



your partner of sensing and measuring

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MICROSENSOR

PRESSURE SENSOR MODULE CAPABILITY

Your partner of sensing and measuring

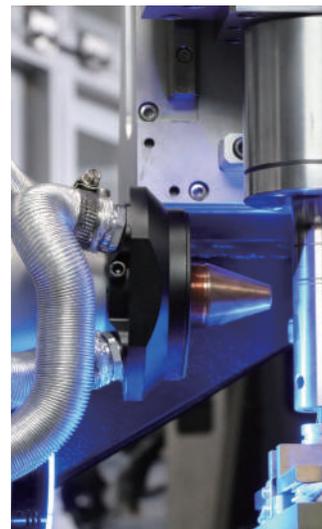


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PRESSURE SENSORS

Company



Since its establishment in 1971, Micro Sensor has emerged as a prominent global manufacturer of industrial instrumentation. Specializing in delivering solutions for pressure, level, temperature, and flow measurements, Micro Sensor caters to diverse industries such as oil & gas, renewable energy, industrial gases, water & wastewater, marine & shipbuilding, HVAC, hydraulics & pneumatic, mechanical manufacturing & automation, as well as food & beverage and paper.

Recognizing the unique requirements of our customers, Micro Sensor acknowledges the necessity for customized sensor products tailored to specific applications. To address this, we offer sensor products with a diverse range of customizable variables, including isolated liquids, pressure ranges, compensated temperature ranges, sizes, materials, structures, power supply and output types, and performance characteristics.

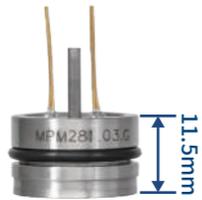
Our objective in modifying these specifications is to deliver high performance and compatible sensor products that cater to the distinctive needs of our customers' applications. Throughout this process, we prioritize maintaining high levels of accuracy, stability, and reliability in our products.

High-Performance Type—MPM281 Series

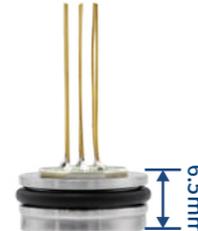
MPM281 Pro



MPM281



MPM281 II



MPM281VC



MPM281PT



	MPM281 Pro	MPM281	MPM281 II	MPM281VC	MPM281PT
Size	Φ19×11.5mm	Φ19×11.5mm	Φ19×6.5mm	Φ19×11.5mm	Φ19×11.5mm
Range	0.07Bar~35Bar	0.07Bar~1000Bar	0.2Bar~35Bar	0.35Bar~1000Bar	0.35Bar~1000Bar
Vacuum/ Compound gauge		-1Bar~0Bar (Vacuum pressure measurement)	-1Bar~0Bar (Vacuum pressure measurement)	-1Bar~0Bar (Vacuum pressure measurement)	-1Bar~0Bar (Vacuum pressure measurement)

