

Your Partner of Sensing and Measuring

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PRESSURE SENSOR MODULE CAPABILITY

Your partner of sensing and measuring



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PRESSURE SENSORS

Company



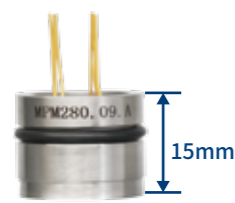
Since 1971, Micro Sensor has been researching, designing and producing pressure sensing and measuring instruments based on piezoresistive measuring principles. Today customers can be supplied with high-quality pressure sensors, pressure transmitters, level sensors, flow meters and wireless IoT devices.

At Micro Sensor, we learned that sometimes customer may need a customized sensor product due to their type of application. That's why we offer sensor product with variety of customized changing variables to suit customer's unique application. To adapt to different application environment, we offer different types of isolated liquid, pressure ranges, compensated temperature ranges, size, materials, structures, power supply & output type and even performance.

Through modifying all of these parameters, we aim to offer the most cost effective and compatible sensor product for customer's application, but maintain high levels of accuracy, stability and reliability at the same time.

19mm Universal

MPM280



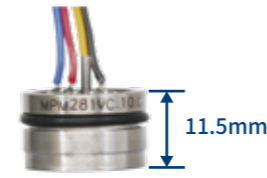
MPM289



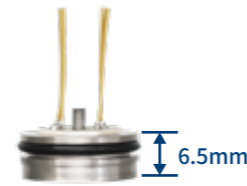
MPM281



MPM281VC



MPM286



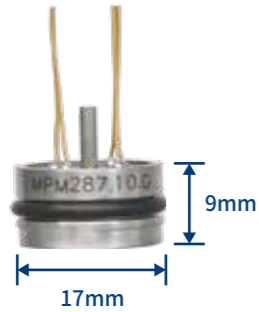
	MPM280	MPM289	MPM281	MPM281VC	MPM286
Size	Φ19×15mm	Φ19×11.5mm	Φ19×11.5mm	Φ19×11.5mm	Φ19×6.5mm
Range	0.2Bar – 1000Bar	0.35Bar – 1000Bar	0.07Bar – 1000Bar	0.35Bar – 1000Bar	0.2Bar – 35Bar
Option	-1Bar – 0Bar (Vacuum pressure measurement)	-1Bar – 0Bar (Vacuum pressure measurement)	-1Bar – 0Bar (Vacuum pressure measurement)	-1Bar – 0Bar (Vacuum pressure measurement)	-1Bar – 0Bar (Vacuum pressure measurement)

19mm Universal

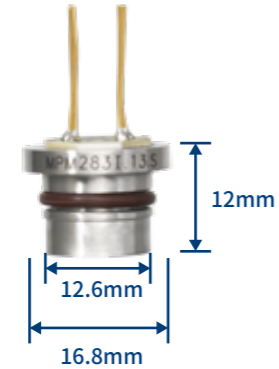
Model	MPM280	MPM289	MPM281	MPM281VC	MPM286	
Size	Φ19×15mm	Φ19×11.5mm	Φ19×11.5mm	Φ19×11.5mm	Φ19×6.5mm	
Pressure type	Gauge / Absolute / Sealed gauge					
Feature	Universal	Universal	High Stable	Constant voltage supply	Small size	
Input	Pressure range	-1Bar ~ 0.2Bar...1000Bar	0.35Bar ~ 1000Bar	-1Bar ~ 0.07Bar...1000Bar	0.35Bar ~ 1000Bar	0.2Bar ~ 35Bar
	Supply	≤2mA DC	≤2mADC	≤2mA DC	≤10V DC	≤2mADC
Output	Reference	Temp.: 25°C Supply: 1.5mA DC	Temp.: 35°C Supply: 1.5mA DC	Temp.: 35°C Supply: 1.5mA DC	Temp.: 35°C Supply: 10V DC	Temp.: 25°C Supply: 1.5mA DC
	Zero output	±1mV DC(Typ.) ±2mV DC(Max.)	±2mV DC(Max.)	±2mV DC(Max.)	±2mV DC(Max.)	±2mV DC(Max.)
	FS output	≥45mV DC (20/70/100kPa) ≥60mV DC (35/200/350kPa) ≥70mV DC(≥700kPa)	≥60mV DC	≥45mV DC(≤7kPa) ≥70mV DC(≥20kPa)	100±2mV DC	≥45mV DC
	Zero thermal error	±0.75%FS(Typ.) ±1.0%FS(Max.)	±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)
	Span thermal error	±0.75%FS(Typ.) ±1.0%FS(Max.)	±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)	±0.75%FS(Typ.) ±1.0%FS(Max.)
	Non-linearity	±0.15%FS(Typ.) ±0.25%FS(Max.)	±0.25%FS(Max.)	±0.15%FS(Typ.) ±0.20%FS(Max.)	±0.2%FS(Typ.) ±0.3%FS(Max.)	±0.15%FS(Typ.) ±0.25%FS(Max.)
	Repeatability	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)
Hysteresis	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)	±0.05%FS(Typ.) ±0.075%FS(Max.)	
Environment condition	Compensated temp.	0°C ~ 50°C	0°C ~ 70°C	0°C ~ 70°C(≤35kPa) -10°C ~ 80°C(≥70kPa)	0°C ~ 70°C	0°C ~ 50°C
	Working temp.	-40°C ~ 125°C				

