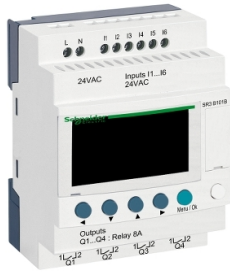


Product data sheet

Specifications



modular smart relay, Zelio Logic
SR2 SR3, 10 IO, 24V AC, clock,
display

SR3B101B

Main

Range of product	Zelio Logic
Product or component type	Modular smart relay

Complementary

Local display	With
Number of control scheme lines	0...500 FBD 0...240 ladder
Cycle time	6...90 ms
Backup time	10 years 77 °F (25 °C)
Clock drift	12 min/year 32...131 °F (0...55 °C) 6 s/month 77 °F (25 °C)
Checks	Program memory on each power up
[Us] rated supply voltage	24 V
Supply voltage limits	20.4...28.8 V
Supply frequency	50/60 Hz
Maximum supply current	160 mA without extension) 280 mA with extensions)
Power consumption in VA	4 VA without extension 7.5 VA with extensions
Isolation voltage	1780 V
Protection type	Against inversion of terminals (control instructions not executed)
Discrete input number	6
Discrete input voltage	24 V AC
Discrete input current	4.4 mA
Discrete input frequency	57...63 Hz 47...53 Hz
Voltage state 1 guaranteed	≥ 14 V discrete input
Voltage state 0 guaranteed	≤ 5 V discrete input
Current state 1 guaranteed	≥ 2 mA discrete input)
Current state 0 guaranteed	≤ 0.5 mA discrete input)
Input impedance	4.6 kOhm 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 relay output
Output thermal current	8 A for all 4 outputs relay output
Electrical durability	AC-12 500000 cycles 230 V, 1.5 A relay output IEC 60947-5-1 AC-15 500000 cycles 230 V, 0.9 A relay output IEC 60947-5-1 DC-12 500000 cycles 24 V, 1.5 A relay output IEC 60947-5-1 DC-13 500000 cycles 24 V, 0.6 A relay output IEC 60947-5-1
Switching capacity in mA	>= 10 mA 12 V relay output)
Operating rate in Hz	0.1 Hz at le)relay output 10 Hz no load)relay output
Mechanical durability	10000000 cycles relay output
[Uimp] rated impulse withstand voltage	4 kV EN/IEC 60947-1 and EN/IEC 60664-1
Clock	With
Response time	50 ms ladder from state 0 to state 1)discrete input 50 ms ladder from state 1 to state 0)discrete input 50...255 ms FBD from state 0 to state 1)discrete input 50...255 ms FBD from state 1 to state 0)discrete input 10 ms from state 0 to state 1)relay output 5 ms from state 1 to state 0)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	4.4 lbf.in (0.5 N.m)
Overvoltage category	III conforming to IEC 60664-1
Product weight	0.55 lb(US) (0.25 kg)

Environment

Immunity to microbreaks	10 ms repeated 20 times
Product certifications	GL UL C-Tick CSA GOST
Standards	IEC 61000-4-2 level 3 IEC 61000-4-5 IEC 61000-4-12 IEC 61000-4-4 level 3 IEC 60068-2-6 Fc IEC 61000-4-6 level 3 IEC 61000-4-11 IEC 61000-4-3 IEC 60068-2-27 Ea
IP degree of protection	IP20 IEC 60529 terminal block) IP40 IEC 60529 front panel)
Environmental characteristic	EMC directive conforming to IEC 61000-6-2 EMC directive conforming to IEC 61000-6-3 EMC directive conforming to IEC 61000-6-4 EMC directive conforming to IEC 61131-2 zone B Low voltage directive conforming to IEC 61131-2
Disturbance radiated/conducted	Class B EN 55022-11 group 1
Pollution degree	2 IEC 61131-2
Ambient air temperature for operation	-4...104 °F (-20...40 °C) in non-ventilated enclosure IEC 60068-2-1 and IEC 60068-2-2 -4...131 °F (-20...55 °C) IEC 60068-2-1 and IEC 60068-2-2
Ambient air temperature for storage	-40...158 °F (-40...70 °C)

Operating altitude	2000 m
Maximum altitude transport	10000 ft (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	2.598 in (6.600 cm)
Package 1 Width	3.543 in (9.000 cm)
Package 1 Length	3.937 in (10.000 cm)
Package 1 Weight	8.466 oz (240.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	30
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	16.936 lb(US) (7.682 kg)

