

User Manual

T/N TC40L.BL

T/N TC40L.SL

T/N TC40L.BW



Home and building automation control

Tantron KNX 4" touch panel



Products



Programming



Monitoring

About Version

Version	Revision notes	Revised by	Date
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1. Summary

This manual provides you with technical information about the touch panel and detailed function introduction. This panel is an integral application module and is suitable for installation in an embedded box conforming to BS 4662: 2006 + A1: 2009.

The program tool software ETS5 can be used and operated on this system.

The 4-inch touch panel has the following functions:

- Energy saving function
- Screensaver
- Laser distance detection
- VRV air conditioning control
- Fan Coil air conditioning control
- Automatic dehumidification function
- Timing function
- Dimming
- Curtain
- Scenes
- Turn on and off for the lights
- Temperature and humidity detection
- Temperature and humidity alarm
- VOC / CO₂ / CO gas function
- Page jump
- Free combination of page icons
- Support icons customization
- Language switch
- Support language customization
- OLED display brightness adjustment

2. Technical performance

2.1 Technical Information

The following are some technical parameters of the touch panel:

☆ Working 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

☆ Environmental humidity: ≤90% (excluding moisture condensation)

☆ Appearance material / shell and color:

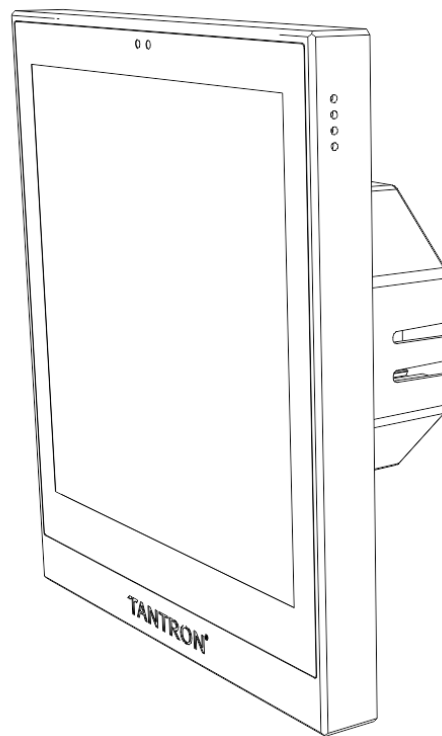
☆ Protection level: IP20 (IP protection level according to EN60529 standard)

