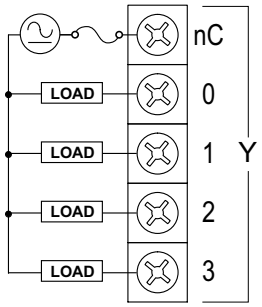
General Specifications

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
Weight	BX-08TR	114g (4 oz)
	BX-12TR	129g (4.6 oz)
	BX-16TR	157g (5.5 oz)
Software Version		Do-more! Designer 2.0 or later

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

I/O Wiring

Relay Output



Discrete Output Specifications

Output Type		Relay Form A (SPST)
Outputs per Module	**BX-08TR**	8
	BX-12TR	12
	BX-16TR	16
Commons	**BX-08TR**	2 (4 points/common) Isolated
	BX-12TR	3 (4 points/common) Isolated
	BX-16TR	4 (4 points/common) Isolated
Maximum current per common		8A
Nominal Voltage Range		5–48 VDC, 24–240 VAC
Operating Voltage Range		5–60 VDC, 5–264 VAC
Maximum Voltage		60VDC, 264VAC
Minimum Output Current		0.1 mA @24VDC/DC
Maximum Output Current		2A
Maximum Leakage Current		1µA (DC), 300µA (AC) due to RC snubber
Maximum Switching Frequency		10Hz
Status Indicators		Logic Side, Green

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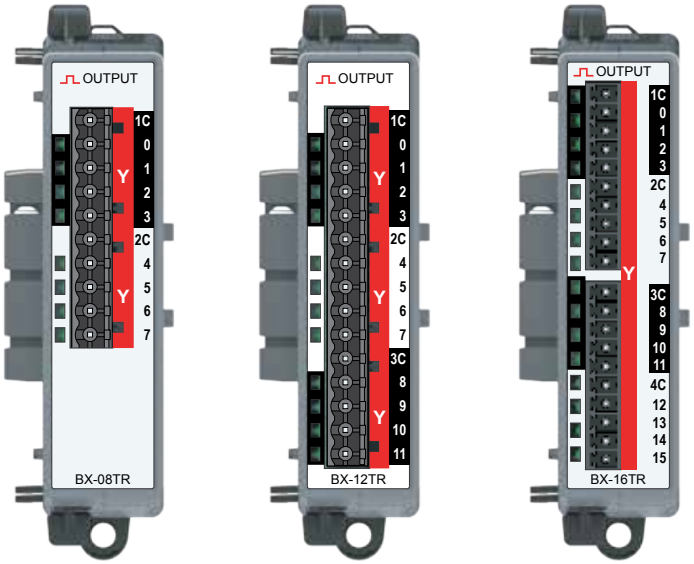
BRX Expansion Module



BX-08TR
Output Module 8-pt, Relay Form A (SPST)

BX-12TR
Output Module 12-pt, Relay Form A (SPST)

BX-16TR
Output Module 16-pt, Relay Form A (SPST)

I/O Terminal Blocks sold separately.
(See Terminal Block Connection Options tables).

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-xxTR	1st Ed. RevF	11/3/2020

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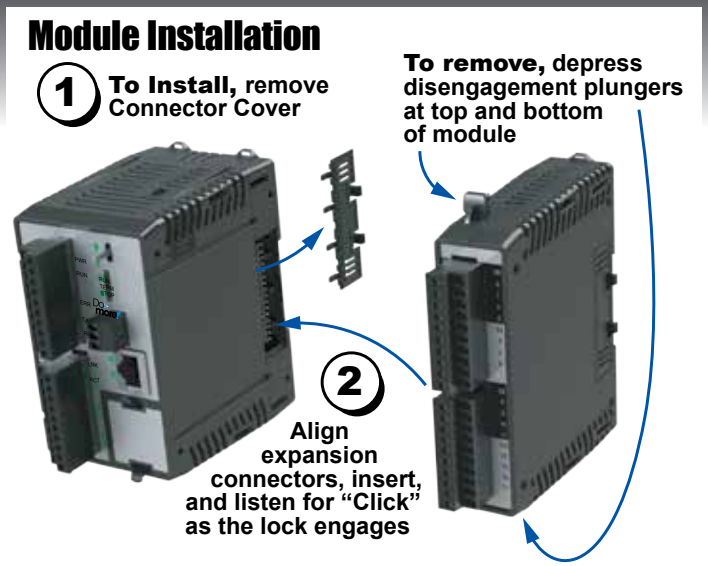
Connector Options — 8 and 12 point

