



MOD9200D Spread Spectrum MODBUS Network Transceiver

General Description

The Series 2000 MODBUS 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 and control signals wirelessly. It is compatible with any control systems or Programmable Logic Controller (PLC) panels that utilize MODBUS 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 MOD9200D 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 at least 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

<u>Model</u>	<u>Description</u>
MOD9200D	MODBUS Network Transceiver
MOD9200DE	MODBUS Network Transceiver with NEMA4 Enclosure
MOD9200D-DC	Same as MOD9000D except with 9 to 24VDC power input

Features

- Receives input from up to 50 remote wireless sensor modules and/or wireless output modules (RD2402 & RD2432) per Transceiver
- Monitor up to 100 data points, control up to 50 wireless digital output points and 50 wireless analog output points per MOD9200 Transceiver
- Multiple MOD9200 Transceivers can be used for large systems
- Simple PC Windows® based MODBUS setup tool
- Ethernet TCP/IP, RS485 or RS232 physical connections
- Low battery and lost sensor alarm indication per data point (up to 100 total)
- Support TCP/IP MODBUS, RTU & ASCII Protocols
- Open System with MODBUS – No license or royalty required
- Suitable for building and industrial automation applications
- Industrial applications - interface to Programmable Logic Controller (PLC) and SCADA systems
- Reliable Spread Spectrum mesh network technology

Specifications

Power:

- 24 VAC 60 Hz, 400 mA (nominal)
- 9 to 24VDC model, 400 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:

- Ethernet – RJ45, Cat. 5 cable
- RS485 – Twisted pair with shield
- RS232 – Serial cable

RF Characteristics

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

Approvals

- FCC Certified

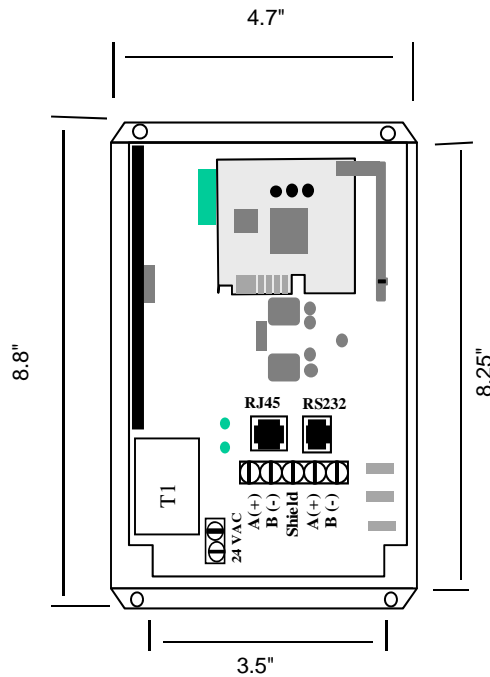


Figure 1

Installation

- Choose a location close to the computer, network hub or RS485 loop.
- Mount the gateway on the wall using four #8 screws.
- 24 VAC Input - Connect 24VAC 60 Hz input to terminals using 18 AWG wire (See Figure 1).
- TCP/IP - If using TCP/IP use RJ45 Category 5 Ethernet cable to connect the Gateway (J2) to the network hub or computer (See Figure 1).
- RS232 - If using RS232 RTU/ASCII use the MOD9200-RS232 cable (sold separately) to connect the Gateway (J1) to the serial port on the computer (See Figure 1).
- RS485 - If using RS485 RTU/ASCII use 18 gauge shielded twisted pair wire to connect the Gateway (Terminals A+ & B-) to the MODBUS master (See Figure 1).

Wireless sensor transmitters should be installed within 200 to 500 feet of the MOD9200 transceiver.

RR2552 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.

Refer to the configuration setup instruction manual for configuration of the MODBUS registers and logging setup. A PC is required for the setup of the Transceiver.

⚠ CAUTION

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

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