

Beck.

The adjustable differential pressure switches in Ex zones.



Differential pressure switch 930..Ex Climair®

with adjustable switching pressure for
Ex zones 1 and 2



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 and 2 with ATEX 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 - 200 Pa (minimum) 1,000 - 4,000 Pa (maximum)
Switching differential	10 Pa minimum 250 Pa maximum depending on pressure range
Switching pressure tolerance	±15% from setpoint
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/45 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	PG-11 or M20x1.5 with cable strain relief
Protection category	IP 54 (with cover)
Mechanical working life	over 10 ⁶ switching operations



ATEX

EC type examination	BVS 06 ATEX E 141X
Device category	II 2G
Ignition protection type	II B T4
CE conformity	ATEX Directive 94/9/EG RoHS-Directive 2002/95/EG

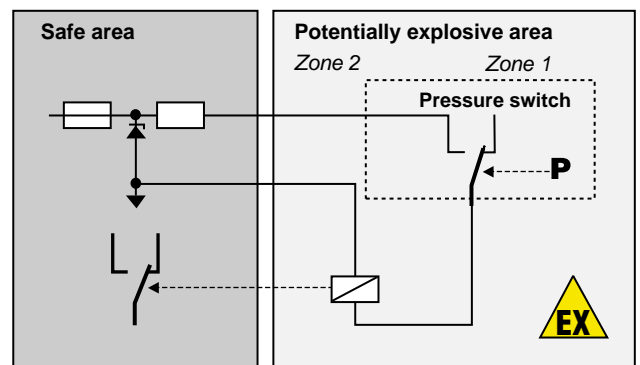
Ex i-circuits

This pressure switch can be used in potentially explosive zones 1 and 2. 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.

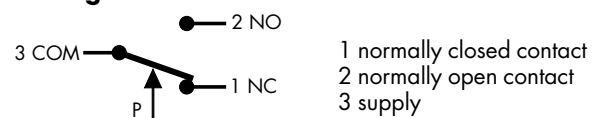
For this purpose, the power specifications (P, I, U) of the barrier must be lower and the characteristics (L, C) higher than those of the pressure switch and of the connection line (blue colour).

Characteristics for IIb:

Voltage - U _i	24 VDC /30 VDC
Current - I _i	100 mA/45 mA
Capacitance - C _i	0 µF
Inductance - L _i	0 mH



Arrangement of contacts



Order matrix

Switching pressure setting range from to	Switching differential set to	Tolerance for max. and min. switching pressure	930.8							EX
20 200 Pa	10 Pa	±15%	0							
30 400 Pa	15 Pa	±15%	4							
50 500 Pa	20 Pa	±15%	3							
200 1,000 Pa	100 Pa	±15%	5							
500 2,500 Pa	150 Pa	±15%	6							
1,000 4,000 Pa	250 Pa	±15%	7							
Switching contacts max. for 100 mA/45 mA for 24 VDC/30 VDC	electrical connection using 6.3 x 0.8 mm flat plug			1						
	electrical connection using enclosed screw terminals			4						
Fitting method	using fastening eyes				2					
Adjustment knob	scale in mbar					1				
	scale in Pascal					2				
	scale in Pascal and inWC					3				
IP protection category	IP 54 with cable conduit PG-11						1			
	IP 54 with cable conduit M20x1.5						2			
Packaging	bulk packed, 45 pcs. per carton							1		
	bulk packed, folding boxes included							2		
	individually boxed							3		
Accessories	without accessories								1	
	with S-shaped metal mounting bracket 6402								2	
	with L-shaped metal mounting bracket 6401								3	
	with Climaset® 6555								4	
	with Climaset® 6550								5	
	with metal mounting bracket 6402 and Climaset® 6555								6	
	with metal mounting bracket 6402 and Climaset® 6550								7	
	with metal mounting bracket 6401 and Climaset® 6555								8	
	with metal mounting bracket 6401 and Climaset® 6550								9	
	with S-shaped snap-on mounting bracket 6482								A	
	with L-shaped snap-on mounting bracket 6481								B	
	with snap-on mounting bracket 6482 and Climaset® 6555								C	
	with snap-on mounting bracket 6482 and Climaset® 6550								D	
	with snap-on mounting bracket 6481 and Climaset® 6555								E	
	with snap-on mounting bracket 6481 and Climaset® 6550								F	

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.

