

Relative and differential pressure switch type 610

Pressure range
-1 ... -320 mbar / 1 ... 500 mbar



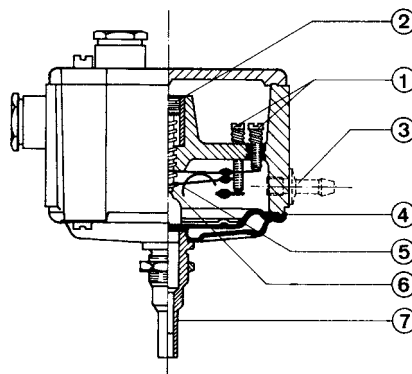
Type 610 pressure switches are especially suited to the monitoring of non-flammable gases in general industrial equipment.

Exemplary accuracy is maintained throughout the high pressure range of this switch.

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

Technical overview

Pressure range	
Relative	1 ... 500 mbar
Negative	-1 ... -320 mbar
Operating conditions	
Medium	Air and neutral gases
	NBR 0 ... +80 °C
	FPM -10 ... +80 °C
	EPDM -10 ... +80 °C
	Q (Silicone) -40 ... +80 °C
	Storage -40 ... +80 °C
Temperature	
Tolerable overload	See order code selection table
Lowest turn-on pressure	≥ 1 mbar
Lowest switching difference	≥ 0.5 mbar
Materials	
Case	Duroplast
	NBR based
	EPDM
	FPM
	Silicone
	Inox 1.4301, 1.4305, 1.4310, 1.4104
	Inox 1.4310, brass, aluminium
	Inox 1.4301, 1.4310
	Brass, nickel plated brass, CuSn, Bakelit
	PF-PH, polyamide and polyacetale, AgCdO, NBR, galvanized steel
Materials in contact with the medium	
	Diaphragm
	To base Inox and diaphragm
	To base, galvanized sheet steel and Diaphragm
	To base, nickel-plated brass and Diaphragm
	With medium in pressure chamber P2:
Electrical overview	
Nominal voltage	250 VAC
Nominal current for resistive loading	1 A 10 A
Nominal current for motor loading	0.5 A 3 A
Contact system	Changeover contact
Service life	mechanically 10 ⁶ switching cycles
Protection standard	
IP 30	IP 65 on request
Repeatability	
±5% of the switching point with diaphragm NBR / Silicone	minimum ± 0.1 mbar
±10% of the switching point with diaphragm FPM / EPDM	minimum ± 0.2 mbar
Electrical connection	
Screw terminals	
Tab connectors (AMP)	6.3 mm
Cable gland PG9 (not part of scope of delivery / see accessories)	
Pressure connection	
Pipe Ø 6mm and thread	G ¼ M12x1
Installation arrangement	
Pressure connections downwards	
Remark:	By changing the mounting position the switching points also change. The adjustment ranges are in relation with the mounting position.
Weight	
	~ 260 g
Packaging	
	Single packaging in cardboard

