

MPM480 Pressure Transmitter



Features

- Wider pressure range
- Full stainless steel construction; optional pressure port; flush diaphragm type, sanitation type and anti-corrosive type are available; protection IP65
- Optional output signal; local calibration and displayable
- Reversed-polarity, transient current & voltage protection, which conform to EMI standard
- Intrinsic safe ex-proof version conforming to GB3836.4 Exia II CT6 Ga Regulation; Ex-proof Certificate is issued
- EXD product conforming to GB3836.2 Exd II CT6 Gb Regulation; EXD Certificate is issued
- Ship-use product conforming to CCS Rules of Classification of Sea-going Steel Ships(2018); Ship-use Certificate is issued
- CE and RoHS Certificates
- National patent, patent No.: ZL002 26957.0

Introduction

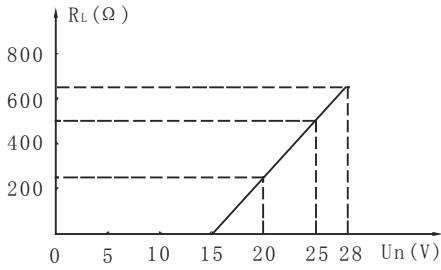
MPM480 transmitter uses piezoresistive OEM pressure sensor with isolated stainless steel diaphragm as signal sensing element, through automatic testing, laser trimming compensating zero and sensitivity in wider temperature range; the amplifier circuit is in stainless steel housing, transforming sensor signal into standard output signal. Through strict component making, semi-finished product and all-finished product testing and aging, the transmitter is stable and reliable, having excellent flexibility, sensitivity and diversity. The product is widely used for pressure measure and control of petroleum, chemi-industry, metallurgy, power station and hydrology, etc.

Specification

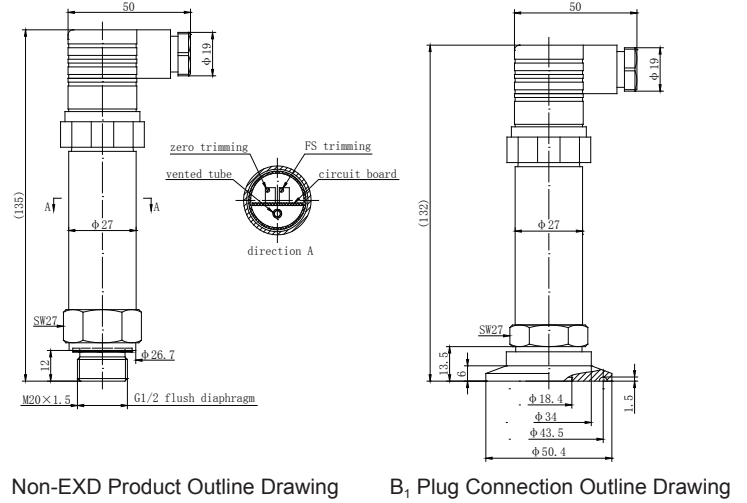
- Pressure range: -1bar...0bar~ 0.1bar...1000bar
- Overpressure: 1.5 times FS or 1100bar(min. value is valid)
- Pressure type: gauge, absolute or sealed gauge
- Accuracy: 0.25%FS(typ.); 0.5%FS(max.)
- Long-term stability: 0.2%FS/year
- Zero temp. drift: 0.03%FS/°C (≤ 1 bar); 0.02%FS/°C (> 1 bar)
- FS temp. drift: 0.03%FS/°C (≤ 1 bar); 0.02%FS/°C (> 1 bar)
- Operation temp.: -30°C ~80°C ; -10°C ~70°C (Cable);
-10°C ~60°C (Exia); -20°C ~60°C (EXD)
- Storage temp.: -40°C ~120°C ; -20°C ~85°C (Cable)
- Power supply: 15V~28V DC (This case through the safety grid power supply)
- Output signal: 4mA ~20mA DC; 0mA~10/20mA DC;
0/1V~5/10V DC
- Transmitting: 2-wire 3-wire 3-wire
- Load: $\leq (U-15)/0.02\Omega$ $\leq (U-15)/0.02\Omega$ $> 100k$
- Protection: IP65
- Electric connection: Plug connection or 1.5m cable connection
- Housing: stainless steel 304
- Diaphragm: stainless steel 316L
- O-ring: Viton
- Rubber casing: NBR

