

JNC

Ultrasound Level sensor



V1.00

Catalogue

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PART 1. Precautions

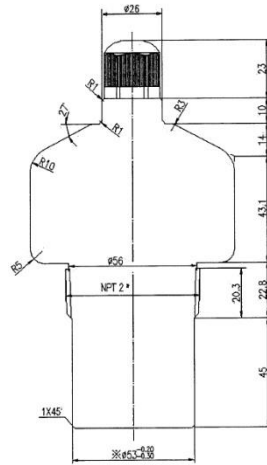
1. Do not operate the device in environments with strong vibrations or high electromagnetic interference, as this may cause product damage, errors, or measurement inaccuracies.
2. Before performing any maintenance, please disconnect the power supply to prevent injury or product damage due to accidental contact with live circuits.
3. If installing the device in environments contaminated with conductive substances (such as metal dust, water, etc.), proper sealing measures must be taken.
4. Do not operate the device if any components or modules have been removed or disassembled. Please contact our company for further assistance immediately.
5. Our company shall not be liable for any damage or reliability issues resulting from improper use not in accordance with this manual, or from applications and environmental conditions that exceed the product specifications.

PART 2. Product Description

2-1 Product Features

- Non-contact measurement using ultrasonic sensing principle — no cleaning required.
- IP68 waterproof design, suitable for harsh environments.
- Wide voltage input range: 10–28VDC.
- RS485 signal output ensures accurate and distortion-free data transmission.
- Applicable environments: chemicals, seawater, rivers, wastewater treatment plants, and more.

2-2 Product Size (mm)



PART 3.Product Specifications

Model	UD485	
Power Supply	◆DC Input : 10~28 VDC ◆Power Consumption: ≤ 50 mA (less than 1 W)	
Environment	Operating Temperature	-20~60 °C
	Storage Temperature	-40~80 °C
	Operating Pressure	1 standard atmosphere
Measuring Range	● 100kHz (0.15~2m) ● 64kHz (0.25~5m) ● 49kHz (0.3~10m) ● 40 kHz (Customizable from 0.4 to 12 MHz)	
Accuracy	0.5%~1%	
Communication Function	RS485 with standard Modbus communication protocol	
Physical Conditions	Product Weight	≤ 1000g
	Waterproof Rating	IP68
Material	Housing	ABS
	Probe	ABS
Cable Length	Standard Cable Length: 5 meters	
Cable Outer Diameter	Cable Diameter: 6.3 mm (4 × 0.3 mm ² cores)	

PART 4. Modbus Communication Protocol Format Description

4-1 INT16 Read Real-Time Value (Function 03)

Protocol Format Description								
	Device Station Number	Function	Starting Address		Number of Data (Words)		16 CRC Code	
Host Command	Address	0x03	0x00	0x00	0x00	0x01	CRC0	CRC1
	Device Station Number	Function	Data Bytes		Sensor Data		16 CRC Code	
Slave Response	Address	0x03	Number of Data*2		ByteL	ByteH	CRC0	CRC1

Communication Example:

Protocol Format Description								
	Device Station Number	Function	Starting Address		Number of Data (Words)		16 CRC Code	
Host Command	0x01	0x03	0x00	0x00	0x00	0x01	0x84	0x0A
	Device Station Number	Function	Data Bytes		Sensor Data		16 CRC Code	
Slave Response	0x01	0x03	0x02		0x00	0x10	0xB9	0x88

When the sensor data register at address 0x0010 (hex) is converted to decimal format, the value is 16, indicating a real-time measured distance of 16 mm.

PART 5.Modbus Table

Function 03 to Read/Function 06,16 to write					
Address	Setting Value	Item	Type	R/W	Remarks
0x0000	400001	Real-time Distance Value	UINT16	R	Unit : mm
0x0002	400003	Real-time Temperature Value	UINT16	R	Unit : °C
0x0062	400099	Slave Baud Rate	UINT16	R/W	0:2400 1: 4800 2: 9600 (default setting) 3: 19200
0x006B	400108	Slave ID	UINT16	R/W	Range:1~254

Revision history

Version	Revision Date	Revision Description	Maintenance Personnel
V1.00	2025/03/05	First version	Denny

About us

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