LiquiLevel MPM

PIEZORESISISTIVE 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 Regulation; Ex-proof Certificate is issued;
- EXD product conforming to GB3836.2 Exd II CT6 Regulation; EXD Certificate is issued;
- Ship-use product conforming to CCS Rules of Classification of Sea-going Steel Ships(2015); 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: -100kPa…0kPa~10kPa…100MPa

Overpressure: 1.5 times FS or 110MPa(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/℃(≤100kPa); 0.02%FS/℃(>100kPa)

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FS temp. drift: 0.03%FS/℃(≤100kPa)； 0.02%FS/℃(>100kPa)

Operation temp.:-30℃~80℃ -10℃~70℃(Cable) -10℃~60℃(Exia) -20℃~60℃(EXD)

Storage temp.: -40℃~120℃ -20℃~85℃(Cable)

Power supply: 15V~28VDC(This case through the safety grid power supply)

Output signal: 4mA~20mADC(2-wire) 0mA~10/20mADC(3-wire) 0/1V~5/10VDC(3-wire)

Load: ≤(U-15)/0.02Ω ≤(U-15)/0.02Ω >100kΩ

Protection: IP65

Electric connection: Plug connection or 1.5m cable connection

Weight: ~280g(B1 connector)

Construction

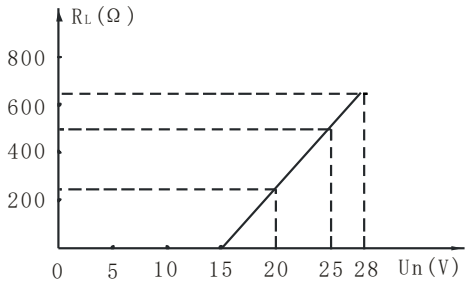
Housing: stainless steel 1Cr18Ni9Ti

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
15~28VDC power supply
$R_L<(U_n-15)/0.02(\Omega)$

Outline Construction(Unit: mm)

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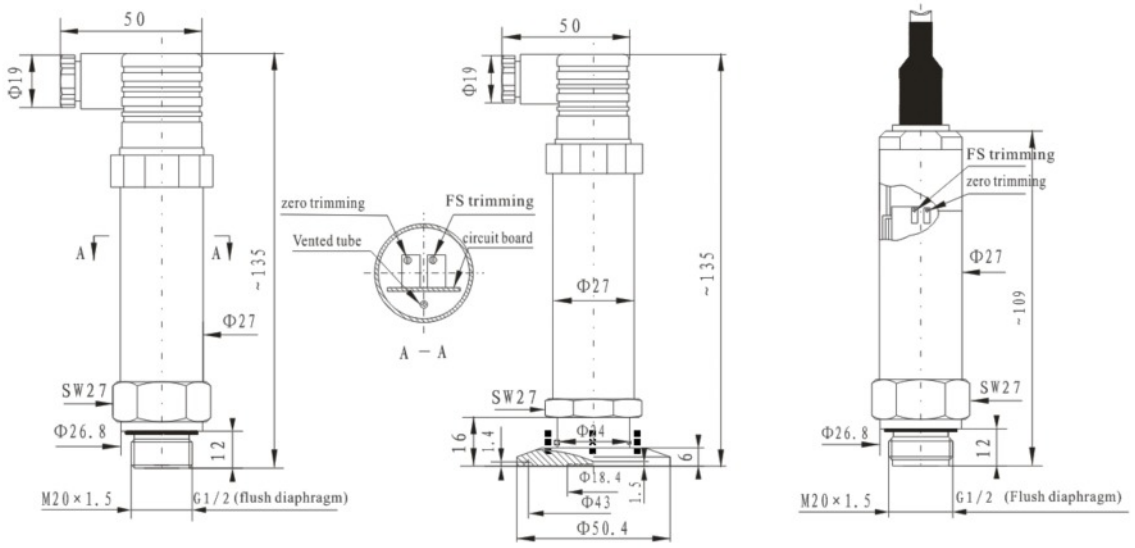
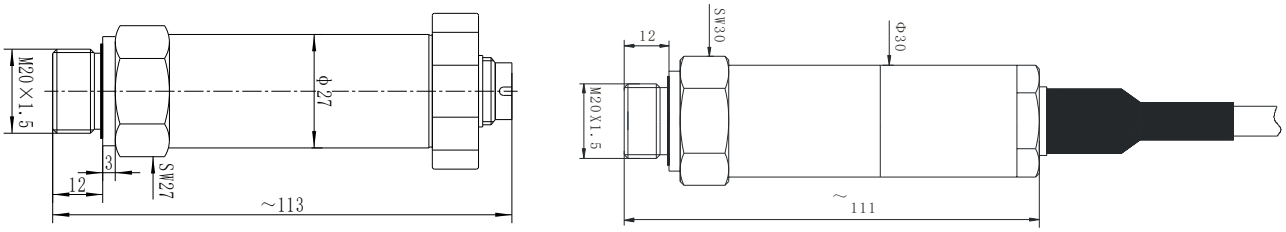


Non-EXD Product Outline Drawing **B_1 Plug Connection Outline Drawing** **B_2 Cable Connection Outline Drawing**