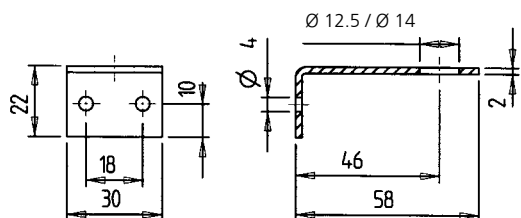


Legend to cross-section drawing

- 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

Order code selection table						1	2	3	4	5	
						610.	X	X	X	X	
Pressure mode	Relative					9					
	Differential					5					
	Negative					6					
	Negative differential					7					
Pressure range ¹⁾		p max.	pt ²⁾	Switching capacity 250 VAC							
	1 ... 4 mbar	30 mbar	50 mbar	1 A	9,5	0		0			
	4 ... 30 mbar	70 mbar	100 mbar	1 A	9,5	1					
	8 ... 70 mbar	70 mbar	100 mbar	1 ... 10 A	9,5	2					
	7 ... 25 mbar	70 mbar	100 mbar	1 ... 10 A	9,5	3					
	10.5 ... 45 mbar	70 mbar	100 mbar	1 ... 10 A	9,5	4					
	28.5 ... 120 mbar	350 mbar	500 mbar	1 ... 10 A	9,5	5					
	30 ... 160 mbar	350 mbar	500 mbar	1 ... 10 A	9,5	6					
	50 ... 300 mbar	600 mbar	1000 mbar	1 ... 10 A	9,5	7					
	65 ... 500 mbar	600 mbar	1000 mbar	1 ... 10 A	9,5	8					
	-1 ... -2 mbar	-30 mbar	-50 mbar	1 A	6	0		0			
	-2 ... -7.5 mbar	-30 mbar	-50 mbar	1 A	6	1					
	-4.8 ... -11.5 mbar	-70 mbar	-100 mbar	6 A	6,7	2					
	-8 ... -20 mbar	-70 mbar	-100 mbar	6 A	6,7	3					
	-18 ... -47 mbar	-350 mbar	-500 mbar	6 A	6,7	4					
	-42 ... -80 mbar	-350 mbar	-500 mbar	6 A	6,7	5					
	-80 ... -200 mbar	-600 mbar	-1000 mbar	6 A	6,7	6					
	-180 ... -320 mbar	-600 mbar	-1000 mbar	6 A	6,7	7					
	Pressure connection / pressure case	Hose connection ø 6 mm and	G ¼	Galvanized sheet steel					2		
			G ¼	Inox sheet steel					3		
G ¼			Nickel plated brass					4			
M12x1			Inox sheet steel					5			
M12x1			Galvanized sheet steel					6			
M12x1			Nickel plated brass					7			
Diaphragm material	NBR based								0		
	FPM								2		
	EPDM								4		
	Q (Silicone)								6		
Switching points (optional)	Two factory set switching points			(please specify on order e.g.: W10/8mbar)						W	
	One factory set switching point high			(please specify on order e.g.: U25mbar)						R	
	One factory set switching point low			(please specify on order e.g.: R50mbar)						U	

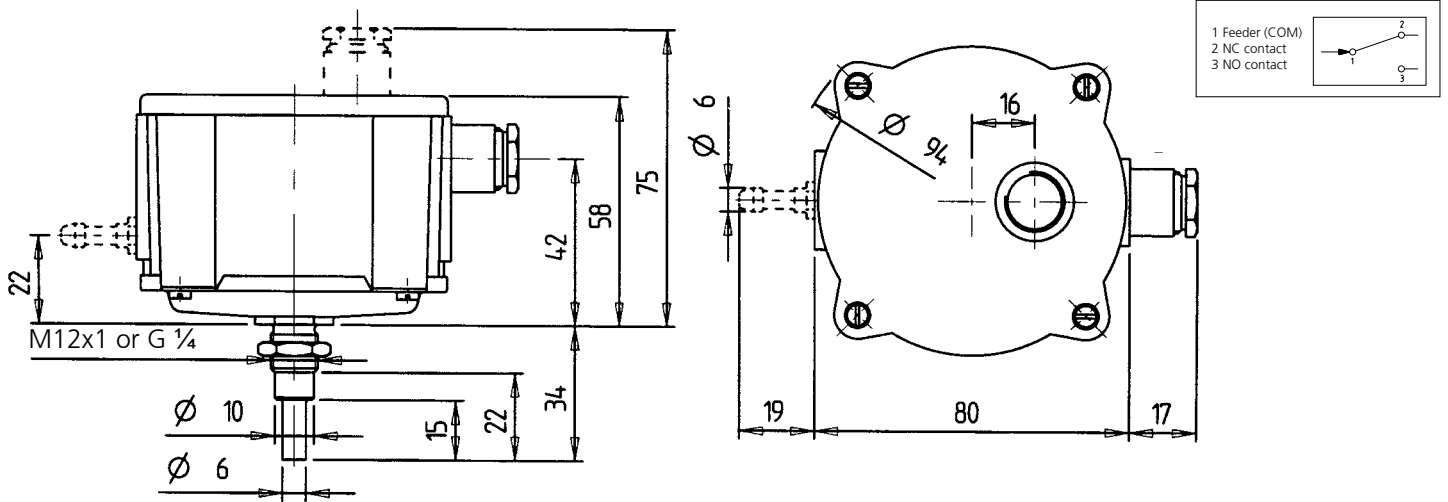
Accessories ³⁾	Order number
Mounting bracket with hole Ø 12.5 mm for M12x1	104259
Mounting bracket with hole Ø 14 mm for G ¼	102872
Connector set (Tab connectors AMP)	103479
Cable gland PG9	103559
Calibration Certificate (at factory set switching points)	104551



