

MECHANICAL AND SIS SYSTEM SAFETY RELAY

安全继电器

适配各类安全信号输入、SIS控制器

SIL3

功能安全认证
Functional safety certification

G3防腐
G3 anticorrosion

6年质保
Six-year warranty

公司简介

COMPANY PROFILE



北京平和始创于 2004 年 1 月，总注册资本 8000 万元，是一家致力于工业信号类接口模块仪表的国家级高新技术企业。作为行业公认的国内一线品牌，北京平和一直专注于工控的产品研发、生产、营销及服务。产品广泛应用于军工核电、航天航空、石油化工、冶金电力、能源环保、船舶制造和生物医药等行业。至今国内外市场在线稳定运行近 700 万只，卓越的品质和优质的服务获得了广大合作伙伴的高度认可和信赖。

Beijing Pinghe was founded in January 2004 with registered capital 80 million Yuan. We are a national high-tech enterprise dedicated to industrial signal interface modules. As a domestic top brand recognized by the industry, Beijing Pinghe has main focused on product R&D, production and sales in the industrial control area. The products are broad-range used in the military nuclear power, aerospace, petrochemical, metallurgical power, energy and environmental protection, shipbuilding and biomedicine industries. So far, more than 7 million pieces run stable in domestic and foreign markets, our excellent quality and outstanding service have been highly recognized and praised by a vast number of partners.

国家级高新技术企业
National high-tech enterprise

北京市“专精特新”中小企业
Specialization, refinement, differentiation, innovation of
small and medium-sized enterprise Beijing

全国监督检查产品质量稳定合格企业
National supervision and inspection product qualified
enterprise of stable quality

北京市两化融合试点企业
Pilot Enterprise Beijing of Informatization
and Industrialization

中国制药装备行业协会会员单位
Member of China Association For Pharmaceutical Equipment

中国仪器仪表学会会员单位
Member of China Instrument and Control Society

中国计量协会会员单位
Member of China Metrology Association

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TÜV 功能安全认证
TÜV Functional safety certification

防爆产品CCC 强制性认证
China Compulsory Certification for explosion-proof products

ISO 9001、ISO 14001、ISO 45001管理体系认证
Quality assurance certified according to
ISO 9001, ISO 14001, ISO 45001

防爆产品CCC强制性认证
China Compulsory Certification for explosion-proof products

北京市新技术新产品（服务）证书
Beijing New Technology and New Product (Service) Certificate

年度仪表自动化创新产品（技术）奖
Instrument Automation Innovation Product (Technology) Award

石油和化工用户可信赖安全仪表及系统品牌
Petroleum and chemical users can trust the brand of safety
instrument and system

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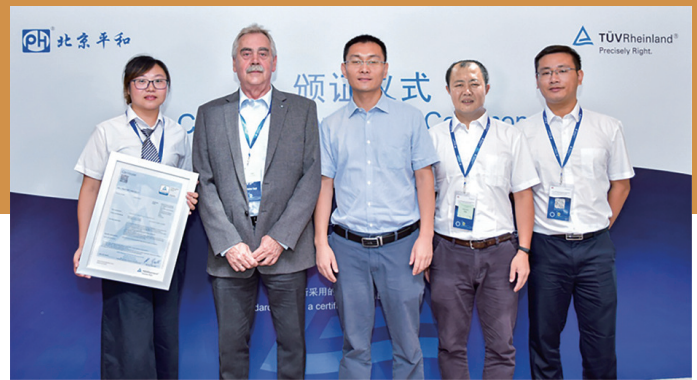
优秀的研发团队 EXCELLENT R&D TEAM

北京平和得益于首都北京人才与技术优势，高级工程师占研发团队的 60%，研发人员占员工总数的 30% 以上。经过 20 年积累，拥有多项专利和自主知识产权，掌握产品核心技术，充分满足了流程工业和过程工业等领域的需求。

我们制定积极的创新战略，关注国际最前端技术和方向，致力于研发符合更高安全要求的防雷、防爆解决方案，为客户创造更多附加值。

We benefit from talent and technical advantages of the capital Beijing, our senior engineers account for 60% of the R&D team, and R&D personnel more than 30% of the total number of employees. In these nearly 20 years, we have obtained a number of patents and independent intellectual property rights, and mastered the core technologies of the products, which fully meets the requirements of process industry.

We formulate an active innovation strategy, pay attention to the international most advanced technology and direction, and devote ourselves to research and develop lightning protection and explosion-proof solutions that meet higher safety requirements in order to create more added values for customers.



严谨的品质管控体系 STRICT QUALITY CONTROL SYSTEM



北京平和质量管控实施“全面质量管理”（Total Quality Management），在产品的设计、生产和服务的各个过程中实施严格的质量管控，为客户提供合格稳定的产品和及时优质的服务。北京平和始终以客户需求做为唯一服务标准，倾听客户声音，关注客户不断变化的需求，强化各个过程的质量管理，不断改进以提升客户满意度，矢志追求为客户提供高品质产品和全方位优质服务。

The quality control of Beijing Pinghe implements the "Total Quality Management" system standards, which carry out strict quality control in each process of product design, production and service, and provide customers with qualified and stable products as well as timely and high-quality services. Beijing Pinghe always takes the needs of customer as only service standard, listens to the opinion of customers, pays attention to the changing needs of customers, strengthens the quality management of each process, strives for providing customers with high-quality products and comprehensive services.

| 输入设备 Input Devices | 型号 Model | 电源 Power Supply | 复位方式 Reset Mode | 继电器输出 Relay Output | | 页码 Page | |
|---|--|--------------------|------------------------------------|---|---|------------|----|
| | | | | 安全断开  | 安全闭合  | | |
|  急停按钮 E-Stop Buttons | PH6101-3A1B | 24V DC/AC | 自动/手动 Manual or automatic reset | 3 | 1 | 6 | |
| | PH6101-2A2B | 24V DC/AC | 自动/手动 Manual or automatic reset | 2 | 2 | 7 | |
| | PH6102-3A1B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 3 | 1 | 8 | |
| | PH6102-2A2B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 2 | 2 | 9 | |
| |  安全门 Safety Gates | PH6103-3A1B | 230V AC | 自动/手动 Manual or automatic reset | 3 | 1 | 10 |
| | | PH6103-2A2B | 230V AC | 自动/手动 Manual or automatic reset | 2 | 2 | 11 |
| | | PH6104-2A2AT | 24V DC | 自动/手动 Manual or automatic reset | 2 | 2 | 12 |
| | | PH6105-2A2AT(M) | 24V DC | 受监控的手动 Monitored manual reset | 2 | 2 | 13 |
|  安全光幕 Light Beam Devices | PH6201-3A1B-P | 24V DC | 自动/手动 Manual or automatic reset | 3 | 1 | 14 | |
| | PH6201-2A2B-P | 24V DC | 自动/手动 Manual or automatic reset | 2 | 2 | 15 | |
| | PH6202-3A1B-N | 24V DC | 自动/手动 Manual or automatic reset | 3 | 1 | 16 | |
| | PH6202-2A2B-N | 24V DC | 自动/手动 Manual or automatic reset | 2 | 2 | 17 | |
| | PH6203-3A1B-NP | 24V DC | 自动/手动 Manual or automatic reset | 3 | 1 | 18 | |
| | PH6203-2A2B-NP | 24V DC | 自动/手动 Manual or automatic reset | 2 | 2 | 19 | |
|  双手开关 Two-Hand Control Buttons | PH6301-3A1B | 24V DC/AC | - | 3 | 1 | 20 | |
| | PH6301-2A2B | 24V DC/AC | - | 2 | 2 | 21 | |
|  安全地毯 Safety Mats | PH6401-3A1B | 24V DC/AC | 自动/手动 Manual or automatic reset | 3 | 1 | 22 | |
| | PH6401-2A2B | 24V DC/AC | 自动/手动 Manual or automatic reset | 2 | 2 | 23 | |
| | PH6402-3A1B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 3 | 1 | 24 | |
| | PH6402-2A2B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 2 | 2 | 25 | |
| | PH6403-3A1B | 24V DC/AC | 通用复位 General reset | 3 | 1 | 26 | |
| | PH6403-2A2B | 24V DC/AC | 通用复位 General reset | 2 | 2 | 27 | |
| | PH6404-3A1B | 230V AC | 通用复位 General reset | 3 | 1 | 28 | |
| | PH6404-2A2B | 230V AC | 通用复位 General reset | 2 | 2 | 29 | |
|  触点扩展模块 Extensin Module | PH6501-4A2B | 24V DC | - | 4 | 2 | 30 | |
| | PH6502-8A4B | 24V DC | - | 8 | 4 | 31 | |

| 输入设备 Input Devices | 型号 Model | 电源 Power Supply | 触点切换容量 Utilisation category | 继电器输出 Relay Output | | 页码 Page |
|--|----------------|--------------------|--------------------------------|-----------------------|-----------|------------|
| | | | | 安全断开 □ | 安全闭合 □ | |
|  SIS系统 SIS system | PH6001-1A | 24V DC | 5A | 1 | - | 32 |
| | PH6002-2A | 24V DC | 5A | 2 | - | 33 |
| | PH6003-1A(超薄) | 24V DC | 5A | 1 | - | 34 |
| | PH6004-1AR1B | 24V DC | 5A | 1 | 1 | 35 |
| | PH6005-1AR1B-F | 24V DC | 5A | 1 | 1 | 36 |
| | PH6101-3A1B | 24V DC | 5A | 3 | 1 | 37 |
| | PH6101-2A2B | 24V DC | 5A | 2 | 2 | 38 |

产品特点

The advantages

机械系统 安全继电器

- 配置双通道安全条件,对双通道输入信号进行实时监控
- 特殊的逻辑结构设计,在单功能故障情况下,保障安全输出
- 对输出控制对象进行反馈监控,功能异常消除,安全隐患不积累

Mechanical System Safety Relay

- Configure dual-channel safety conditions to monitor dual-channel input signals in real-time
- Special logical structure design, guarantee safe output in case of single function failure
- Function integrity feedback-monitoring until the functional abnormality is eliminated, hidden danger will not be accumulated

SIS系统 安全继电器

- 冗余回路设计
- 继电器触点离线校验
- 失效安全技术
- 触点熔接保护

SIS System Safety Relay

- Redundant circuit design
- Offline Proof Test of relay contacts
- Fail-safe technology
- Contact welding protection

PH6101-3A1B

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤ 300ms; 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

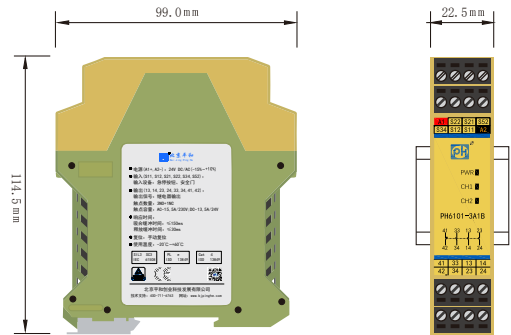
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 °C ~+60 °C |
| 储存温度 Storage temperature | -40 °C ~+85 °C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PL e |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



