

630

## Differential pressure, vacuum, overpressure switch

6 mbar to 5.5 bar

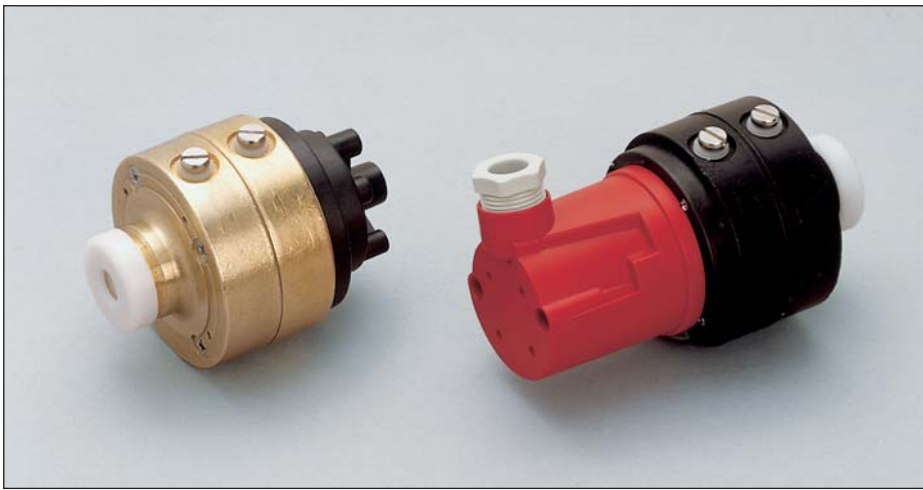


EDITION 12/2004

HUBA-REGISTERED TRADE MARK

**Huba Control**

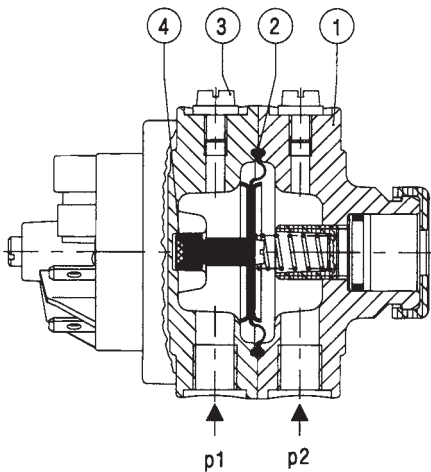
FOR FINE PRESSURE AND FLOW MEASUREMENT



### Technical overview

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.



### 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

### The distinct advantages

- 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

### Pressure ranges

See order code selection table

### System pressure (overload)

Max. system pressure and overload on one side (P1 > P2)  
 with range up to  $\leq 200$  mbar: 10 bar  
 with range 150 ... 5500 mbar: 20 bar

### Setting ranges

See graphic on the back

### Lowest turn-on pressure

6 mbar  
 Switching point and switching difference adjustable  
 Smallest switching difference 3 mbar

### Repeatability

$\pm 5\%$  of the switching point of type A, F diaphragm material, but as a minimum  $\pm 0.4$  mbar  
 $\pm 10\%$  of the switching point of type C, E diaphragm material, but as a minimum  $\pm 0.8$  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

### Case construction

Anodized aluminium, brass, brass chemically nickel-plated

### Weight

With aluminium base 380 g  
 With base brass / nickel-plated brass 1000 g

### Installation arrangement

Unrestricted. For switching points calibrated in the factory indicate installation arrangement. In case of liquid media vent screw at top, i.e. connections down (IP 40 with cover fig. 1)

### Pressure connections

Thread G 1/8

### Diaphragm

A NBR-based	C FPM
E EPDM	F Silicon

Parts coming into contact with the medium, to base and diaphragm:

X 12 CrMoS 17	1.4104
X 5 CrNi 18 9	1.4301
X 12 CrNi 17 7	1.4310

Steel category A2 for screws, Polyacetate-C, Polyamide

### Electrical connections

Screw terminals (option), AMP tab connectors 6.3 mm  
 With cover: Cable gland Pg 9/11

### Contact system

Changeover contact

### Contact material / Loading

Nominal voltage, type of current	VAC 250
Nominal current for resistive loading	1 A
Nominal voltage for motor loading	0.5 A
Contact material	AgCdO

