

Tandem BACnet Installation Guide



Quick Start

Installation

This Quick Start Guide will provide you with the information you need to get your new BACnet IO Board operational.

The BACnet IO Board enables communication between your Tandem lighting controller and any BACnet compatible building automation system. While the Tandem controller operates autonomously, lighting system information is also shared and may be controlled by the building automation system via BACnet.

BACnet IO Board

RS485
Terminals

Power LED

Status LED

ProtoCessor

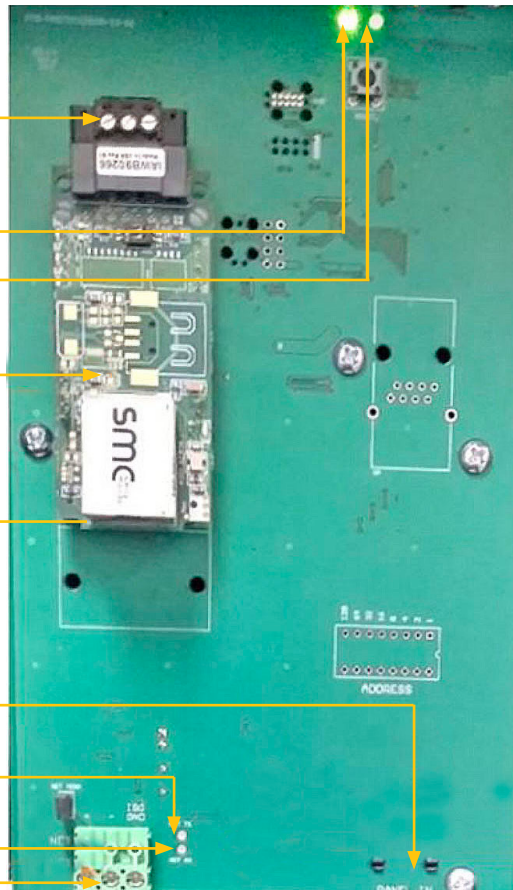
RJ45 Connector

Panel IN

NET TX LED

NET RX LED

Net Connection



Basic Operation

Power-Up

Power should be applied to the Tandem Master Board and BACnet IO Board at the same time. In typical hardware configurations, power is distributed from the Master Board to the BACnet IO Board via the RJ45 cable, so application of power occurs concurrently. However, if the BACnet IO Board is powered after the Master Board, the Tandem must be reset so proper communication can be established.

Initiate

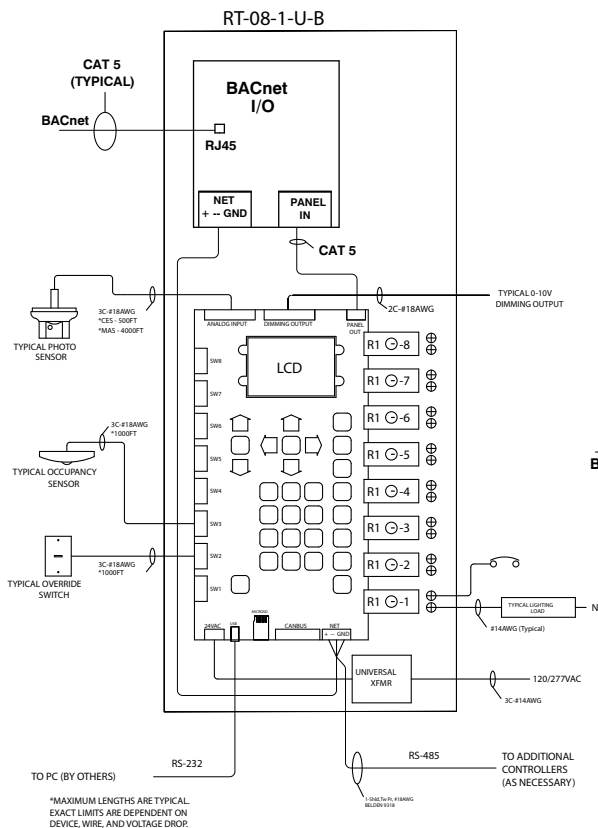
1. The BACnet IO Board Status LED will fast-flash (4 times per second) when the board is in initialization at power-up. This process can take 60 seconds or longer.
2. Upon power-up or reset, the NET TX and NET RX LEDs will flash briefly to indicate that communication between the Tandem Master Board and the BACnet IO board is being established. These indicators will also flash any time the Tandem Master Board is sending or receiving a message to/from the BACnet IO Board.
3. The BACnet IO Board Status LED will slow-flash (on 1 second, off 1 second), when ProtoCessor communication has been established and during subsequent normal operation.

