

MPM289 OEM Pressure Sensor



Features

- Pressure range 0bar~ 0.35bar...1000bar
- Gauge, Absolute, Sealed gauge
- Constant current power supply
- Isolated construction, enable to measure various media
- Φ 19mm standard OEM pressure sensor
- Full stainless steel 316L
- Wide temperature compensation $0^{\circ}\text{C} \sim 70^{\circ}\text{C}$

Application

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

Introduction

MPM289 OEM Pressure Sensor is the piezoresistive pressure sensor with isolated construction and precise compensation. It uses high stable silicon die. Stainless steel 316L housing with diameter Φ 19mm. Wider temperature compensation and zero correction are calibrated by laser trimming technics. The measured pressure is transmitted onto silicon die through 316L diaphragm and inner media, to transform the pressure to electric signal.

MPM289 pressure sensor is inspected and screened on automatic production line, testing and checking time after time strictly. It is widely used for various pressure measurement fields.

Electrical Specification

- Power Supply: $\leq 2.0\text{mA DC}$
- Electric Connection: Kovar pin or 100mm silicon rubber flexible wires
- Common mode voltage output: 50% input (typ.)
- Input Impedance: $2\text{k}\Omega \sim 4\text{k}\Omega$
- Output Impedance: $3.5\text{k}\Omega \sim 6\text{k}\Omega$
- Output Impedance: $4\text{k}\Omega \sim 6\text{k}\Omega$
- Insulation Resistor: $100\text{M}\Omega @ 100\text{V DC}$
- Overpressure: 2 times FS or 1100bar(min.value is valid)

Construction

- Diaphragm: Stainless steel 316L
- Housing: Stainless steel 316L
- Pin: Kovar
- O-ring:FKM
- Net weight: $\sim 25\text{g}$

Environment Condition

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

Basic Condition

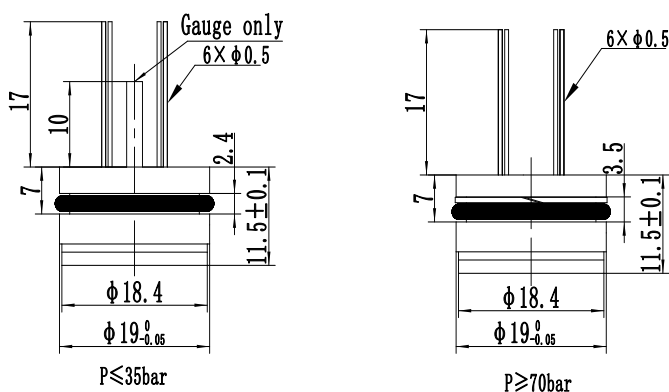
- Media temperature: (35±1)°C
- Environment temperature: (35±1)°C
- Shock: 0.1g (1m/s²)Max
- Humidity: (50%±10%)RH
- Local air pressure: (0.86~1.06)bar
- Power supply: (1.5±0.0015)mA DC

Specification

Item*	Min.	Typ.	Max.	Units
Linearity**		±0.10	±0.25	%FS,BFSL
Repeatability			±0.075	%FS
Hysteresis			±0.075	%FS
Zero output			±2.0	mV DC
Output/Span***	60			mV DC
Zero thermal error			±1.0	%FS, @35°C
Span thermal error			±1.0	%FS, @35°C
Compensated temp. range		0 ~ 70		°C
Working temp. range		-40 ~ 125		°C
Storage temp. range		-40 ~ 125		°C
Stability error		±0.2		%FS/Year

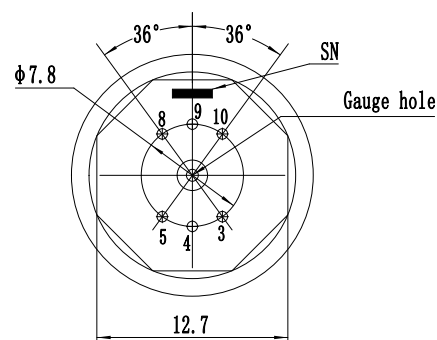
* Testing at basic condition
 ** Code 0.35bar Max. Linearity:±0.3(%FS,BFSL)
 *** Output/Span=full scale output - zero point

Outline Construction (Unit: mm)



The suggested mounting dimension is $\Phi 19^{+0.05}_{+0.02}$ mm

Electrical Connection



Pin	Definition	Wire color
4	-OUT	Blue
5	-IN	Yellow
8	+IN	Black
9	+OUT	Red

Order Guide

MPM289		OEM Pressure Sensor				
	Range code	Pressure range	Ref.	Range code	Pressure range	Ref.
	35K0	0bar~0.35bar	G.A	07M0	0bar~70bar	S.A
	100K	0bar~1bar	G.A	10M0	0bar~100bar	S.A
	200K	0bar~2bar	G.A	20M0	0bar~200bar	S.A
	500K	0bar~ 5bar	G.A	35M0	0bar~350bar	S.A
	01M0	0bar ~ 10bar	G.A	70M0	0bar~700bar	S.A
	02M0	0bar ~ 20bar	G.A	100M0	0bar~1000bar	S.A
	03M5	0bar ~ 35bar	G.A			
		Code	Pressure type			
		G	Gauge			
		A	Absolute			
		S	Sealed gauge			
		Code	Pressure connection			
		0 or null	O-ring			
		Code	Compensation			
		L	Laser trimming			
		Code	Electrical connection			
		1	Kovar pin(default)			
		2*	100mm silicon rubber flexible wires			
MPM289	01M0	G	0	L	2	the whole spec

Notes

1. The default unit of the company's products is kPa, 1kPa=0.01bar.
2. It is recommended that the sensor should be installed as Suspended Mode to avoid face tight press and avoid affecting sensor stability.
3. Please pay attention to protect the diaphragm and the compensated board to prevent any damage or bad performance.
4. Temperature resistant range of standard FKM O-ring of sensor is -20°C ~ 250°C . When working temperature is lower than -20 °C , or sensor is applied in critical environment, please contact us.