

# Relative and differential pressure switch type 630

Pressure range  
6 ... 5500 mbar



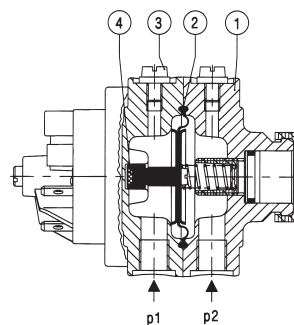
Differential pressure, vacuum and overpressure switches of type series 630 are suitable for monitoring neutral and slightly aggressive liquids and gases. Switching element isolated from medium.

Ideal for use as flow monitor in sanitary piping/ heating installations or for level monitoring in general in process technology applications. Extremely rugged construction with high functionality due to 10/20 bar safety margin in both pressure chambers.

- High overpressure safety margin at both connections (P1 + P2) up to 10/20 bar
- Functionally simple, rugged mechanics with high operating reliability
- Also for slightly aggressive liquids and gases
- Specially economical version with switching points adjusted in the factory
- Repeatability up to  $< \pm 0.4$  mbar

## Technical overview

<b>Pressure range</b>			
Relative und differential		6 ... 5500 mbar	
<b>Operating conditions</b>			
Medium		Liquids and neutral gases	
Temperature	NBR-based	0 ... +80 °C	
	FPM	-10 ... +80 °C	
	EPDM	-10 ... +80 °C	
	Q (Silicone)	-40 ... +80 °C	
	Ambient	+65 °C	
	Storage	-40 ... +80 °C	
Tolerable overload and max. tolerable system pressure (P1 > P2)	≤ 200 mbar	10 bar	
	> 200 mbar	20 bar	
Rupture pressure		30 bar	
Lowest turn-on pressure		≥ 6 mbar	
Smallest switching difference		≥ 3 mbar	
<b>Materials in contact with the medium</b>			
Diaphragm		NBR based	
		EPDM	
		FPM	
		Silicone	
Case		Anodized aluminium	
		Brass	
		Brass chemically nickel plated	
Other components		X14CrMoS17	1.4104
		X5CrNi18-10	1.4301
		X10CrNi18-8	1.4310
		Steel category A2 for screws	
		Polyacetate-C, Polyamide	
<b>Contact material / Loading</b>			
Nominal voltage, type of current		250 VAC	
Nominal current for resistive loading		1 A	
Nominal current for motor loading		0.5 A	
Contact system		Changeover contact	
Service life	Mechanically	10 <sup>6</sup> switching cycles <sup>1)</sup>	
<b>Protection standard</b>			
Without cover		IP 00	
With cover (PG11) <sup>2)</sup>		IP 54	
With cover (PG9) <sup>3)</sup>		IP 65	
<b>Repeatability</b>			
±5% of the switching point	with diaphragm NBR-based / silicone	minimum ±0.4 mbar	
±10% of the switching point	with diaphragm FPM / EPDM	minimum ±0.8 mbar	
<b>Electrical connections</b>			
Screw terminals (Option)			
Tab connectors (AMP) 6.3 mm			
Cable gland PG9 / PG11		with cover	
<b>Pressure connections</b>			
Thread		G 1/8	
Straight screwed connection	Zinc plated steel with NBR seal for pipe (Ø 6 mm)	G 1/8	
Screwed Socket	CuZn nickel plated for tube (Ø 6 mm)	G 1/8	
<b>Mounting instructions</b>			
For switching points calibrated in the factory		Indicate installation arrangement	
In case of liquid media		Connections down	
<b>Remark:</b>	By changing the mounting position the switching points also change. The adjustment ranges are in relation with the mounting position.		
<b>Weight</b>			
With aluminium base		~ 380 g	
With base brass / nickel-plated brass		~ 1000 g	
<b>Packaging</b>			
Single packaging in cardboard boxes			



Legend to cross-section drawing

- 1 Pressure case
- 2 Diaphragm
- 3 Vent
- 4 Permanent magnet
- P1 Higher pressure / lower vacuum
- P2 Lower pressure / higher vacuum

