

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;
- Waterproof Junction Box is optional to ease wiring; protection class IP65;
- Removable top stainless steel cap; prevent diaphragm damage and ease cleaning;
- MPM436W min. pressure range 0.5mH₂O; high pressure impact resistibility;
- MPM426W product is issued CE Certificate;
- MPM426W product is National Patent Product, patent No.ZL00226955.4andZL2013 3 0060430.9;
- Explosion-proof product conforms to Exia II 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.



MPM426W Submersible Level Transmitter

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

Specifications

Range	MPM426W	1	2	5	10	20	50	100	200mH ₂ O
	MPM436W	0.5	2mH ₂ 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 > 10mH ₂ O	
		±10mmH ₂ O (typ.)			±20mmH ₂ O (max.)			range ≤ 10mH ₂ O	
	MPM436W	±5mmH ₂ O (typ.)							

<http://www.microsensor.cn>

Add: No.18,Yingda Road Baoji,P.R.China, 721006

Tel: +86 917 3600739/3600909 Fax: 3609977

MICRO SENSOR CO.,LTD.

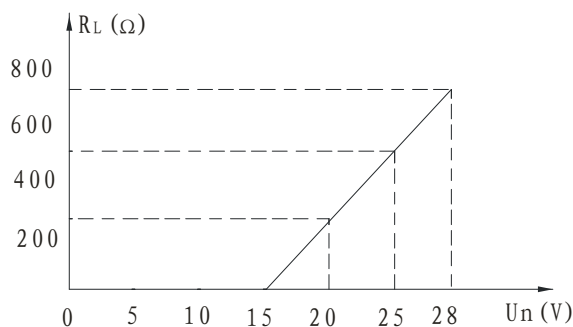
Temp. drift	MPM426W	Rang>10mH ₂ O	0.005 (typ.)	0.01 (max.)	0.02 (max.)
		Range≤10mH ₂ O	0.01 (typ.)	0.02 (max.)	0.02 (max.)
		Range≤5mH ₂ O	0.015 (typ.)	0.03 (max.)	0.02 (max.)
		Range≤2mH ₂ O	0.025 (typ.)	0.05 (max.)	0.02 (max.)
	MPM436W	≤±0.15%FS/10°C			
Transmitting①	2-wire		3-wire		3-wire
Power supply	15V~28VDC (Intrinsic safe version is supplied through safe barrier)				
Output signal	4V~20 mADC		0mA~10/20mADC		0/1V~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°C~70°C	-10°C~60°C(Exia)		
	MPM436W	-10°C~70°C	-10°C~60°C(Exia)		
Storage temp.	-20°C~85°C				
Protection	IP68 (sensor part) ; IP65 (connection box)				
Ex-proof class	Exia II CT6 Ga				

① 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.

② For 2-wire output transmitter with LCD/LED display, the power supply shall be >= 20VDC.

Load Characteristic

(Take MPM426W as example)



