

DS 6

Electronic OEM Pressure Switch

Applications:

- ▶ mechanical engineering / hydraulics
- ▶ measuring, control and process technology

Characteristics:

- ▶ nominal pressure ranges from 0 ... 2 bar up to 0 ... 400 bar
- ▶ 1 or 2 contacts
- ▶ configurable via PC or programming device P6
- ▶ optional:
 - oil- and fat free version
 - oxygen application



Technical Data



Input pressure range									
Nominal pressure gauge	[bar]	2	5	10	20	50	100	200	400
Nominal pressure abs.	[bar]	2	5	10	20	50	100	200	400
Overpressure	[bar]	7	12	25	50	120	250	400	600
Supply									
Supply voltage V_s		12 ... 30 V _{DC}							
Current consumption		max. 14 mA (without contacts)							
Contacts									
Number		standard: 1				optional: 2			
Type		PNP							
Switching performance		max. 300 mA, short-circuit proof							
Accuracy of contacts		EN IEC 62828-2: $\leq \pm 1$ % span							
Repeatability		$\leq \pm 0.2$ % span							
Minimum hysteresis of contacts		$\leq \pm 0.5$ % span							
Status indication		SP 1: green				SP 2: yellow			
Switching function ¹		standard: n/o				optional: n/c			
Switching mode ¹		standard: hysteresis mode				optional: window mode			
Switch on point ¹		standard: factory setting 80 % span others: specify on order; adjustable range 5 ... 100 % span							
Switch off point ¹		standard: factory setting 75 % span others: specify on order; adjustable range 5 ... 100 % span							
Switch on / switch off delay ¹		standard: off others: specify on order, adjustable range from 10 msec up to 90 sec (step 10 msec)							
Switching frequency		200 Hz (without switching delay)							
Switching cycles		$> 100 \times 10^6$							
¹ Parameters can be programmed by customer either with the programming kit CIS 685 / CIS 686 or with the programming device P6 (available as accessories).									
Thermal effects (Offset and Span) / Permissible temperatures									
Thermal error		$\leq \pm 0.3$ % span / 10 K				in compensated range -25 ... 85 °C			
Permissible temperatures		medium / electronics / environment: -25 ... 85 °C				storage: -40 ... 85 °C			

Electrical protection				
Short-circuit protection	permanent			
Reverse polarity protection	no damage, but also no function			
Electromagnetic compatibility	emission and immunity according to EN 61326			
Mechanical stability				
Vibration	10 g RMS (20 ... 2000 Hz)			
Shock	100 g / 11 msec			
Materials				
Pressure port	stainless steel 1.4305			
Housing	stainless steel 1.4305, POM black			
Seals (media wetted)	$P_N < 100$ bar: FKM, EPDM $P_N \geq 100$ bar: NBR other on request			
Diaphragm	ceramic Al_2O_3 96 %			
Media wetted parts	pressure port, seals, diaphragm			
Miscellaneous				
Option oxygen application	for $P_N \leq 15$ bar: O-ring in 70 EPDM 281 (with BAM-approval); permissible maximum values are 15 bar / 60° C and 10 bar / 90° C for $P_N \leq 25$ bar: O-ring in FKM Vi 567 (with BAM-approval); permissible maximum values are 25 bar / 150° C			
Weight	approx. 90 g			
Installation position	any			
Ingress protection	IP 67			
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ²			
² This directive is only valid for devices with maximum permissible overpressure > 200 bar				
Wiring diagrams				
<p>1 contact</p>	<p>2 contacts</p>			
Pin configuration				
Electrical connection	M12x1 (4-pin)		M8x1 (4-pin), metal	
Supply +	1		1	
Supply -	3		3	
Contact 1	4		4	
Contact 2	2		2	
Shield	plug housing		plug housing	
Dimensions (in mm)				
G1/4" DIN 3852 with male plug M12x1		G1/4" DIN 3852 with male plug M8x1		

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

1 Parameters can be programmed by customer either with the programming kit CIS 680 / CIS 681 or with the programming device P6



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