

# Product datasheet

Specifications



## input interface module - 17.5 mm - electromechanical - 110..127 V DC - 1 C/O

ABR1E312F

! Discontinued on: 01 October 2021

! End-of-service on: 01 October 2021

! Discontinued

### Main

Range of product	Interface for discrete signals
Product or component type	Electromechanical input interface module
Contacts type and composition	1 C/O
[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

<b>Minimum switching current</b>	3 mA
<b>Minimum switching voltage</b>	17 V
<b>Electrical reliability</b>	<= 0.00000001
<b>Operating time</b>	<= 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
<b>Contact bounce time</b>	<= 3 ms
<b>Operating rate in Hz</b>	6 Hz at no-load 0.5 Hz at le
<b>Mechanical durability</b>	10000000 cycles
<b>[Ui] rated insulation voltage</b>	250 V conforming to IEC 60947-1 250 V conforming to VDE 0110 group C
<b>Flame retardance</b>	V0 conforming to UL 94
<b>Cable cross section</b>	0.34...2.5 mm <sup>2</sup> , 1 or 2 wires flexible with cable end 0.6...2.5 mm <sup>2</sup> , 1 or 2 wires flexible without cable end 0.27...2.5 mm <sup>2</sup> , 2 wires rigid 0.27...4 mm <sup>2</sup> , 1 wire rigid
<b>Operating position</b>	Any position
<b>Installation category</b>	II conforming to IEC 60947-1
<b>Mounting support</b>	Symmetrical DIN rail Asymmetrical DIN rail Combination rail
<b>Net weight</b>	0.095 kg

## Environment

<b>Immunity to microbreaks</b>	10 ms
<b>Dielectric strength</b>	1500 V between independent contacts 2500 V between wired interface and earth 4000 V between coil circuit and contact circuits
<b>Standards</b>	IEC 60947-5-1
<b>Product certifications</b>	UL LROS (Lloyds register of shipping) CSA DNV BV
<b>IP degree of protection</b>	IP20 conforming to IEC 60529
<b>Protective treatment</b>	TC
<b>Fire resistance</b>	850 °C conforming to IEC 60695-2-1
<b>Shock resistance</b>	50 gn for 11 ms conforming to IEC 60068-2-27
<b>Vibration resistance</b>	6 gn conforming to IEC 60068-2-6 (f = 10...55 Hz)
<b>Electromagnetic compatibility</b>	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
<b>Ambient air temperature for operation</b>	-20...60 °C at Un -5...40 °C unrestricted operation
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Operating altitude</b>	<= 3000 m
<b>Pollution degree</b>	3 conforming to IEC 60947-5-1

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1

Package 1 Weight	96 g
Package 1 Height	2.3 cm
Package 1 width	7.5 cm
Package 1 Length	8.7 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	10.8 cm
Package 2 Length	7.2 cm
Unit Type of Package 3	S02
Number of Units in Package 3	50
Package 3 Weight	5.278 kg
Package 3 Height	15 cm
Package 3 width	30 cm
Package 3 Length	40 cm

## Offer Sustainability

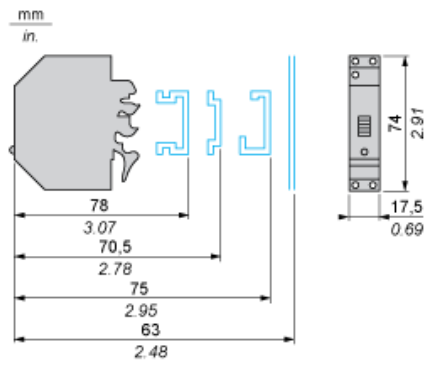
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</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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Electromechanical Interface Module

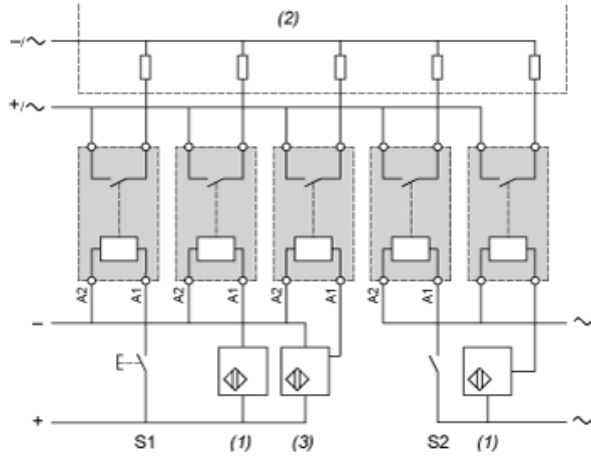
Dimensions



Electromechanical Interface Module

Example of Application with PLC

Interfacing PLC discrete inputs



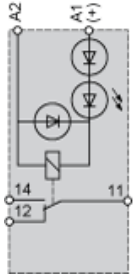
- S1, S2 Pushbuttons series contacts
- (1) 2-wire sensors
- (2) PLC positive logic discrete inputs
- (3) 3-wire sensors

## Interface with Mechanical Indication + LED

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### Circuit Diagram

1 C/O



### Recommended replacement(s)

ABR1E312F is replaced by the following product range:



#### **interfaces ABR/ABS**

Discrete interfaces. Electromechanical and solid state interface modules.

Products: 53