

Differential pressure switch 911.81x



Applications

Adjustable differential pressure switch for monitoring overpressure, vacuum and differential pressure of air or other non-combustible, non-aggressive gases. Possible fields of application include:

- Monitoring air filters and ventilators
- Overheating protection for fan heaters
- Monitoring flows in ventilation ducts
- Frost protection for heat exchangers

Versions

With this pressure switch without a scale the switching pressure can be adjusted very precisely with the central adjusting screw using a screwdriver and a pressure gauge. The switching differential can also be adjusted in the same way as for the Series 930.8x Climair®.

Type	Adjustment range for upper switching pressure from to	Switching differential set to	Tolerance for upper and lower switching pressure
911.811	20 100 Pa	10 Pa	± 10%
911.812	40 200 Pa	20 Pa	± 10%
911.813	100 300 Pa	25 Pa	± 10%
911.814	200 500 Pa	50 Pa	± 10%

Switching pressure specifications apply to vertical installation. If the switches are installed horizontally, the switching values are approx. 20 Pa higher.

Maximum operating pressure

100 kPa for all pressure ranges.

Temperature range

Medium and ambient temperature from -20°C to +85°C. Storage temperature from -40°C to +85°C.

Diaphragm material

Silicone. Other materials available on request.

Pressure connections

2 pipe connection pieces (P1 and P2), external diameter 6.0 mm: P1 for connection to higher pressure (designated +) P2 for connection to lower pressure (designated -)

Housing materials

Switching casing and connection P2 made of PA 6.6, fitting section and connection P1 made of POM.

Weight

911.81x with/without cover

94/ 82 g

Mechanical working life

Over 10⁶ switching operations.

Electrical rating

Standard version

max. 1.0 A (0.4 A) / 250 V AC

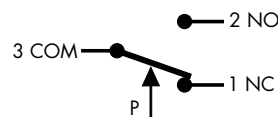
Low-voltage version

max. 0.1 A / 24 V DC

Electrical connections

AMP flat plug 6.3 mm x 0.8 mm in accordance with DIN 46244 or push-on screw terminals.

