

DIFFERENTIAL PRESSURE, VACUUM AND OVERPRESSURE SWITCHES 0.2 TO 50 MBAR

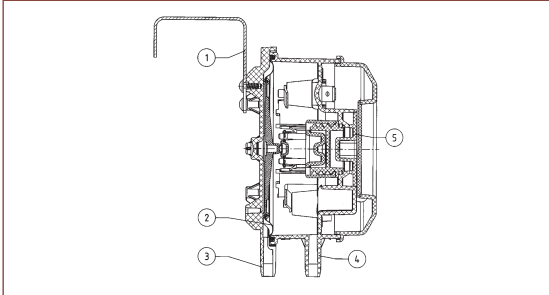
TYPE 604

Technical Overview



The type 604 pressure switch is used as a ΔP flow switch in ventilation ducts for the control of filters and fans, and in primary and secondary control systems for the control of air dampers.

The 604 pressure monitoring switches are also ideally suited to protect heating coils from overheating and for monitoring industrial air cooling circuits. Medium: air and non-corrosive gases.



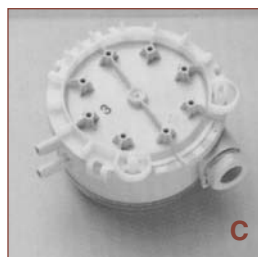
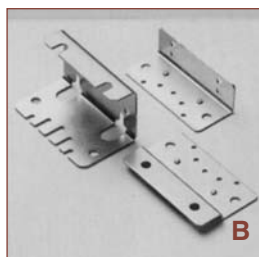
The Distinct Advantages

- Extremely easy to install
- Only one fixing screw for cover
- Cable inlead case geometry
- Cable strain relief integrated in Pg 11
- Combi-bracket for vertical or horizontal installation
- High adjustment accuracy through individual scale engraving per switch
- Long-term stability or switching points through trapezoidal bead diaphragm
- Multi-layer contact gold-plated

Specifications

Legend to cross-section drawing	1. Mounting bracket 2. Diaphragm 3. P1 connection of higher pressure or lower vacuum 4. P2 connection of lower pressure or higher vacuum 5. Scale (switching point setting)
Pressure ranges	See order code selection table
Temperature ranges / Overpressure	Overpressure 50 mbar at medium and ambient temperature -30 to +85 °C Overpressure 75 mbar at medium and ambient temperature -30 to +75 °C Storage temperature -40 to +85 °C
Setting ranges / Switching differential Lowest turn-on pressure	See diagrams, right. The switching differential is factory-set. 0.2 mbar
Repeatability	In the ranges 0.2 to 3 mbar < +/- 0.025 mbar In the ranges 0.5 to 20 mbar < +/- 0.05 mbar In the ranges 10 to 50 mbar < +/- 0.15 mbar
Case construction	Main case : Fiberglass-reinforced plastic Cover : Plastic
Weight	120 grams without bracket 144 grams with bracket type C
Installation arrangement	Standard diaphragm vertical (factory calibration) When the switch is rotated to horizontal the switching points will change by 11 pascal (see back cover)
Pressure connections	Pipe \varnothing 6.2 mm Adapter 1/8"
Diaphragm	Silicone LSR, Tempered 200 °C, free of gas emissions
Electrical connections	Screw terminals or AMP-Connectors 6.3 or 4.8 mm according to DIN 46244 Cable gland with cable strain relief
Contact system	Standard : Changeover switch Option : N/O contact
Contact material	Multi-layer contact (suitable for DDC) 5(0.8*) A 250 VAC 2 A 30 VDC * For inductive loads with 6-fold starting current $\cos \phi$ 0.6
Tests	EN 61058, VDE 0630 DVGW according to DIN 3398, part 2 EU conformity Low voltage directive 73/23/EWG Gas appliance directive 90/396/EWG CE 0085 A P0918
Protection class	IP 00 without cover IP 54 with cover
Service life	Mechanical, > 10 ⁶ switching cycles
Accessories	See order code selection table

Versions



- A - Connection set
Fig. 1 / Fig. 2
- B - Mounting bracket
A, B, C
- C - Switch with
Fastening clip
- D - Equipped with
AMP connectors

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Compact A/C set (standard)

Consisting of switching with hose connection \varnothing 6.2 mm, scale in mbar, screw terminals. Multi-layer contact up to 5 A (suitable for DDC), combi-bracket and hose connection set, single packing.