### Type of protection

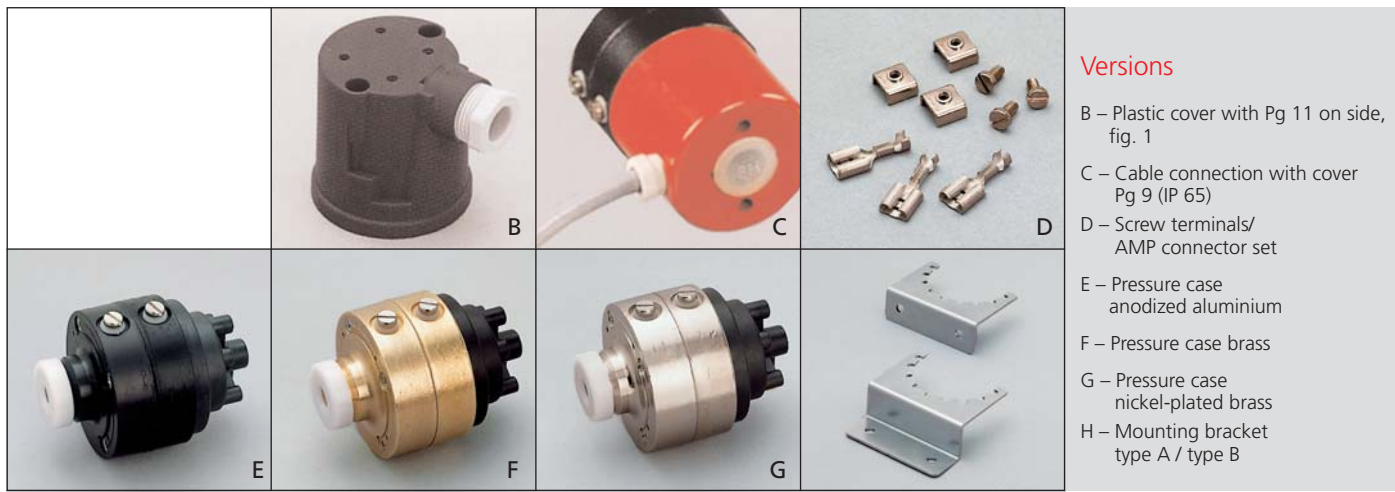
Without cover	IP 00
With cover (for installation arrangement electrical connections upward), picture B	IP 54
With cover, picture C	IP 65

### Service life

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

### Accessories

See order code selection table



### Versions

- B – Plastic cover with Pg 11 on side, fig. 1
- C – Cable connection with cover Pg 9 (IP 65)
- D – Screw terminals/ AMP connector set
- E – Pressure case anodized aluminium
- F – Pressure case brass
- G – Pressure case nickel-plated brass
- H – Mounting bracket type A / type B