Arrangement of contacts



- 1 Break contact
- 2 Operating contact
- 3 Power supply line

Protection category

911.81x with/without cover

IP 20/IP 00

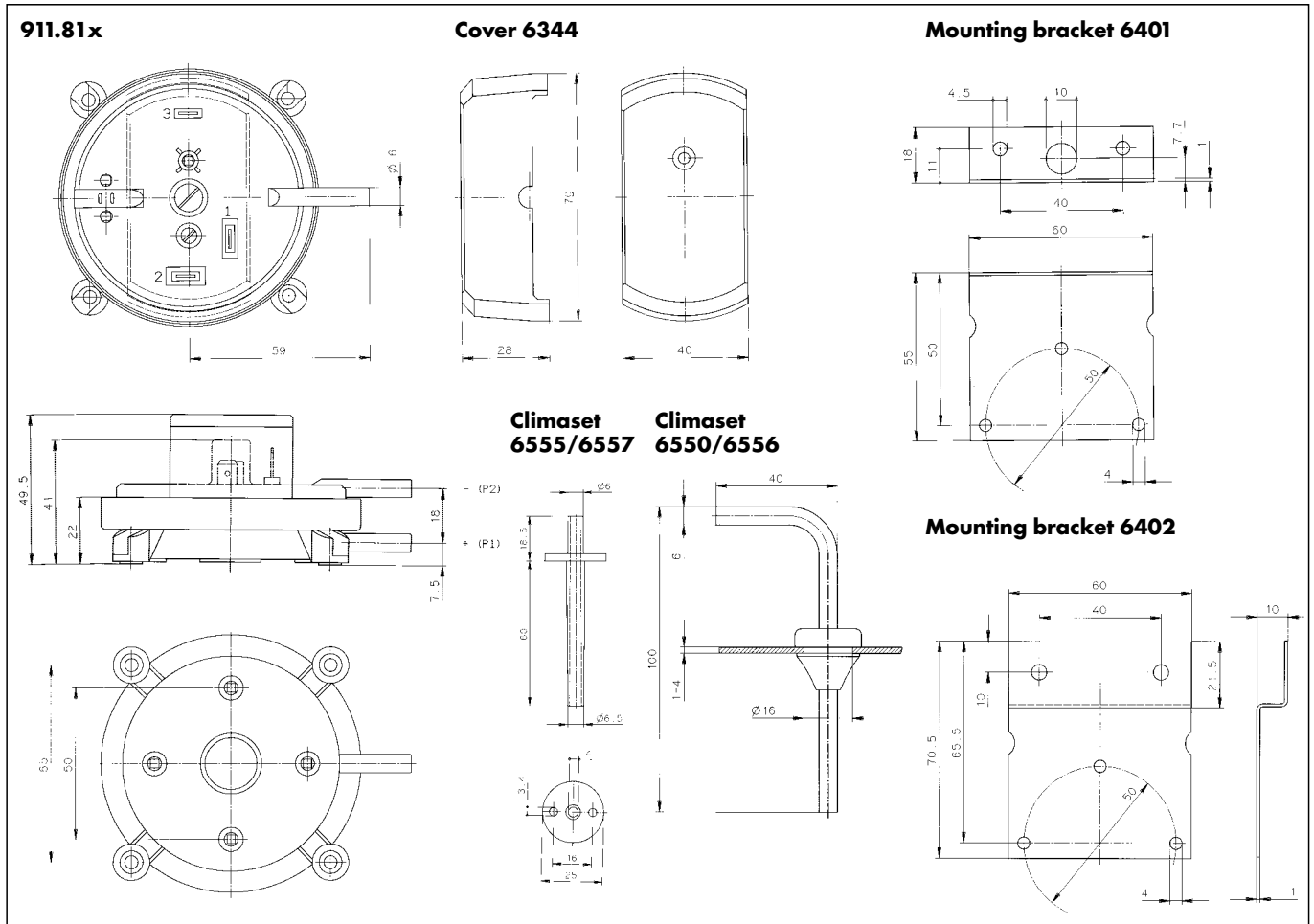
Approvals

Switch is approved in accordance with EU low voltage directive 73/23/EEC.

Order matrix

Pressure ranges	0.2 to 1.0 mbar (20 - 100 Pa) 0.4 to 2.0 mbar (40 - 200 Pa) 1.0 to 3.0 mbar (100 - 300 Pa) 2.0 to 5.0 mbar (200 - 500 Pa)	911.81	1					
Switching contacts	for low voltages up to max. 1.0A (0.4) / 250 V AC		2					
Fitting method	mounted directly without bracket with S-shaped mounting bracket with L-shaped mounting bracket		3					
IP protection category	IP 20 with transparent cover IP 00 without cover		4					
Packaging	bulk packed, 60 pcs. per carton						1	1

Differential pressure switch 911.81x



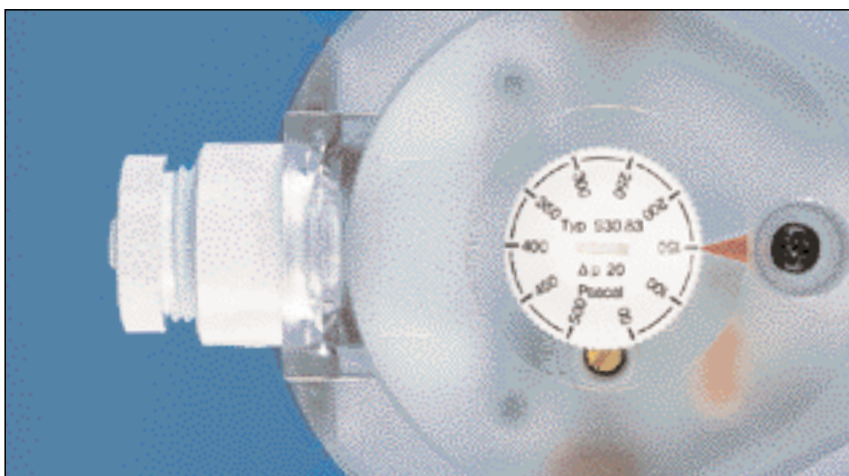
Accessories

L-shaped mounting bracket	Article No. 6401
S-shaped mounting bracket	Article No. 6402
Set consisting of three push-on screw terminals	Article No. 6415
IP 20 cover for 911.81	Article No. 6344
Climaset consisting of 2m PVC piping and two angled metal pipes	Article No. 6550
Climaset consisting of 2m silicone piping and two angled metal pipes	Article No. 6556
Climaset consisting of 2m PVC piping and two plastic nipples	Article No. 6555
Climaset consisting of 2m silicone piping and two plastic nipples	Article No. 6557
0.8 mm nozzle for damping pressure surges	Article No. 6338
0.5 mm nozzle for damping pressure surges	Article No. 6334



Beck.

