



bar **MPM280**

FEATURES

- Pressure range: 0bar ~ 0.35bar...350bar
- Gauge, Absolute and Sealed gauge
- Constant current or Constant voltage power supply for option
- Isolated construction to measure various fluid media
- Thread connection pressure:0bar~0.35bar...350bar
- Clamp connection pressure:0bar~0.35bar~35bar
- Hygienic structure optional(Ra<0.4µm)
- 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
- CIP or SIP online cleaning or sterilization system

ELECTRICAL PERFORMANCE

Power supply	≤2.0mA DC
Electrical connection	φ0.5mm Kovar pin or 100mm silicon rubber flexible wires
Common mode voltage output	50% of input (typ.)
Input impedance	2.5kΩ ~ 8kΩ
Output impedance	3.5kΩ ~ 6kΩ
Response (10% ~ 90%)	< 1ms
Insulated resistor	100MΩ@100V DC
Overpressure	2 times FS

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

MPM280 Hygienic pressure sensor is a pressure sensing element through male thread and clamp connection. It has pressure port G1/2 male, R1/2 male, NPT1/2male, M20×1.5 male and DN25 clamp, sealed by FKM or silicon O-ring. The isolated diaphragm is welded in front of thread port, the range is 0bar~0.35bar...350bar(thread connection) and 0bar~0.35bar...35bar(clamp connection). It is suitable for pressure detection in food, medicine, health and other industries and occasions where the measuring medium may be fouled.

We can use gauge type of general, assembled and flush diaphragm type MPM280 to measure pressure below air pressure, the min. pressure can be around -1bar.

CONSTRUCTION PERFORMANCE

Diaphragm	Stainless steel 316L
Housing	Stainless steel 316L
Pin	Kovar
O-ring	FKM
Net weight	~50g(PC1) ~148g(PD1) ~163g (PD1s)

BASIC CONDITION

Media temperature	(25±1)°C
Environment temperature	(25±1)°C
Shock	0.1g (1m/s²) Max
Humidity	(50±10)%RH
Local air pressure	(0.86 ~ 1.06)bar
Power supply	(1.5±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

350mbar G, FS output ≥60mV

700mbar A, 0.1bar A, 700mbar GY, 1.0bar GY, FS output ≥45mV

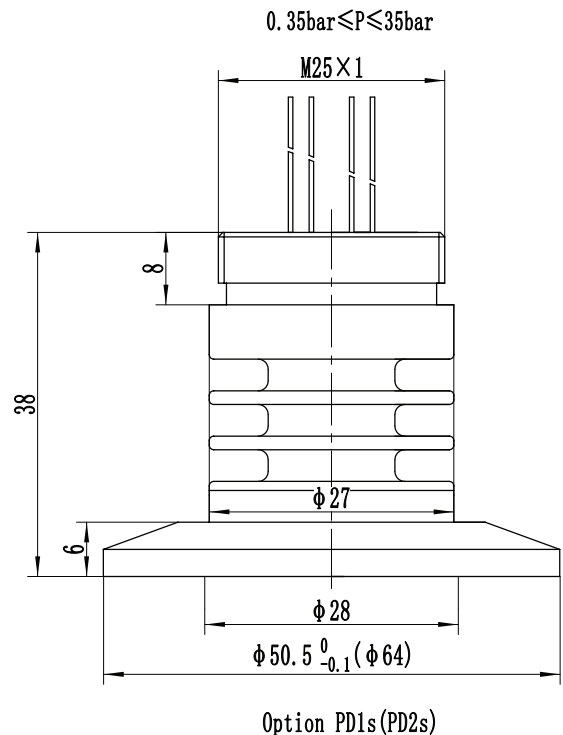
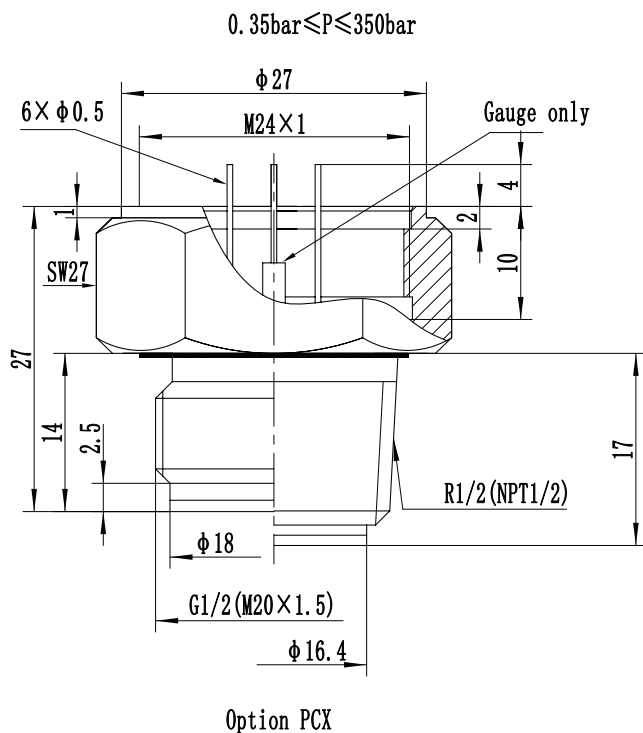
2.0bar A, 3.5bar A, 2bar GY, 3.5bar GY, FS output ≥60mV

