

# PD121

## Pressure transmitter for viscous and pasty media

The PD121 Pressure Transmitter features a flush diaphragm made of stainless steel AISI 316L and a silicon measuring cell; it converts pressure into an electrical signal of 4-20 mA. The flush diaphragm enables easy cleaning, which is essential for the use of sensors in the food and beverage industries. Depending on the device variant, we offer transmitters for gauge or vacuum pressure, as well as universal devices capable of measuring both negative and positive pressure. The PD121 transmitters are applied for pressure measurement in liquid, viscous, pasty, adhesive, crystallizing, and polluted media compatible with stainless steel AISI 316L / 1.4435 (AISI 304L / 1.4307).

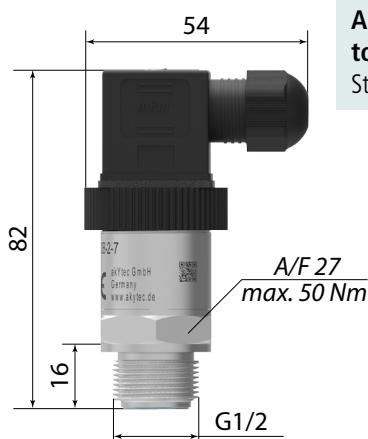
### Functions and features:

- Flush diaphragm
- Wide variety of measuring ranges
- Laser-welded diaphragm (no sealing)
- Silicon sensor
- Low temperature influence:  $\leq 0.1\%$  /  $10\text{ }^\circ\text{C}$
- Good long term stability:  $< 0.2\%$  / year
- Compact design
- Overload limit: 200 % FS
- Easy to clean
- Level measurement

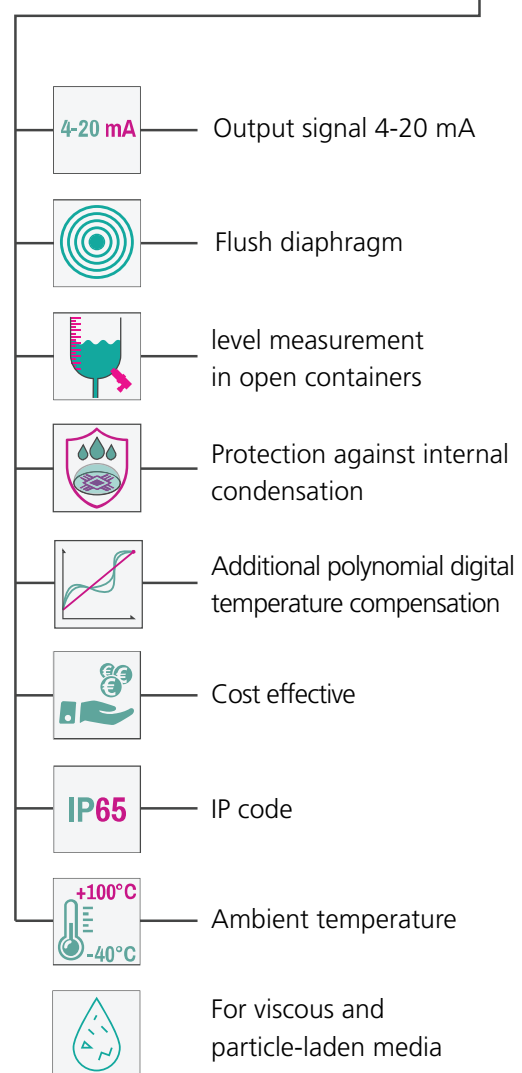
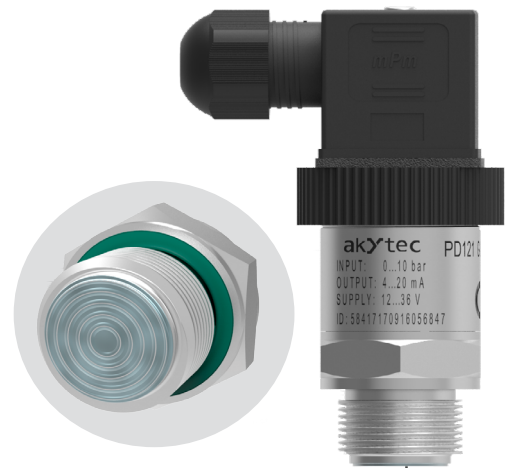
### Areas of application:

- Suitable for hygienic application
- General industrial applications
- Food and beverage industry
- Environmental industry
- Paints and varnishes

