

620

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

625



EDITION 07/2002

HUBA-REGISTERED TRADE MARK

**Huba Control**

FOR FINE PRESSURE AND FLOW MEASUREMENT



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  $\varnothing$  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.

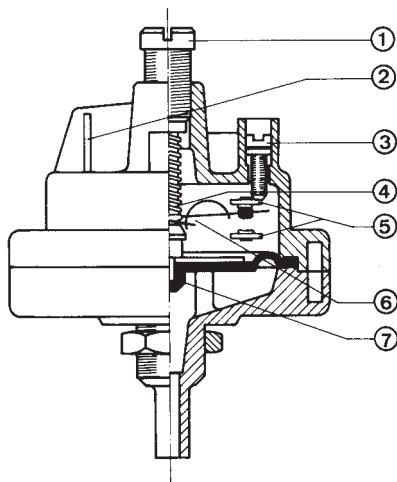
#### Accessories

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

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#### 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.



#### 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

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

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

#### Temperature range

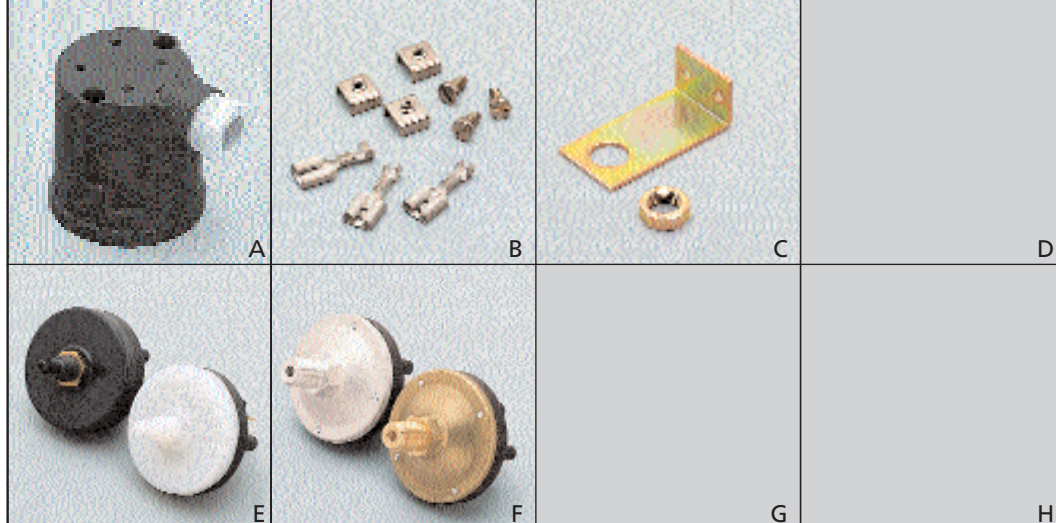
Medium and ambient temperature with diaphragm type 625:  
 NBR-based            0 ... 80 °C  
 FPM                    -10 ... 80 °C  
 EPDM                 -10 ... 80 °C  
 Q (Silicon)          -40 ... 80 °C  
 Type 620 see order code selection table.

#### Case construction

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

#### 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  $< \pm$  0.3 mbar
- Customer-specific switching points adjustable in factory
- Rugged industrial switch with excellent price/performance ratio



- 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

Versions

## Order code selection table

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**620**

**9 X X X X X X X X**

		$p_{max}$	$p_{t^2}$	Switching capacity 250 VDC										
<b>Pressure ranges<sup>1</sup> (mbar)</b>	2 ... 8	30	50	1 A	1									
	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									
<b>Pressure connections / pressure case</b>	Hose Ø 6 mm (M12x1) ABS			up to 70 °C	0									
	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									
<b>Diaphragm material</b>	Type A	NBR based												
	Type C	FPM												
	Type E	EPDM												
	Type F	Q (Silicon)												

