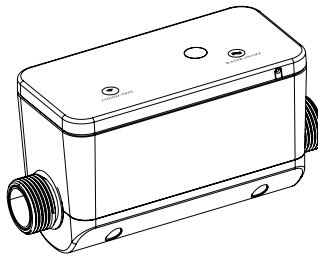


Smart Water Valve

USER GUIDE

ZIGBEE



Powered By
tuya

Specifications

Power interface: DC 5V/2A

Maximum operating current: 800mA

Standby power consumption: 0.3W

Built-in battery: AA nickel-metal hydride batteries * 3

Copper pipe diameter: DN25, 1 inch pipe, environmentally friendly lead-free copper

Screw pitch: 14 NPS

Communication protocol: Zigbee 2.4GHz

Wireless protocol: Zigbee IEEE 802.15.4

Wireless distance: 45M

Waterproof rating: IP65: IP65

Work temperature: 1 ~ 60°C (34 ~ 140°F)

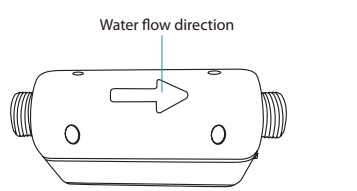
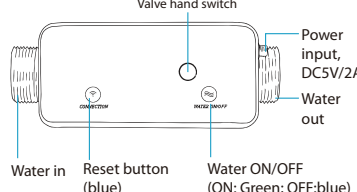
Work humidity: 1% ~ 95%RH (Non-coagulation)

Size: 195mm x 78mm x 102mm

01

Product configuration

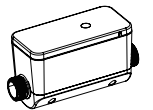
1.Product structure



02

2.Packaging accessories

① Water valve x 1



③ Waterproof tape (3M) x 2



⑤ Waterproof silicone pad x 2



⑦ Standard adapter x 2



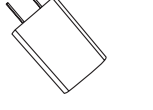
④ Power cord (2.5M) x 1



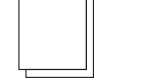
⑥ Threaded protective cover (pre-install) x 2



⑦ Power supply adapter (5V/2A) x 1



⑧ User manual x 1



03

04

Installation

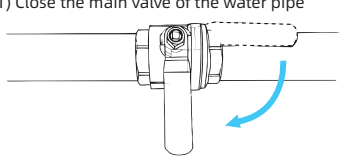
1.Water pipe installation

>>> Prepare tools

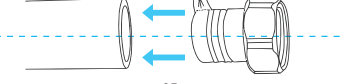
Adjustable spanner
(Need prepared by yourself)

>>> Installation steps

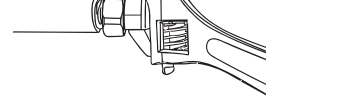
(1) Close the main valve of the water pipe



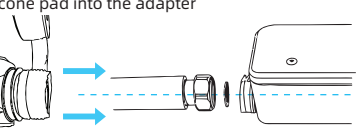
(2) The adapter is wrapped with waterproof tape



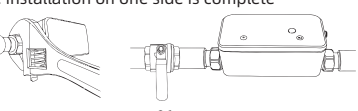
(3) Align the adapter with the municipal water pipe and tighten it with a spanner



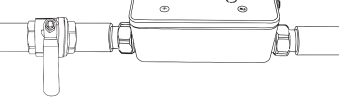
(4) Wrap the copper pipe of the water valve with waterproof tape, and place the waterproof silicone pad into the adapter



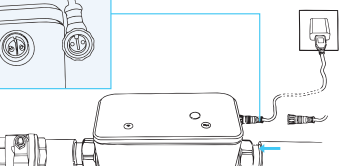
(5) Use spanner to tighten the adapter nut, and the installation on one side is complete



(6) After installing the water valve on the other side using the above method, the installation is complete



(7) Connect the power supply

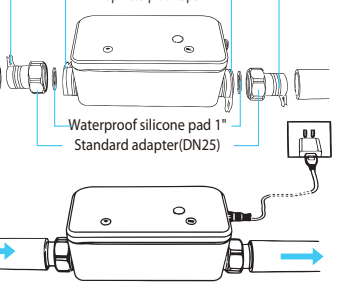


05

06

07

2. Installation structure diagram



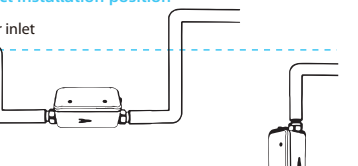
08

3. The installation position and direction of the water valve

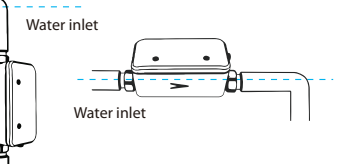
Attention:

(1) Do not reverse the water inlet/outlet of the water valve

(2) The water outlet should be higher than the



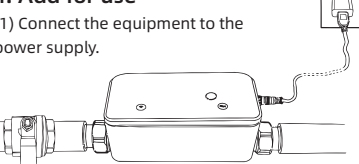
09



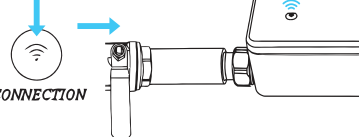
10

4. Add for use

(1) Connect the equipment to the power supply.

