

MPM4700 Intelligent Level Transmitter

Features

- 4~20mADC 2-wire current output;
- Digital temperature compensation and linearity correction;
- RS485 communication interface(Custom or MODBUS protocol) or HART®communication protocol (optional) ;
- Netting application;
- Full stainless steel construction, compact size, light weight;
- Special requirement available;
- RoHS Certificate
- Intrinsic safe ex-proof version conforming to GB3836.4 Exia II BT6 Ga Regulation; Ex-proof Certificate is issued;
- Marine type products accord with CCS classification of sea-going steel ships of the rules "(2006) the requirements, has obtained the type approval.



Introduction

MPM4700 level transmitter is the full stainless steel construction and full-sealed submersible intelligent level transmitter with high accuracy. It uses highly reliable and stable pressure sensor, intelligent processing circuit, precise digital temperature compensation and linearity correction technics for production. The water-proof cable connects with housing sealed, with vented tube putting in, the transmitter could be used in the water or liquid in a long time. Integrated construction and standard output signal could provide easy operation and good automatic control. With 2-wire working, compact size, light weight and easy installation and operation, it is widely used for industry field instead of normal 2-wire 4~20mADC analog output transmitter.

Specifications

Basic range (mH ₂ O)	3.5	7	10	20	35	70	100	200
Overpressure (mH ₂ O)	5	10	15	30	50	100	150	300

Note: The min.shrunked available range is 1/5 of basic range;

For the other pressure range between min.range and max.range, but not indicated on the above table, we enlarge the above basic pressure range to produce (overpressure unavailable);

Total accuracy ①③	±0.075%FS (min.)	±0.1%FS (typ.)	±0.25%FS (max.)
Stability	±0.2%FS/year		

Compensation temp. ②	(-10~70)°C
Operation temp.	(-10~80)°C
Storage temp.	(-40~100)°C
Power supply	(10~28)VDC (RS485) , (12~30)VDC (HART®) (10~12)VDC (The Ann model, the security gate power supply)
Output	(4~20)mADC ·RS485 communication interface(Custom or MODBUS protocol) or HART®communication protocol
Load	(4~20)mADC output, (U-12V) /0.02A (Ω) RS485 bus line could connect with 99 transmitter
Insulation	100MΩ/50V
Shock	20g, (20~5000)Hz
Impact	20g, 11ms
Protection	IP68(Transmitter part);IP65(Junction box part)
Media compatibility	Diaphragm: stainless steel 316L Housing: stainless steel 1Cr18Ni9Ti O-ring: Viton
Weight	~160g

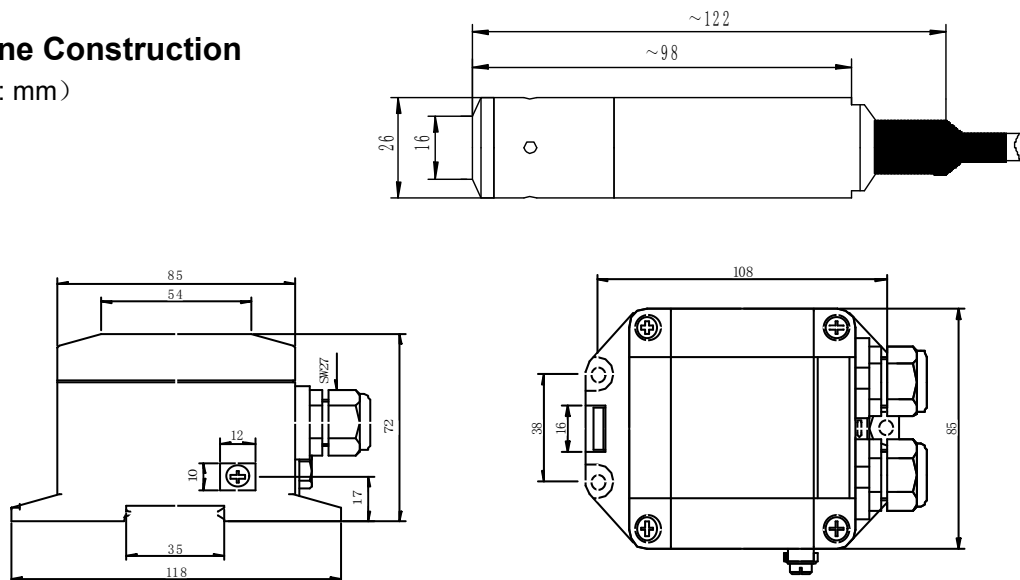
①Total accuracy: including non-linearity, hysteresis, repeatability and thermal error;

②For special temperature requirement, please contact with our company;

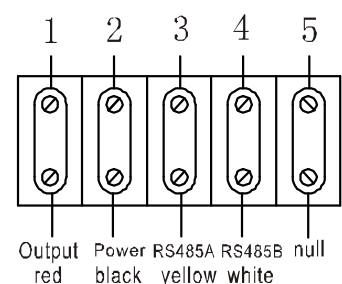
③For pressure range 3.5mH₂O ad 7mH₂O, after shrinking, the total accuracy is 0.5%FS.

