Light beam devices input

CZSR8001–3A1B–P
Output: 3NO, 1NC

CZSR8001-3A1B-P is suitable for PNP light beam devices input, with 3NO(Normal open) and 1NC(Normal close) safety relays. It supports dual channel operation, manual or automatic reset.



Dimensions:114.5mm × 99.0mm × 22.5mm

Specification

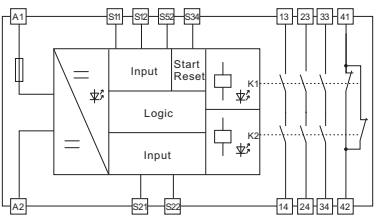
Power:
- Supply voltage: 24V DC
- Voltage tolerance: 0.85~1.1
- Current consumption: DC supply: ⩽90mA, 24V DC

Input:
- Input current: ⩽50mA(24V DC)
- Cable resistance: ⩽15Ω
- Input devices: PNP Light beam devices

Output:
- Number of contacts: 3NO+1NC
- Contact material: $AgSnO_2$+0.2 μm Au
- External contact fuse protection: 10A quick, or 6A slow
- Utilisation category in accordance with EN60947-5-1: AC-15, 5A/230V; DC-13, 5A/24V

Times:
- Switch-on delay:
  - with automatic reset: ⩽300ms
  - with manual reset: ⩽150ms
- Delay-on de-energisation:
  - with E-STOP: ⩽30ms
  - with power failure: ⩽100ms
- Recovery time:
  - After E-STOP: ⩽30ms
  - After power failure: ⩽100ms
- Supply interruption before de-energisation: 20ms

Block diagram



Environmental Characteristics

EMC: In accordance with EN60947, EN61000-6-2, EN61000-6-4
Vibration frequency: 10~55Hz
Vibration amplitude: 0.35mm
Clearance and creepage: In accordance with EN 60947-1
Overvoltage category: Ⅲ
Pollution degree: 2
Protection type: IP20
Rated insulation voltage: 250V AC
Rated impulse voltage: 4000V(1.2/50us)
Dielectric strength: 1500V AC,1min
Ambient temperature: -20~+60℃
Storage temperature: -40~+85℃
Relative humidity: 10%~90%
Mechanical endurance: over 10^7 times

Safety–related characteristic data

Performance level(PL): PLe	in accordance with EN IS0 13849
Category(Cat.): Cat.4	in accordance with EN 954-1
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): SIL3	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 frequency of dangerous failure(PFH_d): 3.09E-10/h	in accordance with IEC61508, IEC62061
Stop Catgory: 0	in accordance with EN60204-1

B_{10d}:

DC-13, Rated voltage(Ue)=24V:

Rated current(Ie)	5A	2A	1A
Cycles	300,000	2,000,000	7,000,000

AC-15, Rated voltage(Ue)=230V:

Rated current(Ie)	5A	3A	1A
Cycles	200,000	230,000	380,000