



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

EAN (European Article Number)	4030661511283
eCl@ss number, Version 9.0	27-37-18-11
eCl@ss number, Version 11.0	27-37-18-11
ETIM number, version 6.0	EC001448

Approval - Standards

Certificates	TÜV cULus CCC
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General data

Standards	EN ISO 13849-1 EN 60947-5-1 EN 60204-1 EN 60947-5-5 IEC 61508
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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
Short-circuit recognition	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 appraisal

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

Performance Level, up to	e
Control category to EN13849	4
Diagnostic Coverage (DC) Level	> 94 %
PFH-value	1.25×10^{-8} /h
PFD value	5.30×10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Safety appraisal - Fail-safe digital outputs

Performance level, up to	e
Control category to EN13849	4
PFH-value	2.66×10^{-9} /h
PFD value	2.42×10^{-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

Terminal Connector	Screw connection, plug-in rigid or flexible
Terminal designations	IEC 60947-1
Cable section, minimum	0.25 mm ²
Cable section, maximum	2.5 mm ²
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 to EN 60068-2-6	10 ... 55 Hz, Amplitude 0.35 mm
Resistance to shock	30 g / 11 ms

Ambient conditions - Insulation value

Rated insulation voltage U_i	250 V / 50 V
Rated impulse withstand voltage, relay output U_{imp}	4 kV
Rated impulse withstand voltage, semiconductor output U_{imp}	0.8 kV
Overvoltage category	III
Degree of pollution to IEC/EN 60664-1	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 Ω
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

Electrical data - Fail-safe digital outputs

Voltage drop U_d , maximum	0.5 V
Current leakage I_r	1 mA
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	2 A

Electrical data - Safe relay outputs

Voltage, Utilisation category AC15	230 VAC
Current, Utilisation category AC-15	4 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	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 Ω
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Electrical data - Digital Output

Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	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
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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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