

# 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

Adjustable 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
- Ex zones 1, 2 and 21, 22 with ATEX type examination

## Technical Specifications

Medium	air, non-combustible and non-aggressive gases
Temperature ranges Medium and ambient temperature	-20°C to +85°C
Storage temperature	-40°C to +85°C
Switching pressure ranges	20 - 300 Pa (minimum) 1,000 - 5,000 Pa (maximum)
Switching differential	10 Pa minimum 250 Pa maximum depending on pressure range
Switching pressure tolerance	±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 Cover	PA 6.6 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
Cable conduit	M20x1.5 or cap nut conduit AF20 with cable strain relief
Protection category	IP 54 (with cover)
Mechanical working life	over 10 <sup>6</sup> switching operations

## ATEX

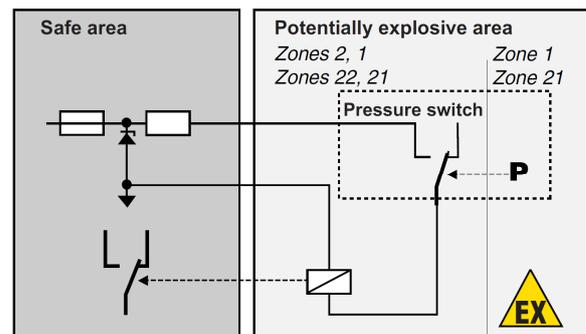
EC type examination	BVS 06 ATEX E 141X
Device category	II 2G and II 2D
Ignition protection type	Ex ia IIB T4 Gb Ex ia IIB T135 C Db
CE conformity	ATEX Directive 2014/34/EU RoHS Directive 2011/65/EU

## Ex i-circuits

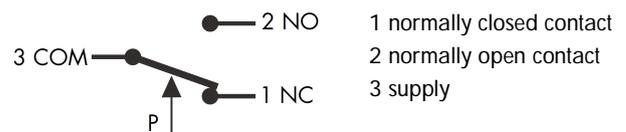
This pressure switch can be used in potentially explosive zones 1, 2 and 21, 22. In the safe area, an associated isolating means (separating barrier, switching amplifier) must be connected before. The entire isolating circuit must then be proved to keep inherent safety. For this purpose, the power specifications (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 IIIB:	30 VDC/60 mA/0.6 W
Capacitance - Ci	0 F
Inductance - Li	0 mH



## Arrangement of contacts



## Order matrix

Switching pressure setting range from to	Switching differential set to	Tolerance for max. and min. switching pressure	<b>930.8</b>							
20 300 Pa	10 Pa	± 15 %		<b>0B</b>						
30 400 Pa	15 Pa	± 15 %		<b>4</b>						
50 500 Pa	20 Pa	± 15 %		<b>3</b>						
200 1,000 Pa	100 Pa	± 15 %		<b>5</b>						
500 2,500 Pa	150 Pa	± 15 %		<b>6</b>						
1,000 5,000 Pa	250 Pa	± 15 %		<b>7B Ex</b>						
Switching contacts max. for 100 mA/60 mA for 24 VDC/30 VDC	electrical connection using enclosed screw terminals AgNi contacts with enclosed screw terminals AgNi contacts with 6.3 x 0.8 mm flat plug electrical connection using 6.3 x 0.8 mm flat plug					<b>1</b>				
						<b>2</b>				
						<b>3</b>				
						<b>4</b>				
Fitting method	using fastening eyes					<b>2</b>				
Adjustment knob	scale in mbar scale in Pascal scale in Pascal and inWC						<b>1</b>			
							<b>2</b>			
							<b>3</b>			
IP protection category	IP 54 with cable conduit M20x1.5 IP 54 with cap nut conduit AF20						<b>2</b>			
							<b>5</b>			
Packaging	bulk packed, 45 pcs. per carton bulk packed, folding boxes included individually boxed								<b>1</b>	
									<b>2</b>	
									<b>3</b>	
Accessories	without accessories with S-shaped metal mounting bracket 6402 with L-shaped metal mounting bracket 6401 with Climaset® 6555 with Climaset® 6550 with metal mounting bracket 6402 and Climaset® 6555 with metal mounting bracket 6402 and Climaset® 6550 with metal mounting bracket 6401 and Climaset® 6555 with metal mounting bracket 6401 and Climaset® 6550 with S-shaped snap-on mounting bracket 6482 with L-shaped snap-on mounting bracket 6481 with snap-on mounting bracket 6482 and Climaset® 6555 with snap-on mounting bracket 6482 and Climaset® 6550 with snap-on mounting bracket 6481 and Climaset® 6555 with snap-on mounting bracket 6481 and Climaset® 6550									<b>1</b>
										<b>2</b>
										<b>3</b>
										<b>4</b>
										<b>5</b>
										<b>6</b>
										<b>7</b>
										<b>8</b>
										<b>9</b>
										<b>A</b>
										<b>B</b>
										<b>C</b>
										<b>D</b>
										<b>E</b>
										<b>F</b>

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.