☆ Appearance size: 95 * 85 * 9mm

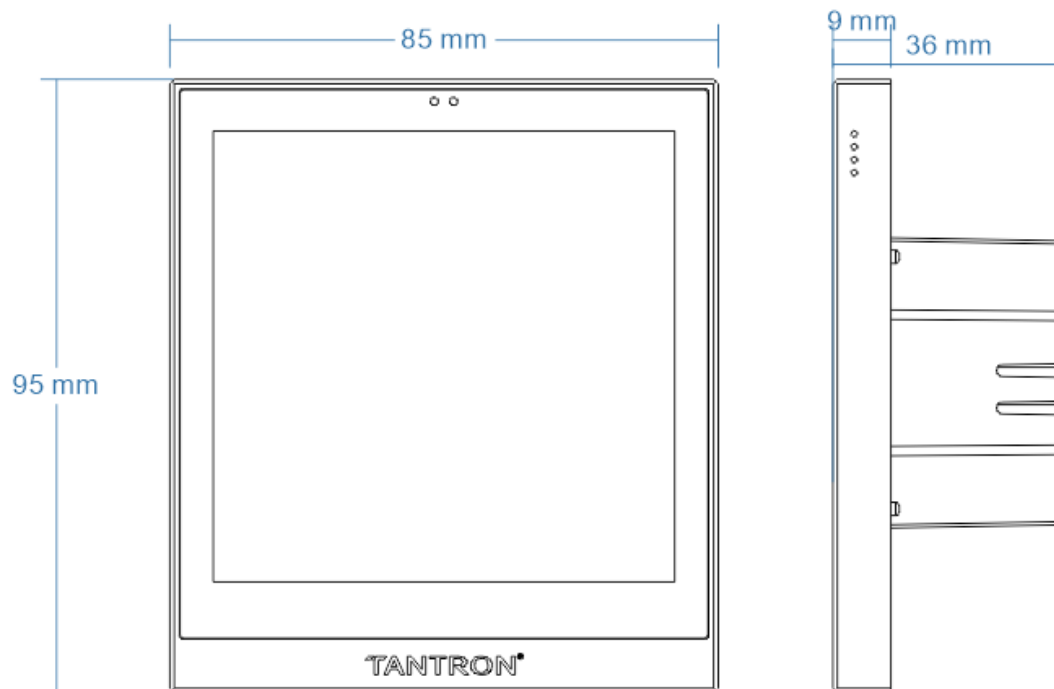
☆ Installation method: wall mounted

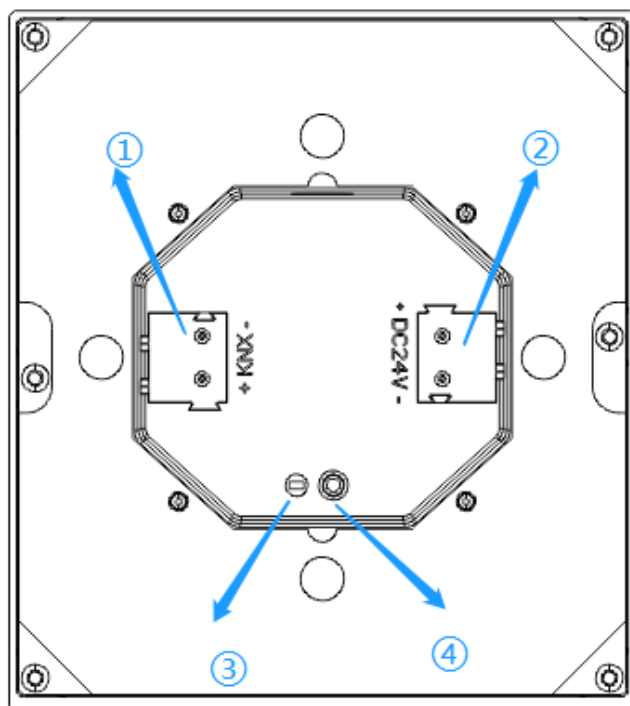
2.2 Dimensions

Appearance

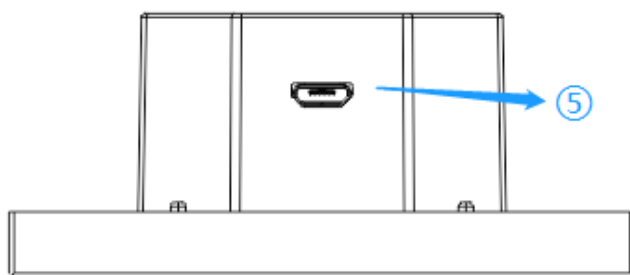


Dimensions

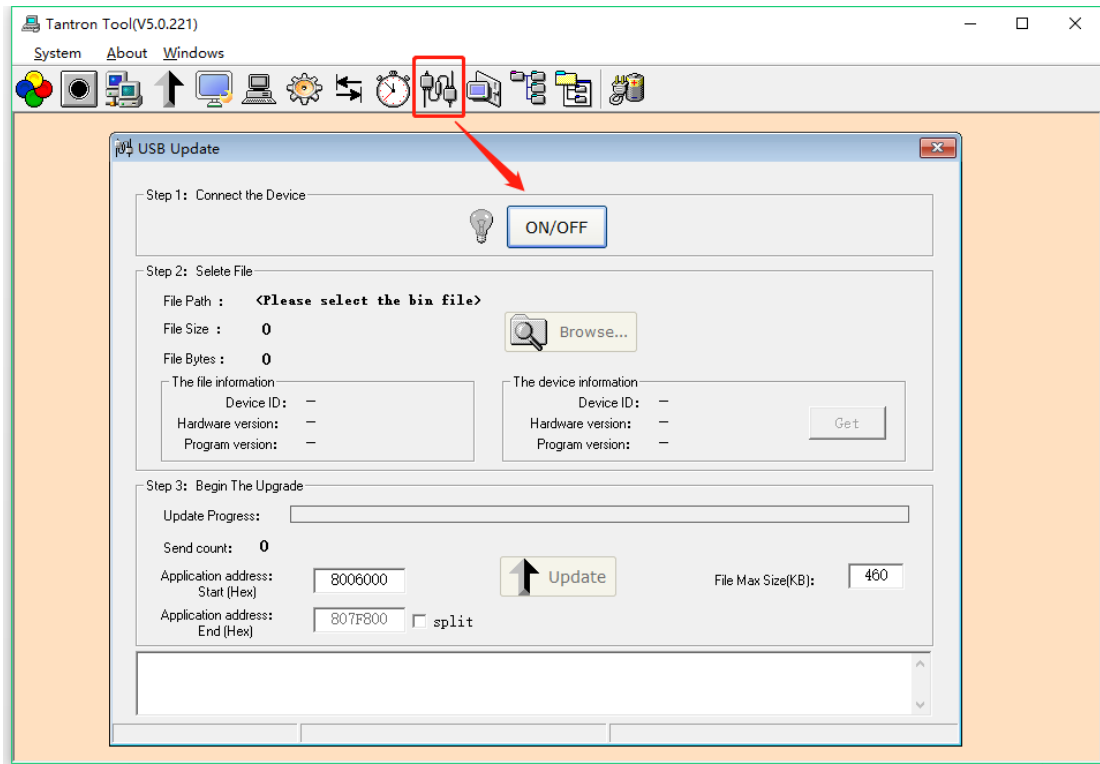




- ①KNX terminal
- ②Auxiliary power terminal
- ③Indicator
- ④ Programming button
- ⑤USB interface






2.3 Update

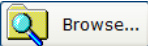


Step 1: Long press the panel programming button (or long press the “setting” on the panel, then programming operation page appears, long press "Updata program"), until the programming button flashes red, and the screen is black at the same time;

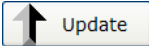
Step 2: Connect the panel and computer directly with a USB cable (you must enter the upgrade state before connecting to USB);

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

Step 4: Click the button  to 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)", 480KB;

Step 7: Click  to start the update process.

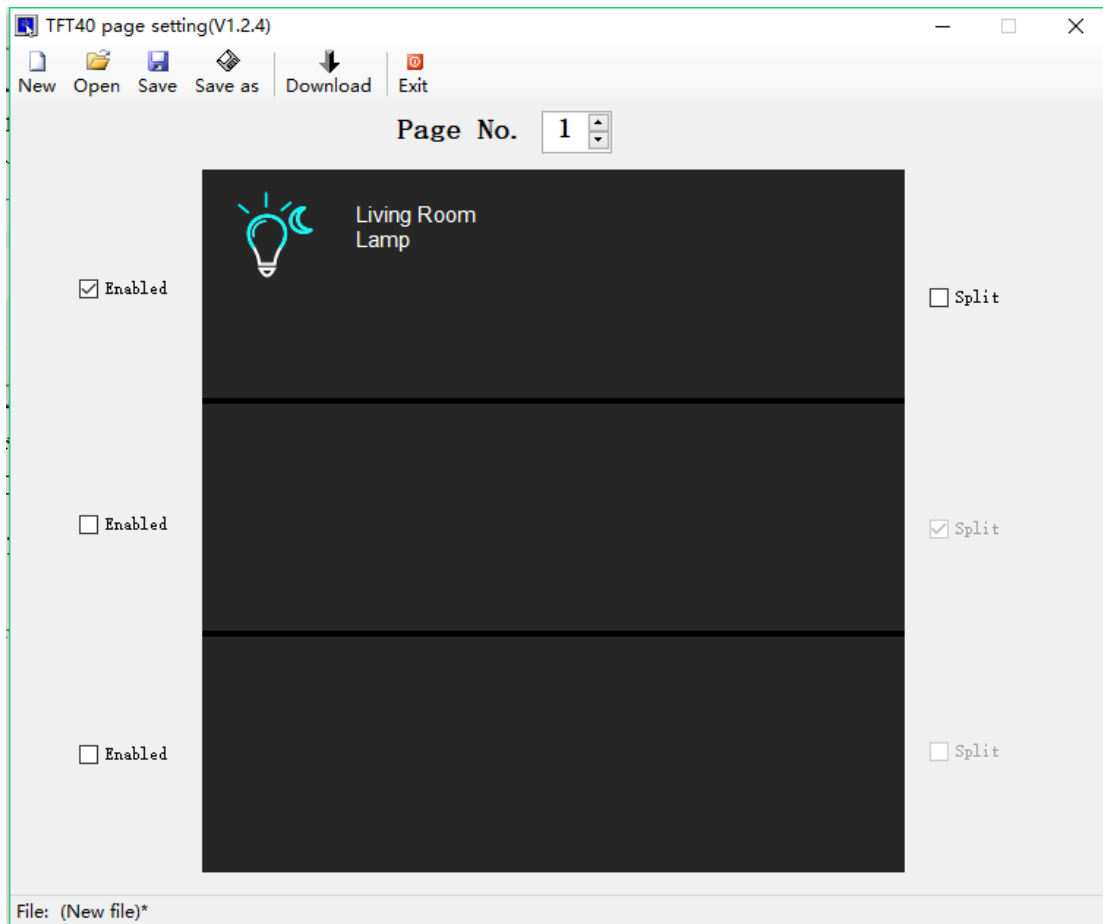
Remarks: 1. Parameters not mentioned do not need to be modified; 2. Click “get” to get the device information. You can upgrade only when the device information is consistent with the bin file information.

