

PX5

UNIVERSAL PRESSURE TRANSMITTER



Description

PX5 a general-purpose industrial pressure transmitter, offers accurate pressure measurement from -1 to 1000 bar. Available in both Absolute and Gauge pressure ranges, it is based on reliable piezoresistive sensor technology with excellent stability, combined with a dedicated electronic circuit, making it a versatile yet cost-effective transmitter in an integrated structure. A variety of standard output signals, as well as mechanical and electrical connections, make the **PX5** suitable for a wide range of applications. In addition to threaded connections, different flush versions are available, particularly suitable for pasty, viscous, and polluted media. An optional ATEX-approved version of this product is available for explosion protection for flammable gasses (Zone 0).

Application

- Hydraulics and pneumatics
- Food and beverage manufacturing
- Energy management systems
- Petroleum and petrochemical industry
- Hydrology and water resources
- Pressure monitoring in the hazardous areas
- Engine manufacturing
- Petrol/gasoline pressure measurement



Main Features

<ul style="list-style-type: none"> ■ Piezoresistive Sensing Element 	<ul style="list-style-type: none"> ■ Pressure Type: Absolute, Gauge, Sealed Gauge
<ul style="list-style-type: none"> ■ Measuring Range: -1 ... 0 bar to 0 ... 1000 bar 	<ul style="list-style-type: none"> ■ Structure: Membrane Inside, Flush Membrane
<ul style="list-style-type: none"> ■ Output Signal: 4 ... 20 mA, 0 ... 10 VDC, 0 ... 5 VDC 1 ... 5 VDC, 0.5 ... 2.5 VDC 0.5 ... 4.5 VDC, 0.5 ... 4.5 VDC Ratiometric 	<ul style="list-style-type: none"> ■ Process Connection: M20 x 1.5, Male, std. EN 837 G 1/4" A, Male, std. ISO 1179-2 G 1/2" A, Male, std. ISO 1179-2 M20 x 1.5, Male, std. ISO 9974-2 1/4" NPT, Male, std. ANSI/ASME B1.20.1 Clamp DN25 Clamp DN25 with Heat Sink
<ul style="list-style-type: none"> ■ Excellent Stability 	
<ul style="list-style-type: none"> ■ Intrinsically Safe Type, Ex ia IIC T6 Ga 	
<ul style="list-style-type: none"> ■ Explosion-proof Type, Ex d IIC T6 Gb 	
<ul style="list-style-type: none"> ■ ATEX Type, II 1 G Ex ia IIC T4 Ga 	<ul style="list-style-type: none"> ■ Electrical Connection: DIN EN 175301-803, Form A M12x1, 4-pin, Mat. Steel Cable Outlet Cable Outlet with Conduit Connection
<ul style="list-style-type: none"> ■ CE, RoHS 	

Technical Specifications

Pressure Type	Absolute, Gauge, Sealed Gauge
Pressure Range	-1 ... 0 bar ~ 100 mbar ... 1000 bar
Overpressure	2 x FS or 1100 bar (minimum value is valid)
Accuracy	See Accuracy in the table below
Long-term Stability	±0.3 %FS/year
Operation Temperature	-30 ... +80 °C (D1, M2) -20 ... +70 °C (C0, C1) -20 ... +80 °C (C2) -30 ... +60 °C (Intrinsically safe type, D1) -20 ... +60 °C (Intrinsically safe type, C types) -20 ... +60 °C (Exd type)
Storage Temperature	-40 ... +120 °C -20 ... +85 °C (C types)
Response time	<1 ms
Vibration	10 g (55 ... 2000 Hz)
Shock	100 g / 11 ms
Protection Rating	IP65, IP67
Weight	≤ 270 g

