

# PX4

## MICRO FUSED PRESSURE TRANSMITTER



### Description

PX4 pressure transmitter is based on micro-fused technology with excellent long-term stability, providing high overpressure capability and outstanding durability despite substantial shock and vibration. The PX4's robust stainless steel structure contains no filling oils and no internal O-rings.

This highly reliable transmitter is designed for use in hydraulic and almost all industrial applications, offering accurate pressure measurement over a wide temperature range, even under harsh environmental conditions. It is an ideal choice for applications where better performance, compact size, and low cost are essential.

### Application

- Machine tools
- Hydraulics and pneumatics
- Plant control and monitoring
- Refrigeration systems
- Pumps and compressors control
- Energy management systems
- HVAC systems



### Main Features

<ul style="list-style-type: none"> <li>■ <b>Micro-fused Technology</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Pressure Type:</b> Gauge, Sealed Gauge</li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Measuring Range:</b> 0 ... 10 bar to 0 ... 1000 bar</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Accuracy @ 25°C:</b> <math>\leq \pm 0.5\%FS</math>, <math>\leq \pm 1\%FS</math></li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Media Temperature:</b> <math>-40^{\circ}C</math> ... <math>+125^{\circ}C</math></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Process Connection:</b> <ul style="list-style-type: none"> <li>G 1/2" B, Male, std. EN 837</li> <li>M20 x 1.5, Male, std. EN 837</li> <li>G 1/4" A, Male, std. ISO 1179-2</li> <li>G 3/8" A, Male, std. ISO 1179-2</li> <li>1/4" NPT, Male, std. ANSI/ASME B1.20.1</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Output Signal:</b> <ul style="list-style-type: none"> <li>4 ... 20 mA</li> <li>0 ... 10 VDC</li> <li>0.5 ... 4.5 VDC</li> <li>0.5 ... 4.5 VDC Ratiometric</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>No Internal Seals or O-rings</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Electrical Connection:</b> DIN EN 175301-803, Form C           <ul style="list-style-type: none"> <li>M12x1, 4-pin, Mat. Steel</li> <li>Packard Metri-Pack, 3-pin</li> <li>Cable Outlet (Default 0.5 m)</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>■ <b>Compact Design, Low Cost</b></li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>High Overpressure Resistance</b></li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>High Resistance to Shock and Vibration</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Non-oil Filled Design</b></li> </ul>

## Technical Specifications

Pressure Type	Gauge, Sealed Gauge
Pressure Range	0 ... 10 bar to 0 ... 1000 bar Pressure Range ≤ 35 bar : Gauge Pressure Range > 35 bar : Sealed Gauge
Overpressure	3 x FS (Pressure Range ≤ 50 bar) 2 x FS (50 bar ≤ Pressure Range ≤ 750 bar) 1.5 x FS (750 bar ≤ Pressure Range ≤ 1000 bar)
Burst Pressure	5 x FS (Max. 2000 bar)
Accuracy @ 25°C	≤ ±0.5 %FS, ≤ ±1 %FS (Pressure Range < 16 bar)
Total Error Band	≤ ±1 %FS (@ -10 ... +80 °C)
Long Term Stability	≤ ±0.25 %FS/year
Response time	< 4 ms
Operation Temperature	-40 ... +125 °C
Storage Temperature	-40 ... +125 °C
Compensation Temperature	-10 ... +80 °C
Vibration Resistance	20 g (20 ... 2000 Hz) (IEC 60068-2-6)
Shock Resistance	100 g / 6 ms (IEC 60068-2-27)
Protection Class	IP65 IP67, IP68 (Optional)
Insulation Resistance	100 MΩ, 500 V
Impact Life	10 million times
Weight	≤ 100 g

## Structure Material

### ■ Wetted part

Isolation Diaphragm: Stainless Steel 17-4PH

Pressure Port: Stainless Steel 17-4PH / Stainless Steel 304

Sealing Ring: FKM / NBR

### ■ Non-Wetted part

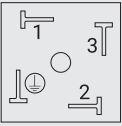


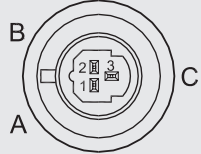
Housing: Stainless Steel 304

Cable: Polyurethane (PUR), 5-core, φ5 mm


## Output Signal

Power Supply	Output Signal	Output Format	Load Resistance	Transmission Distance
8... 33 VDC	4 ... 20 mA	2-wire	$\leq (\text{Supply} - 8) / 0.02(\Omega)$	< 1000 m (@24 VDC, load 250Ω)
	0.5 ... 4.5 VDC	3-wire	> 10kΩ	< 5 m (@24 VDC, load > 10kΩ)
11 ... 33 VDC	0 ... 10 VDC			
5 ± 0.1 VDC	0.5 ... 4.5 VDC			

## Electrical Connection

Definition	D2 DIN EN 175301-803, Form C		C2 Cable Outlet, Mat. PUR		M2 M12x1, 4-pin, Mat. Steel		P1 Packard Metri-Pack, 3-pin	
								
	Current 2-wire	Voltage 3-wire	Current 2-wire	Voltage 3-wire	Current 2-wire	Voltage 3-wire	Current 2-wire	Voltage 3-wire
+V	1	1	Red	Red	1	1	2 (B)	2 (B)
I Out +V Out	2	3	Black	Black	3	3	1 (A)	3 (C)
GND	N.C	2	N.C	White	N.C	2	N.C	1 (A)

## Electrical Definition

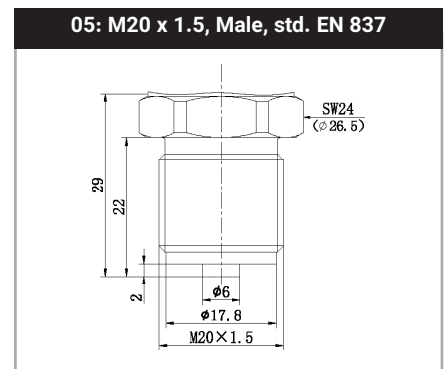
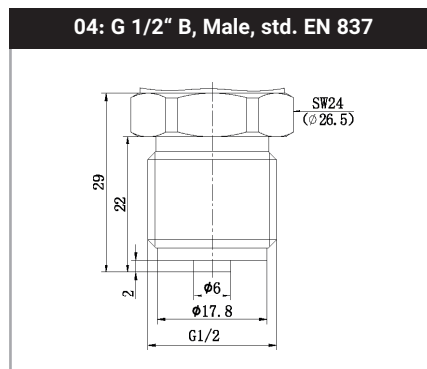
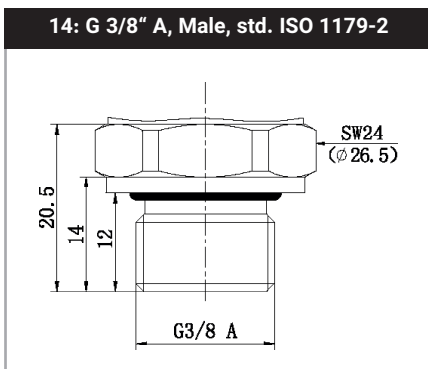
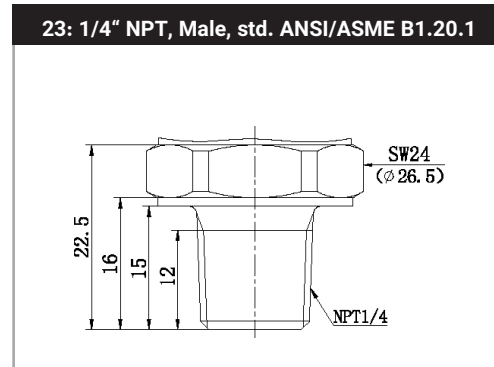
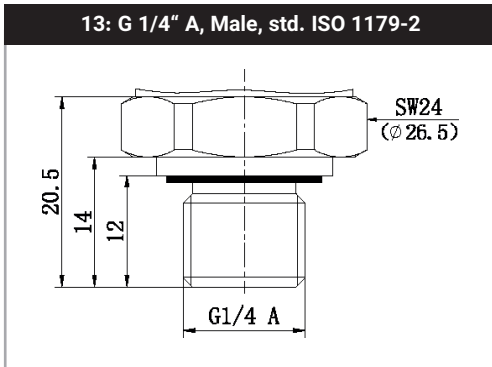
Code	Definition
+V	Supply Voltage +
GND	Supply Voltage -
I Out	Current Output
+V Out	Voltage Output
N.C	No Connection
	Grounding

## 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

## Process Connection

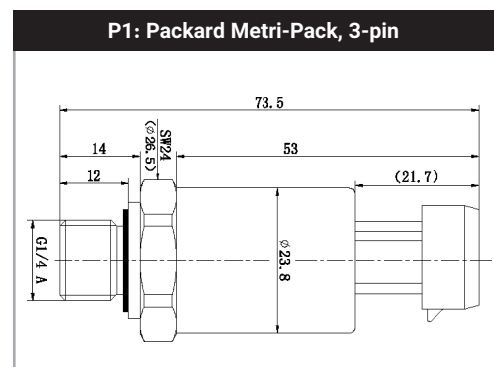
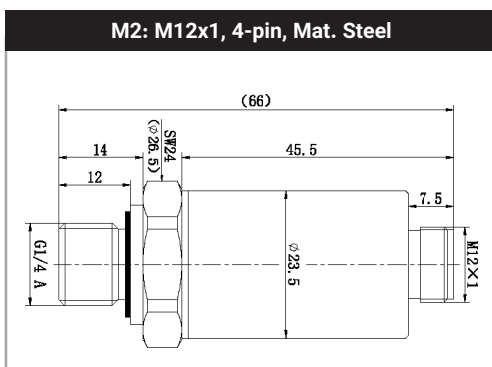
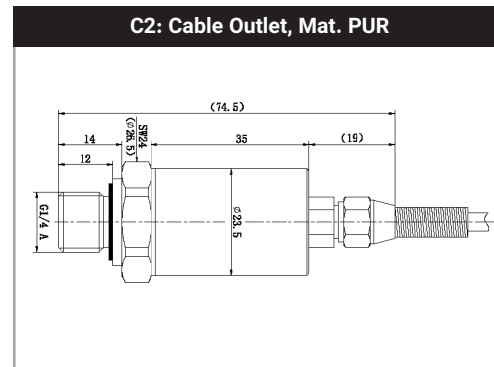
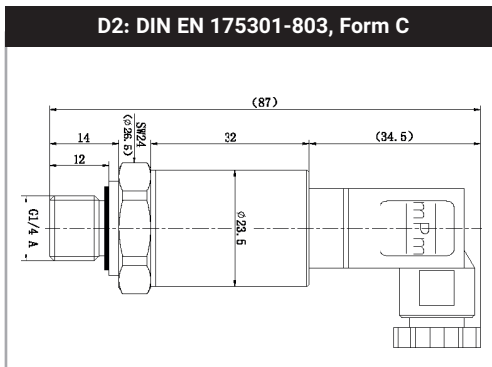
(unit:mm)



The maximum torque applied during the disassembly of the transmitter is 30N·m to 35N·m.

## Dimension

(unit:mm)



## How to Order

PX4 - X - (X...X) X - XXX - XXX - XX - XX - X - XX-XX - XX - X

Pressure Type	
Gauge	G
Sealed Gauge	S

Pressure Range
e.g. (0 ... 400)

Unit	
kPa	mbar
MPa	bar
kgf/cm <sup>2</sup>	psi

Power Supply	
5 ± 0.1 VDC	S04
8 ... 33 VDC	S09
11 ... 33 VDC	S14
Customized	XX

Output Signal	
4 ... 20 mA / 2-wire	C01
0 ... 10 VDC / 3-wire	V01
0.5 ... 4.5 VDC / 3-wire	V07
Customized	XX

Accuracy	
≤ ±0.5 %FS	A5
≤ ±1 %FS	A6
Customized	XX

Process Connection	
G 1/2" B, Male, std. EN 837	04
M20 x 1.5, Male, std. EN 837	05
G 1/4" A, Male, std. ISO 1179-2	13
G 3/8" A, Male, std. ISO 1179-2	14
1/4" NPT, Male, std. ANSI/ASME B1.20.1	23
Customized	XX

Sealing Material	
W	Without Seal
N	NBR
F	FKM
X	Customized

Material			
	Diaphragm	Pressure Port	Housing
62	SS 17-4PH	SS 304	SS 304
66	SS 17-4PH	SS 17-4PH	SS 304
XX	Customized		

Electrical Connection	
D2	DIN EN 175301-803, Form C
M2	M12x1, 4-pin, Mat. Steel
P1	Packard Metri-Pack, 3-pin
C2	Cable Outlet, Mat. PUR
XX	Customized

Extension Cable	
null	Without Assorted Connector
B1	With Assorted Connector
B2	Female Straight Connector M12x1, 4-pin Integrated with 2m Cable
B3	Female Right Angle Connector M12x1, 4-pin Integrated with 2m Cable
Ln	n means cable length when electrical connection is C2 type (exc. L0 = 0.5 m)
XX	Customized

Snubber	
null	Without Snubber
S	With Snubber
C	Customized Pressure Channel

## Example

### PX4-G-(0 ... 16)bar-S09-C01-A5-13-D2-B1-66-F

Gauge Pressure Transmitter, Range: 0 ... 16 bar

Supply: 8 ... 33 VDC, Output: 4 ... 20 mA, Accuracy:  $\leq \pm 0.5$  %FS

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

Electrical Connection: DIN EN 175301-803 Form C With Assorted Connector

Wetted Parts Material: Stainless Steel 17-4PH + FKM Sealing

#### ■ Notes:

1. The error band in the entire temperature zone (- 40 ... 125 °C) is  $\leq \pm 2$  %FS.

If you have special requirements for the error of a certain temperature zone, please consult with our company for customization.

2. Products with an IP68 protection class are available; please consult with our company to customize this demand.

3. For products which are powered by S04 and feature cable connections, the cable length must be less than 10m.

4. If you require a calibration certificate for the ordered product or have any other special requirements, please reach out to our company for assistance.