



## 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
Maximum [In] rated current	13.6 mA
Reverse polarity protection	Control circuit: internal Output circuit: internal
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	2.3 A at 40 °C
Local signalling	Green mechanical indicator for position of contacts and 1 green LED control signal state
Sale per indivisible quantity	5
Width pitch dimension	9.5 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 1.6 A AC-13 vertical position, single product conforming to IEC 60947-5-1 1.6 A AC-14 vertical position, single product conforming to IEC 60947-5-1 1.9 A AC-12 vertical position, single product conforming to IEC 60947-5-1 0.5 A AC-12 vertical position, touching product conforming to IEC 60947-5-1 0.5 A AC-13 vertical position, touching product conforming to IEC 60947-5-1 0.5 A AC-14 vertical position, touching product conforming to IEC 60947-5-1 0.5 A AC-15 vertical position, touching product conforming to IEC 60947-5-1
Minimum switching current	10 mA
Maximum residual current	2.5 mA
Drop-out voltage	3 V 1.5 V
DV/dt	500 V/μs
0 crossing voltage	50 V peak
Response time	≤ 10 ms from state 0 to state 1 at 50 Hz ≤ 10 ms from state 1 to state 0 at 50 Hz ≤ 8 ms from state 0 to state 1 at 60 Hz ≤ 8 ms from state 1 to state 0 at 60 Hz
Switching frequency	≤ 0.6 Hz AC-13 module alone duty cycle: 40 % ≤ 0.6 Hz AC-14 module alone duty cycle: 40 % ≤ 0.6 Hz AC-15 module alone duty cycle: 40 % ≤ 50 Hz on resistive load duty cycle: 50 %

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[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	0.34...2.5 Mm <sup>2</sup> , 1 or 2 wires flexible with cable end screw clamp terminal 0.27...4 Mm <sup>2</sup> , 1 wire rigid 0.6...2.5 mm <sup>2</sup> , 1 or 2 wires flexible without cable end
Operating position	Any position
Installation category	II conforming to IEC 60947-1
Mounting support	Symmetrical DIN rail Asymmetrical DIN rail Combination rail
Net weight	0.34 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	UL LROS (Lloyds register of shipping) DNV CSA BV
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	5 gn conforming to IEC 60068-2-6 (f = 10...150 Hz)
Electromagnetic compatibility	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 1.2/50 µs shock waves immunity test conforming to IEC 60947-1
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

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	42 g
Package 1 Height	7 cm
Package 1 width	9 cm
Package 1 Length	10.8 cm
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Weight	211 g
Package 2 Height	7 cm
Package 2 width	9 cm
Package 2 Length	10.8 cm
Unit Type of Package 3	S02
Number of Units in Package 3	75
Package 3 Weight	3.532 kg
Package 3 Height	15 cm
Package 3 width	30 cm
Package 3 Length	40 cm

## Offer Sustainability

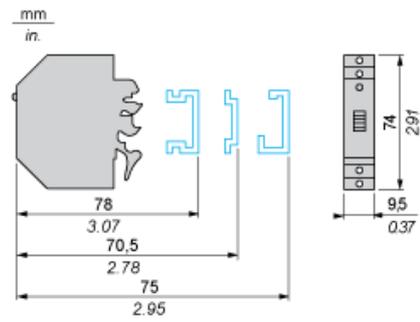
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

## Contractual warranty

Warranty	18 months
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Slim Solid-State Interface Module

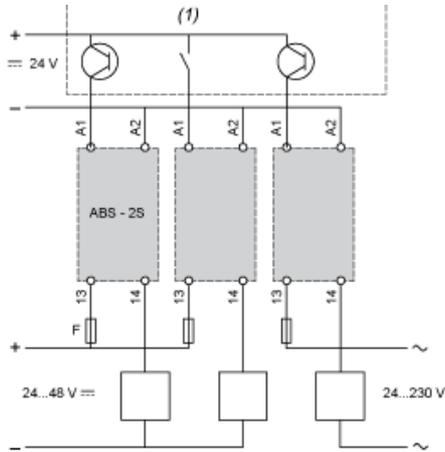
Dimensions



Slim Solid-State Interface Module

Example of Application with PLC

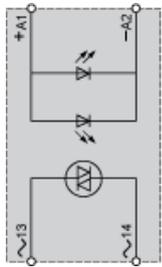
Interfacing PLC discrete outputs



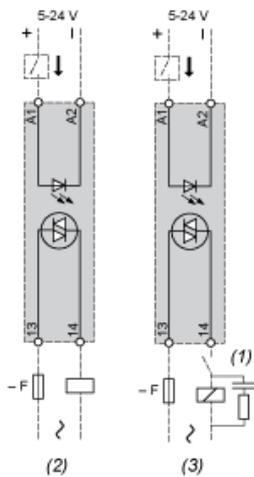
(1) PLC positive logic transistor (or relay) outputs

Solid-State Output Module

Circuit Diagram



Wiring Diagrams



F fuse DF1 SS133.2

(1) or peak limiter

(2) Resistive load

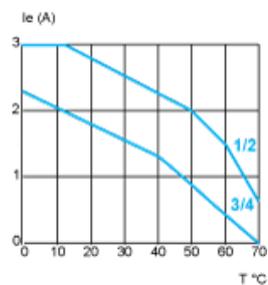
(3) Inductive load

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

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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.