Human Fall Alarm & Voice call for help Radar Sensor



Product model: FDV3-TUY

Using Instruction_V1.0

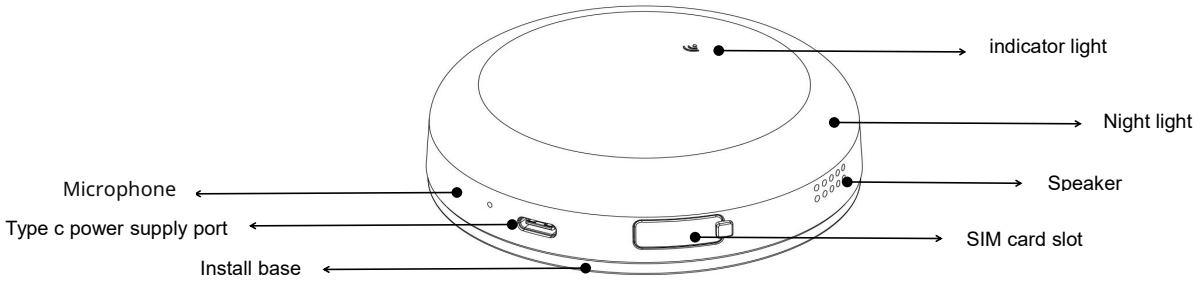
Human Fall Alarm & Voice call for help Radar Sensor FDV3-TUY

1. Product Introduction

The FDV3-TUY fall alarm & voice call for help radar sensor is a product designed to monitor human spatial behavioral using millimeter wave radar technology. It is capable of detecting the presence of human body and providing fall alarm functionality without physical contact. Additionally, it supports voice call for help and provides night light illumination. Through Wi-Fi network, it can be linked to the Tuya cloud platform and controlled by the App of Tuya Smart for scene linkage and status reporting.

Product Features	Function Description
Human presence	Occupied/unoccupied, active/static
Alarm status	Fall alarm, dwell alarm, low posture alarm
Parameter Settings	Installation height, fall time, dwell time
Night light linkage	Turn on/off night light according to occupied / unoccupied
Voice control	radar alarm for fall detection, voice call for help, voice commend learning
Historical records	Human presence record, fall alarm record

*This product should be controlled by the Tuya Smart App



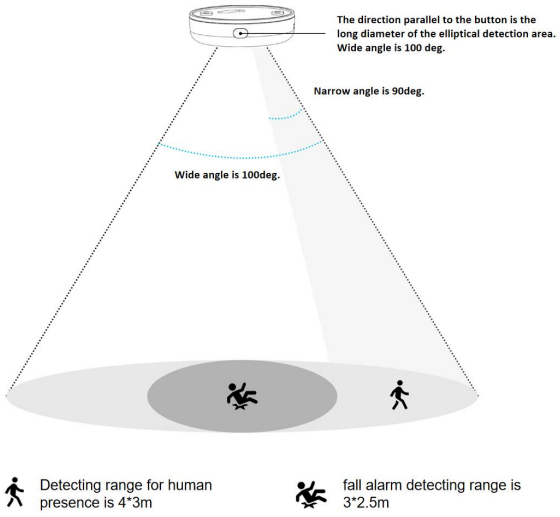


2. Installation Method

2.1 Radar detection range

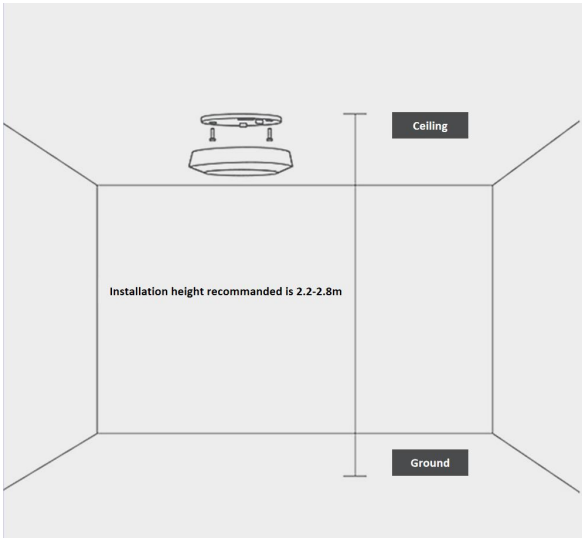
The wide angle is 100° and the narrow angle is 90°.

human presence detection range is approximately 4m * 3m, static dwell alert and fall detection range is 3m*2.5m



2.2 Installation Position Recommendations

The device needs to be installed horizontally at the top. The installation height range is 2.2-2.8m, with a recommended installation height of 2.4m. The radar should be securely installed directly above the detection area, covering the main human activity area.



