250/400
• Other connection threads
• Other connection designs
• Acrylic front glass
• Electrical contacts (Reed contacts)
• Filter in the “plus” connection
• Glycerine filling
• Ref. pointer
• Special scales

Refer to page 394 for prices
Magnetic piston type pressure gauges for differential pressure – high overload protection  
**Type D 3 NG 80/100**

**Types and dimensions (mm)**

**Connection on left and right hand side**

**Connection on left and right hand side**
3-hole fixing, panel mounting bezel

**Connection on left and right hand side**
with electrical contact

**Back mounting plate and fixing clamp**

**Technical specifications electrical contact**

**Version:** Reed contact, single pole changeover (SPDT)

- **Max. switching voltage:** AC/DC 175 V
- **Max. switch rating:** AC 5 VA – DC 5 W
- **Max. current:** AC/DC 250 mA
- **Switching hysteresis:** approx. 5 %
- **Adjustment range:** 35–100 % of full scale value
- **Electrical connection:** plug DIN 43650-A

**Wiring diagram**
Magnetic piston type pressure gauges/magnetic diaphragm pressure gauges for differential pressure

DG: M

<table>
<thead>
<tr>
<th>Type</th>
<th>MAG 80 Dif, D312</th>
<th>MAG 100 Dif, D312</th>
<th>MAG 80 Dif, RK1.W, D312</th>
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* Please specify required switching point!