TW3221 (FosLink)

Wireless I/O Module

Installation and Operation Manual

Product Safety

To prevent severe injury and loss of life or property, read the instruction carefully before installing the detector to ensure proper and safe operation of the system.

European Union directive

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information please visit the website at www.recyclethis.info

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1. Overview

TW3221(FosLink) Wireless I/O Module (hereinafter referred to as the input / output module). It complies with the requirements of the national standard GB 16806-2006 Fire Control Linkage Control System and XF 1151-2014 General Requirements for Wireless Communication Function of Fire Alarm System. The passive fire fighting equipment with action signal output (such as smoke vent, air supply outlet, fire valve, etc.) is connected to the system through the module, and the product can transmit the linkage command of the controller to the controlled equipment, and then send the action feedback signal of the controlled equipment back to the controller.

This product adopts pressing terminal structure, convenient construction and installation, generous and beautiful appearance, excellent performance of single chip machine, with strong analysis and judgment ability. This product can automatically detect the control line (open circuit, short circuit) and the feedback line (open circuit, short circuit) connected to the controlled equipment, and give the status indication through the indicator light and the signal terminal. In the case of power fluctuation, power failure and interference, the output action of the internal relay of the product will remain stable in the last action state, and will not affect the linkage state of the controlled equipment.

2. Main Features

- Use FosLink wireless communication technology without wiring
- Built-in unique ID, which can network with the wireless transmission module and the fire alarm controller
- With the battery undervoltage reminder function
- The input side may be set to normally open or normally closed mode
- The output signal type may be set to a level signal or a pulse signal
- Plug and pull type structure design, convenient and reliable installation

3. Technical Index

- Supply Voltage ：DC3V
- working current

  Monitor current：<50uA

  Alarm current：<30mA
- Communication mode: wireless communication
- Wireless emission power：≤17dBm
- Maximum communication distance: open space: 300m
- Wireless communication frequency band：470～510MHz

- Status indication of the wireless input / output module

  Communication status: the output state indicator light is green flashing, and the flashing period is 80s once

  Fault status: the output status indicator light yellow light flashing, the flashing period is 80s once

  Output action: the output status indicator light is always red

  Enter the action: the input status indicator is always red

  Successful networking: green light 10S
- Use environment: temperature-10℃ ~ + 55℃, relative humidity 95% RH, no condensation
- Output end: level signal or pulse signal (signal type is configurable)
- Input end: normally open mode and normally closed mode (mode available)
- Color: Pearl white
- Weight: about 90g (with battery)
- Overall Size: 89mm 89mm 33mm (including base)
- Implementation standard: GB 16806-2006 Fire Control Linkage Control System and XF 1151-2014 General Requirements for Wireless Communication Function of Fire Alarm System

