CCP-K-230



- electronic pressure switch
- nominal pressure: from 0...2 bar up to 0...400 bar
- 1 or 2 independent PNP contacts, freely configurable
- ceramic sensor
- accuracy 0.5 % span
- indication of measured values on a 4-digit LED display
- rotatable and configurable display module
- optional: analogue output signal 3-wire 4...20 mA

The electronic pressure switch **CCP-K-230** is the successful combination of intelligent pressure switch and digital display and has been designed for universal usage in industry applications. The CCP-K-230 is available with flush pressure ports for viscous, pasty and highly contaminated media.
As standard the CCP-K-230 offers a PNP contact and a rotatable display module with 4-digit LED display. Additional features like e.g. an analogue output complete the profile.

PREFERRED AREAS OF USE ARE

Plant and Machine Engineering

Pneumatics
Pumps and hydraulic machines

TECHNICAL DATA

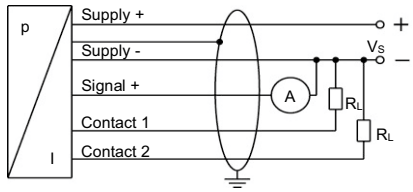
Input pressure range									
Nominal pressure gauge	[bar]	2	5	10	20	50	100	250	400
Overpressure	[bar]	4	10	20	40	100	200	400	600
Burst pressure	[bar]	7	15	35	70	150	250	450	650
Supply									
Supply voltage V_S		24 V_{DC} ±10 %							
Current consumption		< 40 mA (without analogue output and without contacts)							
Output signal									
Number, type		standard: 1 PNP contact optional: max. 2 independent PNP contacts; 1 analogue output							
Contact (Standard)									
Switching current		standard: contact rating max. 125 mA, short-circuit resistant							
Accuracy of contacts [1]		≤ ± 1.5 % span BFSL							
Repeatability [1]		≤ ± 0.5 % span BFSL							
Switching frequency		max. 100 Hz							
Switching cycles		> 100 x 10^6							
Functions		Hysteresis- / Compare mode n/o / n/c							
Delay time		0 ... 99.99 sec							
Analogue output (optionally)									
Signal output		4 ... 20 mA (3-wire)							
Linearity, hysteresis, repeatability		≤ ± 0.5 % span BFSL							
Calibration accuracy		≤ ± 1 % span BFSL							
Permissible load		R_{max} = 500 W							
Response time		< 10 msec							
[1] depending on nominal pressure range									
Thermal effects (Offset and Span) / Permissible temperatures									
Thermal error for offset		≤ ± 0.5 % span / 10 K		in compensated range		-25 ... 85 °C			
Permissible temperatures		medium: -25 ... 125 °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	10 g RMS (25 … 2000 Hz)	according to DIN EN 60068-2-6
Shock	500 g / 1 msec	according to DIN EN 60068-2-27
Materials		
Pressure port / housing	stainless steel 1.4301	
Display housing	PA 6.6, Polycarbonate	
Seals (media wetted)	FKM	others on request
Diaphragm	ceramic Al_2O_3 96 %	
Touchpad	polyester	
Media wetted parts	pressure port, seals, diaphragm	
Miscellaneous		
Display	4-digit, red LED display, digit size 7 mm, digit width 4.85 mm (angle 10 °); range of indication -1999 ... +9999; accuracy 0.3 % ±1 digit; digital damping 0.3 … 30 sec (programmable); measured value update 0.0 … 10 sec (programmable)	
Weight	approx. 180 g	
Installation position	any	
Ingress protection	IP 67	
Operational life	100 million load cycles	
CE-conformity	EMC Directive: 2014/30/EU	Pressure Equipment Directive: 2014/68/EU (module A) [2]

[2] *This directive is only valid for devices with maximum permissible overpressure > 200 bar*

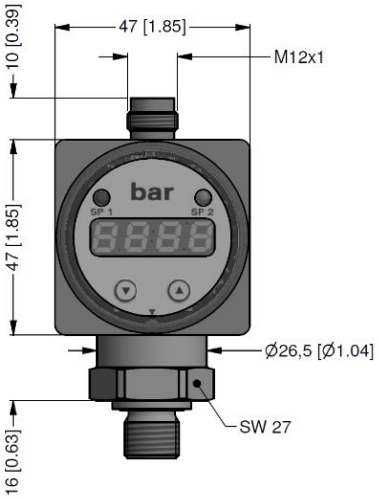
ELECTRICAL CONNECTION

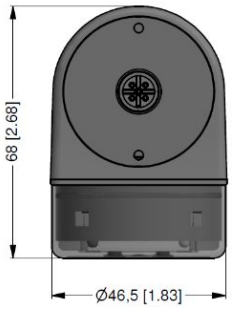
Wiring diagram



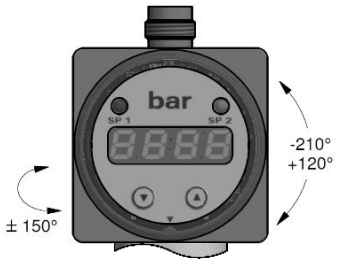
Pin configuration	
Electrical connection	M12x1 (5-pin), plastic
Supply +	1
Supply –	3
Signal +	2
Contact 1	4
Contact 2	5
Shield	via pressure port

DIMENSION DRAWINGS



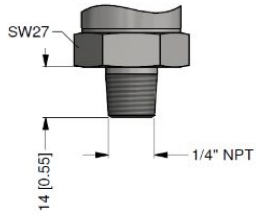


Top view

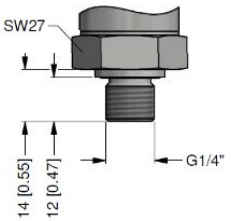


Rotatability of display module

MECHANICAL CONNECTION



1/4" NPT



G1/4" DIN 3852

ORDER CODE

CCP-K-230- ☐☐☐ - ☐☐☐☐ - ☐☐ - ☐☐ - ☐☐ - ☐☐☐ - ☐☐☐ - ☐☐ - ☐☐☐

Measured pressure																							
Gauge	7	8	R																				
Input [bar]																							
0 … 2				2	0	0	1																
0 … 5				5	0	0	1																
0 … 10				1	0	0	2																
0 … 20				2	0	0	2																
0 … 50				5	0	0	2																
0 … 100				1	0	0	3																
0 … 250				2	5	0	3																
0 … 400				4	0	0	3																
Customer				9	9	9	9																
Analogue output																							
without analogue output								0															
4 … 20 mA / 3-wire								7															
Customer								9															
Switching output																							
1 switching contact									1														
2 switching contacts									2														
Accuracy																							
2 %										G													
Customer										9													
Electrical connection																							
Male plug M12x1 (5-pin) / plastic version											N	0	1										
Male plug M12x1 (5-pin) / metal version											N	1	1										
Customer											9	9	9										
Mechanical connection																							
G 1/4" DIN 3852														3	0	0							
1/4" NPT														N	4	0							
Customer														9	9	9							
Seals																							
FKM																	1						
Customer																	9						
Special version																							
Standard																		0	0	0			
Customer																		9	9	9			

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