



## SRB402NE 24V

- Suitable for the signal processing of outputs with contact sensors
- 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
- 2 Signalling outputs

## Data

### Ordering data

EAN (European Article Number)	4250116202409
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
Replacement article number	101178530

### Approval - Standards

Certificates	EAC
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### General data

Standards	IEC 61508 EN 60947-5-1 EN 60204-1 EN ISO 13849-1
Climatic stress	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated

Material of the contacts, electrical	Ag-Ni, self-cleaning, positive drive
Gross weight	370 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 auxiliary contacts	2
Number of LEDs	7
Number of openers	4
Number of safety contacts	4
Number of signalling outputs	2

## Safety appraisal

Standards	IEC/EN 60947-1 IEC 61508
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## Safety appraisal - Relay outputs

PFH-value	$2.00 \times 10^{-8}$ /h
Performance level, stop 0, up to	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	$\geq 99$ %
Safety Integrity Level (SIL), Stop 0, suitable for applications in	3

Mission time	20 Year(s)
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Common Cause Failure (CCF), minimum	65
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## Mechanical data

Mechanical life, minimum	10,000,000 Operations
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Mounting	Snaps onto standard DIN rail to EN 60715
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## Mechanical data - Connection technique

Terminal Connector	Screw connection rigid or flexible
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Terminal designations	IEC/EN 60947-1
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Cable section, minimum	0.25 mm <sup>2</sup>
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Cable section, maximum	2.5 mm <sup>2</sup>
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Tightening torque of Clips	0.6 Nm
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## Mechanical data - Dimensions

Width	45 mm
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Height	100 mm
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Depth	121 mm
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## Ambient conditions

Degree of protection of the enclosure	IP40
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Degree of protection of the mounting space	IP54
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Degree of protection of clips or terminals	IP20
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Ambient temperature, minimum	-25 °C
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Ambient temperature, maximum	+45 °C
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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, ± 15 %
Resistance to shock	30 g / 11 ms

### Ambient conditions - Insulation value

Rated impulse withstand voltage U <sub>imp</sub>	4 kV
Overvoltage category	III
Degree of pollution to IEC/EN 60664-1	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	6 W
Electrical power consumption	6 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 $\Omega$
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### 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
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## Status indication

Indicated operating states	Position relay K2
	Position relay K1
	Internal operating voltage $U_i$
	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.
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## 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

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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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