

Pressure Measurement Technology

Type:
Precont S20

Digital pressure sensor with metal membrane up to 1000 bar, 4-digit LED display, 2 switching outputs, analog output

Description

The Precont® S20 with a metallic membrane offers high pressure shock resistance up to 6 times the nominal pressure. Further advantages are vacuum resistance, good reproducibility and hysteresis, as well as good long-term stability and low temperature influence.

The measuring ranges of the Precont® S20 range from -1...1000 bar and are suitable for recording absolute pressure, gauge pressure, and vacuum. This opens up a wide range of applications for the pressure transmitter for measuring liquid and gaseous media in all areas of industrial measurement technology.

4-20mA 2-wire devices and 0-10V 3-wire devices are available as output signals. In addition, the analog outputs can be combined with 2 freely adjustable PNP switching outputs. It is possible to assign one switching output as a fault alarm output.

Operation and measured value display are handled via a brightly illuminated LED display. This ensures that the current pressure can still be read effortlessly even from a large distance.

Application

- Highly accurate pressure measurement from -1...1000 bar in gases and liquids
- Metal membrane offers high pressure shock resistance
- Connection housing made of stainless steel or PBT with terminal compartment or M12x1 plug
- 2 PNP switching outputs or 2- or 3-wire electronics
- Can be used as a pressure switch and pressure transmitter

Your Benefit

- Robust design – **maintenance-free**
- Electronics rotatable by 330 degrees **rotatable**



Special Features



- Flush membrane possible for media tending to form buildup
 - Bright LED display - readable from a long distance
 - **Password function** to protect settings from changes
 - Simple switch point setting via separate menu
 - Good **long-term stability** and low temperature influence
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Technical Data

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Supply voltage: 14.5...45V DC with output signal 4...20mA / with display / Ex 14.5...30V DC
10.5...45V DC with output signal 4...20mA / without display / Ex 10.5...30V DC
14.5...45V DC with output signal 0...10V / Ex 14.5...30V DC

Current consumption: ≤ 22 mA; for 2-wire 4...20mA PNP switching outputs without load
 ≤ 10 mA; for 3-wire 0...10V PNP switching outputs without load

PNP Switching Output

Function: PNP switching to +Vs

Output current: ≤ 250 mA current limited, short-circuit proof

Measuring accuracy

Characteristic deviation: $\leq \pm 0.15$ / 0.5% FS

Long-term drift: $\leq \pm 0.2\%$ FS / year non-cumulative

Temperature deviation: $\leq \pm 0.20\%$ FS / 10 K (Zero / Span)

Materials

Membrane: ≥ 40 bar: Steel 1.4571/316Ti
(wetted parts) < 40 bar: Steel 1.4542/630 or 1.4534

Process connection: Steel 1.4571/316Ti
(wetted parts)

Connection housing: CrNi-Steel / PBT Polybutylene terephthalate /
PP – Polypropylene / POM – Polyoxymethylene (Delrin®)

Seals: FPM – Fluoroelastomer (Viton®)
(wetted parts) EPDM – Ethylene Propylene Diene Monomer
NBR – Nitrile Butadiene Rubber

Ambient conditions

Ambient temperature: $-40^{\circ}\text{C} \dots +85^{\circ}\text{C}$

Process temperatures: $-40^{\circ}\text{C} \dots +100^{\circ}\text{C}$ or $+125^{\circ}\text{C}$

Process pressure ranges: -1 bar ... 1000 bar

Turn-Down: 30:1

Protection class: IP65 / IP67 EN/IEC 60529

Connection

Signal 4...20 mA

Wire colors standard connection cable M12:

BN = brown, BU = blue

Pin 1 (BN): L+

Pin 3 (BU): L- (4...20mA)

Signal 4...20 mA / 2x PNP Switching Output

Wire colors standard connection cable M12:

BN = brown, WH = white, BU = blue, BK = black

Pin 1 (BN): L+

Pin 2 (WH): PNP S2

Pin 4 (BK): PNP S1

Pin 3 (BU): L- (4...20mA)

Signal 0...10 V

Wire colors standard connection cable M12:

BN = brown, GY = gray, BU = blue

Pin 1 (BN): L+

Pin 5 (GY): 0...10V

Pin 3 (BU): L-

Signal 0...10 V / 2x PNP Switching Output

Wire colors standard connection cable M12:

BN = brown, WH = white, BU = blue, BK = black, GY = gray

Pin 1 (BN): L+

Pin 5 (GY): 0...10V

Pin 2 (WH): PNP S2

Pin 4 (BK): PNP S1

Pin 3 (BU): L-