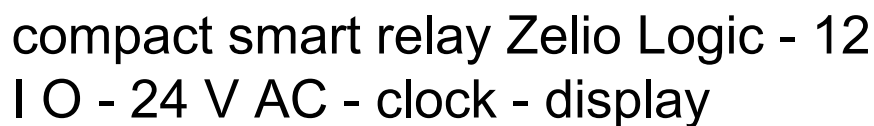


## Specifications



SR2B121B

|                           |                     |
|---------------------------|---------------------|
| Range of product          | Zelio Logic         |
| Product or component type | Compact smart relay |

|                                |  |
|--------------------------------|--|
| Local display                  | With   |
| Number or control scheme lines | 0...240 with ladder programming<br>0...500 with FBD programming    |
| Cycle time                     | 6...90 ms  |
| Backup time                    | 10 years at 25 °C  |
| Clock drift                    | 12 min/year at 0...55 °C<br>6 s/month at 25 °C                     |
| Checks                         | Program memory on each power up                                    |
| [Us] rated supply voltage      | 24 V AC  |
| Supply voltage limits          | 20.4...28.8 V  |
| Supply frequency               | 50/60 Hz   |
| Maximum supply current         | 145 mA (without extension)   |
| Power consumption in VA        | 4 VA without extension   |
| Isolation voltage              | 1780 V   |
| Protection type                | Against inversion of terminals (control instructions not executed) |
| Discrete input number          | 8  |
| Discrete input voltage         | 24 V AC  |
| Discrete input current         | 4.4 mA   |
| Discrete input frequency       | 57...63 Hz<br>47...53 Hz   |
| Voltage state 1 guaranteed     | >= 14 V for discrete input   |
| Voltage state 0 guaranteed     | <= 5 V for discrete input  |
| Current state 1 guaranteed     | >= 2 mA (discrete input)   |
| Current state 0 guaranteed     | <= 0.5 mA (discrete input)   |
| Analogue input number          | 0  |
| Input impedance                | 4.6 kOhm for discrete input  |
| Number of outputs              | 4 relay  |

|  |   |
|--|---|
| Output voltage limits                  | 5...30 V DC (relay output)<br>24...250 V AC   |
| Contacts type and composition          | NO for relay output   |
| Output thermal current                 | 8 A for all 4 outputs for relay output  |
| Electrical durability                  | AC-12: 500000 cycles at 230 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1<br>AC-15: 500000 cycles at 230 V, 0.9 A for relay output conforming to EN/IEC 60947-5-1<br>DC-12: 500000 cycles at 24 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1<br>DC-13: 500000 cycles at 24 V, 0.6 A for relay output conforming to EN/IEC 60947-5-1  |
| Switching capacity in mA               | >= 10 mA at 12 V (relay output)   |
| Operating rate in Hz                   | 0.1 Hz (at Ie) for relay output<br>10 Hz (no load) for relay output   |
| Mechanical durability                  | 10000000 cycles for relay output  |
| [Uimp] rated impulse withstand voltage | 4 kV conforming to EN/IEC 60947-1 and EN/IEC 60664-1  |
| Clock                                  | With  |
| Response time                          | 50 ms with ladder programming (from state 0 to state 1) for discrete input<br>50 ms with ladder programming (from state 1 to state 0) for discrete input<br>50...255 ms with FBD programming (from state 0 to state 1) for discrete input<br>50...255 ms with FBD programming (from state 1 to state 0) for discrete input<br>10 ms (from state 0 to state 1) for relay output<br>5 ms (from state 1 to state 0) for relay output |
| Connections - terminals                | Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 25...AWG 14) semi-solid<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 25...AWG 14) solid<br>Screw terminals, 1 x 0.25...1 x 2.5 mm² (AWG 24...AWG 14) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) solid<br>Screw terminals, 2 x 0.25...2 x 0.75 mm² (AWG 24...AWG 18) flexible with cable end  |
| Tightening torque                      | 0.5 N.m   |
| Overvoltage category                   | III conforming to EN/IEC 60664-1  |
| Net weight                             | 0.25 kg   |

