blumotix
TOUCH YOUR WORLD

BX-KRONOS4

4” KNX touch panel

Home and building automation control

Black or silver frame

User Manual

Rev.	Date	Description	Reviewer
01	20/03/2024	1st Issue	F. Melandri
02	16/07/2024	2nd Issue	S. Croatti

Directory

1. Overview.....5
2. Technical performance.....6
2.1 Technical Data.....6
2.2 External structure and installation diagram.....7
2.3 Upgrade.....10
2.4 Customize the area name, icon.....11
3. Features.....14
3.1 Overview.....14
3.2 Parameter setting interface "General page".....14
3.2.1 Parameter setting interface "screensaver".....18
3.2. 2 Parameter setting interface "Laser detection".....21
3.2. 3 Parameter setting interface "Air conditioning".....24
3.2.4 Parameter setting interface "Temperature".....45
3.2. 5 parameter setting interface "Humidity".....48
3.2. 6 Parameter setting interface "Music function".....51
3.2. 7 Parameter setting interface "Floor heating".....54
3.2. 8 parameter setting interface "Fresh air".....60
3.3 Parameter setting interface "output function page".....64
3.3.1 Parameter setting window "Relay".....65
3.3. 2 Parameter setting window "Dimming".....82
3.4 Parameter setting interface "Key page block x".....95
3.4.1 Dimming settings page "dimmer" ..... **Errore. Il segnalibro non è definito.**
3.4. 2 curtain setting page "shutter"..... **Errore. Il segnalibro non è definito.**
3.4. 3 Air conditioning setting interface "air condition"Errore. Il segnalibro non è definito.
3.4. 5 Scene settings interface "scene"..... **Errore. Il segnalibro non è definito.**
3.4. 5 parameter setting interface "switch value"... **Errore. Il segnalibro non è definito.**
3.4. 6 Parameter setting interface "Environmental detection display"Errore. Il segnalibro non è definito.
3.4. 7 parameter setting interface "jump"..... **Errore. Il segnalibro non è definito.**
3.4. 8 Music settings interface "music" ..... **Errore. Il segnalibro non è definito.**
3.4. 9 parameter setting interface "character"..... **Errore. Il segnalibro non è definito.**
3.4. 10 parameter setting interface "time"..... **Errore. Il segnalibro non è definito.**
3.4. 11 Floor heating setting interface "floor heat" **Errore. Il segnalibro non è definito.**
3.4. 12 fresh air settings interface "fresh air"..... **Errore. Il segnalibro non è definito.**
3.4. 13 parameter setting interface "switch" ..... **Errore. Il segnalibro non è definito.**
3.5 Parameter setting interface "Logic page"..... **Errore. Il segnalibro non è definito.**
3.5.1 Logic function AND/OR/**XOR** ..... **Errore. Il segnalibro non è definito.**

3.5. 2 Logic function Gate forwarding..... **Errore. Il segnalibro non è definito.**
3.5. 3 logical functions Ofhold comparator ..... **Errore. Il segnalibro non è definito.**
3.5. 4 logical functions Format convert ..... **Errore. Il segnalibro non è definito.**
3.5. 5 logic functions Event Group ..... **Errore. Il segnalibro non è definito.**
4. Communication objects ..... **Errore. Il segnalibro non è definito.**
4. 1 "General" communication object..... **Errore. Il segnalibro non è definito.**
4.2 "screensaver" communication object ..... **Errore. Il segnalibro non è definito.**
4.3 "Laser detection" communication object ..... **Errore. Il segnalibro non è definito.**
4.4 "VRV" communication object..... **Errore. Il segnalibro non è definito.**
4.5 "Fan coil" communication object ..... **Errore. Il segnalibro non è definito.**
4.6 "auto dehumidify" communication object..... **Errore. Il segnalibro non è definito.**
4.7 "Timing" communication object ..... **Errore. Il segnalibro non è definito.**
4.8 "Temperature/humidity alarm" communication object**Errore. Il segnalibro non è definito.**
4.9 "Relay" communication object..... **Errore. Il segnalibro non è definito.**
4. 9.1 "switch" communication object..... **Errore. Il segnalibro non è definito.**
4.9. 2 "curtain" communication object..... **Errore. Il segnalibro non è definito.**
4.9. 3 "dry contact" communication object..... **Errore. Il segnalibro non è definito.**
4.10 "dimming" communication object ..... **Errore. Il segnalibro non è definito.**
4.11 "Key page block" communication object ..... **Errore. Il segnalibro non è definito.**
4.11.1 "dimming" communication object..... **Errore. Il segnalibro non è definito.**
4.11.2 "shutter" communication object ..... **Errore. Il segnalibro non è definito.**
4.11.3 "Scene" communication object ..... **Errore. Il segnalibro non è definito.**
4.11.4 "switch value" communication object..... **Errore. Il segnalibro non è definito.**
4.11.5 "Environmental detection display" communication objectsErrore. Il segnalibro non è definito.
4.11. 6 "character" communication object..... **Errore. Il segnalibro non è definito.**
4.11. 7 "time" communication object..... **Errore. Il segnalibro non è definito.**
4.11. 8 "switch" communication object..... **Errore. Il segnalibro non è definito.**
4.12 "Music" communication objects ..... **Errore. Il segnalibro non è definito.**
4.13 "Floor heating" communication objects ..... **Errore. Il segnalibro non è definito.**
4.14 "Fresh air" communication object ..... **Errore. Il segnalibro non è definito.**
4.15 "Logic" communication objects ..... **Errore. Il segnalibro non è definito.**
4.1 5.1 "AND/OR/XOR" communication object ..... **Errore. Il segnalibro non è definito.**
4.15. 2 "Gate forwarding" communication object .. **Errore. Il segnalibro non è definito.**
4.15. 3 "Threshold comparator" communication objectErrore. Il segnalibro non è definito.
4.15. 4 "Format convert" communication object .... **Errore. Il segnalibro non è definito.**
4.15. 5 "Event Group" communication objects ..... **Errore. Il segnalibro non è definito.**

1. Overview

This manual provides you with technical information about touch panels, as well as a detailed introduction to the features. The engineering tool software **ETS** is capable of being used and operated on this system.

The 4-inch touch panel has the following features:

-- Energy-saving function
    -- Screensaver
-- Laser screen calling function
-- Thermostat control (air conditioning).
    -- VRV air conditioning control
    -- Fan Coil air conditioning control (2-step, PWM, Fan coil).
        -- Automatic dehumidification function
        -- Timing function
-- Music controls
-- Underfloor heating
-- Fresh air
-- Dimming
-- Curtains
-- Scene
-- Switch value, switch
-- Text display
-- Time display
-- Temperature and humidity
    --Detection
    --Alarm
-- VOC/CO2/CO gas function
    -- Display
    -- Alarm
-- Logic function
    -- AND, OR, XOR, gate forwarding, threshold comparator, format convert, event group
-- Page jump
-- Free combination of page icons
-- Language switching
-- OLED display brightness adjustment

2. Technical performance

2.1 Technical Data

Here are some technical parameters for the touch panel:

☆ Operating voltage: 21-30V DC

☆ Auxiliary current consumption: < 50mA@24V DC

< 80mA@24V DC (with strong electric box)

☆KNX current: < 20mA@30V DC

☆Screen display mode: TFT size: 4" Resolution: 480*480 dpi

☆Operating temperature: 0 °C ~ 45 °C storage temperature: -25 °C ~ +55 °C

☆Ambient humidity: ≤ 90% (to exclude condensation of water vapor).

☆ Appearance Material/Shell and Color:

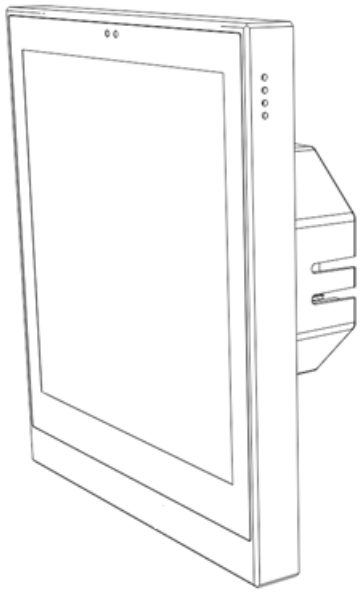
☆ Protection class: IP20 (IP protection class according to EN60529 standard).

☆ Dimensions: 95*85*9mm

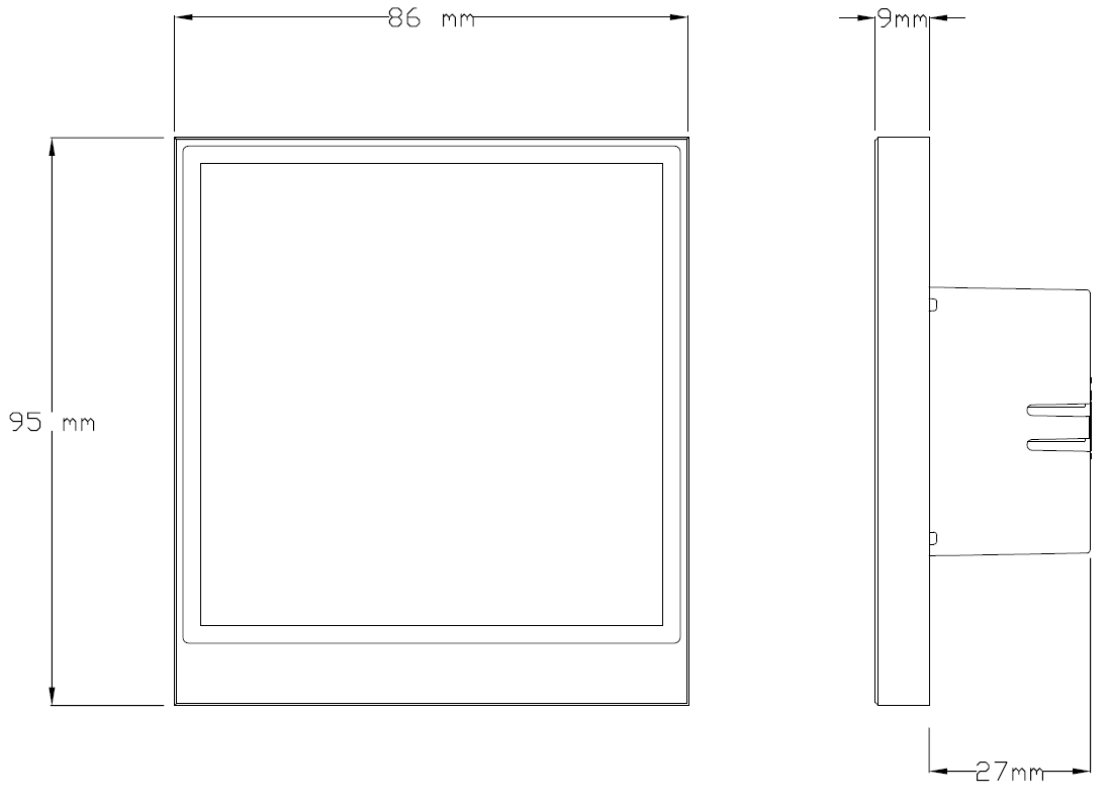
☆ Installation: Wall recessed

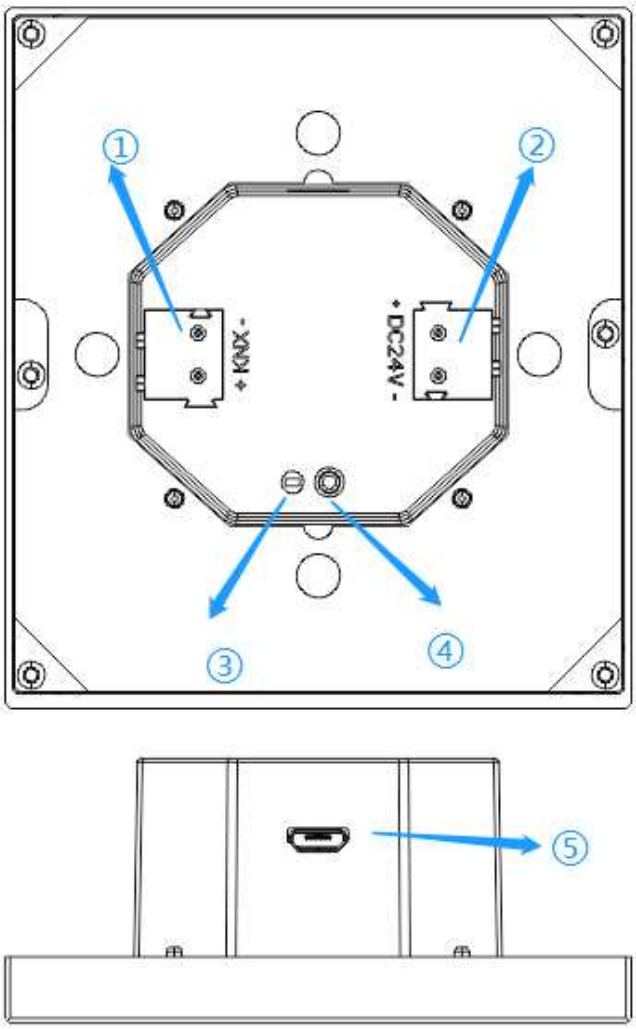
2.2 External structure and installation diagram

Appearance diagram



Exterior structure and dimensional drawings


86 mm
9mm
95 mm
27mm



(1) KNX terminal blocks

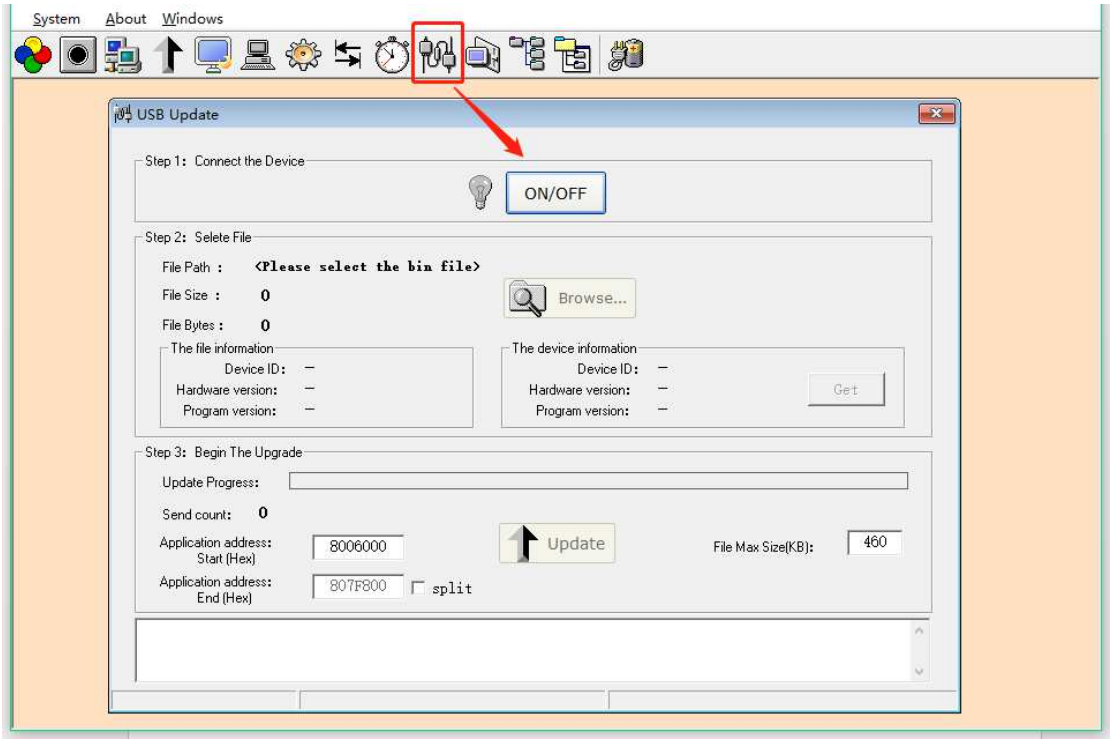
(2) Auxiliary power terminals

(3) LED

(4) Programming buttons

(5) USB interface

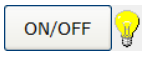
2.3 Upgrade

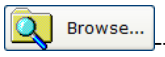


Step 1: Enter the upgrade state, and the specific operation mode: long press the panel programming button (or click the system setting button of the panel, enter the setting interface, long press the system upgrade button, and the programming button operation page appears, long press "system upgrade"), To the programming button red light flashing, while the screen black screen;

Step 2: The panel and the computer are directly connected with the USB cable;

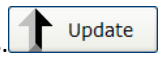
Step 3: Click the icon on the menu bar of the host computer to open the "USB Update" window;

Step 4: Click the button and light up the icon to indicate that the device is connected; 

Step 5: Click the button to open the upgrade file - 

---bin file;

Step 6: Set "file max size (KB)", 480 means to clear the database data;

Step 7: Click to start the update process. 

Remarks: 1. Parameters not mentioned do not need to be modified; 2, click get to get the information of the device, only when the device information and bin file information are consistent

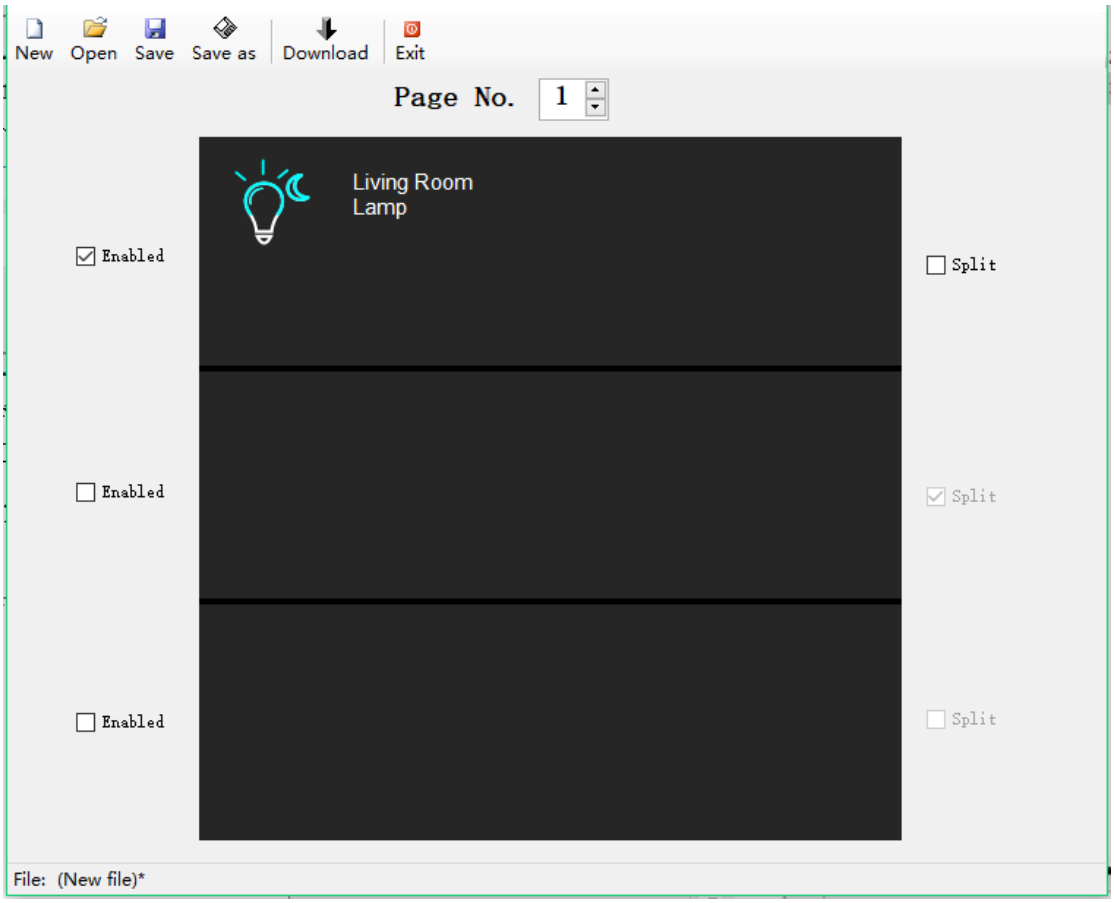
can it be upgraded.

2.4 Customize the area name, icon

For example, the first locale on page 1 of the panel is set to "Multigang button", which sets the custom area name and icon;

Modify the custom icon operation flow:

1. Open the host computer TFT40PageSettingV1.2.4.exe, as shown in the following figure:



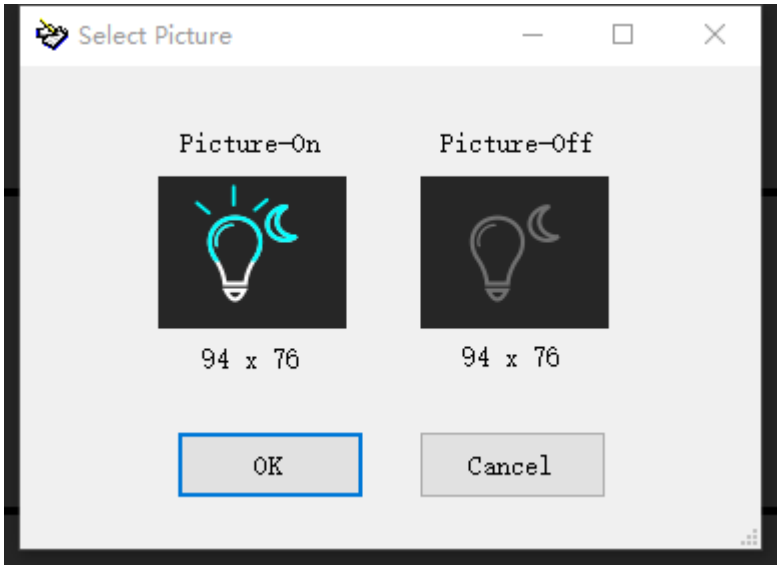
2. Differentiate modules: you need to check the "Enabled" composite box in the area of Page No.1 in line 1 (note that the "Split" composite box does not need to be checked), Indicates that zone 1 has only 1 module;

Note: If the locale is set to "Single button", the "Enabled" and "Split" composite boxes are checked, indicating that the region has 2 modules.

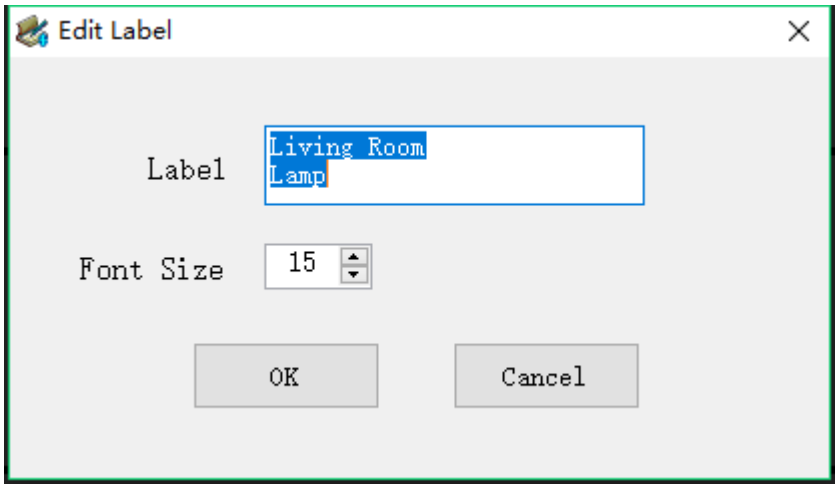
3. Set the icon: Click the icon of the module in line 1, pop up the select picture window (as shown

in the following figure), and set "picture-on" and "picture-off" After the setting is complete, click "OK" to return to the main interface;

*Note: Picture format - resolution 94*76*



4. Set the name of the area: Click the text of the module in line 1, pop up the "edit label" window (as shown in the following figure), fill in the "label", and Set the font size, click "O K" after the setting is completed to return to the main interface;



5. Download: Long press the panel programming button (or click the system setting button of the panel, enter the setting interface, long press the system upgrade button, the programming button operation page appears, long press "system upgrade"), to the programming button red light flashing, while the screen black screen, the panel and the computer are directly connected with the USB cable, click the download icon of the host computer Download, and download the custom

area name and icon to the panel.

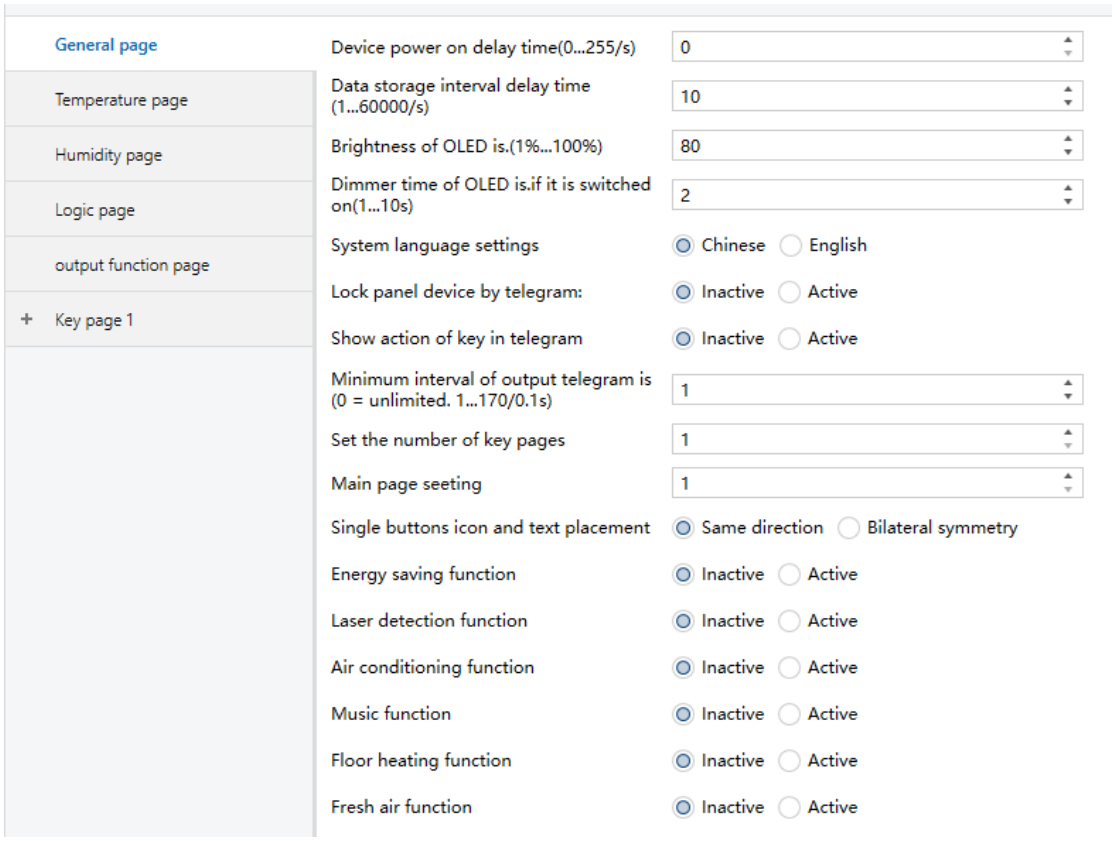
3. Features

3.1 Overview

The specific functions of the touch panel are as follows:

-- Energy-saving function
    -- Screensaver
-- Laser screen calling function
-- Thermostat control (air conditioning).
    -- VRV air conditioning control
    -- Fan Coil air conditioning control (2-step, PWM, Fan coil).
        -- Automatic dehumidification function
        -- Timing function
-- Music controls
-- Underfloor heating
-- Fresh air
-- Dimming
-- Curtains
-- Scene
-- Switch value, switch
-- Text display
-- Time display
-- Temperature and humidity
    --Detection
    --Alarm
-- VOC/CO2/CO gas function
    -- Display
    -- Alarm
-- Logic function
    -- AND, OR, XOR, gate forwarding, threshold comparator, format convert, event group
-- Page jump
-- Free combination of page icons
-- Language switching
-- OLED display brightness adjustment

3.2 Parameter setting interface "General page"



Parameter "Device power-on delay time (0...255/s)"

This parameter sets the startup delay time for the device.

Range: 0... 255, in seconds

Parameter "Data storage interval delay time (1...60000/s)"

This parameter acts on all functional modules with a save function and is used to set the time when the data is saved.

Scope 1... 255, unit: minutes

Note: Add interval saving function, the original power-down saving is still valid; The interval saving function means that when the interval time is up, all the saved data will be saved once; Power-down saving means that all saved data will be saved once at the moment of power-down; If the power-down save fails, the data saved at the last interval will be called; Re-clicking the database will clear all saved data.

Parameter "Brightness of OLED is (1...100/%)"

This parameter sets the brightness value of the OLED screen.

