General Specifications
- Temperature: 32°F to 110°F (0°C to 43°C), altitude 0 to 2,000 ft.
- Humidity: 95% non-condensing.
- Environmental Air: IP50 enclosure (panel mounted).
- Expansion Modules: 4 expansion modules max.
- Real Time Clock Accuracy: ±1 day/month.
- Programming Software: Do-more Designer – Ver. 2.0 or higher.
- LED Status: All LED's are illuminated when active for TXD and RXD.
- RAM Activity (Flash or SD Card): Battery Backed RAM, user-configurable.
- Power Supply: 18-pin connector, 24AWG. 0.5 meter (1.6 ft.) length, 4 required.
- Power Requirements: 120–240 VAC.
- Voltage Withstand: ±5 VAC, 2000VAC to GND.
- Current: 1.5A, 2ms.
- Rated Operating Frequency: 47–63 Hz.
- Nominal Voltage Rating: 240VAC.
- Battery Backed RAM, User Configurable.
- Green LED is illuminated when active for TXD and RXD.
- Internal Input Fuse Protection: ESD protection and built-in surge protection.
- User Data Memory Type: FLASH memory.
- Program Memory Type: FLASH memory.

CPU Specifications
- Language: PLC-5 compatible.
- User Memory Type: Battery Backed RAM, User Configurable.
- Pluggable Option Module: RS-232, RS-485, EtherCAT 10/100 BASE-T (1 Mbps through max), USB 2.0 Type-B.
- Expansion Modules: 4 expansion modules max.
- Real Time Clock Accuracy: ±1 day/month.
- Programming Software: Do-more Designer – Ver. 2.0 or higher.
- Programming Cable Options: BX-PEC-CBL.
- Custom Label Window Size: 0.75” x 2.25” (19mm x 57mm).

Built-in RS-232/485 Port Specifications
- 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).
- Data Rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.
- Replacement Connector: ADC Part # BX-RTB10S.

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 mode, the mode of operation can be changed through the Installation Switch, and the error LED’s will be blank.
- STOP position: CPU is forced into STOP Mode.

Power Supply Specifications
- Nominal Voltage Rating: 120–240 VAC.
- Input Voltage Range (Tolerance): 10%.
- Rated Operating Frequency: 47–63 Hz.
- Maximum Input Power: 40W.
- Cold Start Inrush Current: 1.5A, 2ms.
- Isolated Input/Output Current (with start): 4.5A (sink to source).
- Input Internal Fuse Protection: Micro fuse 250V 2A Non-Replaceable.
- Peak Dissipation: 21.7W Max.
- Voltages Withstand (diastatic): 1500VAC to Ground, 2000VAC to COM, 1500VAC to anything else.
- Terminal Block Connection Options: BX-RTB36, BX-RTB36-1.
- Terminal Block Connector Specifications: BX-RTB36, BX-RTB36-1.
- Replacement Connector: BX-RTB36-3.

Terminals Block Options
- 2-pin, terminal strip, 3.5mm pitch.
- Pinout Options:
  - RS-232/RS485: RX, TX
  - Do-more: TX, RX/D+, RX/D-

**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 apply to your particular application, nor do we assume any responsibility for 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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**Discrete Input Specifications**

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Sink/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inputs per Module</td>
<td>20 Total – 10 High Speed (X0..X9)</td>
</tr>
<tr>
<td>Nominal Voltage Rating</td>
<td>12-24 VAC/DC</td>
</tr>
<tr>
<td>Input Voltage Range</td>
<td>0-30 VAC/DC</td>
</tr>
<tr>
<td>Minimum Voltage</td>
<td>10 VAC/DC</td>
</tr>
<tr>
<td>DC Frequency</td>
<td>0-35kHz High Speed</td>
</tr>
<tr>
<td>AC Frequency</td>
<td>50-60Hz (50-60Hz must be set in software for AC operation)</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>3kΩ @ 24VAC</td>
</tr>
<tr>
<td>Maximum Input Current</td>
<td>12mA @ 20VAC</td>
</tr>
<tr>
<td>Maximum OFF Current</td>
<td>2.0 mA</td>
</tr>
<tr>
<td>ON Voltage Level</td>
<td>+5 VAC/DC</td>
</tr>
<tr>
<td>OFF Voltage Level</td>
<td>+2.0 VAC/DC</td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Logic Side, Green</td>
</tr>
</tbody>
</table>

**Discrete Output Specifications**

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Sinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Outputs per Module</td>
<td>16 Total – 8 High Speed (Y0..Y7)</td>
</tr>
<tr>
<td>Nominal Voltage Rating</td>
<td>24VAC</td>
</tr>
<tr>
<td>Operating Voltage Range</td>
<td>5-30VAC</td>
</tr>
<tr>
<td>Maximum Voltage</td>
<td>36VAC</td>
</tr>
<tr>
<td>Maximum Output Current</td>
<td>0.5A @ 24VDC</td>
</tr>
<tr>
<td>Maximum Leakage Current</td>
<td>10µA</td>
</tr>
<tr>
<td>Maximum Switching Frequency</td>
<td>1kHz</td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Logic Side, Green</td>
</tr>
</tbody>
</table>

**High Speed Input (HSI) Functions**

<table>
<thead>
<tr>
<th>Input Function</th>
<th>Inputs Required</th>
<th>I/O Type</th>
<th>1S</th>
<th>1S/2S</th>
<th>1S/3S</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Speed Counting</td>
<td>2</td>
<td>Up/Down counters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position Scaling</td>
<td>2</td>
<td>Pulse/Direction (Bidirectional) counters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Measurement</td>
<td>2</td>
<td>Quadrature &amp; B counters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement</td>
<td>2</td>
<td>Quadrature &amp; B with 2 counters</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Interval Measurement</td>
<td>1</td>
<td>Single Input (Edge) timers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DDS/CD Measurement</td>
<td>1</td>
<td>Single Input (Edge) timers</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>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**I/O Wiring**

**Discrete Input Wiring**

- Sinking Input
  - Sinking Input
  - Sinking Input
  - Sinking Input

**Discrete Output Wiring**

- Sinking Output
  - Sinking Output
  - Sinking Output

**AC Input**

- AC Power
  - 120-240VAC
  - 24VDC

**Supply Power Wiring**

- 230VAC
  - 120VAC
  - 24VDC

**Status Indicators**

- OFF Voltage Level
- Maximum OFF Current
- Input Current (typical)
- Input Impedance
- AC Frequency
- Maximum Voltage
- Input Voltage Range
- Nominal Voltage Rating
- Common
- Total Outputs per Module

**High Speed Output (HSO) Functions**

- Pulse
  - 1 | PTO & DC/AC motors
  - 2 | PWM & AC/DC motors
  - 3 | PWM & AC motor drive output

**Axis Profile**

- Electronic gearing, Camming, Following, Homing, Jogging

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

(See Terminal Block Connection Options table).