

## GP-2000 Pressure Sensor

### Features

- ✓ Range: 0kPa ~ 0.35MPa...70MPa
- ✓ Temperature compensation
- ✓ 316L housing
- ✓ Small size  $\phi 12.6\text{mm}$
- ✓ High accuracy and stability



### Introduction

GP-2000 series is a compact and isolated oil-filled pressure sensor, which adopts MEMS silicon chip as the core of pressure sensing, and each sensor is manufactured through strict aging, screening and testing to ensure the excellent quality and high reliability of the product.

Featuring high overload resistance and a wide range of temperatures, these products are widely used in hydraulic systems, loading machinery, pumps, and industrial process control.

### Parameters

Items	Parameters
Diaphragm Material	SS 316L
Housing Material	SS 316L
Electrical Connection	Kovar / 100mm silicone rubber wires
Back Tube	SS 316L (only exist on gauge)
Seal Ring	NBR
Power Supply	$\leq 2.0\text{mA DC}$
Impedance Input	$2.5\text{k}\Omega \sim 5\text{k}\Omega$
Impedance Output	$2.5\text{k}\Omega \sim 5\text{k}\Omega$
Response	$< 1\text{ms}$ (10% ~ 90%)
Insulation Resistance	$100\text{M}\Omega$ , 100V DC
Over Pressure	2 x FS
Media Applicability	Fluid which no corrosion on stainless steel and NBR
Shock	No change at 10gRMS, (20 ~ 2000)Hz
Impact	100g, 11ms
Position Effect	Deviate $90^\circ$ from any direction, zero change $\leq \pm 0.05\% \text{FS}$
Standard Condition	Media temperature: $25 \pm 1^\circ\text{C}$ Environment temperature: $25 \pm 1^\circ\text{C}$ Humidity: $50\% \pm 10\% \text{RH}$ Environment pressure: 86 ~ 106kPa Power supply: $1.5 \pm 0.0015\text{mA DC}$

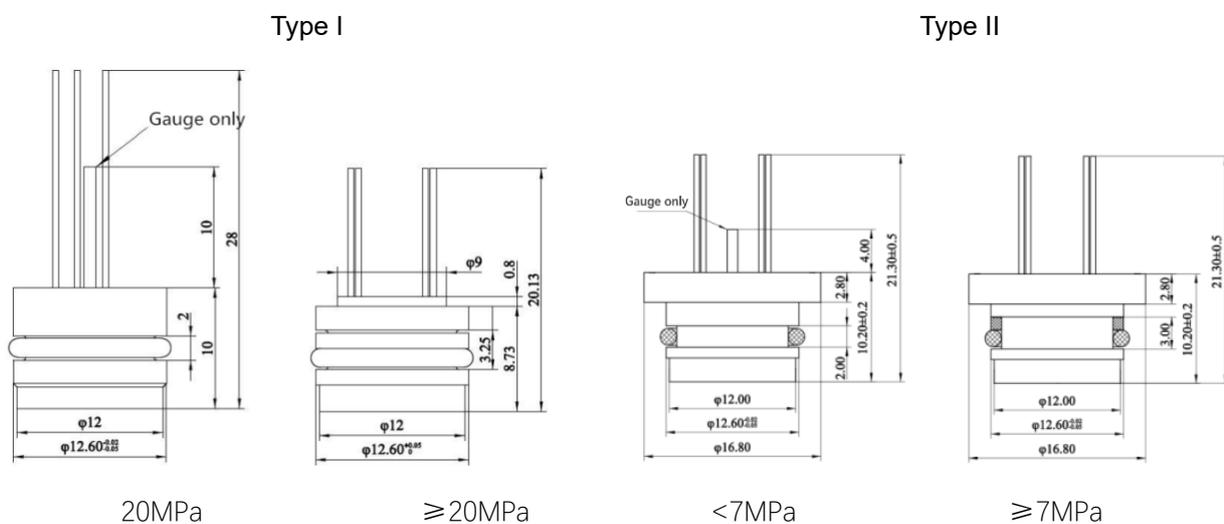
## Specification

Item	Min.	Typ.	Max.	Units
Linearity		±0.2	±0.25	%FS, BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±0.05	±0.075	%FS
Zero output			±2.0	mV DC
FS output	45	100		mV DC
Compensated Temp.		0 ~ 70		°C
Working Temp.		-40 ~ 125		°C
Storage Temp.		-40 ~ 150		°C
Zero Temp. Error		±0.75	±1	%FS, @25°C
Full Temp. Error		±0.75	±1	%FS, @25°C
Long Term Stability		±0.2		%FS/year

Note:

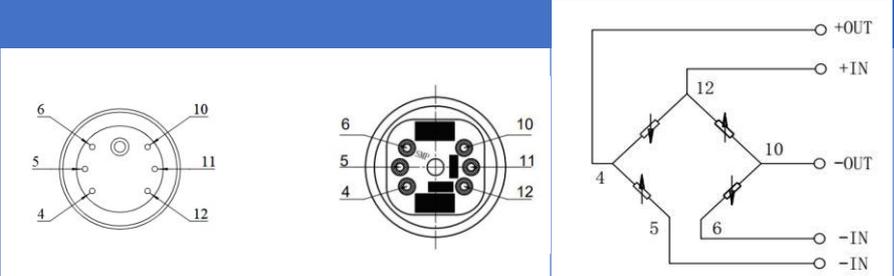
1. The above performance indicators are tested under the benchmark conditions.
2. The temperature range for temperature drift test is the compensation temperature range.

## Dimensions (mm)



## Electrical connections

Pin	Definition	Wire color
4	+OUT	Red
10	- OUT	Blue
11	- IN	Yellow
12	+IN	Black



The figure includes two circular diagrams showing the pin layout on the sensor's top surface, with pins numbered 4, 5, 6, 10, 11, and 12. To the right is a bridge circuit diagram with four nodes labeled 4, 5, 6, and 10. The connections are: Node 4 to +OUT, Node 10 to -OUT, Node 6 to -IN, and Node 5 to -IN.

**Order Guide**

GP-2000		Pressure Sensor			
	Code1				
	I	φ12.6 mm assembly type			
	II	Weld ring type			
		Code2	Range	Support Code1 & Code3	
		08	0 ~ 350kPa	G/A, I/II	
		09	0 ~ 700kPa	G/A, I/II	
		10	0 ~ 1MPa	G/A, I/II	
		12	0 ~ 2MPa	G/A, I/II	
		13	0 ~ 3.5MPa	S, I/II	
		14	0 ~ 7MPa	S, I/II	
		15	0 ~ 15MPa	S, I/II	
		17	0 ~ 20MPa	S, I/II	
		18	0 ~ 35MPa	S, I	
		19	0 ~ 70MPa	S, I	
			Code3	Pressure type	
			G	Gauge	
			A	Absolute	
			S	Sealed Gauge	
				Code4	Electrical connection
				1	Gold-plated Kovar pin
			2	100mm Silicone rubber wires	
				Code5	Special
				Y	Gauge can measure negative pressure Note <sup>①</sup>
<i>Completed Sample: GP-2000-II-10-G-1</i>					

Note<sup>①</sup> When gauge pressure used to measure the negative pressure, it will affect the sensor zero and full value, it is necessary for customers to do fine tuning in the follow-up circuit until the required value.

**Tips:**

- 1: The pressure sensor is suitable for the customer to use by assembling the shell, when installing, please avoid pressing the front and back faces of the sensor to ensure the sensor to be stable.
- 2: When customers weld the sensor to a shell or housing, improper methods might lead to irreparable damage. At this time, please contact us to offer the welding of components directly.