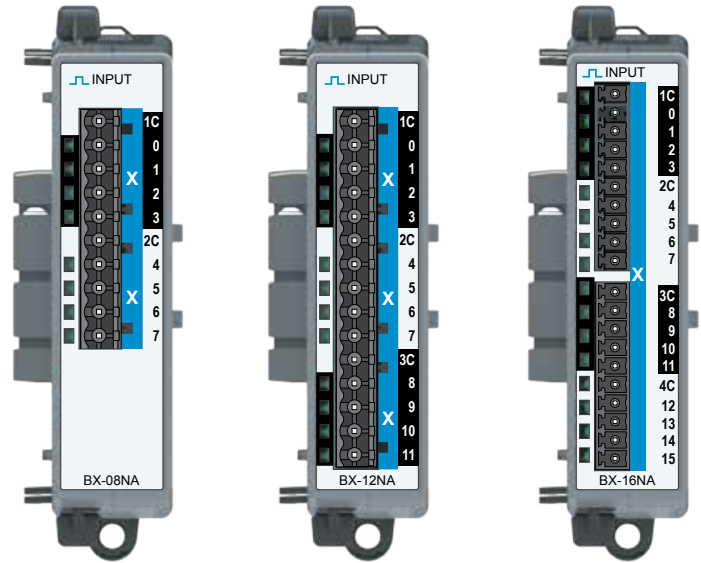
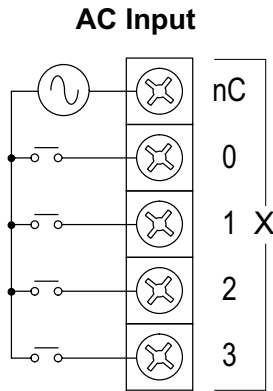


General Specifications

| | | |
|-----------------------|---|--------------|
| 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-08NA | 91g (3.2 oz) |
| | BX-12NA | 93g (3.3 oz) |
| | BX-16NA | 95g (3.4 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



BX-08NA
Input Module
8-pt, 120–240 VAC

BX-12NA
Input Module
12-pt, 120–240 VAC

BX-16NA
Input Module
16-pt, 120–240 VAC

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

Discrete Input Specifications

| | | |
|-------------------------|-----------------------------|------------------------------|
| Input Type | AC | |
| Inputs per Module | BX-08NA | 8 |
| | BX-12NA | 12 |
| | BX-16NA | 16 |
| Commons | BX-08NA | 2 (4 points/common) Isolated |
| | BX-12NA | 3 (4 points/common) Isolated |
| | BX-16NA | 4 (4 points/common) Isolated |
| Nominal Voltage Rating | 120–240 VAC | |
| Input Voltage Range | 85–264 VAC | |
| Maximum Voltage | 264 VAC RMS | |
| AC Frequency | 47–63 Hz | |
| Input Impedance | 15kΩ | |
| Input Current (typical) | 9mA @ 120VAC, 13mA @ 220VAC | |
| ON Voltage Level | > 85VAC | |
| OFF Voltage Level | < 40VAC | |
| Status Indicators | Logic Side, Green | |

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 www.automationdirect.com/pn/doc/manual/BX-xxNA



IMPORTANT!



Hot-Swapping Information

Note: This device cannot be Hot Swapped.

| | | |
|---------------|------------------|-----------|
| Document Name | Edition/Revision | Date |
| BX-xxNA | 1st Ed. RevC | 4/17/2018 |

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Connector Options – 8 and 12 point