2.3 Installation Precautions

The radar is sensitive to slight movements within the space. During detection, it's important to avoid vibrations. When installing, try to avoid placing the device near items such as exhaust hoods, fans, flowing water, and vents. Additionally, the device should be kept away from moving objects as much as possible.

2.4 Power Connection

After determining the installation position, plug the power adapter into the power outlet. Then, insert the USB plug of the device's power cord into the adapter. The device will light up after 5 seconds.

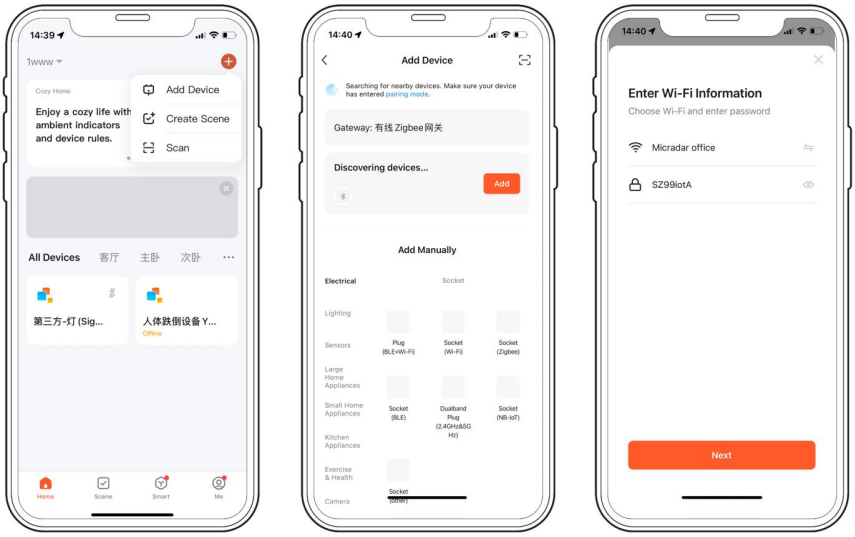
2.5 Download the App

Search for "Tuya Smart" in the App store or scan the QR code below to download.

2.6 Add Device into the App

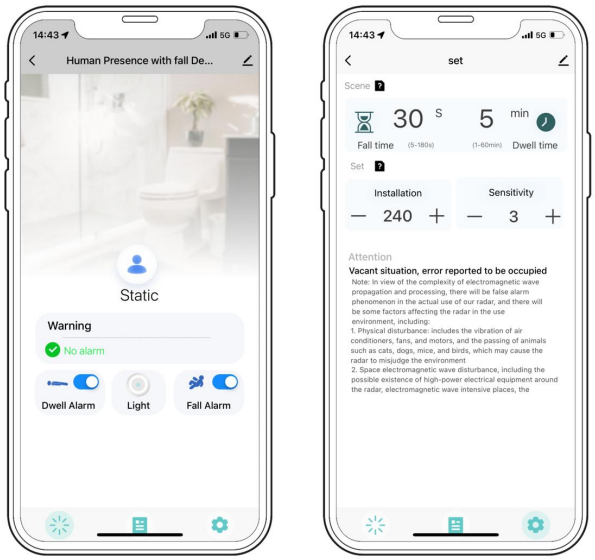
FDV3-TUY: This model of device uses Wi-Fi protocol. You need to click the "+" in the upper right corner of the device page on the App homepage, add the device and connect to the Internet according to the instructions of the App.

*The Wi-Fi frequency band must be connected to 2.4G but cannot be 5.8G.



