



## Main

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

## Complementary

|                                |  |
|--------------------------------|--|
| Local display                  | Without  |
| Number of control scheme lines | 0...500 with FBD programming<br>0...240 with ladder programming          |
| Cycle time                     | 6...90 ms  |
| Backup time                    | 10 years at 25 °C  |
| Clock drift                    | 6 s/month at 25 °C<br>12 min/year at 0...55 °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   |
| 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       | 47...53 Hz<br>57...63 Hz   |
| Voltage state 1 guaranteed     | $\geq 79$ V for discrete input   |
| Voltage state 0 guaranteed     | $\leq 40$ V for discrete input   |
| Current state 1 guaranteed     | $\geq 0.17$ mA for discrete input  |
| Current state 0 guaranteed     | $\leq 0.5$ mA for discrete input   |
| Input impedance                | 350 kOhm (discrete input)  |
| Number of outputs              | 4 relay output(s)  |
| Output voltage limits          | 24...250 V AC<br>5...30 V DC (relay output)                              |

|  |   |
|--|---|
| Contacts type and composition          | NO for relay output   |
| Output thermal current                 | 8 A for all 4 outputs (relay output)  |
| Electrical durability                  | 500000 cycles AC-12 at 230 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1<br>500000 cycles AC-15 at 230 V, 0.9 A for relay output conforming to EN/IEC 60947-5-1<br>500000 cycles DC-12 at 24 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1<br>500000 cycles DC-13 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 (relay output)  |
| [Uimp] rated impulse withstand voltage | 4 kV conforming to EN/IEC 60947-1 and EN/IEC 60664-1  |
| Clock                                  | With  |
| Response time                          | 10 ms (from state 0 to state 1) for relay output<br>5 ms (from state 1 to state 0) for relay output<br>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   |
| Connections - terminals                | Screw terminals, clamping capacity: 1 x 0.2...1 x 2.5 mm <sup>2</sup> AWG 25...AWG 14 semi-solid<br>Screw terminals, clamping capacity: 1 x 0.2...1 x 2.5 mm <sup>2</sup> AWG 25...AWG 14 solid<br>Screw terminals, clamping capacity: 1 x 0.25...1 x 2.5 mm <sup>2</sup> AWG 24...AWG 14 flexible with cable end<br>Screw terminals, clamping capacity: 2 x 0.2...2 x 1.5 mm <sup>2</sup> AWG 24...AWG 16 solid<br>Screw terminals, clamping capacity: 2 x 0.25...2 x 0.75 mm <sup>2</sup> 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                         | 0.22 kg   |

## Environment

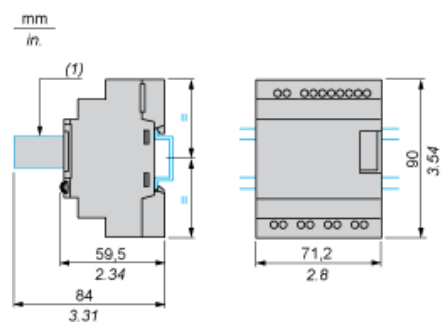
|                                       |   |
|---------------------------------------|---|
| Immunity to microbreaks               | <= 10 ms  |
| Product certifications                | CSA<br>C-Tick<br>GL<br>GOST<br>UL   |
| Standards                             | EN/IEC 60068-2-27 Ea<br>EN/IEC 60068-2-6 Fc<br>EN/IEC 61000-4-11<br>EN/IEC 61000-4-12<br>EN/IEC 61000-4-2 level 3<br>EN/IEC 61000-4-3<br>EN/IEC 61000-4-4 level 3<br>EN/IEC 61000-4-5<br>EN/IEC 61000-4-6 level 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 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/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<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  |
| Altitude transport                    | <= 3048 m   |
| Relative humidity                     | 95 % without condensation or dripping water   |

