

## Datasheet - SRB-E-402FWS-TS

Multi-function safety modules / SRB-E...FWS



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- Detects standstill using 1 or 2 impulse sensors
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- 2 Signalling outputs

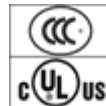
(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	SRB-E-402FWS-TS
Article number	103014757
EAN Code	
eCl@ss	27-37-19-01

### Approval

Approval



### Classification

#### Relay outputs


Standards	ISO 13849-1, IEC 61508, IEC 62061
PL	up e
Control category	up 4
DC	High
CCF	> 65 points
PFH value	$\leq 1.25 \times 10^{-8}/h$
PFD value	$\leq 5.3 \times 10^{-5}$
SIL	up 3
Mission time	20 Years

## Semi-conductor outputs

Standards	ISO 13849-1, IEC 61508, IEC 62061
PL	bis e
Control category	bis 4
PFH value	$\leq 2.66 \times 10^{-9}/h$
PFD value	$\leq 2.42 \times 10^{-5}$
SIL	bis 3 Years
Mission time	20 Years

## Global Properties

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Product name	SRB-E-402FWS-TS
Standards	EN 60204-1, EN 60947-5-1, ISO 13849-1, IEC 61508, IEC 62061
Compliance with the Directives (Y/N) 	Yes
Mounting	snaps onto standard DIN rail to EN 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	190 g
Start conditions	Automatic or
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)	Yes
Pull-in delay	
- ON delay with automatic start	adjustable
- ON delay with reset button	< 150 ms
Drop-out delay	
- Drop-out delay in case of power failure	< 10 ms
- Drop-out delay in case of emergency stop	

## Mechanical data

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Connection type	Screw connection, plug-in
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 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 HZ, Amplitude 0,35 mm

## Ambient conditions

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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	6 kV / 0,8 kV
Overvoltage category	III
- Degree of pollution	2 To IEC/EN 60664-1

## 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	19.2 V
- Max. rated DC voltage for controls	28.8 V
Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	
- Max. rated AC voltage for controls, 50 Hz	
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	
- Max. rated AC voltage for controls, 60 Hz	
Contact resistance	100
Power consumption	3.6
Type of actuation	DC
Switch frequency	0,3 HZ
Rated insulation voltage	250 V / 50 V
Rated operating voltage	24 VDC -20% / +20%, residual ripple 10%
Operating current	0,15 A
Frequency range	
Electronic protection (Y/N)	No
Fuse rating for the operating voltage	We recommend a Z type circuit breaker (max. 16 A) either a fine-wire fuse (max. 15A, slow-blow)
Bridging in case of voltage drops	5 ms
Cyclic outputs	> 20 VDC, 10 mA for each output
Control inputs	24 VDC / 8 mA

## Inputs

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<b>Monitored inputs</b>	
- Short-circuit recognition (Y/N)	Yes
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	Yes
Number of shutters	2
Number of openers	4
Cable length	1500 with 1.5 ; 2500 with 2.5
Conduction resistance	40

## Outputs

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Stop category	
Number of safety outputs	2
Number of safety contacts	2
Number of auxiliary contacts	1
Number of signalling outputs	1
<b>Relay outputs</b>	
Switching capacity of the safety contacts	250 V, 6 A ohmic 10 VDC / 10 mA (inductive in case of appropriate protective wiring)
Protection of the safety contacts	Safety fuse 10 A quick-blow, 6 A slow blow
Utilisation category	AC-15: 230 V / 4 A DC-13: 24 V / 4 A
<b>Semi-conductor outputs</b>	
Switching capacity of the safety outputs	max. 2 A (inductive in case of appropriate protective wiring)
Voltage drop	< 5 V
Residual current	< 1 mA
Test impulse width	< 1 ms < 100
Fuse rating for the safety outputs	
Utilisation category	DC-13: 24 V / 2 A
Switching capacity of the signaling/diagnostic outputs	24 VDC / 100 mA
Fuse rating for the signaling/diagnostic outputs	Internal electronic trip

### LED switching conditions display

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LED switching conditions display (Y/N)	Yes
Number of LED's	6
LED fault codes	Yes

### Miscellaneous data

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Applications



safe standstill monitoring



Fail-safe delay timer



Safety guard monitoring

### Dimensions

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Dimensions	
- Width	22.5 mm
- Height	98 mm
- Depth	115 mm

### Documents

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**Operating instructions and Declaration of conformity (pl)** 1 MB, 07.09.2018

Code: mrl\_srb-e-402fws-ts\_pl

**Operating instructions and Declaration of conformity (nl)** 1 MB, 07.09.2018

Code: mrl\_srb-e-402fws-ts\_nl

**Operating instructions and Declaration of conformity (fr)** 1 MB, 20.09.2018

Code: mrl\_srb-e-402fws-ts\_fr

**Operating instructions and Declaration of conformity (es)** 1 MB, 12.09.2018

Code: mrl\_srb-e-402fws-ts\_es

**Operating instructions and Declaration of conformity (de)** 999 kB, 19.07.2018

Code: mrl\_srb-e-402fws-ts\_de

**Operating instructions and Declaration of conformity (en)** 1 MB, 19.07.2018

Code: mrl\_srb-e-402fws-ts\_en

**Operating instructions and Declaration of conformity (it)** 1 MB, 07.09.2018

Code: mrl\_srb-e-402fws-ts\_it

**Operating instructions and Declaration of conformity (pt)** 1 MB, 12.09.2018

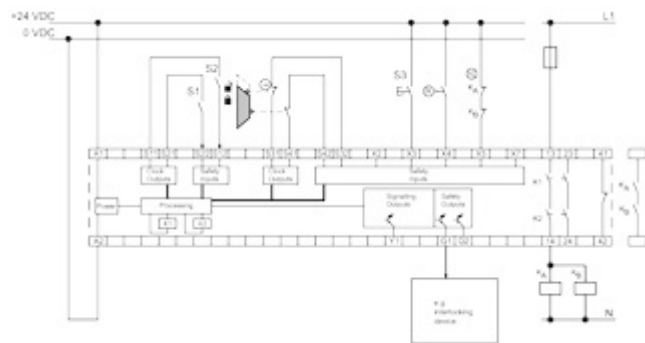
Code: mrl\_srb-e-402fws-ts\_pt

**BG-test certificate (de, en)** 428 kB, 11.10.2018

Code: z\_srbep01

## 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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