



## SRB-E-402FWS-TS

- 2-channel safety door monitoring
- 2 Safety contacts, 2 Safety Output
- Plug-in screw terminals with coding
- 2 Signalling outputs
- 1 Signalling output - failure message dynamic
- Detects standstill using 1 or 2 impulse sensors
- additional standstill signal, e.g. PLC as second input channel
- 2-channel time monitoring

## Data

### Ordering data

Product type description	SRB-E-402FWS-TS
Article number (order number)	103014757
EAN (European Article Number)	4030661511283
eCl@ss number, version 12.0	27-37-18-19
eCl@ss number, version 11.0	27-37-18-19
eCl@ss number, version 9.0	27-37-18-19
ETIM number, version 7.0	EC001449
ETIM number, version 6.0	EC001449

### Approvals - Standards

Certificates	TÜV cULus CCC
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## General data

Standards	EN IEC 62061 EN ISO 13849-1 EN IEC 60947-5-1 EN IEC 60947-5-3 EN IEC 60947-5-5 EN IEC 61508 EN IEC 60204-1 EN IEC 60947-1
Climatic stress	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated
Material of the contacts, electrical	Ag-Ni, self-cleaning, positive drive
Gross weight	190 g

## General data - Features

Stop-Category	0
Electronic Fuse	Yes
Wire breakage detection	Yes
Cross-circuit detection	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Reset edge detection	Yes
Earth connection detection	Yes
Integral system diagnostics, status	Yes
Number of auxiliary contacts	1
Number of inputs for NC	4
Number of inputs for NO	2
Number of LEDs	6
Number of safety contacts	2
Number of fail-safe digital outputs	2
Number of signalling outputs	1

## Safety classification

Standards	EN ISO 13849-1 EN IEC 62061 EN IEC 61508
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## Safety classification - Relay outputs

Performance Level, up to	e
Category	4
Diagnostic Coverage (DC) Level	> 94 %
PFH value	$1.25 \times 10^{-8}$ /h
PFD value	$5.30 \times 10^{-5}$
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

## Safety classification - Fail-safe digital outputs

Performance Level, up to	e
Category	4
PFH value	$2.66 \times 10^{-9}$ /h
PFD value	$2.42 \times 10^{-5}$
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

## Mechanical data

Mechanical life, minimum	10,000,000 Operations
Mounting	Snaps onto standard DIN rail to EN 60715

## Mechanical data - Connection technique

Termination	rigid or flexible Screw connection, plug-in
Terminal designations	IEC 60947-1
Cable section, minimum	0.25 mm <sup>2</sup>
Cable section, maximum	2.5 mm <sup>2</sup>
Tightening torque of Clips	0.5 Nm

## Mechanical data - Dimensions

Width	22.5 mm
Height	98 mm
Depth	115 mm

## Ambient conditions

Degree of protection of the enclosure	IP40
Degree of protection of the mounting space	IP54
Degree of protection of clips or terminals	IP20
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+60 °C
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations	10 ... 55 Hz, Amplitude 0.35 mm
Resistance to shock	30 g / 11 ms

## Ambient conditions - Insulation values

Rated insulation voltage $U_i$	250 V / 50 V
Rated impulse withstand voltage $U_{imp}$ , relay output	4 kV
Rated impulse withstand voltage $U_{imp}$ , semiconductor output	0.8 kV

Overvoltage category	III
Degree of pollution	2

### Electrical data

Rated operating voltage	24 VDC -20%/+20%, residual ripple max. 10%
Operating current	150 mA
Rated AC voltage for controls at DC minimum	19.2 VDC
Rated control voltage at DC, maximum	28.8 VDC
Electrical power consumption	3 W
Contact resistance, maximum	0.1 $\Omega$
Note (Contact resistance)	in new state
Drop-out delay in case of power failure, typically	10 ms
Drop-out delay in case of emergency, typically	10 ms
Pull-in delay at automatic start, maximum, typically	150 ms
ON delay at automatic start	Adjustable
Pull-in delay at RESET, typically	150 ms
Switching frequency, maximum	0.3 Hz
Operating voltage	24 VDC -20 % / 20 %

### Electrical data - Safety digital outputs

Voltage drop $U_d$ , maximum	0.5 V
Leakage current $I_r$ , maximum	1 mA
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	2 A

### Electrical data - Safe relay outputs

Voltage, Utilisation category AC-15	230 VAC
Current, Utilisation category AC-15	4 A
Voltage, Utilisation category DC-13	24 VDC

Current, Utilisation category DC-13	4 A
Switching capacity, minimum	10 VDC
Switching capacity, minimum	10 mA
Switching capacity, maximum	250 VAC
Switching capacity, maximum	6 A

### Electrical data - Digital inputs

Conduction resistance, maximum	40 $\Omega$
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### Electrical data - Digital Output

Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.1 A

### Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum	24 VDC
Switching capacity, maximum	1 A

### Electrical data - Electromagnetic compatibility (EMC)

EMC rating	EMC-Directive
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### Status indication

Indicated operating states	Internal operating voltage $U_i$ Baustein-Status Fault codes
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### Other data

Note (applications)

safe standstill monitoring  
Fail-safe delay timer  
guard door monitoring

## Pictures

### Product picture (catalogue individual photo)

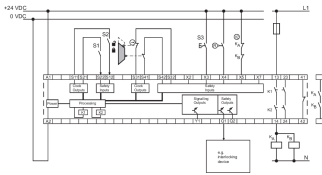


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| 1.0 MB | .jpg | 302.683 x 666.75 mm - 858 x 1890 px - 72 dpi

| 98.2 kB | .png | 74.083 x 162.983 mm - 210 x 462 px - 72 dpi

### Wiring example



ID: ksrbel19

| 111.4 kB | .jpg | 352.778 x 184.15 mm - 1000 x 522 px - 72 dpi

Schmersal, Inc., 15 Skyline Drive, Hawthorne, NY 10532

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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