

# BMXAMI0800

non-isolated analog input module X80 - 8 inputs - fast speed



## Main

|                            |                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product           | Modicon X80                                                                                                                                                  |
| Product or component type  | Analog input module                                                                                                                                          |
| Electrical connection      | 28 ways 1 connector                                                                                                                                          |
| Isolation between channels | Non isolated                                                                                                                                                 |
| Input level                | High level                                                                                                                                                   |
| Analogue input number      | 8                                                                                                                                                            |
| Analogue input type        | Current +/- 20 mA<br>Current 0...20 mA<br>Current 4...20 mA<br>Voltage +/- 10 V<br>Voltage +/- 5 V<br>Voltage 0...10 V<br>Voltage 0...5 V<br>Voltage 1...5 V |

## Complementary

|                                           |                                                                                                                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analog/Digital conversion                 | 16 bits                                                                                                                                                                 |
| Analogue input resolution                 | 15 bits + sign                                                                                                                                                          |
| Input impedance                           | 10 MOhm                                                                                                                                                                 |
| Permitted overload on inputs              | +/- 30 mA 0...20 mA<br>+/- 30 mA 4...20 mA<br>+/- 30 V +/- 10 V<br>+/- 30 V +/- 5 V<br>+/- 30 V 0...10 V<br>+/- 30 V 0...5 V<br>+/- 30 V 1...5 V<br>+/- 30 mA +/- 20 mA |
| Internal conversion resistor              | 250 Ohm                                                                                                                                                                 |
| Precision of internal conversion resistor | 0.1 % - 15 ppm/°C                                                                                                                                                       |
| Type of filter                            | First order digital filtering                                                                                                                                           |
| Fast read cycle time                      | 1 ms + 1 ms x number of channels used                                                                                                                                   |

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal read cycle time      | 9 ms for 8 channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Measurement error            | <= 0.1 % of full scale +/- 10 V 0...60 °C<br><= 0.1 % of full scale +/- 5 V 0...60 °C<br><= 0.1 % of full scale 0...10 V 0...60 °C<br><= 0.1 % of full scale 0...5 V 0...60 °C<br><= 0.1 % of full scale 1...5 V 0...60 °C<br><= 0.3 % of full scale +/- 20 mA 0...60 °C<br><= 0.3 % of full scale 0...20 mA 0...60 °C<br><= 0.3 % of full scale 4...20 mA 0...60 °C<br>0.15 % of full scale +/- 20 mA 25 °C<br>0.15 % of full scale 0...20 mA 25 °C<br>0.15 % of full scale 4...20 mA 25 °C<br>0.075 % of full scale +/- 10 V 25 °C<br>0.075 % of full scale 0...10 V 25 °C<br>0.075 % of full scale 0...5 V 25 °C<br>0.075 % of full scale 1...5 V 25 °C<br>0.075 % of full scale +/- 5 V 25 °C |
| Temperature drift            | 30 ppm/°C +/- 10 V<br>30 ppm/°C +/- 5 V<br>30 ppm/°C 0...10 V<br>30 ppm/°C 0...5 V<br>30 ppm/°C 1...5 V<br>50 ppm/°C +/- 20 mA<br>50 ppm/°C 0...20 mA<br>50 ppm/°C 4...20 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Recalibration                | Factory calibrated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Common mode between channels | >= 80 dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Digital value format         | +/- 32767 in user scale<br>+/- 10000 by default                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Isolation voltage            | 1400 V DC between channels and ground<br>1400 V DC between channels and bus<br>50 V DC between channels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Measurement resolution       | 0.36 mV +/- 10 V<br>0.36 mV 0...10 V<br>0.36 mV 0...5 V<br>0.36 mV 1...5 V<br>0.36 mV +/- 5 V<br>1.4 µA +/- 20 mA<br>1.4 µA 0...20 mA<br>1.4 µA 4...20 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum conversion value     | +/- 11.4 V +/- 10 V<br>+/- 11.4 V 0...10 V<br>+/- 11.4 V 0...5 V<br>+/- 11.4 V 1...5 V<br>0...30 mA +/- 20 mA<br>0...30 mA 0...20 mA<br>0...30 mA 4...20 mA<br>0...30 mA +/- 5 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Protective treatment         | TC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operating altitude           | 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                   | 0.165 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power consumption in W       | 0.55 W 24 V DC typical<br>1.01 W 24 V DC maximum<br>0.32 W 3.3 V DC typical<br>0.48 W 3.3 V DC maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Environment

