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Miniature Ultrasonic Distance Ranging Obstacle Avoidance Sensor (3m, RS485, IP67)

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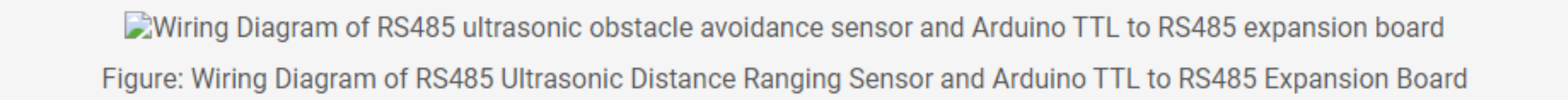
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INTRODUCTION

With a measurement range of up to 3m, the RS485 ultrasonic obstacle avoidance [distance ranging sensor](#) offers advantages such as small blind zones (Measurement accuracy: 1 + (S * 0.3%) cm), narrow measurement angles (30-60°), short response times (15-750ms), filtering of same-frequency interference, compact size, high installation adaptability, IP67 dust and waterproof capabilities, a long lifespan, and high reliability. It is designed for robot automation and control applications.

Utilizing innovative ultrasound processing technology, it can identify and filter out foreign ultrasound, resulting in more stable and reliable data output. This greatly reduces the probability of same-frequency interference, meeting the complex environmental application requirements in the field of robot automation control.

It features RS485 output for sensor data, and users can use it in conjunction with [Arduino's TTL to RS485 expansion board](#). It finds wide applications in robot obstacle avoidance, automatic control, parking management systems, security gate detection, access control systems, and object proximity and presence detection.



FEATURES

- Compact size and small blind zone
- Lightweight and fast response time
- Waterproof level of IP67
- Intelligent ultrasound processing technology for reduced interference

APPLICATIONS

- Robot obstacle avoidance
- Automatic control
- Parking management systems
- Security gate detection
- Access control systems
- Object proximity and presence detection

SPECIFICATION

- Measurement range: 2-300cm
- Measurement accuracy: 1 + (S * 0.3%) cm
- Operating voltage: 3.3-12V
- Operating current: ≤10mA
- Communication method: RS485
- Output response time: 15-750ms
- Power-on delay operating time: ≤1000ms
- Detection angle: 30-60°
- Operating temperature: -25°C~ 65°C
- Operating humidity: 65% ~ 80%RH
- Storage temperature: -30°C ~ 80°C
- Storage humidity: 65% ~ 90%RH

DOCUMENTS

- [Product wiki](#)

SHIPPING LIST

- Ultrasonic Ranging Sensor (3m) x1

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