604

Differential pressure, vacuum and overpressure switch 0.2 – 50 mbar

EDITION 02/2001

Huba Control

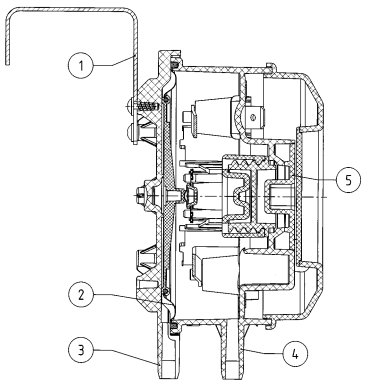
FOR FINE PRESSURE AND FLOW MEASUREMENT

EDITION 02/2001

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 of switching points through trapezoidal bead diaphragm
- Multi-layer contact gold-plated

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

See diagrams, right

The switching differential is factory-set.

Lowest turn-on pressure

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 ∅ 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 Pg 11 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 φ 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

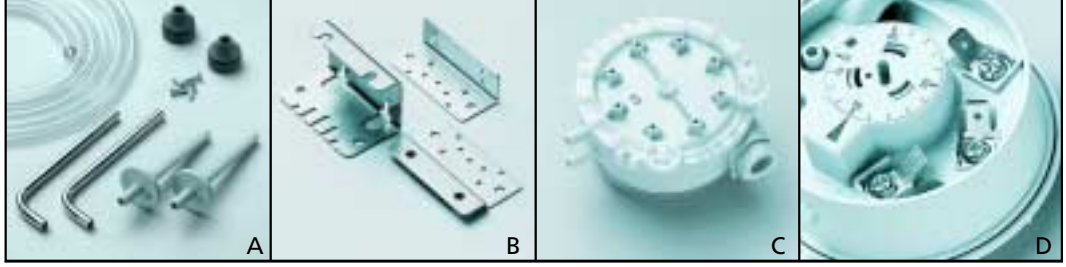
IP 00 without cover
IP 54 with cover

Service life

Mechanical, > 10^6 switching cycles

Accessories

See order code selection table



A – Connection set Fig. 1 / Fig. 2

B – Mounting bracket A, B, C

C – Switch with fastening clip

D – Equipped with AMP connectors

Versions

Compact A/C set (standard)

Consisting of switch with hose connection Ø 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 packaging.

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

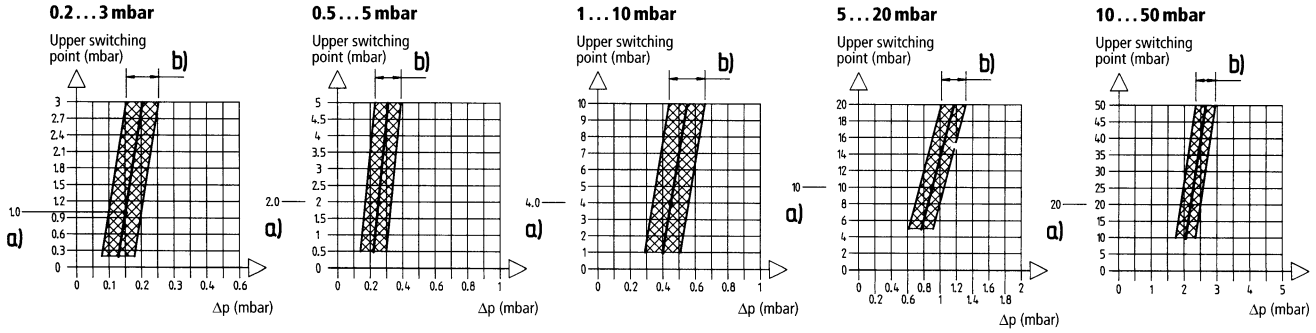
Order code selection table

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 – 1 000 Pa)			2							
	5 – 20 mbar	(500 – 2 000 Pa)			4							
	10 – 50 mbar	(1 000 – 5 000 Pa)			5							
Scale	Scale in mbar					0						
	Scale in Pa					1						
	Scale in inH_2O					2						
	without scale (rating plate in mbar)					3						
	without scale (rating plate in Pa)					4						
	without scale (rating plate in inH_2O)					5						
Pressure connection	Pipe ø 6.2 mm	without orifice					0					
	Pipe ø 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							3			
	without cover	combi-bracket type C							5			
	without cover	bracket type A							6			
	without cover	bracket type B							7			
	without cover	without bracket							8			
Connection set with hose 2 m	without connection set									0		
	with connection set	as Fig. 1 in single packaging								1		
	with connection set	as Fig. 2 in single packaging								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

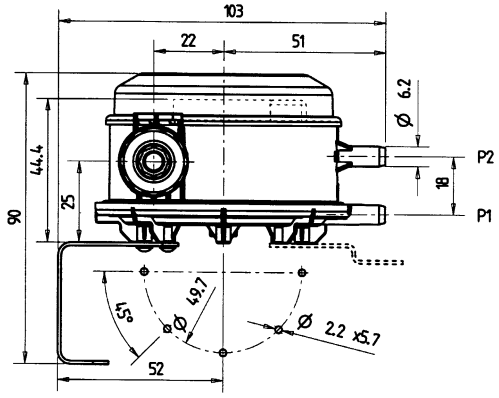


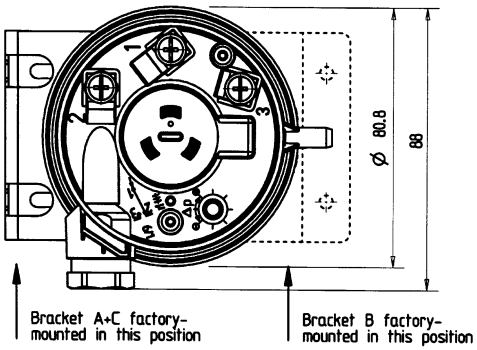
a) Factory-setting b) Δp tolerance

[1] See fixing screws «Wall thickness on customer site» on back page.

