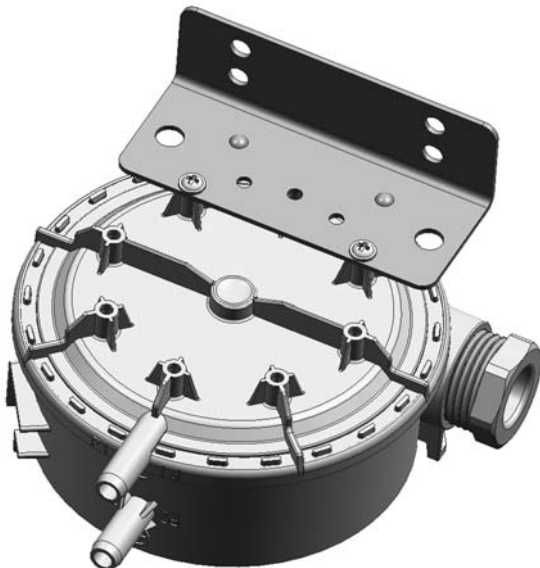


Relativ and differential pressure switch

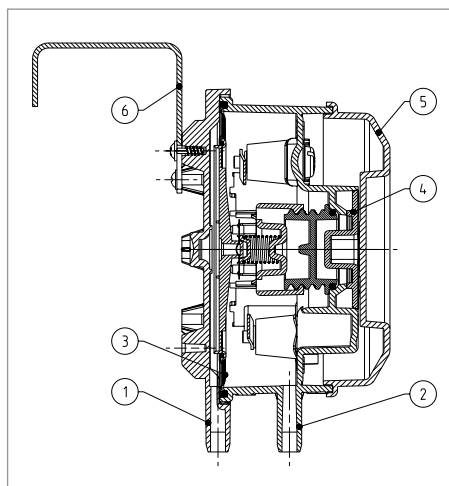
0.2 ... 50 mbar



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.



Legend to cross-section drawing

- 1 P1 Pressure connection (higher pressure)
- 2 P2 Pressure connection (lower pressure)
- 3 Diaphragm
- 4 Scale for switching point high
- 5 Snap fit cover
- 6 Mounting combi-bracket type C (option)

The distinct advantages

- Extremely easy to install
- User-friendly snap fit cover
- Case geometry allows easy cable lead-in
- Cable strain relief integrated in PG11
- Combi-bracket for vertical or horizontal installation
- High adjustment accuracy through individual scale laser-etching per switch
- Long-term stability of switching points through trapezoidal bead diaphragm
- Multi-layer gold plated contact

Medium

Air and neutral gases

Pressure range

0.2 ... 50 mbar

Tolerable overload on one side

75 mbar at	−30 ... 75 °C
50 mbar at	−30 ... 85 °C

Setting ranges / Switching differential

The switching differential is factory-set
(See diagrams page 8)

Repeatability

Setting range	between
0.2 ... 3 mbar	±0.025 mbar
0.5 ... 5 mbar	±0.05 mbar
1 ... 10 mbar	±0.05 mbar
5 ... 20 mbar	±0.05 mbar
10 ... 50 mbar	±0.15 mbar

Switching load

Multi-layer contact (suitable for DDC)

Resistive load:

5 A at 250 VAC

4 A at 30 VDC

Inductive:

(loads with 6-fold starting current $\cos \varphi$ 0.6)

0.8 A at 250 VAC

0.7 A at 30 VDC

Contact system

Changeover switch

Materials in contact with the medium

Case: PC 10% GF

Cover: PC

Diaphragm: Silicone LSR

tempered 200 °C, free of gas emissions

Temperature

Medium and ambient −30 ... +85 °C

Storage −40 ... +85 °C

Service life

Mechanical > 10⁶ switching cycles

Electrical connection

Screw terminals or AMP connectors

6.3 mm or 4.8 mm according to
DIN 46244

Cable gland PG11 with cable strain relief

Protection standard

Without cover	IP 00
With cover	IP 54

Pressure connections

Pipe Ø 6.2 mm

Adapter inside thread G1/8

Installation arrangement

Recommended and factory set:

Vertical, pressure connections facing
downwards

Horizontal, cover facing downwards:

Switching points approx. 11 Pa lower than
on scale

Horizontal, cover facing upwards:

Switching points approx. 11 Pa higher than
on scale

Mounting

Several brackets

Fastening clip for quick mounting
(see page 8)

Tests / Admissions

ETL

CE conformity

DVGW according to DIN 1854

EU conformity:

Low voltage directive 73/23/EWG

Gas appliance directive:

