Product datasheet

Specifications



analog input module X80 - 4 inputs - for severe environments

Local distributor code: 393392991

BMXAMI0410H

EAN Code: 3595864025568

Main

Range Of Product	Modicon X80	
Product Or Component Type	Analog input module	
Product Specific Application	For severe environments	
Electrical Connection	20 ways 1 connector	
Isolation Between Channels	Isolated	
Input Level	High level	
Analogue Input Number	4	
Analogue Input Type	Current +/- 20 mA Current 020 mA Current 420 mA Voltage +/- 10 V Voltage +/- 5 V Voltage 010 V Voltage 05 V Voltage 15 V	

Complementary

Analog/Digital Conversion	24 bits
Analogue Input Resolution	16 bits
Permitted Overload On Inputs	+/- 30 V +/- 10 V
	+/- 30 V +/- 5 V
	+/- 30 V 010 V
	+/- 30 V 05 V
	+/- 30 V 15 V
	+/- 90 mA +/- 20 mA
	+/- 90 mA 020 mA
	+/- 90 mA 420 mA
Input Impedance	10 MOhm in voltage mode
	250 Ohm + 3.650 Ohm internal protective resistor in current mode
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	5 ms for 4 channels

Measurement Error	0.075 % of full scale +/- 10 V 25 °C
	0.075 % of full scale +/- 5 V 25 °C
	0.075 % of full scale 010 V 25 °C
	0.075 % of full scale 05 V 25 °C
	0.075 % of full scale 15 V 25 °C
	0.15 % of full scale +/- 20 mA 25 °C
	0.15 % of full scale 020 mA 25 °C
	0.15 % of full scale 420 mA 25 °C
	<= 0.2 % of full scale +/- 10 V - 2570 °C
	<= 0.2 % of full scale +/- 5 V - 2570 °C
	<= 0.2 % of full scale 010 V - 2570 °C
	<= 0.2 % of full scale 05 V - 2570 °C
	<= 0.2 % of full scale 05 V - 2570 °C
	<= 0.2 % of full scale +/- 20 mA - 2570 °C
	<= 0.55 % of full scale 020 mA - 2570 °C
	<= 0.55 % of full scale 420 mA - 2570 °C
Temperature Drift	15 ppm/°C +/- 10 V
	15 ppm/°C +/- 5 V
	15 ppm/°C 010 V
	15 ppm/°C 05 V
	15 ppm/°C 15 V
	30 ppm/°C +/- 20 mA
	30 ppm/°C 020 mA
	30 ppm/°C 420 mA
Recalibration	Internal
Minimum Crosstalk Attenuation	80 dB
Common Mode Rejection	90 dB
Digital Value Format	- 32768 to + 32767 in maximum user scale +/- 10000 by default
Isolation Voltage	300 V DC between channels
-	1400 V DC between channels and ground
	1400 V DC between channels and bus
Measurement Resolution	0.35 mV +/- 10 V
	0.35 mV +/- 5 V
	0.35 mV 010 V
	0.35 mV 010 V 0.35 mV 05 V
	0.35 mV 05 V
	0.35 mV 05 V 0.35 mV 15 V
	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA
	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA
Maximum Conversion Value	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V -5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 020 mA
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	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 1.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA
Mtbf Reliability Operating Altitude	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor
Mtbf Reliability	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V 010 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 020 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN
Mtbf Reliability Operating Altitude	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED per channel (green) channel diagnostic
Mtbf Reliability Operating Altitude	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +20 mA 030 mA 020 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED (green) RUN 1 LED (green) channel diagnostic 1 LED (red) ERR
Mtbf Reliability Operating Altitude Status Led	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED (green) RUN 1 LED (red) ERR 1 LED (red) I/O
Mtbf Reliability Operating Altitude Status Led Net Weight	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA -/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED per channel (green) channel diagnostic 1 LED (red) ERR 1 LED (red) I/O 0.143 kg
Mtbf Reliability Operating Altitude Status Led	0.35 mV 05 V 0.35 mV 15 V 0.92 μA +/- 20 mA 0.92 μA 020 mA 0.92 μA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED (green) RUN 1 LED (green) RUN 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical
Mtbf Reliability Operating Altitude Status Led Net Weight	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V - 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED (green) RUN 1 LED (green) RUN 1 LED (red) ERR 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC maximum
Mtbf Reliability Operating Altitude Status Led Net Weight	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +20 mA 030 mA 020 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED per channel (green) channel diagnostic 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical
Mtbf Reliability Operating Altitude Status Led Net Weight	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V - 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED (green) RUN 1 LED (green) RUN 1 LED (red) ERR 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC maximum
Mtbf Reliability Operating Altitude Status Led Net Weight Power Consumption In W	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +/- 20 mA 030 mA 020 mA 030 mA 420 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED green) RUN 1 LED (green) RUN 1 LED (red) ERR 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical 0.32 W 3.3 V DC typical 0.48 W 3.3 V DC maximum
Mtbf Reliability Operating Altitude Status Led Net Weight	0.35 mV 05 V 0.35 mV 15 V 0.92 µA +/- 20 mA 0.92 µA 020 mA 0.92 µA 420 mA +/- 11.4 V +/- 10 V +/- 11.4 V +/- 5 V +/- 11.4 V 010 V +/- 11.4 V 05 V +/- 11.4 V 05 V +/- 11.4 V 15 V 030 mA +20 mA 030 mA 020 mA 1200000 H 02000 m 20005000 m with derating factor 1 LED (green) RUN 1 LED per channel (green) channel diagnostic 1 LED (red) ERR 1 LED (red) I/O 0.143 kg 0.82 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical 1.30 W 24 V DC typical