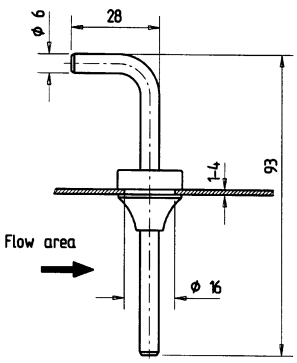
Dimensions in mm / Electrical connections

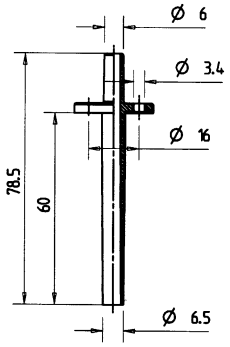
EDITION 02/2001



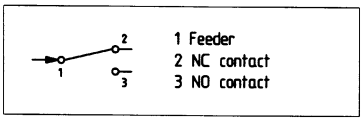


Duct tubes Fig.1





Electrical connections

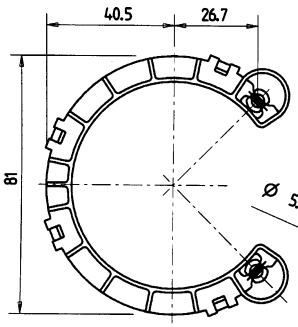


Fixing screws for direct wall-mounting without bracket

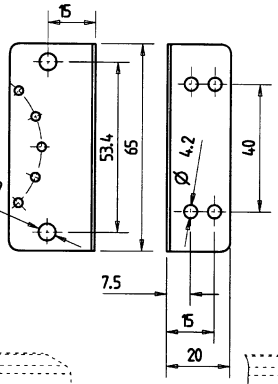
Wall thickness on customer site | Screw length | Order number

Wall thickness on customer site	Screw length	Order number
1 – 2 mm	6 mm	102976
4.1 – 6 mm	10 mm	102978

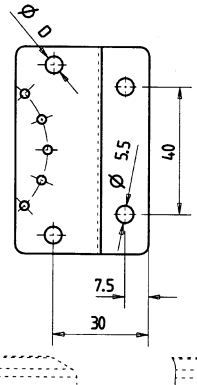
Mounting the switch with fastening clip



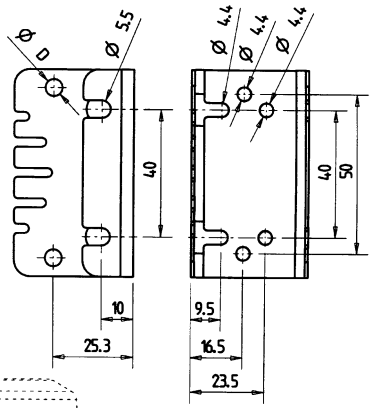
Bracket type A

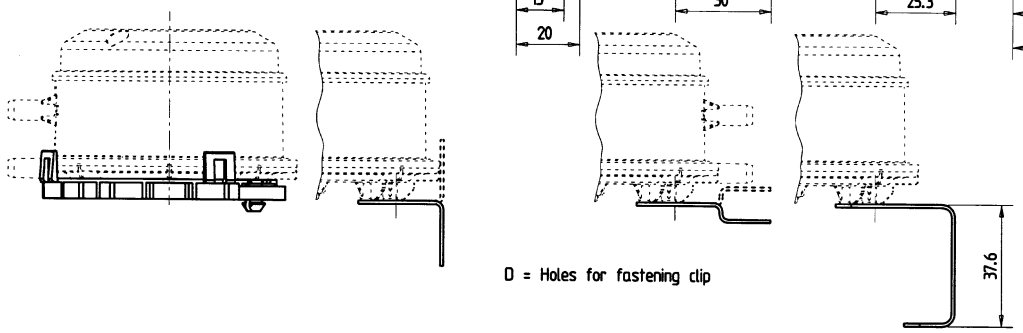


Bracket type B



Bracket type C





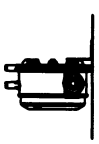
D = Holes for fastening clip

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.



604.02/2001.HUBA/604e0404.DEP.SCHMO/010065.WOH
Technical data subject to change.

Internet: www.hubacontrol.com

Huba Control Switzerland
Headquaters
Industriestrasse 17
CH-5436 Würenlos
Phone ++41 (0) 56 436 82 00
Fax ++41 (0) 56 436 82 82
e-mail: info.ch@hubacontrol.com

Huba Control United Kingdom
Unit 19 A Crawley Mill
Industrial Estate
GB-Witney Oxford OX29 9TJ
Phone 01 993 776 667
Fax 01 993 776 671
e-mail: info.uk@hubacontrol.com

Huba Control France
e-mail: info.fr@hubacontrol.com
Huba Control Germany
e-mail: info.de@hubacontrol.com
Huba Control Netherlands
e-mail: info.nl@hubacontrol.com

Agent for: