TECHNICAL DATA SHEET

SAFETY RELAY
LS-2A4S series

Note: Dimensions (depth × height × width): 114.5mm × 99.0mm × 45.0mm
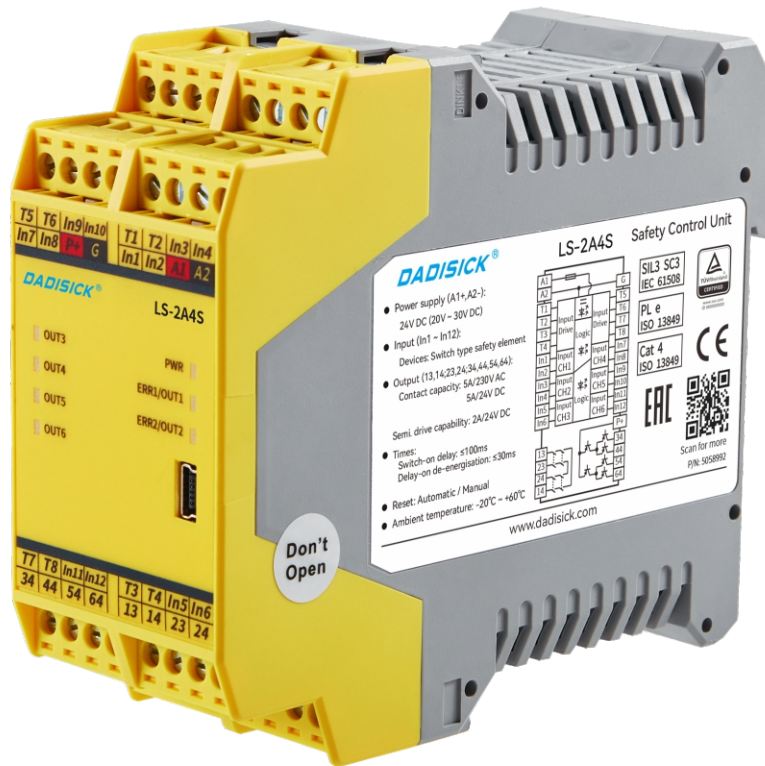
SIL3
IEC61508

PLe Cat.4
EN/ISO13849

TÜVRheinland
CERTIFIED
www.tuv.com
ID 0000000000

CE

Product features

Configurable control logic

Supports a variety of safety input signals

LS-2A4S is a configurable safety control module that supports a variety of switch-type safety element inputs (such as emergency stop buttons, safety doors, two-hand buttons, etc.), and supports up to 6 safety element inputs, 2 relay safety outputs and 4 semiconductor outputs. It can use configuration software to set safety control logic to meet a variety of on-site application requirements.