2.7 Device Verification

After the device is successfully added into the App, you can see the status changes of "Occupied/Unoccupied/Active/Static" on the device homepage of the FDV3 human fall alarm radar sensor. Once the device is confirmed to be working, you can then click to the parameter configuration page to set the installation height, fall sensitivity, fall time, and dwell time.



3. Product Operation Details

3.1 Powering Up the Product

After the device is powered on, it will detect whether there is someone by default. If there is someone, the night light will light up and the distribution network indicator will flash in red. Press and hold the distribution button for 5 seconds and the blue indicator will light up and flash, indicating that you can start using "Tuya" "Smart" App adds a device and configures the network for the device. If there is no network distribution action within 90s, the timeout state will occur, and the network distribution indicator light will return to the red light flashing state.

3.2 How to use the device

Fall alarm radar mainly detects falls in the lying posture, and reports the fall status after 5 seconds when

this posture is detected.

3.3 Product Configuration

On the configuration page, configure the installation height of the device from the ground based on the actual installation height. Set the fall time according to your requirement (5-180s) and dwell time.

3.4 Product Operation

3.4.1 Human presence/absence detection

- When presence detected, night light turns on
- When absence detected, night light turns off
- Night light can be controlled via voice commands to turn on/off

3.4.2 Fall alarm

If the fall status detected, device will emit a voice inquiry such as [Have you fallen down] . User can reply with sentence like [I have fallen down] to ask for help. Alarm via the app will be pushed to the guardian immediately in real time.

3.4.3 Keywords of voice commands

Functions	Voice commands	Device announcement
User actively call for help when trouble happens	Help me please! Can you help me? Could you help me? I need help!	Do you need help? Have you fallen down?
Reply by users	I have fallen down I fell down I fall down I fell	Notifying the guardian immediately Guardians notified, please wait a moment.
Reply by users	I am OK I'm OK I'm alright I didn't fall Nobody fall down	OK！
Turn on light	Turn on the light Turn on light	The light is on
Turn off light	Turn off the light	The light is off

	Turn off light	
Customized keywords with learning mode	Enter learning mode	You have entered learning mode. If you need to learn, please say start learning.
Start learning mode	Start learning	Starting learning : I need help Starting learning : I fell Starting learning: Nobody fall down Learning process has been completed
Factory reset mode	The device has been factory reset	Please say that again The device has been factory reset

3.4.4 Device learning mode

This product has a local language learning function, which can facilitate users in different regions to control the device in dialects or other languages. It also allows users to customize the voice command using for calling help according to their hobbies. Please make sure the voice broadcast button in the App is turned on before entering the learning mode.

1) Wake the device using voice command

【Help me please】【Can you help me】【Could you help me】【I need help】

2) Enter learning mode

Users can actively send voice commands of [enter learning mode] or click the [Voice Learn] button in the App to enter voice learning mode.

3) The device voice announces [OK, entered learning mode. To start learning, please say, start learning]

4）Active voice command from the user [Start learning]

5）The device voice announces [Please study in a quiet environment and follow the prompts:]

6）Device voice broadcast [Starting learning, I need help]

The content replied by the user can be customized as any contents. The device will broadcast [Please say that again] and user should repeat the content. After the two input contents are consistent, the device prompts [Learning Success] and then the process is successful. If the two input contents are inconsistent or the surrounding environment is noisy, the device prompts [Learning Failure] and user need to learn it again.

7)Device voice broadcast [Starting learning, I fell].

The content replied by the user can be customized as any contents. The process is the same as the last one.

8）Device voice broadcast [Starting learning, Nobody fall down]

The content replied by the user can be customized as any contents. The process is the same as the last one.

9) The device can learn a total of three voice commands. User can restore the device to the default factory mode and learn again to change the customized sentences. Users can also restore the device's default voice commands using button of [Voice Reset] in the App.

