# DATASHEET



## SRB200EXi-1R

- Reset with trailing edge
- 2 safety contacts
- Suitable for signal processing of emergency stop control devices, interlocking equipment, etc

## Data

### Ordering data

| | |
|---|---|
| Product type description | SRB200EXi-1R |
| Article number (order number) | 103037575 |
| EAN (European Article Number) | 4030661542737 |
| 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<br>EN 60079-11<br>EN 60079-15 |
| Explosion protection zones | 1<br>21 |
| Explosion protection category | 2D<br>2G |
| Explosion protection designation | II 3 G Ex nA nC IIC T5 Gc (Installation SRB, in Zone 2)<br>II (2) G [Ex ib Gb] IIC<br>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 | 264.9 g |

## General data - Features

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

## Safety appraisal

| | |
|---|---|
| Standards | EN ISO 13849-1<br>EN 60947-5-1<br>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 x $10^{-8}$ /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<br>Guard system<br>Emergency-Stop button<br>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.<br>Monitoring 1 guard door(s), each with a magnetic safety sensor of the BNS range<br>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.<br>To secure a guard door up to PL e and Category 4<br>The feedback circuit monitors the position of the contactors KA and KB.<br>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. |

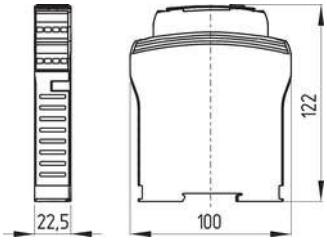
## Pictures

### Product picture (catalogue individual photo)




ID: ksrb2f14
| 767.8 kB | .jpg | 265.642 x 529.167 mm - 753 x 1500 px - 72 dpi
| 89.0 kB | .png | 74.083 x 147.461 mm - 210 x 418 px - 72 dpi

## Dimensional drawing basic component



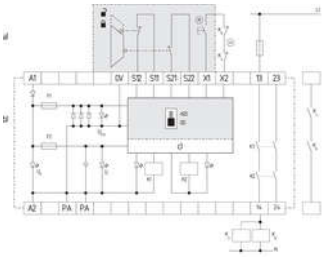

ID: ksrb1g01
| 112.7 kB | .jpg | 352.778 x 255.058 mm - 1000 x 723 px - 72 dpi

## 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: kprexl53
| 126.3 kB | .jpg | 352.778 x 277.283 mm - 1000 x 786 px - 72 dpi