Product data sheet
Characteristics

ABR1E412F
input interface module - 17.5 mm - electromechanical - 110..127 V DC - 2 NO

Main

Range of product	Interface for discrete signals
Product or component type	Electromechanical input interface module
Contacts type and composition	2 NO
[Uc] control circuit voltage	110...127 V
Control circuit type	DC
Width pitch dimension	17.5 mm
Maximum [In] rated current	15 mA DC
Reverse polarity protection	With
Short-circuit protection	16 A external fuse gF (Ik <= 2.5 kA AC and Ik <= 100 A DC) 16 A external fuse gG (Ik <= 2.5 kA AC and Ik <= 100 A DC)
[Ith] conventional free air thermal current	2 A conforming to IEC 60947-1
Local signalling	Green mechanical indicator for position of contacts and 1 green LED control signal state

Complementary

Control circuit voltage limits	264 V energization threshold: 75 V
Housing colour	Grey
Connections - terminals	Screw clamp terminal
Drop-out voltage	16 V
Minimum holding current	1.5 mA DC
Maximum power dissipation in W	1.5 W
Maximum switching voltage	125 V DC 252 V AC
[Ue] rated operational voltage	<= 125 V DC conforming to IEC 60947-5-1 <= 230 V AC conforming to IEC 60947-5-1
Network frequency	50/60 Hz
[Ie] rated operational current	1 A AC-13 Ue: 230 V per 1000000 cycles conforming to IEC 60947-5-1 1 A AC-14 Ue: 230 V per 1000000 cycles conforming to IEC 60947-5-1 1 A AC-15 Ue: 230 V per 1000000 cycles conforming to IEC 60947-5-1 1 A DC-13 Ue: 24 V per 1000000 cycles conforming to IEC 60947-5-1 2 A AC-12 Ue: 230 V per 1000000 cycles conforming to IEC 60947-5-1 2 A DC-12 Ue: 24 V per 1000000 cycles conforming to IEC 60947-5-1
Minimum switching current	3 mA
Minimum switching voltage	17 V
Electrical reliability	<= 0.00000001
Operating time	<= 12 ms between de-energisation of coil and closing of NC contact <= 12 ms between de-energisation of coil and closing of NO contact <= 12 ms between energisation of coil and closing of NC contact <= 12 ms between energisation of coil and closing of NO contact
Contact bounce time	<= 3 ms
Operating rate in Hz	6 Hz at no-load 0.5 Hz at Ie
Mechanical durability	20000000 cycles
[Ui] rated insulation voltage	250 V conforming to IEC 60947-1 250 V conforming to VDE 0110 group C

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.
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Flame retardance	V0 conforming to UL 94
Cable cross section	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 0.27…2.5 Mm², 2 wires rigid 0.27…4 mm², 1 wire rigid
Operating position	Any position
Installation category	II conforming to IEC 60947-1
Mounting support	Asymmetrical DIN rail Combination rail Symmetrical DIN rail
Net weight	0.095 kg

Environment

Immunity to microbreaks	10 ms
Dielectric strength	1500 V between independent contacts 2500 V between wired interface and earth 4000 V between coil circuit and contact circuits
Standards	IEC 60947-5-1
Product certifications	DNV CSA UL BV LROS (Lloyds register of shipping)
IP degree of protection	IP20 conforming to IEC 60529
Protective treatment	TC
Fire resistance	850 °C conforming to IEC 60695-2-1
Shock resistance	50 gn for 11 ms conforming to IEC 60068-2-27
Vibration resistance	6 gn conforming to IEC 60068-2-6 (f = 10…55 Hz)
Electromagnetic compatibility	1.2/50 ms shock waves immunity test conforming to IEC 255-4 Electrostatic discharge immunity test, level 3 8 kV conforming to IEC 61000-4-2 Rapid transients immunity test on input/output 1 kV conforming to IEC 61000-4-4 Rapid transients immunity test on power supply 2 kV conforming to IEC 61000-4-4
Ambient air temperature for operation	-20…60 °C at Un -5…40 °C unrestricted operation
Ambient air temperature for storage	-40…70 °C
Operating altitude	<= 3000 m
Pollution degree	3 conforming to IEC 60947-5-1

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	96 g
Package 1 Height	7.5 cm
Package 1 width	2.3 cm
Package 1 Length	8.8 cm
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Weight	506 g
Package 2 Height	9 cm
Package 2 width	7 cm
Package 2 Length	10.8 cm
Unit Type of Package 3	S02
Number of Units in Package 3	50
Package 3 Weight	5.512 kg
Package 3 Height	15 cm
Package 3 width	30 cm
Package 3 Length	40 cm

Offer Sustainability

Sustainable offer status	Green Premium product
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
Environmental Disclosure	Product Environmental Profile
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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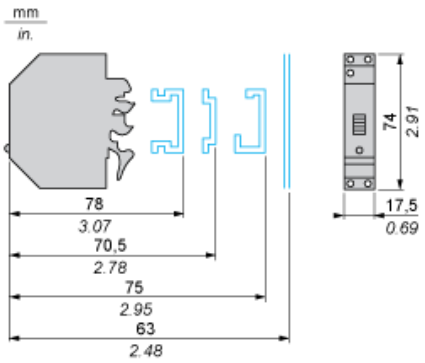
Electromechanical Interface Module

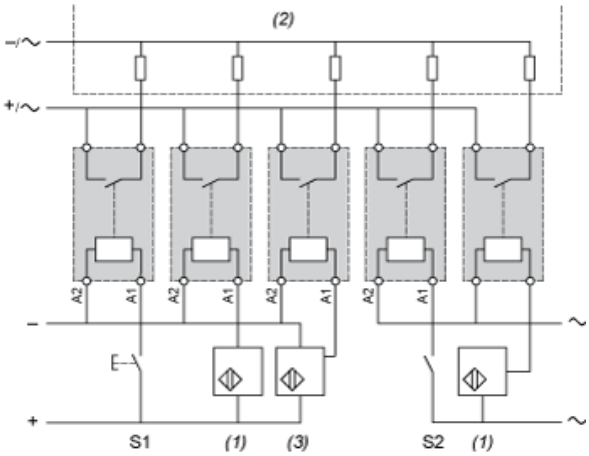
Dimensions



Electromechanical Interface Module

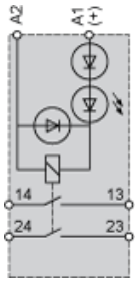
Example of Application with PLC

Interfacing PLC discrete inputs



S1, S2 Pushbuttons series contacts
(1) 2-wire sensors
(2) PLC positive logic discrete inputs
(3) 3-wire sensors

Interface with Mechanical Indication + LED

Circuit Diagram

2 N/O