

XPB Series Thermocouple Input Isolated Barrier Data Sheet

1. General

XPB Series Thermocouple Input Isolated Barrier converts thermocouple 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 thermocouple 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: K、S、E、B、R、T、J、N, etc, hazardous area

Cold junction compensation: external (NTC)
0~50℃, error < 1℃

Output: DC voltage, DC current, safe area

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

Accuracy: ±0.2%F.S (ΔR>10mV)
±0.4%F.S (10mV≥ΔR>5mV)

Temp. coefficient: ≤±100PPM/℃

Insulation resistance: ≥100MΩ/500VDC

Dielectric strength:

input/output ≥2000VAC (1min)

input/power ≥2000VAC (1min)

output/power ≥1000VAC (1min)

Operating temperature: 0~50℃

Storage temperature: -40~85℃

Operating humidity: 10~90%RH

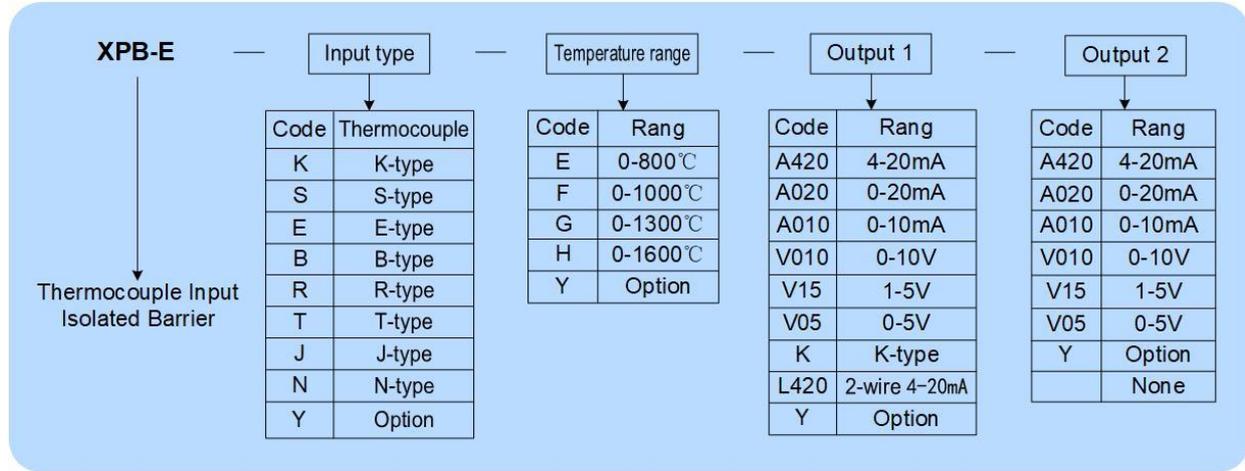
Atmospheric pressure: 86~106kPa

Installation: DIN 35mm rail

Dimension: 122mm×18mm×96mm

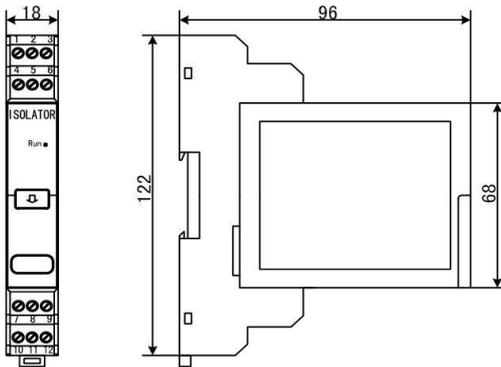
5. Ordering Information

XPB series code table :

