

## Datasheet - SRB100DR

Safety control modules for specific applications / double reset / SRB 100DR



- Safety relay module for double reset
- Suitable for signal processing of potential-free outputs, e.g. command devices
- 1 safety contact, STOP 0

(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	SRB100DR
Article number	101186279
EAN Code	4250116202218
eCl@ss	27-37-19-01

### Approval

Approval




### Classification

Standards	EN ISO 13849-1, IEC 61508, EN 60947-5-1
PFH value	$\leq 2,0 \times 10^{-8}/h$ (STOP 0)
Mission time	20 Years
- notice	<p>The PFH value is applicable for the combinations listed in the table for contact load (K) (current through enabling paths) and switching cycle number (n-op/y).</p> <p>In case of 365 operating days per year and a 24-hour operation, this results in the specified switching cycle times (t-cycle) for the relay contacts.</p> <p>Diverging applications on request.</p>

K	n-oply	t-cycle
20 %	525.800	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

## Global Properties

Permanent light	SRB100DR
Standards	IEC/EN 60204-1, EN 60947-5-1, EN ISO 13849-1, IEC 61508
Compliance with the Directives (Y/N) 	Yes
Climatic stress	EN 60068-2-78
Mounting	snaps onto standard DIN rail to EN 60715
Terminal designations	IEC/EN 60947-1
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, ventilated
- Material of the contacts	Ag-Ni, self-cleaning, positive action
Weight	250
Start conditions	Start button (monitored)
Start input (Y/N)	Yes
Feedback circuit (Y/N)	No
Start-up test (Y/N)	No
Reset after disconnection of supply voltage (Y/N)	Yes
Automatic reset function (Y/N)	No
Reset with edge detection (Y/N)	No
Pull-in delay	
- ON delay with reset button	50 ms

## Mechanical data

Connection type	Screw connection
Cable section	
- Min. Cable section	0,25
- Max. Cable section	2.5
Pre-wired cable	rigid or flexible
Tightening torque for the terminals	0,6
Detachable terminals (Y/N)	No
Mechanical life	10.000.000 operations
Electrical lifetime	Derating curve available on request
restistance to shock	30 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 HZ, Amplitude 0,35 mm, ± 15 %

## Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+60 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-40 °C
- Max. Storage and transport temperature	+85 °C
Protection class	
- Protection class-Enclosure	IP40
- Protection class-Terminals	IP20
- Protection class-Clearance	IP54

Air clearances and creepage distances To IEC/EN 60664-1

- Rated impulse withstand voltage U <sub>imp</sub>	4 kV
- Overvoltage category	III To VDE 0110
- Degree of pollution	2 To IEC/EN 60664-1

## Electromagnetic compatibility (EMC)

EMC rating	conforming to EMC Directive
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## Electrical data

Rated DC voltage for controls	
- Max. rated DC voltage for controls	20.4
- Max. rated DC voltage for controls	28.8
Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	20.4
- Max. rated AC voltage for controls, 50 Hz	26.4
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	20.4
- Max. rated AC voltage for controls, 60 Hz	26.4
Contact resistance	max. 100 mΩ
Power consumption	max. 3.2 W; 6.0 VA
Type of actuation	AC/DC
Rated operating voltage U <sub>e</sub>	24 VDC -15% / +20%, residual ripple max. 10% 24 VAC -15% / +10%
Frequency range	50 / 60 HZ
Electronic protection (Y/N)	Yes
Fuse rating for the operating voltage	Internal electronic trip, tripping current > 0,5 A, Reset after approximately 1 second/s

## Inputs

<b>Monitored inputs</b>	
- Short-circuit recognition (Y/N)	No
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	Yes
Number of shutters	0 piece
Number of openers	2 piece
Cable length	1-channel without cross-wire detection: 1500 m with 1.5 mm²; 2 channel without Short-circuit recognition: 2500 m with 2.5 mm²
Conduction resistance	max. 40 Ω

