



ZETA[®] Low-Power Wide Area Networks

ZETA Water Pressure Sensorr

Water Pressure Sensor

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Water Pressure Sensor

1. Product Description

ZETA Water Pressure Sensor is a low power consumption module with the external water pressure detector which can report the water pressure readings periodically with adjustable alarm threshold values. The pressure sensor is installed at the inspection point by modifying the pipeline.

2. Applications

Water pressure detection of booster pump, fire pump, live water pump pipeline

3. Appearance



4. Features

- ✓ Wireless transmission
- ✓ Battery-powered, low power consumption
- ✓ Easy to install, high sensitivity
- ✓ Reliable detection
- ✓ Real-time transmission

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5. Product parameters

Product No.	WPZTZT92	
Wireless Features	Transmission protocol	ZETA
	Frequency band	920-925 MHz
	Output power	20±3 mW
Electrical Features	Power supply	Battery, ER14505
	Battery capacity	Sensor: 2700 mAh @ 12V ZETA Module: 2700mAh @ 3.3V
	Stand-by current	≤ 10 μA
	Working current	≤ 70 mA
Physical Features	Size	160*110*60 mm
	Enclosure material	Aluminum
	Waterproof level	IP65
	Antenna	External glue stick antenna
Sensor Characteristics	Range	0~0.6Mpa (customizable)
	Precision	± 1%Mpa
Working Environment	Operating temperature	-20℃~+75℃
	Storage temperature	-30℃~+85℃

6. Packing List

Water Pressure Sensor	1
Battery	6

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7. Installation

There are two installation methods: wall-mounted, pole-mounted.

7.1. Wall-mounted

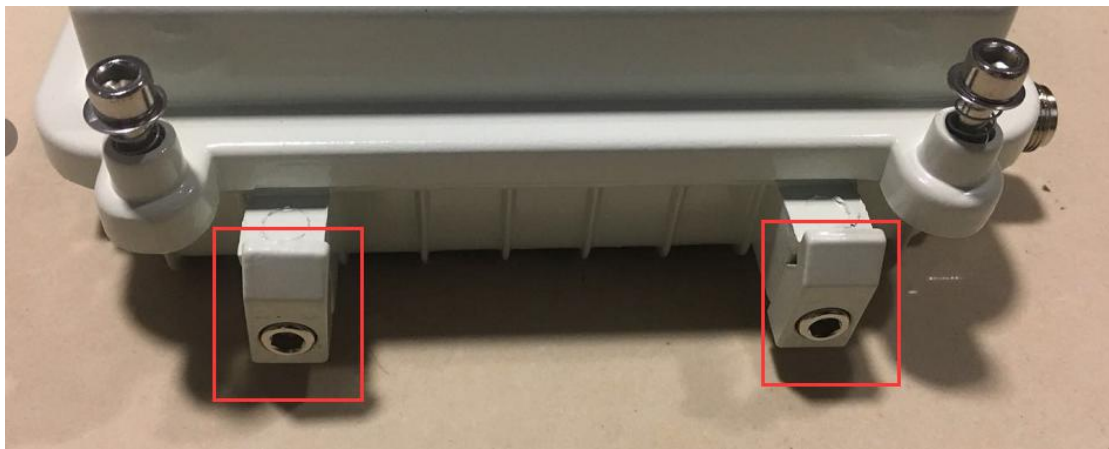
7.1.1. Auxiliary material

No.	Materials	Quantity
1	Expansion screw M6*50)	4/device
2	Impact drill, #6 drill bit, hammer, flat-blade screwdriver, Phillips screwdriver, M6 Allen key, M6 open end wrench	

