PM 07.06

# Differential Pressure Gauges

## Compact Design, Multi Purpose

## With Bourdon Tube • Model 716.01
## One Side With Sealing Membrane • Model 716.02
## Both Sides With Sealing Membrane • Model 716.03
## With Capsule Element • Model 716.04

**Pressure Gauges**

**Service intended**
Where differential pressure is to be measured in many different applications with pressure gauges of uniform design.

**Design**
Bourdon tube or capsule element
Variable pressure entry positions.

**Model 716.01** Preferred for air filter stations of medium size. Suitable for liquid and gaseous, clean and transparent, non-sticky and non-aggressive media.

**Model 716.02** Preferred for filter monitoring at water conditioning and water supply stations.
High pressure side ⊕ for liquid and gaseous, non-aggressive media.
Low pressure side ⊖ for liquid and gaseous media, including non-transparent media.

**Model 716.03** Suitable for universal, liquid and gaseous, non-aggressive media, even dirty and non-transparent media.

**Model 716.04** For filter monitoring, preferably in applications for the ventilating and climatic technology.
Suitable for gaseous and dry, non-aggressive and all clean media.

**Nominal size**
80 mm

**Accuracy class** per EN 837-1 /6
1.6

**Scale ranges** per EN 837-1 /5
Bourdon tube: 0 ... 0.6 to 0 ... 16 bar
Capsule element: 0 ... 10 to 0 ... 400 mbar
or other equivalent units of pressure or vacuum.
(Scale range 0 ... 10 mbar: full scale length approx. 180 p °)

**Working pressure**
Steady: full scale value
Fluctuating: 0.9 x full scale value

**Overpressure safety**
Bourdon tube: full scale value
Capsule element: ≤ 0 ... 16 mbar: ⊕-side 3 x Δp
≥ 0 ... 25 mbar: ⊕-side 10 x Δp

**Static pressure rating**
16 bar with all scale ranges

**Operating temperature**
Ambient: -20 ... +60 °C
Medium: +60 °C maximum

**Temperature error**
Additional error when temperature of the pressure element deviates from +20 °C
Rising temperature: +0.3%/10 K of true scale value
Falling temperature: -0.3%/10 K of true scale value

**Degree of protection**
IP 66 per EN 60 529 / IEC 529

**Gauge mounting**
Pressure entries identified ⊕ and ⊖,
⊕ high pressure,
⊖ low pressure,
Requires mounting by means of rigid tailpipes. Panel mounting or surface mounting rings optionally available

### Standard features

| Component | Material | Model | | | |
|---|---|---|---|---|---|
| | | 716.01 | 716.02 | 716.03 | 716.04 |
| Case | Black aluminium | ● | ● | ● | ● |
| Bezel ring | | ○ | ○ | ○ | ○ |
| Pressure element | Cu-alloy | ● | ● | ○ | ● |
| Assembly | | ● | ● | ○ | ● |
| Movement | | ● | ○ | ○ | ● |
| Pointer | Black aluminium | ● | ○ | ○ | ● |
| Dial | White aluminium | ● | ○ | ○ | ● |
| Window | Glass | ● | ○ | ○ | ● |
| Sealing membrane | FPM (Viton) | N/A | ● | ● | N/A |
| Sealing rings | NBR (Buna rubber) | ● | ○ | ○ | ● |
| Pressure connection: Threaded entry per EN 837-1 /7.3, option | 2 x G⅛ female bottom entry | | | | |
| | 2 x G⅛ female back entry | | | | |
| | 2 x G⅛ female entry, left or right side (optionally) | | | | |

● wetted, ○ non-wetted

## Optional extras

- Other pressure connection
- Panel mounting ring, also retrofitting
- Surface mounting ring
- Male thread pressure entry
- Static pressure rating > 16 bar

## Operating principle

**Model 716.01**
Case machined from solid aluminium bar retains bourdon tube pressure element.
High pressure ⊕ retained in bourdon tube
Low pressure ⊖ retained in case

**Model 716.02**
Liquid filled case machined from solid aluminium bar fitted with a separating diaphragm and bourdon tube pressure element.
High pressure ⊕ retained in bourdon tube
Low pressure ⊖ applied to diaphragm