Range: 1... 100, unit: %

The parameter "Dimming time of OLED is, if it is switched on (1… 10s)"

This parameter is used to set the dimming time of the OLED, that is, the time when the current OLED state reaches the target state.

Range: 1... 10, Unit: seconds

Parameter "System language settings"

This parameter is used to set the system language, and there are two languages to choose from: English and Italian.

Parameter "Lock panel device by telegram"

This parameter sets whether the device is unlocked by bus.

Optional: inactive

active

Select "active", and lock the device through the bus, the communication object is "Lock device", send 01 lock device to the communication object "Lock device" through the bus, cannot operate the touch panel, send 00 to unlock the device.

Parameter "Show action of a key in a telegram"

This parameter sets whether the status of the key is displayed by the message.

Optional: inactive

active

Select "active", the status of the key is displayed through the message, the communication object is "Valid action of key", if the message of the communication object "Valid action of key" is 00, if there is a key press, the communication object "Valid action of key" sends out data 01 indicates that there is a key press; If the message of the communication object "Valid action of key" is 01, if the key is pressed, the communication object "Valid action of key" does not emit data.

Parameter "Minimum interval of output telegram is (0=unlimited,1...170(unit:0.1s))"

This parameter sets the minimum interval for message output.

Range: 1.... 170,0 is unlimited, in units: 0.1 seconds

The parameter "set the number of key pages"

This parameter is used to set the number of pages displayed in the panel.

Range: 1... 10

The parameter "main page setting"

Sets which of all pages in the panel is the home page.

Range: 1... 10

The parameter “Single buttons icon and text placement”

This feature is valid for the page area mode as the single button, which is used to set the icon and text position of the left and right buttons in 1 area.

Optional: Same direction

Bilateral symmetry

Select "Same direction" to indicate that the icons and text of the left and right buttons are displayed on the same side;

Select Bilateral symmetry to indicate that the icon and text of the right button appear symmetrical

Parameter “Energy saving function”

Whether to turn on the energy-saving function.

Optional: inactive

Active

Select "Active" to turn on the energy saving function, the energy saving function is the screensaver function, and the screensaver setting parameters can be found in "3.2.1 Parameter Setting Interface Screensaver".

The parameter "laser detection function"

Whether to activate the laser detection function.

Optional: inactive

active

Select "Active" to activate the laser detection function, and the setting parameters of the laser detection function can be found in "3.2.2 Parameter Setting Interface Laser Detection".

Parameter “Air conditioning function”

Whether to turn on the air conditioning adjustment function.

Optional: inactive

active

Select "Active" to turn on the air conditioning adjustment function, and the setting parameters of the air conditioning adjustment function can be found in "3.2.3 Parameter Setting Interface Air Conditioning".

Parameter "Music function"

Whether to turn on the music control.

Optional: inactive

active

Select "Active" to enable the music control function, and the setting parameters of the music control function can be found in "3.2. 6 parameter setting interface Music function".

The parameter "Floor heating function"

Whether to turn on the floor heating adjustment function.

Optional: inactive

active

Select "Active" to turn on the floor heating adjustment function, and the setting parameters of the floor heating adjustment function are listed in "3.2.." 7 parameter setting interface Fresh air".

The parameter “Fresh air function”

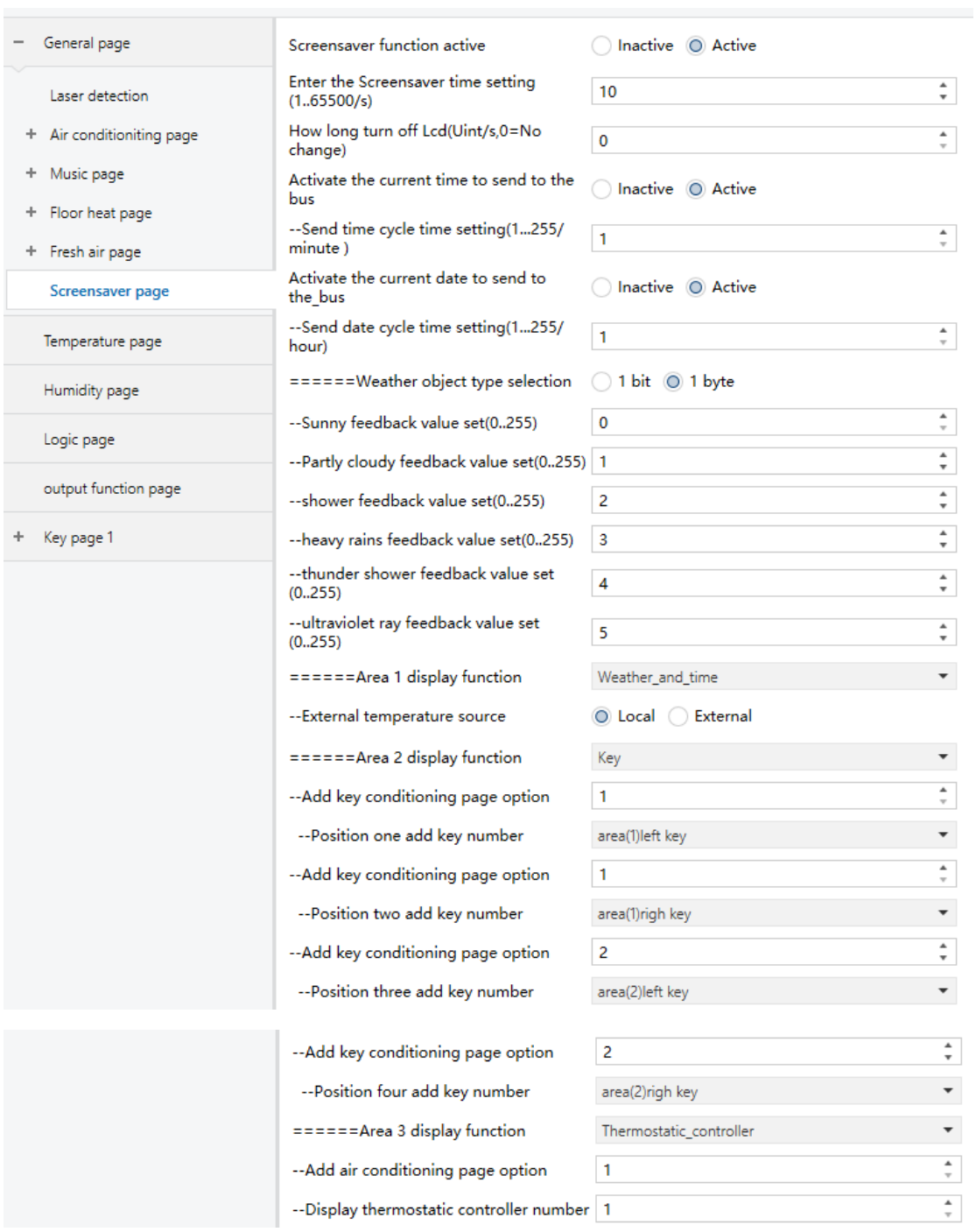
Whether to turn on the fresh air conditioning function.

Optional: inactive

active

Select "Active" to enable the fresh air conditioning function, and the setting parameters of the fresh air adjustment function can be found in "3.2. 8 parameter setting interface Fresh air".

3.2.1 Parameter setting interface "screensaver"



The parameter "Screensaver function active"

This parameter is used to set whether the screensaver function is activated.

Optional: Inactive

Active

Select "Active" to activate the screensaver function and activate all the parameter settings below.

The parameter "Enter the Screensaver time setting (1...65500/s)"

This parameter is used to set the time to enter the screensaver.

Range: 1...65500, unit: s

Note: If you turn on the laser detection function, you need to wait until the laser detects that no one is there before you start calculating the time to enter the screensaver; If the activation detection function is not turned on after the device is not operated, the calculation of the time to enter the screensaver begins.

The parameter "How long turn off Lcd (Uint/s,0=No change)"

This parameter sets how long it takes to enter the screensaver and then extinguish the screen.

Range: 0... 60000, 0 means the unquenchable screen, unit: s

The parameter "Activate the current time to send to the bus"

Parameter "—Send time cycle time setting (1...255/ minute)"

Whether the current time is periodically sent to the bus, the communication object is "current time sent to bus".

Range: 1... 255, Time: minutes

The parameter "Activate the current date to send to the bus"

Parameter "—Send date cycle time setting (1 ... 255/ hour)"

Whether the current date is periodically sent to the bus, the communication object is "current date sent to bus".

Range: 1... 255, Time: hours

Parameter "Weather object type selection"

This parameter sets the data type of the weather object.

Optional: 1bit

1byte

When "1bit" is selected, the communication objects "sunny feedback", "partly cloudy feedback", "shower feedback", "heavy rains feedback" appear ", "thunder shower feedback", and "ultraviolet ray feedback", an object receives 1 and displays it as the current weather.

When "1byte" is selected, the communication object "weather status feedback" appears with the following 6 parameters:

Parameter "—Sunny feedback value set (0...255)"

Parameter "—Partly cloudy feedback value set (0...255)"

The parameter "—shower feedback value set (0...255)"

Parameter "—heavy rains feedback value set (0...255)"

The parameter "—thunder shower feedback value set (0...255)"

Parameter "—ultraviolet ray feedback value set (0...255)"

When the communication object "weather status feedback" receives the above parameter setting value, the current weather is displayed as the corresponding weather, sunny, sunny and cloudy, showers, heavy rain, thunderstorms, and ultraviolet rays.

The following parameters are used to set the display content of the screensaver interface, which is divided into 3 areas, each area has 3 displayable content to choose from, namely: weather and time, Key, Thermostatic controller, the following area 1 as an example to give a detailed introduction.

Note: 1, the screensaver page is only used for display, and *jump, and can not operate the control; 2. If the icon is customized, the screensaver icon is not displayed.*

Parameter "Area x display function"(x=1...3)

Optional: weather and time

Key

Thermostatic controller

Select "weather and time" to indicate that the area x (1...3) displays the content as date time, weather, ambient temperature, ambient temperature source can be selected internal, external, set by the parameter "-- temperature source";

Select "Key" to indicate that the area x (1...3) shows the content as a key function, and 5 parameters appear:

The parameter "—Add Key conditioning page option"

Parameter "—Position one/ two/ three/ four add key number"

The screensaver area displays the content for the key function, and the entire area is divided into 4 positions, which can display 4 buttons, and each button must correspond to the specific key function, such as the above setting Screensaver area 2 correspondingly displays 4 keys: the first key displays the first-page control area 1 left button function, the second one Key shows the first-page control area 1 right button function, the 3rd key shows the second-page control area 2 left button function, the fourth one Key displays the control area 2 right-click function on the second page.

Note: The page area corresponding to the *screensaver key must already have the corresponding key function, otherwise it will not be displayed.*

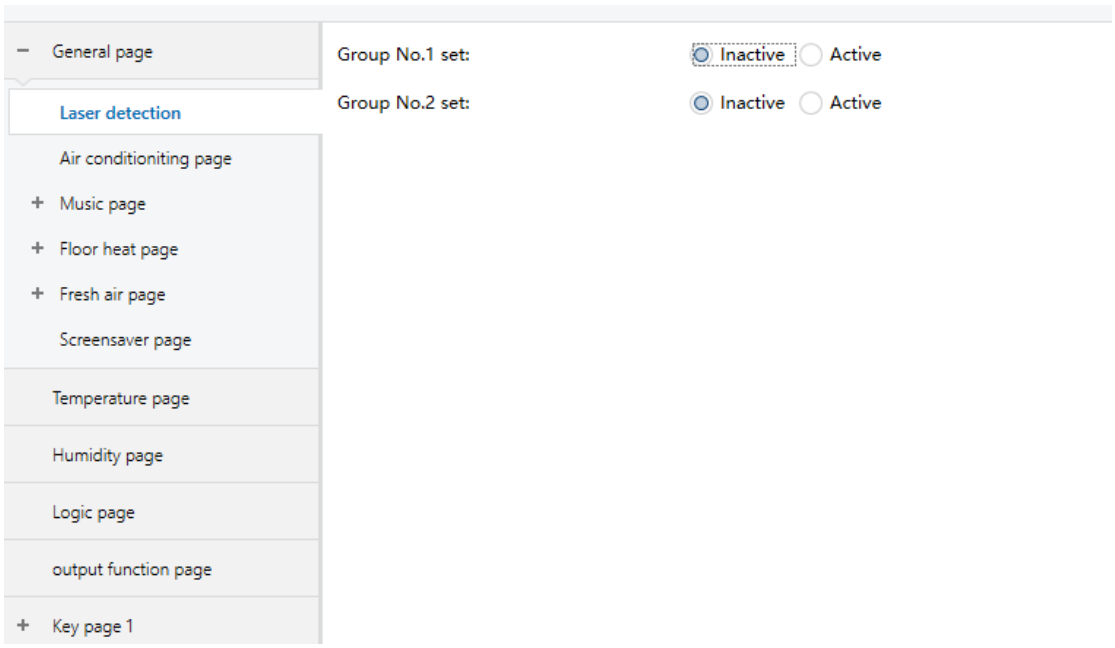
Select "Thermostatic controller" to indicate that the area x (1...3) shows that the content is air conditioning, and 2 parameters appear:

The parameter "—Add air conditioning page option"

Parameter "—Display thermostatic controller number"

The screensaver area displays air conditioners, and you need to set the page and ID corresponding to the air conditioners displayed.

3.2. 2 Parameter setting interface "Laser detection"



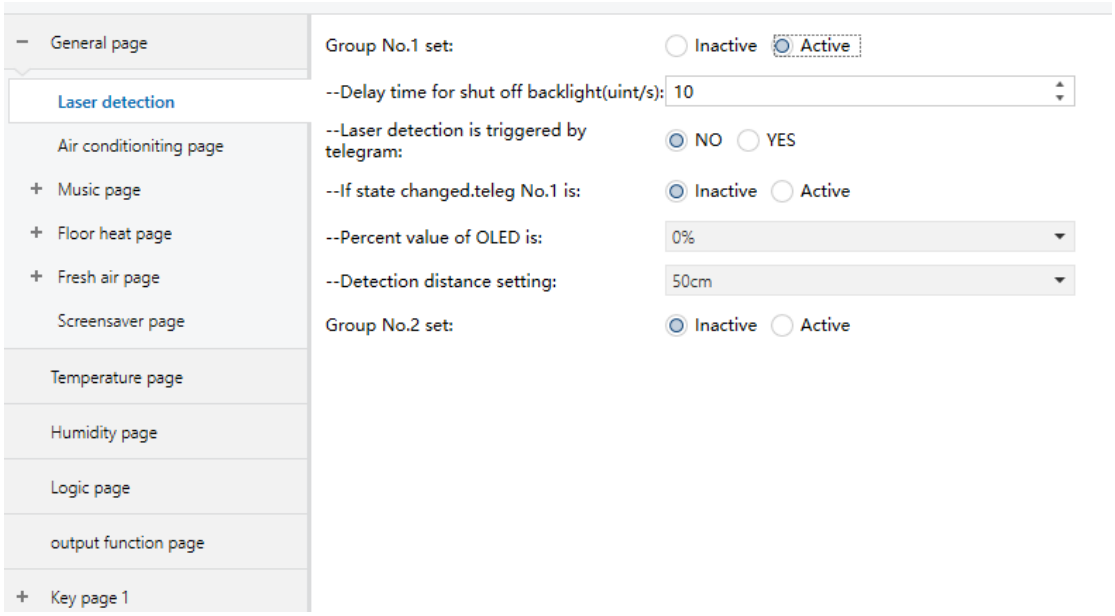
Parameter "Group No.1 set"

Whether to activate the first set of settings.

Optional: inactive

active

Select "Active" to activate the first set of settings for laser detection, and 5 new parameters appear, as shown in the following figure:



The parameter "—delay time for shut off backlight"

This parameter sets the delay time to adjust the backlight of the display. Works when the laser detection distance is 0.

Range: 5... 255, in seconds

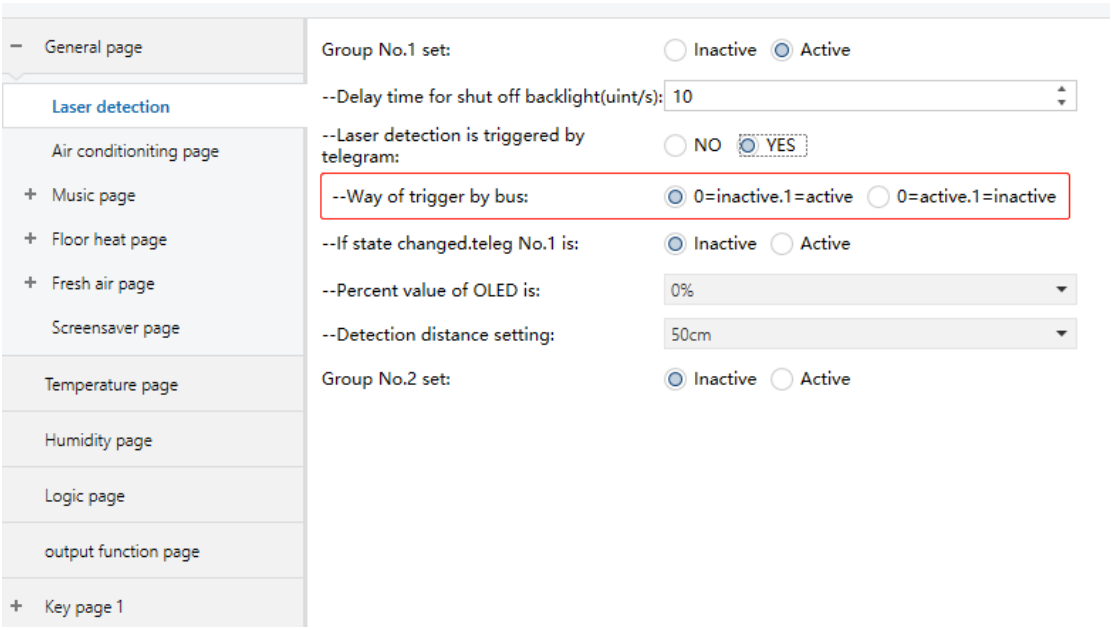
Parameter "laser detection is triggered by telegram"

Whether the laser detection function is triggered by a message.

Optional: No

Yes

Selecting "Yes" allows the laser detection function to be activated or disabled by message, the communication object "Laser detection trigger No1" appears, and a new parameter appears, as shown in the following figure:



Parameter "—Way of the trigger by bus"

This parameter sets how the bus triggers the laser detection function.

Optional: 0=inactive, 1=active

0=active,1=inactive

Select "0=inactive, 1=active" to indicate that the communication object "Laser detection trigger No1" receives the message value 0, disables the laser detection function, and activates the laser detection function when the message value is received;

Select 0=active, 1=inactive, instead.

The parameter "—if the state changed, telling No.1 is"

This parameter sets whether to report to the bus when the display backlight status is changed.

Optional: inactive

Active

Select "Active", and the communication object "laser detection flag No1" appears, when the laser detection distance is 0, wait for the parameter "—delay time for shut off backlight" set the time to end, Adjust the backlight (the brightness of the backlight adjustment is set according to the parameter "-percent value of OLED is"), at the same time, the communication object "laser

detection flag No1" sends a message 0 to the bus; Select "inactive" to activate the communication object.

The parameter "—delay time for shut off backlight"

When the laser detection distance is 0 and lasts for some time, adjust the backlight brightness, as to how much brightness is reduced by this parameter.

Optional: 0%
10%
…
90%
100%

Selecting "0%" means reducing the brightness of the backlight to 0, i.e. completely dark;

……

Selecting 100% maintains the current backlight brightness.

The parameter "—Detection distance setting"

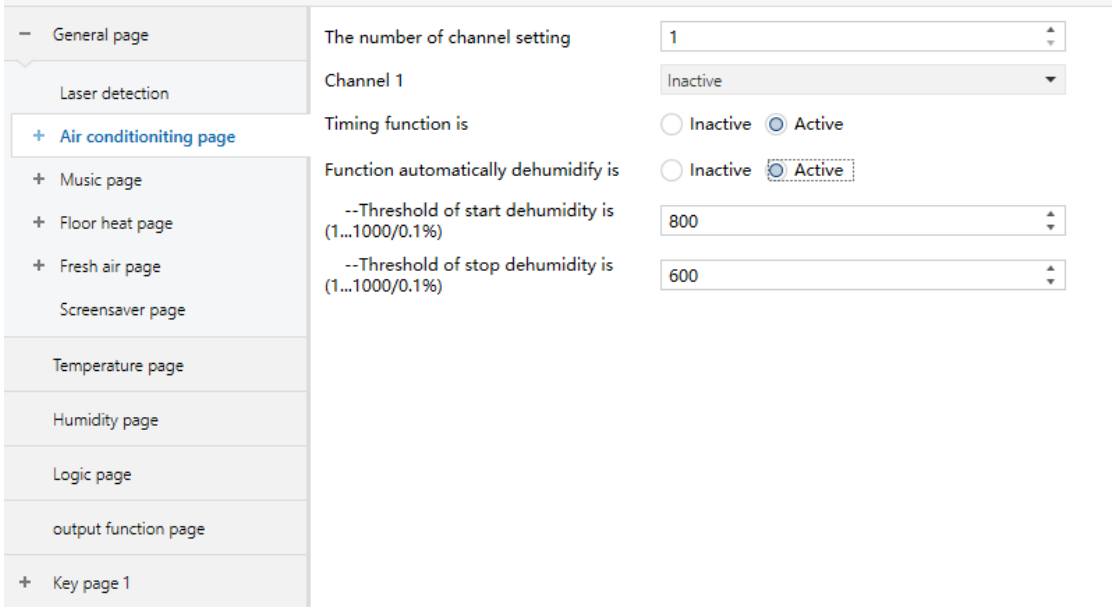
This parameter sets the laser detection distance.

Optional: 10cm
20cm
……
100cm
More than 100cm

For example, selecting "50cm" indicates that the maximum distance detectable by the laser is 50cm, if the object cannot be detected within 50cm, the detection distance is 0; select "More." Then 100cm", theoretically the farthest detection distance can reach 120cm, subject to environmental influences.

Note: The second set of laser detection settings, similar to the first group, can refer to the first set of parameters settings; The first group takes precedence over the second group, that is, both groups are activated at the same time, subject to the first group setting.

3.2. 3 Parameter setting interface "Air conditioning"



The parameter "The number of channel settings"

This parameter is used to set the number of air conditioning channels.

Range: 1... 10

The parameter "Thermostat func set"

Set the air conditioning control mode.

Optional: inactive

VRV function

Fan coil function

Select "VRV function" to indicate that the air conditioning control mode is VRV mode, and the specific parameter settings can be seen in "3.2.3.1 Air Conditioning Control Mode VRV page";

Selecting "Fan coil function" indicates that the air conditioning control mode is fan coil mode, and the specific parameter settings can be found in "3.2.3.2 air conditioning control mode Fancoil page".

Parameter "Timing function is"

This parameter sets whether the timing function is enabled.

Optional: inactive

Active

Select "Active" to enable the timing function, and the setting parameters of the timing function can be found in "3.2.3.3 Parameter Setting Interface Timing page".

The parameter "Function automatically dehumidify is"

Whether to turn on automatic dehumidification.

Optional: inactive

Active

Select "Active" to turn on the automatic dehumidification function, and 2 setting parameters appear:

Parameter "—threshold of start dehumidify is(1… 1000/0.1%)"

Parameter "—threshold of stop dehumidify is(1… 1000/0.1%)"

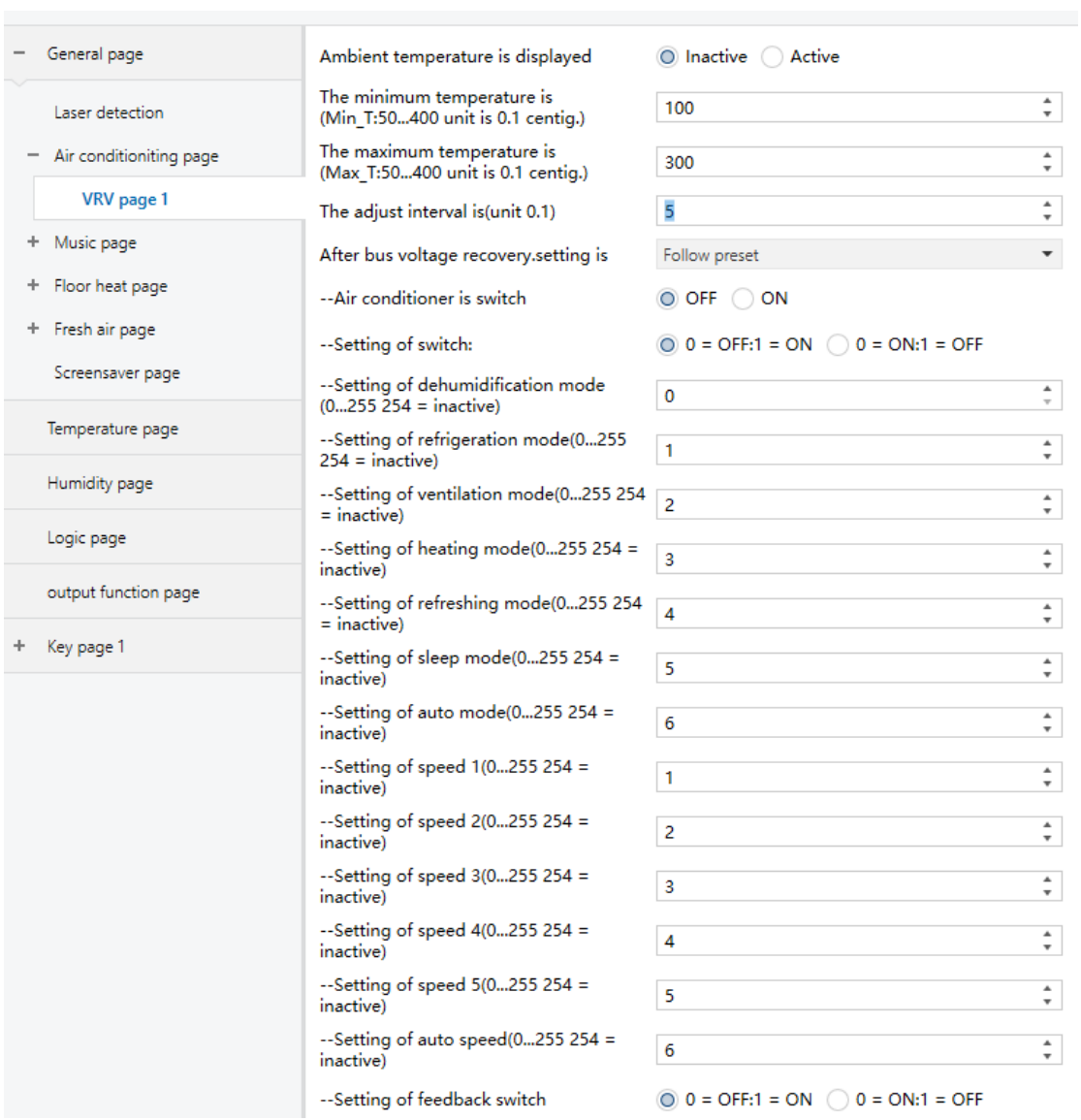
These two parameters set the humidity value at the beginning of the automatic dehumidification and the humidity at the end of the automatic dehumidification. This can be modified by the objects "start threshold of dehumidity" or "stop threshold of dehumidity".

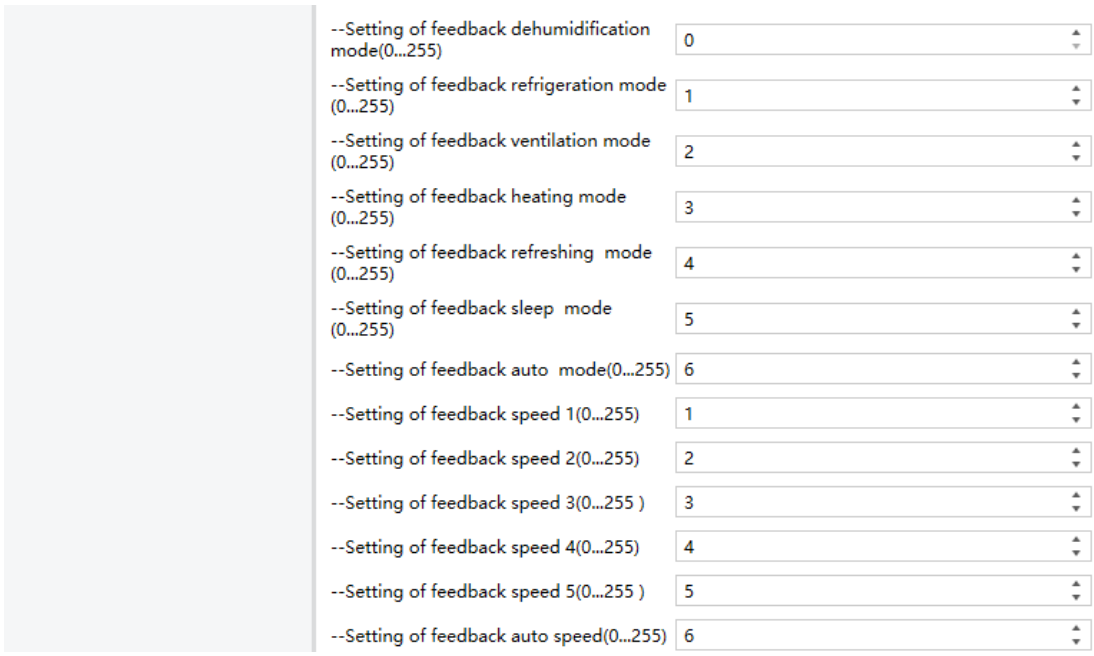
Range: 1... 1000, unit: 0.1%.

