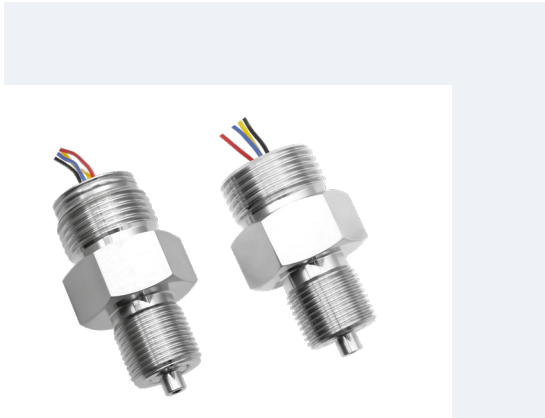


# MPM280 Pressure Sensor

## With Thread



### Features

- Pressure range: 0bar ~ 0.2bar...700bar
- Gauge, Absolute and Sealed gauge
- Constant current or Constant Voltages power supply
- Isolated construction to measure various fluid media
- $\Phi$ 19mm OEM pressure element
- 316L Stainless steel material
- Negative pressure measurement is available, the lowest to around -1bar

### Application

- Industrial process control
- Level measurement
- Gas, Liquid pressure measurement
- Pressure meter
- Pressure calibrator
- Liquid pressure system and switch
- Refrigeration equipment and Air conditioner
- Aviation and Navigation inspection

### Introduction

#### Assembled MPM280 Pressure Sensor

Put general MPM280 pressure sensor into the housing with standard or specialized thread; use face type seal or waterline seal; with flexible construction and strict inspecting and screening.

#### Welded MPM280 Pressure Sensor

Put general MPM280 pressure sensor into the housing with standard or specialized thread; and weld sensor with housing together, no O-ring for sealing. The whole product has flexible construction, it has wider application fields than general pressure sensor, and can be used for mounting and production of different pressure instruments.

### Electrical Performance

- Power supply:  $\leq 2.0$ mA DC
- Electrical connection: Silicon rubber flexible wires
- Common mode voltage output: 50% of input (typ.)
- Input impedance:  $3k\Omega \sim 8k\Omega$
- Output impedance:  $3.5k\Omega \sim 6k\Omega$
- Response (10%~90%):  $< 1$ ms
- Insulation resistor:  $100M\Omega @ 100V$  DC
- Overpressure: 2 times FS or 1100bar (min. value is valid)

### Construction Performance

- Diaphragm: Stainless steel 316L
- Housing: Stainless steel 316L
- O-ring: FKM

### Environment Condition

- Shock: No change at 10gRMS, (20~2000)Hz
- Impact: 100g, 11ms
- Media compatibility: The gas or liquid which is compatible with construction material and FKM

### Basic Condition

- Media temperature:  $(25 \pm 1)^\circ\text{C}$
- Environment temperature:  $(25 \pm 1)^\circ\text{C}$
- Shock: 0.1g ( $1\text{m/s}^2$ ) Max.
- Humidity:  $(50\% \pm 10\%)$  RH
- Local air pressure: (0.86~1.06)bar
- Power supply:  $(1.5 \pm 0.0015)$ mA DC

## Specification

Item*	Min.	Typ.	Max.	Units
Linearity		±0.15	±0.25	%FS,BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±0.05	±0.075	%FS
Zero output		±1.0	±2.0	mV DC
Output/Span**	70			mV DC
Zero thermal error		±0.75	±1.0	%FS, @25°C
FS thermal error		±0.75	±1.0	%FS, @25°C
Compensated temp. range		0~50		°C
Working temp. range		-40~125		°C
Storage temp. range		-40~125		°C
Long-term stability		±0.2	±0.3	%FS/Year

