

SRB324-ST-24V (V3)



- 4 Signalling outputs
- 3 safety contacts, STOP 0; 2 safety contacts, STOP 1 (adjustable 1 ... 30 s)
- Suitable for signal processing of outputs connected to potentials (AOPDs), e.g. safety light grids/curtains
- Optional: Short-circuit recognition, Manual reset with edge detection in fail-safe circuit, Automatic reset function
- Suitable for signal processing of potential-free outputs, e.g. emergency stop command devices, position switches and solenoid interlocks

Data

Ordering data

Product type description	SRB324ST 24V (V.3)
Article number (order number)	101195504
EAN (European Article Number)	4030661446547
eCl@ss number, Version 9.0	27-37-18-19
Replacement article number	101179876

Certifications

Certificates	TÜV cULus EAC TILVA
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General data

Product name	SRB324ST
Standards	IEC 61508 IEC/EN 60204-1 ISO 13849-1 EN 60947-5-1
Climatic stress	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated

Material of the contacts, electrical AgSn0, Ag-Ni, self-cleaning, positive drive

Weight 435 g

General data - Features

Stop-Category	0
	1
Electronic Fuse	Yes
Wire breakage detection	Yes
Short-circuit recognition	Yes
Removable Terminals	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Reset edge detection	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Number of auxiliary contacts	1
Number of LEDs	6
Number of openers	2
Number of safety contacts	5
Number of Safety contacts, STOP 0	3
Number of Safety contacts, STOP 1	2
Number of signalling outputs	3

Safety appraisal

Standards EN 60947-5-1
IEC 61508

Safety appraisal - Relay outputs

Performance Level, Stop 0	e
Performance Level, Stop 1	d
Category, Stop 0	4
Category, Stop 1	3
Diagnostic Coverage (DC) Level, Stop 0	≥ 99 %
Diagnostic Coverage (DC) Level, Stop 1	> 60
PFH-Value Stop 0	2.00×10^{-8} /h
PFH-Value Stop 1	2.00×10^{-7} /h
Safety Integrity Level (SIL), Stop 0	3

Safety Integrity Level (SIL), Stop 1 2

PFD value 5.30×10^{-5}

PFD value 5.30×10^{-5}

Mechanical data

Mounting Snaps onto standard DIN rail to EN 60715

Mechanical life, minimum 10,000,000 Operations

Mechanical data - Connection technique

Terminal Connector Screw connection
rigid or flexible

Terminal designations IEC/EN 60947-1

Cable section, minimum 0.25 mm^2

Cable section, maximum 2.5 mm^2

Tightening torque of Clips 0.6 Nm

Mechanical data - Dimensions

Width 45 mm

Height 100 mm

Depth 121 mm

Ambient conditions

Protection class of the enclosure IP40

Protection class of the Clearance IP54

Protection class of Clips or
Terminals IP20

Ambient temperature, minimum $-25 \text{ }^\circ\text{C}$

Ambient temperature, maximum $+60 \text{ }^\circ\text{C}$

Storage and transport
temperature, minimum $-40 \text{ }^\circ\text{C}$

Storage and transport
temperature, maximum $+85 \text{ }^\circ\text{C}$

Resistance to vibrations to EN
60068-2-6 10 ... 55 Hz, Amplitude 0.35 mm

Resistance to shock 30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage 4 kV
III

Degree of pollution to VDE 0110 2

Electrical data

Frequency range	50 Hz 60 Hz
Rated operating voltage	24 VAC -15% / +10% 24 VDC -15% / +20%, residual ripple max. 10 %
Rated AC voltage for controls, 50 Hz, minimum	20.4 VAC
Rated control voltage at AC 50 Hz, maximum	26.4 VAC
Rated AC voltage for controls, 60 Hz, minimum	20.4 VAC
Rated control voltage at AC 60 Hz, maximum	26.4 VAC
Rated AC voltage for controls at DC minimum	20.4 VDC
Rated control voltage at DC, maximum	28.8 VDC
Electrical power consumption	3.2 W
Electrical power consumption	7.1 VA
Contact resistance, maximum	0.1 Ω
Note (Contact resistance)	in new state
Drop-out delay in case of power failure, typically	80 ms
Drop-out delay in case of emergency, typically	30 ms
Pull-in delay at automatic start, maximum, typically	250 ms
Pull-in delay at RESET, typically	20 ms

Electrical data - Safe relay outputs

Voltage, Utilisation category, AC15	230 VAC
Current, Utilisation category, AC15	6 A
Voltage, Utilisation category, DC13	24 VDC
Current, Utilisation category, DC13	6 A
Switching capacity, minimum	10 VDC
Switching capacity, minimum	10 mA
Switching capacity, maximum	250 VAC
Switching capacity, maximum	8 A
Voltage, Utilisation category, AC15	230 VAC

Current, Utilisation category, AC15	3 A
Voltage, Utilisation category, DC13	24 VDC
Current, Utilisation category, DC13	2 A
Switching capacity, minimum	10 VDC
Switching capacity, minimum	10 mA
Switching capacity, maximum	250 VAC
Switching capacity, maximum	6 A

Electrical data - Digital inputs

Conduction resistance, maximum 40 Ω

Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum 24 VDC
Switching capacity, maximum 2 A

Electrical data - Electromagnetic compatibility (EMC)

EMC-Directive

Status indication

Indicated operating states
Position relay K2
Position relay K1
Internal operating voltage U_{i}
Position relay K3

Other data

Note (applications)
Safety sensor
Guard system
Emergency-Stop button
Pull-wire emergency stop switches
Safety light curtain

Notes

Note (General) Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

Circuit example

The wiring diagram is shown with guard doors closed and in de-energised condition.

The control recognises cross-short, cable break and earth leakages in the monitoring circuit.

Note (Wiring diagram)

2 channel control shown for a guard-door monitor with two contacts, of which at least one contact has positive break, with external reset button (R).

(H2) = Feedback circuit

Pictures

Product picture (catalogue individual photo)



ID: ksrb3f08

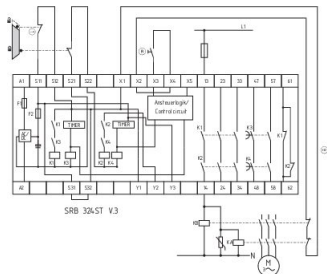
| 1,4 MB | .jpg | 342.547 x 625.122 mm - 971 x 1772
Pixel - 72 dpi

| 174,0 kB | .jpg | 27.009 x 49.361 mm - 319 x 583
Pixel - 300 dpi

| 96,5 kB | .png | 74.083 x 135.114 mm - 210 x 383
Pixel - 72 dpi

| 3,8 kB | .jpg | 35.278 x 35.278 mm - 100 x 100 Pixel -
72 dpi

Wiring example



ID: ksrb3i10

| 47,5 kB | .cdr |

| 156,5 kB | .jpg | 352.778 x 298.097 mm - 1000 x 845
Pixel - 72 dpi

Symbol (technical standard)

K	n-op/y	t-cycle
20 %	525.600	1,0 min
40 %	210.240	2,5 min
60 %	75.087	7,0 min
80 %	30.918	17,0 min
100 %	12.223	43,0 min

ID: kformm02

| 191,1 kB | .jpg | 352.778 x 246.592 mm - 1000 x 699
Pixel - 72 dpi

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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