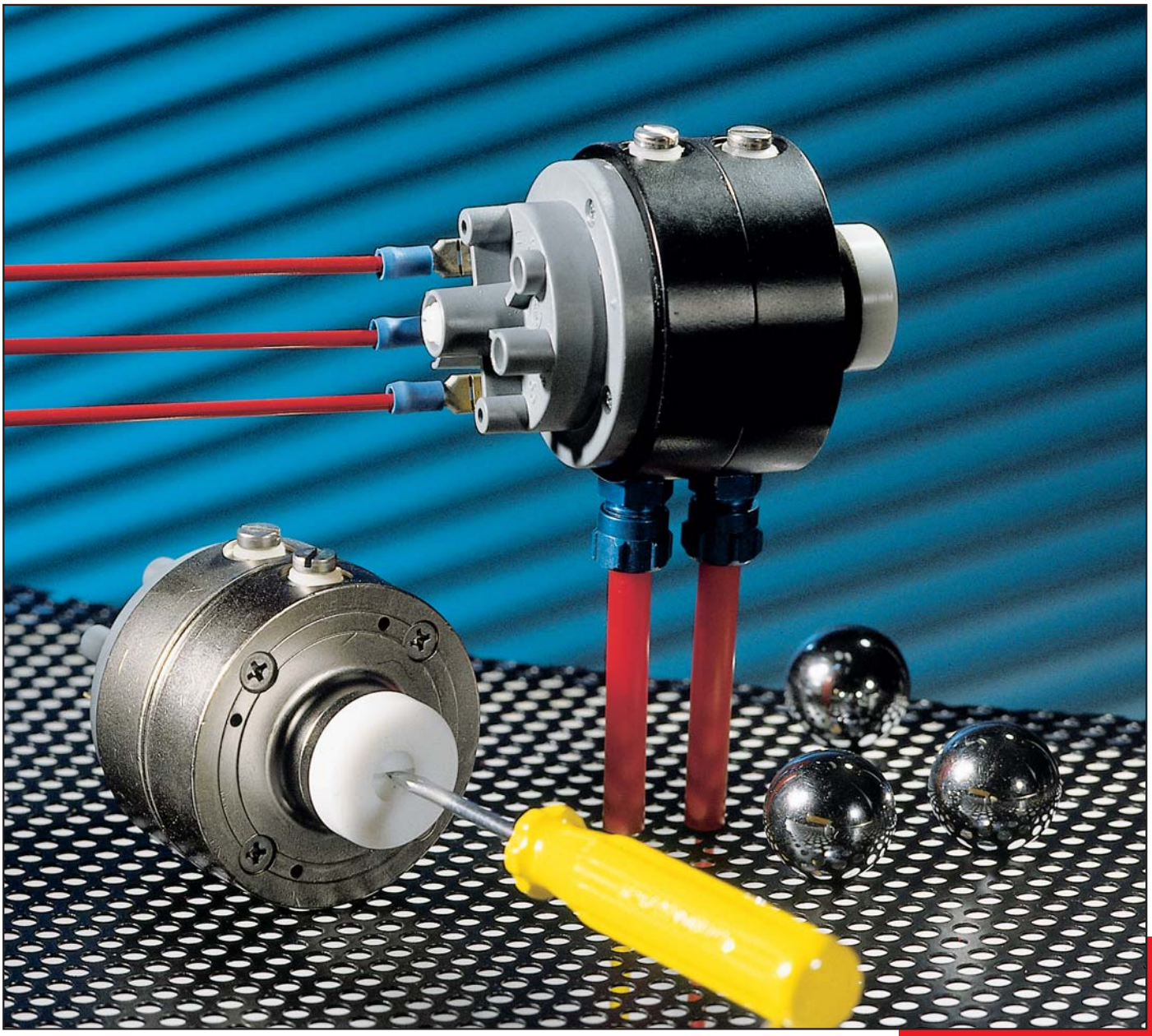
630

Differential pressure, vacuum, overpressure switch

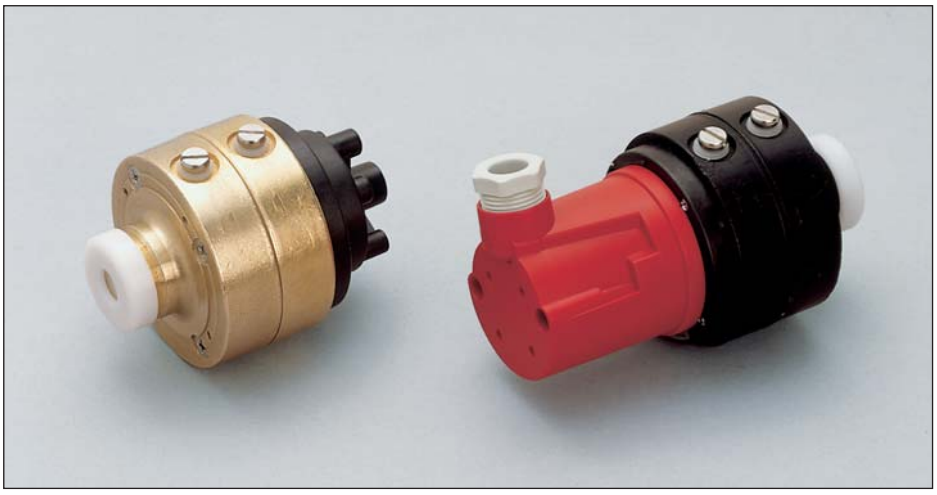
6 mbar to 5.5 bar



EDITION 12/2004

Huba Control

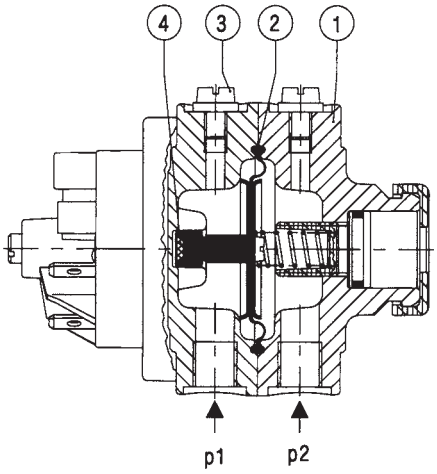
FOR FINE PRESSURE AND FLOW MEASUREMENT



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 chambres.



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
- Funcionally 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 < ± 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	≤ 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
± 5% of the switching point of type A, F diaphragm material, but as a minimum ± 0.4 mbar
± 10% of the switching point of type C, E diaphragm material, but as a minimum ± 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