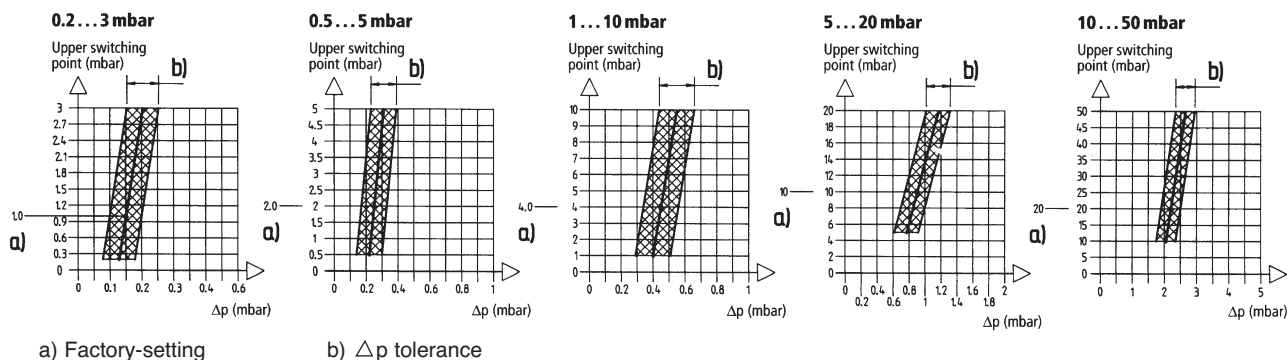
Pressure range	Connection set	Order no.
0.2 - 3 mbar	Fig. 1 (Metal)	604.9000001
0.5 - 5 mbar	Fig. 1 (Metal)	604.9100001
1 - 10 mbar	Fig. 1 (Metal)	604.9200001
5 - 20 mbar	Fig. 1 (Metal)	604.9400001
10 - 50 mbar	Fig. 1 (Metal)	604.9500001
0.2 - 3 mbar	Fig. 2 (Plastic)	604.9000002
0.5 - 5 mbar	Fig. 2 (Plastic)	604.9100002
1 - 10 mbar	Fig. 2 (Plastic)	604.9200002
5 - 20 mbar	Fig. 2 (Plastic)	604.9400002
10 - 50 mbar	Fig. 2 (Plastic)	604.9500002

Order Code Selection Table

		EDITION 02/2001	604 .	9	X	X	X	X	X	X	X	X
ETL execution, fire classification V0				E								
Setting range	0.2 - 3 mbar	(20 - 300 Pa)		0								
	0.5 - 5 mbar	(50 - 500 Pa)		1								
	1 - 10 mbar	(100 - 1000 Pa)		2								
	5 - 20 mbar	(500 - 2000 Pa)		4								
	10 - 50 mbar	(1000 - 5000 Pa)		5								
Scale	Scale in mbar			0								
	Scale in Pa			1								
	Scale in inH2O			2								
	without scale (rating plate in mbar)			3								
	without scale (rating plate in Pa)			4								
	without scale (rating plate in inH2O)			5								
Pressure connection	Pipe \varnothing 6.2 mm	without orifice				0						
	Pipe \varnothing 6.2 mm	with orifice on P2				1						
	Inside thread G 1/8	without orifice				2						
	Inside thread G 1/8	with orifice on P2				3						
Electrical connection	Screw terminals						0					
	AMP connector 6.3 mm						1					
	AMP connector 4.8 mm						2					
Cover / Bracket	with cover	combi-bracket type C						0				
	with cover	bracket type A						1				
	with cover	bracket type B						2				
	with cover	without bracket						4				
	without cover	combi-bracket type C						5				
	without cover	bracket type A						6				
	without cover	bracket type B						7				
	without cover	without bracke						8				
Connection set	without connection set								0			
With hose 2 m	with connection set	as Fig. 1 in single packing								1		
	with connection set	as Fig. 2 in single packing								2		

