Milesight



Smart Radiator Thermostat

WT103

User Guide

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Chapter 1. Preface

Copyright Statement

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Milesight reserves the right to change this guide and the specifications without prior notice. The latest specifications and user documentation for all Milesight products are available on our official website http://www.milesight.com

Safety Instruction

These instructions are intended to ensure that users can use the product correctly to avoid danger or property loss. Milesight will not take responsibility for any loss or damage resulting from failure to follow the instructions in this operating guide.

CAUTION:

Injury or equipment damage may be caused if any of these cautions are neglected.

- The device is intended only for indoor use.
- The device is not intended to be used as a reference sensor, and Milesight will not take responsibility for any damage which may result from inaccurate readings.
- The device must not be disassembled or remodeled in any way.
- Do not place the device close to objects with naked flames.
- Do not place the device where the temperature is below/above the operating range.
- The device must never be subjected to shocks or impacts.
- To protect the security of the device, please change the device password when first configuring.
- To prevent heat accumulation, do not block air circulation around the device.

Revision History

Release Date	Version	Revision Content
November 5, 2026	V1.0	Initial version

Chapter 2. Product Introduction

This chapter describes basic product information.

Overview

WT103 is a LoRaWAN® radiator thermostat designed to help manage the heating control system. With one preset date period and up to 16 customized heating plans, it enables the smart management of the heating system. WT103 is a smart and highly environmentally-sensitive product. Abnormal temperature difference and extremely low temperatures can quickly trigger it, prompting fast corrective action by adjusting the valve opening.

Compliant with Milesight LoRaWAN® gateway and Milesight Development Platform solution, users can control the room temperature as well as triggering other sensors or appliances easily remotely.

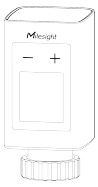
WT103 is widely used for smart heating control in buildings, homes, and water-based underfloor heating systems.

The device has the following features:

- Built-in temperature sensor with support for WT401 wireless thermostat connection enables environmental detection and accurate control
- Adjust the room temperature automatically and manually with a time-controlled regulation
- Up to 16 heating plans within 1 pre-set Date Period
- Intuitive, direction-adjustable LCD display suitable for various installation environments
- Support open-window detection and freeze protection
- Equip with child-lock to enable tamper-proof in public area
- Theft-deterring collar accessory for structural anti-theft protection
- Easy to install with simple lock design without further setting
- Equipped with NFC for one touch configuration
- Function well with standard LoRaWAN® gateways and network servers
- Compatible with Milesight Development Platform
- Support Firmware Update Over the Air (FUOTA) feature

Packing List

This section describes the packing list. After unboxing, please check that the following items are included in the package. If any of the below items are missing or damaged, please contact your sales representative.



1 × WT103 Device
(with Valve Base Plate)



1 × Theft-deterring Collar Kit



1 × Battery Cover Screw



1 × Warranty Card

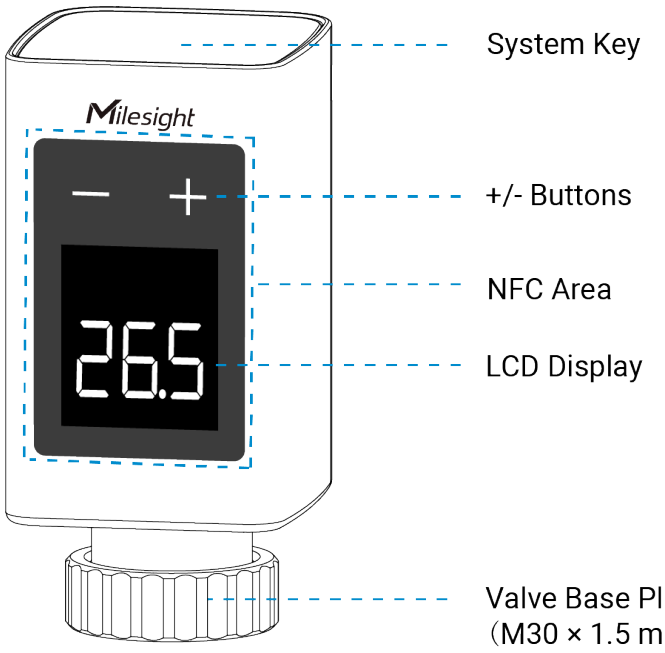


1 × Quick Guide Card

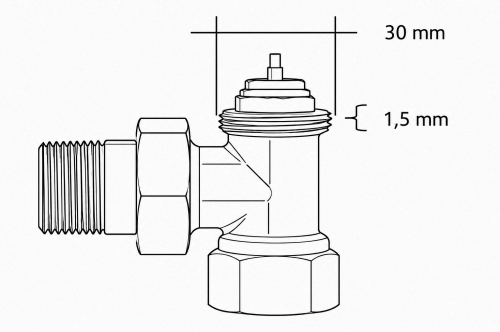
Hardware Introduction

Hardware Overview

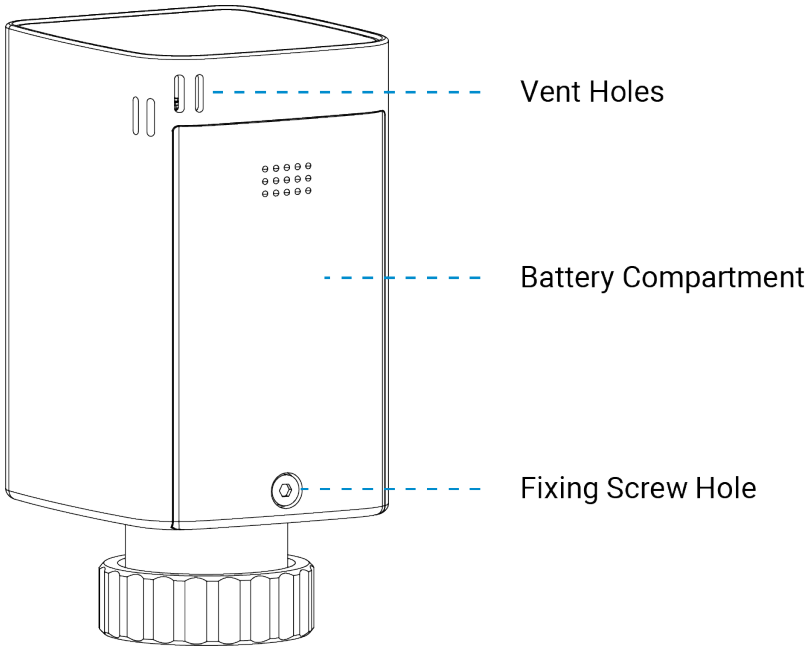
Front View



Part	Description
System Key	When enabled, turns the device on/off or restores factory settings. Disabled by default. For more details, see System Key Description.
NFC Area	Used to access and configure the device via the Milesight ToolBox app.

Part	Description
+/- Buttons	Adjust the scale level, target temperature, or target valve opening when the display is on.
LCD Display	The display is normally off. Press any button once to wake the display. For more details, see LCD Display Description.
Valve Base Plate	Mounts the device to a valve with an M30 × 1.5 mm thread. For other valve types, refer to the Compatibility Guide to install a compatible valve adapter first. 

Back View



Part	Description
Vent Holes	Allow ambient air to reach the internal NTC sensor for timely and accurate temperature measurement.
Battery Compartment	Houses the battery for power supply.
Fixing Screw Hole	Used to secure the battery compartment cover.

System Key Description

Note:
The system key is disabled by default. Enable it in the ToolBox app if needed.

Function	Operation	LCD Display
Power On	When the device is off, press and hold the system key for more than 3 seconds.	On
Power Off	When the device is on, press and hold the system key for more than 3 seconds.	Slowly Blinks → Off
Restore Factory Settings	Press and hold the system key for more than 10 seconds.	Blinks Rapidly

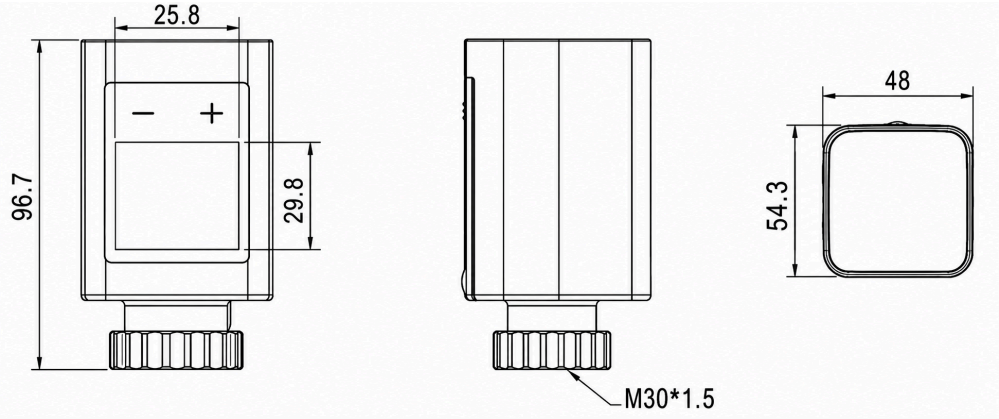
LCD Display Description

Icon	Description
	**Ambient Temperature:** Press any button once when the LCD is off. Disabled by default. **Scale Level:** In Scale Level Control mode, press + or − to display the scale level. **Target Temperature:** In Integrated Control mode, press + or − to display the target temperature. **Valve Opening:** In Valve Opening Control mode, press + or − to display the valve opening. Disabled by default.

