XPB Series ON-OFF Signal Input Isolated Barrier Data Sheet

1. General

XPB Series ON-OFF Signal Input Isolated Barrier receives ON-OFF signal from the hazardous area, such as proximity switch, dry contact, voltage pulse , and outputs to the safe area after isolation. 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
- 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]ⅡC

Equipment	Terminal 4 to 6, 1 to 3	Equipment	Terminal 4 to 6, 1 to 3
Um	250V	Po	39mW
Uo	11V	Co	1.4μF
Io	14mA	Lo	60mH

4. Specifications

Power supply: DC24V±10%

Power consumption: ≤3W

Input (hazardous area) :

dry contact, proximity switch, TTL, voltage pulse

contact signal input: short circuit current 8mA

open circuit voltage 8V

other signal input: design before order

Output (safe area) :

relay, open collector, collector with voltage

Relay output: contact type: normal open

Contact capacity:0.2A/30VDC

Open collector: exterior power supply:≤30VDC

Load current : ≤60mA

Collector with voltage: high level ≥20V

low level ≤3V

Output capacity ≤24VDC/20mA

ON-OFF frequency: ≤5kHz（Open collector output）

≤20Hz（Relay output）

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 :

XPB — Type code — Input 1 — Input 2 — Output 1 — Output 2

ON-OFF Signal Input Isolated Barrier

Type code	
Code	Type
G	Isolation

Input 1	
Code	Type
F1	Contact signal
F2	Current signal
FG	By order

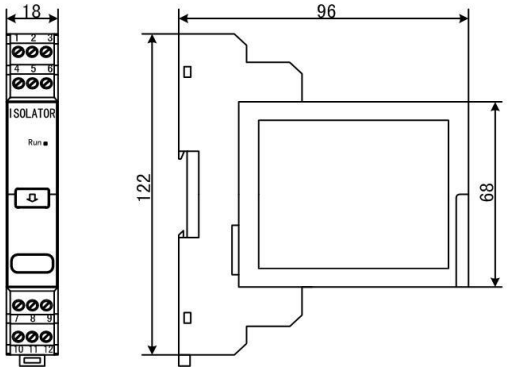
Input 2	
Code	Type
F1	Contact signal
F2	Current signal
FG	By order
	None

Output 1	
Code	Type
1	Relay
2	Open collector
4	Collector with voltage
G	By order

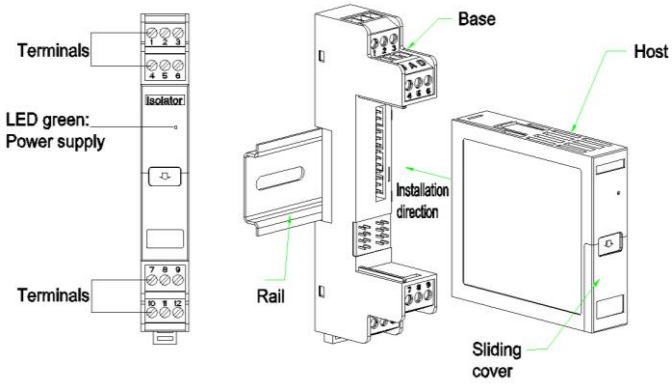
Output 2	
Code	Type
1	Relay
2	Open collector
4	Collector with voltage
G	By order
	None

6. Dimension & Installation

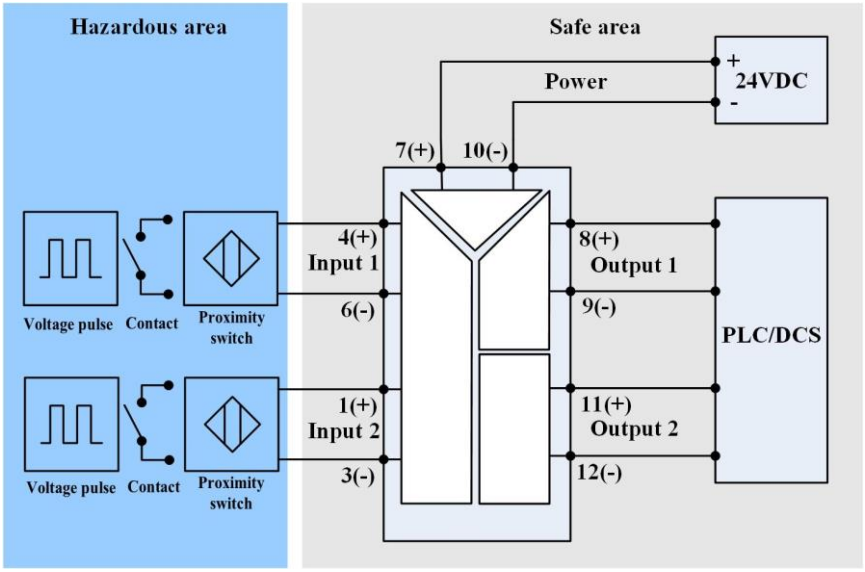
Dimension（122mm×18mm×96mm）



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 dry contact, output: safe area, one channel relay signal, power supply: 24VDC

order model: XPB-G-F1-1

Example 2 input: hazardous area, one channel TTL, output: safe area, two channels collector with 24VDC power supply: 24VDC

order model: XPB-G-F2-4-4

Example 3 input: hazardous area, two channels NAMUR signal, output: safe area, two channels open collector power supply: 24VDC

order model: XPB-G-F1-F1-2-2

9. Explosion-proof Certificate

编号：CNEx19.0396

CNEX 国家防爆

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]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》
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 [Exia 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

编号：CNEx19.0395

CNEX 国家防爆

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]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》
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 热电偶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 [Exia 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

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