# Product data sheet

Specifications

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

BMXP3420102

## Main

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|---|---|
| **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<br>704 I/O single-rack configuration |
| **Analogue I/O processor capacity** | 256 I/O multi-rack configuration<br>66 I/O single-rack configuration |
| **Number of application specific channel** | 36 |
| **Monitoring** | Diagnostic counters Modbus<br>Event counters Modbus |

## Complementary

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|---|---|
| **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<br>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<br>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<br>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<br>USB port at 12 Mbit/s<br>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<br>4 AS-Interface module |
| **embedded communication service** | Network management (NMT) CANopen<br>Process Data Object (PDO) CANopen<br>Service Data Object (SDO) CANopen<br>Special functions (SYNC, EMCY, TIME) CANopen |
| **Transmission rate** | 1 Mbit/s 0…20 m 0…0.6 m<br>125 kbit/s 0…500 m 0…10 m<br>20 kbit/s 0…2500 m 0…300 m<br>250 kbit/s 0…250 m 0…10 m<br>50 kbit/s 0…1000 m 0…120 m<br>500 kbit/s 0…100 m 0…10 m<br>800 kbit/s 0…40 m 0…6 m |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Bus type** | CANopen M20 DS 301 V4.02 devices linked by daisy-chaining or tap junctions CSMA/CA<br>CANopen M20 DS 303-2 devices linked by daisy-chaining or tap junctions CSMA/CA<br>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)<br>0…32 (Modbus)<br>0…16 for <205 m (CANopen)<br>0…32 for <185 m (CANopen)<br>0…64 for <160 m (CANopen) |
| **Number of devices** | 2 point-to-point character mode<br>2 point-to-point Modbus |
| **Bus length** | 0…10 m serial link non isolated character mode segment<br>0…10 m serial link non isolated Modbus segment<br>0…1000 m serial link isolated character mode segment<br>0…1000 m serial link isolated Modbus segment<br>0…15 m character mode point-to-point<br>0…15 m Modbus point-to-point |
| **Maximum tap links length** | <15 m serial link non isolated character mode segment<br><15 m serial link non isolated Modbus segment<br><40 m serial link isolated character mode segment<br><40 m serial link isolated Modbus segment |
| **Number of addresses** | 0…248 for character mode<br>0…248 for Modbus |
| **Requests** | 1 K data bytes per request character mode<br>252 data bytes per RTU request Modbus<br>504 data bytes per ASCII request Modbus |
| **Control parameter** | One CRC on each frame (RTU) Modbus<br>One LRC on each frame (ASCII) character mode<br>One LRC on each frame (ASCII) Modbus |
| **Memory description** | Supplied memory card (BMXRMS008MP) backup of programs, constants, symbols and data<br>Internal RAM 4096 kB<br>Internal RAM 256 kB data<br>Internal RAM 3584 kB program constants and symbols |
| **Maximum size of object areas** | 256 kB unlocated internal data<br>32634 %Mi located internal bits |
| **Default size of object areas** | 1024 %MWi internal words located internal data<br>256 %KWi constant words located internal data<br>512 %Mi located internal bits |
| **Application structure** | No auxiliary task<br>1 cyclic/periodic master task<br>1 periodic fast task<br>64 event tasks |
| **Execution time per instruction** | 0.12 µs Boolean<br>0.17 µs double-length words<br>0.25 µs single-length words<br>1.16 µs floating points |
| **Number of instructions per ms** | 6.4 Kinst/ms 65 % Boolean + 35 % fixed arithmetic<br>8.1 Kinst/ms 100 % Boolean |
| **System overhead** | 0.13 ms for fast task<br>0.7 ms for master task |
| **Current consumption** | 90 mA at 24 V DC |
| **Supply** | Internal power supply via rack |
| **Marking** | CE |

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|---|---|
| **Status LED** | 1 LED (green) integrated machine/installation bus operational (CAN RUN)<br>1 LED (green) processor running (RUN)<br>1 LED (red) I/O module fault (I/O)<br>1 LED (red) integrated machine/installation bus fault (CAN ERR)<br>1 LED (red) memory card fault (CARD ERR)<br>1 LED (red) processor or system fault (ERR)<br>1 LED (yellow) activity on Modbus (SER COM) |
| **Product weight** | 0.21 kg |