Note: Automatic dehumidification process - enables the auto dehumidification function by writing to the communication object "automatical dehumidification" (write 00 enables automatic dehumidification, write 01 exits automatic dehumidification), when the humidity ***exceeds the parameter "Threshold of start dehumidify is(1... 1000; unit is 0.1%)"*** *enters the automatic dehumidification function after setting the value (if the mode is in non-dehumidification mode, it will enter the dehumidification mode; If the mode is in dehumidification mode, it will remain in its original state) when the humidity is below* ***the parameter "Threshold of stop dehumidify is(1... 1000; unit is 0.1%)"*** *sets the value to exit the automatic dehumidification function (after exiting the automatic dehumidification function, the air conditioner displays the status as the saved state of the feedback object).*

3.2.3.1 Air conditioning control mode "VRV"

Note: The *other channels of the V RV air conditioner are the same as in channel 1, refer to the introduction of* channel 1


General page
Laser detection
Air conditioniting page
VRV page 1
Music page
Floor heat page
Fresh air page
Screensaver page
Temperature page
Humidity page
Logic page
output function page
Key page 1
Ambient temperature is displayed
Inactive
Active
The minimum temperature is (Min_T:50...400 unit is 0.1 centig.)
100
The maximum temperature is (Max_T:50...400 unit is 0.1 centig.)
300
The adjust interval is(unit 0.1)
5
After bus voltage recovery.setting is
Follow preset
--Air conditioner is switch
OFF
ON
--Setting of switch:
0 = OFF:1 = ON
0 = ON:1 = OFF
--Setting of dehumidification mode (0...255 254 = inactive)
0
--Setting of refrigeration mode(0...255 254 = inactive)
1
--Setting of ventilation mode(0...255 254 = inactive)
2
--Setting of heating mode(0...255 254 = inactive)
3
--Setting of refreshing mode(0...255 254 = inactive)
4
--Setting of sleep mode(0...255 254 = inactive)
5
--Setting of auto mode(0...255 254 = inactive)
6
--Setting of speed 1(0...255 254 = inactive)
1
--Setting of speed 2(0...255 254 = inactive)
2
--Setting of speed 3(0...255 254 = inactive)
3
--Setting of speed 4(0...255 254 = inactive)
4
--Setting of speed 5(0...255 254 = inactive)
5
--Setting of auto speed(0...255 254 = inactive)
6
--Setting of feedback switch
0 = OFF:1 = ON
0 = ON:1 = OFF



Parameter "Ambient temperature is displayed"

This parameter sets whether the ambient temperature is displayed on the screen (it replaces the setting temperature).

Optional: inactive

active

The parameter "The minimum temperature is"

The parameter "The maximum temperature is"

This parameter is used to set the minimum and maximum values of the air conditioning setting temperature.

Range: 50... 400, unit: 0.1 °C

Parameter "The adjust interval is(unit 0.1)"

This parameter is used to set the increase or decrease of the setting temperature modified by the touch screen.

Range: 1... 10, Range: 0.1°C

The parameter "After bus voltage recovery， the setting is"

This parameter sets the state of the air conditioner after the device bus is restored to the power supply.

Optional: follow preset

read from air-conditioner

restored before the power went down

When "follow setting" is selected, the state of the air conditioner after the device bus is restored

to power is operated according to the preset state, as shown in the figure above:

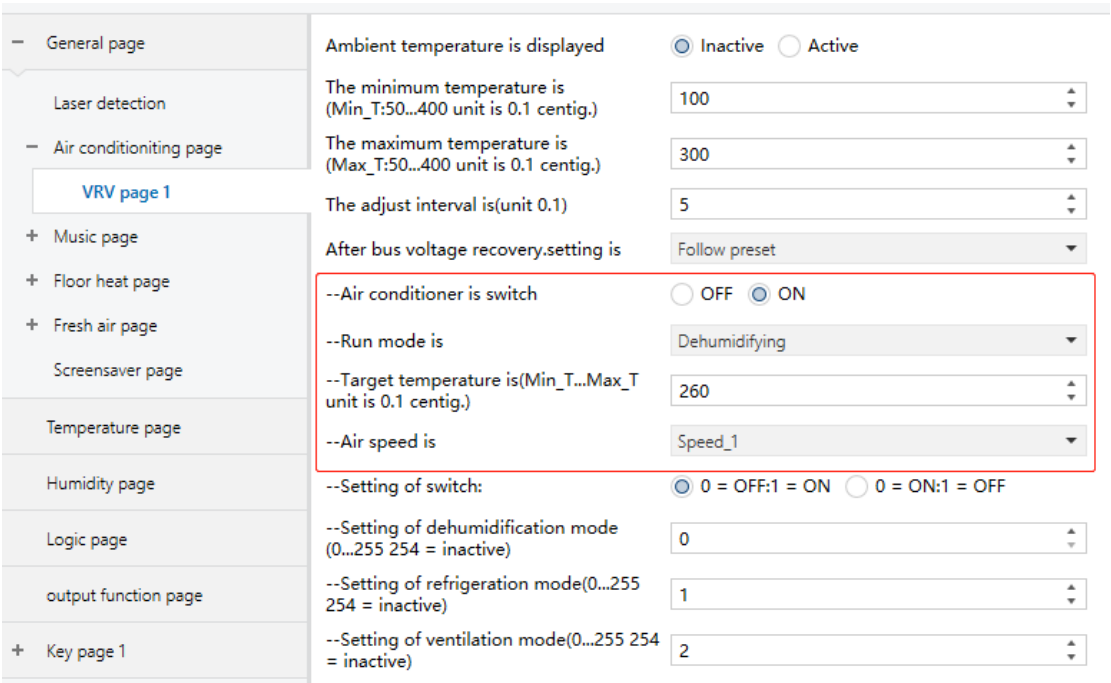
The parameter "--Air-conditioner is switch"

This parameter sets the on/off state of the air conditioner after the bus is restored to the power supply.

Optional: off
on

Select "off", the switch status of the air conditioner is off;

Select "on", the switch status of the air conditioner is on, and 3 setting parameters appear, as shown in the following figure:



The parameter "--Run mode is"

Operating mode when the air conditioner is turned on.

Optional: dehumidifying
refrigeration
ventilation
Heating
Refreshing
Sleep
Car

They are dehumidification mode, refrigeration mode, ventilation mode, heating mode, fresh air mode, sleep mode, and automatic mode.

Parameter "Target temperature is (Min_T... Max_T： unit is 0.1 °C)"

This parameter sets the temperature when the air conditioner is turned on.

Range: Within the range set by the **parameter "The minimum temperature is" and the parameter "The maximum temperature is"**, unit: 0.1°C

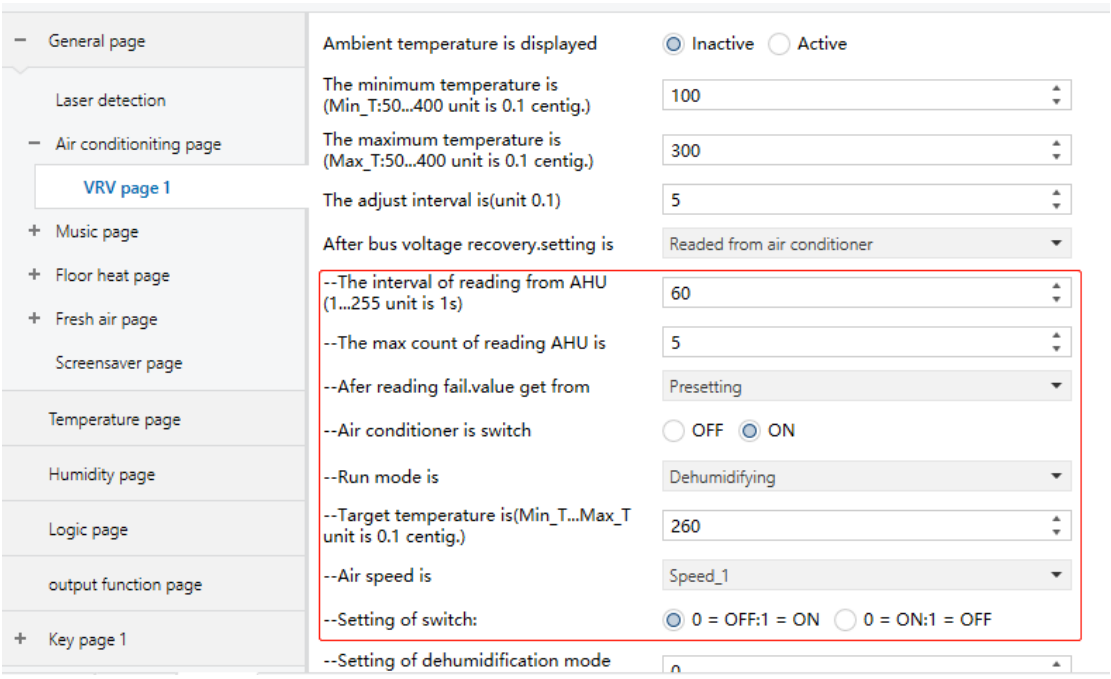
The parameter "Airspeed is"

This parameter sets the wind speed when the air conditioning screen is turned on.

Optional: Sleep 1
Sleep 2
Sleep 3
Sleep 4
Sleep 5
Sleep auto

Selecting "Sleep 1/2/3/4/5/auto" indicates that the wind speed is 1/2/3/4/5/auto when the air conditioner is turned on.

Select "read from air-conditioner" to read the status of the air conditioner from the air conditioner after the device bus is restored. As shown in the following figure:



Parameter "--The interval of reading from AHU(1...255;unit is 1s)"

This parameter sets the time interval at which the status is read from the air conditioner after the device bus is restored to power.

Range: 1.... 255, unit: seconds

The parameter "The max count of reading AHU is"

This parameter sets the maximum number of times the status is read from the air conditioner after the device bus is restored to power.

The parameter "After reading fail， value get from"

This parameter setting reads the status of the air conditioner after the failure.

Optional: none

presetting

restore before the e power goes down

Select "none" to indicate that the status of the air conditioner is not set after the reading fails;

Select "restore before power down" to indicate that the state of the air conditioner after the reading failure is the state before the power is saved;

Select "presetting" to indicate that after the reading fails, the air conditioner activates 4 parameters according to the preset state:

The parameter "--Air-conditioner is switch"

The parameter "--Run mode is"

Parameter "Target temperature is (Min_T... Max_T：unit is 0.1 °C)"

The parameter "Airspeed is"

After the failure of reading these 4 parameter settings, the switching status, operating mode, setting temperature, and wind speed of the air conditioner are set.

Select "restored before power down" to save the state of the air conditioner before the power is lost after the device bus is restored, which is read in the feedback object.

The first group: control values

The parameter "--Setting of a switch"

The control value of the air conditioning switch.

Optional: 0=OFF; 1=ON

0=ON；1=OFF

Select "0=OFF; 1=ON", the communication object "Switch ON/OFF, CHX" emits 01 when the air conditioner is turned on by clicking on the display, and the communication object "Switch ON/OFF, CHX" emits 00 when the air conditioner is turned off;

Select "0=ON; 1=OFF", the opposite of before.

Parameter "--Setting of dehumidification/refrigeration/ventilation/heating mode (0...255;254= inactivate)"

The control value of the air conditioner operation mode dehumidification/refrigeration/ventilation/heating, by clicking on the display screen to modify the air conditioning mode, the communication object "Run mode, CH1" will issue the corresponding mode setting value.

Range: 0.... 255,254 doesn't work

The parameter "Setting of low/medium/high/auto Speed (0...255;254= inactivate)"

The control value of the air conditioner wind speed level of 1 /2 /3 /auto is modified by clicking on the display, and the communication object "Airspeed" sends out the data set in the corresponding

mode.
Range: 0.... 255,254 doesn't work

Group 2: Feedback values

Parameter "Setting of switch"

Feedback value of the air conditioner switch.
Optional: 0=OFF; 1=ON
0=ON； 1=OFF
Select "0=OFF; 1=ON", the communication object "Switch status feedback, CH1" receives a message of 0 when the air conditioning state is off, and the received message is 1 when the air conditioning state is on;
Select "0=ON; 1=OFF", as opposed.

The parameter "Setting of dehumidification/refrigeration/ventilation/heating mode(0...255;254= inactivate)"

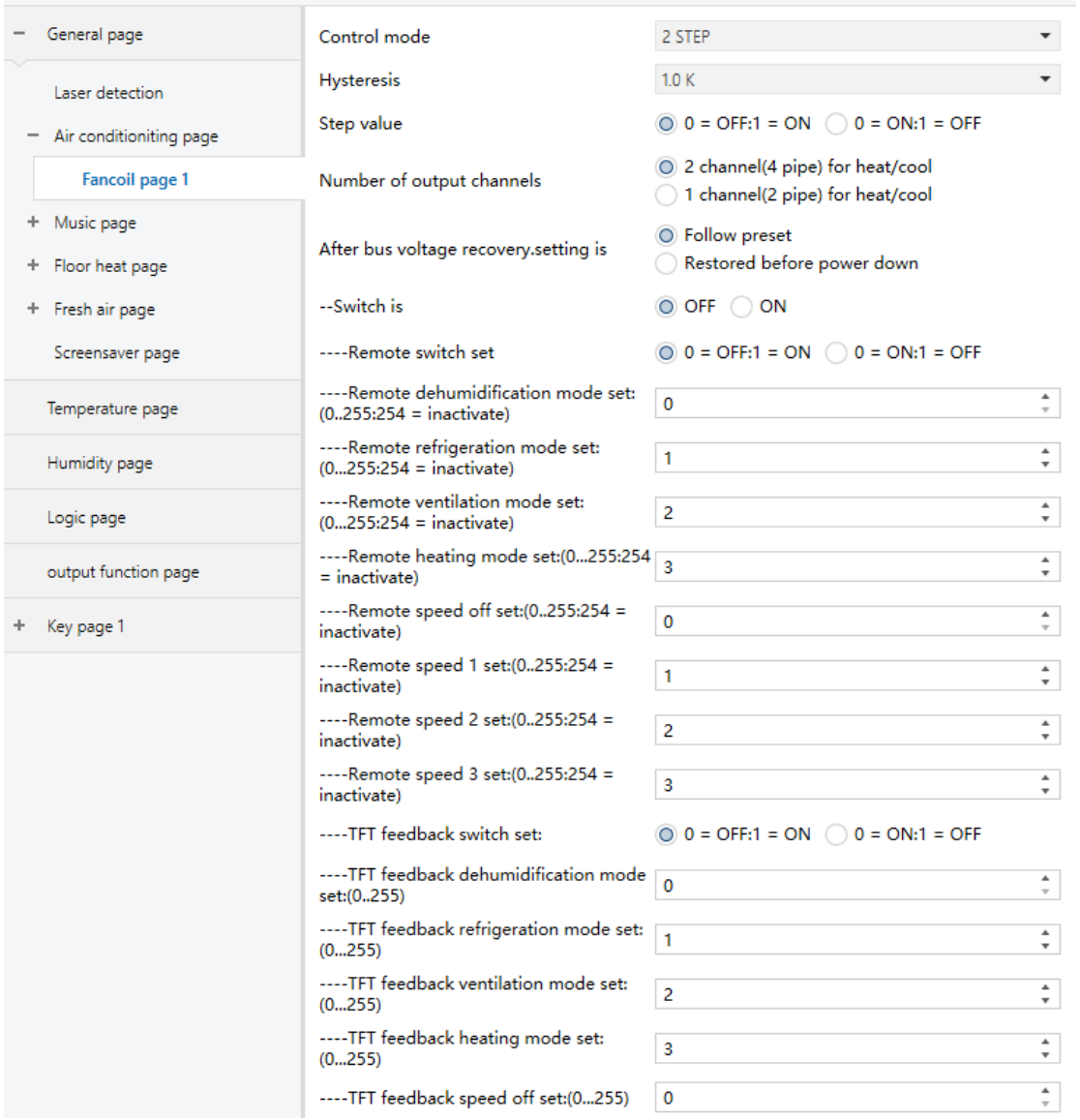
The feedback value of the air conditioner operation mode dehumidification/refrigeration/ventilation/heating, the communication object "Run mode feedback, CH1" receives the corresponding message value into the corresponding mode.
Range: 0.... 255

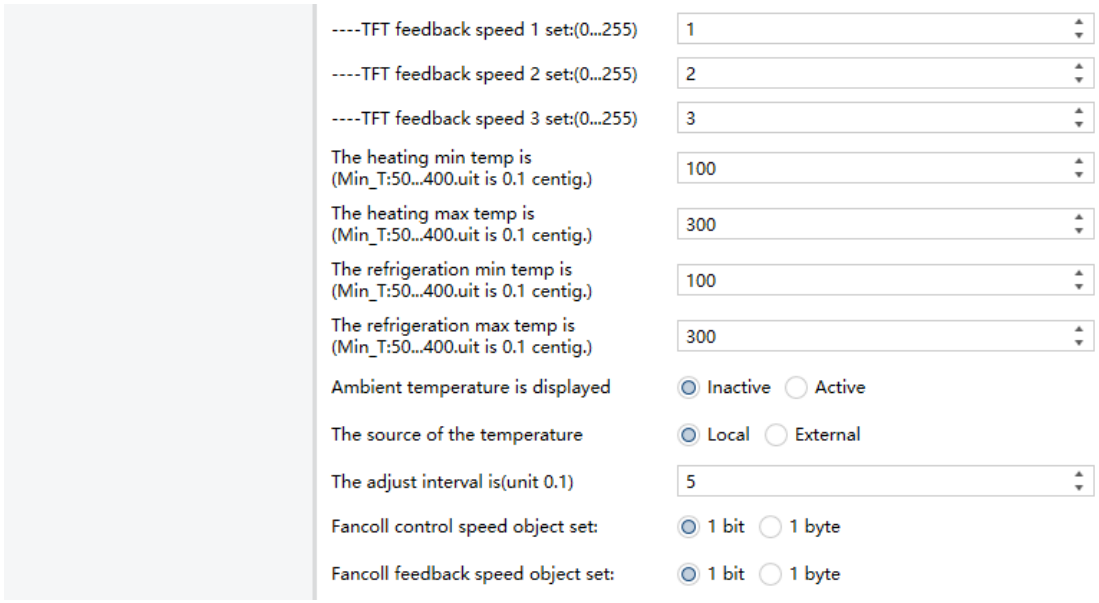
Parameter "Setting of low/medium/high/auto speed(0...255;254= inactivate)"

The feedback value of the air conditioner wind speed is 1/2/3/auto level, and the communication object "Airspeed feedback, CH1" receives the corresponding message value into the corresponding wind speed.
Range: 0.... 255

3.2.3. 2 Air conditioning control mode "Fancoil"

Note: The other channels of the fan coil are *the same as channel 1, refer to the introduction of* channel 1


General page
Laser detection
Air conditioniting page
Fancoil page 1
Music page
Floor heat page
Fresh air page
Screensaver page
Temperature page
Humidity page
Logic page
output function page
Key page 1
Control mode
2 STEP
Hysteresis
1.0 K
Step value
0 = OFF:1 = ON
0 = ON:1 = OFF
Number of output channels
2 channel(4 pipe) for heat/cool
1 channel(2 pipe) for heat/cool
After bus voltage recovery.setting is
Follow preset
Restored before power down
--Switch is
OFF
ON
----Remote switch set
0 = OFF:1 = ON
0 = ON:1 = OFF
----Remote dehumidification mode set: (0..255:254 = inactivate)
0
----Remote refrigeration mode set: (0...255:254 = inactivate)
1
----Remote ventilation mode set: (0...255:254 = inactivate)
2
----Remote heating mode set:(0...255:254 = inactivate)
3
----Remote speed off set:(0..255:254 = inactivate)
0
----Remote speed 1 set:(0..255:254 = inactivate)
1
----Remote speed 2 set:(0..255:254 = inactivate)
2
----Remote speed 3 set:(0..255:254 = inactivate)
3
----TFT feedback switch set:
0 = OFF:1 = ON
0 = ON:1 = OFF
----TFT feedback dehumidification mode set:(0..255)
0
----TFT feedback refrigeration mode set: (0...255)
1
----TFT feedback ventilation mode set: (0...255)
2
----TFT feedback heating mode set: (0...255)
3
----TFT feedback speed off set:(0...255)
0



Parameter "Control mode"

This parameter sets the control mode of the fan coil, which has 2 points of control, PWM control, and fan coil control.

Optional: 2 step

PWM

Fan coil

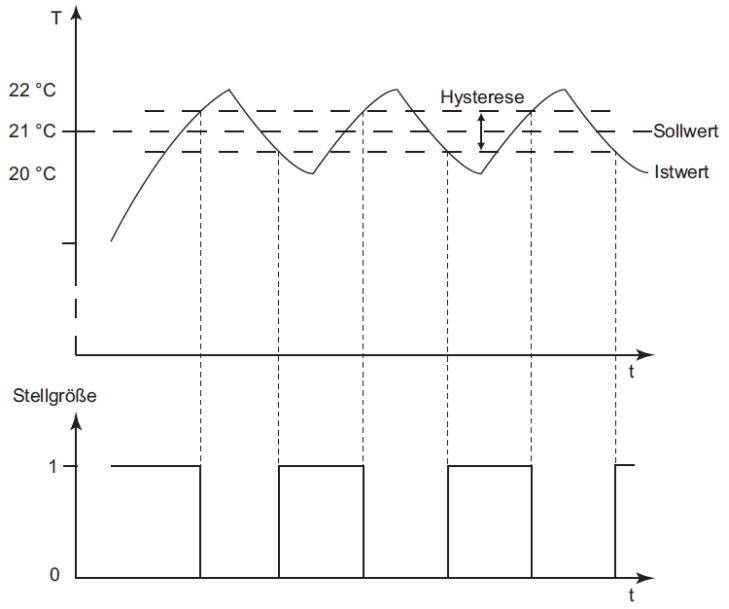
Select "2 step" and the 2-point control has two output states, switching according to the current temperature. As shown in the figure below, in heating mode if the current temperature is higher than the set temperature (current temperature 22 °C, set temperature 21 °C), Send the control value OFF to the bus. If the current temperature is lower than the set temperature (current temperature 20 °C, set temperature 21 °C), the control value is sent ON。 As for the control value ON, the message 0 or 1 is sent, which is controlled by the parameter "'Step value".

The 2-point control has a hysteresis, which varies around the set temperature to prevent rapid oscillation of the output state.

Hysteresis can be set by the parameter "Hysteresis". For example, in heating mode the setup temperature is 21 °C, the hysteresis is 1 K, the controller is turned on when the temperature is below 20 °C, and the controller is turned off when the temperature exceeds 2 2 °C. Hysteresis parameters depend on how quickly heating the room is heated by heating and how quickly cooling cools the room, as well as sensitivity to the temperature of people in the room.

Hysteresis cannot be set too small, otherwise the switching actuator will turn on and off frequently. Hysteresis can't be too big either, otherwise the temperature change in the room will be too great.

2-point control without automatic wind speed.



Select "PWM", PWM control and Fan coil control are similar, PWM control is Fan coil control 1byte control value (0... 255) converts to an on/off ratio (0 and 1). For example, if the cycle time is 10 minutes, if the control output value is 70%, the on-time is 7 minutes, and it is turned off Time is 3 minutes.

Note: 1) Control how the value is calculated (K: set by the parameter "Proportional range").

*Heating mode: control value = (setting temperature - current temperature) / K * 100%."*

*Refrigeration/dehumidification mode: control value = (current temperature - set temperature) / K * 100%."*

Ventilation mode: The hot and cold control values are all 0, and no calculation is required.

The calculated control value is lower than the parameter "Minimum control value" setting value of 0%.

The setting value above the parameter "Maximum control value" is fixed to that setting value.

2) Valve opening/closing time calculation method (T: set by the parameter "Readjust time (10...255/min)")

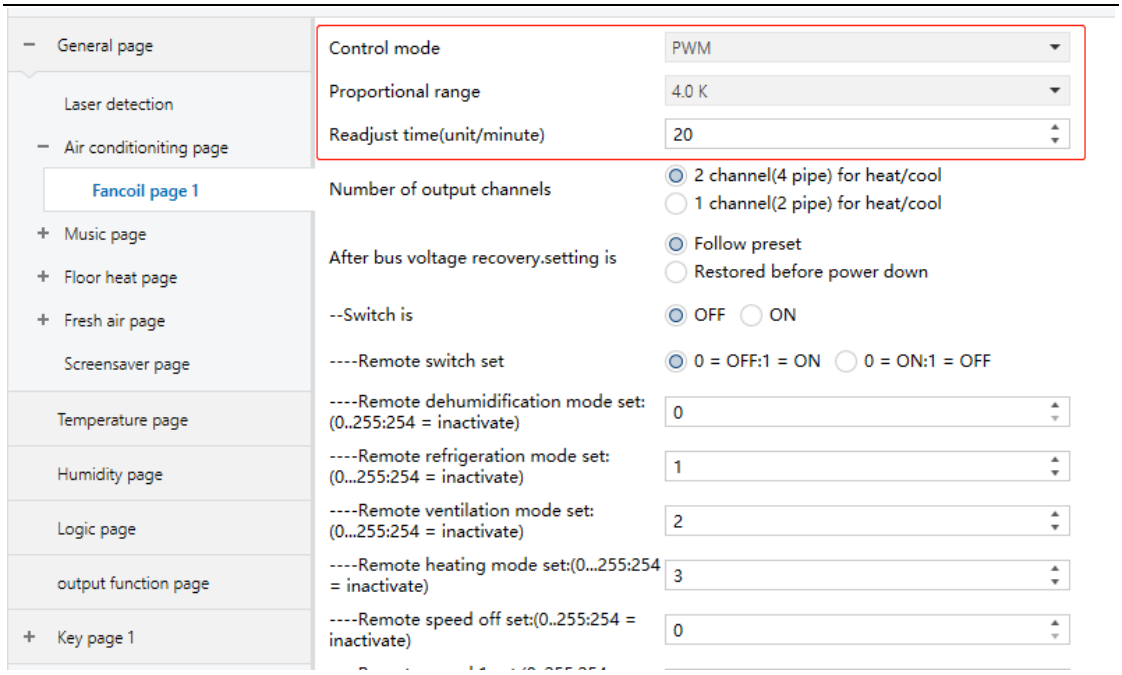
*On-time = control value *T*

Closing time = T - Opening time

3) The setting temperature is changed, and the control value is calculated again

The current temperature is changed, and the control value calculation is re-performed when the cycle is up

4) PWM control no automatic wind speed



Select "Fan coil", fan coil control has a continuous change of control values, between 0 and 100%. Use KNX to convert the control value signal to the value of 1byte, that is, the control value 0% corresponds to the value 0, and the control value 100% corresponds to the value 255。

Note: Controls how the value is calculated

*Heating mode: control value = (setting temperature - current temperature) / 1.6 * 100%*

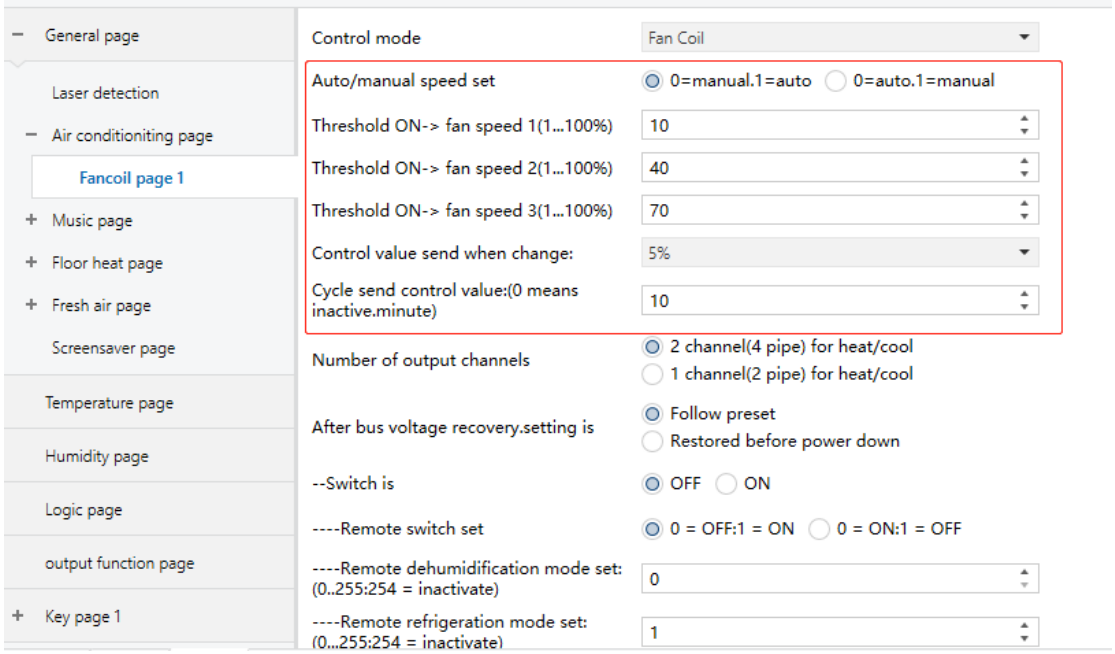
*Refrigeration/dehumidification mode: control value = (current temperature - set temperature) / 1.6 * 100%.*"

Ventilation mode: The hot and cold control values are all 0, and no calculation is required

The calculated control value is lower than the parameter "Minimum control value" setting value of 0%.

