

User Guide Ultrasonic Sensor

1. Performance & Features

- Industrial design, acclimatize itself to various kinds severe environment;
- For parking lots detection;
- With RS485 communication bus, max. 32 sensors can be connected to each RS-485 bus;
- Detection distance: 0.5-4.0 meters;
- With relay On-Off output;
- Working without controller is supported.

2. Technical Data

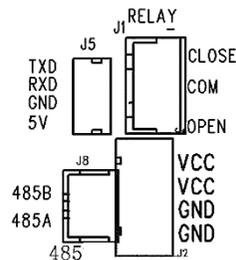
- Operating Power: DC12V/24V, the max. 26V;
- Operating Temp: -20°C to 50°C
- Storage Temp: -40°C to 85°C
- Operating Humidity: 30-90% (Relative Humidity)
- Use Condition: Install on the top-front of the parking lot (range: 1.0m to 3.5m)

3. Operating Principle

The operating principle of Ultrasonic Sensor is to launch and receive the ultrasonic wave. It can calculate the distance between the sensor and the object by compare the time difference. It is a contactless sensor. All detection data will send to the center controller.

4. Port Introduction

- J2: Power
- J8: RS-485A/RS-485B
- J1: RELAY
- J5: Firmware Loader



4.1 Sensor Status & Instructions:

- When ultrasonic wave launched or receive unconventionally, the indicator light(State/Green) will blink 15 times per second;

- When ultrasonic wave launched or receive normally, but no vehicles, no connection (to controller). Will blink 3 times per second;

- When ultrasonic wave launched or receive normally, but with vehicles, no connection. Will blink 3 times per second;

- When ultrasonic wave launched or receive normally, but no vehicles, with connection. Will blink 1 time per second;

- When ultrasonic wave launched or receive normally, with vehicles, with connection. The light will keep turned on.

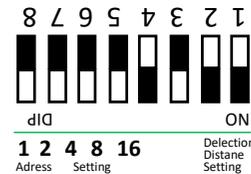
4.2 Alarm distance setting:

Detection Distance Setting							
Dip Setting	8 7 9	8 7 9	8 7 9	8 7 9	8 7 9	8 7 9	8 7 9
Encoding	000	001	010	011	100	101	110
Alarm Distance	2.35m	2.60m	1.75m	2.00m	2.25m	2.50m	2.75m

Could set the detection distance by changing 6,7,8 buttons in 8-digit Toggle Switch. After finish the setting, the light will turn red when it detect a car, and turn green if it detects nothing.

4.3 Address Setting Graph:

The address setting is processed by binary system. For example, when A0,A1, A3 are ON, the address will be 11.



5. Installation Guide

The sensor should be installed 0.5m in front of the parking lot and 2.5-3m high. (Attention: The installation height shouldn't below 0.5m) Make sure the installation place is clear so the sensor can work normally. Make two 4mm holes to fasten the sensor and a 20mm hole to set the wire. Set up the sensor on frame by using the screwdriver. Make sure the sensor is parallel to the ground.

Remark: The sensor could make some fine turning to make sure it is head to the car



Attentions:

- ▶ The sensor installation and cabling should be done as guide supplied by manufacturer strictly.
- ▶ Independent power supply for sensor is suggested. That means you cannot connect the power of sensor.
- ▶ Max. 32pcs ultrasonic sensor can be connected to each RS-485 bus.
- ▶ RS485 could connect 32 sensors in idea conditions. If the distance is over 100 meters, the suggestion number of connected sensor is below 20
- ▶ The communication wire shouldn't install with 220V electric wire together
- ▶ There shouldn't be any other objects except the vehicle in 1m around the sensor