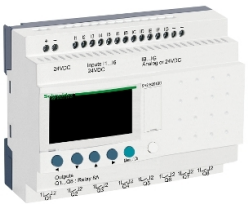
# Product data sheet

Specifications



## compact smart relay, Zelio Logic SR2 SR3, 20 IO, 24V DC, clock, display, 8 relay outputs

SR2B201BD

**Product availability: Stock - Normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Range of Product** | Zelio Logic |
| **Product or Component Type** | Compact smart relay |

## Complementary

| | |
|---|---|
| **Local display** | With |
| **Number or control scheme lines** | 0…240 ladder<br>0…500 FBD |
| **Cycle time** | 6…90 ms |
| **Backup time** | 10 years 77 °F (25 °C) |
| **Clock drift** | 12 min/year 32…131 °F (0…55 °C)<br>6 s/month 77 °F (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** | 6 W without extension |
| **Reverse polarity protection** | With |
| **Discrete input number** | 12 IEC 61131-2 Type 1 |
| **Discrete input type** | Resistive |
| **Discrete input voltage** | 24 V DC |
| **Discrete input current** | 4 mA |
| **Counting frequency** | 1 kHz discrete input |
| **Voltage state 1 guaranteed** | >= 15 V I1...IA and IH...IR discrete input circuit<br>>= 15 V IB...IG used as discrete input circuit |
| **Voltage state 0 guaranteed** | <= 5 V I1...IA and IH...IR discrete input circuit<br><= 5 V IB...IG used as discrete input circuit |
| **Current state 1 guaranteed** | >= 1.2 mA IB...IG used as discrete input circuit)<br>>= 2.2 mA I1...IA and IH...IR discrete input circuit) |
| **Current state 0 guaranteed** | <= 0.75 mA I1...IA and IH...IR discrete input circuit)<br><= 0.75 mA IB...IG used as discrete input circuit) |
| **Input compatibility** | 3-wire proximity sensors PNP discrete input |
| **Analogue input number** | 6 |
| **Analogue Input Type** | Common mode |
| **Analogue input range** | 0...24 V<br>0...10 V |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

| | |
|---|---|
| **Temperature probe type** | NTC 10k 77 °F (25 °C)<br>NTC 1000k 77 °F (25 °C)<br>KTY81 210/220/221/222/250<br>Pt 500 |
| **Maximum permissible voltage** | 30 V analogue input circuit |
| **Analogue input resolution** | 8 bits |
| **LSB value** | 39 mV analogue input circuit |
| **Conversion time** | Smart relay cycle time analogue input circuit |
| **Conversion error** | +/- 5 % 77 °F (25 °C) analogue input circuit<br>+/- 6.2 % 131 °F (55 °C) analogue input circuit |
| **Repeat accuracy** | +/- 2 % 131 °F (55 °C) analogue input circuit |
| **Operating distance** | 10 m between stations, with screened cable (sensor not isolated) analogue input circuit |
| **Input impedance** | 12 kOhm IB...IG used as analogue input circuit<br>12 kOhm IB...IG used as discrete input circuit<br>7.4 kOhm I1...IA and IH...IR discrete input circuit |
| **Number of Outputs** | 8 relay |
| **Output voltage limits** | 24...250 V AC relay output)<br>5...30 V DC relay output) |
| **Contacts type and composition** | NO relay output |
| **Output thermal current** | 8 A for all 8 outputs relay output |
| **Electrical durability** | AC-12 500000 cycles 230 V, 1.5 A relay output IEC 60947-5-1<br>AC-15 500000 cycles 230 V, 0.9 A relay output IEC 60947-5-1<br>DC-12 500000 cycles 24 V, 1.5 A relay output IEC 60947-5-1<br>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 Ie)relay output<br>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** | 10 ms from state 0 to state 1)relay output<br>5 ms from state 1 to state 0)relay output |
| **Connections - terminals** | Screw terminals, 1 x 0.2...1 x 2.5 mm² AWG 25...AWG 14) semi-solid<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² AWG 25...AWG 14) solid<br>Screw terminals, 1 x 0.25...1 x 2.5 mm² AWG 24...AWG 14) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² AWG 24...AWG 16) solid<br>Screw terminals, 2 x 0.25...2 x 0.75 mm² 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 |
| **Net Weight** | 0.84 lb(US) (0.38 kg) |

# Environment

| | |
|---|---|
| **Immunity to microbreaks** | 10 ms |
| **Product Certifications** | GOST<br>UL<br>CSA<br>C-tick<br>GL |