The setting value above the parameter "Maximum control value" is fixed to that setting value

Selecting "Fan coil" activates the following 6 parameters, as shown in the following figure:



Parameter "Auto/manual speed set"

This parameter is activated in fan coil control mode for Fan coil, Fan coil control with automatic wind speed, this parameter is used to set the control value of automatic/manual wind speed.

Options: 0=manual, 1=auto

0=auto, 1=manual

Select "0=manual, 1=auto", 0 is the manual wind speed, 1 is the automatic wind speed, and the communication object "Speed auto" emits 01 when the automatic wind speed is in.

Select "0=auto, 1=manual", 0 is the automatic wind speed, 1 is the manual wind speed, and the communication object "Speed auto" emits 00 when the automatic wind speed is in the automatic wind speed.

Parameter "Threshold ON->fan speed 1(1...100%)"

Parameter "Threshold ON->fan speed 2(1...100%)"

Parameter "Threshold ON->fan speed 3(1...100%)"

These parameters are only valid if you select "Fan coil" in the parameter "Control mode".

In the case of automatic wind speed,

When the control value is lower than the setting value of the parameter "Threshold ON->fan speed 1 (1...100%)", the automatic wind speed is 0;

When the control value is between the set value of the parameter "Threshold ON->fan speed 1 (1...100%)" and the parameter "Threshold ON->fan speed 2 (1...100%)", the automatic wind speed is wind speed 1;

When the control value is between the set values of the parameter "Threshold ON->fan speed 2 (1...100%)" and the parameter "Threshold ON->fan speed 3 (1...100%)", the automatic wind speed is wind speed 2;

When the control value is higher than the set value of the parameter "Threshold ON->fan speed 3 (1...100%)", the automatic wind speed is wind speed 3.

Parameter "Control value send when change"

This parameter is activated in the fan coil control mode for the Fan coil, and when the control value changes beyond the set range, the current control value is sent to the bus.

Optional: 0%

1%

……

14%

15%

For example, if you select "5%", the current control value can be sent to the bus when the control value changes to greater than 5%.

Parameter "Cycle send control value（0 means inactive，minute）"

This parameter is valid in the parameter "Control mode" selected "Fan coil", which sets the period during which control values are transmitted to the bus.

Range: 0... 255, unit: minutes (0 does not work).

Parameter "Number of output channels"

This parameter sets the number of output pipes for the fan coil.

Optional: 2 channels (4 pipes) for heat/cool

1 channel（2 pipe）for heat/cool

Select "2 channels (4 pipes) for heat/cool", and set the number of output pipes of the fan coil to 4 pipes, that is, the fan coil can exist in both refrigeration and heating and activate 2 communication objects "Heating value (control)" and "Refrigeration value (control)";

Select "1 channel (2 pipes) for heat/cool", and set the number of output channels of the fan coil to 2 pipes, then only one of the cooling and heating in the fan coil can exist, activate 2 communication objects "Fan control (heating or cool) value", "Fan control switch heating/cool", as for the communication object when the mode is cooled" Fan control switch heating/cool

"emits 0 or 1, by parameter" Switch cooling/ heating 'object value'' setting.

The parameter “After bus voltage recovery， the setting is”

This parameter is used to set the status of the fan coil after power is restored on the device bus.

Optional: follow the preset

restored before power down

Select "restored before power down" to save the state of the fan coil as it was before the power was lost after the device bus was restored;

Select "follow preset" and the state of the fan coil after the device bus is restored to power is preset by the following 4 parameters, as shown in the figure above:

The parameter "--Switch is"

This parameter sets the on/off state of the fan coil.

Optional: off

on

Select "off", the switch status of the fan coil is off;

Select "on" and the on/off status of the fan coil is on.

The parameter “--Run mode is”

This parameter is used to set the operating mode of the fan coil.

Optional: dehumidifying

refrigeration

ventilation

Heating

Select "dehumidifying", the operating mode of the fan coil is dehumidification;

Select "refrigeration", the operation mode of the fan coil is refrigeration;

Select "ventilation", the operation mode of the fan coil is ventilation;

Select "Heating" and the fan coil will operate in the mode of heating.

The parameter “--Airspeed is”

This parameter is used to set the wind speed of the fan disc.

Optional: off

speed 1

speed 2

speed 3

speed auto

Select "off" to indicate that the wind speed of the fan coil is off;

Select "Speed 1" to indicate that the wind speed of the fan coil is 1 class wind;

Select "Speed 2" to indicate that the wind speed of the fan coil is 2 equal winds;

Select "Speed 3" to indicate that the wind speed of the fan coil is 3rd class wind;

Select "speed auto" to set the wind speed of the fan disc to automatic wind speed, this option appears only in the parameter "Control mode" Select "Fan coil".

Parameter "--Set temperature is (Min_T... Max_T： unit is 0.1 °C)"

This parameter is used to set the temperature of the fan coil.

Range: In the **parameter "Heating/Cooling: Minimum temperature is (Min_T: 50...400; unit is 0.1 °C)",** and parameter **"Heating/Cooling: Maximum temperature is (Min_T: 50...400; unit is 0.1 °C) "**set within the range, unit: 0.1°C

Group 1: Remote

Parameter "Remote Switch set"

This parameter sets the remote control value of the fan coil switch.

Optional: 0=OFF; 1=ON

0=ON； 1=OFF

Select "0=OFF; 1=ON", when the communication object "Remote control switch, CH1" receives the message 0 fan coil switch state is off, and the received message 1 fan coil state is open;

Select "0=ON; 1=OFF", as opposed.

The parameter "Remote Dehumidification/Refrigeration/Ventilation/Heating mode set（0... 255;254= inactivate）"

This parameter sets the remote control value of the fan coil operation mode, and the communication object "Remote control mode" receives the remote control value set by the corresponding mode and enters the corresponding mode.

Range: 0.... 255,254 indicates disabled

Parameter "Remote speed off/speed 1/speed 2/speed 3/speed auto set(0...255;254= inactivate)"

This parameter sets the remote control value of the wind speed of the fan coil, and the communication object "Remote control speed" receives the remote control value of the corresponding wind speed setting and enters the corresponding wind speed grade.

Range: 0.... 255,254 indicates disabled

Group 2: Feedback (TFT).

Parameter "TFT feedback Switch set"

This parameter sets the feedback value of the fan tray switch.

Optional: 0=OFF; 1=ON

0=ON；1=OFF

Select "0=OFF; 1=ON", by clicking on the screen to turn on the air conditioner, and the communication object "Feedback switch, CH1" emits 01, turn off the air conditioner, and the communication object "TFT feedback switch, CH1" emits 00;

Select "0=ON; 1=OFF", as opposed.

Parameter "TFT feedback Dehumidification/Refrigeration/Ventilation/Heating mode set（0... 255）"

This parameter sets the feedback value of the fan coil working mode (dehumidification/refrigeration/ventilation/heating), and the corresponding feedback value is sent to the bus by clicking on the screen to modify the mode, and the communication object "TFT feedback mode, CH1" is sent to the bus.

Range: 0.... 255

Parameter "TFT feedback Speed off/speed 1/speed 2/speed 3/speed auto set(0...255)"

This parameter sets the feedback value of the wind speed of the fan coil (wind speed off / wind speed 1 / wind speed 2 / wind speed 3 / automatic wind speed), and the communication object "TFT feedback control speed, CH1" sends the corresponding feedback value to the bus by clicking the screen.

Range: 0.... 255

Group Three: Fan control

Parameter "Fancoil control speed object set"

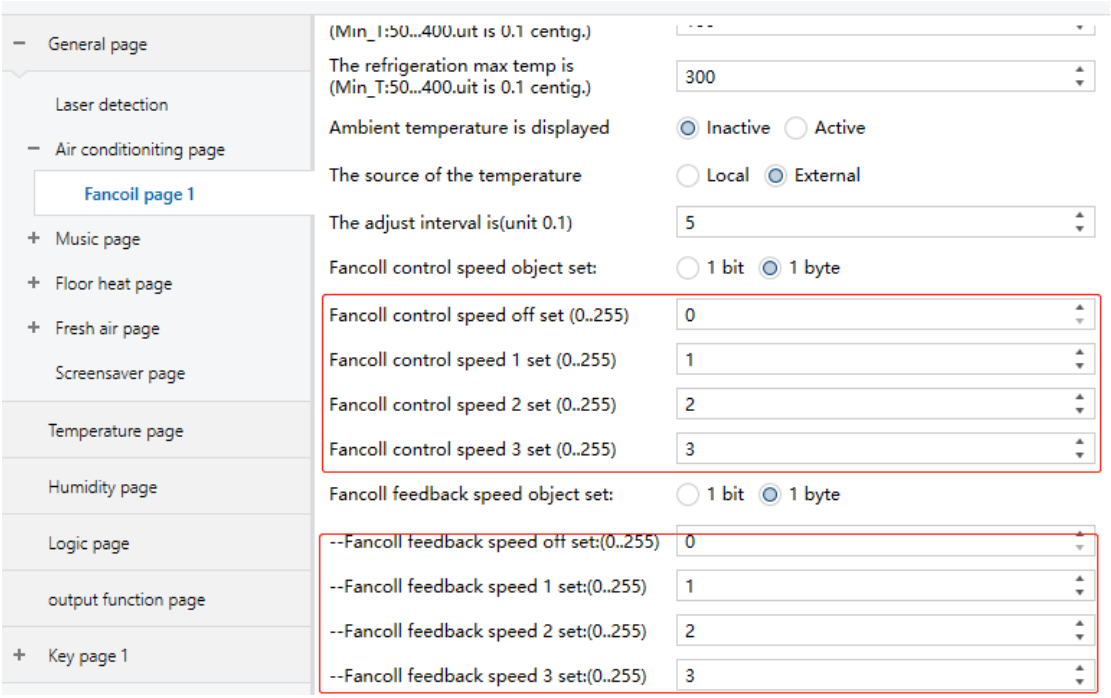
This parameter sets the control value data type for the wind speed of the fan.

Optional: 1bit

1byte

Select "1bit", the control value data type of the wind speed of the fan is 1bit, and the communication objects are "Speed 1 (control)", "Speed 2(control)", " Speed 3(control)"

Select "1byte", the object type of the wind speed control value of the fan is 1byte, and the communication object is "Speed 1byte(control)", activate 4 parameters, as shown in the following figure:



The parameter "' Fancoil control Speed off/1/2/3 set (0...255)"

This parameter sets the control value of the fan wind speed off/wind speed 1/wind speed 2/wind speed 3 of the fan coil.

Range: 0.... 255

Group Four: Fan feedback

Parameter "Fancoil feedback speed object set"

This parameter sets the feedback value data type for the wind speed of the fan.

Optional: 1bit

1byte

Select "1bit", the feedback value data type of the wind speed of the fan is 1bit, and the communication object is "thermostatic controller feedback Speed 1 (feedback)", "thermostatic controller feedback Speed 2 (feedback)", "thermostatic controller feedback Speed 3 (feedback)"

Select "1 byte", the object type of the wind speed feedback value of the fan is 1 byte, and the communication object is "thermostatic controller feedback speed", activate 4 parameters, as above shown in the figure.

Parameter "' Fancoil feedback Speed off/1/2/3 set (0...255)"

This parameter sets the feedback value of the fan wind speed off/wind speed 1/wind speed 2/wind speed 3 of the fan coil.

Range: 0.... 255

Parameter "Heating/Cooling: Min control value"

This parameter is valid in the parameter "Control mode" selected "PWM/Fan coil" and is used to set the minimum control value in heat/cooling mode.

Optional: 0%

5%

10%

15%

20%

25%

30%

For example, select "5%" to indicate that the minimum control value is 5%, and if the actual control value is less than 5%, 0% is issued directly.

Parameter "Heating/Cooling: Max control value"

This parameter is valid in the parameter "Control mode" selected "PWM/Fan coil" and is used to set the maximum control value in heating/cooling mode.

Optional: 70%

75%

80%

85%

90%

95%

100%

For example, if you select "70%", the maximum control value in heating/cooling mode is 70%, and

if the actual control value is greater than 70%, only 70% can be issued.

Parameter "Heating/Cooling: Minimum temperature is (Min_T: 50...400; unit is 0.1 °C)"

This parameter sets the minimum temperature value of the set temperature in heat/cooling mode.

Range: 50... 400, unit: 0.1 °C

Parameter "Heating/Cooling: Maximum temperature is (Min_T: 50...400; unit is 0.1 °C)"

This parameter sets the maximum temperature value of the set temperature in heating/cooling mode.

Range: 50... 400, unit: 0.1 °C

Parameter "Ambient temperature is displayed"

This parameter sets whether the ambient temperature is displayed on the screen (it replaces the setting temperature).

Optional: inactive

active

The parameter "Current temperature of the source"

This parameter is used to set the current temperature source.

Optional: local

External

Select "local" to indicate that the temperature is detected by the local device;

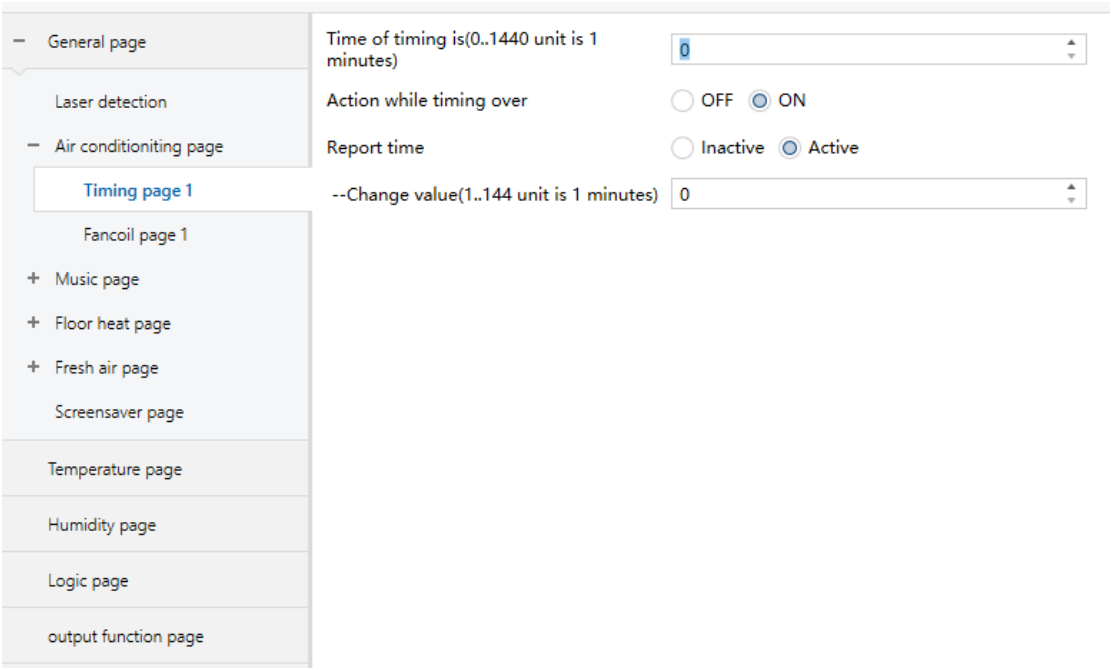
Selecting "External" indicates that the temperature is external, and the parameter "External current temperature" is activated.

Parameter "The adjust interval is(unit 0.1)"

This parameter is used to set the increase or decrease of the setting temperature modified by the touch screen.

Range: 1... 10, Range: 0.1°C

3.2.3. 3 Air conditioners control "Timing**" at regular intervals**



Parameter "Time of timing is(1...1440;0:invalid;unit is 1 minutes)"

This parameter is used to set the timing time, the communication object is "Timing", sending 1 to the communication object indicates that the timing is 1min.

Range: 1... 144 0,0 invalid, unit: 1 minute

Parameter "Action while timing over"

This parameter is used to set the state of the device when the timer ends.

Optional: off

on

Select "off", when the timed time ends, the air conditioning switch status is off;

Select "on" when the timer ends with the air conditioner on/off state is on.

Parameter "Report time"

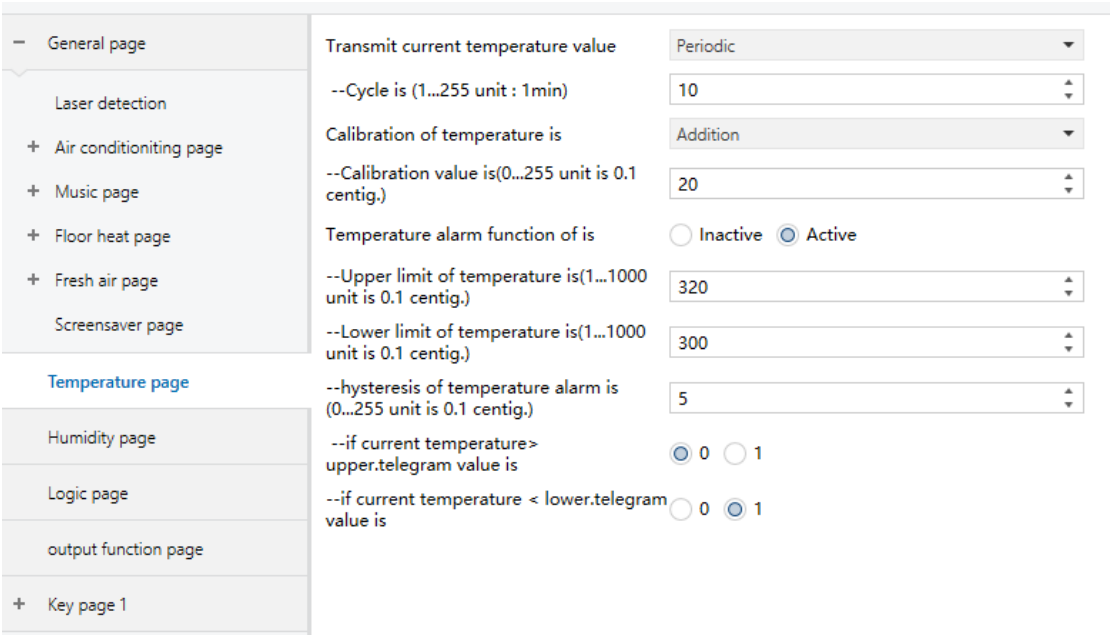
This parameter sets whether the timed reporting function is activated.

Optional: inactive

active

If you select "activated", activate the timing report function, activate the parameter "**change value(1...144/1min)**", set how long the time is changed when the timed time is changed, then send out a message to report the current time of the time, the communication object is" Report"。

3.2.4 Parameter setting interface "Temperature"



The parameter "transmit current temperature value"

Optional: none

After changed

Periodic

Selecting "After changed" indicates that the current temperature value is sent to the bus when the current temperature changes and the current temperature value is reported by the parameter "— change value (1... 100 unit:0.1 °C) "Settings.

Select "periodic" to periodically send the current temperature value to the bus, and the cycle time is set by the parameter "Cycle is (1...255, unit:1min)".

The parameter "Calibration of temperature is"

Let you set whether to activate the function of calibrating the current temperature.

Optional: inactive

addition

subduction

Select "addition" and the direction of the current temperature calibration is increased; Select "subduction" and the direction of the current temperature calibration is minus, and the calibration value is set by the parameter "Calibration value is (0...255, the unit is 0.1 °C)".

Parameter "temperature alarm function of is"

This parameter is used to set whether the temperature alarm function is activated.

Optional: inactive

active

Select "active" to activate the temperature alarm function, and 5 related parameters appear, as described below:

Parameter "--Upper limit of temperature is (1...1000; unit is 0.1 °C)"

This parameter is used to set the upper limit of the temperature alarm, and the upper limit of the temperature can also be modified by the communication object "Upper limit of temp. alarm".

Range: 1.... 1000, unit: 0.1 °C

Parameter "Lower limit of temperature is (1...1000; unit is 0.1 °C)"

This parameter is used to set the lower limit of the temperature alarm, or to modify the lower limit of the temperature through the communication object "Lower limit of temp. alarm".

Range: 1.... 1000, unit: 0.1 °C

Parameter "Hysteresis of temperature alarm (0...255; unit is 0.1 °C)"

This parameter is used to set the hysteresis value for the temperature alarm.

Range: 0.... 255, Unit: 0.1 °C

The parameter "If current temperature>upper, telegram value is"

This parameter is used to set the data emitted by the message if the current temperature is greater than the set upper-temperature value.

Optional: "0"

"1"

Select "0" and send 00 if the current temperature is greater than the set upper-temperature limit. Select "1" to send 01 to the communication object "Temperature alarm status" if the current temperature is greater than the set upper-temperature value.

The parameter "If current temperature<lower, telegram value is"

This parameter is used to set the data emitted by the message if the current temperature is less than the set lower temperature limit value.

Optional: "0"

"1"

Select "0" to send 00 if the current temperature is less than the set lower temperature limit.

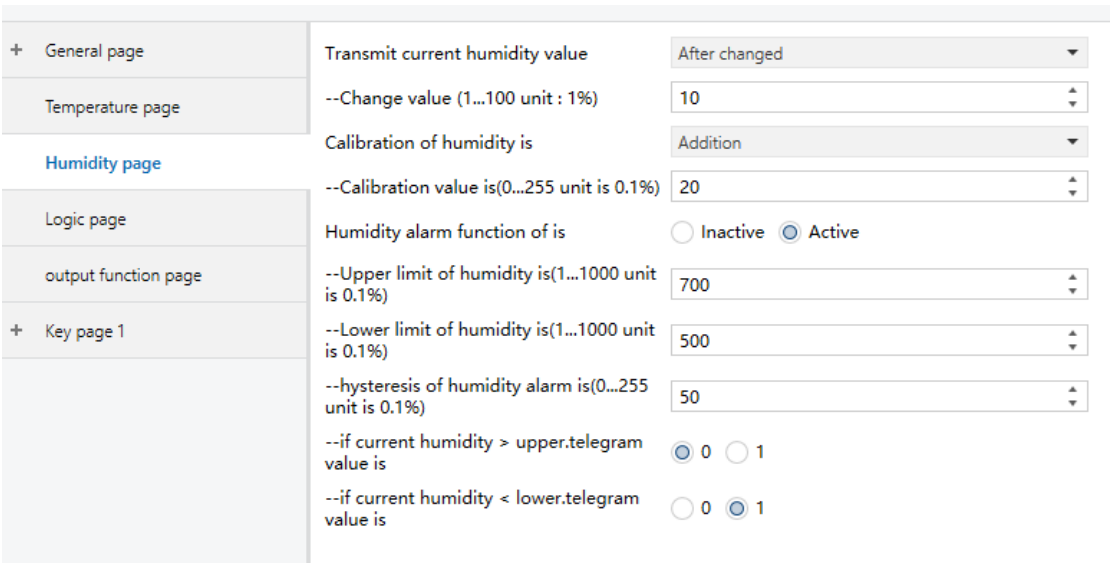
Select "1" to send 01 to the communication object "Temperature alarm status" if the current temperature is less than the set lower temperature limit.

Concentrate:

1, the communication object "temp. alarm activate" is whether to activate the temperature alarm function, through the bus write 00 means to close the temperature alarm function, write 01 means to open the temperature alarm function.

2, as shown in the red box in the figure above, first write the temperature alarm function through the communication object "temp.alarm activate" to 01, when the current temperature is greater than the set upper temperature limit of 32.5 degrees (the set upper temperature value needs to add a lag of 0.5, the set lower temperature limit value needs to subtract the lag of 0.5), the communication object "Temperature alarm status" Send 00 (When the temperature is lower than 31.5 °C and then greater than 32.5 °C, the communication object "Temperature alarm status" will still send 00; When the temperature decreases and is between 32 °C and 31.5 °C, and again greater than 32.5 °C, the communication object "Temperature alarm status" does not send 00); When the current temperature is less than the set lower temperature limit of 29.5 degrees, the communication object "Temperature alarm status" sends 01 (when the temperature is greater than 30.5 °C and then less than 29.5 °C, the communication object "Temperature alarm status" will still send 01; When the temperature rises and is between 30 °C and 30.5 °C, again less than 29.5 °C, the communication object "Temperature alarm status" will not send 01).

3.2. 5 Parameter setting interface "Humidity"



The parameter "transmit current humidity value"

Optional: none

After changed

Periodic

Selecting "After changed" indicates that the current humidity value is sent to the bus when the humidity changes and the current humidity value is reported by the parameter "—change value (1... 100 unit:0.1 °C) "Settings.

Select "periodic" to periodically send the current humidity value to the bus, and the cycle time is set by the parameter "Cycle is (1...255, unit:1min)".

The parameter "Calibration of humidity is"

Used to set whether the calibration humidity value is activated.

Optional: inactive

addition

subduction

Select "addition" and the direction of calibration is increased; Select "subduction", the direction of calibration is subtracted, and the calibration value is set by the parameter "Calibration value is(0...255, the unit is 0.1 °C)"

Parameter "Humidity alarm function of is"

This parameter is used to set whether the humidity alarm function is activated.

Optional: inactive

active

Select "active" to activate the humidity alarm function, and 5 related parameters appear, see the following introduction:

Parameter "--Upper limit of Humidity is (1...1000; unit is 0.1 °C)"

This parameter is used to set the upper limit of the humidity alarm, and the upper limit of humidity can also be modified by the communication object "Upper limit of humidity alarm".

Range: 1.... 1000, unit: 0.1 °C

Parameter "Lower limit of humidity is (1...1000; unit is 0.1 °C)"

This parameter is used to set the lower limit value of the humidity alarm, or to modify the lower limit of humidity through the communication object "Lower limit of humidity alarm".

Range: 1.... 1000, unit: 0.1 °C

Parameter "Hysteresis of humidity alarm (0...255; unit is 0.1 °C)"

This parameter is used to set the hysteresis value for the humidity alarm.

Range: 0.... 255, Unit: 0.1 °C

The parameter "If current humidity>upper, telegram value is"

This parameter is used to set the data emitted by the message if the current humidity is greater than the set upper humidity value.

Optional: "0"

"1"

Select "0", if the current humidity is greater than the set upper humidity value, and the communication object "humidity alarm status" sends 00;

Select "1", if the current humidity is greater than the set maximum humidity value, the communication object "humidity alarm status" sends 01.

The parameter "If current humidity<lower, telegram value is"

This parameter is used to set the data emitted by the message if the current humidity is less than the set lower humidity limit.

