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	
Agonov Approvala	UL61010-2 - UL File # E185989 Canada and USA	
Agency Approvals	CE Compliant EN61131-2*	
Noise Immunity	NEMA ICS3-304	
EU Directive	See the "EU Directive" topic in the Help File	
Weight	316g (11.2 oz)	

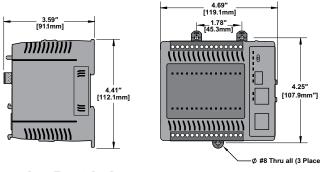
^{*}Meets EMC and Safety requirements. See the D.O.C. for details.

Power Supply Specific	ations
Nominal Voltage Rating	120–240 VAC
Input Voltage Range (Tolerance)	85–264 VAC
Rated Operating Frequency	47–63 Hz
Maximum Input Power	40VA
Cold Start Inrush Current	1.5A, 2ms
Maximum Inrush Current (Hot Start)	1.5A, 2ms
Internal Input Fuse Protection	Micro fuse 250V, 2A Non-replaceable
Heat Dissipation	18.9W Max
Isolated User 24VDC Output	24VDC @ 0.3A max, <1V P-P Ripple, Integrated self-resetting short circuit protection
Voltage Withstand (dielectric)	1500VAC Power Inputs to Ground applied for 1 minute
voitage vittistariu (dielectric)	1500VAC Ground to 24VDC applied for 1 minute

CPU Specifications			
Program Memory Type	FLASH memory		
User Data Memory Type	Battery Backed RAM, User configurable		
Pluggable Option Module	RS-232, RS-485, Ethernet 10/100 BASE-T (1Mbps throughput max), USB 2.0 Type B		
Expansion Modules	4 expansion modules max		
Real Time Clock Accuracy	±2.6s per day typical at 25°C ±8s per day max at 60°C		
Programming Software	Do-more Designer – Ver. 2.0 or higher		
Programming Cable Options	BX-PGM-CBL		
Custom Label Window Size	0.75" x 2.25" (19mm x 57.2mm)		

Terminal B	lock Connection Options
BX-RTB18	Terminal Block Kit, 90-degree screw type, Fits all BRX 18-point PLCs. Kit includes (3) 5-pin 5mm plugs, (2) 6-pin 5mm plugs, (1) 3-pin 5mm plugs.
BX-RTB18-1	Terminal Block Kit, 180-degree spring clamp type, Fits all BRX 18-point PLCs. Kit includes (3) 5-pin 5mm plugs, (2) 6-pin 5mm plugs, (1) 3-pin 5mm plugs.
ZL-BX-CBL15	ZIP Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG. 0.5 meter (1.6 ft.) length, 2 required.
ZL-BX-CBL15-1	ZIP Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG. 1 meter (3.3 ft.) length, 2 required.
ZL-BX-CBL15-2	ZIP Link PLC I/O cable, 15-position terminal block to 24-pin connector, 24AWG. 2 meter (6.6 ft.) length, 2 required.
ZL-BX-CBL15-1P	ZIP Link PLC I/O cable, 15-position terminal block to pigtail connection, 24AWG. 1 meter (3.3 ft.) length, 2 required.
ZL-BX-CBL15-2P	ZIP Link PLC I/O cable, 15-position terminal block to pigtail connection, 24AWG. 2 meter (6.6 ft.) length, 2 required.
ZL-RTB20	ZIP Link Two-Level Feedthrough Module. 20 pole, 35mm DIN mount, 2 required.
ZL-RTB20-1	ZIP Link Three-Level Feedthrough Module. 20 pole, 35mm DIN mount, 2 required.

Dimensional Information



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Mounting Restrict	tions		
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AIRFLOW	2" (50mm) Minimum from Enclosure	2" (50mm) Minimum from Wire Duct	
2" (50mm) Minimum from Enclosure or Wire Duct		2" (50mm) from Encl Wire Duct	Minimum osure or
	2" (50mm) Minimum from Enclosure	2" (50mm) Minimum from Wire Duct	

Terminal Block Connector Specifications			
Part Number	BX-RTB03S	BX-RTB18	BX-RTB18-1
Connector Type	Screw Type-90°	Screw Type-90°	Spring Clamp Type-180°
Wire Exit	180°	180°	180°
Pitch	3.5mm	5.0mm	5.0mm
Screw Size	M2	M2.5	N/A
Recommended Screw torque	<1.77 lb·in (0.2 N·m)	< 3.98 lb·in (0.45 N·m)	N/A
Screwdriver Blade Width	2.5mm	3.5mm	3.5mm
Wire Gauge (Single Wire)	28-16 AWG	28-12 AWG	28-14 AWG
Wire Gauge (Dual Wire)	28-16 AWG	28-16 AWG	28-16 AWG (Dual Wire Ferrule Required)
Wire Strip Length	0.24in (6mm)	0.3in (7.5mm)	0.37in (9.5mm)
Equiv. Dinkle part #	EC350V-03P-BK	5ESDV-0nP-BK*	5ESDSR-0nP-BK*
*NOTE: n=(3) 3-terminal, (5) 5-terminal, or (6) for 6-terminal			