## Environment

|  |   |
|--|---|
| Immunity to microbreaks                  | 10 ms repeated 20 times   |
| Product certifications                   | C-Tick<br>CSA<br>GL<br>UL<br>GOST   |
| Standards                                | EN/IEC 61000-4-3<br>EN/IEC 61000-4-4 level 3<br>EN/IEC 61000-4-11<br>EN/IEC 60068-2-27 Ea<br>EN/IEC 61000-4-5<br>EN/IEC 61000-4-6 level 3<br>EN/IEC 61000-4-2 level 3<br>EN/IEC 60068-2-6 Fc<br>EN/IEC 61000-4-12                                       |
| IP degree of protection                  | IP20 (terminal block) conforming to IEC 60529<br>IP40 (front panel) conforming to IEC 60529   |
| Environmental characteristic             | EMC directive conforming to EN/IEC 61000-6-2<br>EMC directive conforming to EN/IEC 61000-6-3<br>EMC directive conforming to EN/IEC 61000-6-4<br>EMC directive conforming to EN/IEC 61131-2 zone B<br>Low voltage directive conforming to EN/IEC 61131-2 |
| Disturbance radiated/<br>conducted       | Class B conforming to EN 55022-11 group 1   |
| Pollution degree                         | 2 conforming to EN/IEC 61131-2  |
| Ambient air temperature for<br>operation | -20...40 °C in non-ventilated enclosure conforming to IEC 60068-2-1 and IEC 60068-2-2<br>-20...55 °C conforming to IEC 60068-2-1 and IEC 60068-2-2  |
| Ambient air temperature for<br>storage   | -40...70 °C   |
| Operating altitude                       | 2000 m  |
| Maximum altitude transport               | 3048 m  |

|                   |   |
|-------------------|---|
| Relative humidity | 95 % without condensation or dripping water |
|-------------------|---|

Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 6.8 cm   |
| Package 1 Width              | 9.0 cm   |
| Package 1 Length             | 10.0 cm  |
| Package 1 Weight             | 243.0 g  |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 30       |
| Package 2 Height             | 30.0 cm  |
| Package 2 Width              | 30.0 cm  |
| Package 2 Length             | 40.0 cm  |
| Package 2 Weight             | 7.778 kg |

Offer Sustainability

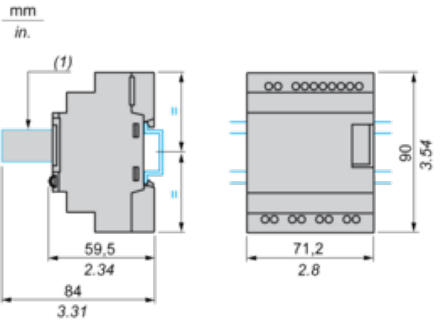
|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>                           |
| Mercury free               | Yes   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>  |
| RoHS exemption information | <a href="#">Yes</a>   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free                   | Yes   |

Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

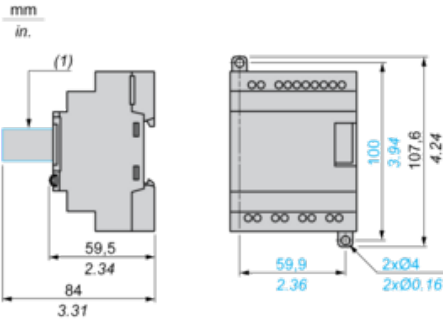
Compact and Modular Smart Relays

Mounting on 35 mm/1.38 in. DIN Rail



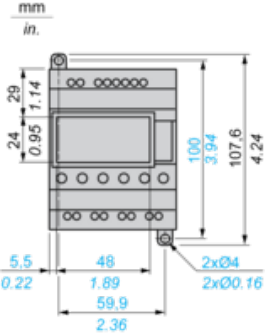
(1) With SR2USB01 or SR2BTC01

Screw Fixing (Retractable Lugs)