90/396/EWG CE 0085 A P0918

Weight

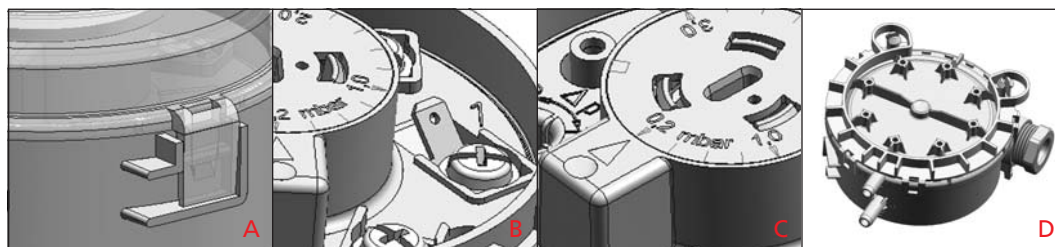
Without bracket	approx. 93 g
With combi-bracket type C	approx. 144 g

Packaging

Please state on order

Single packaging
in cardboard

Multiple packaging
in cardboard (20, 100 or 320 pcs)



Versions

- A – Snap fit
- B – Electrical connections
- C – Individual scale engraving
- D – Switch with fastening clip

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 type C and hose connection set, single packaging.

Setting range (mbar)

Connection set

Order number

0.2 ... 3	Fig. 1 (Metal)	604.9000001
0.5 ... 5	Fig. 1 (Metal)	604.9100001
1 ... 10	Fig. 1 (Metal)	604.9200001
5 ... 20	Fig. 1 (Metal)	604.9400001
10 ... 50	Fig. 1 (Metal)	604.9500001
0.2 ... 3	Fig. 2 (Plastic)	604.9000002
0.5 ... 5	Fig. 2 (Plastic)	604.9100002
1 ... 10	Fig. 2 (Plastic)	604.9200002
5 ... 20	Fig. 2 (Plastic)	604.9400002
10 ... 50	Fig. 2 (Plastic)	604.9500002

Order code selection table

604. X X X X X X X X X

Standard Version

9

ETL execution, fire classification V0

E

Setting range

mbar	Pa	inH ₂ O
0.2 ... 3	20 ... 300	0.08 ... 1.2
0.5 ... 5	50 ... 500	0.2 ... 2
1 ... 10	100 ... 1 000	0.4 ... 4
5 ... 20	500 ... 2 000	2 ... 8
10 ... 50	1 000 ... 5 000	4 ... 20

0
1
2
4
5

Scale

Scale in mbar	
Scale in Pa	
Scale in inH ₂ O	
Without scale	(rating plate in mbar)
Without scale	(rating plate in Pa)
Without scale	(rating plate in inH ₂ O)

0
1
2
3
4
5

Pressure connections

Pipe Ø 6.2 mm	without pressure orifice
Pipe Ø 6.2 mm	with pressure orifice on P2
Inside thread G1/8	without pressure orifice
Inside thread G1/8	with pressure orifice on P2

0
1
2
3

Electrical connection

Screw terminals
AMP connector 6.3 mm
AMP connector 4.8 mm

0
1
2

Cover / Bracket

With cover	combi-bracket type C
With cover	bracket type A
With cover	bracket type B
With cover	without bracket
Without cover	combi-bracket type C
Without cover	bracket type A
Without cover	bracket type B
Without cover	without bracket

0
1
2
3
5
6
7
8

Connection kit

Without	
With connection kit (metal), 90° angled	including tube 2 m long (Fig. 1) ¹⁾
With connection kit (plastic), straight	including tube 2 m long (Fig. 2) ¹⁾

0
1
2

Switching points

Two factory set switching points	(please specify on order)
One factory set switching point high	(please specify on order)
One factory set switching point low	(please specify on order)

W
R
U

Accessories

	Order number
Connection kit for vent duct (metal), 90° angled including tube 2 m long (Fig. 1) ¹⁾	104312
Connection kit for vent duct (plastic), straight including tube 2 m long (Fig. 2) ¹⁾	100064
Bracket type A ¹⁾	100295
Bracket type B ¹⁾	100098
Combi-bracket type C ¹⁾	100106
Special screws for fastening switches to bracket (2 screws per switch required)	102976
Fastening clip for bracket A, B, C or direct mounting for wall thickness 0.8 ... 1.1 mm	100294
for wall thickness 1.8 ... 2.1 mm	100293

¹⁾ See page 8

Setting ranges

A graph showing the relationship between the switching difference and the upper switching point for a pressure range of 0.2 to 3 mbar. The x-axis is labeled 'Switching difference (mbar)' and ranges from 0 to 0.5. The y-axis is labeled 'Upper switching point (mbar)' and ranges from 0 to 3. A shaded gray region represents the operating range, bounded by two parallel lines with a positive slope. A horizontal double-headed arrow at the top of the shaded region is labeled '1)'. A black dot is located within the shaded region at approximately (0.15, 1.0), with an arrow pointing to it labeled '2)'.

