



Our company reserves the modification right for this operation manual due to renovation of production technology and craftwork. If some information is changed, no more notice will be edited.

Please pay attention to the latest version.

Our company also reserves the right of final explanation for this manual.

Version: V1.0

**Thank you very much for selecting Micro Sensor's product, please take some time to read this operation manual very carefully before using the product..**

## **1 Introduction**

MPM430 lower pressure transmitter is developed especially to measure every lower pressure. It has good overpressure, good reliability, small temperature drift, convenient installation and long-term stability.

The Explosion-proof version of MPM430 is an intrinsic safe version, conforming the standard of GB3836.1-2010 and GB3836.4-2010.

Explosion sign is ExiallCT6Ga.

## **2 Specifications**

Range(FS): -25mbar...-5mbar ~ 5mbar...50mbar(OD)

-100mbar...-10mbar ~ 10mbar...100mbar (OC)

0mbar ~ 20mbar...200mbar (OB)

Over pressure: 1.8bar(OD) 2bar(OC) 6bar(OB)

Power Supply: 12V~28V DC

(Intrinsic safe version is supplied through safe barrier)

Output Signal: 4mA~20mA DC (2-wire)

Accuracy:  $\pm 0.5\%$ FS(min.);  $\pm 1.0\%$ FS(typ.)

Note: The precision of products is related to the range of

measurement, and the precision of products in different range is different.

Stability:  $\leq \pm 0.5\%$ FS/year

Operating temp.: -30°C~80°C(Plug)

-20°C~70°C(cable material: PE, PVC)

-20°C~80°C(cable material: PUR)

-20°C~60°C(Intrinsic safe version)

Storage Temp.: -40°C~120°C -20°C~85°C(Cable)

Shock Error:  $\leq \pm 0.01\%FS$  (X,Y,Z 200Hz/g)

Temp Error:  $\leq \pm 0.15\%FS/10^\circ C$  (-20°C~80°C)

$\leq \pm 0.2\%FS/10^\circ C$  (-30°C~-20°C)

Load:  $\leq ((U-12V)/20mA) - R_{wire}(k\Omega)$

( $R_{wire}$  is lead resistance(k $\Omega$ ), U is power supply voltage(V))

Protection: IP65

## 3 Outline Construction and Installation

### 3.1 Outline dimension

Unit:mm

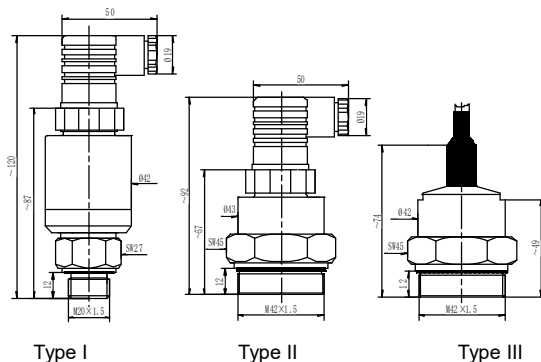


Figure 1

## 3.2 Installation

### 3.2.1 Attention before installation

- a) Please be sure the measuring pressure will not exceed the transmitter measurement range;
- b) Please be sure the measuring media is compatible with the construction material;
- c) Please be sure the measuring media will not jam the liquid leading hole.

### 3.2.2 Installation Method

Usually the transmitter should be mounted vertically up to the horizontal direction. In order to install and maintain conveniently, it is recommended to install a cut-off valve between the transmitter and the measuring point.

3.2.3 The pressure port can be customized for users according to special request.

## 4 Electric Connection

4.1 The transmitter could be connected with the external circuit through socket, cable or connection box.

Table 1

Wire Color	Plug	Electric connection
Red	Pin 1	+V
Black	Pin 2	0V/+OUT

4.2 Typical electrical connection method

a) The electric connection method of transmitter with Cable

Connection to see Figure2:

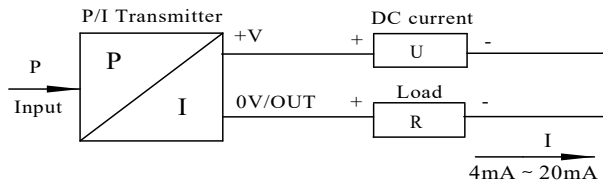
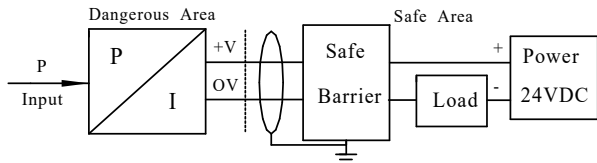


Figure 2

b) The Electrical Connection Method of Explosion Proof Version Transmitter to see Figure3:



ExiallCT6 Ga

[Exia] IIC

Transmitter explosion proof parameter:

Safe barrier output

explosion proof parameter:

$U_i=28\text{VDC}$   $I_i=93\text{mADC}$

$U_o=28\text{VDC}$   $I_o=93\text{mADC}$

$L_i=0\text{mH}$   $C_i=0.044\mu\text{F}$

$P_o=0.65\text{W}$

$P_i=0.65\text{W}$

Figure 3

## 5 Unpacking, Shipment Enclosed and Storage

### 5.1 Unpacking

- a) Please be sure that the package is complete, and the package is put as the sign “UP”;
- b) Please be sure do not knock at the package violently, and protect the housing jacket and rubber bushing.

### 5.2 Thipment Enclosed

MPM430 lower pressure transmitter	1
Specified Plug(for the Plug Type)	1
PVC or polyethylene cable(for the Cable Type)	1.5m or required as the contract
Sealed gasket(assembly in the thread interface)	1
Production Manual	1
Product Qualification Certificate	1

### 5.3 Storage

The transmitter should be stored in dry & ventilate room with environment temperature  $-40^{\circ}\text{C}\sim 120^{\circ}\text{C}$ 、 $-20^{\circ}\text{C}\sim 85^{\circ}\text{C}$  (Cable) , relative humility  $\leq 85\%$ , and no corrosive gas.

## 6 Responsibility

Within one year from the delivery date, we shall repair or replace the instrument with any quality fault caused by material parts or our manufacturing technique free of charge. For non-quality malfunction during user's operation, we are in charge of repair. The material cost and the shuttle transportation fees should be borne by users.

[www.microsensorcorp.com](http://www.microsensorcorp.com)



**MICRO SENSOR CO.,LTD.**

ADD:No. 18 Ying Da Road, Baoji City, Shaanxi Province  
Tel: +86-(0)917-3600739/909 400 860 0606  
Fax:0917-3600755  
E-mail:sales@microsensor.cn