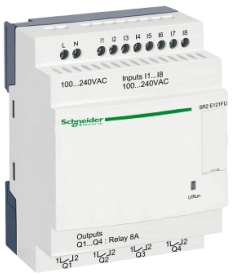
# Product datasheet

Specifications



## compact smart relay Zelio Logic - 12 I O - 100..240 V AC - clock - no display

SR2E121FU

## Main

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

## Complementary

| | |
|---|---|
| **Local display** | Without |
| **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** | 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)<br>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** | 57...63 Hz<br>47...53 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) |
| **Analogue input number** | 0 |
| **Input impedance** | 350 kOhm for discrete input |
| **Number of outputs** | 4 relay |
| **Output voltage limits** | 5...30 V DC (relay output)<br>24...250 V AC |

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

Disclaimer: 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

| | |
|---|---|
| **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 IEC 60947-5-1<br>AC-15: 500000 cycles at 230 V, 0.9 A for relay output conforming to IEC 60947-5-1<br>DC-12: 500000 cycles at 24 V, 1.5 A for relay output conforming to IEC 60947-5-1<br>DC-13: 500000 cycles at 24 V, 0.6 A for relay output conforming to 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 (25 AWG...14 AWG) semi-solid<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² (25 AWG...14 AWG) solid<br>Screw terminals, 1 x 0.25...1 x 2.5 mm² (24 AWG...14 AWG) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² (24 AWG...16 AWG) solid<br>Screw terminals, 2 x 0.25...2 x 0.75 mm² (24 AWG...18 AWG) flexible with cable end |
| **Tightening torque** | 0.5 N.m |
| **Overvoltage category** | III conforming to IEC 60664-1 |
| **Net weight** | 0.22 kg |

# Environment

| | |
|---|---|
| **Immunity to microbreaks** | 10 ms |
| **Product certifications** | GOST<br>C-Tick<br>UL<br>CSA<br>GL |
| **Standards** | IEC 60068-2-6 Fc<br>IEC 61000-4-11<br>IEC 61000-4-4 level 3<br>IEC 61000-4-2 level 3<br>IEC 61000-4-12<br>IEC 61000-4-6 level 3<br>IEC 61000-4-5<br>IEC 60068-2-27 Ea<br>IEC 61000-4-3 |
| **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 IEC 61000-6-2<br>EMC directive conforming to IEC 61000-6-3<br>EMC directive conforming to IEC 61000-6-4<br>EMC directive conforming to IEC 61131-2 zone B<br>Low voltage directive conforming to IEC 61131-2 |
| **Disturbance radiated/conducted** | Class B conforming to EN 55022-11 group 1 |
| **Pollution degree** | 2 conforming to 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<br>-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 Height** | 6.600 cm |
| **Package 1 Width** | 9.000 cm |
| **Package 1 Length** | 10.000 cm |
| **Package 1 Weight** | 211.000 g |
| **Unit Type of Package 2** | S03 |
| **Number of Units in Package 2** | 30 |
| **Package 2 Height** | 30.000 cm |
| **Package 2 Width** | 30.000 cm |
| **Package 2 Length** | 40.000 cm |
| **Package 2 Weight** | 6.827 kg |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **191 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **26 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0.4 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **164 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **0.5 kg CO2 eq.** |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **Yes** |
| SCIP Number | **Eee2fc35-1620-4b70-b1d5-206e9240044e** |
| EU RoHS Directive | Compliant By Exemption |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| PVC free | **Yes** |

## Use Again

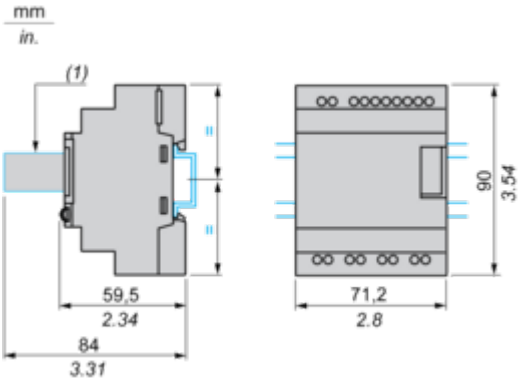
### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **0** |
| End of life manual availability | End of Life Information |
| Take-back | **No** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins** |

