

## CCA-310



- any range from 0...2,5 kPa up to 0...40 MPa
- output: 4...20 mA (2-wire) or 0...20 mA / 0...10V (3-wire)
- piezo-resistive, vacuum-proof construction
- medium temp. up to 120°C (direct measurement)
- PZH certificate

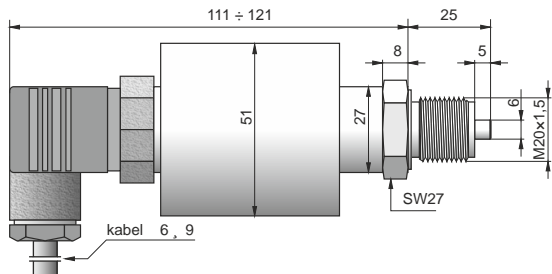
The CCA-310 pressure transmitter is applicable to the measurement of the pressure, underpressure and absolute pressure of gases, vapours and liquids.

### Construction

The active sensing element is a piezoresistant silicon sensor separated from the medium by a diaphragm and by specially selected type of manometric liquid. The electronics is placed in a casing with a degree of protection IP 54. The electrical connection is a DIN 43650 connector.

### Calibration

Potentiometers can be used to shift the zero position and the range by up to ±10%, without altering the settings.



### TECHNICAL DATA

Power supply	10...36V DC (2-wire), 13...39V DC (3-wire)
Error due to supply voltage changes	0,005% / V
Measuring range	any from 2,5 kPa...40 MPa (overpressure, underpressure); 40 kPa...8 MPa (absolute pressure)
Output signal	4...20 mA (2-wire); 0...20 mA / 0...10V (3-wire)
Hysteresis, repeatability	0,05%
Compensation range	-10°C ÷ 80°C
Operating temperature range	-40°C ÷ 80°C (ambient temperature)
Medium temperature range	-40°C ÷ 120°C (direct measurement); over 120°C (measurement with the use of impulse line, radiator or diaphragm seal)
Protection class	IP 54
Material of the wetted parts	00H17N14M2 (316Lss)
Material of the casing	0H18N9 (304ss)

### INSTALLATION

The transmitter is not heavy, so it can be installed directly on the installation. When the pressure of steam or other hot media is measured, a siphon or impulse line should be used. The needle valve placed upstream the transmitter simplifies installation process and enables the zero point adjustment or the transmitter replacement.

When the special process connections are required for the measurement of levels and pressures (e.g. at food and chemical industries), the transmitter is provided with an diaphragm seal.

### APPLICATION

Applicable to measurement the pressure of dusty gases, and viscous or solidifying liquids.

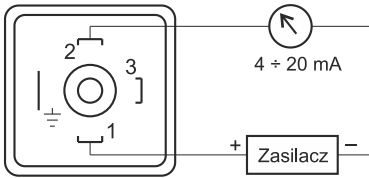
The transmitters with flush diaphragm are applied in food industry and pharmaceutical industry in aseptic systems. Using of fitting sockets with a seal upstream the stub thread is recommended.

	Measuring range				
	2,5 kPa	10 kPa	40 kPa	100 kPa...16 MPa	>16 MPa...40 MPa
Overpressure limit (repeated, without hysteresis)	100 kPa	100 kPa	250 kPa	4 x range	2 x range
Damaging overpressure	200 kPa	200 kPa	500 kPa	8 x range (max. 2000 bar)	
Accuracy	0,6%	0,6%	0,16%		
Long term stability	0,6% / year	0,2% / year	0,1% / year		
Thermal error	typ. 0,5% / 10°C max. 0,6% / 10°C	typ. 0,3% / 10°C max. 0,4% / 10°C	typ. 0,2% / 10°C max. 0,3% / 10°C		

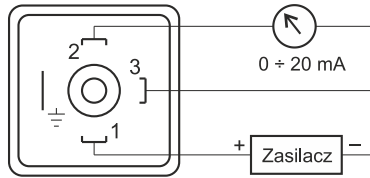
Caution: the medium must not be allowed to freeze in the impulse line or close to the pipe stub of the transmitter.