Outline Construction

(Unit: mm)



Electric Connection

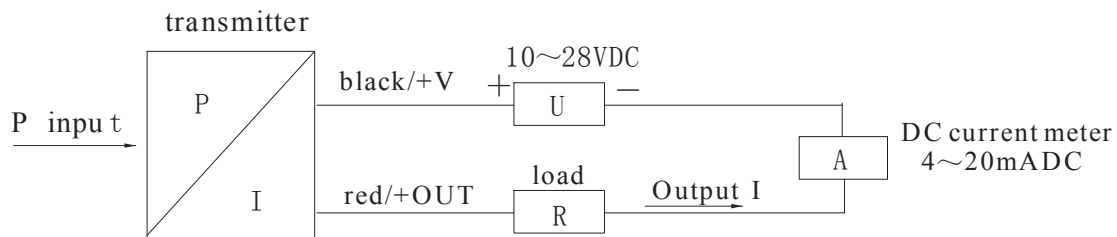


Transmitter connecting the outside by cable or connection box;

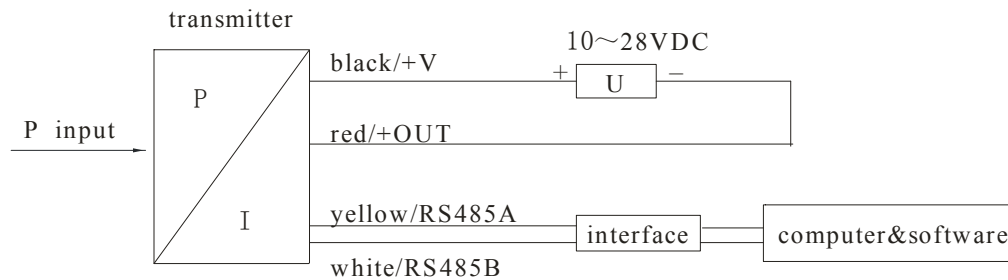
Wire color	Terminal	Connection
Black	2	+V
Red	1	OUT/GND
Yellow	3	RS485A
White	4	RS485B

Terminal
CHART

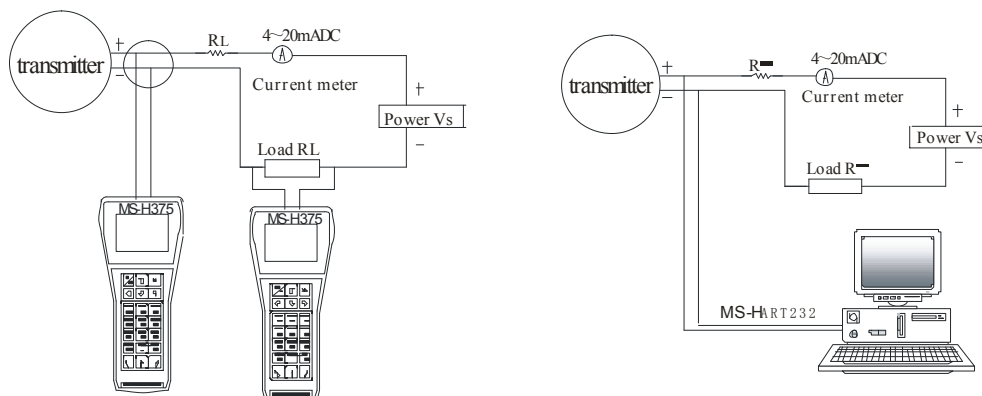
a). Electric connection for transmitter with 2-wire 4~20mADC output:



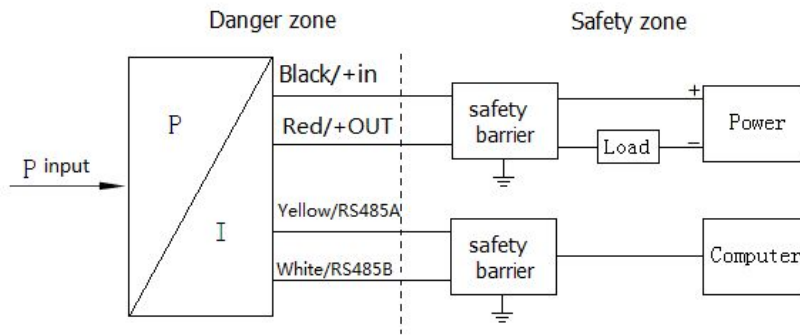
b). Electric connection for transmitter with RS485 interface



c). Wiring for HART® transmitter connecting with hand-communicator;



d). This Ann explosion-proof type electrical connection methods are shown below



ExialIBT6 Ga

Transmitter Ex-proof parameter:

Ui: 12.4VDC li: 140mADC
 Li: 0mH Ci: 7.4 μF Pi: 0.43W

ExialIC

Safe barrier's ex-proof parameter:

Uo: 12.4VDC Io: 140mADC Po: 0.43W

Assistant Software

a). Transmitter Software (RS485 Interface type)