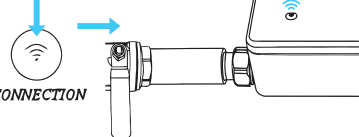


(2) Press and hold the device reset button for 5 seconds to put the device into the ready-to-configure state, and add the device on the APP



CONNECTION

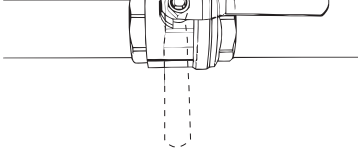
(3) After the addition is completed, open the main switch of the water valve and it can be used



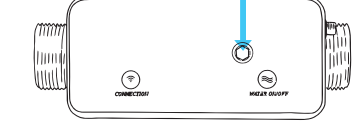
11

5. How to use hand switch

(1) Open the rubber stopper

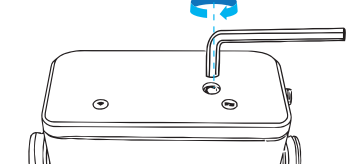


(2) Align the 55 Allen wrench with the hole position, rotate it clockwise to open the valve



12

(3) Rotate counterclockwise to close the valve



13

LED State

Device state	Indicator status
Ready status	Press and hold the switch button for 5 seconds until the blue LED light comes on
Value open	The green indicator light of the switch button remains constantly on
Value Close	The blue indicator light on the switch button remains constantly on
Charging state	The reset button indicator light remains constantly red

14

Network operation

There are two touch buttons on the top of the device. The one on the left can be used to join or leave the network and reset to factory Settings, while the one on the right can be used to control the opening/closing of the water valve.

Log in of the network

1. Electrify the device

2. Set the Zigbee gateway to join the network mode

3. Hold down the configuration button for 5 seconds until the blue led light comes on, and then release the button before the led goes out.

The blue led will flash at intervals of 600 milliseconds until a successful connection is achieved.

Log out of the network

1. Electrify the device

2. Hold down the configuration button for 5 seconds until the blue led light comes on, and then release the button before the led goes out.

The blue indicator light will flash at intervals of 600 milliseconds until a successful departure.

15

Attribute

Attr. Id	Name	Data Type	Range	Default Value
0x0001	Heartbeat Time	uint16	0~30000	0
0x0002	OTA Led Enable	bool	0,1	1
0x0100	Water Leakage Detected Mode	enum8	0~3	0
0x0101	Water Leakage Detect Time	uint8	0~24	0
0x0102	Action When Alarm Occurs	bitmap8	0~255	1
0x0103	Accumulative Flow D-Value Setting	uint8	0~255	1
0x0104	Water Temperature D-Value Setting	uint8	0~255	10
0x0105	Water Pressure D-Value Setting	uint8	0~255	20
0x0120	Hydro Valve Alarm State	bitmap16	0~32767	0
0x0121	Hydro Valve Alarm Mask	bitmap16	0~255	0
0x0122	Low Water Temperature Threshold	uint16	0~1000	180
0x0123	High Water Temperature Threshold	uint16	0~1000	500

18

Attention :

1. The device must join the zigbee network. After joining the zigbee network, the device can enter the target search and binding mode.

2. If a distributed network is successfully created, the device will open the network and allow other zigbee devices to join. After that, users can turn on the network by briefly pressing the configuration button four times.

3. Factory reset will clear the device network data stored in memory and restore all configuration parameters to their factory default values.

17

0x0124

Low Water Pressure Threshold

uint16

1000~5000

1380

0x0125

High Water Pressure Threshold

uint16

1000~5000

4140

0x0126

Low Water Instant Flow Threshold

uint16

0~1000

0

0x0127

High Water Instant Flow Threshold

uint16

0~1000

150

0x0128

Continuous Water Use Time Threshold

uint16

0~65535

3600

0x0129

Continuous Water Consumption Threshold

uint16

0~65535

300

0x0200

Button Enable Mask

bitmap8

0~3

3

1. Heartbeat Time

This attribute is configured the time interval for meter table data report to Zigbee Gateway. When the heartbeat time is arrival, device will send an accumulative flow data frame to host.

