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witmotion WT901C-RS485 Inclinometer Sensor

witmotion WT901C-RS485 Inclinometer Sensor User Manual

Contents

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Specifications:

- Product: WT901C(RS485) Inclinometer Sensor
- Manual Version: v23-0628
- Website: **www.wit-motion.com**
- Email: **support@wit-motion.com**

Product Information

The WT901C is a multi-sensor device detecting acceleration, angular velocity, angle, and magnetic field. It is suitable for industrial retrofit applications like condition monitoring and predictive maintenance. The compact design allows for easy integration into various systems, enabling users to address a wide range of use cases by interpreting sensor data using smart algorithms.

The WT901C, scientifically known as AHRS IMU sensor, measures 3-axis data.

Usage Instructions:

Warning Statement:
It is crucial to follow these warnings to prevent damage to the sensor:

- Do not exceed 5 Volts across the sensor wiring of the main power supply.
- Avoid direct connection between VCC and GND to prevent circuit board damage.
- For proper instrument grounding, use WITMOTION with its original factory-made cable or accessories.
- For secondary development projects or integration, use WITMOTION with its compiled sample code.

Use Instructions with PC:
Follow these steps for using the sensor with a PC:

- Access the software and driver download section.
- Refer to the quick-guide manual and teaching videos.
- Explore common software with detailed instructions.
- Utilize the SDK (sample code) and SDK Tutorial Documentation.

- Understand the communication protocol for proper integration.

Software Introduction:
The software provides various functions. Check the software menu for detailed functionality.

FAQ:

Q: What should I do if I encounter technical problems?
A: If you face technical issues or need additional information,contact our support team at **support@wit-motion.com** for assistance.

Tutorial Link
WT901C-RS485 – Google Drive

Link to instructions DEMO:

TMOTION Youtube Channel
WT901C RS485 Playlist

If you have technical problems or cannot find the information that you need in the provided documents, please contact our support team. Our engineering team is committed to providing the required support necessary to ensure that you are successful with the operation of our AHRS sensors.

Contact

Technical Support Contact Info

Application

- AGV Truck
- Platform Stability
- Auto Safety System
- 3D Virtual Reality
- Industrial Control
- Robot
- Car Navigation
- UAV
- Truck-mounted Satellite Antenna Equipment

Introduction

The WT901C is a multi-sensor device detecting acceleration, angular velocity, angle as well as magnetic filed. The small outline makes it perfectly suitable for industrial retrofit applications such as condition monitoring and predictive maintenance. Configuring the device enables the customer to address a broad variety of use cases by interpreting the sensor data by smart algorithms.

WT901C's scientific name is AHRS IMU sensor. A sensor measures 3-axis angle, angular velocity, acceleration, magnetic field. Its strength lies in the algorithm which can calculate three-axis angle accurately.

WT901C is employed where the highest measurement accuracy is required. It offers several advantages over competing sensor:

- Heated for best data availability: new WITMOTION patented zero-bias automatic detection calibration algorithm outperforms traditional accelerometer sensor
- High precision Roll Pitch Yaw (X Y Z axis) Acceleration + Angular Velocity + Angle + Magnetic Field output
- Low cost of ownership: remote diagnostics and lifetime technical support by WITMOTION service team
- Developed tutorial: providing manual, datasheet, Demo video, free software for Windows computer, communication protocol for project development
- WITMOTION sensors have been praised by thousands of engineers as a recommended attitude measurement solution