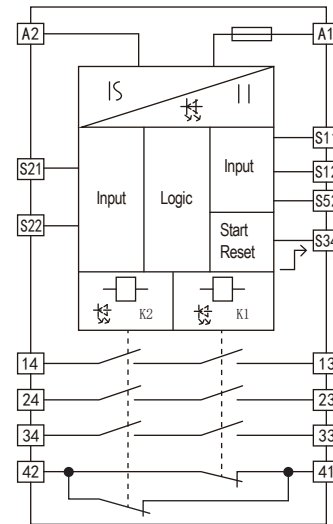
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



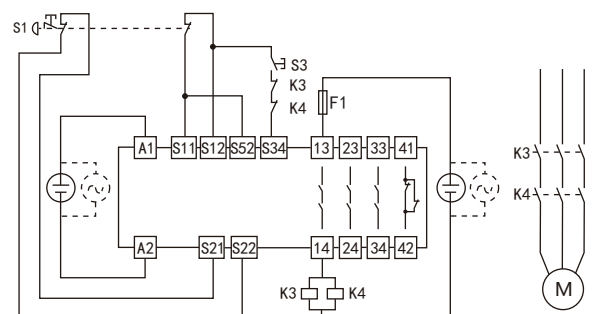
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持自动复位和手动复位 Manual or automatic reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6101-2A2B

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset:≤ 300ms; 手动复位Manual reset:≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

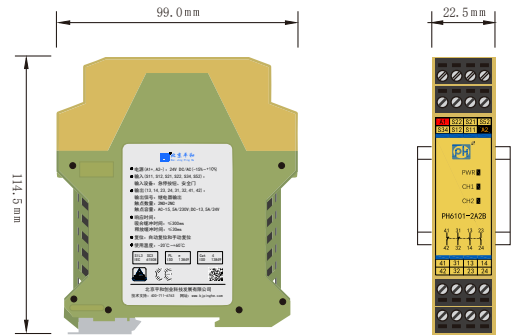
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 °C ~+60 °C |
| 储存温度 Storage temperature | -40 °C ~+85 °C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PL e |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



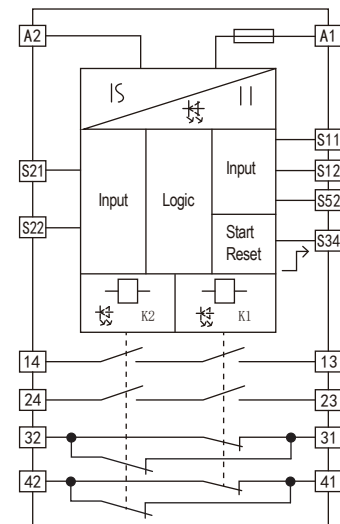
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



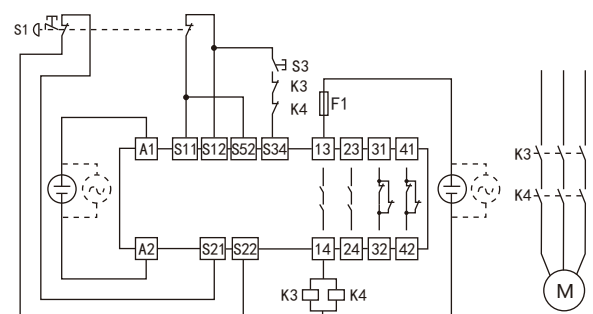
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持自动复位和手动复位 Manual or automatic reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6102-3A1B(M)

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

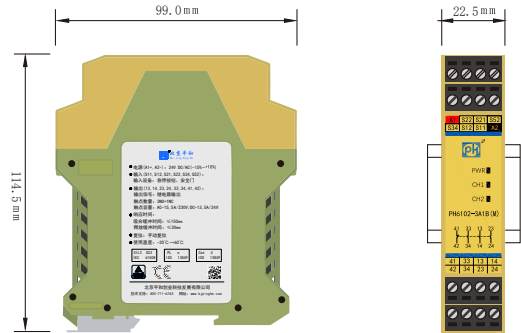
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PL e |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



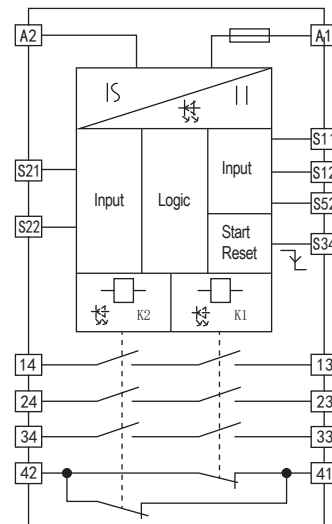
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



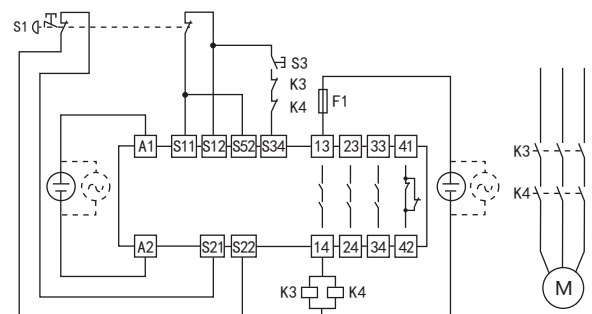
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持受监控的手动复位 Monitored manual reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6102-2A2B(M)

急停按钮、安全门控制开关输入
E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

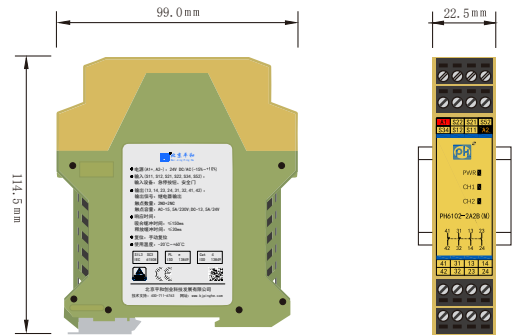
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PL e |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



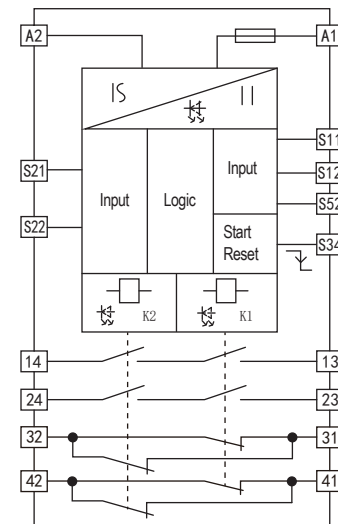
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



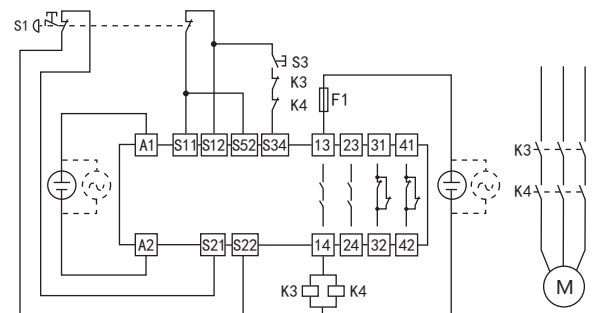
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持受监控的手动复位 Monitored manual reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6103-3A1B

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤7VA(220V AC) |

输入特性 Input data

| | |
|-----------------------|-----------------|
| 输入电流 Input current | ≤50mA (220V AC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 |

输出特性 Output data

| | |
|---|--|
| | E-Stop buttons, safety gates |
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset:≤300ms; 手动复位Manual reset:≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤300ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤500ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

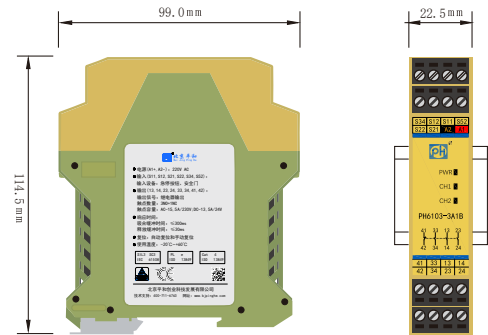
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | II |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



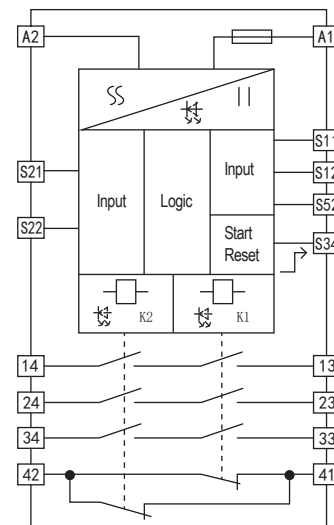
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



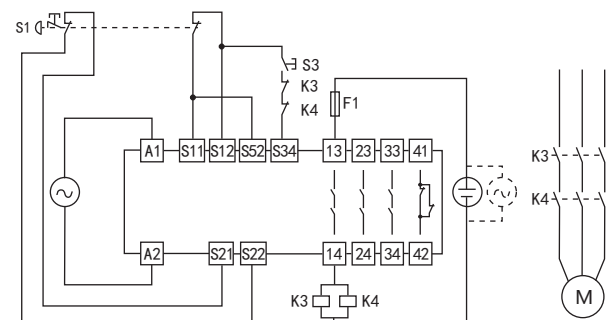
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持自动复位和手动复位 Manual or automatic reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6103-2A2B

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤7VA(220V AC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤300ms; 手动复位Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤300ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤500ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

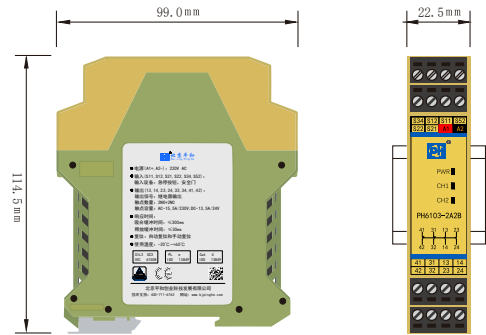
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | II |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



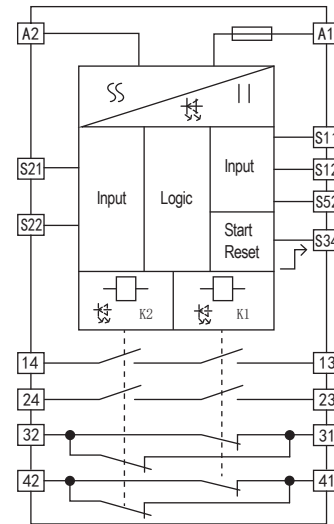
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



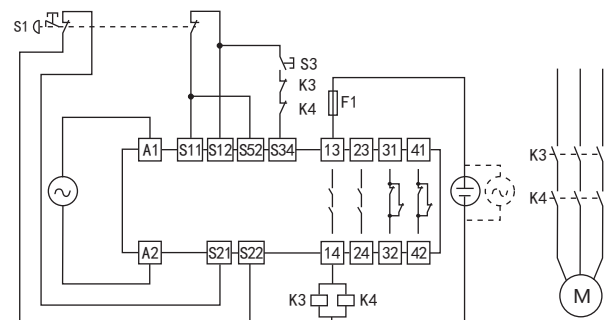
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持自动复位和手动复位 Manual or automatic reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6104-2A2AT

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤130mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮、安全门 E-Stop buttons, safety gates |

