0164

Diaphragm pressure switches up to 42 V with stainless steel housing

- Stainless steel housing (1.4305 / AISI 303)
- Spade or M3 screw terminal
- Overpressure safety up to 600 bar[1)]
  (EPDM-W270 and silicone diaphragm up to 35 bar[2)])

Adjustment range tolerance at room temperature	Male thread	Order number NO —› |:	Order number NC —› :|
0164 Diaphragm pressure switches with spade terminal			
0.1 – 1 (±0.2) bar	G 1/4-E	0164 – 403 41 – **X** – 003	0164 – 404 41 – **X** – 004
	R 1/8	0164 – 403 12 – **X** – 003	0164 – 404 12 – **X** – 004
	R 1/4	0164 – 403 46 – **X** – 003	0164 – 404 46 – **X** – 004
0.5 – 3 (±0.3) bar	G 1/4-E	0164 – 423 41 – **X** – 070	0164 – 424 41 – **X** – 070
	R 1/8	0164 – 423 12 – **X** – 070	0164 – 424 12 – **X** – 070
	R 1/4	0164 – 423 46 – **X** – 070	0164 – 424 46 – **X** – 070
1 – 10 (±0.5) bar	G 1/4-E	0164 – 407 41 – **X** – 007	0164 – 408 41 – **X** – 008
	R 1/8	0164 – 407 12 – **X** – 007	0164 – 408 12 – **X** – 008
	R 1/4	0164 – 407 46 – **X** – 007	0164 – 408 46 – **X** – 008
10 – 20 (±1) bar	G 1/4-E	0164 – 411 41 – **X** – 011	0164 – 412 41 – **X** – 012
	R 1/8	0164 – 411 12 – **X** – 011	0164 – 412 12 – **X** – 012
	R 1/4	0164 – 411 46 – **X** – 011	0164 – 412 46 – **X** – 012
20 – 50 (±2) bar	G 1/4-E	0164 – 415 41 – **X** – 015	0164 – 416 41 – **X** – 016
	R 1/8	0164 – 415 12 – **X** – 015	0164 – 416 12 – **X** – 016
	R 1/4	0164 – 415 46 – **X** – 015	0164 – 416 46 – **X** – 016

Seal material – Application areas

NBR	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
EPDM	Water, Brake fluid, hydrogen, oxygen, acetylene, etc.	2
EPDM-W270	Drinking water (p_{max} ≤ 35 bar)	5
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
Silicone	Water, food products, air, etc. (p_{max} ≤ 35 bar)	8
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 41 for the temperature range and application thresholds of sealing materials.

Your order number:	0164 – XXX XX – X –XXX

[1)] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.

[2)] Overpressure safety of pressure switch up to 600 bar. Functional reliability only up to 35 bar with diaphragm materials EPDM-W270 and silicone.

Pressure switches hex 24

NC or NO, maximum voltage 42 V

- Most cost-effective solution for mechanical pressure monitoring
- Stable switching point even after long use and high load
- Switching point can be adjusted when fitted on site [1)]
- High pressure resistance, compact, small switches, available as normally closed (NC) or normally open (NO)
- For solutions with integrated connectors please refer to chapter M.1, starting at page 22

[1)] Pressure switches can also be supplied preset at factory.
Our preset switches are sealed with lacquer paint, set points are embossed on the housing.

Pressure switches hex 24

Technical data

Rated working voltage:	10 … 42 VAC/DC	
Rated current range (resistive load, 12 DC and 12 AC):	10 mA … 4 A	
Switching power DC12 / AC12:	100 W / 100 VA	
Temperature resistance of sealing materials:	NBR	-40 °C … +100 °C
	EPDM	-30 °C … +120 °C
	EPDM-W270, diaphragm	-20 °C … +100 °C
	FKM (in diaphragm pressure switch)	-5 °C … +120 °C
	FKM (in piston pressure switch)	-10 °C … +120 °C
	Silicone, diaphragm	-40 °C … +120 °C
	HNBR	-30 °C … +120 °C
Switching frequency:	200 / min.	
Mechanical life expectancy:	1,000,000 cycles (for diaphragm pressure switches, life expectancy value only applies for switching pressures to max. 50 bar)	
Pressure rise rate:	≤ 1 bar/ms	
Hysteresis:	Average value 5 – 30 % depending on type, not adjustable	
Vibration resistance:	10 g; 5 – 200 Hz sine wave; DIN EN 60068-2-6	
Shock resistance:	294 m/s^2; 14 ms half sine wave; DIN EN 60068-2-27	
Protection class:	IP65 Terminals IP00	
Weight:	approx. 90 g	

Type:		0163	0164	0166	0167	0168	0169
Material:	Zinc-plated steel (CrVI-free)	●		●		●	●
	Stainless steel		●				
	Brass				●		
Overpressure safety up to:	35 bar				●		
	300 bar			●		●	
	600 bar	●	●				●