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	1.2W
Weight	85g (3 oz)
Software Version	Do-more! Designer 2.5 or later

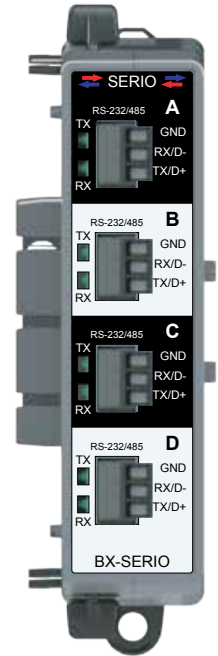*Meets EMC and Safety requirements. See the D.O.C. for details.

AUTOMATIONDIRECT.com
BRX▶ Expansion Module

BX-SERIO
Serial Communications Module
4 Isolated ports, 3-pin, RS-232/RS-485

Four removable 5-pin connectors included.

RS-232/485 Serial Port Specifications

Number of Ports	Four RS-232/RS-485 Serial Ports	
Description	Isolated serial port that can communicate via RS-232 or RS-485 (software selectable). Includes ESD protection and built-in surge protection.	
Supported Protocols	Do-more!™ Protocol (Slave)(Default), Modbus RTU (Master/Slave), DMX512 (Master/Slave), K-Sequence (Slave), ASCII (In/Out)	
Data Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 Baud	
Default Settings	RS-232, 115200bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1, Termination resistor OFF	
Port Status LED	Green LED illuminated when active (TX and RX)	
Port Type	Removable 3-pin terminal strip 3.5 mm pitch	
	RS-232	**RS-485**
Station Addresses	N/A	1–247
RX/D-	Receive input (RX)	Transceiver low (D-)
TX/D+	Transmit output (TX)	Transceiver high (D+)
GND	Logic Ground	
Input Impedance	5kΩ	19kΩ
Terminating Resistor	N/A	120Ω, software selectable
Maximum Load	3kΩ, 1000pf	50 transceivers, 19kΩ each, 120Ω termination
Output Short Circuit Protection	±15mA	±250mA, thermal shut-down protection
Electrostatic Discharge Protection	±1.5 kV per JESD22-C101	±7kV per IEC61000-4-2
Electrical Fast Transient Protection	N/A	±2kV per IEC61000-4-4
Min. Output Voltage	±5V with 3kΩ load	Differential: 1.5 V with 60Ω load
Fail Safe Inputs	N/A	Logic high input state if inputs are unconnected
Maximum Common Mode Voltage	500 Vrms to Logic Ground	
Cable Requirements	ADC# L19772-XXX	ADC# L19954-XXX
Maximum Cable Distance	30m [100ft]; 6m [20ft] rec'd max.	1000m [3280ft]
Replacement Connector	ADC Part # BX-RTB03S	

Do-more! BRX Manual available at www.automationdirect.com/pn/doc/manual/BX-SERIO

IMPORTANT!

⚠️

Hot-Swapping Information
Note: This device cannot be Hot Swapped.

Document Name	Edition/Revision	Date
BX-SERIO	1st Ed.	11/3/2020

Field Wiring Information

RS-232

	DTE		DTE	
1	GND		GND (0V)	1
2	RX		RX	2
3	TX		TX	3

BX-SERIO   Field Device

RS-485*

BX-SERIO

Slave 1   Last Slave

1 Signal GND
2 D-
3 D+

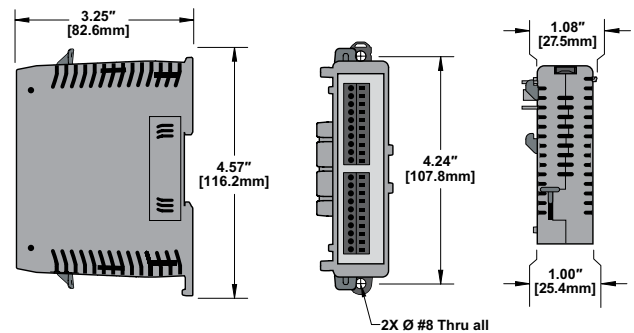GND / D- / D+

Field Device Termination User-supplied
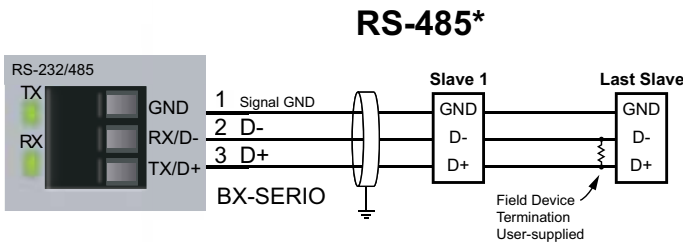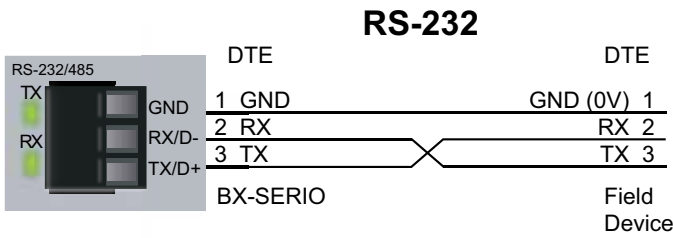
*NOTE: Termination resistor is built-in and software selectable.

