Product datasheet
Characteristics

ABR1E118E

Main

Range of product	Interface for discrete signals
Product or component type	Electromechanical input interface module
Contacts type and composition	1 NO
[Uc] control circuit voltage	48 V
Control circuit type	AC/DC
Control circuit frequency	50/60 Hz
Width pitch dimension	0.69 in (17.5 mm)
[In] rated current	<= 32 mA AC <= 36 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	53 V energization threshold: 34 V
Housing colour	Grey
Connections - terminals	Screw clamp terminal
Drop-out voltage	<= 8.5 V
Holding current	>= 4.7 mA DC >= 5.4 mA AC
Power dissipation in W	<= 1.5 W
Maximum switching voltage	125 V DC 252 V AC
System 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
Flame retardance	V0 conforming to UL 94
Cable cross section	0...0.01 in² (0.27...4 mm²), 1 wire rigid 0...0 in² (0.34...2.5 mm²), 1 or 2 wires flexible with cable end

	0...0 in² (0.6...2.5 mm²), 1 or 2 wires flexible without cable end 0...0 in² (0.27...2.5 mm²), 2 wires rigid
Operating position	Any position
Installation category	II conforming to IEC 60947-1
Mounting support	Asymmetrical DIN rail Combination rail Symmetrical DIN rail
Product weight	0.21 lb(US) (0.095 kg)

Environment

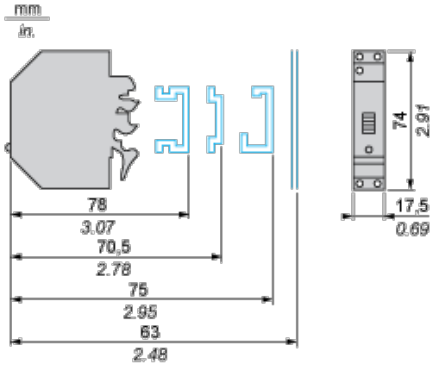
immunity to microbreaks	10 ms
dielectric strength	1500 V between independent contacts 2500 V between wired interface and earth 4000 V between coil circuit and contact circuits
standards	IEC 60947-5-1
product certifications	BV CSA DNV LROS (Lloyds register of shipping) UL
IP degree of protection	IP20 conforming to IEC 60529
protective treatment	TC
fire resistance	1562 °F (850 °C) conforming to IEC 60695-2-1
shock resistance	50 gn 11 ms conforming to IEC 60068-2-27
vibration resistance	6 gn (f = 10...55 Hz) conforming to IEC 60068-2-6
electromagnetic compatibility	1.2/50 ms shock waves immunity test, 0.25 kV for U > 50 V conforming to IEC 255-4 1.2/50 ms shock waves immunity test, 0.5 kV for U < 50 V 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	-4...140 °F (-20...60 °C) at Un 23...104 °F (-5...40 °C) unrestricted operation
ambient air temperature for storage	-40...158 °F (-40...70 °C)
operating altitude	<= 9842.52 ft (3000 m)
pollution degree	3 conforming to IEC 60947-5-1

Contractual warranty

Warranty period	18 months

Electromechanical Interface Module

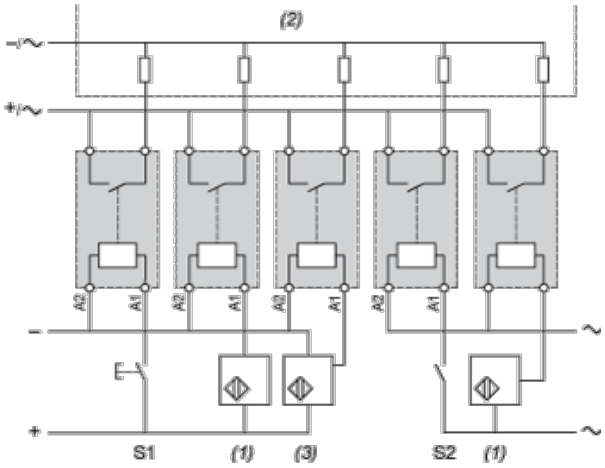
Dimensions



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

1 N/O