WitMotion WT61C Inclinometer Sensor User Manual

USER MANUAL WT61C
Inclinometer Sensor
WT61C RS232| manual v23-0706
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WT61C Inclinometer Sensor

Tutorial Link
WT61C – Google Drive
Link to instructions DEMO:
WITMOTION Youtube Channel
WITMOTION New Software Tutorial – YouTube
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
Contacts (wit-motion.com)support@wit-motion.com

Application

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

Introduction

The WT61C is a multi-sensor device detecting acceleration, angular velocity and angle . 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.
WT61C's scientific name is AHRS IMU sensor. A sensor measures 3-axis angle, angular velocity, acceleration. Its strength lies in the algorithm which can calculate three-axis angle accurately.
WT61C is an ISO standard accelerometer. It is employed where the highest measurement accuracy is required.
WT61C 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
- 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, and sample code for MCU integration including Python, STM32, Arduino, Raspberry Pi, C++, communication protocol for project development
- WITMOTION sensors have been praised by thousands of engineers as a recommended attitude measurement solution

1.1 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

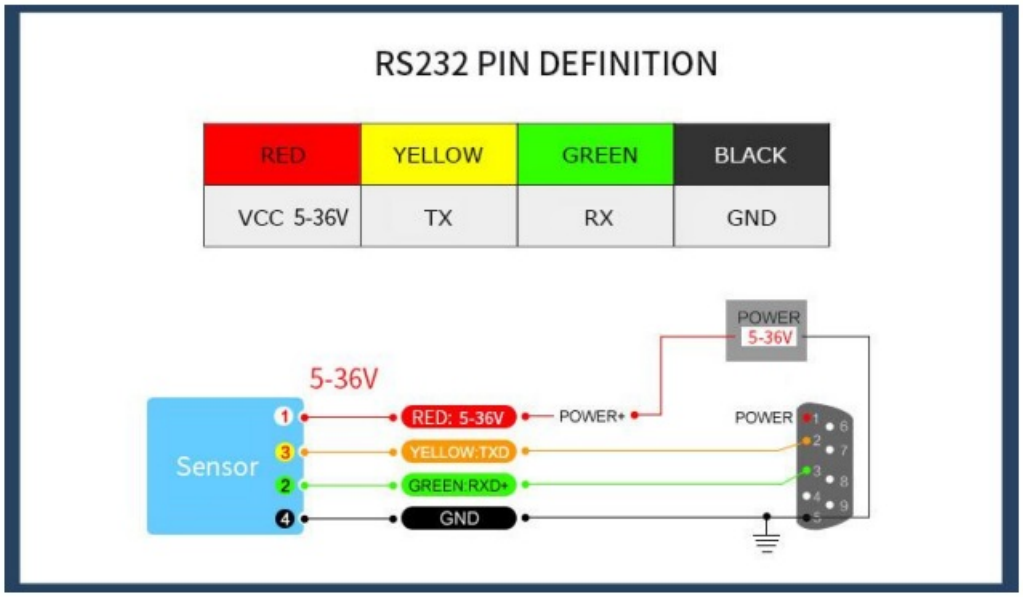
Hit the hyperlink direct to the document or download center:

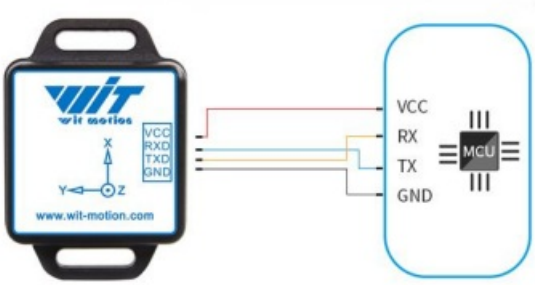
- **Software for Windows PC – Google Drive**
- **Modules Quick Guide.pdf – Google Drive**
- **YouTube**
- **Software Instructions Manual.pdf – Google Drive**
- **GitHub – WITMOTION/WitStandardProtocol_JY901: (c#)**)
- **SDK Tutorial Documentation**
- **WIT Standard Communication Protocol.pdf – Google Drive**

MCU Connection

Step 1. Connect the sensor with a serial converter
PIN Connection:
VCC – 5-36V
TX – RX
RX – TX
GND – GND

(When connecting with computer, VCC-5-36V is recommended.)





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Documents / Resources

	[WitMotion WT61C Inclinometer Sensor] [pdf] User Manual WT61C, WT61C Inclinometer Sensor, Inclinometer Sensor, Sensor

References

- Hukseflux | #1 in solar radiation & heat flux measurement
- Accelerometer, Gyroscope, 6050 Mpu, Ahrs Sensor, Mpu-6050 Supplier
- GitHub - WITMOTION/WitStandardProtocol_JY901: (c#)
- SDK - WITMOTION SDK
- Contacts

- User Manual