输出特性 Output data

| | |
|---|-------------------------------|
| 触点数量 Number of contacts | 2NO+2NO(t) |
| 触点材料 Contact material | AgSnO ₂ |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 3A/230V; DC-13, 3A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤ 300ms; 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 急停操作(延时触点): 0.1s~3s (出厂默认设置3s); E-Stop(delay contact): 0.1~3s (delayed, factory set as 3s); 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作后After E-Stop: ≤30ms; (延时触点响应后Delay after contact response); 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

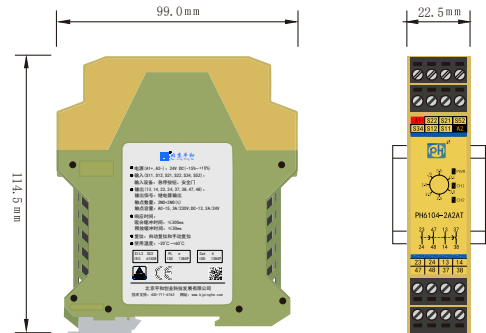
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 °C ~ +60 °C |
| 储存温度 Storage temperature | -40 °C ~ +85 °C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PL e |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



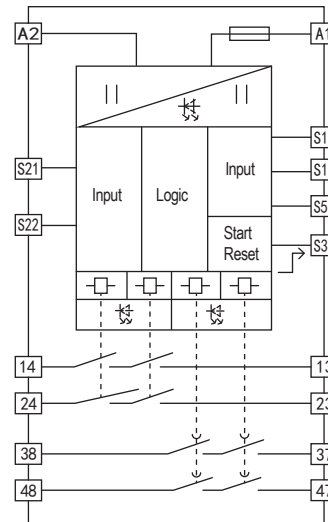
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



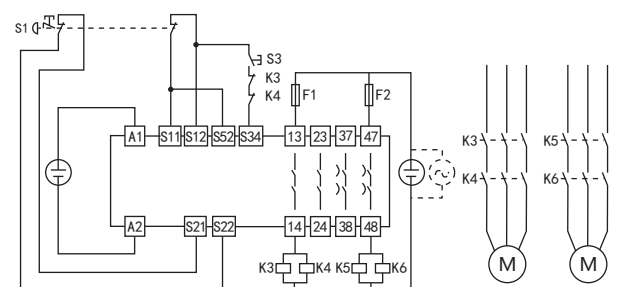
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持自动复位和手动复位 Manual or automatic reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



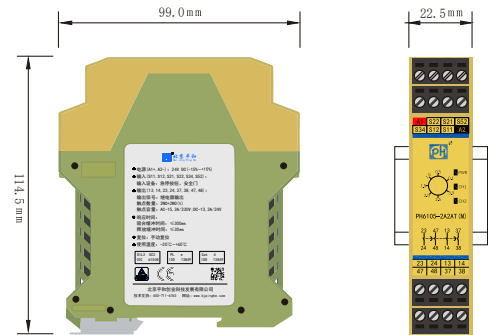
接线示意图 Wiring diagram



PH6105-2A2AT(M)

急停按钮、安全门控制开关输入 E-Stop Buttons, Safety Gates Input

| | | |
|--|--|---|
| 电源特性 Power data | | |
| 供电电压 Supply voltage | | 24V DC |
| 电压容差 Voltage tolerance | | 0.85~1.1 |
| 电流损耗 Current consumption | | ≤130mA(24V DC) |
| 输入特性 Input data | | |
| 输入电流 Input current | | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | | ≤15Ω |
| 输入设备 Input devices | | 急停按钮、安全门 E-Stop buttons, safety gates |
| 输出特性 Output data | | |
| 触点数量 Number of contacts | | 2NO+2NO(t) |
| 触点材料 Contact material | | AgSnO ₂ |
| 触点熔丝保护 Excontact fuse protection | | 10AgL/gG NEOZED(NO)(常开触点) |
| 切换容量 (EN60947-5-1) Utilisation category | | AC-15, 3A/230V; DC-13, 3A/24V |
| 触点机械寿命 Mechanical endurance of contacts | | 10 ⁷ 次以上 |
| 时间特性 Time data | | |
| 吸合缓冲时间 Switch-on delay | | 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | | 急停操作E-Stop: ≤30ms; 急停操作(延时触点): 0.1s~3s (出厂默认设置3s); E-Stop(delay contact): 0.1~3s (delayed, factory set as 3s); 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | | 急停操作后After E-Stop: ≤30ms; (延时触点响应后Delay after contact response); 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | | 20ms |
| 环境特性 Environmental data | | |
| 电磁兼容 EMC | | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | | 0.35mm |
| 使用温度 Ambient temperature | | -20℃~+60℃ |
| 储存温度 Storage temperature | | -40℃~+85℃ |
| 相对湿度 Relative humidity | | 10%~90% |
| 海拔高度 Elevation | | ≤2000m |
| 绝缘特性 Insulation data | | |
| 过压等级 Overvoltage category | | III |
| 污染等级 Pollution degree | | 2 |
| 额定绝缘电压 Rated insulation voltage | | 250V AC |
| 额定冲击电压 Rated impulse voltage | | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | | EN 60947-1 |
| 功能安全参数 Functional safety parameters | | |
| 安全完整性等级 SIL | | SIL3 |
| 性能等级 Performance level | | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | | 符合标准 EN ISO13849, Cat.4 |



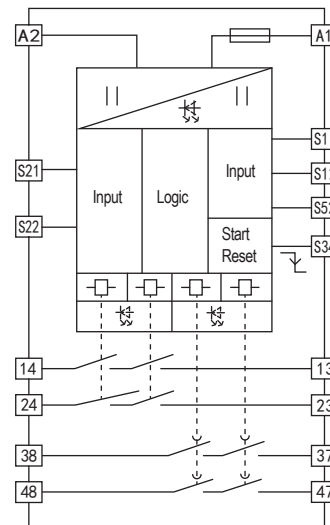
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



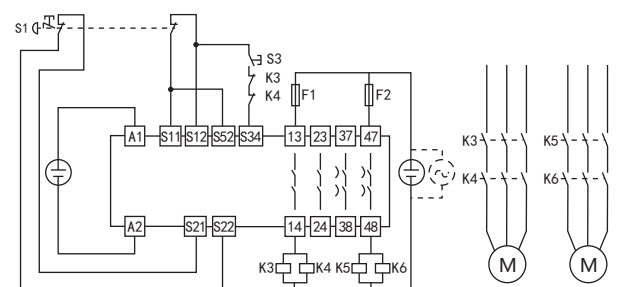
产品特性 Features

- 支持单、双通道操作 Single or dual channels
- 支持受监控的手动复位 Monitored manual reset
- 通道间短路监控 Short circuit monitoring

功能框图 Block diagram



接线示意图 Wiring diagram



PH6201-3A1B-P

PNP型安全光幕输入 PNP Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|---|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | PNP型安全光幕 PNP type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤ 300ms; 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

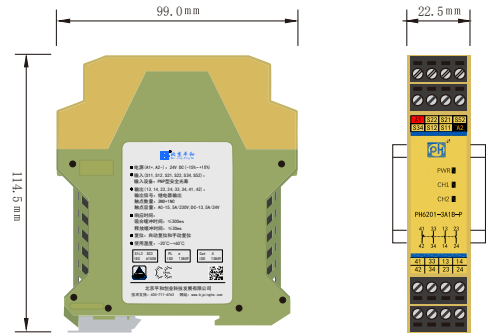
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



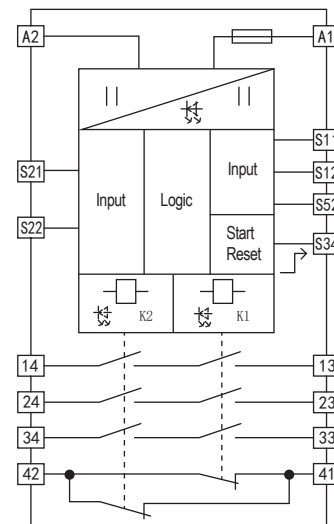
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



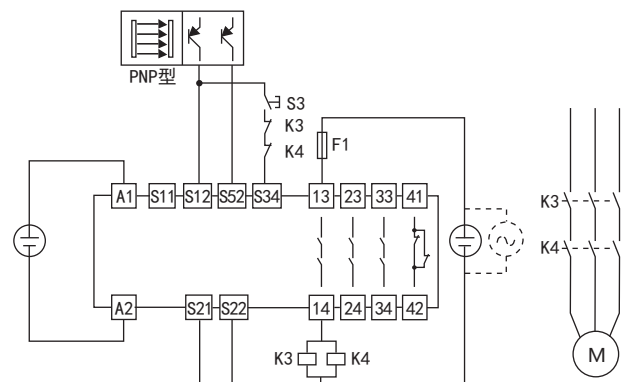
产品特性 Features

- 支持PNP型安全光幕 PNP type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6201-2A2B-P

PNP型安全光幕输入 PNP Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|---|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | PNP型安全光幕 PNP type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤ 300ms; 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

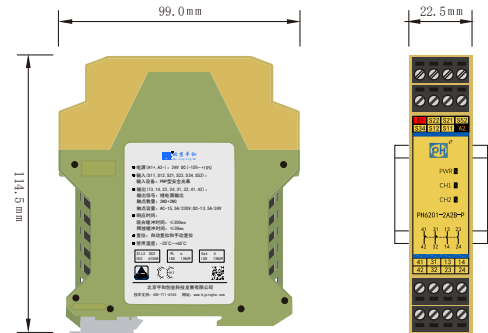
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



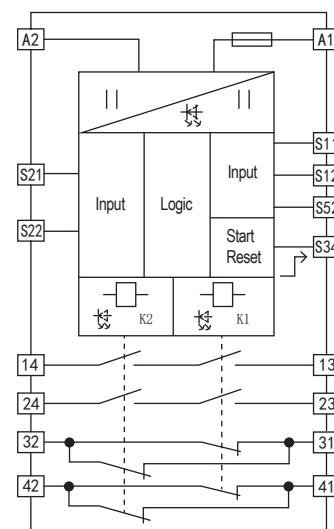
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



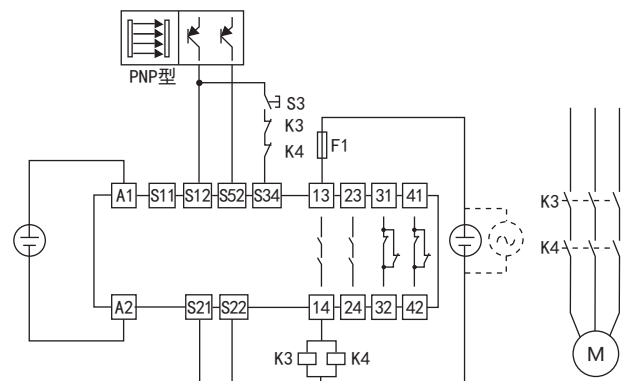
产品特性 Features

- 支持PNP型安全光幕 PNP type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6202-3A1B-N

NPN型安全光幕输入 NPN Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|---|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | NPN型安全光幕 NPN type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤300ms; 手动复位Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

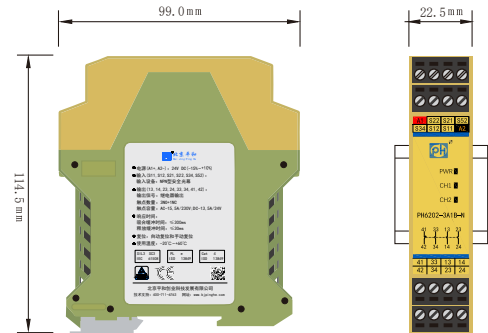
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