Load Characteristic

- 2-wire, 4mA~20mA DC output
- 3-wire, 0mA~10/20mA DC output
- 15V~28V DC power supply
- $RL < (Un-15)/0.02 \text{ (}\Omega\text{)}$

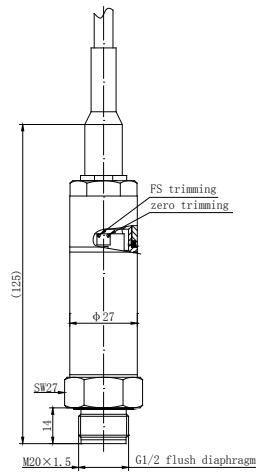


Outline Construction (Unit: mm)

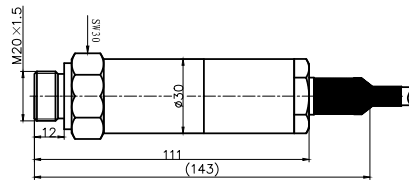


Non-EXD Product Outline Drawing

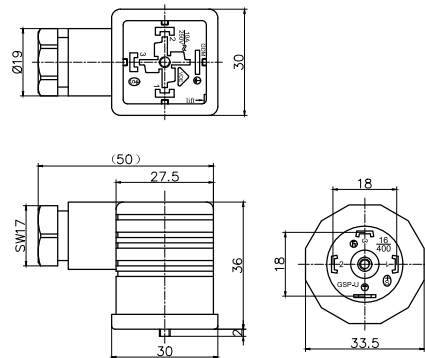
B, Plug Connection Outline Drawing



B₂ Cable Connection Outline Drawing



EXD Product Outline Drawing



Plug Outline and Arrangement

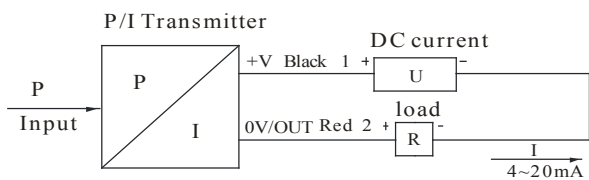
Electrical Connection

Plug Connection:

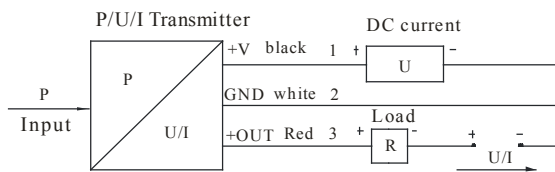
Pin	2-wire	3-wire
1	+V	+V
2	0V/+OUT	GND
3	Null	+OUT

Cable Connection:

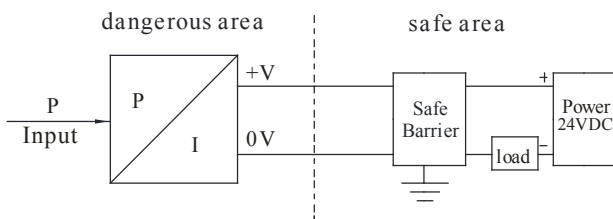
Wire color	2-wire	3-wire
Black	+V	+V
Red	0V/+OUT	+OUT
White	Null	GND



Electrical Connection for transmitter output 2-wire 4mA~20mA DC



Electrical Connection for transmitter 3-wire 0/1V~5V DC, 0mA~10/20mA DC



Electrical Connection for Ex-proof transmitter (Intrinsic safe system 2-wire 4mA~20mA DC)