Accuracy

Pressure Type	Range	Accuracy
Gauge (G)	0 bar ... 100 mbar < X < 200 mbar	±1 %FS
	200 mbar ≤ X ≤ 1 bar	±0.5 %FS
	1 bar ≤ X ≤ 35 bar	±0.25 %FS
		±0.5 %FS
	-1 bar ... -350 mbar < X ≤ 2 bar	±1 %FS
	-1 bar ... -350 mbar < X < 2 bar ... 35 bar	±0.5 %FS
Absolute (A)	0 bar ... 700 mbar < X ≤ 1 bar	±1 %FS
	1 bar < X < 10 bar	±0.5 %FS
	10 bar < X < 1000 bar	±0.25 %FS
		±0.5 %FS
Sealed Gauge (S)	35 bar < X < 1000 bar	±0.25 %FS
		±0.5 %FS

Note:

In flush structure products, For pressure range < 250 mbar the accuracy can only be 1 %FS.

Test standard: IEC 60770-1:2010

Environment temperature: 20°C ± 5°C

Relative humidity: 45% ... 75%

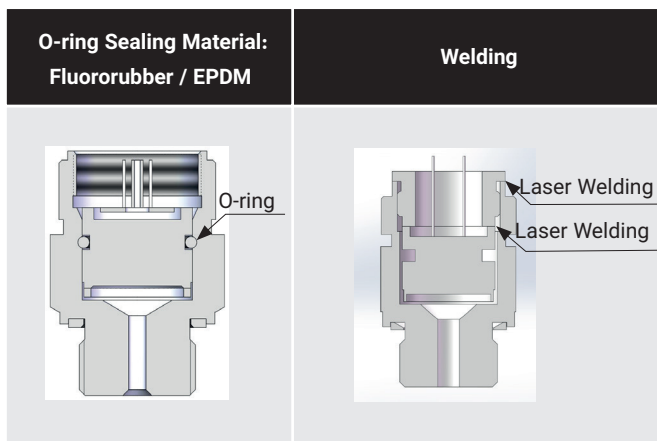
Thermal Drift

Zero Thermal Drift	±0.05 %FS/°C (≤1bar)
	±0.03 %FS/°C (>1bar)
Span Thermal Drift	±0.05 %FS/°C (≤1bar)
	±0.03 %FS/°C (>1bar)

Output Signal

Power Supply	Output Signal	Output Format	Load Resistance
11 ... 28 VDC	4 ... 20 mA	2-wire	≤(Supply - 11)/0.02 (Ω)
	1 ... 5 VDC	3-wire	≥10kΩ
	0 ... 5 VDC		
	0.5 ... 4.5 VDC		
15 ... 28 VDC	0 ... 10 VDC		
5 ± 0.1 VDC	0.5 ... 4.5 VDC	3-wire	≥10kΩ
	0.5 ... 2.5 VDC		
3.3 ± 0.1 VDC	0.5 ... 2.5 VDC		

