

TTL

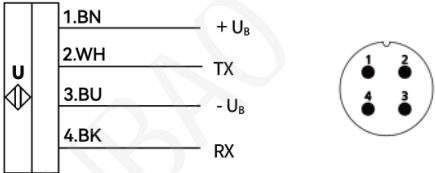


www.lanbaosensor.com

Precautions

- Please do not supply voltages other than the normal operating voltage to avoid burnout of the sensor.
- Please avoid pulling on the lead wires to prevent damage to the electrical connections of the sensor.
- Do not cover the surface of the sensor probe to avoid affecting the detection range of the sensor.
- Please use the supplied mounting nut to secure the sensor in place and avoid using other non-standard clamping devices to ensure good sensitivity.
- Strong mechanical vibration should be avoided when the sensor is used, and the working environment should not have strong electromagnetic interference and rapid air circulation.
- 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. The company will not bear all the consequences caused by the disassembly without permission.

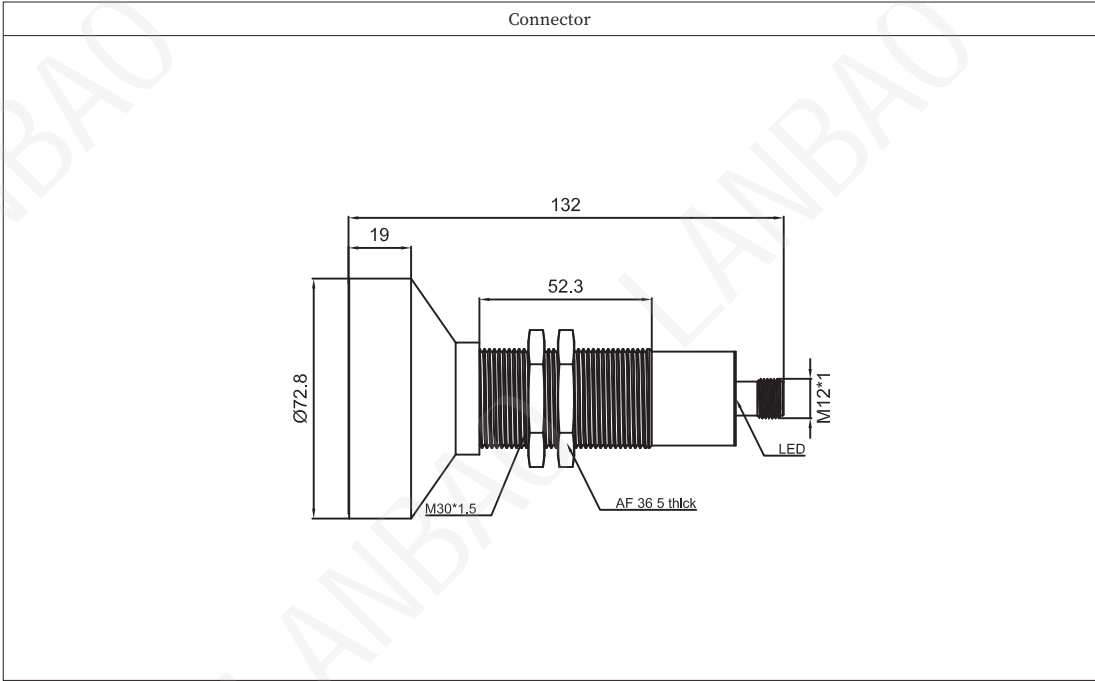
Wiring diagram



Technical specifications

Model	TTL	UR30-CM6DT-E2
Sensing range		350-6000mm
Blind area		0-350mm
Resolution ratio		4mm
Repeat accuracy		±0.15% full scale
Temperature drift		≤2% full scale (Built-in temperature drift compensation)
Linearity		<1%
Response time		300ms
Standard target		300×300mm
Oscillator frequency		About 65KHz
Rated operational current		≤200mA
Supply voltage		5...30VDC
No-load current		≤25mA
Angle		±10°
Circuit protection		Reverse protection, instantaneous over voltage protection, short circuit protection, overload protection
Output indication		Red LED: No target detected in teach-in state, always on; Yellow LED: In normal working mode, the switch status; Blue LED: Target detected in teach-in state, flashing; Green LED: Power indicator light, always on
Ambient temperature		-25°C...70°C (253-343K)
Storage temperature		-40°C...85°C (233-358K)
Material		Nickel plated copper, glass beads mixed with epoxy resin
Protection degree		IP67
Connection		M12 4-pin connection

Dimensions



Used protocol description

product working baud rate: 115200

1.Command format

Message header	address	command	data bit low	data bit high	summation check
0xA5	0x** (01~ff)	0x** (01~06)	0x**	0x**	first five bytes summing to take the low byte

2. Specific command indication

- 1) Write sensor ID number
Example: Write A5 01 01 00 02 A9, the sensor returns data: A5 02 01 00 00 A8
- 2) Write A1 point value
Example: Write A5 01 02 99 06 47, the sensor returns data: A5 01 02 99 06 47.
- 3) Write A2 point value
Example: Write A5 01 03 99 14 56, the sensor returns data: A5 01 03 99 14 56.
- 4) Write external temperature value and use external temperature compensation
Example: Write A5 01 04 12 00 BC, the sensor returns data: A5 01 04 12 00 BC.
- 5) Use internal temperature compensation
Example: Write A5 01 05 00 00 AB, the sensor returns data: A5 01 04 00 00 AB.
- 6) Read out the sensor's current measured distance value, ultrasonic flight time, temperature value, A1 point value, A2 point value, and sensing strength in order.
Example: Write A5 01 06 00 00 AC, the sensor returns data as follows:

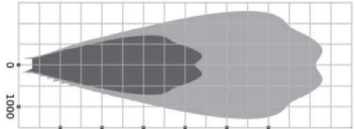
Frame header	Distance (0.1mm)	Fight time (us)	Tempera- ture value (0.1°C)	A1value (0.1mm)	A2value (0.1mm)	induction strength value	pin end
FF	XX XX	XX XX	XX XX	XX XX	XX XX	XX XX	FE

Each 2-bytes representation of the data are the highest digit in front; If the distance is 0E 13, it should be converted from 130E to 487.8mm in in decimal;

Mounting

Since ultrasonic sensors are directional, the mounting position needs to be taken care of. It is recommended that the mounting position be perpendicular to the measured object to obtain better relative accuracy.

Response characteristic curve



Dark color: 75mm diameter PVC pipe Unit: mm
Conditions: 24V power supply, room temperature
Light color: 300mm*300mm flat plate
Note: There may be deviations, for reference only

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This specification doesn't relate to patent responsibility. Moreover, our company is always devoting to improving product quality, and reserves the right to improve products by changing pattern or size without prior notice. We have considered all the notes when compiling this specification, but for the wrong or clipped parts, and any loss caused by using this manual information, we bear no responsibility.

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