Icon	Description
	Displayed when a locked button is pressed.
	Displayed when the device battery is low.
	Displayed while the device is increasing the valve opening.
	Displayed when Open Window Detection is triggered. Disappears when the condition is cleared.
	Displayed when the device is not connected to the network. Disappears after the network connection is restored.

Dimensions

The following figure shows the device dimensions (unit: mm).



Chapter 3. Install the Device

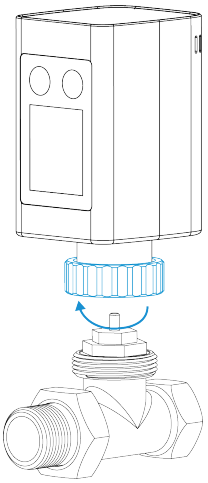
Steps:

1. **Check valve compatibility and select an adapter if required.**

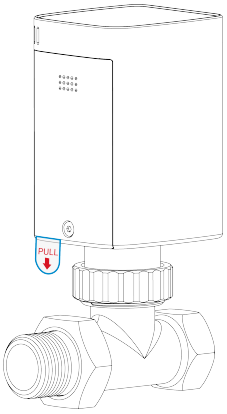
   The device can be mounted on a valve with an M30 × 1.5 mm thread. For other valve types, install a compatible valve adapter first. See the Compatibility Guide for details.

2. **Mount the Device.**

   Place the valve base plate onto the valve or valve adapter and secure it firmly.

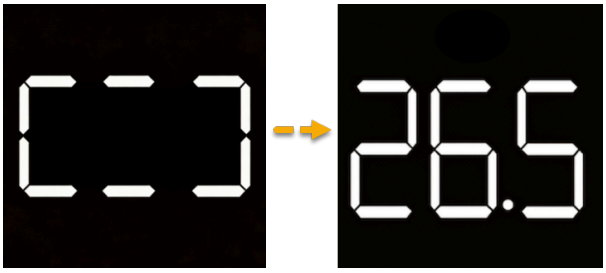


3. **Remove the battery insulation sheet to power on the device.**



4. **Calibrate the Valve.**

   Wait for the motor to complete automatic calibration. Calibration is successful when the LCD switches from the motor calibration icon to displaying the temperature control mode for 2 seconds before turning off.



Troubleshooting:
If the ambient temperature flashes twice before the LCD turns off, calibration has failed. Check the reported data on the platform for the cause.

5. **Connect to the Network.**

   a. Open the ToolBox app and access the device via NFC. For more details, refer to Access the Device Using NFC.



   b. In the ToolBox app, go to **Settings > LoRaWAN** to obtain the following device information.

Parameters	Description
DevEUI	Available under **Settings > LoRaWAN** in the ToolBox app or on the device label.
Application Key	Application key (AppKey) for OTAA mode. Default: DevEUI + DevEUI.

   c. Add the device to the LoRaWAN network server. Make sure the network uses the same frequency band as the device.

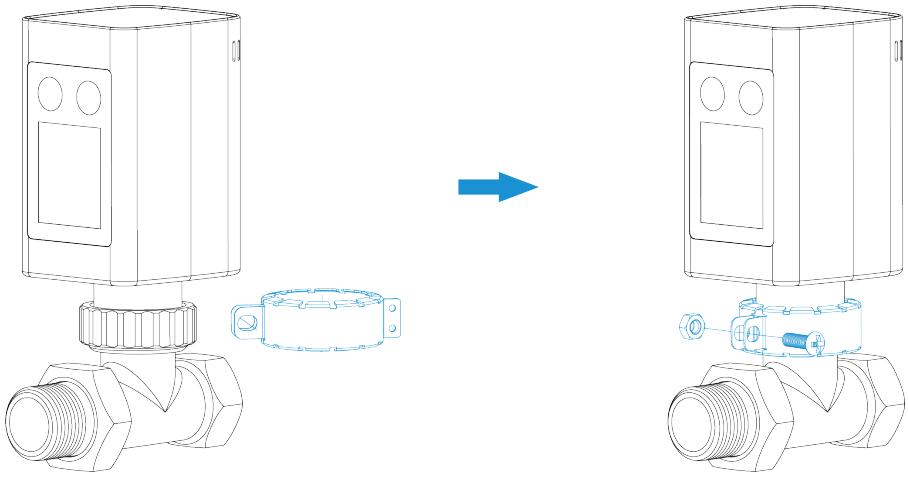
   d. Confirm that the device has joined the network and that the network disconnection icon has disappeared.

6. **Verify Operation.**

Press any button once to wake the display. Then press + or − and confirm that the displayed setting changes accordingly.

7. **(Optional) Secure the Device.**

   Secure the theft-deterring collar to the valve base plate using a screw and a nut.



Chapter 4. Replace the Batteries

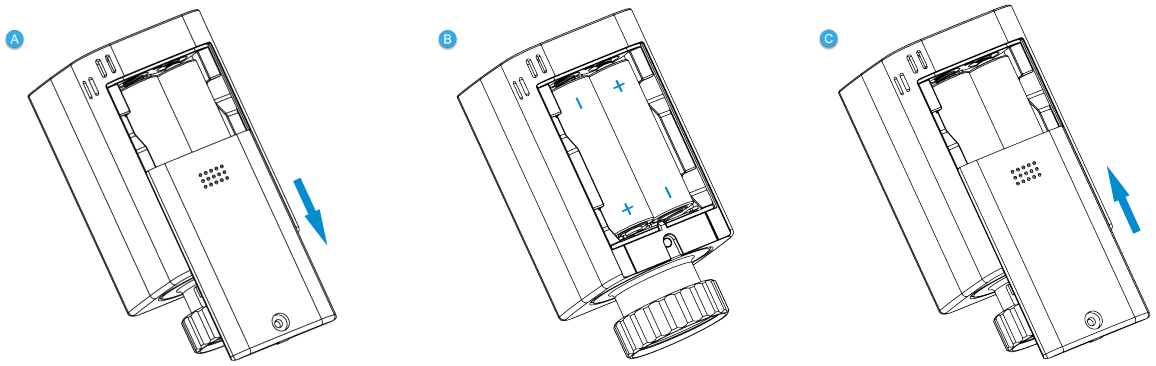
When the device runs out of power, please refer to the following steps to properly replace the batteries.

Requirements:

- The device can only be powered by Li-FeS_2 AA batteries, not alkaline batteries.
- Ensure all replacement batteries are new, otherwise it may shorten battery life or cause inaccurate power calculation.
- Remove the battery from the device if the battery insulation sheet is removed and it is not used for an extended period.

Steps:

1. Push the back cover down to open the battery compartment.
2. Remove the old batteries and insert new ones, observing the polarity markings in the battery compartment.
3. Reinstall the back cover.
4. (Optional) Install the screw to secure the back cover.



Chapter 5. ToolBox App Configuration

The Milesight ToolBox app can be used to configure the device. This chapter describes ToolBox related configuration.

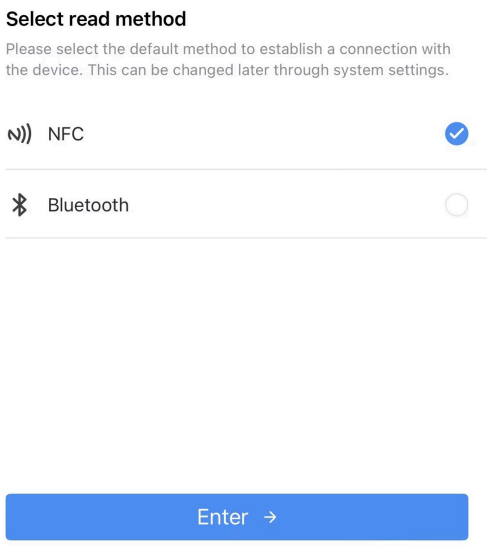
Access the Device Using NFC

This section describes how to access the device using NFC. NFC is enabled by default on this device.

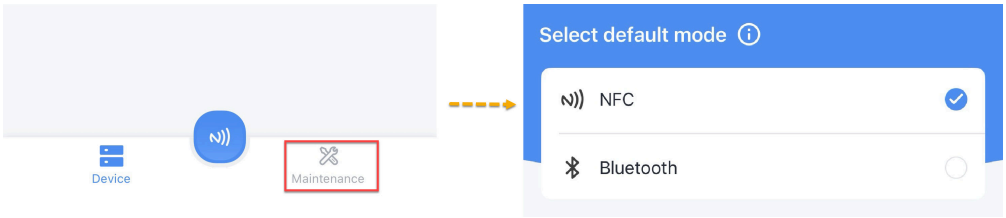
Prerequisites: The device is supplied with power.