## Dimensions Drawings

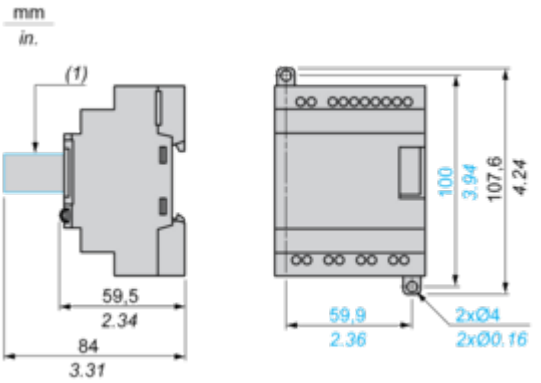
### Compact and Modular Smart Relays

#### Mounting on 35 mm/1.38 in. DIN Rail



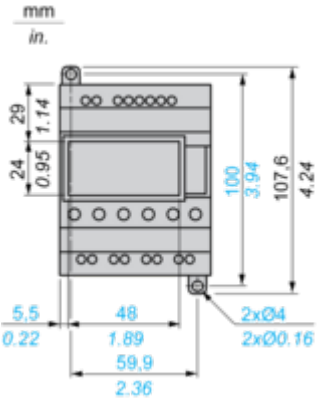

**(1)** With SR2USB01 or SR2BTC01

#### Screw Fixing (Retractable Lugs)




**(1)** With SR2USB01 or SR2BTC01

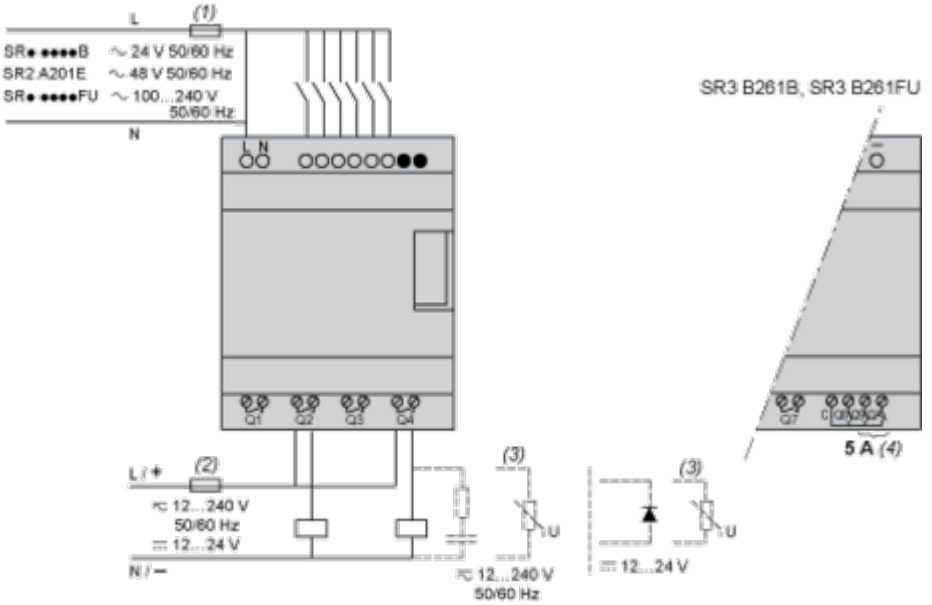
#### Position of Display



Connections and Schema

## Connection of Smart Relays on AC Supply

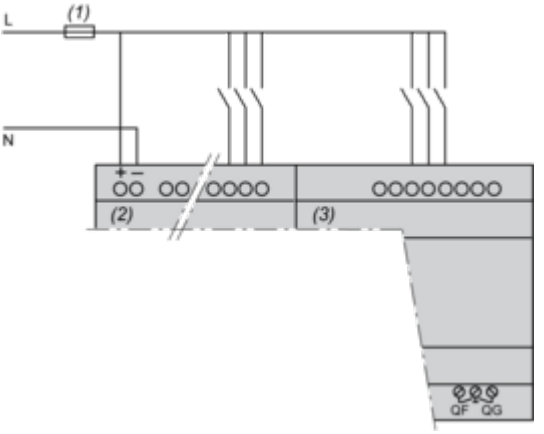
### SR••••1B, SR••••1FU




**(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.

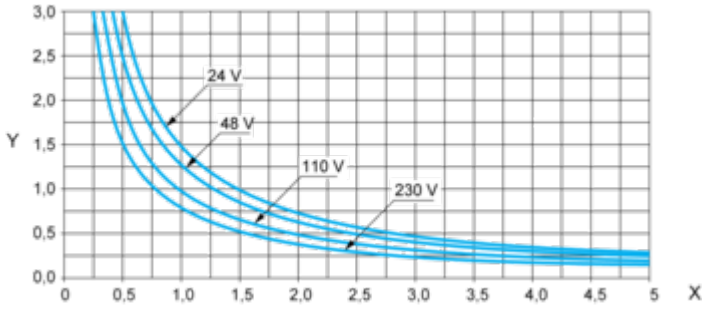
**NOTE:** QF and QG: 5 A for SR3XT141••

## Performance Curves

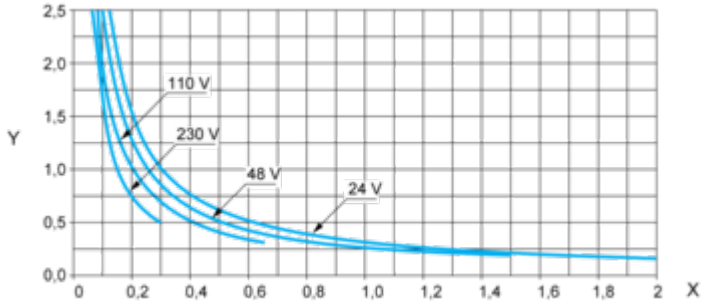