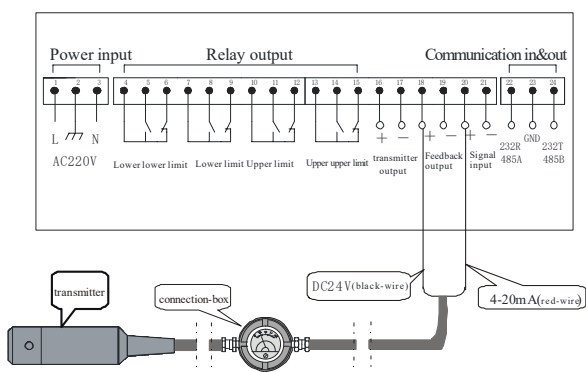
2-wire
4mA~20mADC output

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

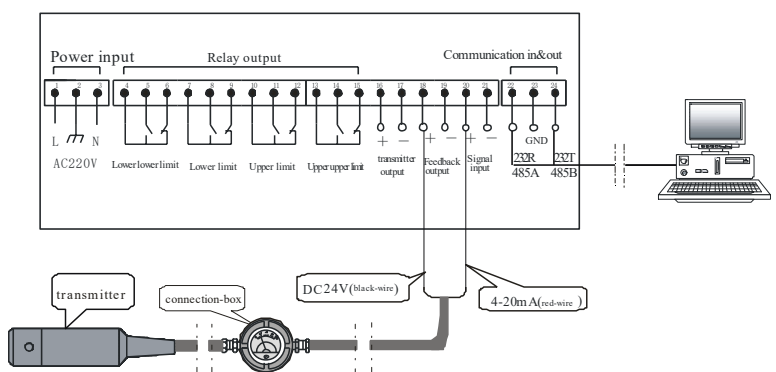
Outline Construction

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

Application Example



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



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.

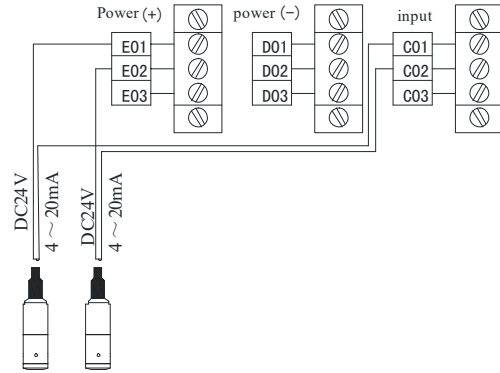
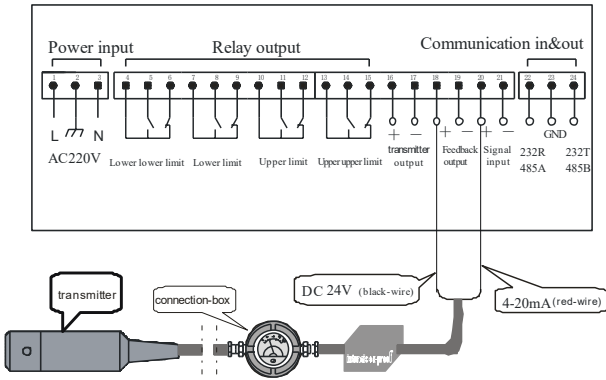
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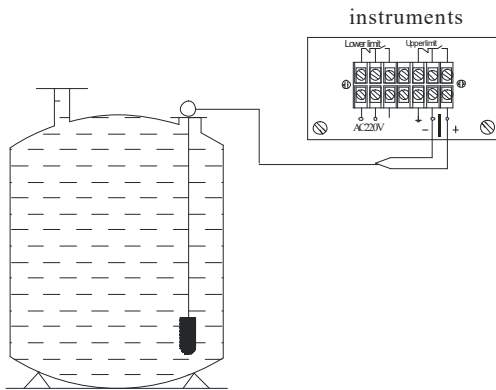
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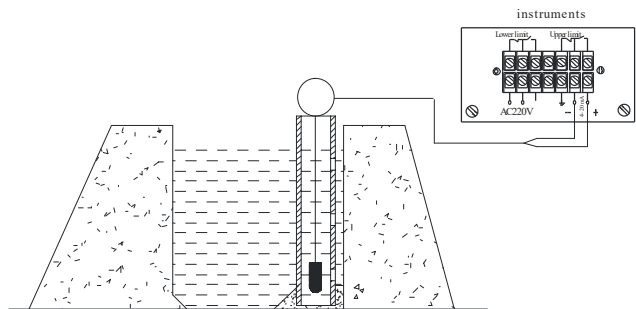
1#transmitter 2#transmitter

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

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.

