Comimark LY499

Comimark SHT20 Temperature Humidity Sensor Modbus RS485 Transmitter User Manual

1. Product Overview

The Comimark SHT20 Temperature Humidity Sensor Modbus RS485 High Precision Transmitter is designed for accurate measurement of temperature and humidity. It transmits data using the Modbus RS485 protocol, making it suitable for integration into various environmental monitoring and control systems. This device provides stable and precise readings for efficient data collection and analysis.



Image 1: Comimark SHT20 Temperature Humidity Sensor with its connecting cable.

2. What's in the Box

- 1 x Comimark SHT20 Temperature Humidity Sensor Modbus RS485 High Precision Transmitter

3. Setup Instructions

Proper wiring and configuration are essential for the correct operation of the sensor.

3.1 Wiring Diagram

Connect the sensor according to the following wire color assignments:

- **RED:** +5V (Power Supply)
- **BLK:** COMMON (Ground)
- **YEL:** RS485 A+ (Data Line A)
- **WHT:** RS485 B- (Data Line B)



Image 2: Close-up view of the sensor's wiring connections.

3.2 Default Modbus Settings

The sensor comes with the following default Modbus communication settings:

- **Modbus Address:** 1
- **Baud Rate:** 9600

For any changes to the address configurations to take effect, the unit must be power cycled after the changes are applied.

4. Operating Instructions

The Comimark SHT20 sensor measures temperature in tenths of degrees Celsius and relative humidity in tenths of a percentage. For example, a reading of 276 for temperature indicates 27.6 °C, and 432 for humidity indicates 43.2% RH.

4.1 Modbus Communication

To communicate with the sensor and retrieve data, you will need to use standard Modbus commands. Detailed information on specific Modbus registers and commands for the SHT20 sensor can typically be found by searching online for "SHT20 MODBUS commands".

Important: When writing to a configuration register, ensure a delay (e.g., 500ms) before attempting to read another register. Failure to do so may result in read errors.

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Video 1: Demonstration of a Modbus RTU RS485 Temperature Humidity Sensor Probe in operation, showing real-time readings.

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Video 2: Overview of a Temperature Humidity Transmitter with RS485 Output, highlighting its features and functionality.

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Video 3: Detailed look at a Digital Temperature Humidity Transmitter with 4-20mA Current Output, showcasing its display and connections.

5. Maintenance

To ensure optimal performance and longevity of your Comimark SHT20 sensor, consider the following:

- **Environmental Considerations:** The sensor may generate internal heat, which can affect temperature readings, especially in still air. When powered, the temperature reading might rise by 4-8 °C within minutes. For accurate ambient temperature measurements, consider the sensor's operating environment and potential self-heating effects.
- **Cleaning:** Keep the sensor's protective filter clean and free from dust or debris to maintain accurate humidity readings.
- **Power Cycling:** Always power cycle the device after making any changes to its Modbus address or other configuration settings to ensure the new settings are applied correctly.



Image 3: Side view of the Comimark SHT20 sensor.

6. Troubleshooting

If you encounter issues with your Comimark SHT20 sensor, refer to the following common problems and solutions:

- **Inaccurate Readings:** If temperature or humidity readings appear incorrect, verify the wiring connections and ensure the sensor is placed in an environment representative of the desired measurement. Be aware of the sensor's self-heating effect, which can cause elevated temperature readings, especially if powered continuously in still air. Compare readings with a known accurate device if possible.
- **No Humidity Reading:** If the sensor fails to provide humidity data, check for physical damage to the humidity sensing element or excessive dust/debris on the filter.
- **Garbage Data for Temperature/Humidity:** This can indicate a communication issue. Double-check your Modbus wiring (A+ and B-), baud rate, and device address. Ensure proper delays are implemented between writing and reading Modbus registers.
- **Modbus Communication Failure:** If your Modbus master cannot control the scan or experiences intermittent communication, review your timing parameters. Some systems may require manually triggering the scan or specific

delays to ensure reliable data acquisition.



Image 4: Another view of the Comimark SHT20 sensor, highlighting its mounting features.

7. Specifications

Feature	Detail
Brand	Comimark
Model Number	LY499
Sensor Type	SHT20
Output Protocol	Modbus RS485
Item Weight	1.27 ounces

Feature	Detail
Package Dimensions	7.28 x 5 x 0.94 inches
Date First Available	September 9, 2019



Image 5: Top-down view of the Comimark SHT20 sensor.

8. Warranty Information

Specific warranty details for the Comimark SHT20 Temperature Humidity Sensor are not provided in the product information. Please refer to your purchase documentation or contact the seller directly for warranty inquiries.

9. Support

For technical assistance or further information regarding the Comimark SHT20 Temperature Humidity Sensor, please contact the seller or manufacturer through the platform where the product was purchased. Ensure you have your product

model number (LY499) and purchase details available when seeking support.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question