

Pressure switch, heavy-duty version For superior industrial applications Model PSM-550

WIKA data sheet PV 35.03

Applications

- Pumps
- Lubrication systems
- Hydraulic systems
- Autoclaves

Special features

- Non-repeatability $\leq 1\%$
- Setting ranges for vacuum, +/- and gauge pressure



Pressure switch, heavy-duty version, model PSM-550

Description

The PSM-550 is used in industrial control, monitoring and alarm applications.
The switch point can be specified by the customer on site.

The instrument can switch electrical loads of up to
AC 230 V, 10 A.

The PSM-550 pressure switch offers many application possibilities with non-corrosive media like oil, water and air.

Specifications

| Unit | Setting range ¹⁾ | Permissible switch point on rising pressure | Permissible switch point on falling pressure | Adjustable switch differential ²⁾ | Max. working pressure depending on measuring element | | |
|------|-----------------------------|---------------------------------------------|----------------------------------------------|----------------------------------------------|------------------------------------------------------|-------------------------|----------------|
| | | | | | Bellow, copper alloy | Bellow, stainless steel | Diaphragm, NBR |
| mbar | 0 ... 300 | 10 ... 300 | 0 ... 250 | 10 ... 50 | - | - | 500 |
| bar | 0.1 ... 1.1 | 0.17 ... 1.1 | 0.1 ... 0.94 | 0.07 ... 0.16 | 7 | 7 | - |
| | 0.2 ... 3 | 0.32 ... 3 | 0.2 ... 2.25 | 0.12 ... 0.75 | 7 | 7 | - |
| | 0.2 ... 6 | 0.45 ... 6 | 0.2 ... 4.8 | 0.25 ... 1.2 | 15 | 25 | - |
| | 1 ... 10 | 1.3 ... 10 | 1 ... 8.7 | 0.3 ... 1.3 | 16 | 25 | - |
| | 2 ... 17 | 2.3 ... 17 | 2 ... 15 | 0.3 ... 2 | - | 25 | - |
| | 4 ... 17 | 5.2 ... 17 | 4 ... 13 | 1.2 ... 4 | 25 | 25 | - |
| | 10 ... 30 | 11 ... 30 | 10 ... 26 | 1 ... 4 | 45 | 45 | - |
| | -1 ... 0 | -0.91 ... 0 | -1 ... -0.4 | 0.09 ... 0.4 | 7 | 7 | - |
| | -0.8 ... +5 | -0.3 ... +5 | -0.8 ... +3 | 0.5 ... 2 | 15 | 25 | - |

1) Switch point and reset point have to be within the setting range

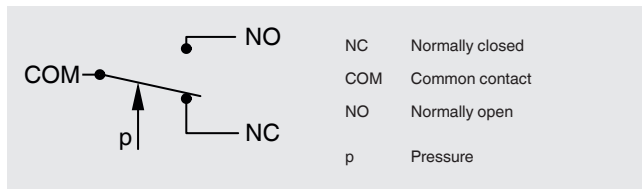
2) The difference between the switch point and the reset point is also known as switch hysteresis

Non-repeatability of the switch point

≤ 1 % of span

Switch contact

1 x change-over contact / SPDT ³⁾



3) Single pole double throw

Electrical rating

| Current consumption ⁴⁾ | Voltage | Current |
|-----------------------------------|----------|---------|
| Resistive load AC-1 | AC 230 V | 10 A |
| Inductive load AC-15 | AC 230 V | 4 A |

4) per DIN EN 60947-1

Operating conditions

Permissible temperature ranges

Ambient: -40 ... +70 °C [-40 ... +158 °F]

Medium: -20 ... +70 °C [-4 ... +158 °F]

-20 ... +170 °C [-4 ... +338 °F] for wetted parts from stainless steel

Storage: -20 ... +80 °C [-4 ... +176 °F]

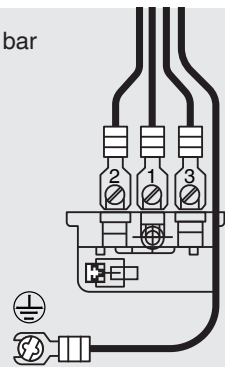
Terminal assignment

All setting ranges, except for -1 ... 0 bar

- 1 NC Normally closed
- 2 COM Common contact
- 3 NO Normally open
- ⊕ GND Ground connection

Setting range: -1 ... 0 bar

- 1 NO Normally open
- 2 COM Common contact
- 3 NC Normally closed
- ⊕ GND Ground connection



