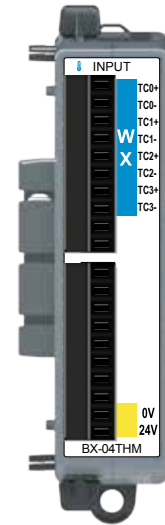


| General Specifications | |
|---------------------------|--|
| Operating Temperature | 0° to 45°C (32° to 113°F) |
| Storage Temperature | -20° to 70°C (-4° to 158°F) |
| Humidity | 5 to 95% (non-condensing) |
| Environmental Air | No corrosive gases permitted |
| Vibration | IEC60068-2-6 (Test Fc) |
| Shock | IEC60068-2-27 (Test Ea) |
| Enclosure Type | Open Equipment |
| Agency Approvals | UL61010-2-201 file E139594, Canada & USA CE (Safety: EN61010-2-201 and Immunity: EN61131-2: 2007) |
| Noise Immunity | NEMA ICS3-304 |
| EU Directive | See the "EU Directive" topic in the BRX Help File. |
| Weight | 100g (3.5 oz) |
| Heat Dissipation | 2.5W |
| Software Version Required | Do-more! Designer Version 2.1, or later. |

*Meets EMC and Safety requirements. See the D.O.C. for details.



BX-04THM

Thermocouple Input Expansion Module

4-ch, 16-bit

I/O Terminal Blocks included. (See Terminal Block Connector Specifications table inside). Not compatible with the ZIPLink Wiring System

| Terminal Block Connector Specifications | | | |
|---|-----------------------|------------------------|-----------------------|
| Part Number | BX-RTB10 (Included) | BX-RTB10-1* | BX-RTB10-2* |
| Connector Type | Screw Type-90° | Spring Clamp Type-180° | Screw Type-180° |
| Pitch | 3.81mm | 3.81mm | 3.81mm |
| Recommended Screw torque | <1.77 lb-in (0.2 N-m) | N/A | <1.77 lb-in (0.2 N-m) |
| Screwdriver Blade Width | 2.5mm | 2.5mm | 2.5mm |
| Equiv. Dinkle part # | EC381V-10P-BK | ESC381V-10-BK | EC381F-10P-BK |

*Sold separately

| Thermocouple Input Specifications | |
|-----------------------------------|--|
| Input Channels | 4 Differential |
| Commons | 0 |
| Input Impedance | >5MΩ |
| Resolution | 16-bit, ±0.1°C or °F |
| Thermocouple Input Ranges | Type J -190° to 760°C (-310° to 1400°F) (Default) Type E -210° to 1000°C (-346° to 1832°F) Type K -150° to 1372°C (-238° to 2502°F) Type R 65° to 1768°C (149° to 3214°F) Type S 65° to 1768°C (149° to 3214°F) Type T -230° to 400°C (-382° to 752°F) Type B 529° to 1820°C (984° to 3308°F) Type N -70° to 1300°C (-94° to 2372°F) Type C 65° to 2320°C (149° to 4208°F) |
| Cold Junction Compensation | Automatic |
| Thermocouple Linearization | Automatic |
| Accuracy vs. Temperature | ±50PPM per °C (maximum) |
| Linearity Error | ±1°C maximum (±0.5°C typical) Monotonic with no missing codes |
| Maximum Inaccuracy Temperature | ±3°C maximum (excluding thermocouple error) (including temperature drift) |
| Linear Voltage Input Ranges | 0-39mV ±78mV ±156mV ±39mV 0-156mV 0-1.25V |
| Maximum Inaccuracy Voltage | 0.06% @25°C, 0.10% @ 0-60°C |
| Sample Duration Time | 270ms |
| All Channel Update Rate | 2.16 s |
| Open Circuit Detection Time | Within 2s |
| Maximum Ratings | Fault protected inputs to ±50V |
| Common Mode Range | 0.6V |
| Common Mode Rejection | 100dB @ DC and 130dB @ 60Hz |
| Conversion Method | Sigma-Delta |
| Backplane Power Consumption | 0.1W |
| External DC Power Required | Class 2 or LPS power supply 24VDC (±20%) 25mA |

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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Do-more BRX Manual available at
www.automationdirect.com/pn/doc/manual/BX-04THM



IMPORTANT!



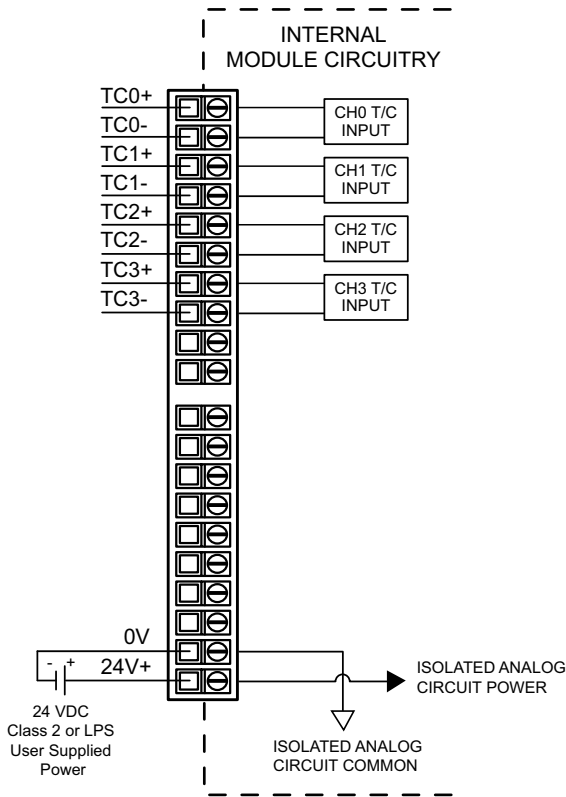
Hot-Swapping Information
Note: This device cannot be Hot Swapped.