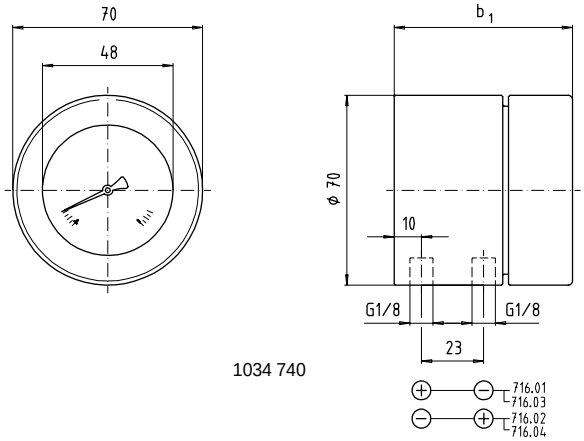
**Model 716.03**
Both, liquid filled case machined from solid aluminium bar and bourdon tube pressure element are fitted with separating diaphragms.
High pressure ⊕ and low pressure ⊖ are applied to diaphragms.

**Model 716.04**
Case machined from solid aluminium bar retains capsule element.
High pressure ⊕ retained in case.
Low pressure ⊖ retained in capsule element.

Any pressure differential across high pressure and low pressure side will deflect the bourdon tube or capsule element, respectively. The deflection will be indicated on a graduated dial scale.

## Dimensions

**Standard version**
Bottom pressure entry

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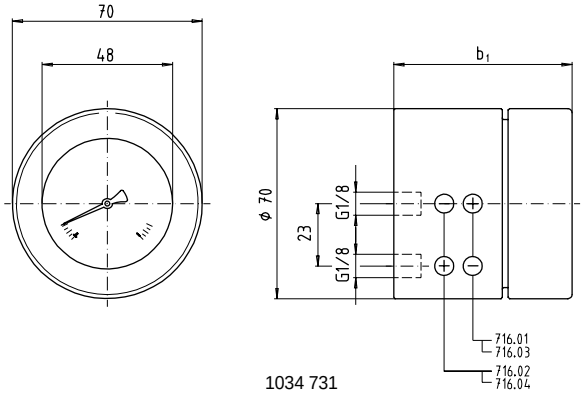
Back pressure entry

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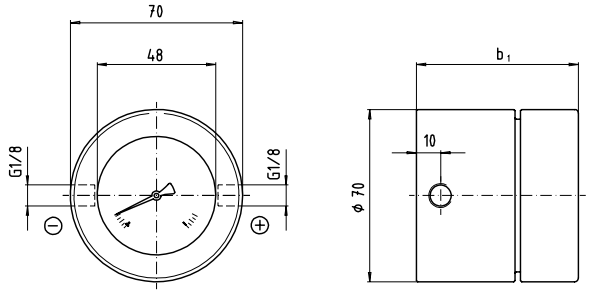
**Option**
Side pressure entry

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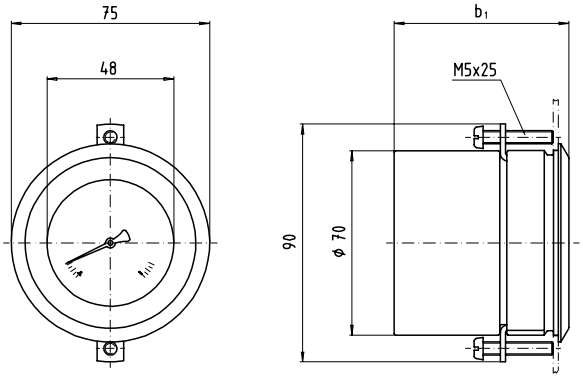
Narrow panel mounting bezel with fixing clamp

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Panel cutout Ø 72 mm

| Model | 716.01k | 716.02 | 716.03 | 716.04 |
|---|---|---|---|---|
| $b_1$ [mm] | 66 | 91 | 99 | 66 |
| Weight [kg] | 0.56 | 0.85 | 0.94 | 0.51 |

Standard pressure entry
with parallel thread and seating to EN 837-1 /7.3.

## Ordering information

State: Model / Nominal size / Scale range / max. static pressure ... bar / Size and location of connection / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.


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