

# MPM/MDM460/MPM460W Multi-functional Intelligent Pressure/Differential Pressure/Level Transmitting Controller

## Features

·RS485 semi-duplex communication interface to transmit data signal and do long-distance calibration; easy for netting and connecting with MODEM interface to achieve data wireless transmitting;

·Using piezoresistive pressure/differential pressure sensor and digital correction compensation; high accuracy;

·Strict testing and aging, stable performance; aluminum-alloy electronic housing; protection IP65;

·Key setting and calibration, easy installation;

·LED measuring value display and LCD status information display;

·Max.5 relay to control;

·Optional pressure port and standard output signal;



## Introduction

MPM/MDM460/MPM460W intelligent transmitting control could measure and control pressure, differential pressure and level accurately in rugged open environment. It can use RS485 netting and display local measure value, and provide analog standard signal or relay control signal. The product could be used for pressure, differential pressure, level measuring, transmitting, displaying and transforming of chemi-industry, metallurgy, ocean, aviation, measurement, science, etc.

## Specifications

MPM460	Pressure range: gauge -0.1...0~0.01...100MPa Overpressure: 1.5 time FS or 110MPa (min.value is valid)
MPM460W	Pressure range: gauge 0~1...200mH2O Overpressure: 1.5 times FS                      Sensor part housing protection: IP68
MDM460	Pressure range: differential pressure 0~35kPa...3.5MPa Static pressure: ≤20MPa

<http://www.microsensor.cn>

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Output signal: analog 4~20mADC, 0~10/20mADC or 0/1~5VDC; digital RS485  
Accuracy:  $\pm 0.25\%FS$  (typ.);  $\pm 0.5\%FS$  (max.) including analog output's lin., rep. and hys.

Zero temp.drift:  $\pm 0.03\%FS/^\circ C$  ( $\leq 100kPa$ )  $\pm 0.02\%FS/^\circ C$  ( $> 100kPa$ )

FS temp.drift:  $\pm 0.03\%FS/^\circ C$  ( $\leq 100kPa$ )  $\pm 0.02\%FS/^\circ C$  ( $> 100kPa$ )

Long-term stability:  $\leq \pm 0.5\%FS/year$

Relay quantity: 1~5

Load: 240V/5A (AC) or 30V/5A (DC)

Replay life: >100000 times

Indicator: 4 digit 0.56 inch LED digit indicator; display range: -1999~9999  
4 digit 0.36 inch LED situation display indicator

