HT30 Silicon Piezoresistive Pressure Sensor

Introduction:

HT30 silicon piezoresistive pressure sensor is a highly stable diffused silicon element. It utilizes the piezoresistive effect of diffused silicon to measure the pressure of liquids and gases. The core is welded together with a standard thread, and it does not use O-ring sealing, making it suitable for a wide range of applications

Product Features :

- Utilizing advanced technology and 316L stainless steel housing, along with materials such as titanium and Hastelloy for the diaphragm
- Employing thick-film circuits for temperature compensation and zero-point correction
- Multiple thread interfaces available for selection
- Welded as one piece, compact size, and high reliability

Applications :

- Applied in various industrial process sites, including petroleum, chemical, metallurgy, power, and hydrology
- Used in marine and aviation industries
- Suitable for hydraulic and pneumatic control systems
- Utilized in process control applications

Notes: :

1、Do not touch the isolation diaphragm with hard objects.

2、Follow the specified wiring method to avoid causing safety incidents.

Electrical performance :

- Power Supply: ≤2mA DC (Typical 1.5mA DC)
- Input Impedance：2.5KΩ~6KΩ
- Output Impedance：2.5KΩ~6KΩ
- Electrical Connection：Gold-plated Kovar pins or 100mm high-temperature wires

Performance Parameters:				
Measurement Range		Gauge (G)	10KPa、20KPa、35KPa、100KPa、200KPa、350KPa、1000KPa、2000Kpa	
		Absolute (A)	100KPaA、200KPaA、350KPaA、700KPaA、1000KPaA、2000KPaA	
		Sealed (S)	3500KPaS、7MPaS、10MPaS、20MPaS	
		Typ	Max	Unit
NonLinearity		±0.15	±0.3	%F.S
Repeatability		0.05	0.1	%F.S
Hysteresis		0.05	0.1	%F.S
Zero Offset Output		0±1	0±2	mV
Full Scale Output	≤20KPa	50±10	50±30	mV
	≥35kPa	100±10	100±30	mV
Zero Offset Temp. Drift	≤20KPa	±1	±2	%F.S
	≥35kPa	±0.5	±1	%F.S
Full Scale Temp. Drift	≤20KPa	±1	±2	%F.S
	≥35kPa	±0.5	±1	%F.S
Compensated Temp.	≤20KPa	0～50		℃
	≥35kPa	0～70		℃
Operating Temperature		-20～80		℃
Storage Temperature		-40～125		℃
Allowable Overload		Take the smaller value between 3 times the full scale or 120MPa		
Burst Pressure		5X the full scale		
Long-term Stability		0.2 %		F.S/Year
Diaphragm Material		316L		
Insulation Resistance		≥200MΩ 100VDC		
Vibration		No change under conditions of 10gRMS, 20Hz to 2000Hz		
Shock		100g，11ms		
Response Time		≤1ms		
O-ring Seal		Nitrile rubber or Fluoro rubber		
Filling Medium		Silicon Oil		
Weight		～63g		
The parameters are tested under the following conditions: 1.5mA @ 25°C				

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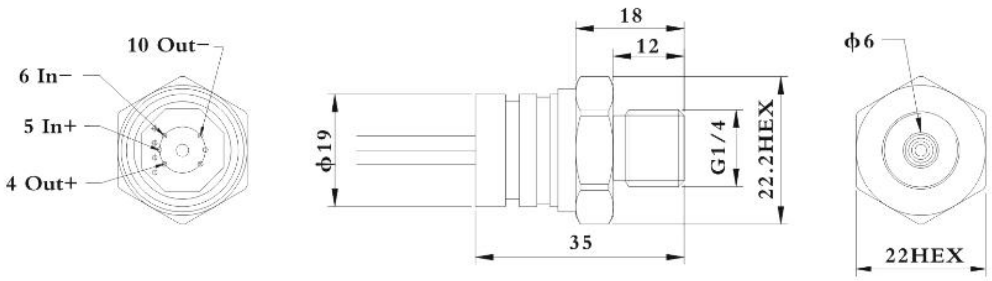
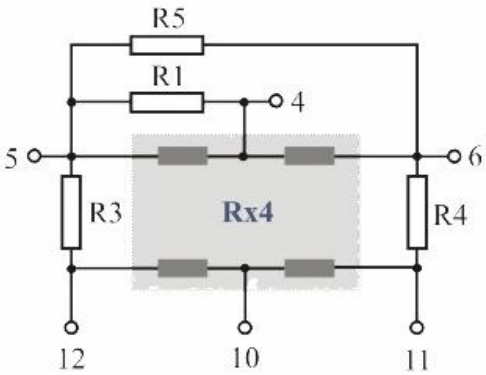
Outline Construction

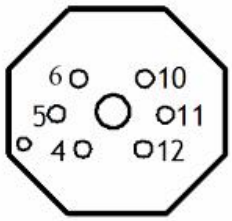
Dimension



Notes： The thread size of the pressure sensor can be customized

Electrical connection and compensation





5	V+	Red
6	V−	Yellow
4	Out+	Blue
10	Out−	Green

Selection Examples

HT30 0035 K G 1 G1/4

- G1/4 — Threaded interface: G1/4,G1/8,M8 and so on
- 1 — Structure： 1= Gold-plated KOVAR pins 2= 100mm high-temperature leads
- G — Pressure Type：G=Gauge A = Absolute S = Sealed gauge
- K — Pressure Units：K=KPa, M=MPa, B=bar, P=psi
- 0035 — Range
- HT30 — Model

Ordering tips

1. Pay attention to the fit between the core size and the transmitter housing during assembly to achieve the required airtightness
2. During the assembly of the housing, ensure it is aligned vertically and apply even pressure to avoid jamming or damaging the compensation plate.
3. If the measured medium is not compatible with the core diaphragm and the housing material (316L), special instructions should be provided when placing the order.
4. Avoid pressing the sensor diaphragm with hands or sharp objects to prevent damage to the core due to diaphragm deformation or piercing.
5. Keep the pressure port of the gauge pressure core open to the atmosphere and prevent the entry of water, water vapor, or corrosive media into the core negative pressure chamber.
6. If there are any changes to the pin leads, follow the label on the actual core for reference.

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