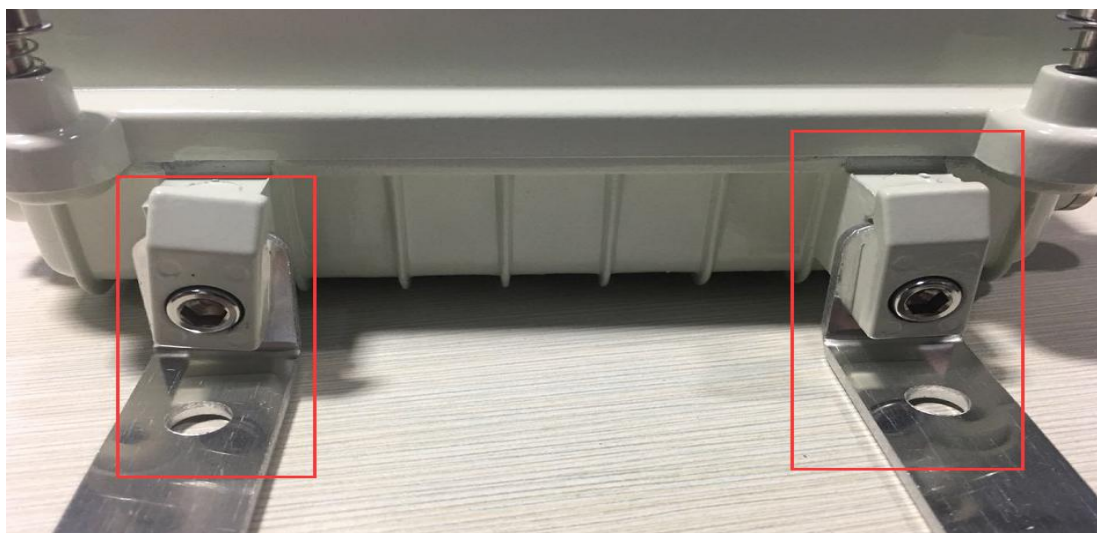
7.1.2. Installation instructions

➤ Bracket installation

Use an M6 Allen key to open the screw on the left to fix the bracket



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➤ Power on

Use an M6 Allen key to open the case

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Install the battery and connect the sensor cable



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7.2. Pole installation

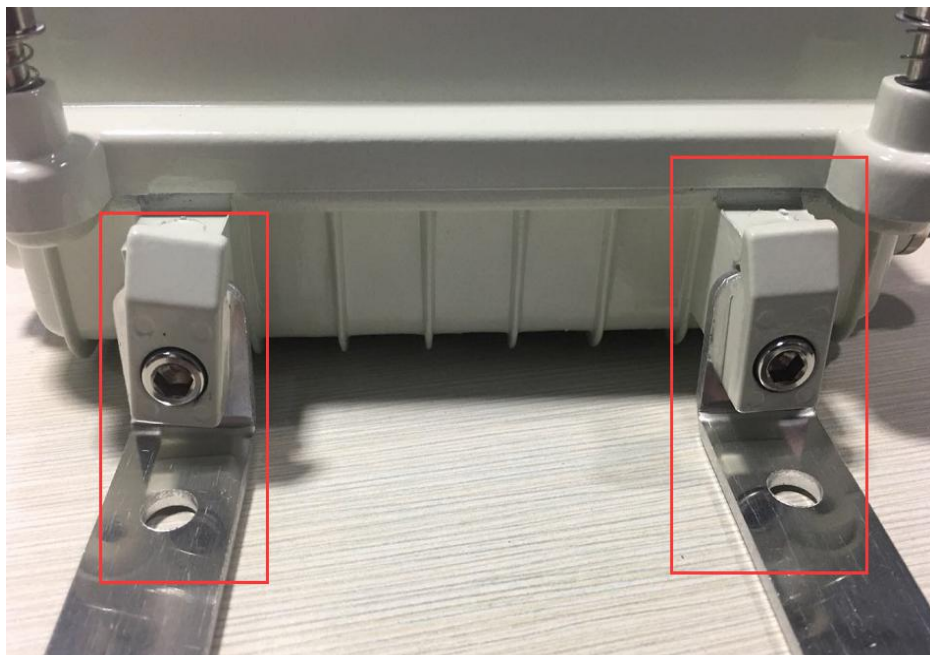
7.2.1.Auxiliary material

No.	Materials	Quantity
1	Pole mounting accessories, support $\leq 50\text{MM}$ pole	2/device
2	M6 Allen wrench, M6 open end wrench	

