

### General Specifications

Operating Temperature	0° to 60°C (32° to 140°F)
Storage Temperature	-20° to 85°C (-4° to 185°F)
Humidity	5 to 95% (non-condensing)
Environmental Air	No corrosive gases permitted
Vibration	IEC60068-2-6 (Test Fc)
Shock	IEC60068-2-27 (Test Ea)
Enclosure Type	Open Equipment
Agency Approvals	UL61010-2 - UL File # E185989 Canada and USA CE Compliant EN61131-2*
Noise Immunity	NEMA ICS3-304
EU Directive	See the "EU Directive" topic in the Help File
Heat Dissipation	10.8W Max
Weight	198g (7 oz)
Software Version	Netedit 3 Version 3.15 or later

\*Meets EMC and Safety requirements. See the D.O.C. for details.

### Power Supply Specifications

Nominal Voltage Rating	120–240 VAC
Input Voltage Range (Tolerance)	85-264 VAC
Rated Operating Frequency	47–63 Hz
Maximum Input Power	40VA
Cold Start Inrush Current	1.5A, 2ms
Maximum Inrush Current (Hot Start)	1.5A, 2ms
Internal Input Fuse Protection	Micro fuse 250V, 2A Non-replaceable
Isolated User 24VDC Output	24VDC @ 0.3A max, <1V P-P Ripple, Integrated self-resetting short circuit protection
Voltage Withstand (dielectric)	1500VAC Power Inputs to Ground applied for 1 minute 1500VAC Ground to 24VDC applied for 1 minute
Replacement Connector	ADC Part # BX-RTB05

Removable Connector Included



Pinout	Connection
1	L
2	N
3	GND
4	V-
5	V+

## BRX-MBIO-M

### BRX Modbus I/O Controller

120 VAC required, serial port, Ethernet port.



**Power and serial terminal blocks included.**

### Ethernet Specifications

Port Name	Ethernet
Description	Standard transformer isolated Ethernet port with built-in surge protection.
Transfer Rate	10Mbps and 100Mbps
Port Status LED	LED is solid when network LINK is established. LED flashes when port is active (ACT).
Supported Protocols	Modbus TCP/IP (Server)
Cable Recommendation	C5E-STxxx-xx from AutomationDirect.com
Port Type	RJ45, Category 5, 10/100 BASE-T, Auto Crossover
Ethernet Port Numbers:	
Modbus TCP/IP (Server)	502, TCP

### Status Indicators

Indicator	Status	Description
PWR	OFF	Base Power is OFF
	GREEN	Base Power is Good
OK	GREEN	Controller is Functioning Normally
	GREEN (Blinking)	Reset Mode (Booter without OS)
	YELLOW	Analog Module Mismatch
	OFF	Controller HW Error or Power is Off
ERR	OFF	Controller is Functioning Normally
	RED	Controller HW Error or Communications Watchdog Timeout
	RED (Blinking)	Reset Mode (Booter without OS)
TX	OFF	No Transmit Activity
	GREEN (Blinking)	Data is being Transmitted
RX	OFF	No Receive Activity
	GREEN (Blinking)	Data is being Received
LNK	OFF	No Ethernet Link
	GREEN	Ethernet Link is Good
ACT	OFF	No Ethernet Activity
	GREEN (Blinking)	Ethernet Activity

**WARNING:** To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

**Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.**

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call Technical Support at 770-844-4200.

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Do-more! BRX Manual available at [www.automationdirect.com/pn/doc/manual/BX-MBIO-M](http://www.automationdirect.com/pn/doc/manual/BX-MBIO-M)



### IMPORTANT!



#### Hot-Swapping Information

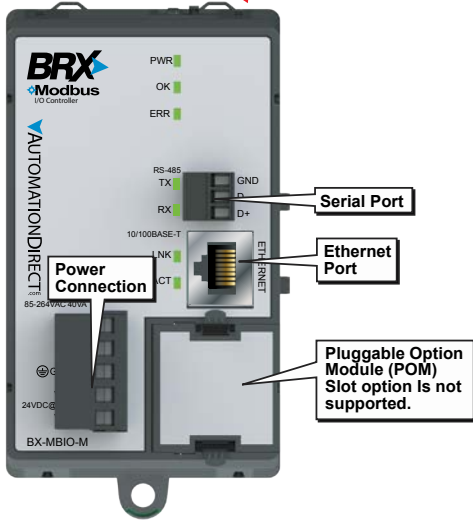
**Note: This device cannot be Hot Swapped.**

