

# MPM426W/436W Submersible Level Transmitter

## Features

· Full sealed stainless steel construction for submersible part; sensor and amplifier circuit are all in the sealed housing; protection class IP68;

· Aluminum-alloy electric connection box is optional to ease wiring; protection class IP65;

· Removable top stainless steep cap; prevent diaphragm damage and ease cleaning;

· MPM436W min. pressure range 0.5mH<sub>2</sub>O; high pressure impact resistibility;

· MPM426W product is issued CE Certificate;

MPM426W Submersible Level Transmitter

· MPM426W product is National Patent Product, patent No.ZL00226955.4;

· Explosion-proof product conforms to Exia CT6 of Standard GB3836.4; Ex-proof Certificate is issued;

· Ship-use product conforms to CCS Rules of Classification of Sea-going Steel Ships (2006); Ship-use Certificate is issued;



## Introduction

The product uses high performance pressure sensor as sensing element, which could measure liquid static pressure that is positive proportional to level depth precisely, and transform pressure signal into standard current/voltage signal output by amplifier circuit to measure accurate level depth. The product has high accuracy, compact size, easy installation, can be submersible into the liquid directly to measure level from transmitter bottom to the liquid surface. It can be widely used for water and level measure and control of petroleum, chemi-industry, power station, city water supply and drainage and hydrology, etc.



MPM436W Submersible Level Transmitter

## Specification

Range	MPM426W	1 2 5 10 20 50 100 200mH <sub>2</sub> O
	MPM436W	0.5 2mH <sub>2</sub> O
Overpressure	1.5 times FS	( MPM436W: 10 times FS )
Accuracy	MPM426W	±0.25%FS ( typ. ) ±0.5%FS ( max. )
	MPM436W	±0.5%FS ( min. ) ±1.0%FS ( max. )
Stability error	MPM426W	±0.1%FS ( typ. ) ±0.2%FS ( max. ) range > 20mH <sub>2</sub> O
		±10mmH <sub>2</sub> O ( typ. ) ±20mmH <sub>2</sub> O ( max. ) range ≤ 20mH <sub>2</sub> O

<http://www.microsensor.cn>

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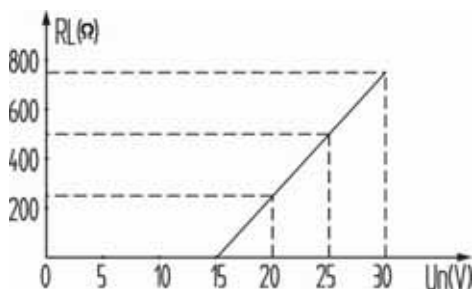
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	MPM436W	±5mmH <sub>2</sub> O ( typ. )			
Temp. drift	MPM426W	Zero drift, %FS/		Sensitivity drift, %FS/	
		Rang > 10mH <sub>2</sub> O	0.005 ( typ. )	0.01 ( max. )	0.02 ( max. )
		Range ≤ 10 mH <sub>2</sub> O	0.01 ( typ. )	0.02 ( max. )	0.02 ( max. )
		Range ≤ 5m H <sub>2</sub> O	0.015 ( typ. )	0.03 ( max. )	0.02 ( max. )
		Range ≤ 2m H <sub>2</sub> O	0.025 ( typ. )	0.05 ( max. )	0.02 ( max. )
	MPM436W	± 0.15%FS/10 ( -20 ~ +70 )			
		± 0.2%FS/10 ( -30 ~ -20 )			
Transmitting	2-wire		3-wire	3-wire	
Power supply	15 ~ 30VDC ( Intrinsic safe version is supplied through safe barrier )		15 ~ 28VDC	15 ~ 28VDC	
Output signal	4 ~ 20mADC		0 ~ 10/20mADC	0/1 ~ 5/10VDC	
Load ( Ω )	< ( U-15 ) /0.02A*		< ( U-15 ) /0.02A	> 5k	
Material contacting with media	Housing: SS ICr18Ni9Ti		Seal parts: Viton		
	Rubber casing: NBR		Cable: Φ7.5mm PVC/Polyurethane cable with vented tube		
	Diaphragm: SS 316L ( MPM426W ) ; 96% alumina ceramic ( MPM436W )				
Operation temp.	MPM426W	-10 ~ 80 ; Intrinsic safe version: -10 ~ 70			
	MPM436W	-30 ~ +70 ;			
Storage temp.	-40 ~ 100 ( MPM426W ) ; -30 ~ 85 ( MPM436W )				
Protection	IP68 ( sensor part ) ; IP65 ( connection box )				
Ex-proof class	Exia CT6				

