### Power Connection

**AC MAINS**

- **BLACK HOT**
- **WHITE NEUTRAL**
- **GREEN EARTH GROUND**

**USE COPPER CONDUCTORS ONLY**

115/230 VAC  
50/60 Hz, 6 VA

**LINE VOLTAGE SELECTOR**

- **115V**
- **230V**

**24 VDC**

**Use care when attaching power wiring (AC or DC) to these connectors. They are not to be used as a strain relief. The connectors cannot withstand excessive bending or flexing.**
### Signal Connection

#### POINT TO POINT CONFIGURATION

![Diagram](image1.png)

**RS485 Connections**

- **RS485 Network Cable**
  - From initiating controller
- **RS485 Network Cable Extension**
  - (Electrically Isolated Side)

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#### DAISY CHAIN CONFIGURATION

![Diagram](image2.png)

**RS485 Connections**

- **RS485 Network Cable Extension**
  - (Electrically Isolated Side)

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### Introduction

The b-Link-F converts RS-485 to fiber optics for use with MS/TP networks. You can set up b-Link-Fs in two possible configurations:

- Point-to-point configuration
- Daisy chain configuration

When you use the daisy chain configuration, you can have an MS/TP connection on the RS-485 port of each b-Link-F which allows you to expand the MS/TP network.

**Note:** You can daisy chain up to 10 b-Link-Fs together.

### Wiring Rules

High voltage AC Power wiring should be routed to the conduit opening nearest the AC power terminals.

Do not bundle or route AC Power wiring with low voltage input or output wiring.

Be absolutely certain that your installation complies with all aspects of the National Electric Code, NFPA 70. Be especially sure that your system is properly grounded.

### Cable Recommendations:

- **Fiber:** 62.5/125 Duplex Glass Fiber with ST-style connector
- **Max. attenuation allowable:** 13.5dB
- **RS-485:** 22-24 AWG bunched, twisted-pair cable with braided shield
- **Impedance:** 100 ohms
- **Capacitance:** 17 pF/ft or lower

### Building Ground Requirements

Be sure that all equipment from Schneider Electric is grounded to true earth ground. True earth ground protects the equipment from transients and other power surges in the area. Special studs are pressed into the inside of the chassis for use as a ground connection.

We cannot guarantee that the controller system will operate as documented without a properly grounded installation.

An example of a sub-standard ground is a galvanized steel cold water pipe. As the pipe corrodes, it does not act as a true ground. The corrosion acts as an insulator, raising the potential of the pipe with respect to the ground.

**Caution:** Earth ground (+) must be connected to avoid module damage.

### Communications Baud Rate & Integrity Test Switch

#### BAUD RATE

- To select a baud rate, slide the appropriate switch to the right.

**Warning:** Only one switch may be activated at a time. If no switch is selected unit will not operate.

**All connected network rates must be the same.** 300-2400 not valid for MS/TP.

#### TEST MODE

The Test Mode allows you to verify the integrity of the fiber optic connection between two b-Link-F units. Connect two b-Link-Fs together. Set the TEST switch to the right on both units. In this mode, the TD and RD indicators for both units should light indicating a good fiber connection.

### System Indicators/Controls

- **TEST** indicates that the connection integrity test mode has been enabled.
- **POWER** indicates that the proper power is applied to the unit.

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