



CCA-K-331P

- industrial pressure transmitter for viscous and pasty media
- nominal pressure: from 0...60 bar up to 0...400 bar
- output signals: 2-wire: 4...20 mA; 3-wire: 0...20 mA / 0...10 V
- pressure ports with flush welded stainless steel diaphragm
- accuracy 0.5 % span
- optionally: food compatible filling fluid with FDA approval, cooling element for media temperatures up to 300°C
- certified for contact with drinking water by the Polish National Institute of Public Health (PZH) - EPDM version

The pressure transmitter **CCA-K-331P** is suitable for measuring the pressure of viscous and pasty media, where a totally flush pressure port is required. As on all industrial pressure transmitters made by Simex, you may choose between various electrical and mechanical connections also on CCA-K-331P.

PREFERRED AREAS OF USE ARE



Plant and Machine Engineering



Food Industry



Viscous and Pasty Media

TECHNICAL DATA

Input pressure range						
Nominal pressure gauge / abs.	[bar]	60	100	160	250	400
Overpressure	[bar]	100	100	200	400	400
Burst pressure ≥	[bar]	120	180	300	500	750

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V _S = 8 ... 32 VDC
Options 3-wire	3-wire: 0 ... 20 mA / V _S = 14 ... 30 V _{DC} 0 ... 10 V / V _S = 14 ... 30 V _{DC}

Performance	
Accuracy ¹	≤ ± 0.5 % span
Permissible load	current 2-wire: R _{max} = [(V _S - V _{S min}) / 0.02 A] W current 3-wire: R _{max} = 500 W voltage 3-wire: R _{min} = 10 kW
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kW
Long term stability	≤ ± 0.3 % span / year at reference conditions
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec

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

Thermal effects (Offset and Span) ² / Permissible temperatures	
Thermal error	≤ ± 0.2 % span / 10 K
in compensated range	-20 ... 85°C
Permissible temperatures	medium ³ : -40 ... 125 °C for filling fluid silicon oil -10 ... 125 °C for filling fluid food compatible oil electronics / environment: -40 ... 85 °C storage: -40 ... 100 °C
Permissible temperature medium for cooling element ⁴	filling fluid silicon oil overpressure: -40 ... 300 °C vacuum: -40 ... 150 °C filling fluid food compatible oil overpressure: -10 ... 250 °C vacuum: -10 ... 150 °C

² an optional cooling element can influence thermal effects for offset and span depending on installation position and filling conditions.
³ max. temperature of the medium for overpressure > 0 bar: 150 °C for 60 minutes with a max. environmental temperature of 50 °C
⁴ max. temperature depends on the used sealing material, type of seal and installation

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	20 g RMS (25 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	500 g / 1 msec according to DIN EN 60068-2-27



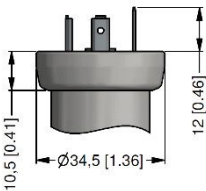
Pressure transmitters

Filling fluids	
Standard	silicon oil
Options	food compatible oil (with FDA approval) (Mobil SHC Cibus 32; Category Code: H1; NSF Registration No.: 141500) others on request
Materials	
Pressure port	stainless steel 1.4404 (316 L)
Housing	stainless steel 1.4404 (316 L)
Option field housing	stainless steel 1.4301 (304) with cable gland 16x1.5 brass, nickel plated (clamping range 2....8 mm)
Seals (media wetted)	standard: FKM options: FFKM ⁵ / EPDM (with drinking water certificate) / NBR others on request
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seals, diaphragm
⁵ for pressure ranges ≤ 100 bar	
Miscellaneous	
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA
Weight	min. 200 g (depending on process connection)
Installation position	any (standard calibration in a vertical position with the pressure port connection down)
Operational life	> 100 x 10 ⁶ pressure cycles
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ⁶
⁶ This directive is only valid for devices with maximum permissible overpressure > 200 bar	

ELECTRICAL CONNECTION

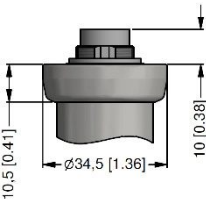
2-wire-system (current)		3-wire-system (current / voltage)			
Pin configuration					
Electrical connection	ISO 4400	Binder 723, (5-pin)	M12x1 / metal, (4-pin)	field housing V _{S+} V _{S-} S+ GND	cable colours (DIN 47100)
Supply + Supply - Signal + (only for 3-wire)	1 2 3	3 4 1	1 2 3	IN + IN - OUT +	wh (white) bn (brown) gn (green)
Shield	ground pin	5	4		ye/gn (yellow / green)

standard

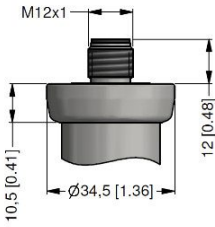


ISO 4400
(IP 65)

