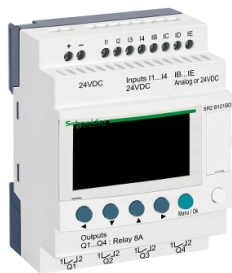


# Bảng thông số sản phẩm

Thông số kỹ thuật



compact smart relay, Zelio Logic SR2 SR3, 12 IO, 24V DC, clock, display, 4 relay outputs

SR2B121BD

## 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	24 V DC
Supply voltage limits	19.2...30 V
Maximum supply current	100 mA (without extension)
Power dissipation in W	3 W without extension
Reverse polarity protection	With
Discrete input number	8 conforming to IEC 61131-2 Type 1
Discrete input type	Resistive
Discrete input voltage	24 V DC
Discrete input current	4 mA
Counting frequency	1 kHz for discrete input
Voltage state 1 guaranteed	$\geq 15$ V for I1...IA and IH...IR discrete input circuit $\geq 15$ V for IB...IG used as discrete input circuit
Voltage state 0 guaranteed	$\leq 5$ V for I1...IA and IH...IR discrete input circuit $\leq 5$ V for IB...IG used as discrete input circuit
Current state 1 guaranteed	$\geq 1.2$ mA (IB...IG used as discrete input circuit) $\geq 2.2$ mA (I1...IA and IH...IR discrete input circuit)
Current state 0 guaranteed	$\leq 0.5$ mA (IB...IG used as discrete input circuit) $\leq 0.75$ mA (I1...IA and IH...IR discrete input circuit)
Input compatibility	3-wire proximity sensors PNP for discrete input
Analogue input number	4
Analogue input type	Common mode
Analogue input range	0...10 V 0...24 V

<b>Temperature probe type</b>	NTC 10k at 25 °C NTC 1000k at 25 °C KTY81 210/220/221/222/250 Pt 500
<b>Maximum permissible voltage</b>	30 V for analogue input circuit
<b>Analogue input resolution</b>	8 bits
<b>LSB value</b>	39 mV for analogue input circuit
<b>Conversion time</b>	Smart relay cycle time for analogue input circuit
<b>Conversion error</b>	+/- 5 % at 25 °C for analogue input circuit +/- 6.2 % at 55 °C for analogue input circuit
<b>Repeat accuracy</b>	+/- 2 % at 55 °C for analogue input circuit
<b>Operating distance</b>	10 m between stations, with screened cable (sensor not isolated) for analogue input circuit
<b>Input impedance</b>	12 kOhm for IB...IG used as analogue input circuit 12 kOhm for IB...IG used as discrete input circuit 7.4 kOhm for I1...IA and IH...IR discrete input circuit
<b>Number of outputs</b>	4 relay
<b>Output voltage limits</b>	24...250 V AC (relay output) 5...30 V DC (relay output)
<b>Contacts type and composition</b>	NO for relay output
<b>Output thermal current</b>	8 A for all 4 outputs for relay output
<b>Electrical durability</b>	AC-12: 500000 cycles at 230 V, 1.5 A for relay output conforming to IEC 60947-5-1 AC-15: 500000 cycles at 230 V, 0.9 A for relay output conforming to IEC 60947-5-1 DC-12: 500000 cycles at 24 V, 1.5 A for relay output conforming to IEC 60947-5-1 DC-13: 500000 cycles at 24 V, 0.6 A for relay output conforming to IEC 60947-5-1
<b>Switching capacity in mA</b>	>= 10 mA at 12 V (relay output)
<b>Operating rate in Hz</b>	0.1 Hz (at Ie) for relay output 10 Hz (no load) for relay output
<b>Mechanical durability</b>	10000000 cycles for relay output
<b>[Uimp] rated impulse withstand voltage</b>	4 kV conforming to EN/IEC 60947-1 and EN/IEC 60664-1
<b>Clock</b>	With
<b>Response time</b>	10 ms (from state 0 to state 1) for relay output 5 ms (from state 1 to state 0) for relay output
<b>Connections - terminals</b>	Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 25...AWG 14) semi-solid Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 25...AWG 14) solid Screw terminals, 1 x 0.25...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 14) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) solid Screw terminals, 2 x 0.25...2 x 0.75 mm <sup>2</sup> (AWG 24...AWG 18) flexible with cable end
<b>Tightening torque</b>	0.5 N.m
<b>Overvoltage category</b>	III conforming to IEC 60664-1
<b>net weight</b>	0.25 kg

## Environment

<b>Immunity to microbreaks</b>	1 ms
<b>Product certifications</b>	GL CSA UL GOST C-Tick