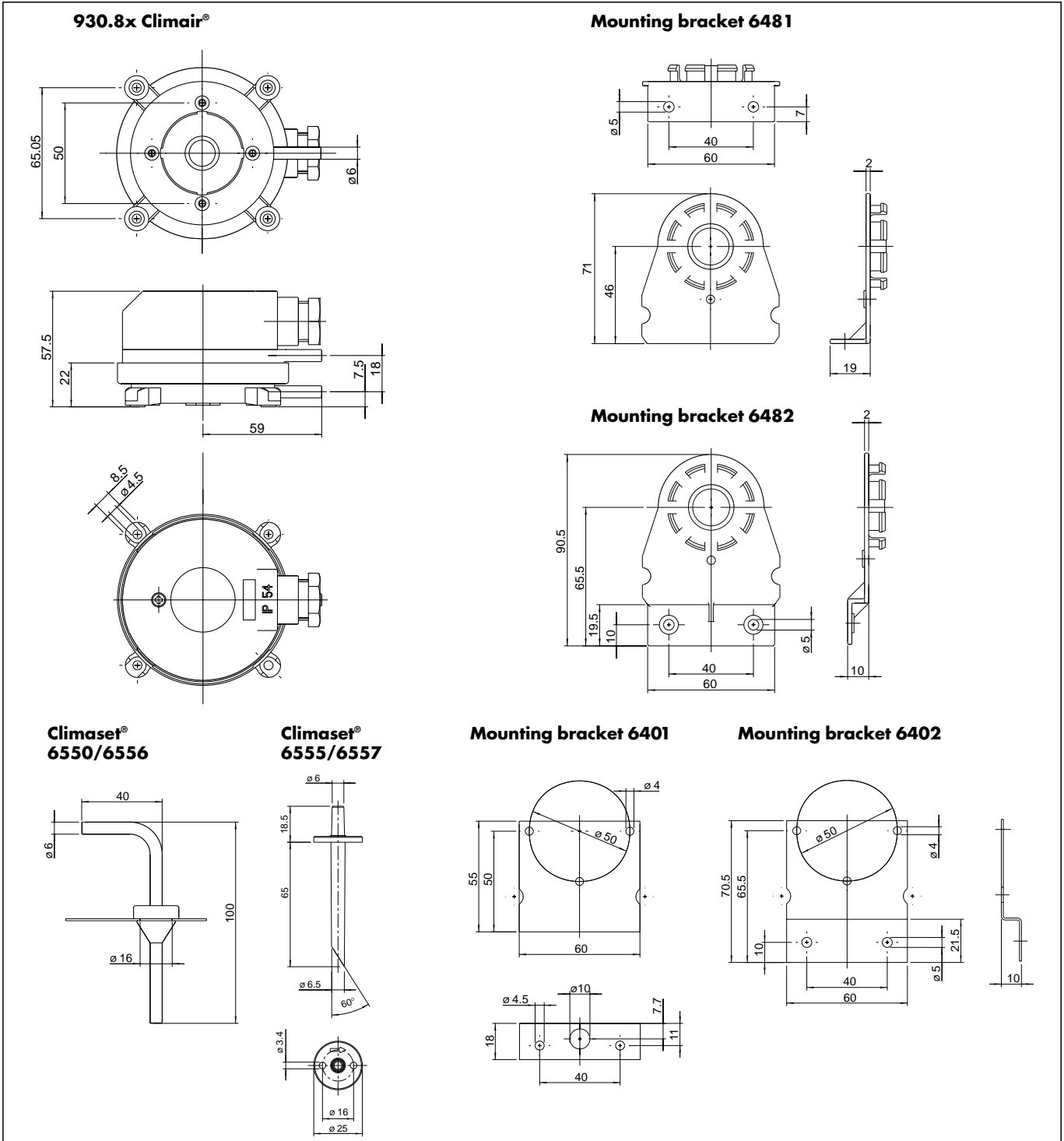
The switching pressure can be set without any manometer by an adjusting knob provided with a reference scale. With the aid of a screwdriver, the switching difference can also be adjusted.

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/silicone hose	Article no. 6424/25
PG-11 cable conduit including sealing and counter screw	Article no. 6358
M20x1.5 cable conduit including sealing and counter screw	Article no. 6568
Cardbox for single packing for 930.8x Climair® small/large	Article no. 6428/29

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Technical data subject to change without prior notice.

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