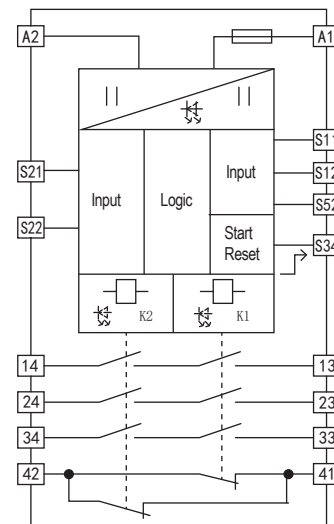
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



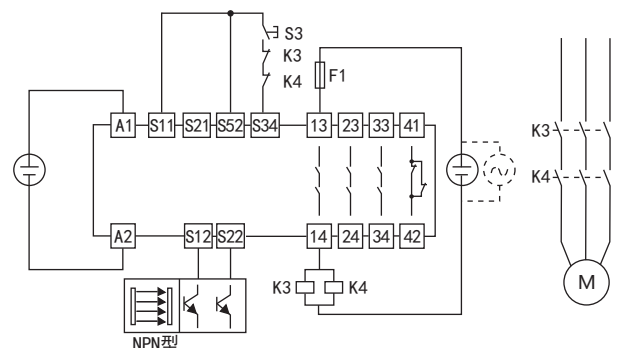
产品特性 Features

- 支持NPN型安全光幕 NPN type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6202-2A2B-N

NPN型安全光幕输入 NPN Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|---|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | NPN型安全光幕 NPN type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤300ms; 手动复位Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

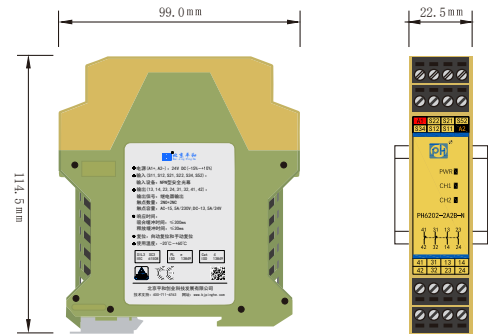
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



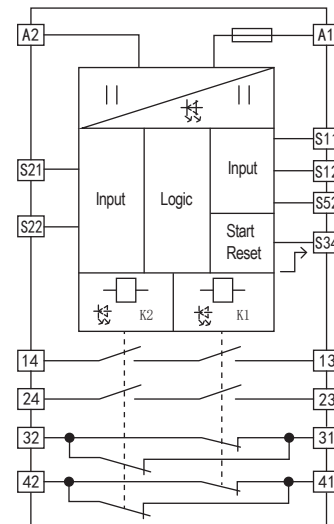
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



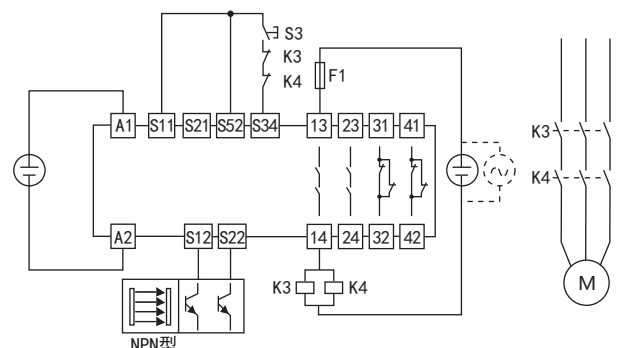
产品特性 Features

- 支持NPN型安全光幕 NPN type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6203-3A1B-NP

NPN、PNP型安全光幕输入 NPN, PNP Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | NPN、PNP型安全光幕 NPN, PNP type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤300ms; 手动复位Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

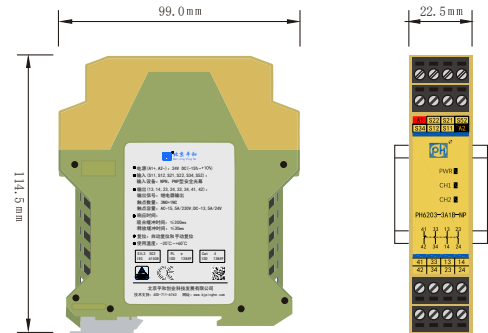
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



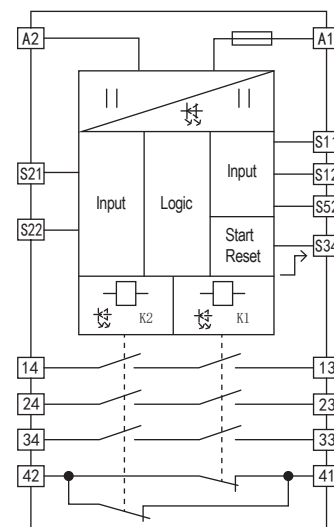
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



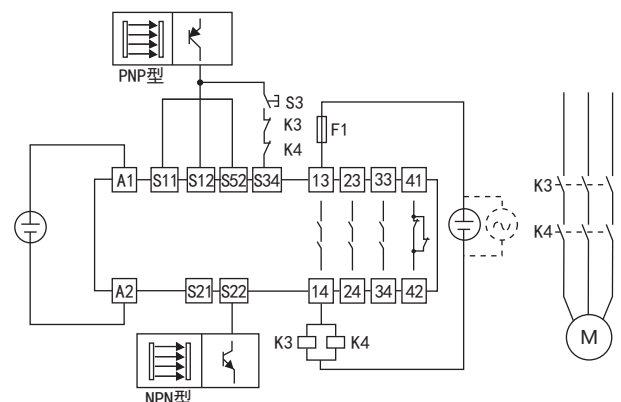
产品特性 Features

- 支持NPN、PNP型安全光幕 NPN, PNP type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6203-2A2B-NP

NPN、PNP型安全光幕输入 NPN, PNP Type Light Beam Devices Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | NPN、PNP型安全光幕 NPN, PNP type light beam devices |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset: ≤300ms; 手动复位Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

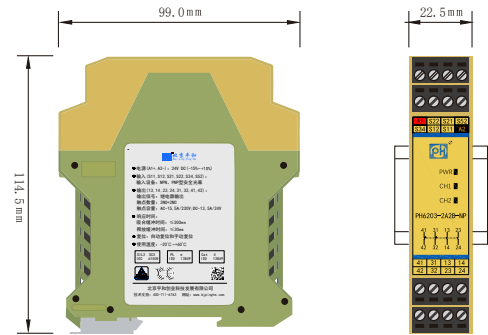
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



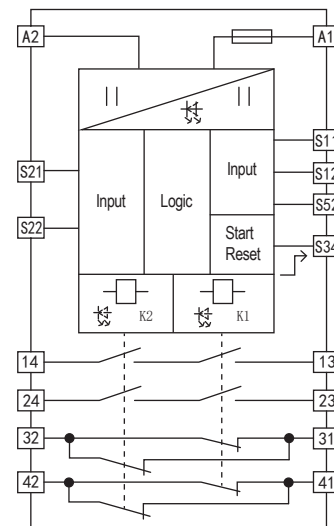
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



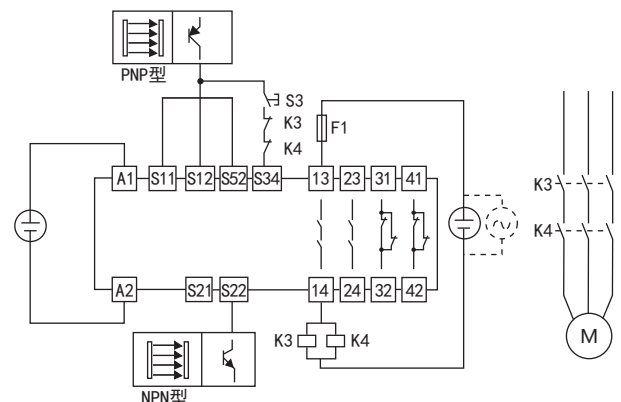
产品特性 Features

- 支持NPN、PNP型安全光幕 NPN, PNP type light beam devices
- 支持双通道输入 Dual channel
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6301-3A1B

双手按钮输入 Two-Hand Control Buttons Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤60mA(24V DC); ≤140mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|----------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 双手按钮 Two-hand control buttons |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--------|
| 吸合缓冲时间 Switch-on delay | ≤ 30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤15ms |
| 同步时间 Simultaneity | ≤500ms |
| 恢复时间 Recovery time | ≤250ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

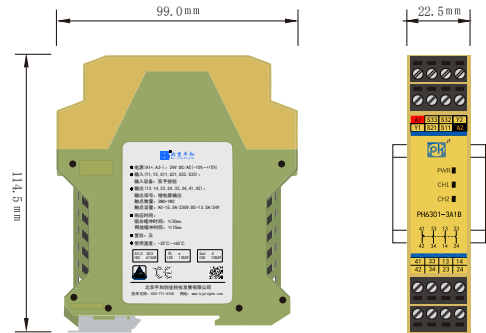
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 °C ~+60 °C |
| 储存温度 Storage temperature | -40 °C ~+85 °C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



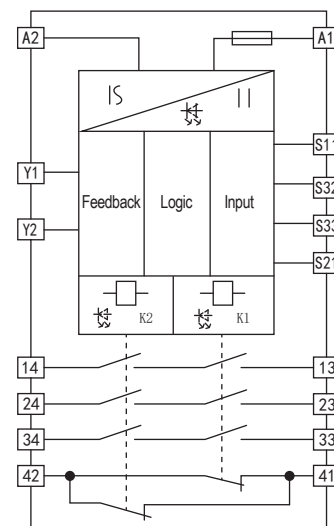
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



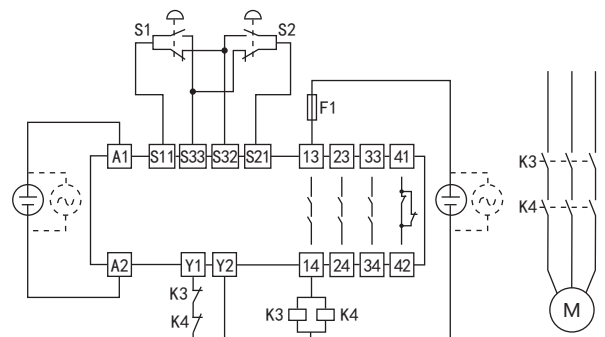
产品特性 Features

- 双通道操作 Dual channels
- 符合EN 574 Type III C要求 Accord with EN 574 Type III C

功能框图 Block diagram



接线示意图 Wiring diagram



PH6301-2A2B

双手按钮输入 Two-Hand Control Buttons Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤60mA(24V DC); ≤140mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|----------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 双手按钮 Two-hand control buttons |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--------|
| 吸合缓冲时间 Switch-on delay | ≤ 30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤15ms |
| 同步时间 Simultaneity | ≤500ms |
| 恢复时间 Recovery time | ≤250ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

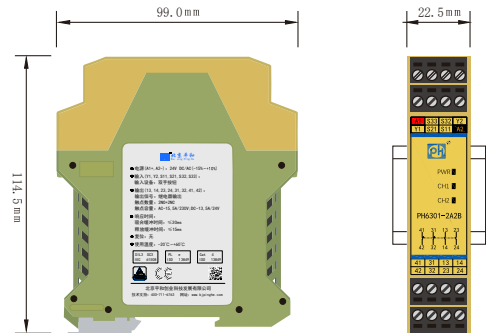
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



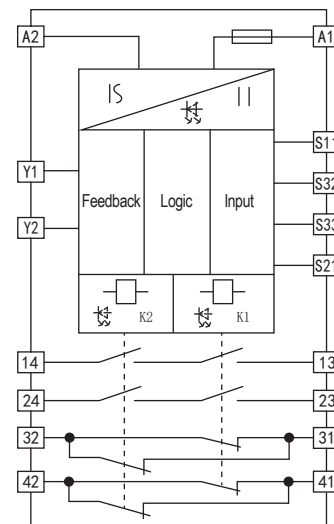
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



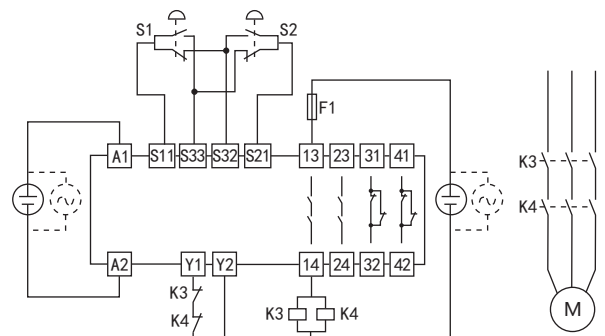
产品特性 Features

- 双通道操作 Dual channels
- 符合EN 574 Type IIIC要求 Accord with EN 574 Type III C

功能框图 Block diagram



接线示意图 Wiring diagram



PH6401-3A1B

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|-------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 四线制安全地毯 4-wire safety mats |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位 Automatic reset: ≤300ms; 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤100ms |
| 恢复时间 Recovery time | ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

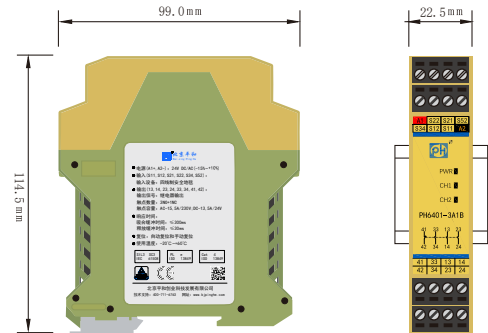
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



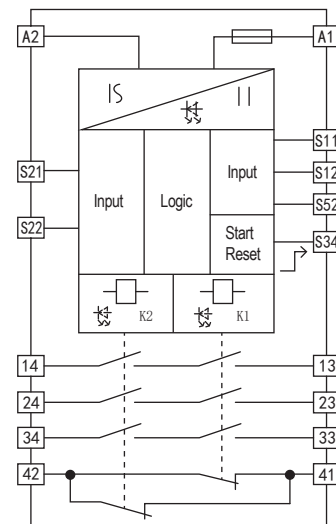
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



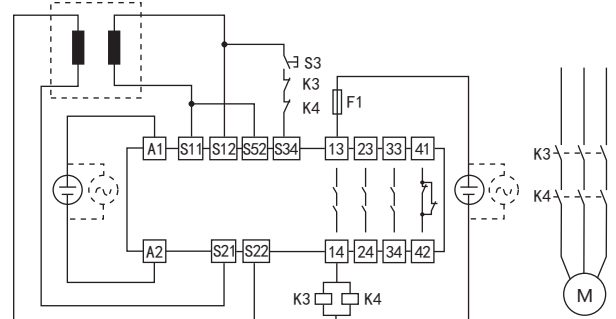
产品特性 Features

- 支持四线制安全地毯输入 4-wire safety mats input
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6401-2A2B

安全地毯输入
Safety Mats Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|-------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 四线制安全地毯 4-wire safety mats |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位 Automatic reset: ≤300ms; 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤100ms |
| 恢复时间 Recovery time | ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

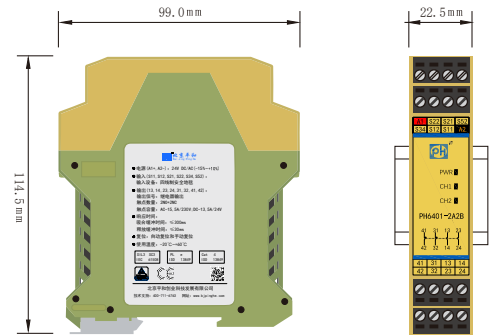
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



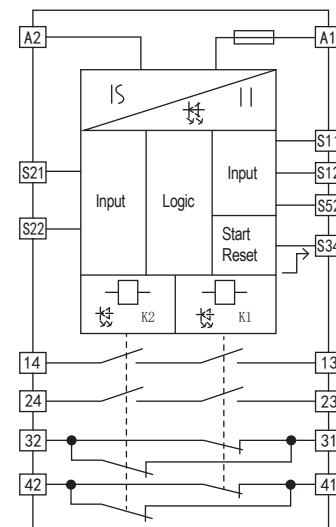
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm

SIL3
IEC 61508PLe
Cat.4
EN/ISO13849

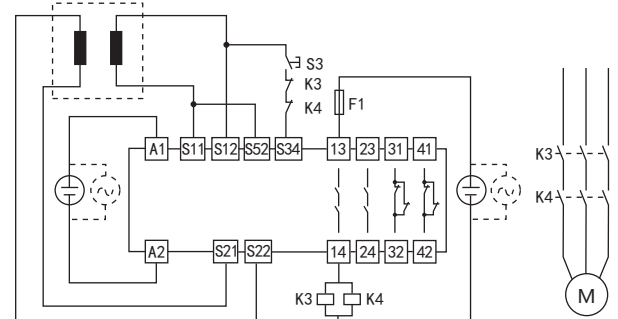
产品特性 Features

- 支持四线制安全地毯输入 4-wire safety mats input
- 支持自动复位和手动复位 Manual or automatic reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6402-3A1B(M)

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|-------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 四线制安全地毯 4-wire safety mats |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤100ms |
| 恢复时间 Recovery time | ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

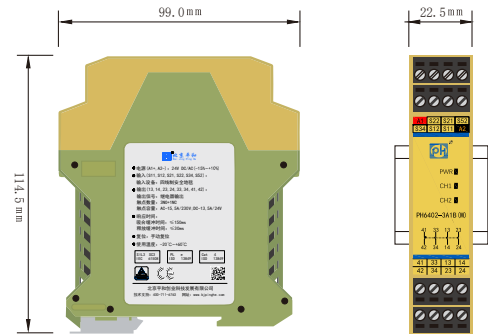
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



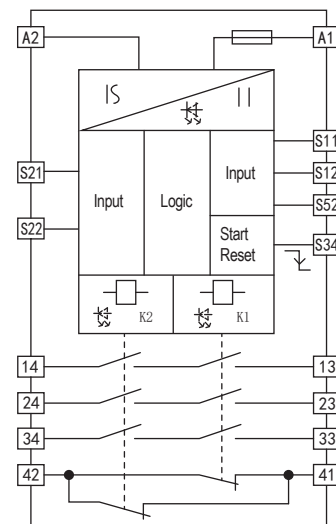
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



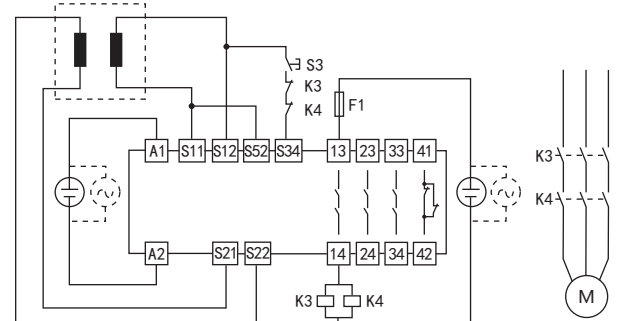
产品特性 Features

- 支持四线制安全地毯输入 4-wire safety mats input
- 支持受监控的手动复位 Monitored or manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6402-2A2B(M)

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|-------------------------------|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 四线制安全地毯 4-wire safety mats |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|---|
| 吸合缓冲时间 Switch-on delay | 手动复位 Manual reset:≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop:≤30ms; 电源失效 Power failure:≤100ms |
| 恢复时间 Recovery time | ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

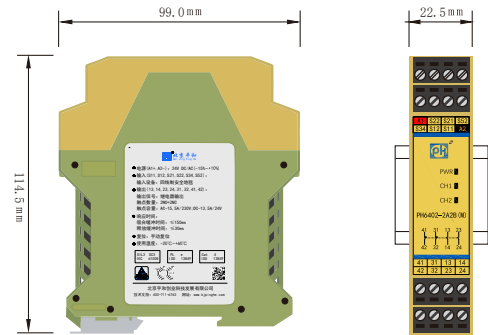
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



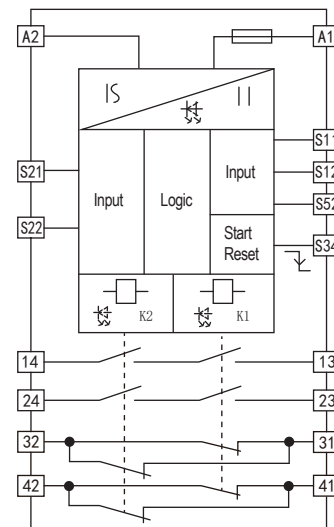
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



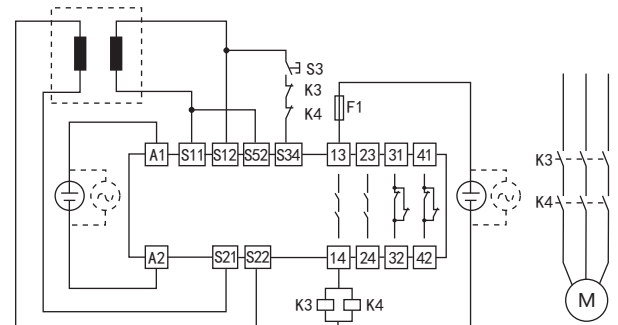
产品特性 Features

- 支持四线制安全地毯输入 4-wire safety mats input
- 支持受监控的手动复位 Monitored or manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6403-3A1B

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|--------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤100mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|--------------------------|----------------------------|
| 输入电流 Input current | ≤10mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 两线制安全地毯 2-wire safety mats |
| 终端电阻 Terminal resistance | 2.0KΩ~20KΩ |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位 Automatic reset: ≤300ms; 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

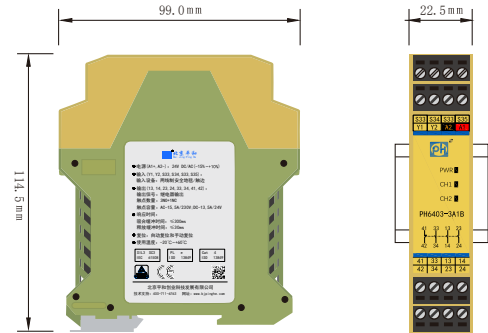
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



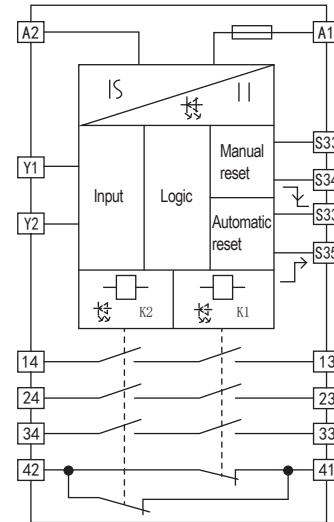
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



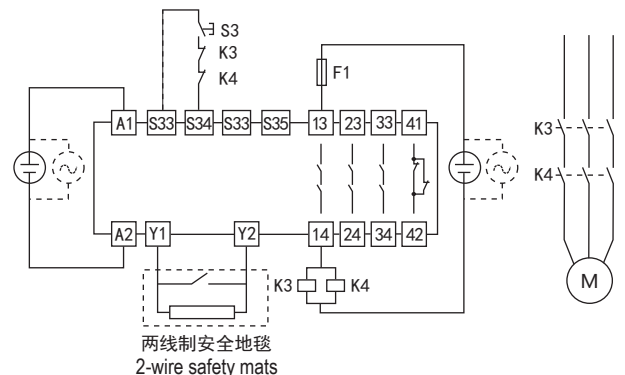
产品特性 Features

- 支持两线制安全地毯输入 2-wire safety mats
- 支持自动复位 Automatic reset
- 支持受监控的手动复位 Monitored manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6403-2A2B

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|--------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤100mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|--------------------------|----------------------------|
| 输入电流 Input current | ≤10mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 两线制安全地毯 2-wire safety mats |
| 终端电阻 Terminal resistance | 2.0KΩ~20KΩ |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|-------------------------------|
| 吸合缓冲时间 Switch-on delay | 自动复位 Manual reset: ≤300ms; |
| 释放缓冲时间 Delay-on de-energisation | 手动复位 Manual reset: ≤150ms |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤30ms; |
| 电源短时中断 Supply short interruption | 电源失效 Power failure: ≤100ms |
| | 急停操作 E-Stop: ≤30ms; |
| | 电源失效 Power failure: ≤100ms |
| | 20ms |

环境特性 Environmental data

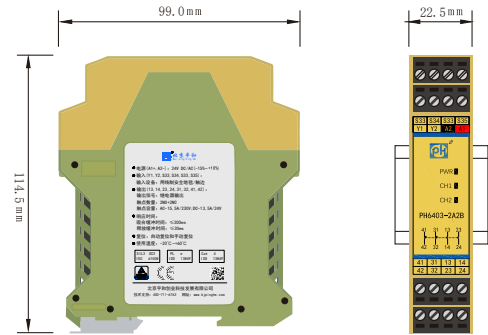
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



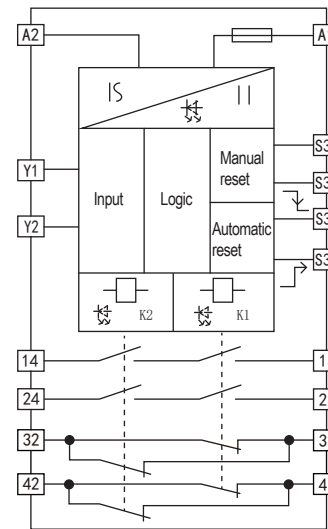
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



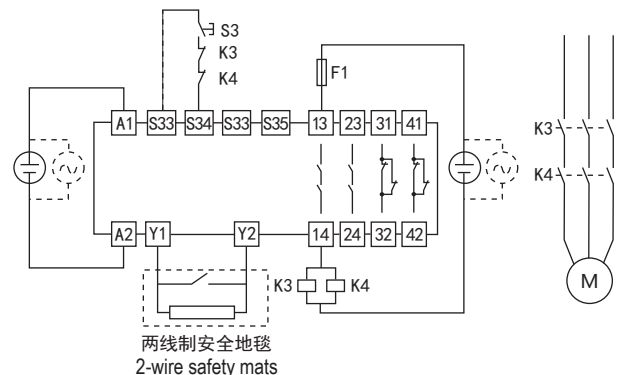
产品特性 Features

- 支持两线制安全地毯输入 2-wire safety mats
- 支持自动复位 Automatic reset
- 支持受监控的手动复位 Monitored manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6404-3A1B

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤7VA(220V AC) |

输入特性 Input data

| | |
|--------------------------|----------------------------|
| 输入电流 Input current | ≤10mA (220V AC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 两线制安全地毯 2-wire safety mats |
| 终端电阻 Terminal resistance | 2.0KΩ~20KΩ |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位 Automatic reset: ≤300ms; 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤300ms |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

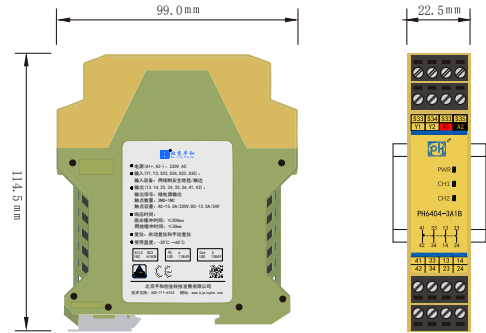
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



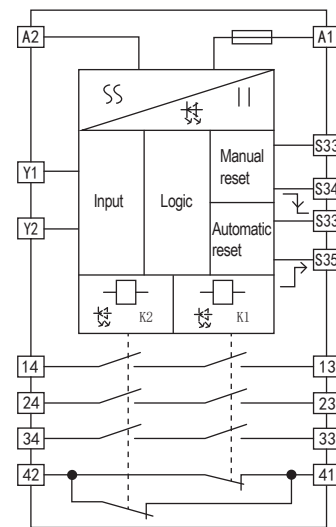
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



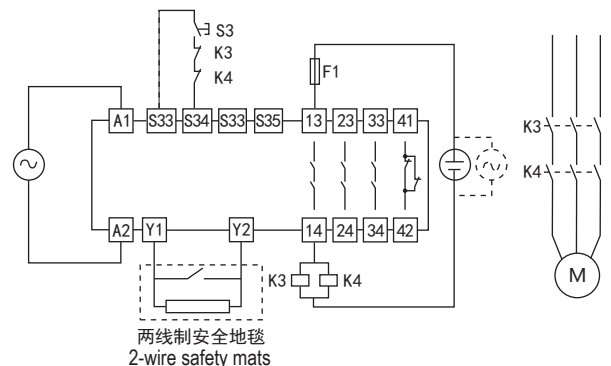
产品特性 Features

- 支持两线制安全地毯输入 2-wire safety mats
- 支持自动复位 Automatic reset
- 支持受监控的手动复位 Monitored manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6404-2A2B

安全地毯输入 Safety Mats Input

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 交流频率 AC frequency | 50Hz~60Hz |
| 电流损耗 Current consumption | ≤7VA(220V AC) |

输入特性 Input data

| | |
|--------------------------|----------------------------|
| 输入电流 Input current | ≤10mA (220V AC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 两线制安全地毯 2-wire safety mats |
| 终端电阻 Terminal resistance | 2.0KΩ~20KΩ |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位 Automatic reset: ≤300ms; 手动复位 Manual reset: ≤150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤300ms |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤30ms; 电源失效 Power failure: ≤300ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

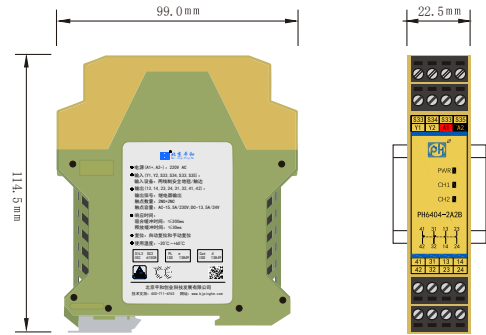
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20℃~+60℃ |
| 储存温度 Storage temperature | -40℃~+85℃ |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



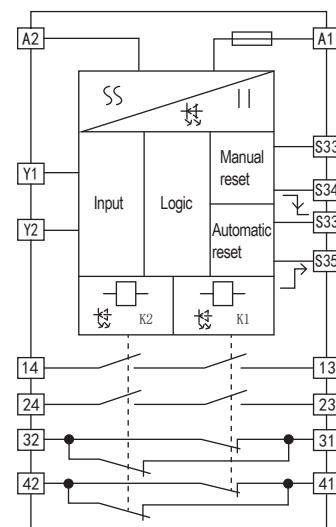
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



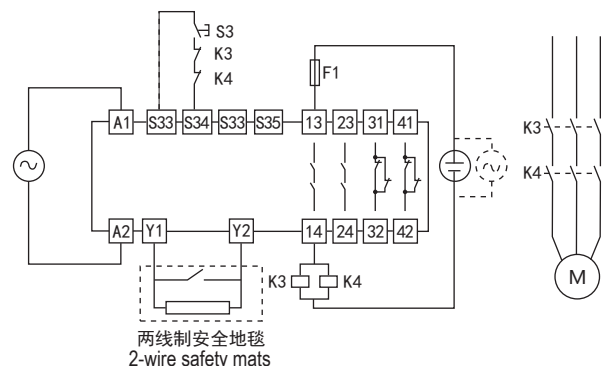
产品特性 Features

- 支持两线制安全地毯输入 2-wire safety mats
- 支持自动复位 Automatic reset
- 支持受监控的手动复位 Monitored manual reset

功能框图 Block diagram



接线示意图 Wiring diagram



PH6501-4A2B

触点扩展模块 Extension Module

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 20V~30V DC |
| 电流损耗 Current consumption | ≤70mA(24V DC) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤70mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 安全开关、触点开关 Safety switches, Contact switches |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 4NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--------|
| 吸合缓冲时间 Switch-on delay | ≤50ms |
| 释放缓冲时间 Delay-on de-energisation | ≤100ms |
| 恢复时间 Recovery time | ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

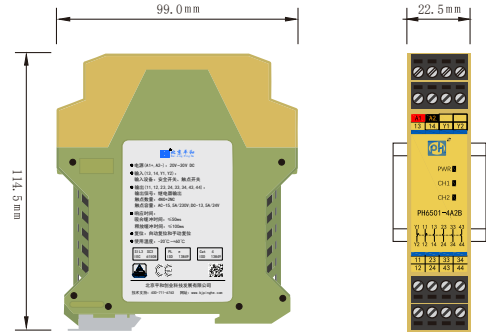
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



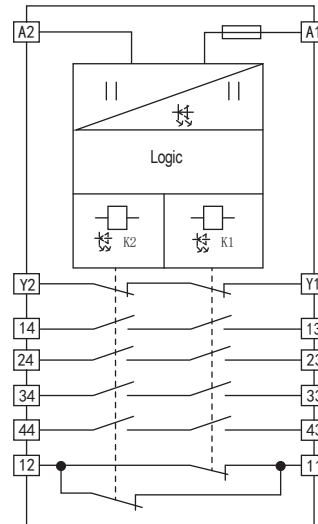
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