## Outputs

Number of safety contacts	1 piece
Number of auxiliary contacts	0 piece
Number of signalling outputs	0 piece
Switching capacity	
- Switching capacity of the safety contacts	max. 250 V, 8 A ohmic (inductive in case of appropriate protective wiring)
Fuse rating	
- Protection of the safety contacts	8 A gG D-fuse
Utilisation category To EN 60947-5-1	AC-15: 230 V / 8 A DC-13: 24 V / 8 A
Number of undelayed semi-conductor outputs with signaling function	0 piece
Number of undelayed outputs with signaling function (with contact)	0 piece
Number of delayed semi-conductor outputs with signaling function.	0 piece

Number of delayed outputs with signalling function (with contact).	0 piece
Number of secure undelayed semi-conductor outputs with signaling function	0 piece
Number of secure, undelayed outputs with signaling function, with contact.	1 piece
Number of secure, delayed semi-conductor outputs with signaling function	0 piece
Number of secure, delayed outputs with signaling function (with contact).	0 piece

## LED switching conditions display

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LED switching conditions display (Y/N)	Yes
Number of LED's	4

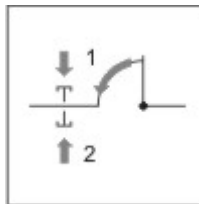
### LED switching conditions display

- The integrated LEDs indicate the following operating states.
- Position relay K2
- Position relay K1
- Position relay K3
- Supply voltage

## Miscellaneous data

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### Applications



Safety relay module for double reset

## Dimensions

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### Dimensions

- Width	22.5 mm
- Height	100 mm
- Depth	121 mm

## notice

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Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

## notice - Wiring example

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Start configuration: 2 time-dependent reset/on switches 1st and 2nd monitoring time between the 1st and 2nd reset button from 3 ... 30 seconds adjustable through DIP switches

The monitoring time is set through DIP switches located below the cover of the enclosure front. (Factory setting: 3 seconds)

Actuator configuration: 1-channel control (output impulse approx. 200 ms) of the reset input of a downstream safety relay module

(H2) = Feedback circuit

Edge detection: After the device is reset, the trailing edge is evaluated, so that errors, e.g. welded contacts or manipulations cannot lead to dangerous situations.

The wiring diagram is shown with guard doors closed and in de-energised condition.

## Documents

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**Operating instructions and Declaration of conformity** (pt) 1 MB, 22.01.2018

Code: mrl\_srb100dr\_pt

**Operating instructions and Declaration of conformity (en)** 1 MB, 27.11.2017

Code: mrl\_srb100dr\_en

**Operating instructions and Declaration of conformity (de)** 1 MB, 27.11.2017

Code: mrl\_srb100dr\_de

**Operating instructions and Declaration of conformity (fr)** 1 MB, 09.03.2018

Code: mrl\_srb100dr\_fr

**Operating instructions and Declaration of conformity (pl)** 1 MB, 08.06.2018

Code: mrl\_srb100dr\_pl

**Operating instructions and Declaration of conformity (nl)** 1 MB, 02.08.2018

Code: mrl\_srb100dr\_nl

**Operating instructions and Declaration of conformity (it)** 1 MB, 22.01.2018

Code: mrl\_srb100dr\_it

**Operating instructions and Declaration of conformity (es)** 1 MB, 12.01.2018

Code: mrl\_srb100dr\_es

**Operating instructions and Declaration of conformity (jp)** 1 MB, 09.10.2017

Code: mrl\_srb100dr\_jp

**Wiring example (99)** 34 kB, 04.08.2008

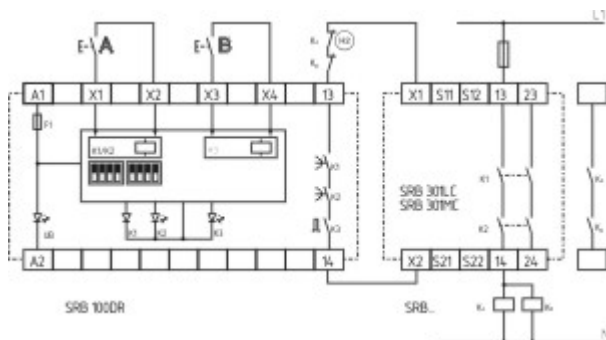
Code: ksrb1l01

**EAC certification (ru)** 1 MB, 15.03.2018

Code: q\_aesp01

## Images

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Wiring example

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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