Steps:

1. Download Milesight ToolBox app from Google Play or Apple Store.
2. Enable the NFC function on the smart phone.
3. Launch ToolBox.
    a. Upon initial launch, the following page will appear. Select **NFC** and click **Enter**.



    b. Upon subsequent launches, Click **Maintenance** on the home page, and then select **NFC**.



4. (Optional) To locate the NFC detection areas of the phone and the device, click **Can't find the NFC location**.

5. Put the NFC detection area of the phone close to the NFC antenna of the device.



> **Tip:**
> It is recommended to remove the phone case.

6. Click . If the device is recognized successfully, the homepage is displayed.

> **Troubleshooting:**
> If read fails, move the phone away and reposition it close to the sensor to try again.

For a description of the homepage, refer to the following table.

Item	Description
Basic Information	Show basic device information and sync the device time.
Setting	Set the device and network parameters.
	Import, add, export or delete a template.
	Select language, show NFC positions, check App version, etc..

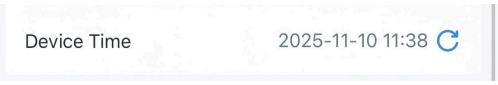
Synchronize Device Time

This section describes how to sync the device time.

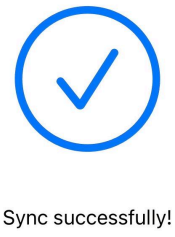
Synchronize the Time Manually Through ToolBox App

The device time can be synced via Milesight ToolBox App.

1. On the homepage of ToolBox, click **Basic Information**.
2. Click to synchronize the time.



3. Put the NFC detection area of the phone close to the NFC antenna of the device. If the time is synchronized successfully, the following page is displayed.



Synchronize the Time Automatically Through a LoRaWAN® Network Server

Prerequisite: The LoRaWAN® network server supports the device time synchronization feature.

Steps:

1. Set the LoRaWAN® version of the device to **V1.0.3**. For details, refer to Configure LoRaWAN® Parameters.
2. Connect the device to the network server. Once the device successfully joins the network, it sends a MAC command to query the time from the network server.
3. After joining the network, the device will send the DeviceTimeReq command every 5 days since the last sync.

Note:
This only supports getting the time, but not the time zone. The time zone can be configured by ToolBox App or downlink command.

Configure LoRaWAN® Parameters

This section describes how to configure the device transmission parameters for the LoRaWAN® network. LoRaWAN® is enabled by default on this device.

Usually, it consists of the below steps:

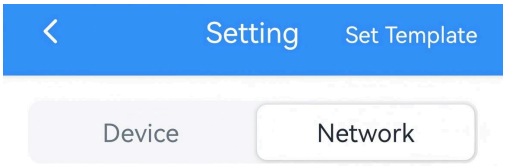
1. Configure Join Type and Supported Frequency (Necessary)
2. Configure Other LoRaWAN® Parameters (Optional)

Configure Join Type and Frequency

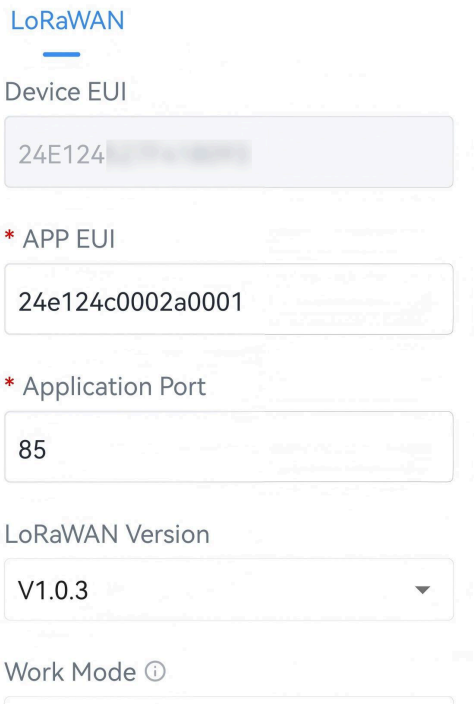
It is necessary to configure the join type and the frequency to establish communication with LoRaWAN® gateways.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Network** tab.



3. Navigate to the **LoRaWAN** page The **LoRaWAN** page is displayed, see the following figure.



4. From the **Join Type** selection box, select **OTAA** or **ABP** as needed.

Note:
OTAA is required if you connect the device to the Milesight Development Platform.

5. Configure **Join Type** related parameters as needed. You can use default values unless otherwise specified.
   - If **OTAA** is selected, configure **Application Key** and **Rejoin Mode** as needed. For details, refer to the following table.

Parameter	Description
Application Key	Appkey for OTAA mode. Default: **Device EUI + Device EUI**. Example: 24e124123456789024e1241234567890. **Tip:** For device security, it is recommended to modify the default value or contact sales before purchase to use random keys.
Rejoin Mode	Rejoin mode for OTAA mode. Reporting interval≤35 minutes: The device sends a specific number of LinkCheckReq MAC packets at each reporting interval or every other reporting interval to verify connectivity. Reporting interval > 35 minutes: The device sends a specific number of LinkCheckReq MAC packets at each reporting interval to validate connectivity. If there is no response, the device will re-join the network. When **Rejoin Mode** is enabled, enter a number in the **Set the number of detection signals sent** text box. The actual sending number is the configured number +1.

   - If **ABP** is selected, configure **Network Session Key**, **Application Session Key** and **Device Address** as needed. For details, refer to the following table.

Tip:
For device security, it is recommended to modify the default values.

Parameter	Description
Network Session Key	Nwkskey for ABP mode. Default: **5572404C696E6B4C6F52613230313823**.
Application Session Key	Appskey for ABP mode. Default: **5572404C696E6B4C6F52613230313823**.
Device Address	DevAddr for ABP mode. Default: 5th to 12th digits of SN.

6. Select a frequency from the **Support Frequency** selection box as needed. This must be the same as the frequency configured on the gateway's web GUI.
7. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.

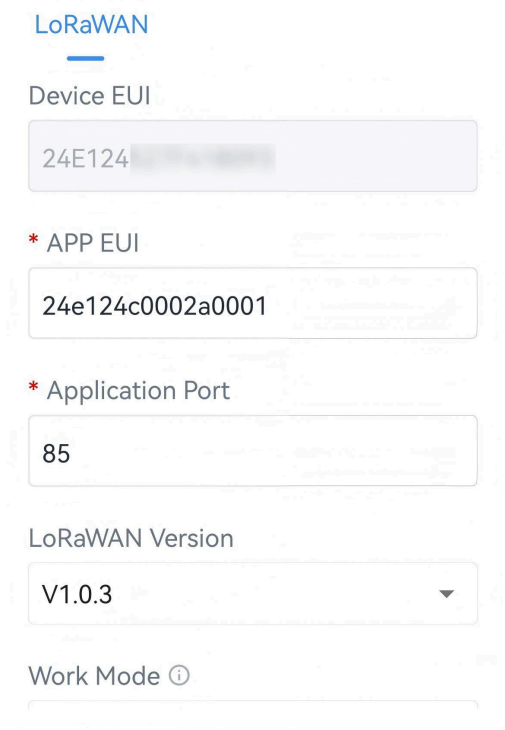


Write successfully!

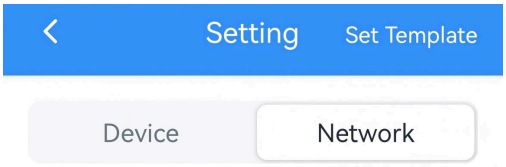
Configure Other LoRaWAN® Parameters

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. Navigate to the **LoRaWAN** page The **LoRaWAN** page is displayed, see the following figure.



3. On the top bar, select **Network** tab.



4. Configure the following parameter as needed. You can use default values unless otherwise specified. For a description of the parameters, refer to the following table.

Parameter	Description
Device EUI	Unique ID of the device labelled on the device housing. **Tip:** For bulk deployments, contact sales to request the device EUI list.
App EUI	The default App EUI (join EUI) is 24E124C0002A0001.
Application Port	Port used for sending and receiving data. Default: **85**.
LoRaWAN® Version	Options: **V1.0.2**, **V1.0.3**.

Parameter	Description
Work Mode	Fixed: Class A.
Confirmed Mode	If the device does not receive ACK packet from network server, it will re-send data once.
Join Type	Refer to Configure Join Type and Supported Frequency.
Supported Frequency	Refer to Configure Join Type and Supported Frequency.
ADR Mode	Enables the network server to adjust the spreading factor, the bandwidth and the transmission power to optimize data rates, airtime and energy consumption in the network.
Spreading Factor	If ADR mode is disabled, the device sends uplink data using this spreading factor. A higher spreading factor increases transmission range but reduces data rate and increases power consumption. This parameter varies with **Supported Frequency**.
Tx Power	Defined by the LoRa Alliance. Specifies the strength of the radio signal transmitted by the device.
RX2 Data Rate	RX2 data rate to receive downlinks.
RX2 Frequency	RX2 frequency to receive downlinks. Unit: Hz

5. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Configure the Device Parameters

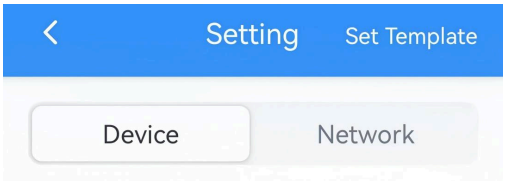
This section describes how to configure the device.