### Dimensions:



Accuracy according to IEC 60770  
Standard: 0.25 % FSO

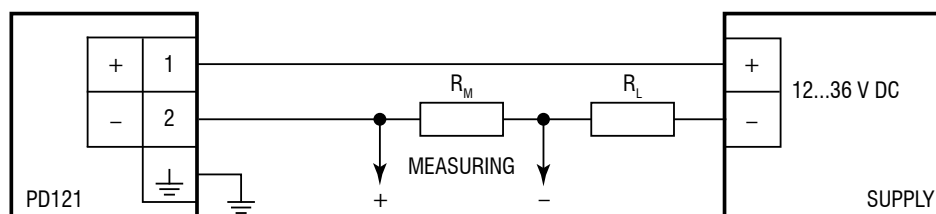


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### Technical Data:

Measuring ranges											
Nominal pressure, bar	0...-1	0...-0.6	0...-0.4	0...-0.25	0...-0.16	0.16	0.25	0.4	0.6	1	1.6
Overpressure, bar	2...-1	2...-1	2...-1	0.7...-0.7	0.7...-0.7	0.7	0.7	2	2	2	10
Burst pressure, bar	4	4	4	1.4	1.4	1.4	1.4	4	4	4	20
Nominal pressure, bar	2.5	4	6	10	16	25	40				
Overpressure, bar	10	10	20	20	60	60	200				
Burst pressure, bar	20	20	40	40	120	120	400				
Vacuum resistance	$P_N \geq 1$ bar: unlimited vacuum resistance $P_N < 1$ bar: on request										
Supply / Output signal											
Power supply	12...36 V DC										
Output signal	4...20 mA										
Performance											
Accuracy	standard: $\pm 0.25$ % FSO $\pm 0.5$ % FSO (for the following ranges, bar: -0.16...0; 0...0.16; -0.125...0.125; -0.2...0.2)										
Permissible load	0...1000 ohm										
Influence effects	supply: 0.01 % FSO / 10 V; load: 0.05 % FSO / kohm										
Temperature stability	$\leq \pm 0.1$ % FSO / 10 °C										
Response time	$\leq 100$ ms										
Permissible temperatures											
Permissible temperatures	medium: -40...100 °C environment: -40...80 °C storage: -40...80 °C										
Electrical protection											
Short-circuit protection	yes										
Reverse polarity protection	yes										
Electromagnetic compatibility	emission and immunity according to EN 61326										
Mechanical stability											
Vibration	9 g RMS (25...2000 Hz) according to DIN EN 60068-2-6										
Shock	480 g / 1 ms according to DIN EN 60068-2-27										
Materials											
Pressure connection	stainless steel 304 L										
Enclosure	stainless steel 304 L										
Diaphragm	stainless steel 316 L										
Media wetted parts	pressure connection, diaphragm										
Miscellaneous											
Current consumption	max. 70 mA										
Weight	approx. 400 g										
Installation position	any										
Operational life	> 500 000 hours										
CE-conformity	EMC Directive: 2004/108/EC										

### Wiring diagram (2-wire)



### Pin configuration

Supply +	1
Supply -	2
Shield	ground pin

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Ordering Code:

PD121 X - X X X X - X - X

Input [bar]								
0...-1	V	1	P	0	B			
0...-0.6	V	6	0	0	M			
0...-0.4	V	4	0	0	M			
0...-0.25	V	2	5	0	M			
0...-0.16*	V	1	6	0	M			
0...0.16*	G	1	6	0	M			
0...0.25	G	2	5	0	M			
0...0.4	G	4	0	0	M			
0...0.6	G	6	0	0	M			
0...1	G	1	P	0	B			
0...1.6	G	1	P	6	B			
0...2.5	G	2	P	5	B			
0...4	G	4	P	0	B			
0...6	G	6	P	0	B			
0...10	G	0	1	0	B			
0...16	G	0	1	6	B			
0...25	G	0	2	5	B			
0...40	G	0	4	0	B			
-0.125...0.125*	C	1	2	5	M			
-0.2...0.2*	C	2	0	0	M			
-0.3...0.3	C	3	0	0	M			
-0.5...0.5	C	5	0	0	M			
-0.8...0.8	C	8	0	0	M			
-1...1	C	1	P	0	B			
-1...3	C	3	P	0	B			
-1...5	C	5	P	0	B			
-1...9	C	9	P	0	B			
-1...15	C	0	1	5	B			
-1...24	C	0	2	4	B			
Accuracy								
0.25%						2		
Pressure connection								
G 1/2"							7	

V – vacuum, G – gauge, C – combined

\* Available only with accuracy 0.5%