Optional: "0"

"1"

Select "0", if the current humidity is less than the set lower humidity limit, and the communication object "humidity alarm status" sends 00;

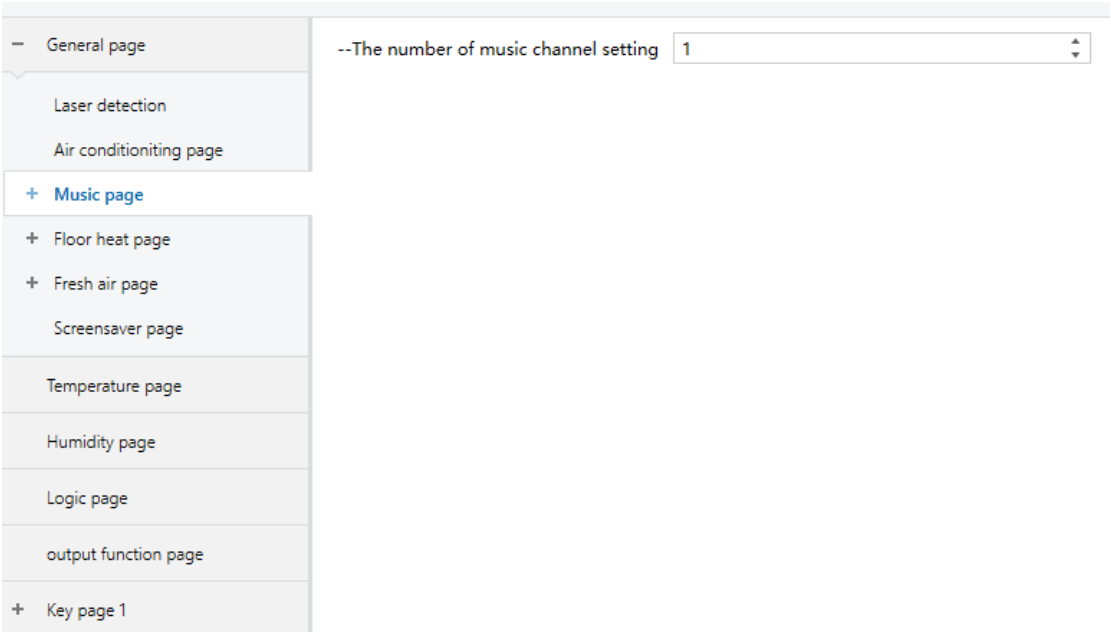
Select "1", if the current humidity is less than the set lower humidity limit, and the communication object "humidity alarm status" sends 01.

Concentrate:

1, the communication object "humidity alarm activate" for whether to activate the humidity alarm function, through the bus write 00 means to turn off the humidity alarm function, write 01 means to open the humidity alarm function.

2, as shown above, first write 01 through the communication object "Humility alarm activate" to open the humidity alarm function when the current humidity is greater than the set upper humidity limit of 75% (the set upper humidity value needs to add a lag of 5%, the set lower humidity limit value needs to subtract the lag of 5%), the communication object "Humility alarm status" sends 01; When the current humidity is less than 45% of the set lower humidity limit, the communication object "Humility alarm status" sends 00.

3.2. 6 Parameter setting interface "Music function"

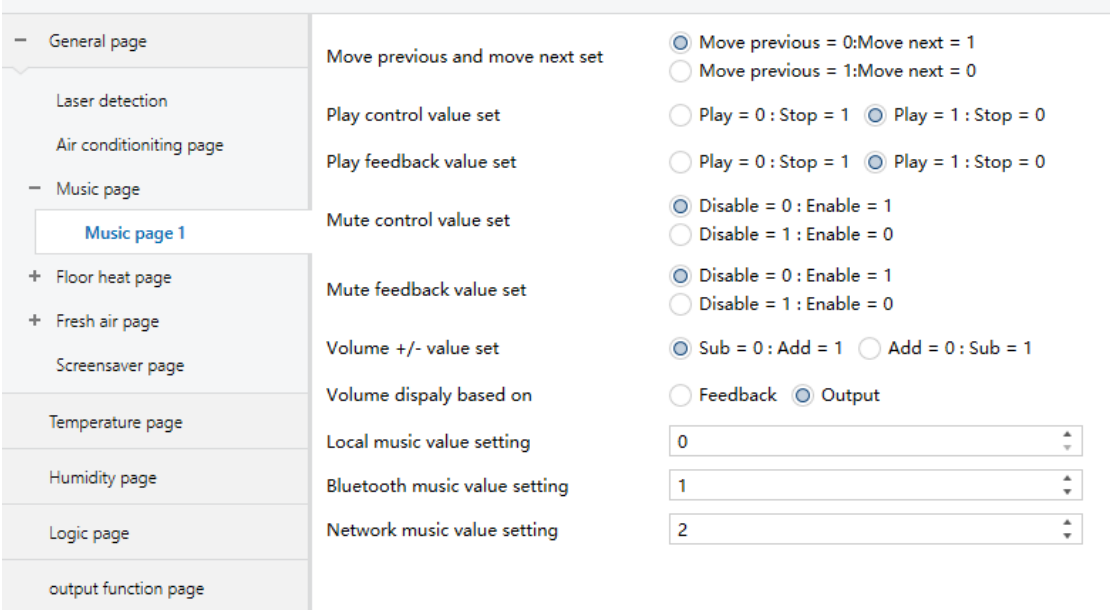


The parameter "The number of music channel settings"

This parameter is used to set the number of music control channels.

Range: 0...6

3.2.6.1 Music control "Music"



The parameter “Move previous and move next set”

This parameter is used to set the setting value of switching to the previous song and the next song, and the communication object is "move previous/next, CH1".

Optional: move previous=0; move next=1

Move previous=1; move next=0

Select "move previous=0; move next=1", the communication object "move previous/next, CH1" emits 0 when switching to the previous song, and the communication object "move previous/next, CH1" issues 1 when switching to the next song;

Select Move previous=1; move next=0", as opposed.

The parameter “play control value set”

This parameter sets the control value of play/pause, and the communication object is "play state control, CH1".

Optional: play=0; stop=1

Play=1; stop=0

Select "play=0; stop=1", when playing music, the communication object "play state control, CH1" emits 0, and when the music is paused, the communication object "play state control, CH1" emits 1;

Select Play=1; stop=0", as opposed.

The parameter “play feedback value set”

This parameter sets the feedback value for play/pause, and the communication object is "play state feedback, CH1".

Optional: play=0; stop=1

Play=1; stop=0

Select "play=0; stop=1", when the communication object "play state control, CH1" receives the message 0, the music is played, and the communication object "play state control, CH1" receives the message 1, pause the music;
Select Play=1; stop=0", as opposed.

Parameter "mute control value set"

This parameter sets the mute control value, and the communication object is "mute control, CH1".
Optional: disable=0; enable=1
disable=1； enable=0
Select "disable=0; enable=1" means that when exiting mute mode, the communication object "mute control, CH1" emits 0, and when entering the silent mode, the communication object "mute control, CH1" emits 1;
Select "disable=1; enable=0", as opposed.

Parameter "mute feedback value set"

This parameter sets the mute feedback value, and the communication object is "mute feedback, CH1".
Optional: disable=0; enable=1
disable=1； enable=0
Select "disable=0; enable=1", when the communication object "mute feedback, CH1" receives the message 0, exits the silent mode, receives the message 1, and enters the silent mode;
Select "disable=1; enable=0", as opposed.

Parameter "Volume +/- value set"

This parameter sets the volume +/- control value, and the object is "Music volume+/volume-CH1".
Optional: Sub = 0; Add = 1
Add = 0; Sub = 1

Parameter "Volume display based on"

This parameter sets the volume control mode, based on output, or feedback.
Optional: Feedback
Output
Selecting "Feedback" indicates that the volume is controlled by feedback, i.e. clicking the volume +/- button on the screen does not display the volume, you need to wait for the feedback object" volume feedback. CH1" synchronous volume values;
Select "Output" to indicate that the volume value is controlled by the output value, i.e. click on the volume +/- on the screen, through the object "volume control. CH1" emits volume values and can display volume values synchronously.

Parameter "local music value setting"

This parameter sets the setting value when the audio source is local music.
Range: 0... 255

Parameter “Bluetooth music value setting”

This parameter sets the setting value when the audio source is Bluetooth music.

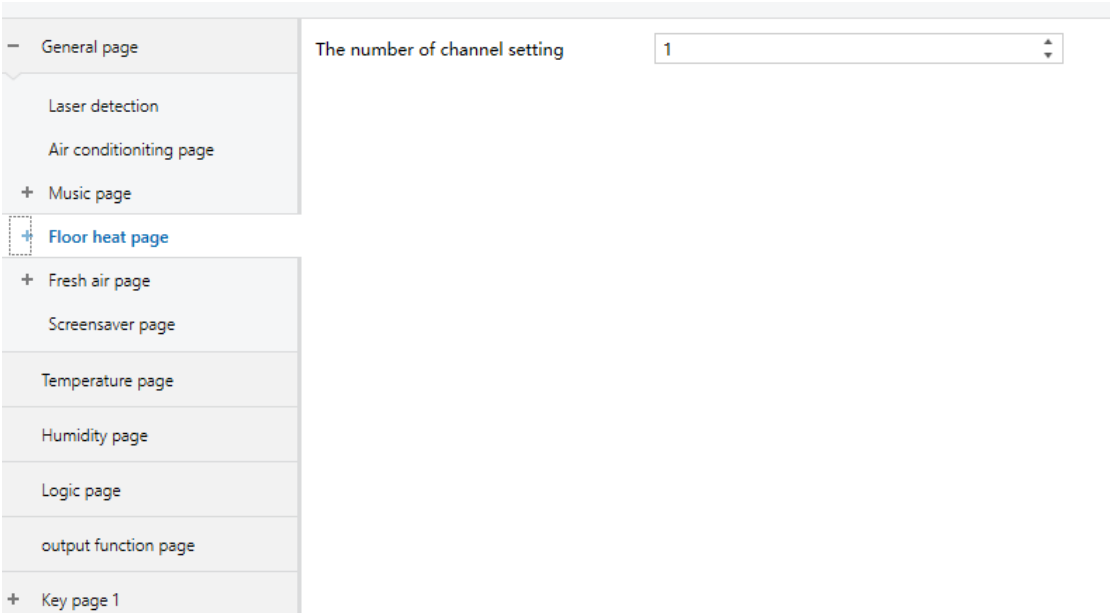
Range: 0... 255

Parameter “network music value setting”

This parameter sets the setting value when the audio source is network music.

Range: 0... 255

3.2. 7 Parameter setting interface "Floor heating"

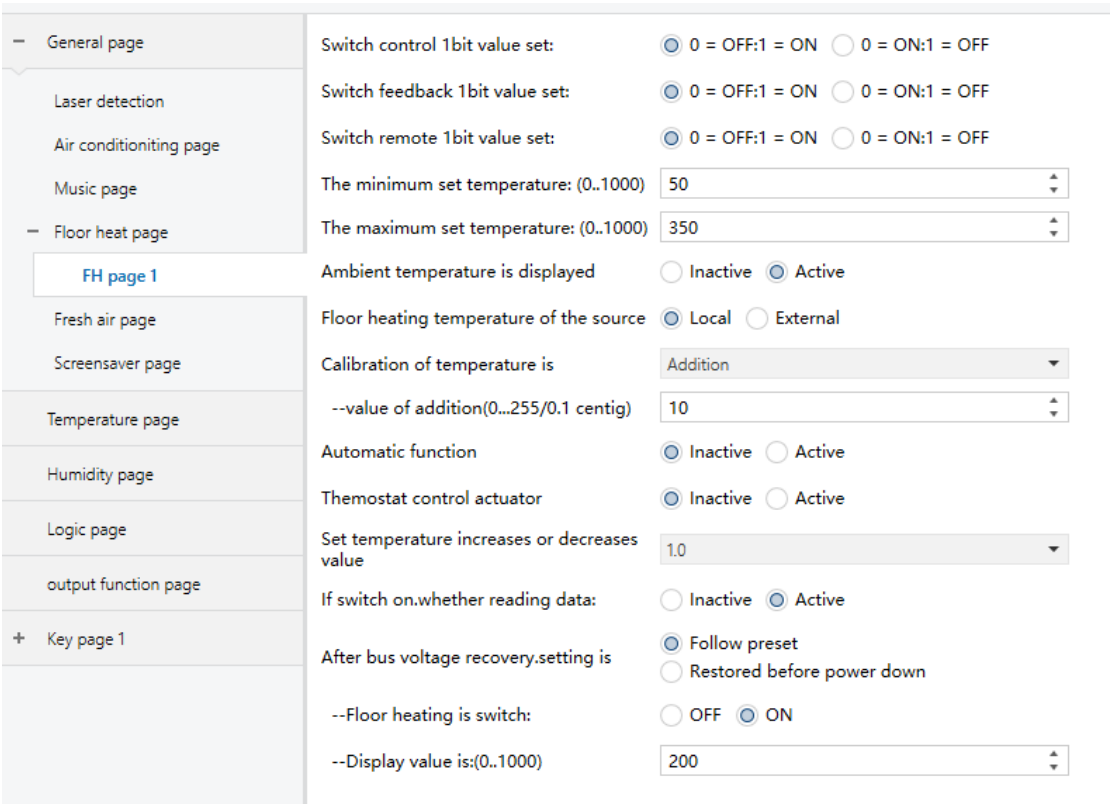


The parameter “The number of channel settings”

This parameter is used to set the number of floor heating control channels.

Range: 0.... 10

3.2.7.1 Floor heating control "FH"



Parameter "switch control 1bit value set"

Parameter "switch feedback 1bit value set"

The parameter "switch remote 1bit value set"

These parameters set the switch control value, feedback value, and remote control value of floor heating, and the corresponding communication object is "Switch control CH1", "Switch feedback CH1", and "Switch remote CH1".

The parameter "the minimum set temperature: (1 ... 1000)"

The parameter "the maximum set temperature: (1 ... 1000)"

This parameter is used to set the minimum and maximum values of the floor heating setting temperature.

Range: 1... 1000, unit: 0.1 °C

Parameter "Ambient temperature is displayed"

This parameter sets whether the ambient temperature is displayed on the screen (it replaces the setting temperature).

Optional: inactive

active

Parameter “Floor heating temperature of the source”

This parameter is used to set the source of the current temperature of the floor heating.

Optional: Local

External

Select "Local", the current temperature of the floor heating is the actual temperature detected by the device's sensor;

Select "External", the current temperature of the floor heating uses the external temperature, and the communication object is "External current temperature".

Note: When "External" is *selected* for *this parameter*, *the temperature can also be calibrated.*

The parameter “Calibration of temperature is”

This parameter is used to set whether the local temperature is calibrated.

Optional: Inactive

Addition

Subduction

Select "Inactive" to not calibrate the local temperature of the floor heating;

Select "Addition", calibrate the local temperature of the floor heating, the calibration method is increased, and the calibration deviation value is set by the parameter "-the value of addition (0...255/0.1 °C)";

Select "Subduction" to calibrate the local temperature of the floor heating, the calibration method is minus, and the calibration deviation value is set by the parameter "-value of subduction (0...255/0.1 °C)".

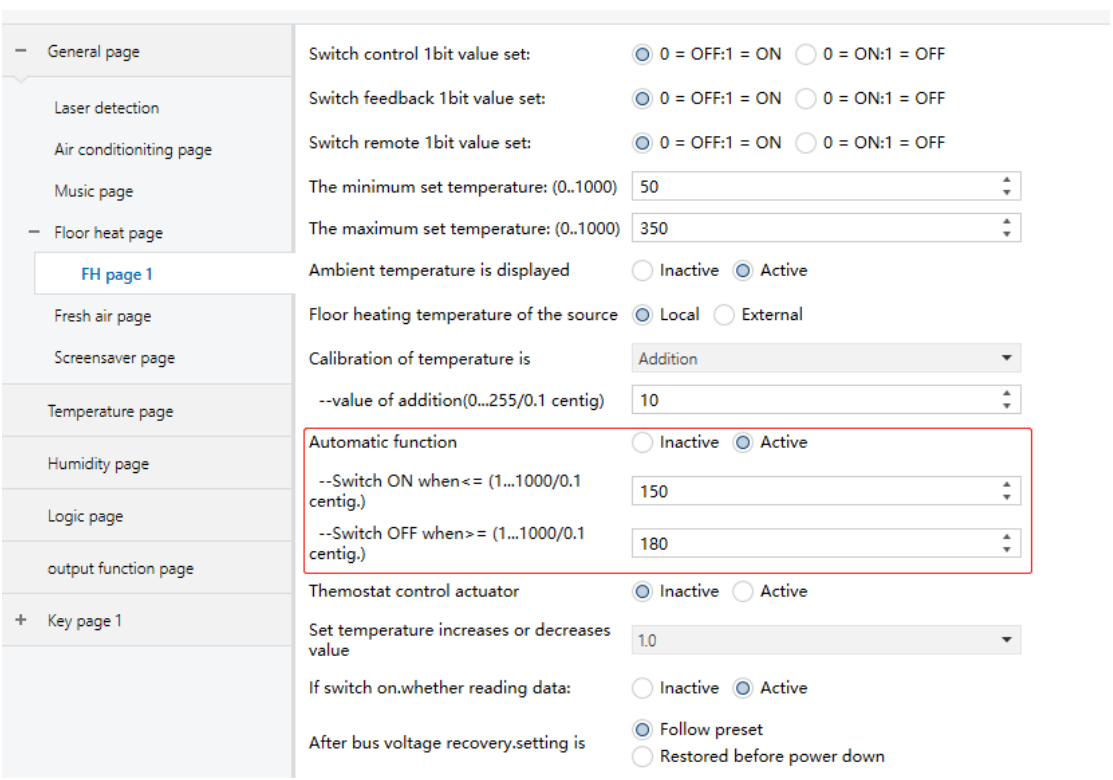
The parameter "automatic function"

This parameter sets whether the auto function is enabled.

Optional: inactive

active

Select "Enable" to enable the auto function and activate 2 parameters, as shown in the following figure:



Parameter "--Switch ON when<= (1...1000/0.1 °C)"

This parameter is used to set the on-switch state when the local temperature is less than or equal to how much.

Range: 1... 1000, unit: 0.1 °C

Parameter "Switch OFF when>= (1...1000/0.1 °C)"

This parameter is used to set the floor heating switch state to Off when the local temperature is greater than or equal to what.

Range: 1... 1000, unit: 0.1 °C

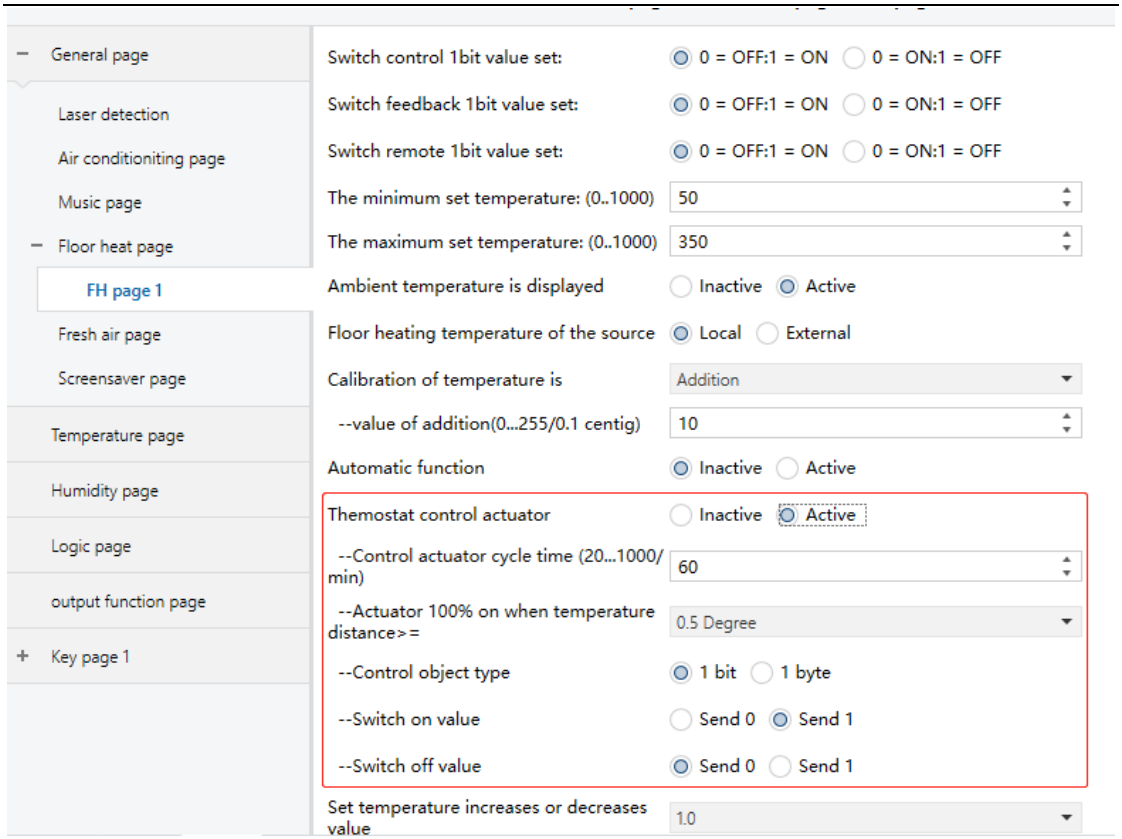
Parameter "Thermostat control Actuator"

This parameter is used to set whether the thermostatic automatic control device is enabled.

Optional: inactive

active

Select "active" to enable the thermostat automatic control device and activate 5 parameters, as shown in the following figure:



Parameter "—Control actuator cycle time(20...1000/minute)"

This parameter is used to set the cycle time of the control unit.

Range: 20... 1000, unit: minutes

Parameter "—Actuator 100% on when Temperature distan>="

This parameter is used to set the number of degrees in which the temperature can be changed during the cycle time of the control device.

Optional: 0.5 degree

1 degree

1.5 degree

2 degree

2.5 degree

3 degree

3.5 degree

4 degree

When "0..5/2/2.5/3/3.5/4 degree" is selected, the current temperature is less than the setting temperature 0.5/1/1.5/2/2.5/3/3.5/4 °C, the communication object "control value 1bit/byte"

issues the setting value of the parameter "--Switch ON value", and the current temperature reaches the set temperature and then issues the setting value of the parameter "--Switch OFF value". After one cycle time has arrived, continue to start the detection and control of the next cycle, and so on... The time when the current temperature reaches the set temperature is determined by the parameter "—5/1/1Control actuator cycle time(20...1000/minute)".

Concentrate:

The time when the current temperature reaches the set temperature = cycle time/number of degrees that the temperature can be changed (set temperature - current temperature)*

Cycle time: Set by the parameter "—Control actuator cycle time(20...1000/minute)"

Degrees of temperature changeability: set by the parameter "*—Actuator 100% on when Temperature distan>="*

Parameter "—Control Object type"

This parameter is used to set the data type of the control value.

Optional: 1bit

1byte

The parameter "--Switch ON value"

This parameter is used to set the data for turning on floor heating.

Range: 0... 1/0...255

The parameter "--Switch OFF value"

This parameter is used to turn off the floor heating.

Range: 0... 1/0...255

The parameter "set temperature increases or decreases value"

This parameter is used to set the increase or decrease of the setting temperature modified by the touch screen.

Optional: 0.1

0.5

1.0

The parameter “if switch on, whether reading data”

This parameter sets whether to read the floor heating setting temperature when the floor heating is turned on.

Optional: OFF

ON

Select "ON" to read the set temperature of the floor heating when the floor heating is turned on.

The parameter “After bus voltage recovery, the setting is”

This parameter is used to set the state of floor heating after the device bus is restored to power.

Optional: Follow preset

Restored before power-down

Select "Follow preset", the state of the floor heating after the device bus is restored to power is set according to the setting, the floor heating switch state is set according to the parameter "--Switch setting", and the floor heating temperature is set according to the parameter "--Display value is:(0..1000)"Settings;

The parameter "--Switch setting"

This parameter sets the switching state of the floor heating after the device bus is restored to power.

Optional: OFF

ON

Select "OFF", the switch state of the floor heating is off after the device bus is restored to the power supply;

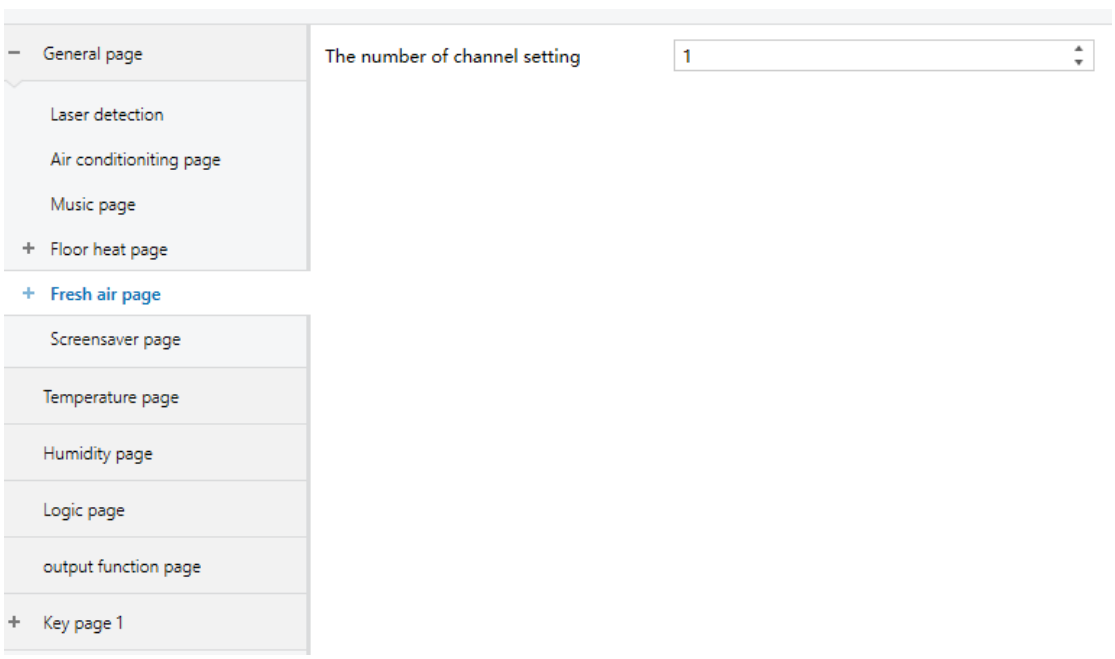
Select "ON" to switch the on/off state of the floor heating after the device bus is restored to power.

Parameter “--Display value is:(0..1000)”

This parameter is activated when ON is selected in the parameter "--Switch setting" to set the temperature of the floor heating after the device bus is restored to power.

Range: 1... 1000

3.2. 8 parameter setting interface "Fresh air"

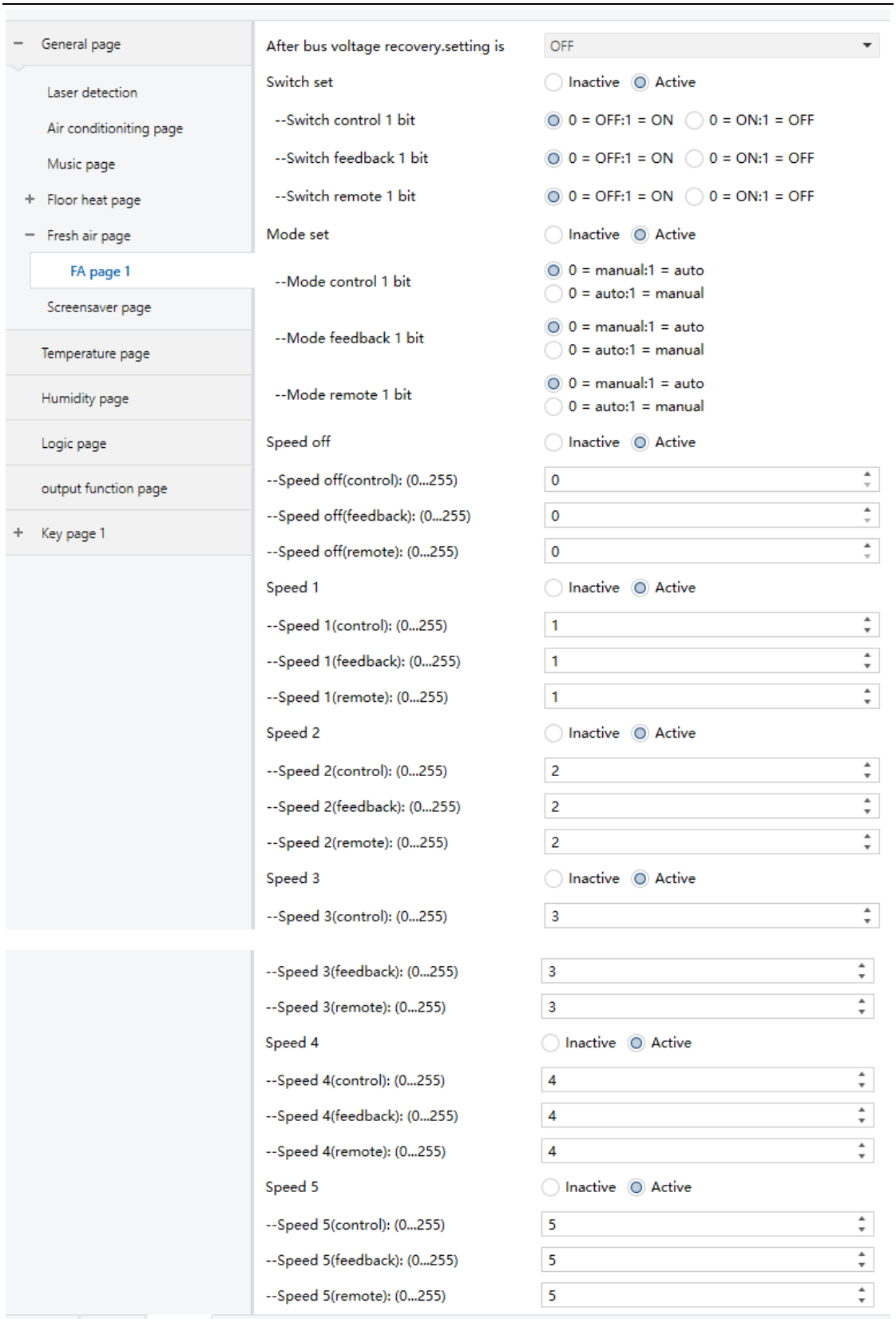


The parameter “The number of channel settings”

This parameter is used to set the number of floor heating control channels.

