Schneider □□□ Series Service Manual

BMXDDM16022

1. Description

The BMXDDM16022 from Schneider Electric is a discrete mixed input/output module designed for versatile applications in Modicon systems. This module provides 8 inputs and 8 outputs, operates at 24V DC, and ensures fast response times of just 4 ms, making it effective for reliable system interactions.

2. Specifications

Specification	Value
Manufacturer	**Schneider Electric**
Product	**Type Discrete Mixed I/O Module**
Product	**Line Modicon**
Part	**Number BMXDDM16022**
EAN	**3595863910506**
Weight	**0.31 lbs (0.14 kg)**
Input	**Type 8 inputs, 8 outputs**
Input	**Voltage 24V DC**
Output	**Type Solid-state**
Response	**Time 4 ms**
Input	**Impedance 6800 Ohm**
Insulation	**Resistance 10 MOhm**
Power	**Dissipation 3.7 W**
Operating	**Temperature -20°C to 60°C**
Mounting	**Type DIN rail mounted**
Communication	**Protocol Modbus**
Protection	**Rating IP20**
Range	**of Product**
Modicon	**X80**
Product	**or Component Type**
Discrete	**I/O module**
Discrete	**input number**
8	
Input	**type**
Current	**sink (logic positive)**
Discrete	**input voltage**
24	**V DC positive**
Discrete	**input current**
3.5	**mA**
Discrete	**output number**
8	
Discrete	**output type**
Solid	**state**
Discrete	**output voltage**
24	**V 19...30 V DC**
Discrete	**output current**
0.5	**A**
Complementary	
Input	**compatibility**
With	**2-wire/3-wire proximity sensors IEC 60947-5-2**
With	**2-wire/3-wire proximity sensors IEC 61131-2 type 3**
Sensor	**power supply**
19...30	**V**
Current	**state 1 guaranteed**
>=	**3 mA**

3. Product Information

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Technical specifications for BMXDDM16022

Manufacturer Schneider Electric

Product Type Discrete Mixed I/O Module

Product Line Modicon

Part Number BMXDDM16022

EAN 3595863910506

Weight 0.31 lbs (0.14 kg)

Input Type 8 inputs, 8 outputs

Input Voltage 24V DC

Output Type Solid-state

Response Time 4 ms

Input Impedance 6800 Ohm

Insulation Resistance 10 MOhm

Power Dissipation 3.7 W

Operating Temperature -20°C to 60°C

Mounting Type DIN rail mounted

Communication Protocol Modbus

Protection Rating IP20

Range of Product

Modicon X80

Product or Component Type

Discrete I/O module

Discrete input number

8

Input type

Current sink (logic positive)

Discrete input voltage

24 V DC positive

Discrete input current

3.5 mA

Discrete output number

8

Discrete output type

Solid state

Discrete output voltage

24 V 19...30 V DC

Discrete output current

0.5 A

Complementary

Input compatibility

With 2-wire/3-wire proximity sensors IEC 60947-5-2

With 2-wire/3-wire proximity sensors IEC 61131-2 type 3

Sensor power supply

19...30 V

Current state 1 guaranteed

>= 3 mA

Current state 0 guaranteed

<= 1.5 mA

Current per channel

0.625 A

Maximum current per module

5 A

Maximum leakage current

0.5 mA at state 0

Maximum voltage drop

<1.2 V at state 1

Input impedance

6800 Ohm

Insulation resistance

> 10 MOhm 500 V DC

Power dissipation in W

3.7 W

DC typical response time

4 ms

DC maximum response time

7 ms

Response time on output

1.2 ms

Paralleling of outputs

Yes : 2 maximum

Typical current consumption

79 mA 3.3 V DC

59 mA 24 V DC

Current consumption

<= 111 mA 3.3 V DC

<= 67 mA 24 V DC

MTBF reliability

450000 H

Protection type

1 external fuse per group of input channel 0.5 A fast blow

overvoltage protection on output

reverse polarity protection on input

reverse polarity protection on output

Output overload protection

With current limiter

With electronic circuit breaker 1.5 In < Id < 2 In

Output overvoltage protection

With transil diode

Output short-circuit protection

With 2 A external fuse

Reverse polarity protection

Reverse mounted diode

Voltage detection threshold

< 14 V DC preactuator fault

< 14 V DC sensor fault

> 18 V DC preactuator OK

> 18 V DC sensor OK

Maximum tungsten load

6 W

Switching frequency

0.5/LI² Hz

Maximum overload time

15 ms

Load impedance ohmic

>= 48 Ohm

Status LED

1 LED (Green) module operating (RUN)

1 LED per channel (Green) channel diagnostic

1 LED (Red) module error (ERR)

1 LED (Red) module I/O

Net Weight

0.254 lb(US) (0.115 kg)

Environment

IP Degree of Protection

IP20

Directives

2014/35/EU - low voltage directive

2014/30/EU - electromagnetic compatibility

Dielectric strength

1500 V AC 50/60 Hz 1 minute, output/ground

1500 V AC 50/60 Hz 1 minute, output/internal logic

1500 V AC 50/60 Hz 1 minute, primary/secondary

500 V DC 1 minute, between group of inputs and outputs

Vibration resistance

3 gn

Shock resistance

30 gn

Ambient Air Temperature for Storage

-40...185 °F (-40...85 °C)

Ambient Air Temperature for Operation

32...140 °F (0...60 °C)

Relative humidity

5...95 % 131 °F (55 °C) without condensation

Operating altitude

0...6561.68 ft (0...2000 m)

2000...5000 m with derating factor

Ordering and shipping details

Category

US1PC3418160

Discount Schedule

PC34

GTIN

3595863910506

Returnability

Yes

Country of origin

FR

Packing Units

Unit Type of Package 1

PCE

Nbr. of units in pkg.

1

Package 1 Height

2.165 in (5.500 cm)

Package 1 Width

4.331 in (11.000 cm)

Package 1 Length

4.606 in (11.700 cm)

Package weight(Lbs)

5.009 oz (142.000 g)

Description

The BMXDDM16022 represents a discrete mixed I/O module within Schneider Electric’s Modicon series. This device is built to offer 8 input channels alongside 8 output channels, all operating at a standard input voltage of 24V DC. It is engineered with solid-state outputs that enable precise control and quick action in various applications.

Professionals will find that this module boasts a response time of only 4 milliseconds, facilitating swift data processing that can enhance system performance. The input impedance measures at 6800 Ohms, ensuring compatibility with various control systems. Additionally, it achieves high insulation resistance at 10 MOhm, contributing to overall system reliability. With a power dissipation rate of 3.7 Watts, it maintains effective operational efficiency, particularly within its specified working temperature range of -20°C to 60°C. Designed for DIN rail mounting, the BMXDDM16022 allows for easy installation in various settings.

Equipped with Modbus communication protocol, this module integrates smoothly into existing networks, enabling efficient data communication. Its protection rating of IP20 means it is suitable for general indoor applications, providing basic protection against dust and contact. Overall, the BMXDDM16022 is an important addition for those requiring reliable mixed I/O capabilities in their automation systems.