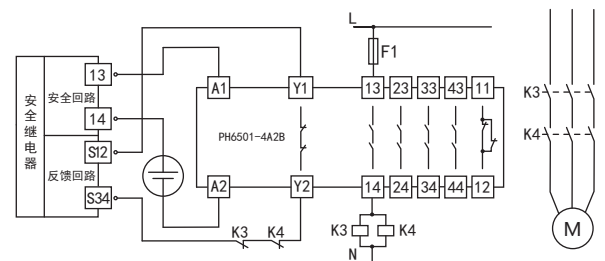
产品特性 Features

- 输出扩展 Output extension
- 故障诊断输出触点 Fault diagnosis contact

功能框图 Block diagram



接线示意图 Wiring diagram



安全继电器输出扩展, 最大可达安全等级 4, 性能等级 PLe

PH6502-8A4B

触点扩展模块 Extension Module

电源特性 Power data

| | |
|--------------------------|---------------------------------|
| 供电电压 Supply voltage | 20V~30V DC |
| 电流损耗 Current consumption | ≤70mA(24V DC, for each channel) |

输入特性 Input data

| | |
|-----------------------|--|
| 输入电流 Input current | ≤70mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 安全开关、触点开关 Safety switches, Contact switches |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 8NO+4NC(4NO+2NC for each channel) |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--------|
| 吸合缓冲时间 Switch-on delay | ≤50ms |
| 释放缓冲时间 Delay-on de-energisation | ≤100ms |
| 恢复时间 Recovery time | ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

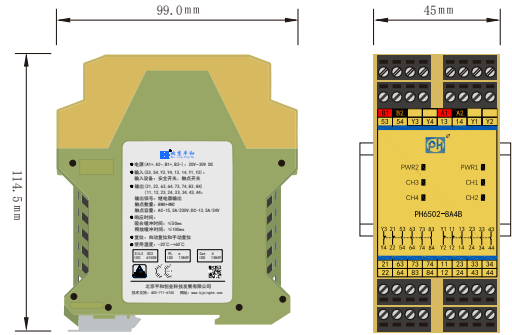
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



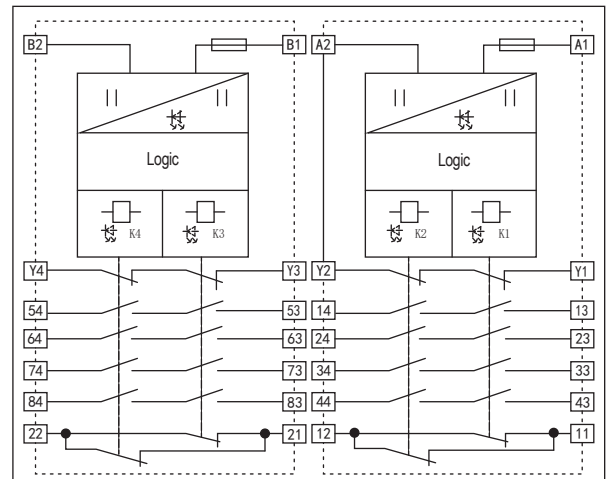
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



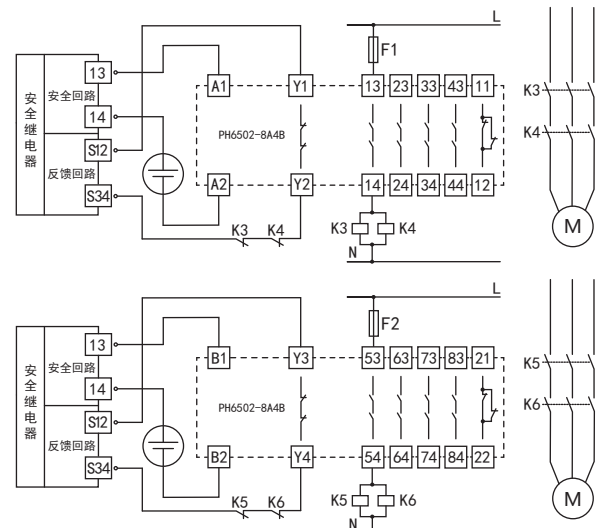
产品特性 Features

- 独立双通道 Separate two channels
- 故障诊断输出触点 Fault diagnosis contact

功能框图 Block diagram



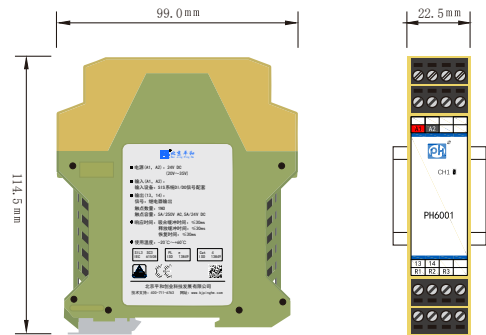
接线示意图 Wiring diagram



安全继电器输出扩展, 最大可达安全等级 4, 性能等级 PLe

PH6001-1A

适用于SIS系统中DI/DO信号输入
Applied in SIS controller DI/DO signals input



深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 20~35V DC |
| 电流损耗 Current consumption | ≤35mA (24V DC) |

输入特性 Input data

| | |
|------------------------|--|
| 通道数 Number of channels | 1 |
| 输入电流 Input current | ≤35mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | SIS系统DI/DO信号配套 SIS controller DI/DO signals |

输出特性 Output data

| | |
|----------------------------------|-----------------------|
| 触点数量 Number of contacts | 1NO |
| 触点材料 Contact material | AgSnO ₂ |
| 触点熔丝保护 Excontact fuse protection | 5A (Internal) |
| 切换容量 Utilisation category | 5A/250V AC; 5A/24V DC |

时间特性 Time data

| | |
|----------------------------------|-------|
| 吸合缓冲时间 Switch-on delay | ≤30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤30ms |
| 恢复时间 Recovery time | ≤30ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

| | |
|--------------------------|--|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4, |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

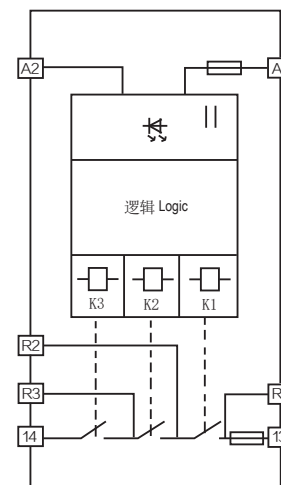
功能安全参数 Functional safety parameters

| | |
|----------------|-----------|
| 安全完整性等级 SIL | SIL3 |
| 硬件故障裕度 HFT | 0 |
| 危险失效概率 PFH | <1.00E-09 |
| 平均危险失效时间 MTTFD | - |
| 安全失效分数 SFF | ≥99% |

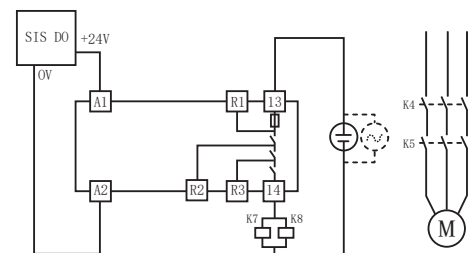
产品特性 Features

- 独立单通道 Separate one channels
- 三重冗余 Triple redundancy
- 内部触点熔丝保护 Internal Excontact protection
- 带Proof Test测试端 (选配, 型号中R表示)
With proof test terminal

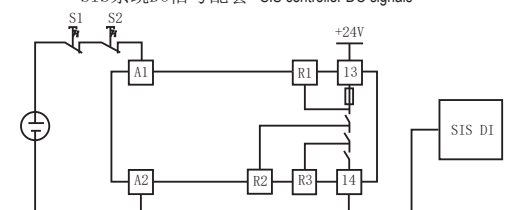
功能框图 Block diagram



接线示意图 Wiring diagram



SIS系统DO信号配套 SIS controller DO signals



SIS系统DI信号配套 SIS controller DI signals

PH6002-2A

适用于SIS系统中DI/DO信号输入
Applied in SIS controller DI/DO signals input

电源特性 Power data

| | |
|--------------------------|----------------------------------|
| 供电电压 Supply voltage | 20~35V DC |
| 电流损耗 Current consumption | ≤35mA (24V DC, for each channel) |

输入特性 Input data

| | |
|------------------------|--|
| 通道数 Number of channels | 2 |
| 输入电流 Input current | ≤35mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | SIS系统DI/DO信号配套 SIS controller DI/DO signals |

输出特性 Output data

| | |
|----------------------------------|----------------------------|
| 触点数量 Number of contacts | 2NO (1NO for each channel) |
| 触点材料 Contact material | AgSnO ₂ |
| 触点熔丝保护 Excontact fuse protection | 5A (Internal) |
| 切换容量 Utilisation category | 5A/250V AC; 5A/24V DC |

时间特性 Time data

| | |
|----------------------------------|-------|
| 吸合缓冲时间 Switch-on delay | ≤30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤30ms |
| 恢复时间 Recovery time | ≤30ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

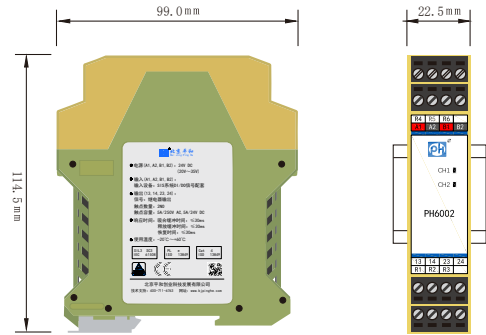
| | |
|--------------------------|---------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4, |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|----------------|-----------|
| 安全完整性等级 SIL | SIL3 |
| 硬件故障裕度 HFT | 0 |
| 危险失效概率 PFH | <1.00E-09 |
| 平均危险失效时间 MTTFD | - |
| 安全失效分数 SFF | ≥99% |



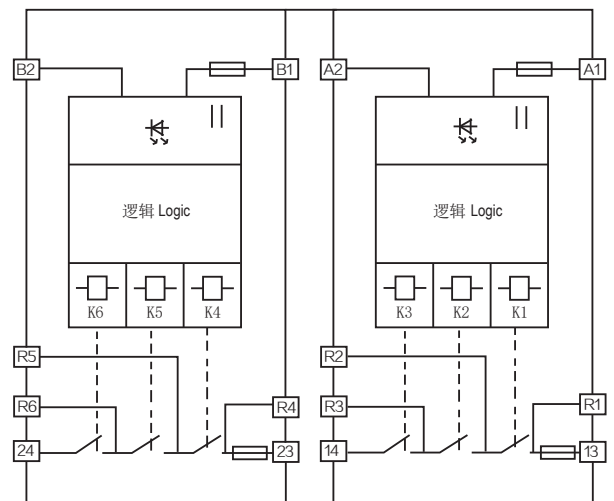
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



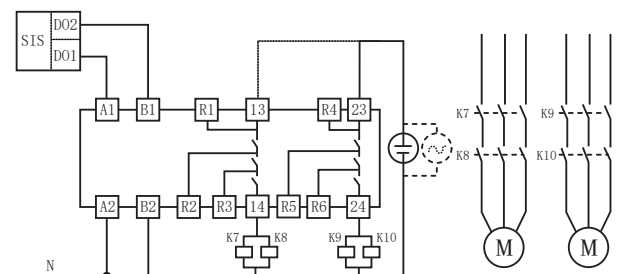
产品特性 Features

- 独立单通道 Separate one channels
- 三重冗余 Triple redundancy
- 内部触点熔丝保护 Internal Excontact protection
- 带Proof Test测试端 (选配, 型号中R表示) With proof test terminal

功能框图 Block diagram



接线示意图 Wiring diagram



PH6004-1AR1B

适用于SIS系统中DO信号输入
Applied in SIS controller DO signals input

电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 20~35V DC |
| 电流损耗 Current consumption | ≤60mA (24V DC) |

