**CPU Specifications**

- **Program Memory Type**: FLASH memory
- **User Data Memory Type**: Battery-backed RAM, User configurable
- **Floppy Drive**: Optional, 3.5" 1.44 MB floppy diskette
- **Expansion Modules**: 3 expansion modules max
- **Real-Time Clock Accuracy**: ±8s per day max at 60°C
- **Power Supply**: 10V to 30V DC input
- **CPU Specifications**: 32-bit microcontroller

**Terminal Block Connector Specifications**

- **Part Number**: BX-RTB18
- **Model**: Terminal Block Kit
- **Connectors**: 90° degree screw type, includes (3) 3-pin plugs, (2) 5-pin plugs
- **Input Voltage**: 10-30 VDC
- **Output Voltage**: 5VDC
- **Current**: 5A
- **Wire Gauge (Single Wire)**: 28-16 AWG
- **Wire Gauge (Dual Wire)**: 22-20 AWG

**CPU Status Indicators**

- **Indication Status Description**
  - **PWR**: Off: Base Power OFF
    - **Green**: Power ON
  - **RUN**: Off: CPU in STOP Mode
    - **Green**: CPU is in RUN Mode
  - **Yellow**: Flashing
    - **Memory**: Memory full
    - **Error**: CPU is in an error state
  - **ERROR**: Off: CPU is functioning normally
    - **Red**: CPU Fatal Hardware Error or Software Watchdog Error

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

- **Description**: Non-isolated serial port that can communicate via RS-232 or RS-485 (software selectable), includes ESD protection and built-in surge protection
- **Port Name**: RS-232, RS-485
- **Transfer Rate**: 9600 bps, No Parity, 8 Data Bits, 1 Stop bit
- **TX/RX**: RXD (Red), TXD (Green)
- **Port Type**: 9-pin D-sub male, 25-pin Female

**Built-in Ethernet Specifications**

- **Port Name**: ETHERNET
- **Description**: Standard transformer isolated Ethernet port with built-in surge protection
- **Transfer Rate**: 100Base-TX (LED) and 10MBase (Green LED)
- **Transfer Mode**: 10MBps, full-duplex, media-independent interface, TXD and RXD are connected
- **Supports Protocols**: Do-more Protocol, EtherCAT, EtherCAT (Slave), EtherCAT (Master), MODBUS TCP

**Safety Information**

- **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 this 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**

- **Technical Support at 770-844-4200.**

- **Important Note**: When using RS-485, use a terminator resistor in both input and output cables.

**Do-more BRX Manual**

- **Available at**: www.automationdirect.com/pn/doc/BX-DM1-18ER3-D

**BRX MPUs with Do-more!**

- **DM1 Technology**
**Discrete Input Specifications**

- **Input Type**: Sink/Source
- **Total Inputs per Module**: 10
- **High Speed**: 10 (All inputs may be used as standard inputs)
- **Commons**: 3 (3 points/common) isolated
- **Nominal Voltage Rating**: 12–24 VAC/DC
- **Input Voltage Range**: 3–30 VAC/DC
- **Maximum Voltage**: 30 VAC/DC
- **DC Frequency**: 0–20kHz – High Speed
- **Minimum Pulse Width**: 0.5 μs – High Speed
- **AC Frequency**: 10–120Hz – AC filter must be set in software for AC operation
- **Input Impedance**: 1kΩ
- **Input Current (Typical)**: 8mA
- **Input Current (Max)**: 12mA @ 30 VAC/DC
- **OFF Current**: 2 mA
- **ON Voltage Level**: < 0.3 VAC/DC
- **Status Indicators**: Logic Side, Green

**Discrete Output Specifications**

- **Output Type**: Relay Form A (SPST)
- **Total Outputs per Module**: 8
- **Current per common**: 1A
- **Maximum current per common**: 2A
- **Nominal Voltage Ratings**: 12–48 VDC, 24–240 VAC
- **Operating Voltage**: 5–30 VAC/DC
- **Voltage**: 24VDC, 24VAC
- **Minimum Output Current**: 2mA @ 24VDC
- **Maximum Output Current**: 2mA
- **Maximum Leakage Current**: Typ (DC) 30μA (AC) due to RC snubber
- **Maximum Switching Frequency**: 10kHz
- **Status Indicators**: Logic Side, Green

**Analog Input Specifications**

- **Input Channels**: 1
- **Input Voltage**: ±10V, ±5V, 0–10V, 0–5V
- **Input Current**: ±20mA, 4–20 mA
- **Input Impedance Voltage**: 1kΩ
- **Input Impedance Current**: 2400Ω

**Analog Output Specifications**

- **Output Per Module**: 1
- **Output Voltage**: ±5V, ±10V, 0–10V, 0–5V
- **Minimum Load Impedance**: 1kΩ
- **Maximum Load Impedance**: 500Ω
- **Output Current**: ±10mA, ±20mA
- **Output Current**: ±20mA, 4–20 mA
- **Input Impedance Voltage**: 1kΩ
- **Input Impedance Current**: 2400Ω

**High Speed Input (HSI) Functions**

- **Input Function**: High-Speed Counting
- **Input Response**: Up counters
- **Down Counting**: 2
- **Pulse/Decimation (Discrete counters)**: 2
- **Quadrature (A and B) counters**: 1
- **Single Input (Edge) timers**: 1
- **Interval**: 1
- **Measurement**: 1
- **Preset tables**: Programmable mask selection
- **Status Indicators**: Logix Side, Green

**Analog Output Wiring**

- **Current Source Output**: 4-Wire Transmitter
- **Voltage Output**: 4-Wire Transmitter

**Discrete Input Wiring**

- **Sinking Input**: N
- **Sourcing Input**: N

**Supply Power Wiring**

- **AC Power**: N
- **DC Power**: N

**Note**: An Edison S500-32-R 0.032A fast-acting fuse is recommended for all analog voltage inputs, analog outputs, and current loops.