2.4 Custom language, icon

As an example, the first area on the first page of the panel is set to "Mulligang button", the module sets the custom area name and icon;

Modify the custom icon operation process:

1. Open the software named “ TFT40PageSettingV1.2.4.exe”, as shown below:

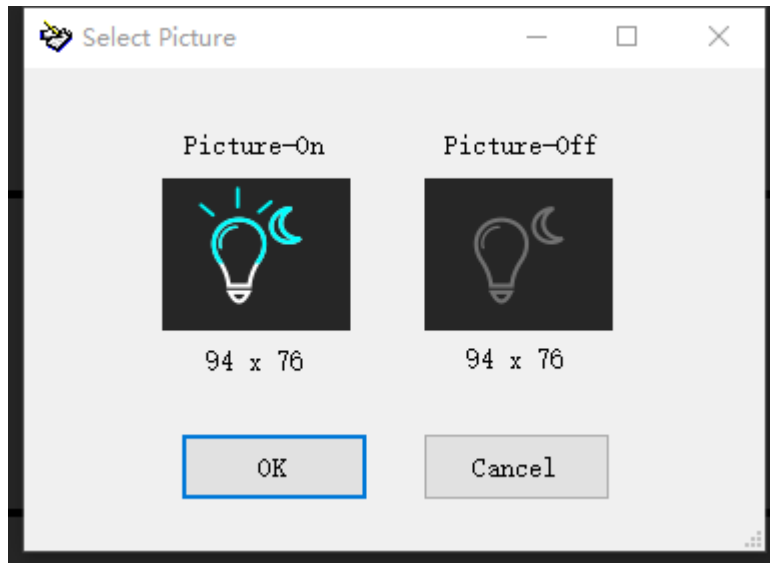


2. Distinguish modules: You need to check the “Enabled” combo box in the first row of Page No. 1 (note that the “Split” combo box does not need to be checked), indicating that there is only 1 module in area 1;

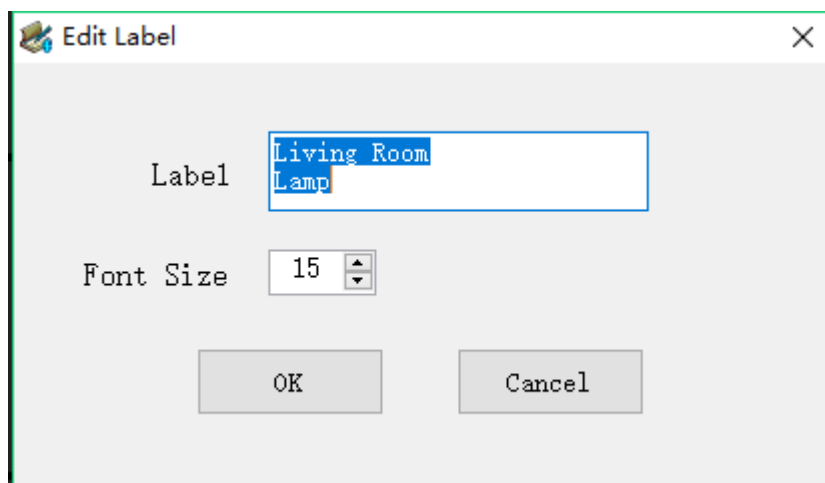
Note: If the area is set to "Single button", the "Enabled" and "Split" combo boxes are checked, indicating that there are 2 modules in the area.


3. Set the icon: Click the icon of the module in the first row to pop up the select picture window (as shown in the figure below), set the pictures of "picture-on" and "picture-off", and click "OK" to return to the main interface after the setting is completed;

*Note: Picture format-resolution 94 * 76*



4. Set the name of the area: click on the text of the module in the first line, a pop-up "edit label" window (as shown in the figure below), fill in "label", and set the font size, click "OK" to return to the main interface after setting



5. Download: Long press the panel programming button (or click the system setting button on the panel to enter the setting interface, long press the system upgrade button, the programming button operation page appears, long press "system upgrade"), until the programming button flashes red, and at the same time The screen is blank, and the panel and the computer are directly connected with a USB cable. Click the software download icon  to download the custom area name and icon to the panel.

3. Functions

3.1 Overview

The specific functions of the touch panel are as follows:

- Energy saving function
- Screensaver
- Laser distance detection
- VRV air conditioning control
- Fan Coil air conditioning control
- Automatic dehumidification function
- Timing function
- Dimming
- Curtain
- Scenes
- Turn on and off for the lights
- Temperature and humidity detection
- Temperature and humidity alarm
- VOC / CO₂ / CO gas function
- Page jump
- Free combination of page icons
- Support icons customization
- Language switch
- Support language customization
- OLED display brightness adjustment

3.2 Parameter “General page”

--- 20200331AppTouchPanel4.0_V1.0 > General page

General page	Device power on delay time(0...255/s)	0
Temperature page	Data storage interval delay time (1...60000/s)	10
Humidity page	Brightness of OLED is.(1%...100%)	80
output function page	Dimmer time of OLED is.if it is switched on(1...10s)	2
Key page 1	System language settings	<input checked="" type="radio"/> Chinese <input type="radio"/> English
Key page block 1	Lock panel device by telegram:	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
	Show action of key in telegram	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
	Minimum interval of output telegram is (0 = unlimited. 1...170/0.1s)	1
	Set the number of key pages	1
	Main page setting	1
	Energy saving function	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
	Laser detection function	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
	Air conditioning function	<input checked="" type="radio"/> Inactive <input type="radio"/> Active

组对象 频道 参数

Parameter “Device power on delay time(0...255/s)”

This parameter sets the startup delay time of the device.

Range: 0 ... 255, unit: second

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

This parameter applies to all function modules with saving function and is used to set the saving time of data.

Range 1... 255, unit: minute

Remarks: Add the interval save function, the original power-off save is still valid; the interval save function means that all the saved data will be saved once when the interval time expires; the power-off save means that all the saved data will be saved once at the moment of power-off; if the power-off save If it fails, the data saved at the last interval will be called; restarting the database will clear all the saved data.

Parameter “Brightness of OLED is(1...100%)”

This parameter sets the brightness value of the OLED screen.

Range: 1... 100, unit:%

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: second

Parameter “System language settings”

This parameter is used to set the system language. There are two languages: Chinese and English.

Available options: Chinese

English

Parameter “Lock panel device by telegram”

This parameter sets whether to unlock the device via the bus.

Optional: Inactive

Active

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

Parameter “Show action of key in telegram”

This parameter sets whether to display the state of the key through the message.

Optional: Inactive

Active

Select "active" to display the state of the key 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 the key is pressed, the communication object "Valid action of The key 01 sends data 01 to indicate that a key is pressed; 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 send 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, unit: 0.1 second

Parameter “set the number of key pages”

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

Range: 1... 10

Parameter “main page setting”

Set which page of all the pages of the panel is the home page.

Range: 1... 10

Parameter “Energy saving function”

Whether to enable the energy saving function.

