

## Datasheet - SRB207AN 230VAC



Guard door monitors and Safety control modules for Emergency Stop applications / General Purpose safety controllers (Series PROTECT SRB) / SRB207AN



- Multi-evaluation of up to 6 safety guards
- Suitable for signal processing of potential-free outputs, e.g. emergency stop command devices, position switches and solenoid interlocks
- Fit for signal evaluation of outputs of safety magnetic switches
- 2 safety contacts, STOP 0
- 6 Signalling outputs

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

### Ordering details

Product type description	SRB207AN 230VAC
Article number	101176472
EAN Code	4250116202041
Replaced article number	101196817
eCl@ss	27-37-19-01

### Approval

Approval



### Classification

Standards	EN ISO 13849-1, IEC 61508, EN 60947-5-1
PL	up e
Control category	up 3
DC	> 99%
CCF	> 65 points
PFH value	$\leq 2,0.0 \times 10^{-8}/h$
SIL	up 3
Mission time	20 Years

- notice

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).


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.

Diverging applications on request.

K	n-op/y	t-cycle
20 %	525.600	1,0 min
40 %	210.240	2,5 min
60 %	75.067	7,0 min
80 %	30.918	17,0 min
100 %	12.223	43,0 min

## Global Properties

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Permanent light	SRB207AN
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	AgSn0, self-cleaning, positive action
Weight	300
Start conditions	Automatic or Start button (Optional monitored)
Start input (Y/N)	Yes
Feedback circuit (Y/N)	Yes
Start-up test (Y/N)	No
Reset after disconnection of supply voltage (Y/N)	No
Automatic reset function (Y/N)	Yes
Reset with edge detection (Y/N)	Yes
Pull-in delay	
- ON delay with automatic start	typ. 120 ms
- ON delay with reset button	typ. 30 ms
Drop-out delay	
- Drop-out delay in case of power failure	typ. 20 ms, max. 35 ms
- Drop-out delay in case of emergency stop	typ. 20 ms, max. 35 ms

## Mechanical data

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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)	Yes
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

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Ambient temperature	
- Min. environmental temperature	-25 °C

- Max. environmental temperature	+45 °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 $U_{imp}$	4 kV
- Overvoltage category	II To VDE 0110
- Degree of pollution	2 To VDE 0110

## Electromagnetic compatibility (EMC)

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EMC rating	conforming to EMC Directive
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## Electrical data

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Rated DC voltage for controls	
- Max. rated DC voltage for controls	-
- Max. rated DC voltage for controls	-
Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	48
- Max. rated AC voltage for controls, 50 Hz	240
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	48
- Max. rated AC voltage for controls, 60 Hz	240
Contact resistance	max. 100 mΩ
Power consumption	6.8 VA, plus signalling outputs Y1...Y6
Type of actuation	AC
Switch frequency	max. 3 HZ
Rated operating voltage $U_e$	48 ... 240 VAC
Operating current $I_e$	0,11 A
Frequency range	50 / 60 HZ
Electronic protection (Y/N)	Yes
Fuse rating for the operating voltage	secondary side: Internal electronic trip, tripping current > 0,12 A primary side: Safety fuse, tripping current > 1 A

## Inputs

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### Monitored inputs

- Short-circuit recognition (Y/N)	Yes
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	Yes
Number of shutters	1 ... 6 piece
Number of openers	1 ... 6 piece
Cable length	1500 m with 1.5 mm <sup>2</sup> ; 2500 m with 2.5 mm <sup>2</sup>
Conduction resistance	max. 40 Ω

## Outputs

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Stop category	0
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Number of safety contacts	2 piece
Number of auxiliary contacts	1 piece
Number of signalling outputs	6 piece
Switching capacity	
- Switching capacity of the safety contacts	max. 230 VAC, 6 A ohmic ( inductive in case of appropriate protective wiring)
- Switching capacity of the auxiliary contacts	24 VDC; 2 A
- Switching capacity of the signaling/diagnostic outputs	Y1...Y6: 24 VDC, 20 mA
Fuse rating	
- Protection of the safety contacts	6.3 A slow blow
- Fuse rating for the auxiliary contacts	2 A slow blow
- Fuse rating for the signaling/diagnostic outputs	Internal electronic trip, tripping current > 0,2 A
Utilisation category To EN 60947-5-1	AC-15: 230 V / 6 A DC-13: 24 V / 6 A
Number of undelayed semi-conductor outputs with signaling function	0 piece
Number of undelayed outputs with signaling function (with contact)	7 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.	2 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	3
LED switching conditions display	
- The integrated LEDs indicate the following operating states.	
- Position relay K2	
- Position relay K1	
- Internal operating voltage Ui	