|                                       |             |
|---------------------------------------|-------------|
| Vibration resistance                  | 3 gn        |
| Shock resistance                      | 30 gn       |
| Ambient air temperature for storage   | -40...85 °C |
| Ambient air temperature for operation | 0...60 °C   |

|                         |                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------|
| Relative humidity       | 5...95 % at 55 °C without condensation                                                                          |
| IP degree of protection | IP20                                                                                                            |
| Directives              | 2014/35/EU - low voltage directive<br>2014/30/EU - electromagnetic compatibility<br>2012/19/EU - WEEE directive |
| Product certifications  | CE<br>UL<br>EAC<br>CSA<br>Merchant Navy<br>RCM                                                                  |
| Standards               | EN 61131-2<br>EN 61000-6-4<br>EN 61000-6-2<br>EN 61010-2-201                                                    |

### Offer Sustainability

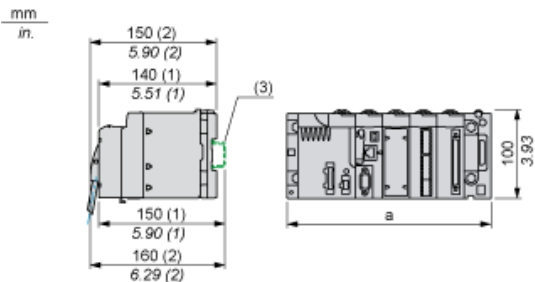
|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>                           |
| Mercury free               | Yes                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                                                      |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                               |
| Circularity Profile        | <a href="#">End of Life Information</a>                                                                                     |
| 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

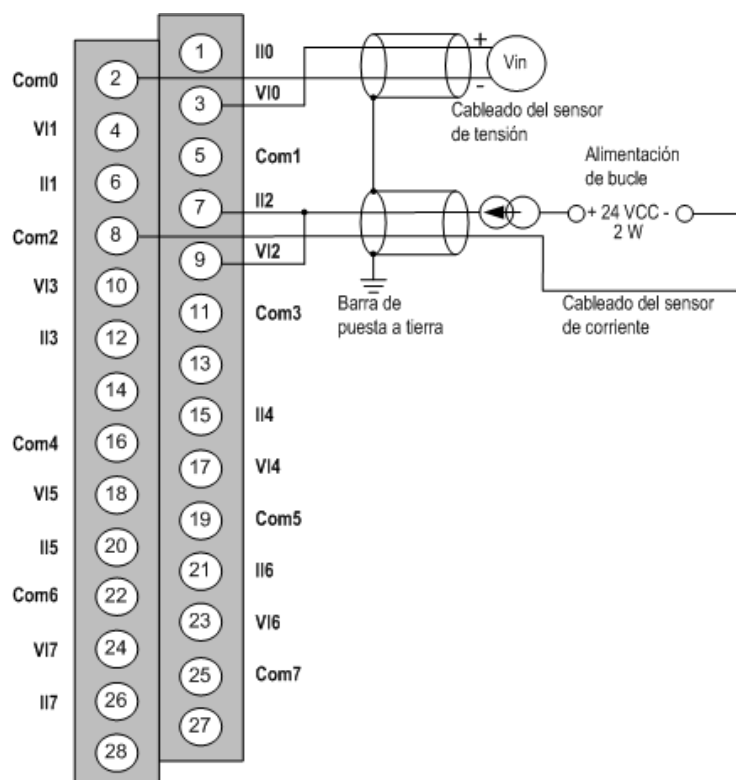
Dimensions



- (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



VIx + pole input for channel x.  
COMx - pole input for channel x, COMx are connected together internally.  
IIx current reading resistor + input.  
Channel 0 voltage sensor.  
Channel 12-wire current sensor.