620

Overpressure and vacuum switch –900 mbar ... 6 bar

625

EDITION 07/2002

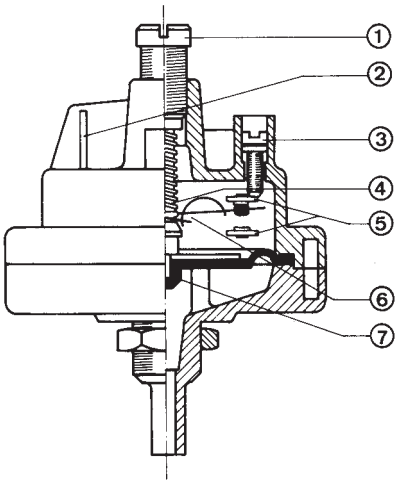
Huba Control

FOR FINE PRESSURE AND FLOW MEASUREMENT

EDITION 07/2002

Technical overview

With their finely tuned range increments and long-term switching point stability, overpressure and vacuum switches of type series 620/25 are suitable for monitoring liquids and gases in industrial equipment manufacturing applications in general, in process technology or in food automation. The rugged mechanics are the assurance of high operating reliability, even in the presence of percussions or vibrations. A range of switches with many standard versions and ideal price/performance ratio, even in the case of small quantities.



The distinct advantages

- High accuracy by 13 ideally designed pressure range increments
- Switching differences adjustable
- High long-term stability with reproducibility of switching points up to < ± 0.3 mbar
- Customer-specific switching points adjustable in factory
- Rugged industrial switch with excellent price/performance ratio

Legend to cross-section drawing

1 Switching point setting
2 AMP tab connectors
3 Switching difference setting
4 Compression spring
5 Changeover contact
6 Contact element
7 Diaphragm

Pressure ranges

See order code selection table.

Maximum overpressure

Maximum overpressure and test pressure see setting ranges.

Setting ranges

See graphic on adjacent page/rear cover.

Lowest turn-on pressure

2 mbar
Switching point and switching difference adjustable.
Lowest switching difference 1 mbar.

Reproducibility

± 5% of the switching point of type A and F diaphragm material, but as a minimum ± 0.3 mbar.

± 10% of the switching point of type C and E diaphragm material, but as a minimum ± 0.6 mbar.

Temperature range

Medium and ambient temperature with diaphragm type 625:

NBR-based	0 … 80 °C
FPM	–10 … 80 °C
EPDM	–10 … 80 °C
Q (Silicon)	–40 … 80 °C

Type 620 see order code selection table.

Case construction

Type series 620/625:
Switch case fiberglass-reinforced plastic.

Type series 620: Base ABS or PA
Type series 625: Base aluminium or brass.
Other specifications or surface treatment on request.

Weight

Type 620:	70 grams
Type 625 alu:	100 grams
Type 625 brass:	200 grams

Installation arrangement

Unrestricted.
For switching points calibrated in the factory indicate installation arrangement.

Pressure connections

Type series 620:
Connection pipe ∅ 6 mm, inside thread M5, thread M12x1 with counternut.
Type series 625:
Thread G 1/8, G 1/4, M12x1 with counternut.
See order code selection table.
Other threads on request.

Diaphragm

A – NBR-based E – EPDM
C – FPM F – Silicon
Parts that come into contact with the medium, to base and diaphragm: Polyacetal and Inox 1.4301 with vacuum switch version.

Electrical connections

Screw terminals (option)
AMP tab connectors 6,3 mm
Cable gland PG 11 with cover

Contact system

Changeover contact

Contact material / Loading

Nominal voltage Type of current:	VAC	250	250
Nominal current for resistive loading:		1 A	6 A
Nominal current for motorloading:		0.5 A	3 A
Contact material:		AgCdO	AgCdO