0'-Heartbeat time disable. Unit: Second.

2. OTA Led Enable

When OTA is running, this attribute decides the

19

0'- No Led blinks.

1'- Led blinks fast with blue color.

3. Water Leakage Detected Mode

This attribute is configured the leak detect mode as below enumerates.

0'- Manually detects.

1'- Automatically detects once every day.

2'- Automatically detects once every Monday.

3'-Automatically detects once at first day of each month.

4. Water Leakage Detect Time

This attribute is configured the time for water leakage detecting.

The value '0 ~ 23' are valid only when "3." is set to '1, 2 or 3'. The device will automatically execute water leakage detection once at time specified. Unit: Hour.

The value '24' is valid only when "3." is set to '0'. When device receive value '24'; it will execute

20

5. Action When Alarm Occurs

This attribute is 8 bits in length and specifies if water valve turn off or not when some alarm generate, as listed in table below. A '1' in each bit indicates the water valve will turn off if corresponding alarm generate and '0' in each bit indicates the water valve will keep current state.

Attribute Bit Number	Which Alarm
0	Water leakage alarm occurs.
1	Low water temperature alarm occurs.
2	Low water instant flow alarm occurs.
3	High water instant flow alarm occurs.
4	Continuous water use time alarm occurs.
5	Continuous water consumption alarm occurs.

21

6. Accumulative Flow D-Value Setting

This attribute is configured the changed value of the accumulative flow. When the difference from the last report exceeds this setting value, the device will report current accumulative flow data to zigbee gateway.

0' - Accumulative flow reporting is disabled.

The D-Value = [Value] × 0.01 m³.

7. Water Temperature D-Value Setting

This attribute sets the changed value of the water temperature. When the difference from the last report exceeds this setting value, the device will report current temperature value to zigbee gateway.

0' - Water temperature reporting is disabled.

The D-Value = [Value] × 0.1 Celsius

8. Water Pressure D-Value Setting

This attribute sets the changed value of the water pressure. When the difference from the last report exceeds this setting value, the device will report current pressure value to zigbee gateway.

0' - Water pressure reporting is disabled.

The D-Value = [Value] × 0.1 kPa.

9. Water Valve Alarm State

This attribute specifies the current state of the device's alarms during water valve operation. It provides a persistent record of a device's alarm conditions as well as a mechanism for reporting changes to those conditions.

This attribute is read only.

A '1' in each bit position indicates the corresponding alarm occurred.

Bit	Description
0	Set '1' when water temperature is less than "11."
1	Set '1' when water temperature is large than "12."
2	Set '1' when water pressure is less than "13."
3	Set '1' when water pressure is large than "14."
4	Set '1' when water instant flow is less than "15."
5	Set '1' when water instant flow is large than "16."
6	Set '1' when continuous water use time is less than "17."
7	Set '1' when continuous water consumption is less than "18."
[9..8]	00 - Valve motor is stopped.
	01 - Valve is closing.
	10 - Valve is opening.
	11 - Valve motor is abnormal.
10	1 - temperature and pressure sensor is abnormal.
11	1 - Water pipe is empty.
12	1 - Water pipe is bursting.
13	1 - Water pipe's installation direction is reverse.
14	1 - Battery is charging.
15	Reserved

10. Water Valve Alarm Mask

This attribute is 16 bits in length and specifies which mains alarms MAY be generated, as listed

11

11. Low Water Temperature Threshold

This attribute sets the threshold value of low water temperature. When water temperature is lower than this value, the bit 0 of "9." will be set to '1' if the bit 0 of "10." set '1'. Device will send a notification to zigbee gateway.

Unit: 0.1 Degree Celsius.

12. High Water Temperature Threshold

This attribute sets the threshold value of high water temperature. When water temperature is higher than this value, the bit 1 of "9." will be set to '1' if the bit 1 of "10." set '1'.

Unit: 0.1 Degree Celsius.

13. Low Water Pressure Threshold

This attribute sets the threshold value of low water pressure. When water pressure is lower than this value, the bit 2 of "9." will be set to '1' if the bit 2 of "10." set '1'.

Unit: 0.1 kPa.

14. High Water Pressure Threshold

This attribute sets the threshold value of high water pressure. When water pressure is higher than this value, the bit 3 of "9." will be set to '1' if the bit 3 of "10." set '1'.

Unit: 0.1 kPa.