Small Size

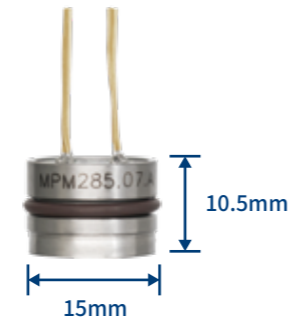
MPM287



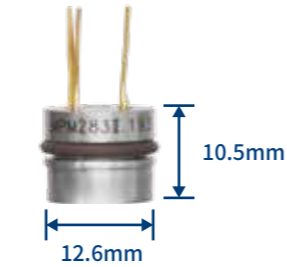
MPM283 I



MPM285



MPM283 II



Size	Φ17×9mm	Φ16.8×12mm	Φ15×10.5mm	Φ12.6×10.5mm
Range	1Bar - 35Bar	2Bar - 1000Bar	1Bar - 35Bar	2Bar - 1000Bar
Option	-1Bar - 0Bar (Vacuum pressure measurement)	-1Bar - 0Bar (Vacuum pressure measurement)	-1Bar - 0Bar (Vacuum pressure measurement)	-1Bar - 0Bar (Vacuum pressure measurement)

Small Size

Model		MPM287	MPM283I	MPM285	MPM283II
Size		Φ17×9mm	Φ16.8×12mm	Φ15×10.5mm	Φ12.6×10.5mm
Pressure type		Gauge / Absolute / Sealed gauge			
Feature		Small size	Thick film circuit compensation	Small size	Outer resistance compensation
Input	Pressure range	0 ~ 1Bar...35Bar	0 ~ 2Bar...1000Bar	0 ~ 1Bar...35Bar	0 ~ 2Bar...1000Bar
	Supply	≤2mA DC	≤2mA DC	≤2mA DC	≤2mA DC
Output	Reference	Temp.: (35±1)°C Supply: 1.5mA DC	Temp.: (35±1)°C Supply: 1.5mA DC	Temp.: (35±1)°C Supply: 1.5mA DC	Temp.: (35±1)°C Supply: 1.5mA DC
	Zero output	±2.0mV DC(Max.)	±3.0mV DC(Max.)	±2.0mV DC(Max.)	±3.0mV DC(Max.)
	FS output	≥50mV DC	≥70mV DC	≥50mV DC	≥70mV DC
	Zero thermal error	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)
	Span thermal error	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)	±0.75%FS (Typ.) ±1.0%FS (Max.)
	Non-linearity	±0.2%FS (Typ.) ±0.25%FS (Max.)	±0.15%FS (Typ.) ±0.2%FS (Max.)	±0.15%FS (Typ.) ±0.25%FS (Max.)	±0.2%FS(Typ.) ±0.2%FS(Max.)
	Repeatability	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)
Hysteresis	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)	±0.05%FS (Typ.) ±0.075%FS (Max.)	
Environment condition	Compensated temp.	0°C ~ 70°C	0°C ~ 70°C(≤2Bar)	0°C ~ 70°C	0°C ~ 70°C(≤2Bar)
			-10°C ~ 80°C(≥3.5Bar)		
	Working temp.	-40°C ~ 125°C			

