HT Series – Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor

Shenzhen Xin Heng Tong Electronics Co., Ltd
Catalogue

HT12 – P1~P2

HT13 – P3~4

HT15 – P5~6

HT19 – P7~8

HT20 – P9~10

HT22 – P11~12

HT24 – P13~14

HT26 – P15~16

HT30 – P17~18
Constant Current Diffused Silicon Piezoresistive Pressure Sensor – HT12

Description
HT12 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. It adopts the international advanced TO-8 packaging technique, with high reliability, repeatability and stability. It can apply to dry air pressure measurement.

Features
✧ Measurement range: -100~10KPa~2Mpa ✧ TO-8 packaging technique
✧ High reliability and stability

Applications
✧ Air control system ✧ Aviation inspection
✧ Biomedical engineering ✧ HVAC control

Electrical Data
✧ Power supply: 1.5mADC ✧ Input impedance: 3KΩ~6KΩ
✧ Output impedance: 2.5KΩ~6KΩ ✧ Insulation resistance: ≥100MΩ/50VDC
✧ Insulation voltage: 500VAC between the case and down-lead will not cause damage
✧ Medium compatible: non-corrosive dry gas

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100~10KPa，20KPa，35KPa，70KPa，100KPa，200KPa，350KPa，700KPa，1000KPa，1MPa，2MPa</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-linearity</td>
<td>±0.15</td>
<td>±0.3</td>
<td>% F.S</td>
<td></td>
</tr>
<tr>
<td>Repeatability and Hysteresis</td>
<td>0.02</td>
<td>0.05</td>
<td>% F.S</td>
<td></td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
<td>0±2</td>
<td>mV</td>
<td></td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20KPa</td>
<td>50±10</td>
<td>50±30</td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>100±10</td>
<td>100±30</td>
<td>mV</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20KPa</td>
<td>±1</td>
<td>±2</td>
<td>% F.S</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>±0.5</td>
<td>±1</td>
<td>% F.S</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>≤20KPa</td>
<td>±1</td>
<td>±2</td>
<td>% F.S</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>±0.5</td>
<td>±1</td>
<td>% F.S</td>
</tr>
<tr>
<td>Overload Pressure</td>
<td>3X</td>
<td></td>
<td></td>
<td>Rated Range</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50(Ranges≤20KPa)</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

• Note: Above parameters are under testing condition: Constant Current: 1.5mA Temperature: 25℃
Dimension

The Circuit Principle & Compensation Mode

Selecting Information

HT12  0010  K  G  01

Wire: 01= gold-plated kvar 6 pin
Pressure type: G=Gauge, A=Absolute, S=Sealed gauge
Unit: K=KPa, M=MPa, B=bar, P=Psi
Pressure range
Model
Shenzhen Xinhengtong Electronics Co., Ltd

Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT13

Description
HT13 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. Utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal. It can apply to air and liquid pressure measurement.

Features
- Measurement range: -100~350KPa~60Mpa
- Piezoresistive oil-filled silicon sensing element
- High reliability and stability
- Imported silicon slice
- Compact size
- Full 316LSS materials

Application
- Gas and liquid pressure measurement
- Process control system
- Medical instrument
- HVAC control
- Pressure transmitter

Electrical Data
- Supply: 1.5mADC
- Input impedance: 3KΩ~6KΩ
- Output impedance: 2.5KΩ~6KΩ
- Insulation resistance: ≥100MΩ/50VDC
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100~350KPa, 700KPa, 1000KPa, 2000KPa, 3500KPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Typical.</td>
</tr>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>100±10</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Overload Pressure</td>
<td>3X Rated range or 100MPa, Which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0~70</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

*Note: Above parameters are under testing condition: Constant Current: 1.5mA  Temperature: 25 °C
Dimension

The Circuit Principle & Compensation Mode

Selecting Information

HT13 0010 K G 1 01

Wire: 01= Gold-plated kovar 6 pin
       02= Flexible silicon cable
Pressure port: 1= Cell body
Pressure type: G=Gauge, A=Absolute, S=Sealed gauge
Unit: K=KPa, M=MPa, B=bar, P=Psi
Pressure range
**Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT15**

**Description**

HT15 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil, utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal. It can apply to air and liquid pressure measurement, widely used in air compressor and refrigeration system.

