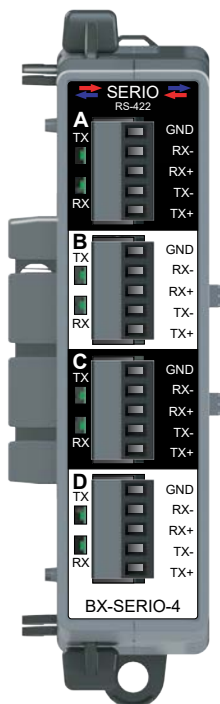


# BX-SERIO-4 Serial Communications



**BX-SERIO-4**  
\$188.00

4 port, RS-422

Four (4) **BX-RTB05S** Terminal Blocks included.



**NOTE:** This device does not support **ZIF** Link Wiring Systems

## IMPORTANT!



### Hot-Swapping Information

Note: This device cannot be Hot Swapped.

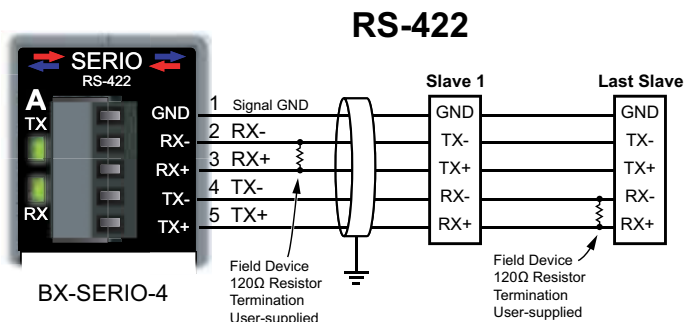


**NOTE:** Cannot be used in Remote I/O Bases.



**NOTE:** The BX-SERIO-4 supports point to point wiring only. Multi-Drop wiring is not supported.

### BX-SERIO-4 Field Wiring Diagram



| Serial Communications Specifications |                                                                                                              |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Specification                        | BX-SERIO-4                                                                                                   |
| Number of Ports                      | Four RS-422 Serial Ports                                                                                     |
| Description                          | Isolated serial port that can communicate via RS-422. Includes ESD protection and built-in surge protection. |
| Supported Protocols                  | Do-more! Protocol (Default)<br>Modbus RTU (Master & Slave)<br>K-Sequence (Slave)<br>ASCII (In & Out)         |
| Data Rates                           | 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bps                                                  |
| Default Settings                     | RS-422, 115200bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1                                            |
| Port Status LED                      | Green LED illuminated when active (TXD and RXD)                                                              |
| Port Type                            | Removable 5-pin terminal strip 3.5 mm pitch                                                                  |
| Station Addresses                    | 1-247                                                                                                        |
| TX-/RX-                              | RS-422 transceiver low                                                                                       |
| TX+/RX+                              | RS-422 transceiver high                                                                                      |
| GND                                  | Logic Ground                                                                                                 |
| Input Impedance                      | 96kΩ                                                                                                         |
| Maximum Load                         | 1 transceiver, 19kΩ each, 120Ω termination                                                                   |
| Output Short Circuit Protection      | ±250mA, thermal shutdown protection                                                                          |
| Minimum Differential Output Voltage  | 2.0 VDC with 54Ω load                                                                                        |
| Maximum Common Mode Voltage          | -7.5 to 12.5 VDC                                                                                             |
| Fail Safe Inputs                     | Logic high input state if inputs are unconnected                                                             |
| Electrostatic Discharge Protection   | ±15kV per IEC 1000-4-2                                                                                       |
| Cable Requirements                   | ADC Part# L19853-XXX                                                                                         |
| Maximum Cable Distance               | 1000m [3280ft]                                                                                               |
| Replacement Connector                | ADC Part# BX-RTB05S                                                                                          |
| Backplane Power Consumption          | 1.2 W                                                                                                        |
| Heat Dissipation                     | 1.2 W                                                                                                        |
| Weight                               | 85g (3oz)                                                                                                    |
| Software Version                     | Do-more! Designer v2.7 or later                                                                              |