Optional: Inactive

Active

Selecting "Active" means turning on the energy saving function, which is the screen saver function. For the screen saver setting parameters, see "3.2.1 Parameter setting interface screensaver".

Parameter “laser detection function”

Whether to activate the laser detection function.

Optional: Inactive

Active

Select "Active" to activate the laser detection function. For the setting parameters of the laser detection function, see "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. For the setting parameters of the air conditioning adjustment function, see "3.2.3 Parameter Setting Interface Air conditioning".

3.2.1 Parameter “screensaver”

--- 20200331AppTouchPanel4.0_V1.0 > General page > screensaver

General page	Screensaver function active	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Energy saving page	Enter the Screensaver time setting (1..65500/s)	10
screensaver	How long turn off Lcd(Uint/s,0=No change)	0
Laser detection	Activate the current time to send to the bus	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Air conditioning	--Send time cycle time setting(1...255/minute)	1
Temperature page	Activate the current date to send to the bus	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Humidity page	--Send date cycle time setting(1...255/hour)	1
output function page	====Weather object type selection	<input checked="" type="radio"/> 1 bit <input type="radio"/> 1 byte
+ Key page 1	====Area 1 display function	Weather_and_time
	====Area 2 display function	Scene
	--Add scene conditioning page option	1
	--Position one add key number	area(2)left key
	--Position two add key number	area(2)right key
	--Position three add key number	area(3)left key
	--Position four add key number	area(3)right key
	====Area 3 display function	Thermostatic_controller
	--Add air conditioning page option	1
	--Display thermostatic controller number	1

组对象 频道 参数

Parameter “Screensaver function active”

This parameter is used to set whether to activate the screen saver function.

Optional: Inactive

Active

Select "active" to activate the screen saver function and activate all the parameter settings below.

Parameter “Enter the Screensaver time setting (1...65500/s)”

This parameter is used to set the time to enter the screen saver.

Range: 1 ... 65500, unit: s

Note: If you turn on the laser detection function, you must wait until the laser detects no one and complete the function of delaying the brightness adjustment of the screen before starting to calculate the time to enter the screen saver; if you do not turn on the activation detection function, start the calculation after not operating the device Calculate the time to enter the screen saver.

Parameter “How long turn off Lcd(Uint/s,0=No change)”

This parameter sets how long the screen saver goes off after entering the screen saver.

Range: 0 ... 60000, 0 means no screen off, unit: s

Parameter “Activate the current time to send to the bus”

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

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

Range: 1 ... 255, time: minutes

Parameter “Activate the current date to send to the bus”

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

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

Range: 1 ... 255, time: hour

Parameter “Weather object type selection”

This parameter is used to set the data type of the weather object.

Available options: 1bit

1byte

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

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

Parameter “—Sunny feedback value set(0..255)”

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

Parameter “—shower feedback value set(0..255)”

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

Parameter “—thunder shower feedback value set(0..255)”

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

o

When the communication object "weather status feedback" receives the value set by the above parameter, the current weather is displayed as the corresponding weather.

The following parameters are used to set the content displayed on the screen saver interface. The screen saver interface is divided into 3 areas, each of which has 3 displayable content to choose from: weather and time, Scene, Thermostatic controller. The following uses area 1 as an example Do a detailed introduction.

Note: 1. The screen saver page is for display only and cannot be operated and controlled; 2. If the icon is customized, the screen saver icon is not displayed.

Parameter “Area 1 display function”

Available options: Weather and time

Scene

Thermostatic controller

Select "Weather and time" to indicate that the display content of area 1 is: date time, weather, ambient temperature;

Select "Scene" to indicate that the display content of area 1 is a scene, and five parameters appear:

Parameter “—Add scene conditioning page option”

Parameter “—Position one/ two/ three/ four add key number”

The screensaver area displays content as a scene, and the entire area is divided into 4 positions, which can display 4 scenes. Each scene must correspond to a specific scene, such as the settings shown in the above figure, corresponding to the left and right buttons on page 1 area 2 3 Left button, right button, etc.

Note: The page area corresponding to the screen saver scene must already have a corresponding scene, otherwise it will not be displayed.

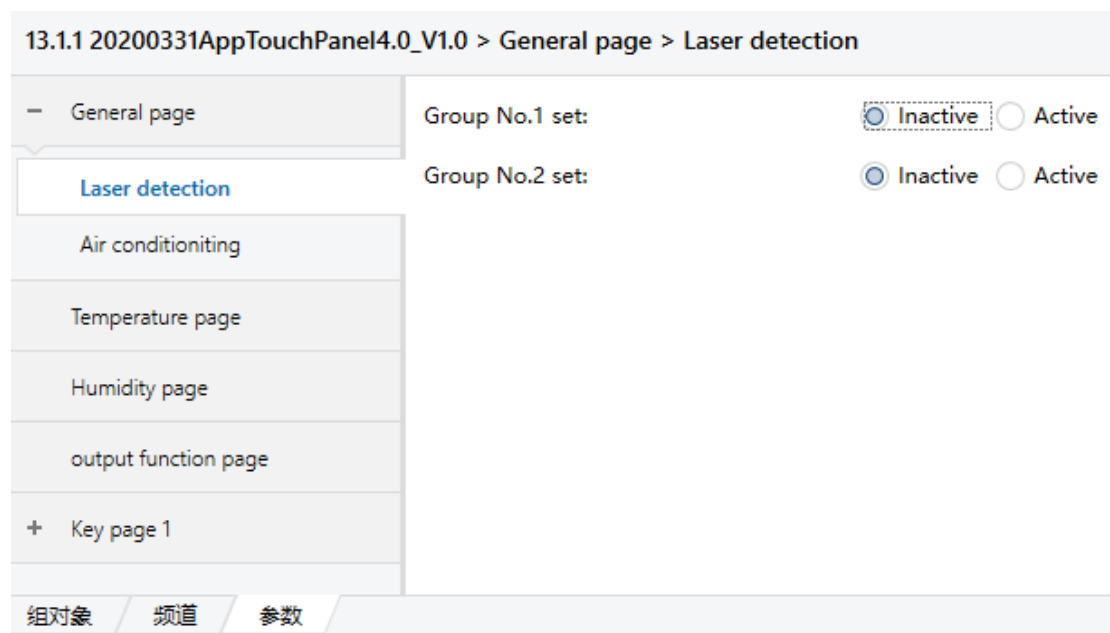
Select "Thermostatic controller" to indicate that the display content of area 1 is air conditioning, and two parameters appear:

Parameter “—Add air conditioning page option”

Parameter “—Display thermostatic controller number”

The content displayed in the screen saver area is air conditioner, and the page and ID corresponding to the displayed air conditioner need to be set.