The adjustable differential pressure switches.



Differential pressure switch 930.8x Climair®

with adjustable switching pressure



Applications

Adjustable differential pressure switch for monitoring overpressure, vacuum and differential pressure of air or other non-combustible, non-aggressive 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

Versions

With this pressure switch the switching pressure can be adjusted without a pressure gauge using a scaled adjustment knob. The switching differential can also be adjusted with a screwdriver.

Type	Adjustment range for upper switching pressure from to	Switching differential set to	Tolerance for upper and lower switching pressure
930.80	20 200 Pa	10 Pa	± 15%
930.81	40 100 Pa	20 Pa	± 15%
930.82	40 200 Pa	20 Pa	± 15%
930.83	50 500 Pa	20 Pa	± 15%
930.85	200 1000 Pa	100 Pa	± 15%
930.86	500 2500 Pa	150 Pa	± 15%
930.87	1000 4000 Pa	250 Pa	± 15%

Switching pressure specifications apply to vertical installation which is also the recommended position with pressure-pipe connections pointing downwards. If the switches are installed horizontally with AMP connection terminals uppermost, the switching values are approx. 20 Pa higher.

Maximum operating pressure

10 kPa for all pressure ranges.

Medium

Air, non-combustible and non-aggressive gases.

Temperature range

Medium and ambient temperature from -20°C to +85°C.
Storage temperature from -40°C to +85°C.

Diaphragm material

Silicone, tempered at 200°C, free of gas emissions.
Other materials available on request.

Pressure connections

2 plastic pipe connection pieces (P1 and P2), external diameter 6.0 mm:
P1 for connection to higher pressure (marked +)
P2 for connection to lower pressure (marked -)

Housing materials

Switch body made of PA 6.6.
Cover made of PS.

Weight

With cover 150 g
Without cover 110 g

Mechanical working life

Over 10⁶ switching operations.

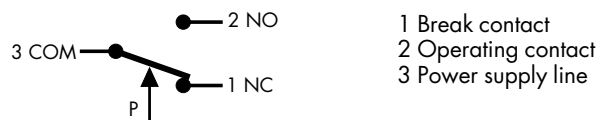
Electrical rating

Standard version max. 1.0 A (0.4 A) / 250 VAC
Low-voltage version max. 0.1 A / 24 VDC

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.

Arrangement of contacts



Protection category

IP 54 with cover
IP 00 without cover

Approvals

CE marking according to EC Low Voltage Directive 73/23/EEC.

Accessories

See order matrix.

Order matrix

Pressure ranges	20 to 200 Pascal (0.2 to 2.0 mbar)	930.8	0						
	40 to 100 Pascal (0.4 to 1.0 mbar)								1
	40 to 200 Pascal (0.4 to 2.0 mbar)								2
	50 to 500 Pascal (0.5 to 5.0 mbar)								3
	200 to 1000 Pascal (2.0 to 10.0 mbar)								5
	500 to 2500 Pascal (5.0 to 25.0 mbar)								6
	1000 to 4000 Pascal (10 to 40 mbar)								7
Switching contacts	gold-plated for low voltages, screw terminals enclosed							1	
	up to maximum 1.0 A (0.4) / 250 VAC, screw terminals enclosed							2	
	up to maximum 1.0 A (0.4) / 250 VAC with 6.3x0.8 mm flat plugs							3	
	gold-plated for low voltages with 6.3x0.8 mm flat plugs							4	
Fitting method	mounted directly without bracket				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	
	IP 54 with cable conduit NPT1/2"							3	
	IP 00 without cover							4	
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 S-shaped metal mounting bracket 6402 and Climaset® 6555							6	
	with S-shaped metal mounting bracket 6402 and Climaset® 6550							7	
	with L-shaped metal mounting bracket 6401 and Climaset® 6555							8	
	with L-shaped metal mounting bracket 6401 and Climaset® 6550							9	
	with S-shaped snap-on plastic bracket 6482							A	
	with L-shaped snap-on plastic bracket 6481							B	
	with S-shaped snap-on plastic bracket 6482 and Climaset® 6555							C	
	with S-shaped snap-on plastic bracket 6482 and Climaset® 6550							D	
	with L-shaped snap-on plastic bracket 6481 and Climaset® 6555							E	
with L-shaped snap-on plastic bracket 6481 and Climaset® 6550							F		

