

## 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 (2 % – 95 %, set at factory)
- Very high switching currents (to 1.4 A)

# Electronic pressure switches

## Technical details

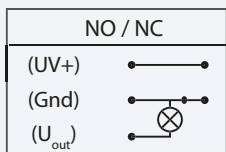
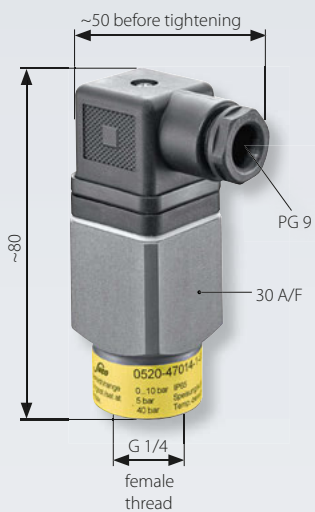
		<b>0520 NO / NC</b>		
Transistor output:		PNP output (High-Side N-channel)		
Supply voltage:		15 – 36 VDC		
Output current:		1.4 A transistor output (PNP, DC12) with short-circuit and overvoltage protection		
Idle power consumption:		< 15 mA		
Adjustment range $p_{nom}$ :		0 – 10 bar	0 – 100 bar	0 – 250 bar
Max. overpressure $p_u$ <sup>1)</sup> :		20 bar	150 bar	500 bar
Burst pressure <sup>1)</sup> :		25 bar	175 bar	600 bar
Mechanical life expectancy:		5,000,000 switching cycles at rise rates to 1,000 bar/s at $p_{nom}$		
Pressure rise rate:		1,000 bar/s		
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 <sup>2)</sup> :		±0.1 % of adjustment range $p_{nom}$ (FS)		
Switching time:		< 4 ms		
Temperature error <sup>2)</sup> :		±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 ... +178 °F)		
Temperature range media:		with NBR joint: -30 °C ... +100 °C (-22 °F ... +212 °F)		
		with FKM joint: -20 °C ... +125 °C (-4 °F ... +257 °F)		
Wetted parts material:	Housing:	zinc-plated steel		
	Measuring cell:	Ceramic		
	Seal material:	NBR or FKM		
Insulation resistance:		> 100 MΩ (35 VDC)		
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. 240 g		

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

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

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Electrical connectors and threads

## DIN EN 175301 - 803 - A



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

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

Connection code: 001

## M12 - DIN EN 61076 - 2 - 101 A



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

IP67

Connection code: 002



Thread code: 14



Thread code: 41

# 0520

## Article 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	<b>0520</b>
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### Adjustment range<sup>1)</sup> for NO

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

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

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

### Pressure connection

G 1/4 – female thread	<b>14</b>
G 1/4 – DIN EN ISO 1179-2 (DIN 3852-11), form E	<b>41</b>

### Seal material – Application areas

NBR	Hydraulic/machine oil, air, nitrogen, etc.	<b>1</b>
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	<b>3</b>

### Electrical connection

DIN EN 175301-803-A (DIN 43650-A); socket device included	<b>001</b>
M12x1 - DIN EN 61076-2-101-A	<b>002</b>

<b>Article number:</b>	<b>0520</b>	<b>47X</b>	<b>XX</b>	<b>X</b>	<b>XXX</b>
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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.

