

# DS 230

## Electronic OEM Pressure Switch

### Applications:

- ▶ pneumatics
- ▶ pumps and hydraulic machines

### Characteristics:

- ▶ nominal pressure ranges from 0 ... 2 bar up to 0 ... 400 bar
- ▶ display and housing rotatable
- ▶ up to 2 contacts
- ▶ configurable via display
- ▶ optional: analogue output



### Technical Data



Input pressure range									
Nominal pressure gauge	[bar]	2	5	10	20	50	100	250	400
Overpressure	[bar]	4	10	20	40	100	200	400	600
Burst pressure	[bar]	7	15	35	70	150	250	450	650
Supply									
Supply voltage $V_s$		24 V <sub>DC</sub> ± 10 %							
Current consumption		< 40 mA (without analogue output and without contacts)							
Output signal									
Number, type		standard: 1 PNP contact optional: max. 2 independent PNP contacts; 1 analogue output							
Contact (Standard)									
Switching current		standard: contact rating max. 125 mA, short-circuit resistant							
Accuracy of contacts <sup>1</sup>		≤ ± 1.5 % FSO BFSL							
Repeatability <sup>1</sup>		≤ ± 0.5 % FSO BFSL							
Switching frequency		max. 100 Hz							
Switching cycles		> 100 x 10 <sup>6</sup>							
Functions		Hysteresis- / Compare mode n/o / n/c							
Delay time		0 ... 99.99 sec							
Analogue output (optionally)									
Signal output		4 ... 20 mA (3-wire)							
Linearity, hysteresis, repeatability		≤ ± 0.5 % FSO BFSL							
Calibration accuracy		≤ ± 1 % FSO BFSL							
Permissible load		R <sub>max</sub> = 500 Ω							
Response time		< 10 msec							
<sup>1</sup> depending on nominal pressure range									
Thermal effects (Offset and Span) / Permissible temperatures									
Thermal error for offset		≤ ± 0.5 % FSO / 10 K		in compensated range		-25 ... 85 °C			
Permissible temperatures		medium: -25 ... 125 °C		electronics / environment: -25 ... 85 °C		storage: -40 ... 85 °C			

<b>Electrical protection</b>	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
<b>Materials</b>	
Pressure port	stainless steel 1.4301
Housing	stainless steel 1.4301
Display housing	PA 6.6, Polycarbonate
Seals (media wetted)	FKM <span style="float: right;">others on request</span>
Diaphragm	ceramic Al <sub>2</sub> O <sub>3</sub> 96 %
Touchpad	polyester
Media wetted parts	pressure port, seals, diaphragm
<b>Miscellaneous</b>	
Display	4-digit, red LED display, digit size 7 mm, digit width 4.85 mm (angle 10 °); range of indication -1999 ... 9999; accuracy 0.3 % ±1 digit; digital damping 0.3 ... 30 sec (programmable); measured value update 0.0 ... 10 sec (programmable)
Weight	approx. 180 g
Installation position	any
Ingress protection	IP 65
CE-conformity	EMC Directive: 2004/108/EC <span style="float: right;">Pressure Equipment Directive: 97/23/EC (module A) <sup>2</sup></span>
<sup>2</sup> This directive is only valid for devices with maximum permissible overpressure > 200 bar	
<b>Wiring diagram</b>	
<b>Pin configuration</b>	
Electrical connection	M12x1 (5-pin), plastic
Supply +	1
Supply -	3
Signal +	2
Contact 1	4
Contact 2	5
Shield	via pressure port
<b>Dimensions (in mm)</b>	

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