Environment

Vibration Resistance	3 gn
Shock Resistance	30 gn
Ambient Air Temperature For Storage	-4085 °C
Ambient Air Temperature For Operation	-2570 °C
Relative Humidity	595 % at 55 °C without condensation
Ip Degree Of Protection	IP20
Directives	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility
Product Certifications	CE RCM CSA EAC Merchant Navy UL ATEX IEC-Ex
Standards	EN/IEC 61010-2-201 EN/IEC 61131-2 UL 61010-2-201 CSA C22.2 No 61010-2-201
Environmental Characteristic	Gas resistant class Gx Gas resistant class 3C4 Dust resistant class 3S4 Sand resistant class 3S4 Salt resistant level 2 Mold growth resistant class 3B2 Fungal spore resistant class 3B2 Hazardous location
Protective Treatment	Conformal coating

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	5.400 cm
Package 1 Width	11.700 cm
Package 1 Length	11.900 cm
Package 1 Weight	180.000 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	3.077 kg

Contractual warranty

Warranty

18 months

Sustainability

Green PremiumTM label is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

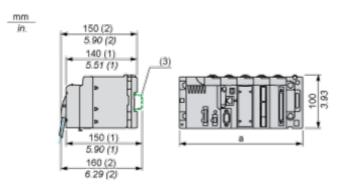
Well-being performance

Mercury Free	
Rohs Exemption Information	Yes
Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

Modules Mounted on Racks

Dimensions



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

(2) With FCN connector.

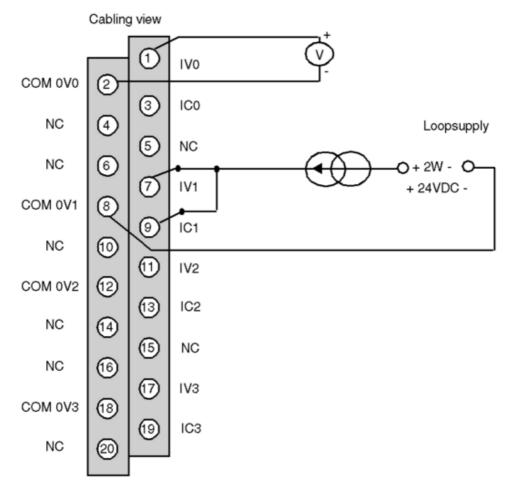
(3) On AM1 ED rail: 35 mm wide, 15 mm deep. Only possible with BMXXBP0400/0400H/0600/0600H/0800/0800H rack.

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

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Connections and Schema

Wiring Diagram



IVx + pole input for channel x COM 0Vx - pole input for channel x ICx current reading resistor + input Channel 0 voltage sensor Channel 1 2-wire current sensor