

CCA-P-343



- industrial pressure transmitter without media isolation
- nominal pressure: from 0...10 mbar up to 0...1000 mbar
- output signals: 2-wire: 4...20 mA; 3-wire: 0...20 mA / 0...10 V
- accuracy 0.5 % span
- excellent linearity
- small thermal effect
- excellent long term stability
- optionally: different electrical and mechanical connections, customer specific versions



The pressure transmitter **CCA-P-343** has been especially designed for the measurement of very low gauge pressure and for vacuum applications. Permissible media are gases, pressurized air and non-aggressive low viscosity oils. The CCA-P-343 features excellent thermal behaviour and outstanding long term stability. A variety of standard output signals as well as mechanical and electrical connections make the CCA-P-343 covering a wide field of applications.

PREFERRED AREAS OF USE ARE



Plant and machine engineering



Heating and Air Conditioning

TECHNICAL DATA

Input pressure range													
Nominal pressure gauge	[mbar]	-1000 ... 0	10	16	25	40	60	100	160	250	400	600	1000
Overpressure	[bar]	3	0.2	0.2	0.2	0.5	0.5	1	2	3	3	3	3
Permissible vacuum	[bar]	-1		-0.2		-0.5				-1			
Burst pressure	[bar]	5	0.3	0.3	0.3	0.75	0.75	1.5	3	5	5	5	5

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$
Options 3-wire	3-wire: 0 ... 20 mA / $V_S = 14 \dots 30 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$

Performance	
Accuracy ¹	$\leq \pm 0.5 \%$ span
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$ current 3-wire: $R_{max} = 500 \Omega$ voltage 3-wire: $R_{min} = 10 k\Omega$
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / $k\Omega$
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec
Long term stability	$\leq \pm 0.3 \%$ span / year at reference conditions, for $P_N < 100$ mbar $\leq \pm 0.1 \%$ span / year at reference conditions, for $P_N \geq 100$ mbar

¹ accuracy according to EN IEC 62828-2— limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span)					
Nominal pressure P_N	[mbar]	-1000 ... 0	≤ 100	≤ 400	> 400
Tolerance band	[% span]	$\leq \pm 0.75$	$\leq \pm 1.5$	$\leq \pm 1$	$\leq \pm 0.75$
in compensated range	[°C]	-20 ... 85	0 ... 50	0 ... 70	-20 ... 85

Permissible temperatures	
Permissible temperatures	medium: -40 ... 125°C electronics / environment: -40 ... 85°C storage: -40 ... 100°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



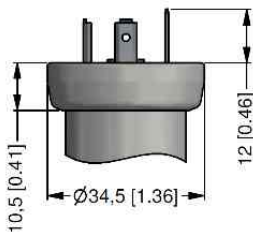
Pressure transmitters

Materials	
Pressure port	stainless steel 1.4404 (316L)
Housing	stainless steel 1.4404 (316L)
Option field housing	stainless steel 1.4301 (304); cable gland M16x 1.5, brass, nickel plated (clamping range 2...8 mm)
Seals (media wetted)	FKM
Sensor	stainless steel 1.4404 (316L), silicon, epoxy or RTV, mineral glass
Media wetted parts	pressure port, seals, sensor
Miscellaneous	
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA
Weight	approx. 140 g
Operational life	100 million load cycles
Installation position	any
CE-conformity	EMC Directive: 2014/30/EU

ELECTRICAL CONNECTION

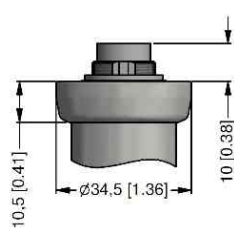
Wiring diagrams					
2-wire-system (current)		3-wire-system (current / voltage)			
Pin configuration					
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / metal (4-pin)	field housing	cable colours (IEC 60757)
Supply + Supply - Signal + (only for 3-wire)	1 2 3	3 4 1	1 2 3	IN + IN - OUT+	wh (white) bn (brown) gn (green)
Shield	ground pin	5	4		gn/ye (green / yellow)

standard

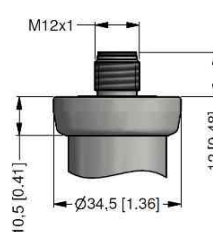


ISO 4400 (IP 65)

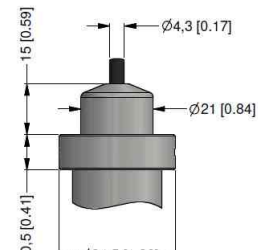
options



Binder Series 723 5-pin (IP 67)



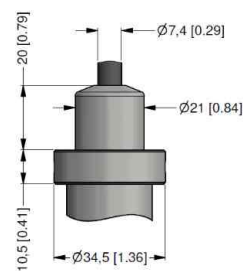
M12x1 4-pin (IP 67)



cable gland PG7/cable length specify (IP 67)²



field housing (IP 67)



cable outlet, cable with ventilation tube (IP 68)³

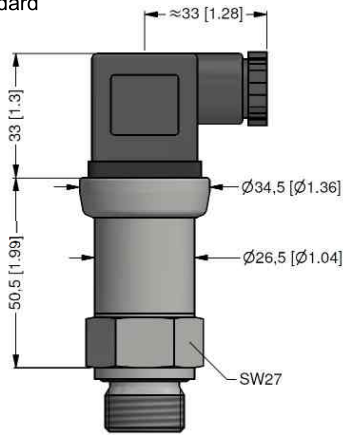
⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

² standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70°C)

³ different cable types and lengths available, permissible temperature depends on kind of cable

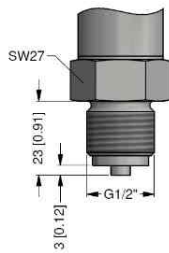
DIMENSION DRAWINGS

standard

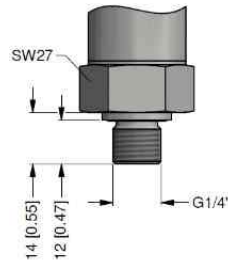


G1/2" DIN 3852 with ISO 4400

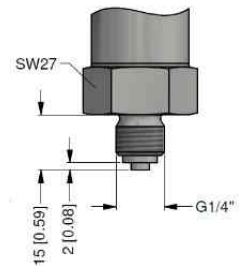
options



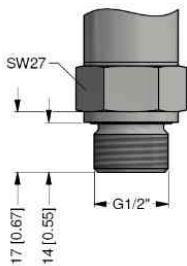
G1/2" EN 837



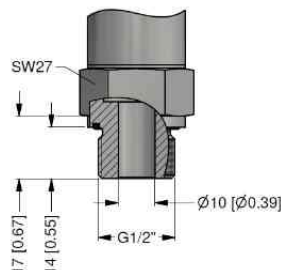
G1/4" DIN 3852



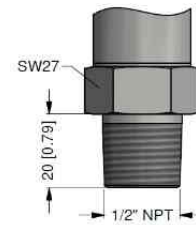
G1/4" EN 837



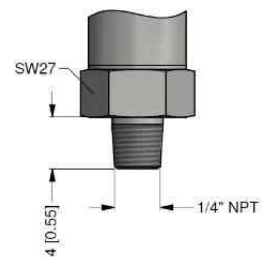
G1/2" DIN 3852



G1/2" open port



1/2" NPT



1/4" NPT

⇒ metric threads and others on request

ORDER CODE

CCA-P-343- [] - [] - [] - [] - [] - [] - [] - [] - []

Pressure																				
Gauge																				
Input [mbar]																				
0 ... 6																				
0 ... 10																				
0 ... 16																				
0 ... 20																				
0 ... 40																				
0 ... 60																				
0 ... 100																				
0 ... 160																				
0 ... 250																				
0 ... 400																				
0 ... 600																				
0 ... 1000																				
-1000 ... 0																				
Customer																				
Customer underpressure																				
Output																				
4 ... 20 mA / 2-wire																				
0 ... 20 mA / 3-wire																				
0 ... 10 V / 3-wire																				
0 ... 5 V / 3-wire																				
4 ... 20 mA / 3-wire																				
Customer																				
Accuracy																				
1 % (P _N ≤ 10 mbar)																				
0,35 % (standard for P _N > 100 mbar)																				
0,5 % (P _N > 10 mbar)																				
1 % including Calibration Certificate (P _N ≤ 10 mbar)																				
0,5 % including Calibration Certificate (P _N ≥ 10 mbar)																				
Table of measured values for accuracy 0,5 %																				
Customer																				



Pressure transmitters

CCA-P-343-□□□ - □□□□ - □ - □ - □□□ - □□□ - □ - □□□

Electrical connection										
Connector DIN 43650 (ISO 4400) (IP 65)	1	0	0							
Connector Binder 723 5-pin (IP 67)	2	0	0							
Cable gland PG7 / cable length specify (IP 67)	4	0	0							
+ PVC cable / 1 m										
Connector Buccaneer (IP 68)	5	0	0							
Connector DIN 43650 (ISO 4400) - potting compound inside (IP 67)	E	0	0							
Cable outlet, cable with ventilation tube (IP 68) ¹	T	R	0							
+ PVC cable / 1 m										
Field housing stainless steel, cable gland M 16 x 1,5 (IP 67)	8	0	0							
Connector M12 x 1, 4-pin (IP 67)	M	0	0							
Connector M12 x 1, 4-pin (IP 67) - metal	M	1	0							
Customer	9	9	9							
Mechanical connection										
G 1/2" DIN 3852				1	0	0				
G 1/2" EN 837				2	0	0				
G 1/4" DIN 3852				3	0	0				
G 1/4" EN 837				4	0	0				
M 20 x 1,5 DIN 3852				5	0	0				
M 12 x 1 DIN 3852				6	0	0				
M 10 x 1 DIN 3852				7	0	0				
M 20 x 1,5 EN 837				8	0	0				
M 12 x 1,5 DIN 3852				C	0	0				
1/2" NPT				N	0	0				
1/4" NPT				N	4	0				
Customer ²				9	9	9				
Seals										
Viton (FKM) (standard)							1			
EPDM							3			
NBR							5			
Customer							9			
Special version										
Standard								0	0	0
Adjustable (using trimmers)								0	4	1
Customer								9	9	9

1 - code TR0 = PVC cable, cable with ventilation tube available in different types and lengths; cable not included in the price
 2 - metric threads and others on request

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