# BRX Motion Control, Communications and Specialty Expansion Modules

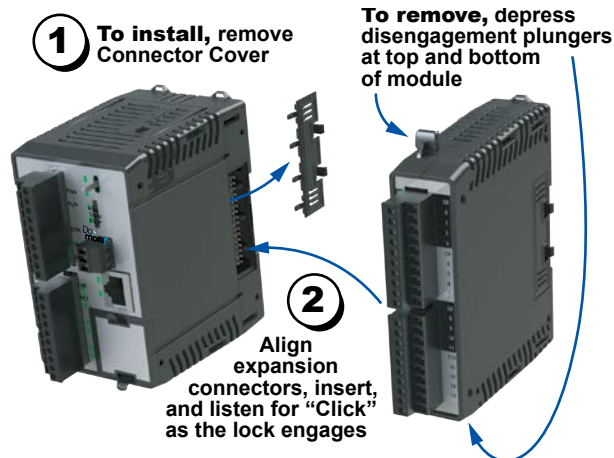
## Overview

One of the unique features of the BRX platform is its ability to expand its capability to fit your application solution. One of the ways the BRX platform can do this is by using expansion modules that conveniently "snap on" to the side of any BRX MPU. Once the expansion module has been snapped into place and is added to the project, it instantly adds I/O to the MPU with little to no additional setup required.

The specialty expansion modules give you the ability to add additional high-speed I/O or serial communications as needed. On the front panel of the expansion modules a color scheme and a symbol are used to denote the module type.

High-speed I/O modules have 8-point sinking/sourcing inputs and are available with 8-point sinking or sourcing outputs, all with switching frequencies up to 250kHz. The serial communications modules have 4 serial ports.

The high-speed I/O modules ship without wiring terminals. This allows you to select the termination style that best suits your application. Several wiring options are available, including screw terminal connectors and spring clamp terminal connectors. The serial communications modules ship with a terminal connector installed in each port.



## Hot-Swapping Information

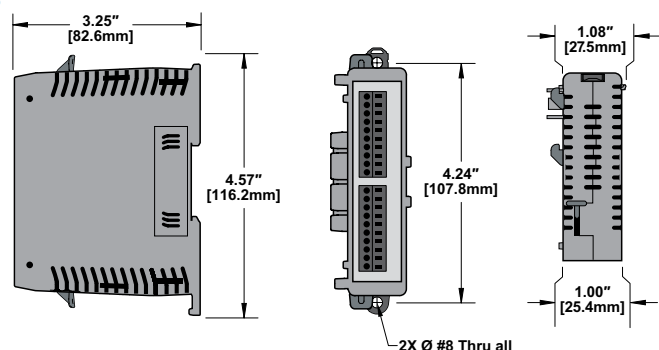
Note: This device cannot be Hot Swapped.

## General Specifications

All BRX high-speed input/output modules and serial communications modules have the same general specifications listed in the table below.

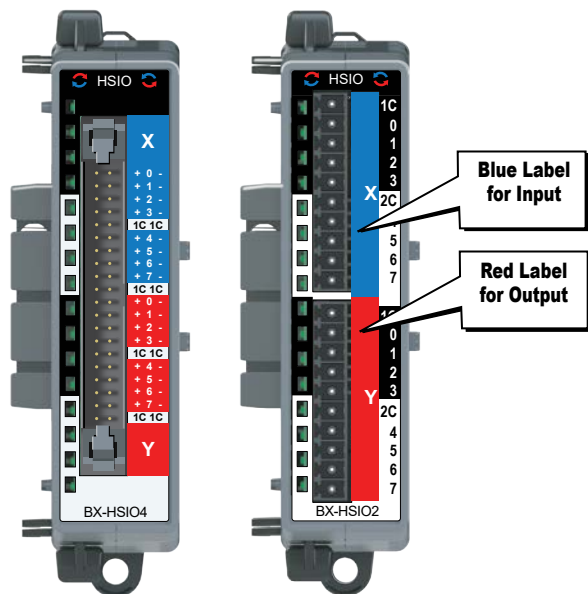
| General Specifications       |                                                                 |
|------------------------------|-----------------------------------------------------------------|
| <b>Operating Temperature</b> | 0° to 60°C (32° to 140°F)                                       |
| <b>Storage Temperature</b>   | -20° to 85°C (-4° to 185°F)                                     |
| <b>Humidity</b>              | 5% to 95% (non-condensing)                                      |
| <b>Environmental Air</b>     | No corrosive gases permitted                                    |
| <b>Vibration</b>             | IEC60068-2-6 (Test Fc)                                          |
| <b>Shock</b>                 | IEC60068-2-27 (Test Ea)                                         |
| <b>Enclosure Type</b>        | Open Equipment                                                  |
| <b>Noise Immunity</b>        | NEMA ICS3-304                                                   |
| <b>EU Directive</b>          | See the "EU Directive" topic in the BRX Help File               |
| <b>Agency Approvals</b>      | UL 61010-2 File E185989, Canada and USA, CE Compliant EN61131-2 |