**Features**

- Measurement range: -100~350KPa~60Mpa
- Piezoresistive oil-filled silicon sensing element
- High reliability and stability
- Customized pressure port
- Full 316LSS

**Application**

- Gas and liquid pressure measurement
- HVAC control
- Process control system
- Air compressor
- Pressure transmitter
- Refrigeration system

**Electrical Data**

- Supply: 1.5mA
- Input impedance: 3KΩ~6KΩ
- Output impedance: 2.5KΩ~6KΩ
- Insulation resistance: ≥100MΩ/50VDC
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

**Performance Specification**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100~350KPa, 700KPa, 1000KPa, 2000KPa, 3500KPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Typical.</td>
</tr>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>100±10</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Overload Pressure</td>
<td>3X Rated range or 100MPa, Which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0~70</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

*Note: Above parameters are under testing condition: Constant Current: 1.5mA  Temperature: 25°C*
**Dimension**

**Type I**

**Type II**

**The Circuit Principle & Compensation Mode**

**Ordering Information**

HT15 0010 K G 1 01

Electrical: 01= Gold-plated Kovar 6 pin  02= Flexible silicon cable

Pressure Port: 1= Cell  2= M20X1.5  3= M12X1  4= G1/2
5= 1/4-18NPT external thread  6= 7/16-20UNF

Pressure Type: G=Gauge,  A=Absolute,  S=Sealed gauge

Unit: K=KPa,  M=MPa,  B=bar,  P=Psi

Pressure Range

Model
Shenzhen Xinhengtong Electronics Co., Ltd

Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT19

Description

HT19 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. Utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal. It can apply to air and liquid pressure measurement, The sensing element is packaged by the advanced technique with 316L stainless steel case. Utilizes thick film circuit to do temperature compensation and zero correction. It has high reliability and stability and repeatability.

Features

- Measurement range: -100~10KPa~100Mpa
- Piezoresistive oil-filled silicon sensing element
- Full 316LSS, full titanium or hastelloy diaphragm

Application

- Gas and liquid pressure measurement
- Water supply, warm supply of town
- Aviation and navigation
- Petroleum exploitation
- Process control system
- Hydraulic system

Electrical Data

- Supply: 1.5mA
- Input impedance: 3KΩ~6KΩ
- Output impedance: 2.5KΩ~6KΩ
- Insulation resistance: ≥100MΩ/50VDC
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100~10KPa, 20KPa, 35KPa, 70KPa, 100KPa, 200KPa, 350KPa, 700KPa, 1MPa, 2MPa, 3.5MPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa, 70MPa, 80MPa, 90MPa, 100MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Non-linearity</td>
<td>Typical: ±0.15 (0<del>2MPa) ±0.2 (3.5MPa</del>100MPa) Max: ±0.3 %F.S</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02 %F.S</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1 mV</td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20KPa: 50±10 mV 50±30 mV   ≥35 KPa: 100±10 mV 100±30 mV</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20KPa: ±1 %F.S  ±2 %F.S     ≥35 KPa: ±0.5 %F.S  ±1 %F.S</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>≤20KPa: ±1 %F.S  ±2 %F.S     ≥35 KPa: ±0.5 %F.S  ±1 %F.S</td>
</tr>
<tr>
<td>Overload Pressure</td>
<td>3X Rated range or 120MPa, which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80 °C</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50(Ranges≤20KPa) °C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125 °C</td>
</tr>
</tbody>
</table>

Note: Above parameters are under testing condition: Constant Current: 1.5mA  Temperature: 25°C
Dimension

**Type I**

![Type I diagram]

**Type II (60MPa≤range≤100MPa)**

![Type II diagram]

**The Circuit Principle & Compensation Mode**

![Circuit diagram]

**Selecting information**

<table>
<thead>
<tr>
<th>HT19 0010</th>
<th>K</th>
<th>G</th>
<th>1</th>
<th>01</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Material:  
L=316L stainless steel  
T= Titanium  
H= Hastelloy diaphragm  