Change the Device Password

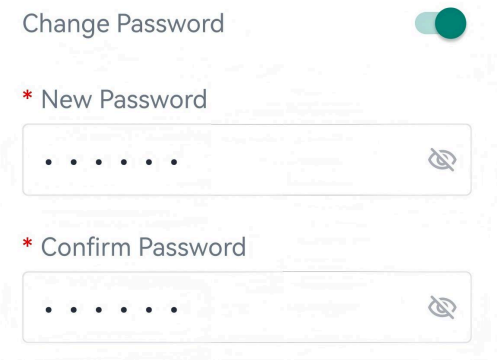
It is recommended to change the device password upon initial configuration for security purposes. This section describes how to change the device password.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **General** page, enable **Change Password** and enter the new password.



Parameter	Description
New Password	Enter a new password of 6 characters. Only letters, digits, and underscores are allowed.
Confirm Password	Enter the password again.

4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

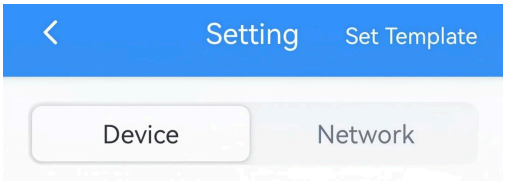
Configure General Parameters

This section describes how to configure the general parameters of the device, which includes:

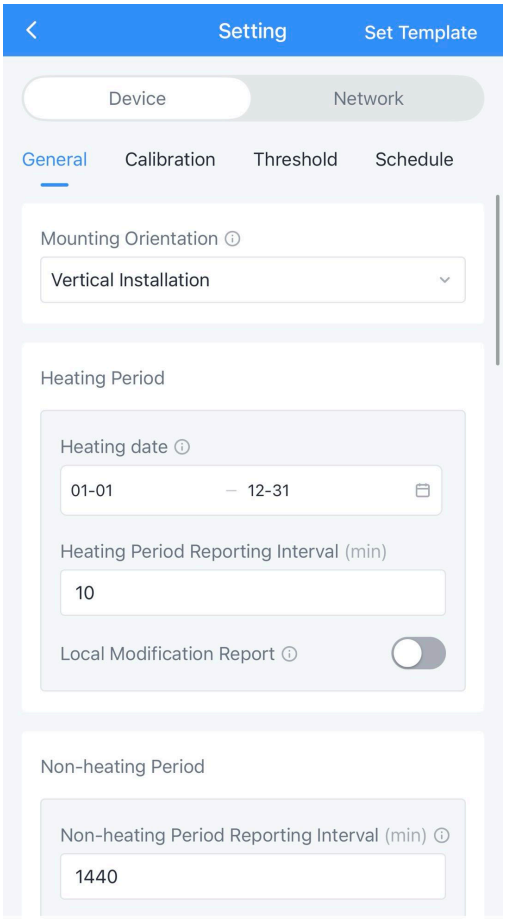
- Mounting Orientation
- Heating Period
- Non-heating Period
- Valve Descaling
- Temperature Unit
- Ambient Temperature Source
- Ambient Temperature Display
- Ambient Temperature Display Time
- System Key
- Child Locks
- Valve Emergency Position
- Time Zone
- Daylight Saving Time
- Device password

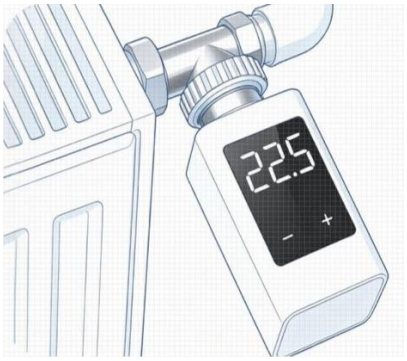
Steps:

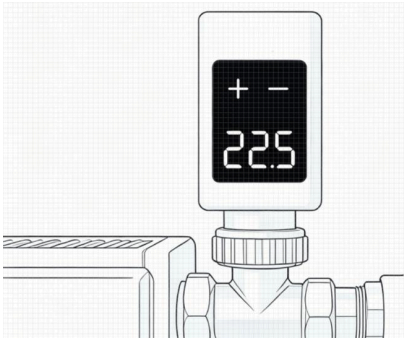
1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **General** page, configure the following device parameters as needed.



Parameter	Description
Mounting Orientation	Set the screen orientation based on the mounting orientation. **Horizontal Installation:**  **Vertical Installation:**

Parameter	Description
	
Heating Date	Set the heating period to control the temperature. The temperature control will stop during the non-heating period.
Heating Period Reporting Interval	The interval to report data to network server during the heating period. Range: 5~1440 min, Default: 10 min.
Local Modification Report	The device reports immediately after the scale level or target temperature is adjusted using the button. This function is available only when Temperature Control Algorithm is set to Built-in PID.
Non-heating Period Valve Status	Select the valve status as **Fully open** or **Fully closed** during the non-heating period.
Non-heating Period Reporting Interval	The interval to report data to network server during the non-heating period. Range: 5~1440 min, Default: 1440 min.
Valve Descaling	Automatically opens the valve once every 30 days during the non-heating period to help flush out limescale or reduce sticking caused by prolonged inactivity. Disabled by default.
Temperature Unit	Select the temperature unit displayed on the ToolBox. **Note:** ◦ The temperature unit in the uplink reports is fixed as Celsius(°C). ◦ Please modify the threshold settings if the unit is changed.
Ambient Temperature Source	Select the source of the ambient temperature.

Parameter	Description
	Internal NTC: Use internal NTC sensor. **LoRa Downlink:** Receive temperature data from network server.
External Temperature Timeout Time	The device will time out if it receives no temperature command from the platform within the specified time. This function is available only when Ambient Temperature Source is set to LoRa Downlink. Range: 1 ~ 1440 min. Default: 30 min.
External Temperature Timeout Control Strategy	**Continue control with Current State:** Continue temperature control based on the current state until new external temperature data is received. **Switch to internal NTC:** Switch to the internal NTC sensor for temperature control until new external temperature data is received, then switch back to the external temperature source. **Close the valve:** Close the valve and stop temperature control until new external temperature data is received, then resume temperature control.
Ambient Temperature Display	Enable or disable the display of the ambient temperature after pressing any button. If disabled, the ambient temperature will be replaced by target temperature or valve opening.
Ambient Temperature Display Time	The ambient temperature display time after pressing any button. Range: 1~10s, Default: 2s.
Temperature Control	Enable or disable temperature control. For details, refer to Configure Temperature Control Parameters.
Open Window Detection	Enable or disable open window detection. For details, refer to Configure Temperature Control Parameters.
Freeze Protection	Enable or disable freeze protection. For details, refer to Configure Temperature Control Parameters.
System Key	Once enabled, the button can be used to power on/off or reset the device.
Child Locks	Once enabled, the corresponding button's feature will be disabled. Options: **System On/Off** and **Temperature +/-**.
Valve Emergency Position	When the device battery is low, the valve maintains emergency position, control operations cease, and normal status reporting continues. Range: 0-100% , Default: 50%.

Parameter	Description
Time Zone	Select the UTC time zone. When you click **Sync** button of ToolBox App to sync time, the device will also sync the time zone from smart phone automatically.
Daylight Saving Time	Enable or disable Daylight Saving Time (DST). **Start Time:** The start time of DST time range. **End Time:** The end time of DST time range. **DST Bias:** The DST time will be faster according to this bias.
Device password	Change the password for ToolBox App to write this device.

4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Related information

Commands for General Setting

Configure Temperature Control Parameters

This section describes how to configure the temperature control related parameters of the device, which includes:

- Temperature Control
- Open Window Detection
- Freeze Protection

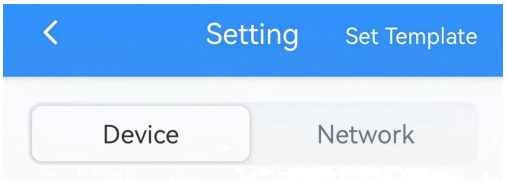
Configure Temperature Control Parameters

The device supports controlling the temperature during the heating period.

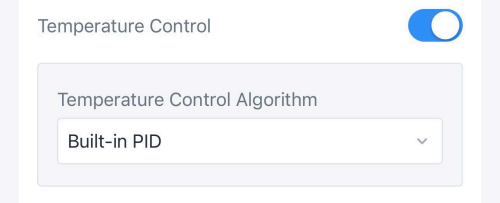
Prerequisites: Motor Stroke Calibration is successful.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **General** page, enable **Temperature Control**.



