Your Automation Foundation™

CPU Specifications

- User Data Memory Type: Battery Backup RAM, User configurable
- Pluggable Option Module: RS-232, RS-485, Ethernet 10/100 BASE-T (1 Mbps through max), USB 2.0 Type B
- Expansion Modules: 2 expansion modules max
- Real-Time Clock Accuracy: ±8s per day max at 60°C
- Programming Software: Do-more Designer – Ver. 2.0 or higher
- Programming Cable Options: BX-PGM-CBL
- Custom Label Window Size: 0.75” x 2.25” (19mm x 57.2mm)

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.
- Supported Protocols: Do-more Protocol (Default), Modbus RTU (Master & Slave), K-Sequence (Slave)
- Data Rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and <± 10%
- Default Settings: RS-232, 115200 bps, No Parity, 8 Data Bits, 1 Stop Bit, Station #1
- Port Type: 3-pin terminal strip, 3.5mm pitch
- Port Status LED: Green LED is illuminated when active for TXD and RXD
- Port Status LED: Fiber LED is illuminated when active for TXD and RXD
- Cable Recommendations: RS-232 use L19772-XXX from AutomationDirect.com
- RS-485 use L19872-XXX from AutomationDirect.com

CPU Mode Switch Functions

- RUN position CPU is forced into RUN Mode if no errors are encountered.
- TERM position CPU, PROGRAM and DEBUG modes are available. In this position, the mode of operation can be changed through the built-in RS-232 port.
- STOP position CPU is forced into STOP Mode.

General Specifications

- Operating Temperature: 0°C to 50°C (32°F to 140°F)
- Storage Temperature: -30°C to 80°C (-22°F to 176°F)
- Humidity: 5 to 95% (non-condensing)
- Environmental Air Flow: 0.5 cubic meters per minute permitted
- Vibration: B/C00886-2 (Test Fu)
- Shock: B/C00886-27 (Test Eu)
- Pressure Type: Open Equipment
- Agency Approvals: UL File E169869 Canada and USA
- CE Compliant EN50131-2
- EU Directive: See the “EU Directive” topic in the Help File

Power Supply Specifications

- Nominal Voltage Range: 12-24 VDC
- Input Voltage Range (Tolerance): 10-36 VDC
- Maximum Input Voltage Ripple: 4%
- Maximum Input Power: 30W
- Start-Inrush Current: 5A, 2ms
- Input Voltage Range (Tolerance)*: 30W
- Nominal Voltage Range*: 1-247 VAC

Dimensions

- Width (DIN Rail): 3.59” [94.6mm]
- Height: 2.25” (57.2mm)
- Depth: 3.47” [88.1mm]
- Weight: 422g (1.49 lb)

Military Specifications

- Voltage Withstand: 1500V (dielectric)
- Heat Dissipation: 50W (4.5A)
- Internal Input Protection: Reverse Polarity Protection and Undervoltage
- Input Overvoltage: N/A

Contactor Specifications

- Minimum Wire: 24 AWG
- Maximum Wire: 16 AWG
- Screw torque: 0.45 N·m (0.5 ft·lb)
- Pitch: 4.5mm
- Width: 5mm
- Length: 5mm

Expansion Module Specifications

- Equivalent Dinkle part #: BX-DM1E-36ED13-D
- Wire Strip Length: 0.244” (6.2mm)
- Pinout: 4-pin terminal strip, 3.5mm pitch

Built-in Ethernet Specifications

- Port Name: ETHERNET
- Description: Standard switched Ethernet port with built-in surge protection.
- Transfer Rate: 100Mbps (Yellow LED) and 10Mbps (Green LED)
- Port Status LED: Green LED is illuminated when CLR is established. LED flashes when port is active (ACT)
- Supported Protocols: Do-more Protocol, Ethernet Remote I/O, Modbus TCP/IP, Modbus TCP/IP, Profinet (EtherCAT), Profinet (EtherCAT), Ethernet Remote I/O, Modbus TCP/IP, Modbus TCP/IP, Profinet (EtherCAT), Profinet (EtherCAT)
- Cable Recommendations: Please see AutomationDirect.com

Optional Ethernet Modules

- Ethernet Port Numbers: M0855/TCP/IP, EthernetRemote I/O
- Host ECM: 4418, TCP
- Do-more Protocol: 20744, LCP

CPU Status Indicators

- Power: OFF = Node Power OFF
- Boot: OFF = Boot Complete
- RUN: OFF = CPU is STOP Mode
- RXD: OFF = CPU is in STOP Mode
- TXD: OFF = CPU is STOP Mode
- Error: OFF = CPU is functioning normally
- Replace: OFF = CPU Fault samo-

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 Tech Support at 770-944-4200.

This publication is based on information that was available at the time it was printed. At AutomationDirect.com, we constantly strive to improve our products and services, so we reserve the right to make changes to the products and/or publications at any time without notice and without any obligation to notify you of these changes. This publication may also discuss features that may not be available in certain revisions of the product.

**Terminal and Front Panel Layout**

- **CPU Mode Switch**
- **Battery Replacement**
- **I/O Terminal Blocks sold separately.**
  (See Terminal Block Connection Options table).

**Discrete Input Specifications**
- **Input Type**
- **Total Inputs per Module**
- **Commons**
- **Nominal Voltage Rating**
- **AC Frequency**
- **Minimum Pulse Width**
- **Input Impedance Voltage Modes**
- **Input Impedance Current Modes**

**Discrete Output Specifications**
- **Output Type**
- **Total Outputs per Module**
- **Commons**
- **Maximum Current per Common**
- **Nominal Voltage Rating**
- **Maximum Voltage**
- **Maximum Output Current**
- **Maximum Leakage Current**
- **Maximum Switching Frequency**
- **Status Indicators**

**Analog Input Specifications**
- **Input per Module**
- **Input Voltage Range**
- **Input Current Range**
- **Rejection**
- **Conversion Time**
- **Input Impedance Voltage Modes**
- **Input Impedance Current Modes**

**Analog Output Specifications**
- **Analog Mode**
- **Output Voltage Range**
- **Minimum Voltage Load Impedance**
- **Output Current Range**
- **Maximum Current Load Impeance**
- **Sensing Time**

**High Speed Input (HSI) Functions**
- **Input Function**
- **Input Required**
- **16 Total – 8 High Speed (Y0..X7)*
- **Up counters**
- **Frequency**
- **Position Scaling**
- **Maximum Loadage Current**
- **Frequency**
- **Status Indicators**

**High Speed Output (HSO) Functions**
- **Analog Mode**
- **Function Required**
- **Pulse Mode**
- **Axis Profile**

**Analog Current Sinking Input Circuits**
- **2-Wire Transmitter**
- **3-Wire Transmitter**
- **4-Wire Transmitter**

**Analog Output Wiring**
- **Current Source Output**
- **Voltage Output**
- **4-Wire Voltage Input Transmitter**
- **3-Wire Transmitter**

**I/O Wiring**
- **Discrete Input Wiring**
- **Discrete Output Wiring**

---

**Analog Voltage Input Circuits**
- **2-Wire Transmitter**
- **3-Wire Transmitter**

---

**Note:**
- Do not remove compartment are used for debug and future battery removal; reuse tape from the original battery or add new tape.

---

**Tech Support**
770-844-4200

**Sales**
800-633-0405