E–STOP pushbuttons, safety gates input

CZSR8001–3A1B
Output: 3NO, 1NC

CZSR8001-3A1B is suitable for E-STOP pushbuttons, safety gates input, with 3NO(Normal open) and 1NC(Normal close) safety relays. It can choose single or dual channel operation, manual or automatic reset, with function of short circuit monitoring between channels.



Dimensions:114.5mm × 99.0mm × 22.5mm

Specification

Power:
- Supply voltage: 24V DC/AC
- Voltage tolerance: 0.85~1.1
- Current consumption: DC supply: ⩽90mA, 24V DC
  AC supply: ⩽180mA, 24V AC

Input:
- Input current: ⩽50mA(24V DC)
- Cable resistance: ⩽15Ω
- Input devices: E–STOP pushbuttons, safety gates

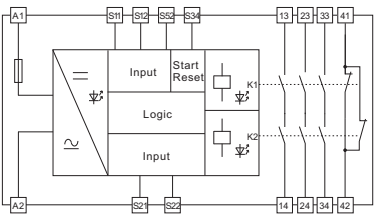
Output:
- Number of contacts: 3NO+1NC
- Contact material: $AgSnO_2$+0.2 μm Au
- External contact fuse protection: 10A quick, or 6A slow
- Utilisation category in accordance with EN60947-5-1:
  AC-15, 5A/230V; DC-13, 5A/24V

Times:
- Switch-on delay:
  - with automatic reset, E-STOP operation: ⩽300ms
  - with automatic reset, power-on delay: ⩽300ms
  - with manual reset, 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

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

Block diagram



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