10）Exit learning mode

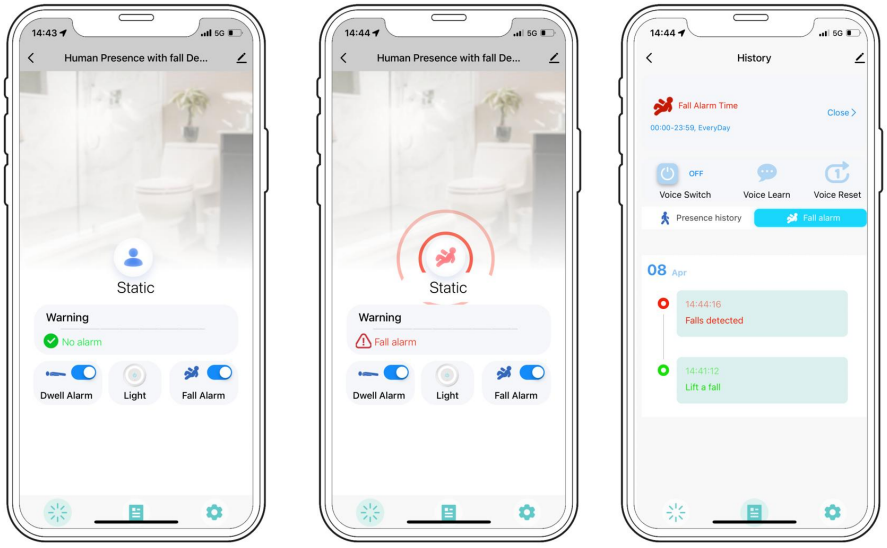
User can send a voice command of [Stop Learning] if they need to exit the learning mode midway. If there is no reply for more than 10 seconds during the learning process, the learning mode will be exited by default and the device will broadcast as [OK, exit learning mode]

4. Restore default factory settings

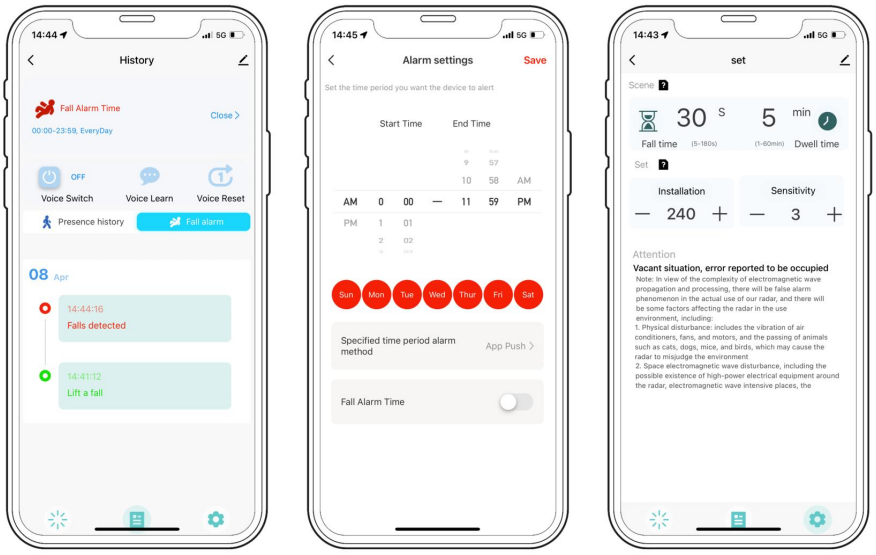
User can restore the device to factory mode by pressing and holding the device reset button for 5 seconds, or by using voice commands [Restore default factory settings].

5. Device function descriptions

5.1 App interface introduction



5.2 Radar functional configuration



5.3 Description of functions

5.3.1 Occupied

Indicates that there is someone in the current detection environment. The response time for triggering the presence of someone is less than 300ms, which is more sensitive than PIR infrared detection.

5.3.2 Unmanned

It means there is no one in the current detection environment. The device will continue to determine whether there is still micro-motion in the area. When it is determined that it is unoccupied for more than 30 seconds, the device will output the unmanned status.

* If the device has been unable to enter unoccupied status, it is recommended to check whether there is micro-motion interference in the space, such as fluttering curtains, moving sweeping robots, or animals.

5.3.3 Active

It means that someone is moving in the current detection environment, and the radar will continue to detect the movement of people

5.3.4 Static

Represents the status of someone standing, sitting or lying quietly in the current detection environment. The radar will continue to detect changes in the status of the person and report it.

