General Specifications
- Operating Temperature: -20°C to 60°C (-4°F to 140°F)
- Storage Temperature: -30°C to 85°C (0°F to 185°F)
- Humidity: 5% to 95% (non-condensing)
- Environmental Air: No corrosive gases permitted
- Power Supply Specifications:
  - Nominal Voltage Range: 12-24 VDC
  - Input Voltage Range (Tolerance): 10-36 VDC
  - Maximum Input Voltage Ripple: 4 V peak-to-peak
  - Maximum Input Power: 30 W
  - Max Start Inrush Current: 3.5 A (500 ms), 1.25 A (1 second)
  - Minimum Inrush Current (Max Start): 1 A
  - Internal Input Protection: Reverse Voltage Polarity and Undervoltage
  - Hot Swapping: 1500VAC Power Inputs to Ground
- Terminal Block Connection:
  - BX-RTB18: 90° degree screw type, fits all BX 18-pole PCLCs. Kit includes (3) 5-pin 5mm plugs, (2) 5-pin 3mm plugs, (1) 5-pin 3mm plug
  - BX-RTB18-1: 90° degree screw type, same as BX-RTB18, but with a different connector
  - ZL-RTB20: 20 pole, 35mm DIN Link, 20 position terminal block to pigtail connector, 24AWG. 1 meter (3.3 ft.) length, 2 required
  - ZL-RTB20-1: 20 pole, 35mm DIN Link, 20 position terminal block to pigtail connector, 24AWG. 0.5 meter (1.6 ft.) length, 2 required
  - ZL-RTB20-2: 20 pole, 35mm DIN Link, 20 position terminal block to 24-pin connector, 24AWG. 2 meter (6.6 ft.) length, 2 required
  - ZL-RTB20-I: 20 pole, 35mm DIN Link, 20 position terminal block to pigtail connector, 24AWG. 2 meter (6.6 ft.) length, 2 required
- Power Supply Specifications:
  - CPU Specifications:
    - Flash memory
    - User Data Memory Type: Battery-backed RAM, User configurable
    - Pluggable Option Module: RS-232, RS-485, Ethernet 10/100 BASE-T, 1-Mbps (built-in), USB 2.0 Type B
    - Expansion Modules: 4 expansion modules max
    - Real Time Clock Accuracy: ±2.6s per day typical at 25°C
- Terminal Board Connection Options
- CPU Status Indicators
- CPU Specifications:
  - CPU Specifications:
    - Flash memory
    - User Data Memory Type: Battery-backed RAM, User configurable
    - Pluggable Option Module: RS-232, RS-485, Ethernet 10/100 BASE-T, 1-Mbps (built-in), USB 2.0 Type B
    - Expansion Modules: 4 expansion modules max
    - Real Time Clock Accuracy: ±2.6s per day typical at 25°C
- Terminal Block Connection Options
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    - Expansion Modules: 4 expansion modules max
    - Real Time Clock Accuracy: ±2.6s per day typical at 25°C
- Terminal Block Connection Options

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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**Discrete Input Specifications**

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inputs per Module</td>
<td>10 High Speed - All inputs may be used as standard inputs</td>
</tr>
<tr>
<td>Commuting</td>
<td>2.0 mA (point/common) isolated</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>Maximum Voltage</td>
<td>30 VAC/DC</td>
</tr>
<tr>
<td>AC Frequency</td>
<td>0–250 kHz - High Speed</td>
</tr>
<tr>
<td>Minimum Pulse Width</td>
<td>0.5 μs - High Speed</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>30 μΩ @ 24 VAC/DC</td>
</tr>
<tr>
<td>Input Current (isolated)</td>
<td>30 mA @ 24 VAC/DC</td>
</tr>
<tr>
<td>Maximum Input Current</td>
<td>120 mA @ 30 VAC/DC</td>
</tr>
<tr>
<td>Minimum Input Current</td>
<td>10.0 mA @ 30 VAC/DC</td>
</tr>
<tr>
<td>OFF Voltage Level</td>
<td>0–9.0 VAC/DC</td>
</tr>
<tr>
<td>ON Voltage Level</td>
<td>0–15.0 VAC/DC</td>
</tr>
<tr>
<td>Status Indicator</td>
<td>Logic Side, Green</td>
</tr>
</tbody>
</table>

**Discrete Output Specifications**

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Sourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Outputs per Module</td>
<td>8 Total - 4 High Speed (Y0..Y3)</td>
</tr>
<tr>
<td>Commmons</td>
<td>0.1 mA (point/common) located</td>
</tr>
<tr>
<td>Nominal Voltage Rating</td>
<td>0–30 VAC/DC</td>
</tr>
<tr>
<td>Minimum Voltage</td>
<td>250 kHz</td>
</tr>
<tr>
<td>Maximum Current per Module</td>
<td>0.5 A per module</td>
</tr>
<tr>
<td>Maximum Leakage Current</td>
<td>0.5 A per module</td>
</tr>
<tr>
<td>Maximum Switching Frequency</td>
<td>200 kHz</td>
</tr>
<tr>
<td>Maximum Switching Frequency</td>
<td>10 kHz</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>Output (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Speed</td>
<td>Up counter(s)</td>
<td>1</td>
</tr>
<tr>
<td>Counting</td>
<td>Up Down counter(s)</td>
<td>1</td>
</tr>
<tr>
<td>Position Scaling</td>
<td>Position counters</td>
<td>1</td>
</tr>
<tr>
<td>Measurement</td>
<td>Position counts</td>
<td>1</td>
</tr>
<tr>
<td>Input(s)</td>
<td>Float interruption(s)</td>
<td>Up to (3)</td>
</tr>
<tr>
<td>Output(s)</td>
<td>Time interruption(s)</td>
<td>Up to (3)</td>
</tr>
</tbody>
</table>

**High Speed Output (HSO) Functions**

<table>
<thead>
<tr>
<th>Output Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Mode</td>
<td>2 x PTO linear high/low direction outputs</td>
</tr>
<tr>
<td></td>
<td>2 x PTO quadrature output</td>
</tr>
<tr>
<td></td>
<td>2 x PTO quadrature output</td>
</tr>
<tr>
<td></td>
<td>2 x PWM pulse width modulation outputs</td>
</tr>
<tr>
<td>Axis Profile</td>
<td>Electronic gearing, Camming, Following, Homing, Jogging</td>
</tr>
</tbody>
</table>

**I/O Wiring**

- **Discrete Input Wiring**
  - Sinking Input
  - Source Input
  - Supply Power Wiring

**Discrete Output Wiring**

- Sinking Output
  - Source Output
  - AC Input
  - DC Power