

CCA-P-334i



- precision industrial pressure transmitter for high pressure
- nominal pressure: from 0...600 bar up to 0...2200 bar
- output signals: 2-wire: 4...20 mA
- thinfilm sensor welded with the pressure port
- accuracy 0.1 % span
- turn-down 10:1
- robust and long-term stable
- optional: communication interface for adjusting offset, span and damping, pressure port M20 x 1.5 or 9/16 UNF, various kinds of electrical connections



The precision pressure transmitter **CCA-P-334i** is a consistent further development of the approved industrial pressure transmitter CCA-P-334. Basic element is a thinfilm sensor which is welded with the pressure port. The integrated digital electronics compensates actively sensor specific deviations like non-linearity and thermal error. It is therefore possible to offer a high pressure transmitter with excellent metrological qualities.

PREFERRED AREAS OF USE ARE



Plant and machine engineering
Test benches



Commercial vehicles and
mobile hydraulics

TECHNICAL DATA

Input pressure range						
Nominal pressure gauge	[bar]	600 ¹	1000	1600	2000	2200
Overpressure	[bar]	800	1400	2200	2800	2800

¹ only available with pressure port G1/2" EN 837

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V _S = 12 ... 36 V _{DC}
Options	2-wire: 4 ... 20 mA with communication interface ²

² only possible with el. connection Binder series 723 (7-pin)

Performance	
Accuracy performance after turn-down - TD ≤ 5:1 - TD > 5:1	IEC 60770 ³ : ≤ ± 0.1 % span no change of accuracy for calculation use the following formula: ≤ ± (0.1 + 0.015 x turn down) % span with turn-down = nominal pressure range / adjusted range e.g. with a turn-down of 10:1 following accuracy is calculated: ≤ ± (0.1 + 0.015 x 10) % span i.e. accuracy is ≤ ± 0.25 % span
Permissible load	current 2-wire: R _{max} = [(V _S - V _{S min}) / 0.02 A] Ω
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kΩ
Long term stability	≤ ± (0.1 x turn-down) % span / year at reference conditions
Response time	approx. 10 msec
Adjustability (option) ⁴	configuration of following parameters possible (interface / software necessary): - electronic damping: 0 ... 100 sec - offset: 0 ... 90 % span - turn down of span: max. 10:1

³ accuracy according to EN IEC 62828-2— limit point adjustment (non-linearity, hysteresis, repeatability)

⁴ adjustable version is only possible in combination with Binder Series 723, 7 -pin; software, interface, and cable have to be ordered separately (software appropriate for Windows® 95, 98, 2000, NT Version 4.0 or higher, and XP)

Thermal effects (Offset and Span) / Permissible temperatures		
TC, average	< 0.25 % span / 10 K	in compensated range - 20 ... 85 °C
Permissible temperatures	medium: - 40 ... 140 °C	electronics / environment: - 25 ... 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 (20 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	100 g / 11 msec. according to DIN EN 60068-2-27

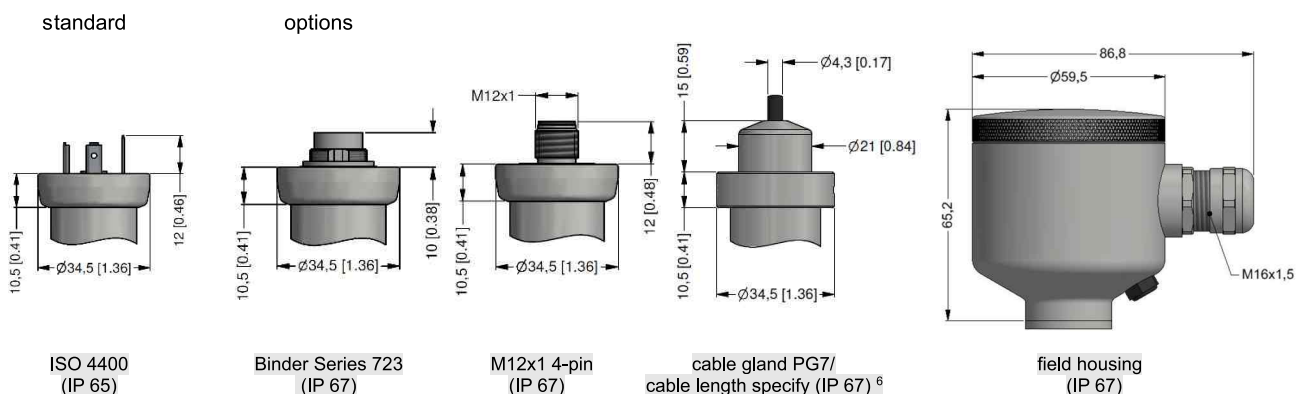


Materials		
Pressure port	stainless steel 1.4542 (17-4 PH)	
Housing	stainless steel 1.4404 (316L)	
Option field housing	stainless steel 1.4301 (304); cable gland M16x1.5, brass, nickel plated (clamping range 2 ... 8 mm)	
Seals	none (welded)	
Diaphragm	stainless steel 1.4542 (17-4 PH)	
Media wetted parts	pressure port, diaphragm	
Miscellaneous		
Current consumption	signal output current: max. 25 mA	
Weight	approx. 300 g	
Installation position	any	
Operational life	$p_N = 600$ bar: 100 million load cycles	$p_N > 600$ bar: 10 million load cycles
CE-conformity	EMC Directive: 2014/30/EU	Pressure Equipment Directive: 2014/68/EU (module A)

