**General Specifications**

- **Operating Temperature:** -20°C to 100°F (0°C to 45°C)
- **Storage Temperature:** -30°C to 85°C (-22°F to 185°F)
- **Humidity:** 5 to 95% (non-condensing)
- **Environmental Air:** 1ttr constant (gaseous permitted)
- **Vibration:** IEC68-2-6 (Test F)
- **Shock:** IEC68-2-27 (Test E)
- **Enclosure Type:** Open Equipment
- **Agency Approvals:** UL/cUL Listed, CE, CSA, RoHS, WEEE Compliant
- **EU Directive:** See the “EU Directive” topic in the Help File
- **Weight:** 16.9g (0.6 oz)

Meets EMI and Safety requirements. See the E.U. directive for details.

**Power Supply Specifications**

- **Nominal Voltage Range:** 12V-24V DC
- **Input Voltage Range (Tolerance):** ±10%
- **Maximum Input Voltage Ripple:** ±10%
- **Maximum Input Power:** 1W
- **Cost Start Input:** 3A
- **Maximum Input Current (Hot Start):** 3A
- **Internal Input Protection:** Reverse Polarity Protection and Undervoltage
- **Real Dissipation:** 7.4W Max
- **Voltage (Hihertated/Delectric):** 1550VAC/500VDC Power Inputs to Ground applied for 1 minute.

**CPU Specifications**

- **Program Erasable Memory:** 8K (ASH memory)
- **User Data Memory Type:** Battery-backed RAM, User-configurable
- **Pluggable Option Module:** RS-232, RS-485, Ethernet 10/100 Base-T (1 Mbps throughputs, max USB 2.0 Type B)
- **Expansion Modules:** 2 expansion modules max
- **Real Time Clock Accuracy:** ±4.2s per day typical at 25°C
- **CPU Mode Switch Functions:** CPU is forced into STOP Mode.
- **Edition/Revision:** 1st Ed. RevD
- **Expansion Modules:** 2 expansion modules max
- **Terminal Block Connector Specifications**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connector Type</th>
<th>Screw Size</th>
<th>Screw Size (Female)</th>
<th>Pluggable Options</th>
<th>Terminals (Male)</th>
<th>Terminals (Female)</th>
<th>Terminals (Male)</th>
<th>Terminals (Female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX-DM1-10ED2-D</td>
<td>BX-RTB10/1</td>
<td>M3 (2.5)</td>
<td>M3 (2.5)</td>
<td>Ethernet</td>
<td>20-pole</td>
<td>20-pole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BX-DM1-10ED2-D</td>
<td>BX-RTB10/2</td>
<td>M3 (2.5)</td>
<td>M3 (2.5)</td>
<td>Ethernet</td>
<td>20-pole</td>
<td>20-pole</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Programming Cable Options**

- **RS232/RS485:** Do-more Designer – Vers. 2.0 or higher

**Built-in RS-232/485 Port Specifications**

- **Description:** Non-isolated serial port that can communicate via RS-232 or RS-485 (software selectable).
- **Supported Protocols:** Modbus RTU (Master & Slave), K-Sequence (Slave)
- **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, 8 Data Bits, 1 Stop Bit
- **Port Type:** 3-pin terminal strip, 3.9mm pitch
- **Port Status LED:** Green LED is illuminated when active for TXD and RXD
- **Replacement Connector:** ADC Part # BX-RTB03S

**CPU Status Indicators**

- **Power:** OFF (Turn Power Off)
- **Low Battery:** Yellow
- **CPU in STOP Mode:** Yellow
- **CPU in RUN Mode:** Green
- **RXD:** Yellow
- **RXD:** Green
- **CPU is Running normally:** Green
- **CPU is malfunctioning normally:** Red
- **CPU is Hardware Error or Software Watchdog Error:** ERR
- **Hot-Swapping Information:** Note: This device cannot be Hot Swapped.

**Dimensional Information**

- **Enclosure Type:** 2 expansion modules max
- **Terminals:** BX-RTB10-1
- **Voltage (Hihertated/Delectric):** 1550VAC/500VDC Power Inputs to Ground applied for 1 minute.

**CPU Status Indicators**

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**I/O Terminal Blocks sold separately.**

**Document Name**

- **BX-DM1-10ED2-D**
- **Edition/Revision:** 1st Ed. Rev.D
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**BRX MPU with Do-more DM1 Technology**

24 VDC required, serial port, microSD slot, Discrete Input: 6-point, sink / source, Discrete Output: 4-point, sourcing.

**Technical Support at 770-844-4200.**

If you have any questions concerning the installation or operation of your equipment, or if you need additional information, please call Technical Support at 770-844-4200.

