

CCA-Xact



- pressure transmitter
- hygienic version
- for food / beverage, pharmaceutical industry and biotechnology
- nominal pressure: from 0...60 mbar up to 0...20 bar
- output signals: 2-wire: 4...20 mA
- internal or flush mounted capacitive ceramic sensor
- integrated display and operating module
- accuracy 0.1 % span
- turn-down 5:1
- diaphragm Al₂O₃ 99.9%

The precise pressure transmitter CCA-Xact measures the pressure of gases, steam and fluids. The special-developed capacitive ceramic sensor for this transmitter, which can optionally be delivered in pure ceramic, has a high overpressure capability and excellent media stability. Several process connections e.g. inch thread or hygienic versions like Varivent®, dairy pipe or Clamp are available. The robust stainless steel globe housing has a high ingress protection IP 67 and all characteristics for a residue-free and an antibacterial cleaning.

PREFERRED AREAS OF USE ARE



Laboratory Techniques



Chemical and petrochemical industry



Food and beverage



Viscous and pasty media

TECHNICAL DATA

Pressure ranges ¹									
Nominal pressure gauge	[bar]	0.06	0.16	0.4	1	2	5	10	20
Overpressure	[bar]	2	4	6	8	15	25	35	45
Permissible vacuum	[bar]	-0.2	-0.3		-0.5			-1	

¹ On customer request we adjust the devices by software on the required pressure ranges (within the turn-down-possibility; starting at 0.02 bar).

Output signal / Supply		
2-wire: 4 ... 20 mA	standard: analogue signal V_S = 12 ... 30 V_{DC}	
Current consumption	max. 25 mA	
Performance		
Accuracy ²	nominal pressure < 1 bar: ± 0.2 % span	
	nominal pressure ≥ 1 bar: ± 0.1 % span	
	for nominal pressure ranges: from 0.16 bar up to 0.4 bar	± (0.2 + (TD-1) x 0.02) % span
	for nominal pressure ranges: from 1 bar up to 20 bar	± (0.1 + (TD-1) x 0.01) % span
	with turn-down = nominal pressure range / adjusted range	
Permissible load	R _{max} [(V _S - V _{S min}) / 0.02 A] W	
Influence effects	supply: 0.05 % span / 10 V permissible load: 0.05 % span / kW	
Long term stability	± 0.1 % span / year	
Response time	200 msec – without consideration of electronic damping measuring rate 5/sec	
Adjustability	electronic damping: 0 ... 100 sec	
	offset: 0 ... 80 % span	
	turn-down of span: max. 5:1 (span min. 0.02 bar)	
² accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability)		
Permissible temperatures		
Thermal error	± (0.02 x turn-down) % span / 10 K in compensated range -20 ... 80 °C	
Permissible temperatures	medium: -25 ... 125 °C environment: -20 ... 70 °C storage: -30 ... 80 °C	
³ Maximum permissible temperature with PVC pressure port is -25...60 °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	

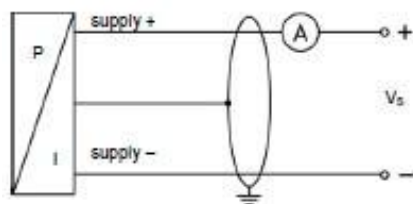


Mechanical stability	
Vibration	5 g RMS (25 ... 2000 Hz)
Shock	100 g / 11 msec
Materials	
Pressure port	inch thread, DRD and flange version, Varivent®, dairy pipe and clamp: stainless steel 1.4404 (316L) optionally for G1 1/2" flush (DIN 3852): PVDF
Housing	stainless steel 1.4301 (304)
Viewing glass	laminated safety glass
Seals	FKM EPDM others on request
Diaphragm	ceramics Al ₂ O ₃ 99,9 %
Media wetted parts	pressure port, seals, diaphragm
Miscellaneous	
Display	LC display, visible range 32.5 x 22.5 mm; 5-digit 7-segment main display, digit height 8 mm, range of indication ±9999; 8-digit 14-segment additional display, digit height 5 mm; 52-segment bargraph; accuracy 0.1% ± 1 digit
Ingress protection	IP 67
Installation position	any
Weight	min. 400 g (depending on mechanical connection)
Operational life	> 100 x 10 ⁶ cycles
CE-conformity	EMC Directive: 2014/30/EU

Varivent® is a trademark of GEA Tuchenhagen GmbH; Windows® is a registered trade mark of Microsoft Corporation

ELECTRICAL CONNECTION

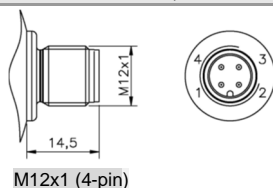
Wiring diagram



Pin configuration

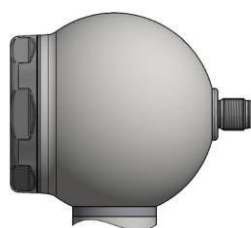
Electrical connection	M12x1 (4-pin)	cable colours (IEC 60757)
Supply +	1	wh (white)
Supply -	3	bn (brown)
Shield	plug housing	ye/gn (yellow / green)

Electrical connections (dimensions in mm)



M12x1 (4-pin)

