

# XPB Series RTD Input Isolated Barrier Data Sheet

## 1. General

**XPB Series RTD Input Isolated Barrier** converts thermal resistance signal in hazardous area into a standard process signal that have a linear relationship with the temperature, and outputs to the safe area. It is intelligent, input type of RTD and temperature range can be configured through computer. It restricts the energy from intrinsically safe port to hazardous area, insuring the system against explosion. It widely used in chemical industry, petroleum, natural gas, electricity, and other industrial fields. It is connected with all kinds of intrinsic safety instruments and used as the associated equipment of intrinsically safe explosion-proof system.



The product meets *GB3836.1-2010 Explosive atmospheres - Part 1: Equipment-General requirements* and *GB3836.4-2010 Explosive atmospheres - Part 4: Equipment protection by intrinsic safety "I"*. It has passed the test of China National Test Centre for Explosion Protect Electrical Products and obtained the Explosion-proof Certificate.

## 2. Features

- ◆ Input, output and power are completely isolated, with strong anti-interference ability
- ◆ PC programmable
- ◆ High accuracy, high linearity, long - term running stability
- ◆ Modular design, small size, low power consumption, suitable for intensive installation
- ◆ Plug-in construction, easy installation, disassembly and maintenance

## 3. Safety Description

Approvals: [Exia Ga] II C

Equipment	Terminal 1 to 4, 1 to 6, 4 to 6
Um	250V
Uo	6.6V
Io	68mA
Po	113mW
Co	5μF
Lo	5mH

## 4. Specifications

Power supply: DC24V±10%

Power consumption: ≤1.5W

Input: Pt100、Pt1000、Ni1000, etc, hazardous area

Exciting current: ≤200μA

Leadwire resistance: ≤20Ω / wire

Output: DC voltage, DC current, safe area

Load resistance: voltage output ≥10KΩ  
current output ≤350Ω

Accuracy: ±0.2%F.S (ΔR>40Ω)

±0.4%F.S (40Ω≥ΔR>20Ω)

Temp. coefficient: ≤±100PPM/°C

Insulation resistance: ≥100MΩ/500VDC

Dielectric strength:

input/output ≥2000VAC (1min)

input/power ≥2000VAC (1min)

output/power ≥1000VAC (1min)

