

## HP15M Pressure Sensor



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## Product Overview

HP15M pressure sensor is an oil-filled OEM pressure sensitive element isolated by 316 stainless steel corrugated diaphragm. Chip selection of international advanced high stability, high precision silicon pressure chip, the application of the latest production technology and high-precision production and inspection equipment, so that the product has excellent stability, through the company's research and development of a special integrated circuit for  $-20 \sim 80 \text{ }^{\circ}\text{C}$  wide temperature zone temperature compensation and non-linear correction, direct output standard (4 ~ 20) mADC telecommunication signal. The product is convenient for docking various equipment, easy assembly, strong applicability, can be widely used in various fluid pressure detection.

## Product features

1. With gauge pressure, absolute pressure, sealing pressure form
2. Isolated structure, suitable for a variety of fluid media
3. Standard  $\Phi 19\text{mm}$  sensor universal size
4. All stainless steel 316L material
5. Standard (4 ~ 20) mA output
6. High accuracy: 0.25 level of non-linear accuracy at room temperature, 0.5 level of integrated accuracy within the compensation temperature range
7.  $-20 \sim 80 \text{ }^{\circ}\text{C}$  wide temperature zone compensation

## Environmental conditions

Vibration: No change under 10gRMS, 20Hz ~ 2000Hz condition.

Shock: 100g, 11ms

Media compatibility: Liquid or gas compatible with structural materials and Viton

## Reference conditions

Ambient temperature:  $(25 \pm 1)^{\circ}\text{C}$

Vibration: 0.1g(1m/s<sup>2</sup>)Max

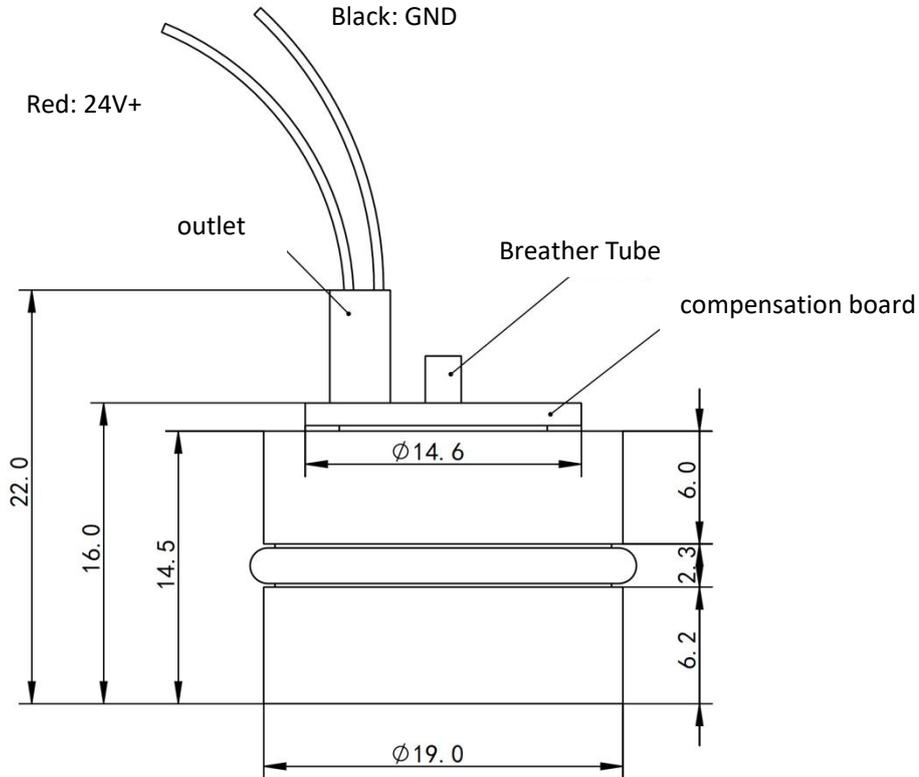
Humidity:  $(50\% \pm 10\%)$ RH

Ambient pressure: (86-106) kPa

**Technical Parameters**

Parameter	Minimum Value	Typical Value	Maximum Value	Unit	Remark
Range	0...50kPa~10MPa				
Output Signal	4 ~ 20			mADC	
Supply Voltage	10	24	30	VDC	
Accuracy		±0.1	±0.25	%FS	@25℃
		±0.3	±0.5	%FS	-20~80℃
Overload Pressure			150	%FS	
Working Temp.	-40 ~ 100			℃	
Temperature Compensation	-20 ~ 80			℃	
Storage Temp.	-40 ~ 125			℃	
Long-term Stability		±0.25		%FS	

**Structural Drawing (Unit:mm)**



**Structure material**

Diaphragm material: stainless steel 316L

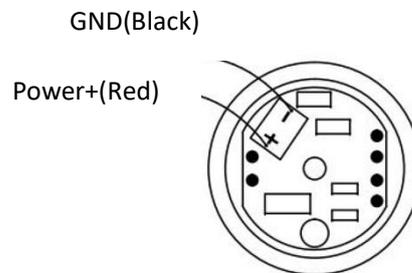
Housing material: stainless steel 316L

Seal material: Nitrile rubber

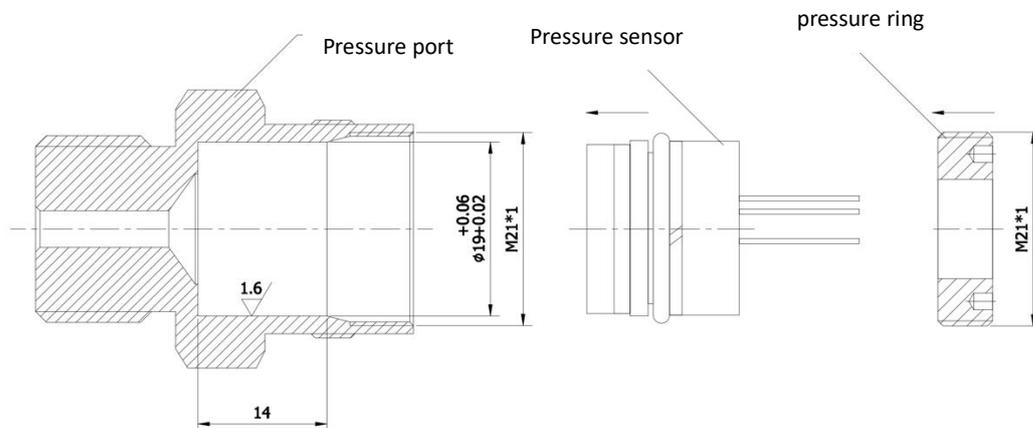
Net weight: about 30g

**Electrical Connection**

Wire color	2 wire current output
red	Power positive (+V)
black	Power negative (0V/+OUT)



## Installation Tips



1. A small amount of vacuum grease should be evenly applied to the surface of the "O" ring during installation.
2. Push the core into the cavity with even force along the axial direction of the cavity, and pay attention that the "O" ring should not have any damage.
3. The diaphragm of the core body is a pressure-sensitive part, please do not touch it with fingers or hard objects during use.
4. The sensor sealing method recommended for suspension sealing structure, to avoid the end face compression sealing.

## Conventional range

Gauge pressure: 5mH<sub>2</sub>O/10mH<sub>2</sub>O/100kPa/250kPa/400kPa  
/600kPa/1MPa/1.6MPa/2.5MPa/3.5MPa

Sealed gauge pressure: 4MPa/6MPa/10MPa