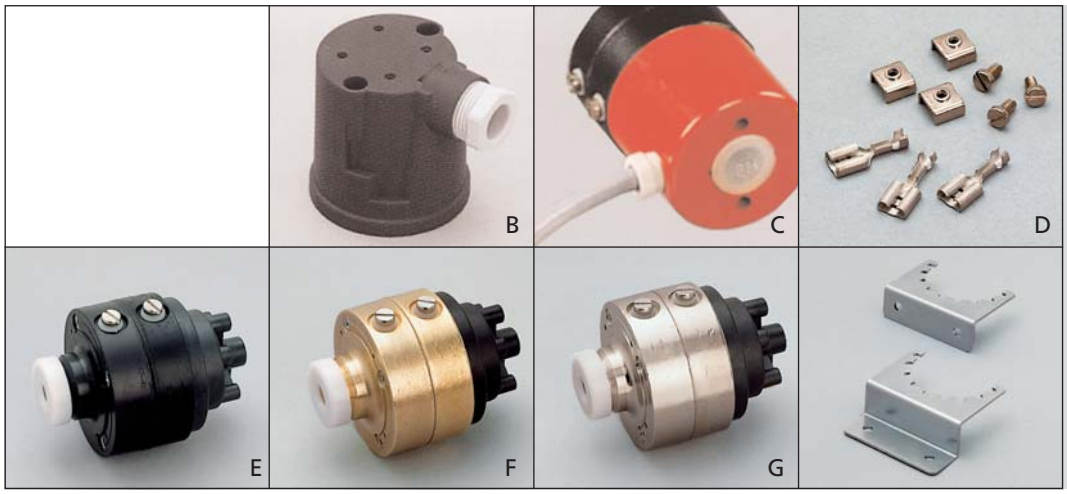
Nominal voltage, type of current	VAC 250
Nominal current for resistive loading	1 A
Nominal voltage for motor loading	0.5 A
Contact material	AgCdO

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: 10^6 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

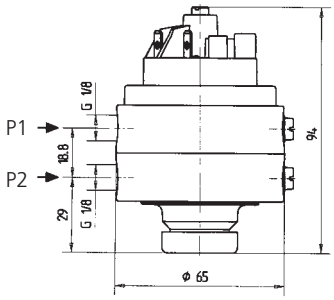
				630.	X	X	X	X	X	X	X	X	X
Pressure ranges[1]		System pressure / Overload on one side (P1)											
	6 … 20 mbar	10 bar			9	1							
	15 … 60 mbar	10 bar			9	2							
	40 … 200 mbar	10 bar			9	3							
	150 …1000 mbar	20 bar			9	4							
	1 … 3 bar	20 bar			9	5							
	2 … 5.5 bar	20 bar			9	6							
Contact 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			