A graph showing the relationship between the upper switching point (mbar) on the y-axis and the switching difference (mbar) on the x-axis. The y-axis ranges from 0 to 5, and the x-axis ranges from 0 to 0.5. A shaded parallelogram represents the operating range. The top-left vertex is at approximately (0.15, 0.5), the top-right vertex is at (0.4, 0.5), the bottom-left vertex is at (0.15, 0.4), and the bottom-right vertex is at (0.3, 0.4). A point labeled '2)' is located at approximately (0.25, 2.0). A horizontal double-headed arrow labeled '1)' spans the width of the parallelogram at the top, from x=0.15 to x=0.4.

1 ... 10 mbar

Graph showing the relationship between the Upper switching point (mbar) on the Y-axis and the Switching difference (mbar) on the X-axis for a pressure range of 1 ... 10 mbar. The Y-axis ranges from 0 to 10, and the X-axis ranges from 0 to 1.0. A shaded region represents the operating range, bounded by two parallel lines. A point labeled '2)' is marked at approximately (0.45, 4.0). A horizontal double-headed arrow labeled '1)' indicates a width of approximately 0.2 mbar at the top of the shaded region.

A graph showing the relationship between the switching difference (x-axis) and the upper switching point (y-axis) for a pressure range of 5 ... 20 mbar. The x-axis ranges from 0 to 2.0 mbar with major grid lines every 0.4 mbar. The y-axis ranges from 0 to 20 mbar with major grid lines every 4 mbar. A shaded parallelogram represents the switching range, with its left edge at approximately 0.7 mbar and its right edge at approximately 1.2 mbar. A point labeled '2)' is marked at the intersection of the two diagonal lines within the parallelogram, at approximately (0.85, 10). A horizontal double-headed arrow labeled '1)' indicates the width of the parallelogram, which is approximately 0.5 mbar.

A graph showing the relationship between the switching difference (x-axis) and the upper switching point (y-axis) for a pressure range of 10 to 50 mbar. The x-axis ranges from 0 to 5 mbar, and the y-axis ranges from 0 to 50 mbar. A shaded region represents the possible switching points, bounded by two lines that diverge as the switching difference increases. A specific point is marked on the lower boundary at a switching difference of approximately 2.2 mbar and an upper switching point of 20 mbar, labeled '2)'. A horizontal double-headed arrow at the top of the shaded region, spanning from approximately 2.2 mbar to 2.8 mbar on the x-axis, is labeled '1)'. The text '10 ... 50 mbar' is written in red at the top left of the graph area.

- 1) Tolerance switching difference
- 2) Factory-setting

Dimensions in mm Electrical connections

Electrical connections

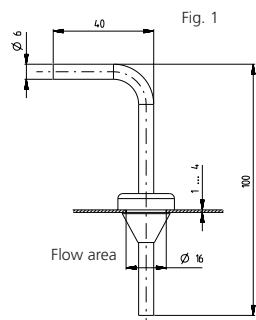
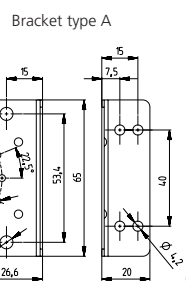
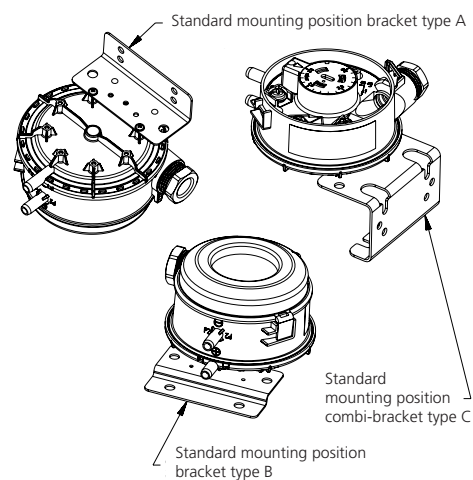
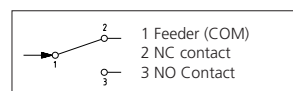
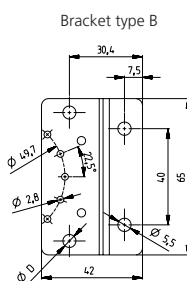


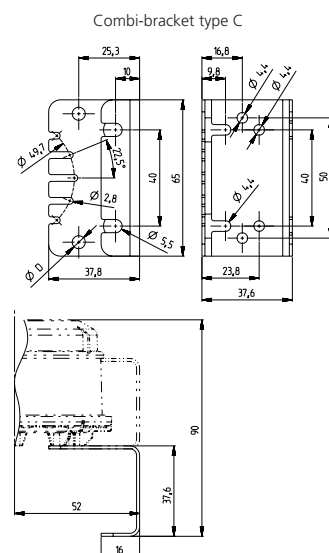
Fig. 1



Bracket type A



Bracket type B



Combi-bracket type C

1) Hole for PT screws KA25