T5	T6	In9	In10		T1	T2	In3	In4
In7	In8	P+	G		In1	In2	A1	A2

DADISICK ®   LS-2A4S

▌ OUT3   PWR ▌
▌ OUT4   ERR1/OUT1 ▌
▌ OUT5   ERR2/OUT2 ▌
▌ OUT6

T7	T8	In11	In12		T3	T4	In5	In6
34	44	54	64		13	14	23	24

Safety relay module

*SIL3 PLe Cat.4 | TÜV Rheinland, SGS certified | Configurable control logic
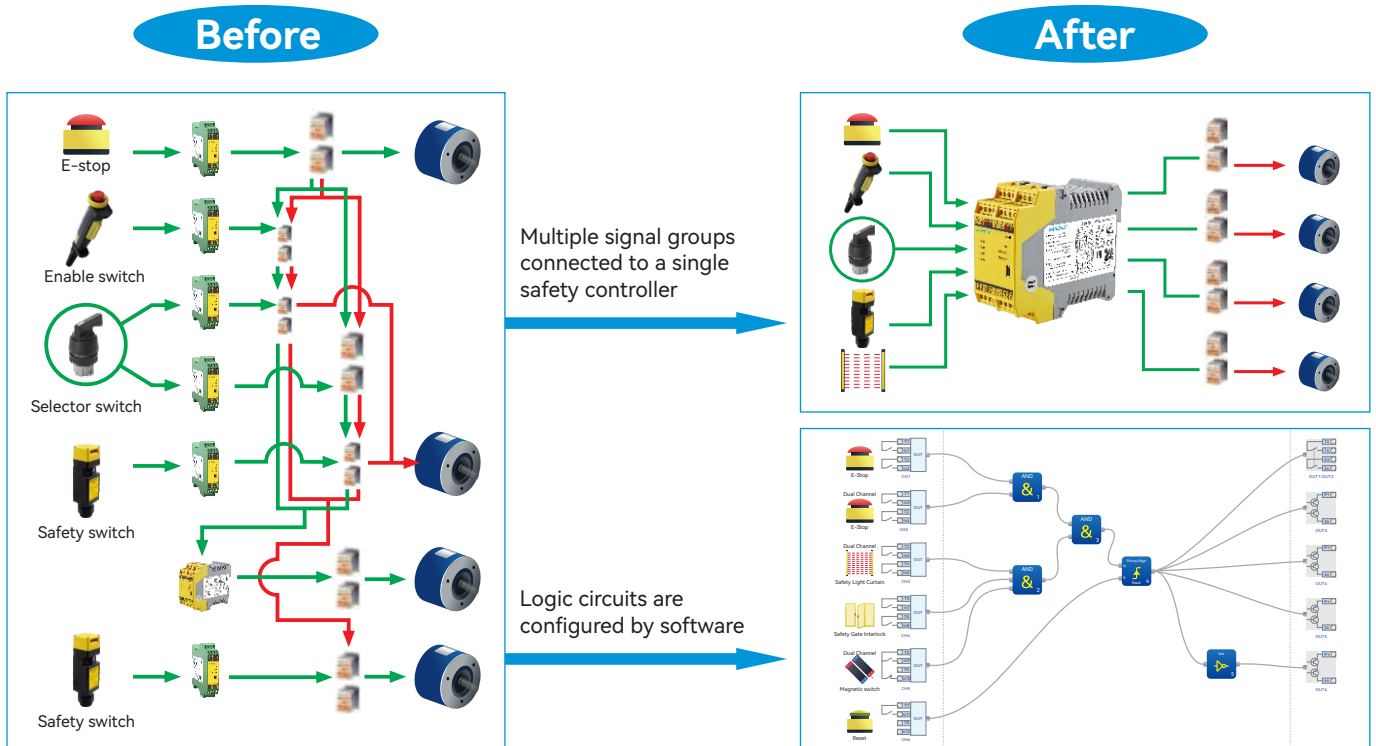Supports multiple safety input signals

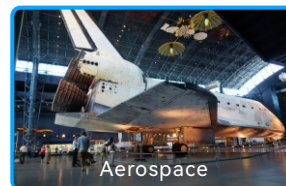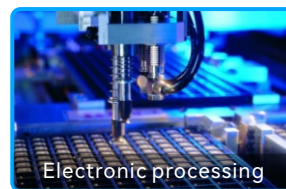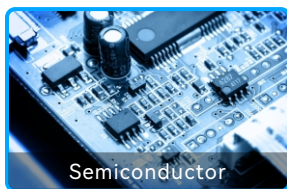**SIL 3** IEC61508   **PLe**   **SGS**   TÜVRheinland CERTIFIED www.tuv.com ID 9600000000   CE

▶ Replace multiple safety relays with one LS-2A4S configurable safety relay module

Category	Model	Power supply	Safety input		
			Redundant channels	Relay	Transistor
Configurable safety relay modules	LS-2A4S	24V DC	6	2	4

Connect all safety sensor signals to an LS-2A4S series safety controller and configure it through SafConfig to achieve the same functions that previously required complex wiring of multiple safety relays. On-site wiring is more convenient and the overall cost is lower.