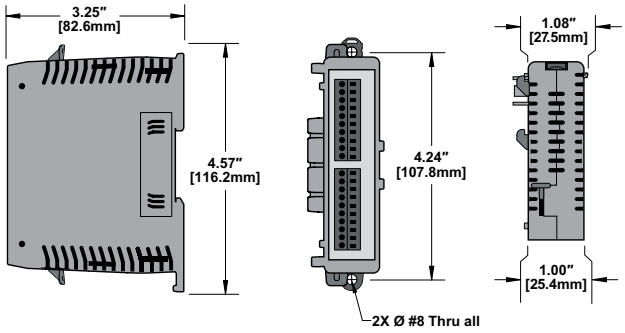
BX-RTB08	Terminal Block Kit, 90-degree screw type. For use with BRX 5-point, 8-point, and 12-point expansion modules. Kit includes (3) 5-pin 5mm plugs.
BX-RTB08-1	Terminal Block Kit, 180-degree spring clamp type. For use with BRX 5-point, 8-point, and 12-point expansion modules. Kit includes (3) 5-pin 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-BXEM-CBL15	***ZIP***Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG, cable length 0.5meter (1.6ft). For use with 5-point and 12-point BRX expansion modules.
ZL-BXEM-CBL15-1	***ZIP***Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG, cable length 1meter (3.3ft). For use with 5-point and 12-point BRX expansion modules.
ZL-BXEM-CBL15-2	***ZIP***Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG, cable length 2meter (6.6ft). For use with 5-point and 12-point BRX expansion modules.
ZL-BXEM-CBL15-1P	***ZIP***Link PLC I/O cable, 15-position terminal block to pigtail connection, 24AWG, cable length 1meter (3.3ft). For use with 5-point and 12-point BRX expansion modules.
ZL-BXEM-CBL15-2P	***ZIP***Link PLC I/O cable, 15-position terminal block to pigtail connection, 24AWG, cable length 2meter (6.6ft). For use with 5-point and 12-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.

Module Installation



Dimensional Information

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



Connector Options — 16 point

BX-RTB10	Terminal Block Kit, 90-degree screw type. For use with BRX 10-point PLCs and BRX 16-point expansion modules.Kit includes (2) 10-pin 3.8mm plugs.
BX-RTB10-1	Terminal Block Kit, 180-degree spring clamp type. For use with BRX 10-point PLCs and BRX 16-point expansion modules.Kit includes (2) 10-pin 3.8mm plugs.
BX-RTB10-2	Terminal Block Kit, 180-degree screw type. For use with BRX 10-point PLCs and BRX 16-point expansion modules.Kit includes (2) 10-pin 3.8mm plugs.
ZL-BXEM-CBL20	***ZIP***Link PLC I/O cable, 20-position terminal block to 24-pin connector, 24AWG, cable length 0.5meter (1.6ft). For use with 16-point BRX expansion modules.
ZL-BXEM-CBL20-1	***ZIP***Link PLC I/O cable, 20-position terminal block to 24-pin connector, 24AWG, cable length 1meter (3.3ft). For use with 16-point BRX expansion modules.
ZL-BXEM-CBL20-2	***ZIP***Link PLC I/O cable, 20-position terminal block to 24-pin connector, 24AWG, cable length 2meter (6.6ft). For use with 16-point BRX expansion modules.
ZL-BXEM-CBL20-1P	***ZIP***Link PLC I/O cable, 20-position terminal block to pigtail connection, 24AWG, cable length 1meter (3.3ft). For use with 16-point BRX expansion modules.
ZL-BXEM-CBL20-2P	***ZIP***Link PLC I/O cable, 20-position terminal block to pigtail connection, 24AWG, cable length 2meter (6.6ft). For use with 16-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.

8 and 12 point Terminal Block Connector Specifications

Part Number	**BX-RTB08**	**BX-RTB08-1**	**BX-RTB08-2**
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

16 point Terminal Block Connector Specifications

Part Number	BX-RTB10	BX-RTB10-1	BX-RTB10-2
Connector Type	Screw Type-90°	Spring Clamp Type-180°	Screw Type-180°
Wire Exit	180°	180°	180°
Pitch	3.81mm	3.81mm	3.81mm
Screw Size	M2	N/A	M2
Recommended Screw torque	<1.77 lb·in (0.2 N·m)	N/A	<1.77 lb·in (0.2 N·m)
Screwdriver Blade Width	2.5mm	2.5mm	2.5mm
Wire Gauge (Single Wire)	28-16 AWG	28-18 AWG	30-16 AWG
Wire Gauge (Two Wires)	28-18 AWG	30-20 AWG (Dual Wire Ferrule Required)	30-18 AWG
Wire Strip Length	0.24in (6mm)	0.35in (9mm)	0.26in (6.5mm)
Equiv. Dinkle part #	EC381V-10P-BK	ESC381V-10-BK	EC381F-10P-BK