

# 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.

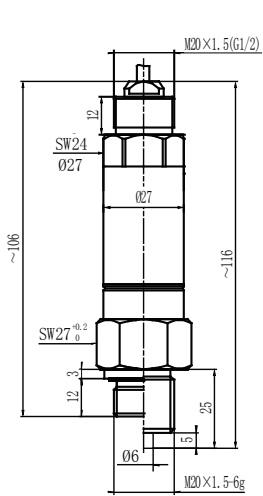
## Specification

- Pressure range: -1bar...0bar~0.1bar...1000bar
- Overpressure:  $\leq 1.5$  times FS or 1100bar (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 ( $\leq 1$ bar);  $\leq \pm 0.03\%$ FS/°C ( $> 1$ bar)
- Span thermal drift:  $\leq \pm 0.05\%$ FS/°C ( $\leq 1$ bar);  $\leq \pm 0.03\%$ FS/°C ( $> 1$ bar)
- 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; 3.3/5V DC
- Output signal: 4mA~20mA DC(2-wire); 0/1V~5/10V DC(3-wire); 0.5V~2.5/4.5V 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)

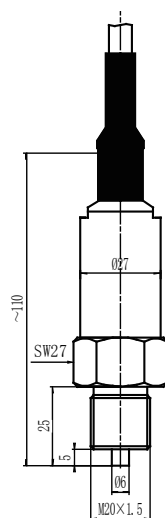
### Construction Material

- Housing: stainless steel 304
- Sensor housing: stainless steel 304
- Diaphragm: stainless steel 316L
- Sealed-ring: Viton
- Plug housing: plastic
- Cable:  $\Phi 7.5\text{mm}$  Polyethylene Special Cable

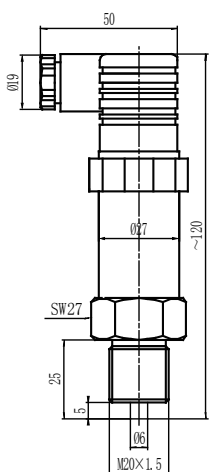
### Outline Construction (Unit: mm)



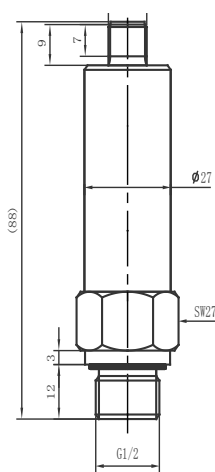
Exd



Cable



4-pin Plug



M12x1 Plug

### Electrical Connection

Transmitter connects with the outer circuit through DIN43650 plug.

#### Plug Connection

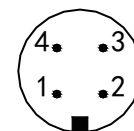
Pin	2-wire	3-wire
1	+V	+V
2	+OUT	GND
3	Null	+OUT

#### Cable Connection

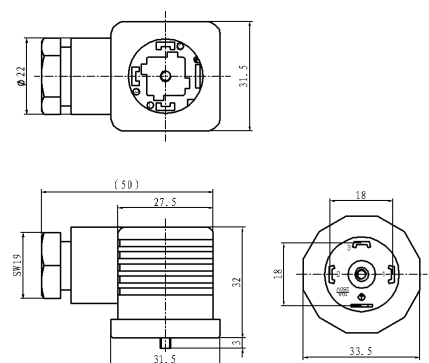
Wire color	2-wire	3-wire
Black	+V	+V
Red	0V	+OUT
White	Null	GND

#### M12x1 4-pin Plug Connection

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



#### M12x1 4-pin Plug Connection



4-pin Plug Connection

## Order Guide

MPM489		Pressure Transmitter				
Range		Pressure range: -1bar...0bar~0.1bar...1000bar				
[0~X]bar		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>		M12×1 4-pin Plug connection				
PC <sub>1</sub>		Flush diaphragm, M20×1.5 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 4mA~20mA DC)				
M <sub>7</sub>		4digits LCD digital indicator(only for 4mA~20mA DC)				
i		Intrinsic safe version: Exia II CT6Ga				
T		Ship-use				
y		ATEX				
d		Exd II CT6 Gb				
C <sub>1</sub>		M20×1.5 male, face type seal				
C <sub>3</sub>		G1/2 male (used for flush diaphragm type)				
C <sub>5</sub>		M20×1.5 male, waterline seal				
G		Gauge				
S		Sealed gauge				
A		Absolute				
MPM489	[0~1bar]	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: 0bar~1bar...350bar; PD1 transmitter's pressure range: 0bar~1bar...35bar; P3 transmitter's pressure range: -1bar...0bar~0.2bar...20bar;
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.