Before

After

Multiple signal groups connected to a single safety controller

Logic circuits are configured by software

Industry Application

Semiconductor

Packaging

Electronic processing

Automotive

Material conveying

Automation Industry

Aerospace

Food & Beverage

Pharmaceutical Chemicals

Textile Industry

Printing Industry

Rubber & plastics

▶ Technical data

Power supply characteristics	
Supply voltage	20V~30V DC
Current consumption	≤110mA (24V DC)

Input characteristics	
Number of channels	6
Input current	≤50mA (24V DC)
Wire resistance	≤15Ω
Input devices	Emergency stop, safety door, safety light curtain, safety carpet, two-hand button, door magnetic switch, reset button

Relay output characteristics	
Number of contacts	2NO
Contact material	AgSnO2
Contact fuse protection	10A fast; 6A slow
Switching capacity	5A/250V AC; 5A/24V DC

Semiconductor output characteristics	
Number of outputs	4SO
Driving capacity	2A (24V DC)

Time characteristics	
Pull-in buffer time	≤100ms
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℃~+60℃
Storage temperature	-40℃~+85℃
Relative humidity	10%~90%

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

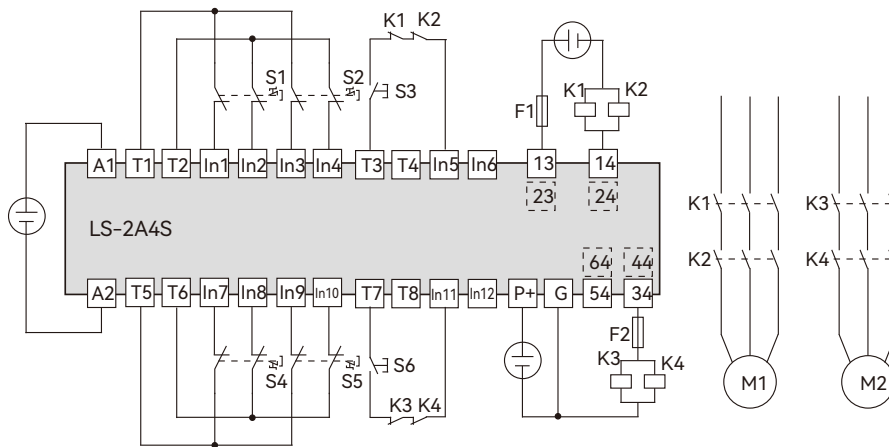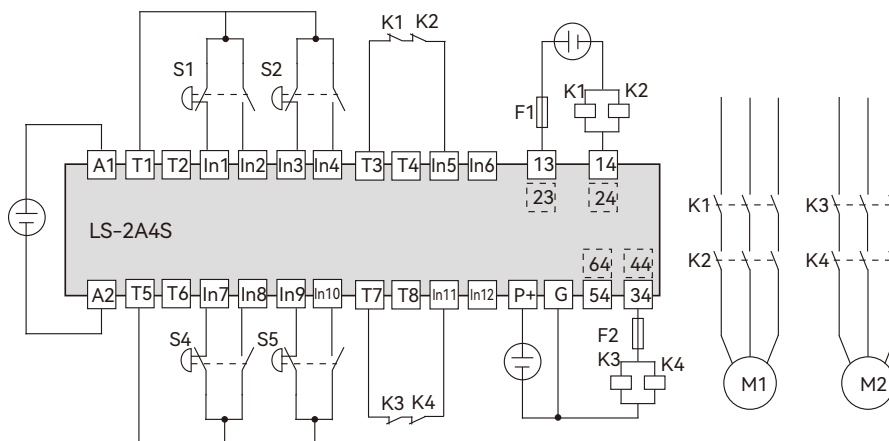| Certification	
Safety integrity level	SIL3
Performance level	Ple
Safety category	Cat.4