Contractual warranty

Warranty (in months)	18
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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	116 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	29 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.5 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	86 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.6 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 Longer




Lifetime extension

Repair	No
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Use Again



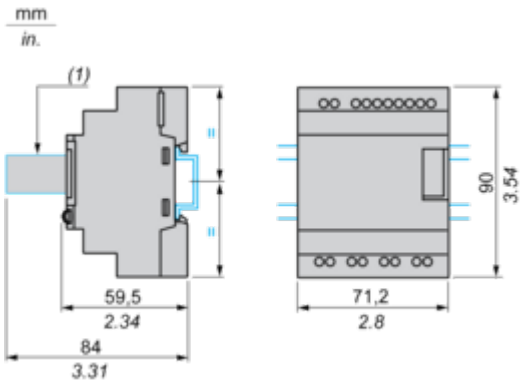
Repack and remanufacture

Recyclability potential, in %	0
Circularity Profile	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

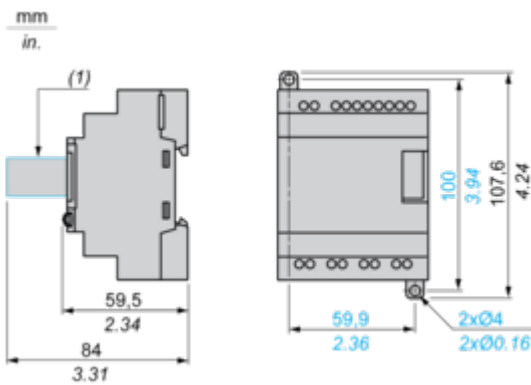
Compact and Modular Smart Relays

Mounting on 35 mm/1.38 in. DIN Rail



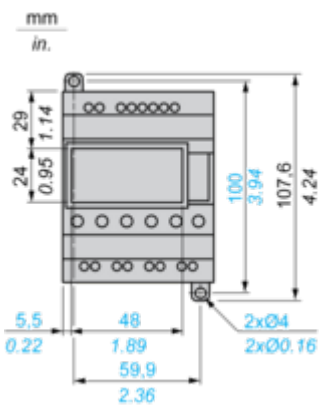
(1) With SR2USB01 or SR2BTC01

Screw Fixing (Retractable Lugs)



