

# PD41

**Nöding**

Messtechnik



## Datasheet Differential Pressure Transmitter PD41

### PERFORMANCE FEATURES

- Measuring sensor with stainless steel membranes made of 1.4404
- Smallest measuring range: 0...50 mbar
- Largest measuring range: 0...20 bar
- Negative pressure measuring range: up to -20 bar
- Accuracy  $\leq 0,2\%$
- One-sided overload capability up to 250 bar
- Rugged industrial design
- Analog output: 4...20 mA, 2-wires  
0...10 V, 3-wires

### AREAS OF APPLICATION

- Gaseous media
- Liquid media
- Hygiene applications
- Viscous and pasty media
- Aggressive media
- Pressure superimposed level measurement

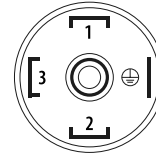
The PD40/41 models are characterized by a robust design and a significantly high overload capability. Stainless steel membrane and process connection are laser-welded, resulting in high media resistance and long-term stability. Each measuring range is temperature compensated, which in combination with the piezoresistive measuring principle results in a very accurate measurement even at lowest pressures. Various electrical connection options allow easy integration and are protected against dust and water with IP 67.

## 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
Power supply	
20 mA Output	9...30 V DC
10 V Output	15...30 V DC
Signal characteristics	
Accuracy	$\leq \pm 0,2 \% \text{ FS @ } 25^\circ\text{C}$
Hysteresis	$\leq \pm 0,05 \% \text{ FS}$
Long term stability	$\leq \pm 0,1 \% \text{ FS/Year}$
Static pressure influence	$\leq \pm 0,1 \% \text{ FS/ } 10 \text{ bar}$
Response time	200 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero	$\leq \pm 0,02 \% \text{ FS/Kelvin}$
Span	$\leq \pm 0,02 \% \text{ FS/Kelvin}$
Temperature ranges	
Medium temperature	-25...120 °C
Surrounding temperature	-25...85 °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	Stainless steel 1.4404 with silicone oil filling
Surroundings	
Protection type	IP 67
Exemplary weight	
PD41-4P01-R11-S0 (figure p. 1)	Approx. 1100 g

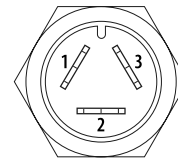
## ELECTRICAL CONNECTION

Connector  
EN 175301-803A



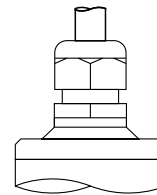
**4...20 mA 2-wires**  
 PIN 1: Signal +  
 PIN 2: Signal -  
**0...10 V 3-wires**  
 PIN 1: in +  
 PIN 2: in -  
 PIN 3: out +

Quickon-Connector



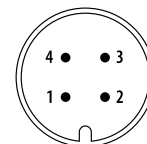
**4...20 mA 2-wires**  
 PIN 1: Signal +  
 PIN 2: Signal -  
**0...10 V 3-wires**  
 PIN 1: in +  
 PIN 2: in -  
 PIN 3: out +

Cable connection



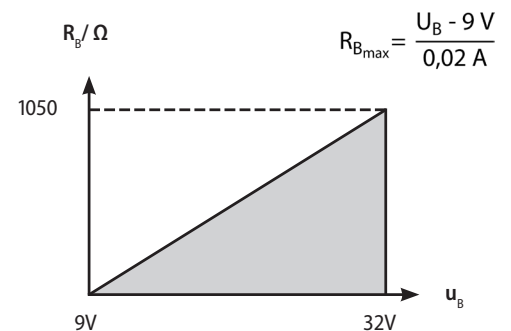
**4...20 mA 2-wires**  
 brown: Signal +  
 white: Signal -  
**0...10 V 3-wires**  
 red: in +  
 black: in -  
 white: out +

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	Code	Measuring ranges	Code
		-25...25 mbar / -2,5...2,5 kPa	BE6
0...50 mbar / 0...5 kPa	PB0	-50...50 mbar / -5...5 kPa	BB0
0...60 mbar / 0...6 kPa	PA9	-60...60 mbar / -6...6 kPa	BA9
0...75 mbar / 0...7,5 kPa	PY1	-75...75 mbar / -7,5...7,5 kPa	BY1
0...100 mbar / 0...10 kPa	P00	-100...100 mbar / -10...10 kPa	B00
0...160 mbar / 0...16 kPa	P01	-160...160 mbar / -16...16 kPa	B01
0...200 mbar / 0...20 kPa	PB1	-200...200 mbar / -20...20 kPa	BB1
0...250 mbar / 0...25 kPa	P02	-250...250 mbar / -25...25 kPa	B02
0...300 mbar / 0...30 kPa	PX5	-300...300 mbar / -30...30 kPa	BX5
0...370 mbar / 0...37 kPa	PY2	-370...370 mbar / -37...37 kPa	BY2
0...400 mbar / 0...40 kPa	P03	-400...400 mbar / -40...40 kPa	B03
0...500 mbar / 0...50 kPa	PB7	-500...500 mbar / -50...50 kPa	BB7
0...600 mbar / 0...60 kPa	P04	-600...600 mbar / -60...60 kPa	B04
0...1 bar / 0...100 kPa	P05	-1...1 bar / -100...100 kPa	B05
0...1,6 bar / 0...160 kPa	P06	-1,6...1,6 bar / -160...160 kPa	B06
0...2 bar / 0...200 kPa	PB3	-2...2 bar / -200...200 kPa	BB3
0...2,5 bar / 0...250 kPa	P07	-2,5...2,5 bar / -250...250 kPa	B07
0...3 bar / 0...300 kPa	PX3	-3...3 bar / -300...300 kPa	BX3
0...4 bar / 0...400 kPa	P08	-4...4 bar / -400...400 kPa	B08
0...5 bar / 0...500 kPa	PF1	-5...5 bar / -500...500 kPa	BF1
0...6 bar / 0...600 kPa	P09	-6...6 bar / -600...600 kPa	B09
0...10 bar / 0...1 MPa	P10	-10...10 bar / -1...1 MPa	B10
0...16 bar / 0...1,6 MPa	P11	-16...16 bar / -1,6...1,6 MPa	B11
0...20 bar / 0...2 MPa	PB5	-20...20 bar / -2...2 MPa	BB5
Non-standard range	P99	Non-standard range	P99