| | |
|---|---|
| **Standards** | IEC 61000-4-2 level 3<br>IEC 61000-4-5<br>IEC 60068-2-27 Ea<br>IEC 61000-4-12<br>IEC 61000-4-3<br>IEC 60068-2-6 Fc<br>IEC 61000-4-6 level 3<br>IEC 61000-4-4 level 3<br>IEC 61000-4-11 |
| **IP degree of protection** | IP20 IEC 60529 terminal block)<br>IP40 IEC 60529 front panel) |
| **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 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<br>-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** | 6561.68 ft (2000 m) |
| **Maximum altitude transport** | 10000 ft (3048 m) |
| **Relative Humidity** | 95 % without condensation or dripping water |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1000I22378 |
| **Discount Schedule** | 000I |
| **GTIN** | 3389110549423 |
| **Returnability** | Yes |
| **Country of origin** | FR |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Height** | 2.56 in (6.500 cm) |
| **Package 1 Width** | 4.02 in (10.200 cm) |
| **Package 1 Length** | 5.20 in (13.200 cm) |
| **Package 1 Weight** | 12.769 oz (362.000 g) |
| **Unit Type of Package 2** | S03 |
| **Number of Units in Package 2** | 20 |
| **Package 2 Height** | 11.81 in (30.000 cm) |
| **Package 2 Width** | 11.81 in (30.000 cm) |
| **Package 2 Length** | 15.75 in (40.000 cm) |
| **Package 2 Weight** | 17.033 lb(US) (7.726 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

## 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

| | |
|---|---|
| Carbon footprint (kg CO2 eq, Total Life cycle) | 241 |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| SCIP Number | Eee2fc35-1620-4b70-b1d5-206e9240044e |
| REACh Regulation | REACh Declaration |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| PVC free | Yes |

## Use Again

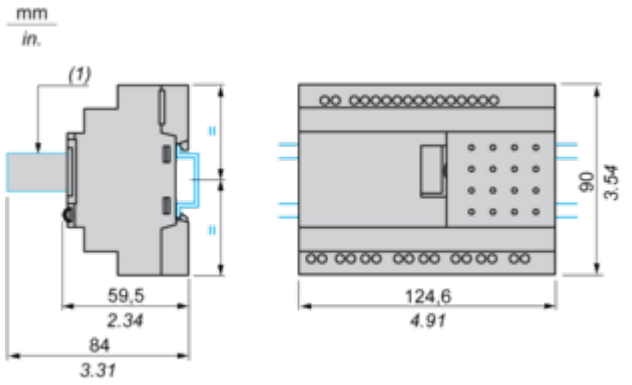
### Repack and remanufacture

| | |
|---|---|
| Circularity Profile | End of Life Information |
| Take-back | No |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |

## Dimensions Drawings

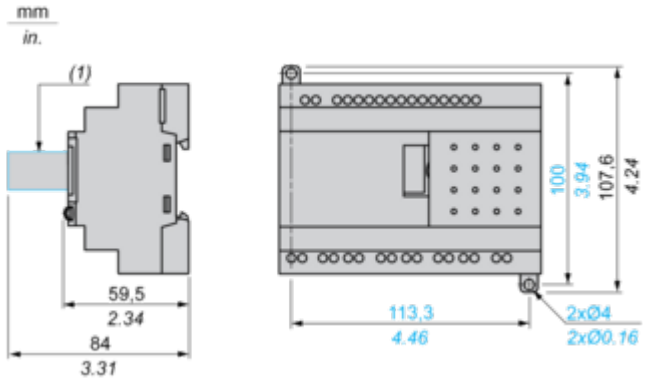
### Compact and Modular Smart Relays

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



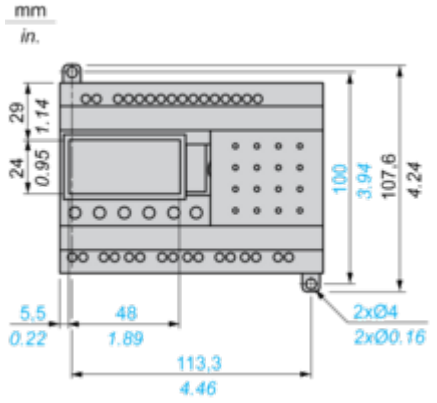

**(1)** With SR2USB01 or SR2BTC01

#### Screw Fixing (Retractable Lugs)




**(1)** With SR2USB01 or SR2BTC01

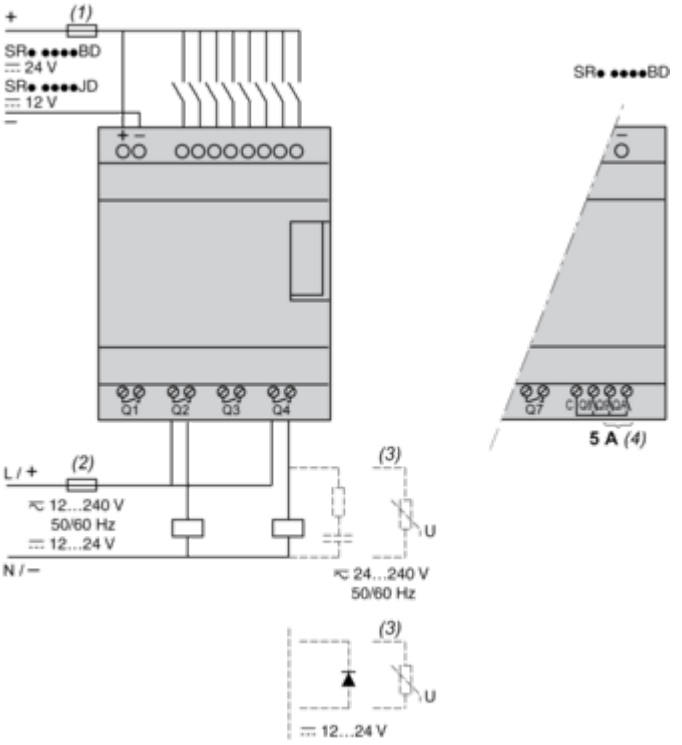
#### Position of Display



Connections and Schema

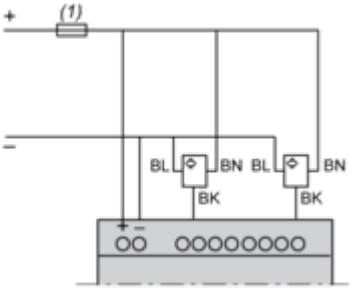
## Compact and Modular Smart Relays

### Connection of Smart Relays on DC Supply



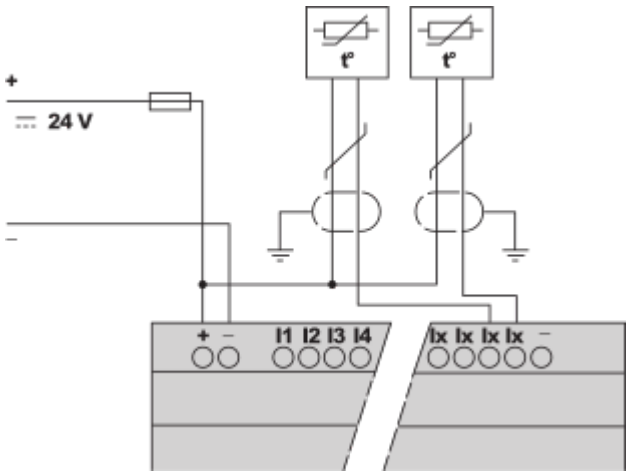

**(1)** 1 A quick-blow fuse or circuit-breaker.
**(2)** Fuse or circuit-breaker.
**(3)** Inductive load.
**(4)** Q9 and QA: 5 A (max. current in terminal C: 10 A).

### Discrete Input Used for 3-Wire Sensors




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

## Connection of Thermistor Input on DC Supply



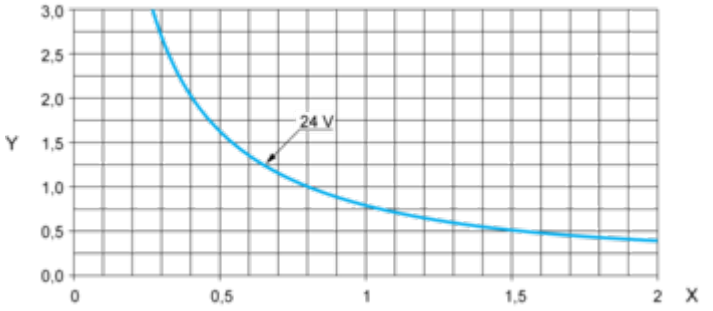

**NOTE:** Ix = IB...IG

## Performance Curves

### Compact and Modular Smart Relays

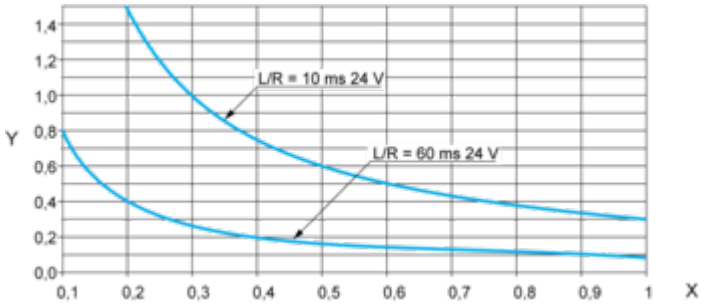
#### Electrical Durability of Relay Outputs

(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 ≤ 1 ms.

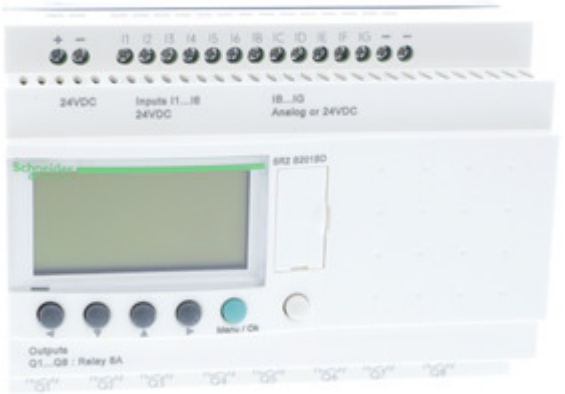
DC-13 (1)




**X:** Current (A)
**Y:** Millions of operating cycles
**(1)** DC-13: switching electromagnets, L/R ≤ 2 x (Ue x Ie) in ms, Ue: rated operational voltage, Ie: 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).

Image of product / Alternate images

**Alternative**




Schneider Electric
Zelio
SR2 B201BD