## Product data sheet
### Characteristics

**SR3B101BD**
modular smart relay Zelio Logic - 10 I O - 24 V DC
- clock - display

Product availability: Stock - Normally stocked in distribution facility

Price*: 282.00 USD

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### Main
- **Range of product**: Zelio Logic
- **Product or component type**: Modular smart relay

### Complementary
- **Local display**: With
- **Number or control scheme lines**
  - 0...500 with FBD programming
  - 0...240 with ladder programming
- **Cycle time**: 6...90 ms
- **Backup time**: 10 years at 77 °F (25 °C)
- **Clock drift**
  - 6 s/month at 77 °F (25 °C)
  - 12 min/year at 32...131 °F (0...55 °C)
- **Checks**: Program memory on each power up
- **[Us] rated supply voltage**: 24 V
- **Supply voltage limits**: 19.2...30 V
- **Supply current**
  - 100 mA (with extensions)
  - 100 mA (without extension)
- **Power dissipation in W**
  - 3 W without extension
  - 8 W with extensions
- **Reverse polarity protection**: With
- **Discrete input number**: 6 conforming to EN/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**
  - $$\geq 15 \text{ V}$$ for I1...IA and IH...IR discrete input circuit
  - $$\geq 15 \text{ V}$$ for IB...IG used as discrete input circuit
- **Voltage state 0 guaranteed**
  - $$\leq 5 \text{ V}$$
  - $$\leq 5 \text{ V}$$ for I1...IA and IH...IR discrete input circuit
  - $$\leq 5 \text{ V}$$ for IB...IG used as discrete input circuit
- **Current state 1 guaranteed**
  - $$\geq 1.2 \text{ mA}$$ for IB...IG used as discrete input circuit
  - $$\geq 2.2 \text{ mA}$$ for I1...IA and IH...IR discrete input circuit
- **Current state 0 guaranteed**
  - $$\leq 0.5 \text{ mA}$$ for IB...IG used as discrete input circuit

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**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.

Jun 5, 2019
### Input compatibility
- 3-wire proximity sensors PNP (discrete input)

### Analogue input number
- 4

### Analogue input type
- Common mode

### Analogue input range
- 0...10 V
- 0...24 V

### 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 % at 77 °F (25 °C) for analogue input circuit
- +/- 6.2 % at 131 °F (55 °C) for analogue input circuit

### Repeat accuracy
- +/- 2 % at 131 °F (55 °C) for 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)
- 12 kOhm (IB...IG used as discrete input circuit)
- 7.4 kOhm (I1...IA and IH...IR discrete input circuit)

### Number of outputs
- 4 relay output(s)

### Output voltage limits
- 24...250 V AC (relay output)
- 5...30 V DC (relay output)

### Contacts type and composition
- NO 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
- 500000 cycles AC-15 at 230 V, 0.9 A for relay output conforming to EN/IEC 60947-5-1
- 500000 cycles DC-12 at 24 V, 1.5 A for relay output conforming to EN/IEC 60947-5-1
- 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
- 10 Hz (no load) for relay output

### Mechanical durability
- 1000000 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) relay output
- 5 ms (from state 1 to state 0) relay output

### Connections - terminals
- Screw terminals, clamping capacity: 1 x 0.2...1 x 2.5 mm² AWG 25...AWG 14 semi-solid
- Screw terminals, clamping capacity: 1 x 0.2...1 x 2.5 mm² AWG 25...AWG 14 solid
- Screw terminals, clamping capacity: 1 x 0.25...1 x 2.5 mm² AWG 24...AWG 14 flexible with cable end
- Screw terminals, clamping capacity: 2 x 0.2...2 x 1.5 mm² AWG 24...AWG 16 solid
- Screw terminals, clamping capacity: 2 x 0.25...2 x 0.75 mm² AWG 24...AWG 18 flexible with cable end

### Tightening torque
- 4.42 lbf.in (0.5 N.m)

### Overvoltage category
- III conforming to EN/IEC 60664-1

### Product weight
- 0.55 lb (US) (0.25 kg)

### Environment

#### Immunity to microbreaks
- <= 1 ms

#### Product certifications
- CSA
- C-Tick
- GL
- GOST
- UL

#### Standards
- EN/IEC 60068-2-27 Ea
- EN/IEC 60068-2-6 Fc
- EN/IEC 61000-4-11
- EN/IEC 61000-4-12
- EN/IEC 61000-4-2 level 3
- EN/IEC 61000-4-3
- EN/IEC 61000-4-4 level 3
- EN/IEC 61000-4-5
- EN/IEC 61000-4-6 level 3

#### IP degree of protection
- IP20 (terminal block) conforming to IEC 60529
IP40 (front panel) conforming to IEC 60529

Environmental characteristic
- EMC directive conforming to EN/IEC 61000-6-2
- EMC directive conforming to EN/IEC 61000-6-3
- EMC directive conforming to EN/IEC 61000-6-4
- EMC directive conforming to EN/IEC 61131-2 zone B
- 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
- -4...104 °F (-20...40 °C) in non-ventilated enclosure conforming to IEC 60068-2-1 and IEC 60068-2-2
- -4...131 °F (-20...55 °C) conforming to 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)

Altitude transport
- <= 10000 ft (3048 m)

Relative humidity
- 95 % without condensation or dripping water

Ordering and shipping details
- Category: 22378 - SR2,3 ZELIO 2 RELAYS
- Discount Schedule: I
- GTIN: 00785901693963
- Nbr. of units in pkg.: 1
- Package weight (Lbs): 0.53000000000000003
- Returnability: Y
- Country of origin: FR

Offer Sustainability
- California proposition 65: WARNING: This product can expose you to chemicals including:
  - Substance 1: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
  - More information: For more information go to www.p65warnings.ca.gov

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
Compact and Modular Smart Relays

Connection of Smart Relays on DC Supply

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. A quick-blow fuse or circuit-breaker.
Connection of Smart Relays on DC Supply

Analog Inputs

<table>
<thead>
<tr>
<th>Smart Relays</th>
<th>Analog Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR2•12••D</td>
<td>IB…IE</td>
</tr>
<tr>
<td>SR2A201BD</td>
<td>IB and IC</td>
</tr>
<tr>
<td>SR2D201BD</td>
<td>IB and IC</td>
</tr>
<tr>
<td>SR2B20••D</td>
<td>IB…IG</td>
</tr>
<tr>
<td>SR2E201BD</td>
<td>IB…IG</td>
</tr>
<tr>
<td>SR3B10••BD</td>
<td>IB…IE</td>
</tr>
<tr>
<td>SR3B26••D</td>
<td>IB…IG</td>
</tr>
</tbody>
</table>
Connection of Smart Relays on DC Supply, with Discrete I/O Extension Modules

SR3B•••JD + SR3XT•••JD, SR3B•••BD + SR3XT•••BD

(1) 1 A quick-blow fuse or circuit-breaker.
(2) Ca: Analog sensor / Ta: Analog transmitter.
(3) Recommended values: 2.2 kΩ / 0.5 W (10 kΩ max.)
(4) Screened cables, maximum length 10 m / 32.80 feet.

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)

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).