# Product data sheet
## Characteristics

# BMXP3420102
processor, Modicon M340, max 1024 discrete, 256 analog IO, Modbus, CANopen



## Main

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|---|---|
| Range of product | Modicon M340 automation platform |
| Product or component type | Processor module |
| Concept | Modbus<br>CANopen |
| Number of racks | 4 |
| Discrete I/O processor capacity | 1024 I/O |
| Analogue I/O processor capacity | 256 I/O |
| 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,<br>Non isolated serial link RJ45 character mode, transmission mode: asynchronous in baseband,<br>Non isolated serial link RJ45, master/slave Modbus, RTU/ASCII, transmission mode: asynchro<br>Non isolated serial link RJ45, master/slave Modbus, RTU/ASCII, transmission mode: asynchro<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 Mb |
| Communication module processor capacity | 2 Ethernet communication module<br>4 AS-Interface module |
| 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 |
| 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 |

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| 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 | 32634 %Mi located internal bits<br>32464 %MWi internal words<br>32760 %KWi constant words |
| 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<br>UL<br>CSA<br>RCM<br>EAC<br>UKCA<br>China RoHS<br>WEEE<br>IEC |
| 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) |
| Net weight | 0.21 Kg |

## Environment

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| Ambient air temperature for operation | 0…60 °C |
| Relative humidity | 5…95 % without condensation |
| IP degree of protection | IP20 |
| Protective treatment | TC |
| Directives | 2014/35/EU - low voltage directive<br>2014/30/EU - electromagnetic compatibility<br>2012/19/EU - WEEE directive |

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| Product certifications | CE[RETURN]UL[RETURN]CSA[RETURN]RCM[RETURN]EAC[RETURN]UKCA[RETURN]Mer |
| Standards | IEC 61131-2<br>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 |

## Packing Units

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|---|---|
| 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 Cm |
| Package 2 Width | 30 Cm |
| Package 2 Length | 40 Cm |
| Package 2 Weight | 4.058 Kg |

## Offer Sustainability

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| Recyclability potential, in % | 32 |
| Total lifecycle Carbon footprint | 114 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 16.891125 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 17 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.032429875 |
| Carbon footprint of the distribution phase [A4] | 0 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.09872531250000001 |
| Carbon footprint of the installation phase [A5] | 0.1 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 96.3229090909 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 96 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.399125 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.4 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 114 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant By Exemption |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, w |
| End of life manual availability | End Of Life Information |
| Take-back | No |

## Contractual warranty

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| Warranty (in months) | 18 |

Product Life Status : Commercialised