Sensor Sealing



Structure Material

Wetted Parts

Isolated Diaphragm: Stainless Steel 316L / Tantalum

Pressure Port: Stainless Steel 304
Stainless Steel 316L
Hastelloy C

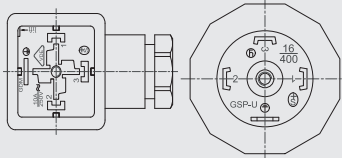


Sealing Ring: FKM / NBR

Non-wetted Parts


Housing: Stainless Steel 304 / Stainless Steel 316L

Cable Wire: PE / PUR / PVC

Electrical Connection

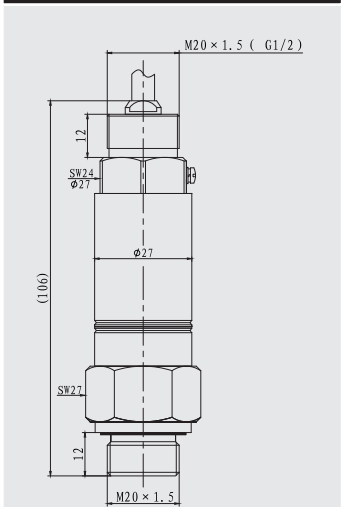
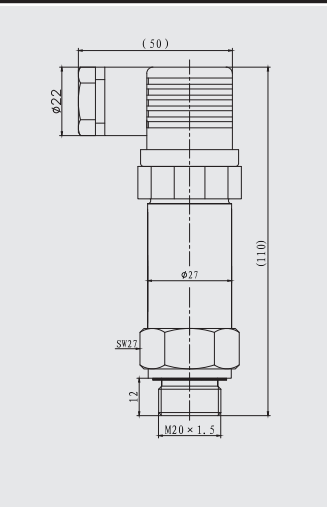
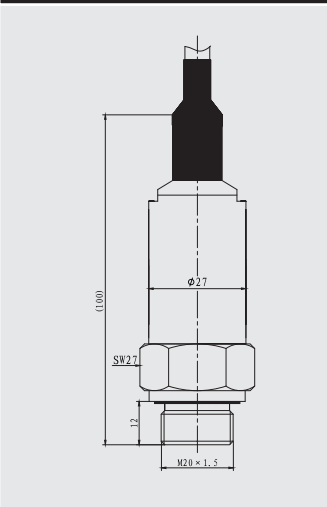
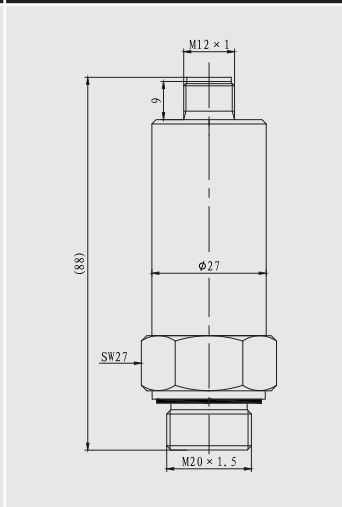
Definition	D1 DIN EN 175301-803, Form A		C Types Cable Wire, Mat. PE / PUR / PVC		M2 M12x1, 4-pin, Mat. Steel		
							
	Current 2-wire	Voltage 3-wire	Current 2-wire	Voltage 3-wire	Current 2-wire	Voltage 3-wire	
+V	1	1	Red	Red	1	1	
I Out +V Out	2	3	Black	White	3	3	
GND	N.C	2	N.C	Black	N.C	2	