| Document Name | Edition/Revision | Date |
|---------------|------------------|-----------|
| BX-04THM | 1st Ed. | 8/23/2017 |

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I/O Wiring

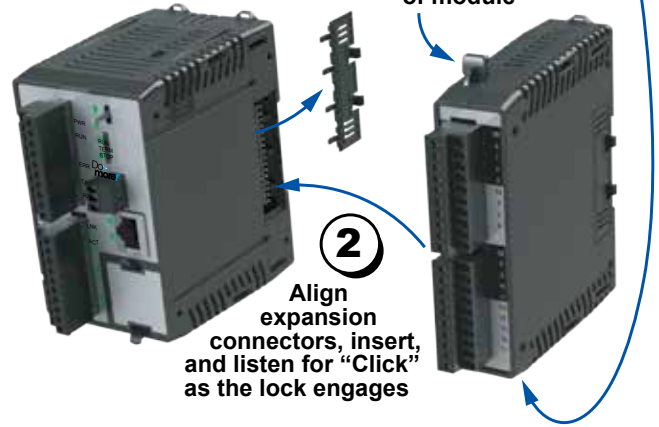
Terminal Block Input Wiring



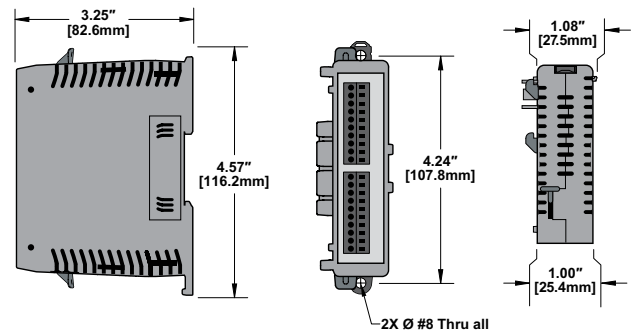
Module Installation

1 To install, remove Connector Cover

To remove, depress disengagement plungers at top and bottom of module

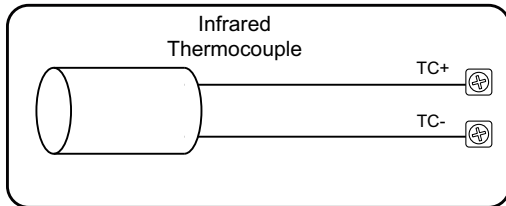
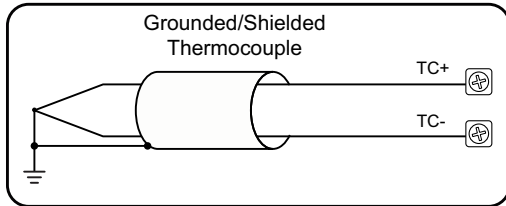
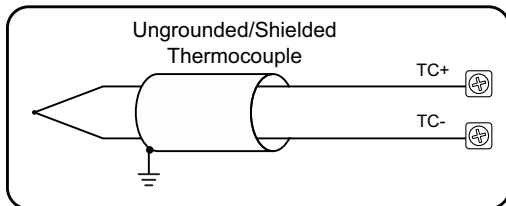


Dimensional Information



I/O Wiring

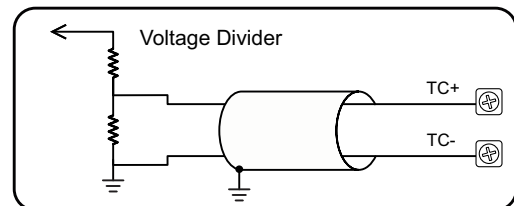
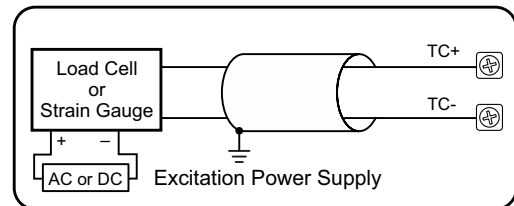
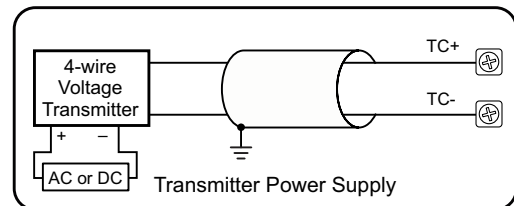
Thermocouple Input Circuits



NOTE: Thermocouple extension wire and proper thermocouple terminal blocks must be used to extend thermocouples. AutomationDirect thermocouple wire is recommended.

I/O Wiring

Analog Voltage Input Circuits



For maximum accuracy: Jumper unused inputs.

NOTE: Shield should be connected only at one end, to ground at the source device.