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**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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**IMPORTANT!** Do-more BRX Manual available at www.automationdirect.com/prdco/ manual/BX-DM1-10ED2-D
Discrete Input Specifications

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Sink/Source</th>
<th>Total Inputs per Module</th>
<th>High-Speed – All inputs may be used as standard inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>20 mA (no current) isolated</td>
<td>30 VAC/DC</td>
<td>0.5 μA – High Speed</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td>6 High Speed</td>
</tr>
<tr>
<td>Minimum Pulse Width</td>
<td>20 μs – High Speed</td>
<td>20 μs – High Speed</td>
<td></td>
</tr>
<tr>
<td>AC Frequency</td>
<td>4–60 Hz</td>
<td>4–60 Hz</td>
<td></td>
</tr>
<tr>
<td>Minimum Impedance</td>
<td>500 Ω</td>
<td>500 Ω</td>
<td></td>
</tr>
<tr>
<td>Maximum Input Current</td>
<td>12 A</td>
<td>12 A</td>
<td></td>
</tr>
<tr>
<td>Maximum OFF Current</td>
<td>2 mA</td>
<td>2 mA</td>
<td></td>
</tr>
<tr>
<td>ON Voltage Level</td>
<td>9.2 VAC/DC</td>
<td>9.2 VAC/DC</td>
<td></td>
</tr>
<tr>
<td>OFF Voltage Level</td>
<td>2.0 VAC/DC</td>
<td>2.0 VAC/DC</td>
<td></td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Logic Side, Green</td>
<td>Logic Side, Green</td>
<td></td>
</tr>
</tbody>
</table>

Discrete Output Specifications

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Sourcing</th>
<th>Total Outputs per Module</th>
<th>All outputs may be used as standard outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>2.0 mA (no current) isolated</td>
<td>1 A</td>
<td>1 A</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
</tr>
<tr>
<td>Minimum Pulse Width</td>
<td>20 μs – High Speed</td>
<td>20 μs – High Speed</td>
<td></td>
</tr>
<tr>
<td>AC Frequency</td>
<td>1–200 Hz (240 Hz filter must be set in software for AC operation)</td>
<td>1–200 Hz (240 Hz filter must be set in software for AC operation)</td>
<td></td>
</tr>
<tr>
<td>Maximum ON Current</td>
<td>1 A</td>
<td>1 A</td>
<td></td>
</tr>
<tr>
<td>Maximum OFF Current</td>
<td>1 mA</td>
<td>1 mA</td>
<td></td>
</tr>
<tr>
<td>Maximum Leakage Current</td>
<td>10 μA per output, no derating over temperature range</td>
<td>10 μA per output, no derating over temperature range</td>
<td></td>
</tr>
<tr>
<td>Maximum Switching Frequency</td>
<td>100 kHz</td>
<td>100 kHz</td>
<td></td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Logic Side, Green</td>
<td>Logic Side, Green</td>
<td></td>
</tr>
</tbody>
</table>

High Speed Input (HSI) Functions

<table>
<thead>
<tr>
<th>Input / Output Type</th>
<th>Input Specified</th>
<th>Output Required</th>
<th>HSI</th>
<th>HSO</th>
<th>Pulse Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>2.0 mA (Sink)</td>
<td>2.0 mA (Sink)</td>
<td>1 A</td>
<td>1 A</td>
<td>100 kHz</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td></td>
</tr>
<tr>
<td>Minimum Pulse Width</td>
<td>20 μs – High Speed</td>
<td>20 μs – High Speed</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum ON Current</td>
<td>1 A</td>
<td>1 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum OFF Current</td>
<td>1 mA</td>
<td>1 mA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Leakage Current</td>
<td>10 μA per output, no derating over temperature range</td>
<td>10 μA per output, no derating over temperature range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Switching Frequency</td>
<td>100 kHz</td>
<td>100 kHz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Logic Side, Green</td>
<td>Logic Side, Green</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

High Speed Output (HSO) Functions

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Function</th>
<th>Current Required</th>
<th>Pulse Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sourcing</td>
<td>2.0 mA (Sink)</td>
<td>2.0 mA (Sink)</td>
<td>100 kHz</td>
</tr>
<tr>
<td>AC Voltage</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
<td>12–24 VAC/DC</td>
</tr>
<tr>
<td>Minimum Pulse Width</td>
<td>20 μs – High Speed</td>
<td>20 μs – High Speed</td>
<td></td>
</tr>
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<td>1–200 Hz (240 Hz filter must be set in software for AC operation)</td>
<td>1–200 Hz (240 Hz filter must be set in software for AC operation)</td>
<td></td>
</tr>
</tbody>
</table>

High-Speed Output Over Current Fault Indicator

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.

NOTE: Do not remove tape from battery.