0520

Order matrix for electronic pressure switches

	Type	Adjustment range	Pressure connection	Seal material	Electrical connection

Type

Electronic pressure switch	0520

Adjustment range [1] 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 [1] 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®)	Hydraulicfluids (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

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.

RoHS III 2020 - 209 compliant

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[1]:		20 bar (290 psi)	150 bar (2,175 psi)	500 bar (7,250 psi)
Burst pressure[1]:		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:		≤ 14,500 psi/s (≤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		
Differential:		2 … 95 % FS, programmable at factory (max. tolerance ± 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:		±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:		+32 °F …+158 °F (0 °C … +70 °C), total error ≤ 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) or FKM (Viton®)		
Insulation resistance:		> 100 M Ω (500 VDC, Ri > 42) Ω		
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. 8.5 oz (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

E.3

hex 27 / 30 A/F
field adjustable

0520

Electrical connectors and threads

	no / nc
○ 1	(+)
○ 2	(GND)
○ 3	(OUT)

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	

M 12x1 - DIN EN 61076-2-101-A	
	
Pin	Assignment
1	Uv+
2	nc
3	Gnd
4	U_{out}
IP67	
Order number: 002	

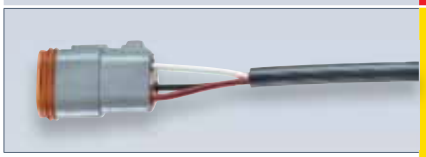
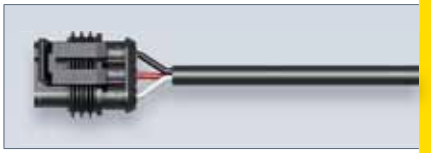

Thread code: 14


Thread code: 41

RoHSII compliant

Accessories

Mating plugs

Deutsch DT06-3S (for DT04-3P) 3 x 0.5 mm² PUR cable 6.5 ft (2 m), IP67	Suitable for connector code **010** **Deutsch DT04-3P**	Order number: **1-1-36-653-160**	
TE AMP Superseal 1.5®, 3-pin 3 x 0.5 mm² Radox cable 6.5 ft (2 m), IP65	Suitable for connector code **007** **AMP Superseal 1.5®**	Order number: **1-1-32-653-158**	
M12 DIN EN 61076-2-LF, 4-pin 4 x 0.34 mm² PUR cable 6.5 ft (2 m), IP65	Suitable for connector code **002** **M12 DIN EN 61076-2-101 A**	Order number: **1-1-00-653-162**	
M 12x1 DIN EN 61071-2-101 D straight, 4-pin Terminals for wire diameter 0.75 mm² (AWG 18)	Suitable for connector code **002** **M12 DIN EN 61076-2-101 A**	Order number: **1-6-00-652-016**	
Coupler socket M 12x1 DIN EN 61071-2-101 D Angled, 4-pin Terminals for wire diameter 0.75 mm² (AWG 18)	Suitable for connector code **002** **M12 DIN EN 61076-2-101 A**	Order number: **1-6-00-652-017**	

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)