Range: 0...10

3.2.8. 1 fresh air control "FA"



The parameter "After bus voltage recovery, the setting is"

This parameter is used to set the state of fresh air after the bus is restored to power.

Optional: OFF

Speed 1

Speed 2

Speed 3

Speed 4

Speed 5

Car

Last state

Parameter "Switch set"

This parameter is used to set the switch setting for whether fresh air is activated.

Optional: inactive

active

Select "active" to activate the ventilation switch settings.

Parameter "—Switch control/ feedback/ remote 1bit"

Set the control value, feedback value, and remote value corresponding to the fresh air switch.

Optional: 0=OFF; 1=ON

0=ON;1=OFF

Parameter "Mode set"

This parameter sets whether the mode setting function is activated.

Optional: inactive

active

Select "active" to activate the mode setting function.

The parameter "Mode control/feedback/remote 1bit"

Set the control value, feedback value, and remote control value corresponding to the automatic mode and manual mode.

Optional: 0=manual; 1=auto

0=autl;1=manual

Parameter "Speed off/1/2/3/4/5"

This parameter is used to set whether the wind speed off/1/2/3/4/5 is activated.

Optional: inactive

active

Select active to activate the feature.

Parameter "—Speed off/1/2/3/4/5(control)"

This parameter is used to set the message value emitted by the communication object "Speed" when the fresh air speed is off/1/2/3/4/5 by pressing a button or remotely controlling the object.

Range: 0... 255

Parameter "—Speed off/1/2/3/4/5(feedback)"

This parameter is used to set the message value that needs to be written to the communication object "Speed, Feedback" when the fresh air speed is off/1/2/3/4/5.

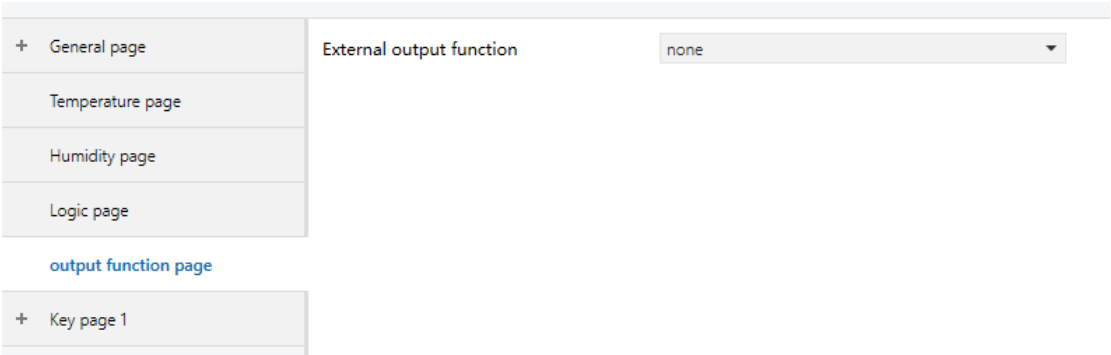
Range: 0... 255

Parameter "—Speed off/1/2/3/4/5(remote)"

This parameter is used to set the packet value that needs to be written to the remote control object "Speed, Remote" when the fresh air speed is off/1/2/3/4/5.

Range: 0... 255

3.3 Parameter setting interface "output function page"



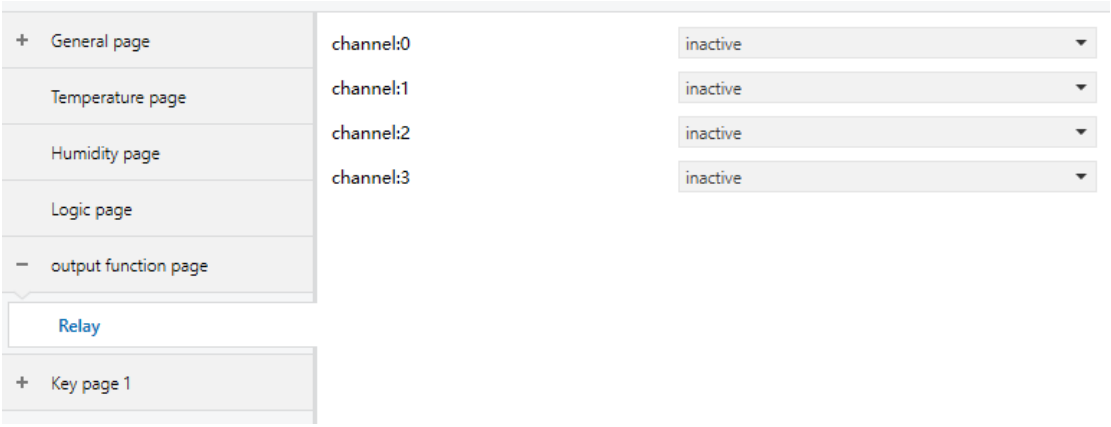
The parameter "external output function"

This parameter is used to set the external output function.

Optional: none
Relay function
Dimming function

3.3.1 Parameter setting window "Relay"

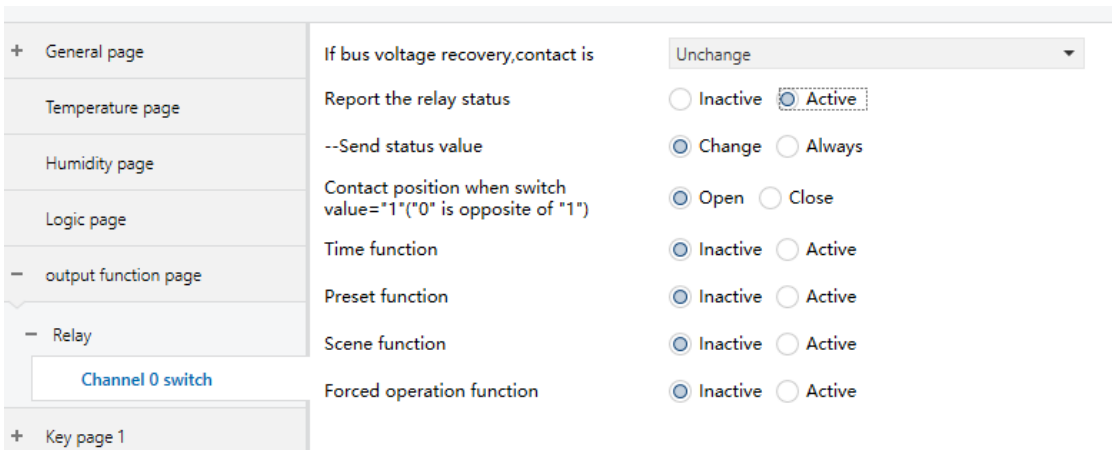
Select "relay function" in the parameter setting window "output function page" and the dimming function appears in the parameter setting window "Relay." ", as shown in the following figure.



Parameter "channel x"
This parameter is used to set the function of the relay channel.
Optional: inactive
Switch
Curtain
Dry contact

3.3.1.1 Parameter setting window "channel x switch"

Displayed when the "switch" function is selected in "channel x" under "Relay". The specific parameters are shown in the figure below.



The parameter "If bus voltage recovery， contact is"

This parameter sets the contact state of the switch when the bus is restored to power.

Optional: unchanged

open

close

as before bus voltage fail

If "unchanged" is selected, the relay contacts of the channel do not change when the bus is powered on; *(to be initialized).*

If "open" is selected, the relay contact of the channel opens when the bus is powered on, and the channel is closed (OFF);

If "close" is selected, the relay contacts of the channel are closed and the channel is opened (ON) when the bus is powered up;

If "as before bus voltage fail" is selected, the relay contacts for that channel will return to their pre-power-down state when the bus is powered up.

The parameter "Report the relay status"

This parameter sets whether the status reporting relay function is enabled.

Optional: Inactive

Active

Selecting "Active" to enable the status of the reported relay and activate the parameter "send the status value".

The parameter "--Send status value"

This parameter sets the state of the relay state sent to the bus, and the communication object is "switch status".

Optional: Change
Always
Select Change to indicate that the switch status value is issued only when the relay contact state changes;
Selecting Always indicates that a switching status value is emitted regardless of whether the relay contact state changes or not.

Parameter "contact position when switch value='1'('0' is opposite of '1')"
This parameter sets the position of the contact when the communication object "switch" message value is 1.
Optional: Open
Close
Selecting "Open" means that the contact is open when the communication object "switch" message value is 1, and the contact is closed when it is 0;
Selecting "Close" indicates that the contact is closed when the communication object "switch" message value is 1 and the contact is open when it is 0.
Note: The communication object "switch status" is fixed to 1 contact off, 0 contact open, with the parameter "contact position when switching value='1' ('0' is opposite of '1' "Irrelevant;

Parameter "Time function"
This parameter sets whether the timing function is enabled.
Optional: Inactive
Active
Select Inactive to not enable the timing function;
Select Active to indicate the enable timing function, for details, please refer to the following 3. 3.1.1.1 Window.

Parameter "Preset function"
This parameter sets whether the preset function is enabled.
Optional: Inactive
Active
Select Inactive to not enable the preset function;
Select Active to enable the preset function, detailed information can be found in the following 3. 3.1.1. 2 windows.

Parameter "Scene function"
This parameter sets whether the scene function is enabled.
Optional: Inactive
Active
Select Inactive to indicate that the scene function is not enabled;
Select Active to enable the scene function, for details, please refer to the following 3. 3.1.1. 3 windows.

The parameter "Forced operation function"

This parameter sets whether the force operation function is enabled, and the communication object is "Forced operation".

Optional: Inactive

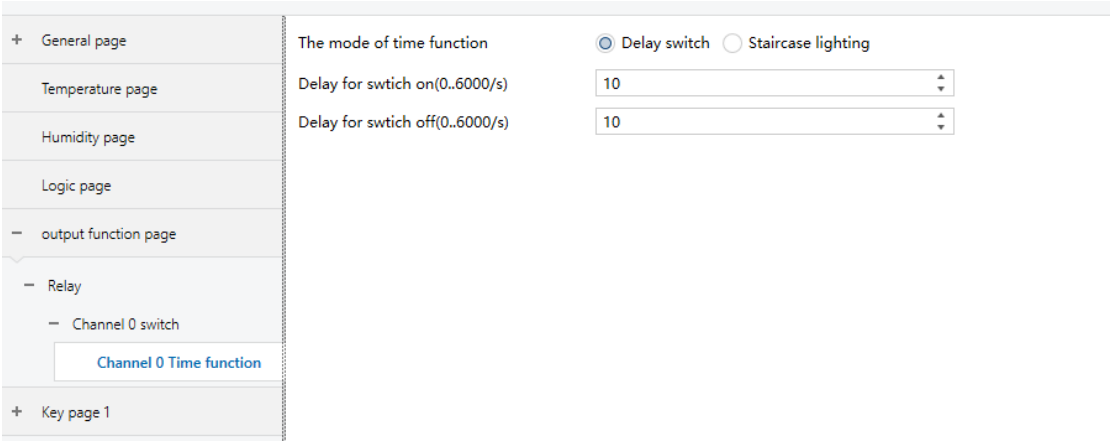
Active

Select Inactive to indicate that the force operation function is not enabled;

Select Active to enable the force action feature.

3.3.1.1.1 Parameter setting window "channel x time function"

This parameter is displayed when "active" is selected for "Time function" under "channel x switch". This is shown in the following figure.



The parameter "The mode of time function"

This parameter sets the mode of the timing function.

Optional: Delay switch

Staircase lighting

Select The Delay switch indicates that the mode of the timing function is the delay switch, and the parameters are described below as A.Delay switch;

Selecting Case lighting indicates that the mode of the timing function is stair light illumination, and the parameters are described below in B. Staircase lighting.

A. Delay switch

Parameter "Delay for switch on（0... 6000/s）"

This parameter sets the delay time for opening the switch.

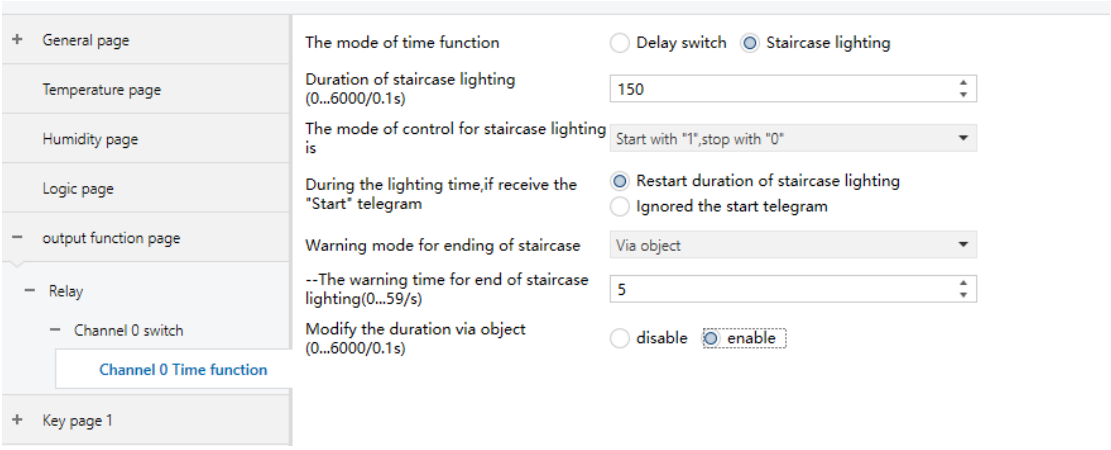
Range: 0 to 6000, units: seconds

Parameter "Delay for switch off（0... 6000/s）"

This parameter sets the delay time for the switch to be turned off.
Range: 0 to 6000, units: seconds

B. Staircase lighting

Displayed when "Staircase lighting" is selected for the parameter "The mode of time function", the parameter is shown in the following figure.



Parameter "Duration of staircase lighting（0... 6000/0.1s）"

This parameter sets the duration of stair light illumination.
Range: 0 to 6000, units: 0.1 seconds

The parameter "The mode of control for staircase lighting is"

This parameter sets the mode that controls the stair lights.
Options: Start with '1', stop with '0'
Start with '1'， no active with '0'
Start with '0/1'， can't be stop
Select Start with '1' and Stop with '0' to indicate that when the communication object "output of staircase lighting" receives a logical value of 01, the stair lights off, and when the logical value of 00 is received;
Select Start with '1', no active with '0' means that when the communication object "output of staircase lighting" receives a logical value of 01, the stair lights up, and does not do anything when the logical value is 00;
Selecting Start with '0/1', can't be stopped means that when the communication object "output of staircase lighting" receives a logical value of 00 or 01, the staircase lights up, and no other value can be used to extinguish him.

The parameter "During the lighting time， if receive 'Start' telegram"

This parameter sets the action when the 'start' command is received during the illumination of the stair light (i.e. the communication object "switch" receives 1).
Optional: Restart duration of staircase lighting
Ignored the start telegram

Choosing the Restart duration of staircase lighting means restarting the duration of the calculation of stair lighting;
Selecting Ignored the start telegram ignores the 'start' directive.

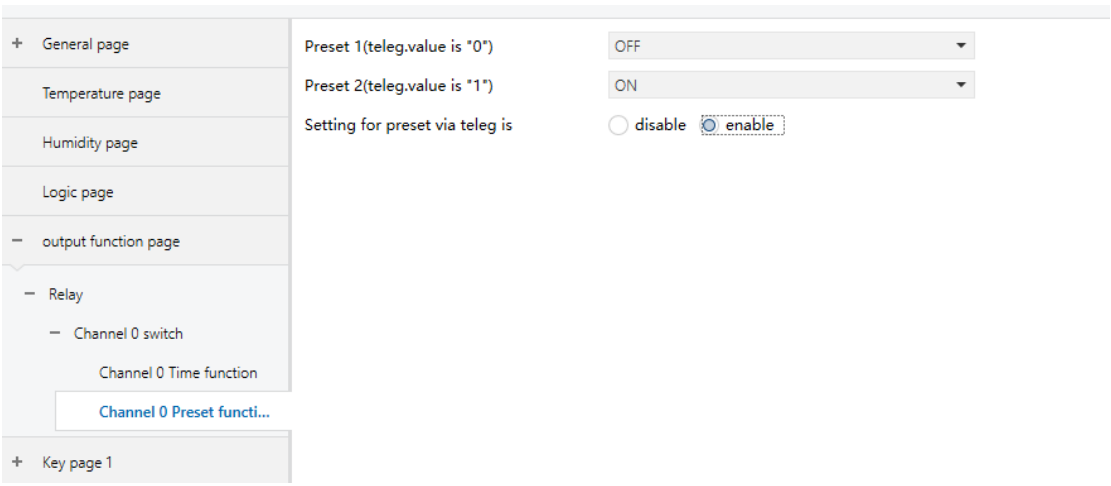
Parameter "Warning mode for ending of the staircase"
This parameter sets the warning mode for ending stair light illumination.
Optional: None
Via object
Flashing the output with ON/OFF
Via object and flashing the output
Two types of alerts are available:
---- alert via communication object: Set the value of the communication object "Warning of the staircase" to "1" at the beginning of the alert and send it to the bus.
---- warning by flashing light: control output blinking (short switch) with an interval of 3 seconds between switches.
These two methods can be used independently or in combination. When the parameter selects "via object", it is an early warning through the communication object; Select "flashing the output with OFF/ON" to warn you by flashing lights;
Selecting "via object & flashing the output" is a mixed-use alert.

The parameter "The warning time for the end of staircase lighting（0… 59s）"
This parameter is visible when an alert mode is selected and is used to set the duration of the alert.
Range: 0 to 59, units: seconds
Note: The warning time here is less than the duration of the stair lighting, if it is greater than the stair lighting is turned off before the warning, then the warning function does not work.

Parameter "Modify the duration via object（0… 6000/0.1s）"
This parameter sets whether the duration of stair light illumination is modified by bus.
Optional: disable
Enable
When "enable" is selected, a 2byte communication object "Staircase duration" will be activated, and the stair lighting time can be modified by this communication object;
If "disable" is selected, the lighting time of the stairs cannot be modified by the bus.

3.3.1.1.2 Parameter setting window "channel x Preset function"

This parameter is displayed when "Active" is selected for "Preset function" under "channel x switch". This is shown in the following figure.



The preset function is used to implement the preset light function, the preset value can be recalled, and the current switching state can also be saved as a new preset by bus.

2 communication objects are used to call and save preset values. There are two preset values (preset 1 and preset 2) to choose from, the value of the communication object "0" corresponds to "preset 1" and the value "1" corresponds to "preset 2".

Parameter "preset 1(teleg. Value is“0”）”

This parameter sets the default value to 1.

Optional: none

ON

Off

Selecting none indicates that when the communication object calls the preset value 1, it does not affect the channel state;

Selecting ON indicates that when the communication object calls the preset value 1, the channel state is Open;

Selecting Off indicates that when the communication object calls the preset value 1, the channel status is Off.

Parameter "preset 2(teleg. Value is“1”）”

This parameter sets the default value of 2.

Optional: OFF

ON

The last status of contact

The setting of preset 1

Selecting ON indicates that when the communication object calls the preset value 1, the channel state is Open;

Selecting Off indicates that when the communication object calls the preset value 1, the channel status is Off;

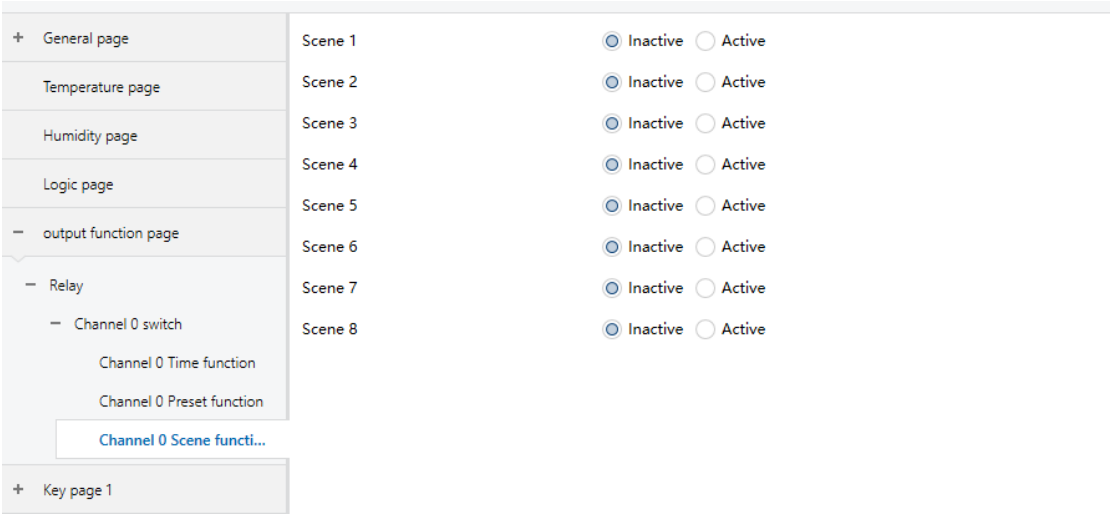
Selecting "last status of contact" means that when preset 2 is called, the relay contacts of the

channel revert to the previous state (the state before the operation to the current state). For example: when the conference room is in a meeting, playing a video clip, you need to turn the light into video mode, at this time call to open the scene mode of playing the video, when the video playback is completed, then contact the preset value 2 (preset 2) to restore the light to the mode before playing the video;
The purpose of selecting "setting of preset 1" is to restore the channel state to the state set by the preset 1 parameter, which is useful when modifying preset values via the bus. For example, if the preset value of preset 1 is modified by bus, the switch state can be restored to the previous state modified by calling preset 2 (preset 2).

The parameter "Setting for preset via teleg is"
This parameter is used to set whether preset values are allowed to be modified over the bus. When "enable" is selected to allow presets to be modified via the bus, the communication object "Set preset1/2" is used to save the channel's current switching state as a new preset. When it receives the message "0", the state value of the current switch is saved as a new preset 1 (preset 1); When it receives the message "1", the state value of the current switch is saved as a new preset 2 .2.
Optional: Enable
Disable
NOTE: When the bus is powered down, the new preset values set are not lost.

3.3.1.1.3 Parameter setting window "channel x Scene function"

This parameter is displayed when "active" is selected for "Scene function" under "channel x switch". This is shown in the following figure.



The window has eight scenes to choose from, and the number of scenes X=1 is represented by X below 8

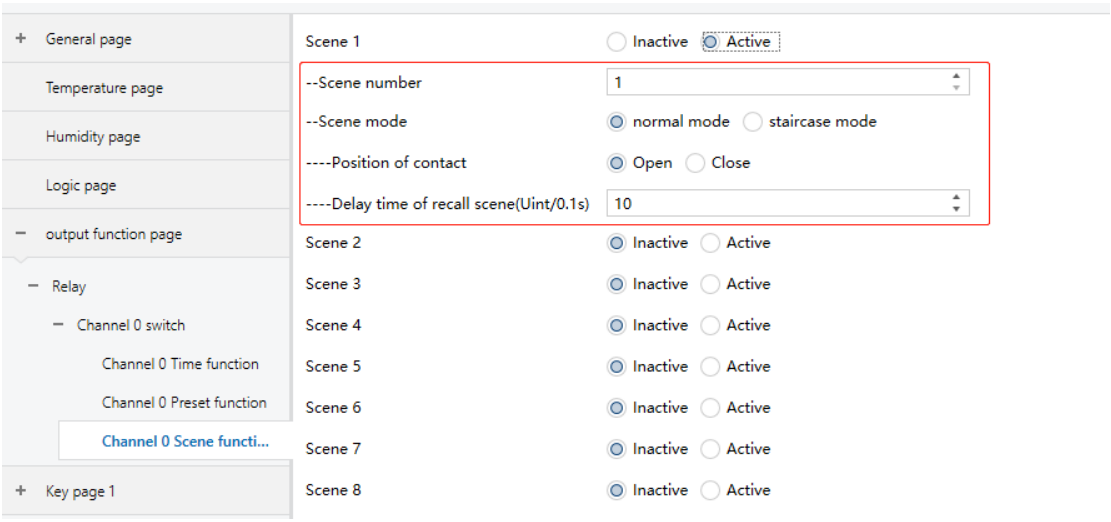
Parameter "Scene X"

This parameter sets whether scene X is enabled

Optional: Inactive

Active

Select Active to enable Scenario X, and activate several parameters, as shown in the figure:



Parameter "Scene number"

This parameter is used to set the scene number.

Range: 1.... 64

Note: The scene number cannot be 0, because the scene number that you want to call must meet the conditions (scene number = value of the input call +1).

Parameter "Scene mode"

This parameter sets the scene mode.

Optional: Normal mode

Staircase mode

Selecting Normal mode indicates that the relay delay opening and closing mode is called under normal conditions, and the parameters can be described in A. Normal_mode;

Selecting Staircase mode indicates the continuous illumination mode of the stair light, see D. Staircase mode for the parameters.

A. Normal mode

Parameter "Position of contact"

This parameter sets the relay contact state for scene X.

Optional: Open

Close

Select open contact to open, channel closed;

Select close the contact to close and the channel opens.

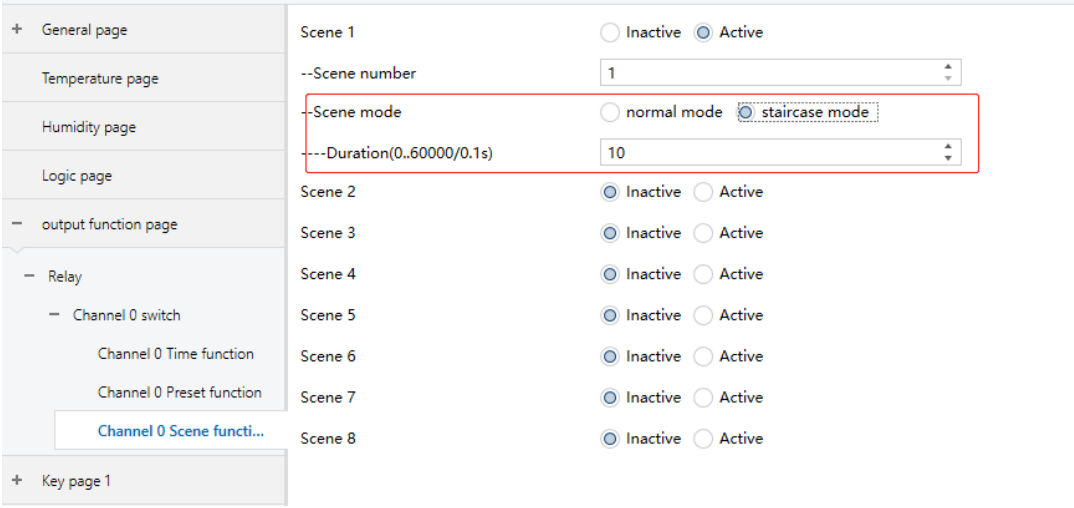
Parameter “Delay time of recall scene”

This parameter sets the delay time for Scene X.

Range: 0.... 65535 in 0.1 seconds

D. Staircase mode

The parameter setting interface is displayed when "scene mode" is selected, as shown in the figure:



The parameter "Duration(0... 60000/0.1s）”

This parameter sets the time that the stair lights continue to illuminate in the mode of stair light illumination in Scene X.

