

Schneider BME Series Service Manual

BMXP3420102

1. Description

processor, Modicon M340, max 1024 discrete, 256 analog IO, Modbus, CANopen

3. Product Information

processor, Modicon M340, max 1024 discrete, 256 analog IO, Modbus, CANopen

BMXP3420102

Main

Range of Product

Modicon M340 automation platform

Product or Component Type

Processor module

Number of racks

4

Number of slots

11

Discrete I/O processor capacity

1024 I/O multi-rack configuration

704 I/O single-rack configuration

Analogue I/O processor capacity

256 I/O multi-rack configuration

66 I/O single-rack configuration

Number of application specific channel

36

Monitoring

Diagnostic counters Modbus

Event counters Modbus

Complementary

Control channels

Programmable loops

Motion control

Independent axis CANopen

Integrated connection type

Non isolated serial link RJ45 character mode asynchronous in baseband, RS232C 2 twisted shielded pairs 0.3...19.2 kbit/s full duplex

Non isolated serial link RJ45 character mode asynchronous in baseband, RS485 1 twisted shielded pair 0.3...19.2 kbit/s half duplex

Non isolated serial link RJ45, master/slave Modbus, RTU/ASCII asynchronous in baseband, RS232C 1 twisted shielded pair 0.3...19.2 kbit/s half duplex

Non isolated serial link RJ45, master/slave Modbus, RTU/ASCII asynchronous in baseband, RS485 1 twisted shielded pair 0.3...19.2 kbit/s half duplex

USB port 12 Mbit/s

CANopen master bus SUB-D 9 2 twisted shielded pairs 20 kbit/s...1 Mbit/s

Communication module processor capacity

2 Ethernet communication module

4 AS-Interface module

embedded communication service

Network management (NMT) CANopen

Process Data Object (PDO) CANopen

Service Data Object (SDO) CANopen

Special functions (SYNC, EMCY, TIME) CANopen

Transmission rate

1 Mbit/s 0...65.6 ft (0...20 m) 0...2.0 ft (0...0.6 m)

125 kbit/s 0...1640.4 ft (0...500 m) 0...32.8 ft (0...10 m)

20 kbit/s 0...8202.10 ft (0...2500 m) 0...984.3 ft (0...300 m)

250 kbit/s 0...820.2 ft (0...250 m) 0...32.8 ft (0...10 m)

50 kbit/s 0...3280.8 ft (0...1000 m) 0...393.7 ft (0...120 m)

500 kbit/s 0...328.08 ft (0...100 m) 0...32.8 ft (0...10 m)

800 kbit/s 0...131.2 ft (0...40 m) 0...19.7 ft (0...6 m)

Bus type

CANopen M20 DS 301 V4.02 devices linked by daisy-chaining or tap junctions CSMA/CA

CANopen M20 DS 303-2 devices linked by daisy-chaining or tap junctions CSMA/CA

CANopen M20 DS 405 devices linked by daisy-chaining or tap junctions CSMA/CA

Number of server device(s)

63 CANopen

Number of devices per segment

0...32character mode)

0...32Modbus)

0...16 672.6 ft (205 m) CANopen)

0...32 607.0 ft (185 m) CANopen)

0...64 524.9 ft (160 m) CANopen)

Number of devices

2 point-to-point character mode

2 point-to-point Modbus

Bus length

0...32.8 ft (0...10 m) serial link non isolated character mode segment

0...32.8 ft (0...10 m) serial link non isolated Modbus segment

0...3280.8 ft (0...1000 m) serial link isolated character mode segment

0...3280.8 ft (0...1000 m) serial link isolated Modbus segment

0...49.2 ft (0...15 m) character mode point-to-point

0...49.2 ft (0...15 m) Modbus point-to-point

Maximum tap links length

<49.2 ft (15 m) serial link non isolated character mode segment

<49.2 ft (15 m) serial link non isolated Modbus segment

<131.2 ft (40 m) serial link isolated character mode segment

<131.2 ft (40 m) serial link isolated Modbus segment

Number of addresses

0...248 character mode

0...248 Modbus

Requests

1 K data bytes per request character mode

252 data bytes per RTU request Modbus

504 data bytes per ASCII request Modbus

Control parameter

One CRC on each frame (RTU) Modbus

One LRC on each frame (ASCII) character mode

One LRC on each frame (ASCII) Modbus

Memory description

Supplied memory card (BMXRMS008MP) backup of programs, constants, symbols and data

Internal RAM 4096 kB

Internal RAM 256 kB data

Internal RAM 3584 kB program constants and symbols

Maximum size of object areas

256 kB unlocated internal data

32634 %Mi located internal bits

Default size of object areas

1024 %MWi internal words located internal data

256 %KWi constant words located internal data

512 %Mi located internal bits

Application structure

No auxiliary task

1 cyclic/periodic master task

1 periodic fast task

64 event tasks

Execution time per instruction

0.12 µs Boolean

0.17 µs double-length words

0.25 µs single-length words

1.16 µs floating points

Number of instructions per ms

6.4 Kinst/ms 65 % Boolean + 35 % fixed arithmetic

8.1 Kinst/ms 100 % Boolean

System overhead

0.13 ms fast task

0.7 ms master task

Current consumption

90 mA 24 V DC

Supply
Internal power supply via rack
Marking
CE
Status LED
1 LED (Green) integrated machine/installation bus operational (CAN RUN)
1 LED (Green) processor running (RUN)
1 LED (Red) I/O module fault (I/O)
1 LED (Red) integrated machine/installation bus fault (CAN ERR)
1 LED (Red) memory card fault (CARD ERR)
1 LED (Red) processor or system fault (ERR)
1 LED (Yellow) activity on Modbus (SER COM)
Net Weight
0.46 lb(US) (0.21 kg)
Environment
Ambient air temperature for operation
32...140 °F (0...60 °C)
Relative Humidity
10...95 % without condensation
IP Degree of Protection
IP20
Protective treatment
TC
Directives
2014/35/EU - low voltage directive
2014/30/EU - electromagnetic compatibility
Product certifications
CE
UL
CSA
RCM
EAC
Merchant Navy
Standards
EN 61131-2
EN/IEC 61010-2-201
UL 61010-2-201
CSA C22.2 No 61010-2-201
IACS E10
EN/IEC 61000-6-5, interface type 1 and type 2
EN/IEC 61850-3, location G
Environmental characteristic
Hazardous location class I division 2
Ordering and shipping details
Category
US1PC3418160
Discount Schedule
PC34
GTIN
3595864024448
Returnability
No
Country of origin
FR
Packing Units
Unit Type of Package 1
PCE
Nbr. of units in pkg.
1

Package 1 Height
2.13 in (5.400 cm)
Package 1 Width
4.53 in (11.500 cm)
Package 1 Length
4.88 in (12.400 cm)
Package weight(Lbs)
8.783 oz (249.000 g)
Unit Type of Package 2
S02
Number of Units in Package 2
15
Package 2 Height
5.91 in (15.000 cm)
Package 2 Width
11.81 in (30.000 cm)
Package 2 Length
15.75 in (40.000 cm)
Package 2 Weight
8.946 lb(US) (4.058 kg)