3.2.2 Parameter “Laser detection”



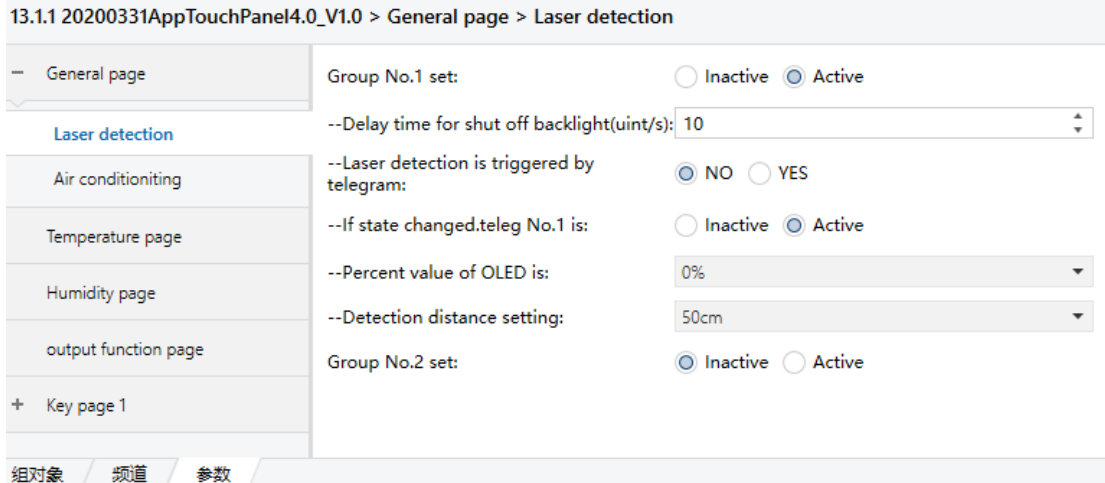
Parameter “Group No.1 set”

Whether to activate the first set of settings.

Optional: Inactive

Active

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



Parameter “—delay time for shut off backlight”

This parameter setting adjusts the delay time of the display backlight. It works when the laser detection distance is 0.

Range: 5... 255, unit: second

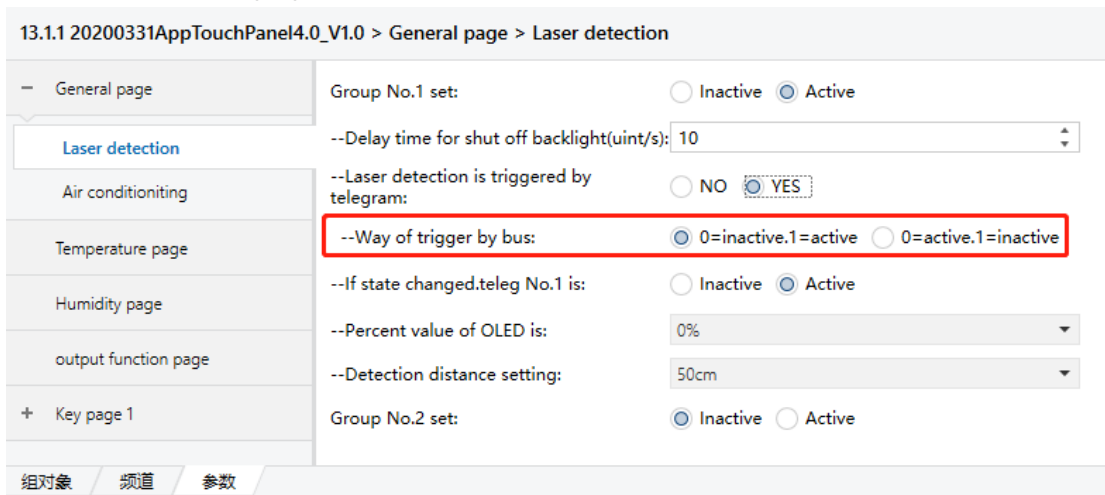
Parameter “laser detection is triggered by telegram”

Whether to trigger the laser detection function through the message.

Available options: No

Yes

Select "Yes" to allow activation or deactivation of the laser detection function through the message, the communication object "Laser detection trigger No1" appears, and a new parameter appears, as shown in the following figure:



Parameter “—Way of trigger by bus”

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

Optional: 0 = inactive, 1 = active

0 = active, 1 = inactive

Selecting "0 = inactive, 1 = active" means that the communication object "Laser detection trigger No1" receives a message value of 0, disables the laser detection function, and receives a message value of 1 to activate the laser detection function;

Select "0 = active, 1 = inactive", the opposite.

Parameter “—if state changed, teleg No.1 is”

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

Optional: Inactive

Active

Select “Active”, the communication object “laser detection flag No1” appears. When the laser detection distance is 0, wait for the time set by the parameter “—delay time for shut off backlight” to end, adjust the backlight (the brightness of the backlight is adjusted according to Parameter “—percent value of OLED is” setting), meanwhile, the communication object “laser detection flag No1” sends message 0 to the bus; select “inactive” to not activate the communication object.

Parameter “—delay time for shut off backlight”

When the laser detection distance is 0, and after a period of time, adjust the brightness of the backlight, and how much the brightness is reduced is set by this parameter.

Optional: 0%

10%

...

90%

100%

Select “0%” to reduce the brightness of the backlight to 0, that is, completely dark;

...

Select “100%” to maintain the current backlight brightness.

Parameter “—Detection distance setting”

This parameter sets the laser detection distance.

Options: 10cm

20cm

...

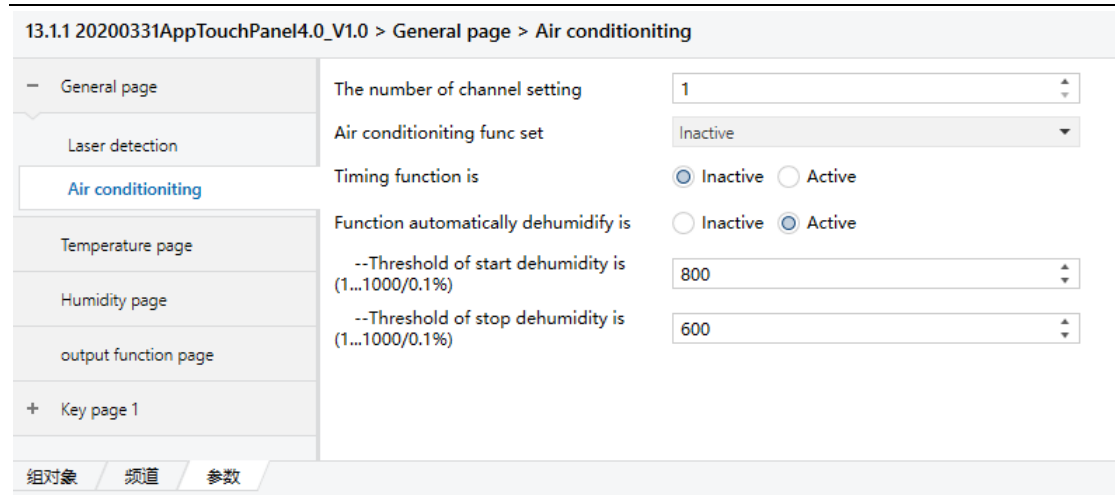
100cm

More than 100cm

For example, selecting “50cm” means that the maximum distance that the laser can detect is 50cm. If no object can be detected within 50cm, the detection distance is 0; selecting “More than 100cm”, the theoretical maximum detection distance can reach 120cm , Affected by the environment.