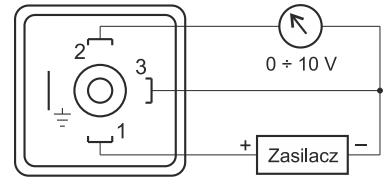
WIRING DIAGRAMS



DIN 43650 connector, IP 65,  
4 ÷ 20 mA output signal

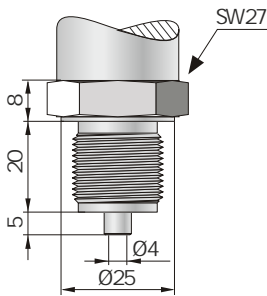


DIN 43650 connector, IP 65,  
0 ÷ 20 mA output signal

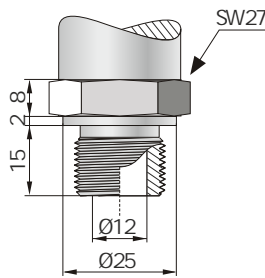


DIN 43650 connector, IP 65,  
0 ÷ 10V output signal

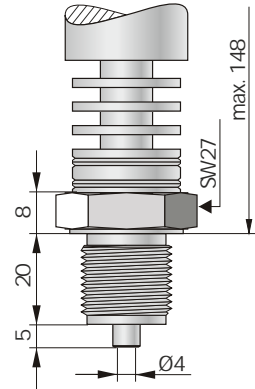
PROCESS CONNECTIONS



G1/2 type: G1/2", Ø4 hole  
M type: M20x1,5, Ø4 hole  
Wetted parts material: 316Lss  
Application: Applicable to measurement  
the pressure of uncontaminated gases, vapours  
and liquids at any measurements ranges

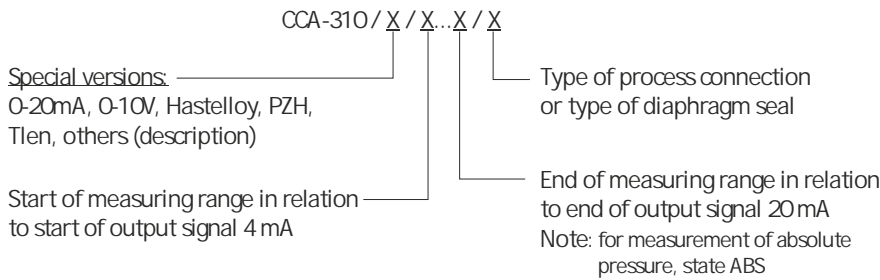


GP type: G1/2", Ø12 hole  
P type: M20x1,5, Ø12 hole  
Wetted parts material: 316Lss - standard,  
Hastelloy C-276  
Application: Applicable to measurement the  
pressure of viscous and contaminates media.  
Max. range: 0 - 70 bar



RM type: M20x1,5 with radiator  
Wetted parts material: 316Lss  
Application: Applicable to measurement the pressure  
of uncontaminated gases, vapours and liquids at the  
temperature up to 170°C, with no impulse line.  
Min. range: 160 mbar  
Max. range: 40 bar

ORDERING



Special versions, certificates

- 0-20mA current output signal
- 0-10V voltage output signal, 13-39V DC power supply, load resistance R 20k
- Hastelloy wetted parts of the transducer measuring head made of Hastelloy C 276 (only P and GP connections)
- Tlen for oxygen service (only M and G1/2 connections)
- PZH certificate of Institute of Public Health for contact with potable water
- others description of required parameters, after consultation with the consultant

Ordering sample:

CCA-310 / -5...5 kPa / P

CCA-310 transducer, standard, -5...5 kPa measuring range, process connection M20x1,5 hole 12 mm.