Reference conditions

Relative humidity per BS 6134

< 50 % r. h. at 40 °C [104 °F]

< 90 % r. h. at 20 °C [68 °F]

Electrical connection

Cable gland ½ NPT

Ingress protection per IEC/EN 60529

IP67

Process connections

| Process connection per | Thread size |
|------------------------|-------------|
| ISO 228-1 | G ¾ B |

Materials

Wetted parts

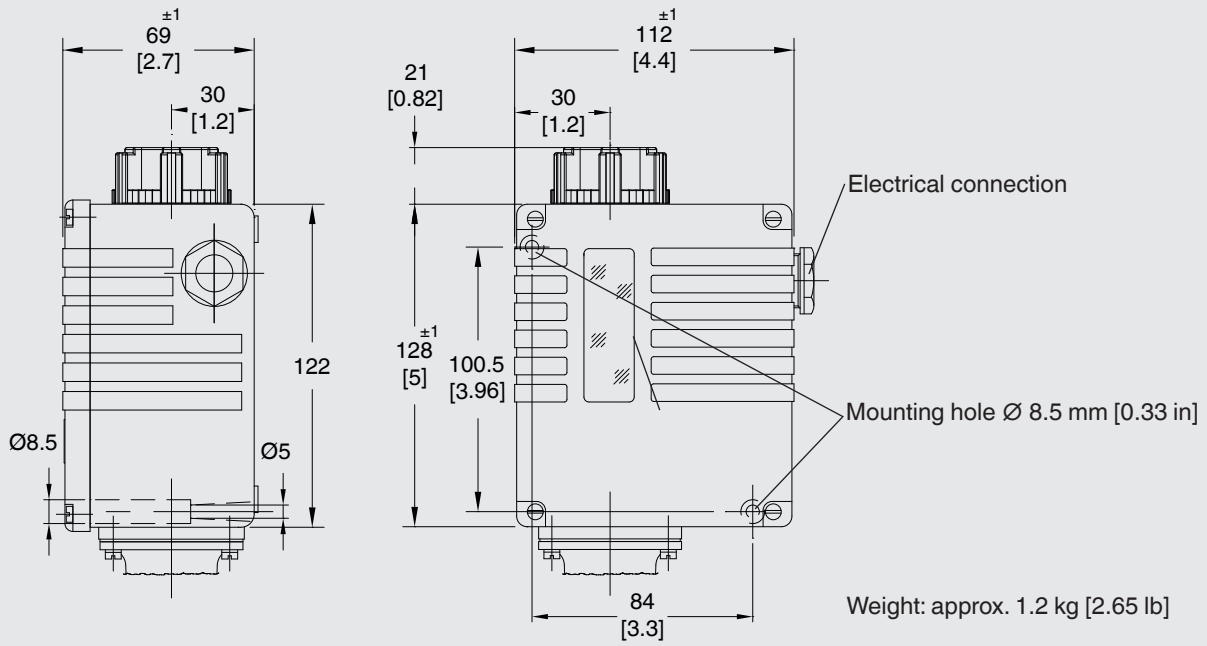
- Measuring element: Bellow, copper alloy CuSn6 per EN 1652
Process connection: Copper alloy
- Measuring element: Bellow, stainless steel 1.4401
Process connection: ■ Copper alloy
 ■ Stainless steel 1.4401
- Measuring element: Diaphragm, NBR
Process connection: Free cutting steel EN1A per
 EN 10277-3, tin-plated

Approvals

| Logo | Description | Country |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------|
|  | EU declaration of conformity <ul style="list-style-type: none">■ Low voltage directive■ RoHS directive | European Union |

