

# BMXAMM0600H

analog non isolated high level IO module,  
Modicon X80, 4 I, 2 O, 0 to 20mA, 4 to 20mA,  
10V positive or negative, severe environment



## Main

|                              |                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Range of Product             | Modicon X80                                                                                                          |
| Product or Component Type    | Mixed analog I/O module                                                                                              |
| Product Specific Application | For severe environments                                                                                              |
| Electrical connection        | 20 ways 1 connector                                                                                                  |
| Isolation between channels   | Non isolated                                                                                                         |
| Input level                  | High level                                                                                                           |
| Analogue input number        | 4                                                                                                                    |
| Analogue input type          | Current 0...20 mA<br>Current 4...20 mA<br>Voltage +/- 10 V<br>Voltage 0...10 V<br>Voltage 0...5 V<br>Voltage 1...5 V |

## Complementary

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analogue input resolution                 | 12 bits 0...20 mA<br>12 bits 0...5 V<br>12 bits 1...5 V<br>12 bits 4...20 mA<br>13 bits 0...10 V<br>14 bits +/- 10 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Permitted overload on inputs              | +/- 30 mA 0...20 mA<br>+/- 30 mA 4...20 mA<br>+/- 30 V +/- 10 V<br>+/- 30 V 0...10 V<br>+/- 30 V 0...5 V<br>+/- 30 V 1...5 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input impedance                           | 250 Ohm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Precision of internal conversion resistor | 0.1 % - 15 ppm/°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Type of filter                            | First order digital filtering by firmware                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Fast read cycle time                      | 1 ms + 1 ms x number of channels used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Nominal read cycle time                   | 5 ms for 4 channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Measurement error                         | 0.25 % of full scale 0...20 mA 25 °C output<br>0.25 % of full scale 4...20 mA 25 °C output<br>0.25 % of full scale +/- 10 V 25 °C output<br>0.25 % of full scale +/- 10 V 25 °C input<br>0.25 % of full scale 0...10 V 25 °C input<br>0.25 % of full scale 0...5 V 25 °C input<br>0.25 % of full scale 1...5 V 25 °C input<br>0.35 % of full scale 0...20 mA 25 °C input<br>0.35 % of full scale 4...20 mA 25 °C input<br>≤ 0.4 % of full scale +/- 10 V - 25...70 °C input<br>≤ 0.4 % of full scale 0...10 V - 25...70 °C input<br>≤ 0.4 % of full scale 0...5 V - 25...70 °C input<br>≤ 0.4 % of full scale 1...5 V - 25...70 °C input<br>≤ 0.6 % of full scale 0...20 mA - 25...70 °C input<br>≤ 0.6 % of full scale 4...20 mA - 25...70 °C input<br>≤ 0.8 % of full scale +/- 10 V - 25...70 °C output<br>≤ 0.8 % of full scale 0...20 mA - 25...70 °C output<br>≤ 0.8 % of full scale 4...20 mA - 25...70 °C output |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                               |                                                                                                                                                                                                                                                                         |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature drift             | 100 ppm/°C +/- 10 V output<br>100 ppm/°C 0...20 mA output<br>100 ppm/°C 4...20 mA output<br>30 ppm/°C +/- 10 V input<br>30 ppm/°C 0...10 V input<br>30 ppm/°C 0...5 V input<br>30 ppm/°C 1...5 V input<br>50 ppm/°C 0...20 mA input<br>50 ppm/°C 4...20 mA input        |
| Recalibration                 | Internal on inputs<br>Factory calibrated on outputs                                                                                                                                                                                                                     |
| Minimum crosstalk attenuation | 70 dB                                                                                                                                                                                                                                                                   |
| Common mode rejection         | 80&nbsp;dB                                                                                                                                                                                                                                                              |
| Isolation voltage             | 1400 V DC between channels and ground<br>1400 V DC between channels and bus<br>750 V DC between group of I/O channels                                                                                                                                                   |
| Output level                  | High level                                                                                                                                                                                                                                                              |
| Analogue output number        | 2                                                                                                                                                                                                                                                                       |
| Analogue output type          | Current 0...20 mA<br>Current 4...20 mA<br>Voltage +/- 10 V                                                                                                                                                                                                              |
| Analogue output resolution    | 11 bits, 0...20 mA<br>11 bits, 4...20 mA<br>12 bits, +/- 10 V                                                                                                                                                                                                           |
| Conversion time               | <= 2 ms                                                                                                                                                                                                                                                                 |
| Maximum conversion value      | +/- 11.25 V +/- 10 V output<br>+/- 11.25 V +/- 10 V input<br>0...30 mA 0...20 mA input<br>0...30 mA 4...20 mA input<br>+/- 11.25 V 0...10 V input<br>+/- 11.25 V 0...5 V input<br>+/- 11.25 V 1...5 V input<br>0...24 mA 0...20 mA output<br>0...24 mA 4...20 mA output |
| Fallback mode                 | Predefined<br>Configurable                                                                                                                                                                                                                                              |
| MTBF reliability              | 1400000 H                                                                                                                                                                                                                                                               |
| Operating altitude            | 0...6561.68 ft (0...2000 m)<br>2000...5000 m with derating factor                                                                                                                                                                                                       |
| Status LED                    | 1 LED (Green) RUN<br>1 LED per channel (Green) channel diagnostic<br>1 LED (Red) ERR<br>1 LED (Red) I/O                                                                                                                                                                 |
| Net Weight                    | 0.34 lb(US) (0.155 kg)                                                                                                                                                                                                                                                  |
| Power consumption in W        | 2.6 W 24 V DC typical<br>3.2 W 24 V DC maximum<br>0.35 W 3.3 V DC typical<br>0.48 W 3.3 V DC maximum                                                                                                                                                                    |
| Current consumption           | 240 mA 3.3 V DC                                                                                                                                                                                                                                                         |

