



LS-A series safety relay

Maximum compliance with ISO13849-1 PLe standard and IEC 62061 SiL3 standard

Proven two-channel security monitoring circuit design

I/O LED indication

Width 22.5mm to reduce installation space

Screw or spring terminals are available for a wider range of applications

PLC signal output

Suitable for monitoring

| | | |
|---------------|----------------------|-------------------|
| Scram button | Safety light curtain | Two-handed switch |
| Safety switch | Security scanner | Safety sensor |
| Safety lock | | |

Forced safety output

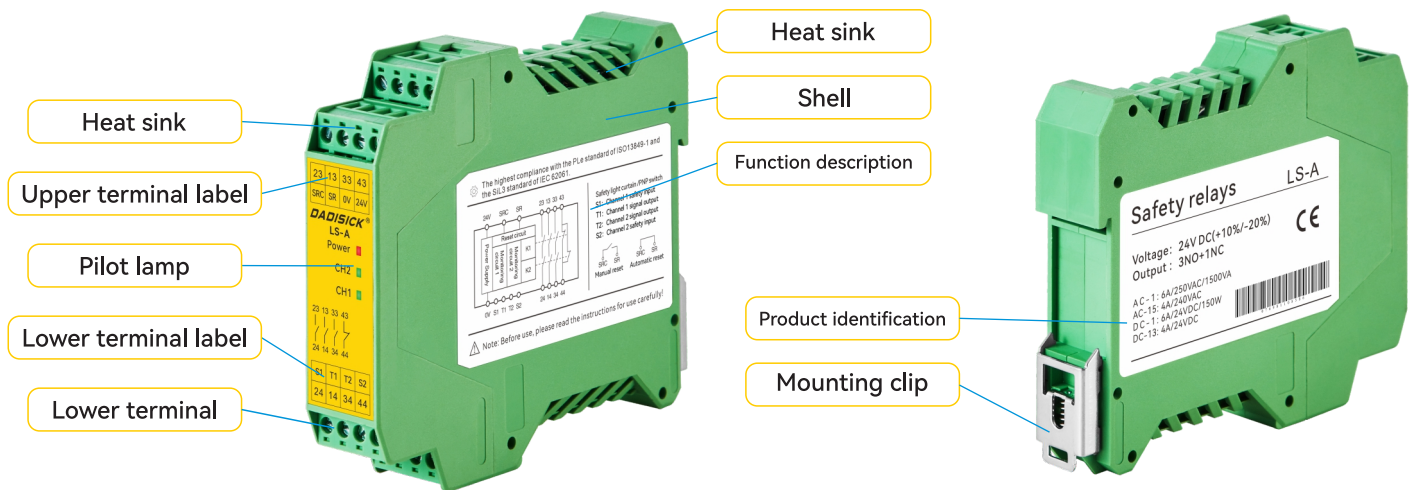
3NO / 1NC

Applicable to the industry

| | |
|---------------------------|-----------------------|
| Injection molding machine | CNC machine press/ |
| Hydraulic press | Glass machinery |
| Filling machinery | Woodworking machinery |
| Packaging machinery | sorting machinery |
| Paper machinery | intelligent |
| Forklift | AGV |
| Robot | Elevator wind power |
| SIS system | |



Board description



100%

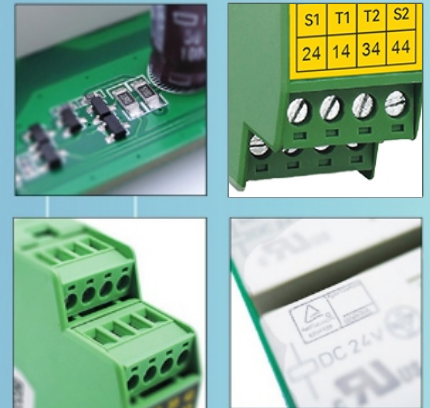
Strictly select first tier brand components and conduct 100% process testing

3 aspects

The core mandatory relay adopts well-known products certified by third-party authoritative organizations to ensure high reliability

comprehensive

Fully functional for easy control of various applications



Extreme speed

Adopting high-speed mutual verification technology to ensure safe and efficient response time

Dual path

Using a dual channel classic design, it fully meets the functional safety requirements of ISO 13849 and GB 16855

40%

Save you 40% of costs



Technical Parameters

| | | |
|---|--|-------|
| Safety Relay Product model | | |
| Safety relay series | LS-A | |
| Model | LS-AN | LS-AP |
| Output method | NPN | PNP |
| Power source | | |
| Power supply | 24V DC | |
| Voltage tolerance | +10%/-20% | |
| Power dissipation | 2.9 W | |
| Output | | |
| Relay safety output | 3NO+1NC | |
| Transistor signal output | <500mA 24VDC | |
| Relay contact capacity | | |
| AC-1 | 6A/250VAC/1500VA | |
| AC-15 | 4A/240VAC | |
| DC-1 | 6A/24VDC /150W | |
| DC-13 | 4A/24VDC | |
| Maximum switching capacity | 12A (Distributed on all safety output contacts) | |
| Contact resistance | <100mΩ | |
| Minimum load | 10mA/5V | |
| Contact material | AgSnO2 + 0.2μmAu | |
| Conventional parameter | | |
| Output fuse (external connection) | 5A gL/gG | |
| Release response time | <30ms (From input to output) | |
| Input component tail detection resistance (Edge/Carpet) | 1kΩ ~ 10kΩ | |
| Electrical life | 80000 times | |
| Pollution degree | 2 | |
| operation temperature | -25℃ ~ 85℃ | |
| Working humidity | 35%-85% (No ice or condensation) | |
| Impulse withstand voltage | 2.5kV | |
| Protection grade | Housing IP30, terminal IP20, recommended for installation in cabinet or housing Ip54 | |
| Storage temperature | -40℃ ~ 105℃ | |
| Shell material | Flame retardant PA66 | |
| Installation method | Standard 35mm DIN rail/spring clip | |
| Size | 112mm×99.5mm×22.6mm | |
| Weight | 172g | |
| Connection parameters | | |
| Available cross-sectional range of rigid wires | 0.5~2.5mm ² | |
| Available cross-sectional range of flexible wires | 0.5~2.5mm ² | |
| Minimum conductor cross-section | AWG 24 | |
| Maximum conductor cross-section | AWG 12 | |
| Strip length | 8mm | |
| Minimum tightening torque | 0.5 Nm | |
| Maximum tightening torque | 0.6 Nm | |

LS-A

Safety force disconnect type relay output

3 normally open transient safety contacts (3NO)

1 normally closed transient safety contact (1NC)

LED indicator

Power supply indication

Input status indication

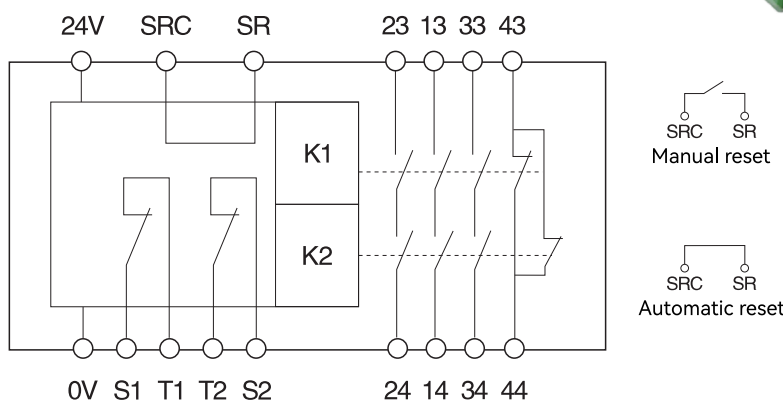
Output status indication

Automatic reset switch

Automatic/manual reset switch can be configured

Can be configured for emergency stops, light curtains, door locks, two-hand switches and many other functional safety features

In the event of component failure, the safety function remains in effect



Description of terminal functions

| | | |
|--------------|--|--|
| Power supply | Power supply positive (24VDC) | |
| | Power supply negative (0V) | |
| S1 | Channel 1 safety input | Accept type I signal input, open circuit detection and channel 2 mutual detection |
| T1 | Channel 1 signal output | Type I signal source |
| T2 | Channel 2 signal output | Type II signal source |
| S2 | Channel 2 safety input | Type II signal input is accepted, open circuit detection and channel 1 mutual detection |
| SR SRC | Reset input (configurable manual reset or automatic reset) | Short-circuited SRS and SRC reset automatically, and disconnected SRS and SRC reset manually |
| 13/14 | Normally open transient safety contact | To increase the number of contacts |
| 23/24 | | |
| 33/34 | | |
| 43/44 | Normally closed transient safety contact | Can be used as external signal light or control other devices |

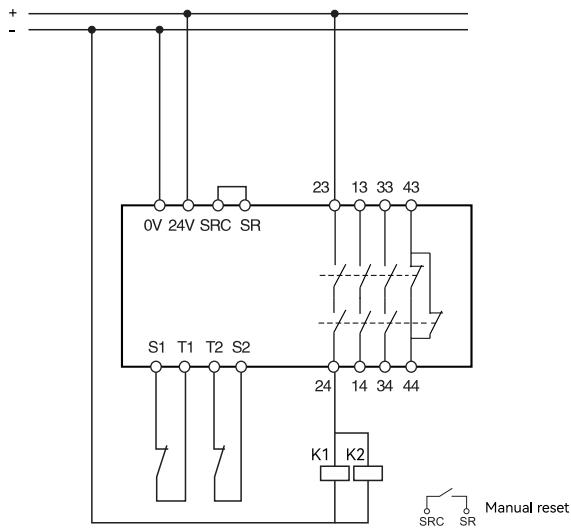
LED and reset lever operation instructions

LED indicator status

| ■ Steady on ★ ☆ Flicker □ Extinguish | | | | |
|---|--|-----------|-----------|------------|
| Feature | Status | Power LED | Input LED | Output LED |
| Emergency stop/door lock | The input connection is disconnected or abnormal | ■ | ★ ☆ | □ |
| | The input single channel is abnormal | ■ | ■ | ★ ☆ |
| | Emergency stop press/Door lock opens | ■ | ★ ☆ | □ |
| | Input is correct/not reset | ■ | ■ | □ |
| | Input is correct/reset | ■ | ■ | ■ |
| | System failure | ★ ☆ | □ | □ |
| Light curtain /PNP switch | The input connection is disconnected or abnormal | ■ | ★ ☆ | □ |
| | The input single channel is abnormal | ■ | ■ | ★ ☆ |
| | Light curtain interrupted/switch action | ■ | ★ ☆ | □ |
| | Input is correct/not reset | ■ | ■ | □ |
| | Input is correct/reset | ■ | ■ | ■ |
| | System failure | ★ ☆ | □ | □ |
| Two-handed switch (Valid for automatic reset only) | The input connection is disconnected or abnormal | ■ | ★ ☆ | □ |
| | Press the two-handed switch | ■ | ■ | ■ |
| | Two-handed switch release | ■ | ★ ☆ | □ |
| | System failure | ★ ☆ | □ | □ |

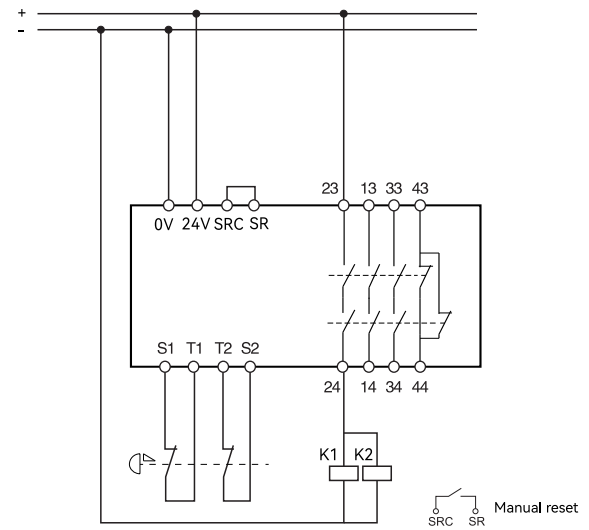
Connection sample

1. Emergency Stop

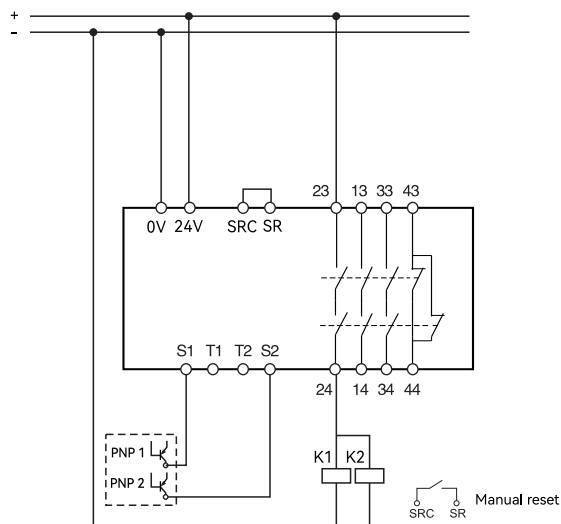


Dual-channel scram safety input with manual reset

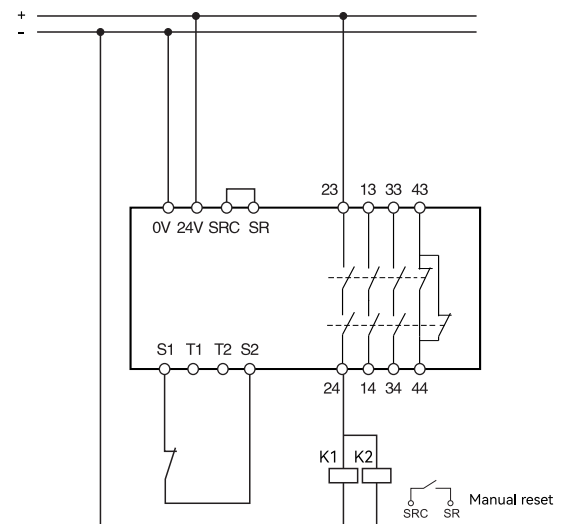
2. Safety Interlock Switch



3. Connect the safety light curtain



Dual channel light curtain /PNP switch safety input,
with automatic reset, PLC signal output



Single channel light curtain/PNP switch safety input,
With automatic reset and PLC signal output

Overall dimensions

