

# P21

**Nöding**

Messtechnik



## Datasheet Pressure Transmitter P21

### PERFORMANCE FEATURES

- Flush process connection
- Dry ceramic sensor
- Accuracy  $\leq 0,5\%$
- Smallest measuring range: 0...250 mbar
- Largest measuring range: 0...100 bar
- Negative pressure measuring range: up to -1 bar
- Analog output: 4...20 mA, 2-wires  
0...10 V, 3-wires  
0...5 V, 3-wires  
0,5...4,5 V, 3-wires ratiometric

### AREAS OF APPLICATION

- Viscous and pasty media
- Hygiene applications
- Liquid media
- Gaseous media
- Aggressive Media

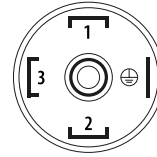
The P21 model is designed for use in applications where media tend to deposit and clog the sensor. Various output signals, process connections and high pressure ranges widen its area of application. A compact front-flush process connection prevents hidden edges and drill holes, in combination with a resistant ceramic sensor, optimal cleaning and maintenance can be ensured. The piezoresistive measuring principle allows for economical application in most liquid and gaseous media. Its compact housing is made of high-quality stainless steel 1.4404 and is therefore suitable for almost all media. Our modular design concept provides a wide variety of products. Feel free to contact us if you need a customization that is not listed in this datasheet.

## TECHNICAL DATA

Measuring range	
Pressure range	see table „Measuring ranges“ others on request
Output	
Analog output	4...20 mA 2-wires 0...10 V 3-wires 0...5 V 3-wires 0,5...4,5 V 3-wires, ratiometric
Power supply	
20 mA output	9...30 V DC
5 V output	9...30 V DC
10 V output	15...30 V DC
0,5...4,5 V output	5 V DC
Signal characteristics	
Accuracy	$\leq \pm 0,5 \% \text{ FS @ } 25^\circ\text{C}$
Long term stability	$\leq \pm 0,5 \% \text{ FS/Year}$
Response time	60 ms - others on request
Swich-on time	< 1 s
Temperature coefficient	
Zero	$\leq \pm 0,03 \% \text{ FS/Kelvin}$
Span	$\leq \pm 0,02 \% \text{ FS/Kelvin}$
Temperature ranges	
Medium temperature	-25...100 °C
Surrounding temperature	-25...80 °C
Storage temperature	-40...85 °C
Electrical protections	
Short-circuit resistance	Permanent
Reverse polarity protection	Protection against reverse polarity, but no function
Electromagnetic compatibility	Interference emissions and immunity acc. to EN 61326
Wetted materials	
Process connection	Stainless steel 1.4404
Sensor	Ceramic $\text{Al}_2\text{O}_3$
Sensor seal	FPM (Viton), NBR, EPDM, FFKM (Chemraz/Kalrez)
Surroundings	
Protection type	IP 67
Exemplary weight	
P21-405-1110 (figure p. 1)	Approx. 150 g