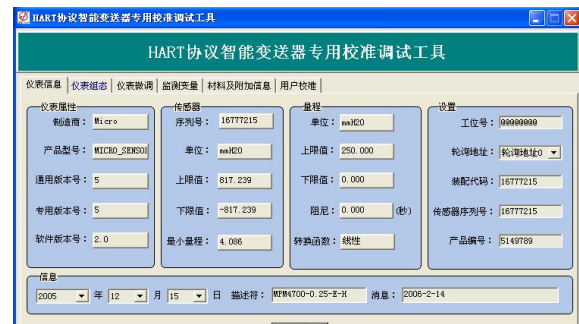
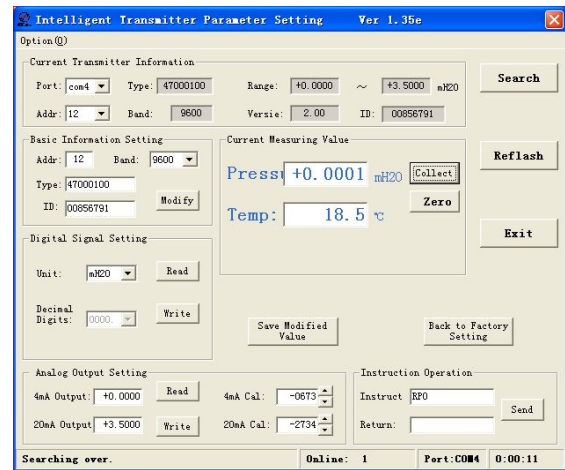
MS Setonline Software

Through RS232/485 conversation module, the user could read inner basic information for RS485 interface transmitter (including level range, compensated temp. range, version code, etc.) and display actual level, set new zero, analog output and device address.

Transmitter Software (RS485 communication interface, MODBUS communication protocol)

MODBUS Software

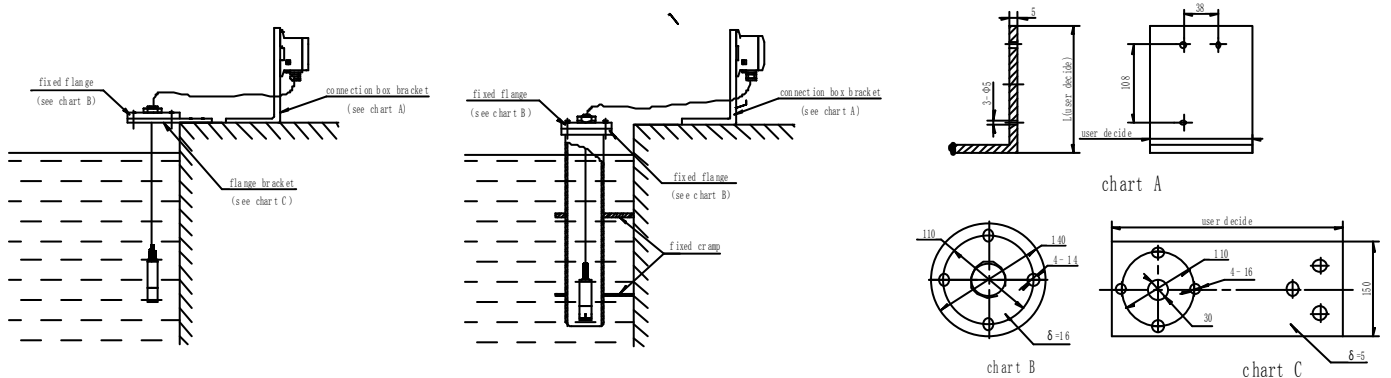
Through MODBUS conversion module, the user could calibrate and adjust RS485 communication interface, MODBUS communication protocol transmitter.



b). Transmitter Software (HART® protocol)

MS-C100A Software Through
 MS-HART 357 conversion module, the
 user could calibrate and adjust HART ®
 transmitter.

Application Example



Order Guide

MPM4700	HART ® Intelligent Level Transmitter		
	Range	Pressure range : 0~3.5...200mH2O	
	[0~XmH2O]L	X=actual pressure range, L=cable length , suggested L-X= (1~2) m	
		Code	Output signal
		E	4~20mADC
		R ₄	RS485 communication interface, Custom protocol
		R ₈	RS485 communication interface, MODBUS communication protocol
		H	HART® communication protocol
		Code	Construction material
			Diaphragm Interface Housing
		22	SS 316L SS SS
		24	SS 316L SS 316L SS 316L
		Code	Others
		C ₁	M20×1.5 male, face type seal

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								C ₅	M20×1.5 male, waterline seal
								Yb	Aluminum connection box without display
								Yc	MS200 water-proof connection box (default)
								Yd	PD140 lightning-proof protection device
								F ₁	Fixed flange
								i	Intrinsic safe version Exia II BT6 Ga
								T	Ship-use
MPM4700	[0~10mH ₂ O]12	ER ₄	22	Yc	the whole spec				

Order Note

1. If the user has no special requirement for cable, we provide default PVC cable;
2. If the user has special requirement, please feel free to contact our company.