

# High Accuracy Analog Output Pressure Transmitter

## MPM483E



### Applications

- Metallurgy
- Hydrogeology
- Food & Pharmaceutical Industry
- Environmental Control

### Features

- High-level electromagnetic compatibility
- Support reverse polarity, instantaneous over-current, over-voltage protection
- LCD and LED digital display
- CE approved

### Introduction

MPM483E pressure transmitter is a cost-effective, universal digital pressure transmitter product launched by our company, the product adopts high-stability diffusion silicon pressure core and advanced digital conditioning circuit, combined with mature pressure transmitter design and manufacturing technology, to ensure the accuracy and stability of pressure measurement. The product adopts corrosion-resistant 2088 shell head, which can be applied to relatively severe working conditions; High-brightness LED and backlit LCD display, suitable for places that require on-site inspection; The product as a whole has passed a higher level of electromagnetic compatibility test and can be used for equipment or environments with electromagnetic interference.



### Specification

Range	-1bar...0mbar ~ 100mbar...1000bar
Over pressure	$\leq 2 \times \text{FS}$ or 1100bar (whichever is less)
Pressure Type	gauge, absolute, sealed gauge
Accuracy	see the "Accuracy"
Long-term Stability	$\pm 0.3\% \text{FS/year}$
Operation Temperature	-30°C ~ 80°C (General type)
	-20°C ~ 60°C (with LCD display)
	-30°C ~ 70°C (with LED display)
Storage Temperature	-40°C ~ 120°C
Vibration	10g, 55Hz ~ 2000Hz
Impact	100g, 11ms
Protection Degree	IP65
Weight	$\leq 375\text{g}$

## Accuracy

Pressure Type	Range	Accuracy
Gauge (G)	0mbar ~ 100mbar < X < 200mbar	±1.0%FS
	200mbar ≤ X ≤ 1bar	±0.5%FS
	1bar < X ≤ 35bar	±0.25%FS
		±0.5%FS
	-1bar ~ -350mbar < X ≤ 2bar	±1.0%FS
	-1bar ~ -350mbar < X < 2bar ~ 35bar	±0.5%FS
Absolute (A)	0mbar ~ 700mbar < X ≤ 1bar	±1.0%FS
	1bar < X ≤ 10bar	±0.5%FS
	10bar < X ≤ 1000bar	±0.25%FS
		±0.5%FS
Sealed Gauge (S)	35bar < X ≤ 1000bar	±0.25%FS
		±0.5%FS

Test Standard: GB/T 17614.1-2015/IEC60770-1:2010

Ambient Temperature: 20°C ±5°C

Relative Humidity: 45% ~ 75%

## Thermal Error

Thermal Error-Offset	±0.05%FS/°C (<200mbar)
	±0.03%FS/°C (200mbar ≤ X ≤ 1bar)
	±0.02%FS/°C (>1bar)
Thermal Error-Span	±0.05%FS/°C (<200mbar)
	±0.03%FS/°C (200mbar ≤ X ≤ 1bar)
	±0.02%FS/°C (>1bar)

## Output Signal

Output Signal	Supply Voltage	Connection	Load Resistance
4mA~20mA DC(E)	11V ~ 28V DC	2-wire	≤(U-11)/0.02(Ω)
0V~5V DC(J)	15V ~ 28V DC	3-wire	≥10kΩ
1V~5V DC(F)			
0V~10V DC(V)			