Log in

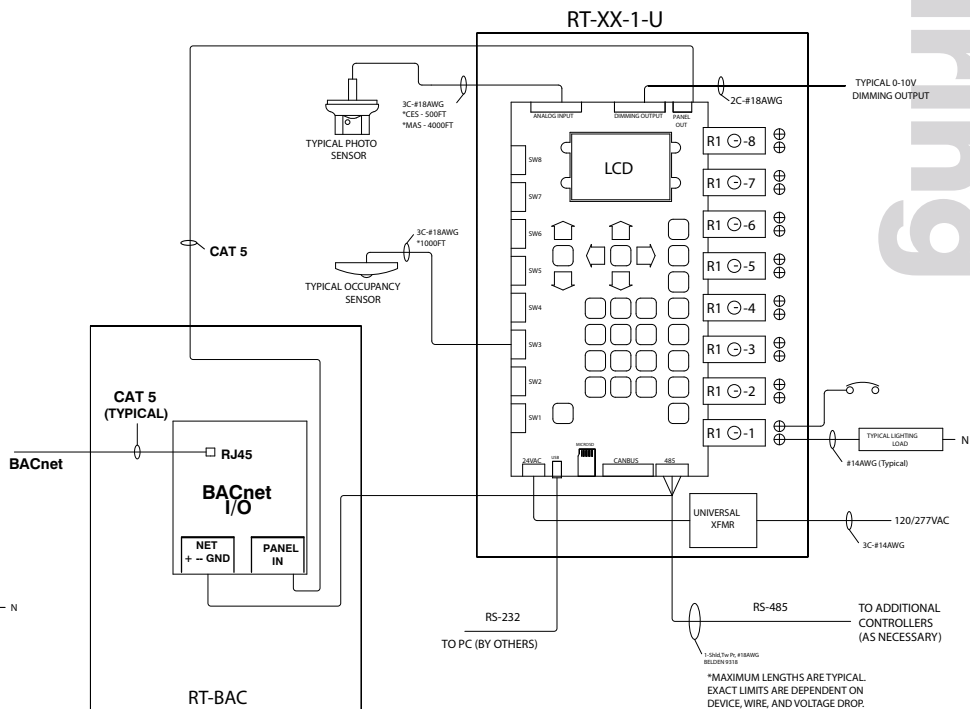
1. The first time the FieldServer GUI is opened in a browser, the IP Address for the gateway will appear as untrusted. When the Web Server Security Unconfigured window appears, select "Use HTTPS".
2. When the warning that "Your connection is not private" appears, click the "Advanced" button on the bottom left corner of the screen.
3. Additional text will expand below the warning, click the underlined text "192.168.1.24 (Unsafe)".
4. When the login screen appears, enter the Username (default is "admin") and the Password (found on the inside of the panel door).

BACnet Default Wiring Connections

Installed in a Tandem Panel



Installed in a Stand-Alone Panel



Once the integrator has mapped points for lighting control, the user will be able to command points at the panel and see status reflected in the BACnet system display and vice versa.

BACnet Basic Setting Changes – Override a Relay

1. Select the Relay from the Data Arrays list
2. Select Enable Data Editing
3. Change the value of the selected cell by overwriting the current value and then pressing Enter.

In the image below, **PNL 001_RELAY** has been selected.

[illegible]

In the image below, **Enable Data Editing** has been selected.

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PNL_001_RELAY

Data Array

Data Array Attrib

Name	Value
Data Array Name	PNL_001_RELAY
Data Format	Bit
Length in Items	48
Bytes per Item	0
Data Age	57:42.138s

Display Format Bit

Data Array

Offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Enable Data Editing

 **Powered By
FieldServer**

In the image below, the value for **Relay 1** has been changed.

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• PNL_001_BUTTON

• PNL_002_GROUP

• PNL_002_PATTERN

• PNL_002_RELAY

• PNL_002_DIMMER

• PNL_002_SWITCH

• PNL_002_BUTTON

• PNL_003_GROUP

• PNL_003_PATTERN

• PNL_003_RELAY

• PNL_003_DIMMER

• PNL_003_SWITCH

• PNL_003_BUTTON

• PNL_004_GROUP

• PNL_004_PATTERN

PNL_001_RELAY

Data Array

Data Array Attrib

Name	Value
Data Array Name	PNL_001_RELAY
Data Format	Bit
Length in Items	48
Bytes per Item	0
Data Age	21.997s

Display Format Bit

Data Array

Offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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