Accessories, Supplied Separately

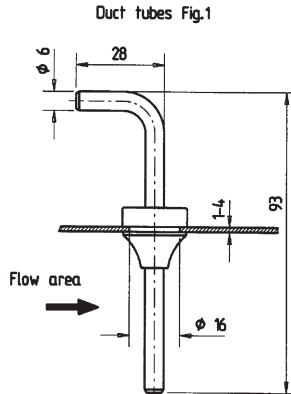
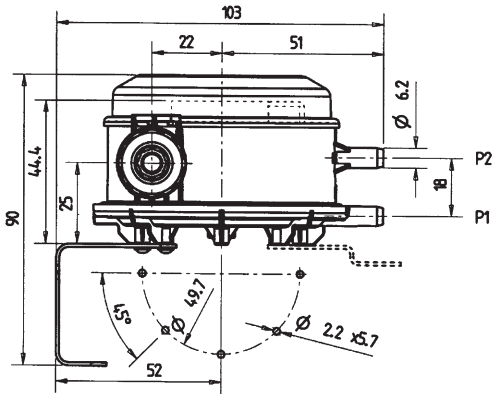
		Order No.					
Hose connection set Fig. 1		1	0	4	3	1	2
Hose connection set Fig. 2		1	0	0	0	6	4
Bracket type A ¹		1	0	0	2	9	5 ¹
Bracket type B ¹		1	0	0	0	9	8 ¹
Combi-bracket type C ¹		1	0	0	1	0	6 ¹
¹ Special screws for fastening switches to bracket (2 screws per switch required)		1	0	2	9	7	6
Fastening clip for bracket A, B, C or direct mounting	For wall thickness 0.8 – 1.1 mm	1	0	0	2	9	4
	For wall thickness 1.8 – 2.1 mm	1	0	0	2	9	3



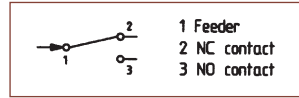
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Dimensions in mm / Electrical Connections

EDITION 02/2001



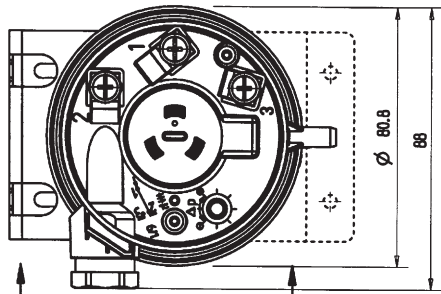
Electrical connections



Fixing screw for direct wall-mounting without bracket

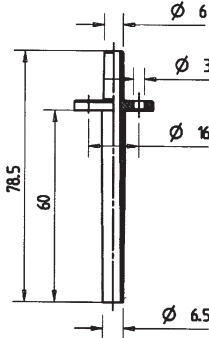
Wall thickness
On customer site

Order number	Screw length	1 - 2mm 4.1 - 6mm
102976	6mm	
102978	10mm	

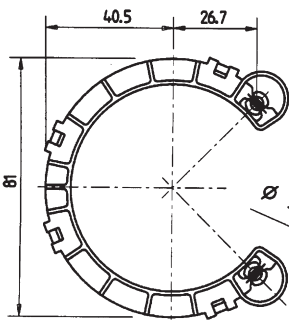


Bracket A+C factory-mounted in this position

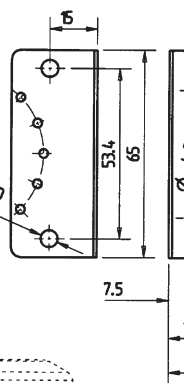
Bracket B factory-mounted in this position



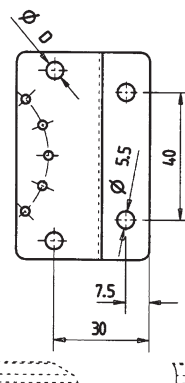
Mounting the switch with fastening clip



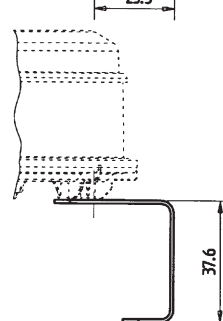
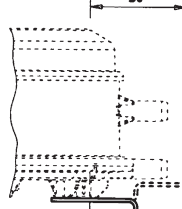
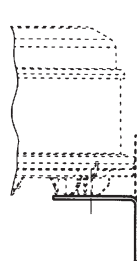
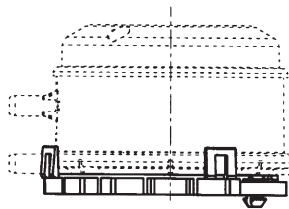
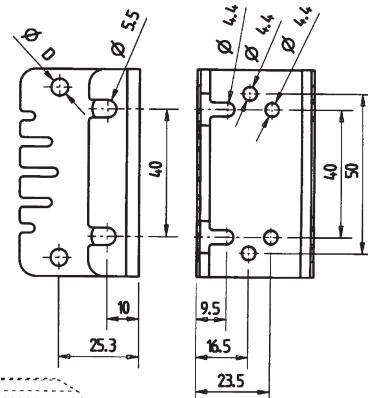
Bracket type A



Bracket type B



Bracket type C



D = Holes for fastening clip

Installation Arrangement

Recommended orientation: vertical (factory calibration)



Horizontal mounting with cover upwards. Switching points 11 Pa higher than indicated on scale



Horizontal mounting with cover downwards. Switching points 11 Pa lower than indicated on scale

