PC11(WTP01) Pressure Sensor

- Piezoresistive silicon chip employed
- Perfect long term stability
- MEMS Technology

PC11(WTP01) pressure sensor is a standard and popular sensor applied in air and liquid pressure measuring. A high sensitivity silicon pressure chip is employed in the transducer. The sensor is welded within the housing, and no leakage will happen. It is more reliable compared with O-ring sealing for leakage.

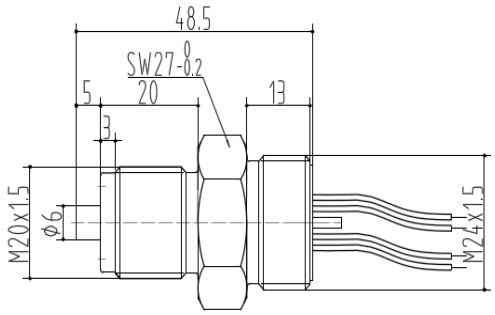
Caution

The sensor is welded with housing, so no leakage will happen. That is more reliable compared with O-ring sealing. But if the sensor has a problem, the housing will be wasted.

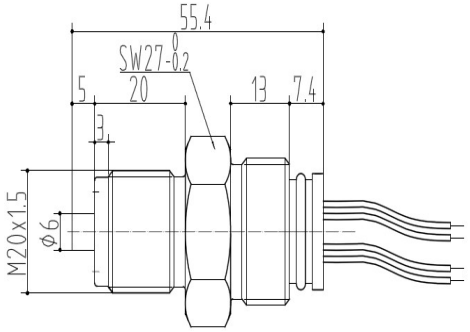
Pressure range	
Pressure range	-100kPa, 10kPa, 35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
Pressure reference	Gauge pressure | Absolute pressure | Sealed gauge pressure
Overpressure	300%F.S.(≤70kPa) | 200%F.S.(＜25MPa) | 150%F.S.(≥25MPa)
Output signal	
Zero output	±2mV
Span output	1.5mA excitation: ≥40mV (≤35kPa); ≥60mV (Other ranges) 10V excitation: ≥60mV (≤35kPa); 80-120mV (Other ranges)
Specification	
Accuracy (linearity, repeatability and hysteresis)	±0.25%F.S. (Typical)
Excitation	1.5mA | 10VDC
Compensated temp.	0℃-60℃ (≤35kPa) | -10℃-70℃ (Other ranges)
Operating temp.	-40℃-125℃
Storage temp.	-40℃-125℃
Zero temp. coefficient	0.02%F.S. /℃(≥100kPa) | 0.04%F.S. /℃(<100kPa)
Span temp. coefficient	0.02%F.S. /℃(≥100kPa) | 0.04%F.S. /℃(<100kPa)
Insulation resistance	＞200Mohm/250VDC
Input impedance	2kΩ-5kΩ
Long term stability	≤0.2%F.S.S/year
Vibration	20g (20-5000Hz)
Shock	100g (11ms)
Response time	≤1ms(up to 90%F.S.)
Lifetime	$10*10^6$ (cycles)
Oil filling	Silicon oil
O-ring	NBR, Viton
Housing material	Stainless steel 304
Diaphragm material	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	130g(approx.)

Drawing

For pressure range <25MPa



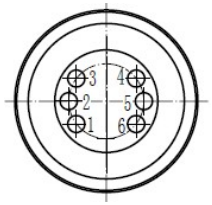
For pressure range ≥25MPa



In mm

without temperature compensation

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



1.5mA supply with temperature compensation

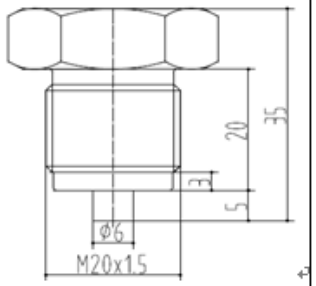
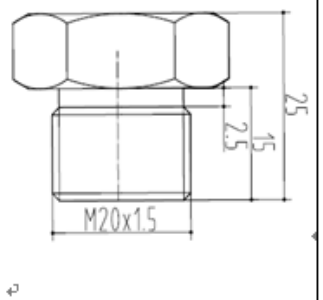
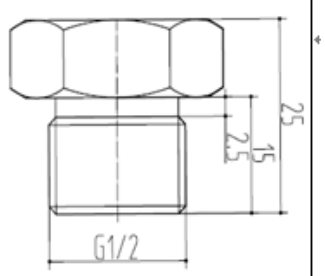
Pin	Connection
3	excitation+
1or6	excitation-
5	pending
2	output+
4	output-

10V supply with temperature compensation

Pin	Connection
3	excitation+
5	excitation-
1or6	pending
2	output+
4	output-

Pin	Connection
5	excitation+
1or6	excitation-
3	pending
2	output+
4	output-

Pressure port

Thread	M20*1.5	M20*1.5	G1/2
Dimension in mm, Hex 27mm			

How to order

PC11 XX XX XX XX XX XX

Pressure range

Please write directly

Pressure reference

A: absolute pressure

G: gauge pressure

S: sealed gauge pressure

Excitation

U1: 1.5mA

U5: 10V

Electrical connection

4w: 4 wire

6p: 6 pin

Housing connection

I1: M25*1

I2: M27*2

Pressure connection

C0: M20*1.5 (with tube)

C1: M20*1.5

C2: G1/2

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