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DONGKER 1

DONGKER RS232 to LIN Bus Module / RS485 to UART Converter User Manual

Model: 1 | Brand: DONGKER

INTRODUCTION

The DONGKER RS232 to LIN Bus Module is an RS485 to UART converter designed for efficient communication monitoring and maintenance of LIN bus equipment. This module utilizes the SP232EEN+TJA1020 chip solution, ensuring pure and stable data signal conversion. It is an essential tool for professionals working with LIN bus systems, offering reliable performance for various applications.

SETUP

Follow these steps to set up your DONGKER RS232 to LIN Bus Module:

- Power Connection:** Connect a DC 12V power supply to the '12V' and 'GND' terminals on the module. Ensure the polarity is correct.
- LIN Bus Connection:** Connect your LIN bus lines to the 'LIN' and 'GND' terminals. The 'INH' terminal is for an inhibit signal, if required by your specific LIN bus setup.
- RS232 Connection:** Use a standard DB9 female connector to interface with your RS232 device. The module supports RS232 protocol for data communication.

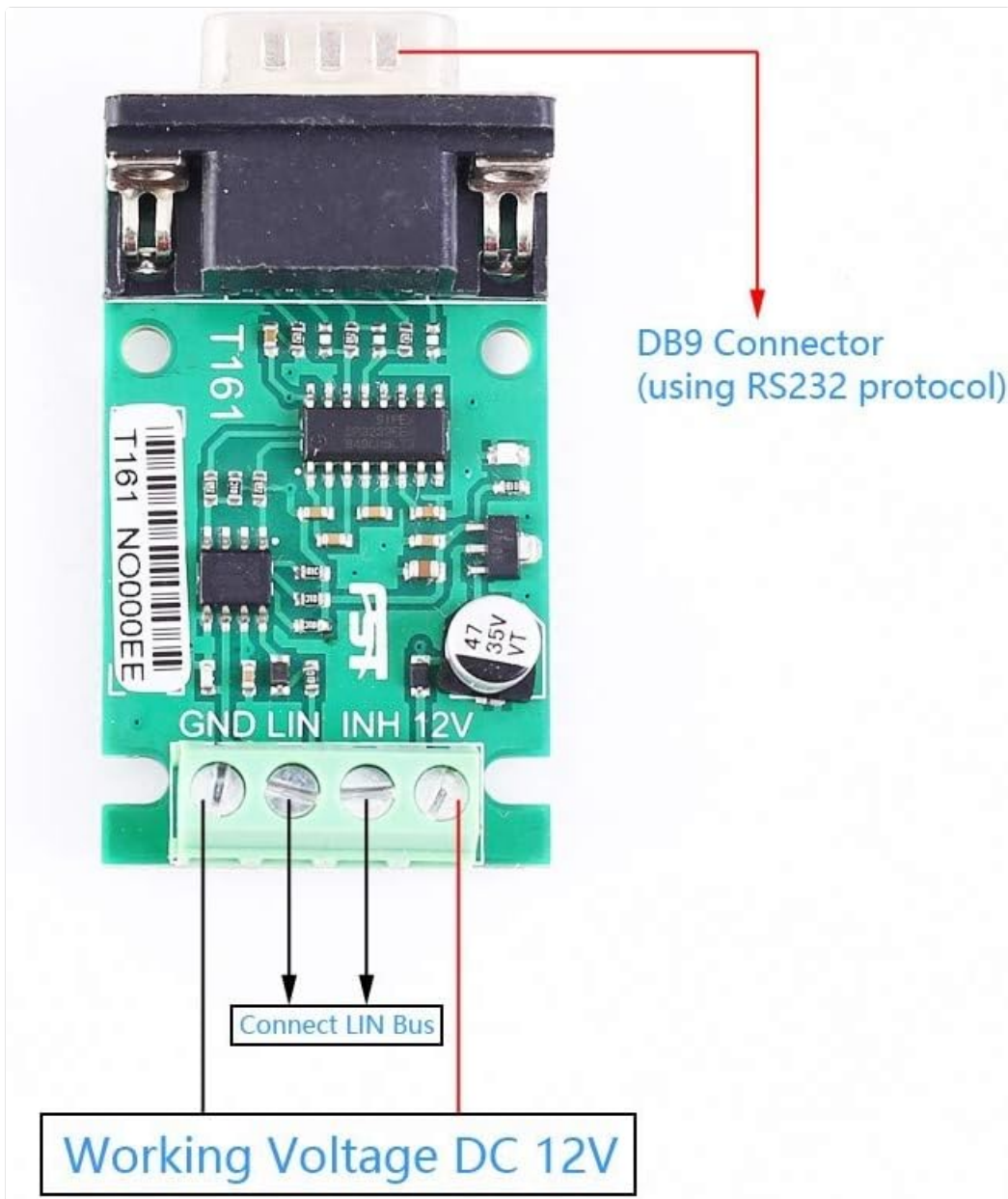


Figure 1: Connection diagram for the DONGKER RS232 to LIN Bus Module. This image illustrates the DB9 connector for RS232 communication, the terminals for LIN bus connection (GND, LIN, INH), and the 12V DC power input.

OPERATING INSTRUCTIONS

The DONGKER RS232 to LIN Bus Module is designed for pure data signal conversion, ensuring stable data transmission. Here are key operational aspects:

- **Power Indicator:** A green power indicator LED on the module shows its working status. When powered correctly, this LED will illuminate.
- **Baud Rate:** The module supports a measured baud rate of up to 57600bps. For optimal performance, the recommended maximum operating frequency is less than 20Kbps.
- **Level Conversion:** This module functions solely as a level conversion module. It does not perform any software protocol conversion or analysis.