7.2.2.Installation instructions

➤ Bracket installation

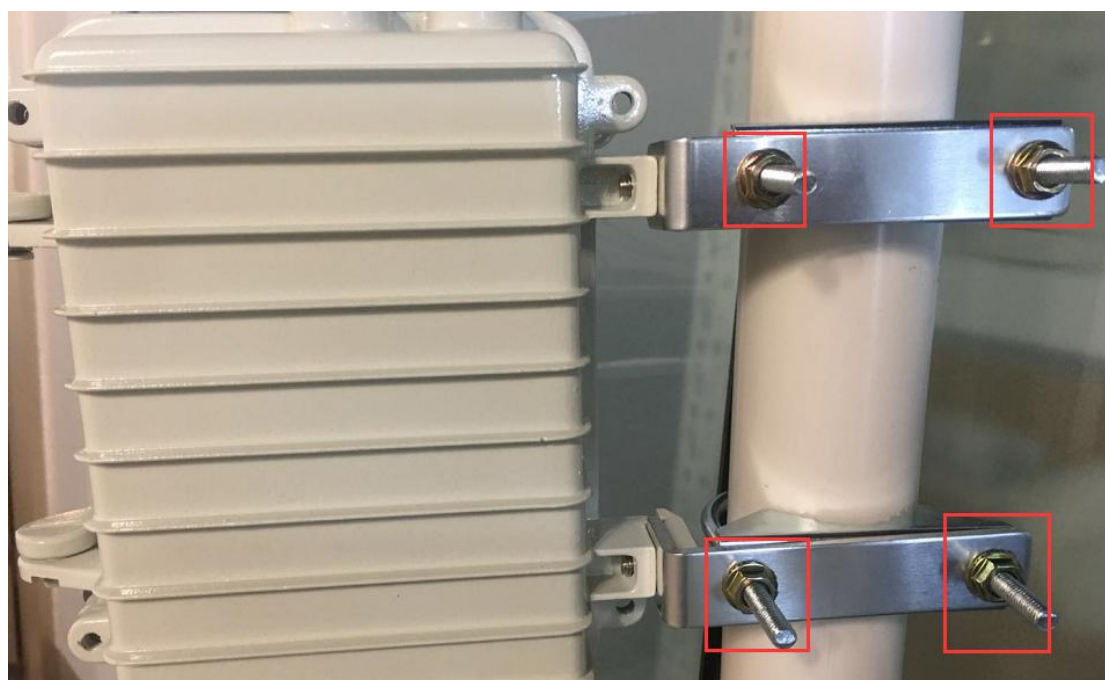
Use an M6 Allen key to open the screw on the left to fix the bracket.



➤ Fixed holding pole

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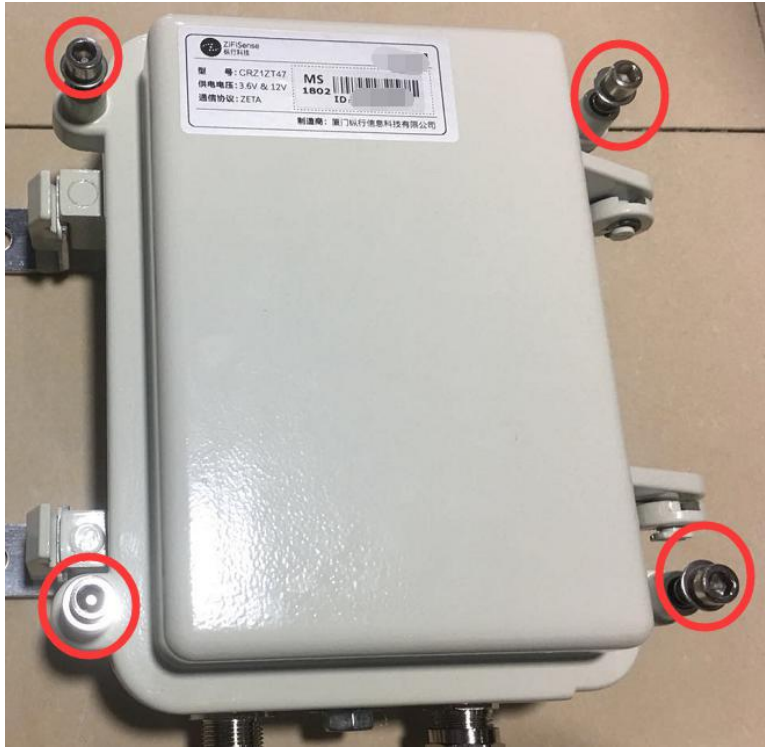
Fix the device to the pole.



