

Schneider Series Service Manual

BMXDAI1604

1. Description

The BMXDAI1604 digital input module from Schneider Electric's Modicon series is designed to facilitate reliable input processing. Capable of handling 16 capacitive digital inputs, this device operates with a voltage range of 100-120 VAC, supporting both 2-wire and 3-wire proximity sensors for versatile sensor compatibility.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Digital Input Module
Product	Line Modicon
Part	Number BMXDAI1604
EAN	3595863909999
Weight	4.56 lbs (2.07 kg)
Inputs	16 Digital Inputs
Input	Type Capacitive
Sensor	Compatibility 2-wire/3-wire proximity sensors
Input	Voltage 100-120 VAC
Input	Impedance 13000 Ohm
Protection	IP20
Frequency	50/60 Hz
Power	Consumption <= 3.8 W
Certifications	CE, CSA, UL, RCM, EAC
MTBF	Reliability 1,504,958 hours
Range	of Product
Modicon	X80
Product	or Component Type
Discrete	input module
Discrete	input number
16	
Discrete	input type
Isolated	
Input	type
Capacitive	
Discrete	input voltage
100...120	V AC
Discrete	input current
5	mA
Complementary	
Input	compatibility
2-wire	proximity sensor IEC 60947-5-2
2-wire	proximity sensor IEC 61131-2 type 3
Network	Frequency
50/60	Hz
Network	frequency limits
47...63	Hz
Sensor	power supply
85...132	V
Current	state 1 guaranteed
>=	2.5 mA
Current	state 0 guaranteed
<=	1 mA
Input	impedance
13000	Ohm
Insulation	resistance
>	10 MOhm 500 V

3. Product Information

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Technical specifications for BMXDAI1604

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Product Line Modicon

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Weight 4.56 lbs (2.07 kg)

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Input Type Capacitive

Sensor Compatibility 2-wire/3-wire proximity sensors

Input Voltage 100-120 VAC

Input Impedance 13000 Ohm

Protection IP20

Frequency 50/60 Hz

Power Consumption <= 3.8 W

Certifications CE, CSA, UL, RCM, EAC

MTBF Reliability 1,504,958 hours

Range of Product

Modicon X80

Product or Component Type

Discrete input module

Discrete input number

16

Discrete input type

Isolated

Input type

Capacitive

Discrete input voltage

100...120 V AC

Discrete input current

5 mA

Complementary

Input compatibility

2-wire proximity sensor IEC 60947-5-2

2-wire proximity sensor IEC 61131-2 type 3

Network Frequency

50/60 Hz

Network frequency limits

47...63 Hz

Sensor power supply

85...132 V

Current state 1 guaranteed

>= 2.5 mA

Current state 0 guaranteed

<= 1 mA

Input impedance

13000 Ohm

Insulation resistance

> 10 MOhm 500 V DC

Power dissipation in W

3.8 W

AC activation response time

10 ms

AC deactivation response time

20 ms

Typical current consumption

76 mA 3.3 V DC

MTBF reliability
1120000 H

Protection type
1 external fuse per group of channel 0.5 A fast blow

Voltage detection threshold
< 40 V AC sensor fault
> 82 V AC sensor OK

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 min

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
3595863909999

Returnability
Yes

Country of origin
FR

Packing Units
Unit Type of Package 1
PCE
Nbr. of units in pkg.
1

Package 1 Height
2.244 in (5.700 cm)

Package 1 Width
4.488 in (11.400 cm)

Package 1 Length
4.724 in (12.000 cm)

Package weight(Lbs)
5.220 oz (148.000 g)

Description

The BMXDAI1604 module acts as a digital input interface from Schneider Electric within the Modicon series. With the capacity to manage 16 inputs, this module utilizes capacitive technology for effective signal processing. It supports both 2-wire and 3-wire proximity sensors, providing flexibility in sensor applications.

This module requires an input voltage of 100-120 VAC and has an input impedance of 13,000 Ohm. It is designed for operation across 50/60 Hz frequencies, which aligns with standard electrical systems. Power consumption is relatively low, ensuring efficient use of energy at less than or equal to 3.8 watts. The device is built with IP20 protection to prevent ingress of solid objects, ensuring adequate safety in typical installation environments.

Furthermore, the BMXDAI1604 module complies with several industry standards, including CE, CSA, UL, RCM, and EAC certifications, confirming its quality and safety. With a remarkable mean time between failures (MTBF) reliability rating of 1,504,958 hours, this digital input module is well-suited for demanding applications.