▶ Functional Block Diagram
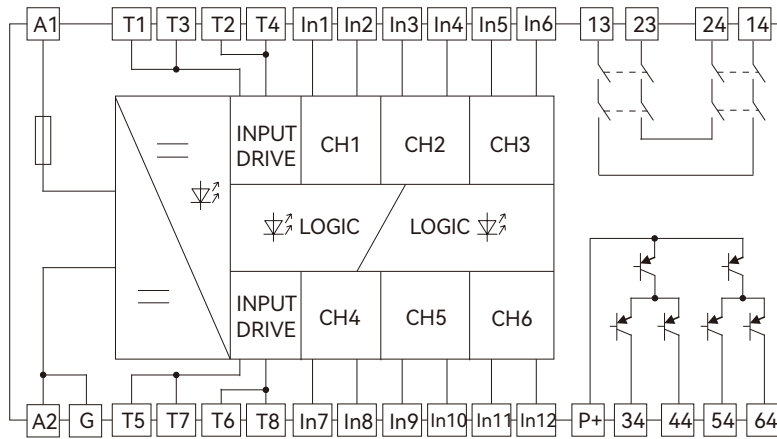
LS-2A4S

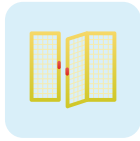# ▶ LS-2A4S wiring diagram

■ Four emergency stop button inputs

■ Two-way two-hand push button input
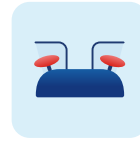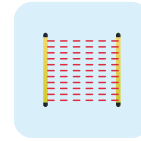
▶ Configurable safety input signals

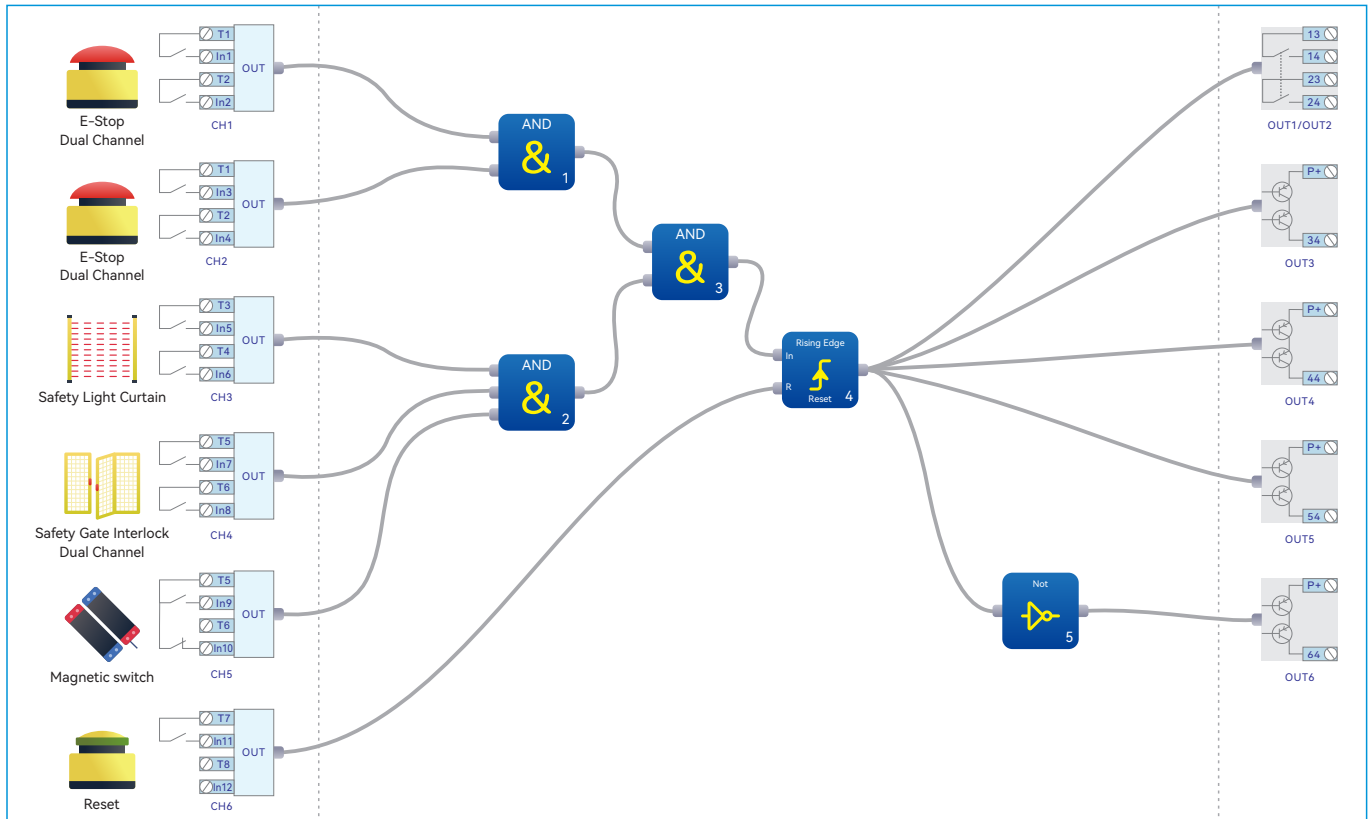|						
E-stop	Safety Gate	Safety Mat	Magnetic Switch	Two-handed Button	Safety Light Curtain	Reset Button

