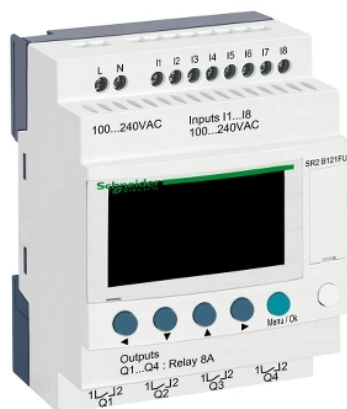


Product data sheet

Characteristics

SR2B121FU

Compact smart relay, Zelio Logic, 12 I/O,
100...240 V AC, clock, display



Main

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

Complementary

| | |
|--------------------------------|--|
| Local display | With |
| Number of control scheme lines | 0...240 with ladder programming 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 6 s/month at 25 °C |
| Checks | Program memory on each power up |
| [Us] rated supply voltage | 100...240 V AC |
| Supply voltage limits | 85...264 V |
| Supply frequency | 50/60 Hz |
| Maximum supply current | 30 mA at 240 V (without extension) 80 mA at 100 V (without extension) |
| Power consumption in VA | 7 VA without extension |
| Isolation voltage | 1780 V |
| Protection type | Against inversion of terminals (control instructions not executed) |
| Discrete input number | 8 |
| Discrete input voltage | 100...240 V AC |
| Discrete input current | 0.6 mA |
| Discrete input frequency | 47...53 Hz 57...63 Hz |
| Voltage state 1 guaranteed | ≥ 79 V for discrete input |
| Voltage state 0 guaranteed | ≤ 40 V for discrete input |
| Current state 1 guaranteed | ≥ 0.17 mA (discrete input) |
| Current state 0 guaranteed | ≤ 0.5 mA (discrete input) |
| Input impedance | 350 kOhm for discrete input |
| Number of outputs | 4 relay |
| Output voltage limits | 5...30 V DC (relay output) 24...250 V AC |
| Contacts type and composition | NO for relay output |
| Output thermal current | 8 A for all 4 outputs for relay output |

The information provided in this documentation contains general descriptions and/or technical characteristics of the products of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

| | |
|--|--|
| Electrical durability | AC-12: 500000 cycles at 230 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1 AC-15: 500000 cycles at 230 V, 0.9 A for relay output conforming to EN/IEC 60947-5-1 DC-12: 500000 cycles at 24 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1 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 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 50 ms with ladder programming (from state 1 to state 0) for discrete input 50...255 ms with FBD programming (from state 0 to state 1) for discrete input 50...255 ms with FBD programming (from state 1 to state 0) for discrete input 10 ms (from state 0 to state 1) for relay output 5 ms (from state 1 to state 0) for relay output |
| Connections - terminals | Screw terminals, 1 x 0.2...1 x 2.5 mm ² (AWG 25...AWG 14) semi-solid Screw terminals, 1 x 0.2...1 x 2.5 mm ² (AWG 25...AWG 14) solid Screw terminals, 1 x 0.25...1 x 2.5 mm ² (AWG 24...AWG 14) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² (AWG 24...AWG 16) solid Screw terminals, 2 x 0.25...2 x 0.75 mm ² (AWG 24...AWG 18) flexible with cable end |
| Tightening torque | 0.5 N.m |
| Overvoltage category | III conforming to EN/IEC 60664-1 |
| Product weight | 0.25 kg |

Environment

| | |
|---------------------------------------|---|
| Immunity to microbreaks | 10 ms |
| Product certifications | GL GOST UL CSA C-Tick |
| Standards | EN/IEC 61000-4-4 level 3 EN/IEC 60068-2-27 Ea EN/IEC 61000-4-5 EN/IEC 61000-4-11 EN/IEC 61000-4-12 EN/IEC 61000-4-3 EN/IEC 60068-2-6 Fc EN/IEC 61000-4-2 level 3 EN/IEC 61000-4-6 level 3 |
| IP degree of protection | IP20 (terminal block) conforming to IEC 60529 IP40 (front panel) conforming to IEC 60529 |
| Environmental characteristic | EMC directive conforming to EN/IEC 61000-6-2 EMC directive conforming to EN/IEC 61000-6-3 EMC directive conforming to EN/IEC 61000-6-4 EMC directive conforming to EN/IEC 61131-2 zone B Low voltage directive conforming to EN/IEC 61131-2 |
| Disturbance radiated/conducted | Class B conforming to EN 55022-11 group 1 |
| Pollution degree | 2 conforming to EN/IEC 61131-2 |
| Ambient air temperature for operation | -20...40 °C in non-ventilated enclosure conforming to IEC 60068-2-1 and IEC 60068-2-2 -20...55 °C conforming to IEC 60068-2-1 and IEC 60068-2-2 |
| Ambient air temperature for 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 Weight | 249 g |
| Package 1 Height | 6.8 cm |
| Package 1 width | 8.8 cm |
| Package 1 Length | 10 cm |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 30 |
| Package 2 Weight | 7.902 kg |
| Package 2 Height | 30 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |

Offer Sustainability

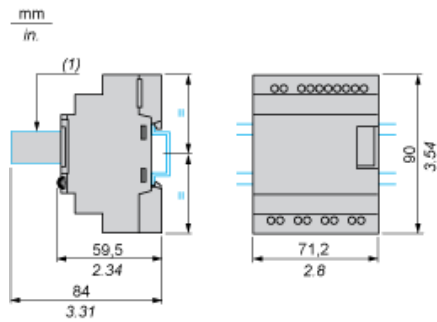
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| 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 |
|----------|-----------|

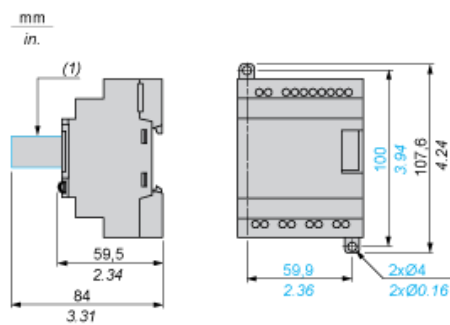
Compact and Modular Smart Relays

Mounting on 35 mm/1.38 in. DIN Rail



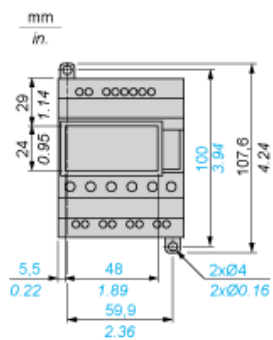
(1) With SR2USB01 or SR2BTC01

Screw Fixing (Retractable Lugs)



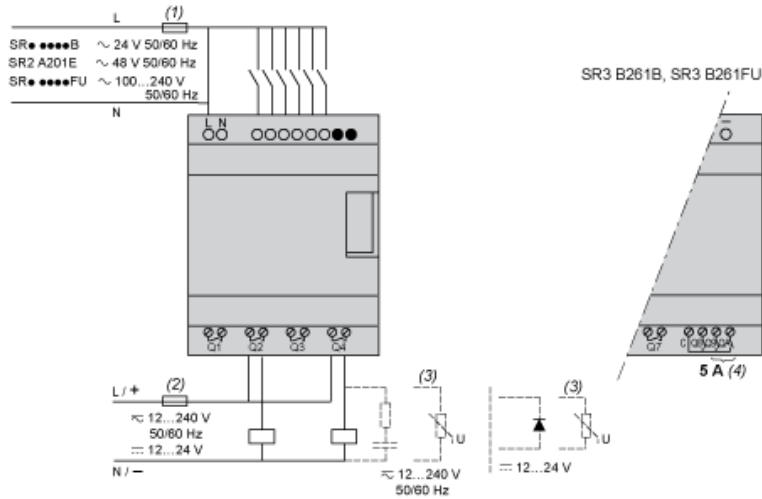
(1) With SR2USB01 or SR2BTC01

Position of Display



Connection of Smart Relays on AC Supply

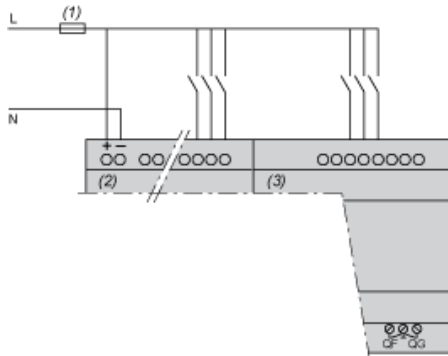
SR...1B, SR...1FU



- (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, $\cos \geq 0.9$.

AC-14 (1)

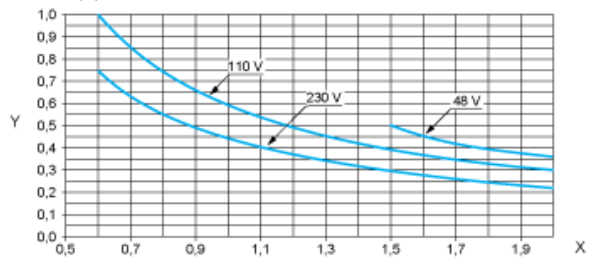


X: Current (A)

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: $\cos = 0.4$.