## Environment

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|---|---|
| **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<br>2014/30/EU - electromagnetic compatibility |
| **Product certifications** | CE<br>UL<br>CSA<br>RCM<br>EAC<br>Merchant Navy |
| **Standards** | EN 61131-2<br>EN/IEC 61010-2-201<br>UL 61010-2-201<br>CSA C22.2 No 61010-2-201<br>IACS E10<br>EN/IEC 61000-6-5, interface type 1 and type 2<br>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** | 5.400 cm |
| **Package 1 Width** | 11.500 cm |
| **Package 1 Length** | 12.400 cm |
| **Package 1 Weight** | 249.000 g |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 15 |
| **Package 2 Height** | 15.000 cm |
| **Package 2 Width** | 30.000 cm |
| **Package 2 Length** | 40.000 cm |
| **Package 2 Weight** | 4.058 kg |

## Contractual warranty

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|---|---|
| **Warranty** | 18 months |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | 114 |
| Environmental Disclosure | Product Environmental Profile |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| REACh Regulation | REACh Declaration |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

## Use Again

### Repack and remanufacture

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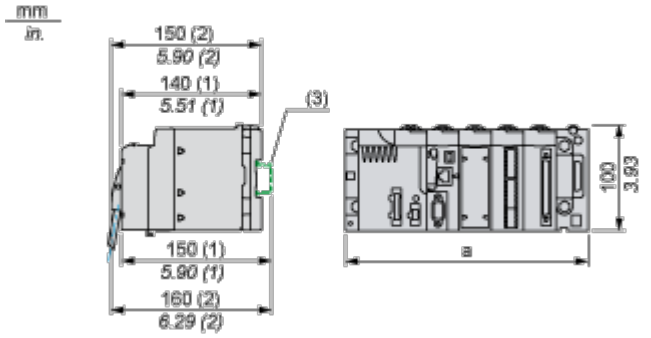
|---|---|
| End of life manual availability | End of Life Information |
| Take-back | No |

## Dimensions Drawings

### Modules Mounted on Racks

### Dimensions




(1) With removable terminal block (cage, screw or spring).

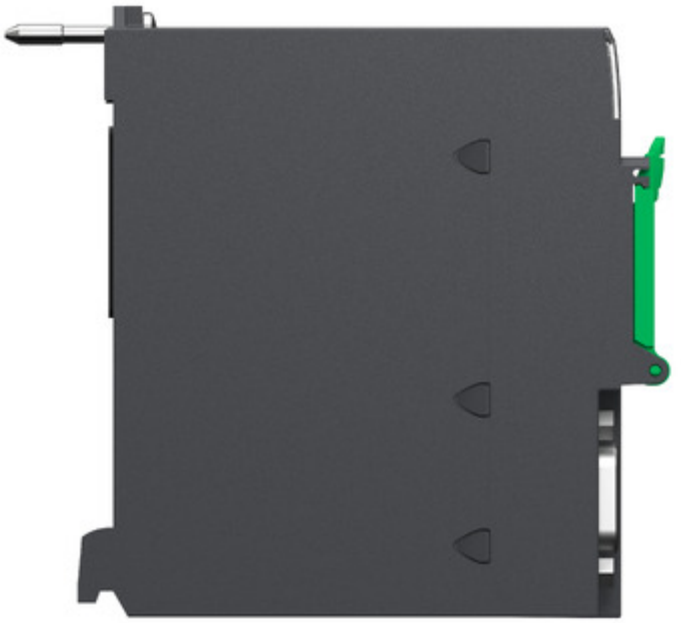
(2) With FCN connector.

(3) On AM1 ED rail: 35 mm wide, 15 mm deep. Only possible with BMXXBP0400/0400H/0600/0600H/0800/0800H rack.

| Rack references | a in mm | a in in. |
|---|---|---|
| BMXXBP0400 and BMXXBP0400H | 242.4 | 09.54 |
| BMXXBP0600 and BMXXBP0600H | 307.6 | 12.11 |
| BMXXBP0800 and BMXXBP0800H | 372.8 | 14.68 |
| BMXXBP1200 and BMXXBP1200H | 503.2 | 19.81 |

Image of product / Alternate images

**Alternative**



Schneider Electric
Modicon
BMXP3420102
CPU340-20 MODBUS
CANOPEN2
DOM : XXXX