<b>Standards</b>	IEC 61000-4-12 IEC 61000-4-4 level 3 IEC 61000-4-5 IEC 61000-4-11 IEC 61000-4-2 level 3 IEC 60068-2-6 Fc IEC 61000-4-6 level 3 IEC 60068-2-27 Ea IEC 61000-4-3
<b>IP degree of protection</b>	IP20 (terminal block) conforming to IEC 60529 IP40 (front panel) conforming to IEC 60529
<b>Environmental characteristic</b>	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
<b>Disturbance radiated/conducted</b>	Class B conforming to EN 55022-11 group 1
<b>Pollution degree</b>	2 conforming to IEC 61131-2
<b>Ambient air temperature for operation</b>	-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
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Operating altitude</b>	2000 m
<b>Maximum altitude transport</b>	3048 m
<b>Relative humidity</b>	95 % without condensation or dripping water

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	6.500 cm
<b>Package 1 Width</b>	9.000 cm
<b>Package 1 Length</b>	10.000 cm
<b>Package 1 Weight</b>	239.000 g
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	30
<b>Package 2 Height</b>	30.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	7.660 kg

## Contractual warranty

<b>Warranty</b>	18 months
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## Bền vững

Nhãn **Green Premium™** là cam kết của Schneider Electric trong việc cung cấp sản phẩm với hiệu suất môi trường tốt nhất. Green Premium cam kết tuân thủ các quy định mới nhất, minh bạch về tác động môi trường, cũng như các sản phẩm tuần hoàn và CO<sub>2</sub> thấp.

**Hướng dẫn đánh giá tính bền vững của sản phẩm** là tài liệu kỹ thuật phổ thông giúp làm rõ các tiêu chuẩn nhân sinh thái toàn cầu và cách diễn giải việc khai báo môi trường.

[Tìm hiểu thêm về Green Premium >](#)

[Hướng dẫn đánh giá về sự bền vững của sản phẩm >](#)



Minh bạch [RoHS/REACH](#)

## Hiệu suất sức khỏe

Mercury Free

Rohs Exemption Information [Yes](#)

Pvc Free

## Chứng nhận & Tiêu chuẩn

Reach Regulation

[REACH Declaration](#)

Eu Rohs Directive

Pro-active compliance (Product out of EU RoHS legal scope)

China Rohs Regulation

[China RoHS declaration](#)

Environmental Disclosure

[Product Environmental Profile](#)

Weee

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

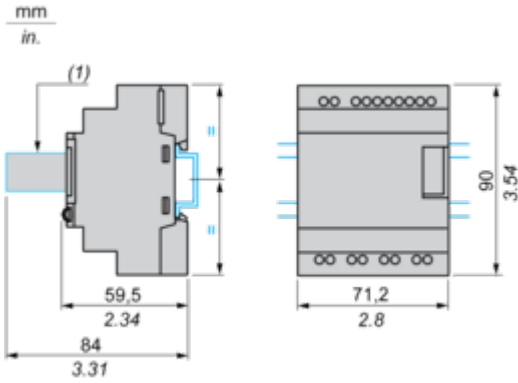
Circularity Profile

[End of Life Information](#)