▶ SafConfig main interface

▶ Configurable logic function blocks

AND	OR	Not	NOR	XNOR	Rising Edge	Falling Edge

Automatic	Delay O	Delay On	Two Hand
			TYPE IIIC
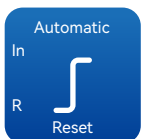
▶ SafConfig login interface
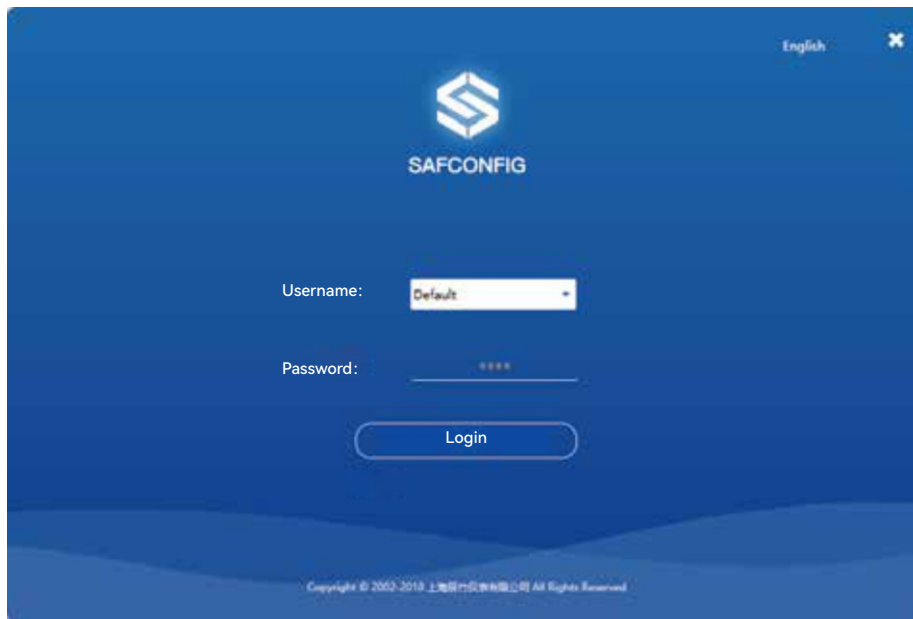
▶ SafConfig Software Features

- ♦ Online remote upgrade
- ♦ Drag-and-drop configuration of function blocks and wiring
- ♦ Function block quantity limit: max18
- ♦ Single-machine logic simulation after configuration
- ♦ Online monitoring
- ♦ Configurable safety input type and safety output delay in software