Electrical:  
01= Gold-plated kovar 6 pin,  
02= Flexible silicon cable  

Dimension: 1=Type I 2= Type II  

Pressure type: G1=Gauge, G2=Gauge with tube, A=Absolute, S=Sealed gauge  

Unit: K=KPa, M=MPa, B=bar, P=Psi  

Pressure Range  

Model
Constant Current Diffused Silicon Oil-filled Piezoresistive Differential Pressure Sensor – HT20

Description
HT20 is a piezoresistive silicon differential pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. It has high stability, good reliability, high static pressure. It is widely used in the field that need to measure differential pressure.

Features
✧ Measurement range: 0~20KPa~2Mpa  
✧ Piezoresistive oil-filled silicon sensing element  
✧ Isolated diaphragm
✧ High accuracy and stability
✧ High static pressure
✧ Full 316LSS material

Application
✧ Gas and liquid pressure measurement
✧ Hydraulic and pneumatic equipment
✧ Chemical products and chemical industry
✧ Environmental control
✧ Process control

Electrical Data
✧ Supply: 1.5mADC  
✧ Output impedance: 2.5KΩ~6KΩ
✧ Insulation resistance: ≥100MΩ/50VDC  
✧ Insulation voltage: 500VAC between the case and down-lead will not cause damage
✧ Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: 0~35KPa, 70KPa, 100KPa, 200KPa, 350KPa, 700KPa, 1000KPa, 2000KPa</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15</td>
<td>±0.3</td>
<td>%F.S</td>
<td></td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
<td>0.05</td>
<td>%F.S</td>
<td></td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
<td>0±2</td>
<td>mV</td>
<td></td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20Kpa</td>
<td>50±10</td>
<td>50±30</td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>100±10</td>
<td>100±30</td>
<td>mV</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20Kpa</td>
<td>±2.5</td>
<td>±5</td>
<td>%F.S</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>±0.5</td>
<td>±1</td>
<td>%F.S</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>≤20Kpa</td>
<td>±2.5</td>
<td>±5</td>
<td>%F.S</td>
</tr>
<tr>
<td></td>
<td>≥35 KPa</td>
<td>±0.5</td>
<td>±1</td>
<td>%F.S</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>3X</td>
<td></td>
<td>Rated range</td>
<td></td>
</tr>
<tr>
<td>Static pressure</td>
<td>5X or 5MPa, which is less</td>
<td></td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
<td>℃</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0~70</td>
<td>℃</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
<td>℃</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Note: Above parameters are under testing condition: Constant Current: 1.5mA  
  Temperature: 25℃
Dimension

The Circuit Principle & Compensation Mode

Selecting Information

<table>
<thead>
<tr>
<th>HT20</th>
<th>001</th>
<th>K</th>
<th>1</th>
<th>01</th>
</tr>
</thead>
</table>

- Electrical: 01= flexible silicon cable
- Pressure port: 1= Cell
- Unit: K=KPa, M=MPa, B=bar, P=Psi
- Pressure range

Model
Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT22

Description
HT22 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. It utilizes elastic ring face encapsulation. Can apply to wide-range pressure measurement.

Features
- Measurement range: -100~10KPa~100Mpa  
- Rear-end M25×1, customized fore-end thread  
- Piezoresistive oil-filled silicon sensing element  
- High reliability and stability  
- Full 316L stainless steel  
- O-ring seal

Application
- Gas and liquid pressure measurement  
- HVAC control  
- Pressure transmitter  
- Process control system  
- Refrigeration system

Electrical Data
- Supply: 1.5mA DC  
- Input impedance: 3KΩ~6KΩ  
- Output impedance: 2.5KΩ~6KΩ  
- Insulation resistance: ≥100MΩ/50VDC  
- Insulation voltage: 500VAC between the case and down-lead will not cause damage  
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100<del>10KPa, 35KPa, 0</del>70KPa, 100KPa, 200KPa, 350KPa, 700KPa, 1000KPa, 2000KPa, 3500KPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa, 100MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15 (0~2MPa)</td>
</tr>
<tr>
<td></td>
<td>±0.2 (3.5MPa~60MPa)</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>3X Rated range or 120MPa, which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50(Range≤20KPa)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

