

# Diaphragm seal pressure transmitter

## Model PY106

### Applications

- Hydraulic systems and switches
- Refrigeration and air conditioning systems
- Food, Pharmaceutical, Hygiene and other industries
- CIP/SIP in-line cleaning/sterilization system



**PY 106 Pressure Transmitter**

### Special features

- Measuring ranges : 0 ... 100 bar
- Accuracy: up to 0.1% F.S
- Flush diaphragm pressure sensor with thread structure
- High accuracy, high reliability
- Vacuum-tight
- Strong anti-interference, good long-term stability

### Description

PY 106 diaphragm pressure transmitter transmits pressure to the measuring instrument through the system packing inside the diaphragm sealing system.

Diaphragm sealing systems are used to protect pressure measuring instruments from aggressive, adherent, crystallizing, corrosive, highly viscous, environmentally harmful or toxic media. Diaphragms made of stainless steel provide isolation from the medium.

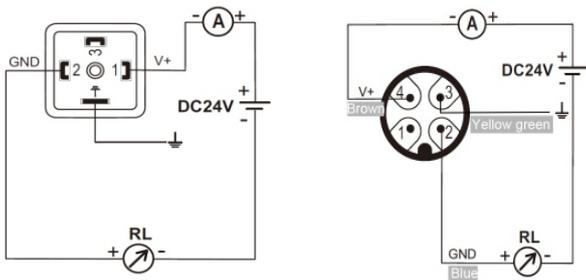
- Hygienic pressure measurement in sanitary applications for the food and beverage industry
- Mounting to pipelines and vessels with 4 ... 20 mA output signal
- Pressure/vacuum monitoring during cleaning, sterilisation, pressure testing
- For gases, compressed air, vapour; liquid, pasty, powdery and crystallising media

# Specifications

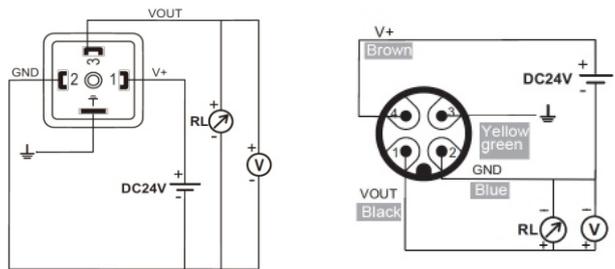
Basic information	
Pressure types	
Pressure ranges	0 ... 100 bar
Accuracy	Standard: $\leq \pm 0.5$ % of span Option: $\leq \pm 0.2$ % or $\leq \pm 0.25$ % of span <sup>1</sup> 1) Only for measuring ranges $\geq 1$ bar
Non-linearity (per IEC 61298-2)	$\leq \pm 0.2$ % of span BFSL
Non-repeatability	$\leq \pm 0.1$ % of span
Temperature error in rated temperature range	Rated temperature range: 0 ... 80 °C
Mean temperature coefficient of zero point	Measuring range $> 0.25$ bar: $\leq \pm 0.2$ % of span/10 K Measuring range $\leq 0.25$ bar: $< \pm 0.4$ % of span/10 K
Mean temperature coefficient of span	$\leq \pm 0.2$ % of span/10 K
Adjustability of zero point and span	Adjustment is made using potentiometers inside the instrument. Zero point: $\pm 5$ %      Span: $\pm 5$ %
Response Time	2ms
Output signal	<ul style="list-style-type: none"> <li>■ Current (2-wire), 4~20mA DC (Load resistance <math>\leq 750\Omega</math>)</li> <li>■ Current (3-wire), 0~10 mA DC (Load resistance <math>\leq 1.5K\Omega</math>)</li> <li>■ Voltage (2-wire), 1~5V DC (Load resistance <math>\geq 250K</math>)</li> <li>■ Voltage (3-wire), 0~5V DC (Load resistance <math>\geq 250K</math>)</li> <li>■ Voltage (3-wire), 0~10V DC (Load resistance <math>\geq 250K</math>)</li> </ul>
Load in $\Omega$	Depending on the signal type the following loads apply: <ul style="list-style-type: none"> <li>■ Current (2-wire): <math>\leq</math> (power supply - 10 V) / 0.02 A</li> <li>■ Current (3-wire): <math>\leq</math> (power supply - 3 V) / 0.02 A</li> <li>■ Voltage (3-wire): <math>&gt;</math> max. output signal / 1 mA</li> </ul>
Power supply	The power supply depends on the selected output signal <ul style="list-style-type: none"> <li>■ 4 ... 20 mA (2-wire): DC 10 ... 30 V</li> <li>■ 0 ... 20 mA (3-wire): DC 10 ... 30 VDC</li> <li>■ 1 ... 5 V (2-wire): DC 10 ... 30 V</li> <li>■ 0 ... 10 V: DC 14 ... 30 VDC</li> <li>■ 0 ... 5 V: DC 10 ... 30 V</li> </ul>
Overpressure	5bar or 3×FS, whichever is smaller
electrical connection	Hirschmann connector, waterproof connector optional
Material wetted	Diaphragm: Stainless steel 1.4435 [316L] Diaphragm seal: Stainless steel 1.4435 [316L] Case: Stainless steel 1.4571 [316Ti]
non-wetted	Zero adjustment ring: PBT/PET GF30 Angular connector: PBT/PET GF30
Ambient conditions	-40...85°C with air humidity $\leq 95$ %r.h.
Weight	280 g

