

Product datasheet

Specifications



output interface module - 17.5 mm - electromechanical - 24 V DC - 2 NO

Local distributor code: 386415209 ABR1S402B

! Discontinued on: 27 February 2021

! End-of-service on: 01 March 2021

! To be discontinued

Main

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|---|--|
| Range of product | Interface for discrete signals |
| Product or component type | Electromechanical output interface module |
| Contacts type and composition | 2 NO |
| [Uc] control circuit voltage | 24 V |
| Control circuit type | DC |
| Width pitch dimension | 17.5 mm |
| Maximum [In] rated current | 62 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 | 12 A conforming to IEC 60947-1 |
| Local signalling | Green mechanical indicator for position of contacts and 1 green LED control signal state |

Complementary

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| Control circuit voltage limits | 30 V energization threshold: 15 V |
| Maximum switching voltage | 125 V DC |
| Housing colour | Grey |
| Connections - terminals | Screw clamp terminal |
| Drop-out voltage | 3.2 V |
| Minimum holding current | 6.6 mA DC |
| Maximum power dissipation in W | 1.5 W |
| [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 4 A AC-12 Ue: 230 V per 1000000 cycles conforming to IEC 60947-5-1 5 A DC-12 Ue: 24 V per 1000000 cycles conforming to IEC 60947-5-1 |
| Minimum switching current | 3 mA |

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| 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 |
| Flame retardance | V0 conforming to UL 94 |
| Cable cross section | 0.34...2.5 mm ² , 1 or 2 wires flexible with cable end 0.6...2.5 mm ² , 1 or 2 wires flexible without cable end 0.27...2.5 mm ² , 2 wires rigid 0.27...4 mm ² , 1 wire rigid |
| Operating position | Any position |
| Installation category | II conforming to IEC 60947-1 |
| Mounting support | Combination rail Asymmetrical DIN rail Symmetrical DIN rail |
| Net weight | 0.09 kg |

Environment

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| Immunity to microbreaks | 3 ms |
| Dielectric strength | 1500 V for 1 minute between independent contacts 2500 V for 1 minute between wired interface and earth 4000 V for 1 minute between coil circuit and contact circuits |
| Standards | IEC 60947-5-1 |
| Product certifications | UL CSA BV LROS (Lloyds register of shipping) DNV |
| 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

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| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 99 g |

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|------------------------------|----------|
| Package 1 Height | 7.5 cm |
| Package 1 width | 2.3 cm |
| Package 1 Length | 7.5 cm |
| Unit Type of Package 2 | PAL |
| Number of Units in Package 2 | 5 |
| Package 2 Weight | 519 g |
| Package 2 Height | 10.7 cm |
| Package 2 width | 7.5 cm |
| Package 2 Length | 5 cm |
| Unit Type of Package 3 | S02 |
| Number of Units in Package 3 | 50 |
| Package 3 Weight | 5.645 kg |
| Package 3 Height | 15 cm |
| Package 3 width | 30 cm |
| Package 3 Length | 40 cm |

Offer Sustainability

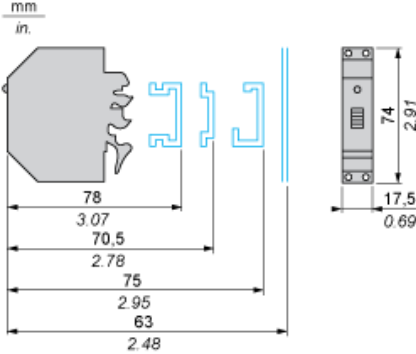
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China 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

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| Warranty | 18 months |
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Electromechanical Interface Module

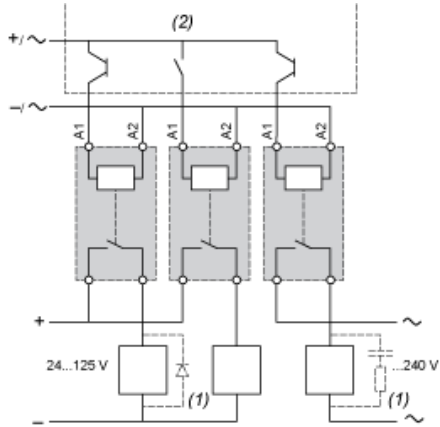
Dimensions



Electromechanical Interface Module

Example of Application with PLC

Interfacing PLC discrete outputs

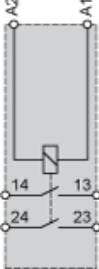


- (1) Essential on inductive loads (can be replaced with peak limiter)
- (2) PLC positive logic transistor (or relay) outputs

