



Technical parameters

Detection range: 30±1mm

Inspect the material: Wooden floors or tiles, carpets

Angle: ±5°

Sensor frequency: Approx. 300 kHz

Response delay: ≤20ms

Operating voltage: 5V DC, 10%Vpp

No-load current: ≤11mA

lose

Output method: TTL232 interface

Detection principle: Different materials have different reflection intensities to ultrasonic waves and high echoes. Different degrees, such as wooden floors, tiles and other flat and Smooth materials quality, the reflected sound wave is strong, and the echo height is high; And the ground blanket and other materials are weak in reflection of sound waves, and the echo height is low, Different materials are identified by the difference in echo height

Characteristics

Operating temperature: 0°C... 40°C

Storage temperature: 0°C... 80°C

Protection level: IP65

Connection: VC, 1.25mm terminal, A1251H-4P/CJT

Shell material: Plastic, epoxy resin + glass beads

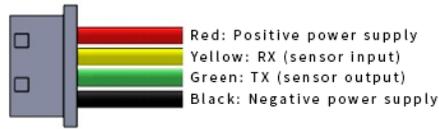
Weight: Approx. 4g

Product Model: ISUB30-16GK12-TTL4-VC View Details

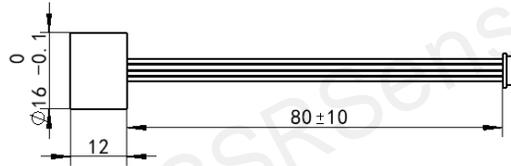
Ultrasonic sensor

- TTL232 interface
- Material inspection
- Small size
- Serial port upgrade

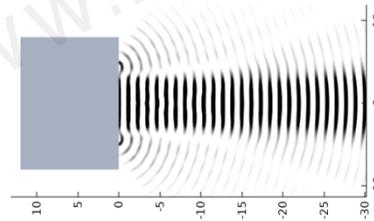
Electrical connections



Dimensions



Response characteristic curve



Ultrasound schematic diagram

Instructions for Use Agreement

Baud rate 115200

Command Format:

directive	Meaning
0x55 0xAA 0x0B 0x0A	Stop continuous testing
0x55 0xAA 0x0C 0x0B	Continuous testing
0x55 0xAA 0x0D 0x0C	Single test

Return data: (Initial power-up, no data is returned by default, and data is returned after receiving a continuous or single detection instruction).

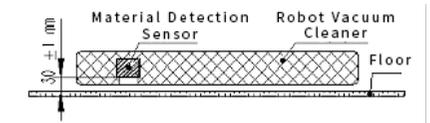
byte s	Meaning	Return examples	data
0x5A	frame header	5A	/
0x**	The height of the first echo is high bytes	0B	Echo height
0x**	The first echo height is low bytes	96	2966
0x**	The secondary echo height is high bytes	0A	Echo height
0x**	The secondary echo height is low bytes	CA	2762
0x**	The height of the third echo is high bytes	05	Echo height
0x**	The third echo height is low bytes	54	1364
0x**	Check bits, sum the first 7 bytes, and take the lower 8 bits	B4	/

Typical values for third-order echo height:

	A echo	Secondary echo	Three echoes
Ceramic tiles	2600-3500	1500-3500	1-3500
Planks	2600-3500	1500-3500	1-3500
Carpet	0	0	0

Installation

Because the ultrasonic sensor is directional, it is necessary to pay attention to the installation position, and the angle between the material detection end face and the ground is required to be < 1°, and the distance between the end face and the ground is 30 ±1mm



Notes:

- 1) Do not input voltages other than the normal operating voltage to avoid sensor burnout failure.
- 2) Do not wire incorrectly to avoid sensor burnout failure.
- 3) Avoid pulling the sensor lead wire too hard to prevent damaging the sensor's electrical connection.
- 4) It is forbidden to cover the surface of the sensor probe to avoid affecting the detection range of the sensor.
- 5) The sensor should avoid strong mechanical vibration when used, and the working environment should not have strong electromagnetic interference and rapid air circulation.
- 6) Please do not disassemble the sensor without permission, if the sensor does not work properly, please contact the after-sales service in time to solve it, the company will not be responsible for all the consequences caused by unauthorized disassembly.