



**ZETA<sup>®</sup> Low-Power Wide Area Networks**

**ZETA 485 Transceiver**

## **ZETA 485 Transceiver**

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## ZETA 485 Transceiver

## 1. Product Description

ZETA 485 Transceiver is a low power module that uses the standard RS485 (Modbus RTU) interface to collect data from the multifunction electric meter.

## 2. Applications

Smart meter reading. Modbus RTU terminal reading control.

### 3. Appearance



## 4. Features

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

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### 5. Product parameters

|                        |                       |                       |
|------------------------|-----------------------|-----------------------|
| Product No.            | D485ZT92              |                       |
| Wireless Features      | Transmission protocol | ZETA                  |
|                        | Frequency band        | 920-925 MHz           |
|                        | Output power          | $20 \pm 3$ mW         |
| Electrical Features    | Power supply          | 100~240V AC           |
|                        | Power frequency       | 50~60Hz               |
|                        | Stand-by current      | $\leq 10 \mu\text{A}$ |
|                        | Working current       | $\leq 70$ mA          |
| Physical Features      | Size                  | 36*104*59 mm          |
|                        | Enclosure material    | ABS                   |
|                        | Antenna               | Monopole antenna      |
| Sensor Characteristics | Interface             | RS485 RTU             |
| Working Environment    | Operating temperature | -20℃~+75℃             |
|                        | Storage temperature   | -30℃~+85℃             |

### 6. Packing List

|                      |   |
|----------------------|---|
| ZETA 485 Transceiver | 1 |
| Antenna              | 1 |

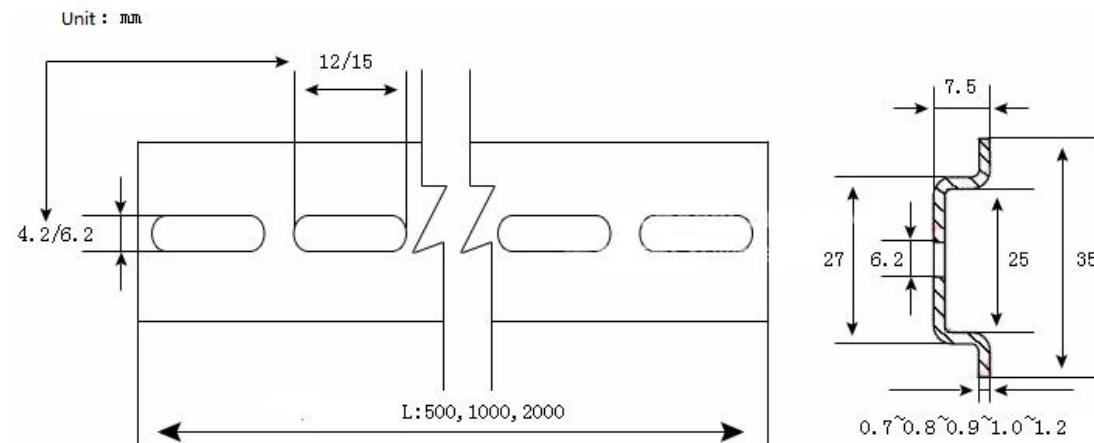
## 7. Installation

### 7.1. Screw

#### 7.1.1.Auxiliary material

| No. | Materials         | Quantity |
|-----|-------------------|----------|
| 1   | C45 GB steel rail | 1        |
| 2   | Screws            | 1 set    |

Rail size:



#### 7.1.2.Installation instructions

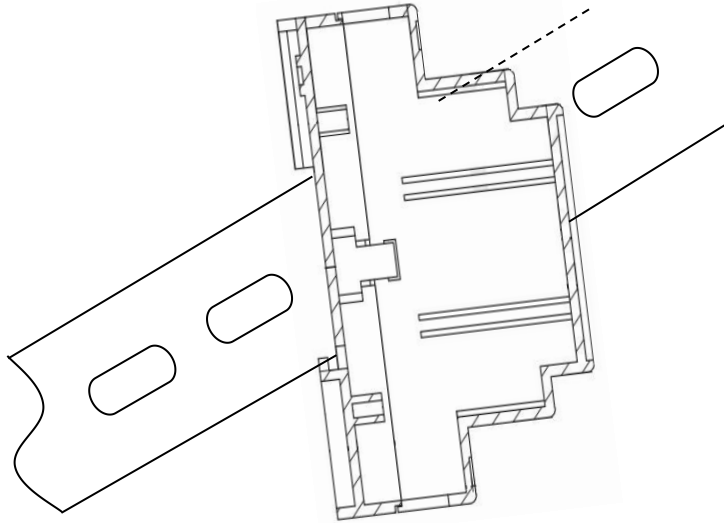
- Install steel rail

Before installation, clean the burrs on the mounting surface of the rail and the dirt on the wall. Attach the guide rail to the mounting surface and confirm the bolt hole position, and tighten the bolts one by one.

- Install sensor device

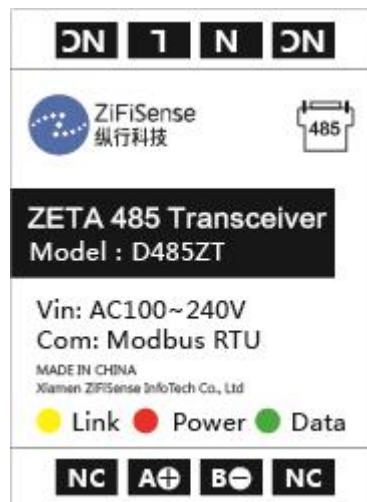
Snap the sensor onto the rail and push the lower snap to engage the rail as shown:

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### ● Wiring

Connect according to the label on the sensor label, as shown in the figure:



|     |   |                                     |
|-----|---|-------------------------------------|
| NC  | : | Reserved, no wiring required        |
| L/N | : | Connected to the mains, AC 100~240V |
| A+  | : | 485 Positive                        |
| B-  | : | 485 Negative                        |

### 8. Use of Device

#### 8.1. Indicator Description

- Red: power indicator

Lights up when power is normal

- Yellow: module status indicator
  - Registration: Lights up 2ms every 2s until the registration is successful. When the device goes to sleep, the light is off.
  - Successfully registered: Lights up 2ms every 500ms, and lasts for 5s.
  - Working normally: Lights up 2ms every 1 minute
- Green: sensor operation indicator
  - Lights up 1 second for every time the data is collected.
  - Alarm occurred: 500ms on, 500ms off, until the alarm is cleared.

#### 8.2. Steps for use

- Connect the antenna and place the device within ZETA network coverage area ;
- Power on, wait for the device to connect to network
- Configure alarm thresholds and reporting periods based on requirements.
- Daily maintenance and data viewing

#### 8.3. Support function

- Version number: Report the software version number of the sensor only once after power-on.
- Status report: Report status data periodically according to the setting .
- Set/Query the parameter reporting period: can set or query the data reporting cycle (Range: 1~65535 min, default: 12\*60min)
- Set/Query address code: 485 communication requires address code matching. (Range: 1~247, default: none)
- Set/Query register function code: Query or set the function code of Modbus (range: 03 or 04)

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- Set/Query acquisition parameters: When setting, you need to input the register address to be read and the number of bytes read. You can set multiple acquisition parameters at the one time.
- Set/Query serial port parameters: The serial port parameters include: baud rate, data bit, parity bit, stop bit, and the parameters need to be matched with the device to read the data normally.
- Query data: In addition to waiting for the sensor to report, you can actively query the current data collected by the device.
- Query version number: You can query the software version number of the current sensor.

## **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 online
- 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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