M.4

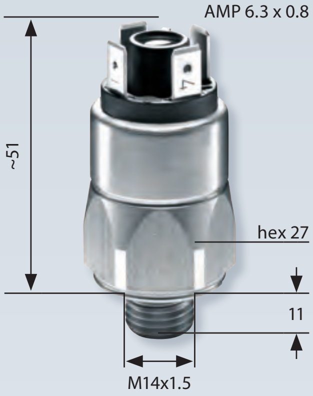
hex 27

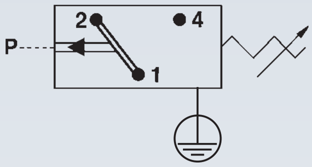
0183

Piston pressure switches up to 250 V

- Zinc-plated steel (CrVI-free)
- Changeover with silver contacts
- Overpressure safety up to 600 bar[1], Hysteresis adjustable at factory
- Adjustment range: 100 – 400 bar
- Height only 51 mm

Thread similar to ISO 6149-3
(including O-ring for sealing)





$p_{max.}$ in bar	Adjustment range in bar	Tolerance in bar at room temperature	Male thread	Order number
0183 Piston pressure switches with spade terminal				
600[1]	100 – 300	± 10.0	M 14x1.5 DIN 6149-3	0183 – 462 45 – X – 051
	200 – 400			0183 – 462 45 – X – 061

Seal material – Application areas

NBR	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 53 for the temperature range and application thresholds of sealing materials.

Your order number:	**0183 – 462 45 – X – XXX**

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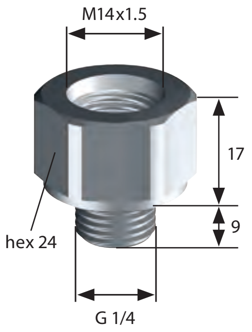
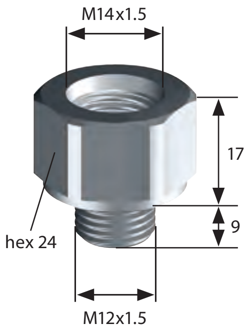
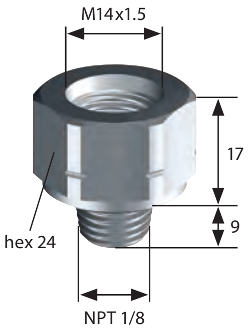
[1] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.

Accessory ▶

Not included in the delivery.
Please order separately.

Thread adapters

from
M 14 x 1.5

to **G 1/4**	to **M12 x 1.5**	to **NPT 1/8**
		
1-1-83-420-006	**1-1-83-420-007**	**1-1-83-420-008**

Order number ▶

Pressure switches hex 27

Changeover with silver or gold contacts

- Switching point can be adjusted when fitted on site 1)
- Factory adjustable hysteresis (except types 0140 and 0141)
- High overpressure safety and long service life under harsh conditions
- Operating voltage up to 250 V
- Series 0140 / 0141 with protective insulation ⧈
- For ready-wired customized versions refer to chapter M.5, starting at page 62
- For pressure switches with integrated connectors refer to chapter M.2, starting at page 32

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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 27

Technical data

Temperature resistance of sealing materials:	NBR (max. overpressure up to 100 bar)	-30 °C … +100 °C
	NBR (max. overpressure up to 300 bar)	-40 °C … +100 °C
	EPDM	-30 °C … +120 °C
	EPDM-W270 (in diaphragm pressure switch)	-20 °C … +100 °C
	FKM (in diaphragm pressure switch)	-5 °C … +120 °C
	FKM (in piston pressure switch)	-15 °C … +120 °C
	Silicone (in diaphragm pressure switch)	-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 (only adjustable at factory):	Adjustable average value 10 … 30 % depending on type Types 0140 and 0141 cannot be adjusted	
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 60068-2-6, DIN EN 60068-2-29	
Protection class:	IP65 with socket device, terminals IP00	
Weight:	approx. 100 g	

Switching performance and materials overview

Type	0140	0141	0170	0171	0180	0181	0183	0186	0187	0190	0191	0196	0197
5 … 24 VDC										●	●	●	●
10 … 42 VAC/DC			●	●									
10 … 250 VAC/DC	●	●			●	●	●	●	●				
3 … 50 mA										●	●	●	●
10 mA … 2 A	●	●											
10 mA … 4 A			●	●	●	●	●	●	●				
Gold contacts										●	●	●	●
Silver contacts	●	●	●	●	●	●	●	●	●				
Adjustable hysteresis			●	●	●	●	●	●	●	●	●	●	●
Zinc-plated steel (CrVI-free)	●	●	●	●	●	●	●			●	●		
Stainless steel 1.4305								●	●			●	●

Pressure switches hex 27

Electrical values

0140 / 0141		
Rated working voltage U_e	Rated working current I_e	Usage category1)
250 VAC 50 / 60 Hz	2 A	AC 12
24 VDC	2 / 1 A	DC 12 / DC 13
50 VDC	1 / 0.5 A	DC 12 / DC 13
75 VDC	0.5 / 0.25 A	DC 12 / DC 13
125 VDC	0.2 / 0.1 A	DC 12 / DC 13
250 VDC	0.15 / 0.1 A	DC 12 / DC 13
Rated insulation voltage U_i:	300 V	
Rated impulse withstand voltage U_{imp}:	4 kV	
Conventional thermal current I_{the}:	5 A	
Switching overvoltage:	< 2.5 kV	
Rated frequency:	DC and 50 / 60 Hz	
Nominal current of short-circuit mechanism:	to 3.5 A	
Rated short-circuit current:	< 350 A	
IP class of protection according to EN60529:1991+A1:1999:	IP65 with connector	
Tightening torque of terminal screws:	< 0.35 Nm	
Connector cross-section:	0.5 – 1.5 mm^2	

0170 / 0171 / 0180 / 0181 / 0183 / 0186 / 0187 / 0190 / 0191 / 0196 / 0197		
Rated working voltage U_e	Rated working current I_e	Usage category1)
250 VAC 50 / 60 Hz	4 A	AC 12
250 VAC 50 / 60 Hz	1 A	AC 14
24 VDC	4 / 2 A	DC 12 / DC 13
50 VDC	2 / 1 A	DC 12 / DC 13
75 VDC	1 / 0.5 A	DC 12 / DC 13
125 VDC	0.3 / 0.2 A	DC 12 / DC 13
250 VDC	0.25 / 0.2 A	DC 12 / DC 13
Rated insulation voltage U_i:	300 V	
Rated impulse withstand voltage U_{imp}:	2.5 kV	
Conventional thermal current I_{the}:	5 A	
Switching overvoltage:	< 2.5 kV	
Rated frequency:	DC and 50 / 60 Hz	
Nominal current of short-circuit mechanism:	to 5 A	
Rated short-circuit current:	< 350 A	
IP-Protection class nach EN60529:1991+A1:1999:	IP65 with connector	

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1) For technical explanations refer to page 9