* Note: Above parameters are under testing condition: Constant Current: 1.5mA Temperature: 25°C
Shenzhen Xinhengtong Electronics Co., Ltd

Dimension

Type I

The Circuit Principle & Compensation Mode

Selecting Information

Electrical: 01 = Gold-plated Kovar 6 pin
02 = flexible silicon cable

Pressure Port: 1 = G 1/4  2 = M20X1.5  3 = M12X1  4 = G1/2
5 = 1/4-18NPT external thread  6 = 7/16-20UNF

Pressure type: G = Gauge, A = Absolute, S = Sealed gauge
Unit: K = KPa, M = MPa, B = bar, P = Psi

Pressure range

Model

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Mobile: 0086-0-15017920822  Website: www.sailton-sensor.com

12 / 20
Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT24

Description
HT24 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. Utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal and fulfill pressure measurement. It has the flat membrane configuration and high reliability, easy to clean. It can apply to food production, sanitation.

Features
- Measurement range: 0~35KPa~20Mpa
- Piezoresistive oil-filled silicon sensing element
- Full 316L Stainless steel
- Flat membrane configuration
- High accuracy and stability
- 3 shapes selection

Application
- Gas and liquid pressure measurement
- Food and beverage industry
- Industry process control
- Medicine

Electrical Data
- Supply: 1.5mA
- Input impedance: 3kΩ~6kΩ
- Output impedance: 2.5kΩ~6kΩ
- Insulation resistance: ≥100MΩ/50VDC
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: 0<del>10KPa、35KPa、0</del>70KPa、100KPa、200KPa、350KPa、700KPa、1000KPa、2000KPa、3500KPa、7MPa、10MPa、20MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Typical.</td>
</tr>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>100±10</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>±0.5</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>3X</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50(Ranges≤20KPa)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

• Note: Above parameters are under testing condition: Constant Current: 1.5mA  Temperature: 25℃

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Tel: +86-(0)755-83165394  Fax: +86-(0)755-83158852
Mobile: 0086-0-15017920822  Website: www.sailton-sensor.com
Dimension

Type I

Type II
35 KPa ≤ range ≤ 3.5 MPa

Type III

The Circuit Principle & Compensation Mode

<table>
<thead>
<tr>
<th>5</th>
<th>V+</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>V−</td>
<td>Yellow</td>
</tr>
<tr>
<td>4</td>
<td>Out+</td>
<td>Blue</td>
</tr>
<tr>
<td>10</td>
<td>Out−</td>
<td>Green</td>
</tr>
</tbody>
</table>

Selecting Information

HT24 0010 K G 01

Electrical:
01= Gold-plated Kovar 6 pin
02= Flexible silicon cable

Pressure type:
G=Gauge, A=Absolute, S=Sealed gauge

Unit:
K=KPa, M=MPa, B=bar, P=Psi

Pressure Range

Model
# Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT26

## Description

HT26 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability. The measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. Utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal and fulfill air and liquid pressure measurement. Has high reliability, repeatability and stability.

## Features

- Measurement range: -100~10KPa~100Mpa
- High accuracy and stability
- Isolated membrane configuration
- Φ19 mm standard dimension
- Piezoresistive oil-filled silicon OEM sensing element
- Full 316LSS, titanium or Hastelloy diaphragm

## Application

- Gas and liquid pressure measurement
- Industry process control
- Power machineries
- HAVC control
- Aviation and navigation inspection

## Electrical Data

- Supply: 1.5mADC
- Input impedance: 3KΩ~6KΩ
- Output impedance: 2.5KΩ~6KΩ
- Insulation resistance: ≥100MΩ/50VDC
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

## Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100~10KPa, 35KPa, 70KPa, 100KPa, 200KPa, 350KPa, 700KPa, 1000KPa, 2000KPa, 3500KPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa, 100MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Typical</td>
</tr>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15 (0~2MPa)</td>
</tr>
<tr>
<td></td>
<td>±0.2 (3.5MPa~100MPa)</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Span Temperature Error</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>3X Rated range or 120MPa, which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50 (Ranges ≤ 20KPa)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

