

## Products Overview

Holykell CYX19 high stable OEM sensor is the piezoresistive pressure sensor with isolated construction and precise compensation. It uses high stable silicon die. Stainless steel 316L housing with diameter  $\Phi 19\text{mm}$ . Wider temperature compensation and zero correction are calibrated by laser trimming technics. The measured pressure is transmitted onto silicon die through 316L diaphragm and inner media, to transform the pressure to electric signal. CYX19 pressure sensor is inspected and screened on automatic production line, testing and checking time after time strictly. It is widely used for various pressure measurement fields.



## Product Features

- Pressure range , -100kPa~10kPa~100MPa
- Gauge, absolute, sealed gauge
- Constant current power supply
- Isolated construction, enable to measure various media
- $\Phi 19\text{mm}$  standard OEM pressure sensor
- Full stainless steel 316L
- Wide temperature compensation  $-10^{\circ}\text{C} \sim +80^{\circ}\text{C}$
- Long-term stability 0.1%FS/year
- 18 Months warranty

## Application

- Industrial process control
- Gas, liquid pressure measure
- Pressure checking meter
- Pressure calibrator
- Liquid pressure system and switch
- Cooling equipment and air conditioning system
- Aviation and navigation inspection

**Technical Specification**

Specification	Min	Typ	Max
FS output (mV)	--	100	--
Zero output (mV)		±1	±2
Non Linearity (%FS)		0.2	0.5
Hysteresis (%FS)		0.05	0.1
Repeatability (%FS)		0.05	0.1
Zero Temperature drift (%FS@25°C)	10kPa	±0.4	±1.6
	≥35kPa	±0.15	±0.8
Temperature Error Sensitivity (%FS @25°C)	10kPa	±0.4	±1.6
	≥35kPa	±0.2	±0.7
Long-term stability (%FS/Year)		0.1	
Compensated temp. range (°C)	0~50; -10~80		
Working temp. range (°C)	-40~+125		
Storage temp. range (°C)	-40~+125		
Lifetime (25°C) (times)	>1×10 <sup>8</sup> Pressure cycle (FS)		

**Electric Specification**

<b>Input impedance (KΩ)</b>	3~8	<b>Insulation Resistance (MΩ)</b>	500 (500VDC)
<b>Output impedance(KΩ)</b>	3.5~6	<b>Response time (ms)</b>	≤10
<b>Excitation Current (mA)</b>	1.5 (DC Max10V)	<b>Overpressure</b>	1.5 times FS

**Material**

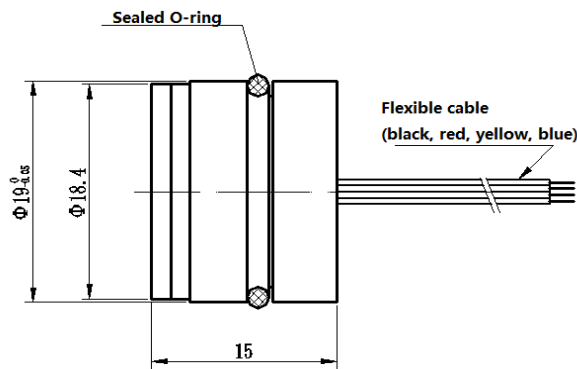
<b>Filled Medium</b>	silicone oil	<b>O-ring</b>	φ16×1.8mm (BUNA or VITON)
<b>Housing</b>	stainless steel 316L	<b>Pin</b>	silicon rubber flexible wire
<b>Diaphragm</b>	stainless steel 316L	<b>Weight (g)</b>	36

**Environment Condition**

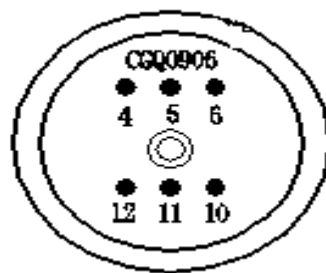
<b>Position effect</b>	deviate 90° from any orientation, zero change $\leq 0.05\%FS$	<b>Compensated temp. range (°C)</b>	0~50; -10~80
<b>Shock (20~500Hz) (G)</b>	20	<b>Working temp. range (°C)</b>	-40~+125
<b>Media Compatibility</b>	the gas or liquid which is compatible with stainless steel and viton	<b>Relative Humidity</b>	45%~80%RH;
<b>Ambient temperature</b>	22°C±5°C	<b>Atmosphere pressure</b>	86kPa~106kPa

**Outline Structure**

(unit:mm)



**Electrical Connection**



Wire Code	Electric Connection
4 Yellow	+OUT
5 Red	+IN
6 Black	-IN
10 Green/Blue	-OUT

**Part Number Selection Table:**

CYX19	Piezoresistive pressure sensor						
	Range code	Pressure range	Ref.	Range code	Pressure range	Ref.	
	01	0~10KPa	G/D	10	0~2.0MPa	G/A/D	
	02	0~20KPa	G/A/D	11	0~3.5MPa	G/A/D	
	03	0~35KPa	G/A/D	12	0~7.0MPa	G/A	
	04	0~70KPa	G/A/D	13	0~10MPa	G/A	
	05	0~100KPa	G/A/D	14	0~25Mpa	A	
	06	0~200KPa	G/A/D	15	0~40Mpa	A	
	07	0~400KPa	G/A/D	16	0~60Mpa	S	
	08	0~600KPa	G/A/D	17	0~100Mpa	S	
	09	0~1.0MPa	G/A/D	XX	By Customized	S	
		<b>Code</b>	<b>Pressure type</b>				
		<b>G</b>	Gauge/Relative pressure				
		<b>A</b>	Absolute pressure				
		<b>S</b>	Sealed pressure				
			<b>Code</b>	<b>Pressure connection</b>			
			<b>0</b>	O-ring			
				<b>Code</b>	Temperature Compensation		
				<b>L</b>	Laser trimming		
				<b>M</b>	Outer compensated resistor		
					<b>Code</b>	Electric connection	
					<b>1</b>	0.5mm Kovar pins	
					<b>2</b>	4-color 100mm Flexible rubber wire	
					<b>Code</b>	Special measurement	
					<b>Y</b>	Gauge sensor to measure Vacuum	
<b>CYX19</b>	<b>04</b>	<b>G</b>	<b>0</b>	<b>L</b>	<b>1</b>	<b>Y</b>	<b>Remarks</b>

**Order Note:**

- 1.We suggest you to use Floating construction when you install the sensor to prevent affecting sensor stability;
- 2.Please pay attention to protect sensor isolated diaphragm and ceramic compensated board, to avoid damaging sensor and affecting the performance;
- 3.When the temperature exceeds viton working temperature, or the user needs sensor at rugged environment, please contact our company freely.