HP10MY Silicon Piezoresistive Pressure Sensor Module

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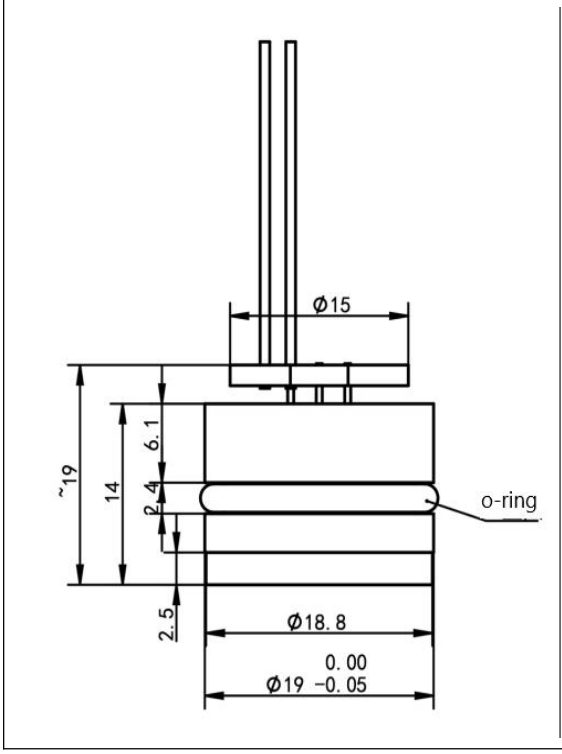
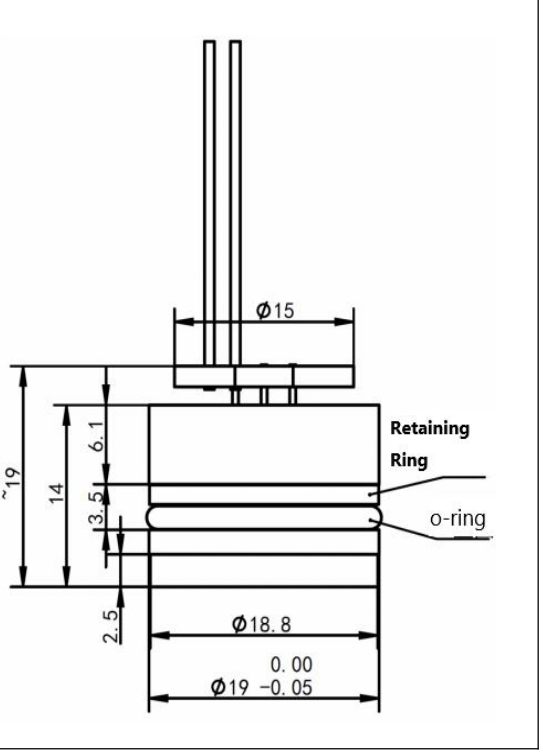
Overview

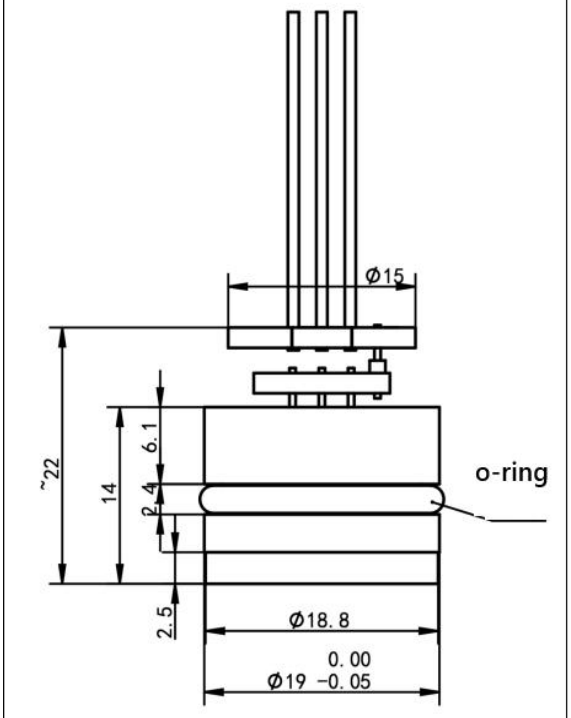
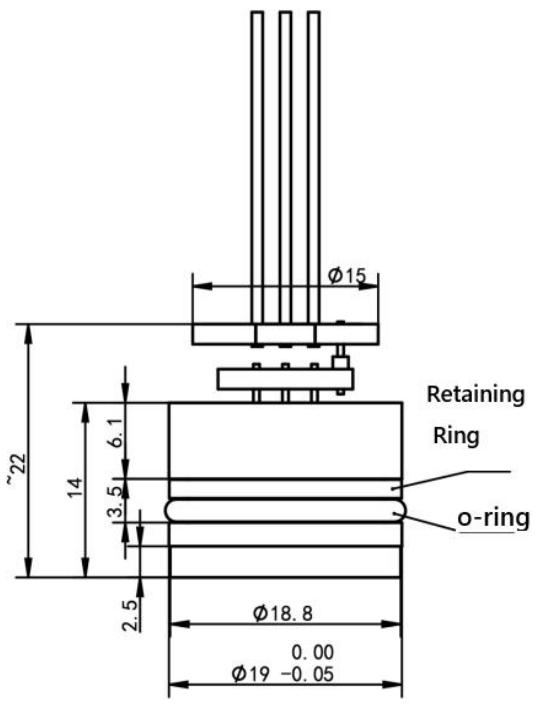
The HP10MY silicon piezoresistive pressure sensor module is an oil-filled OEM pressure core isolated by a 316 stainless steel corrugated diaphragm. The sensitive components are selected from high-stability and high-precision silicon pressure chips. Mature production processes and high-precision production inspection equipment are applied to ensure the product has excellent stability. Wide-temperature range temperature compensation and nonlinearity correction are carried out through dedicated integrated circuits, and standard current or voltage signals are directly output. Product stability after long term aging and screening, reliable and steady performance. This product can be conveniently connected to various devices, is easy to assemble, has strong applicability, and can be widely used in the detection of various fluid pressures.