Flush Diaphragm

MPM280F



MPM280PC1



MPM280PC2



MPM280PC3



MPM280PD1S



Diameter

φ19mm

M20×1.5

R1/2

G1/2

DN25

Range

1Bar – 35Bar

1Bar – 350Bar

1Bar – 350Bar

1Bar – 350Bar

1Bar – 35Bar

Option

-1Bar – 0Bar
(Vacuum pressure measurement)

-1Bar – 0Bar
(Vacuum pressure measurement)

-1Bar – 0Bar
(Vacuum pressure measurement)

-1Bar – 0Bar
(Vacuum pressure measurement)

Flush diaphragm

Model		MPM280F	MPM280PC1	MPM280PC2	MPM280PC3	MPM280PD1S
Size		φ19×13.5mm	M20×1.5	R1/2	G1/2	DN25
Pressure type		Gauge / Absolute / Sealed gauge				
Feature		Flush diaphragm	Integrated threaded connection		Clamp connection with cooling part	
Input	Pressure range	1Bar ~ 35Bar	1Bar ~ 350Bar		1Bar ~ 35Bar	
	Supply	≤2mA DC				
Output	Reference	Temp.: (25±1)°C / Supply: 1.5mA DC				
	Zero output	±1mV DC(Typ.) / ±2mV DC(Max.)				
	FS output	≥45mV DC(20/70/100kPa) / ≥60mV DC(35/200/350kPa) / ≥70mV DC(≥700kPa)				
	Zero thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)				
	Span thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)				
	Non-linearity	±0.15%FS(Typ.) / ±0.25%FS(Max.)				
	Repeatability	±0.05%FS(Typ.) / ±0.075%FS(Max.)				
Environment condition	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)				
	Compensated temp.	0°C ~ 50°C				
	Working temp.	-40°C ~ 125°C			-40°C ~ 150°C	

Pressure Sensor with Thread

MPM280H1C2



MPM280H1C6



MPM280H4C2



MPM280H4C6



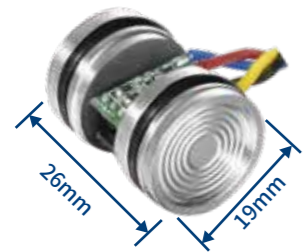
Upper thread	M24×1	M24×1	M27×2	M27×2
Pressure connection	M20×1.5	M20×1.5	G1/4	NPT1/4
Range	0.2Bar – 20Bar	35Bar – 350Bar	0.2Bar – 1000Bar	0.2Bar – 1000Bar

with thread

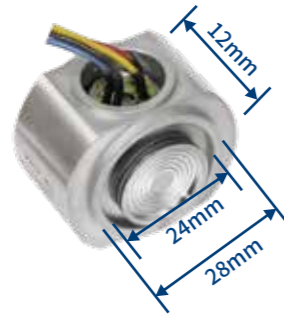
Model	MPM280H1C2	MPM280H1C6	MPM280H4C2	MPM280H4C6
Upper thread	M24×1	M24×1	M27×2	M27×2
Pressure connection	G1/4	NPT1/4	G1/4	NPT1/4
Pressure type	Gauge / Absolute / Sealed gauge			
Feature	Integrated threaded connection			
Input	Pressure range	0.2Bar ~ 20Bar	35Bar ~ 700Bar	0.2Bar ~ 20Bar 35Bar ~ 350Bar
	Supply	≤2mA DC		
Output	Reference	Temp.: (25±1)°C / Supply: 1.5mA DC		
	Zero output	±1mV DC(Typ.) / ±2mV DC(Max.)		
	FS output	≥45mV DC(20/70/100kPa) / ≥60mV DC(35/200/350kPa) / ≥70mV DC(≥700kPa)		
	Zero thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)		
	Span thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)		
	Non-linearity	±0.15%FS(Typ.) / ±0.25%FS(Max.)		
	Repeatability	±0.05%FS(Typ.) / ±0.075%FS(Max.)		
	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)		
Environment condition	Compensated temp.	0°C ~ 50°C		
	Working temp.	-40°C ~ 125°C		