B3 Plug Connection Outline Drawing **EXD Product Outline Drawing**

Electric Connection

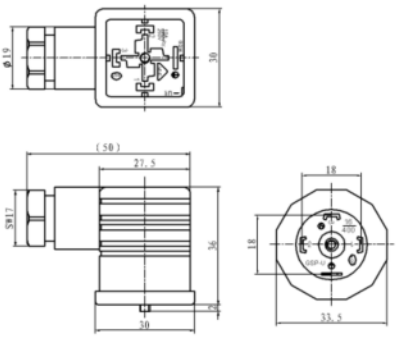
Plug Connection Wiring

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

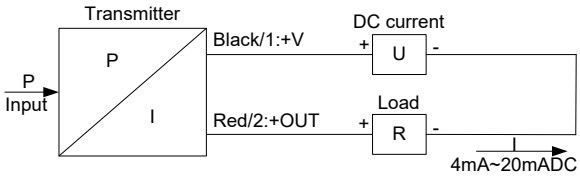
Cable Connection Wiring

Color	2-wire	3-wire
Black	(+V)	(+V)
Red	(0V/+OUT)	(+OUT)
White	Null	(GND)

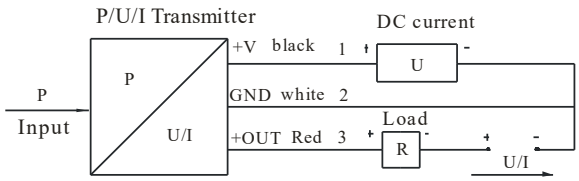
Plug Outline and Arrangement



Electric Connection output 2-wire 4mA~20mAD



Electric Connection 3-wire 0/1V~5VDC, 0mA~10/20mADC



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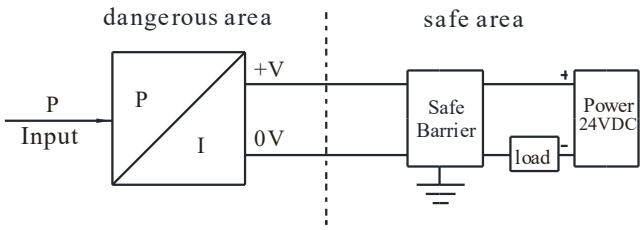
Electrical connection diagram of type MPM480(Intrinsic safe system 2-wire 4mA~20mADC)



Transmitter Ex-proof parameter:

Ui:28VDC Ii:93mADC

Li:0mH Ci:0.044uF

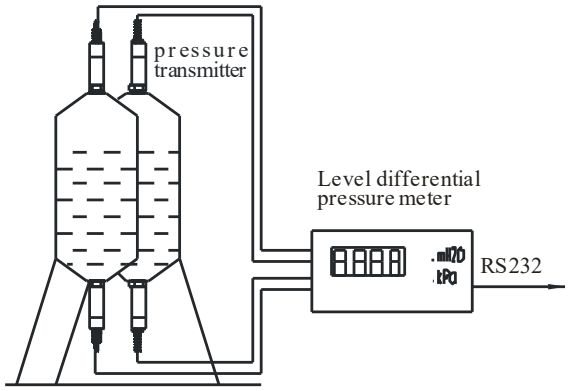
Pi:0.65W

Safe barrier's ex-proof parameter:

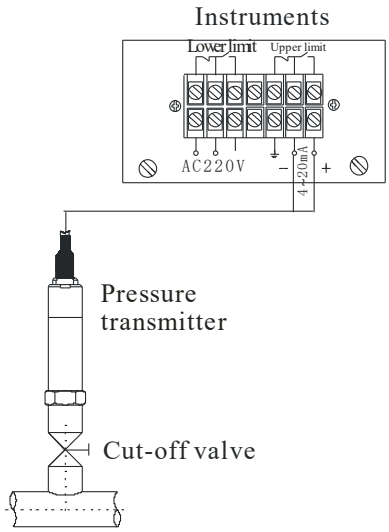
Uo:28VDC Io:93mADC

Po:0.65W

Application Example



Flush diaphragm transmitter installed on beer tank to measure level



General transmitter installed on tube to measure pressure

Order Guide

MPM480	Piezoresistive Pressure Transmitter				
	Range	Pressure range: -100kPa…0kPa~10kPa…100MPa			
	[0~X]kPa or MPa	X= actual pressure range			
		Code	Output signal		
		E	4mA~20mADC		
		F	1V~5VDC		
		J	0V~5VDC		
		Q	0mA~10mAC		
		U	0mA~20mAC		
		V	0V~10VDC		
		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 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	DN25 clamp connection(Welding type) -100kPa…0kPa~20kPa…2MPa
M_6	4 digits LED digital indicator(only for 4~20mA) Non-explosion-proof or non-inspection products
M_7	4 digits LED digital indicator(only for 4~20mA) Non-explosion-proof or non-inspection products
d	ExdⅡCT6Gb
i	Intrinsic safe version ExiaⅡCT6Ga
T	Ship-use
C_1	M20×1.5 male, face type seal
C_3	G1/2 male
C_5	M20×1.5 male, waterline seal
G	Gauge
A	Absolute
S	Sealed gauge

MPM480	[0~100]kPa	E	22	B_1PC_3G	the whole spec.

Order Note

1. Please pay attention that the media should be compatible with contacting material.
2. Please pay attention for transmitter with LCD or LED, the power supply of the transmitter should not be less than 20VDC.
3. When users choose LED digital indicator (M_6), environment temperature range for transmitter:-20℃ to 70℃; for LCD digital indicator (M_7), Range:-10℃~60℃.Table head Settings refer to our company table head selection,which can be obtained from our website.
4. The measurement range of flush membrane (PC_1, PC_3) transmitters is 0kPa ~ 70kPa...35 Mpa.
5. If ordering products need metrological verification certificate,or other special requirements,please contact us and indicate in the order.