Remarks: The second group of laser detection settings are similar to the first group, you can refer to the first group of parameter settings; the first group has higher priority than the second group, that is, both groups are activated at the same time, subject to the first group settings.

3.2.3 Parameter “ Air conditioning”



Parameter “The number of channel setting”

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

Range: 1... 10

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. For specific parameter settings, see "3.2.3.1 Air-conditioning control mode VRV page";

Select "Fan coil function" to indicate that the air-conditioning control mode is the fan coil mode. For specific parameter settings, see "3.2.3.2 Air-conditioning Control Mode Fancoil page".

Parameter “Timing function is”

This parameter sets whether to enable the timing function.

Optional: Inactive

- Active

Select "Active" to enable the timing function. For the setting parameters of the timing function, please refer to "3.2.3.3 Parameter Setting Interface Timing page".

Parameter “Function automatically dehumidity is”

Whether to turn on the automatic dehumidification function.

Optional: Inactive

- Active

Select "Active" to turn on the automatic dehumidification function, there are 2 setting parameters:

Parameter “—threshold of start dehumidity is(1...1000/0.1%)”

Parameter “—threshold of stop dehumidity is(1...1000/0.1%)”

These two parameters set the humidity value at which automatic dehumidification starts and the humidity at which automatic dehumidification ends. It can be modified by the objects "start

threshold of dehumidity" and "stop threshold of dehumidity".

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

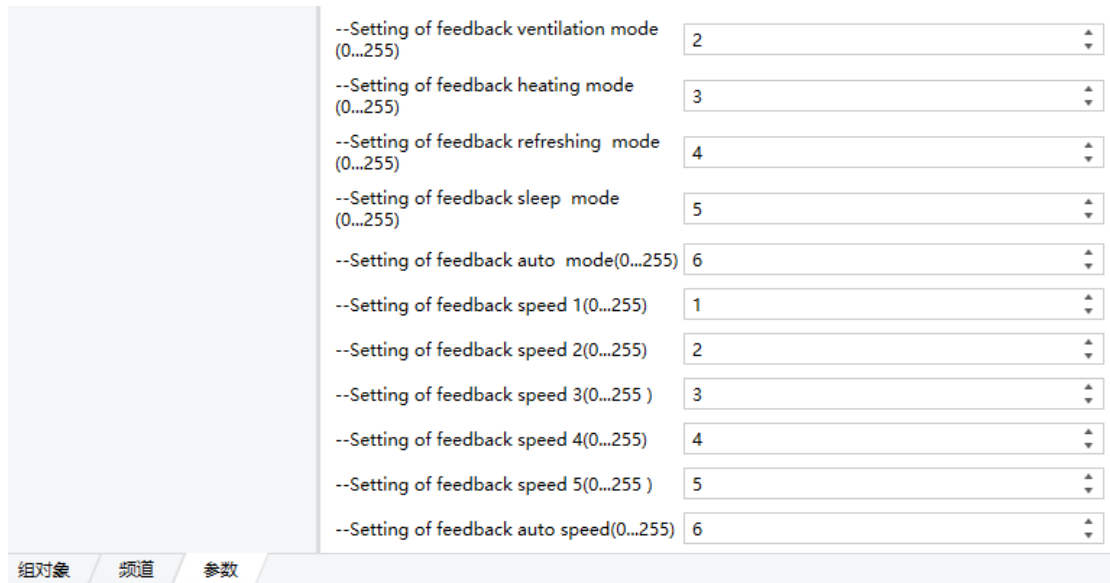
*Remarks: Automatic dehumidification process-write 00 to enable automatic dehumidification function through communication object "automatical dehumidification" (write 00 to enable automatic dehumidification, write 01 to exit automatic dehumidification), when the humidity exceeds the **parameter "Threshold of start dehumidify is (1 ... 1000; unit is 0.1%) "**After setting the value, enter the automatic dehumidification function (if the mode is in non-dehumidification mode, it will enter the dehumidification mode; if the mode is in the dehumidification mode, it will maintain the original state), when the humidity is lower than After the value set by the **parameter "Threshold of stop dehumidify is (1 ... 1000; unit is 0.1%)"**, exit the automatic dehumidification function (after exiting the automatic dehumidification function, the air conditioner display state is the state saved by the feedback object).*

3.2.3.1 Air conditioning control mode “VRV page 1”

Remarks: The other channels of VRV air conditioner are the same as channel 1, refer to the introduction of channel 1

13.1.1 20200331AppTouchPanel4.0_V1.0 > General page > Air conditioning > VRV page 1

- General page	The minimum temperature is (Min_T:50...400 unit is 0.1 centig.)	100
Laser detection	The maximum temperature is (Max_T:50...400 unit is 0.1 centig.)	300
- Air conditioning	After bus voltage recovery.setting is	Follow preset
Timing page 1	--Air conditioner is switch	<input checked="" type="radio"/> OFF <input type="radio"/> ON
VRV page 1	--Setting of switch:	<input checked="" type="radio"/> 0 = OFF:1 = ON <input type="radio"/> 0 = ON:1 = OFF
Temperature page	--Setting of dehumidification mode (0...255 254 = inactive)	0
Humidity page	--Setting of refrigeration mode(0...255 254 = inactive)	1
output function page	--Setting of ventilation mode(0...255 254 = inactive)	2
+ Key page 1	--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	<input checked="" type="radio"/> 0 = OFF:1 = ON <input type="radio"/> 0 = ON:1 = OFF
	--Setting of feedback dehumidification mode(0...255)	0
	--Setting of feedback refrigeration mode (0...255)	1



Parameter “The minimum temperature is”

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 “After bus voltage recovery, setting is”

This parameter sets the state of the air conditioner after the device bus recovers power.