### Compact and Modular Smart Relays

### Electrical Durability of Relay Outputs

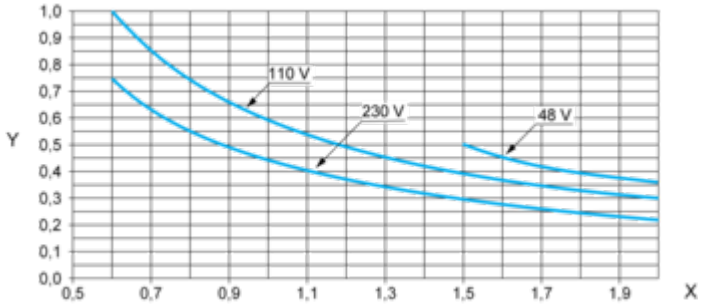
(in millions of operating cycles, conforming to IEC/EN 60947-5-1)
AC-12 (1)




**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)



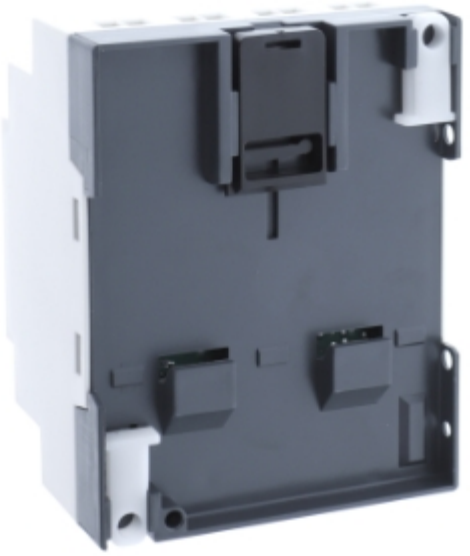

**X:** Current (A)
**Y:** Millions of operating cycles
**(1)** AC-14: switching small electromagnetic loads ≤ 72 VA, make: cos = 0.3, break: cos = 0.3.
AC-15 (1)




**X:** Current (A)
**Y:** Millions of operating cycles
**(1)** AC-15: switching electromagnetic loads ≥ 72 VA, make: cos = 0.7, break: cos = 0.4.

Image of product / Alternate images

**Alternative**





# Product datasheet SR2E121FU

