

ABS2SA01MB

output interface module - 9.5 mm - solid state -
24..230 V AC - 2.3 A



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
[In] rated current	<= 13.6 mA
Reverse polarity protection	Internal for control circuit Internal for 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	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
Residual current	<= 2.5 mA
Drop-out voltage	<= 3 V Ie >= 10 mA <= 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 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 %
[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 0.6...2.5 mm², 1 or 2 wires flexible without cable end

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 intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or 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.

	0.34...2.5 mm², 1 or 2 wires flexible with 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	0.34 kg

Environment

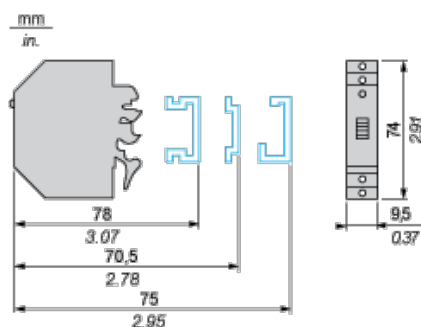
dielectric strength	2500 V between wired interface and earth for 1 minute 4000 V between I/O for 1 minute
standards	IEC 60947-5-1
product certifications	BV CSA DNV LROS (Lloyds register of shipping) UL
IP degree of protection	IP20 conforming to IEC 60529
protective treatment	TC
fire resistance	960 °C conforming to IEC 60695-2-1
shock resistance	30 gn for 11 ms conforming to IEC 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 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
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
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Slim Solid-State Interface Module

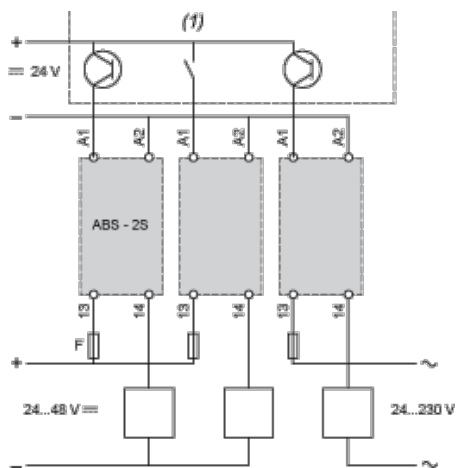
Dimensions



Slim Solid-State Interface Module

Example of Application with PLC

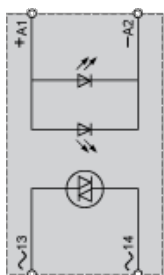
Interfacing PLC discrete outputs



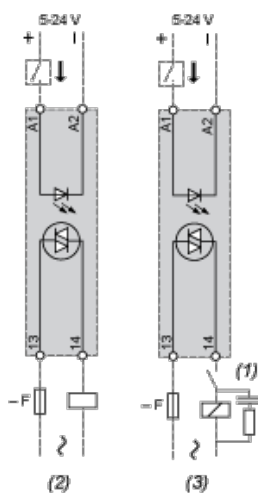
(1) PLC positive logic transistor (or relay) outputs

Solid-State Output Module

Circuit Diagram



Wiring Diagrams



F fuse DF1 SS133.2

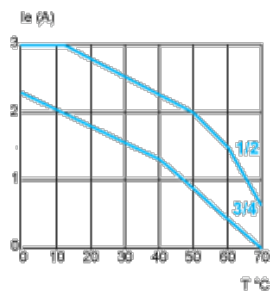
(1) or peak limiter

(2) Resistive load

(3) Inductive load

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

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.