<sup>1)</sup> Admissible switching difference has to be considered

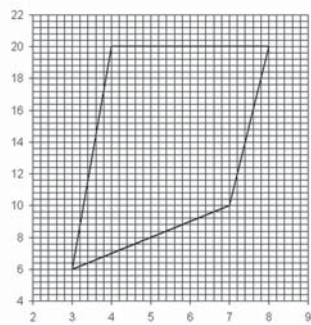
<sup>2)</sup> For installation arrangement electrical connections upward

<sup>3)</sup> With O-Ring

Order code selection table		1	2	3	4	5	6	7	
		630. X X X X X X X							
Pressure range <sup>1)</sup>	6 ... 20 mbar	9	1						
	15 ... 60 mbar	9	2						
	40 ... 200 mbar	9	3						
	150 ... 1000 mbar	9	4						
	1 ... 3 bar	9	5						
	2 ... 5.5 bar	9	6						
Contact material	AqCdO			0					
	Anodized aluminium, black				0				
	Brass				1				
	Nickelplated brass				2				
Pressure case	Anodized aluminium, black	with straight screwed connection G1/8 for pipe ø 6 mm			3				
	Brass	with straight screwed connection G1/8 for pipe ø 6 mm			4				
	Nickel plated brass	with straight screwed connection G1/8 for pipe ø 6 mm			5				
	Anodized aluminium, black	with screwed socket G3/8 for tube ø 6 mm			6				
	Brass	with screwed socket G3/8 for tube ø 6 mm			7				
	Nickel-plated brass	with screwed socket G3/8 for tube ø 6 mm			8				
	Diaphragm material	NBR						0	
		FPM						1	
EPDM							2		
Q (silicone)							3		
Cover PG9 on side / Bracket	Without cover	without bracket						0	
		with bracket type A						1	
	With cover (plastic) (Fig.1) (PG11)	without bracket							3
		with bracket type A							4
	With spec. cover (Fig.2) (PG9)	without bracket							6
		with bracket type A							7
		with bracket type B							8
		Two factory set switching points	(please specify on order e.g.: W10/8mbar)						
One factory set switching point high	(please specify on order e.g.: R25mbar)							R	
One factory set switching point low	(please specify on order e.g.: U100mbar)							U	

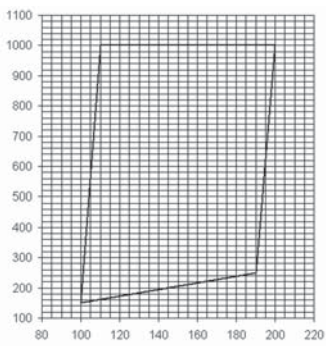
### Setting ranges

6 ... 20 mbar



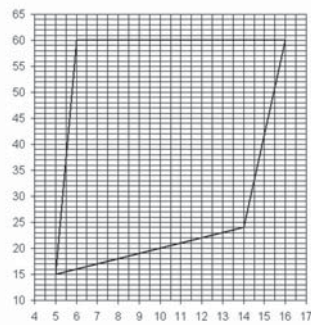
Δp (mbar)

150 ... 1000 mbar



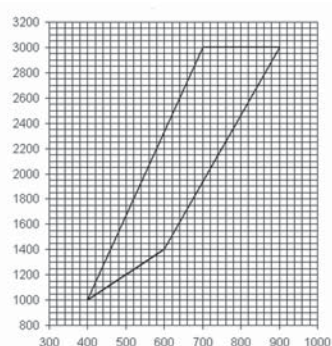
Δp (mbar)

15 ... 60 mbar



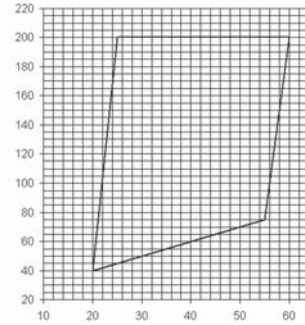
Δp (mbar)

1000 ... 3000 mbar (1 ... 3 bar)



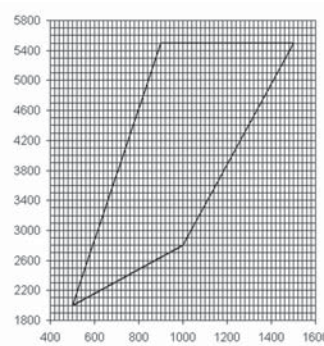
Δp (mbar)

40 ... 200 mbar



Δp (mbar)

2000 ... 5500 mbar (2 ... 5.5 bar)