- **Host Communication:** When connected to a computer's COM port, the computer can receive data from the module. However, the computer's COM port cannot generate the 13-bit start bit required by the LIN protocol, meaning it cannot act as a host to communicate with LIN slave devices directly through this module. For host functionality, connect the module to a development board such as a microcontroller.

MAINTENANCE

To ensure the longevity and optimal performance of your DONGKER RS232 to LIN Bus Module, follow these simple maintenance guidelines:

- Keep the module in a clean, dry environment, away from excessive dust, moisture, and extreme temperatures.
- Avoid exposing the module to strong electromagnetic fields.
- Handle the module with care to prevent physical damage to the connectors or internal components.
- Do not attempt to open the module casing, as this may void any applicable warranty and could damage the device.

TROUBLESHOOTING

If you encounter issues with your DONGKER RS232 to LIN Bus Module, consider the following:

- **No Power Indicator:** Check the DC 12V power supply connection and ensure it is providing the correct voltage and current. Verify polarity.
- **No Data Transmission:** Double-check all wiring connections, especially for the LIN bus and RS232. Ensure the baud rate settings on your connected devices match the module's capabilities (up to 57600bps, recommended < 20Kbps).
- **Computer Not Acting as LIN Host:** Remember that the module performs level conversion only. A standard computer COM port cannot generate the LIN protocol's 13-bit start bit. If host functionality is required, use a microcontroller or a dedicated LIN master device.
- **Intermittent Data:** Ensure all connections are secure and free from interference. Check for loose wires or damaged connectors.

SPECIFICATIONS

Feature	Specification
Product Name	RS232 to LIN Bus Module
Product Chip	SP232EEN + TJA1020
Working Voltage	DC 12V
Work Temperature	-25°C to 85°C
Work Humidity	5% to 95%RH
Measured Baud Rate	Up to 57600bps (Recommended max operating frequency < 20Kbps)
Functionality	Pure data signal level conversion
Dimensions	59mm x 31.5mm x 17mm