Warning Statement

- Putting more than 5 Volt across the sensor wiring of the main power supply can lead to permanent damage to the sensor.
- VCC cannot connect with GND directly, otherwise it will lead to the burning of the circuit board.
- For proper instrument grounding: use WITMOTION with its original factory-made cable or accessories.
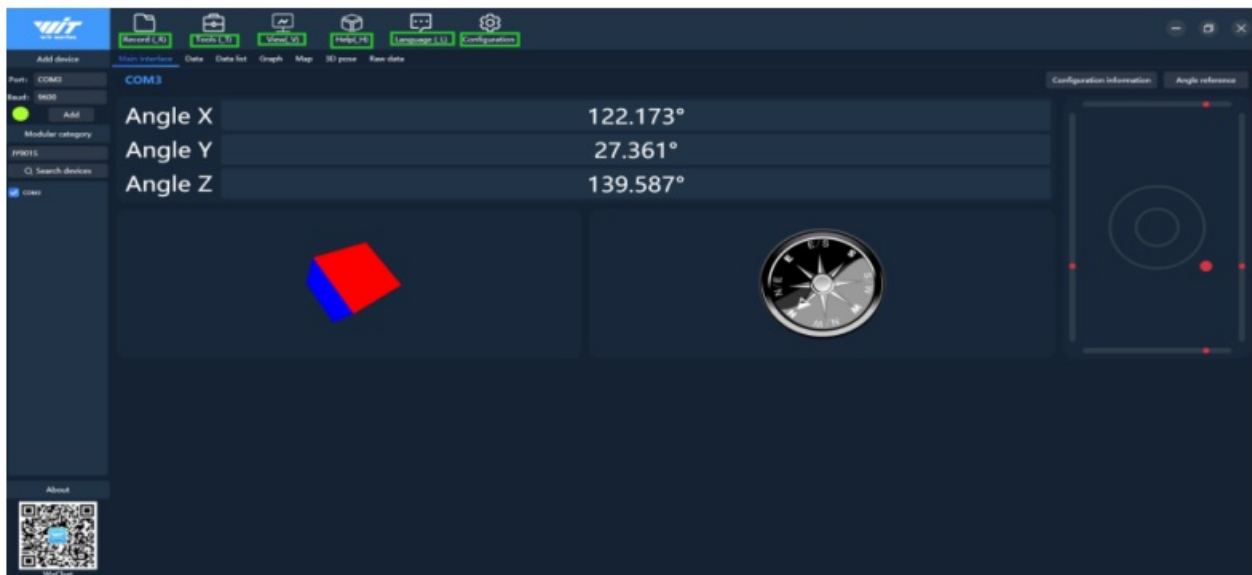- For secondary developing project or integration: use WITMOTION with its compiled sample code.

Use Instructions with PC

- **Software and driver download**
- **Quick-guide Manual**
- **Quick-guide Manual**
- **Common Software with detailed instructions**
- **Common Software with detailed instructions**
- **SDK Tutorial Documentation**
- **Communication Protocol**

Software Introduction

Software function introduction

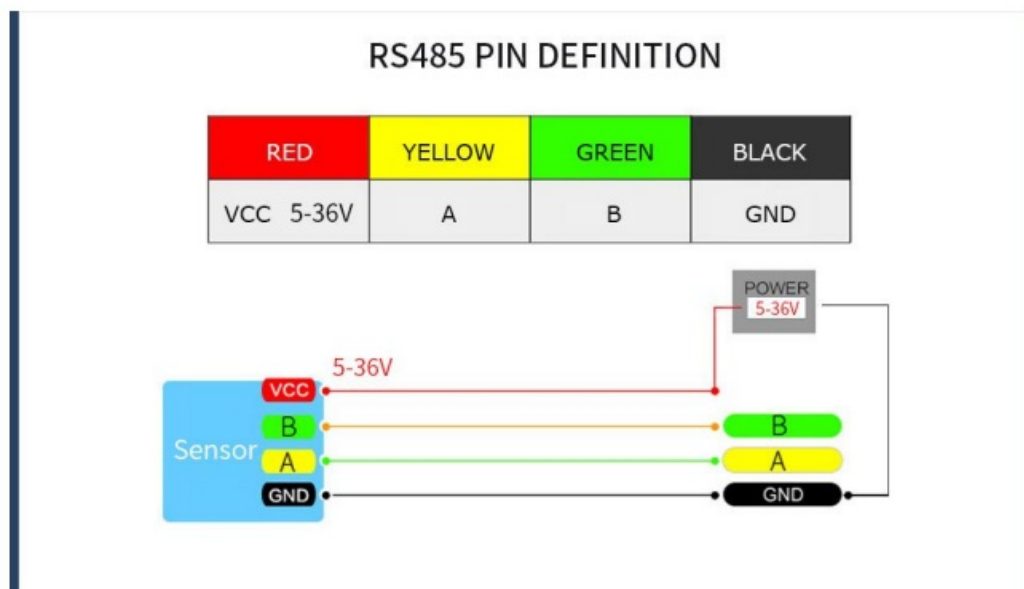(Ps You can check the functions of the software menu from the link.

Connect the sensor with a serial converter

PIN Connection:

- VCC – 5-36V
- B – B
- A – A
- GND – GND

(VCC 5 3 6 V is recommended for connection)

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manual v23-0628
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Documents / Resources

USER MANUAL **WT901C(RS485)** Inclinometer Sensor	[**witmotion WT901C-RS485 Inclinometer Sensor**](#) [pdf] User Manual WT901C-RS485 Inclinometer Sensor, WT901C-RS485, Inclinometer Sensor, Sensor

References

- [**Market leader in solar radiation & heat flux measurement**](#)
- [](#)
- [](#)
- [**GitHub - WITMOTION/WitStandardModbus_WT901C485**](#)
- [**WIT standard Modbus Protocol | WITMOTION SDK**](#)
- [**User Manual**](#)