

## CCA-P-331



- industrial pressure transmitter for low pressure
- nominal pressure: from 0...100 mbar up to 0...40 bar
- output signals: 2-wire: 4...20 mA; 3-wire: 0...20 mA / 0...10V, others
- stainless steel sensor
- accuracy 0.35% / 0.25% span
- perfect thermal behaviour
- excellent long term stability
- pressure port G 1/2" flush from 100 mbar
- options: pressure sensor welded



The pressure transmitter **CCA-P-331** can be used in all industrial areas when the medium is compatible with stainless steel 1.4404 (316 L) or 1.4435 (316 L). Additional are different elastomer seals as well as a helium tested welded version available. The modular concept of the device allows to combine different stainless steel sensors and electronic modules with a variety of electrical and mechanical versions. Thus a diversity of variations is created, meeting almost all requirements in industrial applications.

### PREFERRED AREAS OF USE ARE



Plant and Machine Engineering



Environmental Engineering  
(water - sewage - recycling)



Energy Industry

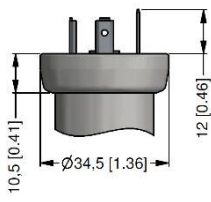
### TECHNICAL DATA

| Input pressure range  |          |   |      |                |          |                        |      |          |     |
|---|----------|---|------|----------------|----------|------------------------|------|----------|-----|
| Nominal pressure gauge  | [bar]    | -1...0  | 0.10 | 0.16           | 0.25     | 0.40                   | 0.60 | 1        | 1.6 |
| Nominal pressure abs.   | [bar]    | -   | -    | -              | -        | 0.40                   | 0.60 | 1        | 1.6 |
| Overpressure  | [bar]    | 5   | 0.5  | 1              | 1        | 2                      | 5    | 5        | 10  |
| Burst pressure  | [bar]    | 7.5   | 1.5  | 1.5            | 1.5      | 3                      | 7.5  | 7.5      | 15  |
|   |          |   |      |                |          |                        |      |          |     |
| Nominal pressure gauge / abs.   | [bar]    | 2.5   | 4    | 6              | 10       | 16                     | 25   | 40       |     |
| Overpressure  | [bar]    | 10  | 20   | 40             | 40       | 80                     | 80   | 105      |     |
| Burst pressure  | [bar]    | 15  | 25   | 50             | 50       | 120                    | 120  | 210      |     |
| Vacuum resistance   |          | P <sub>N</sub> 1 bar: unlimited vacuum resistance<br>P <sub>N</sub> < 1 bar: on request   |      |                |          |                        |      |          |     |
| Output signal / Supply  |          |   |      |                |          |                        |      |          |     |
| Standard  |          | 2-wire: 4 ... 20 mA / V <sub>S</sub> = 8 ... 32 V <sub>DC</sub>   |      |                |          |                        |      |          |     |
| Options 3-wire  |          | 3-wire: 0 ... 20 mA / V <sub>S</sub> = 14 ... 30 V <sub>DC</sub><br>0 ... 10 V / V <sub>S</sub> = 14 ... 30 V <sub>DC</sub>   |      |                |          |                        |      |          |     |
| Performance   |          |   |      |                |          |                        |      |          |     |
| Accuracy <sup>1</sup>   |          | standard: nominal pressure < 0.4 bar: ± 0.5 % span<br>nominal pressure 0.4 bar: ± 0.35 % span<br>option 1: nominal pressure 0.4 bar: ± 0.25 % span                            |      |                |          |                        |      |          |     |
| Permissible load  |          | current 2-wire: R <sub>max</sub> = [(V <sub>S</sub> - V <sub>S</sub> min) / 0.02 A] W<br>current 3-wire: R <sub>max</sub> = 500 W<br>voltage 3-wire: R <sub>min</sub> = 10 kW |      |                |          |                        |      |          |     |
| Influence effects   |          | supply: 0.05 % span / 10 V  |      |                |          | load: 0.05 % span / kW |      |          |     |
| Long term stability   |          | ± 0.1 % span / year at reference conditions   |      |                |          |                        |      |          |     |
| Response time   |          | 2-wire: 10 msec   |      |                |          | 3-wire: 3 msec         |      |          |     |
| <sup>1</sup> accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability) |          |   |      |                |          |                        |      |          |     |
| Thermal effects (O set and Span)  |          |   |      |                |          |                        |      |          |     |
| Nominal pressure P <sub>N</sub>   | [bar]    | -1 ... 0  |      |                | < 0.40   |                        |      | 0.40     |     |
| Tolerance band  | [% span] | ± 0.75  |      |                | ± 1      |                        |      | ± 0.75   |     |
| in compensated range  | [°C]     | 0 ... 85  |      |                | 0 ... 70 |                        |      | 0 ... 85 |     |
| Permissible temperatures  |          |   |      |                |          |                        |      |          |     |
| Permissible temperatures  |          | medium:   |      | -40 ... 125 °C |          |                        |      |          |     |
|   |          | electronics / environment:  |      | -40 ... 85 °C  |          |                        |      |          |     |
|   |          | storage:  |      | -40 ... 100 °C |          |                        |      |          |     |



