



SRB402EM

- 2 Signalling outputs
- 4 safety contacts, STOP 0
- Expander module for contact expansion

Data

Ordering data

Product type description	SRB402EM
Article number (order number)	101170840
EAN (European Article Number)	4250116201518
eCl@ss number, Version 9.0	27-37-18-19
Replacement article number	101175611

Certifications

Certificates	CCC EAC
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General data

Product name	SRB402EM
Standards	IEC 61508
	ISO 13849-1
	EN 60947-5-1
	EN 60204-1
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	250 g

General data - Features

Stop-Category	0
Wire breakage detection	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	1
Number of openers	1
Number of safety contacts	4

Safety appraisal

Standards	EN 60947-5-1 IEC 61508
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Safety appraisal - Relay outputs

Performance Level, Stop 0	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	$\geq 99\%$
PFH-Value Stop 0	$2.00 \times 10^{-8} /h$
Safety Integrity Level (SIL), Stop 0	3

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
Cable section, minimum	0.25 mm ²
Cable section, maximum	2.5 mm ²
Tightening torque of Clips	0.6 Nm

Mechanical data - Dimensions

Width	22.5 mm
Height	120 mm
Depth	121 mm

Ambient conditions

Protection class of the enclosure	IP40
Protection class of the Clearance	IP54
Protection class of Clips or Terminals	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 %
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage	4 kV 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	1 W
Electrical power consumption	1 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

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-Directive

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) Relay outputs: 1-channel control of the expander module is suitable for contact reinforcement or multiplication of the connected safety relay module.
 Terminals X1 and X2 of the expander module must be connected to the feedback circuit or reset circuit of the safety relay module.
 The wiring diagram shows the control of the expander module by a SRB... safety relay module with the guard doors closed and in de-energised condition.

Pictures

Product picture (catalogue individual photo)



ID: ksrb4f02

| 166,0 kB | .jpg | 27.093 x 63.669 mm - 320 x 752

Pixel - 300 dpi

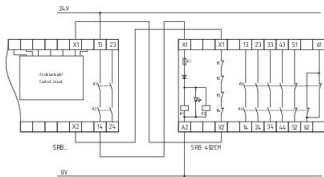
| 98,6 kB | .png | 74.083 x 173.919 mm - 210 x 493

Pixel - 72 dpi

| 793,2 kB | .jpg | 265.994 x 625.122 mm - 754 x 1772

Pixel - 72 dpi

Wiring example



ID: ksrb4l02

| 90,7 kB | .jpg | 352.778 x 188.383 mm - 1000 x 534

Pixel - 72 dpi

| 38,0 kB | .cdr |

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

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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