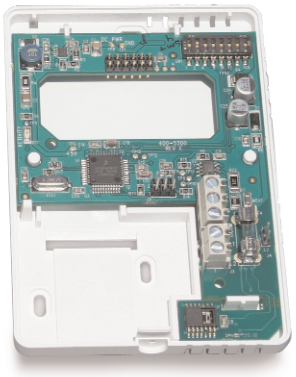
GreenTrol Automation, Inc.

# Model GS-200-N-RH/T

*Technical Data Sheet*

*Wall Mount Relative Humidity/Temperature BACnet/Modbus IAQ Room Sensor*

## *GreenSense 200 Series*

## APPLICATIONS

- Combined precision relative humidity and temperature sensor elements in a single instrument for integration into modern BAS systems; eliminates compatibility and communications issues typically encountered with individual sensors.

## SYSTEM FEATURES

- Integrated BACnet/Modbus RTU device with complement of precision sensing elements for RH and temperature measurement.
- Integral RS-485 BACnet MS/TP and Modbus RTU interface for interoperability with modern BAS devices.
- Microprocessor-based electronics with industrial grade integrated circuits.
- Convenient DIP switch user interface for simple field configuration.
- Low profile enclosure designed for standard single-gang electrical junction boxes or for surface mount applications.

## GS-200-N-RH/T OVERVIEW

GreenTrol introduces the GreenSense line of wall mounted IAQ room sensors, designed for monitoring indoor air quality in single sensor, dual sensor and triple sensor versions; Models GS-100, GS-200 and GS-300 respectively. Model GS-200-N-RH/T is an innovative precision relative humidity (RH)/temperature measurement device in a single device package with BACnet® MS/TP or Modbus® RTU interface for interoperability with virtually all modern building automation systems (BAS). Microprocessor-based electronics and industrial grade integrated circuits ensure exceptional accuracy and long term reliability. Simple field configuration is accomplished using DIP switches on the main circuit board, or through the BACnet and Modbus RTU interface. The GS-200-N-RH/T is housed in a low profile enclosure suitable for mounting on standard single gang electrical junction boxes or for surface mounting.