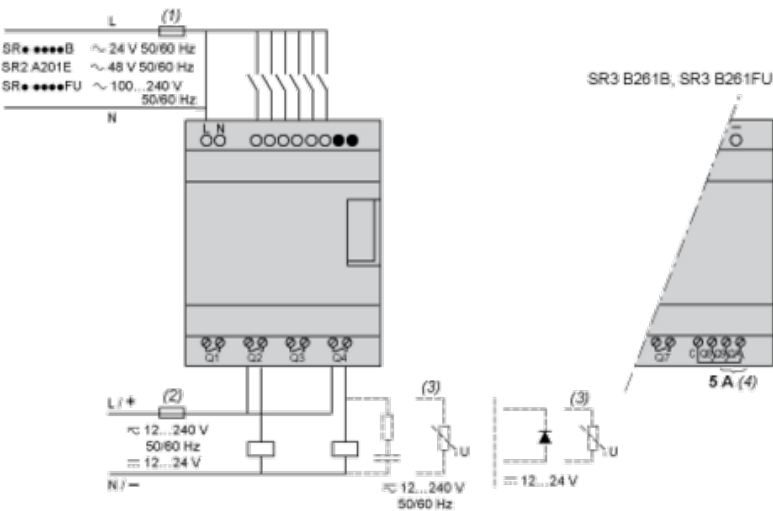
(1) With SR2USB01 or SR2BTC01

Position of Display



Connection of Smart Relays on AC Supply

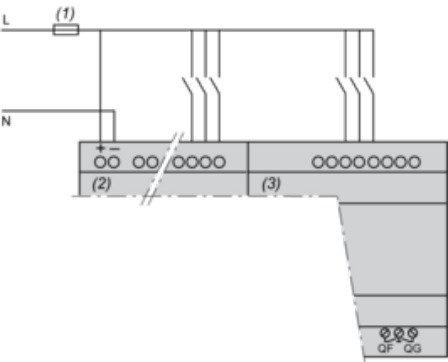
SR...1B, SR...1FU



- (1) 1 A quick-blow fuse or circuit-breaker.
- (2) Fuse or circuit-breaker.
- (3) Inductive load.
- (4) Q9 and QA: 5 A (max. current in terminal C: 10 A).

With Discrete I/O Extension Module

SR3B...B + SR3XT...B, SR3B...FU + SR3XT...FU



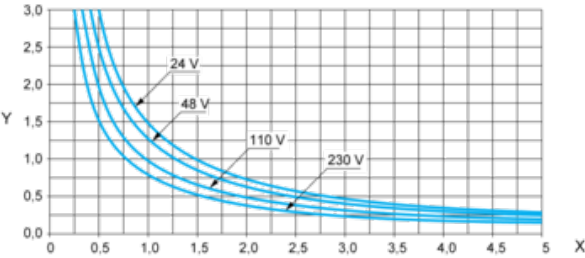
- (1) 1 A quick-blow fuse or circuit-breaker.
- NOTE:** QF and QG: 5 A for SR3XT141...

Compact and Modular Smart Relays

Electrical Durability of Relay Outputs

(in millions of operating cycles, conforming to IEC/EN 60947-5-1)

AC-12 (1)

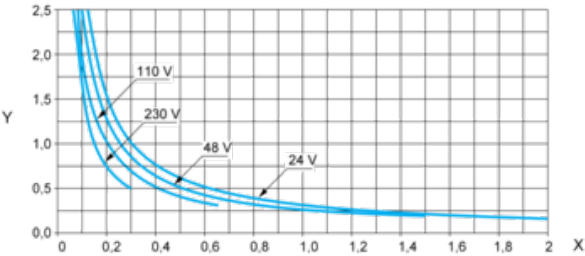


X: Current (A)

Y: Millions of operating cycles

(1) AC-12: switching resistive loads and opto-coupler isolated solid-state loads, cos ≥ 0.9.

AC-14 (1)

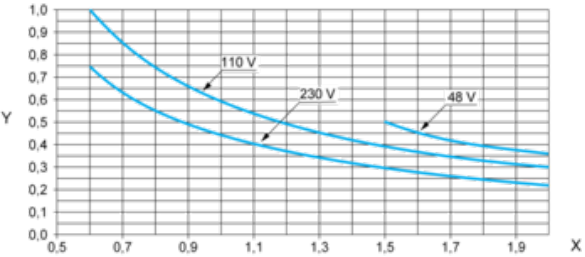


X: Current (A)

Y: Millions of operating cycles

(1) AC-14: switching small electromagnetic loads ≤ 72 VA, make: cos = 0.3, break: cos = 0.3.

AC-15 (1)



X: Current (A)

Y: Millions of operating cycles

(1) AC-15: switching electromagnetic loads ≥ 72 VA, make: cos = 0.7, break: cos = 0.4.

Recommended replacement(s)