## ELECTRICAL CONNECTION

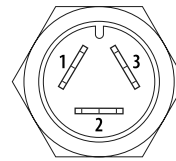
Connector  
EN 175301-803A



**4...20 mA 2-wires**  
PIN 1: Signal +  
PIN 2: Signal -

**0...10 V 3-wires**  
PIN 1: in +  
PIN 2: in -  
PIN 3: out +

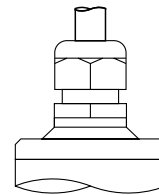
Quickon-Connector



**4...20 mA 2-wires**  
PIN 1: Signal +  
PIN 2: Signal -

**0...10 V 3-wires**  
PIN 1: in +  
PIN 2: in -  
PIN 3: out +

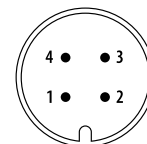
Cable connection



**4...20 mA 2-wires**  
red: Signal +  
black: Signal -

**0...10 V 3-wires**  
red: in +  
black: in -  
white: out +

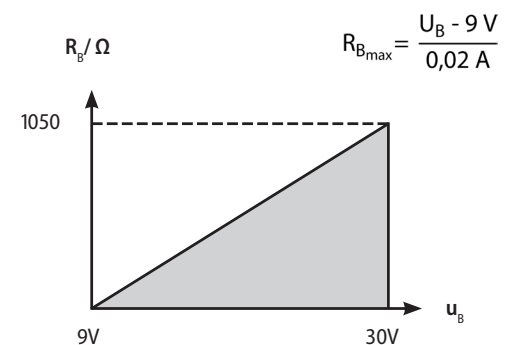
M12 Connector



**4...20 mA 2-wires**  
PIN 1: Signal +  
PIN 3: Signal -

**0...10 V 3-wires**  
PIN 1: in +  
PIN 3: in -  
PIN 4: out +

## LOAD



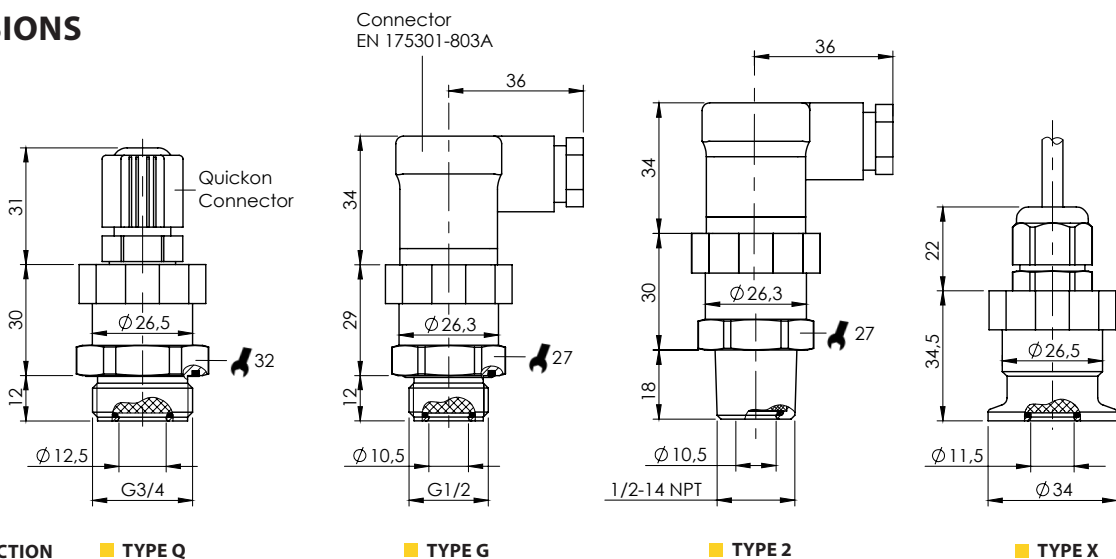
## MEASURING RANGES

Measuring ranges	Relative	Overload (bar)
0...250 mbar / 0...25 kPa */**	02	-0,15/1
0... 300 mbar / 0...30 kPa */**	X5	-0,15/1
0...400 mbar / 0...40 kPa **	03	-0,15/1
0...500 mbar / 0...50 kPa **	B7	-0,15/1
0...600 mbar / 0...60 kPa	04	-0,2/2
0...1 bar / 0...100 kPa	05	-0,2/2
0...1,6 bar / 0...160 kPa	06	-0,4/4
0...2 bar / 0...200 kPa	B3	-0,4/4
0...2,5 bar / 0...250 kPa	07	-0,8/10
0...4 bar / 0...400 kPa	08	-0,8/10
0...5 bar / 0...500 kPa	F1	-0,8/10
0...6 bar / 0...600 kPa	09	-1/20
0...10 bar / 0...1 MPa	10	-1/20
0...16 bar / 0...1,6 MPa	11	-1/40
0...20 bar / 0...2 MPa	B5	-1/40
0...25 bar / 0...2,5 MPa	12	-1/100
0...40 bar / 0...4 MPa	13	-1/100
0...50 bar / 0...5 MPa	F3	-1/100
0...60 bar / 0...6 MPa **	14	-1/200
0...100 bar / 0...10 MPa **	15	-1/500
-1...5 bar / -100...500kPa	D9	-1/20
-1...9 bar / -100...900kPa	E1	-1/20
-1...15 bar / -100...1,5 MPa	E2	-1/40
-1...19 bar / -100...1,9 MPa	E3	-1/40
-1...25 bar / -100...2,5 MPa	E7	-1/40

\* Accuracy 1%

\*\* Range not possible for G1/2", 1/2 NPT

## DIMENSIONS



## ORDERING CODE

### Output signal

- 1 0...10 V 3-wires
- 4 4...20 mA 2-wires
- 8 0...5 V 3-wires
- A 0,5...4,5 V 3-wires, ratiometric

### Ranges

Measuring ranges see table

- 99 Non-standard range (on request)

### Process connection and material

- 1 G 1/2 A, ISO 228-1, 1.4404
- Q G 3/4 A, ISO 228-1, 1.4404
- 2 1/2 - 14 NPT, 1.4404
- X Clamp DN 10...20, 1.4404
- 9 Others (on request)

### Prozessdichtung

- 1 FPM (Viton), standard
- 2 NBR (Perbuan)
- 3 EPDM
- 5 FFKM (Chemraz / Kalrez)
- 9 Others (on request)

### Electrical connection

- 1 Connector EN 175301-803A
- A Connector M12x1 4-pole
- F Quickon-Connector
- 6 2 m cable
- 0 5 m cable
- 0 5 m cable
- 9 Others (on request)

### Options

- 0 Without potted electronics
- 1 Potted electronics

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