**625**

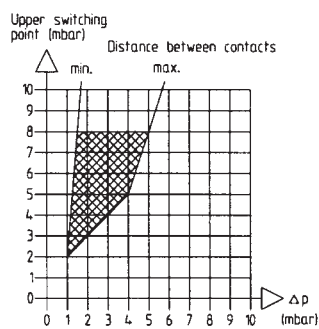
<b>Pressure</b>					9									
<b>Vacuum</b>					6									
		$p_{max}$	$p_{t^2}$	Switching capacity 250 VDC										
<b>Pressure ranges<sup>1</sup> (mbar)</b>	2 ... 8	30	50	1 A	0									
	6 ... 75	300	500	1 A	1									
	12.5 ... 80	300	500	6 A	2									
	12.5 ... 200	300	500	1 A	3									
	25 ... 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										
<b>Vacuum ranges<sup>1</sup></b>	-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									
<b>Pressure connections / Pressure case</b>	G 1/8 aluminium				1									
	M12x1 aluminium				2									
	G 1/4 brass				3									
	G 1/4 aluminium				4									
	G 1/8 brass				B									
<b>Diaphragm material</b>	Type A	NBR based												
	Type C	FPM												
	Type E	EPDM												
	Type F	Q (Silicon)												
<b>Accessories 620/625</b>	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			

