

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	IEC 60770: $\leq \pm 1\%$ FSO								
Repeatability	$\leq \pm 0.2\%$ FSO								
Minimum hysteresis of contacts	$\leq \pm 0.5\%$ FSO								
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 % FSO others: specify on order; adjustable range 5 ... 100 % FSO								
Switch off point ¹	standard: factory setting 75 % FSO others: specify on order; adjustable range 5 ... 100 % FSO								
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	$\leq \pm 0.3\%$ FSO / 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 $P_N \geq 100$ bar: NBR others on request
Diaphragm	ceramic Al_2O_3 96 %
Media wetted parts	pressure port, seals, diaphragm
Miscellaneous	
Option oxygen application	for $P_N \leq 50$ bar: O-ring in V747-75 (with BAM-approval); permissible maximum values are 40 bar / 130° C and 50 bar / 100° C for $P_N > 50$ bar: O-ring in FKM 90 (approved by the scientific coal research institute in Ostrava – CZ) up to 215 bar / 95 °C
Weight	approx. 90 g
Installation position	any
Ingress protection	IP 67
CE-conformity	EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (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 (5-pin)
Supply +	1
Supply -	3
Contact 1	4
Contact 2	5
Shield	plug housing
Dimensions (in mm)	

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