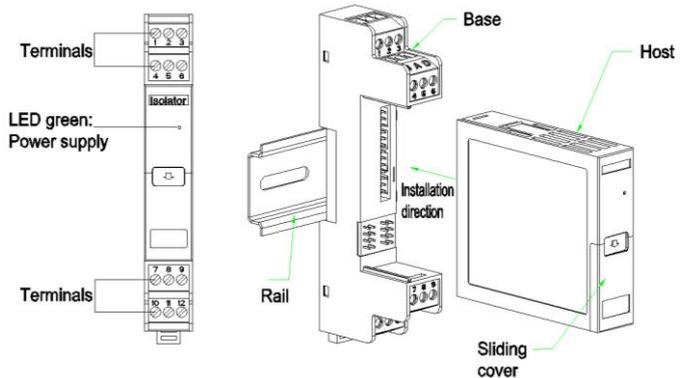


6. Dimension & Installation

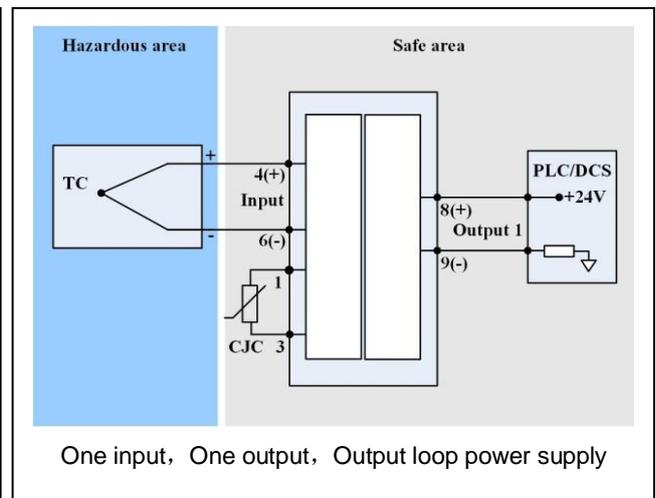
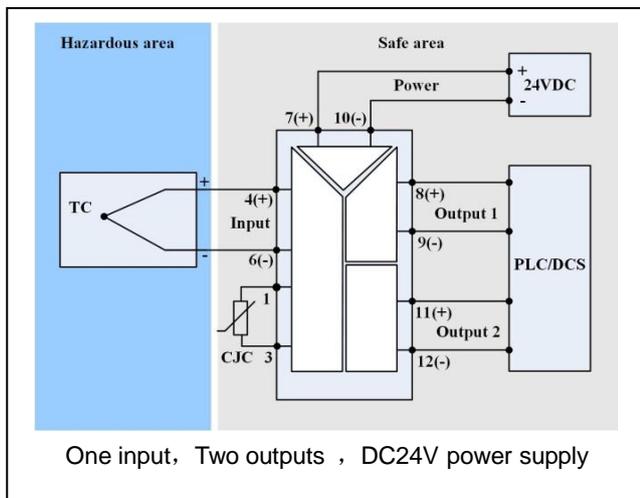
Dimension (122mm×18mm×96mm)



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 K-type thermocouple, 0-800℃, output: safe area, one channel 4-20mA, power supply: 24VDC

order model: XPB-E-K-E-A420

Example 2 input: hazardous area, one channel S-type thermocouple, 0-1300℃, output: safe area, two channels 4-20mA, power supply: 24VDC

order model: XPB-E-S-G-A420-A420 (abbreviated as: XPB-E-S-G-2A420)

Example 3 input: hazardous area, one channel K-type thermocouple, 0-1000℃, output: safe area, one channel 2-wire 4-20mA, power supply: output loop

order model: XPB-E-K-F-L420

9. Explosion-proof Certificate

国家防爆 防爆合格证 编号: CNEx19.0396	
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]IIC	
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]IIC。 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
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 地址:中国河南省南阳市卧龙区仲景北路209号 邮政编码:471009 电话:0377-63285664 传真:0377-63281919 http://www.cnex-ea.com	

国家防爆 防爆合格证 编号: CNEx19.0395	
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]IIC	
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]IIC。 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。	
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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 地址:中国河南省南阳市卧龙区仲景北路209号 邮政编码:471009 电话:0377-63285664 传真:0377-63281919 http://www.cnex-ea.com	



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