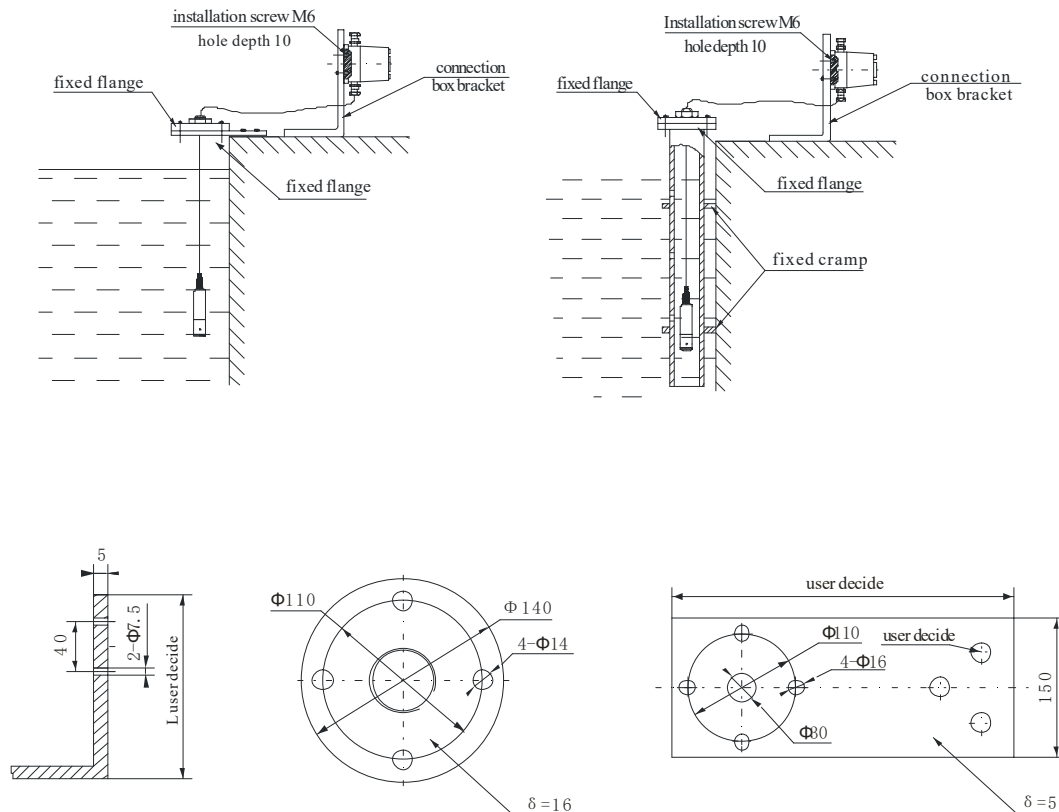


When measure static pressure in open tank, please put transmitter into tank bottom, and fix transmitter cable and connection box at the entrance of the tank.



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)



Notes

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;
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.

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Order Guide

MPM426W/436W	Submersible Level Transmitter				
	Range	[0~XmH ₂ 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			
	Code	Construction material			
		Diaphragm	Pressure port	Housing	
	22	SS 316L	SS	Only for MPM426W	
	24	SS 316L	SS 316L		
	25	Tantalum	SS		
	Code	Others			
	M ₁	0~100% hand pointer indicator			
	M ₃	3 1/2 digits LCD digital indicator (only for 4~20mA)			
	M ₄	3 1/2 digits LED digital indicator (only for 4~20mA)			
	Yb	Aluminum connection box without display			
	Yc	MS200 water-proof connection box(default)			
	Yd	PD140 lightning-proof protection device			
	Ye	connection box(with display or without display)			
	i	Intrinsic safe version Exia II CT6			
	C ₁	M20×1.5 male, face type seal		Only for MPM426W	
	C ₃	G1/2 male			
	C ₅	M20×1.5 male, waterline seal			
	T	Ship-use			
	F ₁	Fixed flange			
MPM426W	[0~3mH ₂ O]5	E	22	YiC ₁	the whole spec