## Dimensions



**NOTE:** When removing an expansion module make sure there is room for the module to slide away from the system. Failure to do so will result in difficulty removing the module.

# BRX Motion Control, Communications and Specialty Expansion Modules



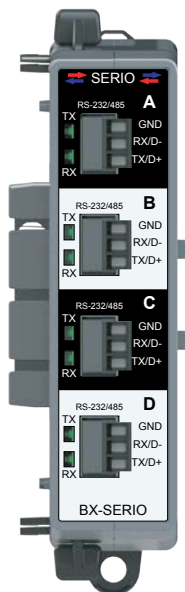
## High-speed Input/Output Modules

Three (3) high-speed input/output modules are available, with eight inputs and eight outputs each. High-speed I/O module faceplates have blue and red terminal bar sections to distinguish input and output terminals, respectively, and have the  symbol to signify high-speed I/O.

| High-Speed Input/Output Modules |              |               |                            |                 |          |
|---------------------------------|--------------|---------------|----------------------------|-----------------|----------|
| Part Number                     | Input Points | Output Points | Output Type                | Switching Speed | Price    |
| <b><u>BX-HSIO1</u></b>          | 8            | 8             | 12–24 VDC Sinking          | Up to 250kHz    | \$229.00 |
| <b><u>BX-HSIO2</u></b>          | 8            | 8             | 12–24 VDC Sourcing         | Up to 250kHz    | \$229.00 |
| <b><u>BX-HSIO4</u></b>          | 8            | 8             | 2.5–5 VDC Sinking/Sourcing | Up to 2MHz      | \$259.00 |

## Serial Communications Module

Three (3) serial communications modules are available, with four serial ports each. Serial communications module faceplates have black and white terminal sections to distinguish serial terminals, and have the  symbol to signify serial I/O.



| Serial Communications Module |       |                          |          |
|------------------------------|-------|--------------------------|----------|
| Part Number                  | Ports | Port Type                | Price    |
| <b><u>BX-SERIO</u></b>       | 4     | RS-232 / RS-485          | \$208.00 |
| <b><u>BX-SERIO-2</u></b>     | 4     | RS-232 with Flow Control | \$204.00 |
| <b><u>BX-SERIO-4</u></b>     | 4     | RS-422                   | \$188.00 |

| Expansion Module Support by Controller |                     |
|----------------------------------------|---------------------|
| Controller Type                        | # Expansion Modules |
| <b><u>BX-DM1E-M</u></b>                | 8                   |
| <b><u>BX-DM1-10</u></b>                | 8                   |
| <b><u>BX-DM1E-10</u></b>               | 8                   |
| <b><u>BX-DM1-18</u></b>                | 8                   |
| <b><u>BX-DM1E-18</u></b>               | 8                   |
| <b><u>BX-DM1-36</u></b>                | 8                   |
| <b><u>BX-DM1E-36</u></b>               | 8                   |
| <b><u>BX-DMIO*</u></b>                 | 8                   |
| <b><u>BX-EBC100*</u></b>               | 8                   |
| <b><u>BX-MBIO*</u></b>                 | 8                   |

\* Remote I/O controllers do not support Motion Control and Communications Modules.