



# DS 4

## Electronic OEM Pressure Switch Pneumatics

### Applications:

- ▶ Pneumatics
- ▶ Vacuum technology

### Characteristics:

- ▶ nominal pressure ranges from 0 ... 1 bar up to 0 ... 10 bar also -1 ... 0 bar
- ▶ 1 or 2 contacts
- ▶ compact design
- ▶ configurable via PC or programming device P6



Input pressure range					
Nominal pressure gauge	[bar]	-1 ... 0	1	3.5	10
Overpressure	[bar]	2	2	7	13
Supply					
Supply voltage $V_S$	12 ... 30 V <sub>DC</sub>				
Current consumption	max. 14 mA (without contacts)				
Output signal					
Contact <sup>1</sup>					
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				
Status indication	SP 1: green		SP 2: yellow		
Switching function <sup>2</sup>	standard: n/o		optional: n/c		
Switching mode <sup>2</sup>	standard: hysteresis mode		optional: window mode		
Switch on point <sup>2</sup>	standard: factory setting 80 % FSO others: specify on order; adjustable range 0 ... 100 % FSO				
Switch off point <sup>2</sup>	standard: factory setting 75 % FSO others: specify on order; adjustable range 0 ... 100 % FSO				
Switch on / switch off delay <sup>2</sup>	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	$> 100 \times 10^6$				
Analogue output <sup>1</sup> (optionally)					
Analogue output	1 ... 5 V / 3-wire				
Accuracy	IEC 60770 <sup>3</sup> : $\leq \pm 2\%$ FSO				
Permissible load	$R_{min} = 10 \text{ k}\Omega$				
<sup>1</sup> with optional analogue output max. 1 contact possible					
<sup>2</sup> Parameters can be programmed by customer either with the programming kit CIS 680 / CIS 681 or with the programming device P6 (available as accessories).					
<sup>3</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)					

Thermal effects (Offset and Span) / Permissible temperatures			
Tolerance band	$\leq \pm 2\%$ FSO in compensated range 0 ... 50 °C		
TC, average	$\leq \pm 0.4\%$ FSO / 10 K in compensated range 0 ... 50 °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	aluminium		
Housing	PA 6.6 black		
Seal (media wetted)	NBR		
Sensor	silicon, RTV		
Media wetted parts	pressure port, seal, sensor		
Miscellaneous			
Media	compressed air, non-aggressive gases		
Weight	approx. 25 bis 35 g		
Installation position	any		
Ingress protection	IP 54		
CE-conformity	EMC Directive: 2004/108/EC		
Wiring diagrams			
<p>1 contact (without analogue output)</p>	<p>2 contacts (without analogue output)</p>	<p>1 contact (with analogue output)</p>	
Pin configuration			
Electrical connection	M8x1 (4-pin) 1 contact	M8x1 (4-pin) 2 contacts	M8x1 (4-pin) 1 contact, 1 analogue output
Supply +	1	1	1
Supply -	3	3	3
Signal +	-	-	2
Contact 1	4	4	4
Contact 2	-	2	-
Dimensions (in mm)			
		<p><b>Mechanical connections (view X)</b></p>	

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



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<b>Messgröße</b>											
	relativ	6	8	0							
<b>Eingang</b>											
	[bar]										
	1,0	1	0	0	1						
	3,5	3	5	0	1						
	10	1	0	0	2						
	-1 ... 0	X	1	0	2						
	Sondermessbereiche	9	9	9	9						auf Anfrage
<b>Anzahl Schaltausgänge</b>											
	1 Schaltausgang				1						
	2 Schaltausgänge <sup>1</sup>				2						
<b>Analogausgang</b>											
	ohne Analogausgang				0						
	1 ... 5 V / 3-Leiter <sup>1</sup>				C						
<b>Elektrischer Anschluss</b>											
	M8x1 (4-polig)				Q	0	0				
	andere				9	9	9				auf Anfrage
<b>Mechanischer Anschluss</b>											
	G1/8" Innengewinde				Q	0	0				
	M5 Innengewinde mit Nut für O-Ring <sup>2</sup>				R	0	0				
	andere				9	9	9				auf Anfrage
<b>Dichtung</b>											
	NBR						5				
	andere						9				auf Anfrage
<b>Einstellungscode</b>											
	Standard <sup>3</sup>					0	0	0			
	nach Kundenvorgabe <sup>3</sup>					9	9	9			
<b>Sonderausführungen</b>											
	Standard					0	0	0			
	andere					9	9	9			auf Anfrage

<sup>1</sup> mit optionalem Analogausgang max. 1 Schaltausgang möglich

<sup>2</sup> flanschbar

<sup>3</sup> Die Parameter können kundenseitig durch die Programmier-Kits CIS 680 / CIS 681 oder durch das Programmiergerät P6 eingestellt werden (als Zubehör erhältlich).

Die Angaben dieses Bestellzeichens enthalten die Spezifikation der Produkte, nicht die Zusicherung von Eigenschaften. Ausführliche Informationen zu den Bestelloptionen können dem Datenblatt entnommen werden. Technische Änderungen vorbehalten.