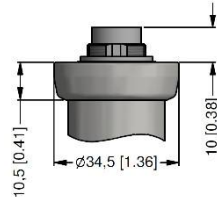


## standard

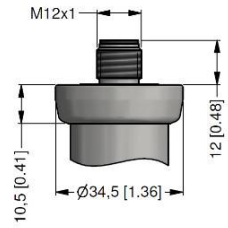


ISO 4400  
(IP 65)

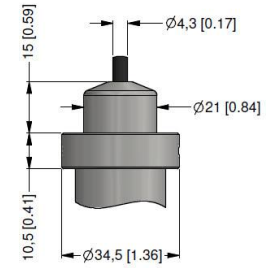
## option



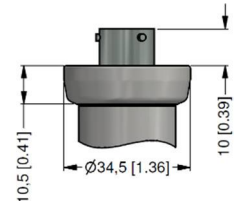
Binder Series 723 5-pin  
(IP 67)



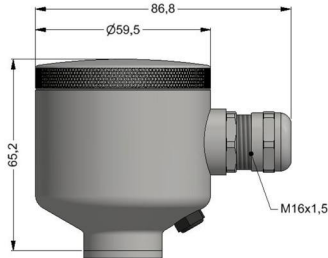
M12x1 4-pin  
(IP 67)



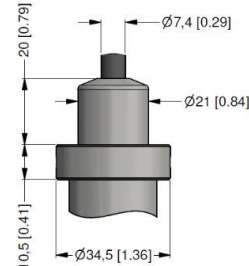
cable gland PG7 / cable length specify  
(IP 67) <sup>5</sup>



Bayonet MIL-C-26482 (10-6)  
(IP 67)



field housing  
(IP 67)



cable outlet, cable with ventilation tube  
(IP 68) <sup>6</sup>

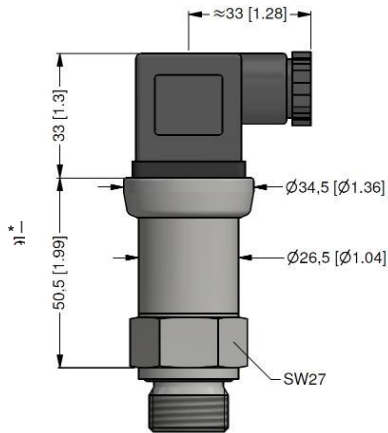
— universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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

<sup>6</sup> different cable types and lengths available, permissible temperature depends on kind of cable

## DIMENSION DRAWINGS

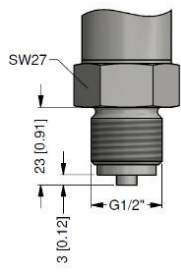
### standard



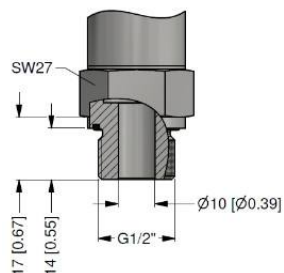
G1/2" DIN 3852  
with ISO 4400

\*with electrical connection Bayonet MIL-C-26482 (10-6) increases the length of devices by 5 mm