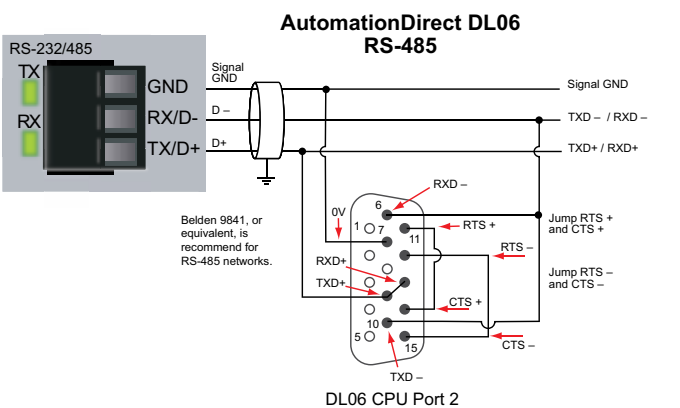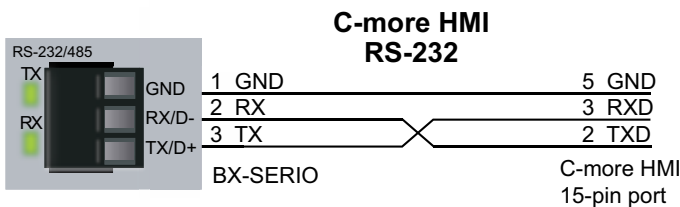ADC # L19827-xxx or equivalent is recommend for RS-485 networks.

Module Installation

① **To Install,** remove Connector Cover

To remove, depress disengagement plungers at top and bottom of module

② **Align expansion connectors, insert, and listen for "Click" as the lock engages**
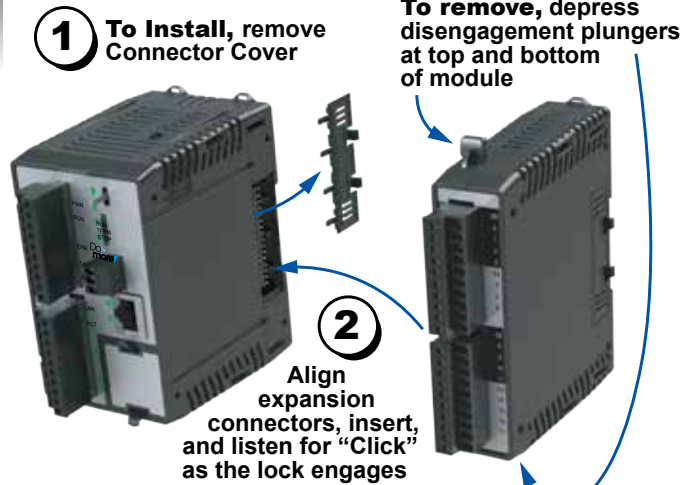
Dimensional Information

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

- 3.25" [82.6mm]
- 4.57" [116.2mm]
- 4.24" [107.8mm]
- 1.08" [27.5mm]
- 1.00" [25.4mm]
- 2X Ø #8 Thru all

Example Wiring Connections

C-more HMI RS-232

1	GND		GND	5
2	RX		RXD	3
3	TX		TXD	2

BX-SERIO   C-more HMI 15-pin port

AutomationDirect DL06 RS-485

Signal GND / D – / D+

Signal GND
TXD – / RXD –
TXD+ / RXD+

Belden 9841, or equivalent, is recommend for RS-485 networks.

RXD –
RTS +
RXD+
TXD+
RTS –
CTS +
CTS –
TXD –
0V

Jump RTS + and CTS +
Jump RTS – and CTS –

DL06 CPU Port 2

Terminal Block Connector Specifications

Part Number	BX-RTB03S
Connector Type	Screw Type-90
Wire Exit	90 degree
Pitch	3.5mm
Screw Size	M2
Recommended Screw torque	<1.77Lb-in (0.2 N-m)
Screwdriver Blade Width	2.5mm
Wire Gauge (Single Wire)	28-16 AWG
Wire Gauge (Two Wires)	28-16 AWG
Wire Strip Length	0.24in (6mm)
Equiv. Dinkle part #	EC350V-03P-BK

RS-232/485 Port Replacement Connector

Replacement Connector	ADC Part # BX-RTB03S

Pinout	RS232	RS485
1	GND	GND
2	RX	D-
3	TX	D+

Removable connector included.

* NOTE: When using RS-485, a terminator resistor is built-in and software selectable.