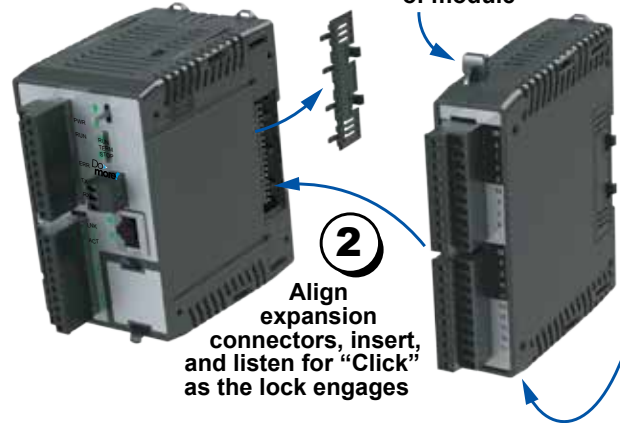
| | |
|-------------------------|--|
| BX-RTB08 | Terminal Block Kit, 90-degree screw type. For use with BRX 5-point, 8-point, and 12-point discrete expansion modules. Kit includes (3) 5-pin 5mm plugs. |
| BX-RTB08-1 | Terminal Block Kit, 180-degree spring clamp type. For use with BRX 5-point, 8-point, and 12-point discrete 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 discrete expansion modules. Kit includes (3) 5-pin 5mm plugs. |
| ZL-BXEM-CBL10 | ZIPLink 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 discrete expansion modules. |
| ZL-BXEM-CBL10-1 | ZIPLink PLC I/O cable, 10-position terminal block to 24-pin connector, 24AWG, cable length 1meter (3.3ft). For use with 8-point BRX discrete expansion modules. |
| ZL-BXEM-CBL10-2 | ZIPLink PLC I/O cable, 10-position terminal block to 24-pin connector, 24AWG, cable length 2meter (6.6ft). For use with 8-point BRX discrete expansion modules. |
| ZL-BXEM-CBL10-1P | ZIPLink PLC I/O cable, 10-position terminal block to pigtail connection, 24AWG, cable length 1meter (3.3ft). For use with 8-point BRX discrete expansion modules. |
| ZL-BXEM-CBL10-2P | ZIPLink PLC I/O cable, 10-position terminal block to pigtail connection, 24AWG, cable length 2meter (6.6ft). For use with 8-point BRX discrete expansion modules. |
| ZL-BXEM-CBL15 | ZIPLink PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG, cable length 1meter (1.6ft). For use with 5-point and 12-point BRX discrete expansion modules. |
| ZL-BXEM-CBL15-1 | ZIPLink 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 discrete expansion modules. |
| ZL-BXEM-CBL15-2 | ZIPLink 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 discrete expansion modules. |
| ZL-BXEM-CBL15-1P | ZIPLink 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 discrete expansion modules. |
| ZL-BXEM-CBL15-2P | ZIPLink 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 discrete expansion modules. |
| ZL-RTB20 | ZIPLink Two Level Feedthrough Module, 20-pole, 35mm, DIN mount. |
| ZL-RTB20-1 | ZIPLink Three Level Feedthrough Module, 20-pole, 35mm, DIN mount. |

Module Installation

1

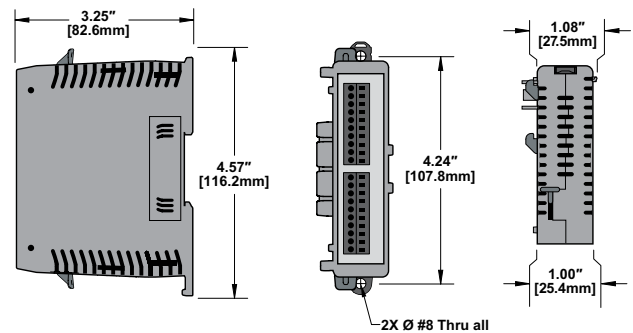
To Install, remove Connector Cover

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



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 discrete 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 discrete 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 discrete expansion modules. Kit includes (2) 10-pin 3.8mm plugs. |
| ZL-BXEM-CBL20 | ZIPLink 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 discrete expansion modules. |
| ZL-BXEM-CBL20-1 | ZIPLink PLC I/O cable, 20-position terminal block to 24-pin connector, 24AWG, cable length 1meter (3.3ft). For use with 16-point BRX discrete expansion modules. |
| ZL-BXEM-CBL20-2 | ZIPLink PLC I/O cable, 20-position terminal block to 24-pin connector, 24AWG, cable length 2meter (6.6ft). For use with 16-point BRX discrete expansion modules. |
| ZL-BXEM-CBL20-1P | ZIPLink PLC I/O cable, 20-position terminal block to pigtail connection, 24AWG, cable length 1meter (3.3ft). For use with 16-point BRX discrete expansion modules. |
| ZL-BXEM-CBL20-2P | ZIPLink PLC I/O cable, 20-position terminal block to pigtail connection, 24AWG, cable length 2meter (6.6ft). For use with 16-point BRX discrete expansion modules. |
| ZL-RTB20 | ZIPLink Two Level Feedthrough Module, 20-pole, 35mm, DIN mount. |
| ZL-RTB20-1 | ZIPLink 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 |