Power supply: 220VAC $\pm 15\%$  or 220VDC or 24VDC

Max.consumption:  $\leq 3.5W$

Environment temp.:  $-10^\circ C \sim 60^\circ C$

Frequency: 0~300Hz

Media temp.:  $-10^\circ C \sim 80^\circ C$

Acceleration:  $\leq 3 \times 9.81ms^{-2}$

Storage temp.:  $-40^\circ C \sim 125^\circ C$

Impact:  $\leq 10 \times 9.81ms^{-2}$

Pressure port: stainless steel 1Cr18Ni9Ti

Diaphragm: stainless steel 316L

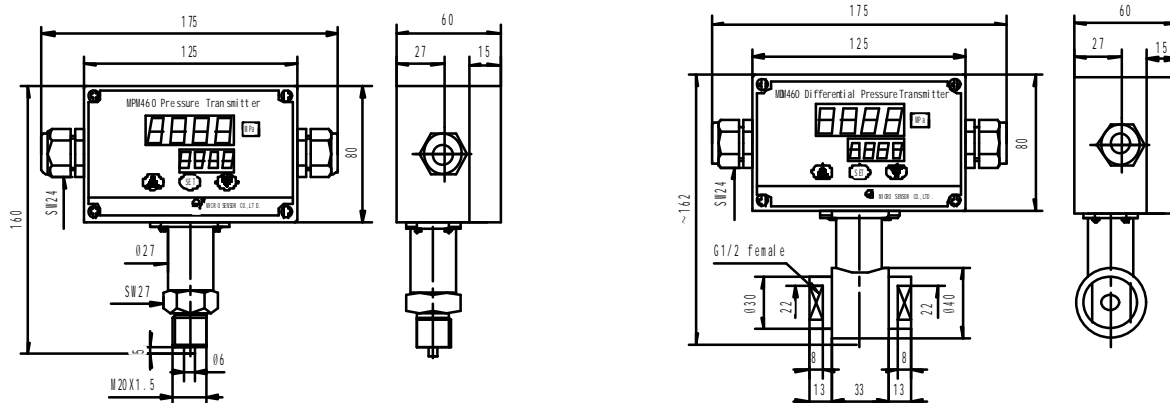
Electronic housing: aluminum-alloy

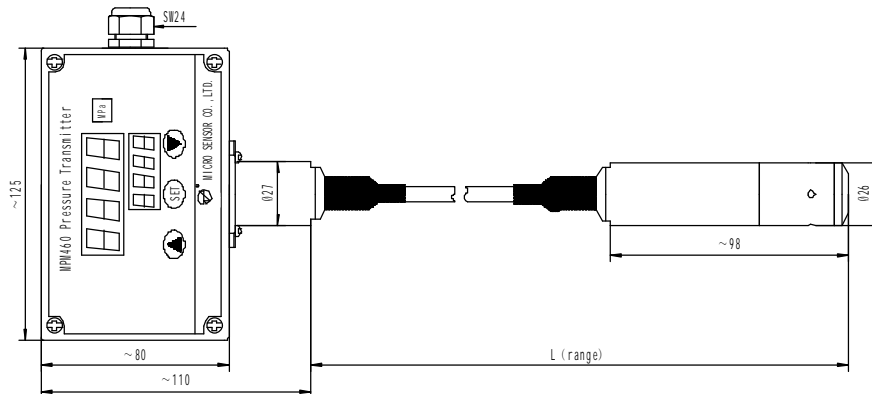
Sealing: Viton or full-welded

Pressure port: Optional

## Outline Construction

(Unit: mm)



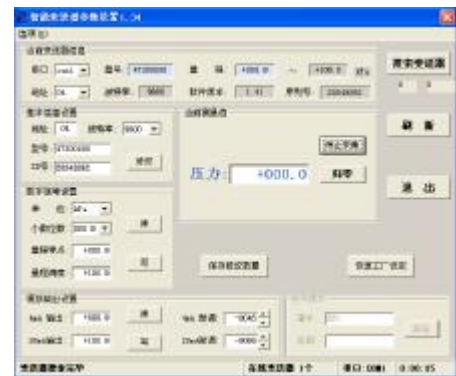


## Assistant Software

RS485 Interface's software

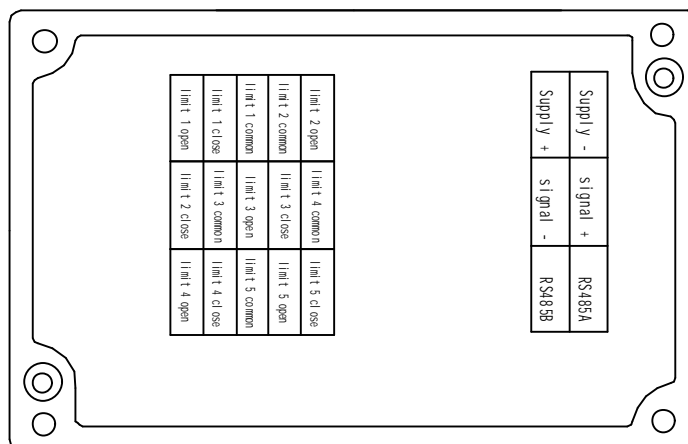
Setonline Software

Communicate with RS485 interface through RS232/485 transforming module, display measuring pressure, level, differential pressure value, zero, analog output and transmitter address.



