Built-in RS-232/485 Port Specifications

Port Name	RS-232/RS-485 Serial Port
Description*	Non-isolated serial port that can communicate via RS-232 or RS-485 (software selectable). Includes ESD protection and built-in surge protection.
Supported Protocols	Do-more Protocol (Default) Modbus RTU (Master & Slave) K-Sequence (Slave) ASCII (In & Out)
Data Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200
Default Settings	RS-232, 115200 bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1
Port Type	3-pin terminal strip 3.5mm pitch
Port Status LED	Green LED is illuminated when active for TXD and RXD
RS-485 Station Addresses	1-247
Cable Recommendations	RS-232 use L19772-XXX from AutomationDirect.com RS-485 use L19827-XXX from AutomationDirect.com
Replacement Connector	ADC Part # BX-RTB03S
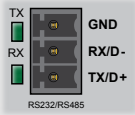
Pinout	RS232	RS485
1	GND	GND
2	RX	D-
3	TX	D+

Removable connector included.

* 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.

microSD Specifications

Port Name	microSD Card Slot			
Description	Standard microSD socket for data logging / file management			
Maximum Card Capacity	32GB			
Transfer Rate (ADATA microSDHC Class 4 memory card)	Mbps	Minimum	Typical	Maximum
	Read	14.3	14.4	14.6
	Write	4.8	4.9	5.1
Port Status LED	Green LED is illuminated when card is inserted/detected			
Optional microSD Card	ADC Part # MICSD-16G			

Ethernet Specifications

Port Name	ETHERNET
Description	Standard transformer isolated Ethernet port with built-in surge protection.
Transfer Rate	10Mbps (Yellow LED) and 100Mbps (Green LED)
Port Status LED	LED is solid when network LINK is established. LED flashes when port is active (ACT).
Supported Protocols	Do-more! Protocol Ethernet Remote I/O Modbus TCP/IP (Client & Server) EtherNet/IP (Explicit & Implicit, Scanner & Adapter) HOST ECOM (DirectLogic), HTTP SMTP (Email), SNTP (Time Server) TCP/IP, UDP/IP (Raw packet) MQTT
Cable Recommendation	C5E-STxxx-xx from AutomationDirect.com
Port Type	RJ45, Category 5, 10/100 BASE-T, Auto Crossover
Ethernet Port Numbers: MODBUS TCP/IP EtherNet/IP HOST ECOM Do-more Protocol	502, TCP 44818, TCP 28784, UDP 28784, UDP

AUTOMATIONDIRECT.com

BRX

Do-more DRIVEN

# BX-DM1E-M

BRX MPU with Do-more! DM1 technology
120 VAC required, serial port, Ethernet port, microSD slot, no on-board I/O.

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-DM1E-M
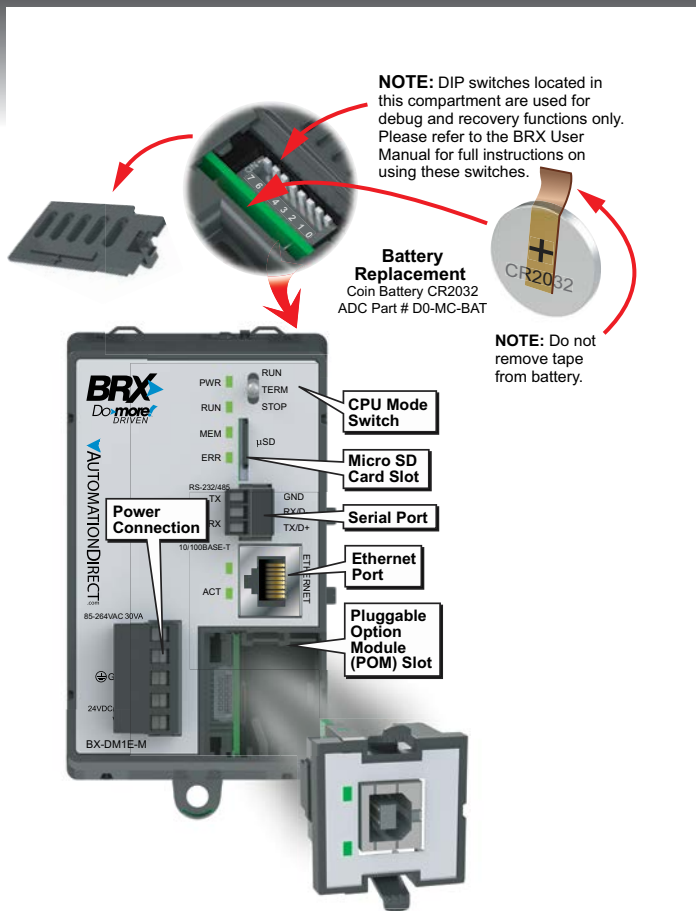