Operating temperature: 0~50°C

Storage temperature: -40~85°C

Operating humidity: 10~90%RH

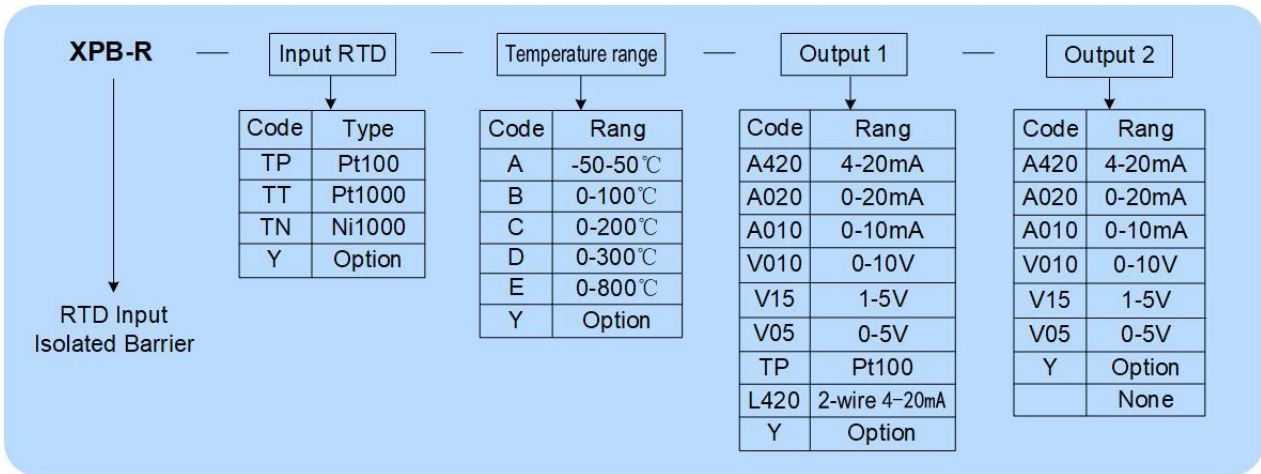
Atmospheric pressure: 86~106kPa

Installation: DIN 35mm rail

Dimension: 122mm×18mm×96mm

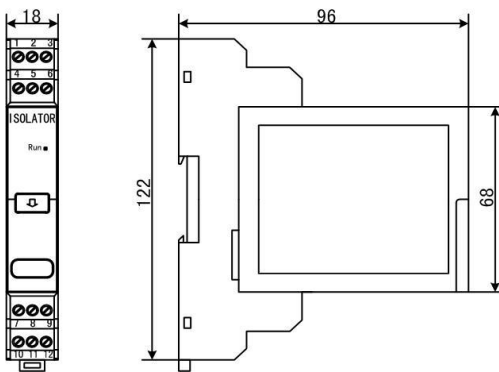
## 5. Ordering Information

XPB series code table :

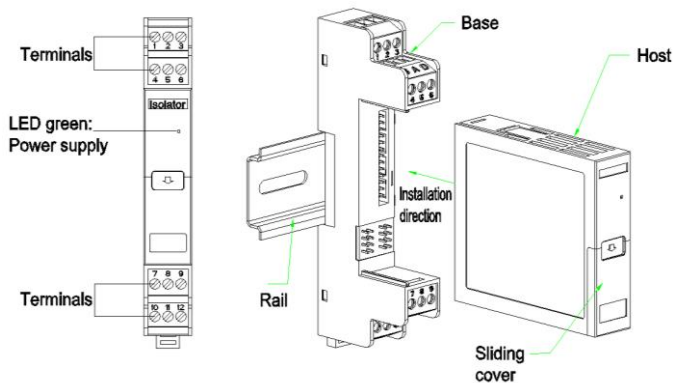


## 6. Dimension & Installation

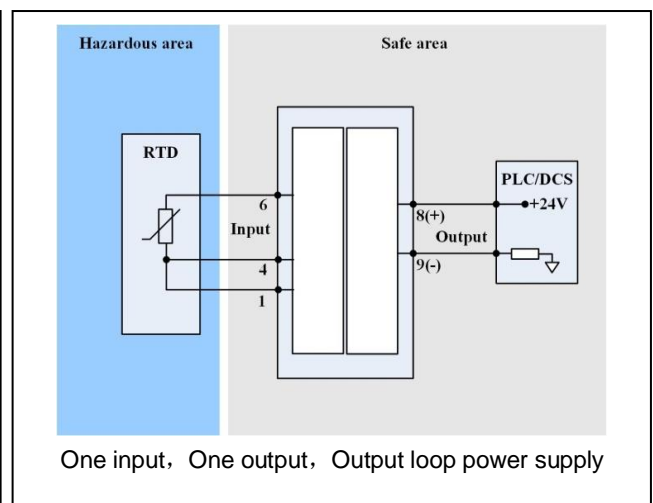
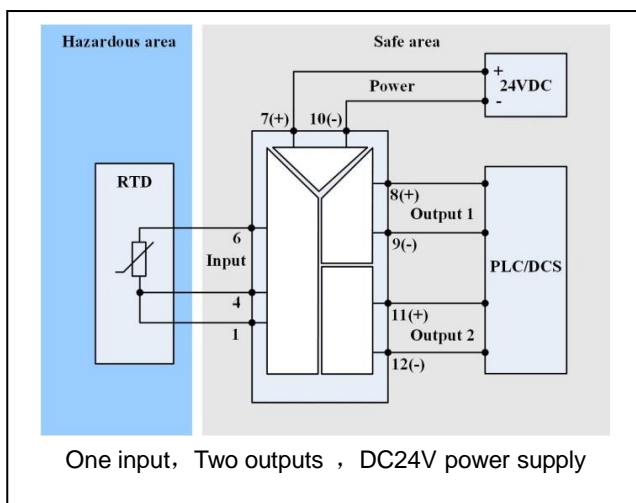
Dimension (122mm×18mm×96mm)



Installation



## 7. Typical Connection



Note: The connection diagrams given in this manual are typical. When installing, please refer to the connection diagram on the product.