4. Select the **Temperature Control Algorithm** and configure the related parameters.
   - **Built-in PID:** Automatically adjusts the valve opening according to the ambient temperature and the set temperature.
   - **Platform Algorithm:** Local target changes are reported immediately. The device executes valve opening commands from the platform without local calculation. If the platform times out, the configured fallback strategy is applied.

Parameter	Description
Temperature Control Algorithm Timeout Time	The device will time out if it receives no command from the platform within the specified time. Range: 1-1440 min. Default: 30 min.
Platform Algorithm Timeout Control Strategy	**Continue control with Current State:** Continue temperature control based on the last data received from the platform until new data is received.

Parameter	Description
	Switch to Built-in PID Algorithm: Switch to the built-in PID algorithm until new data is received from the platform, then switch back to the platform algorithm. **Close the valve:** The device closes the valve and stops temperature control until new data is received from the platform, then resumes temperature control.

5. Select the **Temperature Control Mode** and configure the related parameters.
   - **0-5 Scale Mode:**

Parameter	Description
Target Temperature for Each Scale Level	Set the target temperature for each scale level. Range: 5-35 °C. Default values: Level 0 = 7 °C, Level 1 = 12 °C, Level 2 = 16 °C, Level 3 = 20 °C, Level 4 = 23 °C, Level 5 = 26 °C.
Target Scale Level	Set the target scale level for device control.
Target Scale Level Display Time	The target scale level display time after pressing any button. Range: 1-10s , Default: 2s.

   - **Integrated Control Mode:** Automatically adjust to target temperature via the device's algorithm, and support receiving valve opening downlink control commands.

Parameter	Description
Target Temperature	Set the target temperature for device control. Range: 5-35 °C.
Target Temperature Regulation Range	Set the adjustable range of the target temperature. Range: 5-35 °C.
Target Temperature Resolution	Select the resolution of the target temperature. Options: **0.5:** Increase or decrease target temperature by 0.5 each time. **1:** Increase or decrease target temperature by 1 each time.

Parameter	Description
Target Temperature Display Time	The target temperature display time after pressing any button. Range: 1-10s , Default: 2s.

◦ **Valve Opening Control:** Adjust the valve opening status directly to control the temperature.

Parameter	Description
Target Valve Opening	Set the valve opening percentage. 0% means fully closed and 100% means fully open.

6. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Result

During the heating period and not executing any schedule event, the device will control the temperature according to the above settings.

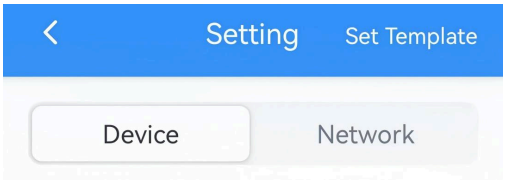
Configure Open Window Detection Parameters

The device supports detecting the window open status to stop invalid temperature control, thus saving energy. The following steps enable automatic detection of the window open status. In addition, the device supports manual control of the window open status via downlink commands.

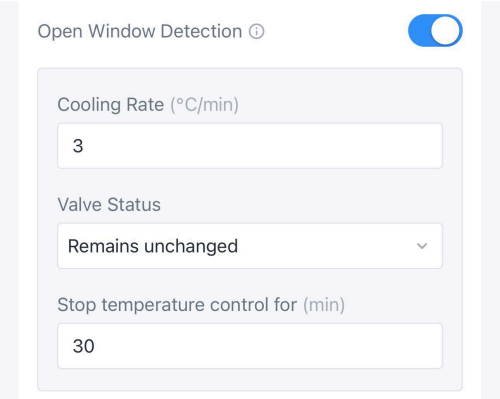
Prerequisites: Temperature Control is enabled.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **General** page, enable **Open Window Detection** and configure the related parameters. The following page is displayed.



Parameter	Description
Cooling Rate	Set the dropping ambient temperature per minute. When the rate reaches the preset value, it is considered a window-open status. Range: 2~10 °C/min.
Valve Status	Select the valve status during the window-open status. Options: **Remains unchanged**, **Close Valve**.
Stop Temperature Control Time	The interval to stop temperature control after detecting a window-open status. If the window-open status is not released within this interval, the device will re-detect the window-open status. Range: 1~1440 min, Default: 30 min.

4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Result

When the device detects that the cooling rate reaches the preset value, it sends an open window alarm packet and stops temperature control.

The open-window alarm is cleared when any of the following conditions is met:

- Reach the set temperature control stop time.
- The ambient temperature shows an upward trend for at least **10 minutes**.
- A release command is received from the platform.

After the alarm is cleared, the device sends an open-window alarm release packet and resumes temperature control.

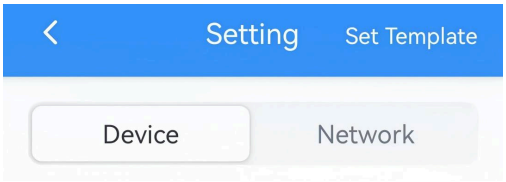
Configure Freeze Protection Parameters

The device supports opening the valve to avoid freezing when detecting that the ambient temperature is too low.

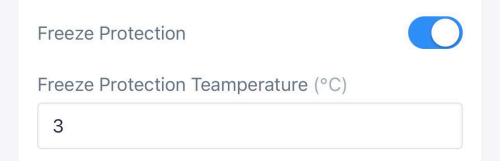
Prerequisites: Temperature Control is enabled.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **General** page, enable **Freeze Protection** and configure the **Freeze Protection Temperature**. The following page is displayed.



4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Result

When the device detects that the ambient temperature is lower than freeze protection temperature, it sends a freeze protection trigger packet and starts temperature control.

When the device detects that the ambient temperature is higher than freeze protection temperature for over 2 hours, it sends a freeze protection release packet and keeps current valve opening status.

Related information

Commands for Temperature Control Settings

Alarm Report

Configure Calibration Parameters

This section describes how to configure the calibration parameters.

Motor Stroke Calibration

Motor stroke calibration must be performed to ensure temperature control. Usually, the device will automatically perform a stroke calibration under the following cases:

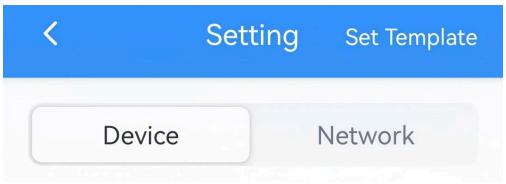
- The device is powered on, restarted, or reset;
- Temperature Control is re-enabled;

- From the non-heating period to the heating period;
- For a non-calibrated device, press any button, change target temperature or valve opening, or execute the heating event.

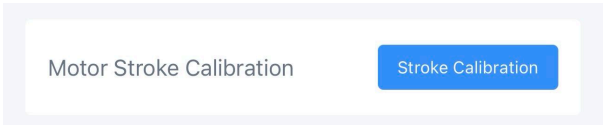
If calibration still fails, please follow the steps for manual calibration.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **Calibration** page, click **Stroke Calibration**.



4. Put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the device will start calibrating once.

Valve Opening Range

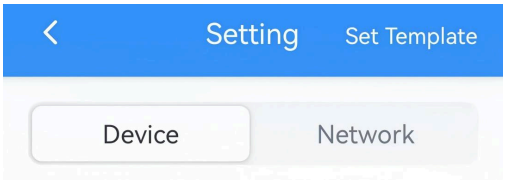
The valve control feature allows to set the min. and max. valve opening. Setting a minimum valve opening helps maintain heating efficiency, while limiting the maximum opening can restrict water flow through the radiator and help with hydraulic balancing.

Note:

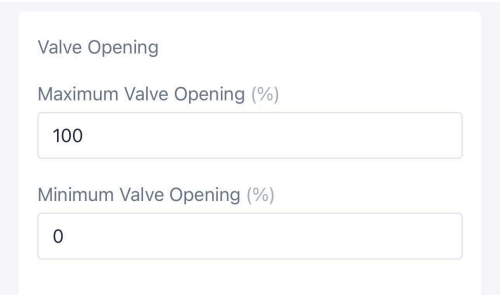
1. The difference between the maximum and minimum valve openings must be at least 10%.
2. This setting applies only to the PID algorithm.

Steps:

1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **Calibration** page, configure the max./min. valve opening percentage.



4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



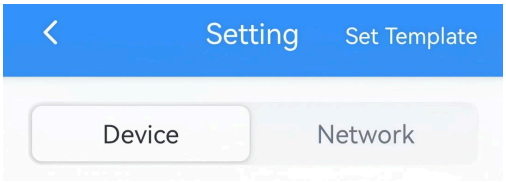
Temperature Calibration

The device supports adding calibration values to the current temperature values, then displays and reports the final values.

Prerequisites: Ambient temperature source is **Internal NTC**.

Steps:

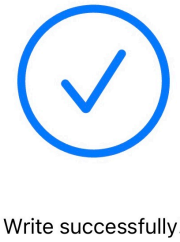
1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **Calibration** page, enable **Temperature** and enter a **Calibration Value**. The following page is displayed.