(1) With SR2USB01 or SR2BTC01

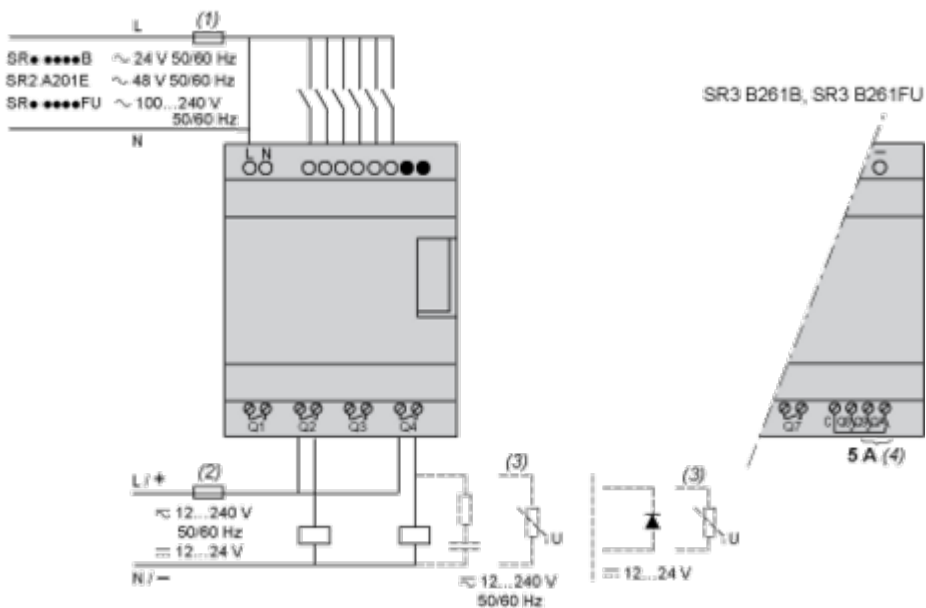
Position of Display



Connections and Schema

Connection of Smart Relays on AC Supply

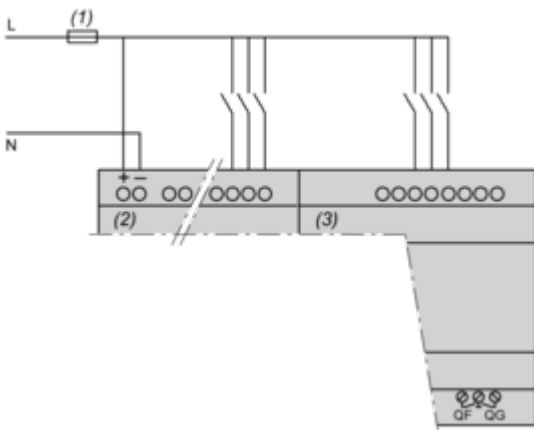
SR••••1B, SR••••1FU



- (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.

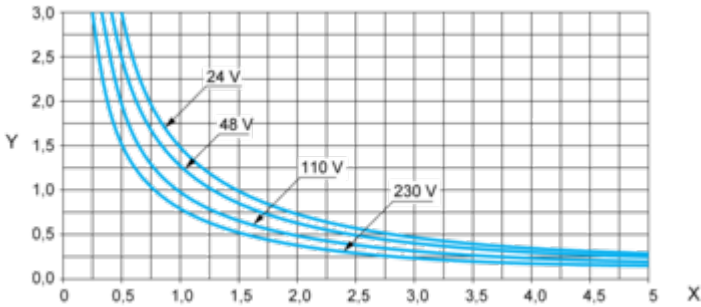
NOTE: QF and QG: 5 A for SR3XT141••

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)

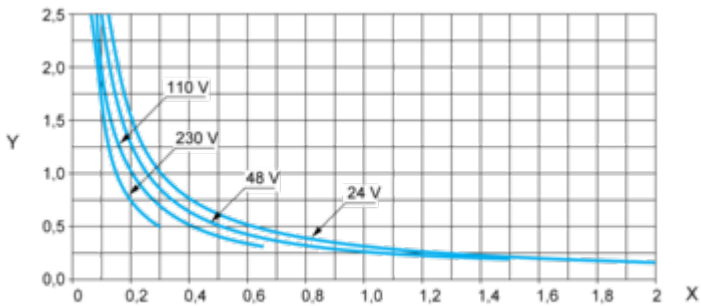


X: Current (A)

Y: Millions of operating cycles

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

AC-14 (1)

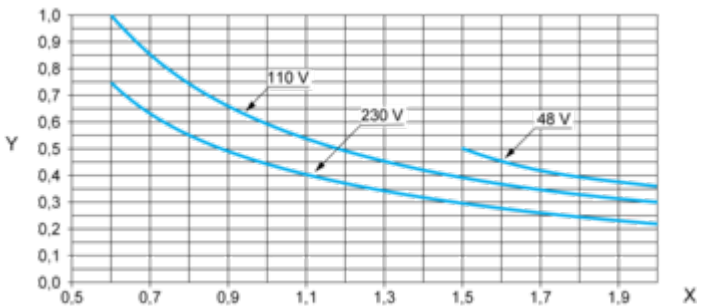


X: Current (A)

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: $\cos = 0.4$.

Technical Illustration

Dimensions

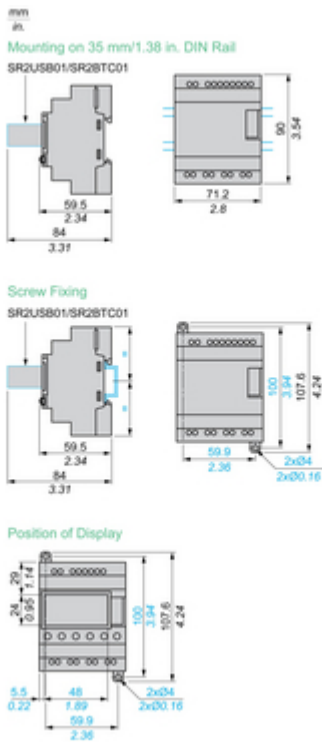


Image of product / Alternate images

Alternative



