



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 0 ... -1 bar
- ▶ 1 or 2 contacts
- ▶ compact design
- ▶ configurable via PC or programming device P6



Technical Data



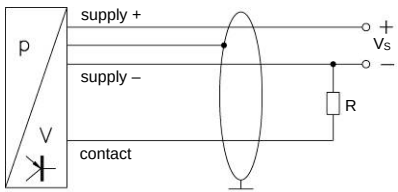
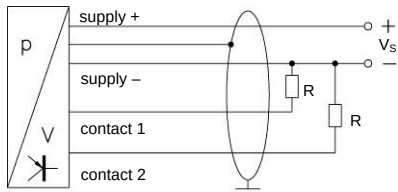
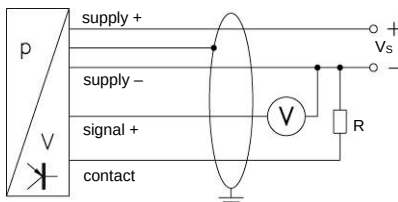
Input pressure range				
Nominal pressure gauge	[bar]	0 ... -1	1	3.5
Overpressure	[bar]	2	2	7
				10
				13

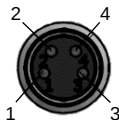
Supply	
Supply voltage	$V_S = 12 \dots 30 V_{DC}$
Current consumption	max. 14 mA (without contacts)
Output signal / Contact ¹	
Number	standard: 1 option: 2
Type	PNP
Switching performance	max. 300 mA, short-circuit proof
Accuracy of contacts ²	$\leq \pm 1 \% FSO$
Repeatability	$\leq \pm 0.2 \% FSO$
Status 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 % FSO others: specify on order; adjustable range 0 ... 100 % FSO
Switch off point ³	standard: factory setting 75 % FSO others: specify on order; adjustable range 0 ... 100 % FSO
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	$> 100 \times 10^6$

¹ with optional analogue output max. 1 contact possible

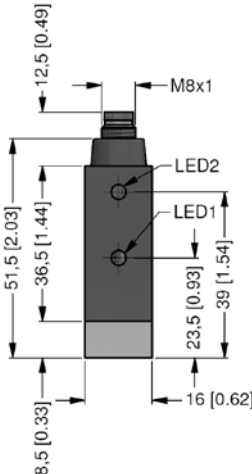
² accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)

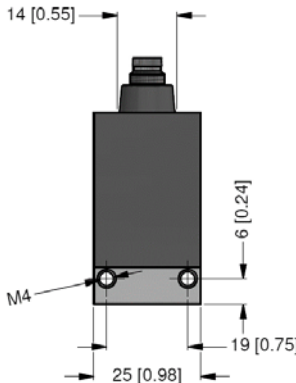
³ Parameters can be programmed by customer either with the programming kit CIS680/CIS681 or with the programming device P6 (available as accessories).

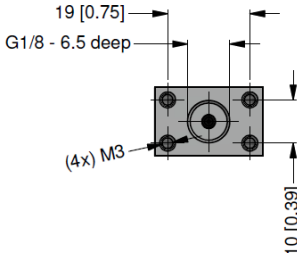
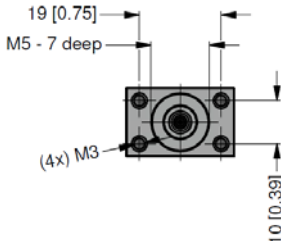
Output signal / Analogue output ¹ (optionally)	
Analogue output	1 ... 5 V / 3-wire
Accuracy ²	$\leq \pm 2\%$ FSO
Permissible load	$R_{\min} = 10\text{ k}\Omega$
¹ with optional analogue output max. 1 contact possible	
² accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (offset and span)	
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	-25 ... 85 °C
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	20 g RMS / 10 ... 2000 Hz according to DIN EN 60068-2-6
Shock	500 g / 1 msec half sine according to DIN EN 60068-2-27
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	
1 contact, without analogue output 	
2 contacts, without analogue output 	
1 contact, with analogue output 	

Pin configuration					
Electrical connection		M8x1 / metal (4-pin)			
		1 contact	2 contacts	1 contact, 1 analogue output	
Supply +		1	1	1	
Supply -		3	3	3	
Signal +		-	-	2	
Contact 1		4	4	4	
Contact 2		-	2	-	
Shield		housing	housing	housing	

Dimensions (mm / in)





Mechanical connections (dimensions mm / in)	
 G1/8" internal thread	 M5 internal thread

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Ordering code DS 4

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[illegible]

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 accessories).