

# MPM281VC Pressure Sensor



## Features

- Constant Voltage Power Supply, Standard Output
- International Famous chips, Laser trimming
- Pressure range 0bar~0.35bar...1000bar
- Gauge, Sealed gauge and Absolute
- Isolated construction, enable to measure various media
- $\Phi$ 19mm standard OEM pressure sensor
- Full stainless steel 316L

## 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

MPM281VC Pressure Sensor is the piezoresistive pressure sensor with constant voltage power supply and standard output. The outline, installation dimension and sealing method of the general MPM281VC is strongly interchangeable, it is widely used for measuring pressure which is compatible with stainless steel and FKM, it also can meet the requirement of installation with limited space.

## Electrical Performance

- Power supply:  $\leq 10V$  DC
- Electrical connection: 100mm silicon rubber flexible wires
- Common mode voltage output: 50% input (typ.)
- Input impedance:  $4k\Omega \sim 25k\Omega$
- Output impedance:  $3.5k\Omega \sim 6k\Omega$
- Response: (10%~90%):  $< 1ms$
- Insulation resistor:  $100M\Omega @ 100V$  DC
- Overload: 2 times FS or 1100bar (min. value is valid)

## Construction Performance

- Diaphragm: Stainless steel 316L
- Housing: Stainless steel 316L
- Pressure leading tube : Stainless steel 316L
- Pin: Silicon rubber flexible wires
- O-ring: FKM
- Net weight:  $\sim 16g$

## 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/s<sup>2</sup>) Max
- Max Humidity: (50±10)%RH
- Local air pressure: (0.86~1.06)bar
- Power supply: (10±0.1)V DC

## Specification

Specification*	Min.	Typ.	Max.	Units
Linearity		±0.2	±0.3	%FS, BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±0.05	±0.075	%FS
Zero Output**			±2.0	mV DC
Output/Span***	98	100	102	mV DC
Zero thermal error		±0.75	±1.0	%FS, @35°C
FS thermal error		±0.75	±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	±0.3	%FS/Year

\* Test at the basic condition

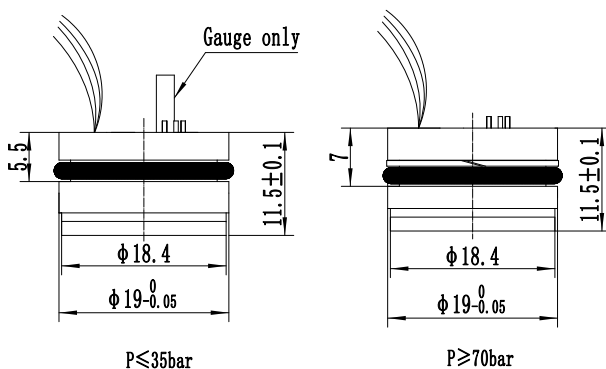
\*\* Closed-loop products

\*\*\* Output/Span=full scale output - zero point

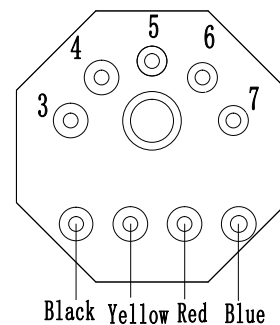
## Outline Construction

Unit: mm

## Electrical Connection



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



Wire color	Definition
Black	+IN
Yellow	-IN
Red	+OUT
Blue	-OUT

## Order Guide

MPM281VC		Pressure Sensor					
		Range Code	Pressure Range	Ref.	Range Code	Pressure Range	Ref.
		0A	0bar~0.35bar	G	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
		10	0bar~10bar	G.A	19	0bar~700bar	S.A
		12	0bar~20bar	G.A	20	0bar~1000bar	S.A
		Code	Pressure Type				
		G	Gauge				
		A	Absolute				
		S	Sealed Gauge				
		Code	Pressure Connection				
		0 or Null	O-ring				
		Code	Temperature compensation				
		L	Laser trimming				
		Code	Electrical connection				
		2	100mm silicon rubber flexible wires				
MPM281VC	03	G	0	L	2	The whole spec.	

## Notes

1. The default unit of all the products is kPa (1kPa=0.01bar).
2. We suggest you to use suspended construction when you install the sensor to prevent affecting sensor stability.
3. Please pay attention to protect sensor isolated diaphragm and ceramic compensated board, to avoid damaging sensor and affecting the performance.
4. Sensor standard components FKM O-ring temperature range is -20 °C ~ 250 °C ,when the sensitive component operating temperature range below -20 °C or the user needs to use sensor at rugged environment, please contact our company freely.