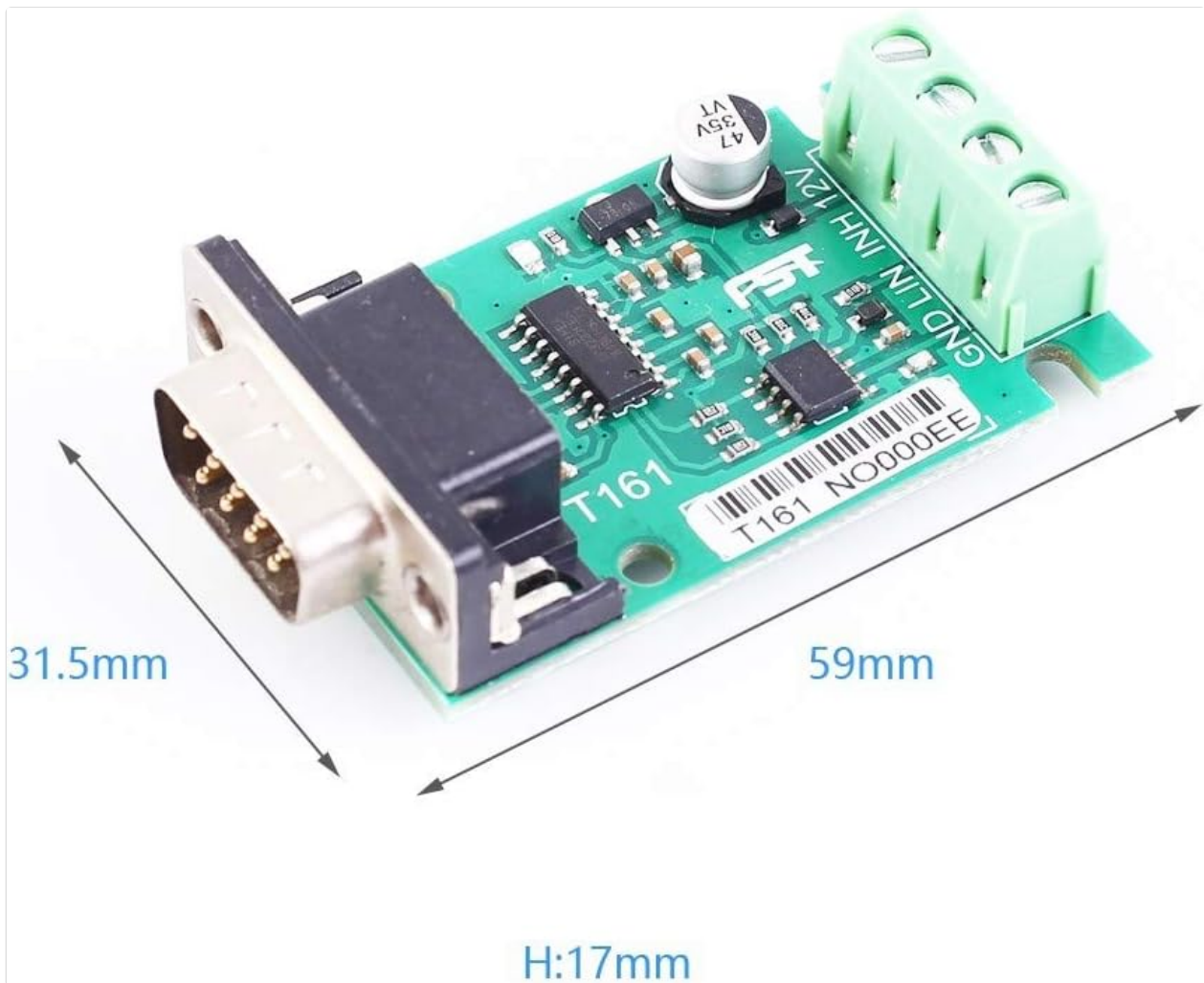


Figure 2: Physical dimensions of the DONGKER RS232 to LIN Bus Module, showing length (59mm), width (31.5mm), and height (17mm).

WARRANTY

DONGKER products are manufactured to high-quality standards. Please refer to the product packaging or the official DONGKER website for specific warranty terms and conditions. Keep your purchase receipt as proof of purchase for any warranty claims.

SUPPORT

For any questions, technical assistance, or support regarding your DONGKER RS232 to LIN Bus Module, please do not hesitate to contact DONGKER customer service. We are committed to providing high-quality service and support until you are satisfied.

Contact information can typically be found on the product packaging or the official DONGKER website.