

E.3

hex 27 / 30 A/F
adjustable by user

Electronic pressure switches

hex 27 and 30 A/F, adjustable by user



- Ceramic sensor in thick film technology
- High overpressure protection to 500 bar
- Easy adjustment of switching point from the outside using set screw
- Hysteresis available within broad range (1 % – 98 %, set at factory)
- **Very high switching currents (to 1.4 A)**

Technical details

Type:	0520 NO or NC		
Transistor output:	PNP output (High-Side N-channel)		
Supply voltage:	15 – 36 VDC		
Output current:	1.4 A transistor output (PNP, DC12) with short-circuit and overvoltage protection		
Idle power consumption:	< 15 mA		
Adjustment range p_{nom} :	0 – 10 bar	0 – 100 bar	0 – 250 bar
Max. overpressure ¹⁾ :	20 bar	150 bar	500 bar
Burst pressure ¹⁾ :	25 bar	175 bar	600 bar
Mechanical life expectancy:	5,000,000 switching cycles in adjustment range at p_{nom}		
Pressure rise:	≤ 1 bar/ms		
Accuracy:	±0.5 % of adjustment range p_{nom} (full scale (FS)) at room temperature		
Switching point adjustment range:	2 ... 100 % of adjustment range p_{nom} (FS), set from outside using set screw		
Hysteresis:	2 ... 95 % FS, programmable at factory (max. tolerance ± 1.0% of adjustment range)		
Standard hysteresis without order specification:	approx. 0.5 bar	approx. 5 bar	approx. 10 bar
Resolution:	0.15 % of adjustment range p_{nom} (FS)		
Long term stability:	±0.1 % of adjustment range p_{nom} (FS) per year		
Repeatability ²⁾ :	±0.1 % of adjustment range p_{nom} (FS)		
Switching time:	< 4 ms		
Temperature error ²⁾ :	±0.04 % of adjustment range p_{nom} (FS) / °C		
Compensated temperature range:	0 °C ... +70 °C (32 °F ... 158 °F), total error ≤ 2 %		
Temperature range ambient:	-30 °C ... +80 °C (-22 °F ... 212 °F)		
Temperature range media:	with NBR seal:	-30 °C ... +100 °C (-22 °F ... +212 °F)	
	with EPDM seal:	-30 °C ... +125 °C (-22 °F ... +257 °F)	
	with FKM seal:	-20 °C ... +125 °C (-4 °F ... +257 °F)	
Wetted parts material	Housing:	zinc-plated steel	
	Measuring cell:	Ceramic	
	Seal material:	NBR, EPDM or FKM	
Insulation resistance:	> 100 MΩ (500 VDC, $R_i > 42 \Omega$)		
Vibration resistance:	10 g at 4 ... 2000 Hz sine wave; DIN EN 60068-2-6		
Shock resistance:	294 m/s ² ; 11 ms half sine wave; DIN EN 60068-2-27		
Protection class:	IP65: (DIN EN 175301-803-A); IP67: (M12x1)		
Electromagnetic compatibility:	EMC 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007		
Weight:	approx. 240 g		

¹⁾ Static pressure, dynamic pressure 30 to 50% lower. Value refers to the hydraulic or pneumatic part of the electronic pressure switch.

²⁾ Within the compensated temperature range

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	no / nc	
○ 1	(+)	
○ 2	(GND)	
○ 3	(OUT)	



0520

Electrical connectors and threads

DIN EN 175301-803-A (DIN 43650-A)

Pin	Assignment
1	Uv+
2	Gnd
3	U _{out}
PE	PE

IP65
Cable output Pg9
(outside diameter of cable 6 to 9 mm)

Order number: 001

G 1/4 – female thread

Thread code: 14

M 12x1 - DIN EN 61076-2-101-A

Pin	Assignment
1	Uv+
2	nc
3	Gnd
4	U _{out}

IP67

Order number: 002

Gasket

G 1/4 DIN EN ISO 1179-2 (DIN 3852-11) form E

Thread code: 41

0520

Order matrix for electronic pressure switches

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	Type	Adjustment range	Pressure connection	Seal material	Electrical connection
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Type

Electronic pressure switch	0520
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Adjustment range¹⁾ for NO

0 – 10 bar (approx. 145 PSI)	470
0 – 100 bar (approx. 1450 PSI)	472
0 – 250 bar (approx. 3620 PSI)	474

Adjustment range¹⁾ for NC

0 – 10 bar (approx. 145 PSI)	471
0 – 100 bar (approx. 1450 PSI)	473
0 – 250 bar (approx. 3620 PSI)	475

Pressure connection

G 1/4 – female thread	14
G 1/4 – ISO 1179-2 (DIN 3852), form E, male thread	41

Seal material – Application areas

NBR	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
EPDM	Brake fluid, water, acetylene, hydrogen, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3

Electrical connection

DIN EN 175301-803-A (DIN 43650-A) ; socket device included	001
M 12x1 - DIN EN 61076-2-101-A	002

Order number:	0520	47X	XX	X	XXX
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Also available factory adjusted. If you require factory adjustment, please state switching point and hysteresis when ordering.

¹⁾ Static pressure, dynamic pressure 30 to 50% lower. Value refers to the hydraulic or pneumatic part of the electronic pressure switch.



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