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

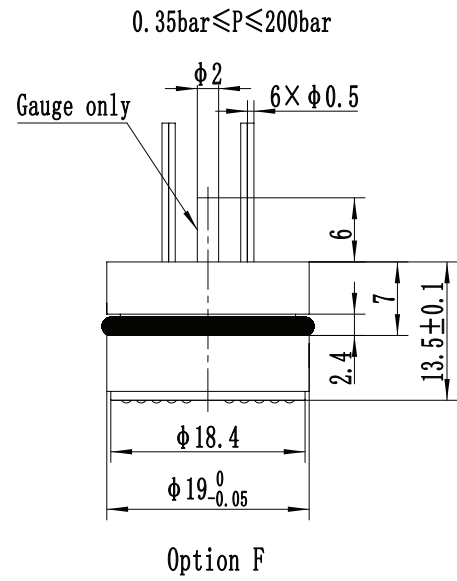
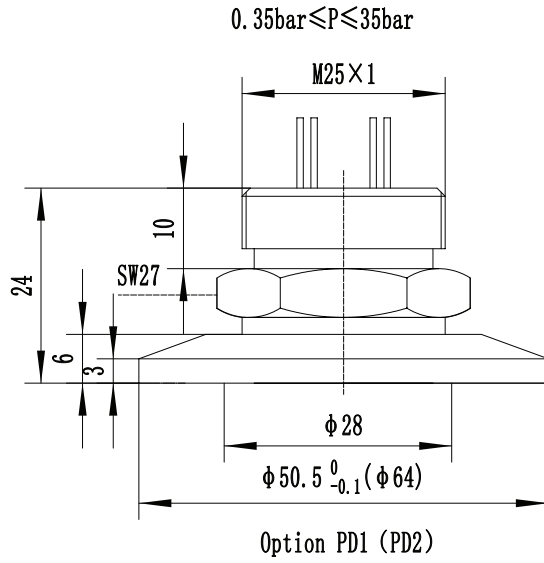
*** PDX, PDXs, F type zero thermal error, FS thermal error reference temperature condition 35°C

**** PDX, PDXs, F type compensated temp. range: 0~70°C

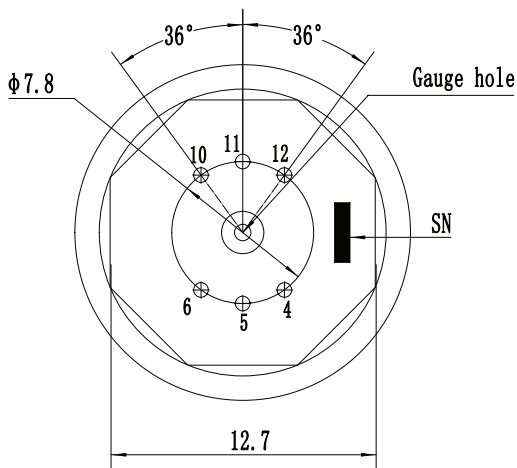
OUTLINE CONSTRUCTION (UNIT:mm)