## Miscellaneous data

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Applications



Emergency-Stop button



Pull-wire emergency stop switches



Guard system



Safety sensor

## Dimensions

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Dimensions

- Width	45 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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To secure 6 guard doors up to PL d and Category 3

Monitoring 6 guard door(s), each with a magnetic safety sensor of the BNS range

Start button (S) with edge detection

The feedback circuit monitors the position of the contactors K3 and K4.

Automatic start: The automatic start is programmed by connecting the feedback circuit to the terminals X1/X3. If the feedback circuit is not required, establish a bridge

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** (sv) 227 kB, 18.01.2013

Code: mrl\_srb207an\_sv

**Operating instructions and Declaration of conformity** (cs) 246 kB, 18.01.2013

Code: mrl\_srb207an\_cs

**Operating instructions and Declaration of conformity** (da) 232 kB, 18.01.2013

Code: mrl\_srb207an\_da

**Operating instructions and Declaration of conformity** (jp) 551 kB, 05.07.2011

Code: mrl\_srb207an-230v\_jp

**Operating instructions and Declaration of conformity** (jp) 428 kB, 27.01.2014

Code: mrl\_srb207an\_jp

**Operating instructions and Declaration of conformity** (it) 331 kB, 28.11.2017

Code: mrl\_srb207an\_it

**Operating instructions and Declaration of conformity** (pl) 351 kB, 01.03.2018

Code: mrl\_srb207an\_pl

**Operating instructions and Declaration of conformity** (es) 331 kB, 19.12.2017

Code: mrl\_srb207an\_es

**Operating instructions and Declaration of conformity** (pt) 336 kB, 19.12.2017

Code: mrl\_srb207an\_pt

**Operating instructions and Declaration of conformity** (fr) 336 kB, 19.12.2017

Code: mrl\_srb207an\_fr

**Operating instructions and Declaration of conformity** (nl) 339 kB, 03.08.2018

Code: mrl\_srb207an\_nl

**Operating instructions and Declaration of conformity** (de) 315 kB, 19.11.2018

Code: mrl\_srb207an\_de

**Operating instructions and Declaration of conformity** (en) 341 kB, 19.11.2018

Code: mrl\_srb207an\_en

**Operating instructions and Declaration of conformity** (en) 244 kB, 16.11.2017

Code: mrl\_srb207an-230v\_en

**Operating instructions and Declaration of conformity (it)** 233 kB, 23.01.2018

Code: mrl\_srb207an-230v\_it

**Operating instructions and Declaration of conformity (fr)** 234 kB, 09.03.2018

Code: mrl\_srb207an-230v\_fr

**Operating instructions and Declaration of conformity (es)** 234 kB, 12.01.2018

Code: mrl\_srb207an-230v\_es

**Operating instructions and Declaration of conformity (de)** 222 kB, 16.11.2017

Code: mrl\_srb207an-230v\_de

**Operating instructions and Declaration of conformity (nl)** 232 kB, 03.08.2018

Code: mrl\_srb207an-230v\_nl

**TÜV certification (en, de)** 234 kB, 28.08.2014

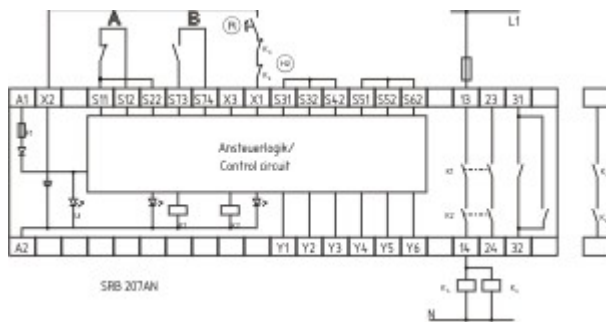
Code: z\_srbp06

**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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