

## 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

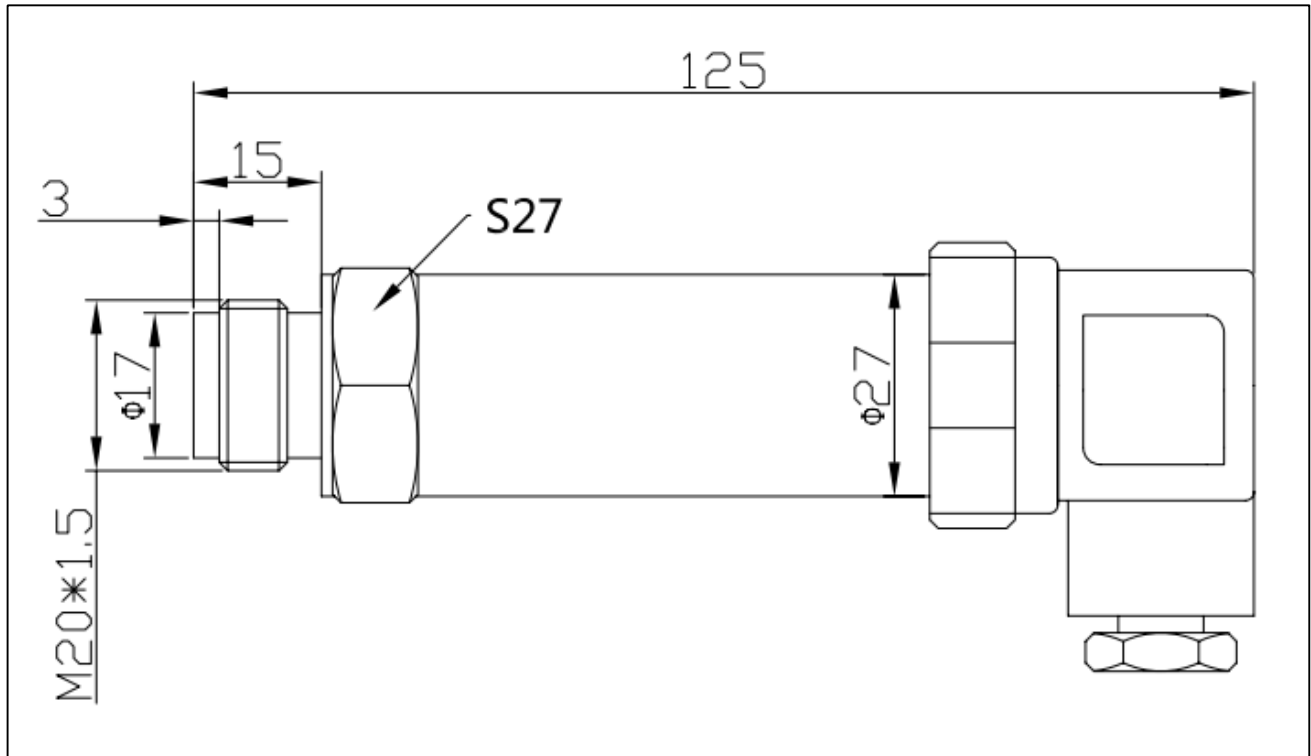
Specification	A	B	C	D
Non-Linearity/±%FS	1.00	0.50	0.20	0.10
Non-repeatability, Hysteresis	0.20	0.15	0.10	0.04

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

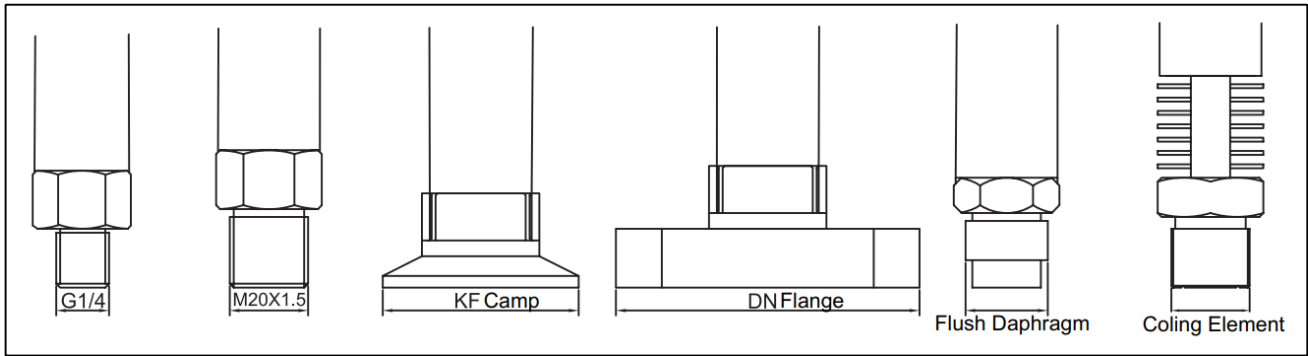
#### Electronic Connection

<b>4-20mA(2-Wire)</b>	Input +	Red
	Output+	Black
<b>0-10V,0-5V(3-Wire)</b>	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 Temperat	Additional
	G General	None General	XK (0-XXPa)	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-XBar)	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-XXMPa)	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									

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