Model	MPM281 Pro	MPM281	MPM281 II	MPM281VC	MPM281PT	
Size	Φ19×11.5mm	Φ19×11.5mm	Φ19×6.5mm	Φ19×11.5mm	Φ19×11.5mm	
Pressure type	Gauge / Absolute	Gauge / Absolute / Sealed gauge				
Feature	Wide temperature compensation, ±1% interchangeability, gain 3.012V output	High-stability		Constant voltage power supply	Pressure and temperature dual output Thermal error±0.5°C	
Input	Pressure range	0.07Bar ~ 35Bar	0.07Bar ~ 1000Bar	0.2Bar ~ 35Bar	0.35Bar ~ 1000Bar	
	Supply	≤2mA DC	≤2mA DC		≤2mA DC	
Output	Reference	Temp.: 25°C Supply: 1.5mA DC	Temp.: 35°C Supply: 1.5mA DC		Temp.: 35°C Supply: 1.5mA DC	
	Zero output	±1mV DC (P<0.35Bar) ±2mV DC (P≤0.35Bar)	±2mV DC (Max.)		±2mV DC (Max.)	
	FS output	≥60mV DC Note: ≥45mV DC (P=0.07Bar)	≥45mV DC (≤0.07Bar) ≥70mV DC (≥0.35Bar)	100±2mV DC		≥70mV DC (P≥0.35Bar) Note: ≥60mV DC (P=0.7Bar)
	Zero thermal error	±1.5%FS (P=0.07Bar) ±1.0%FS (P<0.35Bar) ±0.75%FS (0.7Bar<P<0Bar) ±0.5%FS (P>1Bar)	±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	±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 (P<0.35Bar) ±0.10%FS (P≥0.35Bar)	±0.15%FS (Typ.) ±0.25%FS (Max.)		±0.2%FS (Typ.) ±0.3%FS (Max.)	±0.15%FS (Typ.) ±0.25%FS (Max.) Note: ±0.3%FS (P=0.35Bar)
	Repeatability	±0.02%FS (Typ.) ±0.05%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	±0.02%FS (Typ.) ±0.05%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.)	
Environmental condition	Compensation temp.	0°C ~ 50°C (P<0.35Bar) 0°C ~ 70°C (0.35Bar≤P≤0.7Bar) -20°C ~ 85°C (P≥1Bar)	0°C ~ 70°C (≤0.35Bar) -10°C ~ 80°C (≥0.7Bar)		0°C ~ 70°C	0°C ~ 70°C (≤0.35Bar) -10°C ~ 80°C (≥0.7Bar)
	Operating temp.	-40°C ~ 125°C				

Cost-Effective Type—MPM288 Series

MPM289



MPM288DI



MPM288SA



	MPM289	MPM288DI	MPM288SA
Size	Φ19×11.5mm	Φ19×15mm	Φ19×15mm
Range	0.2Bar~700Bar	0.35Bar~35Bar	0.35Bar~700Bar
Vacuum/ Compound gauge	-1Bar~0Bar (Vacuum pressure measurement)	-1Bar~0Bar (Vacuum pressure measurement)	-1Bar~0Bar (Vacuum pressure measurement)

Model		MPM289	Model	MPM288DI	MPM288SA
Size		Φ19×11.5mm	Size		Φ19×15mm
Pressure type		Gauge / Absolute / Sealed gauge	Pressure type		Gauge / Absolute
Feature		Cost-effective	Feature		Standard I ² C communication protocol Dual 24-bit ADC for pressure and temperature acquisition
Input	Pressure range	0.2Bar ~ 700Bar	Pressure range		-1Bar...0Bar ~ 0.35Bar...35Bar
	Supply	≤2mA DC	Supply		Low-power consumption current:<100nA
output	Reference	Temp.: 35°C Supply: 1.5mA DC	Reference		Temp.: 35°C Supply: 3.0V~5.5V DC
	Zero output/accuracy	±2mV DC(Max.)	Accuracy class		/
	FS output	≥60mV DC	Thermal error		±2°C
	Zero thermal error	±1.0%FS(Max.)	Pressure error		±0.2%FS (±0.5%FS@0.35Bar)
	Span thermal error	±1.0%FS(Max.)	Comprehensive error		±1%FS (-10°C~80°C)
	Non-linearity	±0.25%FS(Max.)	Overload		2×FS
	Repeatability	±0.075%FS(Max.)	Burst pressure		3×FS
	Hysteresis	±0.075%FS(Max.)	Insulation resistance		50MΩ@50V DC
Environmental condition	Compensation temp.	0°C ~ 70°C	Dielectric strength		50Hz、500V AC
			Compensated temp.		0°C ~ 70°C
	Operating temp.	-40°C ~ 125°C	Working temp.		-10°C ~ 80°C

Customized Type—MPM280 Series

MPM280F



MPM280PC1



MPM280PC2



MPM280PC3



MPM280PD1S



	MPM280F	MPM280PC1	MPM280PC2	MPM280PC3	MPM280PD1S
Size	Φ19mm	M20×1.5	R1/2	G1/2	DN25
Range	0.35Bar ~ 200Bar	0.35Bar ~ 350Bar	0.35Bar ~ 350Bar	0.35Bar ~ 350Bar	0.35Bar ~ 35Bar
Vacuum/ Compound gauge	Customizable	Customizable	Customizable	Customizable	

