

## 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	94g (3.3 oz)
Software Version	Do-more! Designer 2.8 or later

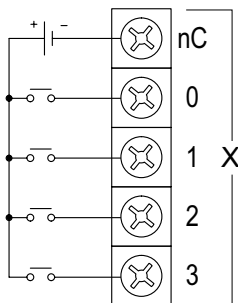
\*Meets EMC and Safety requirements. See the D.O.C. for details.

## Discrete Input Specifications

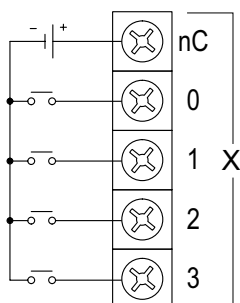
Input Type	Sink/Source
Total Inputs per Module	8
Commons	2
Nominal Voltage Rating	3-5 VDC
Input Voltage Range	2-6 VDC
Maximum Voltage	6 VDC
Input Impedance	870Ω @ 5VDC
Input Current (typical)	6mA @ 5VDC
Maximum Input Current	8mA @ 6VDC
ON Voltage Level	> 2.0 VDC
OFF Voltage Level	< 0.8 VDC
Minimum ON Current	1.2 mA (2.0V required to guarantee ON state)
Maximum OFF Current	0.5 mA
OFF to ON Response	2ms
ON to OFF Response	2ms

## I/O Wiring

### Sinking Input



### Sourcing Input



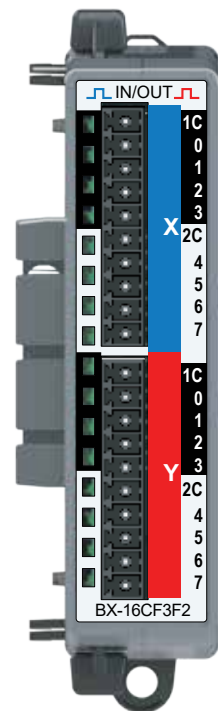
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## BRX Expansion Module

## BX-16CF3F2

### Combination Discrete Module

In – 8-pt, 3–5 VDC, Sink/Source,  
Out – 8-pt, 3–5 VDC, Sourcing



**ZIPLink Connections system available for this module.**  
(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.

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Do-more! BRX Manual available at  
[www.automationdirect.com/pn/doc/manual/BX-16CF3F2](http://www.automationdirect.com/pn/doc/manual/BX-16CF3F2)



## IMPORTANT!



### Hot-Swapping Information

**Note: This device cannot be Hot Swapped.**

Document Name	Edition/Revision	Date
BX-16CF3F2	1st Ed. RevA	11/3/2020

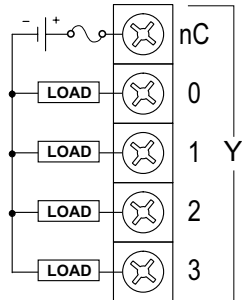
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## Discrete Output Specifications

Output Type	Sourcing
Outputs per Module	8
Commons	2
Maximum Current per Common	96mA
Nominal Voltage	3.3-5 VDC
Operating Voltage Range	1.65VDC-5.5VDC
Peak Voltage	5.5VDC
Minimum Output Current	0µA
Maximum Output Current	24mA per output, no derating over temperature range
Maximum Leakage Current	10µA
ON Voltage Drop	0.05 VDC
Fuses, Overcurrent Protection	N/A
OFF-ON Response	< 5ms
ON-OFF Response	< 2ms
Status Indicators	Logic Side, Green
Backplane Power Consumption	1.0 W
Heat Dissipation	1.5 W

## I/O Wiring

### Sourcing Output

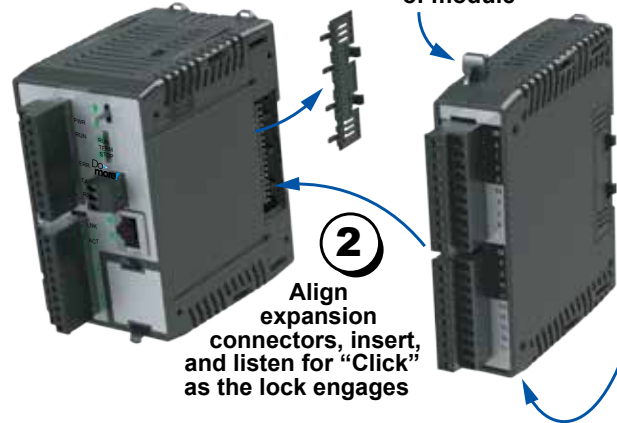


## Module Installation

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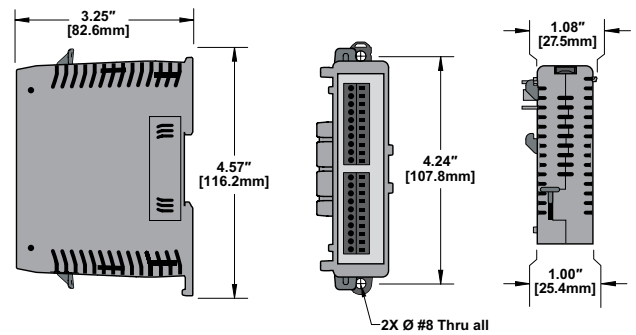
To Install, remove Connector Cover

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

<b>BX-RTB10</b>	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.
<b>BX-RTB10-1</b>	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.
<b>BX-RTB10-2</b>	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.
<b>ZL-BXEM-CBL20</b>	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 expansion modules.
<b>ZL-BXEM-CBL20-1</b>	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 expansion modules.
<b>ZL-BXEM-CBL20-2</b>	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 expansion modules.
<b>ZL-BXEM-CBL20-1P</b>	ZIPLink 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.
<b>ZL-BXEM-CBL20-2P</b>	ZIPLink 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.
<b>ZL-RTB20</b>	ZIPLink Two Level Feedthrough Module, 20-pole, 35mm, DIN mount.
<b>ZL-RTB20-1</b>	ZIPLink Three Level Feedthrough Module, 20-pole, 35mm, DIN mount.

## 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