4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Related information

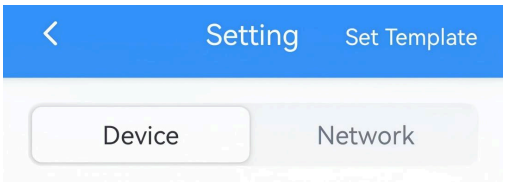
Commands for Calibration Settings

Configure Temperature Threshold Parameters

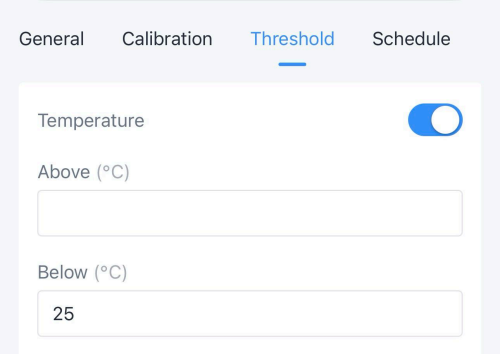
This section describes how to configure temperature threshold parameters.

Steps:

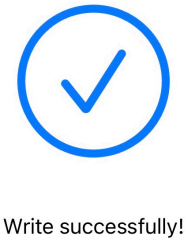
1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **Threshold** page, enable **Temperature** and enter at least one threshold value. The following page is displayed.



4. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Result:

Above Threshold: When the ambient temperature exceeds the Above threshold value, the device immediately sends a threshold alarm packet; when the ambient temperature falls to the Above threshold value minus 1, the device sends an alarm release packet.

Below Threshold: When the ambient temperature falls below the Below threshold value, the device immediately sends a threshold alarm packet; when the ambient temperature exceeds the Below threshold value plus 1, the device sends an alarm release packet.

Related information

Command for Threshold Setting

Alarm Report

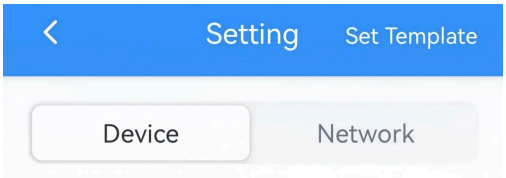
Configure Schedule Parameters

This section describes how to add and manage schedule events to achieve the automatic temperature control during heating period.

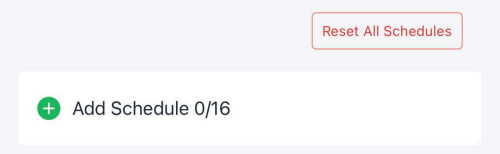
Prerequisites: Sync the time to ensure the schedule is executed in correct time.

Steps:

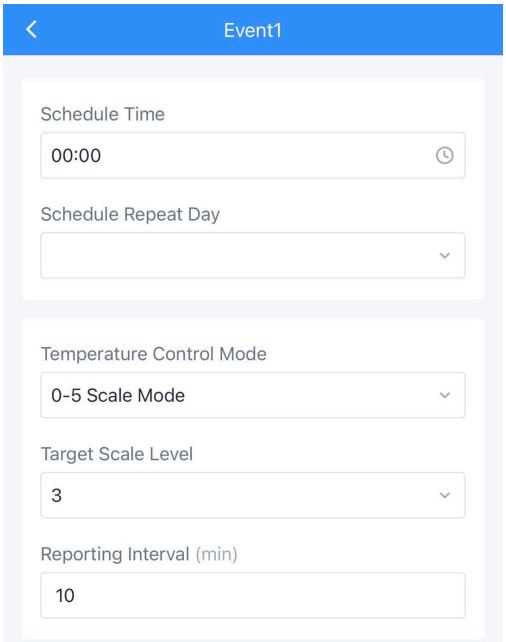
1. On the homepage of ToolBox, click **Setting** to enter the **Setting** page.
2. On the top bar, select **Device** tab.



3. In the **Schedule** page, click **Add Schedule** to add a schedule event. Each device supports up to 16 events.



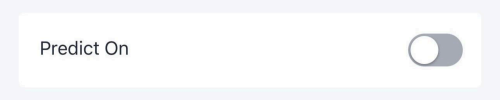
4. Configure the related parameters of this schedule event.



Parameter	Description
Schedule Time	The time to execute this schedule event during heating period.
Schedule Repeat Day	Select the weekdays to execute this schedule event every week. If left blank, the schedule event will only execute once.
Temperature Control Mode	Select the temperature control mode.

Parameter	Description
Target Scale Level	When temperature control mode is 0-5 Scale Mode, set the target scale level. Range: 0-5.
Target Temperature	When temperature control mode is Integrated Temperature Control, set the target temperature. Range: 5-35 °C/41-95 °F.
Valve Opening	When temperature control mode is Valve Opening Control, set the target valve opening percentage. Range: 0-100%.
Reporting Interval	The interval to report data to network server when executing the schedule event. Range: 5~1440 min.

5. Click **Confirm** to save this schedule event.
6. (Optional) Enable the **Predict On** feature to start the scheduled event in advance, allowing the target temperature to be reached by the scheduled time. When this feature is disabled, the scheduled event starts at the scheduled time.



7. Enable or disable to execute the schedule event.
8. (Optional) Click ⛔ to delete a schedule event, or click **Reset All Schedules** to restore factory settings as required.
9. Click **Write** in the lower right corner, and put the NFC detection area of the phone close to the NFC antenna of device. If the configuration succeeds, the following page is displayed.



Write successfully!

Related information

Commands for Schedule Settings

Chapter 6. Uplink Packets and Downlink Commands

This chapter describes the uplink data packet and downlink commands supported by the device.

All messages follow the following format (HEX), the Parameter/Data field must follow **little-endian** byte order:

Channel	Type	Parameter/Data	...
1 Byte	1 Byte	1-N Bytes	...

For decoder and encoder examples, please find files on https://github.com/Milesight-IoT/SensorDecoders. For details of uplink reports and downlink commands please refer to the sections below.

Uplink Packets

This section describes the uplink packets reported by the device.

Basic Information Packet

After joining the network, the device reports a packet containing the basic device information.

Packet description:

Item	Channel	Type	Byte	Description
Power On	ff	0b	1	ff, Device is on
Protocol Version	ff	01	1	Example: 01=V1
Hardware Version	ff	09	2	Example: 03 10 = V3.1
Software Version	ff	0a	2	Example: 03 01 = V3.1
Device Type	ff	0f	1	00: Class A, 01: Class B, 02: Class C, 03: Class C to B
Serial Number	ff	16	8	16 digits
TSL Version	ff	ff	2	Example: 01 00=>V1.0
Reset Event	ff	fe	1	ff, report only after reset

Example:

ff0bff ff0101 ffff0100 ff166746d48016300014 ff090110 ff0a0101 ff0f00		
Channel	**Type**	**Value**
ff	0b	Power On: ff(Reserved)
ff	01	Protocol Version: 01=> V1
ff	ff	TSL Version: 0100=> V1.0
ff	16	SN: 6746d48016300014
ff	09	Hardware Version: 0100 => V1.0
ff	0a	Software Version: 0101=> V1.1
ff	0f	00: Class A

Periodic Data Packet

The device reports a data packet at a configured reporting interval.

Packet description:

Item	Channel	Type	Byte	Description
Scale Level Control Report	14	d0	8	**Byte 1:** Battery Level, UINT8, Unit: % **Byte 2:** Current Valve Opening, UINT8, Unit: % **Byte 3-4:** Ambient Temperature, INT16/100, Unit: °C **Byte 5-6:** Target Temperature, INT16/100, Unit: °C **Byte 7:** Current Scale Level, UINT8 **Byte 8:** Reporting Reason • 00 = Periodic Report • 01 = Local Modification • 02 = Query Response • 03 = Enter Non-heating Period

Item	Channel	Type	Byte	Description
				• 04 = Temperature Control Enabled During Non-heating Period • 05 = Valve in Emergency Position
Integrated Control Report	15	d1	7	**Byte 1:** Battery Level, UINT8, Unit: % **Byte 2:** Current Valve Opening, UINT8, Unit: % **Byte 3-4:** Ambient Temperature, INT16/100, Unit: °C **Byte 5-6:** Target Temperature, INT16/100, Unit: °C **Byte 7:** Reporting Reason • 00 = Periodic Report • 01 = Local Modification • 02 = Query Response • 03 = Enter Non-heating Period • 04 = Temperature Control Enabled During Non-heating Period • 05 = Valve in Emergency Position
Valve Opening Control Report	16	d2	6	**Byte 1:** Battery Level, UINT8, Unit: % **Byte 2:** Current Valve Opening, UINT8, Unit: % **Byte 3-4:** Ambient Temperature, INT16/100, Unit: °C **Byte 5:** Target Valve Opening, UINT8, Unit: % **Byte 6:** Reporting Reason • 00 = Periodic Report • 01 = Local Modification • 02 = Query Device Status • 03 = Enter Non-heating Period

