

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



Technical Data

Input pressure range					
Nominal pressure gauge	[bar]	-1 ... 0	1	3.5	10
Overpressure	[bar]	2	2	7	13
Supply					
Supply voltage	$V_s = 12 \dots 30 V_{DC}$				
Current consumption	max. 14 mA (without contacts)				
Output signal¹					
Contact¹					
Number	standard: 1		option: 2		
Type	PNP				
Switching performance	max. 300 mA, short-circuit proof				
Accuracy of contacts ²	IEC 60770: $\leq \pm 1\%$ span				
Repeatability	$\leq \pm 0.2\%$ span				
Status indication	SP 1: green		SP 2: yellow		
Switching function ³	standard: n/o		option: n/c		
Switching mode ³	standard: hysteresis mode		option: window mode		
Switch on point ³	standard: factory setting 80 % span others: specify on order; adjustable range 0 ... 100 % span				
Switch off point ³	standard: factory setting 75 % span others: specify on order; adjustable range 0 ... 100 % span				
Switch on / switch off delay ³	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 output¹ (optionally)					
Analogue output	1 ... 5 V / 3-wire				
Accuracy ²	$\leq \pm 2\%$ span				
Permissible load	$R_{min} = 10 k\Omega$				
¹ with optional analogue output max. 1 contact possible					
² accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability)					
³ Parameters can be programmed by customer either with the programming kit CIS 680 / CIS 681 or with the programming device P6 (available as accessories).					

Thermal effects (Offset and Span) / Permissible temperatures			
Tolerance band	$\leq \pm 2\%$ span	in compensated range 0 ... 50 °C	
TC, average	$\leq \pm 0.4\%$ span / 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. 50 g		
Installation position	any		
Operational life	100 million load cycles		
Ingress protection	IP 54		
CE-conformity	EMC Directive: 2014/30/EU		
Wiring diagrams			
Pin configuration			
Electrical connection	M8x1 / metal (4-pin) 1 contact	M8x1 / metal (4-pin) 2 contacts	M8x1 / metal (4-pin) 1 contact, 1 analogue output
	Supply + 1 Supply - 3 Signal + - Contact 1 4 Contact 2 - Shield housing	1 3 - 4 2 housing	1 3 2 4 - housing
Dimensions (in mm)			

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

Ordering code DS 4

23.08.2024

DS 4

□□□ - □□□ - □ - □ - □□□ - □□□ - □ - □□□ - □□□

Measured pressure										
Gauge overpressure DS 4	6	8	0							
Input [bar]										
0 ... 1				1	0	0	1			
0 ... 3,5				3	5	0	1			
0 ... 10				1	0	0	2			
-1 ... 0				X	1	0	2			
Customer				9	9	9				
Customer - underpressure				X	X	X	X			
Number of contacts										
Without switching output									0	
1 switching output									1	
2 switching output ¹									2	
Analogue output										
Without analogue output									0	
1 ... 5 V / 3-wire ¹									C	
Customer									9	
Electrical connection										
Connector M 8 x 1 (4-pin) + plug with 2 m cable									Q	A 2
Connector M 8 x 1 (4-pin) plug excluded									Q	0 0
Customer									9	9 9
Mechanical connection										
G 1/8" internal thread									Q	0 0
M 5 x 1 internal thread ²									R	0 0
Customer									9	9 9
Seals										
NBR										5
Customer										9
Setting code										
BD SENSORS setting - standard ³										0 0 0
Customer ³										9 9 9
Special version										
Standard										0 0 0
Customer										9 9 9
Software for the pressure switch DS 4										
CIS-680-USB-000+SW for DS 4, VS 4 incl. Cable										CIS_G

0,-...without additional charge

On request...in accordance with the producer

Attention: a discount for DS 4 - according to agreement. No standard customers discount.

Surcharges for calibration are not subject to any discounts. Subject to change.

This document contains the specification for ordering the product;

detailed technical parameters of the product and its possible variants are given in the data sheet.

BD SENSORS reserves the right to change sensor specifications without further notice.

1 with optional analogue output max. 1 contact possible

2 suitable for flange installation

3 Parameters can be programmed by customer either with the programming kit CIS 680 / CIS 681 or with the programming device P6 (available as acce