Technical Parameters

Measuring range(Gauge)	-100kPa...0～10kPa･･･100MPa
Measuring range(Absolute)	0～20kPa･･･10MPa
Overload	1.5x
Measuring medium	A variety of liquids compatible with the contact materials
Output signal/Power supply	
Two- wire	4~20mA / Vs=10~30V
Three-wire	0～10V / Vs=12~30V
Four-wire	0～5V / Vs=12~30V
Performance	
Accuracy	±0.5%FS (std.) ±0.25%FS(opt.)
Long-term stability	±0.25%FS/年
Environment condition	
Temperature range	Ambient temp.：-40～85℃ Medium temp.：-40～125℃ Storage temp.：-40～85℃
Temperature drift	
Compensation temperature scope	0～60℃（≤70kPa);-10～70℃（other normal range）
Temperature effect on zero	±1.5%FS(reference 30℃); ±2.0%FS(10kPa)
Temperature effect on full scale	±1.5%FS(reference 30℃); ±2.0%FS(10kPa)
Mechanical stability	
Vibration	20g(20~5000Hz)
Shock resistance	100g(10ms)
Insulation	
Insulation resistance	>100MΩ， 100VDC

Dimensions(unit:mm)

4～20mA, two-wire current（ordering code B1）	
<25MPa	⩾25MPa
	

4～20mA, three-wire voltage（ordering code B3、B4、B5、B15）	
<25MPa	⩾25MPa
	

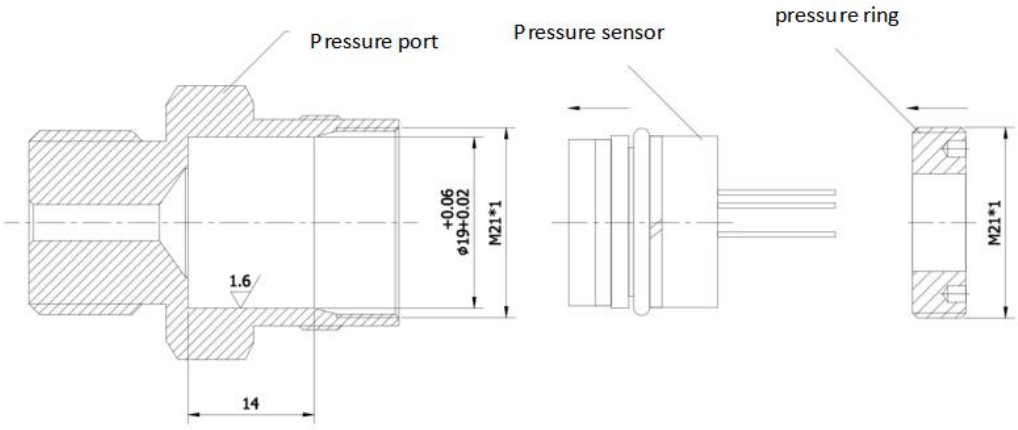
Structural Material

Ordering code	Part	Material
S6	Diaphragm	SS316L
S6	Housing Shell	Silicon piezoresistive, SS 316L
FK	O-ring	FKM（-20～200℃）
NB		NBR（-40～120℃）

Wiring Diagram

Two-wire 4～20mA current output		
Signal Definition	Power+(+V)	Power-(0V/+OUT)
Wire color	Red	Black

Three-wire 0~5V/10Vvoltage output			
Signal Definition	Power+(+V)	Power-(0V/+OUT)	Signal+(+OUT)
Wire color	Red	Black	Blue



Installation Tips

1. Apply a small amount of vacuum grease evenly on the surface of the O-ring during installation.

2. Apply force evenly along the axial direction of the cavity to push the core into the cavity. Be careful not to damage the O-ring.

3. The diaphragm of the core is a pressure-sensitive part. Do not touch it with your fingers or hard objects during use.

4. The sensor sealing method is recommended to be a suspended sealing structure to avoid the end face pressing the seal

Ordering Guide

Model	Type						
HP10MY	Pressure Sensor Module						
	Measuring Range						
	(0 ~ X)kPa						
		Code	**Output Signal**				
		B1	(4 ~ 20)mA				
		B3	(0 ~ 10)V				
		B4	(0 ~ 5)V				
		B5	(1 ~ 5)V				
		B15	(1 ~ 10)V				
			Code	**Power Supply**			
			V24	DC24V			
				Code	**Seal Ring**		
				FK	FKM		
				NB	NBR		
					Code	**Electrical Connection**	
					NX	No cable	
					ZY	Silicone rubber wire lead-out	
					5264	5264 terminal	
					X	Customization	
						Code	**Additional Functions**
						G	Gauge
						S	Sealed Gauge
						A	Absolute
						L	Cable length
E.g. HP10MY	(0 ~ 100)kPa	B1	V24	FK	ZY	G	L=100mm