## 8. Examples of ordering

Refer to the code table above and provide the model number correctly.

Example 1 input: hazardous area, one channel Pt100, temperature range: 0-100℃, output: safe area, one channel 4-20mA, power supply: 24VDC

order model: XPB-R-TP-B-A420

Example 2 input: hazardous area, one channel Ni1000, temperature range: -50-250℃, output: safe area, two channels 4-20mA, power supply: 24VDC

order model: XPB-R-TN-Y-A420-A420 (abbreviated as: XPB-R-TN-Y-2A420)

Example 3 input: hazardous area, one channel Pt100, temperature range: 0-200℃, output: safe area, one channel 2-wire 4-20mA, power supply: output loop

order model: XPB-R-TP-C-L420

## 9. Explosion-proof Certificate

国家防爆

编号: CNEx19.0396

### 防爆合格证

制造单位 苏州迅鹏仪器仪表有限公司  
(江苏省苏州市工业园区星汉街5号B幢6楼)

产品名称 隔离式安全栅

型号规格 XPB-P DC24V

防爆标志 [Ex ia Ga]IC

产品标准 Q/MXB 29-2017

总装图号 WG-RY-155

经对上述产品图样及技术文件的审查和样品检验,确认符合下列标准:  
GB3836.1-2010《爆炸性环境 第1部分:设备通用要求》  
GB3836.4-2010《爆炸性环境 第4部分:由本质安全型“i”保护的设备的设备》  
GB3836.20-2010《爆炸性环境 第20部分:设备保护级别(EPL)为Ga级的设备》

记事:

- 1、本证书可代表XPB-P和XPB-G两种型号的隔离式安全栅,防爆标志均为[Ex ia Ga]IC。
- 2、本安参数(1/3端,4/6端)均为:Um:250VAC/DC  
Uo:28VDC, Io:93mA, Po:0.65W, Co:0.05μF, Lo:2.4mH
- 3、安全注意事项见使用说明书。

中心主任

颁发日期 2019年1月24日

本证有效期 2019年1月24日至2024年1月23日

COST

国家防爆电气产品质量监督检验中心  
南阳防爆电气研究所

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国家防爆

编号: CNEx19.0395

### 防爆合格证

制造单位 苏州迅鹏仪器仪表有限公司  
(江苏省苏州市工业园区星汉街5号B幢6楼)

产品名称 温度变送隔离式安全栅

型号规格 XPB-E DC24V

防爆标志 [Ex ia Ga]IC

产品标准 Q/MXB 33-2017

总装图号 WG-RY-143

经对上述产品图样及技术文件的审查和样品检验,确认符合下列标准:  
GB3836.1-2010《爆炸性环境 第1部分:设备通用要求》  
GB3836.4-2010《爆炸性环境 第4部分:由本质安全型“i”保护的设备的设备》  
GB3836.20-2010《爆炸性环境 第20部分:设备保护级别(EPL)为Ga级的设备》

记事:

- 1、本证书可代表XPB-E热电阻温度变送隔离式安全栅和XPB-R热电阻温度变送隔离式安全栅,防爆标志均为[Ex ia Ga]IC。
- 2、本安参数(1-4-6端)均为:Um:250VAC/DC  
Uo:6.6VDC, Io:68mA, Po:0.112W, Co:15μF, Lo:5mH
- 3、安全注意事项见使用说明书。

中心主任

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