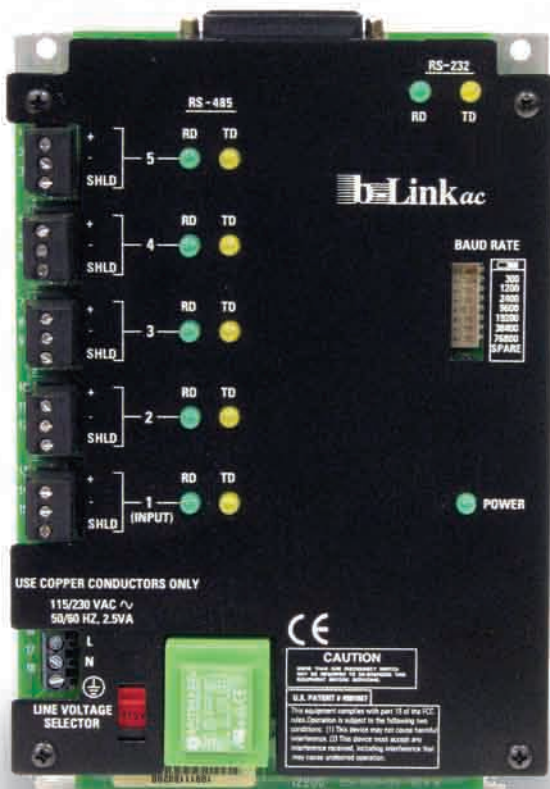


# Andover Continuum™

## b-Link Repeaters

The b-Link and b-Link-F electronic repeaters are multi-port active hubs for the BACnet MS/TP field bus, designed to transmit RS-485 or fiber signals beyond the 4,000-foot (1.2 km) limitation. Andover Continuum™ BACnet Family controllers support the BACnet MS/TP field bus.



# Andover Continuum b-Link Repeaters Features



## PRODUCT AT A GLANCE

### b-Link:

- Five-Port Active Hub for MS/TP Field Bus
- RS-485 to RS-232 Conversion for Short-Haul Modems

### b-Link-F:

- Dual Fiber Optic Ports for Daisy Chain Configuration
- RS-485 to Fiber Optic Conversion Provides Noise-Free Communications

### b-Link and b-Link-F:

- AC and DC Models Available
- Extends Field Bus Communications Beyond 4,000 feet (1.2km) Standard Limitation
- Switch Selectable Baud Rates from 9600 to 76.8K Baud
- AC Input Voltage Switch-Selectable
- Full LED Indication for Easy Troubleshooting

The b-Link accepts twisted pair cabling at each of its five RS-485 ports. A single MS/TP input supplies up to four RS-485 output signals, or “spoke.” Each spoke has the drive capability of up to 4,000 feet (1.2km) and up to 76.8K baud. A maximum of 127 devices may be attached to a single b4920 or bCX1 System Controller/BACnet Router.

For conversion applications, the same RS-485 input can become a single RS-232 output for use with third-party short haul modems. (The four RS-485 output ports are still available when using the RS-232 port.) Data transmission speeds for the b-Link are switch-selectable from 9600 to 76.8K baud.

The b-Link-F has one RS-485 port and two duplex fiber ports, and allows point-to-point chaining or stacking for use in hub applications. Using two b-Link-Fs with fiber, you can connect BACnet MS/TP directly between two buildings without the worry of electrical noise interference. Data Transmission speeds for the b-Link-F are switch-selectable from 9600 to 76.8K baud.

The b-Link and b-Link-F simplify network troubleshooting by using LED indicators. These LEDs flash to indicate when the MS/TP field bus is receiving and transmitting RS-232, RS-485 or fiber signals.

### Enclosure

The b-Link is provided with a hinged, black 16-gauge, cold-rolled steel enclosure. Installation is simplified by the use of detachable connectors for all RS-485 ports or available as an open class solution without the enclosure.

