Trs Systems Inc.

Wireless Transmitters, Receivers and Sensors For All Your Applications

MOD9200BNT
Spread Spectrum BACnet® MSTP Network Transceiver

General Description

The Series 2000 BACnet® network transceiver utilizes reliable Spread Spectrum Mesh Network Radio technology. Together with other Trs wireless sensors and controls, the system can be used to transmit remote sensor readings, status/alarm indications, control signals and outputs wirelessly. It is compatible with any control panels or Automation systems that utilize BACnet MSTP (Master Slave Token Passing) communication protocol or interface. Up to 50 separate physical wireless sensor transmitters and/or wireless remote output (analog & digital) modules can be used with one MOD9200BNT Transceiver and up to 100 data points and 100 outputs can be monitored and controlled with one (1) MOD9200 Transceiver.

The maximum radio transmission distance is dependent on building type. The maximum open-air transmission distance is one mile. In a typical commercial building with steel I-beam construction, concrete floors with reinforcing rod, and metal stud walls, it can be expected that transmissions will penetrate vertically through floors and horizontally through 200 to 500 feet of walls, furniture and air.

Generally a wireless system will cover about three floors - one floor above and one floor below the transceiver location. In some buildings with favorable transmission characteristics the system may cover more floors.

Ordering Information

Model	Description
MOD9200BNT	BACnet MSTP Network Transceiver
MOD9200BNT-24DC	Same as MOD9200BNT except 24VDC power input

Features

- Receives input from up to 50 remote wireless sensor modules and/or wireless output modules (RD2402 & RD2431) per Transceiver
- Monitor up to 100 data points, control up to 50 wireless digital output points and 50 wireless analog output points per MOD9200BNT
- Multiple MOD9200 Transceivers can be used for large systems
- Simple PC Windows® based Transceiver setup tool
- RS485 physical connections
- Low battery and lost sensor alarm indication per data point (up to 100 total)
- Support BACnet MSTP (Master Slave Token Passing) Protocol
- Open System with BACnet
- Suitable for control or building automation applications
- Reliable Spread Spectrum mesh network technology

Specifications

Input Power:
- 24 VAC 60 Hz, 500 mA (nominal)
- 24VDC Model, 500 mA (nominal)

Dimensions:
- 8.8” x 4.7” x 2.25”

Operating Conditions:
- 32 F to 150 F
- 5 to 95% non-condensing

Case
- Flame Retardant ABS Plastic (Black)
- UL Flame Rating – 94-5VA

Network Connections:
- Protocol – BACnet MSTP
- Physical Layer - RS485, Twisted pair with shield
- Data rate – 76.8kbps

RF Characteristics
- Operating Frequency Channel
  - 902 – 928 MHz
- Receiver Sensitivity (avg. power)
  - –110 dBm

Approvals
- FCC Certified

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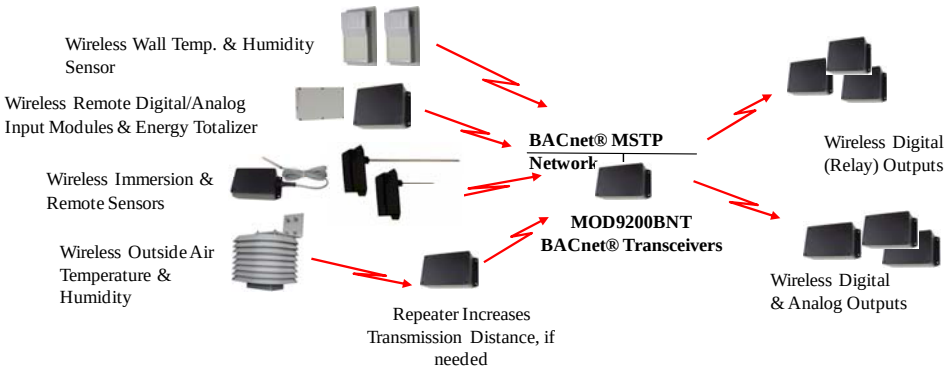

Sub-System Overview

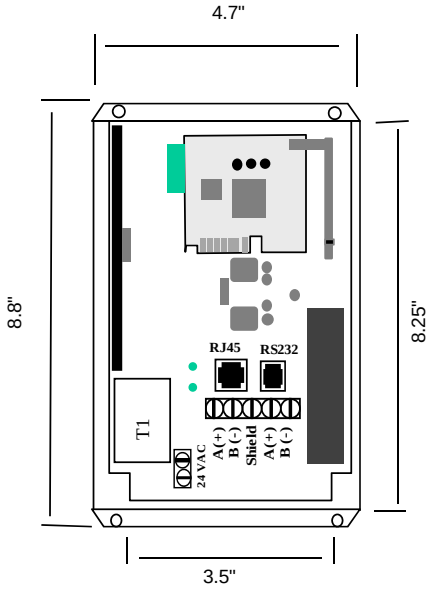

Figure 1

Wireless sensor transmitters should be installed within 200 to 500 feet of the MOD9000 transceiver.

RR252 signal repeaters can be installed as needed to increase transmission distance between sensors and transceivers.

⚠ CAUTION

Sensors, Repeaters and transceivers should NOT be installed in the following areas:

- **Inside metal enclosure/panel**
- **Inside or immediately next to elevator shaft/elevator banks**
- **In front of or immediately next to large trees or a large body of water**

Transmission distance and performance will be drastically reduced.

Installation

- Refer to the configuration setup instruction manual for configuration of the MOD9200BNT registers and BACnet input variables setup. A PC is required for the setup of the Transceiver.
- Choose a location close to the BACNet network connection and away from the ground.
- Mount the gateway on the wall using four #8 screws.
- 24 VAC Input - Connect 24VAC 60 Hz to the input terminals using 20 AWG wire (See Figure 1).
- MSTP (RS485) - Use 20 or 22 gauge shielded twisted pair wire to connect the Transceiver(Terminals A+ & B-) to the MSTP network (See Figure 1).

⚠ CAUTION

Do not use this product in any safety related applications where human life may be affected.

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