

Micro pressure transmitter

Model PY109

Applications

- Environmental protection, chemical, coating
- Petrochemical industry
- Power plant
- Urban water supply
- Hydro exploration

Special features

- Measuring ranges : -10 ...10 mbar or 0 ...400 mbar
- Accuracy: up to 0.1% F.S
- Pressure-sensitive diaphragm material is ceramic, good corrosion resistance
- Overpressure can be up to tens of times, can withstand strong pressure impacts Pressure-sensitive diaphragm and media contact surface is large
- Pressure port has general, non-cavity two kinds of structure options

Description

PY 109 Micro pressure transmitter is a pressure measurement product specially developed for applications in the field of micro pressure measurement. Ceramic sensor and integrated stainless steel fully sealed structure, small size, strong overload resistance, high stability, good corrosion resistance and reliable performance.



PY 109 Pressure Transmitter

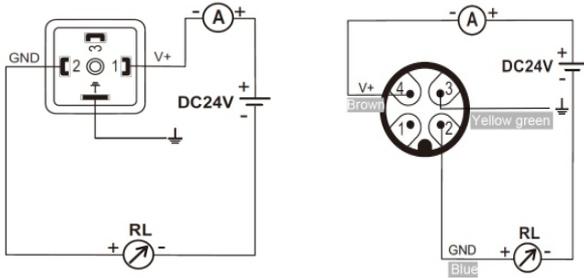
The pressure of the measured medium is transmitted through the ceramic diaphragm. The high-precision signal processing circuit is located in the stainless steel housing, which converts the sensor output signal into a standard output signal.

Specifications

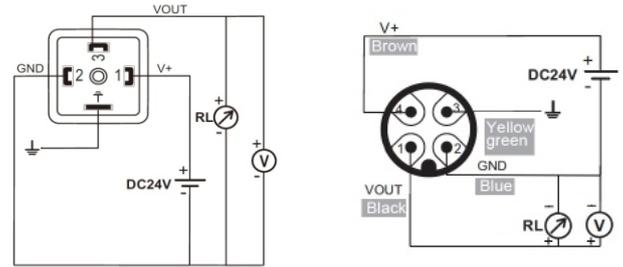
Basic information	
Pressure types	
Pressure ranges	-10 ... 0 ... 10mbar, 0 ... 400mbar
Accuracy	Standard: $\leq \pm 0.5$ % of span Option: $\leq \pm 0.1$ % or $\leq \pm 0.25$ % of span ¹ 1) Only for measuring ranges ≥ 0.25 bar
Non-linearity (per IEC 61298-2)	$\leq \pm 0.2$ % of span BFSL
Non-repeatability	$\leq \pm 0.1$ % 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 ≤ 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: ± 5 % Span: ± 5 %
Response Time	2ms
Output signal	<ul style="list-style-type: none"> ■ Current (2-wire), 4~20mA DC (Load resistance $\leq 750\Omega$) ■ Current (3-wire), 0~10 mA DC (Load resistance $\leq 1.5K\Omega$) ■ Voltage (2-wire), 1~5V DC (Load resistance $\geq 250K$) ■ Voltage (3-wire), 0~5V DC (Load resistance $\geq 250K$) ■ Voltage (3-wire), 0~10V DC (Load resistance $\geq 250K$)
Load in Ω	Depending on the signal type the following loads apply: <ul style="list-style-type: none"> ■ Current (2-wire): \leq (power supply - 10 V) / 0.02 A ■ Current (3-wire): \leq (power supply - 3 V) / 0.02 A ■ Voltage (3-wire): $>$ max. output signal / 1 mA
Power supply	The power supply depends on the selected output signal <ul style="list-style-type: none"> ■ 4 ... 20 mA (2-wire): DC 10 ... 30 V ■ 0 ... 20 mA (3-wire): DC 10 ... 30 VDC ■ 1 ... 5 V(2-wire): DC 10 ... 30 V ■ 0 ... 10 V: DC 14 ... 30 VDC ■ 0 ... 5 V: DC 10 ... 30 V
electrical connection	Hirschmann connector, waterproof connector optional
Thread	M20×1.5 male, M42×1.5 male
Material	316L
Ambient conditions	-40...85°C with air humidity ≤ 95 %r.h.
Weight	320 g

Wire

2-wire 4mA ~ 20mA Output

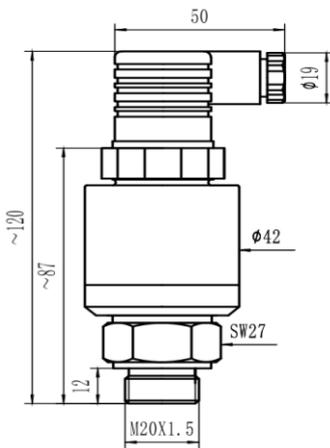


3-wire Voltage Output

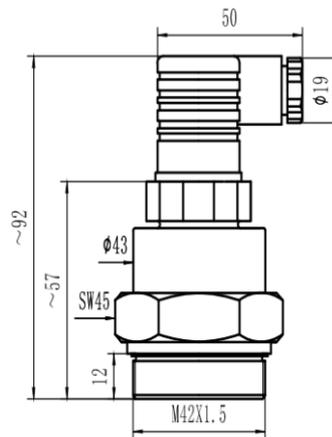


Dimension (Unit: mm)

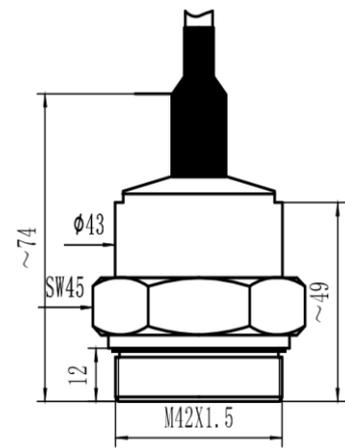
with angular connector DIN 175301-803 A



with angular connector, Non-cavity



with cable outlet IP 67, Non-cavity



Measuring ranges, gauge pressure

Overview pressure ranges				
Type	pressure ranges(mbar)	Accuracy (\pm of full scale value)	media	Burst Pressure(bar)
GP 10	0...10	0.2(0.25,0.5)	Gas/Liquid	3
GP 20	0...20	0.2(0.25,0.5)	Gas/Liquid	6
GP 40	0...40	0.2(0.25,0.5)	Gas/Liquid	6
GP 60	0...60	0.2(0.25,0.5)	Gas/Liquid	6
GP 80	0...80	0.2(0.25,0.5)	Gas/Liquid	6
GP 100	0...100	0.1(0.2,0.25,0.5)	Gas/Liquid	6
GP 200	0...200	0.1(0.2,0.25,0.5)	Gas/Liquid	6
GP 400	0...400	0.1(0.2,0.25,0.5)	Gas/Liquid	6

Measuring ranges, vacuum and +/- measuring ranges

Overview pressure ranges				
Type	pressure ranges(mbar)	Accuracy (± of full scale value)	media	Burst Pressure(bar)
VP -10	-10...0	0.2(0.25,0.5)	Gas/Liquid	1.8
VP -20	-20...0	0.2(0.25,0.5)	Gas/Liquid	1.8
VP -40	-40...0	0.2(0.25,0.5)	Gas/Liquid	1.8
VP -60	-60...0	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP -100	-100...0	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 10	-10...10	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 20	-20...20	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 40	-40...40	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 100	-100...100	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 110	-10...100	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8
VP 510	-50...100	0.1(0.2,0.25,0.5)	Gas/Liquid	1.8

Order code

Order code				
Model	Accuracy	Pressure ranges	Output	Process connection
PY 109	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	P1: M20*1.5 P2: Non-cavity connector type(M42×1.5 male) P3: Non-cavity cable type(M42×1.5 male)
Example order number PY109-A050-GP10(0...100)mbar-A-M20*1..5 PY 109 with M20*1.5, 0.5%F.S, 4-20 mA, 0...100mbar				