

CCP-S-4



- electronic pressure switch
- nominal pressure: from 0...1 bar up to 0...10 bar
- 1 or 2 independent PNP contacts, freely configurable
- output signal: 1...5 V, 3-wire
- silicon sensor
- accuracy 1 % span
- compact design
- configurable via PC or programming device P6



The electronic pressure switch **CCP-S-4** has been designed for pneumatics and vacuum applications. Due to the materials aluminium for the pressure port and silicon for the pressure sensor, the CCP-S-4 is suited for use with non-aggressive gases or compressed air. The housing for the switching electronics consists of PA 6.6. The new microcontroller switching electronics offer - besides the standard functions - many additional features for an optimal adaptation to the measuring requirements. The one or two freely programmable contacts whose status is indicated by differently coloured LEDs can be quickly and comfortably configured either by means of the optionally available configuration kit or the programming device P6.

PREFERRED AREAS OF USE ARE



Plant and Machine Engineering



HVAC



Gases

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 ... 30 V _{DC}				
Current consumption	max. 14 mA (without contacts)				
Output signal¹					
Contact	1				
Number	standard:	1	option:	2	
Type	PNP				
Switching performance	max. 300 mA, short-circuit proof				
Accuracy of contacts ²	IEC 60770: ≤ ± 1 % span				
Repeatability	≤ ± 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 x 10 ⁶				
Analogue output¹ (optionally)					
Analogue output	1 ... 5 V / 3-wire				
Accuracy ²	IEC 60770: ≤ ± 2 % span				
Permissible load	R _{min} = 10 kΩ				
¹ with optional analogue output max. 1 contact possible					
² accuracy according to EN IEC 60770—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).					



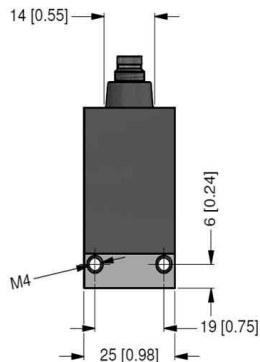
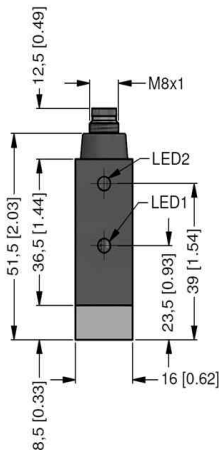
Pressure switches

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		

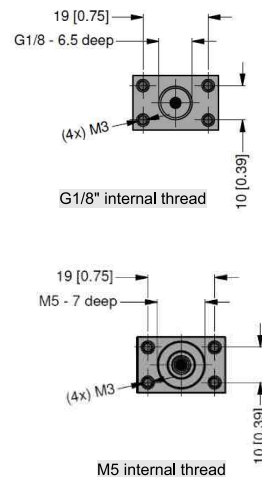
ELECTRICAL CONNECTION

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 / metal (4-pin) 1 contact	M8x1 / metal (4-pin) 2 contacts	M8x1 / metal (4-pin) 1 contact, 1 analogue output
<p>Supply + Supply - Signal + Contact 1 Contact 2 Shield</p>	<p>1 3 - 4 -</p>	<p>1 3 - 4 2</p>	<p>1 3 2 4 -</p>
	housing	housing	housing

MECHANICAL CONNECTION



Mechanical connections (view X)



Pressure switches

ORDER CODE

CCP-S-4- - - - - - -

Measured pressure														
Gauge overpressure	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	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														
Standard														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

- 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).

Manufacturer reserves the right to change sensor specifications without further notice.