Accessories

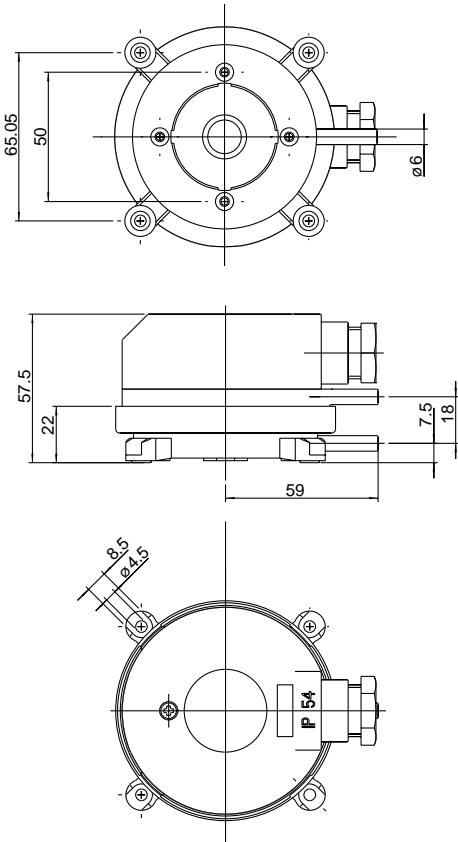
Metal mounting bracket S-shaped	Article No. 6402
Metal mounting bracket L-shaped	Article No. 6401
Snap-on plastic bracket S-shaped	Article No. 6482
Snap-on plastic bracket L-shaped	Article No. 6481
Climaset® consisting of 2 m PVC hose and 2 plastic tubes	Article No. 6555
Climaset® consisting of 2 m Silicone hose and 2 plastic tubes	Article No. 6557
Climaset® consisting of 2 m PVC hose and 2 angled metal pipes	Article No. 6550
Climaset® consisting of 2 m Silicone hose and 2 angled metal pipes	Article No. 6556
Set consisting of three push-on screw terminals	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
PG-11 cable conduit including sealing and counter screw	Article No. 6358
M20x1.5 cable conduit including sealing and counter screw	Article No. 6568
NPT1/2" cable conduit without counter parts	Article No. 6561
Card box for single packing of series 930.8x Climair®	Article No. 6426

Differential pressure switches

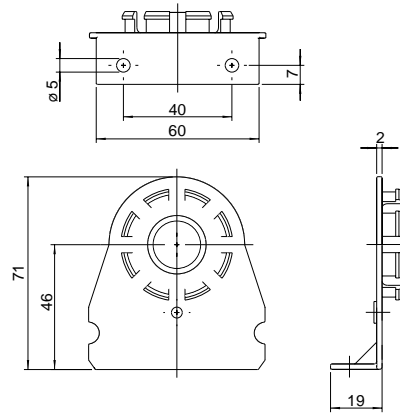
930.8x Climair®

with adjustable switching pressure

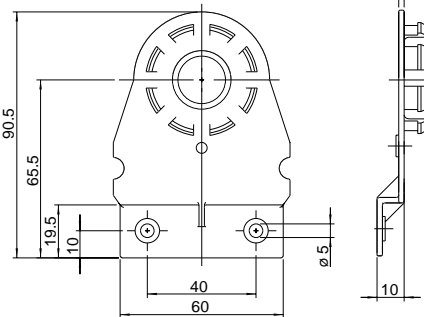
930.8x Climair®



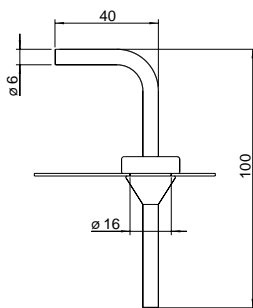
Mounting bracket 6481



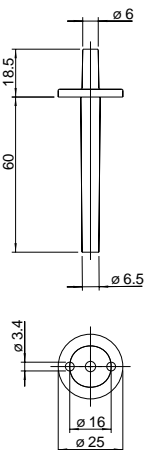
Mounting bracket 6482



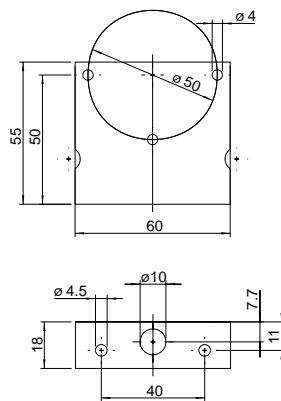
**Climaset®
6550/6556**



**Climaset®
6555/6557**



Mounting bracket 6401



Mounting bracket 6402