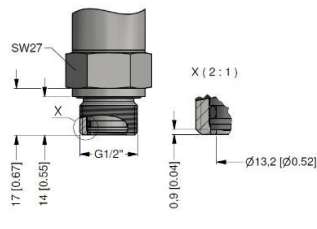
### options



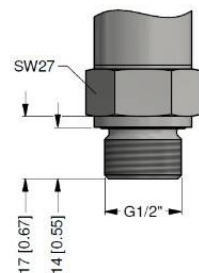
G1/2" EN 837



G1/2" open port



G1/2" DIN 3852  
with flush sensor



G1/2" DIN 3852



CCA-P-331-  -  -  -  -  -  -  -

| 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)<br>+ PVC cable / 1 m                 | 4 | 0 | 0 |  |  |  |  |   |   |   |
| Connector Buccaneer (IP 68)   | 5 | 0 | 0 |  |  |  |  |   |   |   |
| Field housing stainless steel, cable gland M 16 x 1,5 (IP 67)                       | 8 | 0 | 0 |  |  |  |  |   |   |   |
| Field housing stainless steel, cable gland M 20 x 1,5 (IP 67)                       | 8 | 8 | 0 |  |  |  |  |   |   |   |
| 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 |  |  |  |  |   |   |   |
| Cable outlet, cable with ventilation tube (IP 68) <sup>1</sup><br>+ PVC cable / 1 m | T | R | 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 |  |  |  |  |   |   |   |
| G 1/2" DIN 3852 with flush sensor diaphragm <sup>2</sup>                            | F | 0 | 0 |  |  |  |  |   |   |   |
| M 20 x 1,5 DIN 3852 with flush sensor diaphragm                                     | F | 0 | 4 |  |  |  |  |   |   |   |
| G 1/2" DIN 3852 with flush sensor diaphragm - welded (only with FFKM seal)          | G | 0 | 0 |  |  |  |  |   |   |   |
| G 1/2" open port (port ø 14 mm) <sup>2</sup>  | H | 0 | 0 |  |  |  |  |   |   |   |
| 1/2" NPT  | N | 0 | 0 |  |  |  |  |   |   |   |
| 1/4" NPT  | N | 4 | 0 |  |  |  |  |   |   |   |
| G 1/8" DIN 3852   | Z | 3 | 7 |  |  |  |  |   |   |   |
| Customer  | 9 | 9 | 9 |  |  |  |  |   |   |   |
| Seals   |   |   |   |  |  |  |  |   |   |   |
| Viton (FKM)   |   |   |   |  |  |  |  | 1 |   |   |
| Viton (FKM) up to -40°C (for special version 022)                                   |   |   |   |  |  |  |  | F |   |   |
| Without seals - welded (only with EN 837) <sup>2,3</sup>                            |   |   |   |  |  |  |  | 2 |   |   |
| EPDM (drinking water)   |   |   |   |  |  |  |  | 3 |   |   |
| FFKM  |   |   |   |  |  |  |  | 7 |   |   |
| Customer  |   |   |   |  |  |  |  | 9 |   |   |
| Special version   |   |   |   |  |  |  |  |   |   |   |
| Standard  |   |   |   |  |  |  |  | 0 | 0 | 0 |
| Temperature compensation -20...+50 °C   |   |   |   |  |  |  |  | 0 | 0 | 6 |
| Temperature compensation -40...+60 °C (only with seals "F" or welded "2")           |   |   |   |  |  |  |  | 0 | 2 | 2 |
| Reduced supply voltage 7...30 V DC only for 4...20 mA / 2-wire                      |   |   |   |  |  |  |  | 0 | 2 | A |
| 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 - only for P<sub>N</sub> = 40 bar

3 - welded version only with pressure ports according to EN 837

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

