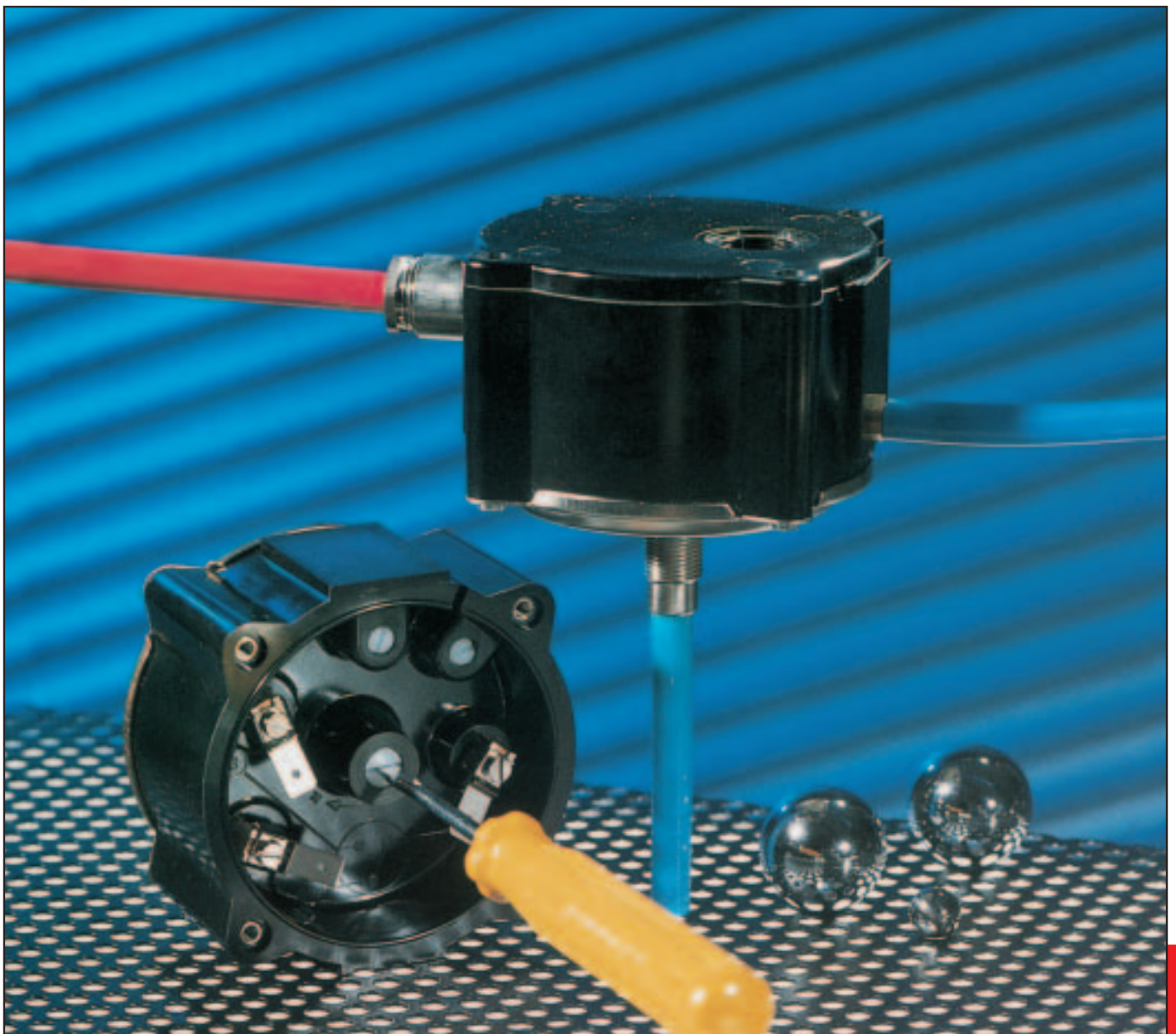


610

Differential pressure,
vacuum, overpressure
switch
-320 ... +500 mbar

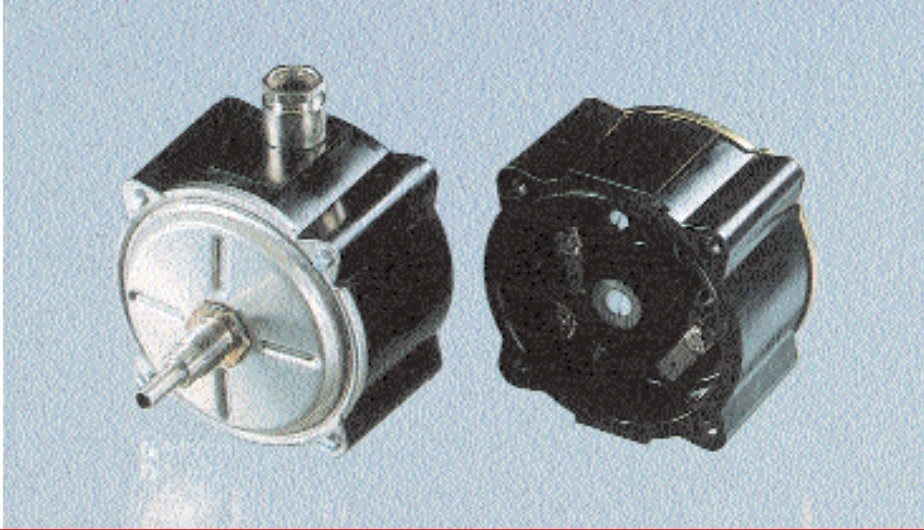


EDITION 07/2002

HUBA-REGISTERED TRADE MARK

Huba Control

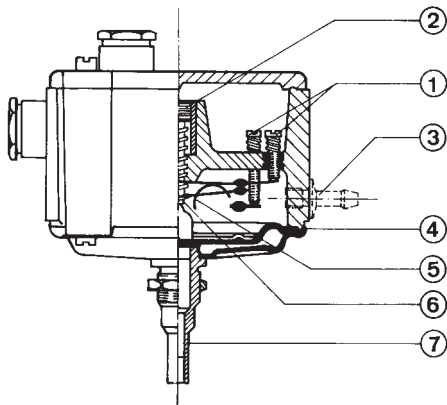
FOR FINE PRESSURE AND FLOW MEASUREMENT



EDITION 07/2002

Technical overview

Differential pressure, vacuum, over-pressure switches of type series 610 are specially suited for monitoring non-explosive gases in the machine and industrial equipment building industry in general, in process engineering or as control and monitoring elements in packing lines. Finely adjustable switching points and switching differences even in the higher ranges with exemplary reproducibility.



Legend to cross-section drawing

- 1 Adjustment of switching difference
- 2 Adjustment of switching points
- 3 Connection for differential pressure
- 4 Diaphragm
- 5 Switchover contact element
- 6 Compression spring
- 7 Pressure or vacuum connection

Pressure ranges

See order code selection table.

Maximum overload

Maximum overload and test pressure see setting ranges.

Setting ranges

See graphic on adjacent page/rear cover.

Lowest turn-on pressure

- 1 mbar
- Switching point and switching difference adjustable
- Lowest switching difference 0.5 mbar

Reproducibility

- ± 5% of the switching point of type A and F diaphragm material, but as a minimum ± 0.1 mbar
- ± 10% of the switching point of type C and E diaphragm material, but as a minimum ± 0.2 mbar

Temperature range

- Medium and ambient temperature with diaphragm:
- NBR-based 0 ... 80 °C
- FPM -10 ... 80 °C
- EPDM -10 ... 80 °C
- Q (Silicon) -40 ... 80 °C

The distinct advantages

- High accuracy (especially the upper pressure ranges by 17 ideally designed pressure range incrementations)
- Ease of accurate adjustment by customer
- Reproducibility of switching points up to $\pm 0.1\text{ mbar}$
- Rugged mechanics with high operating reliability and switching capacities up to 10 A

Case construction

Case material: Duroplast
Case base: Galvanized sheet steel, nickel-plated brass oder stainless steel.

