

# MPM489 Piezoresistive Analog Output Pressure Transmitter



## Features

- Reliable performance, easy application
- Short protection and reverse polarity protection
- Measure gauge, absolute and sealed gauge
- Intrinsic safe version, conforming to Standard Exia II CT6Ga of GB3836.4
- Exd product conforms to Standard GB3836.2, and Exd certificate is approved.
- Ship-use product conforming to CCS Rules of Classification of Sea-going Steel Ships (2006)
- CE, RoHS and ATEX approved

## Introduction

MPM489 product is a pressure transmitter with zero and span adjustable. It uses high stable and reliable pressure sensor and special circuit board to produce transmitter, and performance is good and reliable. MPM489 pressure transmitter is used for measure and control of petroleum, chemi-industry, electric power, hydrology and flow pressure measure, etc.

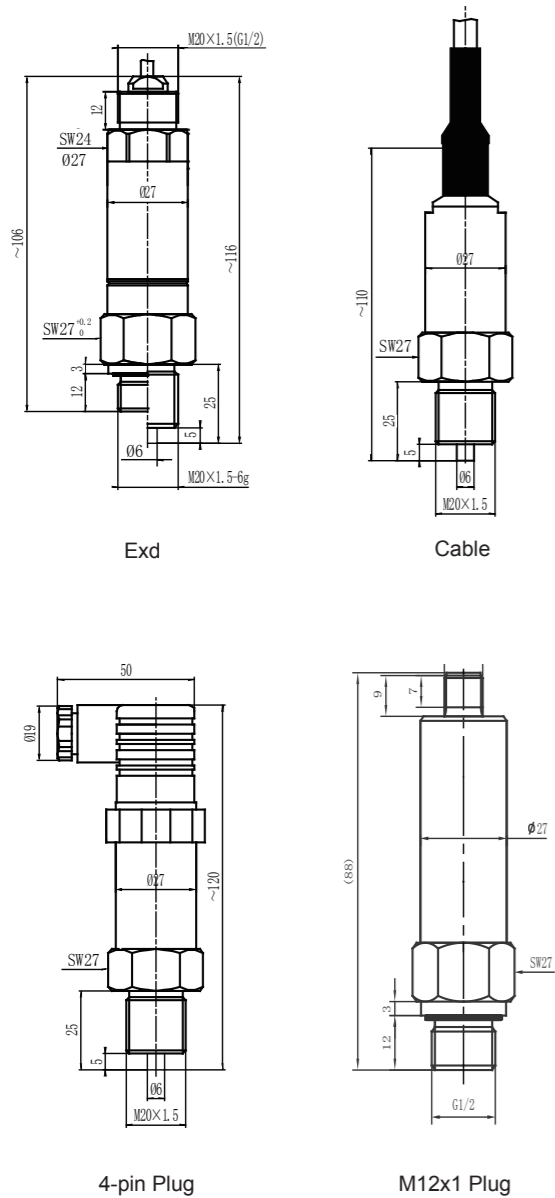
## Specification

- Pressure range: -100kPa...0kPa~10kPa...100MPa
- Overpressure:  $\leq 1.5$  times FS or 110MPa (min. value is valid)
- Pressure type: gauge/ absolute / sealed gauge
- Process connection: M20×1.5 male waterline seal (or on your demand)
- Accuracy:  $\leq \pm 0.5\%$ FS
- Long term stability:  $\leq \pm 0.3\%$ FS/year
- Zero thermal drift:  $\leq \pm 0.05\%$ FS/°C ( $\leq 100$ kPa);  $\leq \pm 0.03\%$ FS/°C ( $> 100$ kPa)
- Span thermal drift:  $\leq \pm 0.05\%$ FS/°C ( $\leq 100$ kPa);  $\leq \pm 0.03\%$ FS/°C ( $> 100$ kPa)
- Compensation temp. : 0°C ~50°C
- Application temp. : -30°C ~80°C ; -10°C ~60°C (Exia)  
-20°C ~60°C (Exd) -10°C ~70°C (Cable)
- Storage temp. : -40°C ~120°C ; -20°C ~85°C (Cable)
- Power supply: 11V~28VDC ; 11V~28VDC ; 3.3V/5V DC
- Output signal: 4mA~20mA DC(2-wire); 0/1~5/10V DC(3-wire)  
0.5V~2.5V/4.5V DC(3-wire)
- Load:  $\leq (U-11)/0.02\Omega$ (2-wire);  $\geq 10k$ (3-wire);  $\geq 10k$ (3-wire)
- Housing protection: IP65
- Electrical connection: DIN43650 plug or cable(1.5m)

**Construction Material**

- Housing: stainless steel 1Cr18Ni9Ti
- Sensor housing: stainless steel 1Cr18Ni9Ti
- Diaphragm: stainless steel 316L
- Sealed-ring: Viton
- Plug housing: plastic
- Cable: Φ7.5mm Polyethylene Special Cable

**Outline Construction (Unit: mm)**



**Electrical Connection**

Transmitter connects with the outer circuit through DIN43650 plug.

