



## SRB400NE 230V

- Possibility to connect a non-contact end switch or speed reduction switch
- 2 safety contacts, switch-off level 1; 2 safety contacts, switch-off level 2
- Fit for signal evaluation of outputs of safety magnetic switches (to this end, integrated current and voltage limiters)

### Data

#### Ordering data

|                               |               |
|-------------------------------|---------------|
|                               | SRB400NE 230V |
|                               | 101178396     |
| EAN (European Article Number) | 4250116202416 |
| eCl@ss number, Version 9.0    | 27-37-18-19   |
| Replacement article number    | 101178531     |

#### Approval - Standards

EAC

#### General data

|                                      |                                                  |
|--------------------------------------|--------------------------------------------------|
|                                      | SRB400NE                                         |
|                                      | 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 | Ag-Ni, self-cleaning, positive drive             |
| Gross weight                         | 530 g                                            |

## General data - Features

|                                     |     |
|-------------------------------------|-----|
| Stop-Category                       | 0   |
| Wire breakage detection             | Yes |
| Short-circuit recognition           | Yes |
| Removable Terminals                 | Yes |
| Feedback circuit                    | Yes |
| Automatic reset function            | Yes |
| Earth connection detection          | Yes |
| Integral System Diagnostics, status | Yes |
| Number of LEDs                      | 7   |
| Number of openers                   | 4   |
| Number of safety contacts           | 4   |

## Safety appraisal

EN 60947-5-1  
IEC 61508

## Safety appraisal - Relay outputs

|                                                      |                                  |
|------------------------------------------------------|----------------------------------|
| PFH-value                                            | $2.00 \times 10^{-8} / \text{h}$ |
| Performance level, stop 0, up to Category, Stop 0    | e<br>4                           |
| Diagnostic Coverage (DC) Level, Stop 0               | $\geq 99 \%$                     |
| Safety Integrity Level (SIL), Stop 0, 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<br>rigid or flexible                         |
| Terminal designations      | IEC/EN 60947-1<br>0.25 mm <sup>2</sup><br>2.5 mm <sup>2</sup> |
| Tightening torque of Clips | 0.6 Nm                                                        |

### Mechanical data - Dimensions

|        |        |
|--------|--------|
| Width  | 45 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, $\pm 15\%$ |
|                                            | 30 g / 11 ms                              |

### Ambient conditions - Insulation value

|                                 |      |
|---------------------------------|------|
| Rated impulse withstand voltage | 4 kV |
|                                 | III  |
|                                 | 2    |

### Electrical data

|                                                    |                      |
|----------------------------------------------------|----------------------|
| Frequency range                                    | 60 Hz                |
|                                                    | 230 VAC -15% / + 10% |
| Rated AC voltage for controls, 50 Hz, minimum      | 195.5 VAC            |
| Rated control voltage at AC 50 Hz, maximum         | 253 VAC              |
| Rated AC voltage for controls, 60 Hz, minimum      | 195.5 VAC            |
| Rated control voltage at AC 60 Hz, maximum         | 253 VAC              |
| Electrical power consumption                       | 6 W                  |
| Electrical power consumption                       | 7.8 VA               |
| Contact resistance, maximum                        | 0.1 $\Omega$         |
| 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 | 4 A     |
| Voltage, Utilisation category DC13  | 24 VDC  |
| Current, Utilisation category DC13  | 4 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 - 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 <sub>i</sub> |
|                            | Position relay K3                         |
|                            | Position relay K5                         |

#### Other data

|                     |               |
|---------------------|---------------|
| Note (applications) | Safety sensor |
|                     | Guard system  |

## 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 control system recognises wire-breakage and earth faults in the monitoring circuit.

The example shows a 1-channel control with contact A for a guard door monitor; of which at least one contact has positive break; with external reset button (R).

Relay outputs: Suitable for 1 channel control, for increase in capacity or number of contacts by means of contactors or relays with positive-guided contacts.

The wiring diagram is shown with non-actuated limit switches and in de-energised condition.

(H2) = Feedback circuit

## Pictures

### Photo/Product/Catalogue



ID: ksrb4f08

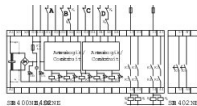
| 1,4 MB | .jpg | 342.547 x 625.122 mm - 971 x 1772

Pixel - 72 dpi

| 95,2 kB | .png | 74.083 x 135.114 mm - 210 x 383

Pixel - 72 dpi

### Graphic/Product/Wiring

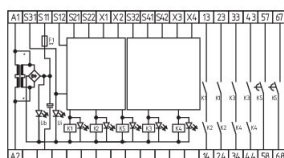


ID: ksrb4l04

| 145,0 kB | .jpg | 352.778 x 207.081 mm - 1000 x 587

Pixel - 72 dpi

### Graphic/Product/Wiring



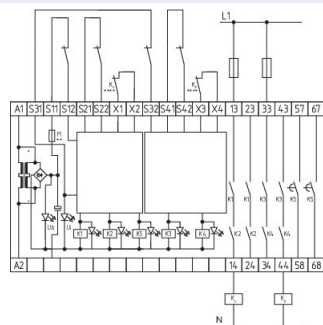
ID: 1srb4l03

| 35,9 kB | .cdr |

| 134,1 kB | .jpg | 352.778 x 247.297 mm - 1000 x 701

Pixel - 72 dpi

## Graphic/Product/Wiring



ID: ksrb4l03

| 40,9 kB | .cdr |

| 176,1 kB | .jpg | 352.778 x 358.775 mm - 1000 x 1017 Pixel - 72 dpi

## 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

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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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