15. Low Water Instant Flow Threshold

This attribute sets the threshold value of low water instant flow. When water instant flow is lower than this value, the bit 4 of "9." will be set to '1' if the bit 4 of "10." set '1'.

Unit: l/h.

16. High Water Instant Flow Threshold

This attribute sets the threshold value of high water instant flow. When water instant flow is higher than this value, the bit 5 of "9." will be set to '1' if the bit 5 of "10." set '1'.

Unit: l/h.

17. Continuous Water Use Time Threshold

This attribute sets the threshold value of continuous water use time. When continuous water use time is large than this value, the bit 6 of "9." will be set to '1' if the bit 6 of "10." set '1'.

Unit: second.

18. Continuous Water Consumption Threshold

This attribute sets the threshold value of continuous water consumption. When continuous water consumption is large than this value, the bit 7 of "9." will be set to '1' if the bit 7 of "10." set '1'.

Unit: 0.01 m³

19. Button Enable Mask

This attribute is 8 bits in length and specifies which button can be enabled, as listed in table below. A '1' in each bit position enables which button.

Attribute Bit Number	Description
0	Configure button: 0 - disable, 1 - Enable
1	Control button: 0 - disable, 1 - Enable
3-7	Reserved

20

Get Started with Home Assistant

1. Download APP

Android system: Download the "HomeAssistant" APP from GooglePlay

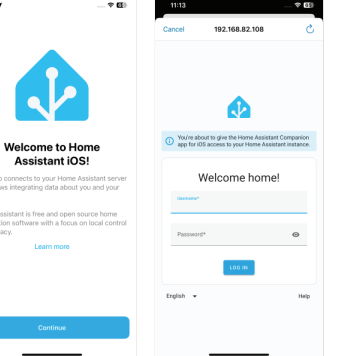
iOS system: Download the "HomeAssistant" APP from the App Store



Home Assistant

2. Register and Login

Run the APP, register and log in to your account

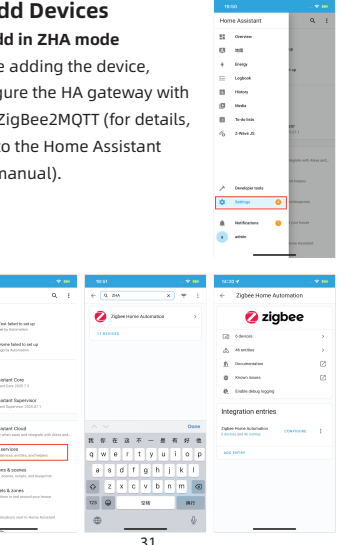


21

3. Add Devices

(1) Add in ZHA mode

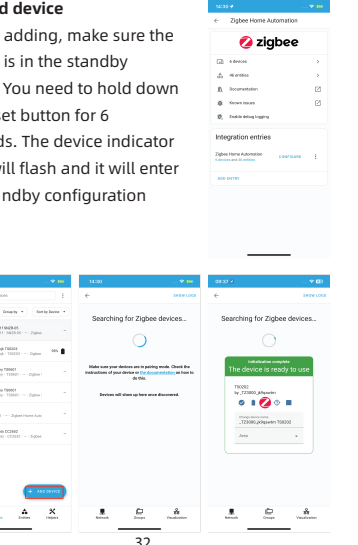
Before adding the device, configure the HA gateway with ZHA/ZigBee2MQTT (for details, refer to the Home Assistant user manual).



22

(2) Add device

Before adding, make sure the device is in the standby mode. You need to hold down the reset button for 6 seconds. The device indicator light will flash and it will enter the standby configuration state.

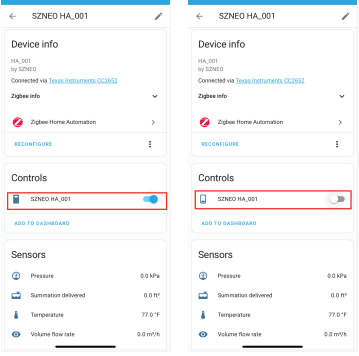


23

Functions and Settings

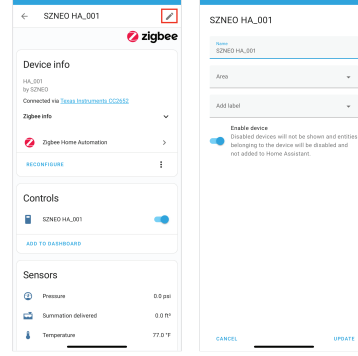
Main Functions, Working Status and Record Settings

