



Description:

The outline, installation dimension and sealing method of the general MPM280 is strongly interchangeable, it is widely used for measuring pressure which is compatible with stainless steel and viton.

Features:

- Pressure range 0 – 20kPa....35MPa
- Wide temp. compensation: -10°C~+80°C
- Constant current power supply
- Isolated construction to measure various media
- Ø19mm OEM pressure element
- 316L stainless steel material
- Tantalum diaphragm or titanium construction for option
- Different male thread connection optional
- Pressure type: Gauge (G), Absolute (A) and sealed gauge (S)

Applications:

- Industrial processing control
- Level measurements
- Gas, liquid pressure measurements
- Pressure meter
- Pressure calibrator
- Liquid pressure system and switch
- Aviation & navigation inspection
- Refrigeration equipment and air conditioner



**PRESSURE SENSOR
TYPE MPM280
HIGH STABLE OEM**

Electric performance:

- Power supply: $\leq 2.0\text{mADC}$
- Electric connection: Kovar pin or 100mm silicon rubber flexible wires
- Common mode voltage output: 50% of input (Typ.)
- Input impedance: $3\Omega - 8\Omega$
- Output impedance: $305\Omega - 6\Omega$
- Response (10% - 90%): $< 1\text{ms}$
- Insulation resistor: $100\text{M}\Omega$, 100VDC
- Overpressure: 1.5 times FS

Construction:

- Diaphragm: Stainless steel 316L
- Housing: Stainless steel 316L
- Titanium TA1 (MPM280Ti)
- Titanium TC4 (MPM280Ti)
- Tantalum Ta (MPM280TS/TH)
- Hastelloy C (MPM280TH)
- Pin: Kovar
- O-Ring: Viton
- Net weight: $\sim 23\text{g}$ (general type); $\sim 50\text{g}$ (flush diaphragm); $\sim 125\text{g}$ (assembled type); $\sim 13.5\text{g}$ (MPM280Ti)

Basic specifications:

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			± 2	mVDC
FS output**	70			mVDC
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
Stability		± 0.2	± 0.3	%FS/year
*testing at basic condition · G: Gauge; A: Absolute; S: Sealed gauge				
**	oAG,	FS	output	$\geq 60\text{mV}$
oBG,		FS	output	$\geq 45\text{mV}$
o2A,	o3A,	o2GY,	o3GY,	FS output
o7A, o8A, o7GY, o8GY,	FS output $\geq 60\text{mV}$			$\geq 50\text{mV}$

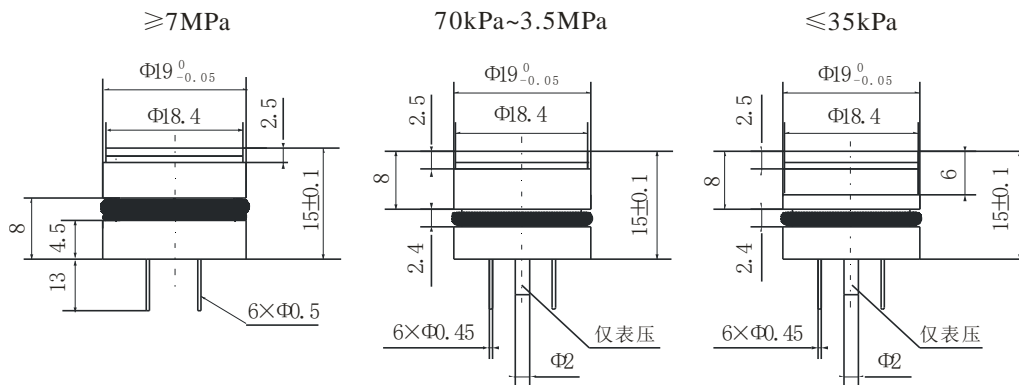
Environment condition:

- Position: deviate 90° from any orientation, zero change $\leq 0.05\%FS$
- Shock: no change at 10gRMS, (20 – 2000)Hz
- Impact: 100g, 11ms
- Media compatibility: the gas or liquid which is compatible with construction material and viton

Basic condition:

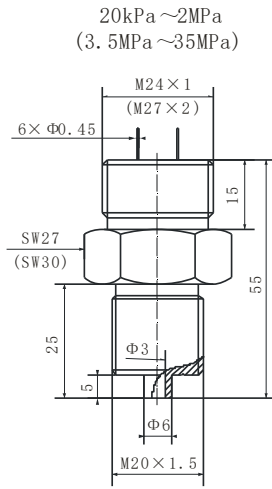
- Media temp.: (25±1) °C
- Environment Temp.: (25±1) °C
- Shock: 0.1g (1m/s/s) Max.
- Humidity: (50%±10%) RH
- Local air pressure: (86 – 106) kPa
- Power supply: (1.5±0.0015) mADC

Outline construction in mm:

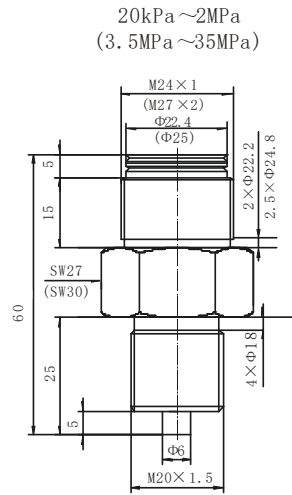


Option 0

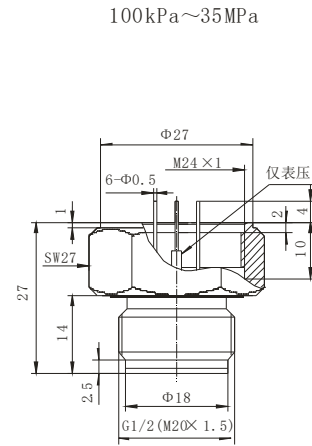
For option 0, we suggest the installation dimension is $\Phi 19_{+0.02}^{+0.05}$ mm.



Option 1 or 2

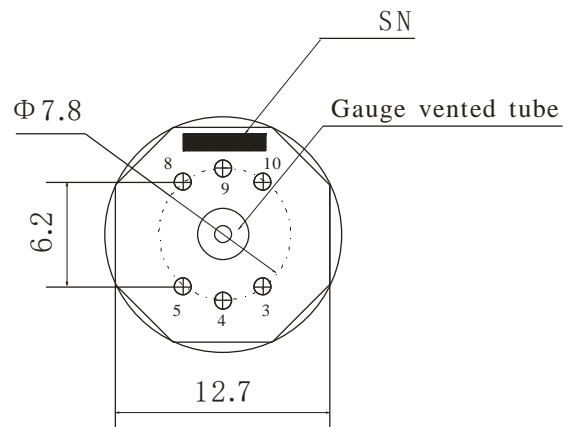
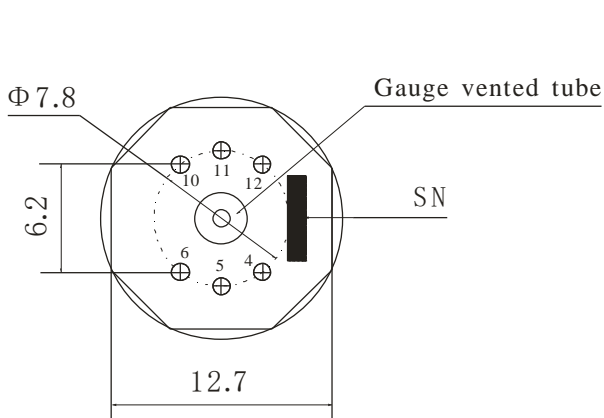


Option 3 or 4



Option PC₁ or PC₂

Electric connection:



Pin	Electric Connection	Wire Color
5	(+In)	Black
6	(-In)	Yellow (white)
4	(+Out)	Red
10	(-Out)	Blue
Other pins are useless		

Pin	Electric Connection	Wire Color
8	(+In)	Black
5	(-In)	Yellow (white)
4	(+Out)	Red
9	(-Out)	Blue
Other pins are useless		

Note:

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



**PRESSURE SENSOR
TYPE MPM280
HIGH STABLE OEM**

Order guide:

MPM280(TS/TH/Ti)*		Piezoresistive OEM Pressure Sensor				
Range code	Pressure range	Ref.	Range code	Pressure range	Ref.	
0B	0 ~ 20kPa	G	10	0 ~ 1MPa	G.A	
0A	0 ~ 35kPa	G	12	0 ~ 2MPa	G.A	
02	0 ~ 70kPa	G.A	13	0 ~ 3.5MPa	G.S.A	
03	0 ~ 100kPa	G.A	14	0 ~ 7MPa	S	
07	0 ~ 200kPa	G.A	15	0 ~ 10MPa	S	
08	0 ~ 350kPa	G.A	17	0 ~ 20MPa	S	
09	0 ~ 700kPa	G.A	18	0 ~ 35MPa	S	
Code		Pressure type				
G		Gauge				
A		Absolute				
S		Sealed gauge				
Code		Pressure connection		Installation		
o or null		O-ring				
1	Assembled M20x1.5 male, waterline seal	Top:	M24x1	male	(P≤2MPa)	
2	Assembled M20x1.5 male, waterline seal	Top:	M27x2 male			
3	Welded M20x1.5 male, waterline seal	Top:	M24x1 male (P≤2MPa)			
4	Welded M20x1.5 male, waterline seal	Top:	M27x2 male			
PC ₁	Flush diaphragm M20x1.5 male,	Top:	M24x1 female			
PC ₃	Flush diaphragm G1/2 male,	Top:	M24x1 female			
Code		Compensation				
L		Laser trimming				
M		Outer compensated resistor (providing resistor value)				
Code		Electric connection				
1		φ0.5mm Kovar pin				
3		4-color flexible wire, default length:100mm				
Code		Special measurement				
Y		Gauge sensor to measure vacuum (0~ -100kPa)				

MPM280 09 G 0 L 1 Y The whole spec

Note: When you select Tantalum diaphragm and stainless steel housing, the P/N is MPM280TS;
 When you select Tantalum diaphragm and Hastelloy C housing, the P/N is MPM280TH;
 When you select Titanium construction, the P/N is MPM280Ti;