

## Datasheet - SRB-E-301MC

Multi-function safety modules / SRB-E-301MC



- Suitable for applications up to Cat. 4 / PL e und up to SIL 3
- 1 or 2 channel signal evaluation
- Start / feedback circuit monitoring
- Optionally with short-circuit recognition
- 3 safety contacts, stop category 0
- 1 Signalling contact
- Slot-in termination with coding

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

### Ordering details

Product type description	SRB-E-301MC
Article number	103014374
EAN Code	
eCl@ss	27-37-19-01

### Approval


Approval



### Classification

DC	99
CCF	> 65 points
Standards	ISO 13849-1, IEC 61508, IEC 60947-5-1
PL	up e
Control category	up 4
PFH value	$\leq 6.0 \times 10^{-9} / h$
PFD value	$\leq 4.0 \times 10^{-5}$
SIL	up 3
Mission time	20 Years

### Global Properties

Permanent light	SRB-E-301MC
Standards	EN 60204-1, IEC 60947-5-1, ISO 13849-1, IEC 61508
Compliance with the Directives (Y/N) 	Yes
Climatic stress	IEC 60068-2-78
Mounting	Snaps onto standard DIN rails to IEC 60715
Terminal designations	IEC 60947-1
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, ventilated
- Material of the contacts	, self-cleaning, positive action
Weight	175
Start conditions	Automatic or Start button
Start input (Y/N)	Yes
Feedback circuit (Y/N)	Yes
Start-up test (Y/N)	No
Automatic reset function (Y/N)	Yes
Reset with edge detection (Y/N)	No
Pull-in delay	
- ON delay with automatic start	< 120
- ON delay with reset button	< 120
Drop-out delay	
- Drop-out delay in case of power failure	< 50
- Drop-out delay in case of emergency stop	< 10

## 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	0,5
Detachable terminals (Y/N)	Yes
Mechanical life	10.000.000 operations
Electrical lifetime	Derating curve available on request
resistance to shock	30 / 11
Resistance to vibration To EN 60068-2-6	10...55 HZ, Amplitude 0,35 mm, ± 15 %

## Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25
- Max. environmental temperature	+60
Storage and transport temperature	
- Min. Storage and transport temperature	-40
- Max. Storage and transport temperature	+85
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	4
Overvoltage category	III To IEC 60664-1
- Degree of pollution	2 To IEC 60664-1

## Electromagnetic compatibility (EMC)

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EMC rating conforming to EMC Directive

## Electrical data

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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
Current and tension on control circuits	
Contact resistance	100
- S11, S12, S21, S22	24 , Test current: 10
Power consumption	3.4; 8.5
Type of actuation	AC/DC
Switch frequency	
Rated operating voltage	24 -15 / +20, residual ripple 10 24 -15 / +10
Operating current	
Frequency range	50 / 60
Electronic protection (Y/N)	
Fuse rating for the operating voltage	Internal fuse, tripping current > 1 A
Bridging in case of voltage drops	40

## Inputs

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### Monitored inputs

- Short-circuit recognition (Y/N)	optional
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	Yes
Number of shutters	0
Number of openers	2
Cable length	1500 with 1.5 ; 2500 with 2.5
Conduction resistance	40

## Outputs

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Fuse rating	
Switching capacity	
- Switching capacity of the safety contacts	max. 250 , 6 A ohmic ( inductive in case of appropriate protective wiring) 10 / 10
- Switching capacity of the auxiliary contacts	24 , 1 A
Utilisation category To EN 60947-5-1	AC-15: 230 V / 4 A DC-13: 24 V / 4 A
- Protection of the safety contacts	6 A slow blow
- Fuse rating for the auxiliary contacts	1 A slow blow
Number of undelayed semi-conductor outputs with signaling function	0
Number of undelayed outputs with signaling function (with contact)	1

Number of delayed outputs with signalling function (with contact).	0
Number of delayed semi-conductor outputs with signaling function.	0
Number of secure undelayed semi-conductor outputs with signaling function	0
Number of secure, undelayed outputs with signaling function, with contact.	3
Number of secure, delayed semi-conductor outputs with signaling function	0
Number of secure, delayed outputs with signaling function (with contact).	0

## LED switching conditions display

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LED switching conditions display (Y/N)	Yes
Number of LED's	5
- Position relay K2	1
- Position relay K1	1
- Internal operating voltage	1
- Supply voltage	1
LED switching conditions display	
- The integrated LEDs indicate the following operating states.	
- Short-circuit recognition	1

## Miscellaneous data

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Applications



Emergency-Stop button



Guard system



Pull-wire emergency stop switches



Safety light curtain



Safety sensor

## Dimensions

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Dimensions

- Width	22.5
- Height	98
- Depth	115

## Documents

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**Operating instructions and Declaration of conformity** (pt) 719 kB, 30.08.2018

Code: mrl\_srb-e-301mc\_pt

**Operating instructions and Declaration of conformity** (en) 700 kB, 17.07.2018

Code: mrl\_srb-e-301mc\_en

**Operating instructions and Declaration of conformity** (fr) 724 kB, 30.08.2018

Code: mrl\_srb-e-301mc\_fr

**Operating instructions and Declaration of conformity** (nl) 713 kB, 29.08.2018

Code: mrl\_srb-e-301mc\_nl

**Operating instructions and Declaration of conformity** (de) 682 kB, 17.07.2018

Code: mrl\_srb-e-301mc\_de

**Operating instructions and Declaration of conformity** (es) 717 kB, 30.08.2018

Code: mrl\_srb-e-301mc\_es

**Operating instructions and Declaration of conformity** (pl) 736 kB, 30.08.2018

Code: mrl\_srb-e-301mc\_pl

**Operating instructions and Declaration of conformity** (it) 717 kB, 30.08.2018

Code: mrl\_srb-e-301mc\_it

**BG-test certificate** (de, en) 2 MB, 17.12.2018

Code: z\_301p03

**Brochure** (pt) 1 MB, 30.01.2018

Code: b\_srb-e\_pt

**Brochure** (it) 1 MB, 31.01.2018

Code: b\_srb-e\_it

**Brochure** (es) 1 MB, 14.02.2018

Code: b\_srb-e\_es

**Brochure** (en) 1 MB, 15.02.2018

Code: b\_srb-e\_en

**Brochure** (de) 1 MB, 15.02.2018

Code: b\_srb-e\_de

**Brochure** (fr) 1 MB, 23.08.2018

Code: b\_srb-e\_fr

**Brochure** (pl) 1 MB, 06.08.2018

Code: b\_srb-e\_pl

**CCC certification** (cn) 3 MB, 16.07.2018

Code: q\_srbp13

**CCC certification** (en) 3 MB, 16.07.2018

Code: q\_srbp14

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

Code: q\_aesp01

## Images

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

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