ELECTRICAL CONNECTION

Wiring diagrams							
2-wire-system (current)							
Pin configuration							
Electrical connections		ISO 4400	Binder 723 (5-pin)	Binder 723/423 (7-pin)	M12x1/ metal (4-pin)	field housing	cable colours (IEC 60757)
	Supply +	1	3	3	1	$V_S +$	WH (white)
	Supply -	2	4	1	2	$V_S -$	BN (brown)
	Shield	ground pin \oplus	5	2	4	GND \oplus	GNYE (green-yellow)
Communication interface ⁵	RxD	-	-	4	-	-	-
	TxD	-	-	5	-	-	-
	GND	-	-	7	-	-	-

⁵ may not be connected directly with the PC (the suitable adapter is available as accessory)



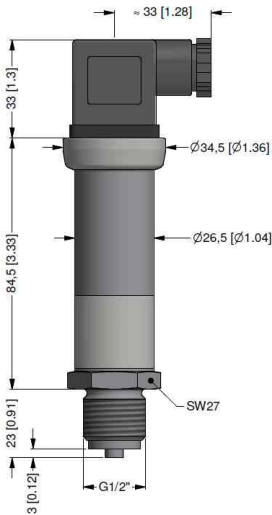
⇒ universal field housing in stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

⁶ standard: 2 m PVC cable (without ventilation tube, permissible temperature: -5 ... 70 °C)



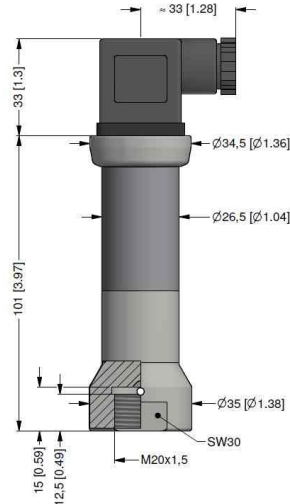
DIMENSION DRAWINGS

standard ⁷

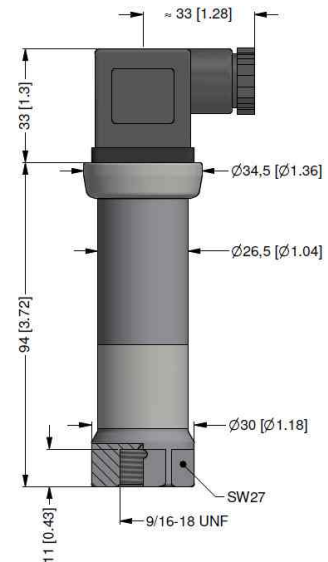


G1/2" EN 837 ⁸

options ⁷



M20x1.5 internal thread



9/16-18 UNF internal thread

⁷ adjustable version is only possible in combination with Binder Series 723, 7 pin

⁸ according to EN 837, the pressure port and the complement at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of $R_P > 260 \text{ N/mm}^2$ in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

ORDER CODE

CCA-P-334i- [] - [] - [] - [] - [] - [] - [] - []

Pressure																						
Gauge		1	4	0																		
Input [bar]																						
0 ... 600 ¹					6	0	0	3														
0 ... 1000					1	0	0	4														
0 ... 1600					1	6	0	4														
0 ... 2000					2	0	0	4														
0 ... 2200					2	2	0	4														
Customer					9	9	9	9														
Output																						
4 ... 20 mA / 2-wire									1													
Customer									9													
Accuracy																						
0,1 %									1													
Customer									9													
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 DIN 43650 (ISO 4400) - potting compound inside (IP 67)									E	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" EN 837 ($P_N \leq 1000 \text{ bar}$) ²												2	0	0								
M 20 x 1,5 internal thread												D	2	8								
9/16 UNF internal thread												V	0	0								
Customer												9	9	9								
Seals																						
Without seals - welded																		2				
Customer																		9				
Special version																						
Standard																			1	1	1	
RS-232 interface ³																				1	2	1
Customer																				9	9	9



Pressure transmitters

1 - only available with pressure port G1/2" EN 837

2 - according to EN 837, the pressure port and the complement, at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of RP > 260 N/mm² in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

3 - RS-232 interface only possible with el. connection Binder serie 723/423 (7pin)

Software, Interface and cable for DMP 334i with option RS-232 have to be order separately

(Ordering code: CIS Set 510; Software appropriate for Windows® 95, 98, 2000, NT Version 4.0 or newer and XP)

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

The manufacturer provides the EU declaration of conformity.

Calibration - All production undergoes output control, which is performed by comparison with standards. The traceability of standards and working gauges is ensured in accordance with Act No. 505/1990, as amended, on metrology.

The manufacturer offers the possibility to supply sensors calibrated in the calibration laboratory, accredited according to ČSN EN ISO / IEC 17025: 2018.

