

High Frequency Pressure Transmitter XY- PTHF

Typical Feature

- Pressure Measurement Range 0~100 MPa
- Accuracy 0.25%FS, 0.5%FS
- Output 0-5V;0-10V, powered by 9~32V (Typical 24V)
- Wide passband and operating temperature range
- Flush diaphragm design to eliminate the cavity effect
- High Frequency Response and high dynamic
- measurement of the natural frequency, range up to 1MHz
- Customized structure diversification is available.



Brief Introduction





XY-PTHF high frequency pressure transmitter is ideal product for measuring high frequencydynamic pressure, such as military engineering, chemical explosion experiments, oil exploration and well test, Scientific Experiments about materials, mechanics, civil engineering, rock mechanics, trauma medicine, hydraulic power and mechanical test, also can be used in other scientific experiments and modern instruments and meters; These test need get exactly data value of high frequency and quick rise pressure waveform, thus we requires the pressure sensor has a high natural frequency, a very short rise time, excellent frequency response, and wide dynamic pressure to ensure enough precision, XY-PTHF is designed and developed for this kind of high requirement, we use micro mechanical processing technology to make the integrated silicon diaphragm have small effective size is and high natural frequency;

The XY-PTHF dynamic Pressure Transducer is a new generation of piezoelectric pressure sensor in dynamic pressure test, because it has excellent elasticity mechanical property, at the same time its comprehensive performance is better than piezoelectric dynamic pressure sensor.

The piezoresistive pressure sensor is recommended priority both in The United States Army Standard and Chinese Army Standard for dynamic measurement of detonation.

In dynamic pressure test, The XY-PTHF pressure sensor has very high natural frequency because it has excellent elasticity mechanical, it is made of high young's elastic modulus of semiconductor silicon and excellent mechanical properties. Combined with the company's advanced internal and external structure design, the frequency loss is reduced. Standard electrical signal output 0 ~ 5VDC,0~10VDC, accuracy 0.25% and 0.5%, pressure measurement range 0~100MPa.

Suggested Applications

-  Military engineering,
-  Chemical explosion experiments,
-  Oil exploration and well test,
-  Scientific Experiments about materials, mechanics, civil engineering, rock mechanics, trauma medicine, hydraulic power and mechanical test and

Other scientific experiments and modern instruments and meters;

More details for XY-PTHF, please contact us.

Specification

Model	XY-PTHF
General Pressure Range	0~50~100~200~400~800KPa 0~1~2~4~6~10~20~40~60~100MPa
Pressure Type	Gauge Pressure Test
Dimension	Diameter Φ27
Overload Capacity	200%
Measurement Medium	Gas or Liquid with Compatibility of Silcom
Response time	Refer details data in below form
Output Single	0 ~ 5VDC,0~10VDC
Power Supply	9-32VDC (Typical 24VDC)
Accuracy	0.25%FS, 0.5%FS
Long-Term Stability/Year	Typical: ±0.1% FS/Year, Maximum ±0.2% FS/Year
Zero Temperature Drift	Typical: ±0.02%FS/°C; Maximum ±0.05%FS/°C
Sensitivity Temperature Drift	Typical: ±0.02%FS/°C; Maximum ±0.05%FS/°C
Reverse Voltage Protect, (RVP)	>15S
Mechanical Life	≥5Million Pressure Cycle
Operation Temperature	-40 ~ 80°C
Compensation Temperature	-20 ~ 80°C
Load Resistance	≤[(U-6.6V)/0.02A] Ω
IP Protection Class	IP65; IP67

Frequency Response Characteristic

Pressure Range	Natural Frequency/Hz	Response Frequency/Hz	Typical Application
0-250,400KPa	100,200K	0-20KHz,200K(Max)	Aerodynamics
0-0.5MPa,4.0MPa	300-750k	0-100K	Trauma medicine
0-5MPa,10MPa	700K-1000K	0-120k	Oil exploration and Engine
0-16MPa,40MPa	800-1200K	0-120k	Turbine blade impact
0-60MPa,100MPa	0-1200K	0-120K	High Frequency Soil stress

