



## Main

|   |  |
|---|--|
| Range of product                            | Interface for discrete signals   |
| Product or component type                   | Slim solid state output interface module   |
| Contacts type and composition               | 1 NC   |
| [Uc] control circuit voltage                | 24 V   |
| Control circuit type                        | DC   |
| Line Rated Current                          | <= 13.6 mA   |
| Reverse polarity protection                 | Internal control circuit<br>Internal output circuit                                      |
| Short-circuit protection                    | 3.15 A external fuse fast blow (Ik <= 1 kA AC and Ik <= 100 A DC)                        |
| [Ith] conventional free air thermal current | 3 Aat 104 °F (40 °C)   |
| Local signalling                            | Green mechanical indicator for position of contacts and 1 green LED control signal state |
| Sale per indivisible quantity               | 1  |
| Width pitch dimension                       | 0.69 in (17.5 mm)  |

## Complementary

|                                  |  |
|----------------------------------|--|
| Control circuit voltage limits   | 28.8 V   |
| Voltage state 1 guaranteed       | 16.9 V   |
| Current state 1 guaranteed       | 8.3 mA   |
| Voltage state 0 guaranteed       | 5.3 V  |
| Current state 0 guaranteed       | 2 mA   |
| [Ue] rated operational voltage   | 24...240 V   |
| Output circuit type              | AC   |
| Rated operational voltage limits | <= 264 V   |
| [Ie] rated operational current   | 1 A AC-15 vertical position, single product conforming to IEC 60947-5-1<br>1 A AC-15 vertical position, touching product conforming to IEC 60947-5-1<br>1.6 A AC-13 vertical position, single product conforming to IEC 60947-5-1<br>1.6 A AC-14 vertical position, single product conforming to IEC 60947-5-1<br>2.1 A AC-12 vertical position, single product conforming to IEC 60947-5-1<br>1.5 A AC-12 vertical position, touching product conforming to IEC 60947-5-1<br>1.5 A AC-13 vertical position, touching product conforming to IEC 60947-5-1<br>1.5 A AC-14 vertical position, touching product conforming to IEC 60947-5-1 |
| Minimum switching current        | 10 mA  |
| Residual current                 | <= 2.5 mA  |
| Drop-out voltage                 | <= 3 V Ie >= 10 mA<br><= 1.5 V Ie >= 100 mA  |
| DV/dt                            | 500 V/μs   |
| 0 crossing voltage               | 50 V peak  |
| Response time                    | <= 10 ms from state 0 to state 1at 50 Hz<br><= 10 ms from state 1 to state 0at 50 Hz<br><= 8 ms from state 0 to state 1at 60 Hz<br><= 8 ms from state 1 to state 0at 60 Hz   |
| Switching frequency              | <= 0.7 Hz AC-13 module alone duty cycle: 40 %<br><= 0.7 Hz AC-14 module alone duty cycle: 40 %<br><= 0.7 Hz AC-15 module alone duty cycle: 40 %<br><= 50 Hz on resistive load duty cycle: 50 %   |
| [Ui] rated insulation voltage    | 250 V conforming to VDE 0110 group C<br>300 V conforming to IEC 60947-1  |
| Flame retardance                 | V0 conforming to UL 94   |
| Cable cross section              | 0...0.01 in <sup>2</sup> (0.27...4 mm <sup>2</sup> ), 1 wire rigid<br>0...0 in <sup>2</sup> (0.34...2.5 mm <sup>2</sup> ), 1 or 2 wires flexible with cable end<br>0...0 in <sup>2</sup> (0.6...2.5 mm <sup>2</sup> ), 1 or 2 wires flexible without cable end screw clamp terminal  |

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|                       |   |
|-----------------------|---|
| Operating position    | Any position  |
| Installation category | II conforming to IEC 60947-1                                      |
| Mounting support      | Asymmetrical DIN rail<br>Combination rail<br>Symmetrical DIN rail |
| Product weight        | 0.97 lb(US) (0.44 kg)   |