MPM436W only can be 2-wire transmitting; power supply 12 ~ 30VDC, load < ( U-12 ) /0.02A-Rwire ( kΩ ) ; U is power supply valrage, Rwire is wire resistance.

### Load Characteristic

( Take MPM426W as example )



2-wire  
4 ~ 20mADC output

$$R_L = \frac{U_n - 15V}{20mA} \times 10^3 (\Omega)$$


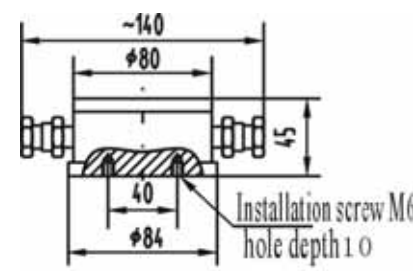
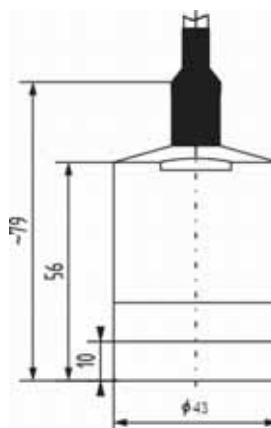
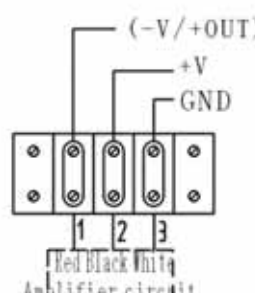
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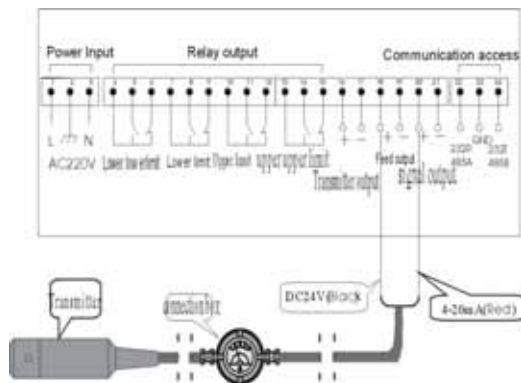
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### Outline Construction

( Unit:mm )	Outline dimension	Connection box outline and dimention and Terminal electric connection
MPM426W		
MPM436W		

