

## 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 7,250 psi (500 bar)
- Easy adjustment of switching point from the outside using set screw
- Differential available within broad range (2 % – 95 %, set at factory)
- Very high switching currents (to 1.4 A)

## Technical details

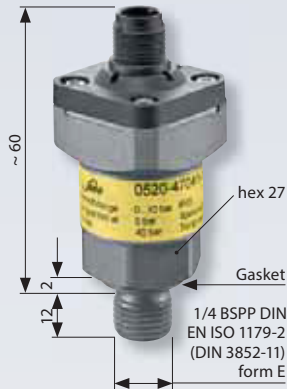
Type:	0520 NO or NC		
Transistor output:	PNP output (High-Side N-channel)		
Supply voltage:	15 – 36 VDC		
Output current:	1.4 A transistor output (PNP, DC12) with short-circuit and overvoltage protection		
Idle power consumption:	< 15 mA		
Adjustment range $p_{nom}$ :	0 – 10 bar (145 psi)	0 – 100 bar (1,450 psi)	0 – 250 bar (3,625 psi)
Max. overpressure <sup>1)</sup> :	20 bar (290 psi)	150 bar (2,175 psi)	500 bar (7,250 psi)
Burst pressure <sup>1)</sup> :	25 bar (360 psi)	175 bar (2,540 psi)	600 bar (8,700 psi)
Mechanical life expectancy:	5,000,000 switching cycles in adjustment range at $p_{nom}$		
Pressure rise:	$\leq 14,500$ psi/s ( $\leq 1,000$ bar/s)		
Accuracy:	$\pm 0.5$ % 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		
Differential:	2 ... 95 % FS, programmable at factory (max. tolerance $\pm 1.0$ % of adjustment range)		
Standard differential without order specification:	approx. 7.25 psi (0.5 bar)	approx. 72.5 psi (5 bar)	approx. 145 psi (10 bar)
Resolution:	0.15 % of adjustment range $p_{nom}$ (FS)		
Long term stability:	$\pm 0.1$ % of adjustment range $p_{nom}$ (FS) per year		
Repeatability <sup>2)</sup> :	$\pm 0.1$ % of adjustment range $p_{nom}$ (FS)		
Switching time:	< 4 ms		
Temperature error <sup>2)</sup> :	$\pm 0.04$ % of adjustment range $p_{nom}$ (FS) / °C		
Compensated temperature range:	+32 °F ... +158 °F (0 °C ... +70 °C), total error $\leq 2$ %		
Temperature range ambient:	-22 °F ... +176 °F (-30 °C ... +80 °C)		
Temperature range media:	with NBR (BunaN) seal: -22 °F ... +212 °F (-30 °C ... +100 °C)		
	with FKM (Viton®) seal: -4 °F ... +257 °F (-20 °C ... +125 °C)		
Wetted parts material	Housing:	zinc-plated steel	
	Measuring cell:	Ceramic	
	Seal material:	NBR (BunaN), EPDM or FKM (Viton®)	
Insulation resistance:	> 100 M.Ω (500 VDC, $R_i > 42$ ) Ω		
Vibration resistance:	10 g at 4 ... 2000 Hz sine wave; DIN EN 60068-2-6		
Shock resistance:	294 m/s <sup>2</sup> ; 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. 8.5 oz (240 g)		

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

<sup>2)</sup> Within the compensated temperature range

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no / nc	
○ 1	(UV+)
○ 2	(Gnd)
○ 3	(U <sub>out</sub> )

# 0520

Electrical connectors and threads

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

Pin	Assignment
1	Uv+
2	Gnd
3	U <sub>out</sub>
PE	PE

IP65  
Cable output PG9  
(outside diameter of cable 6 to 9 mm)

Order number: 001

1/4 BSPP - female thread

Thread code: 14

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

Pin	Assignment
1	Uv+
2	nc
3	Gnd
4	U <sub>out</sub>

IP67

Order number: 002

Gasket

1/4 BSPP 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 range <sup>1)</sup> for NO

0 – 145 psi (0 – 10 bar)	470
0 – 1,450 psi (0 – 100 bar)	472
0 – 3,625 psi (0 – 250 bar)	474

Adjustment range <sup>1)</sup> for NC

0 – 145 psi (0 – 10 bar)	471
0 – 1,450 psi (0 – 100 bar)	473
0 – 3,625 psi (0 – 250 bar)	475

Pressure connection

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

Seal material – Application areas

NBR (BunaN)	Hydraulic/machine oil, heating oil, air, nitrogen, etc.	1
FKM (Viton®)	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.

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