## ORDERING CODE

### Output signal

- 1 0...10 V 3-wires
- 4 4...20 mA 2-wires

### Ranges

Measuring ranges see table

- 99 Non-standard range (on request)

### Process connection and material

- 0** Standard flange Pmax. 100 bar  
G 1/4 inside, ISO 228-1, 1.4404
- R** Standard flange Pmax. 100 bar  
1/4-18 NPT, 1.4404
- S** Heavy duty flange Pmax. 250 bar  
1/4-18 NPT, 1.4404
- M** Heavy duty flange Pmax. 160 bar  
M10, 1.4404

### Connection seal

- 1 FPM (Viton), standard
- 3 EPDM
- 5 FFKM (Chemraz/Kalrez)

### Electrical connection

- 1 Connector EN 175301-803A
- A Connector M12x1
- F Quickon-Connector
- 6 2 m cable
- 0 5 m cable
- H 10 m cable
- 9 Others (on request)

### Mounting position \*

- S Horizontal pressure connection
- L Vertical, top low connection
- H Vertical, top high connection

### Options

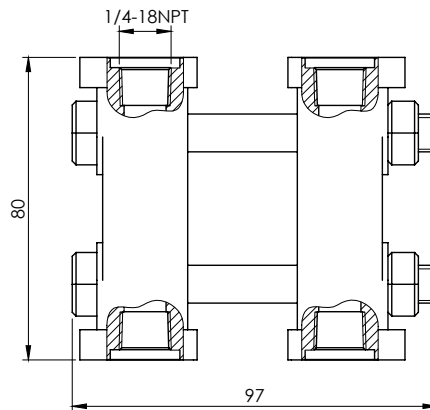
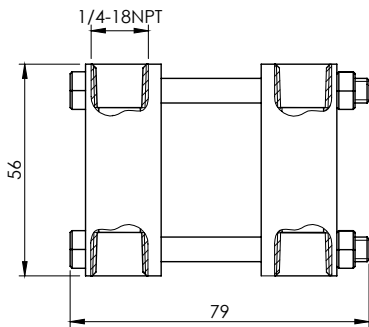
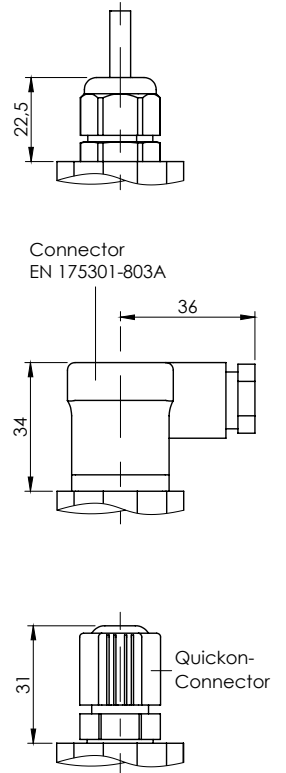
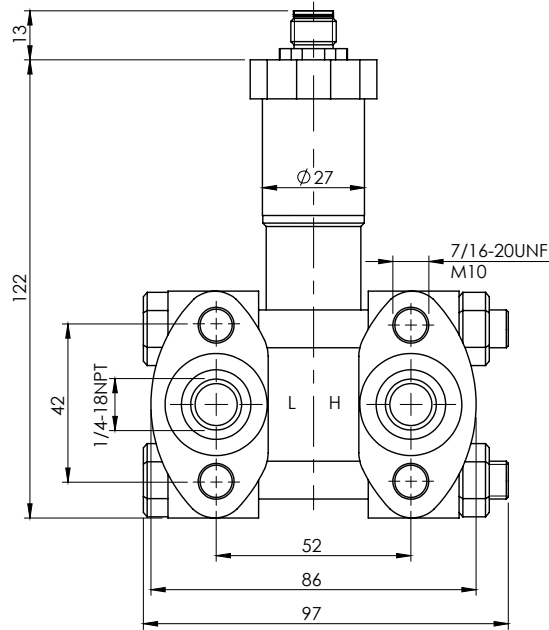
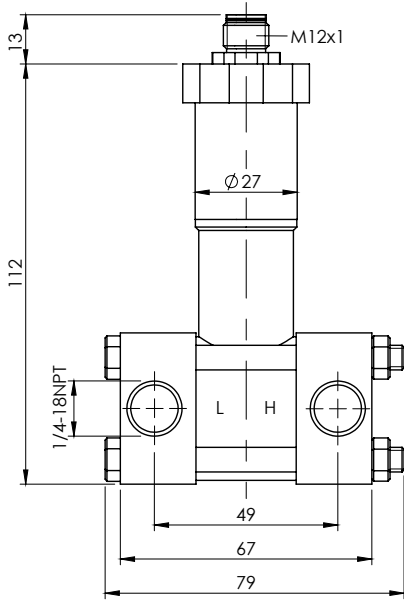
- 0 none

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\*Note!

In order to avoid a position-dependent zero point shift, please specify the mounting position when ordering. Illustrations: Standard mounting position, horizontal pressure connections.

**DIMENSIONS**



PROCESS CON. ■ TYPE 0/R

■ TYPE S/M