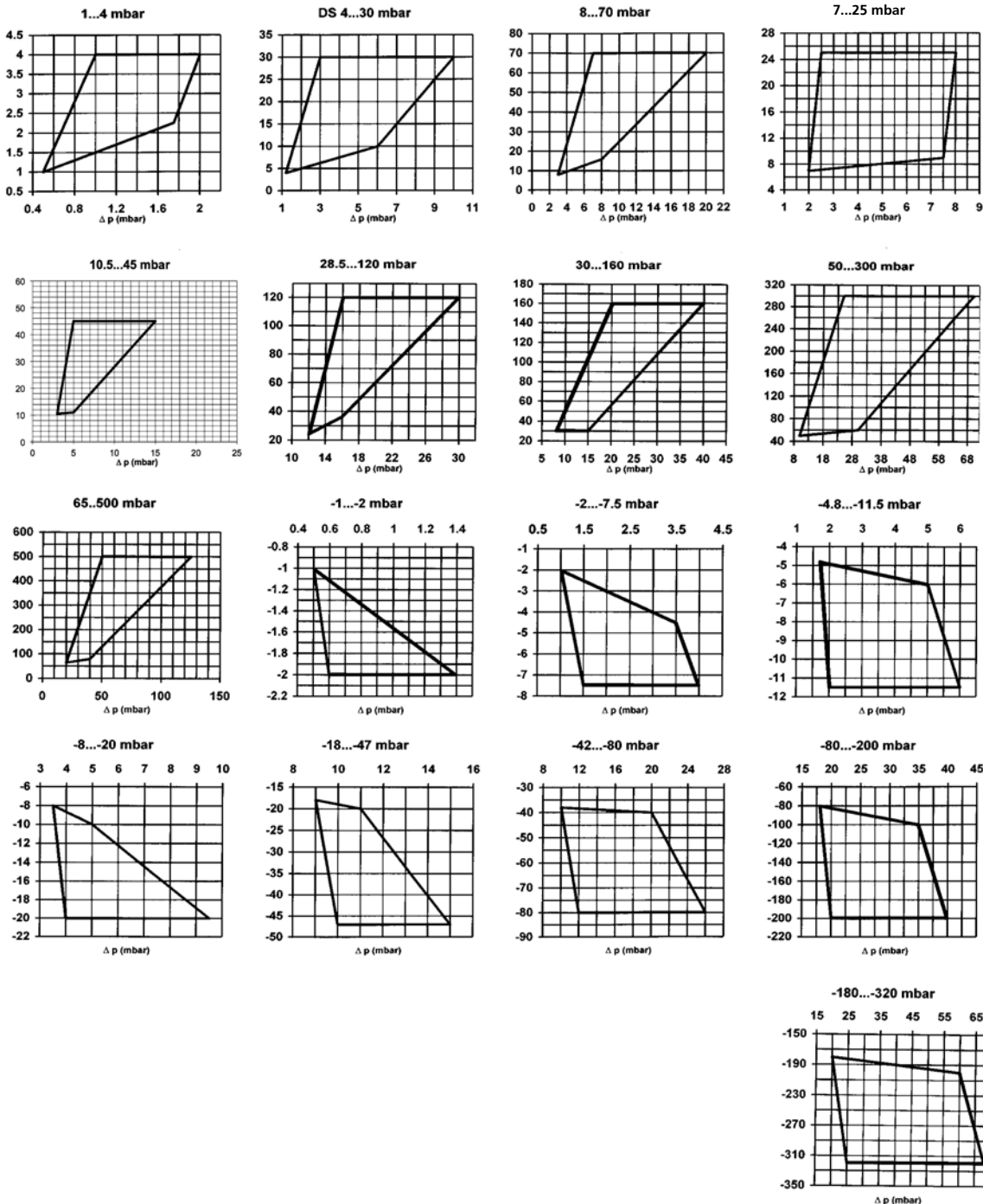
¹⁾ Other pressure range on request

²⁾ pt = test pressure

³⁾ Accessories supplied loose



Setting ranges



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