DATASHEET



SRB-E-402ST-CC

- Plug-in spring-cage terminal blocks with coding
- Two-functions safety monitoring module (double evaluation), 2 x STOP 0
- 2 x 1 oder 2-channel control
- 2 x Start button / Auto-start
- 1 x Monitoring two-hand control panels to ISO 13851
- 2 safety contacts
- 2 Safety outputs

Data

Ordering data

Product type description	SRB-E-402ST-CC
Article number (order number)	103016576
EAN (European Article Number)	4030661510361
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

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
Housing material	Glass-fibre reinforced thermoplastic, ventilated
Gross weight	250 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 LEDs	6
Number of normally closed (NC)	4
Number of normally open (NO)	2
Number of Safety contacts, STOP 0	2
Number of safety digital outputs, Stop 0	2
Number of Signalling outputs, STOP 0	1

Safety classification

Standards	EN ISO 13849-1 EN IEC 62061 EN IEC 61508

Safety classification - Relay outputs

Performance Level, up to	e
Category	4
Diagnostic Coverage (DC) Level	> 94 %
PFH value	1.25 x 10^{-8} /h
PFD value	5.30 x 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 x 10^{-9} /h
PFD value	2.42 x 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 designations	IEC/EN 60947-1

Termination	Cage clamp, plug-in rigid or flexible
Cable section, minimum	0.25 mm²
Cable section, maximum	1.5 mm²

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	-25 ... +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
Restistance 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

Operating voltage	24 VDC -20 % / +20 %
Ripple voltage	10 %
Rated operating voltage	24 VDC
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	3.6 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
Pull-in delay at RESET, typically	150 ms
Switching frequency, maximum	0.3 Hz
Material of the contacts, electrical	Ag-Ni, self-cleaning, positive drive

Electrical data - Safety digital outputs

Voltage drop U_d, maximum	0.5 V
Leakage current I_r, maximum	1 mA
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	2 A
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 Ω

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

Status indication

Indicated operating states	Internal operating voltage U_i Baustein-Status Fault codes

Other data

Note (applications)	Safety sensor hinged safety guard Emergency-Stop button Pull-wire emergency stop switches Safety light curtain Safety light barriers Two-hand control panels

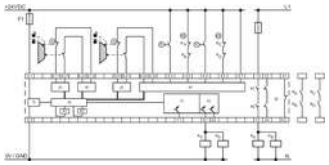
Pictures

Product picture (catalogue individual photo)



ID: ksrb4f16
| 1.0 MB | .jpg | 281.869 x 655.814 mm - 799 x 1859 px - 72 dpi
| 126.5 kB | .png | 74.083 x 172.156 mm - 210 x 488 px - 72 dpi
| 47.6 kB | .jpg | 52.917 x 123.472 mm - 150 x 350 px - 72 dpi

Wiring example



ID: ksrbel07
| 1.3 MB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 107.2 kB | .jpg | 352.778 x 172.861 mm - 1000 x 490 px - 72 dpi