Item	Channel	Type	Byte	Description
				• 04 = Temperature Control Enabled During Non-heating Period • 05 = Valve in Emergency Position
Temperature Control Disabled Report	17	d3	3	**Byte 1:** Battery Level, UINT8, Unit: % **Byte 2:** Current Valve Opening, UINT8, Unit: % **Byte 3:** Reporting Reason • 00 = Periodic Report • 01 = Local Modification • 02 = Query Response • 03 = Enter Non-heating Period • 04 = Temperature Control Enabled During Non-heating Period • 05 = Valve in Emergency Position

Example:

1. Periodic report when temperature control is disabled.

17d3 646400		
Channel	**Type**	**Value**
17	d3	Battery Level: 64=>100% Current Valve Opening: 64=>100% Reporting Reason: 00 = Periodic Report

2. Periodic packet for Scale Level Control Mode.

14d0 6400 6309 6c07 0400		
Channel	**Type**	**Value**
14	d0	Battery Level: 64=>100%

14d0 6400 6309 6c07 0400		
Channel	**Type**	**Value**
		Current Valve Opening: 00=> 0% Ambient Temperature: 63 09 =>09 63=2403/100=24.03 °C Target Temperature: 6c 07 => 07 6c = 1900/100=19 °C Current Scale Level: 04=Level 4 Reporting Reason: 00 = Periodic Report

3. Periodic packet for Integrated Control mode.

15d1 6400 6309 6c0700		
Channel	**Type**	**Value**
15	d1	Battery Level: 64=>100% Current Valve Opening: 00=> 0% Ambient Temperature: 63 09 =>09 63=2403/100=24.03 °C Target Temperature: 6c 07 => 07 6c = 1900/100=19 °C Reporting Reason: 00 = Periodic Report

4. Periodic packet for Valve Opening Control mode.

16d2 6400 6309 3200		
Channel	**Type**	**Value**
16	d2	Battery Level: 64=>100% Current Valve Opening: 00=> 0%

16d2 6400 6309 3200		
Channel	**Type**	**Value**
		Ambient Temperature: 63 09 =>09 63=2403/100=24.03 °C Target Valve Opening: 32=>50% Reporting Reason: 00 = Periodic Report

Alarm Report

The device reports the following types of alarm packets.

Packet description:

Item	Channel	Type	Description
Temperature Alarm	83	67	**Byte 1-2:** Ambient Temperature, INT16/100, Unit: °C **Byte 3:** • 00=Configured high-temperature threshold alarm cleared • 01=Configured high-temperature threshold alarm triggered • 02=Configured low-temperature threshold alarm cleared • 03=Configured low-temperature threshold alarm triggered • 04 = Above 60°C alarm cleared • 05 = Above 60°C alarm triggered • 06 = Below -20°C alarm cleared • 07 = Below -20°C alarm triggered
Valve Descaling Alarm	84	92	**Byte 1:** Current Valve Opening, UINT8, Unit: % **Byte 2:** Mode, 00 = Automatic, 01 = Manual **Byte 3:** Result, 00 = Success, 01 = Failure **Byte 4:** Reason

Item	Channel	Type	Description
			• 00=Success • 01=Low battery • 02=Not in non-heating period • 03=Motor is running • 04=Calibration failed • 05=Motor stalled prematurely • 06=Device removed • 07=Motor operation failed • 08=Freeze protection triggered • 09=Temperature control enabled
Open Window Alarm	85	67	**Byte 1-2:** Ambient Temperature, INT16/100, Unit: °C **Byte 3:** 00=Window close, 01=Window open
Freeze Protection Alarm	86	67	**Byte 1-2:** Ambient Temperature, INT16/100, Unit: °C **Byte 3:** 00=Protection close, 01=Protection open **Byte 4:** Current Valve Opening, UINT8, Unit: %
Temperature Source Alarm	87	00	00=Alarm release, 01=Alarm
Low Battery Alarm	88	00	00=Alarm release, 01=Alarm

Examples:

1. Low battery alarm: Report once every 26 seconds when it enters low battery mode, for a total of three reports.

880001		
Channel	**Type**	**Value**
88	00	01=Low battery alarm

2. Temperature alarm: Report once when the ambient temperature reaches the threshold.

8367 9e0a01		
Channel	**Type**	**Value**
83	67	Ambient temperature: 9e 0a => 0a 9e=2718/100=27.18°C 01=Above threshold

3. Temperature source alarm: Report when no valid external temperature command is received within the timeout period and the internal NTC sensor is faulty.

870001		
Channel	**Type**	**Value**
87	00	01=Temperature source alarm

Motor Stroke Calibration Packet

The device reports a data packet after a motor stroke calibration.

Packet description:

Item	Channel	Type	Description
Calibration Result	08	e5	• 00 = Success • 01 = Over-range • 02 = Device removed • 04 = Temperature control disable • 05 = Low battery

Example:

1. Calibration success.

08e500		
Channel	**Type**	**Value**
08	e5	00 = Success

2. Calibration failure.

08e501		
Channel	**Type**	**Value**
08	e5	01 = Over-range

Downlink Commands

Downlink commands can be used for remote control of device through a network server. The downlink port (application port) is 85 by default and can be configured through ToolBox.

If the device receives a downlink command requiring confirmation, it will send a reply packet in the following format:

Channel (1 Byte)	Type (1 Byte)	Command (1-N Byte)	...
Downlink command channel -1	Same as downlink command		...

For details of downlink commands please refer to the sections below.

Commands for General Setting

The device supports multiple commands for general settings.

Command description:

Item	Channel	Type	Byte	Description
Ambient Temperature	03	-	3	**Byte 1-2:** Temperature, INT16/100 **Byte 3:** ff Available only when Ambient Temperature Source is set to LoRa Downlink.

Item	Channel	Type	Byte	Description
Non-heating Period Reporting Interval	f9	32	2	UINT16, Unit: min, Range: 5-1440, Default: 1440
Heating Date	f9	33	4	**Byte 1:** Start month, range: 1-12 **Byte 2:** Start day, range: 1-31 **Byte 3:** End month, range: 1-12 **Byte 4:** End day, range: 1-31
Ambient Temperature Display	f9	36	1	00 = Disable, 01 = Enable
Local Modification Report	f9	3a	1	00 = Disable, 01 = Enable Available only when Temperature Control Algorithm is set to Built-in PID.
Non-heating Period Valve Status	f9	3b	1	00 = Fully closed, 01 = Fully open
Valve Descaling	f9	3c	1	00 = Disable, 01 = Enable
Mounting Orientation	f9	3d	1	00 = Horizontal Installation, 01 = Vertical Installation
Temperature Unit	f9	3e	1	00 = °C, 01 = °F
Ambient Temperature Display Time	f9	40	1	UINT8, Unit: s, Range: 1~10, Default: 2
Valve Emergency Position	f9	4a	1	UINT8, Unit: %, Range: 0~100, Default: 50
System Key	f9	4f	1	00 = Disable, 01 = Enable
Device Access Password	f9	52	6	Hex to ASCII, Range: 0x21~0x7E

Item	Channel	Type	Byte	Description
Device Configuration Reporting Interval	f9	53	3	**Byte 1:** 00=Disable (Default), 01=Enable **Byte 2-3:** UINT16, Unit: minute, Range: 60~10080, Default: 1440
Reboot	ff	10	1	ff
Child Locks	ff	25	1	• 00 = Disable (Default) • 01 = Lock all buttons • 02 = Lock temperature +/- • 03 = Lock system key
Query Device Status	ff	28	1	• 00 = Real-time operating status • 01 = Heating date • 02 = All heating schedule
Manual Valve Descaling	ff	29	1	00
Time Sync	ff	3b	1	00=Disable, 02=Enable
Sync Time from LNS	ff	4a	1	ff
Heating Period Reporting Interval	ff	8e	3	**Byte 1**: 00 **Byte 2-3**: UINT16, Unit: minute, Range: 5~1440, Default: 10
External Temperature Timeout Time	ff	c4	2	UINT16, Unit: min, Range: 1-1440, Default: 30
Ambient Temperature Source	ff	c5	1	00 = Internal NTC, 01 = LoRa Downlink
Daylight Saving Time	ff	ba	10	**Byte 1:** 00 = Disable, 01 = Enable

<table>
<tr><th>Item</th><th>Channel</th><th>Type</th><th>Byte</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Byte 2: DST bias, unit: min, range: 1-120
Byte 3-6: Start time, Month (1B)+Week&Day (1B) + Minute Time (2B)
Byte 7-10: End time, Month (1B)+Week&Day (1B) + Minute Time (2B)

Week&Day:
<table><tr><th>Bit7-4</th><th>Bit3-0</th></tr><tr><td>Week number, range: 1-5</td><td>Weekday, range: 1-7</td></tr></table></td></tr>
<tr><td>Time Zone</td><td>ff</td><td>bd</td><td>2</td><td>INT16/60</td></tr>
<tr><td>External Temperature Timeout Control Strategy</td><td>ff</td><td>f8</td><td>1</td><td>• 00 = Continue control with Current State
• 01 = Switch to internal NTC
• 02 = Close the valve</td></tr>
<tr><td>Device Reset</td><td>ff</td><td>fe</td><td>1</td><td>ff</td></tr>
</table>

Example:

1. Select ambient temperature source as LoRa Downlink.

ffc501		
Channel	**Type**	**Value**
ff	c5	01 = LoRa Downlink

2. Reboot the device.

ff10ff

3. Set the non-heating period reporting interval as 1440 minutes.

f932a005		
Channel	**Type**	**Value**
f9	32	a0 05 =>05 a0 = 1440min

4. Set DST time: start time is last Sunday 1:00 of March, end time is last Sunday 1:00 of October, and bias is 1h (60 minutes).

ffba013c03573c000a573c00		
Channel	**Type**	**Value**
ff	ba	01=Enable DST bias: 3c=>60 mins Start time: 03=>March, 57=>last (5) Sunday(7), 3c 00 =>00 3c=60 minutes =1:00 End time: 0a=>10=October, 57=>last (5) Sunday(7), 3c 00 =>00 3c=60 minutes =1:00

Related information

Configure General Parameters

Commands for Temperature Control Settings

The device supports multiple commands for temperature control settings.

