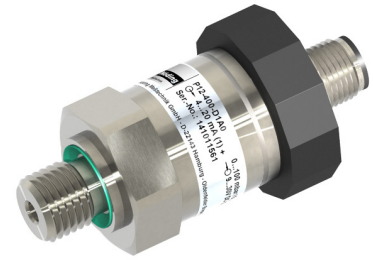


# P12

**Nöding**

Messtechnik



## Datasheet Pressure Transmitter P12

### PERFORMANCE FEATURES

- Dry ceramic sensor
- High overload capability
- Smallest measuring range: 0...100 mbar
- Largest measuring range: 0...60 bar
- Negative pressure measuring range: to -1 bar
- Accuracy  $\leq 0,35\%$
- Compact and rugged design
- 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

- Gaseous media
- Liquid media
- Hygiene applications
- Abrasive media
- Aggressive media
- Vacuum applications

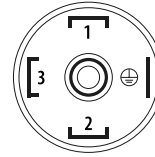
The compact model P12 features a capacitive ceramic sensor with high accuracy and overload capability. Regardless of the measuring range, the sensor always remains vacuum-proof. In combination with a laser-welded stainless steel housing, the transmitter is resistant to aggressive as well as abrasive 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
Ausgang	
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	$\leq \pm 0,35\%$ FS @ 25 °C $\leq \pm 0,5\%$ FS @ 25°C $\leq 200$ mbar
Long term stability	$\leq \pm 0,3\%$ FS/Year
Response time	200 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
zero	$\leq \pm 0,02\%$ FS / Kelvin $\leq \pm 0,03\%$ FS / Kelvin $\leq 0...200$ mbar
span	$\leq \pm 0,02\%$ 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 Al <sub>2</sub> O <sub>3</sub>
Sensor seal	FPM (Viton), NBR, EPDM, FFKM (Chemraz / Kalrez)
Surroundings	
Protection type	IP 67
Exemplary weight	
P12-4B1-D1A0 (figure S. 1)	150 g

## ELECTRICAL CONNECTION

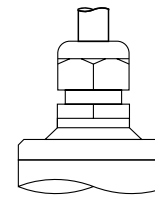
Connector  
EN 175301-803A



**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 +

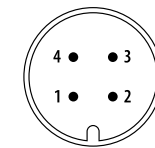
Cable connection



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

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

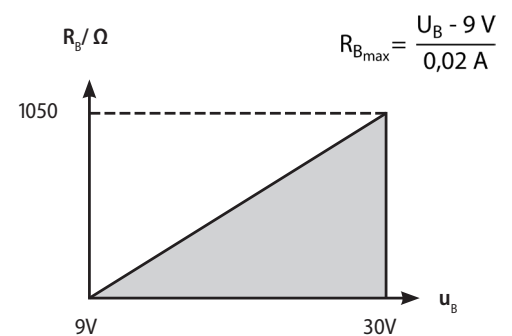
M12 Connector



**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	Absolute	Overload (bar)
0...100 mbar / 0...10 kPa *	00		-1/2
0...160 mbar / 0...16 kPa *	01		-1/2
0...200 mbar / 0...20 kPa*	B1		-1/2
0...250 mbar / 0...25 kPa	02		-1/2
0...400 mbar / 0...40 kPa	03		-1/2
0...500 mbar / 0...50 kPa	B7		-1/4
0...600 mbar / 0...60 kPa	04		-1/4
0...1 bar / 0...100 kPa	05		-1/4
0...1,6 bar / 0...160 kPa	06		-1/7
0...2 bar / 0...200 kPa	B3		-1/7
0...2,5 bar / 0...250 kPa	07		-1/10
0...3 bar / 0...300 kPa	X3		-1/10
0...4 bar / 0...400 kPa	08		-1/10
0...5 bar / 0...500 kPa	F1		-1/21
0...6 bar / 0...600 kPa	09		-1/21
0...10 bar / 0...1 MPa	10		-1/30
0...10 bar / 0...1 MPa	HD		-1/105
0...16 bar / 0...1,6 MPa	11		-1/60
0...20 bar / 0...2 MPa	B5		-1/60
0...25 bar / 0...2,5 MPa	12		-1/105
0...40 bar / 0...4 MPa	13		-1/100
0...60 bar / 0...6 MPa	14		-1/210
-100...0 mbar / -10...0 kPa*	C4		-1/2
-100...100 mbar / -10...10kPa*	C5		-1/2
-1...1 bar / -100...100 kPa	D6		-1/7
-1...3 bar / -100...300 kPa	D8		-1/21
-1...5 bar / -100...500kPa	D9		-1/21
-1...9 bar / -100...900kPa	E1		-1/30
-1...15 bar / -100...1,5 MPa	E2		-1/60
-1...19 bar / -100...1,9 MPa	E3		-1/60
-1...25 bar / -100...2,5 MPa	E7		-1/105

\* Accuracy 0,5%, Temperature coefficient  $\leq \pm 0,03\%$  FS/K (zero)

## 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
- B 0,5...4,5 V 3-wires, 9 - 30 V power supply

### Ranges

Measuring ranges see table

- 99 Non-standard range (on request)

### Process connection and material

- D G 1/4 A, DIN EN ISO 1179-2, 1.4404
- 3 G 1/2 B, EN 837-1, 1.4404
- G G 1/2 A u. 11,6 mm drill hole, ISO 228-1, 1.4404
- 9 Others (on request)

### Sensor seal

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

### Electrical connection

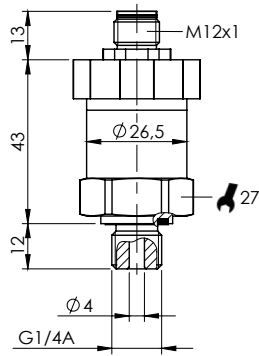
- 1 Connector EN 175301-803A
- A Connector M12x1 4-pole
- 6 2 m cable
- 0 5 m cable
- H 10 m cable
- R 25 m cable
- 9 Others (on request)

### Options

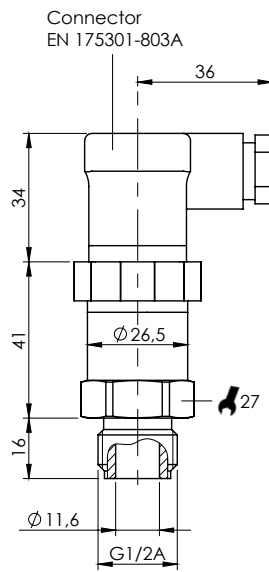
- 0 Without potted electronics
- 1 Potted electronics



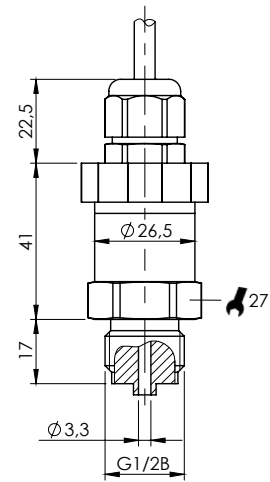
## DIMENSIONS



PROCESS CONNECTION ■ TYPE D



■ TYPE G



■ TYPE 3