Approvals and certificates, see website

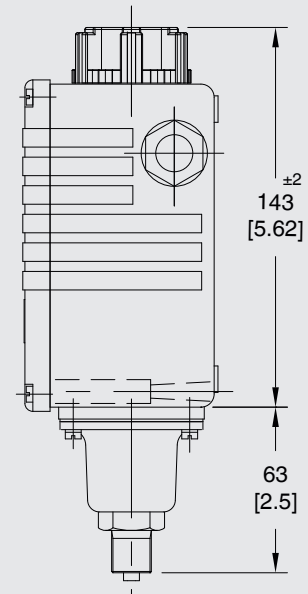
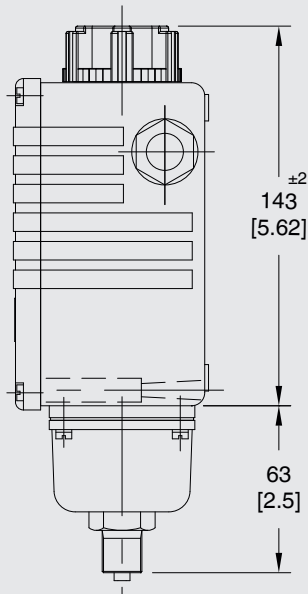
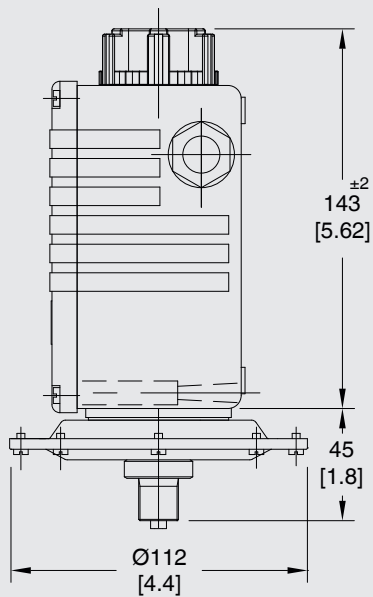
Dimensions in mm [in]



Setting range: 0 ... 300 mbar

Setting range: 0.1 ... 1 bar
-1 ... 0 bar

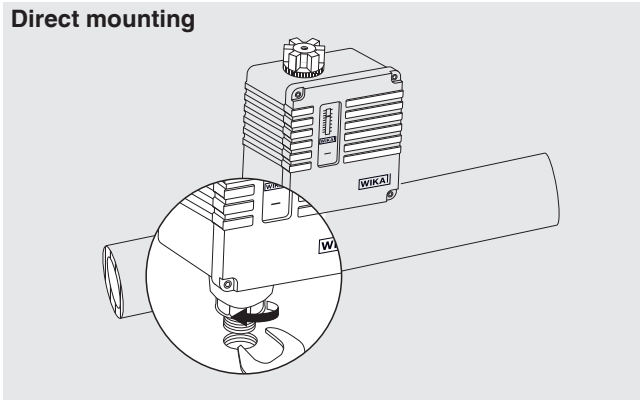
Setting range: 0.2 ... 3 bar 0.2 ... 6 bar
1 ... 10 bar 2 ... 17 bar
4 ... 17 bar 10 ... 30 bar
-0.8 ... +5 bar



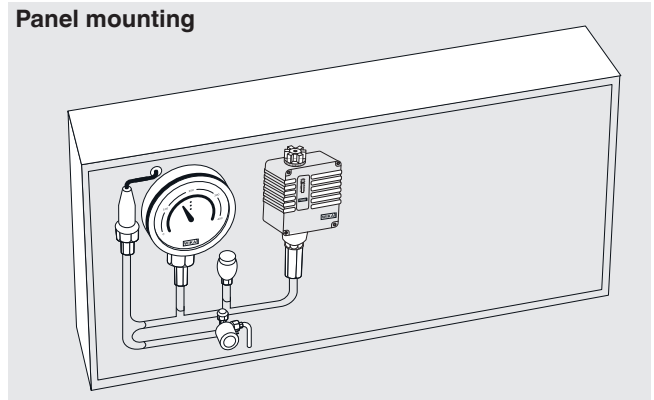
Mounting

Mounting option

Direct mounting

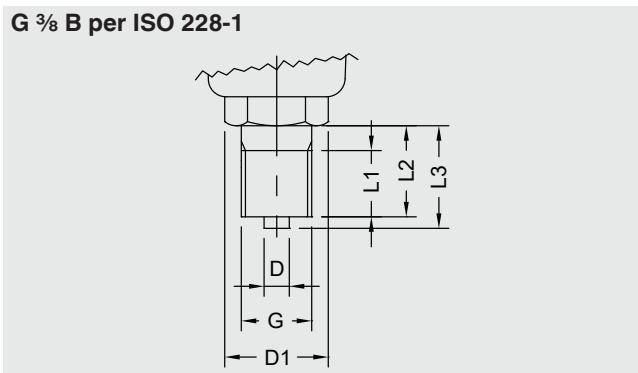


Panel mounting



Process connections

G 3/8 B per ISO 228-1



Dimensions in mm [in]

| G | D | D1 ¹⁾ | L1 | L2 | L3 |
|---------|-------------|------------------|------------|-----------|------------|
| G 3/8 B | ∅ 6 [0.236] | SW 24 [0.945] | 13 [0.511] | 16 [0.63] | 19 [0.748] |

1) SW = spanner width

Ordering information

Model / Setting range / Material of measuring element / Material of process connection

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