\* Testing at basic condition, G: Gauge; A: Absolute; S: Sealed gauge

\*\* Output/Span=full scale output - zero point

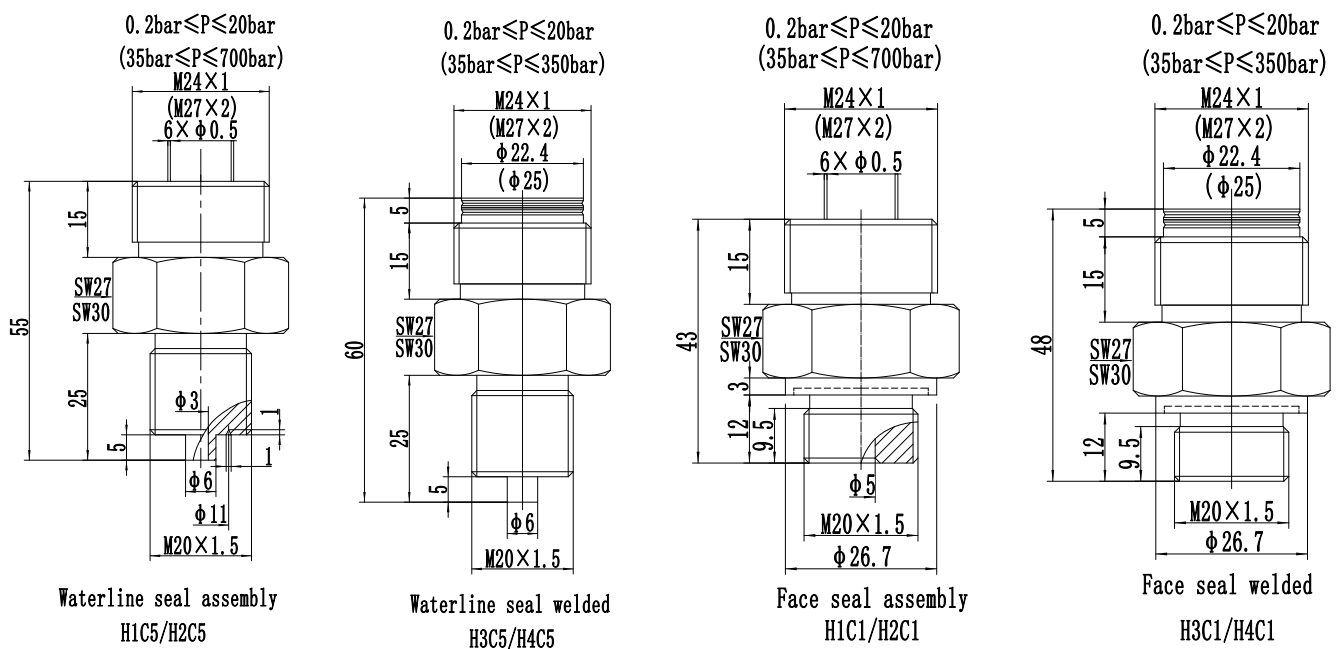
0.2bar G, FS output ≥45mV

0.35bar G, FS output ≥60mV

0.7bar A, 1.0bar A, 0.7bar GY, 1.0bar GY, FS output ≥45mV

2.0bar A, 3.5bar A, 2.0bar GY, 3.5bar GY, FS output ≥60mV

## Outline Construction (Unit: mm)



## Electrical Connection

Definition	Wire color
+OUT	Red
+IN	Black
-IN	Yellow or White
-OUT	Blue

## Notes

- The actual electrical connection method, please check the parameter label enclosed with products.

Order Guide

MPM280		Pressure Sensor With Thread					
		Range code	range	Ref.	Range code	range	Ref.
		0B	0bar~0.2bar	G	12	0bar~20bar	G.A
		0A	0bar~0.35bar	G.A	13	0bar~35bar	G.A.S
		02	0bar~0.70bar	G.A	14	0bar~70bar	S.A
		03	0bar~1bar	G.A	15	0bar~100bar	S.A
		07	0bar~2bar	G.A	17	0bar~200bar	S.A
		08	0bar~3.5bar	G.A	18	0bar~350bar	S.A
		09	0bar~7bar	G.A	19	0bar~700bar	S.A
		10	0bar~10bar	G.A			
		Code	Pressure type				
		G	Gauge				
		A	Absolute				
		S	Sealed gauge				
		Code*	O-ring				
		0 or null					
		H1	M24×1 male(assembled, P≤20bar)				C1~C31 are available for pressure connections for both assembled and welded type
		H2	M27×2 male (assembled, P≤700bar)				
		H3	M24×1 male(welded, P≤20bar)				
		H4	M27×2 male (welded, P≤350bar)				
		C1	M20×1.5 maleface type seal				Pressure connection options for assembled or welded type
		C2	G1/4 male				
		C3	G1/2 male				
		C4	G1/4 female				
		C5	M20×1.5male waterline seal				
		C6	1/4NPT male				
		C8	1/4NPT female				
		C10	1/2NPT male				
		C11	1/2NPTfemale				
		C15	R1/4 male				
		C31	R1/2 male				
		Code	Compensation				
		L	Laser trimming				
		M	Outer compensated resistor (providing resistor value)				
		Code	Electrical connection				
		2	100mm silicon rubber flexible wires				
		Code	Special measurement				
		Y	Gauge sensor to measure vacuum(-1bar ~ 0bar)				
MPM280	09	G	0	L	2	Y	The whole spec

\*For assembled and welded type, please choose the top connection and pressure connection at the same time, eg. H1C2. For other customized options not shown in the order guide, please contact us.

## Notes

1. The default unit of the company's products is kPa, 1kPa=0.01bar.
2. It can be used in over-range or down-range, generally within  $\pm 30\%$ .
3. The materials and processes used to manufacture negative pressure products are quite different from those of positive pressure products, and general gauge pressure products cannot be used to replace negative pressure products.
4. Confirm the maximum overload of the system, the maximum overload of the system is less than the maximum overload of the product, otherwise it will affect the performance and service life of the product, and even cause the product to be damaged.
5. For the temperature compensation of conventional products under the condition of constant current source, constant current power supply should be selected to ensure temperature performance.
6. Temperature resistant range of standard FKM O-ring of sensor is  $-20^{\circ}\text{C} \sim 250^{\circ}\text{C}$  . When working temperature is lower than  $-20^{\circ}\text{C}$  , or sensor is applied in critical environment, please contact us.