**Plug Connection**

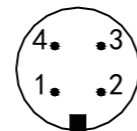
Pin	2-wire	3-wire
1	+V	+V
2	+OUT	GND
3	Null	+OUT

**Cable Connection**

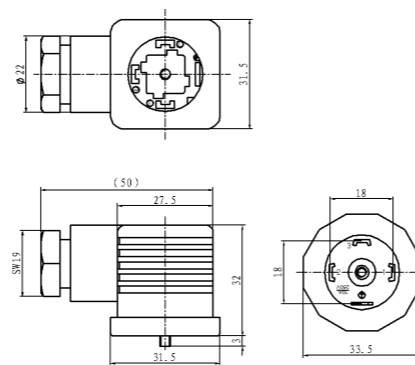
Wire color	2-wire	3-wire
Black	+V	+V
Red	0V	+OUT
White	Null	GND

**M12x1 Plug Connection**

Pin	2-wire	3-wire
1	+V	+V
2	Null	GND
3	+OUT	+OUT



**M12x1 Plug Connection**



**Order Guide**

MPM489	Pressure Transmitter						
	Range	Pressure range: -100kPa...0kPa~10kPa...100MPa					
	[0~X]kPa or MPa	X: the actual measured pressure					
		Code	Power				
		V <sub>1</sub>	24V DC				
		V <sub>6</sub>	5V DC				
		V <sub>7</sub>	3.3V DC				
		Code	Output signal				
		E	4mA~20mA DC				
		F	1V~5V DC				
		J	0V~5V DC				
		V	0V~10V DC				
		W	0.5V~2.5V DC				
		K	0.5V~4.5V DC				
		Code	Construction material				
			Diaphragm	Pressure port	Housing		
		22	SS 316L	SS	SS		
		24	SS 316L	SS 316L	SS 316L		
		25	Tantalum	SS	SS		
		35	Tantalum	Hastelloy	SS		
		Code	Others				
		B <sub>1</sub>	4-pin Plug connection				
		B <sub>2</sub>	Cable connection				
		B <sub>4</sub>	M12x1 Plug connection				
		PC <sub>1</sub>	Flush diaphragm, M20x1.5 male				
		PC <sub>2</sub>	Flush diaphragm, R1/2 male				
		PC <sub>3</sub>	Flush diaphragm, G1/2 male				
		PD <sub>1</sub>	DN25 clamp connection(Large diaphragm)				
		P <sub>3</sub>	DN25 clamp connection(Welding type)				
		M <sub>6</sub>	4digits LED digital indicator(only for 4~20mA)				
		M <sub>7</sub>	4digits LCD digital indicator(only for 4~20mA)				
		i	Intrinsic safe version: Exia II CT6Ga				
		T	Ship-use				
		y	ATEX				
		d	Exd II CT6 Gb				
		C <sub>1</sub>	M20x1.5 male, face type seal				
		C <sub>3</sub>	G1/2 male (used for flush diaphragm type)				
		C <sub>5</sub>	M20x1.5 male, waterline seal				
		G	Gauge				
		S	Sealed gauge				
		A	Absolute				
MPM489	[0~100kPa]	V <sub>5</sub>	E	22	B <sub>1</sub> C <sub>5</sub> G	the whole spec	

## Notes

1. Please pay attention that the media should be compatible with the contacted parts;
2. Flush diaphragm transmitter's pressure range: 0kPa~100kPa...35MPa; PD1 transmitter's pressure range: 0kPa~100kPa...3.5MPa; P3 transmitter's pressure range: -100kPa...0kPa~20kPa...2MPa;
3. If any special requirements on function or specification, please contact with us freely;
4. Please pay attention that the intrinsic safe version and ship-use product do not include digital indicator M6 or M7; Transmitter with M6 or M7, the power supply of the transmitter shall be no less than 20V DC;
5. 24V DC power supply (V1), see "Specification" for detail about Power supply range;
6. When ordering, please pay attention to 3.3V/5V DC power supply. If the cable is connected out of line, the cable length should be less than 10m; When the order output is 0V to 10V DC product, the power supply is 15V to 28V DC;
7. 3.3V DC power supply (V7), output can only select W(0.5V~2.5V DC); 5V DC power supply (V6), output can only select W(0.5V~2.5V DC) or K(0.5V~4.5V DC), generally recommended K.



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