option

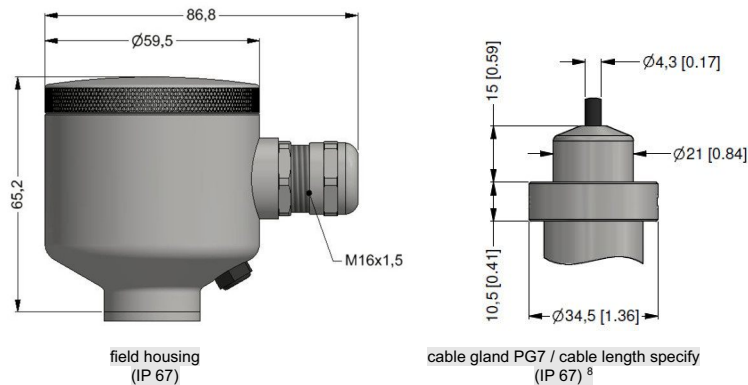


Binder Series 723 5-pin
(IP 67)



M12x1 4-pin
(IP 67)

option



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

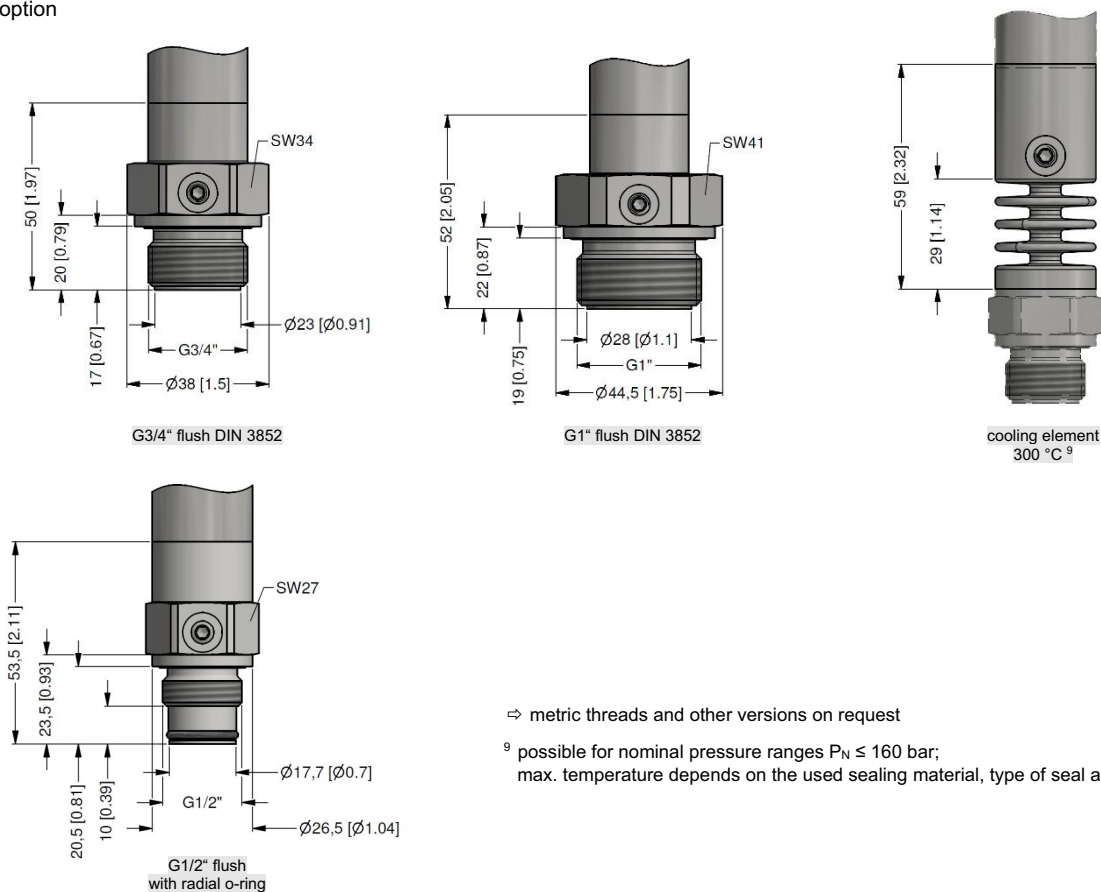
⁸ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

DIMENSION DRAWINGS

standard



option



⇒ metric threads and other versions on request

⁹ possible for nominal pressure ranges $P_N \leq 160$ bar;
max. temperature depends on the used sealing material, type of seal and installation

ORDER CODE

2 - drinking water certification only possible with EPDM seal

The manufacturer reserves the right to change sensor specifications without prior notice.