Weight

260 grams

Installation arrangement

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

Pressure connections

Connection pipe \varnothing 6 mm and thread M 12x1 or G 1/4 with counter nut.

Diaphragm

A – NBR-based E – EPDM
C – FPM F – Silicon

Parts that come into contact with the medium, to base Inox and diaphragm: Inox 1.4301, 1.4305, 1.4310, 1.4104.

To base, galvanized sheet steel and diaphragm: Inox 1.4310, brass, aluminium

To base, nickel-plated brass and diaphragm: Inox 1.4301, 1.4310

With medium in pressure chamber P2: Brass, nickel-plated brass, CuSn, Bakelit PF-PH, polyamide and polyacetale, AgCdO, NBR

Electrical connections

Screw terminals
AMP tab connectors 6,3 mm
Gland PG 9

Contact system

Changeover contact

Contact material / Loading

Nominal voltage			
Type of current:	VAC	250	250
Nominal current for resistive loading:		1 A	10 A
Nominal current for motor loading:		0.5 A	3 A
Contact material:		AgCdO	AgCdO

Protection class

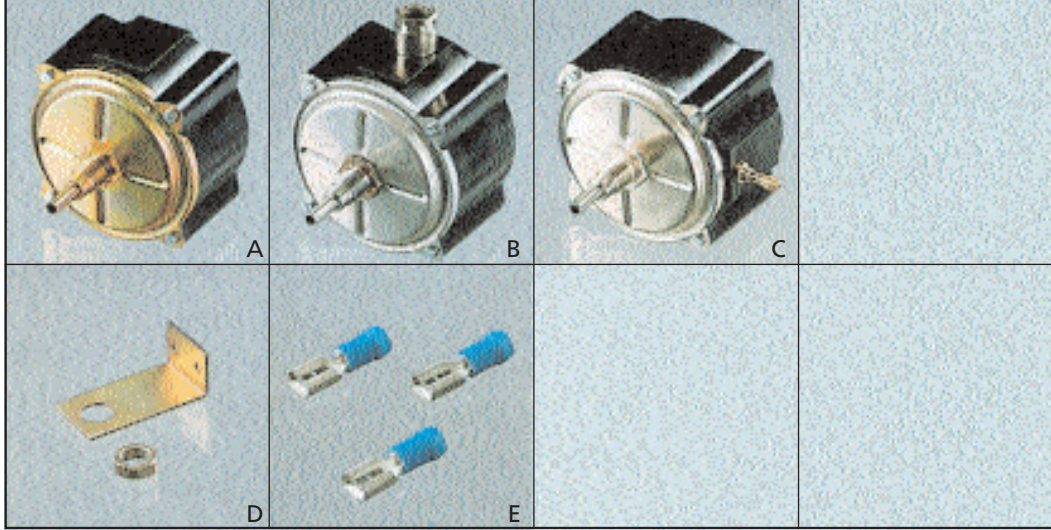
IP 30

Service life

> 10⁶ switching cycles

Accessories

Mounting bracket
AMP connector set



- A – Case base galvanized sheet steel
- B – Case base sheet steel Inox
- C – Case base nickel-plated sheet steel
Example: differential pressure connection on side
- D – Mounting bracket
- E – AMP connector set

