CCP-P-217



- electronic pressure switch
- nominal pressure: from 0...6 bar up to 0...600 bar
- 1 or 2 independent PNP contacts, freely configurable
- stainless steel sensor, welded
- 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-P-217** is the successful combination of intelligent pressure switch and digital display and due to welded sensor has been designed for the usage with fuels and oils, water and gases (oxygen).
As standard the CCP-P-217 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
- Medical technology
- Energy industry
- Oxygen applications

TECHNICAL DATA

Input pressure range												
Nominal pressure gauge	[bar]	6	10	16	25	40	60	100	160	250	400	600
Overpressure (static)	[bar]	12	20	32	50	80	120	200	320	500	800	1 200
Burst pressure ≥	[bar]	30	50	80	125	200	300	500	800	1 400	2 000	3 000
Vacuum resistance		unlimited										
Contact												
Number / type		standard: 1 PNP contact optionally: max. 2 independent PNP contact; 1 analogue output										
Switching current		standard: contact rating max. 125 mA, short-circuit resistant										
Accuracy of switching points [1]		≤ ± 1.5 % span										
Repeatability		≤ ± 0.5 % span										
Switching frequency		max. 10 Hz										
Switching cycles		> 100 x 10^6										
Delay time		0 ... 100 sec										
Analogue output (optionally) / Supply												
3-wire current signal		4 ... 20 mA / V_S = 24 V_{DC} ± 10 %										
Accuracy [1]		≤ ± 0.5 % span										
Permissible load		3-wire: R_{max} = 500 W										
Influence effects		supply: 0.05 % span / 10 V load: 0.05 % span / kW										
Measuring rate		10 Hz										
[1] accuracy according to EN IEC 62828-2– limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span) / Permissible temperatures												
Thermal error		≤ ± 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 (25 … 2000 Hz)					according to DIN EN 60068-2-6					
Shock		500 g / 1 msec					according to DIN EN 60068-2-27					

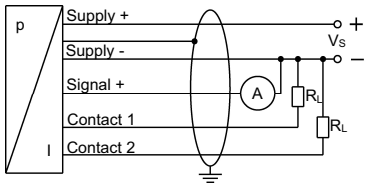
Materials	
Pressure port / housing	stainless steel 1.4571 (316 Ti) / stainless steel 1.4301 (304)
Display housing	PA 6.6, polycarbonate
Seal sensor	none (welded)
Diaphragm	stainless steel 1.4542 (17-4PH)
Media wetted parts	pressure port, seal pressure port, diaphragm
Miscellaneous	
Weight	approx. 160 g
Display	4-digit, red LED display, digit height 7 mm, digit width 4.85 mm (angle 10°); range of indication -1999 ... +9999; accuracy 0.1% ± 1 digit; digital damping 0.3 … 30 sec (programmable); measured value update 0.0 … 10 sec (programmable)
Long term stability	≤ ± 0.3 % span / year at reference conditions
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.

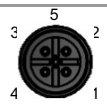
ELECTRICAL CONNECTION

Wiring diagrams

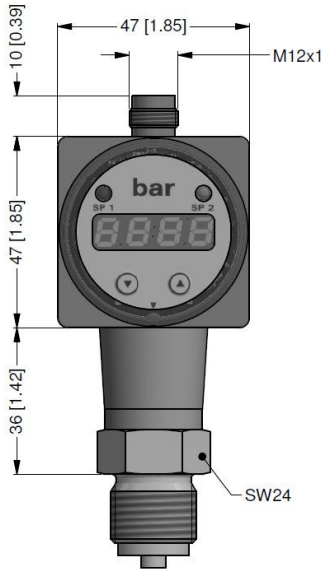
3-wire-system (current)

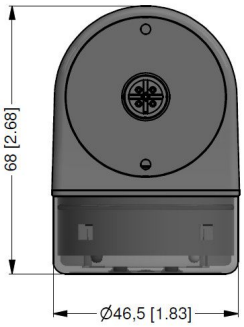


Pin configuration

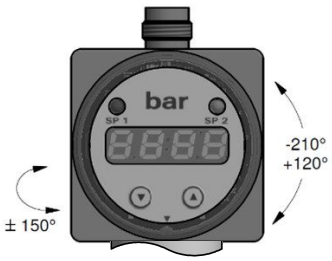
Electrical connections	M12x1 (5-pin) plastic	
supply +	1	
supply –	3	
signal + (only for 3-wire)	2	
contact 1	4	
contact 2	5	
shield	via pressure port	

DIMENSION DRAWINGS



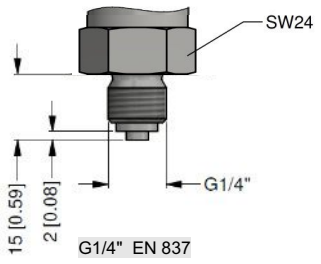


top view

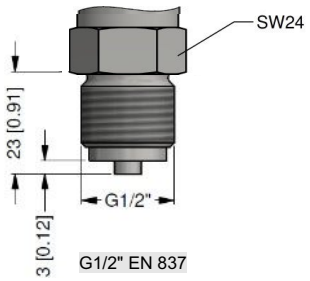


Rotatability of display module

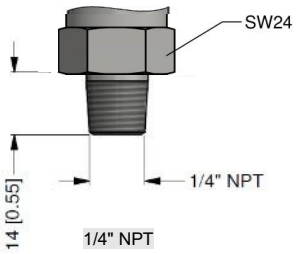
MECHANICAL CONNECTION



G1/4" EN 837



G1/2" EN 837



1/4" NPT

ORDER CODE

CCP-P-217- [ ][ ][ ] - [ ][ ][ ][ ] - [ ] - [ ] - [ ] - [ ][ ][ ] - [ ][ ][ ] - [ ] - [ ] - [ ][ ][ ]

Measured pressure																									
Gauge	7	8	P																						
Input [bar]																									
0 … 6				6	0	0	1																		
0 … 10				1	0	0	2																		
0 … 16				1	6	0	2																		
0 … 25				2	5	0	2																		
0 … 40				4	0	0	2																		
0 … 60				6	0	0	2																		
0 … 100				1	0	0	3																		
0 … 160				1	6	0	3																		
0 … 250				2	5	0	3																		
0 … 400				4	0	0	3																		
0 … 600				6	0	0	3																		
Customer				9	9	9	9																		
Customer - underpressure				X	X	X	X																		
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																									
0,5%										5															
Customer										9															
Electrical connection																									
Connector M 12 x 1 (5-pin)											N	0	1												
Customer											9	9	9												
Mechanical connection																									
G 1/2" EN 837														2	0	0									
G 1/4" DIN 3852														3	0	0									
G 1/4" EN 837														4	0	0									
1/4" NPT														N	4	0									
7/16 - 20 UNF														U	0	0									
Customer														9	9	9									
Seals																									
Without - welded																	2								
Customer																	9								
Special version																									
Standard																		0	0	0					
Oxygen application																		0	0	7					
Customer																		9	9	9					

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