**Terminal Block Connector Specifications**

| Part Number | BX-RTB10 (Included) | BX-RTB10-1* | BX-RTB10-2*
|-------------|---------------------|-------------|-------------
| Connector Type | Screw Type-90° | Screw Type-180° | Screw Type-180°
| Pitch | 3.81mm | 3.81mm | 3.81mm
| Maximum Clamp Force | 12.7N (2.9 lbs) | 12.7N (2.9 lbs) | 12.7N (2.9 lbs)
| Screwdriver Blade Width | 2.5mm | 2.5mm | 2.5mm

*Sold separately

**NOTE:** This module is not compatible with ZipLink wiring solutions.

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**I/O Wiring**

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**General Specifications**

- Operating Temperature: 0° to 60°C (32° to 140°F)
- Storage Temperature: 0° to 85°C (32° to 185°F)
- Humidity: 5% to 95% (non-condensing)
- Environmental Air: No corrosive gases permitted
- Pollution: G2 (per IEC 61131-2)
- Shock: per IEC60068-2-27 (Test Ea)
- Enclosure Type: Open Equipment
- Noise Immunity: EN60664-3:199
- CE Directive: See the "EU Directives" topic in the Help File
- Heat Dissipation: 2.3W
- Weight: 88g (3.1 oz)
- Software Version: Do-more! Designer 2.7 or later

**I/O Terminal Blocks included.** (See Terminal Block Connector Specification inside.) Not compatible with the ZipLink Wiring System.

**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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**Temperature Combo**

4-pt. Universal Temperature Input, 4-pt. 5–36 VDC Sourcing Output

**INPUT**

**OUTPUT**

**Temperature Wiring**

**Hot-Swapping Information**

*Note: This device cannot be Hot Swapped.*

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**Do-more BRX Manual available at**


**BX-USER-M**

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**Important!**

- **Document Name:** BX-4UT4TD2
- **Edition/Revision:** 1st Ed. Rev A
- **Date:** 1/25/2021

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**Thermocouple Data Range Specifications**

<table>
<thead>
<tr>
<th>Thermocouple Selection</th>
<th>Temperature Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type J</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
<tr>
<td>Type K</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
<tr>
<td>Type E</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
<tr>
<td>Type N</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
<tr>
<td>Type R</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
<tr>
<td>Type S</td>
<td>-10 to 1800 °F</td>
<td>±0.1 °F</td>
</tr>
</tbody>
</table>

**Thermistor Data Range Specifications**

<table>
<thead>
<tr>
<th>Thermistor Selection</th>
<th>Temperature Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type R</td>
<td>-200 to 850 °C</td>
<td>±0.2 °C</td>
</tr>
<tr>
<td>Type N</td>
<td>-200 to 850 °C</td>
<td>±0.2 °C</td>
</tr>
<tr>
<td>Type B</td>
<td>-200 to 850 °C</td>
<td>±0.2 °C</td>
</tr>
</tbody>
</table>

**Universal Temperature Input Specifications**

- **Input Channels:** 4 Differential
- **Common Mode Rejection:** 100dB @ DC and 130dB @ 60Hz
- **Common Mode Range:** -0.3V to +5.3V
- **Maximum Ratings:** -0.3V to +5.3V, <15mA
- **Open Circuit Detection Time:** Within 5s
- **Sample Duration Time:** 175ms
- **All Channel Update Rate:** 1s max (4 thermocouples enabled)
- **Resolution:** 24-bit, ±0.1° (C or °F)
- **Input Impedance:** 150kΩ
- **Sample Duration Time:** 175ms
- **Open Circuit Detection Time:** Within 5s
- **Maximum Ratings:** -0.3V to +5.3V, <15mA
- **Open Circuit Detection Time:** Within 5s
- **Sample Duration Time:** 175ms
- **All Channel Update Rate:** 1s max (4 thermocouples enabled)
- **Resolution:** 24-bit, ±0.1° (C or °F)

