

# TECHNICAL DATA SHEET

## SAFETY RELAY DK-LS-3A1B.C series



**SIL3**  
IEC61508

**PLe**  
**Cat.4**  
EN/ISO13849



Note: Dimensions (depth × height × width): 114.5mm × 99.0mm × 22.5mm

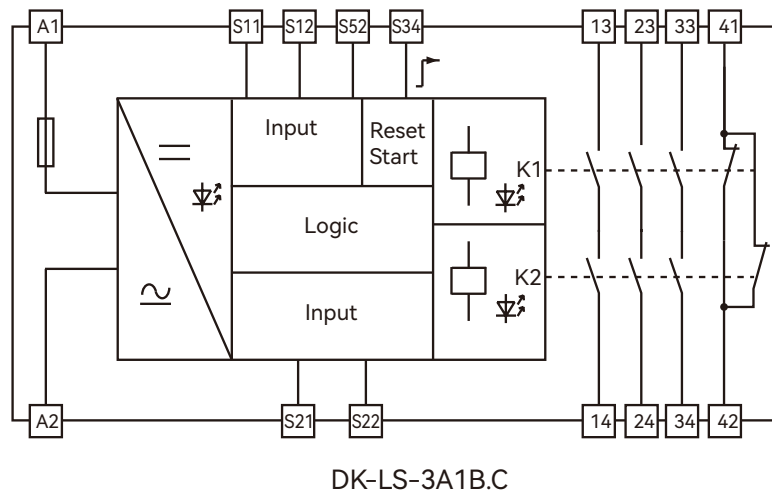
## Product features

DK-LS-3A1B.C is a safety relay suitable for emergency stop, safety door, PNP type safety light curtain signal of various mechanical equipment. It has 3 normally open (NO) safety output contacts and 1 normally closed (NC) auxiliary output contact, and can select single/dual channel operation, manual/automatic reset, and short circuit monitoring between channels. It adopts the design of components produced in China, has excellent cost performance, and maintains the performance, specifications, quality, etc.

## Technical data

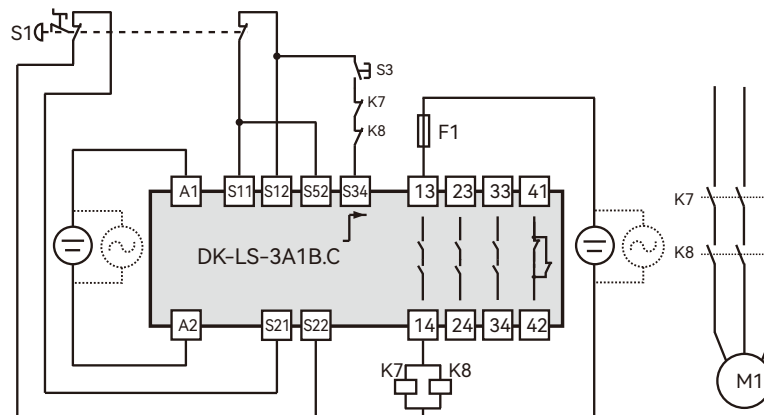
Power supply characteristics	
Supply voltage	24V DC/AC
Voltage tolerance	0.85~1.1
Current consumption	≤90mA (24V DC); ≤240mA (24V AC)
Input characteristics	
Input current	≤50mA (24V DC)
Wire resistance	≤15Ω
Input devices	Emergency stop button, safety door, PNP type safety light curtain
Output characteristics	
Number of contacts	3NO + 1NC
Contact material	AgSnO <sub>2</sub> + 0.2μm Au
Contact fuse protection	10A gL/gG, NEOZED (normally open contact) 6A gL/gG, NEOZED (normally closed contact)
Electric shock mechanical life	more than 10 <sup>7</sup> times
Switching capacity (EN60947-5-1)	AC-15, 5A/230V; DC-13, 5A/24V
Time characteristics	
Pull-on buffer time	≤300ms
Release buffer time	≤30ms
Recovery time	≤100ms
Short power interruption	20ms
Environmental characteristics	
Electromagnetic compatibility	EN60947, EN61000-6-2, EN61000-6-4
Vibration	Frequency: 10Hz~55Hz; Amplitude: 0.35mm
Operating temperature	-20°C~+60°C
Storage temperature	-40°C~+85°C
Relative humidity	10%~90%
Altitude	≤2000m
Insulation characteristics	
Overvoltage level	III
Pollution level	2
Rated insulation voltage	250V AC
Rated impulse voltage	6000V (1.2/50us)
Insulation strength	1500V AC, 1min
Electrical clearance and creepage distance	in accordance with EN 60947-1
Certification	
Safety integrity level	SIL3
Performance level	Ple
Safety category	Cat.4

## Functional Block Diagram



## DK-LS-3A1B.C wiring diagram

### ■ Emergency stop button



### ■ PNP type safety light curtain