Differential Pressure Sensor

MDM290



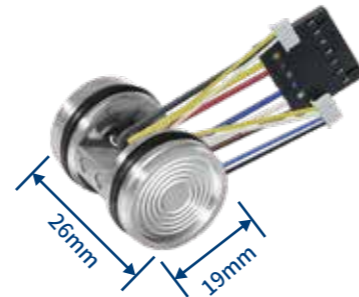
MDM291



MDM293



MCM211



Diameter

φ19mm

φ28mm

φ12.6mm

φ19mm

Range

0.35Bar – 35Bar

0.35Bar – 35Bar

2Bar – 35Bar

1Bar – 35Bar

Differential

Model	MDM290	MDM291	MDM293	MCM211	
Size	φ19×26mm	Connection can be customized	φ12.6×18mm	φ19×26mm	
Pressure type	Differential pressure				
Feature	Outer resistance compensation	With thread connection	Small size Outer compensation resistor	Temperature, pressure and differential pressure compound	
Input	Pressure range	0.35Bar ~ 35Bar	0.35Bar ~ 20Bar	2Bar ~ 35Bar	
	Supply	≤2mA DC			
Output	Reference	Temp.: (25±1)°C Supply: 1.5mA DC	Temp.: (35±1)°C Supply: 1.5mA DC	Temp.:(25±1)°C / Supply: 1.5mA DC	
	Zero output	±3mV DC(Max.)	±2mV DC(Max.)	±3mV DC(Max.)	
	FS output	≥60mV DC	≥70mV DC	≥60mV DC	≥50mV DC
	Zero thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)	±0.5%FS(Typ.) ±1%FS(Max.≤35kPa) ±0.75%FS(Max.≥70kPa)	±0.75%FS(Typ.)	±1.0%FS(Max.)
	Span thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)			
	Non-linearity	±0.15%FS(Typ.) / ±0.25%FS(Max.)			
	Repeatability	±0.05%FS(Typ.) / ±0.075%FS(Max.)			
Environment condition	Compensated temp.	0°C ~ 50°C	0°C ~ 70°C	0°C ~ 70°C	
	Working temp.	-40°C ~ 125°C			

Special Material

	MPM280	MPM280Ti	MPM280HH	MPM280TH	MPM280AU
Diaphragm	SS316L	Titanium	Hastelloy C	Tantalum	Gold plated
Housing	SS316L	Titanium	Hastelloy C	Hastelloy C	SS316L
O-ring	FKM 	NBR 	HNBR 	EPDM 	Neoprene Kalrez 
Compatible medium	Water / Oil / Gas / Non-corrosive fluid	Sea water / Chemical	Sea water / Chemical	Sea water / Chemical	Hydrogen

Special Material

Model	MPM280	MPM280Ti	MPM280HH	MPM280TH	MPM280AU	
Size	φ19×15mm					
Pressure type	Gauge / Absolute / Sealed gauge					
Diaphragm	SS316L	Titanium	Hastelloy C	Tantalum	Gold plated on SS316L	
Housing	SS316L	Titanium alloy	Hastelloy C	Hastelloy C	SS316L	
Input	Pressure range	-1Bar ~ 0.2Bar...1000Bar	-1Bar ~ 0.2Bar...700Bar	-1Bar ~ 0.2Bar...350Bar	-1Bar ~ 0.2Bar...350Bar	-1Bar~0.35Bar...200Bar
	Supply	≤2mA DC				
Output	Reference	Temp.: (25±1)°C / Supply: 1.5mA DC				
	Zero output	±1mV DC(Typ.) / ±2mV DC(Max.)				
	FS output	≥45mV DC(20/70/100kPa) / ≥60mV DC(35/200/350kPa) / ≥70mV DC(≥700kPa)				
	Zero thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)				
	Span thermal error	±0.75%FS(Typ.) / ±1.0%FS(Max.)				
	Non-linearity	±0.15%FS(Typ.) / ±0.25%FS(Max.)				
	Repeatability	±0.05%FS(Typ.) / ±0.075%FS(Max.)				
Environment condition	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)				
	Compensated temp.	0°C ~ 50°C				
	Working temp.	-40°C ~ 125°C				

Digital Pressure Sensor

MPM3801



Diameter	Φ19×15mm
Range	0.07Bar – 1000Bar
Accuracy	±0.25%FS
Diaphragm	SS316L
Housing	SS316L
Output Signal	I ² C /SPI (pressure, temperature)

Digital Output

Customized Piezoresistive Pressure Sensor