### Application Example

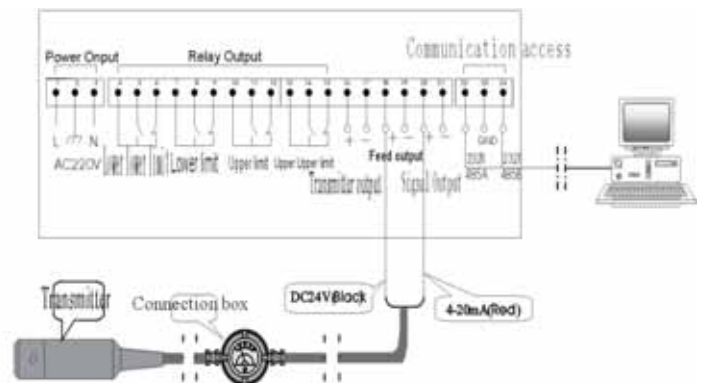


Connecting level transmitter with measure displayer to build up a control system

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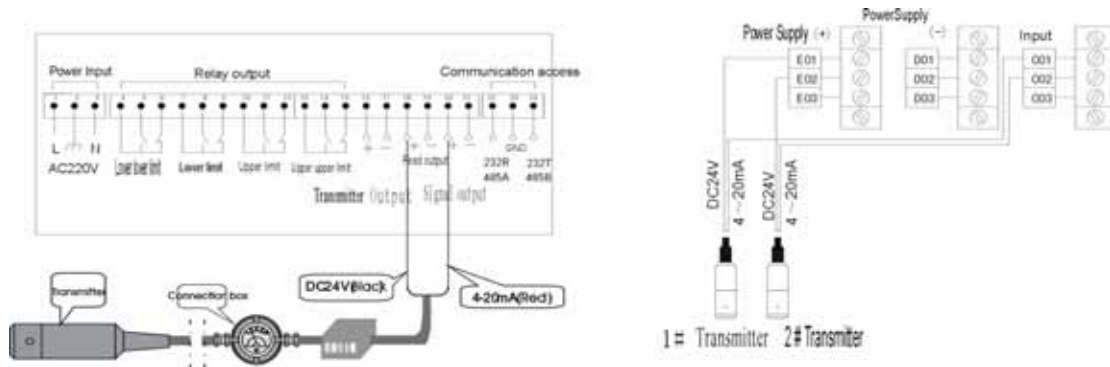
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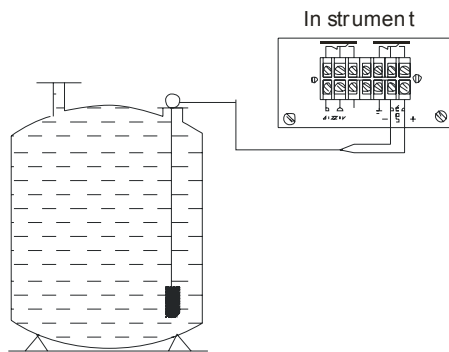
Connecting level transmitter with MSB9418 measure displayer to build up one level measure system with upper and lower limits control and alarming. Output signal is RS232 or analog 1~5VDC, 0~5VDC, 4~20mADC.

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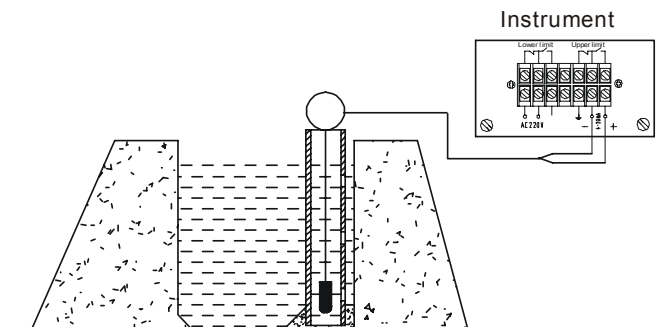


Connect Ex-proof version transmitter with safe barrier and measure displayer to build up one

Connecting the most two level transmitter with MSB9438 measure displayer to build up one level difference system with multi-channel display. Output signal can be 4~20mA analog, it can also provide upper and lower limit control and alarm.



When measure static pressure in open tank, please put transmitter into tank bottom, and fix transmitter cable and connection box at the entrance of the tank.



When measuring level in flow water, please insert one steel tube  $\Phi 45$ , and make some little holes  $\Phi 5$  at the different height of the tube. Make holes opposite to water flowing direction, and let water go into tube unobstructed. Fix cable and connection box at the entrance of the tube.