Range: 0... 6,0000 in 0.1 seconds

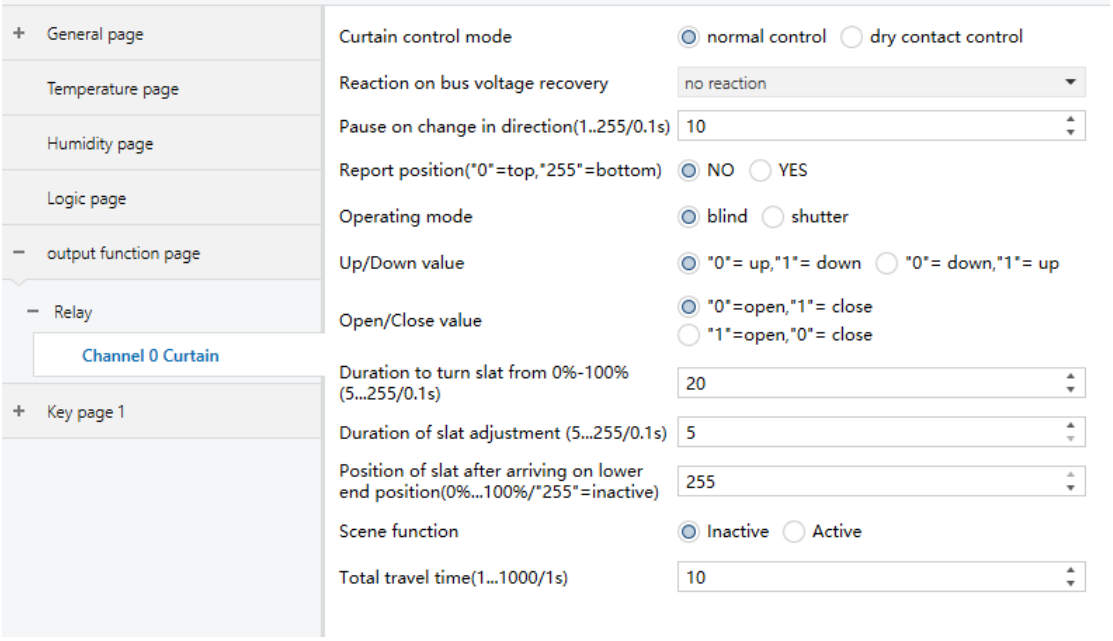
3.3.1. 2 Parameter setting window "channel x Curtain"

Displayed when the "curtain" function is selected in "channel x" under "Relay". Its specific parameters are shown in the figure.

Note:

1. When opening the curtain function, channels 1 and 2 should be selected at the same time, indicating curtain channel 1 (the same as channels 3 and 4);

2. The curtain moves upwards, the relay A/C closes, moves downward, and the relay B/D closes ；



The parameter "Curtain control mode"

This parameter sets the control mode of the curtain, and there are two kinds of ordinary control and dry contact control.

Optional: normal control

dry contact control

3.3. 1. 2.1 Curtain control mode norm control

The parameter "Curtain control mode" selects Normal control to indicate that the control mode of the curtain is normal control mode. The specific parameters are shown in the figure above.

Parameter "Reaction on bus voltage recovery"

This parameter sets the operating state of the curtain after the bus is restored to the power supply.

Optional: No reaction

Up

Down

Stop

Select "no reaction" to indicate that the curtain does not react when the bus is restored to power;

Select "up" to indicate that the curtain moves upwards, moving to the very top;

Select "down" to indicate that the curtain moves downwards, moving to the very bottom;

Select "stop" to stop the curtain.

Parameter "Pause on change in direction（1… 255/0.1s）"

This parameter sets the pause time when the direction of motion of the curtain changes.

Range: 1.... 255, in units: 0.1 seconds

Parameter "Report position（"0"=top，"255"=bottom）"

This parameter sets whether to report the position of the curtain. where 0 means the curtain moves to the top and 255 means the curtain moves to the bottom.

Parameter "Operation mode"

This parameter sets the operating mode of the curtain.

Optional: blind

shutter

Selecting "blind" indicates that the curtain operation mode is the mode with blades, see A blind description;

Selecting "shutter" indicates that the curtain operation mode is without blades, as described by B.shutter.

A. blind

Parameter "Up/Down value"

Available options: "0"=up, "1"=down

"0"=down，"1"=up

Select "0"=up, "1"=down" indicates that the communication object "Move curtain up/down" sends 00 curtains upwards to the top, and 01 curtains move down to the bottom;

Select "0" = down, "1" = up" indicates that the communication object "Move curtain up/down" sends 00 curtains down to the bottom, and hair 01 curtains move up to the top.

Parameter "Open/Close value"

Optional: "0"=open, "1"=close

"0"= close，"1"= open

Select "0"=open, "1"=close means that the communication object "Adjustment stop/up/down" receives the message 0 when the blind blade is fully opened, the angle value is 0% when the message 1 is received, the blind blade is completely closed, the angle value is 100%;

Select "0" = close, "1" = open, in contrast.

Parameter "Duration to turn slat from 0%-100%（5… 255/0.1s）"

This parameter sets the duration of the curtain angle to run from 0% to 100%.

Range: 5.... 255, unit: 0.1s

Parameter "Duration of salt adjustment(5… 255/0.1s)"

This parameter sets the adjustment time of each step of the curtain angle.

Range: 5.... 255, unit: 0.1s

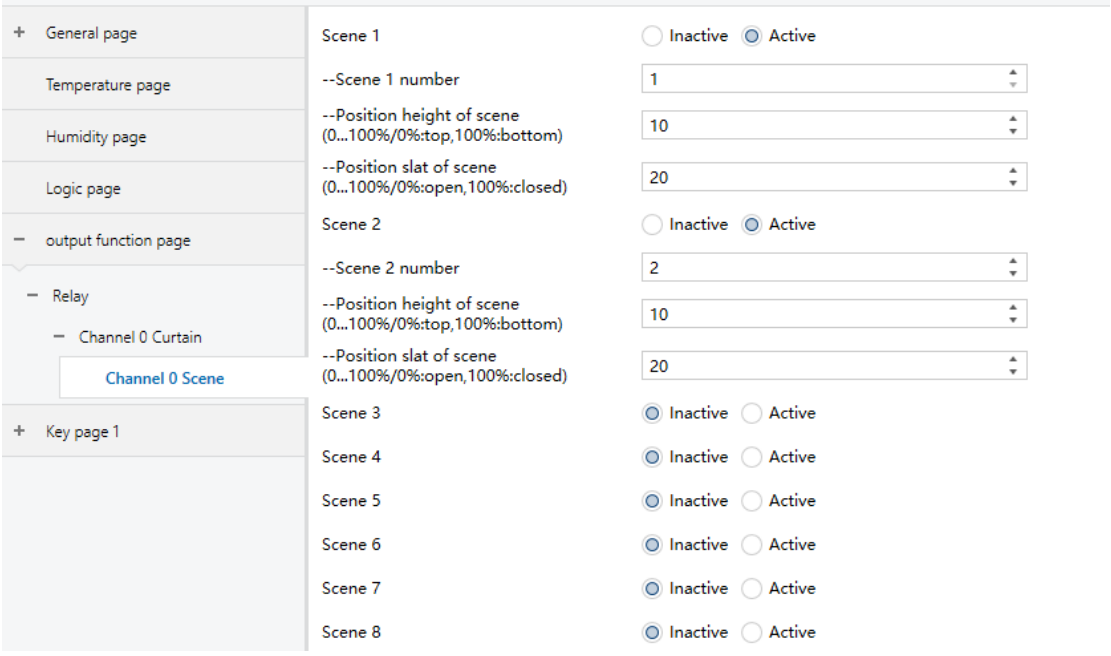
Note: As shown in Figure 3.5.2-1, the parameter "Duration to turn slat from 0%-100%(5... 255/0.1s) "Set 20, parameter" Duration of salt adjustment(5... 255/0.1s) "set 5, indicating that the *total adjustment time of the angle* is *2s, adjusted in 4 steps, the adjustment time of each step is 0.5s, and each step is adjusted 25 %, The communication object of step adjustment is "Adjustment stop/up/down".*

Parameter "Position of salt after arriving on lower end position（0%... 100%/"255"= inactive）"
This parameter sets the position of the angle when the curtain height is run to the very bottom (100%).
Range: 0%... 100%, 255 means that no value is enabled.

Parameter "Total travel time（1… 6000/1s）"
This parameter sets the entire time of the curtain run (height + angle).
Range: 1... 1,000 in seconds

Note: 1, curtain height full time = total time - angle time;
2. When the height of the curtain is moved to the top (0%), the angle must be 0%;
3. When the curtain performs the upward movement command, first move the angle to 0%, then move the height to the specified position, and then restore the angle; When executing the move down command, first move the angle to 100%, then move the height to the specified position, and then restore the angle;
4. When the default curtain is adjusted throughout the process, the time is 5% of the total time plus the whole time, such as the entire time is 1 *0s,1 0 + 10 * 5% = 10.5s*

Parameter "Scene function"
This parameter sets whether to activate the scene function of the curtain.
Optional: Inactive
Active
Selecting "inactive" means that the scene function is not activated
Select "active" to activate the scene function, and its parameter interface refers to the following figure:



The window has eight scenes to choose from, and the number of scenes X=1 is represented by X below 8

Parameter "Scene X"

This parameter sets whether scene X is enabled.

Optional: Inactive

Active

Select Inactive to indicate that scenario X is not enabled;

Select Active to enable scenario X.

Parameter "Scene X number"

This parameter sets the scene number of scene X.

Range: 1.... 64

Parameter "Position height of scene（0… 100%/0%：top，100%：bottom）"

This parameter sets the height position of scene X.

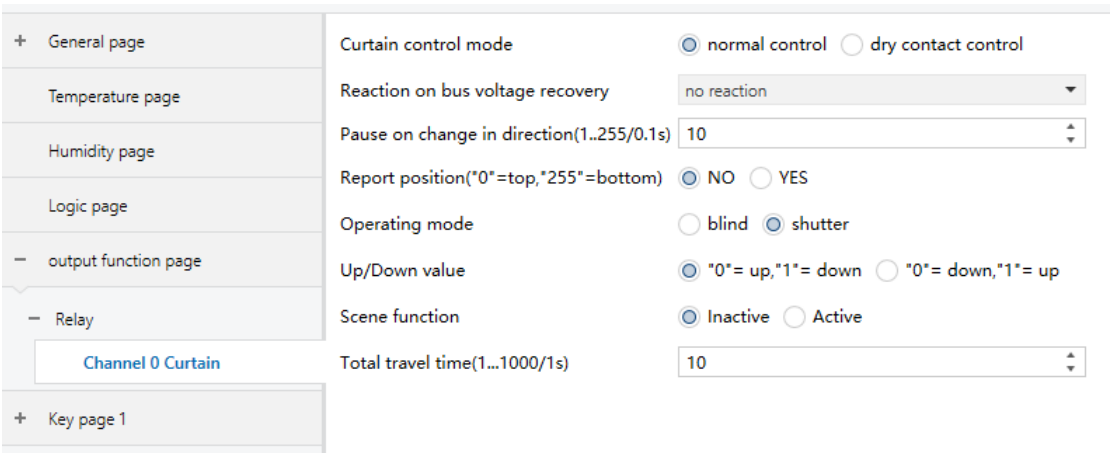
Range: 0.... 100%, 0% means the height moves to the top, and 100% means the height moves to the bottom.

Parameter "Position salt of scene（0… 100%/0%：open，100%：colsed）"

This parameter sets the angle position of scene X.

Range: 0.... 100%, 0% means that the angle is fully open, and 100% means that the angle is fully closed.

B. shutter



Parameter "Up/Down value"

Available options: "0"=up, "1"=down

"0"=down，"1"=up

Select "0"=up, "1"=down" indicates that the communication object "Move curtain up/down" sends 00 curtains upwards to the top, and 01 curtains move down to the bottom;

Select "0" = down, "1" = up" indicates that the communication object "Move curtain up/down" sends 00 curtains down to the bottom, and hair 01 curtains move up to the top.

Parameter "Total travel time（1… 1000/1s）"

This parameter sets the entire time for the curtain to run.

Range: 1... 1,000 in seconds

Parameter "Scene function"

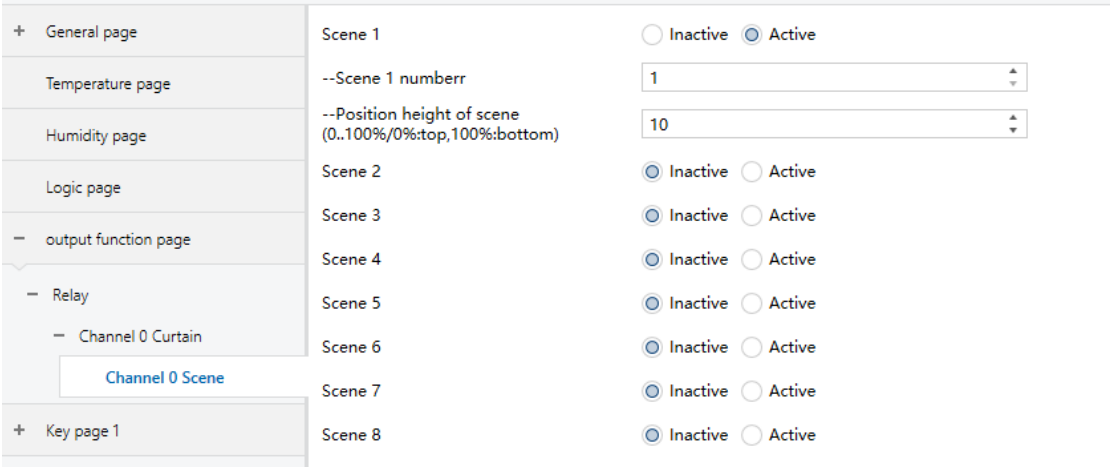
This parameter sets whether to activate the scene function of the curtain.

Optional: Inactive

Active

Selecting "inactive" means that the scene function is not activated

Select "active" to activate the scene function, and its parameter interface refers to the following figure:



The window has eight scenes to choose from, and the number of scenes X=1 is represented by X below 8

Parameter "Scene X"

This parameter sets whether scene X is enabled.

Optional: Inactive

Active

Select Inactive to indicate that scenario X is not enabled;

Select Active to enable scenario X.

Parameter "Scene X number"

This parameter sets the scene number of scene X.

Range: 1.... 64

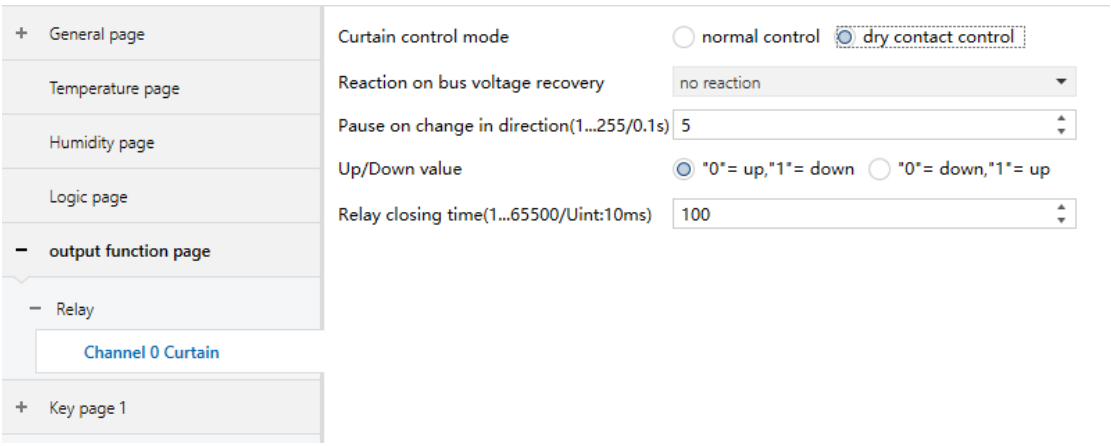
Parameter "Position height of scene（0… 100%/0%：top，100%：bottom）"

This parameter sets the height position of scene X.

Range: 0.... 100%, 0% means the height moves to the top, and 100% means the height moves to the bottom.

3.3. 1. 2.2 Curtain control mode dry contact control

The parameter "Curtain control mode" selects dry contact control to indicate that the control mode of the curtain is dry contact control. The specific parameters are shown in the figure below.
Curtain dry contact control, the main feature is that when the curtain is suspended, the two relays will close at the same time.



Parameter “Reaction on bus voltage recovery”
This parameter sets the operating state of the curtain after the bus is restored to the power supply.
Optional: No reaction
Up
Down
Stop
Select "no reaction" to indicate that the curtain does not react when the bus is restored to power;
Select "up" to indicate that the curtain moves upwards, moving to the very top;
Select "down" to indicate that the curtain moves downwards, moving to the very bottom;
Select "stop" to stop the curtain.

Parameter “Pause on change in direction(1...255/0.1s)”
This parameter sets the pause time when the direction of motion of the curtain changes.
Range: 1.... 255, in units: 0.1 seconds

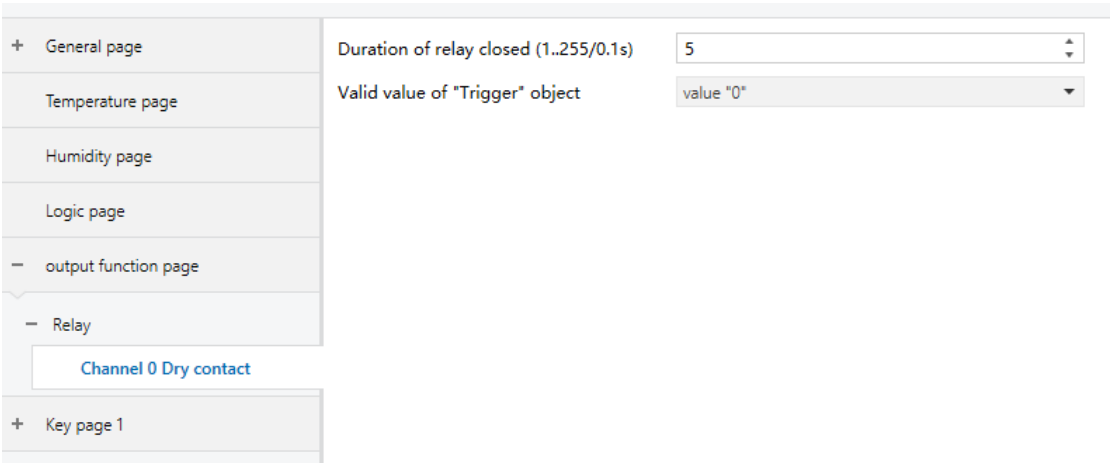
Parameter “Up/Down value”
Available options: "0"=up, "1"=down
“0”=down，“1”=up
Select "0"=up, "1"=down" indicates that the object "Move curtain up/down" receives the message 00 Curtain moves upwards to the top (Relay A closes), 01 Curtain moves down to the bottom (Relay

B closure);
Select "0" = down, "1" = up" indicates that the communication object "Move curtain up/down" received the message 00 curtain moves down to the bottom, 01 curtain moves up to the top.

Parameter "Relay closing time (1..6000/Uint:10ms)"
This parameter sets the relay closing time, that is, the whole time of curtain movement and the time of curtain suspension.
Range: 1... 6000, unit: 10ms

3.3.1. 3 Parameter setting window "channel x Dry contact"

Displayed when "channel x" under "Relay" selects the "dry contact" function. Its specific parameters are shown in the figure.

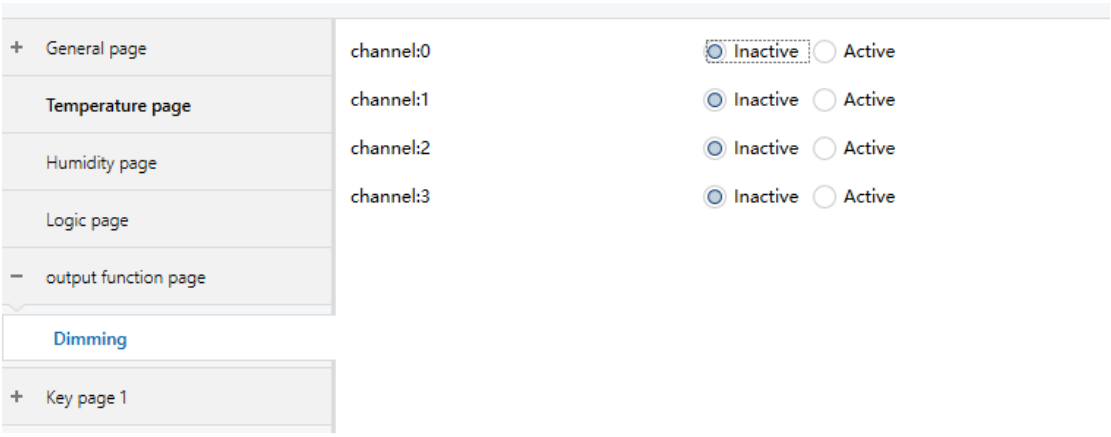


Parameter "Duration of relay closed（1... 255/0.1s）"
This parameter sets the duration for which the relay is turned off.
Range: 1.... 255, unit: 0.1s

Parameter "Valid value of "Trigger" object"
This parameter sets the valid value of the trigger relay, and the communication object is "Trigger".
Optional: Value "0"
Zone V"1"
Division V "0/1"
Selecting "value "0" indicates that the valid value of the trigger relay is 00.
Selecting "value "0" indicates that the valid value of the trigger relay is 01.
Selecting "value "0/1" indicates that the valid value of the trigger relay is 00/01.

3.3. 2 Parameter setting window "Dimming"

Select "dimming function" in the parameter setting window "output function page" and the parameter setting window "dimming" appears in the parameter setting window "dimming", as shown in the following figure.



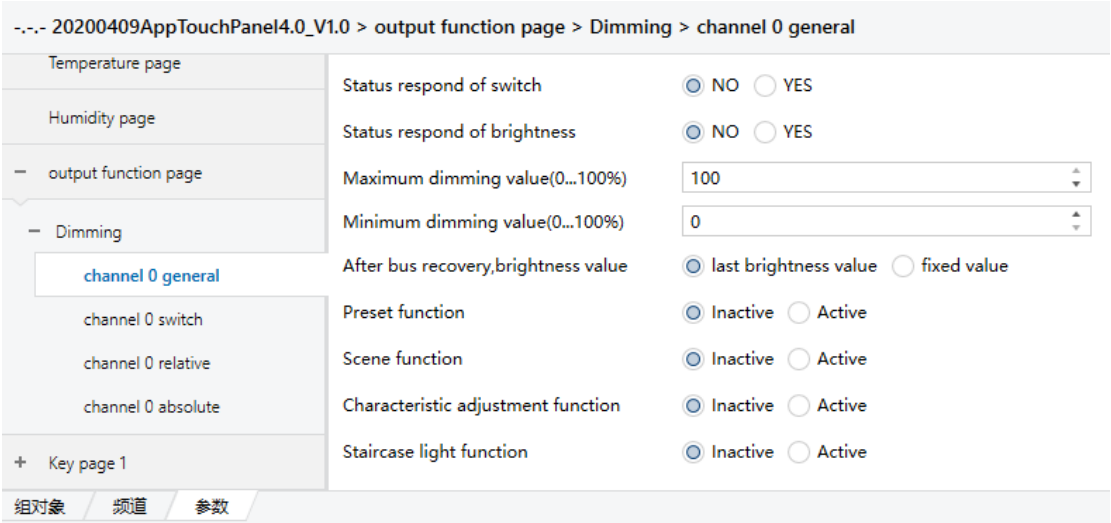
Parameter "channel x"

This parameter is used to set whether the dimming channel x is activated.

Optional: inactive

Active

3.3.2.1 Parameter setting window "channel x general"



Parameter "Status responded of switch"

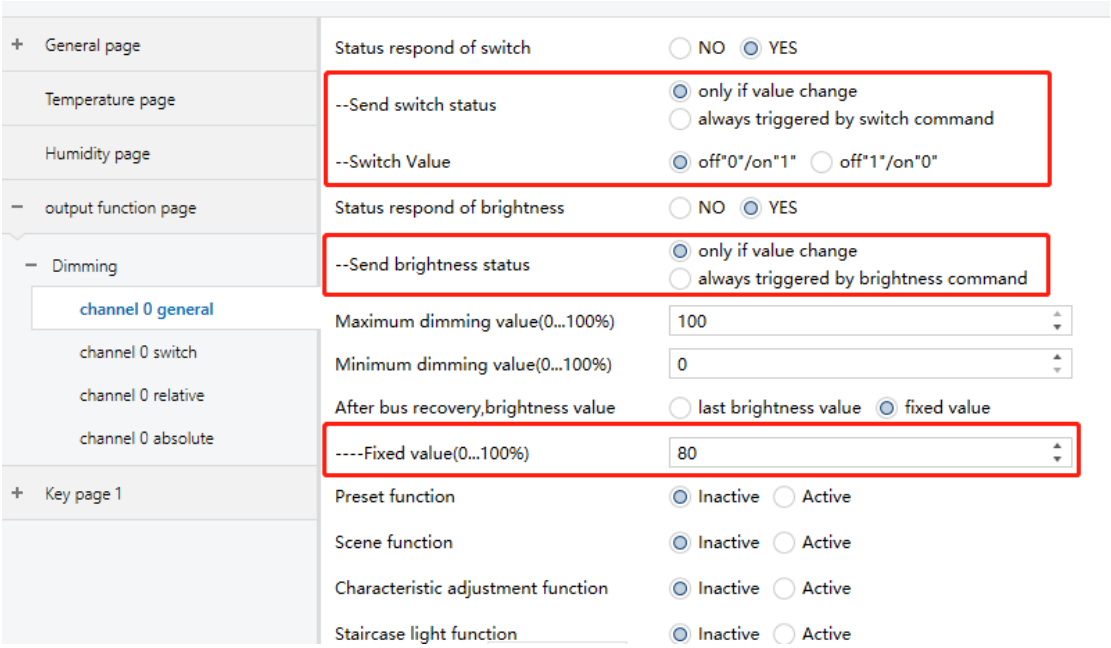
This parameter sets whether to send the status of the switch, and the communication object is "Current switch state".

Optional: NO
YES

Select "NO" to not send the status of the switch;

Select YES to send the status of the switch.

The interface for parameter setting is shown in the figure:



The parameter "Send switch status"

This parameter sets how the state of the switch is sent.

Optional: only if value change
always triggered by the switch command

Select "only if value change" to set the switch state change to be issued;

Select "always triggered by switch command" to signal the current switch status to the bus whenever the trigger switch is triggered.

Parameter "Switch Value"

This parameter sets the status value of the switch.

Optional: off "0"/on "1"
off“1”/on“0”

Select off "0"/on "1", the status value of the switch is 00 for the off switch, 01 is the open switch;

Select off "1"/on "0" and the status value of the switch is 00 for the on switch and 01 for the off switch.

Parameter “Status response of brightness”

This parameter sets whether to send a brightness value, and the communication object is the "Current brightness value".

Optional: NO
YES

Select "NO" without sending the brightness value;

Select YES, send the brightness value, and activate a new parameter, as shown in Figure 3.4.1-2.

The parameter "Send brightness status"

This parameter sets how the brightness value is sent.

Optional: only if value change
always triggered by the brightness command

Select "only if the value changes" to set the way the brightness value is sent so that the brightness value is changed.

Select "always triggered by brightness command" to emit the current brightness value to the bus whenever the brightness command is triggered.

The parameter "Maximum dimming value(0... 100%）"

This parameter sets the maximum dimming value.

Range: 0... 100%

The parameter "Minimum dimming value(0... 100%）"

This parameter sets the minimum dimming value.

Range: 0... 100%

Note: 0... The decimal number corresponding to 100% is shown in the following figure

```
const UCHAR PercentDataTable[101] = {0,3,5,8,10,13,15,18,20,23,26,
                                     28,31,33,36,38,41,43,46,48,51,
                                     54,56,59,61,64,66,69,71,74,77,
                                     79,82,84,87,89,92,94,97,99,102,
                                     105,107,110,112,115,117,120,122,125,128,
                                     130,133,135,138,140,143,145,148,150,153,
                                     156,158,161,163,166,168,171,173,176,179,
                                     181,184,186,189,191,194,196,199,201,204,
                                     207,209,212,214,217,219,222,224,227,230,
                                     232,235,237,240,242,245,247,250,252,254};
```

The parameter “After bus recovery， brightness value”

This parameter sets the brightness value after the bus is restored.

Optional: last brightness value
fixed value

Select "last brightness value", and the brightness value after bus recovery is the brightness value of the previous time;

Select "fixed value", the brightness value after bus recovery is a fixed value, and the fixed value is determined by the parameter "Fixed value(0... 100%" setting, as shown in Figure 3.4.1-4.

Parameter "Preset function"

This parameter setting is whether to activate the preset function, select "active" indicates the

activation of the preset function, and the introduction can be seen in "3.3.2.1.1 parameter setting window channel x preset".