## Environment

|                                       |  |
|---------------------------------------|--|
| dielectric strength                   | 2500 V between wired interface and earth for 1 minute<br>4000 V between I/O for 1 minute   |
| 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                       | 1760 °F (960 °C) conforming to IEC 60695-2-1   |
| shock resistance                      | 30 gn 11 ms conforming to IEC 60068-2-27   |
| vibration resistance                  | 5 gn (f = 10...150 Hz) conforming to IEC 60068-2-6   |
| electromagnetic compatibility         | 1.2/50 µs shock waves immunity test, 0.5 kV for U < 50 V conforming to IEC 60947-1<br>1.2/50 µs shock waves immunity test, 1.5 kV for U < 150 V conforming to IEC 60947-1<br>1.2/50 µs shock waves immunity test, 2.5 kV for U < 300 V conforming to IEC 60947-1<br>Electromagnetic field immunity test level 3, 10 V/m between 27...1000 MHz conforming to IEC 61000-4-3<br>Electrostatic discharge immunity test level 3, 8 kV conforming to IEC 61000-4-2<br>Fast transients immunity test level 3, on input/output 1 kV conforming to IEC 61000-4-4<br>Fast transients immunity test level 3, on power supply 2 kV conforming to IEC 61000-4-4 |
| ambient air temperature for operation | -13...158 °F (-25...70 °C) at Us<br>23...131 °F (-5...55 °C) unrestricted operation  |
| ambient air temperature for storage   | -40...176 °F (-40...80 °C)   |
| operating altitude                    | <= 9842.52 ft (3000 m)   |
| pollution degree                      | 2 conforming to IEC 60947-1  |

## Offer Sustainability

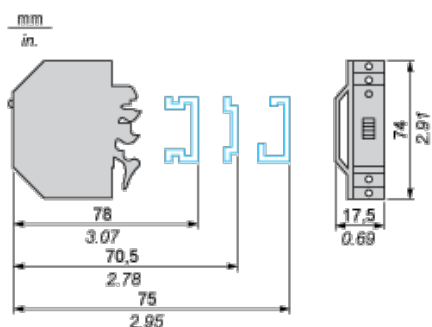
|  |  |
|--|--|
| WARNING: This product can expose you to chemicals including:   | WARNING: This product can expose you to chemicals including:   |
| Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. | Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. |
| For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>                                    | For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>                                    |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

## Slim Solid-State Interface Module

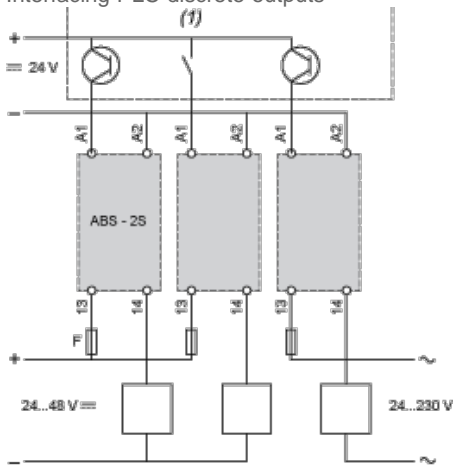
### Dimensions



## Slim Solid-State Interface Module

### Example of Application with PLC

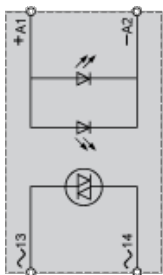
Interfacing PLC discrete outputs



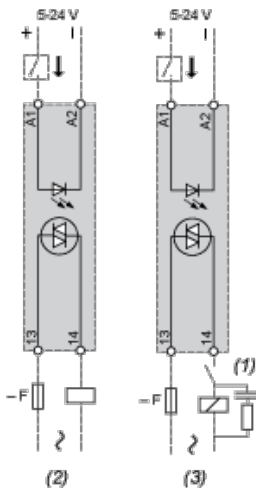
(1) PLC positive logic transistor (or relay) outputs

## Solid-State Output Module

### Circuit Diagram



### Wiring Diagrams

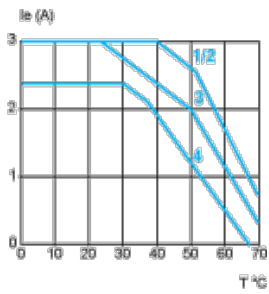


F fuse DF1 SS133.2

- (1) or peak limiter
- (2) Resistive load
- (3) Inductive load

## Temperature Derating Curves - $U_c = U_s = 24\text{ V}$

### AC 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°C is the ambient temperature.



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Электрон  
Связь**

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**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331