## GS-200-N-RH/T SPECIFICATIONS

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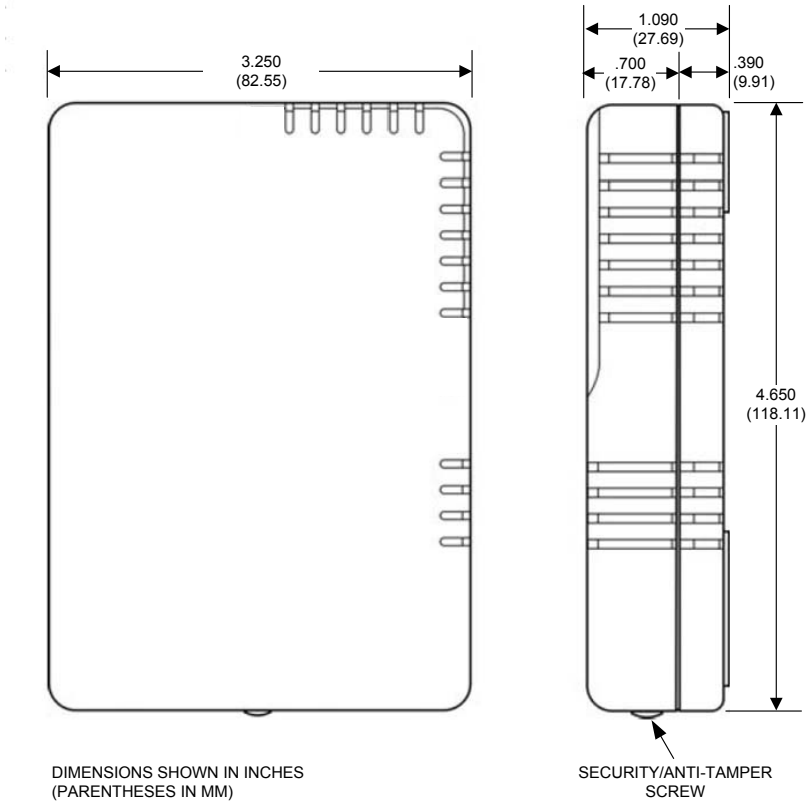
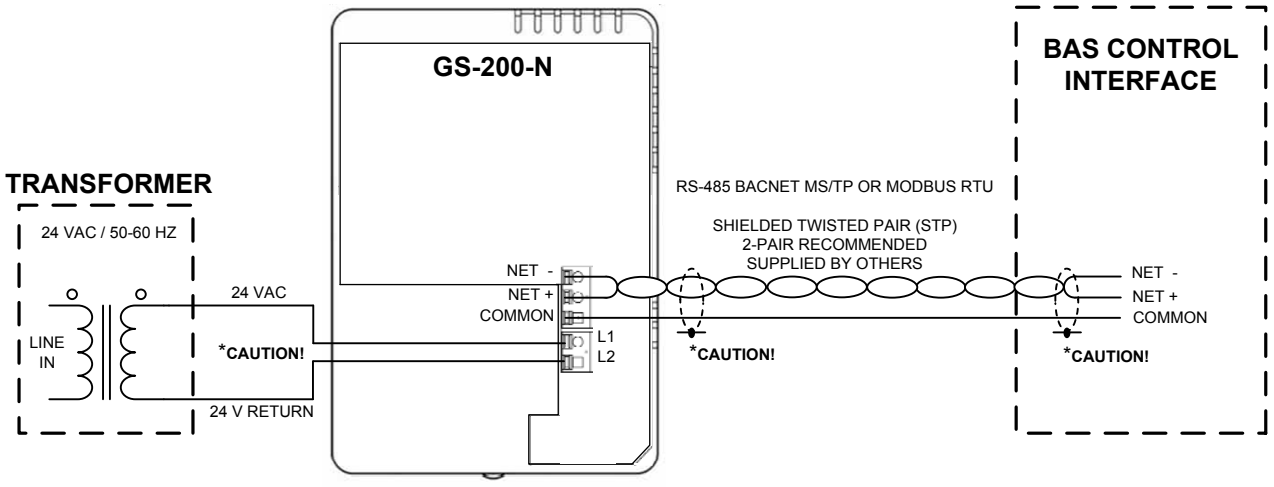
|---|---|
| Sensor Complement: | Precision sensing elements for relative humidity and temperature |
| RH Sensor Technology: | Planar Capacitive Polymer |
| RH Range: | 0 to 100% RH, non condensing |
| RH Accuracy: | ±2% @ 20% - 80% RH, 77°F (25°C)<br>±3%: <20% ->80% RH, 77°F (25°C) |
| RH Resolution: | 0.4% RH |
| Temperature Sensor Type: | Integral band gap PTAT |
| Temperature Range: | -58°F to 302°F (-50°C to 150°C) |
| Temperature Accuracy: | ±1.08°F at 77°F (±0.6°C at 25°C) |
| Temperature Resolution: | 0.36°F (0.2°C) |
| Signal Processing: | Microprocessor-based |
| Power Supply: | Integral power supply powered by 24 VAC (22.8-26.4VAC), 50/60 Hz source. Power supply features overvoltage, overcurrent, surge protection and brownout watchdog circuit |
| Enclosure: | Low profile wall mount enclosure, compatible with standard single gang electrical box and surface mount applications. |
| Dimensions: | 4.650 x 3.250 x 1.090 in (118.11 x 82.55 x 27.69 mm) |
| User Interface: | Convenient DIP switch selection |
| Output to Host Controls: | RS-485 BACnet MS/TP or Modbus RTU at 76.8K, 38.4K 19.2K or, 9.6 K baud rates |
| System Diagnostics: | On board LED status indicator |
| Operating Temp. Range: | 32° F to 122° F (0° C to 50° C) |
| Operating Humidity Range: | 0 to 95% RH, non-condensing |

## GS-200-N-RH/T MECHANICAL DETAIL




## GS-200-N-RH/T TYPICAL WIRING DIAGRAM




*** CAUTION!**

When multiple devices are powered from a common 24VAC power source, ensure that all devices are wired in phase with 24VAC power at L1, and 24VAC return at L2! Damage will occur to the GS-200-N and/or other devices if this caution is not observed.

On RS-485 networks that are ground referenced to earth, GS-200-N terminal L2 **may** also be connected to a wire ground referenced to earth. However, on RS-485 networks that are **not** ground referenced to earth, terminal L2 **must not** be connected to a wire ground referenced to earth. Damage may occur to the GS-200-N or other network connected devices if this caution is not observed.

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