Optional: Follow preset

 Readed from air-conditioner

 Restored before power down

When "follow setting" is selected, the state of the air conditioner will operate according to the preset state after the power supply of the device bus is restored, as shown in the figure above:

Parameter “--Air-conditioner is switch”

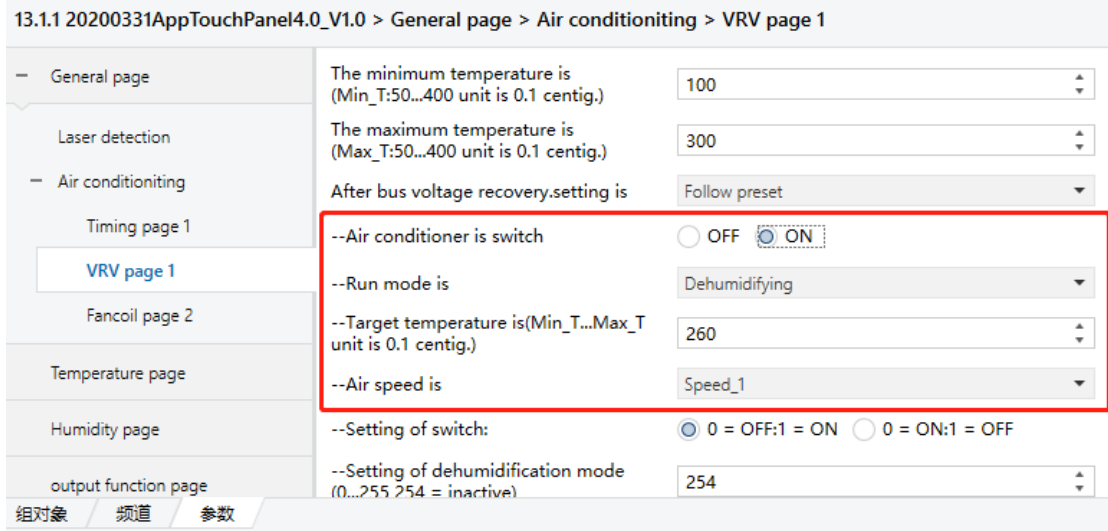
This parameter sets the switch state of the air conditioner after the bus returns to power.

Optional: Off

 On

Select "Off", the switch state 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 figure below:



Parameter “--Run mode is”

Operating mode when the air conditioner is turned on.

Options: Dehumidifying

Refrigeration

Ventilation

Heating

They are dehumidification mode, cooling mode, ventilation mode, and heating mode.

Parameter “Target temperature is (Min_T...Max_T: unit is 0.1centing)”

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

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

Parameter “Air speed is”

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

Available options: Sleep 1

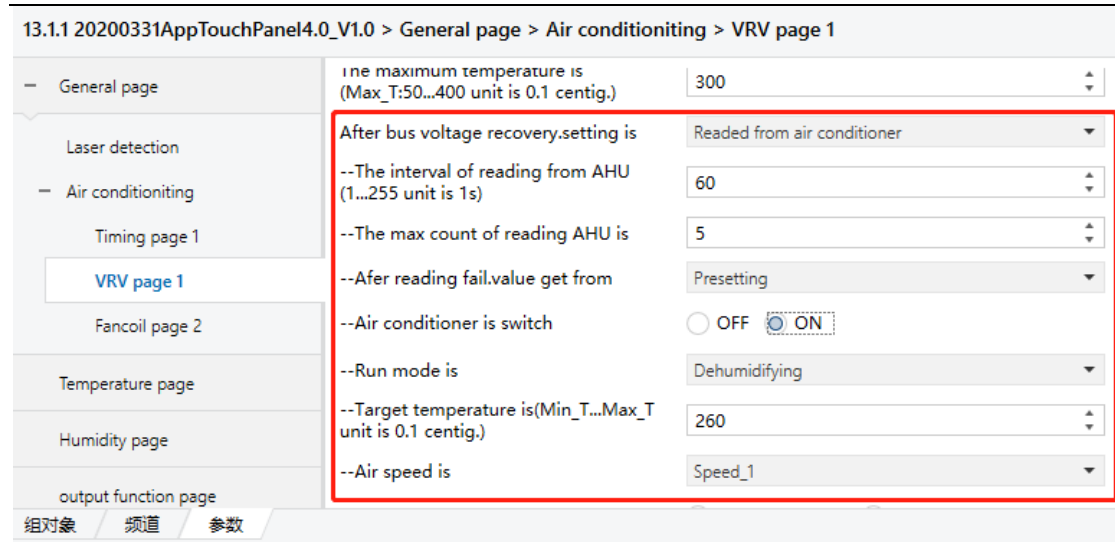
Sleep 2

Sleep 3

Sleep auto

Select "Sleep 1/2/3 / auto" to indicate that the wind speed when the air conditioner is turned on is 1/2/3 / auto.

Select "readed from air-conditioner", and the state of the air conditioner will be read from the air conditioner after the device bus restores power. As shown below:



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

This parameter sets the time interval for reading the status from the air conditioner after the device bus restores power.

Range: 1... 255, unit: second

Parameter “The max count of reading AHU is”

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

Parameter “After reading fail, value get from”

This parameter sets the state of the air conditioner after a failed reading.

Optional: None

Presetting

Restore before power down

Select "none" to indicate that 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 reading failed is the state before saving the power;

Selecting "presetting" means that the air conditioner will activate 4 parameters according to the preset state after reading failure:

Parameter “--Air-conditioner is switch”

Parameter “--Run mode is”

Parameter “Target temperature is (Min_T...Max_T: unit is 0.1centing)”

Parameter “Air speed is”

After the reading of these 4 parameter settings fails, the switch status, operating mode, set temperature and wind speed of the air conditioner.

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

First group:Control value

Parameter “--Setting of switch”

The control value of the air conditioner switch.

Options: 0 = OFF; 1 = ON

0 = ON; 1 = OFF

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

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

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

The control value of the dehumidification / cooling / ventilation / heating operation mode of the air conditioner can be modified by clicking the display screen. The communication object "Run mode, CH1" will send out the setting value in the corresponding mode.

Range: 0... 255, 254 does not work

Parameter “Setting of low/medium/high/auto Speed (0...255;254= inactivate)”

The control value of the air conditioner wind speed of 1/2/3 / auto level can be modified by clicking the display screen, and the communication object "Air speed" sends the data set in the corresponding mode.

Range: 0... 255, 254 does not work

The second group: feedback value**Parameter “Setting of switch”**

Feedback value of air conditioner switch.

Options: 0 = OFF; 1 = ON

0 = ON; 1 = OFF

Select "0 = OFF; 1 = ON", the communication object "Switch status feedback, CH1" when the received message is 0, the air conditioning status is off, and when the received message is 1, the air conditioning status is on;

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

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

The feedback value of the dehumidification / cooling / ventilation / heating operation mode of the air conditioner, the communication object "Run mode feedback, CH1" receives the corresponding message value and enters the corresponding mode.

Range: 0... 255

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

The feedback value of air conditioner air speed 1/2/3 / auto level, the communication object "Air speed feedback, CH1" receives the corresponding message value and enters the corresponding wind speed.