Protection class

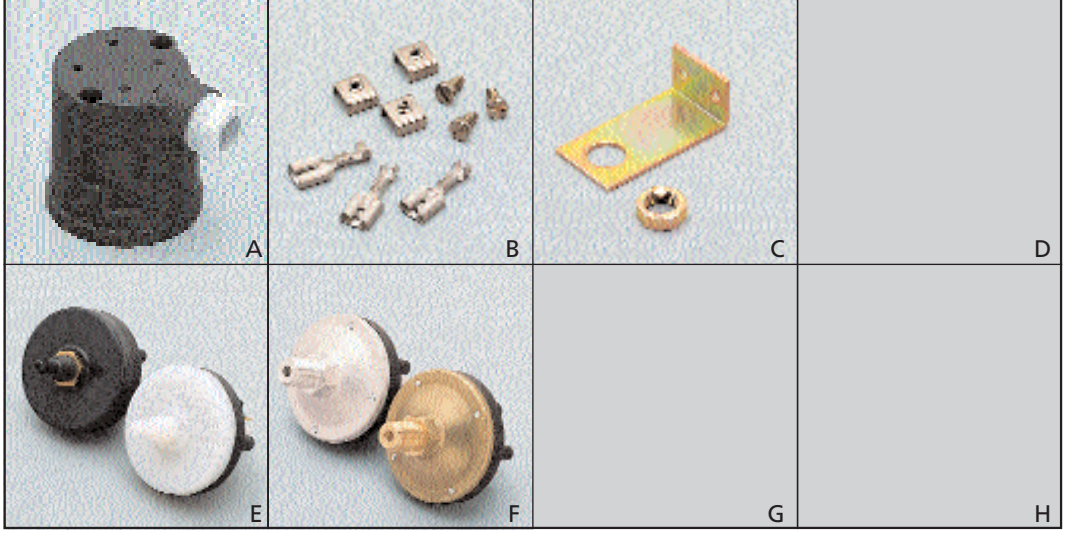
IP 00 without cover
IP 54 with cover (for installation arrangement electrical connections upward)

Service life

Mechanical and electrical service life:
10^6 switching cycles, if the permitted switching difference is respected according to the diagram on the back.

Accessories

– Plastic cover
– Mounting bracket
– AMP connector set
– Screw terminals



A – Plastic cover with PG 11 on side, Fig. 1

B – Screw terminals AMP connector set

C – Mounting bracket

E – Type 620 with pressure case ABS/PA

F – Type 625 with pressure case alu/brass

Order code selection table

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620 . **9 X X X X X X X X**

			p max	pt[2]	Switching capacity 250 VDC	
Pressure ranges[1]	2	… 8	30	50	1 A	1
(mbar)	6	… 75	300	500	1 A	2
	12.5	… 80	300	500	6 A	3
	12.5	… 200	300	500	1 A	4
	25	… 220	300	500	6 A	5

Pressure connections /	Hose Ø 6 mm	(M12x1) ABS	up to 70 °C	0
pressure case	Hose Ø 6 mm	(M12x1) PA 66	up to 80 °C	1
	Inside thread M5	(M12x1) ABS	up to 70 °C	2
	Inside thread M5	(M12x1) PA 66	up to 80 °C	3

Diaphragm material	Type A	NBR based	0
	Type C	FPM	2
	Type E	EPDM	4
	Type F	Q (Silicon)	6

625

Pressure	9
Vacuum	6

			p max	pt[2]	Switching capacity 250 VDC	
Pressure ranges[1] (mbar)	2	… 8	30	50	1 A	0
	6	… 75	300	500	1 A	1
	12.5	… 80	300	500	6 A	2
	12.5	… 200	300	500	1 A	3
	25	… 220	300	500	6 A	4
	80	… 2000	6000	10 000	1 A	5
	120	… 2200	6000	10 000	6 A	6
	1000	… 6000	6000	10 000	6 A	7
Vacuum ranges[1]	–4	… –30	- 50	- 100	1 A	1
	–15	… –80	- 300	- 500	1 A	2
	–30	…–150	- 300	- 500	6 A	3
	–50	…–600	- 1000	- 1000	6 A	4
	–100	…–900	- 1000	- 1000	6 A	5

Pressure connections /	G 1/8	aluminium	1
Pressure case	M12x1	aluminium	2
	G 1/4	brass	3
	G 1/4	aluminium	4
	G 1/8	brass	B