## Contractual warranty

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

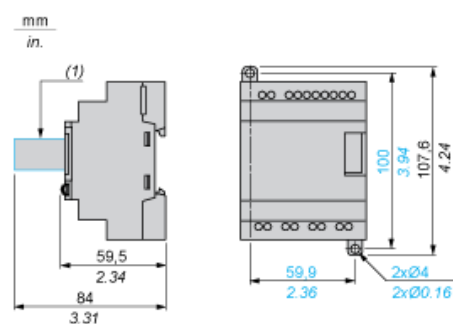
## Compact and Modular Smart Relays

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



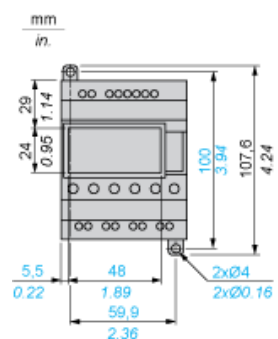
(1) With SR2USB01 or SR2BTC01

### Screw Fixing (Retractable Lugs)



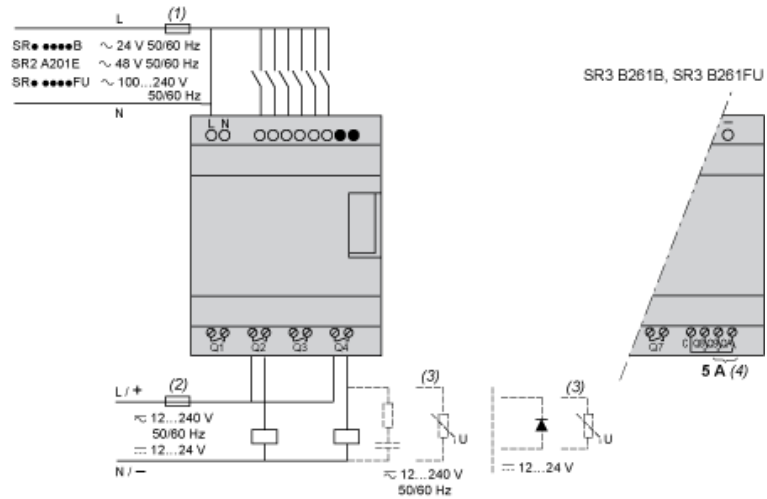
(1) With SR2USB01 or SR2BTC01

### Position of Display



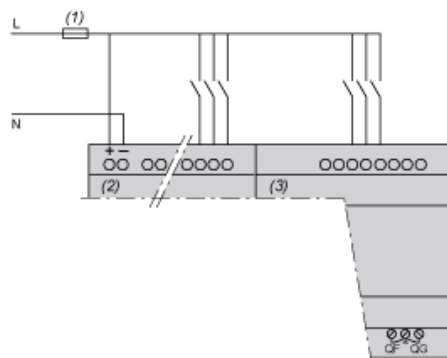
## Connection of Smart Relays on AC Supply

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

$$\text{SR3B}\cdots\text{B} + \text{SR3XT}\cdots\text{B}, \text{SR3B}\cdots\text{FU} + \text{SR3XT}\cdots\text{FU}$$


- (1) 1 A quick-blow fuse or circuit-breaker.

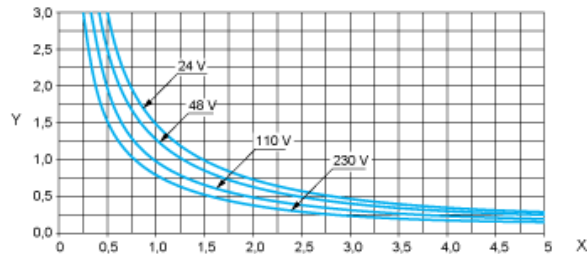
NOTE: QF and QG: 5 A for SR3XT141..

## 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)

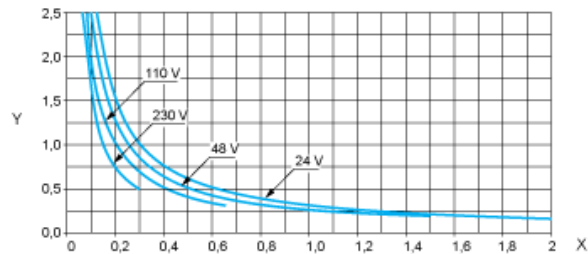


X: Current (A)

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)

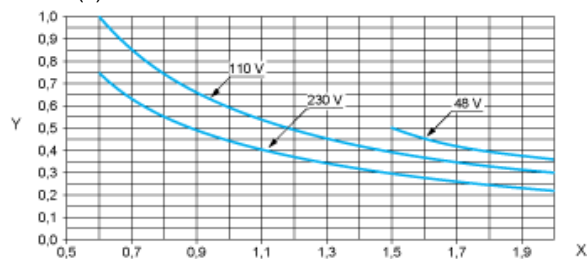


X: Current (A)

Y: Millions of operating cycles

(1) AC-14: switching small electromagnetic loads  $\leq 72$  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  $\geq 72$  VA, make:  $\cos = 0.7$ , break:  $\cos = 0.4$ .