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	0.35Bar ~ 200Bar	0.35Bar ~ 350Bar		0.35Bar ~ 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(0.2/0.7/1.0Bar) / ≥60mV DC(0.35/2.0/3.5Bar) / ≥70mV DC(≥7.0Bar)				
	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.)				
Environmental condition	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)				
	Compensation temp.	0°C ~ 50°C				
	Operating temp.	-40°C ~ 125°C				

Customized Type—MPM280 Series

MPM280H1 Assembled



MPM280H2 Assembled



MPM280H3 Welded



MPM280H4 Welded



Upper thread

M24×1

M27×2

M24×1

M27×2

Pressure connection (Optional)

M20×1.5, G1/4, G1/2, G1/4, 1/4NPT, 1/2NPT

Range

0.2Bar~20Bar

35Bar~700Bar

0.2Bar~20Bar

35Bar~350Bar

Model	MPM280H1 Assembled	MPM280H2 Assembled	MPM280H3 Welded	MPM280H4 Welded
Upper thread	M24×1	M27×2	M24×1	M27×2
Pressure connection (optional)	M20×1.5, G1/4, G1/2, G1/4, 1/4NPT, 1/2NPT			
Pressure type	Gauge / Absolute / Sealed gauge			
Feature	Integrated threaded connection			
Input	Pressure range	0.2Bar ~ 20Bar	35Bar ~ 700Bar	0.2Bar ~ 20Bar
	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(0.2/0.7/1.0Bar) / ≥60mV DC(0.35/2.0/3.5Bar) / ≥70mV DC(≥7.0Bar)		
	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.)		
Environmental condition	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)		
	Compensation temp.	0°C ~ 50°C		
	Operating temp.	-40°C ~ 125°C		

Customized Type—MPM280 Series

MPM280Ti



MPM280HH



MPM280TH



MPM280Au



Diaphragm

Titanium

Hastelloy C

Tantalum

Gold plated

Housing

Titanium

Hastelloy C

Hastelloy C

SS316L

Compatible medium

Sea water / Chemical

Sea water / Chemical

Sea water / Chemical

Hydrogen

Model		MPM280Ti	MPM280HH	MPM280TH	MPM280Au
Size		Φ19×15mm			
Pressure type		Gauge / Absolute / Sealed gauge			
Diaphragm		Titanium	Hastelloy C	Tantalum	Gold plated on SS316L
Housing		Titanium alloy	Hastelloy C	Hastelloy C	SS316L
Input	Pressure range	-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(0.2/0.7/1.0Bar) / ≥60mV DC(0.35/2.0/3.5Bar) / ≥70mV DC(≥7.0Bar)			
	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.)			
Environmental condition	Hysteresis	±0.05%FS(Typ.) / ±0.075%FS(Max.)			
	Compensation temp.	0°C ~ 50°C			
	Operating temp.	-40°C ~ 125°C			

Customized Type—MPM280 Series

MPM285



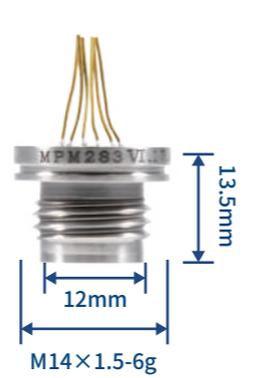
MPM283 I



MPM283 II



MPM283 VI

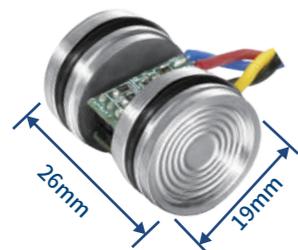


Size	Φ15×10.5mm	Φ16.8×12mm	Φ12.6×10.5mm	Φ12×13.5mm M14×1.5-6g
Range	1Bar~35Bar	2Bar~1000Bar	2Bar~1000Bar	100Bar~1000Bar
Vacuum/ Compound gauge	Customizable	Customizable	Customizable	Customizable

