



bar **MPM280**

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
- Φ 19mm OEM pressure element
- 316L Stainless steel material
- Negative pressure measurement is available, the lowest to around -1bar

APPLICATIONS

- 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

CONSTRUCTION PERFORMANCE

Diaphragm	Stainless steel 316L
Housing	Stainless steel 316L
Pressure leading tube	Stainless steel 304
O-ring	FKM

BASIC CONDITION

Media temperature	(25±1)°C
Environment temperature	(25±1)°C
Shock	0.1g (1m/s ²) Max
Humidity	(50±10)%RH
Local air pressure	(0.86 ~ 1.06)bar
Power supply	(1.5±0.0015)mA DC

ENVIRONMENT CONDITION

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



MICROSENSOR

AUTHORIZED DISTRIBUTOR

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	≤2.0mA DC
Electrical connection	Silicon rubber flexible wires
Common mode voltage output	50% of input (typ.)
Input impedance	3.5kΩ ~ 8kΩ
Output impedance	3.5kΩ ~ 6kΩ
Response (10% ~ 90%)	< 1ms
Insulated resistor	100MΩ@100V DC
Overpressure	2 times FS or 1100bar (min. value is valid)

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

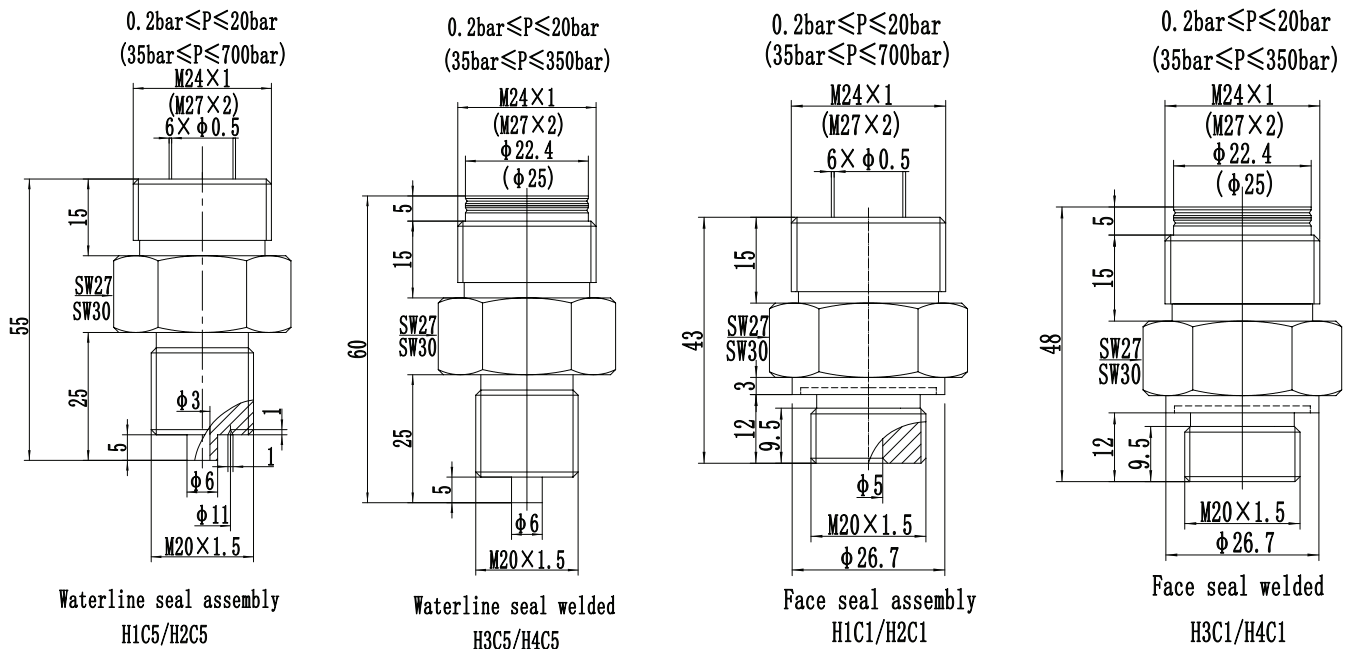
0.2bar G, FS output ≥45mV

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	Pressure range	Ref.	Range code	Pressure 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	Pressure connection				
		0 or null	O-ring				
		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.

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■ **ORDERING 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°C , or sensor is applied in critical environment, please contact us.*