Indicator	Status	Description
	OFF	Base Power OFF
PWR	Green	Base Power ON
	Yellow	Low Battery
	OFF	CPU is in STOP Mode
RUN	Green	CPU is in RUN Mode
	Yellow	Forces are Active
	OFF	No ROM Activity, No SD Card
MEM	Yellow	ROM Activity (Flash or SD Card)
IVI⊏IVI	Green	SD Card Installed and Mounted
	Red	SD Card Installed and Not Mounted
ERR	OFF	CPU is functioning normally
ERR	Red	CPU Fatal Hardware Error or Software Watchdog Error

Built-in RS-232/485 Port Specifications Port Name RS-232/RS-485 Serial Port Non-isolated serial port that can communicate via RS-232 or RS-485 (software selectable). Includes Description* ESD protection and built-in surge protection. Do-more Protocol (Default) Modbus RTU (Master & Slave) Supported Protocols K-Sequence (Slave) ASCII (In & Out) 1200, 2400, 4800, 9600, 19200, 38400, 57600, and Data Rates 115200 RS-232, 115200 bps, No Parity, 8 Data Bits, 1 Stop **Default Settings** Bit. Station #1 Port Type 3-pin terminal strip 3.5mm pitch Green LED is illuminated when active for TXD and Port Status LED RS-485 Station Addresses 1-247 RS-232 use L19772-XXX from AutomationDirect.com Cable Recommendations RS-485 use L19827-XXX from AutomationDirect.com Replacement Connector ADC Part # BX-RTB03S



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

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

CPU Mode Switch Functions		
RUN position CPU is forced into RUN Mode if no errors are encountered.		
TERM position RUN, PROGRAM and DEBUG modes are available. In this position, the mode of operation can be changed through the Do-more Designer Software.		
STOP position	CPU is forced into STOP Mode.	

VAUTOMATION DIRECT







BX-DM1-18AR

BRX MPU with Do-more! DM1 technology

120 VAC required, serial port, microSD slot, Discrete Input: 10-point, AC, Discrete Output: 8-point, relay.

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

Document Name	Edition/Revision	Date
BX-DM1-18AR	1st Ed. RevD	9/8/2021

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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-DM1-18AR



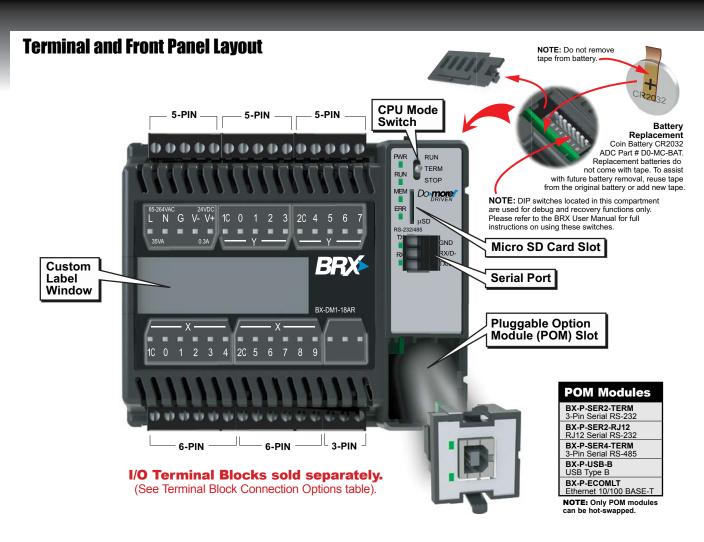
IMPORTANT!



Hot-Swapping Information

Note: This device cannot be Hot Swapped.

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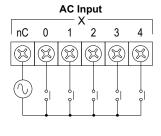


Discrete Input Speci	fications
Input Type	AC
Total Inputs per Module	10 Standard
Commons	2 (5 points/common) Isolated
Nominal Voltage Rating	120–240 VAC
Input Voltage Range	85–264 VAC
Maximum Voltage	264 VAC RMS
AC Frequency	47–63 Hz
Input Current (typical)	9mA @ 120VAC, 13mA @ 220VAC
Input Impedance	15kΩ
ON Voltage Level	> 85 VAC
OFF Voltage Level	< 40 VAC
Status Indicators	Logic Side, Green

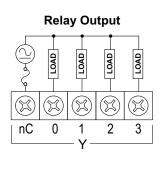
Discrete Output Sp	ecifications
Output Type	Relay Form A (SPST)
Total Outputs per Module	8 Relay
Commons	2 (4 points/common) Isolated
Maximum current per common	8A
Nominal Voltage Ratings	12–48 VDC, 24–240 VAC
Operating Voltage Range	5–60 VDC, 5–264 VAC
Maximum Voltage	60VDC, 264VAC
Minimum Output Current	0.1mA @ 24VAC/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

I/O Wiring

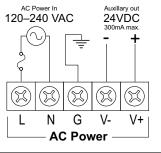
Discrete Input Wiring



Discrete Output Wiring



Supply Power Wiring



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