DESIGNS



Side display

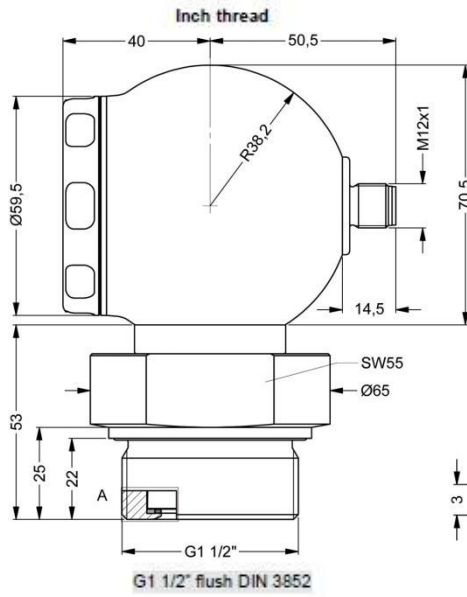


45° display (on request)

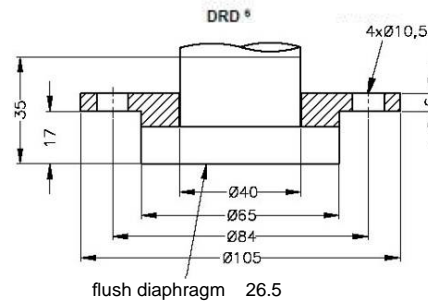
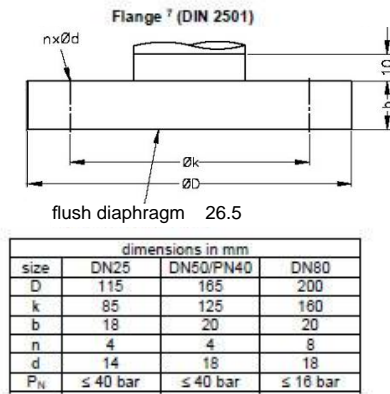
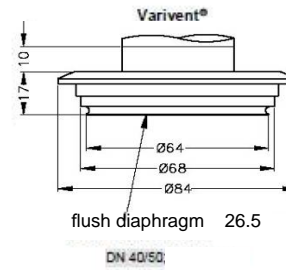
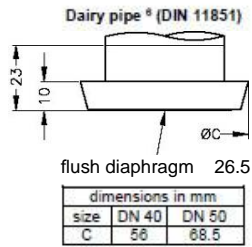
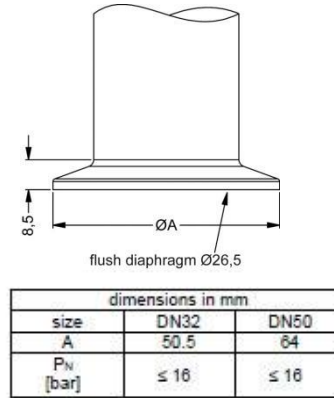
⁵ all designs in combination with G1 1/2" flush in horizontal rotatable housing as standard; other mech. connections in rotatable housing on request



DIMENSION DRAWINGS



Clamp (DIN 32676)



⁶ cup nut for dairy pipe or mounting flange for DRD is included in the delivery (already pre-assembled)

⁷ DN80/PN16 possible with nominal pressure ranges P_N ≤ 7 bar

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ORDER CODE

CCA-Xact- - - - - - - - -

Pressure															
Gauge	5	1	E												
Input [bar]															
0 ... 0,06				0	6	0	0								
0 ... 0,16				1	6	0	0								
0 ... 0,4				4	0	0	0								
0 ... 1				1	0	0	1								
0 ... 2				2	0	0	1								
0 ... 5				5	0	0	1								
0 ... 10				1	0	0	2								
0 ... 20				2	0	0	2								
Customer				9	9	9	9								
Design															
Stainless steel ball housing - side display (IP 67)											K	H			
Stainless steel ball housing - 45° display (IP 67)											K	4			
Output															
4 ... 20 mA / 2-wire												1			
Customer												9			
Accuracy															
0,1 % (P _N 1 bar)												1			
0,1 % including Calibration Certificate (P _N 1 bar)												P			
0,2 % (P _N < 1 bar)												B			
0,2 % including Calibration Certificate (P _N < 1 bar)												Q			
Customer												9			
Electrical connection															
Connector M12 x 1, 4-pin (IP 67) - metal											M	1	0		
Customer											9	9	9		
Mechanical connection															
G 1 1/2" DIN 3852											M	0	0		
Clamp DN 1 1/2" (DN 32)											C	6	2		
Clamp DN 2" (DN 50)											C	6	3		
Dairy pipe DIN 11851 DN 40 ¹											M	7	5		
Dairy pipe DIN 11851 DN 50 ¹											M	7	6		
Flange DN 80/PN 16 DIN 2501											F	1	4		
Flange DN 25/PN 40 DIN 2501											F	2	0		
Flange DN 40/PN 40 DIN 2501											F	2	2		
Flange DN 50/PN 40 DIN 2501											F	2	3		
DRD Ø 65 mm ¹											D	R	D		
Customer											9	9	9		
Diaphragm															
Ceramic Al ₂ O ₃ 96 %													2		
Ceramic Al ₂ O ₃ 99,9 %													C		
Customer													9		
Seals															
Viton (FKM)													1		
EPDM													3		
Customer													9		
Pressure port															
Stainless steel 1.4404 (316 L)													1		
PVDF (only for mechanical connection M00) ²													B		
Customer													9		
Special version															
Standard													0	0	0
Customer													9	9	9

!!! When you make an order it is necessary to fill the questionnaire for transmitters with separators!!!

If setting range shall be different from nominal range please specify in your order

- 1 - cup nut resp. mounting flange is included in the delivery (already pre-assembled)
- 2 - for pressure port in PVDF the operation medium temperature is -25 ... 60 °C

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