Document Name	Edition/Revision	Date
BX-MBIO-M	1st Ed. RevA	9/8/2021

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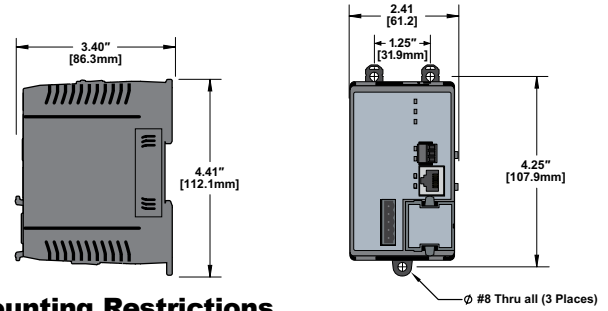


**NOTE:** DIP switches located in this compartment are used for debug and recovery functions only. Please refer to the BRX User Manual for full instructions on using these switches.

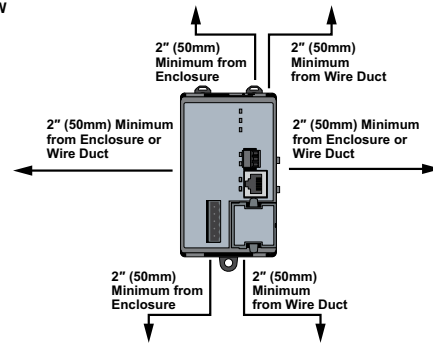
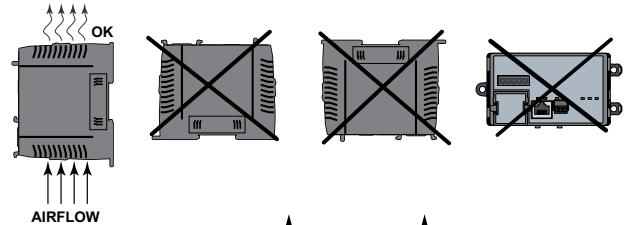


## Dimensional Information

Note: Drawings are for reference only. Shown without terminal blocks.



## Mounting Restrictions

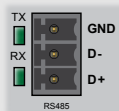


## Built-in RS-485 Port Specifications

Port Name	RS-485
Description	Non-isolated serial port that can communicate via RS-485. Includes ESD protection and built-in surge protection. 120Ω Termination resistor is available (software selectable)
Supported Protocols	Modbus RTU (Slave)
Data Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200
Default Settings	RS-485, 115200 bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1
Port Type	3-pin terminal strip 3.5mm pitch
RS-485 Station Addresses	1-247
Cable Recommendations	RS-485 use L19827-XXX from AutomationDirect.com
Replacement Connector	ADC Part # BX-RTB03S



Removable connector included.



Pinout	RS485
1	GND
2	D-
3	D+

## Terminal Block Connector Specifications

Part Number	BX-RTB03S	BX-RTB05	BX-RTB05-1
Connector Type	Screw Type-90°	Screw Type-90°	Spring Clamp Type-180°
Wire Exit	180°	180°	180°
Pitch	3.5mm	5.0mm	5.0mm
Screw Size	M2	M2.5	N/A
Recommended Screw torque	<1.77Lb-in (0.2 N-m)	< 3.98 Lb-in (0.45 N-m)	N/A
Screwdriver Blade Width	2.5mm	3.5mm	3.5mm
Wire Gauge (Single Wire)	28-16 AWG	28-12 AWG	28-14 AWG
Wire Gauge (Two Wires)	28-16 AWG	28-16 AWG	28-16 AWG (Dual Wire Ferrule Required)
Wire Strip Length	0.24in (6mm)	0.3in (7.5mm)	0.37in (9.5mm)
Equiv. Dinkle part #	EC350V-03P-BK	5ESDV-05P-BK	5ESDSR-05P-BK