



SRB301MC-24V

- Suitable for the signal processing of outputs with contact sensors
- 3 safety contacts, STOP 0
- 1 Signalling output
- Suitable for signal processing of outputs connected to potentials (AOPDs), e.g. safety light grids/curtains
- Suitable for the signal processing of outputs with contact sensors

Data

Ordering data

Product type description	SRB301MC-24V
Article number (order number)	101190684
EAN (European Article Number)	4250116202249
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
Available until	31.12.2023

Approvals - Standards

Certificates	TÜV cULus CCC EAC
--------------	----------------------------

General data

Standards	EN IEC 62061 EN ISO 13849-1 EN IEC 60947-5-1 EN IEC 60947-5-3 EN IEC 60947-5-5 EN IEC 61508 EN IEC 60204-1 EN IEC 60947-1
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
Gross weight	250 g

General data - Features

Stop-Category	0
Electronic Fuse	Yes
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 60947-5-1 EN IEC 61508
-----------	----------------------------------

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	2.00×10^{-8} /h
Safety Integrity Level (SIL), Stop 0, suitable for applications in	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Mechanical data

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

Mechanical data - Connection technique

Termination	rigid or flexible Screw terminals M20 x 1.5
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

Degree of protection of the enclosure	IP40
Degree of protection of the mounting space	IP54
Degree of protection of clips or terminals	IP20
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+60 °C

Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+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 U_{imp}	4 kV
Overvoltage category	III
Degree of pollution	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	2 W
Electrical power consumption	4.9 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 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
--------------------------------	-------------

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
------------	---------------

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

Pictures

Product picture (catalogue individual photo)



ID: ksrb3f20

| 743.3 kB | .jpg | 265.642 x 529.167 mm - 753 x 1500 px - 72 dpi

| 89.3 kB | .png | 74.083 x 147.461 mm - 210 x 418 px - 72 dpi

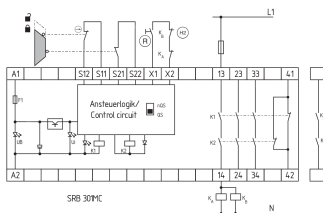
Symbol (technical standard)

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 px - 72 dpi

Wiring example



ID: ksrb3l18

| 90.7 kB | .ai | 82.447 x 51.39 mm - 233 x 145 px - 72 dpi

| 112.8 kB | .jpg | 352.778 x 226.483 mm - 1000 x 642 px - 72 dpi

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220

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: 03/11/2022, 11:09 am