



## Main

|                           |                               |
|---------------------------|-------------------------------|
| Range of product          | Zelio Logic                   |
| Product or component type | Analogue I/O extension module |

## Complementary

|                                 |  |
|---------------------------------|--|
| Analogue input number           | 2  |
| Analogue input type             | Common mode  |
| Analogue input range            | 0...10 V<br>0...20 mA<br>-25...125 °C  |
| Temperature probe type          | Pt 100, 3-wire conforming to IEC 751   |
| Maximum permissible voltage     | 30 V for analogue input circuit  |
| [Imp] maximum permanent current | 30 mA for analogue input circuit   |
| Analogue input resolution       | 10 bits on the input range   |
| Input impedance                 | 247 Ohm, input range: 0...20 mA for analogue input circuit<br>18 kOhm, input range: 0...10 V for analogue input circuit  |
| Analogue output number          | 2  |
| Analogue output range           | 0...10 V   |
| Analogue output resolution      | 10 bits on the output range  |
| Load type                       | Resistive load for analogue output   |
| Maximum load current            | 10 mA for analogue output  |
| Short-circuit protection        | With analogue output   |
| LSB value                       | 9.8 mV, 0...10 V for analogue output<br>9.8 mV, 0...10 V for analogue input circuit<br>20 µA, 0...20 mA for analogue input circuit<br>0.15 °C, - 25...125 °C for analogue input circuit  |
| Conversion time                 | Smart relay cycle time for analogue output<br>Smart relay cycle time for analogue input circuit  |
| Conversion error                | +/- 1.5 °C, input range: - 25...125 °C (55 °C) for analogue input circuit<br>+/- 1.5 °C, input range: - 25...125 °C (25 °C) for analogue input circuit<br>+/- 1 %, input range: 0...20 mA (55 °C) for analogue input circuit<br>+/- 1 %, input range: 0...20 mA (25 °C) for analogue input circuit<br>+/- 1 %, input range: 0...10 V (55 °C) for analogue input circuit<br>+/- 1 %, input range: 0...10 V (25 °C) for analogue input circuit<br>+/- 1 % of the full scale value, input range: 0...10 V (55 °C) for analogue output<br>+/- 1 % of the full scale value, input range: 0...10 V (25 °C) for analogue output |
| Repeat accuracy                 | <= +/- 1 %, input range: 0...20 mA at 25 °C for analogue input circuit<br><= +/- 1 %, input range: 0...10 V at 55 °C for analogue output<br><= +/- 1 %, input range: 0...10 V at 25 °C for analogue input circuit<br>< +/- 0.3 °C, input range: - 25...125 °C at 25 °C for analogue input circuit  |
| Operating distance              | 10 m with screened cable for analogue output<br>10 m with screened cable for analogue input circuit  |
| Reverse polarity protection     | With analogue input circuit  |

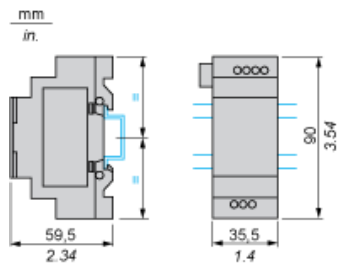
|                         |  |
|-------------------------|--|
| Connections - terminals | Screw terminals, 2 x 0.25...2 x 0.75 mm <sup>2</sup> , AWG 24...AWG 18, flexible cable with cable end<br>Screw terminals, 1 x 0.25...1 x 2.5 mm <sup>2</sup> , AWG 24...AWG 14, flexible cable with cable end<br>Screw terminals, 2 x 0.25...2 x 1.5 mm <sup>2</sup> , AWG 23...AWG 16, solid cable<br>Screw terminals, 1 x 0.25...1 x 2.5 mm <sup>2</sup> , AWG 24...AWG 14, solid cable<br>Screw terminals, 1 x 0.25...1 x 2.5 mm <sup>2</sup> , AWG 24...AWG 14, semi-solid cable |
| Tightening torque       | 0.5 N.m  |
| Product weight          | 0.11 kg  |

## Environment

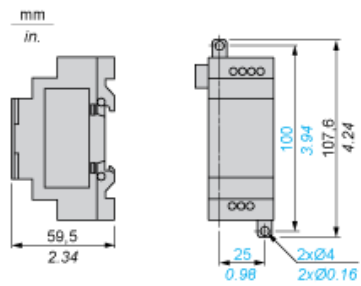
|                                       |   |
|---------------------------------------|---|
| Product certifications                | CSA<br>C-Tick<br>GOST<br>UL   |
| Standards                             | EN/IEC 60068-2-27 Ea<br>EN/IEC 60068-2-6 Fc<br>EN/IEC 61000-4-11<br>EN/IEC 61000-4-12<br>EN/IEC 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               | IP40 (front panel) conforming to IEC 60529<br>IP20 (terminal block) conforming to IEC 60529   |
| Environmental characteristic          | Low voltage directive conforming to EN/IEC 61131-2<br>EMC directive conforming to EN/IEC 61131-2 zone B<br>EMC directive conforming to EN/IEC 61000-6-4<br>EMC directive conforming to EN/IEC 61000-6-3<br>EMC directive conforming to EN/IEC 61000-6-2 |
| 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...55 °C conforming to IEC 60068-2-1 and IEC 60068-2-2<br>-20...40 °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   |

Analog I/O Extension Modules

Mounting on 35 mm/1.38 in. DIN Rail



Screw Fixing (Retractable Lugs)



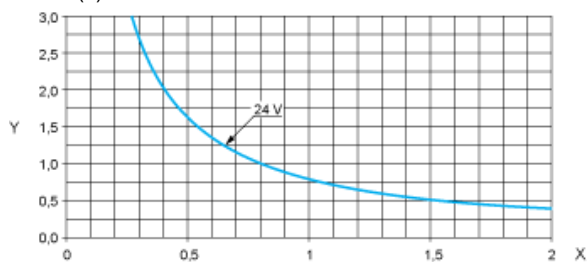


Compact and Modular Smart Relays

Electrical Durability of Relay Outputs

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

DC-12 (1)

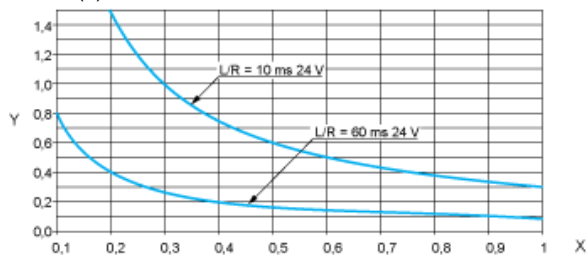


X: Current (A)

Y: Millions of operating cycles

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