



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	0.012 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	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	1
Width pitch dimension	17.5 mm

Complementary

Control circuit voltage limits	28.8 V
Voltage state 1 guaranteed	16.9 V
Current state 1 guaranteed	7.7 mA
Voltage state 0 guaranteed	5.6 V
Current state 0 guaranteed	2 mA
[Ue] rated operational voltage	5...48 V
Output circuit type	DC
Rated operational voltage limits	≤ 57.6 V
[Ie] rated operational current	2.2 A DC-12 vertical position, touching product conforming to IEC 60947-5-1 2.2 A DC-13 vertical position, touching product conforming to IEC 60947-5-1 2.5 A DC-12 vertical position, single product conforming to IEC 60947-5-1 2.5 A DC-13 vertical position, single product conforming to IEC 60947-5-1 0.6 A DC-14 vertical position, single product conforming to IEC 60947-5-1 0.6 A DC-14 vertical position, touching product conforming to IEC 60947-5-1
Minimum switching current	1 mA
Maximum residual current	1 mA
Drop-out voltage	1.5 V
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	0.6...2.5 Mm ² , 1 or 2 wires flexible without cable end screw clamp terminal 0.27...4 Mm ² , 1 wire rigid 0.34...2.5 mm ² , 1 or 2 wires flexible with 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	0.43 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	DNV CSA BV UL LROS (Lloyds register of shipping)
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	40 g
Package 1 Height	7 cm
Package 1 width	9 cm
Package 1 Length	10.5 cm
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Weight	230 g
Package 2 Height	7 cm
Package 2 width	9 cm
Package 2 Length	10.5 cm
Unit Type of Package 3	S01
Number of Units in Package 3	25
Package 3 Weight	1.368 kg
Package 3 Height	15 cm
Package 3 width	15 cm
Package 3 Length	40 cm

Offer Sustainability

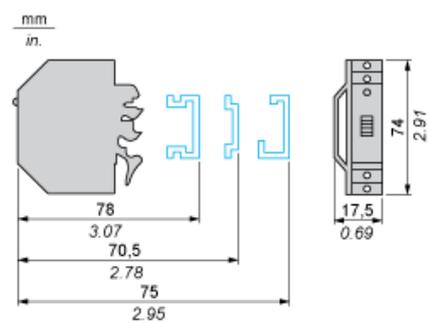
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
WEEE	The product must be disposed on European Union markets following specific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

Contractual warranty

Warranty	18 months
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Slim Solid-State Interface Module

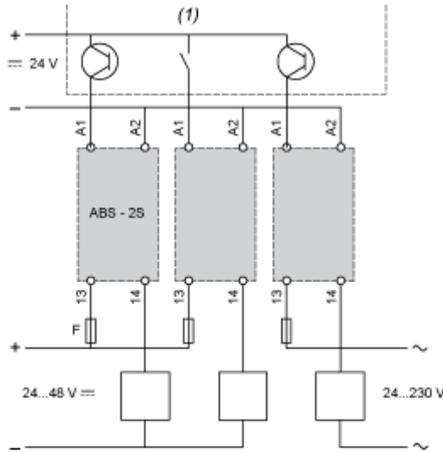
Dimensions



Slim Solid-State Interface Module

Example of Application with PLC

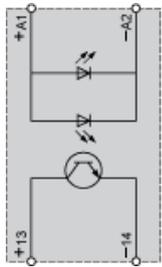
Interfacing PLC discrete outputs



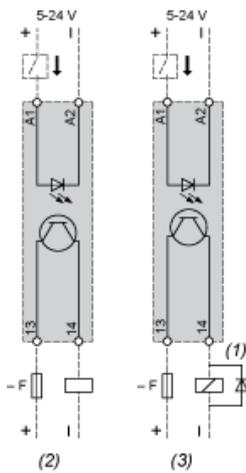
(1) PLC positive logic transistor (or relay) outputs

Solid-State Output Module

Circuit Diagram



Wiring Diagrams

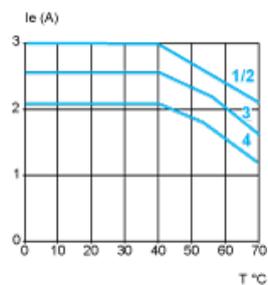


F fuse DF1 SS133.2

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

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

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 °C is the ambient temperature.