Differential pressure gauge
Compact version NS 80, class 2.5 to 4.0
Model 716.05, high overload safety

Applications
- Differential pressure measurement at measuring points with very low differential pressures and very high one-sided or reciprocal overload
- For transparent, clean, non-sticky, non-aggressive media
- Control of ventilator and blast pressures
- Filter monitoring in ventilation and heating systems
- Level measurement on closed vessels

Special features
- Differential pressure measuring ranges from 0 … 16 mbar
- High working pressure (static pressure) and high overload safety up to 16 bar
- Numerous options for installation, connection form and connection location

Description
The compact differential pressure gauge, model 716.05 with a nominal size of 80 mm, has been specifically designed for measuring points at which differential pressure measurements with low differential pressures take place. In addition, an overload safety of up to 16 bar is guaranteed, on either side.

Depending on the accuracy classes of 2.5 % and 4 %, different scale ranges can be specified. Differential pressures of 0 to 16 mbar and 0 to 600 mbar can be measured.

The differential pressure gauge offers a wide variety of connection options, as well as panel mounting, and can therefore be used in many applications for level measurement.
Specifications

Version
Small compact design

Nominal size in mm
80

Accuracy class
4.0: Scale ranges 0 ... 16 mbar and 0 ... 25 mbar
2.5: Scale ranges from 0 ... 40 mbar to 0 ... 600 mbar

Scale ranges
0 ... 16 mbar to 0 ... 600 mbar

Pressure limitation
Steady: Full scale value
Fluctuating: Full scale value

Overload safety
Either side max. 16 bar

Max. working pressure (static pressure)
16 bar

Permissible temperature
Ambient: -15 ... +60 °C
Medium: +70 °C maximum

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ±0.5 %/10 K of true scale value

Ingress protection
IP66 per IEC/EN 60529

Process connections (wetted)
Lower mount or back mount, 2 x G ⅛ female

Case (wetted)
Aluminium, black, pressure-tight

Ring
Aluminium, black

Pressure element (wetted)
Stainless steel

Separating diaphragm of measuring chamber (wetted)
Diaphragm, silicone rubber

Sealings (wetted)
NBR

Movement (wetted)
Copper alloy, wear parts argentan

Dial (wetted)
Aluminium, white, black lettering

Pointer (wetted)
Aluminium, black

Window (wetted)
Glass

Weight
0.64 kg

Installation
According to affixed symbols, ⊕ high pressure, ⊖ low pressure

Mounting
Rigid measuring lines

Design and operating principle

- Pressure-tight case interior with diaphragm (secondary pressure element) and metallic measuring range springs (primary pressure element)
- Positive ⊕ and negative ⊖ media chambers are separated by the diaphragm
- The pressure difference between the ⊕ and ⊖ media chambers causes an axial deflection (measuring path) of the diaphragm against the measuring range springs
- The deflection is transmitted to the movement via the link
- Overload safety is provided by metal bolsters resting against the elastic diaphragm

Options

- Triangular bezel with fastening elements for panel mounting
- Panel or surface mounting flange (steel, black)
- Lateral mount connections
- Connections via male thread (wetted)
- Scale ranges < 0 ... 16 mbar and > 0 ... 600 mbar (on request)
- Overload safety > 16 bar
- Max. working pressure (static pressure) > 16 bar
## Approvals

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## Dimensions in mm

### Standard version

**Lower mount (radial)**

- Diameter: 70 mm
- Diameter: 48 mm
- Height: 72 mm
- G1/8 port
- Width: 72 mm

**Back mount**

- Diameter: 70 mm
- Height: 48 mm
- Width: 72 mm
- G1/8 port
- Width: 23 mm
- Width: 23 mm
- G1/8 port
Dimensions in mm

Options

Lateral mount (radial)

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Triangular bezel with fastening elements

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Panel mounting flange

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<td>2</td>
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Surface mounting flange

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Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

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