Versions

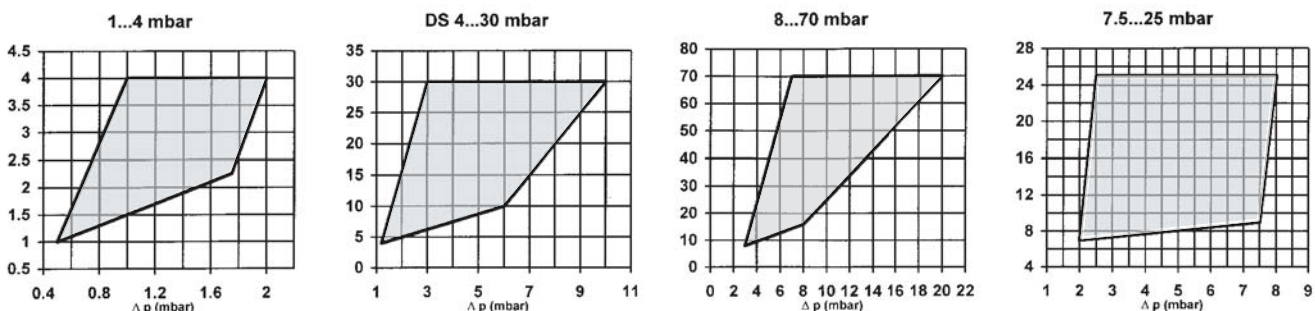
Order code selection table

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610

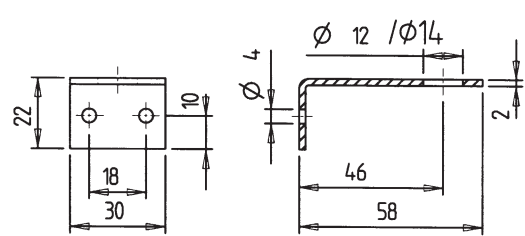
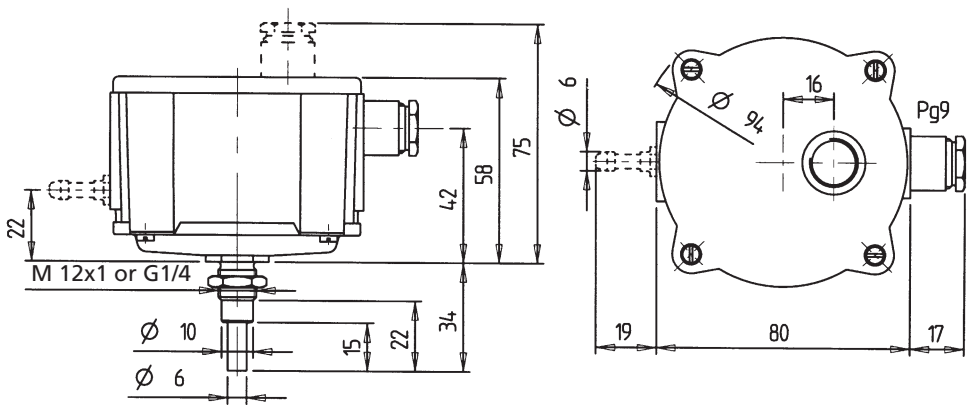
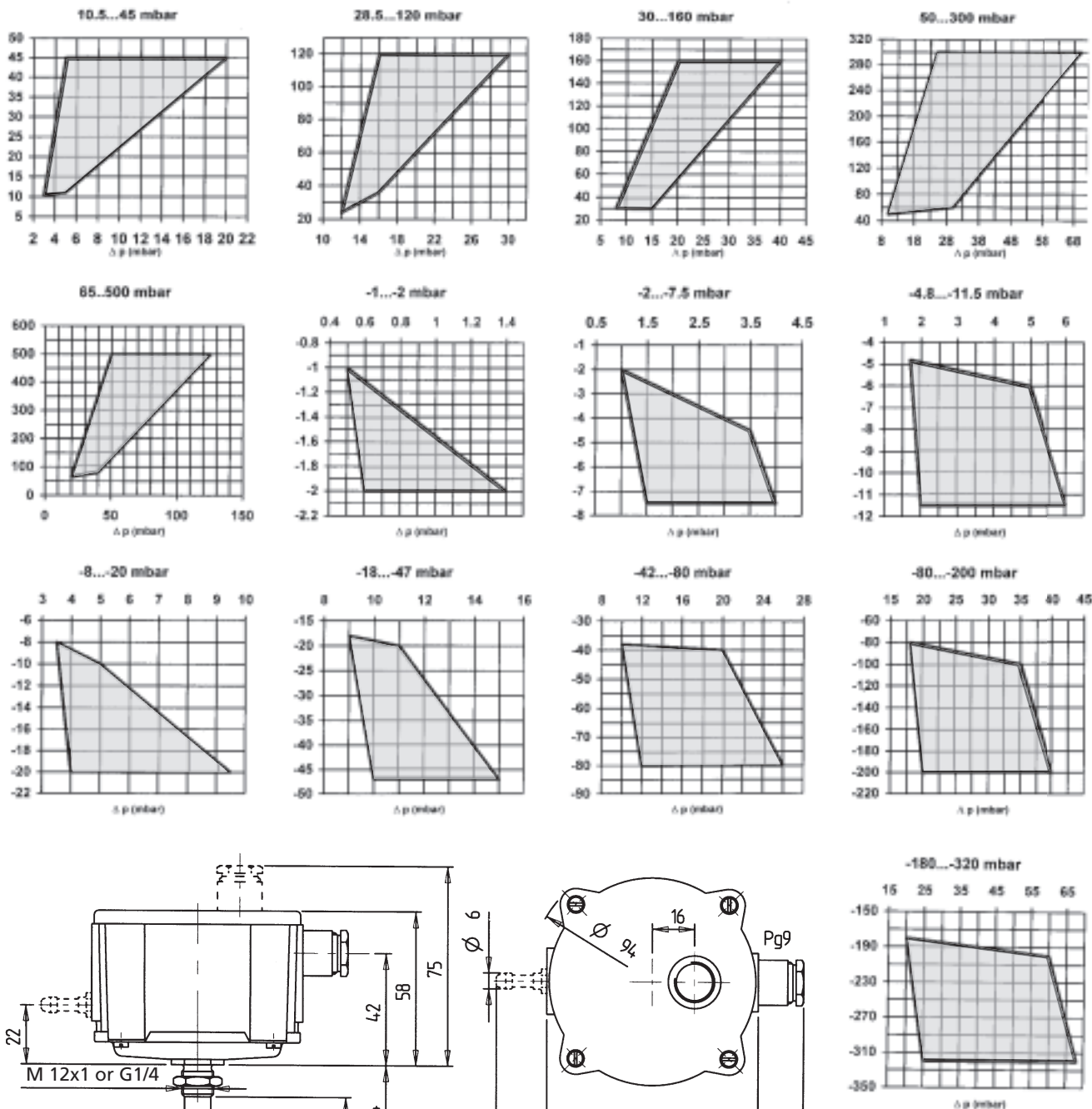
	X	X	X	X	X	X	X	X	X
Pressure									
Differential pressure									
Vacuum									
Differential vacuum									
	9								
	5								
	6								
	7								
Switching capacity 250 VAC									
Pressure ranges ¹ (mbar)									
1 ... 4 ²	0								
4 ... 30	1								
8 ... 70	2								
7.5 ... 25	3								
10.5 ... 45	4								
28.5 ... 120	5								
30 ... 160	6								
50 ... 300	7								
65 ... 500	8								
Vacuum ranges ¹									
-1 ... -2 ²	0								
-2 ... -7.5	1								
-4.8 ... -11.5	2								
-8 ... -20	3								
-18 ... -47	4								
-42 ... -80	5								
-80 ... -200	6								
-180 ... -320	7								
Pressure case									
Hose connections Ø 6 mm and G 1/4		2							
Hose connections Ø 6 mm and G 1/4		3							
Hose connections Ø 6 mm and G 1/4		4							
Hose connections Ø 6 mm and M 12x1		5							
Hose connections Ø 6 mm and M 12x1		6							
Hose connections Ø 6 mm and M 12x1		7							
Diaphragm material									
Type A NBR-based						0			
Type C FPM						2			
Type E EPDM						4			
Type F Q (Silicon)						6			
Accessories									
Mounting bracket with hole Ø 12,5 mm for M 12			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	

Setting ranges

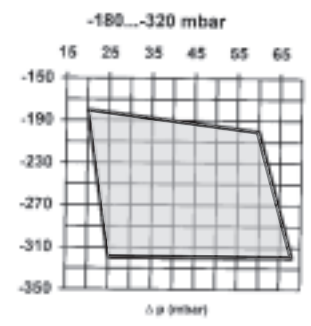


¹ Other ranges on request
² Only with diaphragm A

³ pt = test pressure



1 Common
 2 NC contact
 3 NO contact



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