4. Structural features and working principle

1. Schematic diagram of wireless I / O module overall dimensions, as shown in Figure 1 (unit: mm)

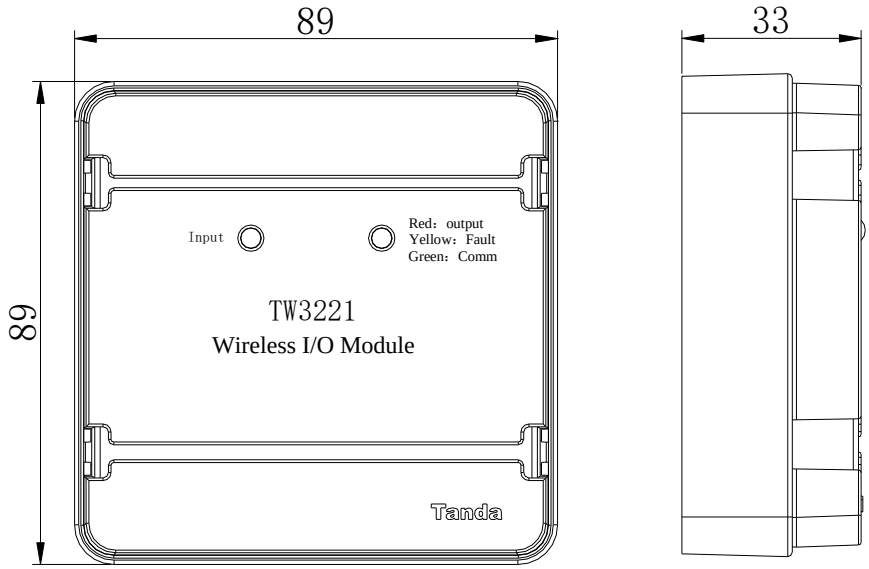

Figure 1: Schematic diagram of wireless input/output module

2. Schematic of wireless I / O module base dimensions as shown in Figure 2 (unit: mm)

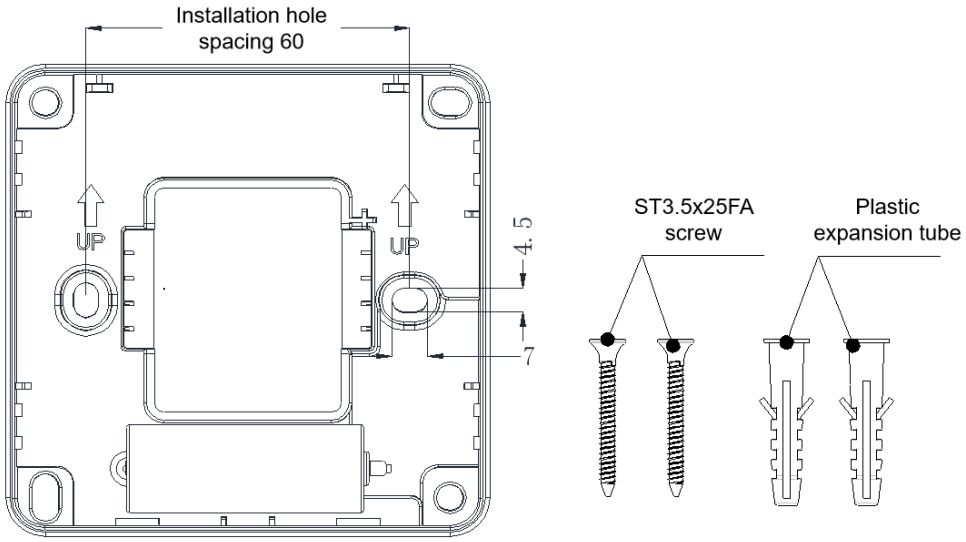

Figure 2: Wireless input/output module base and mounting accessories

3. operational principle

The controller indirectly controls the action of the controlled device through the module. After the controlled device moves, give the module a feedback signal through a pair of passive action contacts. After the module confirms it, the feedback signal will be transmitted to the controller, and the corresponding alarm display is given on the controller. This product can automatically complete the breaking detection of the control line and feedback line of the receiving control equipment.

5. Installation instructions

1. method of erection

TW3221 Wireless input / output module should be installed next to the controlled equipment for easy operation and areas with weak wireless signal interference

Disconnect the power supply of the controlled equipment first during the installation, and connect the control line and feedback line of the controlled equipment to the corresponding terminals of the module. The wiring mode shall comply with Article 5.2;

Insert the module battery power plug into the module power interface, and then network the module and the gateway, and plug the module back to the base after the networking is successful and the connection is correct. Turn on the power supply of the controlled equipment, complete the input / output mode configuration, and complete the installation immediately after the test. See Figure 3 for the installation schematic diagram:

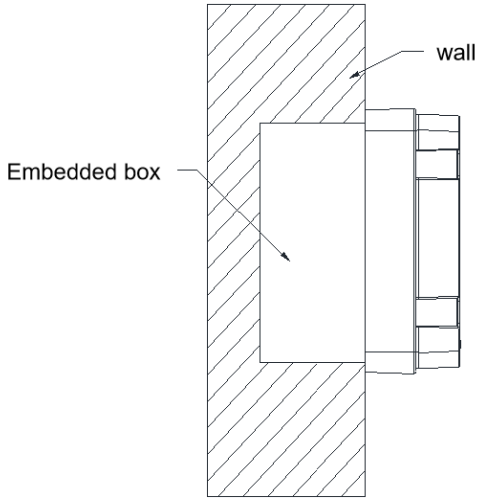

Figure 3: Installation method

2. mode of connection

The wiring mode of the module is as shown in Figure 4

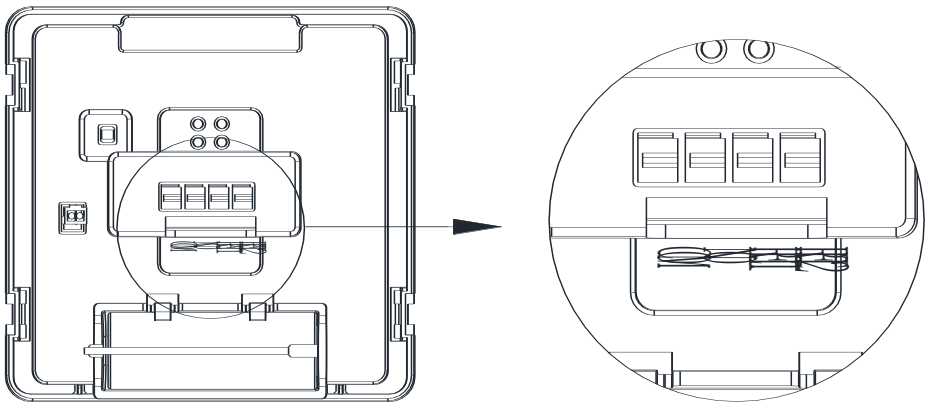

Figure 4: Interface information

COM, NO: for the output interface, interface connection control smoke exhaust valve, fire valve, fire electrical equipment linkage interface, etc

RET 1 and RET 2: input interface connected to active fire fighting equipment. A 10 kΩ terminal resistance must be connected at the end of the input line (away from the module end)

Special warning

① For the feedback line, a terminal resistance (10 kΩ) must be attached to the end, otherwise the controller will report the product "feedback line fault"; because the control line is connected to the controlled equipment for load, it is not necessary to connect the terminal resistance, but not the controlled equipment for test, otherwise the controller will report the "output fault" of the module

② When controlling high voltage and high power equipment, it is necessary to add intermediate relay to indirectly control high voltage and high power equipment

③ The low-voltage and low-power equipment directly controlled by the module shall meet

the following conditions

a. Operating voltage range: 18 to 30 V (24V is recommended)

b. Operating current: ≤2.0A

④ After the equipment is started, the input / output module can still maintain the output connection in the absence of the output terminal, and the output terminal can only be disconnected by the special controller reset module (or the disconnect of the module battery).

3. Wiring requirements

Bus (BUS) is RVS-2×1.0mm2 or 1.5mm2; BV-2×1.5mm2 or 2.5mm2; RVS-2×1.0mm2 or 1.5mm2. Laying through the metal pipe (wire groove) or the flame retardant PVC pipe.

6. Use and operation

1. Registered networking

Connect the wireless transmission module to the computer via Type-C cable, through the Foslink gateway configuration software, click Add, select the front ID, long press the hand base from the button, let go after the Foslink gateway configuration software display device ID, observe the device ID and device status displayed in the configuration software

2. Remove the device

In the FosLink gateway configuration software, select the device and click to delete to delete the wireless manual fire alarm button from the wireless transmission module.

See FosLink configuration Software IFU for detailed operation

3. The output input line fault detection can be set by FosLink configuration software, the factory default is detection
4. Input end often open mode and normal closed mode can be set by FosLink configuration software, factory default is normal open mode
5. The output pulse signal or level signal can be set by FosLink configuration software, and the default is level signal.

7. Precautions for products

1. The installation environment of this product is indoor environment, prohibited in outdoor environment and corrosive environment
2. The product shall be installed in a low interference environment and far away from large electrical equipment
3. This product needs to conduct regular linkage function test. If any fault is found, please repair it in time
4. In high temperature, high humidity, frequent misalarm and other harsh environment and weak

signal coverage environment, the battery use time will be shortened

5. The battery voltage of this product is lower than DC2.7V and reporting the undervoltage fault, and can be operated for 4 hours after reporting the undervoltage fault, please replace the battery after reporting the undervoltage fault;
6. The battery used in this product is non-rechargeable battery, and it is strictly prohibited to charge and short circuit the battery
7. In case of failure, it is strictly prohibited for users to dismantle and repair, please inform the company or the local office, we will deal with you as soon as possible!

8. Battery safety precautions

- It is strictly prohibited to charge, discharge, squeeze, or burn batteries
- It is strictly prohibited to use batteries with serious injuries or deformations
- Do not use or heat the battery outside the permitted temperature range
- Users are strictly prohibited from disassembling batteries on their own
- Do not weld directly on the battery surface
- When replacing the battery, use the original battery or the battery of the same specifications; otherwise, the battery may catch fire or explode

9. Common faults and troubleshooting

trouble	processing method
The product does not work	Check whether the product green light flashes, and the green light does not flicker to check that the battery is installed correctly.
The product reported the underpressure fault	Replace the new battery
The product report base is faulty	Check if the wireless input / output module base is not fastened
Product report for communication failure	Check if the installation location is too far away from the wireless gateway.

10. Please contact us

Thank you for choosing TW3221 independent smoke fire detection and alarm, please keep in touch with us, we will do our best to provide you with timely and high quality service.