ISSR 英萨智研

Technical parameters

Detection range: 60...1000mm
Adjustment range: 70...1000mm
Blind spots: 0...60mm
Standard detection plate: 100×100mm
Angle: ±7°
Sensor frequency: Approx. 200 kHz
Response delay: ≤100ms
Operating voltage: 9...30V DC, 10%Vpp
No-load current: ≤35mA
LED green light: Constant light: Turn on the power
LED blue light: Constant light: Can be learned (5 minutes before powering on), Flashing: Enter the learning state
LED yellow light: Solid on: Switch status indication, Flashing: The learning state detects the target
LED red light: Solid Light: The learning state does not detect the target, Flickering: Error occurred

Infusion

Enter the form: A1, learning wire-UB; A2, learning wire connection + UB

lose

Output method: PNP
Rated working current: 200mA, short-circuit protection/overload protection
Default settings: Normally open window mode, A1=60mm; A2=1000mm
Repeatability: ±1% of full-scale value
Hysteresis range: 1% of the set switching distance
Temperature drift: ±2% of full-scale value (built-in temperature compensation)

Characteristics

Operating temperature: −25°C... 70℃
Storage temperature: −40℃... 85℃
Electromagnetic compatibility: GB/T17626.2-2006, GB/T17626.4-2008
Protection level: IP67
Connection: V1 connector (M12×1), 4 pins
Shell material: Brass nickel plated
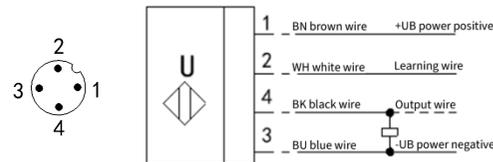Transducers: Plastic, epoxy resin + glass beads
Weight: Approx. 46g

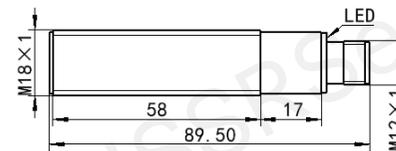# Product Model: ISUB1000-18GM75-E5-V1 View Details

Ultrasonic sensor

- PNP output
- You can learn A1/A2 points
- Temperature compensation
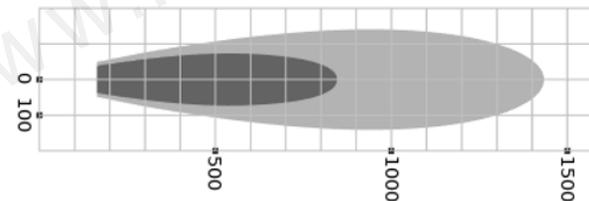- Small blind spots
- Serial port upgrade

Electrical connections

Pin	Wire	Function
1	BN brown wire	+UB power positive
2	WH white wire	Learning wire
4	BK black wire	Output wire
3	BU blue wire	-UB power negative

Dimensions

M18×1
58   17
89.50
M12×1
LED
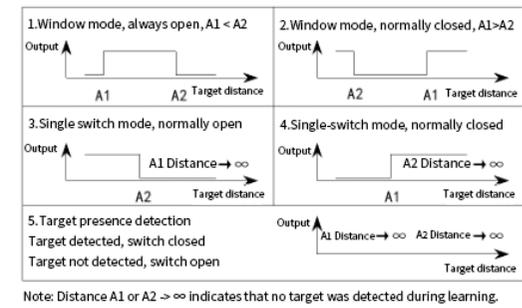
Response characteristic curve

mm

Test conditions: power supply 24V, 25°C, humidity 50%, actual deviation, for reference only

Set the detection range

Working mode: A1 and A2 can be learned separately, by setting the position of A1 point and A2 point, you can choose the working mode, there are 5 working modes in total:

1. Window mode, always open, A1 < A2
2. Window mode, normally closed, A1>A2
3. Single switch mode, normally open
4. Single-switch mode, normally closed
5. Target presence detection
   Target detected, switch closed
   Target not detected, switch open

Note: Distance A1 or A2 -> ∞ indicates that no target was detected during learning.

First, the sensor is powered on, and the green indicator light on the back of the sensor will light up

Set A2 points:

1) Place a test object where the distance needs to be set; 2) Connect the learning cable and the power supply positively, the blue light flashes all the time to indicate that it has entered the learning state, during this period, if the test object is captured, the yellow light flashes, this state lasts for 2 to 3 seconds, then disconnect the learning cable (note that do not cut off the power within 2 seconds after disconnecting the learning line, otherwise the setting may fail), A2 setting is successful, if the target is not detected during the setting period, the red light will turn on;

Set A1 point:

1) Place a test object where the distance needs to be set;
2) Connect the learning cable negatively to the power supply and repeat the above steps;

Note: The learning mode can only be learned within 5 minutes of power-up

Installation

Since ultrasonic sensors are directional, attention needs to be paid to the installation position. It is recommended that the mounting position and the DUT be perpendicular for better relative accuracy

Notes:

1) The temperature drift is mainly due to the heating of the sensor at the beginning of the electric power, resulting in the temperature measurement bias inside the sensor, which in turn leads to the ranging deviation, which reaches stability after about half an hour.

2) Do not input voltages other than the normal operating voltage to avoid sensor burnout failure.

3) Do not wire incorrectly to avoid sensor burnout failure.

4) Avoid pulling the sensor lead wire too hard to prevent damaging the sensor's electrical connection.

5) It is forbidden to cover the surface of the sensor probe to avoid affecting the detection range of the sensor.

6) The sensor should avoid strong mechanical vibration when used, and the working environment should not have strong electromagnetic interference and rapid air circulation.

7) 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.