The parameter "Scene function"

Whether the parameter setting activates the scene function, selecting "active" indicates that the function is activated, and the introduction can be seen in "3.3.2.1.2 parameter setting window channel x scene".

The parameter "characteristic adjustment function"

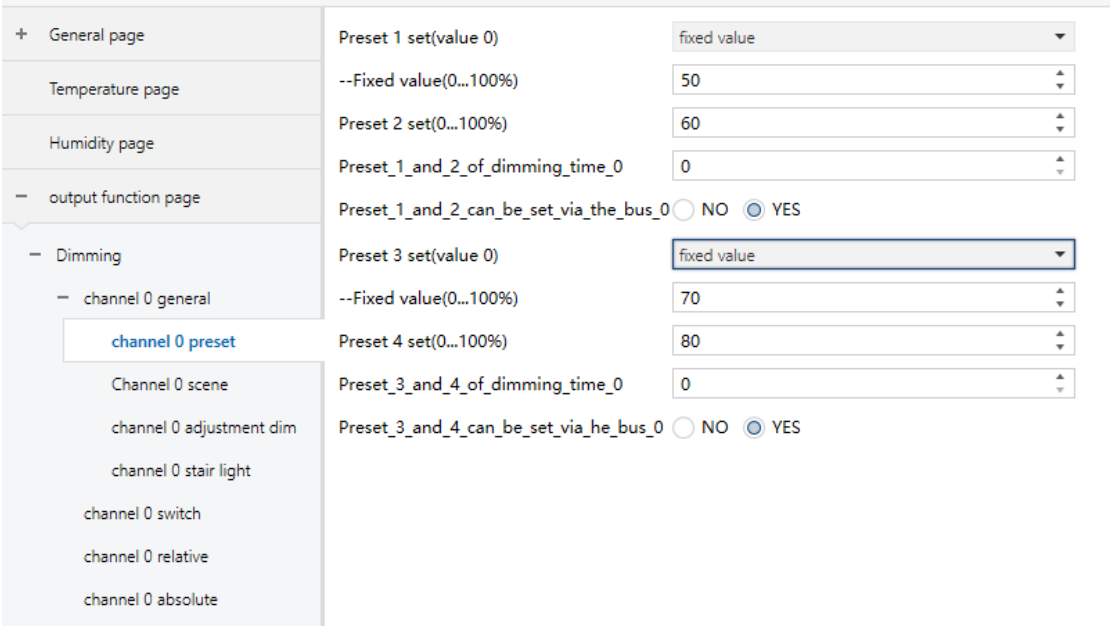
This parameter sets whether to activate the characteristic dimming function, select "active" to activate the function, the introduction can be seen in "3. 3.2.1.3 Parameter setting window "channel x adjustment dim".

The parameter "staircase light function"

This parameter sets whether to activate the feature adjustment function, select "active" to activate the function, the function description can be seen in "3. 3.2.1.4 Parameter setting window channel x stair light".

3.3.2.1.1 Parameter setting window "channel x preset"

The preset function is divided into two parts, "Preset 1 and 2" and "Preset 3 and 4", which are the same and written together.



Parameter "Preset 1/3 set(value 0)"

This parameter sets the value of preset 1 (preset 3).

Optional: fixed value

restore value before the first preset call

reset to parameterized value before preset 2/4

Select "fixed value" and set the value of preset 1 (preset 3) to a fixed value.

The interface for parameter setting is shown in Figure 3.4.1.1-1.

The parameter "Fixed value(0... 100%）”

This parameter sets a fixed value for preset 1 (preset 3).

Range: 0... 100%, unit: Percentage

Select "restore value before first preset call" to revert the value of preset 1 (preset 3) to the value of the last preset function.

Select reset to parameterized value before preset 2/4 to reset the value of preset 1 (preset 3) to the value of preset 2 (preset 4).

Parameter "Preset 2/4 set(0... 100%）”

This parameter sets a fixed value for preset 2 (preset 4).

Range: 0... 100%

Parameter “Preset 1 and 2/Preset 3 and 4 of dimming time(0...600/0.1s, 0=immediately)”

This parameter sets the dimming time for presets 1 and 2 (presets 3 and 4).

Range: 0... 600, in units: 0.1 seconds, 0 for immediately

The parameter “Preset 1 and 2/Preset 3 and 4 can be set via the bus”

This parameter sets whether to set the values of presets 1 and 2 (presets 3 and 4) by bus, and the communication objects are "Set preset 1 and 2" ("Set preset 3 and 4").

Optional: NO

YES

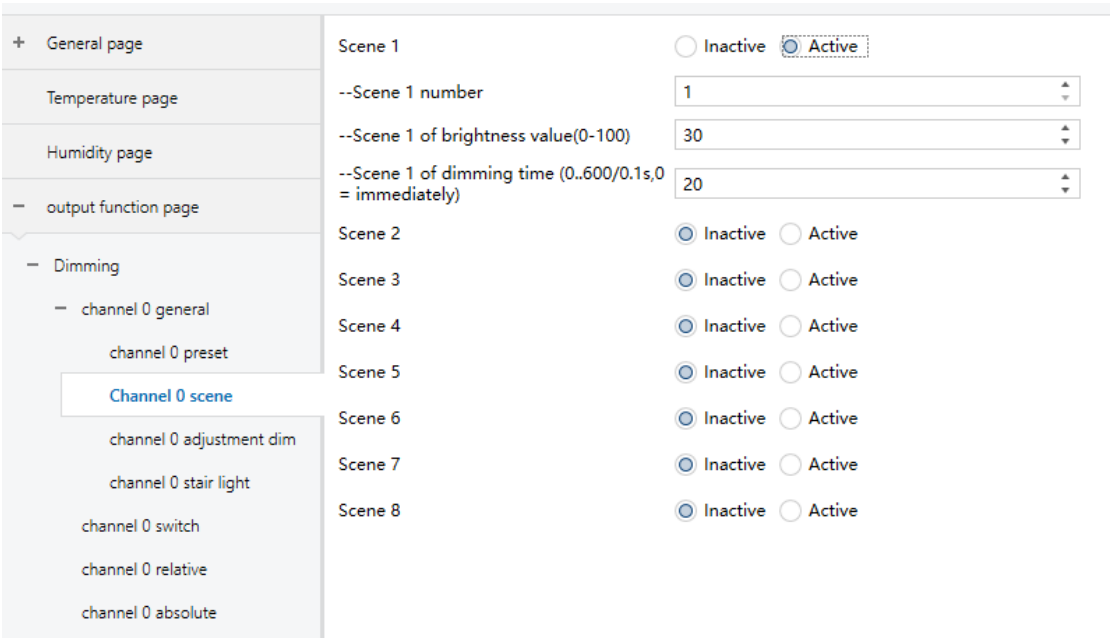
Select "NO" without setting the values of presets 1 and 2 (presets 3 and 4) via the bus;

Select "YES" to set the values of presets 1 and 2 (presets 3 and 4) via the bus.

3.3.2.1.2 Parameter setting window "channel x scene"

The scene function contains 8 scenes, each of which has the same parameters and communication objects, taking Scenario 1 as an example.

where x means 0... 8。



Parameter "Scene x"

This parameter sets whether to activate the function of scene x.

Optional: inactive

active

Select "active" to activate the function of scene x and activate the three parameters, as shown in the figure above.

The parameter "Scene x number"

This parameter sets the scene number of scene x.

Range: 1... 64

Parameter "Scene x of brightness value（0... 100）"

This parameter sets the brightness value of scene x.

Range: 0... 100%

Parameter "Scene x of dimming time(0...600/0.1s,0=immediately)"

This parameter sets the dimming time of scene x.

Range: 0... 600, in units: 0.1 seconds, 0 for immediately

3.3.2.1.3 Parameter setting window "channel x adjustment dim"

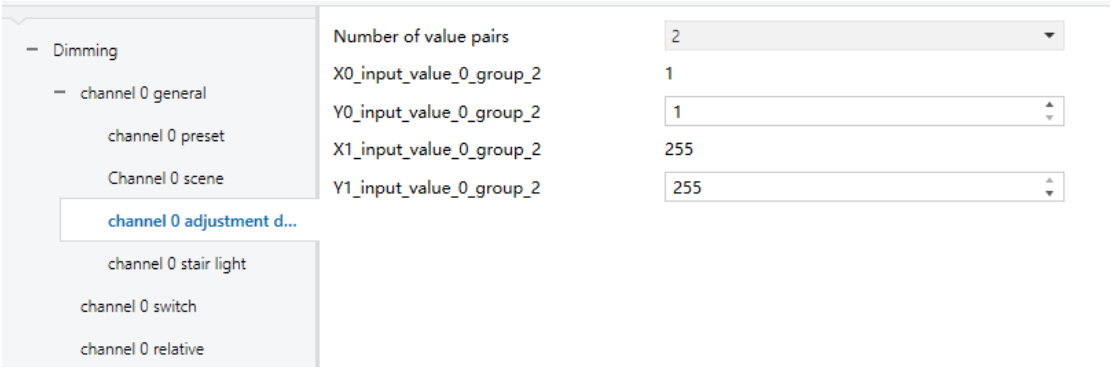


Figure 3. 3.2.1.3-1 "adjustment dim" parameter setting interface

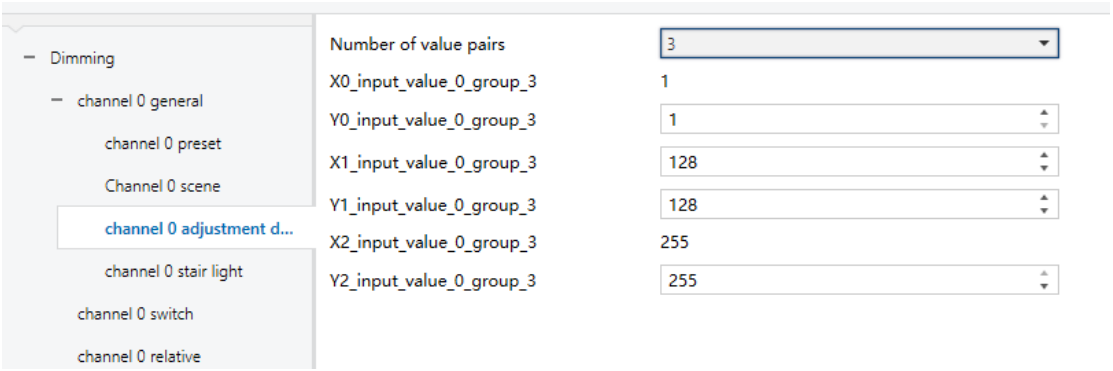


Figure 3. 3.2.1.3-2 "adjustment dim" parameter setting interface

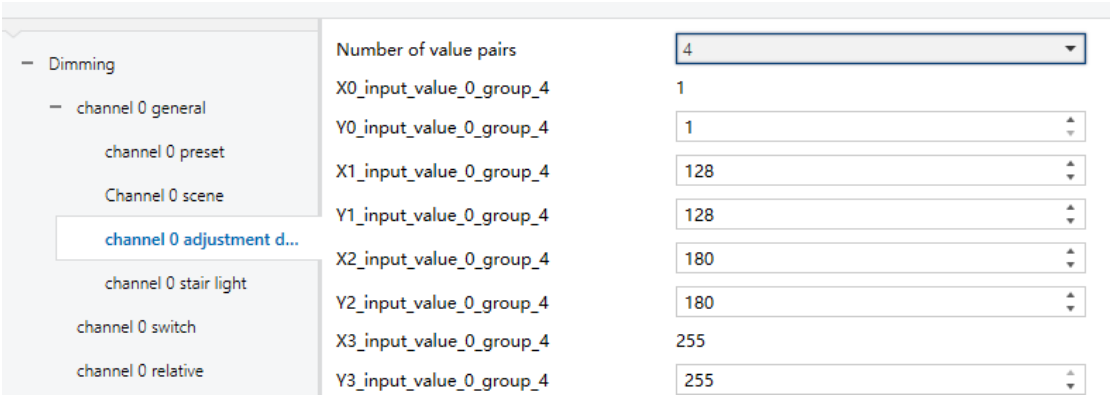


Figure 3. 3.2.1.3-3 "adjustment dim" parameter setting interface

Parameter "Number of value pairs"

This parameter sets the number of numeric pairs.

Available options: 2

3

4

Select "2" to activate 2 log-numeric pairs, X0/Y0, X1/Y1, as shown in Figure 3.3.2.1.3-1;

Select "3" to activate 3 log-numeric pairs, X0/y0, X1/Y1, X2/Y2, as shown in Figure 3.3.2.1.3-2;

Select "4" to activate 4 log-numeric pairs, X0/Y0, X1/Y1, X2/Y2, X3/Y3, as shown in Figure 3.3.2.1.3-3 。

The parameter "X0/X1/X2/X3 input value(1... 255）"

This parameter sets the input value of X0/X1/X2/X3.

Range: 1... 255

The parameter "Y0/Y1/Y2/Y3 output value(1... 255）"

This parameter sets the output value of Y0/Y1/Y2/Y3.

Range: 1... 255

Remarks: 1, the *relationship between X values*: $X_0 <<< X_1\ X_2\ X_3$, *the relationship between Y values:* $Y_0 <<< Y_1\ Y_2\ Y_3$;

2. When the characteristic dimming function is turned on, dimming (absolute dimming/relative dimming, etc.), the relationship between the input dimming value and the output dimming value needs to be calculated through the formula, the formula is as follows:

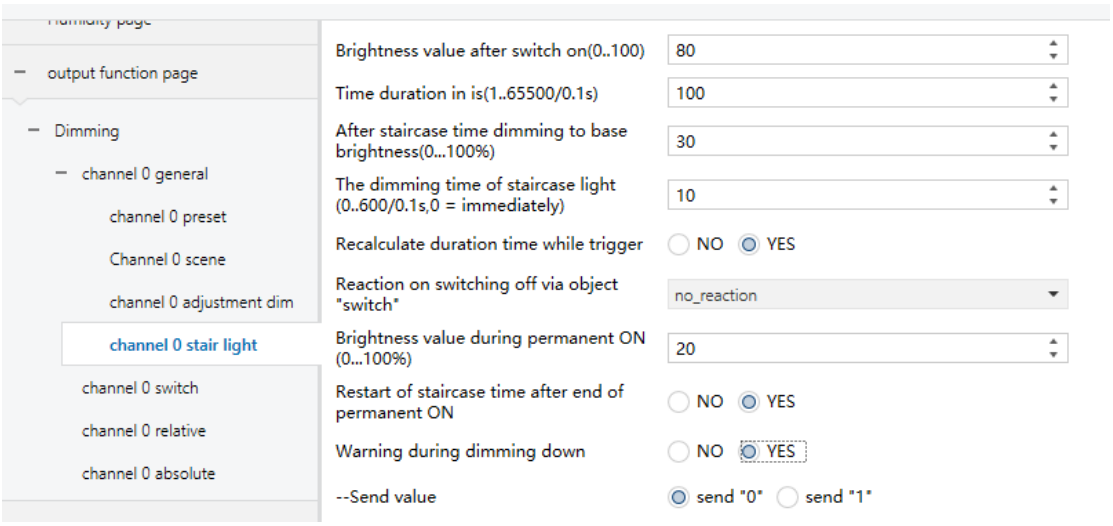
The input dimming value is less than X_1, $y = \frac{(Y_1 - Y_0)(x - 1)}{X_1 - 1} + Y_0$

The input dimming value is less than X_2, $y = \frac{(Y_2 - Y_1)(x - X_1)}{X_2 - X_1} + Y_1$

The input dimming value is less than X_3, $y = \frac{(Y_3 - Y_2)(x - X_2)}{X_3 - X_2} + Y_2$

where x is the input dimming value and y is the actual output dimming value.

3.3.2.1.4 Parameter setting window "channel x stair light"



Parameter "Brightness value after switch on(0...100%)"

This parameter sets the brightness value when the switch is turned on.

Range: 0... 100%

Parameter "Time duration in is(1...65536/0.1s)"

This parameter sets the delay time of the stair light.

Range: 1... 65536 in 0.1 seconds

Parameter "After staircase time dimming to base brightness(1...100%)"

This parameter sets the brightness value that the stair light returns after dimming.

Range: 0... 100%

Parameter "The dimming time of staircase light（0... 600/0.1s,0=immediately）"

This parameter sets the dimming time for the stair lights to return to the set brightness value.

Range: 0... 600, in units: 0.1 seconds, 0 for immediately

The parameter "Recalculate duration time while triggering"

This parameter sets whether the duration is recalculated when the stair light is triggered again.

Optional: NO

YES

Select "NO" and do not recalculate the duration when the stair light is triggered again;

Select YES to recalculate the duration when the stair light is triggered again.

Parameter "Reaction on switching off via object "switch"

This parameter sets the state change of the switch by turning off the switch by the communication object "switch".

Optional: no reaction

base brightness value

switch off

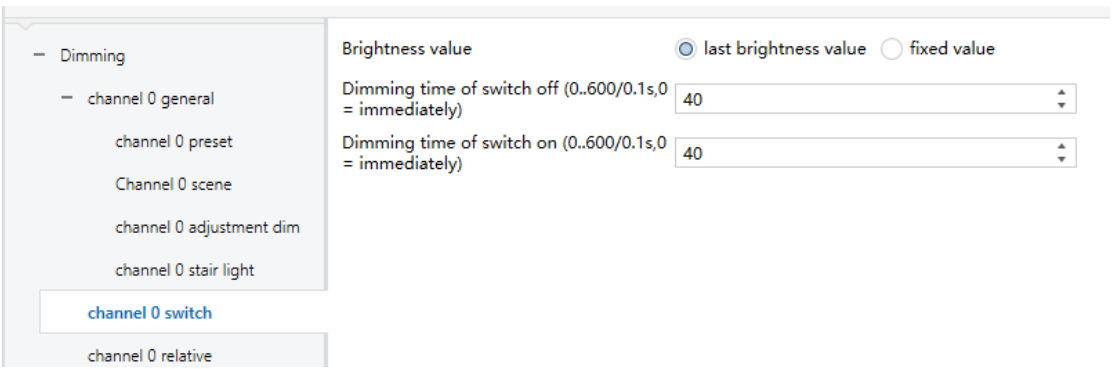
Select "no reaction" and turn off the switch by turning off the switch through the communication object "switch", the state of the switch changes to non-reactive, that is, it remains unchanged.
Select "base brightness value" and turn off the switch by turning off the switch through the communication object "switch", so that the state of the switch changes back to the set brightness base value.
Select "switch off" and turn off the switch by using the communication object "switch" to change the state of the switch to switch off.

Parameter "Brightness value during permanent ON(0...100%)"
This parameter sets the brightness value when the switching state is permanently on.
Range: 0... 100%

The parameter "Restart of staircase time after the end of permanent ON"
This parameter sets whether the switch state is permanent after the end of the stair light time is recalculated.
Optional: NO
YES
Select "NO" to not recalculate the stair light time after the switch state is permanently on. *(The stair light delay function does not work after triggering).)*
Select YES to recalculate the stair light time after the switch state is permanently on.
Note: The parameter "Restart of staircase time after end of permanent ON" selects "YES." When the parameter "brightness value during permanent ON" is set to a value smaller than the parameter "after staircase time dimming to base brightness" setting value, the stair light time is not recalculated after the permanent opening ends.

Parameter "Warning during dimming down"
This parameter sets whether to issue a warning after the dimming time is over, and the communication object is "Warning staircase lighting".
Optional: NO
YES
Select "NO" and do not issue a warning after the dimming time is over;
Select "YES" to issue a warning after the dimming time is over, and the warning value is set by the parameter "Send value".

3.3.2. 2 Parameter setting window "channel x switch"



Parameter "brightness value"

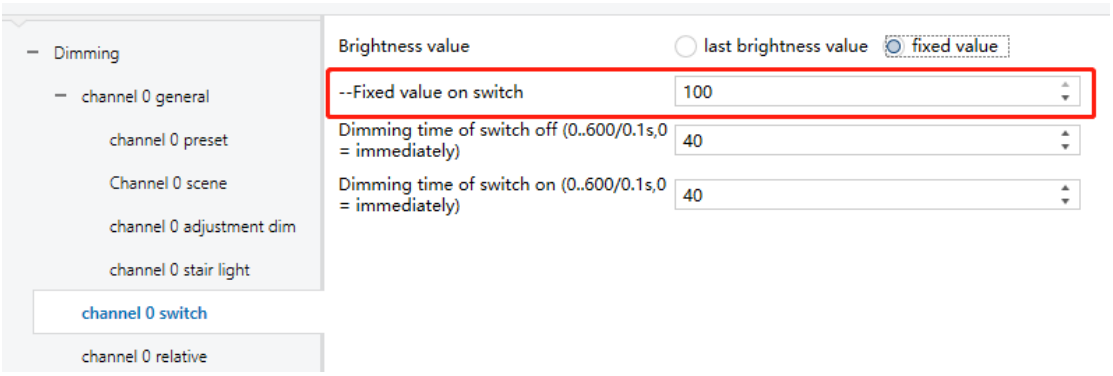
This parameter sets the brightness value when the switch state is turned on.

Optional: last brightness value

fixed value

Select the last brightness value, and the brightness value when the switch state is turned on is the last brightness value.

Select "fixed value", the brightness value when the switch state is turned on is a fixed value, and a parameter is activated, as shown in the figure.



Parameter “Fixed value on switch（0... 100%）”

This parameter sets the brightness value when the switch state is turned on.

Range: 0... 100%

Parameter “Dimming time of switch off（0... 600/0.1s,0=immediately）”

This parameter sets the dimming time of the off switch.

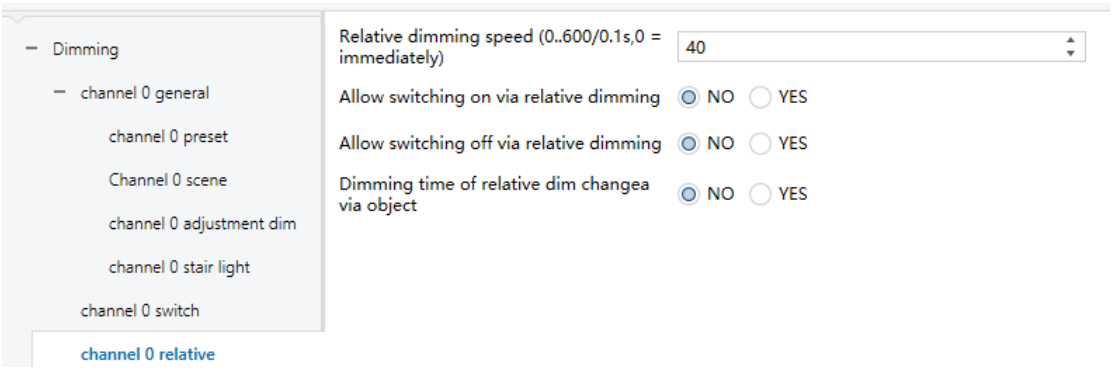
Range: 0... 600, in units: 0.1 seconds, 0 for immediately

Parameter “Dimming time of switch on（0... 600/0.1s,0=immediately）”

This parameter sets the dimming time for the switch to be turned on.

Range: 0... 600, in units: 0.1 seconds, 0 for immediately

3.3.2. 3 Parameter setting window "channel x relative"



Parameter "Relative dimming speed（0... 600/0.1s,0=immediately）"

This parameter sets the dimming time for relative dimming.

Range: 0... 600, in units: 0.1 seconds, 0 for immediately

The parameter "Allow switching on via relative dimming"

This parameter sets whether to allow the switch to be turned on by relative dimming.

Optional: NO

YES

Select "NO", it is not allowed to open the switch by relative dimming;

Select YES to allow the switch to be turned on by relative dimming.

The parameter "Allow switching off via relative dimming"

This parameter sets whether to allow the switch to be turned off by relative dimming.

Optional: NO

YES

Select "NO" to not allow the switch to be turned off by relative dimming;

Select YES to allow the switch to be turned off by relative dimming.

The parameter "Dimming time of relative dim change via object"

This parameter sets whether to change the dimming time of the relative dimming through the communication object, and the communication object is the "Dimming time of relative".

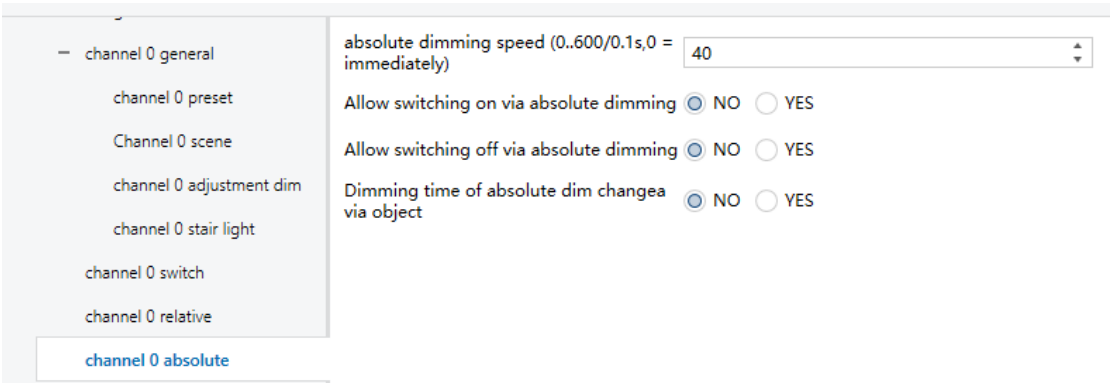
Optional: NO

YES

Select "NO" to change the dimming time of the relative dimming without using the communication object;

Select "YES" to change the dimming time of the relative dimming through the communication object.

3.3.2. 4 Parameter setting window "channel x absolute"



Parameter "Absolute dimming speed（0... 600/0.1s,0=immediately）"
This parameter sets the dimming time for absolute dimming.
Range: 0... 600, in units: 0.1 seconds, 0 for immediately

The parameter "Allow switching on via absolute dimming"
This parameter sets whether to allow the switch to be turned on by absolute dimming.
Optional: NO
YES
Select "NO" to not allow the switch to be turned on by absolute dimming.
Select YES to allow the switch to be turned on by absolute dimming.

The parameter "Allow switching off via absolute dimming"
This parameter sets whether to allow the switch to be turned off by absolute dimming.
Optional: NO
YES
Select "NO" to not allow the switch to be turned off by absolute dimming.
Select YES to allow the switch to be turned off by absolute dimming.

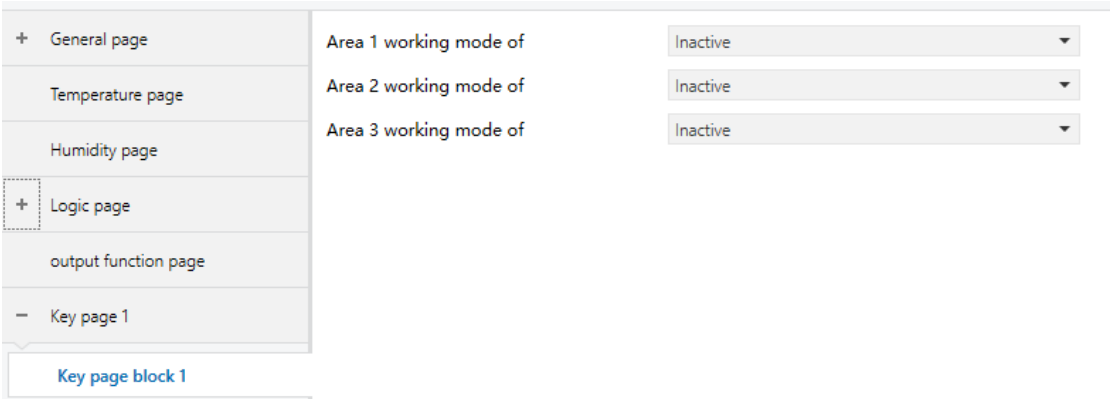
The parameter "Dimming time of absolute dimming changeable via object"
This parameter sets whether to change the dimming time of absolute dimming through the communication object, which is the "Dimming time of value".
Optional: NO
YES
Select "NO" to change the dimming time of absolute dimming without using the communication object.
Select "YES" to change the dimming time of the absolute dimming through the communication object.

3.4 Parameter setting interface "Key page block x"

Each page is divided into 3 areas, and the working mode of each area has two options to choose from: multigang button, or single button, and this settings window is used to define the functions of each module.

Note: x represents the number of pages, and the range of x is set according to the parameter "set the number of key pages" in the parameter setting interface "General page", *and the maximum range is 1 ... 10；*

z represents the number of regions on the page, the range is 1... 3。



Parameter "Area z working mode of"

This parameter is used to set the mode of operation of the region z(z=1...3).

Optional: inactive

Mulligang button

Single button

Selecting the "multi-gang button" means that only one function module is displayed in the area, and a parameter is activated, as shown in the following figure: