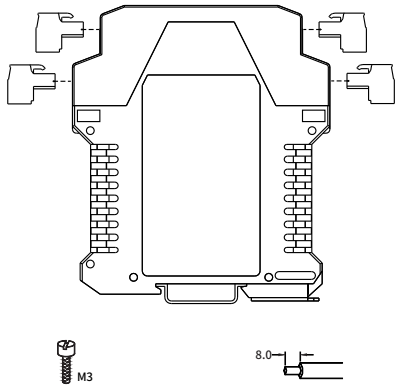
Connections

(1) The module adopts knock-down connector with screw terminals.
(2) The minimum cross section area of the flexible copper wire on the input side should be 0.5mm^2, and 1mm^2 on the output side.
(3) A length of 8mm bared wire is locked by the M3 bolt.
(4) Sufficient fuse protection must be provided to the output contacts.
(5) The copper wire must tolerate ambient temperature at least 75°C.
(6) Wrong use of the terminal screws may cause malfunction, heat, etc., so please tighten the screws with the torque of 0.5Nm.



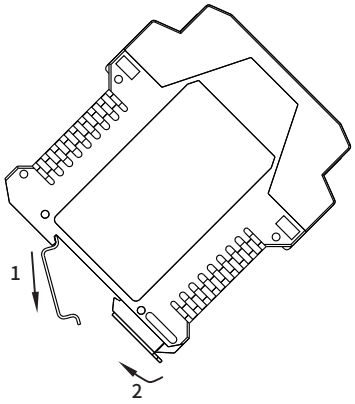
Installation

The safety relay should be installed in a housing at least IP54 (IEC 60529) degree of protection, and the installation and using should fulfill the related requirements of IEC 60204-1.

CZSR8000 series safety relays are designed for mounting on 35mm DIN guide rail.

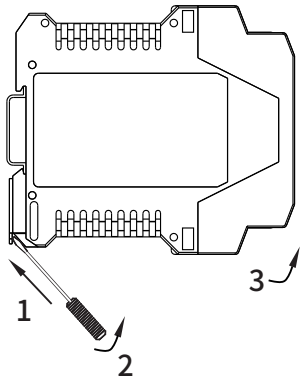
Installation according to the following steps:

(1) Make the upside of the device locked into the guide rail;
(2) Push the downside of the device in the rail.



Disassembly

(1) Insert a screwdriver (its edge length ⩽ 6mm) into the downside metal lock of the device;
(2) Push the screwdriver upwards, then prize the metal lock downwards;
(3) Take the device out of the guide rail.



Maintenance

(1) Please check the safety function of safety relay periodically, make sure the safety function executes properly, and there is no sign of any components or circuit changed or bypassed.
(2) Please observe relevant safety regulations, and operate according to this user manual. Disregarding these safety regulations may cause fatal accident, serious personal injury or property loss.
(3) Every product has been test strictly before leaving factory. If users find any abnormality in the module, please contact the nearest agent or our technic support hot-line.
(4) In 5 years from the delivery date, if the product works improperly during normal operation, we will repair or replace it without payment.

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CHENZHU | User Manual

Safety Relay

CZSR8201-3A1B

Performance Level: PL e

Category: Cat. 4

Read this instruction sheet to make sure of correct operation.
Make sure that the instruction sheet is kept by the end user.

⚠ CAUTION

- Please check whether the product type on the package accords to the ordering contract;
- Read this manual carefully before installation or using. If anything unclear, please dial technical support hot-line:400 881 0780;
- Safety relay should be located in IP54 control cabinet;
- Supply voltage is 24V DC/AC, 220V AC is forbidden;
- Users are not allowed to dismantle or repair the product, otherwise it will induce malfunction.

CZ.CZSR8201-3A1B.11(S)E-3.2/22.08

Summarize

CZSR8201-3A1B is suitable for the application of two-hand push buttons, with 3 safety output contacts (N/O) and 1 auxiliary output contact (N/C). It should be operated in double channel mode, with the simultaneity time of less than 500ms.

Specification

POWER:
- Supply voltage: 24V DC/AC
- Voltage range: 0.85 ~ 1.1
- AC frequency: 50Hz ~ 60Hz
- Current consumption: ⩽60mA(24V DC); ⩽200mA(24V AC)

INPUT:
- Input current: ⩽50mA(24V DC)
- Cable resistance: ⩽15Ω
- Input devices: Two-hand push buttons

OUTPUT:
- Number of contacts: 3NO + 1NC
- Contact material: $AgSnO_2$ + 0.2μmAu
- Contact type: force guided
- External contact fuse protection: 10A gL/gG NEOZED (NO)
  6A gL/gG NEOZED (NC)
- Utilisation category in accordance with EN60947-5-1: AC-15, 5A/230V;
  DC-13, 5A/24V
- Mechanical endurance: over 10^7 times

TIMES:
- Switch-on delay: ⩽30ms
- Delay-on de-energisation: ⩽15ms
- Recovery time: ⩽250ms

Simultaneity time: ⩽500 ms (typ. 300 ms)
- Supply interruption before de-energisation: 20ms

Safety

Performance level (PL): PL e — in accordance with EN ISO 13849
Category (Cat.): Cat. 4 — in accordance with EN ISO 13849
Mission time (T_M): 20 years — in accordance with EN ISO 13849
Diagnostic coverage (DC/DC_{avg}): 99% — in accordance with EN ISO 13849
Safety integrity level (SIL): SIL 3 — in accordance with IEC61508,IEC62061
Hardware fault tolerant (HFT): 1 — in accordance with IEC61508,IEC62061
Safe failure fraction (SFF): 99% — in accordance with IEC61508,IEC62061
Average probability of dangerous failure (PFH_D): 3.06E-10/h
in accordance with IEC61508,IEC62061
Stop category: 0 — in accordance with EN60204-1
B_{10d}:

DC-13, Ue = 24 V:

Ie	5A	2A	1A
Cycles	300,000	2,000,000	7,000,000

AC-15, Ue = 230 V:

Ie	5A	3A	1A
Cycles	200,000	230,000	380,000

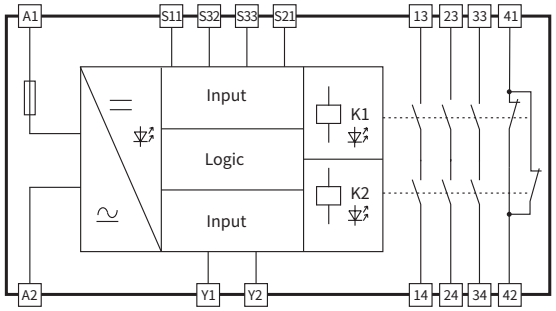
Environmental Characteristics

EMC: In accordance with EN60947, EN61000-6-2, EN61000-6-4
Vibration frequency: 10Hz ~ 55Hz
Vibration amplitude: 0.35mm
Ambient temperature: -20°C ~ +60°C
Storage temperature: -40°C ~ +85°C
Relative humidity: 10% ~ 90%

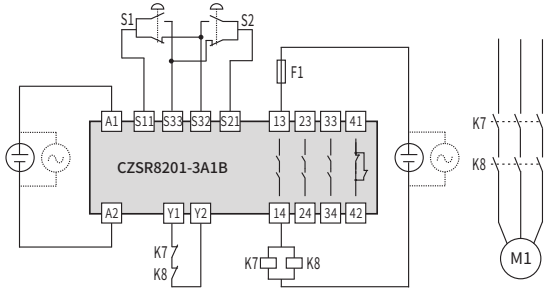
Insulation characteristic

Clearance and creepage: In accordance with EN60947-1
Overvoltage category: III
Pollution degree: 2
Protection type: Ip20
Elevation: ⩽2000m
Rated insulation voltage: 250V AC
Rated impulse voltage: 6000V (1.2/50μs)
Dielectric strength: 1500V AC, 1min

Block Diagram



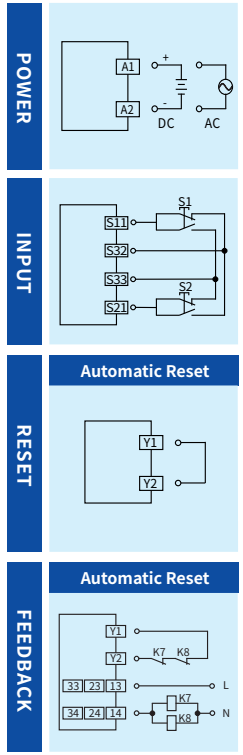
Typical Application



- Dual channel Two-hand buttons input
- Short circuit monitoring
- Output with EDM
- Up to Cat. 4

S1, S2: Two-hand buttons
K7, K8: Contactors
F1: External fuse protection
M1: Motor

Wiring Diagrams



Dimensions

Dimensions(L×H×W): 114.5mm×99.0mm×22.5mm
Weight: 200g