

CCA-K-387



- pressure transmitter
- nominal pressure: from 0...100 mbar up to 0...40 bar
- output signals: 2-wire: 4...20 mA; 3-wire: 0...10 V
- ceramic sensor
- diaphragm 99.9 % Al_2O_3
- accuracy 0.35% / 0.25% span
- high long-term stability

The pressure transmitter CCA-K-387 has been specially designed for applications in plant and machine engineering as well as laboratory techniques and is suitable for measuring small system pressure and filling heights.

By using our own-developed capacitive sensor, available in Al_2O_3 99.9%, the CCA-K-387 offers a high overpressure resistance and a high temperature and media resistance.

PREFERRED AREAS OF USE ARE



Plant and Machine Engineering



Aggressive media



Laboratory Techniques



Water

TECHNICAL DATA

Input pressure range																
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	
Level	[mH ₂ O]	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	
Overpressure	[bar]	3	4	5	5	5	7	7	12	12	20	20	20	40	70	
Burst pressure ≥	[bar]	4	6	8	8	8	9	9	18	18	25	30	30	45	80	
Permissible vacuum	[bar]	-0.2	-0.3				-0.5									-1

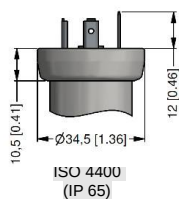
Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 14 \dots 36 \text{ V}_{DC}$
On request	3-wire: 0 ... 10 V / $V_S = 14 \dots 36 \text{ V}_{DC}$
Performance	
Accuracy ¹	standard: $\leq \pm 0.35 \%$ span option: $\leq \pm 0.25 \%$ span others on request
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{Smin}) / 0.02 \text{ A}] \text{ W}$ voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / $\text{k}\Omega$
Long term stability	$\leq \pm 0.1 \%$ span / year
Turn-on time	450 msec
Mean response time	$\leq 70 \text{ msec}$
Measuring rate	80 Hz
¹ accuracy according to EN IEC 62828-2 - limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (on set and span)	
Tolerance band	$\leq \pm 1 \%$ span
In compensated range	-20 ... 80 °C
Permissible temperatures	
Medium ²	-40 ... 125 °C
Electronics / environment	-40 ... 85 °C
Storage	-40 ... 85 °C
² for pressure port in PVDF the operation medium temperature is -30 ... 60 °C and in PP-HT 0 ... 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	10 g RMS (25 ... 2000 Hz)		according to DIN EN 60068-2-6
Materials			
Pressure port / housing	standard: options for G3/4" flush:	pressure port	housing
		stainless steel 1.4404 (316 L)	stainless steel 1.4404 (316 L)
		PVDF (p _{max} = 20 bar)	PVDF (p _{max} = 20 bar)
Option compact field housing	stainless steel 1.4301 (304) cable gland M12x1.5, brass, nickel plated (clamping range 2 ... 8 mm)		
Seals (O-rings)	FKM, EPDM, FFKM		others on request
Diaphragm	ceramics Al ₂ O ₃ 99.9 %		others on request
Media wetted parts	pressure port, seals, diaphragm		
Miscellaneous			
Current consumption	max. 22 mA		
Weight	approx. 180 g		
Operational life	100 million load cycles		
CE-conformity	EMC Directive: 2014/30/EU		

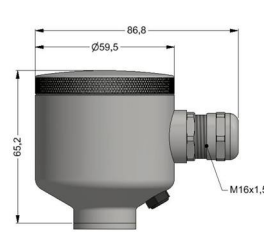
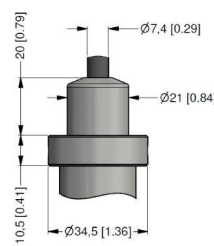
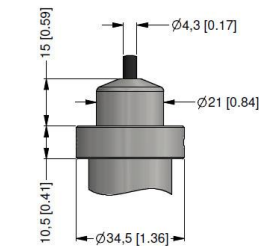
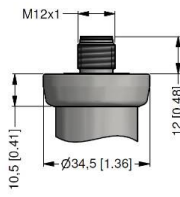
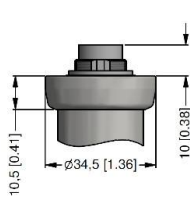
ELECTRICAL CONNECTION

Wiring diagram					
2-wire-system (current)		3-wire-system (current / voltage)			
Pin configuration					
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	field housing	cable colours (DIN 47100)
Supply +	1	3	1	Vs +	wh (white)
Supply -	2	4	2	Vs -	bn (brown)
Signal + (only for 3-wire)	3	1	3	S +	gn (green)
Shield	ground contact	5	4	GND	ye/gn (yellow / green)

standard

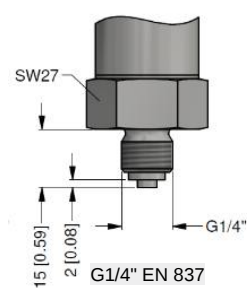
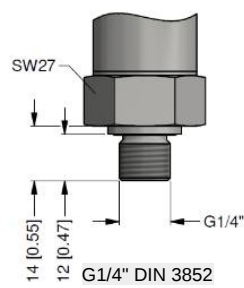
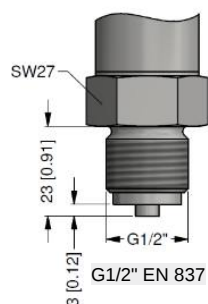
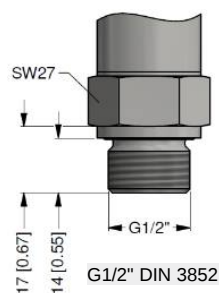
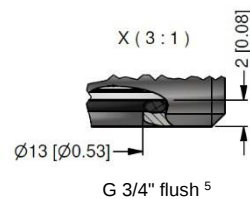
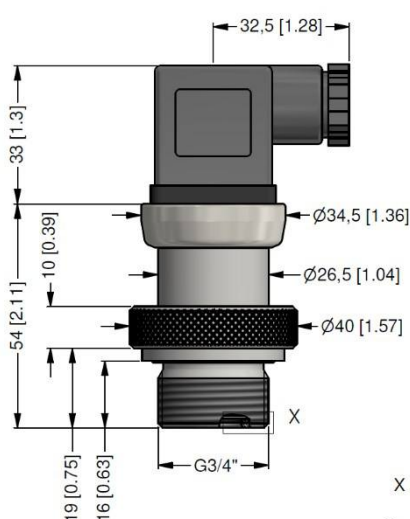
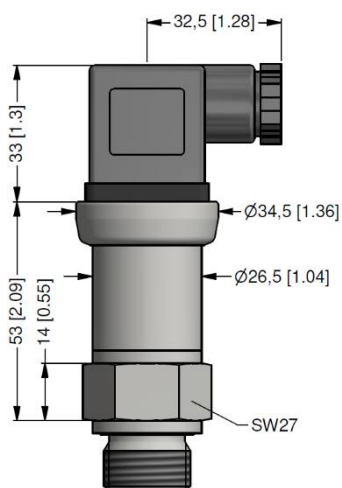


options



⁴ standard: 2 m PVC-cable without ventilation tube (permissible temperature: -5 ... 70°C), optional cable with ventilation tube

⁵ different cable types and lengths available, permissible temperature depends on kind of cable



ORDER CODE

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[illegible]

Pressure transmitters

CCA-K-387- - - - - -

Accuracy											
Standard 0.35 % FSO	3										
Option 0.25 % FSO	2										
Customer	9										
Electrical connection											
Connector DIN 43650 (ISO 4400) (IP 65) Connector DIN 43650 (ISO 4400) (IP 65)	1	0	0								
Connector Binder 723 5-pin (IP 67)	2	0	0								
Cable outlet, cable with ventilation tube (IP 68) ¹ + PVC cable / 1 m	T	R	0								
Cable outlet with PVC cable (IP67) ² + PVC cable / 1 m	T	A	0								
Connector M12 x 1, 4-pin (IP 67) - metal	M	1	0								
Field housing stainless steel 1.4301 (304)	8	5	0								
Customer	9	9	9								
Mechanical connection ³											
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								
G 3/4" with flush sensor ⁴	K	0	0								
Customer	9	9	9								
Seals											
Viton (FKM)	1										
EPDM (P _N < 160 bar)	3										
FFKM	7										
Customer	9										
Pressure port											
Stainless steel 1.4404 (316 L)	1										
PVDF (P _N ≤ 60 bar) only with G 1/2" DIN 3852 open port H00 ⁵	B										
Customer	9										
Diaphragm											
Ceramics Al ₂ O ₃ 99.9 %	C										
Customer	9										
Special version											
Standard									0	0	0
Customer									9	9	9

1 - standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C); others on request

2 - code TR0 = PVC cable, cable with ventilation tube available in different types and lengths; cable not included in the price

3 - metric threads and others on request

4 - not in combination with field housing

5 - only for mechanical connection G3/4"; for pressure port in PVDF the operation medium temperature is -30 ... 60 °C

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