输入特性 Input data

| | |
|------------------------|--|
| 通道数 Number of channels | 1 |
| 输入电流 Input current | ≤60mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | SIS系统DO信号配套 SIS controller DO signals |

输出特性 Output data

| | |
|----------------------------------|-----------------------|
| 触点数量 Number of contacts | 1NO+1NC |
| 触点材料 Contact material | Ag-alloy |
| 触点熔丝保护 Excontact fuse protection | 5A |
| 切换容量 Utilisation category | 5A/250V AC; 5A/24V DC |

时间特性 Time data

| | |
|----------------------------------|-------|
| 吸合缓冲时间 Switch-on delay | ≤30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤30ms |
| 恢复时间 Recovery time | ≤30ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

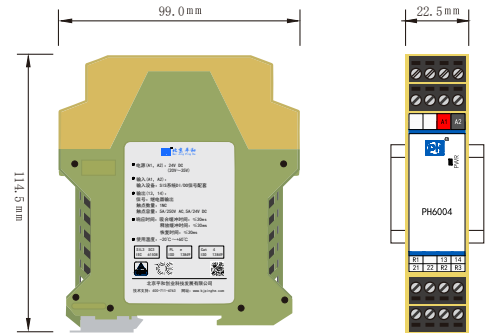
| | |
|--------------------------|--|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4, |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~ +60 C |
| 储存温度 Storage temperature | -40 C ~ +85 C |
| 相对湿度 Relative humidity | 10%~90% |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|-------------|------|
| 安全完整性等级 SIL | SIL3 |
|-------------|------|



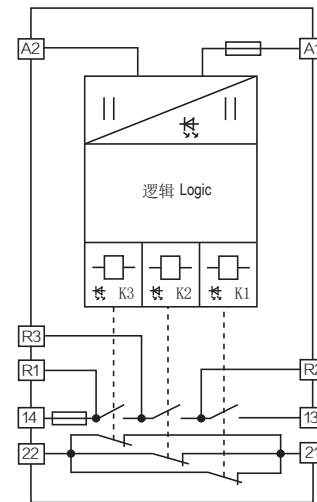
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



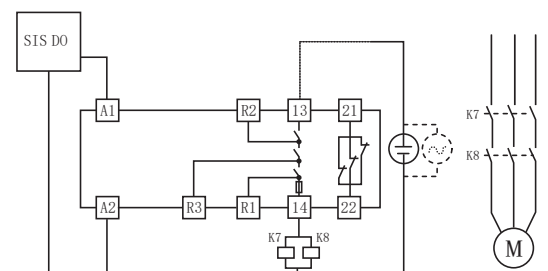
产品特性 Features

- 三重冗余 Triple redundancy
- 带Proof Test测试端 (型号中R表示)
With proof test terminal

功能框图 Block diagram

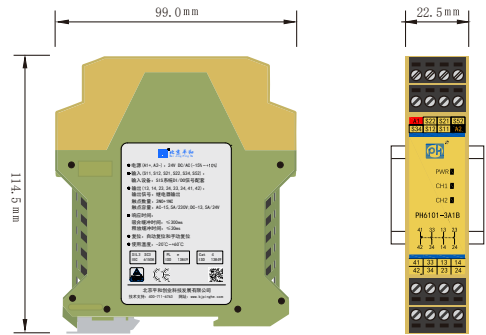


接线示意图 Wiring diagram



PH6101-3A1B

适用于急停按钮，安全门控开关，DO信号输入
Applied in E-Stop Buttons, Safety Gates DO signals input



深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



| 电源特性 Power data | | |
|--------------------------|--|-------------------------------|
| 供电电压 Supply voltage | | 24V DC/AC |
| 电压容差 Voltage tolerance | | 0.85~1.1 |
| 电流损耗 Current consumption | | ≤90mA(24V DC); ≤240mA(24V AC) |

| 输入特性 Input data | | |
|-----------------------|--|---|
| 输入电流 Input current | | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | | ≤15Ω |
| 输入设备 Input devices | | 急停按钮，安全门控开关，DO信号 E-Stop Buttons, Safety Gates DO signals |

| 输出特性 Output data | | |
|---|--|--|
| 触点数量 Number of contacts | | 3NO+1NC |
| 触点材料 Contact material | | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | | 10 ⁷ 次以上 |

| 时间特性 Time data | | |
|----------------------------------|--|--|
| 吸合缓冲时间 Switch-on delay | | 自动复位Automatic reset: ≤ 300ms; 手动复位Manual reset: ≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | | 20ms |

| 环境特性 Environmental data | | |
|--------------------------|--|--------------------------------------|
| 电磁兼容 EMC | | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | | 0.35mm |
| 使用温度 Ambient temperature | | -20 C ~+60 C |
| 储存温度 Storage temperature | | -40 C ~+85 C |
| 相对湿度 Relative humidity | | 10%~90% |
| 海拔高度 Elevation | | ≤2000m |

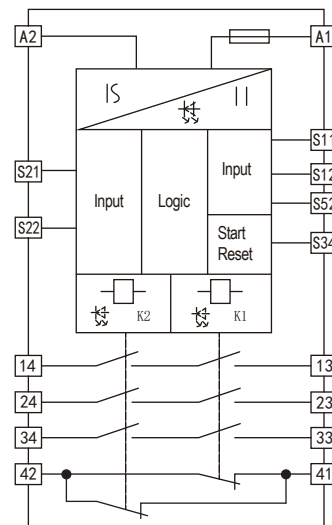
| 绝缘特性 Insulation data | | |
|---|--|------------------|
| 过压等级 Overvoltage category | | III |
| 污染等级 Pollution degree | | 2 |
| 额定绝缘电压 Rated insulation voltage | | 250V AC |
| 额定冲击电压 Rated impulse voltage | | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | | EN 60947-1 |

| 功能安全参数 Functional safety parameters | | |
|-------------------------------------|--|-------------------------|
| 安全完整性等级 SIL | | SIL3 |
| 性能等级 Performance level | | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | | 符合标准 EN ISO13849, Cat.4 |

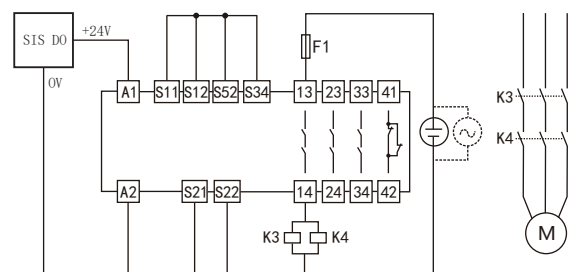
产品特性 Features

- 多触点输出 Several contacts output
- 低启动冲击电流 Low start-up inrush current

功能框图 Block diagram



接线示意图 Wiring diagram



PH6101-2A2B

适用于急停按钮，安全门控开关，DO信号输入
Applied in E-Stop Buttons, Safety Gates DO signals input

电源特性 Power data

| | |
|--------------------------|-------------------------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤90mA(24V DC); ≤240mA(24V AC) |

输入特性 Input data

| | |
|-----------------------|---|
| 输入电流 Input current | ≤50mA (24V DC) |
| 导线电阻 Cable resistance | ≤15Ω |
| 输入设备 Input devices | 急停按钮，安全门控开关，DO信号 E-Stop Buttons, Safety Gates DO signals |

输出特性 Output data

| | |
|---|--|
| 触点数量 Number of contacts | 2NO+2NC |
| 触点材料 Contact material | AgSnO ₂ +0.2μm Au |
| 触点熔丝保护 Excontact fuse protection | 10AgL/gG NEOZED(NO)(常开触点); 6AgL/gG NEOZED(NC)(常闭触点) |
| 切换容量 (EN60947-5-1) Utilisation category | AC-15, 5A/230V; DC-13, 5A/24V |
| 触点机械寿命 Mechanical endurance of contacts | 10 ⁷ 次以上 |

时间特性 Time data

| | |
|----------------------------------|--|
| 吸合缓冲时间 Switch-on delay | 自动复位Automatic reset:≤ 300ms; 手动复位Manual reset:≤ 150ms |
| 释放缓冲时间 Delay-on de-energisation | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 恢复时间 Recovery time | 急停操作E-Stop: ≤30ms; 电源失效Power failure: ≤100ms |
| 电源短时中断 Supply short interruption | 20ms |

环境特性 Environmental data

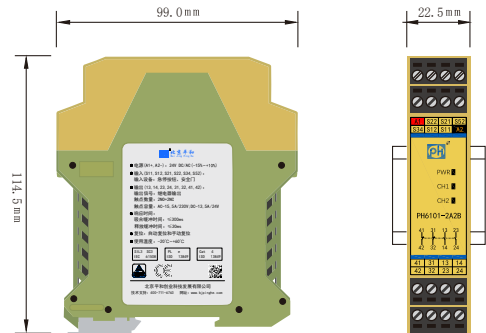
| | |
|--------------------------|--------------------------------------|
| 电磁兼容 EMC | EN 60947, EN 61000-6-2, EN 61000-6-4 |
| 振动频率 Vibration frequency | 10Hz~55Hz |
| 振动幅度 Vibration amplitude | 0.35mm |
| 使用温度 Ambient temperature | -20 C ~+60 C |
| 储存温度 Storage temperature | -40 C ~+85 C |
| 相对湿度 Relative humidity | 10%~90% |
| 海拔高度 Elevation | ≤2000m |

绝缘特性 Insulation data

| | |
|---|------------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V (1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance | EN 60947-1 |

功能安全参数 Functional safety parameters

| | |
|------------------------|-------------------------|
| 安全完整性等级 SIL | SIL3 |
| 性能等级 Performance level | 符合标准 EN ISO13849, PLe |
| 安全类别 Category | 符合标准 EN ISO13849, Cat.4 |



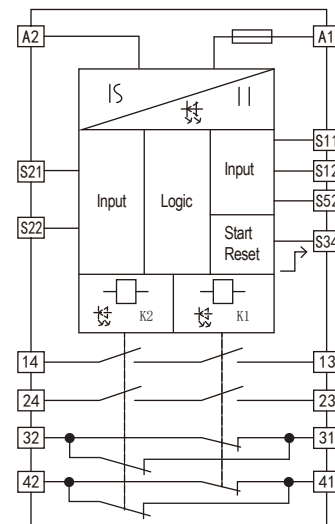
深Thickness 114.5mm * 高height 99mm * 宽width 22.5mm



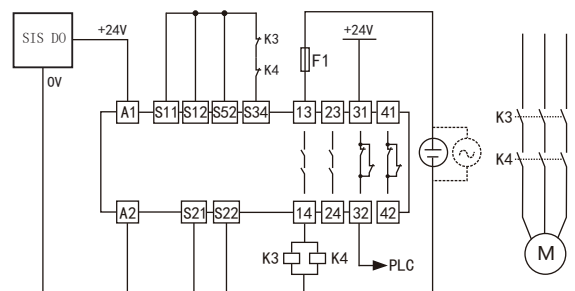
产品特性 Features

- 多触点输出 Several contacts output
- 低启动冲击电流 Low start-up inrush current

功能框图 Block diagram



接线示意图 Wiring diagram



主要应用领域 MAIN APPLICATION AREAS

石油
Petroleum



制药
pharmacy



化工
chemical



机械设备
mechanization



官方网站



官方微信

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