## Environment

|                                       |                                                                                                 |
|---------------------------------------|-------------------------------------------------------------------------------------------------|
| Vibration resistance                  | 3 gn                                                                                            |
| Shock resistance                      | 30 gn                                                                                           |
| Ambient Air Temperature for Storage   | -40...185 °F (-40...85 °C)                                                                      |
| Ambient Air Temperature for Operation | -13...158 °F (-25...70 °C)                                                                      |
| Relative humidity                     | 5...95 % 131 °F (55 °C) without condensation                                                    |
| IP Degree of Protection               | IP20                                                                                            |
| Directives                            | 2014/35/EU - low voltage directive<br>2014/30/EU - electromagnetic compatibility                |
| Product Certifications                | CE[RETURN]RCM[RETURN]CSA[RETURN]EAC[RETURN]Merchant<br>Navy[RETURN]UL[RETURN]ATEX[RETURN]IEC-Ex |
| Standards                             | EN/IEC 61010-2-201<br>EN/IEC 61131-2<br>UL 61010-2-201<br>CSA C22.2 No 61010-2-201              |

|                              |                                                                                                                                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental characteristic | Gas resistant class Gx<br>Gas resistant class 3C4<br>Dust resistant class 3S4<br>Sand resistant class 3S4<br>Salt resistant level 2<br>Mold growth resistant class 3B2<br>Fungal spore resistant class 3B2<br>Hazardous location |
| Protective treatment         | Conformal coating                                                                                                                                                                                                                |

### Ordering and shipping details

|                   |                    |
|-------------------|--------------------|
| Category          | 18160-MODICON M340 |
| Discount Schedule | PC34               |
| GTIN              | 3595864025537      |
| Returnability     | Yes                |
| Country of origin | FR                 |

### Packing Units

|                              |                        |
|------------------------------|------------------------|
| Unit Type of Package 1       | PCE                    |
| Number of Units in Package 1 | 1                      |
| Package 1 Height             | 2.17 in (5.500 cm)     |
| Package 1 Width              | 4.33 in (11.000 cm)    |
| Package 1 Length             | 4.72 in (12.000 cm)    |
| Package 1 Weight             | 6.67 oz (189.000 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             | 6.71 lb(US) (3.045 kg) |