Performance Parameter Profile

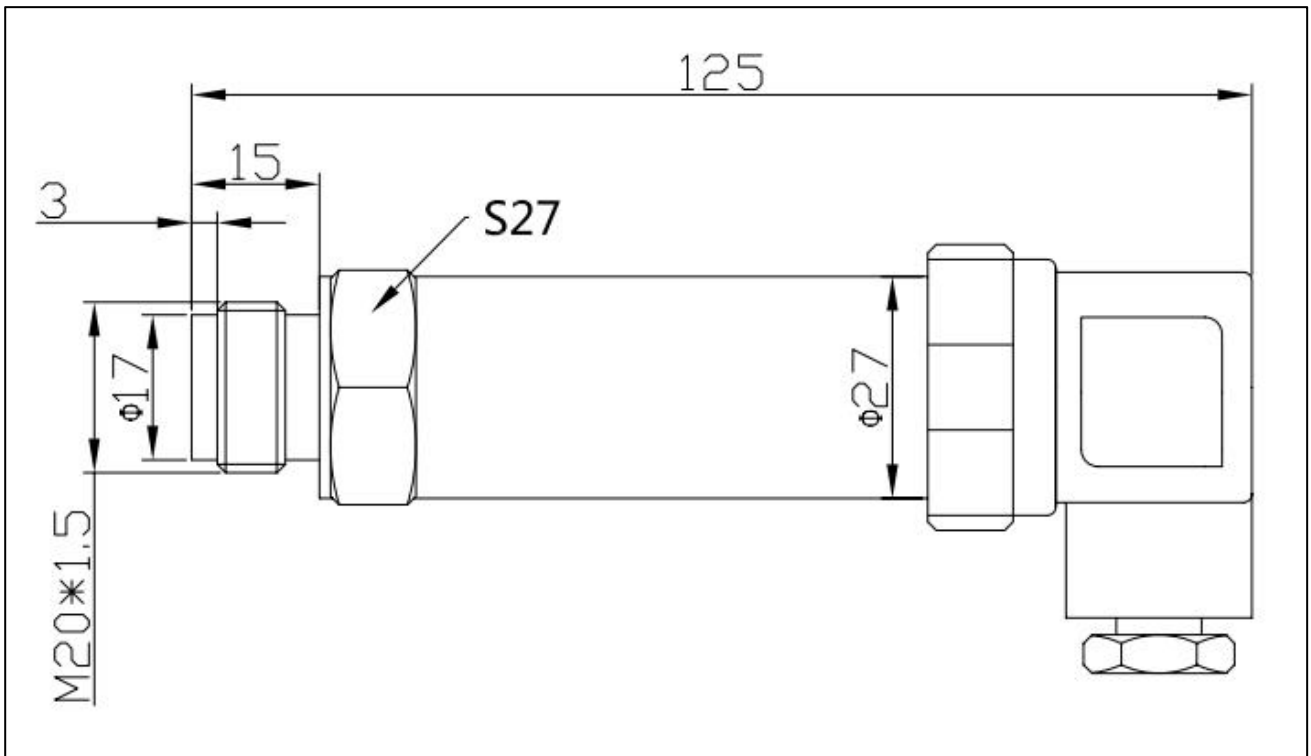
Specification	A	B	C	D
Non-Linearity/±%FS	1.00	0.50	0.20	0.10
Non-repeatability, Hysteresis	0.20	0.15	0.10	0.04
Zero Temperature Coefficient	5.00	3.00	2.00	1.00
Sensitivity Temperature Coefficient	5.00	3.00	2.00	1.00
Zero Drift	0.20	0.15	0.10	0.10

Comprehensive Accuracy	1.00	0.50	0.25	0.15
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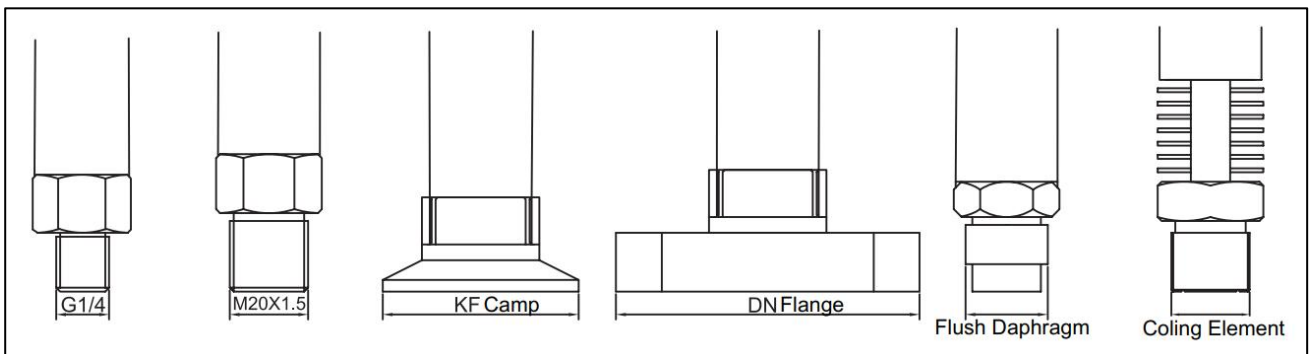
Electronic Connection

4-20mA(2-Wire)	Input +	Red
	Output+	Black
0-10V,0-5V(3-Wire)	Input +	Red
	Input -	Black
	Output+	Green

Dimension(mm)



Mechanical Connection(mm)



How To Order

XY-PT		G		KF		4M		1		A		P2		M3		B1		T1		L	
		Type		Pressure Connection		Pressure Range		Accuracy		Output		Power		Thread		Electrical Connection		dium Temperatu		Additional	
G	General	None	General	XK	(0-XKPa)	1	0.15%	A	4-20mA	P1	5V	M1	M20*1.5	A	HIRSCHMANN	T1	-20~80°C	L	With Display		
GA	Absolute Pressure	P	Diaphragm Seals	XB	(0-XBa)	2	0.25%	R	RS485	P2	24V	M2	G1/4	B	Cable Outlet	T2	-20~120°C	I	Explosion-Proof		
DP	Differential Pressure	DP	Differential Pressure	XM	(0-XMPa)	3	0.50%	V1	0-10V	P3	12-28V	M3	G1/2	C	Circular Connector	T3	0~150°C				
GR	IoT	KF	Clamp	CC	Customized	4	1.00%	V2	0-5V	P6	12V	M4	1/2NPT	CC	Customized	T9	Customized				
GT	Temperature & Pressure	DN	Flange			9	Customized	V3	0.5-4.5V	P9	Customized	M5	1/4NPT								
MT	Mini Thickness	1210	Explosion Proof					CC	Customized			M7	ZG1/4								
MK	Economic	9999	Customized									M9	Customized								
HF	High Frequency																				
A	Air Conditioning																				
B	Ink Corrosion Resistance																				
C	Air Compressor																				
M	Hydraulic Pressure																				
W	Water Pressure																				

Shanghai Xuan Precision Technology Co., Ltd.

Address: No. 969, Yunshan Road Pudong District Shanghai City China

Tel: +86 21 59241315

Email: sales@xvyanprecision.com

Website: www.xvyanprecision.com

Product Manager: Tyler Tou

Cell: +86 189 1797 0680

Email: ttao@Xuyanpercision.com