

Schneider Series Service Manual

ABE7S16E2M0

1. Description

The Schneider Electric ABE7S16E2M0 is a solid-state output relay designed to handle a supply voltage in the range of 230 V to 240 V AC. This model supports 16 channels, each with two terminals for reliable electrical connections.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon
Part	Number ABE7S16E2M0
EAN	3389110546286
Weight	0.94 lbs (0.43 kg)
Product	Solid State Output Relay
Minimum	Supply Voltage 230 V
Maximum	Supply Voltage 240 V
Voltage	Type AC
Minimum	Operating Frequency 50 Hz
Maximum	Operating Frequency 60 Hz
Number	of Channels 16
Number	of Terminals Per Channel 2
Electrical	Connection Screw Type Terminal
Terminal	Block Type Removable
Supply	Voltage Limits 19 to 30 VDC
Current	Per Channel 0.008 A
Maximum	Switching Current 15 mA
Minimum	Switching Current 1 mA
Response	Time Less than 20 ms
Range	of product
Modicon	ABE7
Product	or component type
Solid	state input relay sub-base
[Us]	rated supply voltage
230/240	V AC 50/60 Hz (sensor end)
24	V DC (PLC end)
Number	of channels
16	
Number	of terminal per channel
2	
Connections	- terminals
Screw	type terminals, 1 x 0.09...1 x 1.5 mm², 0.09...1.5 mm² (AWG 28...AWG 16) flexible with cable end
Screw	type terminals, 1 x 0.14...1 x 2.5 mm², 0.14...2.5 mm² (AWG 26...AWG

3. Product Information

The Schneider Electric ABE7S16E2M0 is a solid-state output relay designed to handle a supply voltage in the range of 230 V to 240 V AC. This model supports 16 channels, each with two terminals for reliable electrical connections.

Technical specifications for ABE7S16E2M0

Manufacturer Schneider Electric

Product Line Modicon

Part Number ABE7S16E2M0

EAN 3389110546286

Weight 0.94 lbs (0.43 kg)

Product Solid State Output Relay

Minimum Supply Voltage 230 V

Maximum Supply Voltage 240 V

Voltage Type AC

Minimum Operating Frequency 50 Hz

Maximum Operating Frequency 60 Hz

Number of Channels 16

Number of Terminals Per Channel 2

Electrical Connection Screw Type Terminal

Terminal Block Type Removable

Supply Voltage Limits 19 to 30 VDC

Current Per Channel 0.008 A

Maximum Switching Current 15 mA

Minimum Switching Current 1 mA

Response Time Less than 20 ms

Range of product

Modicon ABE7

Product or component type

Solid state input relay sub-base

[Us] rated supply voltage

230/240 V AC 50/60 Hz (sensor end)

24 V DC (PLC end)

Number of channels

16

Number of terminal per channel

2

Connections - terminals

Screw type terminals, 1 x 0.09...1 x 1.5 mm², 0.09...1.5 mm² (AWG 28...AWG 16) flexible with cable end

Screw type terminals, 1 x 0.14...1 x 2.5 mm², 0.14...2.5 mm² (AWG 26...AWG 12) solid

Screw type terminals, 1 x 0.14...1 x 2.5 mm², 0.14...2.5 mm² (AWG 26...AWG 14) flexible without cable end

Screw type terminals, 2 x 0.09...2 x 0.75 mm², 0.09...0.75 mm² (AWG 28...AWG 20) flexible with cable end

Screw type terminals, 2 x 0.2...2 x 2.5 mm², 0.2...2.5 mm² (AWG 24...AWG 14) solid

Complementary

Terminal block type

Removable

Supply voltage limits

19...30 V DC (PLC end) conforming to IEC 61131-2

Isolation PLC/operative part

Yes

Protection type

Internal fuse 1 A 5 x 20 mm fast blow PLC end

Adjustable by external fuse fast blow sensor end

Fixing mode

By clips (35 mm symmetrical DIN rail)

By screws (solid plate with fixing kit)

Current per channel

0.008 A

Current state 1 guaranteed

>= 4.5 mA (sensor end)

Voltage state 1 guaranteed

>= 164 V for sensor end

Maximum switching current
15 mA (PLC end)

Minimum switching current
1 mA for PLC end

Response time
<= 20 ms from state 0 to 1
<= 20 ms from state 1 to 0

Switching frequency
<= 25 Hz duty cycle: 50 %

[Uimp] rated impulse withstand voltage
2.5 kV conforming to IEC 60947-1

[Ui] rated insulation voltage
2000 V

Installation category
II conforming to IEC 60664-1

Tightening torque
0.6 N.m with flat Ø 3.5 mm screwdriver

Net weight
0.407 kg

Environment

Dielectric strength
2000 V at 50/60 Hz conforming to IEC 60947-1

Product certifications

DNV

GL

CSA

EAC

Standards

IEC 61131-2 Type 1

IP degree of protection
IP2X conforming to IEC 60529

Resistance to incandescent wire
750 °C conforming to IEC 60695-2-11

Shock resistance
15 gn for 11 ms conforming to IEC 60068-2-27

Vibration resistance
2 gn (f= 10...150 Hz) conforming to IEC 60068-2-6

Resistance to electrostatic discharge
4 kV (contact) level 3 conforming to IEC 61000-4-2
8 kV (air) level 3 conforming to IEC 61000-4-2

Resistance to radiated fields
10 V/m (26000000...1000000000 Hz) conforming to IEC 61000-4-3 level 3

Resistance to fast transients
2 kV level 3 conforming to IEC 61000-4-4

Ambient air temperature for operation
-5...60 °C conforming to IEC 61131-2

Ambient air temperature for storage
-40...80 °C conforming to IEC 61131-2

Pollution degree
2 conforming to IEC 60664-1

Packing Units

Unit Type of Package 1
PCE

Number of Units in Package 1
1

Package 1 Height
7.000 cm

Package 1 Width
8.300 cm

Package 1 Length

21.300 cm

Package 1 Weight

475.000 g

Description

The ABE7S16E2M0 solid-state output relay from Schneider Electric is engineered for precise control in automation applications. It requires a supply voltage of 230 V to 240 V AC to operate efficiently. The relay functions effectively within a frequency range of 50 Hz to 60 Hz, accommodating various operational standards. Comprising 16 distinct channels, it allows for dual terminals per channel, providing flexibility in wiring configurations.

In terms of electrical connections, this relay utilizes removable screw-type terminals, enhancing ease of installation and maintenance. The supply voltage can vary from 19 V to 30 V DC, ensuring compatibility with multiple power systems. Each channel has a current rating of 0.008 A, which is crucial for ensuring proper function in low-power applications. The device is designed to switch currents ranging from a minimum of 1 mA to a maximum of 15 mA, making it suitable for a range of control tasks.

Quick response times are crucial in automation, and this relay boasts a response time of less than 20 milliseconds, enabling rapid operation in various applications. Its design ensures reliability and stability in demanding environments, fulfilling the requirements of modern industrial systems.