Diaphragm material	Type A	NBR based	0
	Type C	FPM	2
	Type E	EPDM	4
	Type F	Q (Silicon)	6

Accessories 620/625	Plastic cover with PG 11 on side fig. 1	1	0	5	8	3	6
	Mounting bracket with hole Ø 12,5 mm for M12	1	0	4	2	5	9
	Mounting bracket with hole Ø 14 mm for G 1/4	1	0	2	8	7	2
	AMP connector set	1	0	3	4	7	9
	Screw terminal set	1	0	3	4	9	1

[1] Other ranges on request
[2] p_t = test pressure

Setting ranges / dimensions in mm / electrical connections

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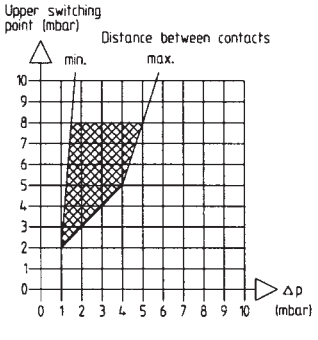
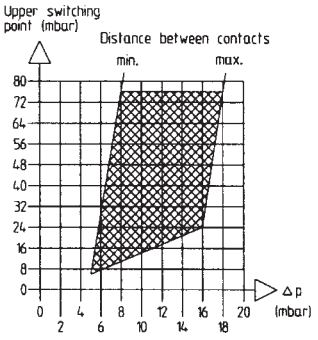
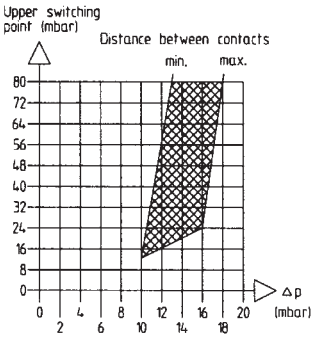
Setting range: 2...8 mbar



