Beck.
The adjustable differential pressure switches in Ex zones.
Differential pressure switch 930..Ex Climair®
with adjustable switching pressure for Ex zones 1, 2 and 21, 22

Applications
A differential pressure switch for monitoring
overpressure, vacuum and differential pressure of air or other
non-aggressive, combustible gases.
Possible fields of application include:
- Monitoring air filters and ventilators
- Monitoring industrial cooling-air circuits
- Overheating protection for fan heaters
- Monitoring flows in ventilation ducts
- Controlling air and fire-protection flaps
- Frost protection for heat exchangers

Technical Specifications
Medium: air, non-combustible and non-aggressive gases
Temperature ranges:
- Medium temperature: -20°C to +85°C
- Medium and ambient temperature: -40°C to +85°C
Storage temperature: -20°C to +85°C
Switching pressure ranges:
- 10 Pa minimum
- 250 Pa maximum
Switching differential:
- Depending on pressure range ±15% from setpoint, Min. ±10 Pa
Max. working overpressure: 10 kPa
Pressure connections:
- 2 plastic hose ports
Outer diameter: 6.0 mm
Materials:
- Diaphragm: silicone, tempered at 200°C free of gas emissions (other materials on request).
Pressure switch housing: PA 6.6
Cover: PS
Weight: 150/110 g (with/without cover)
Electrical rating:
- 24 VDC/100 mA
- 30 VDC/60 mA
Electrical connections:
- AMP flat plug, 6.3 mm x 0.8 mm, in accordance with DIN 46244 or push-on screw terminals
- M20x1.5 or cap nut conduit AF20 with cable strain relief
Cable conduit: IP 54 (with cover)
Protection category: over 10⁶ switching operations
Mechanical working life: Ex

ATEX
EC type examination: BV5 06 ATEX E 141X
Device category:
Ignition protection type: Ex ia II B T4 Gb
CE conformity: ATEX Directive 2014/ 34/ EU
RoHS Directive 2011/ 65/ EU

Ex i-circuits
This pressure switch can be used in potentially explosive zones 1, 2 and 21, 22. In the safe area, an associated isolating means (separating barrier, switching amplifier) must be connected before. The entire isolating circuit must then be proved to keep inherent safety. For this purpose, the power specifications (P, I, U) of the barrier must be lower and the characteristics (L, C) higher than those of the pressure switch and of the connection line (blue colour).

Characteristics:
- Gas for IIB: 30 VDC/ 60 mA; 24 VDC/ 100 mA
- Dust for II B: 30 VDC/ 60 mA/ 0.6 W
- Capacitance: Ci 0 F
- Inductance: Li 0 mH

Arrangement of contacts

Safe area
Potentially explosive area
Zones 2, 1
Zones 22, 21
Zones 1
Zone 21

1 normally closed contact
2 normally open contact
3 supply
### Order matrix

<table>
<thead>
<tr>
<th>Switching pressure setting range</th>
<th>Switching differential set to</th>
<th>Tolerance for max. and min. switching pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>from 20 to 300 Pa</td>
<td>10 Pa</td>
<td>± 15 %</td>
</tr>
<tr>
<td>30 to 400 Pa</td>
<td>15 Pa</td>
<td>± 15 %</td>
</tr>
<tr>
<td>50 to 500 Pa</td>
<td>20 Pa</td>
<td>± 15 %</td>
</tr>
<tr>
<td>200 to 1,000 Pa</td>
<td>100 Pa</td>
<td>± 15 %</td>
</tr>
<tr>
<td>2,500 Pa</td>
<td>150 Pa</td>
<td>± 15 %</td>
</tr>
<tr>
<td>5,000 Pa</td>
<td>250 Pa</td>
<td>± 15 %</td>
</tr>
</tbody>
</table>

Switching contacts max.
- Electrical connection using enclosed screw terminals
  - for 100 mA/60 mA: AgNi contacts with enclosed screw terminals
  - for 24 VDC/30 VDC: AgNi contacts with 6.3 x 0.8 mm flat plug
- Electrical connection using 6.3 x 0.8 mm flat plug

Adjustment knob
- Scale in mbar
- Scale in Pascal
- Scale in Pascal and in WC

Fitting method
- Using fastening eyes

### Switching pressure details

The switching pressure details are referred to a vertical installation position which is also recommended for pressure switches which have their connection ports below. For a horizontal installation position with AMP terminal lugs on top, the switching values are some 20 Pa higher.

The switching pressure can be set without any manometer by an adjusting knob provided with a reference scale. With the aid of a screwdriver, the switching difference can also be adjusted.

### Accessories

- Metal mounting bracket, S-shaped: Article no. 6402
- Metal mounting bracket, L-shaped: Article no. 6401
- Snap-on plastic bracket, S-shaped: Article no. 6482
- Snap-on plastic bracket, L-shaped: Article no. 6481
- Climaset® consisting of 2 m PVC hose and two plastic tubes: Article no. 6555
- Climaset® consisting of 2 m silicone hose and two plastic tubes: Article no. 6555
- Climaset® consisting of 2 m PVC hose and two angled metal pipes: Article no. 6550
- Climaset® consisting of 2 m silicone hose and two angled metal pipes: Article no. 6550
- Set consisting of three push-on screw terminals, bagged: Article no. 6415
- Plastic tube for Climaset® 6555: Article no. 6551
- Angled metal pipe for Climaset® 6550: Article no. 6552
- Rubber grommet for Climaset® 6550: Article no. 6553
- Roll with 100 m PVC hose: Article no. 6424
- Roll with 100 m silicone hose: Article no. 6425
- Cap nut conduit AF20 with integrated cable strain relief: Article no. 6562
- M20x1.5 cable conduit including sealing and counter screw: Article no. 6568
- Cardbox for single packing for 930.8x Climair® small: Article no. 6428
- Cardbox for single packing for 930.8x Climair® large: Article no. 6429
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