Model	MPM285	MPM283I	MPM283II	MPM283 VI
Size	Φ15×10.5mm	Φ16.8×12mm	Φ12.6×10.5mm	Φ12×13.5mm M14×1.5-6g
Pressure type	Gauge / Absolute / Sealed gauge			
Feature	Small size	Thick film circuit compensation	Outer resistance compensation	Thick film circuit compensation
Input	Pressure range	0Bar ~ 1Bar...35Bar	0Bar ~ 2Bar...1000Bar	0Bar ~ 2Bar...1000Bar
	Supply	≤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
	Zero output	±2.0mV DC(Max.)	±3.0mV DC(Max.)	±3.0mV DC(Max.)
	FS output	≥50mV DC	≥70mV 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.)
	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.)
	Non-linearity	±0.15%FS (Typ.) ±0.25%FS (Max.)	±0.15%FS (Typ.) ±0.2%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.)
	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.)
Environmental condition	Compensation temp.	0°C ~ 70°C(≤2Bar)	0°C ~ 70°C(≤2Bar)	0°C ~ 70°C(≤2Bar)
		-10°C ~ 80°C(≥3.5Bar)	-10°C ~ 80°C(≥3.5Bar)	-10°C ~ 80°C(≥3.5Bar)
	Operating temp.	-40°C ~ 125°C		

Customized Type—Differential/Compound Pressure Sensor

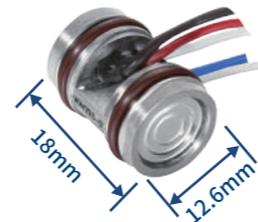
MDM290



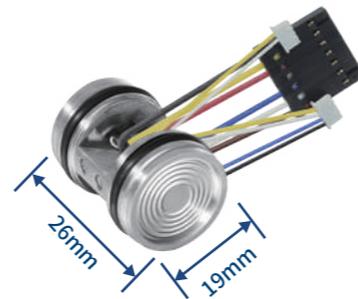
MDM291



MDM293



MCM211



Size	Φ19mm	φ28mm	Φ12.6mm	φ19mm
Range	0.35Bar~35Bar	0.35Bar~20Bar	2Bar~35Bar	1Bar~35Bar

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.≤0.35Bar) ±0.75%FS(Max.≥0.7Bar)	±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.)			
Environmental condition	Compensation temp.	0°C ~ 50°C	0°C ~ 70°C	0°C ~ 70°C	0°C ~ 70°C
	Operating temp.	-40°C ~ 125°C			

High-Temperature and High-Accuracy Pressure Sensor



MPM281 Pro

Size: $\phi 19 \times 11.5\text{mm}$

Range: 0Bar~0.07Bar...35Bar

Wide temperature compensation: $-20^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Zero/full scale hysteresis $\pm 0.05\% \text{FS}$ (Typ.)

Long-term stability $\pm 0.1\% \text{FS/Year}$

Normalized output, wide temperature compensation,
 $\pm 1\%$ interchangeability, gain 3.012V output

Compound Output Pressure Sensor



MPM281PT

Size: $\phi 19 \times 11.5\text{mm}$

Range: 0Bar~0.35Bar...1000Bar

Compensation temperature: $-10^{\circ}\text{C} \sim 80^{\circ}\text{C}$

Pressure and temperature dual output

Thermal error: $\pm 0.5^{\circ}\text{C}$

PT100/PT1000 temperature probe is available

Standard Voltage/Current Output Pressure Sensor



MPM288SA

Size: $\phi 19 \times 15\text{mm}$

Range: -1Bar... 0Bar~0.35Bar...700Bar

Compensation temperature: $0^{\circ}\text{C} \sim 70^{\circ}\text{C}$

Accuracy class: $\pm 0.25\% \text{FS}$ ($\pm 0.5\% \text{FS}$ @ $\text{FS} = 0.35\text{Bar}$)

Standard voltage output: 0.5V~4.5V

Reverse power protection

Customized Piezoresistive Pressure Sensor

