**Terminal Block Connection Options**

**BX-RTB36** Terminal block kit, 90-degree screw type, fits all BRX 20-point PLCs. Kit includes (12) 2-pin 5mm terminal blocks.

**BX-RTB36-I** Terminal block kit, 90-degree screw type, fits all BRX 36-point PLCs. Kit includes (12) 2-pin 5mm terminal blocks.

**ZL-BX-CBL15** ZIPLink PLC I/O cable, 15-pin terminal block to 24-pin connector, 2AWG. 0.5 meter (1.6 ft.) length, 4 required.

**ZL-BX-CBL15-I** ZIPLink PLC I/O cable, 15-pin terminal block to 24-pin connector, 2AWG. 1 meter (3.3 ft.) length, 4 required.

**ZL-BX-CBL15-2** ZIPLink PLC I/O cable, 15-pin terminal block to 24-pin connector, 2AWG. 2 meter (6.6 ft.) length, 4 required.

**ZL-BX-CBL15-15** ZIPLink PLC I/O cable, 15-pin terminal block to 24-pin connector, 2AWG. 15 meter (49.2 ft.) length, 4 required.

**ZL-BX-CBL20** ZIPLink PLC I/O cable, 20-pin terminal block to 36-pin connector, 2AWG. 0.5 meter (1.6 ft.) length, 4 required.

**ZL-BX-CBL20-I** ZIPLink PLC I/O cable, 20-pin terminal block to 36-pin connector, 2AWG. 1 meter (3.3 ft.) length, 4 required.

**ZL-BX-CBL20-2** ZIPLink PLC I/O cable, 20-pin terminal block to 36-pin connector, 2AWG. 2 meter (6.6 ft.) length, 4 required.

**ZL-BX-CBL20-1** ZIPLink PLC I/O cable, 20-pin terminal block to 36-pin connector, 2AWG. 15 meter (49.2 ft.) length, 4 required.

**ZL-RTB20** ZIPLink PLC I/O cable, Two-Level Feedthrough Module, 20 pole, 35mm DIN mount, 4 required.

**ZL-RTB20-1** ZIPLink PLC I/O cable, Two-Level Feedthrough Module, 20 pole, 35mm DIN mount, 4 required.

**CPU Status Indicators**

<table>
<thead>
<tr>
<th>Indicator Code</th>
<th>Description</th>
<th>Display</th>
<th>Power-On</th>
<th>Power-Off</th>
<th>Low Battery</th>
<th>In STOP Mode</th>
<th>In Rich Mode</th>
<th>Active</th>
<th>Active (Flash or SD Card)</th>
<th>SD Card Installed and Monitored</th>
<th>ERR</th>
<th>發布 1</th>
<th>Statistics</th>
<th>Debugging</th>
<th>Error Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Power</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RUN</td>
<td>CPU in RUN</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>MEM</td>
<td>No ROM</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I/O</td>
<td>No SD Card</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>ERR</td>
<td>CPU ERROR</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**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 debugging software.
- **STOP position**: CPU is forced into STOP Mode.

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

- **Parameter**
  - **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
  - **Default Settings**: RS-232, 115200 bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1
  - **Port Type**: 9-pin terminal strip, 2.5mm pitch
  - **Port Status LED**: Green LED is illuminated when Active for RXD and TXD
  - **Replacement Connector**: IDC-50 Part # BX-RTB035

**Programming Cable Options**

- **Port Name**: RS-232/485 Port
- **Pinout**
  - **RX232**: 1 GND
  - **RX485**: 2 RX D–
  - **TX232**: 3 TX D+
  - **TX485**: 4 TX D+
  - **DTR**: 5
  - **DSR**: 6
  - **RI**: 7
  - **GND**: 8

**Serial Port Specifications**

- **Data Rates**
  - 115200
  - 57600
  - 38400
  - 19200
  - 9600
  - 4800
  - 2400
  - 1200

**Built-in RS-232/485 Port Connection Options**

- **Description**: Non-isolated serial port that can communicate via RS-232 or RS-485 (software selectable). Includes ESD protection and built-in surge protection.

**Agency Approvals**

- **CE Compliant**: EN61131-2
- **UL61010-2 - UL File # E185989 Canada and USA**
- **CSA Certified (In & Out)**

**Environmental Specifications**

- **Temperature**: 0°C to 55°C (32°F to 131°F)
- **Humidity**: 5 to 95% (non-condensing)
- **Vibration**: 10 to 1000 Hz, 2 to 20 Hz, 5% RMS
- **Shock**: 50 to 1000 Hz, 1g at 5% RMS
Terminal and Front Panel Layout

CPU Mode Switch

Battery Replacement

NOTE: Do not use knife to remove battery. Use hands to remove battery.

NOTE: Pinout and wiring documentation are available for downloading from the website.

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

POM Modules

Module (POM) Slot

Discrete Input Specifications

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Total Inputs per Module</th>
<th>Signal/Source</th>
<th>Total Outputs per Module</th>
<th>Signal/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>10 Total – 10 High Speed (X0..X9)*</td>
<td>10 Standard (X10..X19)</td>
<td>All inputs may be used as standard inputs</td>
</tr>
</tbody>
</table>

*All inputs may be used as standard inputs

Discrete Output Specifications

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Total Outputs per Module</th>
<th>Signal/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinking</td>
<td>16 Total – 8 High Speed (Y0..Y7)*</td>
<td>All outputs may be used as standard outputs</td>
</tr>
</tbody>
</table>

*All outputs may be used as standard outputs

High Speed Input (HSI) Functions

<table>
<thead>
<tr>
<th>Input Function</th>
<th>Input Required</th>
<th>10µA</th>
<th>0.5µA</th>
<th>2mA</th>
<th>10mA</th>
<th>50mA</th>
<th>1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Speed Counting</td>
<td>Preset tables</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Frequency</td>
<td></td>
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<tr>
<td>Position Scaling</td>
<td></td>
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</tr>
<tr>
<td>Measurement</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

High Speed Output (HSO) Functions

<table>
<thead>
<tr>
<th>Output Required Function</th>
<th>10µA</th>
<th>0.5µA</th>
<th>2mA</th>
<th>10mA</th>
<th>50mA</th>
<th>1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axis Profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Standard inputs may be used with high-speed functions, but at lower response frequencies of approximately 120Hz.
2. Table-Driven Outputs are triggered by an Auto Position or a high-speed counter/timer accumulation value. It requires the selection of 1 discrete output (see HSO Table 1 below)
3. Standard outputs may be used for high-speed functions, but at lower response frequencies of approximately 120Hz. Use of relay outputs is not recommended.
4. A combination of both high-speed and standard outputs may be used up to this total.

Supply Power Wiring

AC Power 12-24VDC

DC Power In

Bus Power 12-24VDC

DC Power In

Bus Power 12-24VDC

DC Power Out

+V

GND

X/D- X/TX RX RX/D-

Note: Use hands to remove battery.