



# Differential Pressure Gauges with Compression Spring and Magnetic Piston

With Magnetic Piston • Type 700.01

With Piston and Separation Diaphragm • Type 700.02

## Pressure Gauges

- ◆ Differential ranges from 0/6 to 0/145 PSI for Type 700.01
- ◆ Differential ranges from 0/3 to 0/60 PSI for Type 700.02
- ◆ Sturdy stainless steel pressure ports
- ◆ High static pressure ratings
- ◆ Modular design with field-installable components
- ◆ Reed alarm contacts can be easily added

### Application

For monitoring differential pressures in filter plants, pipeline systems, valves and pumps, particularly in the gas, water and air supply markets and the preparation of such media without any magnetic substances. The Type 700.02 is suitable for measuring liquids, such as water treatment and supply systems.

### Size

3" (80 mm)

### Accuracy

±3% of span (on rising pressure) - Type 700.01

±5% of span (on rising pressure) - Type 700.02

### Scale Ranges

0/6 to 0/145 PSID - Type 700.01

0/3 to 0/60 PSID - Type 700.02

or other equivalent units of pressure

### Maximum Static Pressure (either side)

1500, 4000, or 6000 PSI - Type 700.01

1500 PSI only - Type 700.02

### Operating Temperature

Ambient: 32°F (0°C) to 140°F (60°C)

Medium: max. + 212°F (+100°C)

### Weather Protection

Weather resistant (NEMA 4 / IP 54)

## Standard Features

### Pressure chamber and connections (exposed to pressure medium)

316 stainless steel, 2 x 1/4" NPT female

### Pressure element (exposed to pressure medium)

Compression spring: 304 stainless steel

### Magnetic piston (exposed to pressure medium)

Piston: 316 stainless steel

Magnet: barium-iron

### Separation Diaphragm (exposed to pressure medium)

NBR

### Dial

White aluminum with black lettering

### Pointer

Black aluminum

### Gauge Case

Black-painted aluminum



Type 700.01



Type 700.02

### Window

Snap-in acrylic

### Gauge Mounting

Pressure entries identified ⊕ and ⊖

⊕ high pressure, ⊖ low pressure

Gauge should be mounted to study piping. Optional bracket for surface or pipe mounting is available.

### Order Options

Drag pointer (max. hand) (field installable)

Reed alarm contacts, UL/CSA approved (field installable)

Front flange (field installable) for Type 700.01

Rear flange (field installable) for Type 700.01

Higher accuracy

Lower mount or back mount connection

Sintered filter in ⊕ side

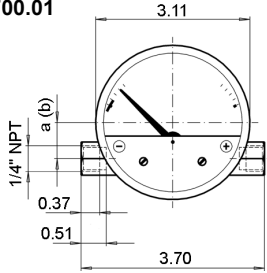
Other threaded connections (limited to wrench flat area)

**APM 700.01**  
**(APM 07.14)**

**Dimensions:**

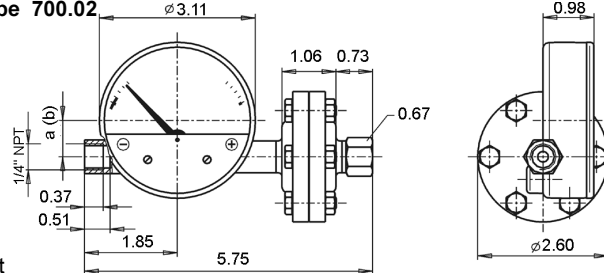
**Dimensions Standard version**

**Type 700.01**



a = 0.73 (+) connection right  
b = 0.10 (+) connection left

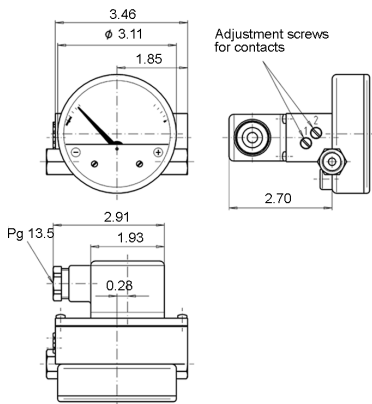
**Type 700.02**



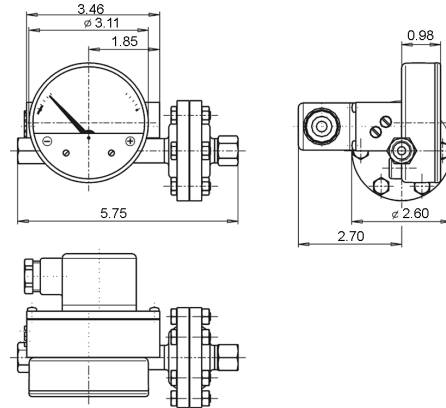
**Optional version**

Reed contacts (single and/or double change over contact)

**Type 700.01**

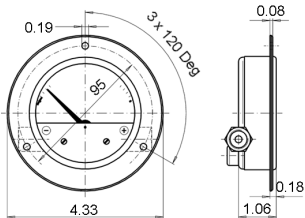


**Type 700.02**



**Optional version**

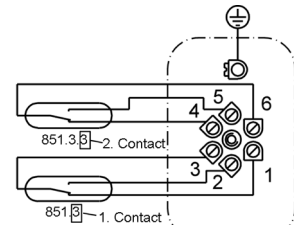
Front flange (Only for Type 700.01)



**Electric wiring diagram and technical data**

**Reed contact:**

Designed to allow low current circuits to be switched directly. Switch point can be set between 10% and 100% of the full scale value using the external adjustment in the back of the case.



Terminal box

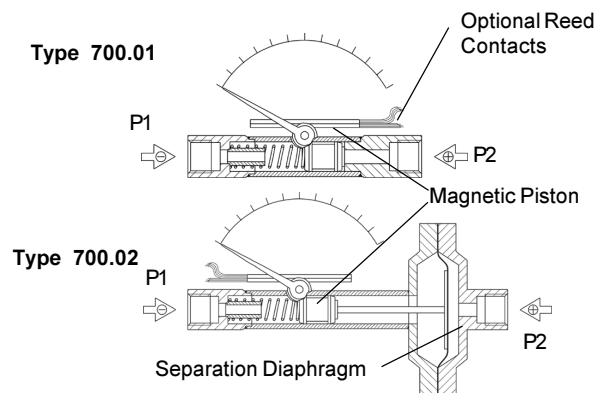
Max. switching voltage:	250 VDC / VAC	30 VDC / VAC
Max. load:	60 W	3 W
Max. strength of current:	1 A	0.2 A
Switching hysteresis:	5% of full scale value	

**Design and operating principle**

- Pressure p1 and p2 are applied to the ⊕ and ⊖ pressure chambers which are separated by a **magnetic piston**.
- The piston rests on the **measuring range spring**. The difference in pressure causes the piston to move.
- A **magnetic ring** mounted on the instrument pointer follows the magnets built into the piston so that each piston position corresponds to a defined pointer position.
- This design ensures complete mechanical separation of the measuring system and the case and eliminates external leakage.
- The displacement volume from the ⊕ measuring chamber to the ⊖ measuring chamber is limited by the constructive design and will not interfere with the process.
- An optional microfilter must be used in the ⊕ measuring chamber for dirty and heavily contaminated media.

**THE MEASURE OF**

**Total Performance™**



**Ordering Information:**

State computer part number (if available) / type number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing. Modifications may take place and the specified materials may change without prior notice



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