

Datasheet - -232.0

Multi-function safety modules / SRB-E-232ST



- STOP 0 / 1 Function
- 1 oder 2-channel control
- 2 Safety outputs STOP 0
- 3 safety contacts STOP 1
- Drop-out delay 0 ... 30

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

Ordering details

| | |
|--------------------------|-------------|
| Product type description | SRB-E-232ST |
| Article number | 103014308 |
| EAN Code | |
| eCl@ss | 27-37-19-01 |

Approval

Approval



Classification


Relay outputs

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

Global Properties

| | |
|--|---|
| Permanent light | SRB-E-232ST |
| Standards | IEC/EN 60204-1, EN 60947-5-1, EN ISO 13849-1, IEC 61508, IEC/EN 62061 |
| Compliance with the Directives (Y/N)  | Yes |
| Mounting | snaps onto standard DIN rail to EN 60715 |
| Terminal designations | IEC/EN 60947-1 |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic, ventilated |
| - Material of the contacts | , self-cleaning, positive action |
| Weight | 170 |
| Start conditions | Automatic or Start button (Optional monitored) |
| 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 | < 150 |
| - ON delay with reset button | < 150 |
| Drop-out delay | |
| - Drop-out delay in case of power failure | < 10 |
| - Drop-out delay in case of emergency stop | < 10 |

Mechanical data

| | |
|---|-------------------------------------|
| 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 |
| restistance to shock | 30 / 11 |
| Resistance to vibration To EN 60068-2-6 | 10...55 HZ, Amplitude 0,35 mm |

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 | 6 / 4 / 0,8 |
| Overvoltage category | III |
| - Degree of pollution | 2 To IEC/EN 60664-1 |

Electromagnetic compatibility (EMC)

| | |
|------------|-----------------------------|
| EMC rating | conforming to EMC Directive |
|------------|-----------------------------|

Electrical data

| | |
|---|---|
| Rated DC voltage for controls | |
| - Max. rated DC voltage for controls | 19.2 |
| - Max. rated DC voltage for controls | 28.8 |
| 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 |
| Type of actuation | DC |
| Switch frequency | 0,3 |
| Rated insulation voltage | 250 / 50 |
| Rated operating voltage | 24 -20 / +20, residual ripple 10 |
| Operating current | 0,125 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 |
| Cyclic outputs | > 20 , 10 for each output |
| Control inputs | 24 / 8 |

Inputs

Monitored inputs

| | |
|------------------------------------|----------------------------------|
| - Short-circuit recognition (Y/N) | Yes |
| - Wire breakage detection (Y/N) | Yes |
| - Earth connection detection (Y/N) | Yes |
| Number of shutters | 1 |
| Number of openers | 2 |
| Cable length | 1500 with 1.5 ; 2500 with 2.5 |
| Conduction resistance | 40 |

Outputs

| | |
|--|--|
| Stop category | 0 and 1 |
| Number of safety outputs | 2 x STOP 0 |
| Number of safety contacts | 3 x STOP 1 |
| Number of auxiliary contacts | 1 x STOP 1 |
| Number of signalling outputs | 1 x STOP 0 |
| Relay outputs | |
| Switching capacity of the safety contacts | 250 , 6 A ohmic 10 / 10 (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 |
| Switching capacity of the auxiliary contacts | 24 , 1 A |
| Fuse rating for the auxiliary contacts | 2.5 A quick-blow, 2 A slow blow |
| Semi-conductor outputs | |
| Switching capacity of the safety outputs | 2 A (inductive in case of appropriate protective wiring) |
| Voltage drop | < 0,5 |
| Residual current | < 1 |
| Test impulse width | < 1 < 100 |
| Fuse rating for the safety outputs | |
| Utilisation category | DC-13: 24 V / 2 A |
| Switching capacity of the signaling/diagnostic outputs | 24 / 100 |
| Fuse rating for the signaling/diagnostic outputs | Internal electronic trip |

LED switching conditions display

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

Miscellaneous data

| | |
|--------------|---|
| Applications |  Emergency-Stop button  Pull-wire emergency stop switches  Safety light barriers  Safety light curtain  Safety sensor  hinged safety guard |
|--------------|---|

Dimensions

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

Documents

Operating instructions and Declaration of conformity (de) 910 kB, 18.07.2018

Code: mrl_srb-e-232st_de

Operating instructions and Declaration of conformity (en) 924 kB, 18.07.2018

Code: mrl_srb-e-232st_en

Operating instructions and Declaration of conformity (nl) 944 kB, 31.08.2018

Code: mrl_srb-e-232st_nl

Operating instructions and Declaration of conformity (pl) 972 kB, 31.08.2018

Code: mrl_srb-e-232st_pl

Operating instructions and Declaration of conformity (it) 947 kB, 31.08.2018

Code: mrl_srb-e-232st_it

Operating instructions and Declaration of conformity (fr) 955 kB, 31.08.2018

Code: mrl_srb-e-232st_fr

Operating instructions and Declaration of conformity (es) 948 kB, 31.08.2018

Code: mrl_srb-e-232st_es

Operating instructions and Declaration of conformity (pt) 951 kB, 31.08.2018

Code: mrl_srb-e-232st_pt

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

Code: z_srbep01

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 (pl) 1 MB, 06.08.2018

Code: b_srb-e_pl

CCC certification (cn) 460 kB, 24.07.2017

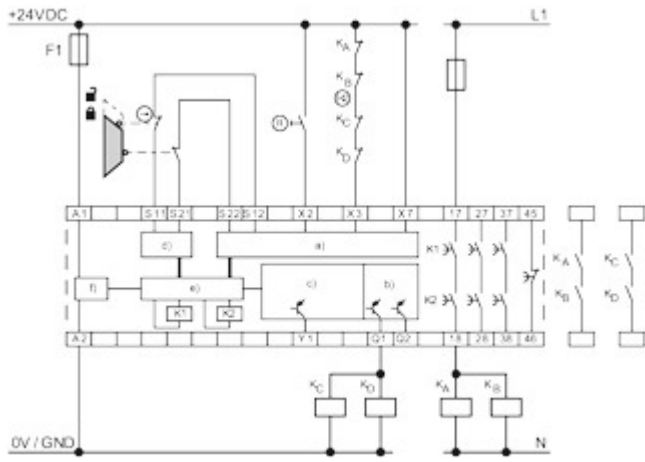
Code: q_srbp11

CCC certification (en) 460 kB, 24.07.2017

Code: q_srbp12

EAC certification (ru) 1 MB, 15.03.2018

Code: q_aesp01



Wiring example

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

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