Command description:

Item	Channel	Type	Byte	Description
Target Temperature Regulation Range	f9	35	4	**Byte 1-2:** Min. target temperature, INT16/100, Unit: °C, Range: 5-35 **Byte 3-4:** Max. target temperature, INT16/100, Unit: °C, Range: 5-35
Open Window Valve Status	f9	37	1	00 = Remains unchanged, 01 = Close Valve

Item	Channel	Type	Byte	Description
Platform Algorithm Timeout Time	f9	41	2	UINT16, Unit: min, Range: 1-1440, Default: 30
Platform Algorithm Timeout Control Strategy	f9	42	1	• 00 = Continue control with Current State • 01 = Switch to Built-in PID Algorithm • 02 = Close the valve
Target Temperature for Each Scale Level	f9	43	3	**Byte 1:** Scale Level, UINT8, Range: 0-5 **Byte 2-3:** UINT16/100, Unit: °C, Range: 5-35
Target Scale Level	f9	44	1	UINT8, Range: 0-5, Default: 3
Target Scale Level Display Time	f9	45	1	UINT8, Unit: s, Range: 1-10, Default: 2
Target Temperature Resolution	f9	46	1	00=0.5, 01=1
Target Temperature Display Time	f9	47	1	UINT8, Unit: s, Range: 1-10, Default: 2
Open Window Stop Temperature Control Time	f9	49	2	UINT16, Unit: min, Range: 1-1440, Default: 30
Valve Opening Display	f9	4d	1	00=Disable, 01=Enable Available only when Temperature Control Mode is set to Valve Opening Control Mode.
Open Window	ff	57	1	00 = Close the window, 01 = Open the window

Item	Channel	Type	Byte	Description
Temperature Control Algorithm	ff	ac	1	00 = Built-in PID, 01 = Platform Algorithm
Temperature Control Mode	ff	ae	1	• 00 = 0~5 Scale Mode • 01 = Integrated Control Mode • 02 = Valve Opening Control Mode
Open Window Detection	ff	af	5	**Byte 1:** 00=Disable, 01=Enable **Byte 2-3:** Cooling rate, INT16/100, Unit: °C/min, Range: 2-10, Default: 3 **Byte 4-5:** Stop temperature control time, UINT16, Unit: min, Range: 1-1440， Default: 30
Freeze Protection	ff	b0	3	**Byte 1:** 00=Disable, 01=Enable **Byte 2-3:** Freeze protection temperature, INT16/100, Unit: °C, Range: 1-5
Target Temperature	ff	b1	2	UINT16/100, Unit: °C, Range: 5-35 Available only when Temperature Control Mode is set to Integrated Control Mode.
Temperature Control	ff	b3	1	00=Disable, 01=Enable
Valve Opening	ff	b4	1	Valve opening percent, UINT8, Unit: %, Range: 0~100,Default: 0

Example:

1. Select temperature control mode as Integrated Control Mode.

ffae01		
Channel	**Type**	**Value**
ff	ae	01 = Integrated Control Mode

2. Enable the open window detection and configure the related parameters.

ffaf 012c011e00		
Channel	**Type**	**Value**
ff	af	01 = Enable Cooling rate: 2c 01 => 01 2c = 300/100 = 3°C/min Stop temperature control time: 1e00 => 001e = 30

Related information

Configure Temperature Control Parameters

Commands for Calibration Settings

The device supports multiple commands for calibration settings.

Command description:

Item	Channel	Type	Byte	Description
Valve Opening Range	f9	4b	2	**Byte 1:** Min. valve opening, UINT8, Unit: % **Byte 2:** Max. valve opening, UINT8, Unit: %
Thermal Conduction Calibration	f9	51	1	00=Disable, 01=Enable (Default) Available only when Ambient Temperature Source is set to Internal NTC.
Temperature Calibration	ff	ab	3	**Byte 1:** 00=Disable, 01=Enable **Byte 2-3:** Calibration value, INT16/100, range: -60-60, Unit: °C
Motor Stroke Calibration	ff	ad	1	ff

Example:

1. Calibrate stroke once.

ffadff

Reply:

08e500		
Channel	**Type**	**Value**
08	e5	00 = Success

2. Enable temperature calibration and set the calibration value.

ffab01e2ff		
Channel	**Type**	**Value**
ff	ab	01=Enable Calibration value: e2 ff=> ff e2 =-30/100=-0.3°C

Related information

Configure Calibration Parameters

Command for Threshold Setting

The device supports a command for threshold setting.

Command description:

Item	Channel	Type	Byte	Description
Temperature Threshold	ff	06	9	**Byte 1:** • 00 = Disable • 01 = Enable Min. threshold • 02 = Enable Max. threshold • 03 = Enable both the Min. and Max. thresholds

Item	Channel	Type	Byte	Description
				Byte 2-3: Min. threshold, INT16/100, range: -20-60, Unit: °C **Byte 4-5:** Max. threshold, INT16/100, range: -20-60, Unit: °C **Byte 6-9:**0000

Example:

Enable the temperature threshold alarm and set its threshold to 25 °C.

ff0602 0000 c409 0000 0000		
Channel	**Type**	**Value**
ff	06	02 = Enable Max. threshold Max. threshold: c4 09 => 09 c4 => 2500/100 = 25°C

Related information

Configure Temperature Threshold Parameters

Commands for Schedule Settings

The device supports multiple commands for schedule settings.

Command description:

Item	Channel	Type	Byte	Description
Predict On	f9	4c	1	00 = Disable, 01 = Enable
Predict On Time	f9	4e	2	UINT16, Unit: min, Range: 1-1440, Default: 30 Available only when Temperature Control Algorithm is set to Built-in PID.
Schedule Setting	f9	34	9	**Byte 1:** • Bit 7-4: Event ID • Bit 3-0: 0 = Disable, 1= Enable

<table>
<tr><th>Item</th><th>Channel</th><th>Type</th><th>Byte</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Byte 2: Temperature Control Mode

• 00 = 0-5 Scale Mode
• 01 = Integrated Control Mode
• 02 = Valve Opening Control Mode

Byte 3-4: Value

• Target Scale Level: Range: 0-5
• Target Temperature: UINT16/100, Unit: °C, Range: 5-35
• Valve Opening: Unit: %, Range: 0-100

Byte 5-6: Reporting Interval, UINT16, Unit: min, Range: 5-1440

Byte 7-8: Schedule Time, UINT16, Unit: min, Range: 0-1439

Byte 9: Schedule Repeat Day. Per bit 0=Disable, 1=Enable

<table><tr><th>Bit</th><th>7</th><th>6</th><th>...</th><th>1</th><th>0</th></tr><tr><td></td><td>Sun.</td><td>...</td><td>Tues.</td><td>Mon.</td><td>0</td></tr></table></td></tr>
<tr><td>Schedule Event</td><td>f9</td><td>50</td><td>2</td><td>Byte 1: UINT8, Range: 0-15
Byte 2: 00=Disable, 01=Enable</td></tr>
</table>

Example:

1. Enable the predict on feature.

f94c01		
Channel	**Type**	**Value**
f9	4c	01 = Enable

2. Add a schedule event 1.

f934 0101 d007 0500 580250		
Channel	**Type**	**Value**
f9	34	01 = Enable Schedule 0 Temperature control mode: 01 = Integrated Control Target temperature: d0 07=>07 d0=2000/100=20°C Reporting Interval: 05 00=>00 05=5 minutes Schedule Time: 58 02=> 02 58= 600 minutes = 10:00 Schedule Repeat Day: 50=>0101 0000 =Thursday and Saturday

Related information

Configure Schedule Parameters

Chapter 7. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact their local dealer to obtain technical support. Distributors and resellers can contact Milesight directly for technical support.

Technical Support Mailbox: iot.support@milesight.com

Online Support Portal: https://support.milesight-iot.com

Resource Download Center: https://www.milesight.com/iot/resources/download-center/

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