



MECHANICAL SYSTEM SAFETY RELAY

安全继电器

适配各类安全信号输入

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，座落于北京市中关村科技园，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。作为行业公认的一线品牌，北京平和一直专注于工控产品的研发、生产和营销，拥有两大智能制造基地。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。至今国内外市场稳定运行500余万只，卓越的品质和优质的服务获得了广大合作伙伴的高度信赖和认可。

Beijing Pinghe was founded in January 2004 and is located in Beijing Zhongguancun Science and Technology Park with registered capital 80 million CNY. We are a national high-tech enterprise dedicated to industrial signal interface modules. As a top brand recognized by the industry, Beijing Pinghe has main focused on R&D, production and sales in the industrial control area, possesses two big intelligent production bases. 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 5 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.

企业荣誉 ENTERPRISE HONORS

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

北京市“专精特新”小巨人
Specialization, refinement, differentiation, innovation
of Little Giant 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 Integration 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

产品认证及殊荣 PRODUCT CERTIFICATION AND HONORS

TÜV 功能安全认证
TÜV Functional safety certification

ATEX 防爆认证
Quality assurance certified according to
ATEX Approval

IECEX 防爆质量管理体系认证
Quality assurance certified according to
IECEX Approval

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

2020 年度仪表自动化创新产品（技术）奖
2020 Instrument Automation Innovation
Product (Technology) Award

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。经过近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 | | 晶体管输出 Transistor output | 页码 Page |
|---|-----------------|--------------------|------------------------------------|--|---|----------------------------|------------|
| | | | | 安全断开  | 安全闭合  | | |
|  急停按钮 安全门 E-Stop Buttons, Safety Gates | PH6101-3A1B | 24V DC/AC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 5 |
| | PH6102-3A1B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 3 - 1 | - | - | 6 |
| | PH6103-3A1B | 230V AC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 7 |
| | PH6104-2A2AT | 24V DC/AC | 自动/手动 Manual or automatic reset | 2 2 | - - | - | 8 |
| | PH6105-2A2AT(M) | 24V DC | 受监控的手动 Monitored manual reset | 2 2 | - - | - | 9 |
|  安全光幕 Light Beam Devices | PH6201-3A1B-P | 24V DC/AC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 10 |
| | PH6202-3A1B-N | 24V DC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 11 |
| | PH6203-3A1B-NP | 24V DC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 12 |
|  双手开关 Two-Hand Control Buttons | PH6301-3A1B | 24V DC/AC | 无复位 No reset | 3 - 1 | - | - | 13 |
|  安全地毯 Safety Mats | PH6401-3A1B | 24V DC/AC | 自动/手动 Manual or automatic reset | 3 - 1 | - | - | 14 |
| | PH6402-3A1B(M) | 24V DC/AC | 受监控的手动 Monitored manual reset | 3 - 1 | - | - | 15 |
| | PH6403-3A1B | 24V DC/AC | 通用复位 General reset | 3 - 1 | - | - | 16 |
| | PH6404-3A1B | 230V AC | 通用复位 General reset | 3 - 1 | - | - | 17 |
|  触点扩展模块 Extension Module | PH6501-4A2B | 24V DC | 自动/手动 Manual or automatic reset | 4 - 1 | - | - | 18 |
| | PH6502-8A4B | 24V DC | 自动/手动 Manual or automatic reset | 8 - 2 | - | - | 19 |

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
- 安全输出进行反馈监控，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

PH6101-3A1B

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

SIL3
IEC 61508

PLe
Cat. 4
EN/ISO13849



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); ≤180mA(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(N0) (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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

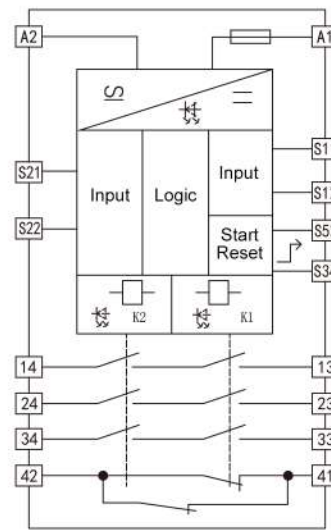
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

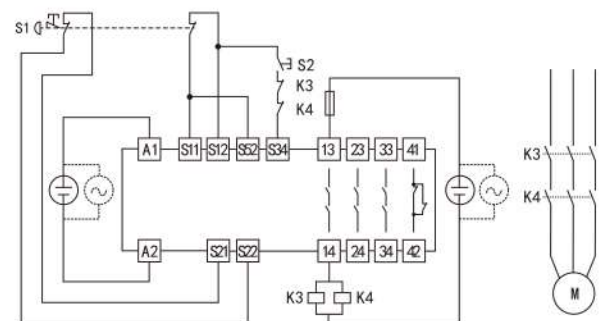
产品特征 Features

- 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

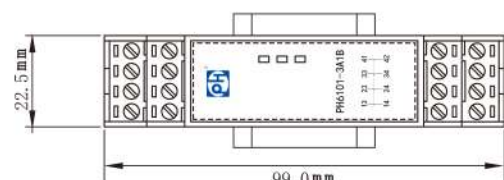
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

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 |
| 电流损耗 Current consumption | ≤90mA (24V DC); ≤180mA (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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

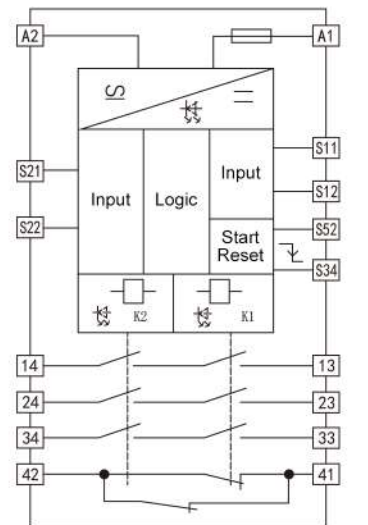
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

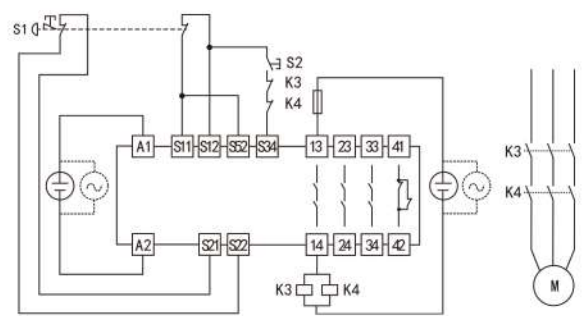
产品特征 Features

- 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

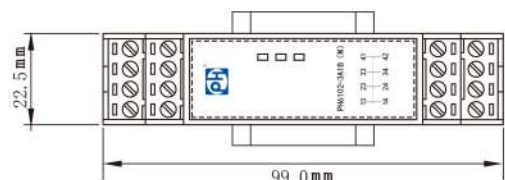
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6103-3A1B

急停按钮、安全门控制开关输入

E-Stop Buttons, Safety Gates Input

SIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 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 | 3NO+1NC |
| 触点材料 Contact material | AgSnO ₂ +0.24μm 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

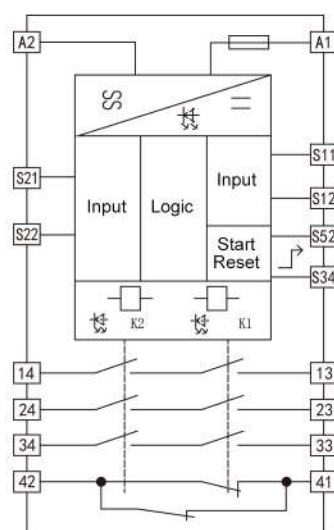
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

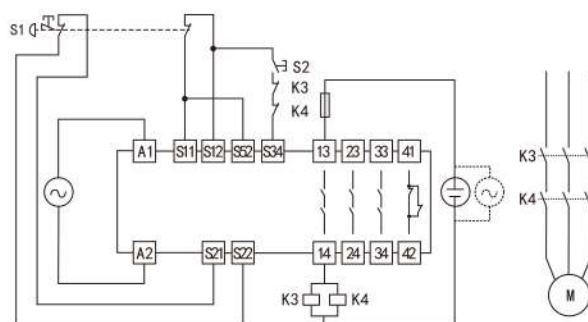
产品特征 Features

- 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

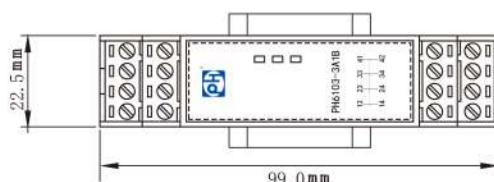
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6104-2A2AT

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

SIL3
IEC 61508

PLe
Cat. 4
EN/ISO13849



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 +0.2μm Au |
| 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; (instantaneous); 0.1s~3s (delayed, factory set as 3s) |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤100ms; 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

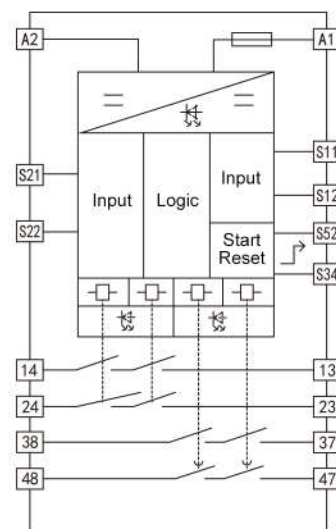
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

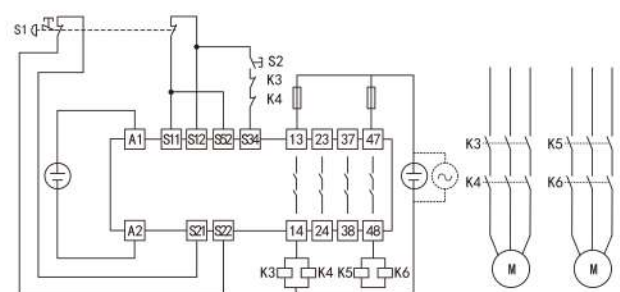
产品特征 Features

- 支持延时/非延时输出 Instantaneous or delayed output
- 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

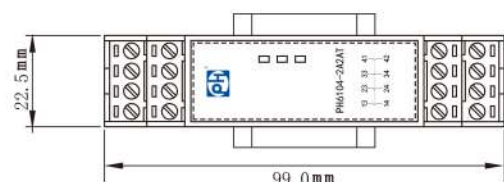
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6105-2A2AT(M)

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

SIL3
IEC 61508

PLe
Cat. 4
EN/ISO13849



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 +0.24μm Au |
| 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; (instantaneous); 0.1s~3s (delayed, factory set as 3s) |
| 恢复时间 Recovery time | 急停操作 E-Stop: ≤100ms; |
| 电源短时中断 Supply short interruption | 电源失效 Power failure: ≤100ms 20ms |

环境特性 Environmental data

| | |
|--------------------------|-----------------------------------|
| 电磁兼容 EMC | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

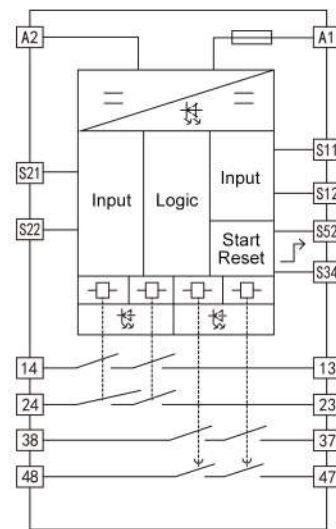
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

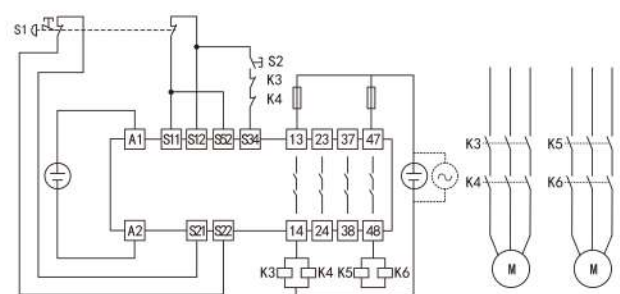
产品特征 Features

- 支持延时/非延时输出 Instantaneous or delayed output
- 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

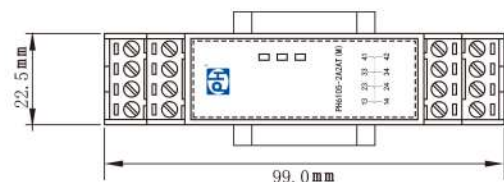
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

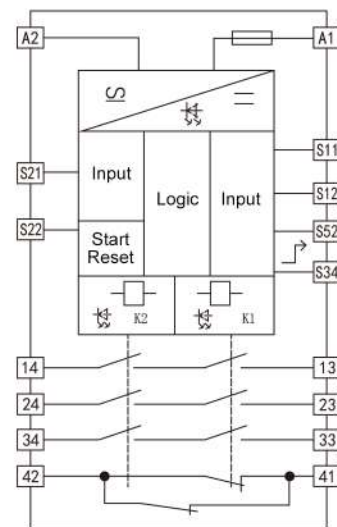
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

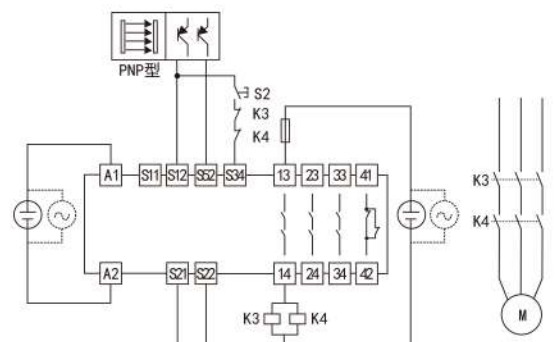
产品特征 Features

- 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

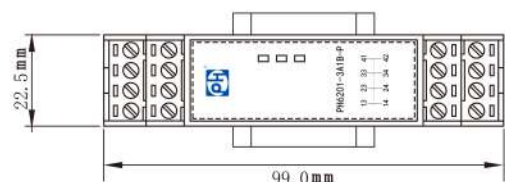
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6202-3A1B-N

NPN型安全光幕输入

NPN Type Light Beam Devices Input

SIL3
IEC 61508

PLe
Cat.4
EN/ISO13849



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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

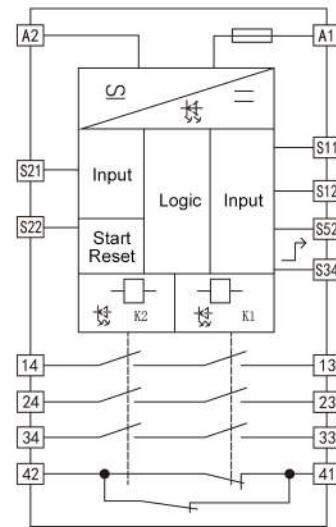
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

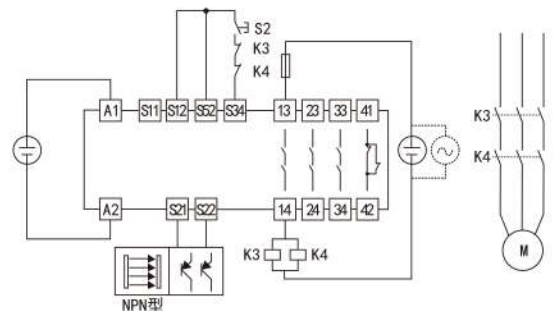
产品特征 Features

- 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

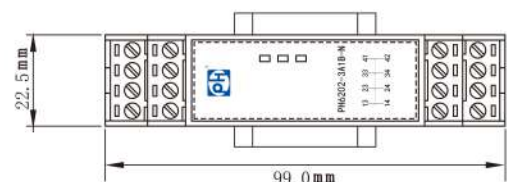
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

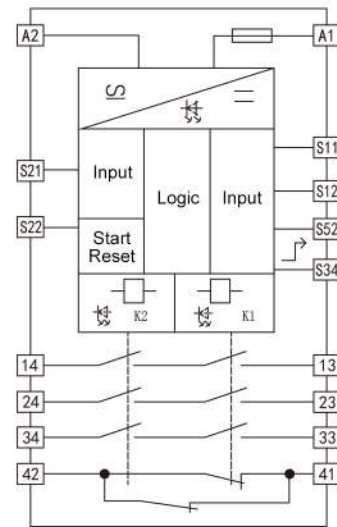
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

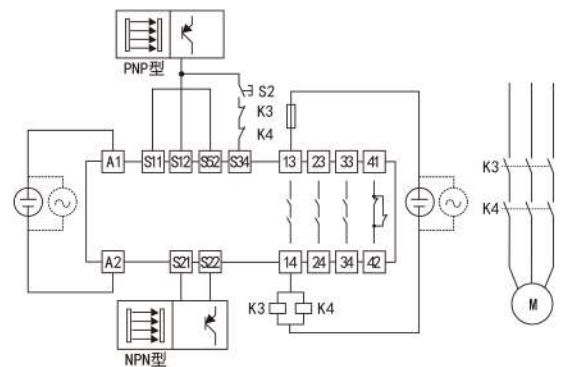
产品特征 Features

- 支持NPN、PNP型安全光幕 NPN,PNP type light beam devices
-
-

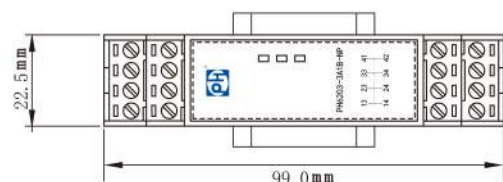
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6301-3A1B

双手按钮输入

Two-Hand Control Buttons Input

SIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

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 | ≤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 (典型值 Typical 300ms) |
| 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

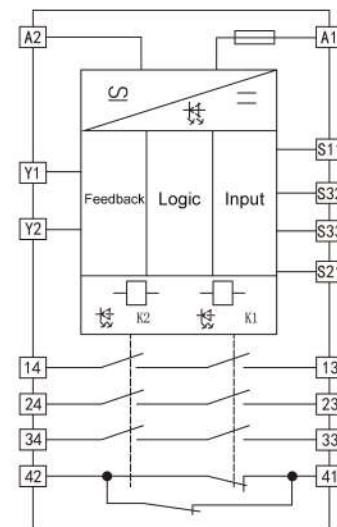
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

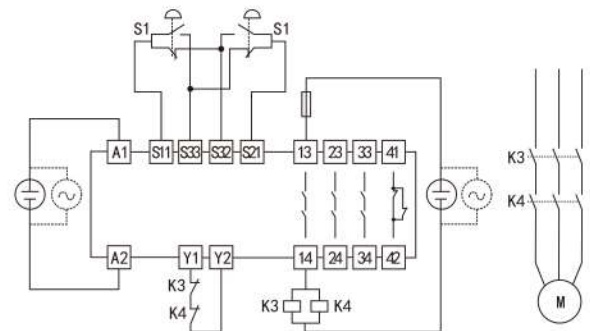
产品特征 Features

- 双通道输入 Dual channel
- 符合 EN 574 Type III 要求 Accord with EN 574 Type III

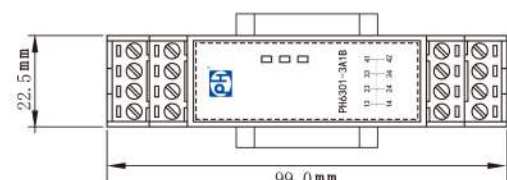
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6401-3A1B安全继电器

安全地毯输入
Safety Mats Input

SIL3
IEC 61508

PLe
Cat. 4
EN/ISO13849



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 | 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

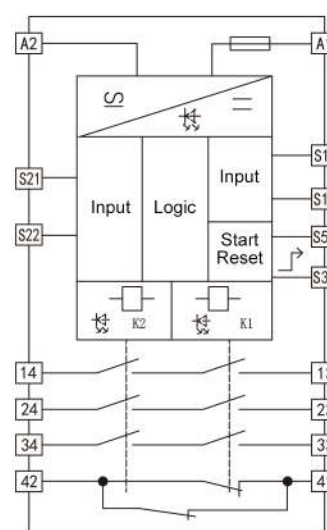
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

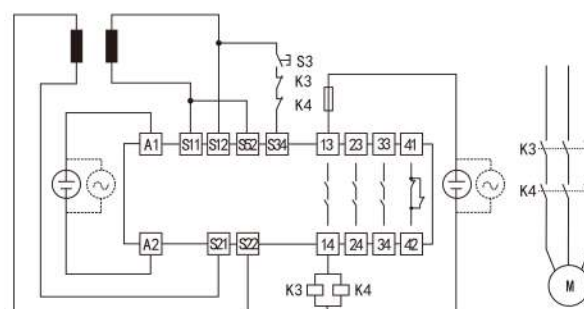
产品特征 Features

- 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

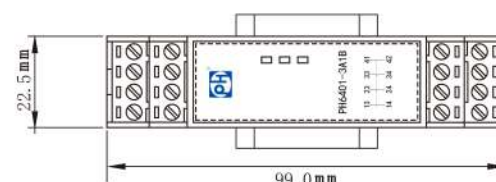
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6402-3A1B(M)

安全地毯输入
Safety Mats InputSIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

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 | 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

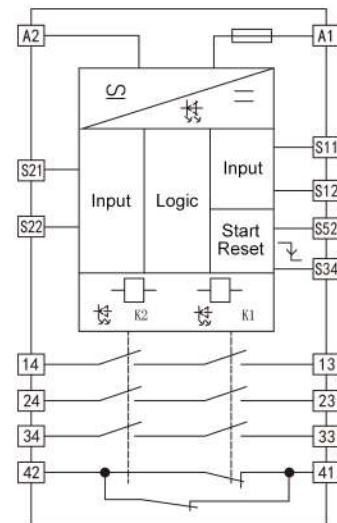
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

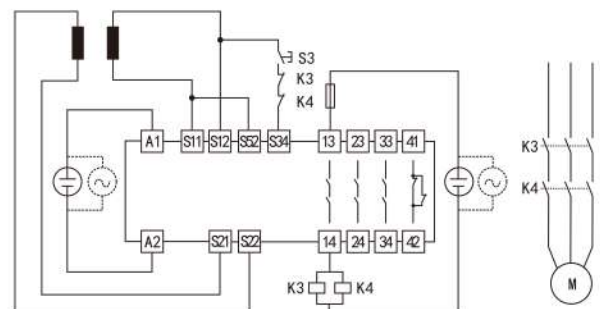
产品特征 Features

- 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 manual reset

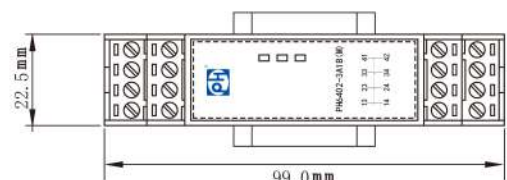
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6403-3A1B

安全地毯输入
Safety Mats InputSIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

电源特性 Power data

| | |
|--------------------------|---------------|
| 供电电压 Supply voltage | 24V DC/AC |
| 电压谷差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤50mA(24V DC) |

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/触边 2-wire safety mats/edges |
| 终端电阻 Terminal resistance | 1.0KΩ~10KΩ |

继电器输出特性 Relay 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 (1.2/50μs) |
| 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 |

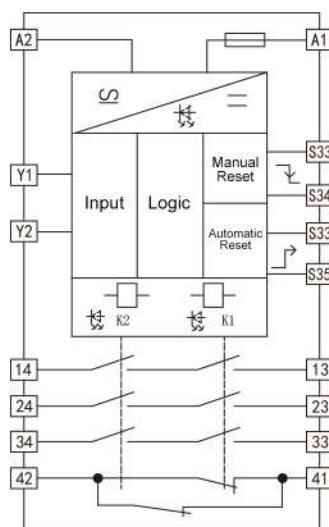
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

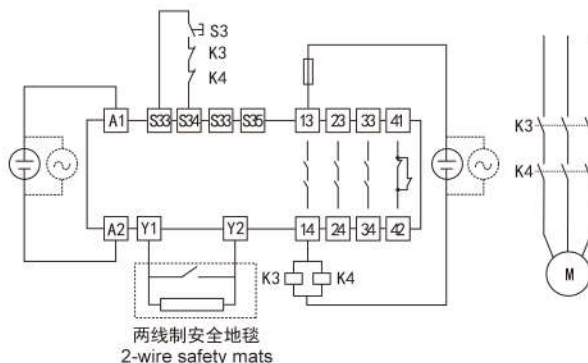
产品特征 Features

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

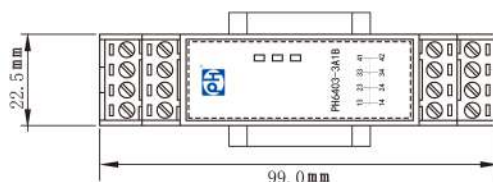
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6404-3A1B

安全地毯输入
Safety Mats InputSIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 100V~230V AC |
| 电压容差 Voltage tolerance | 0.85~1.1 |
| 电流损耗 Current consumption | ≤7VA (220V AC) |

输入特性 Input data

| | |
|--------------------------|--|
| 输入电流 Input current | ≤10mA (24V DC) |
| 导线电阻 Cable resistance | ≤15 Ω |
| 输入设备 Input devices | 两线制安全地毯/触边 2-wire safety mats/edges |
| 终端电阻 Terminal resistance | 1.0K Ω ~ 10K Ω |

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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 (1.2/50μs) |
| 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 |

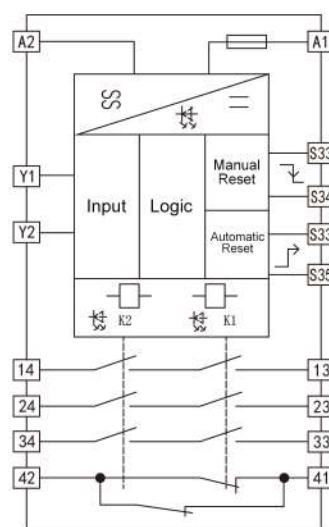
安全认证 safety Certification

| | |
|------------------------|--------------------------|
| 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 |

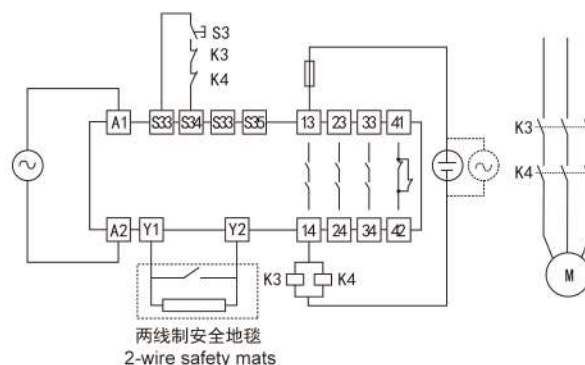
产品特征 Features

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

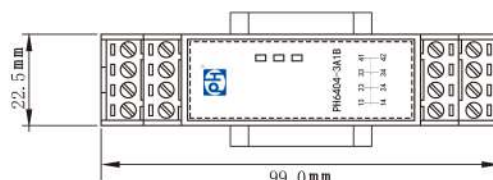
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6501-4A2B

触点扩展模块

Extension Module

SIL3
IEC 61508PLe
Cat. 4
EN/ISO13849

电源特性 Power data

| | |
|--------------------------|----------------|
| 供电电压 Supply voltage | 20~30V DC |
| 电流损耗 Current consumption | ≤50mA (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 | 安全开关、触点开关 Safety switches, Contact switches |
| 通道数 Number of channels | 1 |

继电器输出特性 Relay 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 | ≤30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤20ms |
| 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 | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 (1.2/50μs) |
| 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 |

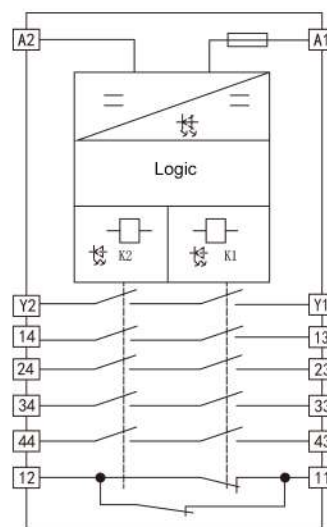
安全认证 safety Certification

| | |
|------------------------|-------------------------|
| 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 |

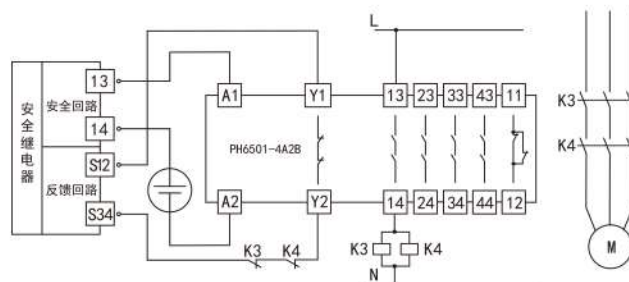
产品特征 Features

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

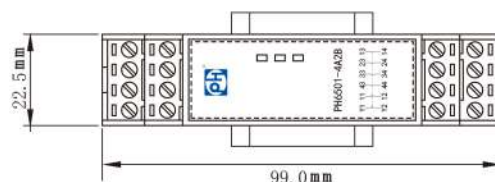
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 22.5mm × height 99.0mm

PH6502-8A4B

触点扩展模块
Extension Module

SIL3
IEC 61508

PLe
Cat. 4
EN/ISO13849



| 电源特性 Power data | |
|---|--|
| 供电电压 Supply voltage | 20~30V DC |
| 电流损耗 Current consumption | ≤50mA(24V DC, for each channel) |
| 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 | 安全开关、触点开关 Safety switches, Contact switches |
| 通道数 Number of channels | 2 |
| 继电器输出特性 Relay 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 | ≤30ms |
| 释放缓冲时间 Delay-on de-energisation | ≤20ms |
| 恢复时间 Recovery time | ≤100ms |
| 电源短期中断 Supply short interruption | 20ms |
| 环境特性 Environmental data | |
| 电磁兼容 EMC | EN60947, EN61000-6-2, EN61000-6-4 |
| 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 |

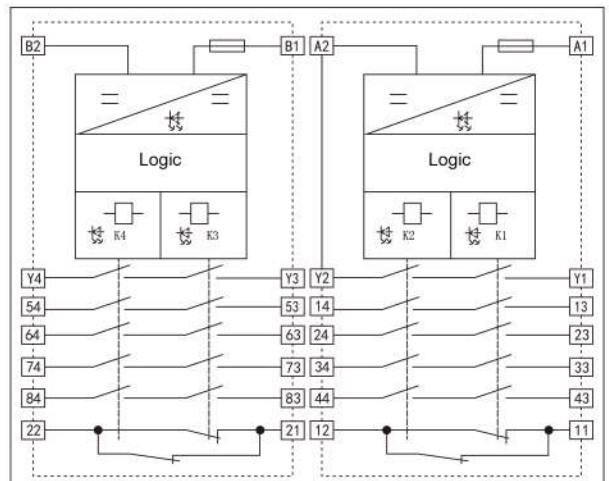
| 绝缘特性 Insulation data | |
|---|-----------------|
| 过压等级 Overvoltage category | III |
| 污染等级 Pollution degree | 2 |
| 额定绝缘电压 Rated insulation voltage | 250V AC |
| 额定冲击电压 Rated impulse voltage | 6000V(1.2/50us) |
| 绝缘强度 Dielectric strength | 1500V AC, 1min |
| 电气间隙和爬电距离 Clearance and creepage distance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

| 安全认证 safety Certification | |
|---------------------------|-------------------------|
| 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 |

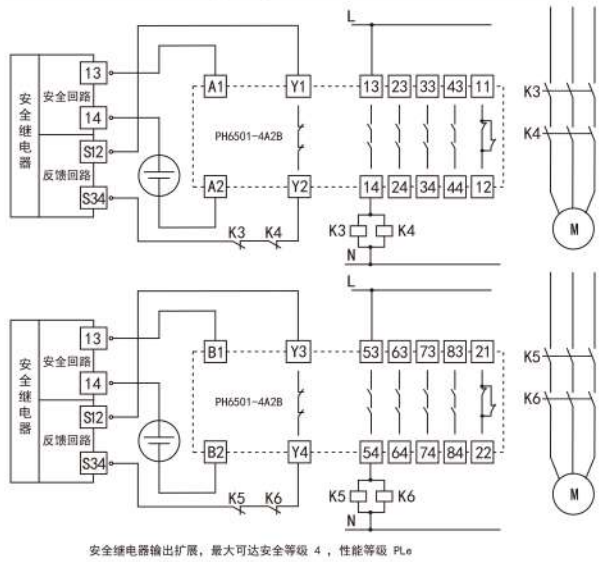
产品特征 Features

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

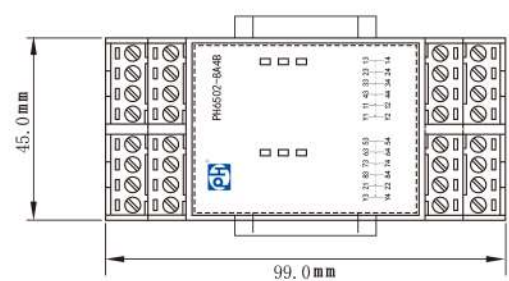
功能框图 Block diagram



接线示意图 Wiring diagram



外形尺寸 Outline and dimensions



Thickness 114.5mm × width 45.0mm × height 99.0mm

主要应用领域

MAIN APPLICATION AREAS

石油
Petroleum



化工
chemical

制药
pharmacy



机械设备
mechanization



北京平和官方网站



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生产基地：北京市中关村科技园区永兴路25号

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传 真：010-61259872-8027

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