

TECHNICAL DATA SHEET

SAFETY RELAY ELS-3A1B.C series



SIL3
IEC61508

PLe
Cat.4
EN/ISO13849



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

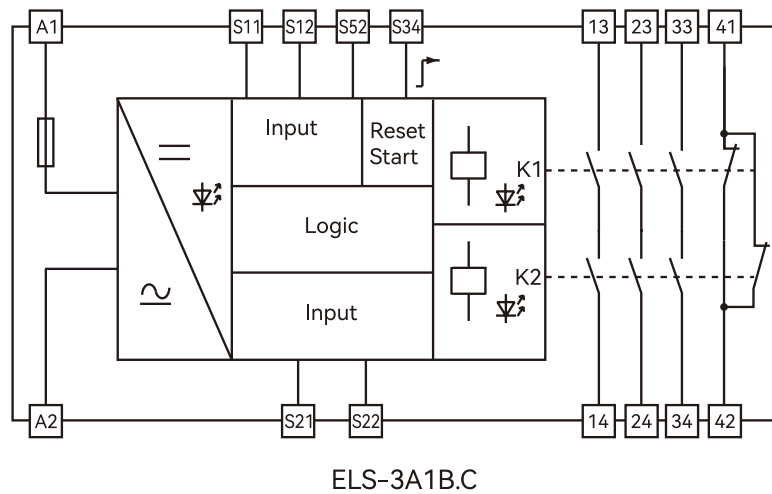
Product features

ELS-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

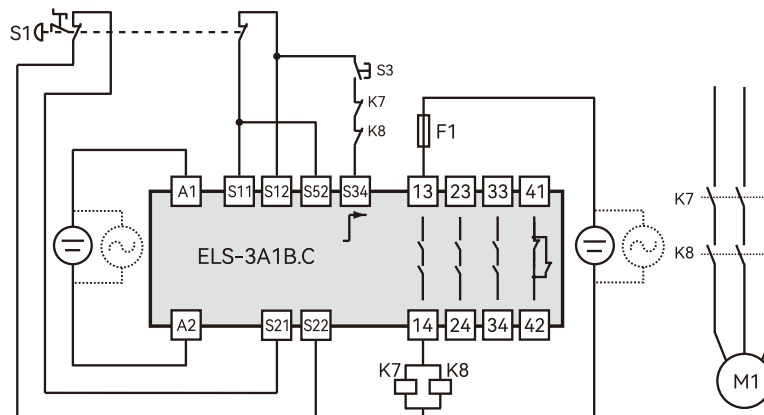
Power supply characteristics	
Supply voltage	24V DC/AC
Voltage tolerance	0.85~1.1
Current consumption	≤90mA (24V DC); ≤240mA (24V AC)
Input characteristics	
Input current	≤50mA (24V DC)
Wire resistance	≤15Ω
Input devices	Emergency stop button, safety door, PNP type safety light curtain
Output characteristics	
Number of contacts	3NO + 1NC
Contact material	AgSnO ₂ + 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 ⁷ 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



ELS-3A1B.C wiring diagram

- Emergency stop button



- PNP type safety light curtain