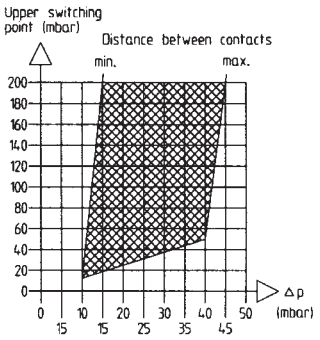
Setting range: 6...75 mbar



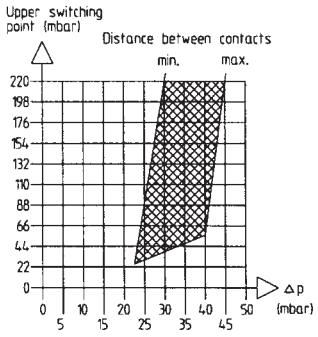
Setting range: 12.5...80 mbar



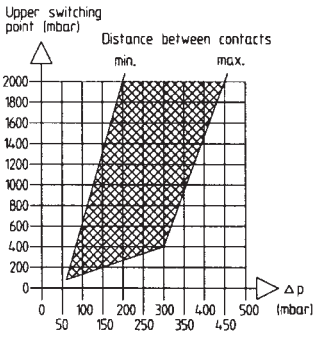
Setting range: 12.5...200 mbar



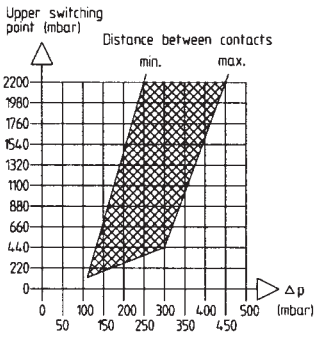
Setting range: 25...220 mbar



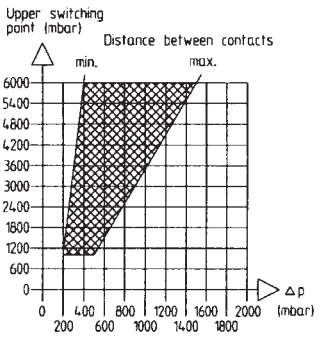
Setting range: 80...2000 mbar



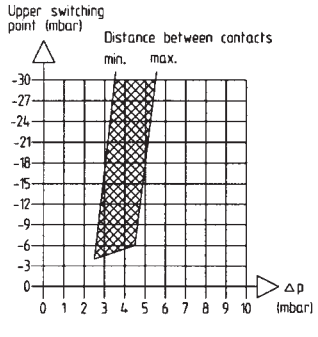
Setting range: 120...2200 mbar



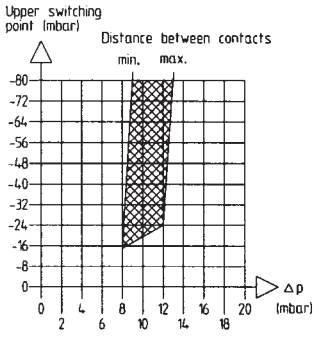
Setting range: 1000...6000 mbar



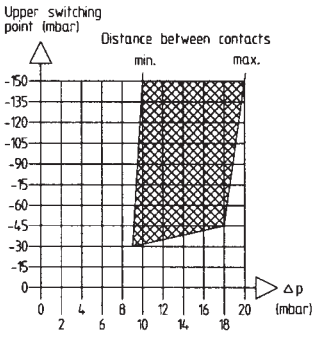
Setting range: -4...-30 mbar



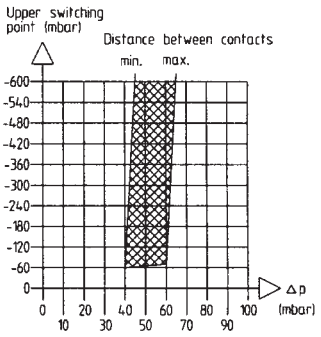
Setting range: -15...-80 mbar



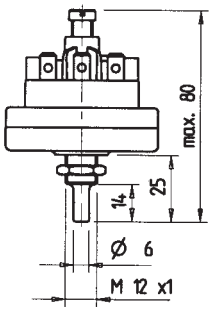
Setting range: -30...-150 mbar



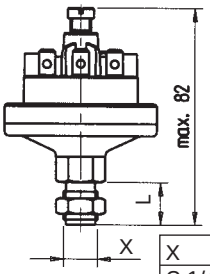
Setting range: -50...-600 mbar



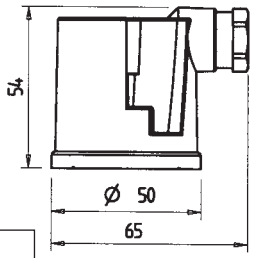
Type 620



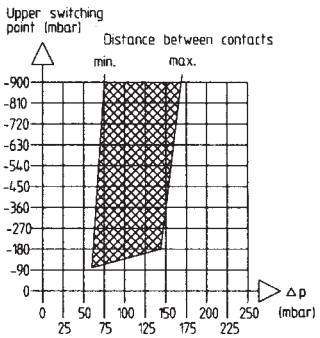
Type 625

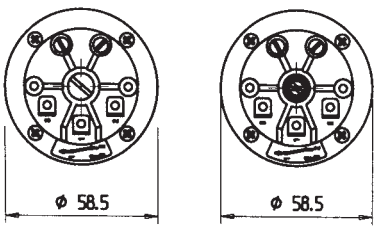


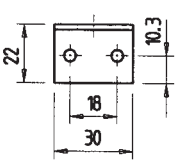
X	L
G 1/4	16
G 1/8	16
M 12 x 1	14

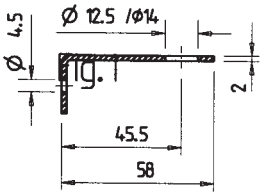


Setting range: -100...-900 mbar

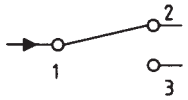




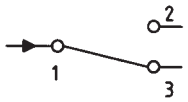




1 Common
2 NC contact
3 NO contact



For vacuum:
terminal 3
break contact



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