### Product data sheet Characteristics

## ABR2SB312B

output interface module - 9.5 mm - electromechanical - 24 V DC - 1 C/O low-level

#### Main

| Commercial Status                           | Commercialised   |
|---|--|
| Range of product                            | Interface for discrete signals   |
| Product or component type                   | Slim electromechanical output interface module   |
| Product specific application                | For very low level switching   |
| Contacts type and composition               | 1 C/O  |
| [Uc] control circuit voltage                | 24 V   |
| Control circuit type                        | DC   |
| Width pitch dimension                       | 17.5 mm  |
| [In] rated current                          | <= 23 mA   |
| Reverse polarity protection                 | With for yes   |
| Short circuit protection                    | 0.4 A external fuse fast blow (lk <= 1 kA AC and lk <= 100 A DC)                         |
| [lth] conventional free air thermal current | 0.05 A conforming to IEC 60947-1   |
| Local signalling                            | Green mechanical indicator for position of contacts and 1 green LED control signal state |

#### Complementary

| Complementary                  |   |
|--------------------------------|---|
| Control voltage limits         | 28.8 V energization threshold: 16.9 V   |
| Connections - terminals        | Screw clamp terminal  |
| Drop-out voltage               | <= 3.8 V  |
| Holding current                | 2 mA  |
| Power dissipation in W         | 0.55 W  |
| Maximum switching voltage      | 60 V DC<br>60 V AC  |
| [Ue] rated operational voltage | <= 48 V DC conforming to IEC 60947-5-1<br><= 48 V AC conforming to IEC 60947-5-1  |
| Network frequency              | 50/60 Hz  |
| Minimum switching current      | 0.01 mA   |
| Minimum switching voltage      | 0.01 V  |
| Electrical reliability         | <= 0.00000001   |
| Operating time                 | <= 6 ms between energisation of coil and closing of NO contact DC <= 6 ms between energisation of coil and closing of NC contact <= 6 ms between de-energisation of coil and closing of NO contact DC <= 6 ms between de-energisation of coil and closing of NC contact |
| Contact bounce time            | <= 2 ms   |
| Operating rate in Hz           | 10 Hz at no-load  |
| Mechanical durability          | >= 20000000 cycles  |
| [Ui] rated insulation voltage  | 300 V conforming to IEC 60947-1<br>250 V conforming to VDE 0110 group C   |
| Flame retardance               | V0 conforming to UL 94  |
| Cable cross section            | 0.62.5 mm², 1 or 2 wires flexible without cable end 0.342.5 mm², 1 or 2 wires flexible with cable end 0.274 mm², 1 wire rigid   |
| Operating position             | Any position  |
| Installation category          | II conforming to IEC 60947-1  |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not inherent or and is not to be used for determining suitability or inhability of these products for specific user applications. It is the dourn aren in integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

| Mounting support                      | Asymmetrical DIN rail<br>Combination rail<br>Symmetrical DIN rail   |
|---------------------------------------|---|
| Product weight                        | 0.048 kg  |
|                                       |   |
| Environment                           |   |
| Immunity to microbreaks               | 1 ms  |
| Dielectric strength                   | 2500 V for 1 minute between wired interface and earth 1500 V between coil circuit and contact circuits 1000 V for 1 minute between open contacts  |
| Standards                             | IEC 60947-5-1   |
| Product certifications                | BV<br>CSA<br>DNV<br>LROS (Lloyds register of shipping)<br>UL  |
| IP degree of protection               | IP20 conforming to IEC 60529  |
| Protective treatment                  | TC  |
| Fire resistance                       | 960 °C conforming to IEC 60695-2-1  |
| Shock resistance                      | 30 gn for 11 ms conforming to IEC 60068-2-27  |
| Vibration resistance                  | 3 gn (f = 10150 Hz) conforming to IEC 60068-2-6   |
| Electromagnetic compatibility         | Fast transients immunity test level 3, on power supply 2 kV conforming to IEC 61000-4-4 Fast transients immunity test level 3, on input/output 1 kV conforming to IEC 61000-4-4 Electrostatic discharge immunity test level 3, 8 kV conforming to IEC 61000-4-2 Electromagnetic field immunity test level 3, 10 V/m between 271000 MHz conforming to IEC 61000-4-3 1.2/50 µs shock waves immunity test, 2.5 kV for U < 300 V conforming to IEC 60947-1 1.2/50 µs shock waves immunity test, 1.5 kV for U < 150 V conforming to IEC 60947-1 1.2/50 µs shock waves immunity test, 0.5 kV for U < 50 V conforming to IEC 60947-1 |
| Ambient air temperature for operation | -555 °C from 0.851.1 Us -540 °C unrestricted operation -2570 °C at Us with 8 mm space between ABR2S12555 °C at Us   |
| Ambient air temperature for storage   | -4080 °C  |
| Operating altitude                    | <= 3000 m   |
| Pollution degree                      | 2 conforming to IEC 60947-1   |

#### Contractual warranty

| <b>.</b> |           |
|----------|-----------|
| Period   | 18 months |
| i Cilou  | 10 months |

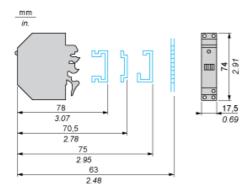


# Product data sheet Dimensions Drawings

# ABR2SB312B

#### Slim Electromechanical Interface Module

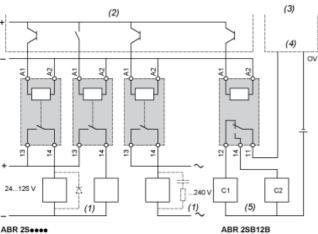
#### Dimensions



#### Slim Electromechanical Interface Module

#### Example of Application with PLC

Interfacing PLC discrete outputs



- ABR 2Seeee
- Essential on inductive loads (can be replaced with peak limiter)
- (2) PLC positive logic transistor (or relay) outputs
- PLC analog inputs (3)
- Channel X
- (4) (5) Analog sensors

#### Slim Electromechanical Interface Module

#### Circuit Diagram

1 C/O

