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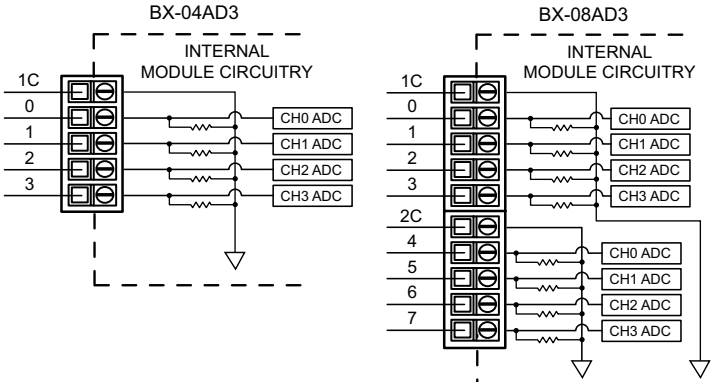
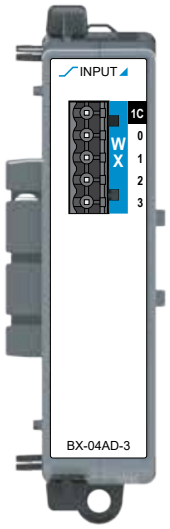
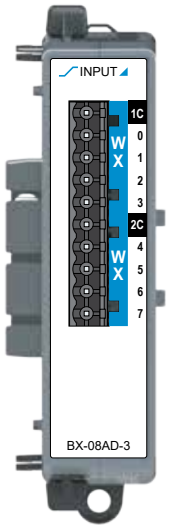
BRX Expansion Module

General Specifications		
Operating Temperature	0° to 60°C (32° to 140°F)	
Storage Temperature	-20° to 70°C (-4° to 158°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	UL61010-2-201 file E185989, Canada & USA CE (Safety: EN61010-2-201 and Immunity: EN61131-2: 2007)	
Noise Immunity	NEMA ICS3-304	
EU Directive	See the "EU Directive" topic in the BRX Help File.	
Weight	98g (3.5 oz)	
Heat Dissipation	**BX-04AD-3**	**BX-08AD-3**
	2.25 W	3.25 W
Software Version Required	Do-more! Designer Version 2.7, or later.	

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







BX-04AD-3

Analog Input Expansion Module

4-ch, ±20mA or ±10V

BX-08AD-3

Analog Input Expansion Module

8-ch, ±20mA or ±10V

I/O Terminal Blocks sold separately. (See Connector Options Spec. table inside.)

Analog Universal Current/Voltage Sinking Input Specifications		
Module Part Number	BX-04AD-3	BX-08AD-3
Inputs per Module	4	8
Commons	1	2
Module Signal Input Range	0–20mA, ±20mA, 4–20mA ±10 VDC, ±5 VDC, 0-5VDC (Default), 0–10 VDC	
Signal Resolution	16-bit at ±10V or ±20ma	
Resolution Value of LSB	See user manual - BX-USER-M	
Input Impedance (Current)	249Ω±0.1%, 1/10th watt	
Input Impedance (Voltage)	100KΩ	
All Channel Update Rate	1.2ms	
Over Current Circuit Detection Time	< 1second	
Maximum Continuous Overload	±40mA current mode, ±20V voltage mode	
Sample Duration Time	1.2ms	
Hardware Filter Characteristics	Active Low Pass, −3dB @ 1kHz	
Conversion Method	Delta Sigma	
Linearity Error (end to end)	±0.1% of HW Full Scale (65 counts)	
Input Stability and Repeatability (after 10 min. warmup)	±0.02% of HW Full Scale (13 counts)	
Full Scale Calibration Error	±0.1% of HW Full Scale (65 counts)	
Offset Calibration Error	±0.05% of HW Full Scale (32 counts)	
Accuracy vs. Temperature	±25PPM/ºC maximum	
Maximum Inaccuracy	0.2% of HW Full Scale (130 counts)	
Maximum Crosstalk	1 count	
Channel to Backplane Isolation	1500VAC applied for one second, 1C to 2C	
Channel to Channel Isolation	None	
Loop Fusing (External)	Fast-acting 0.032A recommended	
Backplane Power Consumption	BX-04AD-3	BX-08AD-3
	1.5 W	2.5 W

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.

This publication is based on information that was available at the time it was printed. At AutomationDirect.com® we constantly strive to improve our products and services, so we reserve the right to make changes to the products and/or publications at any time without notice and without any obligation. This publication may also discuss features that may not be available in certain revisions of the product.

Do-more BRX Manual available at
http://www.automationdirect.com/pn/doc/manual/BX-USER-M

IMPORTANT!

Hot-Swapping Information

Note: This device cannot be Hot Swapped.