### Electromagnetic Compatibility

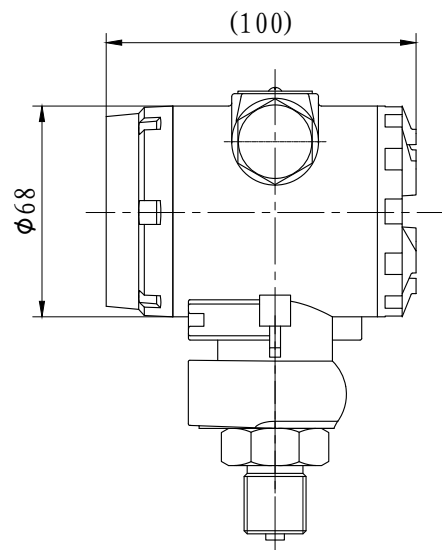
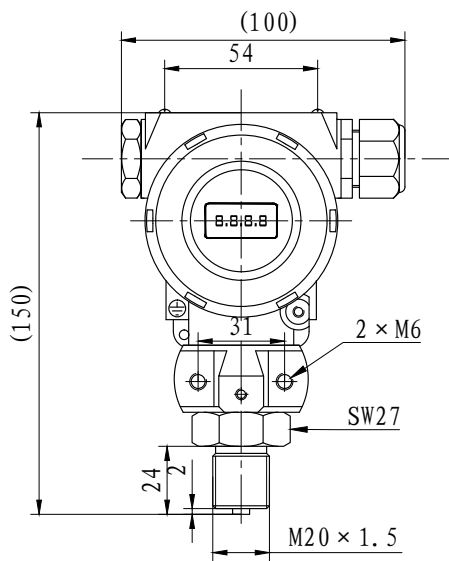
S.N.	Test Item	Standard	Test Condition	Performance Level
①	Electrostatic Discharge Immunity	EN IEC 61000-6-2:2019&IEC 61000-4-2:2008	±4kV (touch) ±8kV (air)	B
②	RF Radiated Immunity	EN IEC 61000-6-2:2019&IEC 61000-4-3:2020	80MHz~1000MHz 10V/m 1400MHz~6000MHz 3V/m	A
③	Electrical Fast Pulse Immunity	EN IEC 61000-6-2:2019&IEC 61000-4-4:2012	1kV	B
④	Surge Immunity	EN IEC 61000-6-2:2019&IEC 61000-4-5:2014	line-line 0.5kV line-ground 1kV	B
⑤	Conducted RF Immunity	EN IEC 61000-6-2:2019&IEC 61000-4-2:2013	0.15MHz~80MHz	A
⑥	Power Frequency Magnetic Field	EN IEC 61000-6-2:2019&IEC 61000-4-8:2009	30A/m	A

Performance Level A: normal performance within limits specified by the manufacturer, contractor or purchaser;

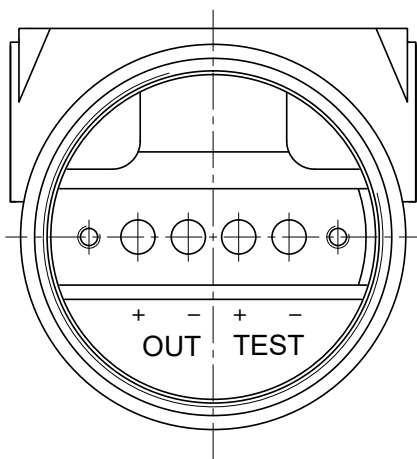
Performance Level B: temporary loss or reduction in function or performance, but self-recovery after the disturbance ceases without operator intervention

### Outline Dimension

unit: mm



### Electrical Connection



Current Type		Voltage Type	
Terminal	Signal	Terminal	Signal
OUT+	V+	OUT+	V+
OUT-	IO	OUT-	OUT
null	null	TEST-	GND

## Materials

### Wetted Parts

Isolated Diaphragm: Stainless Steel 316L/Tantalum

Pressure Port: Stainless Steel 304/ Stainless Steel 316L/Hastelloy C

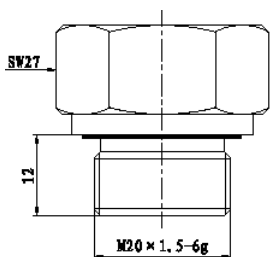
### Non-wetted Parts

Housing: Aluminum Alloy

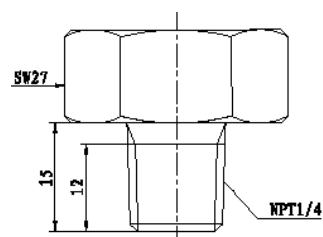
## Process Connection

unit: mm

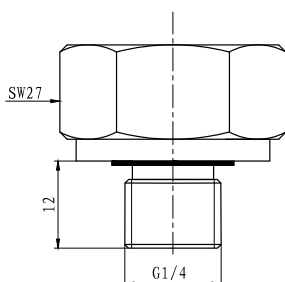
M20×1.5 Male, End Face Seal (C1)



