## ABS2SC02EB
output interface module - 17.5 mm - solid state - 24..48 V DC - 3 A

### Main

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of product</td>
<td>Interface for discrete signals</td>
</tr>
<tr>
<td>Product or component type</td>
<td>Slim solid state output interface module</td>
</tr>
<tr>
<td>Contacts type and composition</td>
<td>1 NC</td>
</tr>
<tr>
<td>[Uc] control circuit voltage</td>
<td>24 V</td>
</tr>
<tr>
<td>Control circuit type</td>
<td>DC</td>
</tr>
<tr>
<td>[In] rated current</td>
<td>&lt;= 0.012 mA</td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td>Internal for control circuit</td>
</tr>
<tr>
<td>Short-circuit protection</td>
<td>Internal for output circuit</td>
</tr>
<tr>
<td>[Ith] conventional free air thermal current</td>
<td>3 A at 40 °C</td>
</tr>
<tr>
<td>Local signalling</td>
<td>Green mechanical indicator for position of contacts and 1 green LED control signal state</td>
</tr>
<tr>
<td>Sale per indivisible quantity</td>
<td>1</td>
</tr>
<tr>
<td>Width pitch dimension</td>
<td>17.5 mm</td>
</tr>
</tbody>
</table>

### Complementary

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control circuit voltage limits</td>
<td>28.8 V</td>
</tr>
<tr>
<td>Voltage state 1 guaranteed</td>
<td>16.9 V</td>
</tr>
<tr>
<td>Current state 1 guaranteed</td>
<td>7.7 mA</td>
</tr>
<tr>
<td>Voltage state 0 guaranteed</td>
<td>5.6 V</td>
</tr>
<tr>
<td>Current state 0 guaranteed</td>
<td>2 mA</td>
</tr>
<tr>
<td>[Ue] rated operational voltage</td>
<td>5...48 V</td>
</tr>
<tr>
<td>Output circuit type</td>
<td>DC</td>
</tr>
<tr>
<td>Rated operational voltage limits</td>
<td>&lt;= 57.6 V</td>
</tr>
<tr>
<td>[Ie] rated operational current</td>
<td>2.2 A DC-12 vertical position, touching product conforming to IEC 60947-5-1</td>
</tr>
<tr>
<td></td>
<td>2.2 A DC-13 vertical position, touching product conforming to IEC 60947-5-1</td>
</tr>
<tr>
<td></td>
<td>2.5 A DC-12 vertical position, single product conforming to IEC 60947-5-1</td>
</tr>
<tr>
<td></td>
<td>2.5 A DC-13 vertical position, single product conforming to IEC 60947-5-1</td>
</tr>
<tr>
<td></td>
<td>0.6 A DC-14 vertical position, single product conforming to IEC 60947-5-1</td>
</tr>
<tr>
<td>Minimum switching current</td>
<td>1 mA</td>
</tr>
<tr>
<td>Residual current</td>
<td>&lt;= 1 mA</td>
</tr>
<tr>
<td>Drop-out voltage</td>
<td>&lt;= 1.5 V</td>
</tr>
</tbody>
</table>
### Response time
- <= 0.05 ms from state 0 to state 1
- <= 0.6 ms from state 1 to state 0

### Switching frequency
- <= 3 Hz DC-14 module alone duty cycle: 40%
- <= 6 Hz DC-13 module alone duty cycle: 40%
- <= 700 Hz on resistive load duty cycle: 50%

### [Ui] rated insulation voltage
- 250 V conforming to VDE 0110 group C
- 300 V conforming to IEC 60947-1

### Flame retardance
- V0 conforming to UL 94

### Cable cross section
- 0.27...4 mm², 1 wire rigid
- 0.34...2.5 mm², 1 or 2 wires flexible with cable end
- 0.6...2.5 mm², 1 or 2 wires flexible without cable end screw clamp terminal

### Operating position
- Any position

### Installation category
- II conforming to IEC 60947-1

### Mounting support
- Asymmetrical DIN rail
- Combination rail
- Symmetrical DIN rail

### Product weight
- 0.43 kg

### Environment

#### Dielectric strength
- 2500 V between wired interface and earth for 1 minute
- 4000 V between I/O for 1 minute

#### Standards
- IEC 60947-5-1

#### Product certifications
- BV
- CSA
- DNV
- LROS (Lloyds register of shipping)
- 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 6068-2-27

#### Vibration resistance
- 5 gn (f = 10...150 Hz) conforming to IEC 6068-2-6

#### Electromagnetic compatibility
- 1.2/50 µs shock waves immunity test, 0.5 kV for U < 50 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, 2.5 kV for U < 300 V conforming to IEC 60947-1
- Electromagnetic field immunity test level 3, 10 V/m between 27...1000 MHz conforming to IEC 61000-4-3
- Electrostatic discharge immunity test level 3, 8 kV conforming to IEC 61000-4-2
- Fast transients immunity test level 3, on input/output 1 kV conforming to IEC 61000-4-4
- Fast transients immunity test level 3, on power supply 2 kV conforming to IEC 61000-4-4
- Electromagnetic field immunity test level 3, 8 kV conforming to IEC 61000-4-2
- Fast transients immunity test level 3, on input/output 1 kV conforming to IEC 61000-4-4
- 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
- Fast transients immunity test level 3, on power supply 2 kV conforming to IEC 61000-4-4

#### Ambient air temperature for operation
- -25...70 °C at Us
- -5...55 °C unrestricted operation

#### Ambient air temperature for storage
- -40...80 °C

#### Operating altitude
- <= 3000 m

#### Pollution degree
- 2 conforming to IEC 60947-1

### Contractual warranty

#### Warranty period
- 18 months
Slim Solid-State Interface Module

Dimensions

[Diagram showing dimensions with measurements: 3.07 mm, 78 mm, 70.5 mm, 2.76 mm, 75 mm, 2.25 mm]
Example of Application with PLC

Interfacing PLC discrete outputs

(1) PLC positive logic transistor (or relay) outputs
Solid-State Output Module

Circuit Diagram

Wiring Diagrams

F fuse DF1 SS133.2
(1) or peak limiter
(2) Resistive load
(3) Inductive load
Temperature Derating Curves - $U_c = U_s = 24$ V

DC Loads

(1) Vertical module alone or adjacent to modules with low heat dissipation
(2) Horizontal module alone or adjacent to modules with low heat dissipation
(3) Vertical module mounted with 2 modules with identical heat dissipation on both sides
(4) Horizontal module mounted with 2 modules with identical heat dissipation on both sides

NOTE: $T^\circ C$ is the ambient temperature.