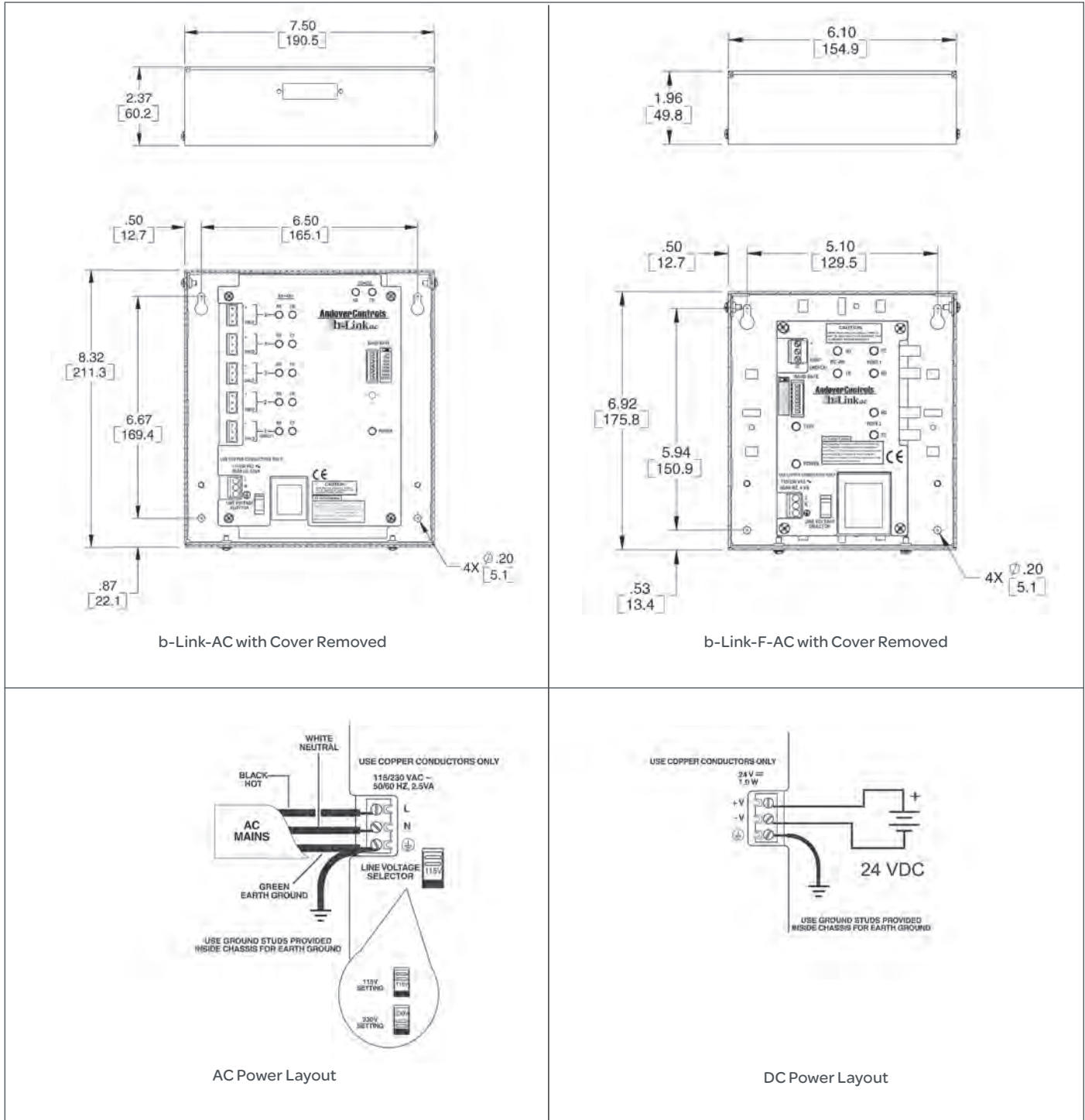
### AC and DC Models Available

The b-Link is available in two models: The AC model is powered from a standard 115/230 VAC source. A 24 VDC model is also available for applications where battery-backed operation is required.

