Product datasheet Characteristics

ABR1E312F



Main

mann	
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	110127 V
Control circuit type	DC
Width pitch dimension	0.69 in (17.5 mm)
[In] rated current	<= 15 mA DC
Reverse polarity protection	With
Short-circuit protection	16 A external fuse gF (lk <= 2.5 kA AC and lk <= 100 A DC) 16 A external fuse gG (lk <= 2.5 kA AC and lk <= 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

complementary		
Control circuit voltage limits	264 V energization threshold: 75 V	
Housing colour	Grey	
Connections - terminals	Screw clamp terminal	
Drop-out voltage	<= 16 V	
Holding current	>= 1.5 mA DC	
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	
[le] 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 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	<= 0.0000001	
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 le	
Mechanical durability	>= 1000000 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	00.01 in ² (0.274 mm ²), 1 wire rigid 00 in ² (0.342.5 mm ²), 1 or 2 wires flexible with cable end 00 in ² (0.62.5 mm ²), 1 or 2 wires flexible without cable end 00 in ² (0.272.5 mm ²), 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 = 1055 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	-4140 °F (-2060 °C) at Un 23104 °F (-540 °C) unrestricted operation
ambient air temperature for storage	-40158 °F (-4070 °C)
operating altitude	<= 9842.52 ft (3000 m)
pollution degree	3 conforming to IEC 60947-5-1

Offer Sustainability

 WARNING: This product can expose you to chemicals including:
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 Nickel compounds, which is known to the State of California to cause cancer, and
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 Di-isodecyl phthalate (DIDP), which is known to the StateDi-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive defects or other reproductive harm.

For more information go to www.p65warnings.ca.gov For more information go to www.p65warnings.ca.gov

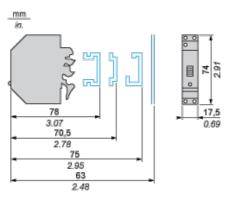
Contractual warranty

Warranty period

18 months

Electromechanical Interface Module

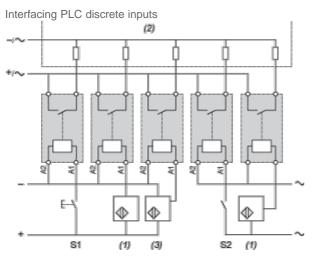
Dimensions





Electromechanical Interface Module

Example of Application with PLC



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

Interface with Mechanical Indication + LED

Circuit Diagram

