**Power Supply Specifications**

- **Minimum Voltage Range**: 9.5V-DC
- **Input Voltage (Tolerance)**: ±10.38 VDC
- **Maximum Input Ripple**: ±10%
- **Maximum Input Power**: 14W
- **Maximum Input Voltage Ripple**: ±10%

**Environmental Specifications**

- **Operating Temperature**: 0° to 60°C (32° to 140°F)
- **Storage Temperature**: -20° to 85°C (-4° to 185°F)

**Agency Approvals**

- **CE Compliance EN61131-2***: CE Compliant
- **UL61010-2**: UL File # E185989 Canada and USA
- **UL File # E18372**: UL File # E18372
- **EN61131-2**
- **UL61010-2**: UL File # E185989
- **UL61010-2**: UL File # E185989
- **MODBUS TCP/IP**: MODBUS TCP/IP (Master & Slave)
- **K-Sequence (Slave)**: K-Sequence (Slave)
- **ASCI (In & Out)**: ASCI (In & Out)
- **EU Directive**: See the “EU Directive” topic in the Help File

**Product Compatibility**

- **Suitable for**: All BRX 10-point PLCs and all expansion I/O Modules
- **Suitable for**: BX-RTB03S

**Expansion Module Specifications**

- **Number of Expansion Modules**: 2 expansion modules max

**Memory Specifications**

- **User Data Memory**: Battery Backed RAM, User configurable
- **LASH memory**: Non-volatile memory

**CPU Status Indicators**

- **Power**: OFF (Idle), Power LED Off
- **Low Battery**: Off
- **CPU**: DO-MORE Designer
- **Ethernet**: Off
- **SD Card**: Non-Actionable
- **Pin 1**: Cable Selection
- **Pin 2**: SD Card
- **Pin 3**: Battery

**CPU Mode Switch Functions**

- **RUN**: CPU is forced into RUN Mode if no errors are encountered
- **POSITION**: CPU is forced into STOP Mode
- **STOP**: CPU is forced into STOP Mode

**Built-in Ethernet Specifications**

- **Port Name**: ETHERNET
- **Description**: Standard transformer isolated Ethernet port with built-in surge protection
- **Transfer Rate**: 100Mbps (Yellow LED) and 10Mbps (Green LED)
- **Port Status LED**: Green LED is illuminated when active, Red LED flashes when port is active (ACT)

**Supported Protocols**

- **MODBUS TCP/IP**: MODBUS TCP/IP (Client & Server)
- **Do-more Designer**: Do-more Designer (Default)
- **K-Sequence (Slave)**: K-Sequence (Slave)
- **ASCI (In & Out)**: ASCI (In & Out)

**Applications**

- **Industrial**: Standard transformer isolated Ethernet port with built-in surge protection
- **Home**: Standard transformer isolated Ethernet port with built-in surge protection

**Caution**

When using RS-485, a terminator resistor is required.

**Expansion Module Kit**

- **Part Number**: BX-RTB03S
- **Description**: Terminal Block Kit, BX-RTB03S

**Dimensional Information**

- **Enclosure**: Minimum from Wire Duct
- **Minimum from Wire Duct**: 2″ (50mm)
- **Minimum from Wire Duct**: 2.41″ (61mm)

**CPU Specifications**

- **Program Change**: BX-RTB03S
- **FLASH memory**: Battery Backed RAM, User configurable
- **Programmable Option Module**: RS-232, RS-485, EtherCAT 10/100 BASE-T (1 Mbps through max), USB 2.0 Type B

**Real-Time Clock Accuracy**

- **Accuracy**: ±4.8s per day typical at 25°C or ±12s per day at 60°C

**Terminal Block Options**

- **BX-RTB03S**: Terminal Block Kit, BX-RTB03S

**Dimensional Information**

- **Mounting Restrictions**: M5, M6, M8

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- **Port 1**: Cable Selection
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### Analog Input Specifications

**Inputs per Module**: 10

- **Input Voltage Range**: 5-28 VAC
- **AC Frequency**: 47–63 Hz
- **Nominal Voltage Rating**: 120–240 VAC
- **Maximum Voltage**: 264 VAC RMS
- **Input Impedance**: 15kΩ
- **Resolution**: 16-bit @ ±10V, ±20mA
- **Settling Time**: < 1ms
- **Maximum Current Load Impedance**: 500Ω

### Analog Output Specifications

**Outputs per Module**: 4

- **Output Voltage Range**: ±20mA, 4-20 mA
- **Minimum Voltage Load Impedance**: 1kΩ
- **Maximum Output Current**: 2A
- **Minimum Output Current**: 0.1mA @ 24VAC/DC

### Discrete Input Specifications

- **Input Type**: AC
- **Total Inputs per Module**: 8
- **Common**: True
- **Nominal Voltage Rating**: 120–240 VAC
- **Input Voltage Range**: 85–264 VAC
- **AC Frequency**: 47–63 Hz
- **Input Current (typical)**: 9mA @ 120VAC, 13mA @ 220VAC
- **ON Voltage Level**: > 85 VAC
- **OFF Voltage Level**: < 40 VAC

### Discrete Output Specifications

- **Output Type**: Relay (A-GPST)
- **Total Outputs per Module**: 4
- **Common**: True
- **Nominal Voltage Rating**: 120–240 VAC
- **Maximum Voltage**: 264 VAC RMS
- **Input Impedance**: 1kΩ
- **Status Indicators**: Logic Side, Green

### Analog Current Sinking Input Circuits

- **2-Wire Transmitter**
- **3-Wire Transmitter**

### Analog Voltage Input Circuits

- **4-Wire Transmitter**

### Analog Output Wiring

- **Current Source Output**
- **Voltage Output**

### Analog Voltage Input Circuits

- **4-Wire Voltage Transmitter**
- **3-Wire Voltage Transmitter**

### I/O Wiring

### Supply Power Wiring

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR IN+</td>
<td>PWR IN–</td>
</tr>
</tbody>
</table>

**NOTE**: For all analog voltage inputs, analog outputs, and current loops.