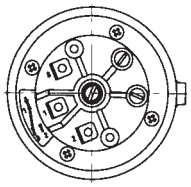
Accessories

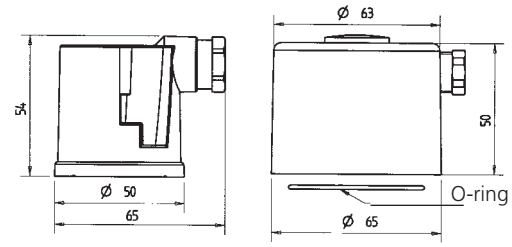
Plastic cover with Pg 11 lateral	IP 54	Fig. 1	1	0	1	1	3	4
Plastic cover with Pg 9 lateral	IP 65	Fig. 2	1	0	5	2	9	4
O-ring			1	0	3	3	4	2
AMP connector set			1	0	3	4	7	9
Screw terminal set			1	0	3	4	9	1

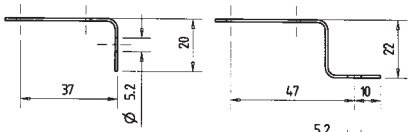
[1] Other pressure ranges on request

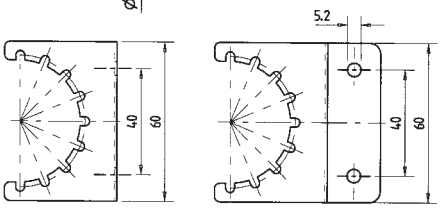
Dimensions in mm



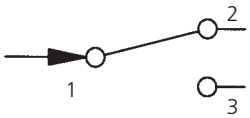








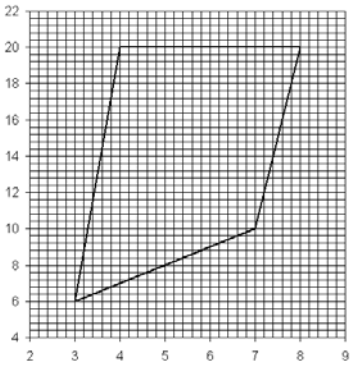
Type A Type B



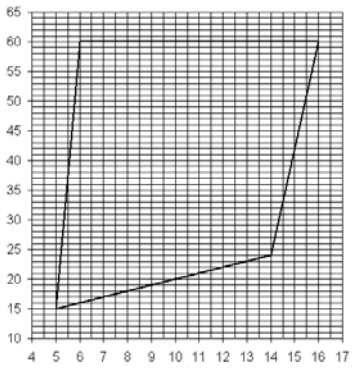
1 Common
2 NO contact
3 NC contact

Setting ranges

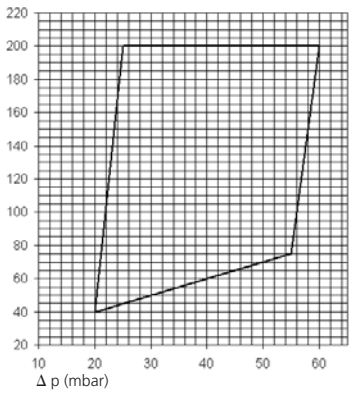
6 … 20 mbar



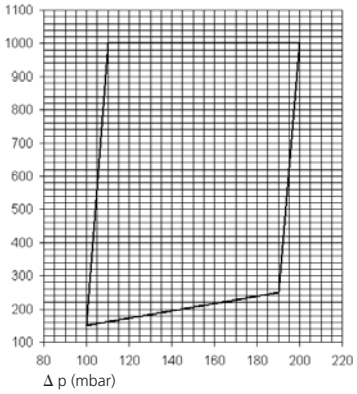
15 … 60 mbar



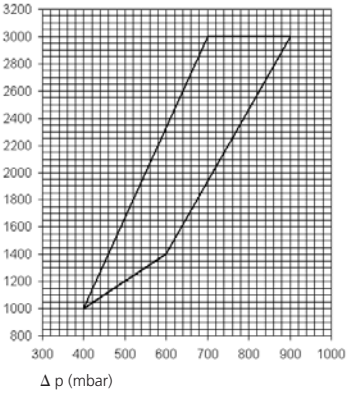
40 … 200 mbar



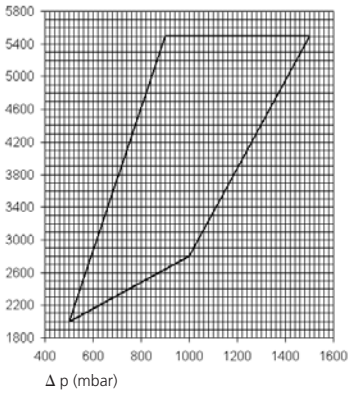
150 … 1000 mbar



1 … 3 bar



2 … 5.5 bar



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