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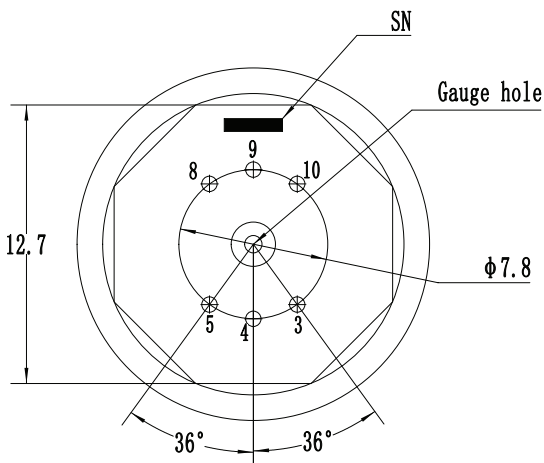


ELECTRICAL CONNECTION



Pin	Definition	Wire color
4	+OUT	Red
5	+IN	Black
6	-IN	Yellow or White
10	-OUT	Blue
Other pins are useless		

Pin	Definition	Wire color
4	+OUT	Red
5	-IN	Yellow or White
8	+IN	Black
9	-OUT	Blue
Other pins are useless		



Pin	Definition	Wire color
4	-OUT	Blue
5	-IN	Yellow or White
8	+IN	Black
9	+OUT	Red
Other pins are useless		

Notes

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

ORDER GUIDE

MPM280								
Range code	Pressure range	Ref.	Range code	Pressure range	Ref.			
0B	0bar~0.20bar	G	10	0bar~10bar	G.A			
0A	0bar~0.35bar	G.A	12	0bar~20bar	G.A			
02	0bar~0.70bar	G.A	13	0bar~35bar	G.A.S			
03	0bar~1bar	G.A	14	0bar~70bar	S.A			
07	0bar~2bar	G.A	15	0bar~100bar	S.A			
08	0bar~3.5bar	G.A	17	0bar~200bar	S.A			
09	0bar~7bar	G.A	18	0bar~350bar	S.A			
Code		Pressure type						
G		Gauge						
A		Absolute						
S		Sealed gauge						
Code		Pressure connection						
0 or null		O-ring						
F		Flat film(0.35bar~200bar),Φ19mm						
PC1		Flush film, M20×1.5 External thread						
PC2		Flush film, R1/2 External thread						
PC3		Flush film, G1/2 External thread						
PC4		Flush film, NPT1/2 External thread						
PD1		DN25 Clamp connection						
PD1s		DN25 Clamp connection with heat sink						
PD2		DN50 Clamp connection						
PD2s		DN50Clamp connection with heat sink						
Code		Compensation						
L		Laser trimming						
M		Outer compensated resistor (providing resistor value)						
Code		Electrical connection						
1		Kovar pin(default)						
2*		100mm silicon rubber flexible wires						
Code		Special measurement						
Y **		Gauge sensor to measure vacuum(-1bar ~ 0bar)						
0 or null		normal type						
W		NEObee M20						
MPM280	08	G	PC1	L	1	Y	W	The whole spec

* The default code for electrical connection is “1”on the parameter card. And it is also allowed to print code “1” if the electrical connection is flexible wire (original code “2”). The wire length shall be as per customers’ request on the contact.

** The gauge pressure type can be used to measure negative pressure (02 GY: 700mbar~0bar, 03 GY and above: -1.0bar~0bar).

*** PDXX Pressure measurement range:0bar~0.35bar...35bar

Notes:

1. The default unit of the company’s products is kPa, (1kPa=0.01bar).

The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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