Note: software "Setonline" could be downloaded from our official website, [www.microsensor.cn](http://www.microsensor.cn)

## Electric Connection



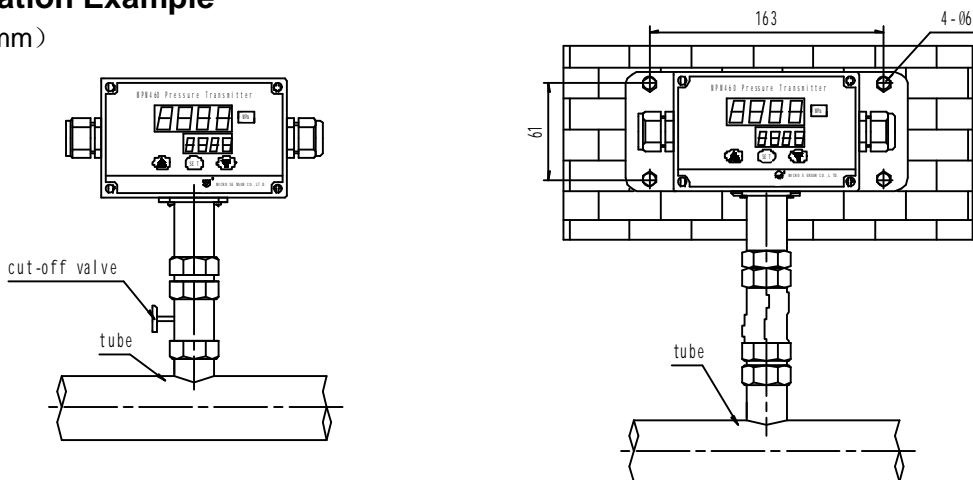
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### Application Example

(Unit: mm)



### Order Guide

MPM460	Multi-functional Intelligent Pressure Transmitting Controller							
MPM460W	Multi-functional Intelligent Level Transmitting Controller							
MDM460	Multi-functional Intelligent Differential Pressure Transmitting Controller							
	Range	Pressure range: mH <sub>2</sub> O, kPa or MPa						
	[0~X mH <sub>2</sub> O]Lm	Level	0~1...200mH <sub>2</sub> O, X=actual measuring level, L=cable length (unit: m)					
	[0~X]kPa or MPa	Pressure	-0.1...0~0.01...100MPa, X=actual measuring pressure					
		Differential pressure	Pressure (kPa)	Overpressure kPa		Pressure (kPa)	Overpressure kPa	
				+	-		+	-
			0~35	70	35	0~700	1400	700
			0~70	150	70	0~1000	2000	1000
			0~100	200	100	0~2000	4000	1000
	0~200	400	200	0~3500	7000	1000		
	0~350	700	350					
		Code	Output signal					
		E	4~20mADC					
		F	1~5VDC					
		J	0~5VDC					
		Q	0~10mADC					
		U	0~20mADC					
		R <sub>4</sub>	RS485 interface					
		Code	Construction material					
			Diaphragm	Pressure port	Housing			
		22	SS 316L	SS	Aluminum-alloy			

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				25	Tantalum	SS	Aluminum-alloy
				35	Tantalum	Hastelloy C	Aluminum-alloy
					Code	Others	
					C <sub>1</sub>	M20×1.5 male, face type seal	Only MPM460
					C <sub>3</sub>	G1/2 male	
					C <sub>4</sub>	G1/4 female	Only MDM460
					C <sub>5</sub>	M20×1.5 male, waterline seal	Only MPM460
					G	Gauge	
					A	Absolute	
					S	Sealed gauge	
					P	Flush diaphragm, G1/2 male,	
					J <sub>n</sub>	Relay quantity, n=1~5	
					V <sub>1</sub>	Power supply 24VDC	
					V <sub>2</sub>	Power supply 220VAC	
					F <sub>1</sub>	Fixed flange	Only MPM460W
MPM460	[0~200]kPa	F	22	C <sub>3</sub> AJ <sub>1</sub> V <sub>1</sub>		the whole spec	

### Order Note

1. Please note power supply, accuracy, relay quantity; the default is 24VDC power supply, accuracy 0.5%FS and no relay control;
2. If the user needs communication software and instruction for RS485 interface, please note in the order;
3. Flush diaphragm product's pressure range 0~70kPa...35MPa;
4. The user who needs MPM460W, please install product as MPM416W/426W operation manual; we can provide fixed flange for the user;
5. For MDM460 product, please pay attention to overpressure of positive and negative cavity should be suitable to max. Pressure; we suggest to install tri-valve between measured point and transmitter to make pressure ading on positive and negative cavity slowly.