



SRB301LC-24V

- 3 safety contacts, STOP 0
- 1 Signalling output
- Suitable for the signal processing of outputs with contact sensors

Data

Ordering data	
Replacement article number	101165472
Product type description	SRB301LC-24V
Article number (order number)	101163475
EAN (European Article Number)	4250116201532
eCl@ss number, version 12.0	27-37-18-19
eCl@ss number, version 11.0	27-37-18-19
eCl@ss number, version 9.0	27-37-18-19
ETIM number, version 7.0	EC001449
ETIM number, version 6.0	EC001449
Approvals - Standards	
Certificates	TILVA
	cULus
	CCC
General data	
Standards	EN IEC 60947-5-3
	EN IEC 60947-5-5
	EN IEC 60947-5-1

General data	
	EN IEC 61508
	EN IEC 60204-1
	EN IEC 60947-1
	EN ISO 13849-1
	EN IEC 62061
Climatic stress	EN 60068-2-78
Housing material	Glass-fibre reinforced thermoplastic, ventilated
Gross weight	250 g

General data - Features	
Wire breakage detection	Yes
Cross-circuit 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 normally closed (NC)	2
Number of safety contacts	3

Safety classification	
Standards	EN IEC 61508
	EN IEC 60947-5-1
Stop-Category	0

Safety classification - Relay outputs	
Performance Level, stop 0, up to	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	≥ 99 %
PFH value, Stop 0	2.00 x 10 ⁻⁸ /h
Safety Integrity Level (SIL), Stop 0, suitable for applications in	3
Mission time	20 Year(s)

Safety classification - Relay outputs

Common Cause Failure (CCF), minimum	65
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Mechanical data

Mechanical lifetime, minimum	10,000,000 Operations
Mounting	Snaps onto standard DIN rail to EN 60715

Mechanical data - Connection technique

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
Allowed type of cable	solid single-wire
	flexible
Terminal (mechanical)	Screw terminals

Mechanical data - Dimensions

Width	22.5 mm
Height	100 mm
Depth	121 mm

Ambient conditions

IP Degree of protection of the enclosure	IP40
IP Degree of protection of the installation space	IP54
IP Degree of protection of clips or terminals	IP20
Ambient temperature	-25 ... +45 °C
Storage and transport temperature	-40 ... +85 °C
Resistance to vibrations	10...55 Hz, Amplitude 0.35 mm, ± 15 %
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation values

Rated impulse withstand voltage Uimp	4 kV
Overvoltage category	III
Degree of pollution	2

Electrical data

Frequency range	50 Hz
	60 Hz
Operating voltage	24 VAC -15 % / +10 %24 VDC -10 % / +20 %
Ripple voltage	10 %
Rated operating voltage	24 VAC
Rated operating voltage	24 VDC
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
Material of the contacts, electrical	AgSn0. self-cleaning, positive drive

Electrical data - Safe relay outputs

Voltage, Utilisation category AC-15	230 VAC
Current, Utilisation category AC-15	6 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	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
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Electrical data - Digital Output

Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	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
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Status indication

Indicated operating states	Position relay K1
	Internal operating voltage Ui
	Position relay K2

Other data

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

Note

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

Note (Wiring diagram)	The control recognises cross-short, cable break and earth leakages 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.
	In case of a 1-channel control, connect the NC contact to the operating voltage and bridge S11/S12 and S21/S22.
	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.

Wiring example

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)

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

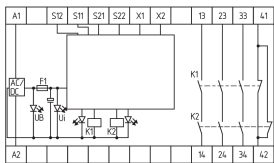
Pictures

Product picture (catalogue individual photo)



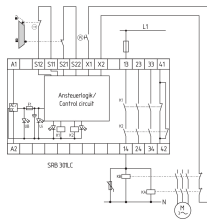
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| 46.7 KB | .jpg | 176 x 350 Pixel
| 88.64 KB | .png | 210 x 418 Pixel

Wiring example



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Wiring example



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Symbol (technical standard)

K	n-op/y	t-cycle	ID: kformm02
20 %	525.600	1,0 min	191.12 KB .jpg 1000 x 699 Pixel
40 %	210.240	2,5 min	
60 %	75.087	7,0 min	
80 %	30.918	17,0 min	
100 %	12.223	43,0 min	

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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