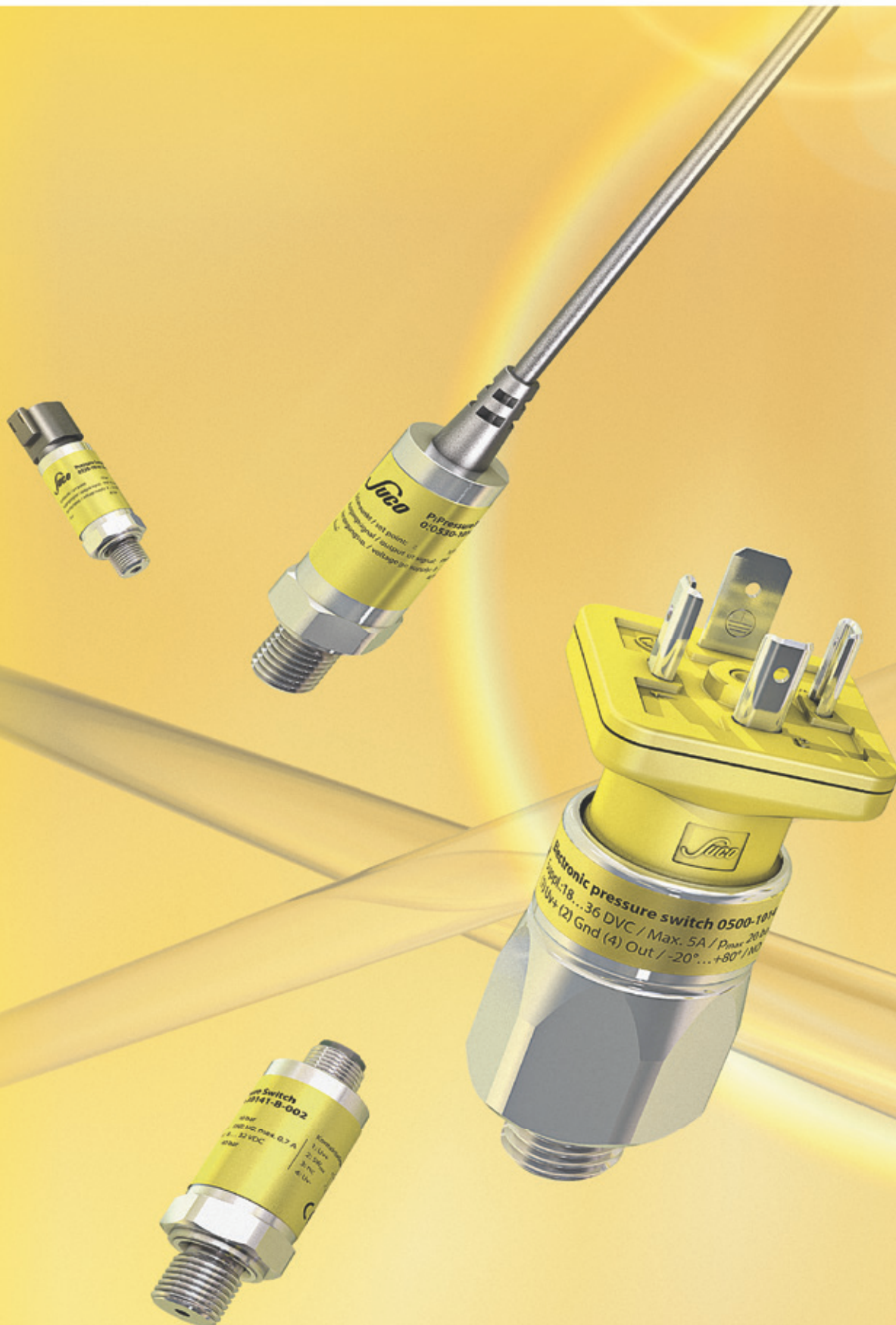


# E. Electronic Pressure Switches



## 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

Type:	<b>0520 NO or 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 <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 in adjustment range at $p_{nom}$		
Pressure rise:	$\leq 1$ bar/ms		
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		
Hysteresis:	2 ... 95 % FS, programmable at factory (max. tolerance $\pm 1.0$ % 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:	$\pm 0.1$ % 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:	0 °C ... +70 °C (32 °F ... 158 °F), total error $\leq \pm 2$ %		
Temperature range ambient:	-30 °C ... +80 °C (-22 °F ... 178 °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 M $\Omega$ (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 <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		

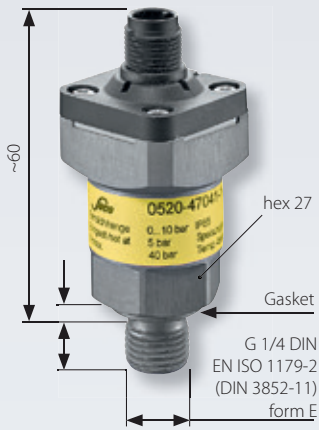
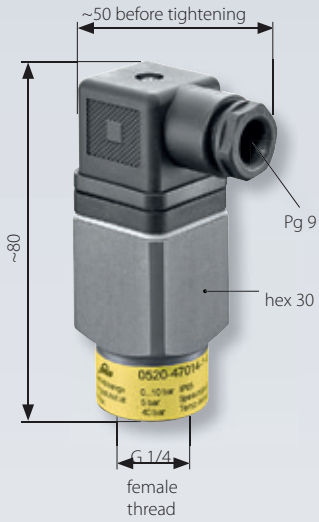
<sup>1)</sup> Static pressure, dynamic pressure 30 to 50 % lower. Values refer to the hydraulic or pneumatic part of the electronic pressure switch.

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



# E.3

hex 27 / 30 A/F  
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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**

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**

**Thread code: 14**

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

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

IP67

**Order number: 002**

**Thread code: 41**

# 0520

## Order matrix for electronic pressure switches

E.3

hex 27 / 30 A/F  
adjustable by user



	Type	Adjustment range	Pressure connection	Seal material	Electrical connection
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Type	↓	↓	↓	↓	↓
Electronic pressure switch	0520				

### Adjustment range<sup>1)</sup> for NO

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

### Adjustment range<sup>1)</sup> 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 – DIN EN ISO 1179-2 (DIN 3852-11), form E	41

### Seal material – Application areas

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

### Elektrischer Anschluss

DIN EN 175301-803-A (DIN 43650-A); socket device included	001
M12x1 - 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.

