DATASHEET



SRB101EXi-1R

- Reset with trailing edge
- 1 safety contact
- Suitable for signal processing of emergency stop control devices, interlocking equipment, etc
- Installation in Ex-Zone 2

Data

Ordering data

Product type description	SRB101EXi-1R
Article number (order number)	103037574
EAN (European Article Number)	4030661542720
eCl@ss number, Version 9.0	27-37-18-19
eCl@ss number, Version 11.0	27-37-18-19
ETIM number, version 6.0	EC001449

Explosion protection

Explosion protection: regulations	EN 60079-0 EN 60079-11 EN 60079-15
Explosion protection zones	1 21
Explosion protection category	2D 2G
Explosion protection designation	II 3 G Ex nA nC IIC T5 Gc (Installation SRB, in Zone 2) II (2) G [Ex ib Gb] IIC II (2) D [Ex ib Db] IIIC

General data

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	263.8 g

General data - Features

Stop-Category	0
Wire breakage detection	Yes
Short-circuit recognition	Yes
Automatic reset function	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Number of auxiliary contacts	1
Number of LEDs	5
Number of openers	2
Number of safety contacts	1

Safety appraisal

Standards	EN ISO 13849-1 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	≥ 99 %
PFH-Value Stop 0	2.00×10^{-8} /h
Safety Integrity Level (SIL), Stop 0, suitable for applications in	3
Mission time	15 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

Terminal designations	IEC/EN 60947-1
Cable section, minimum	0.25 mm²
Cable section, maximum	2.5 mm²
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 to EN 60068-2-6	10 ... 55 Hz, Amplitude 0.35 mm

Restistance to shock	30 g / 11 ms
TEMP_AMBIENT_MIN_GEN	-25

Ambient conditions - Insulation value

Rated impulse withstand voltage U imp	4 kV
Overvoltage category	III
Degree of pollution to IEC/EN 60664-1	2

Electrical data

Operating Current	57 mA
Rated operating voltage	24 VDC -15%/+20%, residual ripple max. 10%
Rated AC voltage for controls at DC minimum	20.4 VDC
Rated control voltage at DC, maximum	28.8 VDC
Utilisation category AC-15	230 VAC
Utilisation category AC-15	2 A
Utilisation category DC-13	24 VDC
Utilisation category DC-13	2 A
Electrical power consumption	3 W
Contact resistance, maximum	0.1 Ω
Note (Contact resistance)	in new state
Drop-out delay in case of power failure, typically	20 ms
Drop-out delay in case of "emergency stop", maximum	20 ms
Pull-in delay at automatic start, maximum, typically	300 ms
Pull-in delay at RESET, typically	20 ms

Electrical data - Digital inputs

Conduction resistance, maximum	30 Ω

Electrical data - Electromagnetic compatibility (EMC)

EMC rating	EMC-Directive

Other data

Note (applications)	Safety sensor 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. Monitoring 1 guard door(s), each with a magnetic safety sensor of the BNS range If only one external relay or contactor is used to switch the load, the system can be classified in Control Category 3 to ISO 13849-1, if exclusion of the fault “Failure of the external contactor” can be substantiated and is documented, e.g. by using a reliable down-rated contactor. A second contactor leads to an increase in the level of security by redundant switching to switch the load off. To secure a guard door up to PL e and Category 4 The feedback circuit monitors the position of the contactors KA and KB. 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.

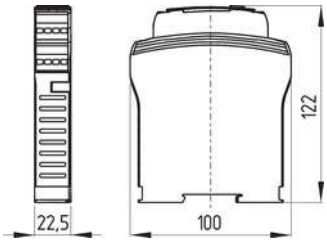
Pictures

Product picture (catalogue individual photo)



ID: ksrb1f04
| 768.2 kB | .jpg | 265.642 x 529.167 mm - 753 x 1500 px - 72 dpi
| 88.7 kB | .png | 74.083 x 147.461 mm - 210 x 418 px - 72 dpi

Dimensional drawing basic component



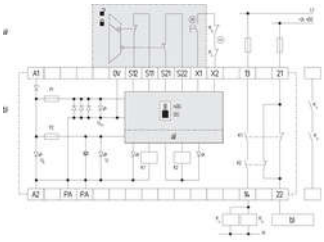
ID: ksrb1g01
| 112.7 kB | .jpg | 352.778 x 255.058 mm - 1000 x 723 px - 72 dpi

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: kprexl19
| 130.4 kB | .jpg | 352.778 x 258.939 mm - 1000 x 734 px - 72 dpi