Document Name	Edition/Revision	Date
BX-xxAD-3	1st Ed. RevB	1/25/2021

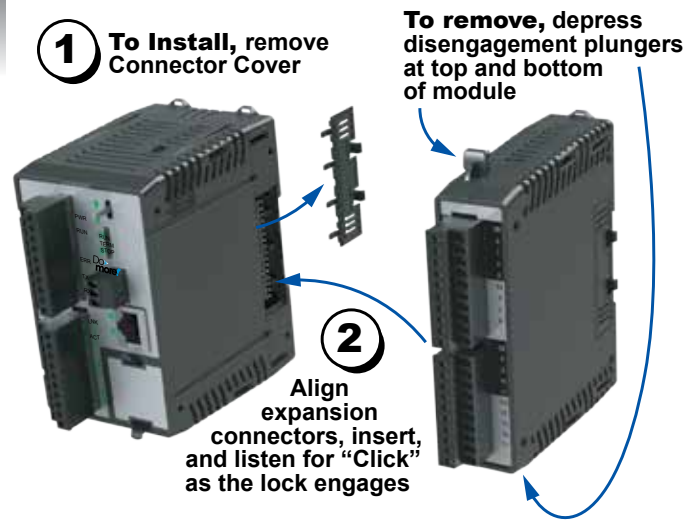
Connector Options — 8 point

BX-RTB08	Terminal Block Kit, 90-degree screw type. For use with BRX 5-point, 8-point, and 12-point expansion modules. Kit includes (3) 5-pin 5mm plugs.
BX-RTB08-1	Terminal Block Kit, 180-degree spring clamp type. For use with BRX 5-point, 8-point, and 12-point expansion modules. Kit includes (3) 5-pin 5mm plugs.
BX-RTB08-2	Terminal Block Kit, 180-degree screw type. For use with BRX 5-point, 8-point, and 12-point expansion modules. Kit includes (3) 5-pin 5mm plugs.
ZL-BXEM-CBL10	***ZIP***Link PLC I/O cable, 10-position terminal block to 24-pin connector, 24AWG, cable length 0.5meter (1.6ft). For use with 8-point BRX expansion modules.
ZL-BXEM-CBL10-1	***ZIP***Link PLC I/O cable, 10-position terminal block to 24-pin connector, 24AWG, cable length 1meter (3.3ft). For use with 8-point BRX expansion modules.
ZL-BXEM-CBL10-2	***ZIP***Link PLC I/O cable, 10-position terminal block to 24-pin connector, 24AWG, cable length 2meter (6.6ft). For use with 8-point BRX expansion modules.
ZL-BXEM-CBL10-1P	***ZIP***Link PLC I/O cable, 10-position terminal block to pigtail connection, 24AWG, cable length 1meter (3.3ft). For use with 8-point BRX expansion modules.
ZL-BXEM-CBL10-2P	***ZIP***Link PLC I/O cable, 10-position terminal block to pigtail connection, 24AWG, cable length 2meter (6.6ft). For use with 8-point BRX expansion modules.
ZL-RTB20	***ZIP***Link Two Level Feedthrough Module, 20-pole, 35mm, DIN mount.
ZL-RTB20-1	***ZIP***Link Three Level Feedthrough Module, 20-pole, 35mm, DIN mount.

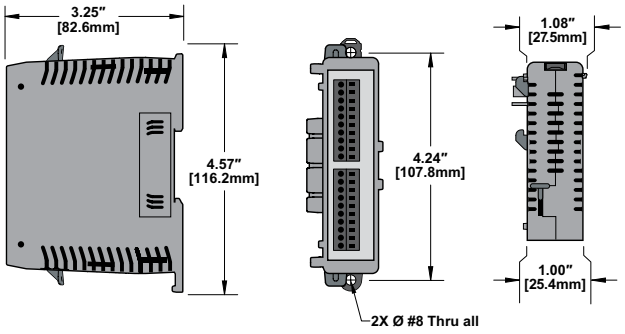
4 & 8 Point Terminal Block Connector Specifications

Part Number	**BX-RTB05** (single block) **BX-RTB08** (set of 3 blocks)	**BX-RTB05-1** (single block) **BX-RTB08-1** (set of 3 blocks)	**BX-RTB05-2** (single block) **BX-RTB08-2** (set of 3 blocks)
Connector Type	Screw Type-90°	Spring Clamp Type-180°	Screw Type-180°
Wire Exit	180°	180°	180°
Pitch	5.0mm	5.0mm	5.0mm
Screw Size	M2.5	N/A	M2.5
Recommended Screw torque	< 3.98 lb·in (0.45 N·m)	N/A	< 3.98 lb·in (0.45 N·m)
Screwdriver Blade Width	3.5mm	3.5mm	3.5mm
Wire Gauge (Single Wire)	28-12 AWG	28-14 AWG	28-12 AWG
Wire Gauge (Two Wires)	28-16 AWG	28-16 AWG (Dual Wire Ferrule Required)	28-16 AWG
Wire Strip Length	0.3in (7.5mm)	0.37in (9.5mm)	0.3in (7.5mm)
Equiv. Dinkle part #	5ESDV-05P-BK	5ESDSR-05P-BK	5ESDF-05P-BK

Module Installation

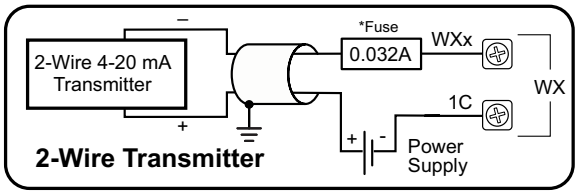


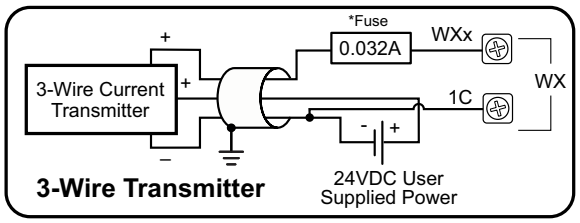
Dimensional Information

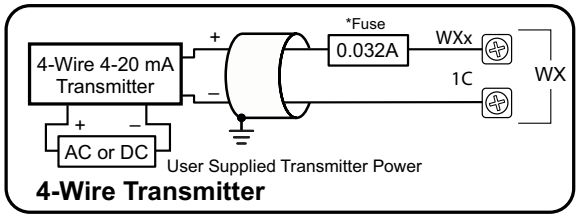


I/O Wiring

Analog Current Sinking Input Circuits







*NOTE: An Edison S500-32-R 0.032A fast-acting fuse is recommended for all analog voltage inputs, analog outputs, and current loops.

Analog Voltage Input Circuits