**RTD Data Range Specifications**

<table>
<thead>
<tr>
<th>RTD Type</th>
<th>Degrees</th>
<th>1-degree Integer</th>
<th>24 Bit Floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 50</td>
<td>50, 100, 200, 300, 1000Ω</td>
<td>±0.00672</td>
<td>±0.1 °C (C or °F)</td>
</tr>
<tr>
<td>Type 100</td>
<td>10, 50, 100, 200, 500, 1000Ω</td>
<td>±0.00385</td>
<td>±0.1 °C (C or °F)</td>
</tr>
</tbody>
</table>

**Mixed Resistive and Thermocouple Wiring**

- **Notes for maximum accuracy:**
  1. All wires to an RTD must be equal length and type.
  2. Do not use cable shield as sensing wire.
  3. All wires to an RTD must be equal length and type.
  4. Do not connect shield to module common only.
  5. RTD common only, otherwise connect.
  6. Refer to RTD manufacturer’s recommendations.
  7. Do not use cable shield as sensing wire.
  8. Do not connect shield to module.

**Dimensional Information**

- **Connector Cover:**
  - To Install, remove Connector Cover
  - To remove, depress disengagement plungers at top and bottom of module

**Mounting Restrictions**

- **Minimum**:
  - 2″ (50mm) from Wall Duct
  - 2″ (50mm) from Wire Duct

- **Maximum**:
  - 3.25″ (83mm) from Wall Duct
  - 3.59″ (91.1mm) from Wire Duct

- **Expansion**:
  - 1.84″ (46.8mm) from Wire Duct
  - 1.00″ (25.4mm) from Wall Duct

- **Connector Cover:**
  - 3.73″ (94.6mm) from Wire Duct
  - 3.59″ (91.1mm) from Wall Duct

- **Module:**
  - 8.11″ (205.7mm) from Wall Duct
  - 4.24″ (107.9mm) from Wire Duct

- **1X Ø 10/32 Insert:**
  - 1.23″ (31.2mm) from Wire Duct

- **2X Ø #8 Thru all:**
  - 4.57″ (116.2mm) from Wire Duct
  - 4.24″ (107.9mm) from Wire Duct

- **Expansion:**
  - 1.00″ (25.4mm) from Wall Duct

- **Common Mode Rejection:** 100dB @ DC and 130dB @ 60Hz
- **Common Mode Range:** -0.3V to +5.3V
- **Open Circuit Detection Time:** Within 5s
- **Sample Duration Time:** 175ms
- **All Channel Update Rate:** 1s max (4 thermocouples enabled)
- **Resolution:** 24-bit, ±0.1° (C or °F)

**Thermocouple and Voltage Source Wiring**

- **Ungrounded/Shielded Thermocouple**
  - TC+ to V+ and TC- to V-.

- **Grounded/Shielded Thermocouple**
  - TC+ to V+ and TC- to V-.

- **Transmitter Power Supply**
  - V+ to TC+ and V- to TC-.

- **Exhaust Power Supply**
  - V+ to TC+ and V- to TC-.

- **Voltage Divider**
  - V+ to TC+ and V- to TC-.

**Module Installation**

- **1.** To Install, remove Connector Cover
- **2.** Align expansion connectors, insert, and listen for “Click” as the lock engages

**Dimensional Information**

- **Connector Cover:**
  - 3.25″ (83mm) from Wall Duct
  - 3.59″ (91.1mm) from Wire Duct

- **Module:**
  - 8.11″ (205.7mm) from Wall Duct
  - 4.24″ (107.9mm) from Wire Duct

- **Common Mode Rejection:** 100dB @ DC and 130dB @ 60Hz
- **Common Mode Range:** -0.3V to +5.3V
- **Open Circuit Detection Time:** Within 5s
- **Sample Duration Time:** 175ms
- **All Channel Update Rate:** 1s max (4 thermocouples enabled)
- **Resolution:** 24-bit, ±0.1° (C or °F)