Overview

When an HVAC communications network has to travel between different buildings BAPI recommends the use of fiber optic cable. Because fiber optic cable is not electrically conductive it is unaffected by electrical disturbances such as lightning strikes, radio transmitters, electrical power distribution system ground variations, etc.

Once inside the building envelope the fiber optic transceiver, BA/FOX, converts the fiber optic signal into RS-485 for distribution to controllers in that building. The BA/FOX accepts the fiber cable on connectors along its front edge and RS-485 data on the connector that plugs into the communications repeater backplane, BA/RBP. The BA/FOX converts the RS-485 data on the back plane to a fiber optic signal and sends it out on the transmit fiber cable. The BA/FOX converts the data on the receive fiber into an RS-485 signal on the backplane. Each BA/FOX consumes one unit load on the RS-485 bus.

A green power LED shows that the unit has 12 VDC power. One red LED for each fiber cable connection will flash when data is transmitted or received.

Mounting

The BA/FOX plugs into a BA/RBP as shown in Figure 1.

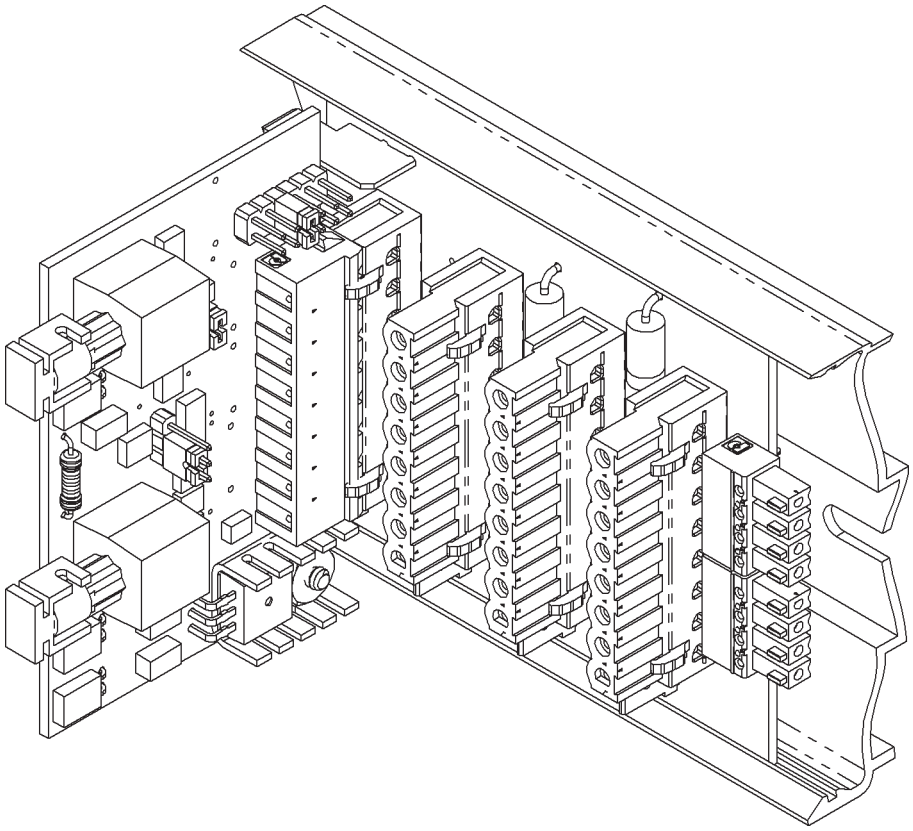

Figure 1 BA/FOX plugging into a BA/RBP

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Termination

Connect your transmit and receive fiber optic cable to the emitter and receiver as shown in Figure 2. The receive line of one BA/FOX communications repeater is connected to the transmit line of another.

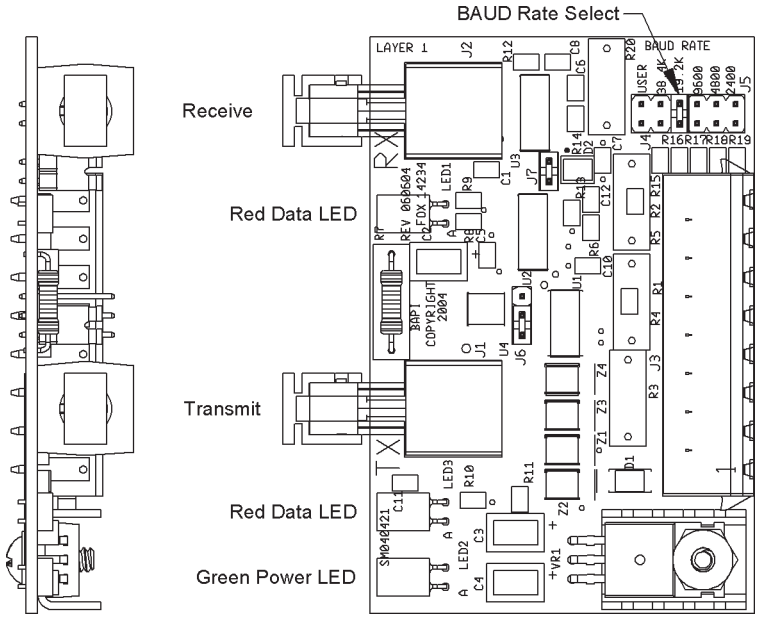

Figure 2 BA/FOX component identifier

Troubleshooting

Possible Problems:	**Possible Solutions:**
Power LED L1 does not light	- Check to see that the BA/FOX is firmly inserted into the backplane - Check to see if the power cable is firmly inserted into the backplane. - Check to see if the 3312VC is working correctly - Check to see if the power to the PS17 supplying the 3312VC is turned on
Data LEDs do not blink	-Check fiber optic cable for proper termination -Check RS485 communications link for proper termination -Check to see if Baud rate jumpers are properly set

Specifications

Power Voltage	11 to 13 VDC (from BAPI BA/3312VC)
Power Current	250mA maximum (3VA max)
Communications rates	2400, 4800, 9600, 19.2K, and 38.4K Baud
Network Load	1 unit load (RS-485 side)
Optical Network Length	6560ft (2000 meters)
RS-485 Network Length	4000ft (1.2Km)

Specifications subject to change without notice.