➤ Power on

Use an M6 Allen key to open the case

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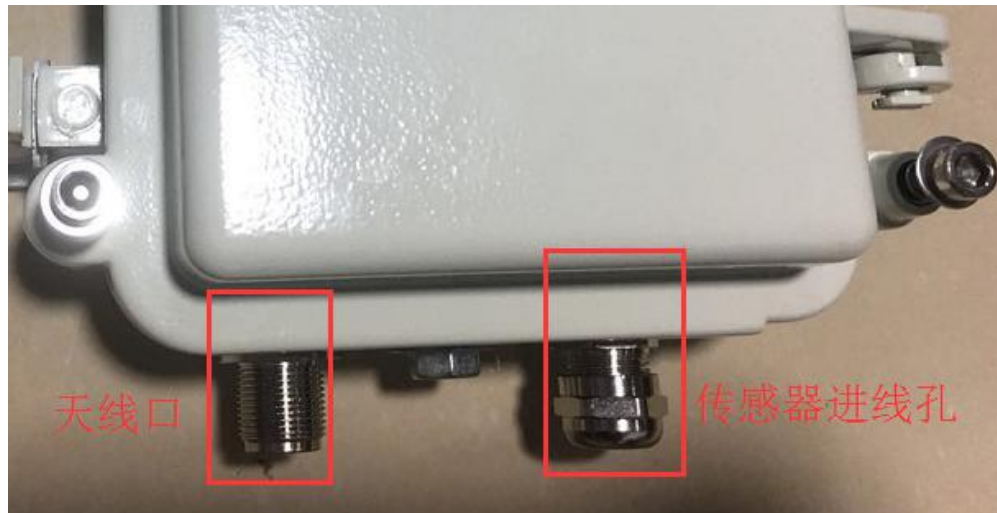
Install the battery and connect the sensor cable



7.3. Waterproofing

When installed outdoors or indoors in a humid place, the antenna port and sensor inlet of the device need to be waterproofed.

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Three layers of protection, from the inside to the outside are: adhesive tape-clay-adhesive tape:

Use waterproof tape to wrap around the interface:



Cut a piece of waterproof glue, stretch it and wrap it along the RF port



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Finally, use waterproof tape to wrap it again:



8. Use of Device

8.1. Steps for usage

- Place the device in the range covered by the ZETA network, install the battery, and wait for the device to go online.
- When the device is online, report the current device status once, and check whether the device is detected correctly according to the reported water pressure status. If it is not accurate, you need to check whether the range of the device and the sensor are consistent. Before the sensor is installed, an initial calibration can be issued to avoid detection errors.
- According to the use scenario, set the alarm enable state and alarm threshold and other policy configurations.
- Daily maintenance and data viewing.

8.2. Support function

- Report version number: Only report once after power-on.
- Status report: normal heartbeat/alarm/release alarm, the heartbeat status will be reported once after power on.
- Set/query reporting heartbeat cycle-h: Set or query the currently set heartbeat reporting cycle by hour. (Range: 1-24 hours, default value: 2

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hours)

- Set/query reporting heartbeat cycle-m: Set or query the currently set heartbeat reporting cycle in minutes. (Range: 1-65535 minutes)
- Set/query the alarm cycle: When the detected water pressure exceeds the set threshold, the alarm will be reported according to the set cycle. (Range: 0-255 minutes, default value: 0, 0 means that the alarm is only reported once, without periodic reporting.)
- Set/query alarm threshold: upper alarm threshold and lower alarm threshold. Once the detection value exceeds the set alarm threshold, the device will immediately report an alarm. (Range: 0~2.55, unit: 0.01MPa, a value of 0xFF means that there is no such threshold threshold. Note that the lower threshold must be lower than the upper threshold when setting)
- Setting/querying the alarm threshold: To avoid repeated alarms caused by the fluctuation of the device's collection value within the alarm threshold, the default value is generally used, and there is no need to set it.
- Set/query alarm enable: turn on/off the threshold alarm.
- Set/query collection period: the period for the device to collect sensor information (range: 0-65535 seconds, when the value is 0, it means real-time collection).
- Setting/query range: It needs to be set according to the range of the sensor. When the range is inconsistent, the detected water pressure value will be wrong.
- Set/query initialization calibration: reset the current detection value to 0. After the device receives the information, it starts calibration and feeds back the current calibration value.
- Query device status: query the current status of the device, including the current water pressure value and alarm enable information.
- Query version number: Actively query the software version number of the current device.

9. Common faults and handling

- Ensure ZETA signal coverage
- Ensure that the device is powered on, and the ZETA network device management platform can observe that the ZETA module is on line
- Check the battery usage of the device. When the battery is low, replace the battery in time.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC PART15 Rules. Operation is subject to the following two conditions:(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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