



SRB301ST 230V

- 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

	SRB301ST 230V
	101170099
EAN (European Article Number)	4250116201822
eCl@ss number, Version 9.0	27-37-18-19
Replacement article number	101177167

Approval - Standards

TÜV
cULus
CCC
EAC

General data

	SRB301ST 230V
	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	250 g

General data - Features

Stop-Category	0
Electronic Fuse	Yes
Wire breakage detection	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	3
Number of openers	2
Number of safety contacts	3

Safety appraisal

EN 60947-5-1
IEC 61508

Safety appraisal - Relay outputs

Performance Level, up to	e
Control category to EN13849	4
Diagnostic Coverage (DC) Level	> 99 %
PFH-value	2.00×10^{-8} /h
Safety Integrity Level (SIL), applicable for	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

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

	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
	30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage	4 kV
	III
	2

Electrical data

Frequency range	60 Hz
	48 ... 240 VAC
Rated AC voltage for controls, 50 Hz, minimum	48 VAC
Rated control voltage at AC 50 Hz, maximum	240 VAC
Rated AC voltage for controls, 60 Hz, minimum	48 VAC
Rated control voltage at AC 60 Hz, maximum	240 VAC
Electrical power consumption	2.8 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

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.

Circuit example

Note (Wiring diagram) The wiring diagram is shown with guard doors closed and in de-energised condition.
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) and feedback circuit (H2).
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.
For 1-channel control, connect NC contact to S11/S12 and bridge S12/S22
Automatic start: The automatic start is programmed by connecting the feedback circuit to the terminals S12/X3. If the feedback circuit is not required, establish a bridge.
The control recognises cable break in the monitoring circuit.

Pictures

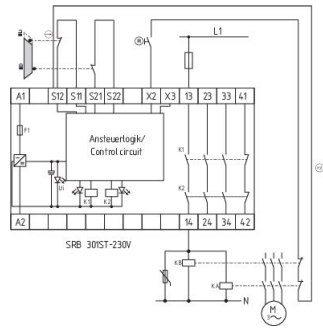
Photo/Product/Catalogue



ID: ksrb3f06

| 100,8 kB | .png | 74.083 x 173.919 mm - 210 x 493
Pixel - 72 dpi
| 807,3 kB | .jpg | 265.994 x 625.122 mm - 754 x 1772
Pixel - 72 dpi

Graphic/Product/Wiring



ID: ksrb3109

| 155,5 kB | .jpg | 352.425 x 359.833 mm - 999 x 1020
Pixel - 72 dpi
| 45,5 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

K.A. Schmersal GmbH & Co. KG, Möddinghofe 3, D-42279 Wuppertal

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 352021-01-31T12:25:35+01:001201Europe/BerlinSun, 31 Jan 2021 12:25:35

+010035pmSunday.31pm31Europe/BerlinCET2501Europe/BerlinJanuary2021Sun, 31 Jan 2021 12:25:35

+010001pm31