<sup>1</sup> Other ranges on request

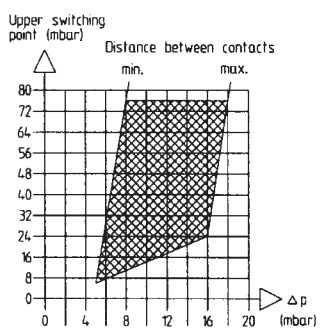
<sup>2</sup>  $p_t$  = test pressure



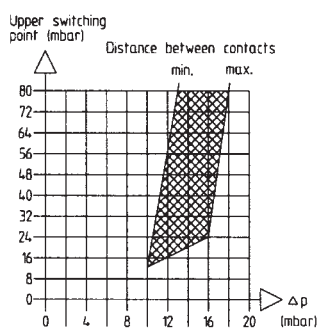
Setting range: 2...8 mbar



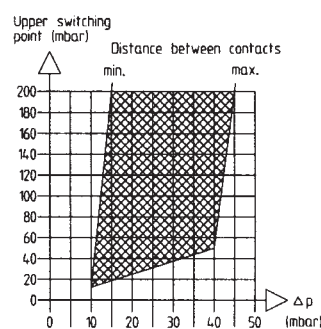
Setting range: 6...75 mbar



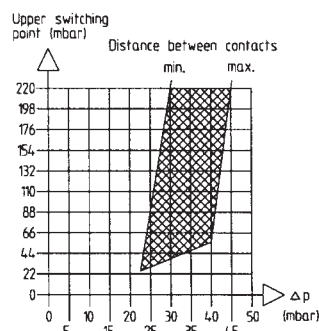
Setting range: 12.5...80 mbar



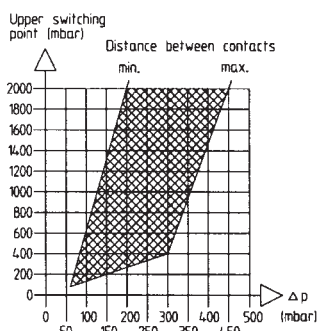
Setting range: 12.5...200 mbar



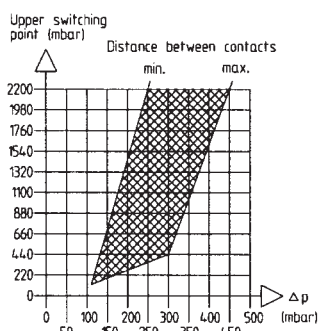
Setting range: 25...220 mbar



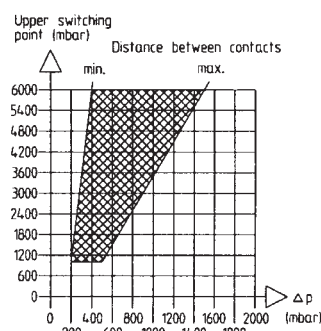
Setting range: 80...2000 mbar



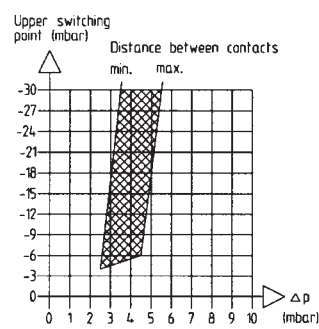
Setting range: 120...2200 mbar



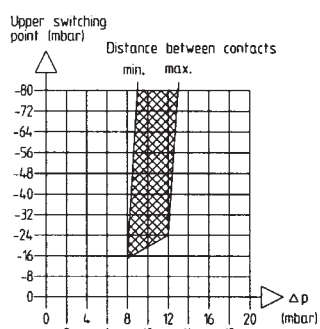
Setting range: 1000...6000 mbar



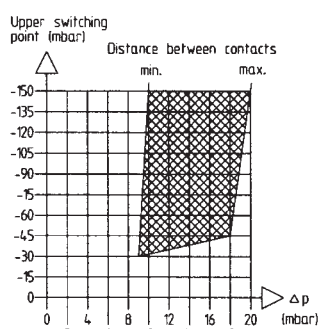
Setting range: -4...-30 mbar



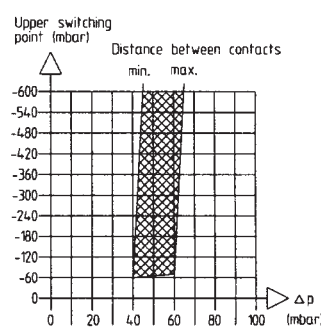
Setting range: -15...-80 mbar



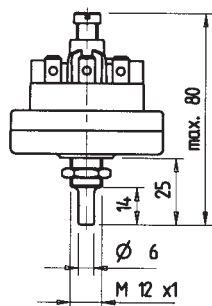
Setting range: -30...-150 mbar



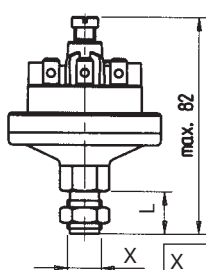
Setting range: -50...-600 mbar



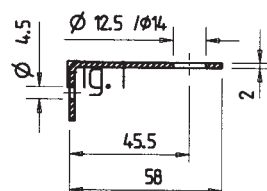
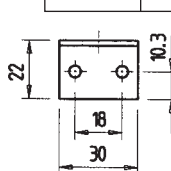
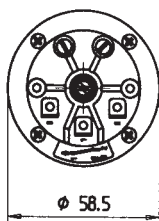
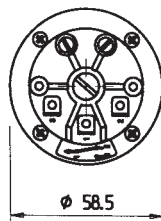
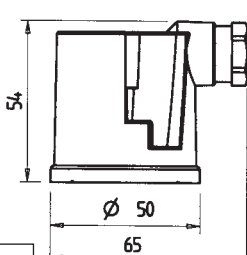
Type 620



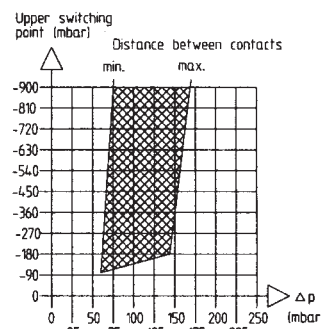
Type 625



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

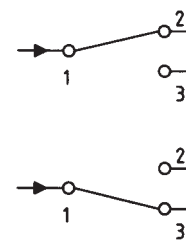


Setting range: -100...-900 mbar



- 1 Common
- 2 NC contact
- 3 NO contact

For vacuum:  
terminal 3  
break contact



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