



SRB301LC-24VAC/DC

- **1 Signalling output**
- **3 safety contacts, STOP 0**
- **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	SRB301LC 24VAC/DC
Article number (order number)	101163475
EAN (European Article Number)	4250116201532
eCl@ss number, Version 9.0	27-37-18-19
Replacement article number	101165472

Certifications

Certificates	CE
	cULus
	CCC
	EAC
	TILVA

General data

Product name	SRB 301LC
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. self-cleaning, positive drive

Gross weight	250 g
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General data - Features

Stop-Category	0
Wire breakage detection	Yes
Short-circuit recognition	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

Standards	EN 60947-5-1 IEC 61508
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Safety appraisal - Relay outputs

Performance Level, Stop 0	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	$\geq 99 \%$
PFH-Value Stop 0	$2.00 \times 10^{-8} /h$
Safety Integrity Level (SIL), Stop 0	3

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
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	22.5 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 °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, $\pm 15\%$
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage	4 kV
	III
Degree of pollution to IEC/EN 60664-1	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
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Rated control voltage at DC, maximum	28.8 VDC
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Electrical power consumption	1.7 W
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Electrical power consumption	1.9 VA
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Contact resistance, maximum	0.1 Ω
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Note (Contact resistance)	in new state
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Drop-out delay in case of power failure, typically	80 ms
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Drop-out delay in case of emergency, typically	20 ms
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Pull-in delay at automatic start, maximum, typically	100 ms
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Pull-in delay at RESET, typically	20 ms
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Electrical data - Safe relay outputs

Switching capacity, minimum	10 VDC
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Switching capacity, minimum	10 mA
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Switching capacity, maximum	250 VAC
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Switching capacity, maximum	8 A
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Electrical data - Digital inputs

Conduction resistance, maximum	40 Ω
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Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum	24 VDC
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Switching capacity, maximum	2 A
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Electrical data - Electromagnetic compatibility (EMC)

EMC-Directive

Status indication

Indicated operating states	Position relay K2
	Position relay K1
	Internal operating voltage U _i

Other data

Note (applications)	Guard system
	Emergency-Stop button
	Pull-wire emergency stop switches

Notes

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

Note (Wiring diagram)	The wiring diagram is shown with guard doors closed and in de-energised condition.
	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.
	The control recognises cross-short, cable break and earth leakages in the monitoring circuit.
	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)
	In case of a 1-channel control, connect the NC contact to the operating voltage and bridge S11/S12 and S21/S22.

Pictures

Product picture (catalogue individual photo)



ID: ksrb3f03

| 88,6 kB | .png | 74.083 x 147.461 mm - 210 x 418

Pixel - 72 dpi

| 732,6 kB | .jpg | 265.642 x 529.167 mm - 753 x 1500

Pixel - 72 dpi

| 152,9 kB | .jpg | 27.093 x 53.933 mm - 320 x 637

Pixel - 300 dpi

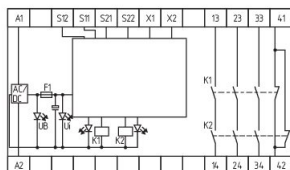
Symbol (technical standard)

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

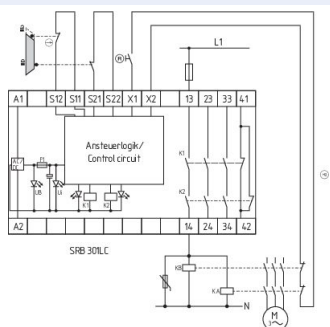
Wiring example



ID: 1srb3l04

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

Wiring example



ID: ksrb3l04

| 46,0 kB | .cdr |
| 160,4 kB | .jpg | 352.778 x 353.483 mm - 1000 x
1002 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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