WT19 Industrial Pressure Sensor

- Piezoresistive silicon chip employed
- Perfect long term stability
- MEMS technology
- CE certificate
- Sensor diameter: 19mm

WT19 industrial pressure sensor is a standard and most popular sensor applied in air and liquid pressure measuring. A high sensitivity silicon pressure chip is employed in the sensor. The housing is filled with oil for pressure transmission. The most important specification for industry application is long term stability. The WT19 sensor is designed for industry application with perfect long term stability.

Diaphragm and pressure range

The diaphragm diameter has tight relation with pressure measured. Low pressure requires large diameter and high pressure needs small diameter. This is caused by oil expansion during temperature changing. It creates internal pressure due to the resistance of the diaphragm. The smaller diaphragm will create large internal pressure, and it is difficult to make zero compensation.

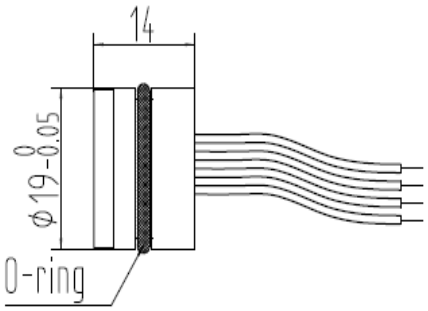
Caution

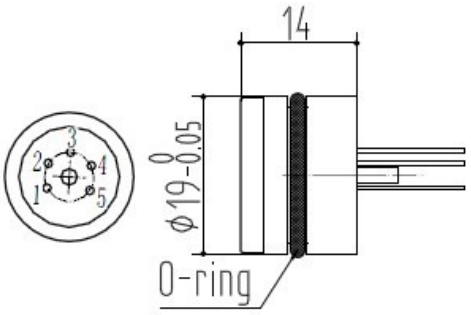
1. Please do not touch the diaphragm by finger and other hard objects, or it may be damaged
2. The sensor will not work, if the excitation and output are reversed connected due to polarity protection.

Pressure range	
Pressure range	10kPa, 35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
Pressure reference	Gauge pressure | Absolute pressure | Sealed gauge pressure
Overpressure	300%F.S.(＜70Kpa)|200%F.S.(＜25Mpa) | 150%F.S(≥25Mpa)
Output signal	
Zero output	±2mV
Span output	100mV(Typical) ｜60mV(for 10kpa)
Specification	
Accuracy (linearity, repeatability and hysteresis)	±0.25%F.S. (Typical)

Excitation	1.5mA (Typical) | 5VDC | 10VDC		
Compensated temp.	-10--70℃(Typical)		
Operating temp.	-40-125℃		
Storage temp.	-40-125℃		
Zero temp. coefficient	0.02%F.S.(≥100kPa) ｜0.03%F.S.(<100kPa)		
Span temp. coefficient	0.02%F.S.(≥100kPa) ｜0.03%F.S.(<100kPa)		
Insulation resistance	＞100Mohm/250VDC		
Bridge resistance	Min.	Max.	Unit
	2600	5500	ohm
Long term stability	≤0.2%F.S.S/year		
Vibration	20g (20--5000HZ)		
Oil filling	Silicon oil (Typical) Olive oil available for sanitary application		
O-ring	NBR, Viton		
Housing and diaphragm	Stainless steel 316L		
Wire connection	4 wire (typical) | 5 wire (available) 39×φ0.015, Silicon shielded, 200℃ bearing		
Pin connection	Kovar pin (0.6um Gold platted)		
Weight	30g(approx)		

Wire connection	Pin connection

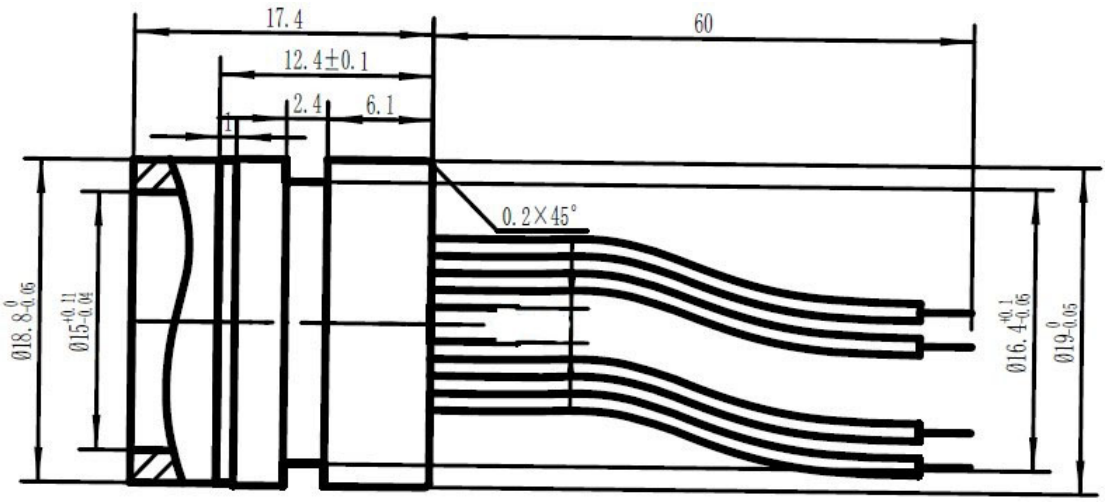




Wire	Connection
red	excitation+
blue	excitation-
yellow	output+
white	output-

Pin	Connection
3	excitation+
1,5	excitation-
2	output+
4	output-

Drawing of front welding sensor



How to order

WT19 XX— XX—XX—XX—XX

Pressure range

Please write directly

Pressure reference

A: absolute Pressure
G: gauge Pressure
S: sealed Gauge Pressure

Excitation

C1: 1.5mA
C2：10V
C3: 5V

Electrical Connection

W: wire connection
P: pin connection

Diaphragm

D1: stainless steel 316L
D2: hastelloy
D3: flush diaphragm
D4: front welding