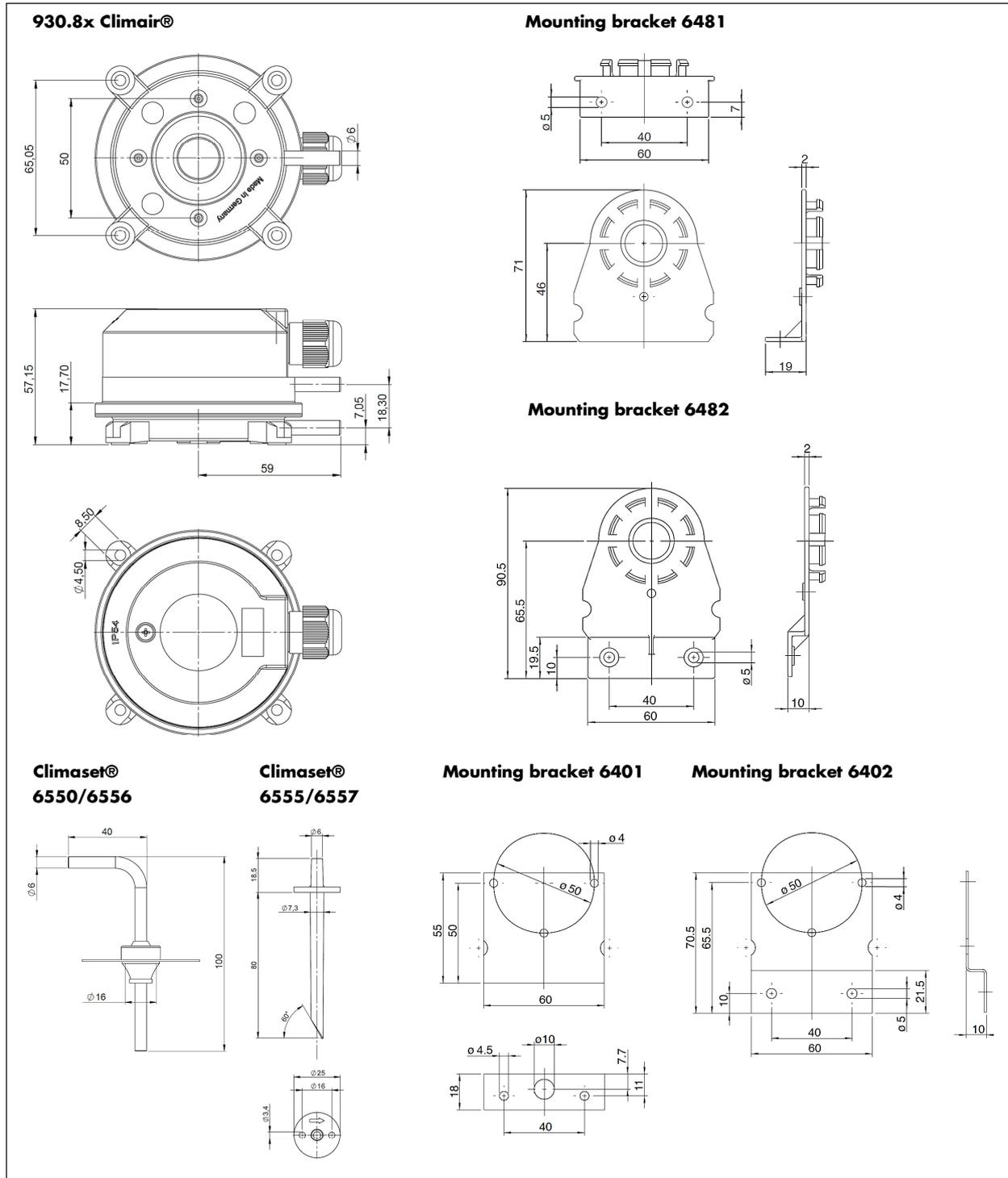
## Accessories

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. 6557
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. 6556
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

# Differential pressure switches

## 930..Ex Climair®

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for Ex zones 1, 2 and 21, 22



Technical data subject to change without prior notice.

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