

## PX1

### ANTI WATER HAMMER PRESSURE TRANSMITTER



#### Description

**PX1** pressure transmitter provides a cost-effective solution based on micro-fused technology for exceptional long-term stability. Its specialized amplifier circuit delivers both linear correction and temperature compensation, ensuring accurate measurements.

Designed for hydraulic applications up to 50 bar, this robust transmitter can withstand pressure spikes like cavitation, liquid hammer, and severe medium influences. Even under harsh environmental conditions, it provides reliable pressure measurement. The sensing diaphragm, constructed from durable stainless steel 174-PH, resists transient overload pressure. This versatility makes the **PX1** ideal for various environmental conditions, meeting various needs for pressure measurement and control.

#### Application

- Water treatment
- Pumps and compressors control
- Water pressure control systems
- IoT terminal
- Building automation systems
- Machine tools
- Energy management systems
- Pipeline systems



#### Main Features

■ <b>Micro-fused Technology</b>	■ <b>Accuracy:</b> $\leq \pm 1\%$ FS
■ <b>Pressure Type:</b> Gauge, Sealed Gauge	■ <b>Media Temperature:</b> $-10^{\circ}\text{C} \dots +80^{\circ}\text{C}$
■ <b>Measuring Range:</b> 0 ... 10 bar to 0 ... 50 bar	■ <b>Electrical Connection:</b> Cable Outlet (Default 0.5 m)
■ <b>Output Signal:</b> 4 ... 20 mA, 0.5 ... 2.5 VDC 0.5 ... 4.5 VDC, I <sup>2</sup> C	■ <b>Waterproof Rating:</b> IP65 Protection Class IP68 Protection Class
■ <b>High Overpressure Resistance</b>	■ <b>Process Connection:</b> G 1/4" A, Male, std. ISO 1179-2 G 3/8" A, Male, std. ISO 1179-2 1/8" NPT, Male, std. ANSI/ASME B1.20.1 1/4" NPT, Male, std. ANSI/ASME B1.20.1
■ <b>Water Hammer Resistant</b>	
■ <b>Temperature Compensation and Linear Correction</b>	

## Technical Specifications

Pressure Type	Gauge, Sealed Gauge
Pressure Range	0 ... 10 bar to 0 ... 50 bar Pressure Range ≤ 35 bar : Gauge Pressure Range > 35 bar : Sealed Gauge
Overpressure	1.5 x FS
Burst pressure	5 x FS (Max. 100 bar)
Accuracy	≤ ±1 %FS
Long-term Stability	≤ ±0.3 %FS/year
Response time	≤ 4 ms
Operation Temperature	-10 ... +80 °C
Storage Temperature	-40 ... +100 °C
Compensated Temperature	0 ... +70 °C
Vibration	5 g, (10 ... 500 Hz) (IEC 60068-2-6)
Shock	10 g / 11 ms (IEC 60068-2-27)
Protection Rating	IP65, IP68
Insulation Resistance	100 MΩ, 500 V
Weight	≤ 60 g

## Structure Material

### ■ Wetted part

Isolation Diaphragm: Stainless Steel 17-4PH

Pressure Port: Stainless Steel 304 / Stainless Steel 316L

Sealing Ring: FKM / NBR

### ■ Non-Wetted part

Housing: Stainless Steel 304

Cable: Polyvinyl chloride (PVC), 5-core, φ5 mm


## Output Signal

Power Supply	Output Signal	Output Format	Load Resistance	Transmission Distance
10 ... 28 VDC	4 ... 20 mA	2-wire	$\leq (\text{Supply} - 10) / 0.02 (\Omega)$	< 1000m (@24VDC, load 250Ω)
5 ± 0.1 VDC	0.5 ... 4.5 VDC	3-wire	> 10kΩ	≤ 5m
	0.5 ... 2.5 VDC			
3.3 ± 0.1 VDC	0.5 ... 2.5 VDC			

## Electrical Connection

Wire Color	2-wire	3-wire
Red	+V	+V
Green	N.C	+V Out
Black	I Out	GND

## Electrical Definition

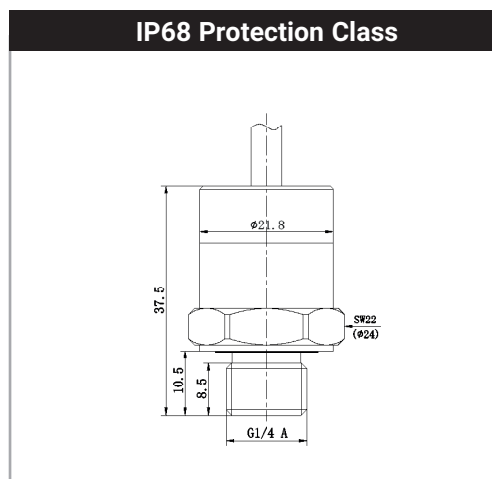
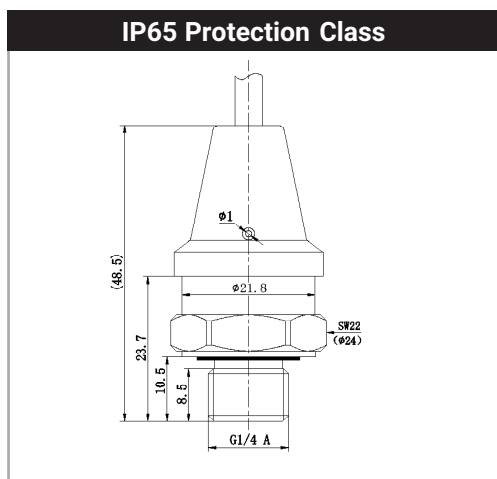
Code	Definition
+V	Supply Voltage +
GND	Supply Voltage -
I Out	Current Output
+V Out	Voltage Output
N.C	No Connection
	Grounding

## Electromagnetic Compatibility

Code	Test Item	Standard
1	Electrostatic Discharge Immunity	IEC 61000-4-2
2	Radio-frequency Field	IEC 61000-4-3
3	Power Frequency Magnetic Field	IEC 61000-4-8
4	Immunity of Electrical Fast Pulse Group	IEC 61000-4-4
5	Surge Immunity	IEC 61000-4-5
6	RF Induction Conduction Anti-harassment	IEC 61000-4-6

## Dimension

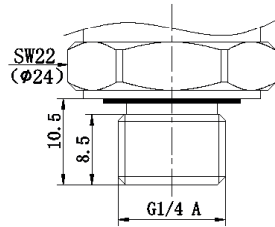
(Unit:mm)



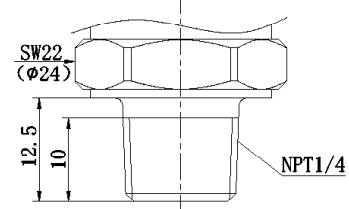
## Process Connection

(Unit:mm)

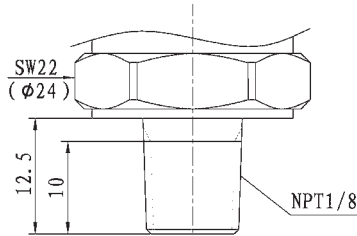
13: G 1/4" A, Male, std. ISO 1179-2



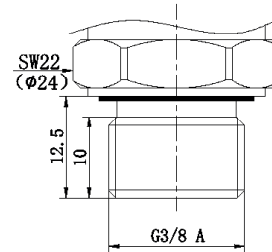
23: 1/4" NPT, Male, std. ANSI/ASME B1.20.1



22: 1/8" NPT, Male, std. ANSI/ASME B1.20.1



14: G 3/8" A, Male, std. ISO 1179-2



The maximum torque applied during the disassembly of the transmitter is 20N·m to 25N·m.

## How to Order

PX1 - X - (X...X) X - XXX - XXX - XX - XX - X - XX-XX - XX - X - X

Pressure Type	
Gauge	G
Sealed Gauge	S

Pressure Range	
e.g. (0 ... 10)	

Unit	
kPa	mbar
MPa	bar
kgf/cm²	psi

Power Supply	
3.3 ± 0.1 VDC	S01
5 ± 0.1 VDC	S04
10 ... 28 VDC	S11
Customized	XX

Output Signal	
4 ... 20 mA / 2-wire	C01
0.5 ... 2.5 VDC / 3-wire	V06
0.5 ... 4.5 VDC / 3-wire	V07
I²C	T01
Customized	XX

Accuracy	
≤ ±1 %FS	A6
Customized	XX

Process Connection	
G 1/4" A, Male, std. ISO 1179-2	13
G 3/8" A, Male, std. ISO 1179-2	14
1/8" NPT, Male, std. ANSI/ASME B1.20.1	22
1/4" NPT, Male, std. ANSI/ASME B1.20.1	23
Customized	XX

Water Proof Rating	
65	IP65 Protection Class
68	IP68 Protection Class
XX	Customized

Sealing Material	
W	Without Seal
N	NBR
F	FKM
X	Customized

Material			
	Diaphragm	Pressure Port	Housing
62	SS 17-4PH	SS 304	SS 304
64	SS 17-4PH	SS 316L	SS 304
XX	Customized		

Electrical Connection	
C1	Cable Outlet, Mat. PVC
XX	Customized

Extension Cable	
Ln	n means cable length (exc. L0 = 0.5 m)
XX	Customized

Snubber	
null	Without Snubber
S	With Snubber
C	Customized Pressure Channel

## Example

### PX1-G-(0 ... 10)bar-S11-C01-A6-13-C1-L0-64-N-65

Gauge Pressure Transmitter, Range: 0 ... 10 bar

Supply: 10 ... 28 VDC, Output: 4 ... 20 mA, Accuracy:  $\leq \pm 1$  %FS

Process Connection: G 1/4" A Male, Without Snubber

Electrical Connection: Cable Outlet, Material: PVC, Cable Length: 0.5 meter

Wetted Parts Material: Stainless Steel 17-4PH, Stainless Steel 316L + NBR Sealing

Waterproof Rating: IP65

#### ■ Notes:

1. For products which are powered by S01 or S04 and feature cable connections, the cable length must be less than 10m.
2. If you require a calibration certificate for the ordered product or have any other special requirements, please reach out to our company for assistance.