

Schneider BME Series Service Manual

BMXP3420102CL

1. Description

Processor module, Modicon M340 automation platform, without memory card, max 1024 discrete

3. Product Information

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Main

Range of product

Modicon M340 automation platform

Product or component type

Processor module

Condition of use

Requires a memory card to work (not supplied)

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, transmission mode: asynchronous in baseband, RS232C, transmission mode: 2 twisted shielded pairs at 0.3...19.2 kbit/s full duplex

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

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

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

USB port at 12 Mbit/s

CANopen master bus SUB-D 9, transmission mode: 2 twisted shielded pairs at 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...20 m 0...0.6 m

125 kbit/s 0...500 m 0...10 m

20 kbit/s 0...2500 m 0...300 m

250 kbit/s 0...250 m 0...10 m

50 kbit/s 0...1000 m 0...120 m

500 kbit/s 0...100 m 0...10 m

800 kbit/s 0...40 m 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...32 (character mode)

0...32 (Modbus)

0...16 for <205 m (CANopen)

0...32 for <185 m (CANopen)

0...64 for <160 m (CANopen)

Number of devices

2 point-to-point character mode

2 point-to-point Modbus

Bus length

0...10 m serial link non isolated character mode segment

0...10 m serial link non isolated Modbus segment

0...1000 m serial link isolated character mode segment

0...1000 m serial link isolated Modbus segment

0...15 m character mode point-to-point

0...15 m Modbus point-to-point

Maximum tap links length

<15 m serial link non isolated character mode segment

<15 m serial link non isolated Modbus segment

<40 m serial link isolated character mode segment

<40 m serial link isolated Modbus segment

Number of addresses

0...248 for character mode

0...248 for 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

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

64 event tasks

No auxiliary task

1 cyclic/periodic master task

1 periodic fast task

Execution time per instruction

0.12 μ s Boolean

0.17 μ s double-length words

0.25 μ s single-length words

1.16 μ s 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 for fast task

0.7 ms for master task

Current consumption

90 mA at 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)

Product weight

0.21 kg

Environment

Ambient air temperature for operation

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

Packing Units

Unit Type of Package 1

PCE

Number of Units in Package 1

1

Package 1 Height

5.5 cm

Package 1 Width

11.0 cm

Package 1 Length

12.0 cm

Package 1 Weight

252.0 g

Unit Type of Package 2

S02

Number of Units in Package 2

15

Package 2 Height

15.0 cm

Package 2 Width

30.0 cm

Package 2 Length

40.0 cm

Package 2 Weight

4.581 kg