### Offer Sustainability

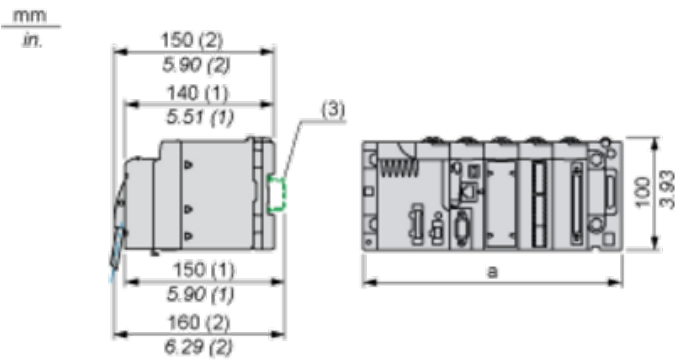
|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           |  <a href="#">REACH Declaration</a>                                                                                                                                                                       |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>                                                                                                                                                                  |
| RoHS exemption information |  Yes                                                                                                                                                                                                     |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                                                |

### Contractual warranty

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

Modules Mounted on Racks

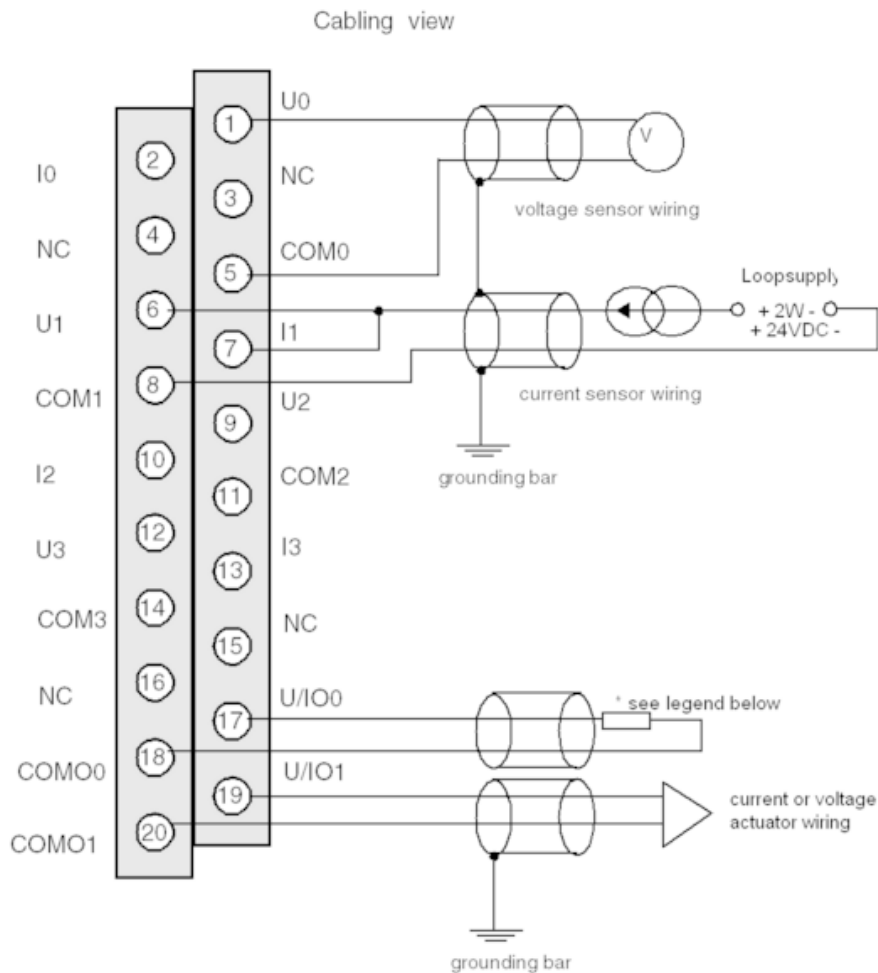
Dimensions



- (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    |

## Wiring Diagram



Ux + pole input for channel x

COMx - pole input for channel x

U/IOx + pole output for channel x

COMOx - pole output for channel x

\* The current loop is self-powered by the output and does not request any external supply.