Ultrasonic distance sensors

Small Blind-Zone Ultrasonic Obstacle-Avoidance Sensor

Model A02-V2.0

Split waterproof ultrasonic sensor module with a 3 cm blind zone and 3-450 cm range for robot obstacle avoidance and cliff detection, with UART, PWM, RS485 or IIC output.



Range	Accuracy
3–450 cm	±(1+S*0.5%) cm
Output	**Blind zone**
PWM pulse width	3 cm

Features

- 3 cm blind zone
- Reference beam angle ≈60°
- Standby current ≤5 uA
- 3.3–5 V or 5–24 V supply
- Compensated and uncompensated versions

Applications

Robot obstacle avoidance, Anti-drop and cliff detection

Specifications

PWM pulse width output	
Operating voltage	3.3–5 V
RS485 output	
Operating voltage	5–24 V
PWM pulse width output	
Standby current	≤5 uA
Average operating current	≤8 mA
RS485 output	
Average operating current	≤15 mA
PWM pulse width output	
Peak current	≤40 mA

RS485 output	
Peak current	≤75 mA
PWM pulse width output	
Blind zone	3 cm
Measuring range, flat object	3–450 cm
Working cycle	Controlled ms
UART auto output	
Working cycle	100 ms
PWM pulse width output	
Output	PWM pulse width
UART controlled output	
Output	UART serial
Switch output	
Output	Switch
RS485 output	
Output	485
PWM pulse width output	
Accuracy at room temperature	±(1+S*0.5%) cm
UART controlled output	
Accuracy at room temperature	±(1+S*0.3%) cm
PWM pulse width output	
Temperature compensation	Not compensated
UART controlled output	
Temperature compensation	Compensated
PWM pulse width output	
Reference beam angle	≈60°
Operating voltage	3.3-5 V
Output	UART / PWM / RS485 / IIC
Measuring range	3-450 cm

Ordering and support

Pricing, samples, lead time and custom versions: dwinsales@163.com, +86 181 0280 8901.

Guangzhou Dwin Technology Co., Ltd., 4th Floor, Building 2, No. 4 Xingye Road, Xiaowu Second Industrial Zone, Dongyong Town, Nansha District, Guangzhou, China. Specifications are typical values and may change without notice; confirm critical values with DWIN before design-in. Revision 2026-11.