



SRB 301LC/B-24V

- 1 Signalling output
- 3 safety contacts, STOP 0
- Suitable for signal processing of outputs connected to potentials (AOPDs), e.g. safety light grids/curtains
- Fit for signal evaluation of outputs of safety magnetic switches (to this end, integrated current and voltage limiters)
- Suitable for signal processing of potential-free outputs, e.g. emergency stop command devices, position switches and solenoid interlocks

Data

Ordering data

	SRB 301LC/B-24V
	101177962
EAN (European Article Number)	4250116201686
eCl@ss number, Version 9.0	27-37-18-19
Available until	31.12.2022

Approval - Standards

cULus
CCC
EAC

General data

	SRB 301LC/B
	IEC 61508
	IEC/EN 60204-1
	ISO 13849-1
	EN 60947-5-1
	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated

Material of the contacts, electrical	AgSn0. self-cleaning, positive drive
Gross weight	230 g

General data - Features

Stop-Category	0
Wire breakage detection	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Number of auxiliary contacts	1
Number of LEDs	4
Number of openers	2
Number of safety contacts	3

Safety appraisal

EN 60947-5-1
IEC 61508

Safety appraisal - Relay outputs

Performance level, stop 0, up to	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	$\geq 99 \%$
PFH-Value Stop 0	$2.00 \times 10^{-8} / \text{h}$
Safety Integrity Level (SIL), Stop 0, applicable for	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Mechanical data

Mounting	Snap 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

	0.25 mm ²
	2.5 mm ²
Tightening torque of Clips	0.6 Nm

Mechanical data - Dimensions

Width	22.5 mm
Height	100 mm
Depth	121 mm

Ambient conditions

	IP40
	IP54
	IP20
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+45 °C
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations to EN 60068-2-6	10...55 Hz, Amplitude 0.35 mm, ± 15 %
	30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage	4 kV
	III
	2

Electrical data

Frequency range	60 Hz
	24 VAC -15% / +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 1.7 W

Electrical power consumption 1.9 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 20 ms

Pull-in delay at automatic start, maximum, typically 100 ms

Pull-in delay at RESET, typically 20 ms

Electrical data - Safe relay outputs

Voltage, Utilisation category AC15 230 VAC

Current, Utilisation category AC-15 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

Electrical data - Digital inputs

Conduction resistance, maximum 40 Ω

Electrical data - Digital Output

Voltage, Utilisation category DC12 24 VDC

Current, Utilisation category DC12 0.1 A

Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum 24 VDC

Switching capacity,
maximum

2 A

Electrical data - Electromagnetic compatibility (EMC)

EMC rating

EMC-Directive

Status indication

Indicated operating states

Position relay K2
Position relay K1
Internal operating voltage U_i

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

Note (Wiring diagram)

The wiring diagram is shown with guard doors closed and in de-energised condition.
The control system recognises wire-breakage and earth faults in the monitoring circuit.
Relay outputs: Suitable for 2 channel control, for increase in capacity or number of contacts by means of contactors or relays with positive-guided contacts.
Automatic start: The automatic start is programmed by connecting the feedback circuit to the terminals X1/X2. If the feedback circuit is not required, establish a bridge.
For 1-channel control, connect NC contact to S11/S12 and bridge S12/S22
Connect potential p-type outputs of safety light grids/curtains to S12/S22. The devices must have the same reference potential.
Input level: The example shows a 2-channel control of a guard door monitoring with two position switches, whereof one with positive break, external reset button (R); cross-wire monitoring and feedback circuit (H2)

Pictures

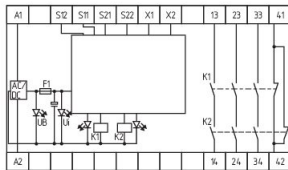
Photo/Product/Catalogue



ID: ksrb3f03

| 732,6 kB | .jpg | 265.642 x 529.167 mm - 753 x 1500
Pixel - 72 dpi
| 88,6 kB | .png | 74.083 x 147.461 mm - 210 x 418
Pixel - 72 dpi

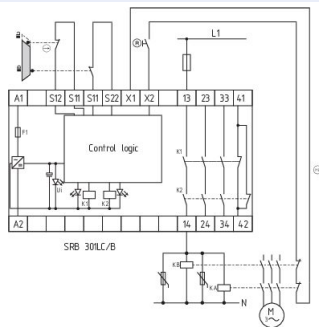
Graphic/Product/Wiring



ID: 1srb3l04

| 74,5 kB | .cdr |
| 101,3 kB | .jpg | 352.778 x 248.003 mm - 1000 x 703
Pixel - 72 dpi

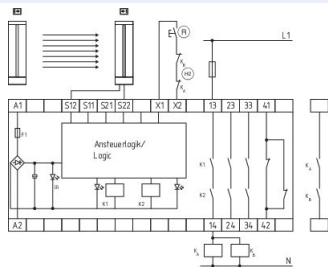
Graphic/Product/Wiring



ID: ksrb3l11

| 149,9 kB | .jpg | 352.425 x 359.833 mm - 999 x 1020
Pixel - 72 dpi

Graphic/Product/Wiring



ID: ksrb3l23

| 123,5 kB | .jpg | 352.778 x 285.044 mm - 1000 x 808
Pixel - 72 dpi
| 34,1 kB | .cdr |

Graphic/Product/Icon

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.

Generated on 392021-01-31T12:24:39+01:001201Europe/BerlinSun, 31 Jan 2021 12:24:39

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