# Andover Continuum b-Link Repeaters

## Features (continued)

### Dimensional Drawings



# Andover Continuum b-Link Repeaters Specifications



## b-Link Repeaters

### Electrical

#### Power

115/230 VAC, 50/60 Hz, switch-selectable, or 24 VDC

#### Power Consumption

6 VA for AC model; 1.8 W for DC model

#### Overload Protection

Fused with 2 A fuse. MOV protected.

### Mechanical

#### Operating Environment

32–120°F (0–49°C), 10–95% RH (non-condensing)

#### Size

6.92" H x 6.100" W x 1.960" D (176H x 155W x 50D)mm

#### Weight

2.74 lbs. (1.24 kg)

#### Enclosure Type

NEMA 1-style 16-GA, C.R.S. enclosure, flammability rating of UL94-5V, IP 20

### Communications

#### Communications Speed

9600 to 76.8K bps, switch-selectable

#### Propagation Delay

RS-485 to fiber port = 0.5 μs max. (not including media delay)

Fiber port to fiber port = 0.5 μs max. (not including media delay)

### Bus Length

RS-485 not to exceed 4000' (1.2 km).

Fiber run not to exceed 12 dB fiber loss including connectors.

Note: When connected in series, the maximum propagation delay from farthest node to farthest node (including media propagation delay) must not exceed 140μs

### Bus Media

BACnet: twisted, shielded pair, approved, low capacitance cable  
Fiber Optic: 62.5/125 duplex glass fiber optic cable

### Pin Assignments for RS-485 to RS-232 Signal

Pin 1: Chassis Ground  
Pin 2: Transmit Data  
Pin 3: Receive Data  
Pin 4: RTS always high (9V)  
Pin 7: Signal Ground  
Pin 9: 9V/(1) 5k W  
Pin 10: 9V/(1) 5k W  
Pin 20: DTR always high

### Connections

#### Power

AC: Three-position barrier strip  
DC: Three-position fixed terminal block

#### RS-485 Ports

Removable two-piece terminal strips

#### Fiber Optic

Two pairs of fiber optic transceiver interfaces (ST)

### User LEDs/Switches

#### Status Indicator LEDs

POWER	Power is ON
TEST	Test Mode
Fiber Optic	
PORT 1-2 TDs	Transmit Data
Fiber Optic	
PORT 1-2 RDs	Receive Data
RS-485 COMM TD	Transmit Data
RS-485 COMM RD	Receive Data

#### Switches

Test  
Baud Rate

### Agency Listings

UL/CUL 916, FCC CFR47 part 15, ICES-003, EN55022, AS/NZS 3548, VCCI Class A, CE

### Options

AC or DC Power  
DIN Rail Kit (P/N:DIN-MTG-KIT)

Part Number	Description
B-LINK-AC	B-LINK, AC
B-LINK-AC-OP	B-LINK-AC, OPEN CLASS
B-LINK-AC-S	B-LINK, AC, SMK
B-LINK-DC	B-LINK-DC
B-LINK-DC-OP	B-LINK, DC, OPEN CLASS
B-LINK-DC-S	B-LINK, DC, SMK
B-LINK-F-AC	B-LINK, AC, FIBER
B-LINK-F-AC-S	B-LINK, AC, FIBER, SMK
B-LINK-F-DC	B-LINK, DC, FIBER
B-LINK-F-DC-S	B-LINK, DC, FIBER, SMK

On October 1st, 2009, TAC became the Buildings Business of its parent company Schneider Electric. This document reflects the visual identity of Schneider Electric, however there remains references to TAC as a corporate brand in the body copy. As each document is updated, the body copy will be changed to reflect appropriate corporate brand changes.

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