Interface with Mechanical Indication

Circuit Diagram

2 N/O

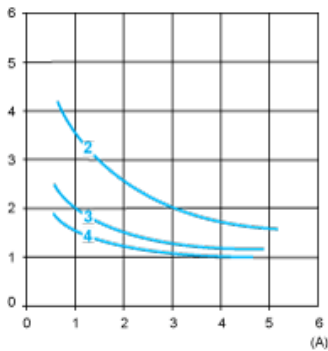


Electrical Durability of Contacts

AC Loads

Test conditions: in accordance with standard IEC 947-5-1 set up for rated control voltage, operating rate: 1800 cycles/hour. (0.5 Hz).

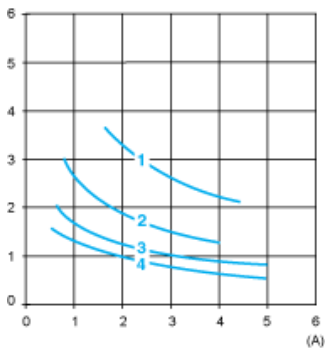
AC-12 operating cycles in millions



AC-12 Control of resistive loads and isolated solid state loads via optocoupler ($\cos \phi \geq 0.9$)

- (1) 24 V
- (2) 48 V
- (3) 127 V
- (4) 230 V

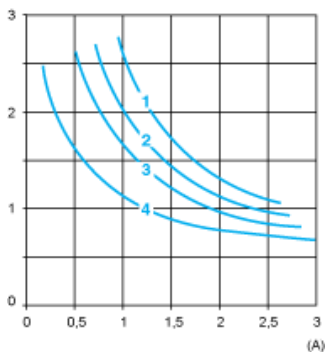
AC-13 operating cycles in millions



AC-13 Control of isolated solid state loads via transformer ($\cos \phi \geq 0.65$)

- (1) 24 V
- (2) 48 V
- (3) 127 V
- (4) 230 V

AC-14 and AC-15 operating cycles in millions



AC-14 Control of weak electromagnetic loads of electromagnets ≤ 72 VA (make: $\cos \phi = 0.3$, break: $\cos \phi = 0.3$)

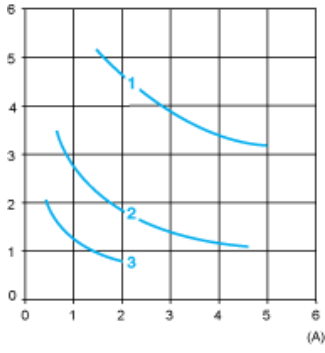
AC-15 Control of electromagnetic loads of electromagnets > 72 VA (make: $\cos \phi = 0.7$, break: $\cos \phi = 0.4$)

- (1) 24 V
- (2) 48 V
- (3) 127 V
- (4) 230 V

DC Loads

Test conditions: in accordance with standard IEC 947-5-1 set up for rated control voltage, operating rate: 1800 cycles/hour. (0.5 Hz).

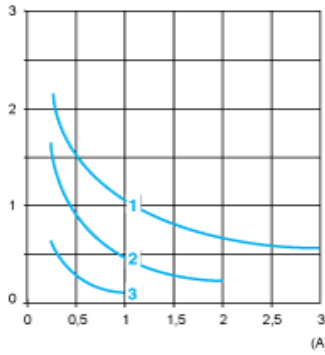
DC-12 operating cycles in millions



DC-12 Control of resistive loads and isolated solid state loads via optocoupler ($L/R \leq 1$ ms)

- (1) 24 V
- (2) 48 V
- (3) 127 V

DC-13 operating cycles in millions



DC-13 Control of electromagnets ($L/R \leq 2 \times (U_e \times I_e)$ in ms, with U_e : rated operating voltage and I_e : rated operating current)

- (1) 24 V
- (2) 48 V
- (3) 127 V