5.3.5 Alert status

1）No alarm status currently: Nobody fall down

2）Fall alarm: Someone has fallen down

*** If someone falls in the detection environment, the fall status will continue until the person gets up safely.**

3) If someone is still in the detection environment for a long time (fainting, lying down or sitting still), the stationary dwell state and dwell alarm will be displayed. The dwell alarm will remain until the person recovers.

4）Static Dwell switch and fall switch

Turn on and off static dwell alarm and fall alarm. The default status is on.

5) History records for human presence detection and fall alarm

The device can record the presence/no man and fall status with time record in 7 days

6) Time settings for pushing alarm

Customize the time period for device alarms or alarms within specified time periods

7）Fall alarm time setting

After a person falls, the alarm will be pushed after a specified period of time. The setting range is 5s-180s. If you need to push the notification immediately, it is recommended to set as 5s.

8） Static dwell time setting

After the person stay stationary for a specified period of time, the static dwell alarm will be pushed. The setting range is 1-60 minutes. If you need to push notification immediately, it is recommended to set it to 1 minute.

9) Intelligent height

Before installation, you need to set this parameter according to the actual installation height. The device supports an installation height range of 2.2-2.8 meters.

10） Fall sensitivity setting

Fall sensitivity represents the degree of fall detection ability, divided into 1-3 levels, and the default level of level 3 is the most sensitive.

11） Night light control switch

Turn on and off the night light. You can also control the light using voice command.

7.Product parameters

Product number	FDV3-TUY
Previous Product Number	FDVW3
Rated input	5V⎓ 3A
Wireless connections	2.4G
Radar frequency	60G
Operating temperature	-10℃ ~ +60℃
Working humidity	0 ~ 95% RH，no condensation
Power adapter output	5V ⎓ 3A

Power adapter input	180V — 240V～50/60Hz 0.6A

8. Status indicator light description

Indicator status	Device Status
The red indicator light flashes and alternates on and off for 500ms (90s timeout)	Device network status
No indicator light is on	In normal state/no button state
The blue indicator light is on	Button trigger
The green indicator light stays on for 3 seconds and then goes out	Connected to the router and connected to the cloud
The red indicator light is always on	Device goes offline
Night light on	Someone exists
Night light goes out	Unmanned

9. Name and content of harmful substances in products

	Harmful Substance					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Circuit board components	○	○	○	○	○	○
Plastic parts	○	○	○	○	○	○
Metal parts	○	○	○	○	○	○
Speaker	○	○	○	○	○	○
Power Adapter	○	○	○	○	○	○

This form is prepared in accordance with the provisions of SJ/T11364.

○ Indicates that the content of the hazardous substance in all homogeneous materials of this part is within the limit requirements specified in GB/T26572.

× indicates that the content of the hazardous substance in at least one homogeneous material of the component exceeds the limit requirements specified in GB/T26572.

10. After-sales service

The after-sales service of this product is implemented in strict accordance with the "Consumer Rights and Interests Protection Law of the People's Republic of China" and the "Product Quality Law of the People's Republic of China". The service content is as follows:

Warranty Policy

During the validity period of the Three Guarantees, you can enjoy free returns, exchanges, and repair services in accordance with these regulations. Returns, exchanges, and repairs should be handled with invoices.

Service type	Service Policy
return the goods	Return of product due to quality reasons within 7 days from the day after receipt
Exchange	Exchange for product quality reasons within 15 days from the day after receipt
Repair	Repair due to product quality within 1 year from the day after receipt

Friendly reminder: Since packaging boxes are required to ensure the safety of product transportation during transportation, it is recommended that you keep the packaging boxes for at least 30 days from the day after signing for receipt.

11. Product performance fault table

Name	Performance glitches
Human fall alarm sensor FDV3-TUY	1. Surface cracks caused by structural or material factors 2. The indicator light fails 3. The network distribution button fails 4. Human body induction failure 5.Night light failed

Non-warranty regulations

- Unauthorized maintenance, misuse, collision, neglect, abuse, liquid intrusion, accident, modification, incorrect use of non-product accessories, or tearing or altering labels and anti-counterfeiting marks.
- The three-pack validity period has expired.
- Damage caused by force majeure.
- Situations that do not meet the performance failures listed in the "Product Performance Failure Table".
- This product and its accessories may have performance failures listed in the "Product Performance Failure Table" due to human reasons.