



bar

## MPM288SA

### FEATURES

- Standard voltage output signal
- $\Phi 19\text{mm}$  standard outer diameter, high interchangeability
- Wide power supply range
- No need for re-calibration for users, high precision
- Customizable dimensions
- Power reverse protection

### APPLICATION

- Medical devices
- Pressure transmitters
- Level measurement
- Smart pressure gauges
- Gas and liquid pressure measurement
- Flow meter matching

### ELECTRICAL PERFORMANCE

Range	-1bar...-0.35bar ~ 0bar ~0.35bar...700bar
Pressure type	Gauge, Absolute, Sealed gauge
Power supply	See output specifications for details
Accuracy <sup>1</sup>	$\pm 0.25\% \text{FS} (\pm 0.5\% \text{FS} @ \text{FS} = 0.35\text{bar})$
Insulation resistance	100M $\Omega$ @50V DC
Dielectric strength	50Hz, 500V AC
Compensation temperature <sup>2</sup>	0°C ~ 70°C
Operating temperature	-40°C ~ 125°C
Storage temperature	-40°C ~ 125°C
Vibration	No change at 10gRMS, (20~2000)Hz
Shock	100g, 11ms
Overpressure	1.5 × FS (Maximum $\leq 1100\text{bar}$ )
Burst pressure	3.0 × FS (Maximum $\leq 1400\text{bar}$ )
<p>1. The test standard is based on JJG 860. 2. This is the compensation temperature for standard products. Please feel free to consult us for specific temperature requirements.</p>	



MICROSENSOR

AUTHORIZED DISTRIBUTOR

MPM288SA pressure sensor can convert pressure into standard electrical signal. It is composed of a PCBA circuit board with an ASIC chip and a standard  $\phi 19\text{mm}$  piezoresistive pressure sensor. It can be flexibly assembled or welded to various pressure connections for different on-site pressure measurement instruments.

MPM288SA pressure sensor can output different signals including the 3-wire (fixed) voltage output and the 3-wire ratio metric voltage output. Based on Micro Sensor's mature production process and signal conditioning technology, a pressure sensor- specific conditioning chip (ASIC) is utilized. Its digital processing part has dual 24-bit ADC, enabling high signal resolution for the product. The performance is stable and reliable after high and low temperature aging and wide temperature range compensation.

It features the same outline construction, mounting dimensions, and sealing method as international mainstream products, ensuring excellent interchangeability.

CONSTRUCTION PERFORMANCE

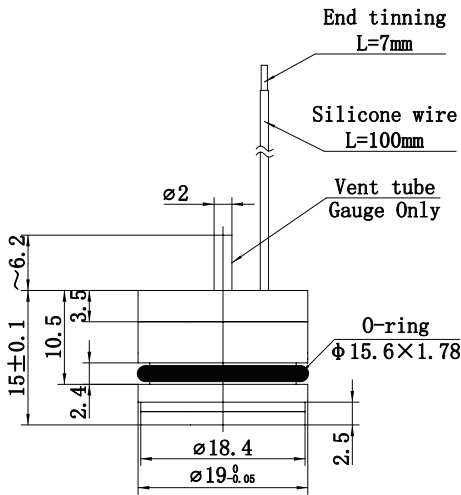
Diaphragm	Stainless steel 316L
Housing	Stainless steel 316L
Vent tube	Stainless steel 304
Wiring	Silicone wire
O-ring	FKM
Net weight	About 30g

BASIC CONDITIONS

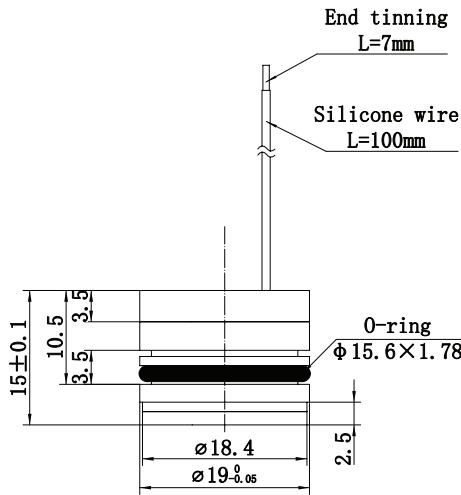
Media temperature	(35±1)°C
Environment temperature	(35±1)°C
Relative humidity	≤ 80% RH
Local air pressure	(0.86 ~ 1.06)bar
Power supply	24V DC (8V ~ 28V DC), 5V DC (5V±0.3V DC), 3.3V DC(3.3V±0.3V DC)
Load resistance	≥ 10kΩ(voltage type)

OUTLINE CONSTRUCTION (UNIT:mm)

Voltage type



P≤35bar



P>35bar

The suggested installation dimension is  $\Phi 19^{+0.05}_{+0.02}$  mm, L ≥15mm

OUTPUT SPECIFICATIONS

Output signal	Supply voltage	Output format	Load resistance
0.5V ~ 4.5V DC	8V ~ 28V DC	3-wire	≥ 10kΩ
0.5V ~ 4.5V DC	5V±0.3V DC		
0.5V ~ 2.5V DC	3.3V±0.3V DC		

ELECTRICAL CONNECTION

Color	3-wire
Red	+V
White	+OUT
Black	GND

ORDER GUIDE

MPM288SA		Pressure Sensor						
		Range code	Measuring range	Ref.	Range code	Measuring range	Ref.	
		0A	0bar~0.35bar	G.A	12	0bar~20bar	G.A	
		02	0bar~0.7bar	G.A	13	0bar~35bar	G.S.A	
		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	
		10	0bar~10bar	G.A	19	0bar~700bar	S.A	
			Code	Pressure type				
	G		Gauge					
	A		Absolute					
	S		Sealed gauge					
			Code	Power supply				
			V1	24V DC				
			V6	5.0V DC				
			V7	3.3V DC				
				Code	Output signal			
				K1	0.5V ~ 4.5V DC			
				K3	0.5V ~ 4.5V DC(ratio metric,5.0V DC power supply only)			
	W			0.5V ~ 2.5V DC(3.3V DC power supply only)				
		Code	Electrical connection					
2		100mm silicone flexible wire(default)						
Code		Special measurements						
	Y	Gauge sensor to measure negative pressure (-1bar ~-0.35bar)						

MPM288SA	07	G	V6	K3	2	Y	the whole spec
----------	----	---	----	----	---	---	----------------

- Notes:
- The listed range is the standard range for the product. Please feel free to contact with us for special range requirements (including negative pressure type).
  - If the pressure sensor is fixed by a locking ring, the inner diameter of the locking ring should not be less than Φ15mm.
  - It is recommended to use a "suspended" construction when assembling the pressure sensor to avoid applying direct pressure to its end face during sealing, preventing any interference with the sensor's stability.
  - The operating temperature range is -20°C ~ 250°C for FKM O-ring by default. Please feel free to contact with us if the operating temperature range is lower than -20°C , or if the sensor is used in harsh condition.