Transmitter Ex-proof parameter:

Ui: 28V DC li: 93mA DC

Li: 0mH Ci: 0.044uF

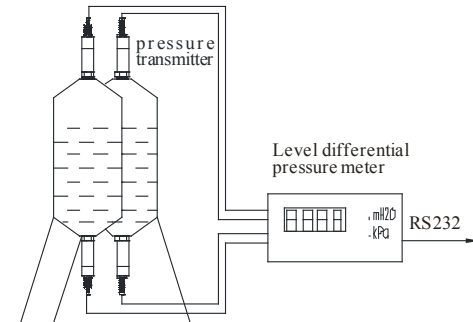
Pi: 0.65W

Safe barrier's ex-proof parameter:

Uo: 28V DC Io: 93mA DC

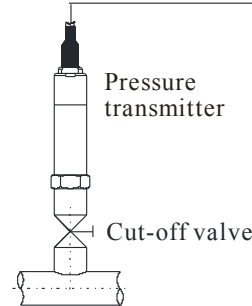
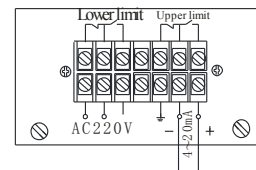
Po: 0.65W

Application Example



Flush diaphragm transmitter installed on beer tank to measure level

Instruments



General transmitter installed on tube to measure pressure

Order Guide

MPM480		Pressure Transmitter				
	Range	Pressure range: -1bar...0bar~0.1bar...1000bar				
	[0~X]bar	X= actual pressure range				
		Code	Output signal			
		E	4mA~20mA DC			
		F	1V~5V DC			
		J	0V~5V DC			
		Q	0mA~10mA DC			
		U	0mA~20mA DC			
		V	0V~10V DC			
			Construction material			
		Code	Diaphragm	Pressure port	Housing	
		22	SS 316L	SS	SS	
		24	SS 316L	SS 316L	SS 316L	
		25	Tantalum	SS	SS	
		35	Tantalum	Hastelloy C	SS	
		Code	Other			
		B ₁	Plug connection			
		B ₂	Cable connection cable length: 1.5m			
		B ₃	7-pin plug connection			
		PC ₁	Flush diaphragm, M20×1.5 male			
		PC ₃	Flush diaphragm, G1/2 male			
		P ₃	Sanitation type: -1bar...0bar~0.2bar...20bar, DN25 clamp connection			
		M ₆	4 digits LED digital indicator(only for 4mA~20mA) Non-explosion-proof or non-inspection products			
		M ₇	4 digits LCD digital indicator(only for 4mA~20mA) Non-explosion-proof or non-inspection products			
		i	Intrinsic safe version Exia II CT6 Ga			
		T	Ship-use			
		d	Exd II CT6 Gb			
		C ₁	M20×1.5 male, face type seal			
		C ₃	G1/2 male			
		C ₅	M20×1.5 male, waterline seal			
		Code	Other			
		G	Gauge			
		A	Absolute			
		S	Sealed gauge			
MPM480	[0~1]bar	E	22	B ₁ PC ₃	G	the whole spec.

Notes:

- Please pay attention that the media should be compatible with contacting material;
- Please pay attention for transmitter with LCD or LED, the power supply of the transmitter should not be less than 20V DC;
- When users choose LED digital indicator (M₆), environment temperature range for transmitter: -20℃ ~ 70℃ ; for LCD digital indicator (M₇), Range: -10℃ ~ 60℃ . Table head Settings refer to our company table head selection, which can be obtained from our website;
- The measurement range of flush membrane (PC₁, PC₃) transmitters is 0bar ~ 0.7bar...350bar;
- If ordering products need metrological verification certificate, or other special requirements, please contact us and indicate in the order.