### Order code selection table

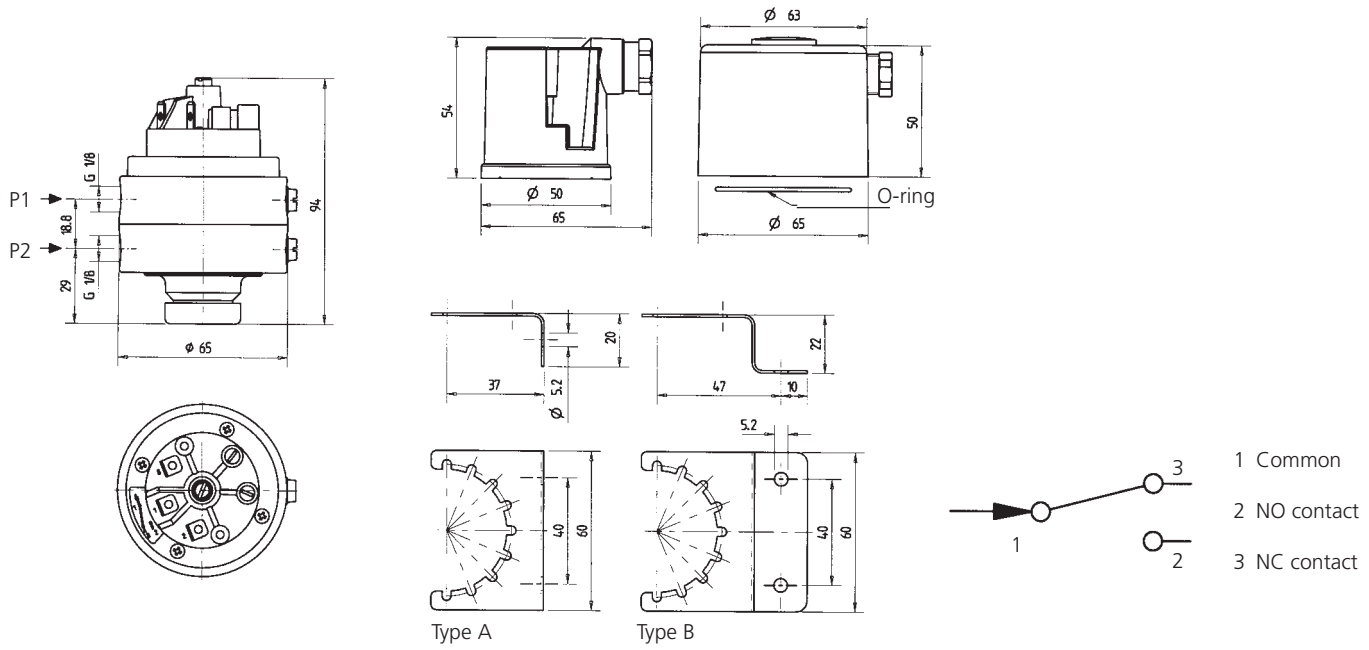
630. X X X X X X X X X

		9	1	2	3	4	5	6										
Pressure ranges <sup>1</sup>	System pressure / Overload on one side (P1)																	
	6 ... 20 mbar	10 bar	9	1														
	15 ... 60 mbar	10 bar	9	2														
	40 ... 200 mbar	10 bar	9	3														
	150 ... 1000 mbar	20 bar	9	4														
	1 ... 3 bar	20 bar	9	5														
2 ... 5.5 bar	20 bar	9	6															
Contact material	AgCdO							0										
Pressure case	Anodized aluminium, black							0										
	Brass							1										
	Nickel-plated brass							2										
Diaphragm material	Type A – NBR-based							0										
	Type C – FPM							1										
	Type E – EPDM							2										
	Type F – Q (Silicon)							3										
Cover Pg 9 on side / bracket	without cover, without bracket							0										
	without cover, with bracket type A							1										
	without cover, with bracket type B							2										
	with plastic cover (Pg 11), without bracket	(IP 54)						3										
	with plastic cover (Pg 11), with bracket type A	(IP 54)						4										
	with plastic cover (Pg 11), with bracket type B	(IP 54)						5										
	with special cover (Pg 9), without bracket	(IP 65)						6										
	with special cover (Pg 9), with bracket type A	(IP 65)						7										
with special cover (Pg 9), with bracket type B	(IP 65)						8											

### Accessories

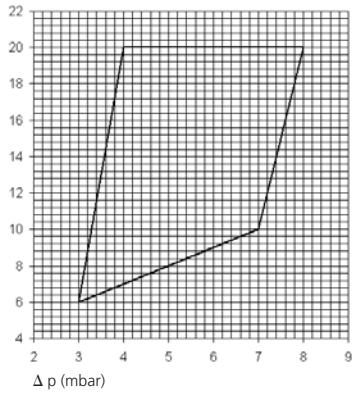
Plastic cover with Pg 11 lateral	IP 54	Fig. 1	1	0	5	8	3	6										
Plastic cover with Pg 9 lateral	IP 65	Fig. 2	1	0	5	2	9	4										
O-ring			1	0	3	3	4	2										
AMP connector set			1	0	3	4	7	9										
Screw terminal set			1	0	3	4	9	1										

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

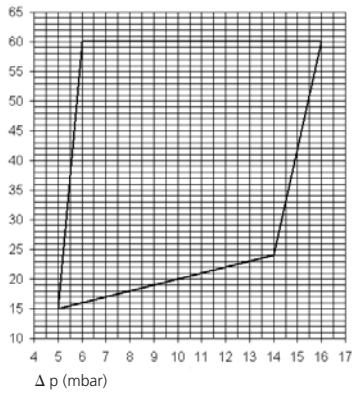


Setting ranges

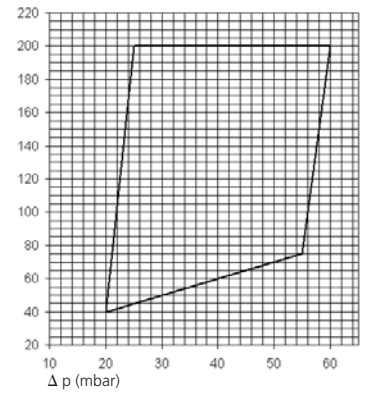
6 ... 20 mbar



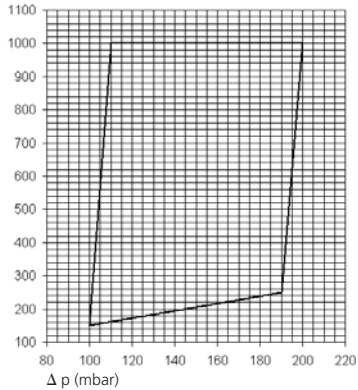
15 ... 60 mbar



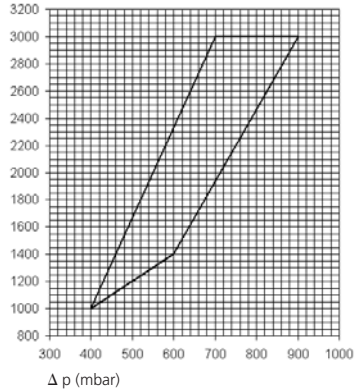
40 ... 200 mbar



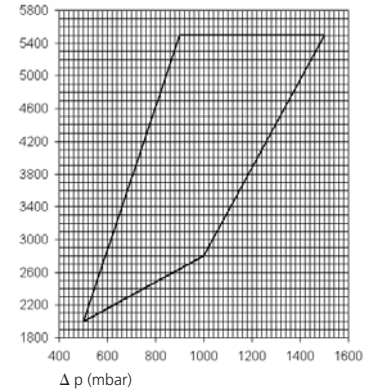
150 ... 1000 mbar



1 ... 3 bar



2 ... 5.5 bar



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