### Installation at Local Place

(Unit: mm)

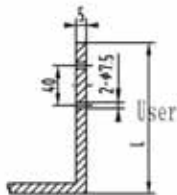
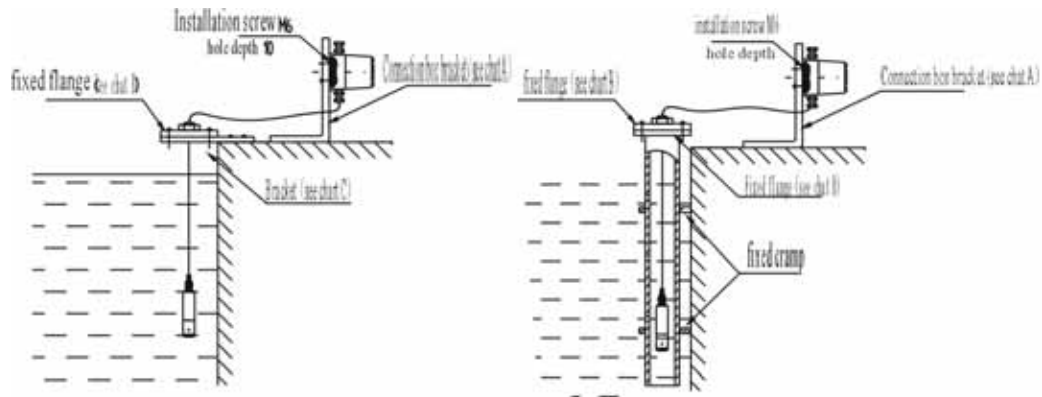


Figure A (User)

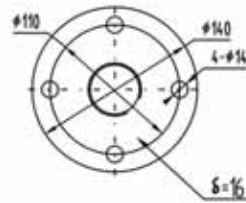


Figure B (manufacturers or user)

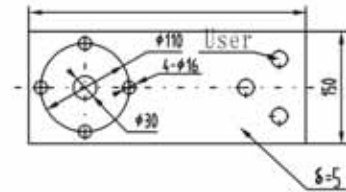


Figure C (User)

**Order Guide**

MPM426W/436W	Submersible Level Transmitter				
	Range	[0 ~ XmH <sub>2</sub> O]L	L: cable length; suggested L-X= ( 1 ~ 2 ) m		
		code	Output signal		
		E	4 ~ 20mADC		
		F	1 ~ 5VDC		
		J	0 ~ 5VDC		
		Q	0 ~ 10mADC		
		U	0 ~ 20mADC		
		V	0 ~ 10VDC		
			Construction material		
		Code	Diaphragm	Pressure port	Housing
		22	SS 316L	SS	SS
		24	SS 316L	SS 316L	SS 316L
		25	Tantalum	SS	SS
			Code	Others	
			M <sub>1</sub>	0 ~ 100% hand pointer indicator	
			Y	Connection box	
			i	Intrinsic safe version Exia CT6	
			C <sub>1</sub>	M20×1.5 male, face type seal	Only for MPM426W
			C <sub>3</sub>	G1/2 male	
			C <sub>5</sub>	M20×1.5 male, waterline seal	
			T	Ship-use	
			F <sub>1</sub>	Fixed flange	
MPM426W	[0 ~ 3mH <sub>2</sub> O]5	E	22	YIC <sub>1</sub>	the whole spec

**Order Note**

1. Please be sure the measured media is compatible with contacting material; please pay attention to media density in the measurement (except water);

2. We provide two kinds of cable, PVC or polyurethane cable. Polyurethane cable is more flexible and wearable. If the use has no special requirement, we provide PVC cable as default;

3. If the product is installed in "lightning and thunder" area, please note "lightning-proof" in the order. We suggest to increase Lightning-proof Protection Device to protect transmitter. Please be sure good grounding as well;

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4. If the user needs MPM436W the pressure range  $< 0.5\text{mH}_2\text{O}$ , we provide product with accuracy 1.0%FS;

5. If the user has special requirement, please feel free to contact our company.