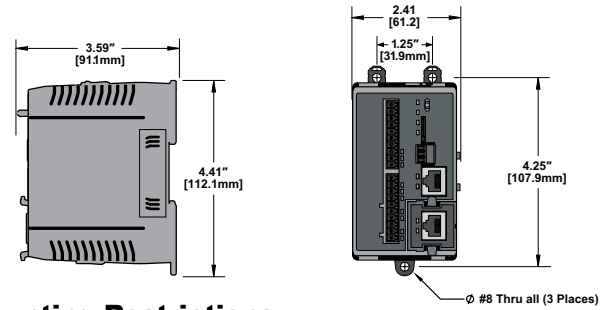## IMPORTANT!

Hot-Swapping Information
Note: This device cannot be Hot Swapped.

Document Name	Edition/Revision	Date
BX-DM1E-M	1st Ed. RevE	7/10/2024

NOTE: DIP switches located in this compartment are used for debug and recovery functions only. Please refer to the BRX User Manual for full instructions on using these switches.

Battery Replacement
Coin Battery CR2032
ADC Part # D0-MC-BAT

NOTE: Do not remove tape from battery.

CR2032

PWR
RUN
MEM
ERR
µSD
RS-232/485
TX
RX
10/100BASE-T
ACT

RUN
TERM
STOP

GND
RX/D-
TX/D+

CPU Mode Switch
Micro SD Card Slot
Power Connection
Serial Port
Ethernet Port
Pluggable Option Module (POM) Slot

BRX
Do-more DRIVEN
AUTOMATIONDIRECT.com
85-264VAC 30VA
24VDC
BX-DM1E-M

Dimensional Information

3.59″ [91.1mm]
4.41″ [112.1mm]
2.41 [61.2]
1.25″ [31.9mm]
4.25″ [107.9mm]
⌀ #8 Thru all (3 Places)

Mounting Restrictions

OK
AIRFLOW

2″ (50mm) Minimum from Enclosure
2″ (50mm) Minimum from Wire Duct
2″ (50mm) Minimum from Enclosure or Wire Duct
2″ (50mm) Minimum from Enclosure or Wire Duct
2″ (50mm) Minimum from Enclosure
2″ (50mm) Minimum from Wire Duct
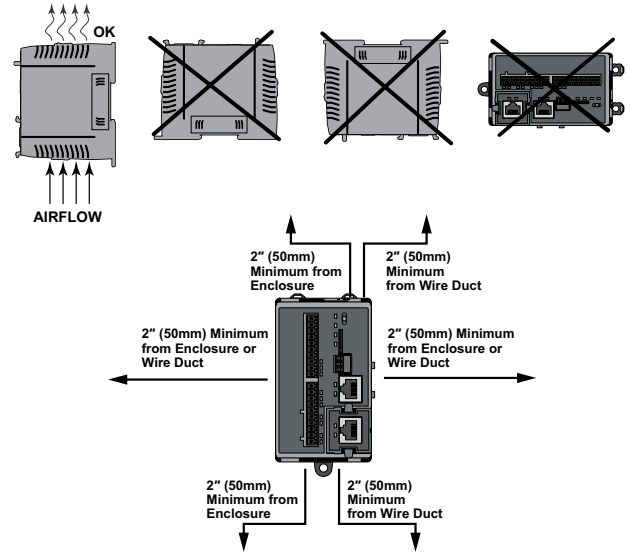
General Specifications

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	202g (7.1 oz)

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

Power Supply Specifications

Nominal Voltage Range	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	8W 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
	1500VAC Ground to 24VDC applied for 1 minute
Replacement Connector	ADC Part # BX-RTB05

Removable Connector Included		Pinout	Connection
		1	L
		2	N
		3	GND
		4	V–
		5	V+

Terminal Block Connector Specifications

Part Number	BX-RTB03S	BX-RTB5	BX-RTB5-1
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	<1.77Lb-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 (Two Wires)	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-05P-BK	5ESDSR-05P-BK