1. Open/Close the water valve



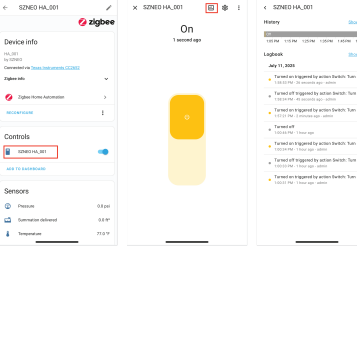
24

2. Change the device name



25

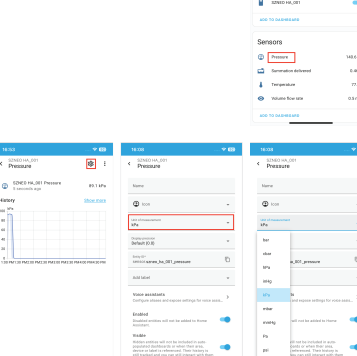
3. Historical Records



26

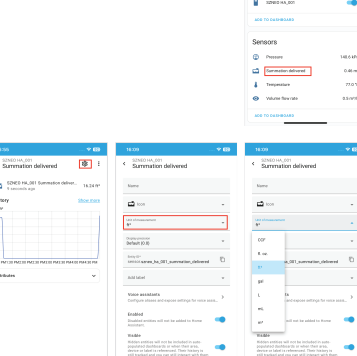
4. Unit Settings

(1) Pressure unit setting



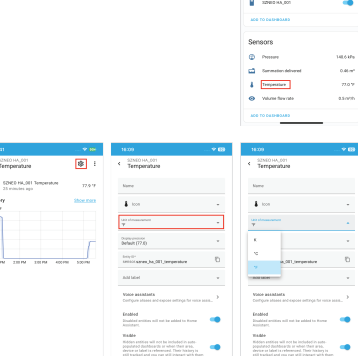
27

(2) Total water consumption unit setting



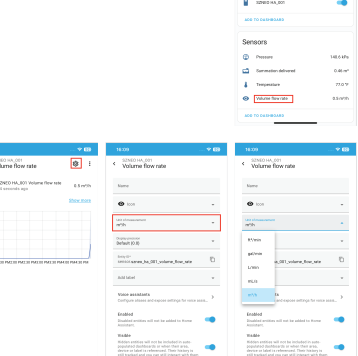
28

(3) Temperature unit setting



29

(4) Flow unit Settings

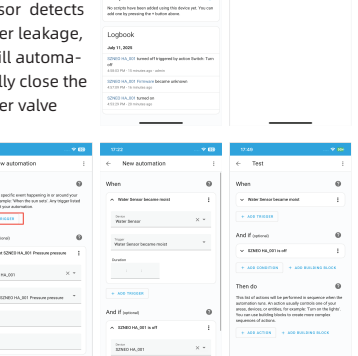


30

Other Function

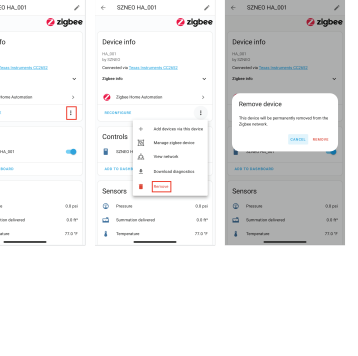
1. Product linkage

Eg: When the water leakage sensor detects water leakage, it will automatically close the water valve



31

2. Equipment exit



32

1. How to install the two-in-one water valve product correctly?

● Before installation, check the sealing performance: Before installation, check whether the sealing gasket and sealing material of the water valve are intact to prevent water leakage.

● The correct installation direction: The water valve has a flow direction requirement. Ensure that the flow direction of the water is consistent with the designed direction of the water valve's inlet and outlet; otherwise, it may affect the water flow or the normal operation of the valve

● Tighten the screws: When installing, ensure that the screws or joints at the connection between the valve and the pipeline are securely fastened, but do not tighten them too much to avoid damaging the valve or pipeline

● Check power-on: Verify if the power

connection is correct. Then power on and connect the operating equipment.

2. What is the main function of a water valve?

Answer: The main function of the water valve is to control the opening and closing of water flow. It can adjust the opening and closing of water flow manually or automatically. Additionally, it supports viewing parameters such as water pressure, flow rate, and total water consumption etc.

3. How to maintain the water valve during use?

Answer: To maintain the best performance of the water valve, it is recommended to regularly inspect and clean the valve interfaces and batteries of the equipment. Conduct a check every three months to remove any scale or debris and ensure that the equipment is securely connected. If the equipment is not used for a long time, please disconnect the power supply and ensure that the equipment is dry.

2