* Note: Above parameters are under testing condition: Constant Current: 1.5mA  Temperature: 25°C
Dimension

**Type I**

![Type I Diagram]

**Type II**

![Type II Diagram]

The Circuit Principle & Compensation Mode

![Circuit Diagram]

Selecting Information

<table>
<thead>
<tr>
<th>HT26 0010</th>
<th>K</th>
<th>G</th>
<th>1</th>
<th>01</th>
<th>L</th>
</tr>
</thead>
</table>

- Material: L=316L stainless steel, T= Titanium, H= Hastelloy diaphragm, 316L stainless steel case
- Electrical: 01= Gold-plated Kovar 6 pin, 02= flexible silicon cable
- Dimension: 1=Type I, 2=Type II
- Pressure type: G1=Gauge, G2= Gauge with tube, A=Absolute, S=Sealed gauge
- Unit: K=KPa, M=MPa, B=bar, P=Psi

Model
Constant Current Diffused Silicon Oil-filled Piezoresistive Pressure Sensor – HT30

Description

HT30 is a piezoresistive silicon pressure sensor, the kernel is a diffused silicon sensing element with high stability, the measured medium pressure is transferred from 316LSS isolated diaphragm to silicon sensing element via the silicon oil. Utilizes the piezoresistive effect principle of diffused silicon, transfer pressure to voltage signal and fulfill air and liquid pressure measurement. It is a full-welded pressure sensor, Pressure port is customized. It can apply to extensive field.

Features

- Measurement Range: -100~10KPa~100Mpa
- High Accuracy and stability
- Piezoresistive oil-filled silicon sensing element

Application

- Gas and liquid pressure measurement
- Water supply, warm supply of town
- Process control system
- Aviation and navigation inspection
- Pressure transmitter

Electrical Data

- Supply: 1.5mADC
- Output impedance: 2.5KΩ~6KΩ
- Insulation voltage: 500VAC between the case and down-lead will not cause damage
- Medium compatible: liquid, gas which is compatible with 316L stainless steel

Performance Specification

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Range: -100<del>10KPa, 35KPa, 0</del>70KPa, 100KPa, 200KPa, 350KPa, 700KPa, 1000KPa, 2000KPa, 3500KPa, 7MPa, 10MPa, 20MPa, 35MPa, 60MPa, 100MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Typical</td>
</tr>
<tr>
<td>Pressure Non-linearity</td>
<td>±0.15 (0~2MPa)</td>
</tr>
<tr>
<td></td>
<td>±0.2 (3.5MPa~60MPa)</td>
</tr>
<tr>
<td>Pressure Repeatability and Hysteresis</td>
<td>0.02</td>
</tr>
<tr>
<td>Zero Output</td>
<td>0±1</td>
</tr>
<tr>
<td>Span Output</td>
<td>≤20KPa</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Zero Temperature Error</td>
<td>≤20KPa</td>
</tr>
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<td></td>
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<td>Span Temperature Error</td>
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<td></td>
<td>≥35KPa</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>3X rated range or 120MPa, which is less</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-20~80</td>
</tr>
<tr>
<td>Compensated Temperature Range</td>
<td>0<del>70, 0</del>50 (Ranges 20KPa)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40~125</td>
</tr>
</tbody>
</table>

* Note: Above parameters are under testing condition: Constant Current: 1.5mA Temperature: 25℃
Dimension

The Circuit Principle & Compensation Mode

Selecting Information

HT30 0010  K  G  1  01

Electrical:  01= Gold-plated kovar 6 pin
        02= Soft silicon cable

Pressure Port:  1=G 1/4
        2= M20X1.5
        3=M12X1
        4= G1/2
        5=1/4-18NPT external thread
        6= 7/16-20UNF

Pressure type: G=Gauge, A=Absolute, S=Sealed gauge

Unit: K=KPa, M=MPa, B=bar, P=Psi

Model

Pressure Range