Δp (mbar)

<sup>1)</sup> Other pressure range on request

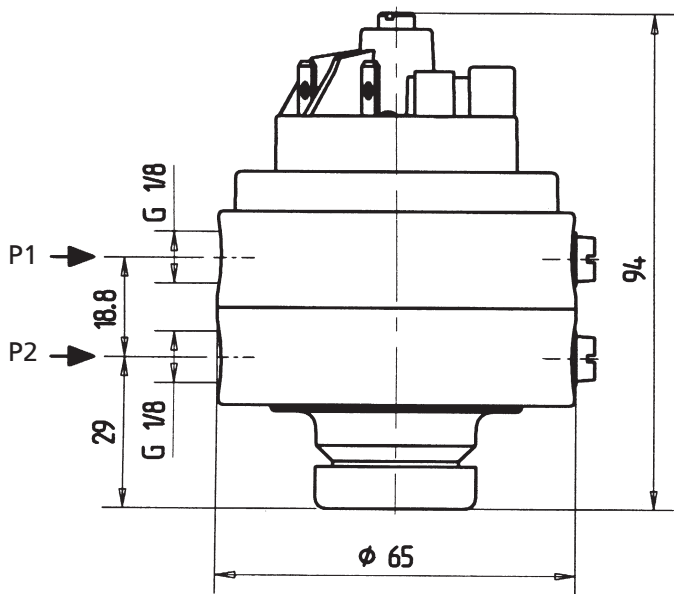
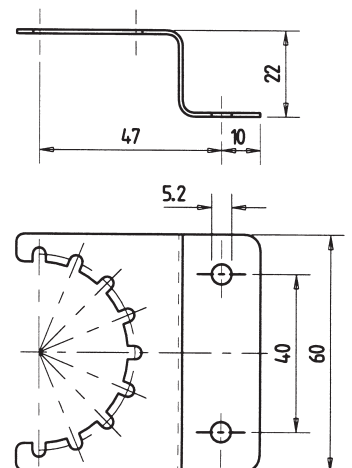
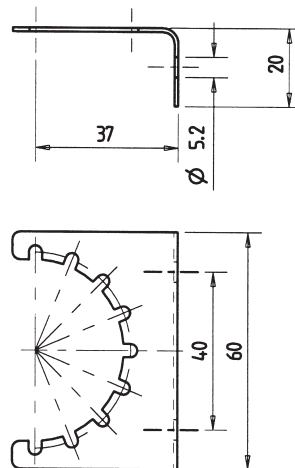
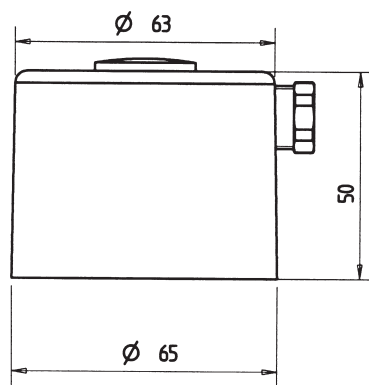
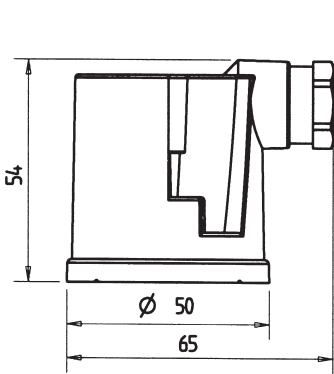


Fig. 1

Fig. 2

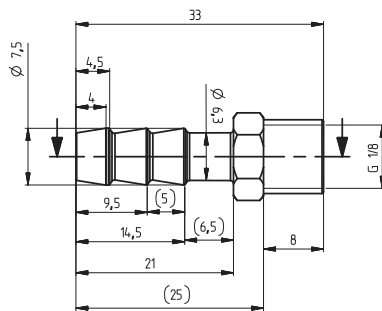
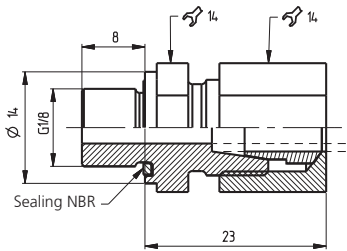
Type A

Type B



Straight screwed connector G 1/8

Screwed Socket G 1/8



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