Electrical Definition

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

Dimension

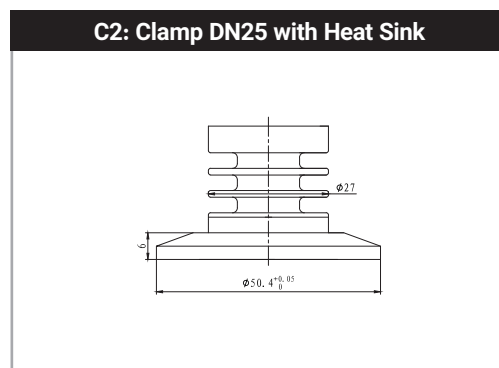
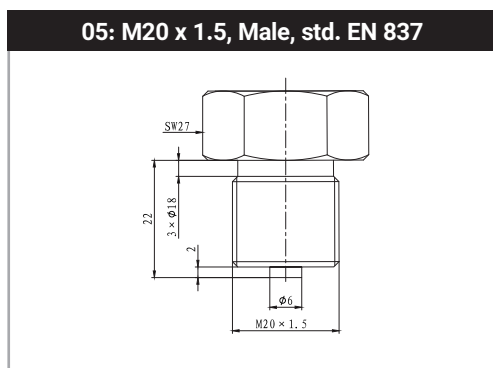
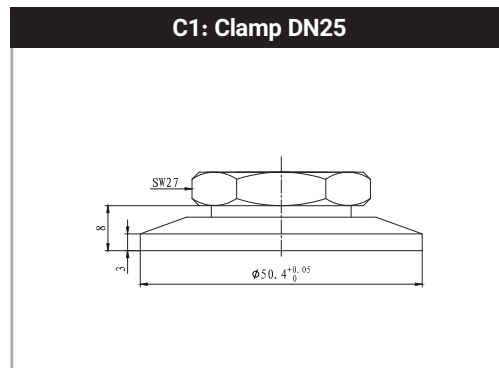
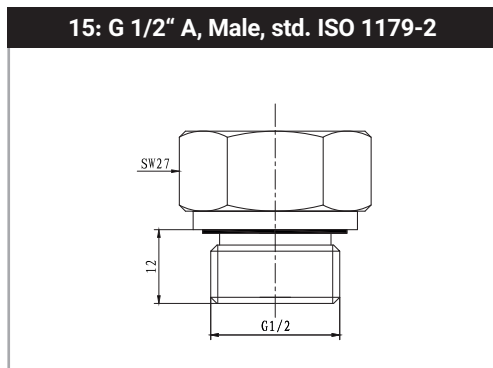
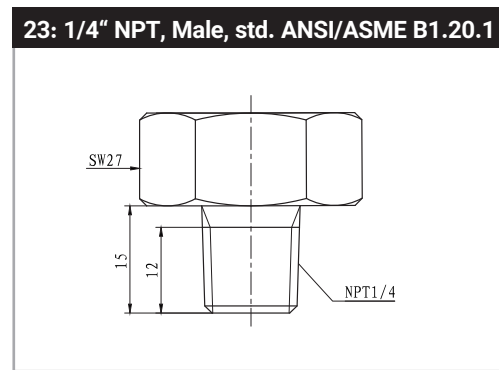
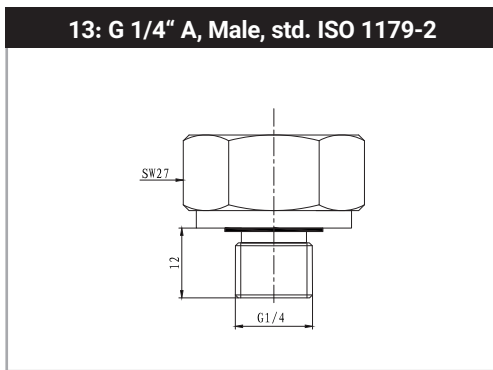
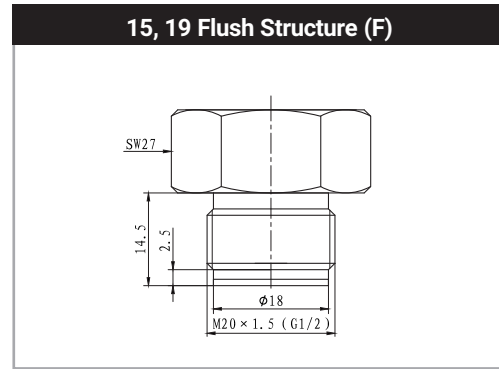
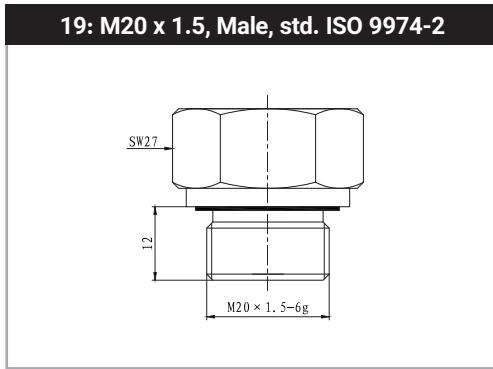
unit: mm

Exd Type (XD)	D1 Types	C Types	M2 Types
			

Process Connection

Process Connection Dimensions

unit: mm



How to Order

PX5 - X - (X...X) X - XXX - XXX - XX - X - XX - X - XX-XX - XX - X - X - X

Pressure Type	
Absolute	A
Gauge	G
Sealed Gauge	S

Pressure Range
e.g. (0 ... 250)

Unit	
kPa	mbar
MPa	bar
kgf/cm ²	psi

Power Supply	
3.3 ± 0.1 VDC	S01
5 ± 0.1 VDC	S04
11 ... 28 VDC	S13
15 ... 28 VDC	S18
Customized	XX