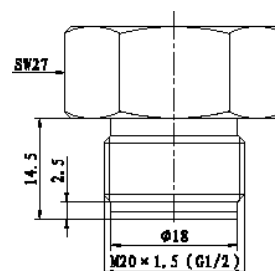
NPT1/4 Male (C6)



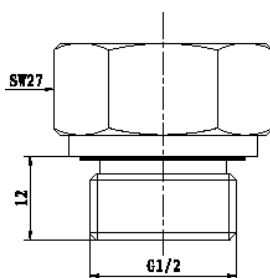
G1/4 Male, End Face Seal (C2)



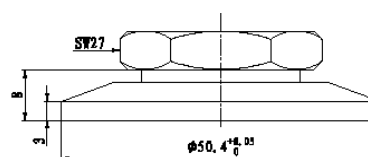
M20×1.5 or G1/2 Flush Diaphragm (PC1/PC3)



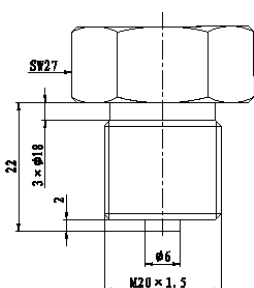
G1/2 Male, End Face Seal (C3)



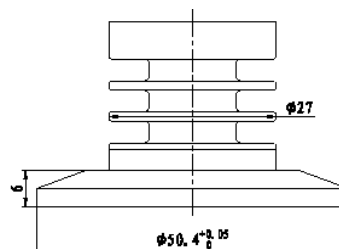
DN25 Tri-clamp (PD1)



M20×1.5 Male, Waterline Seal (C5)



DN25 Tri-clamp with Heat Sink (PD1s)



## Order Guide

MPM483E	Pressure Transmitter							
	Range	Measured range: -1bar...0mbar ~ 100mbar...1000bar						
	[0 ~ X]mbar or bar	X: Actual Measured Range						
	Code	Pressure Type						
	G	gauge						
	A	absolute						
	S	sealed gauge						
	Code	Accuracy <sup>①</sup>						
	A1	±0.25% FS						
	A2	±0.5% FS						
	A3	±1% FS						
	Code	Output Signal						
	E	4mA~20mA DC						
	J	0V~5V DC						
	F	1V~5V DC						
	V	0V~10V DC						
	Code	Material						
		Isolated Diaphragm	Pressure Port					
			Housing					
	22	S.S. 316L	S.S. 304					
	24	S.S. 316L	S.S. 316L					
	25	Tantalum	S.S. 304					
	35	Tantalum	Hastelloy C					
	Code	Process Connection						
	C1	M20×1.5 male, end face seal						
	C2	G1/4 male, end face seal						
	C3	G1/2 male, end face seal						
	C5	M20×1.5 male, waterline seal						
	C6	NPT1/4 male						
	PC1	M20×1.5 flush diaphragm	0 mbar ~ 200mbar...350bar					
	PC3	G1/2 flush diaphragm						
	PD1	DN25 tri-clamp	0 mbar ~ 350mbar...35bar					
	PD1s	DN25 tri-clamp with the heat sink						
	Code	Accessories						
	Null	Null						
	M6	4 -bit LED Digital Display (for 4mA ~ 20mA DC only)						
	M7	4 -bit LCD Digital Display (for 4mA ~ 20mA DC only)						
MPM483E	[0 ~10]bar	G	A1	E	22	C1	M6	Complete Part Number

## Order Notes

1. " ① " in Order Guide table indicates the product accuracy parameters, see "Accuracy" on page 2 for details.
2. Please note the power supply should be  $\geq 16V$  DC when ordering a transmitter with M6 or M7 display.
3. For the product measurement certificate or other special requirements, please contact with us and note in the order.