# Wire

## 2-wire 4mA ~ 20mA Output

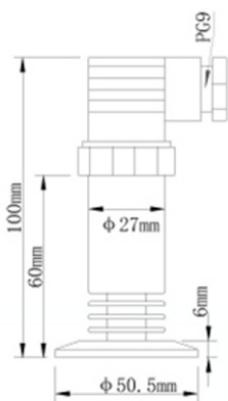


## 3-wire Voltage Output

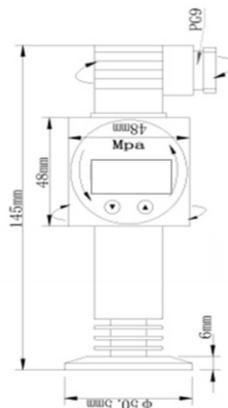


# Dimension (Unit: mm)

### with angular connector DIN 175301-803 A

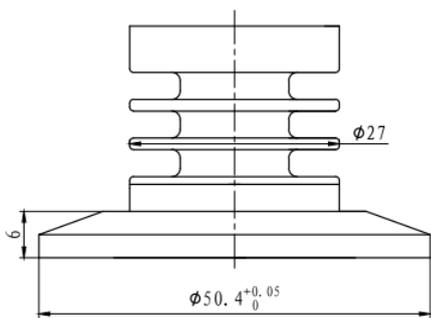


### Display typewith DIN 175301-803 A-type angle connector

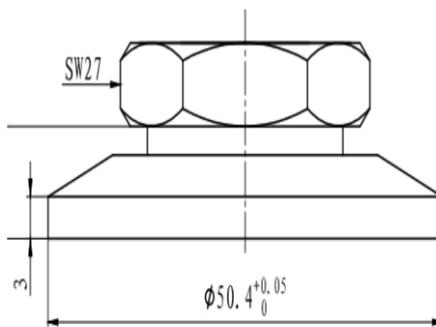


# Process connections (Unit: mm)

### DN 25 Clamp connection with heat sink



### DN 25 Clamp



## Measuring ranges, gauge pressure

Overview pressure ranges				
Type	pressure ranges(bar)	Accuracy (± of full scale value)	media	Burst Pressure
GP0.20	0...0.20	0.2(0.25,0.5)	Gas/Liquid	4X
GP 0.25	0...0.25	0.2(0.25,0.5)	Gas/Liquid	4X
GP 0.4	0...0.4	0.2(0.25,0.5)	Gas/Liquid	3X
GP 0.6	0...0.6	0.2(0.25,0.5)	Gas/Liquid	3X
GP 1	0...1	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 1.6	0...1.6	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 2.5	0...2.5	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 4	0...4	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 6	0...6	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 10	0...10	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 16	0...16	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 25	0...25	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 40	0...40	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 60	0...60	0.1(0.2,0.25,0.5)	Gas/Liquid	3X
GP 100	0...100	0.1(0.2,0.25,0.5)	Gas/Liquid	3X

## Measuring ranges, absolute pressure

Overview pressure ranges				
Type	pressure ranges(bar)	Accuracy (± of full scale value)	media	Burst Pressure
AP 0.25	0...0.25	0.2(0.25,0.5)	Gas	4X
AP 0.4	0...0.4	0.2(0.25,0.5)	Gas	3X
AP 0.6	0...0.6	0.2(0.25,0.5)	Gas	3X
AP 1	0...1	0.1(0.2,0.25,0.5)	Gas	3X
AP 1.6	0...1.6	0.1(0.2,0.25,0.5)	Gas	3X
AP 2.5	0...2.5	0.1(0.2,0.25,0.5)	Gas	3X

# Order code

Order code				
Model	Accuracy	Pressure ranges	Output	Process connection
PY 106	A010(0.1%F.S) A020(0.2%F.S) A025(0.25%F.S) A050(0.5%F.S)	Table of reference measuring ranges	A: 4~20mA DC B: 0~10 mA DC C: 1~5V DC D: 0~5V DC E: 0~10V DC	DN 25 Clamp DN 25 Clamp connection with heat sink
<b>Example order number</b> <b>PY106-A020-GP40(0...40)bar-A-G1/2</b> PY 106 with DN25, 0.2%F.S, 4-20 mA, 0...10bar				