## Dimensions Drawings

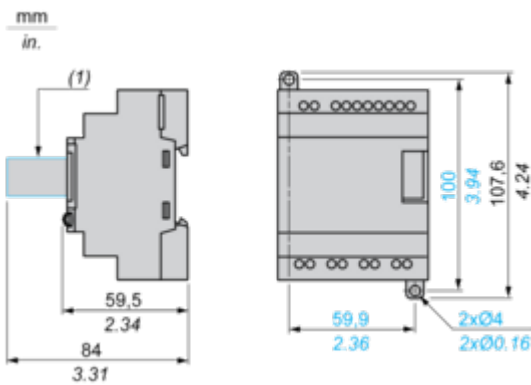
### Compact and Modular Smart Relays

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



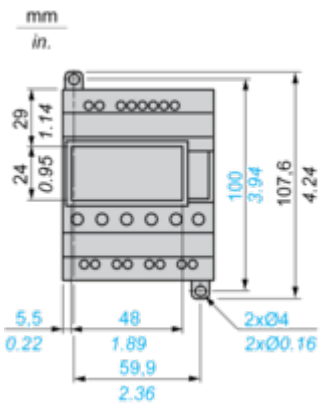
(1) With SR2USB01 or SR2BTC01

#### Screw Fixing (Retractable Lugs)



(1) With SR2USB01 or SR2BTC01

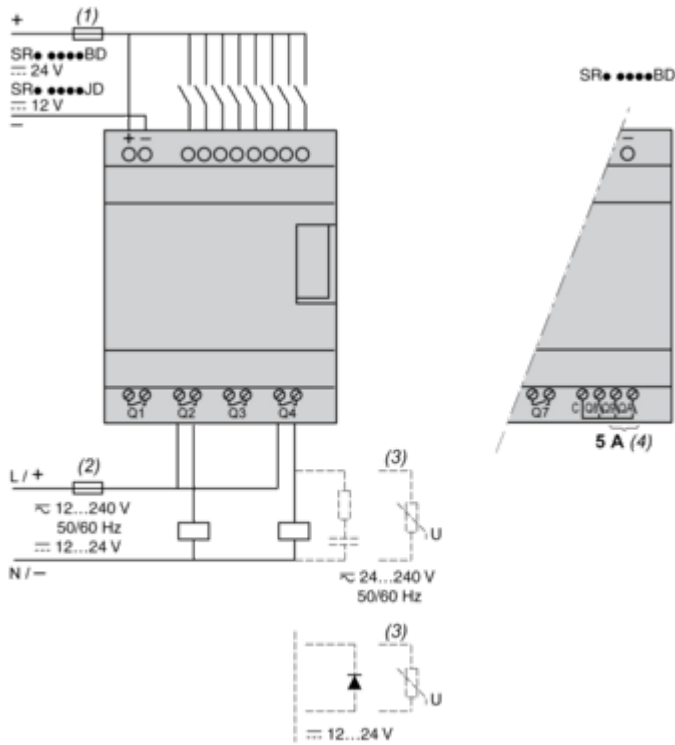
#### Position of Display



## Connections and Schema

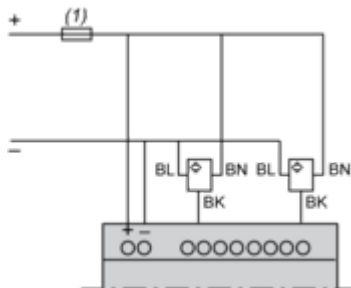
### Compact and Modular Smart Relays

#### Connection of Smart Relays on DC Supply



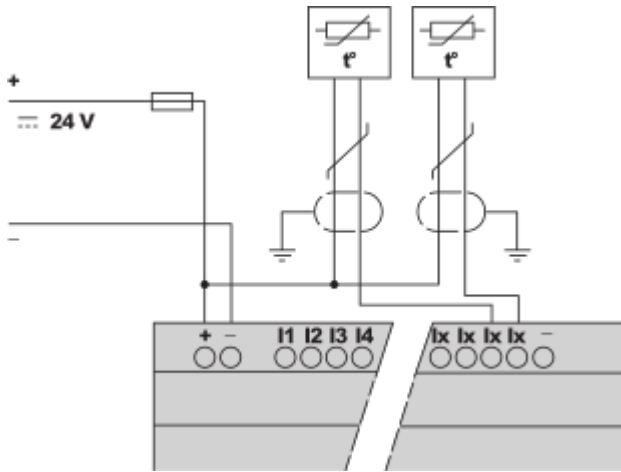
- (1) 1 A quick-blow fuse or circuit-breaker.
- (2) Fuse or circuit-breaker.
- (3) Inductive load.
- (4) Q9 and QA: 5 A (max. current in terminal C: 10 A).

#### Discrete Input Used for 3-Wire Sensors



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

Connection of Thermistor Input on DC Supply



**NOTE:** Ix = IB...IG

## Performance Curves

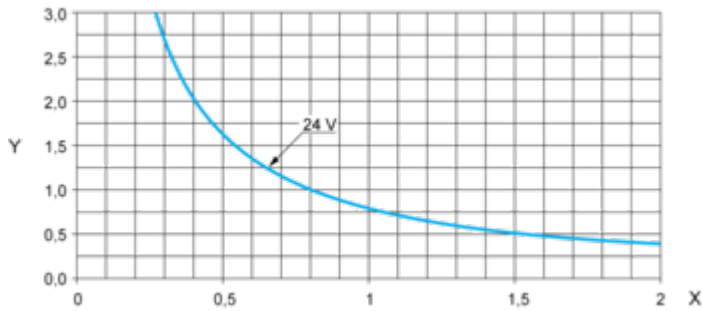
### Compact and Modular Smart Relays

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#### Electrical Durability of Relay Outputs

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

DC-12 (1)

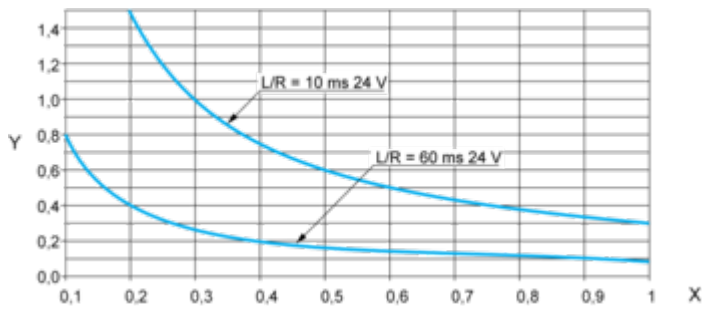


X: Current (A)

Y: Millions of operating cycles

(1) DC-12: control of resistive loads and of solid state loads isolated by opto-coupler,  $L/R \leq 1$  ms.

DC-13 (1)



X: Current (A)

Y: Millions of operating cycles

(1) DC-13: switching electromagnets,  $L/R \leq 2 \times (U_e \times I_e)$  in ms,  $U_e$ : rated operational voltage,  $I_e$ : rated operational current (with a protection diode on the load, DC-12 curves must be used with a coefficient of 0.9 applied to the number in millions of operating cycles).