Output Signal	
4 ... 20 mA / 2-wire	C01
0 ... 10 VDC / 3-wire	V01
0 ... 5 VDC / 3-wire	V03
1 ... 5 VDC / 3-wire	V04
0.5 ... 2.5 VDC / 3-wire	V06
0.5 ... 4.5 VDC / 3-wire	V07
Customized	XX

Accuracy	
≤ ±0.25 %FS	B2
≤ ±0.5 %FS	A5
≤ ±1 %FS	A6
Customized	XX

Structure	
Membrane Inside	null
Flush Membrane	F

① Process Connection	
M20 x 1.5, Male, std. EN 837	05
G 1/4" A, Male, std. ISO 1179-2	13
G 1/2" A, Male, std. ISO 1179-2	15
M20 x 1.5, Male, std. ISO 9974-2	19
1/4" NPT, Male, std. ANSI/ASME B1.20.1	23
Clamp DN25	C1
Clamp DN25 with Heat Sink	C2
Customized	XX

Certification Requirement	
null	No Certification Requirement
AT	ATEX
XI	Intrinsically safe type, Ex ia IIC T6 Ga ²
XD	Explosion-proof type, Ex d IIC T6 Ga
MA	Marine Approval

Display Indicator ³	
null	Without Display Indicator
Z4	4 digits LED Digital Indicator
Z5	4 digits LCD Digital Indicator

Sealing Material ⁴	
W	Without Seal
F	FKM
E	EPDM
X	Customized

	Material		
	Diaphragm	Pressure Port	Housing
42	SS 316L	SS 304	SS 304
43	SS 316L	SS 316L	SS 304
44	SS 316L	SS 316L	SS 316L
T2	Tantalum	SS 304	SS 304
TH	Tantalum	Hastelloy C	SS 304
XX	Customized		

Electrical Connection	
D1	DIN EN 175301-803, Form A
M2	M12x1, 4-pin, Mat. Steel
C0	Cable Outlet, Mat. PE
C1	Cable Outlet, Mat. PVC
C2	Cable Outlet, Mat. PUR
C6	Cable Outlet with Conduit Connection
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 C type (exc. L0 = 0.5 m)
XX	Customized

Snubber	
null	Without Snubber
S	With Snubber
C	Customized Pressure Channel

Example

PX5-G-(0 ... 4)bar-S13-C01-A5-F-15-D1-B1-43-F

Gauge Pressure Transmitter, Range: 0 ... 4 bar

Supply: 11 ... 28 VDC, Output: 4 ... 20 mA, Accuracy: $\leq \pm 0.5$ %FS

Process Connection: G 1/2" A Male, Flush Structure

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

Wetted Parts Material: Stainless Steel 316L + FKM Sealing

■ Notes:

1. **1** For flush structure process connection F-15 and F-19, Pressure range: 0 ... 200 mbar to 0 ... 350 bar.
For flush structure Process connection F-C1 and F-C2, Pressure range: 0 ... 350 mbar to 0 ... 350 bar.
2. **2** The intrinsically safe type is only available for current output products.
The product can be intrinsically safe and suitable for marine applications simultaneously, or it can be both intrinsically safe and explosion-proof.
3. **3** It is only available for 4 ... 20 mA output, non-explosion proof, and non-ship-use products with D1 electrical connection.
The power supply must be ≥ 16 VDC.
Ambient temperature should be -20 ... 70 °C for products with Z4 display indicator.
Ambient temperature for products with Z5 display indicator should be -10 ... 60 °C.
Z4/Z5 Datasheets can be found on our website www.hogller.com.
4. **4** FKM Sealing is suitable for medium temperatures between -20 ... 250 °C.
For medium temperatures < -20 °C, EPDM sealing is needed.
5. For products which are powered by S01 or S04 and feature cable connections, the cable length must be less than 10m.
6. If you require a calibration certificate for the ordered product or have any other special requirements, please reach out to our company for assistance.