Range: 0... 255

3.2.3.2 Air conditioning control mode “Fancoil page 1”

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

13.1.1 20200331AppTouchPanel4.0_V1.0 > General page > Air conditioning > Fancoil page 2

General page	The heating min temp is(Min_T:50...40.uit is 0.1 centig.)	100
Laser detection	The heating max temp is(Min_T:50...40.uit is 0.1 centig.)	300
Air conditioning	Minimum control value:	0%
Timing page 1	Maximum control value:	100%
VRV page 1	The refrigeration min temp is (Min_T:50...400.uit is 0.1 centig.)	100
Fancoil page 2	The refrigeration max temp is (Min_T:50...400.uit is 0.1 centig.)	300
Temperature page	Minimum control value:	0%
Humidity page	Maximum control value:	100%
output function page	Control value send when change:	5%
Key page 1	Cycle send control value:(0 means inactive.minute)	10
Key page block 1	Fancoil control speed object set:	<input checked="" type="radio"/> 1 bit <input type="radio"/> 1 byte
	Auto/manual speed set	<input checked="" type="radio"/> 0=manual.1=auto <input type="radio"/> 0=auto.1=manual
	Threshold ON-> fan speed 1(1...100%)	10
	Threshold ON-> fan speed 2(1...100%)	40
	Threshold ON-> fan speed 3(1...100%)	70
	Number of output channels	<input checked="" type="radio"/> 2 channel(4 pipe) for heat/cool <input type="radio"/> 1 channel(2 pipe) for heat/cool
	After bus voltage recovery.setting is	<input checked="" type="radio"/> Follow preset <input type="radio"/> Restored before power down
	--Switch is	<input checked="" type="radio"/> OFF <input type="radio"/> ON
	----Remote switch set	<input checked="" type="radio"/> 0 = OFF:1 = ON <input type="radio"/> 0 = ON:1 = OFF
	----Remote dehumidificationmode set: (0...255:254 = inactivate)	254
	----Remote refrigerationmode set: (0...255:254 = inactivate)	254
	----Remote ventilation mode set: (0...255:254 = inactivate)	254

----	Remote heating mode set:(0...255;254 = inactivate)	254
----	Remote speed off set:(0..255)	254
----	Remote speed 1 set:(0..255)	254
----	Remote speed 2 set:(0..255)	254
----	Remote speed 3 set:(0..255)	254
----	Remote speed auto set:(0..255)	254
	Fancoll feedback speed object set:	<input checked="" type="radio"/> 1 bit <input type="radio"/> 1 byte
----	TFT feedback switch set:	<input checked="" type="radio"/> 0 = OFF:1 = ON <input type="radio"/> 0 = ON:1 = OFF
----	TFT feedback dehumidificationmode set:(0...255)	0
----	TFT feedback refrigerationmode 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
----	TFT feedback speed 1 set:(0...255)	1
----	TFT feedback speed 2 set:(0...255)	2
----	TFT feedback speed 3 set:(0...255)	3
----	TFT feedback speed auto set:(0...255)	4

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Parameter “The minimum temperature is(Min_T: 1...1000;unit is 0.1centing)”

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

Range: 50... 400, unit: 0.1 °C

Parameter “The maximum temperature is(Max_T: 1...1000;unit is 0.1centing)”

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

Range: 50... 400, unit: 0.1 °C

Parameter “Minimum control value”

This parameter is used to set the minimum control value in heating / cooling mode.

Optional: 0%

5%

10%

15%

20%

25%

30%

For example, select "5%", which means that the minimum control value is 5%, and if the actual control value is less than 5%, it will directly issue 0%.

Parameter “Maximum control value”

This parameter is used to set the maximum control value in heating / cooling mode.

Optional: 70%

75%

80%

85%

90%

95%

100%

For example, if "70%" is selected, the maximum control value in heating / cooling mode is 70%.

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

Note:

1. Calculation method of control value:

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

*Cooling mode: control value = (current temperature-set temperature) /1.6*100%*

If the calculated control value is lower than the parameter "Minimum control value" setting value, it will issue 0%

Above the setting value of the parameter "Maximum control value", the setting value is sent out

2. The calculation method of the control value of the dehumidification mode is the same as that of the cooling mode;

In the ventilation mode, the automatic wind speed is not subdivided into grades, and the heating and cooling control values are 0, no calculation is required.

Parameter “Control value send when change”

When the control value change range is greater than the set range, the current control value is sent to the bus.

Optional: 0%

- 1%
- ...
- 14%
- 15%

For example, select "5%", then when the control value change range is greater than 5%, the current control value can be sent to the bus.

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

This parameter sets the period for transferring control values to the bus.

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

The first group: control value

Parameter “Speed object set”

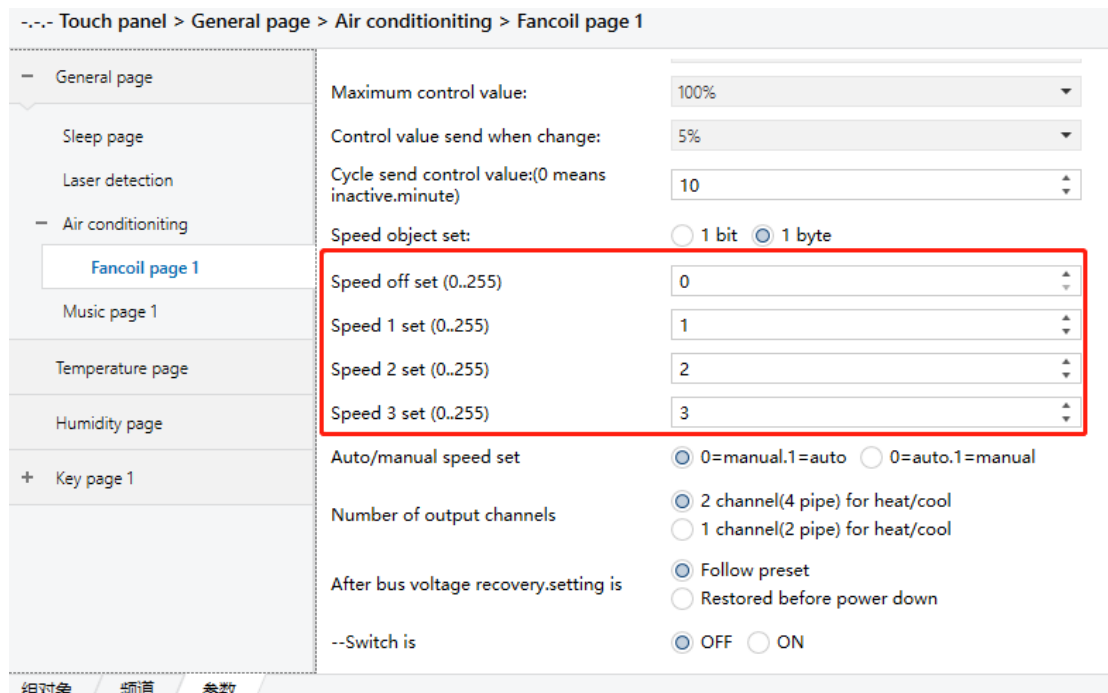
This parameter sets the object type of the wind speed control value.

Available options: 1bit

1byte

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



Parameter “Speed off/speed 1/speed 2/speed 3 (0...255)”

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

Range: 0... 255

Parameter “Auto/manual speed set”

This parameter sets the control value of automatic / manual wind speed.

Options: 0 = manual, 1 = auto

0 = auto, 1 = manual

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

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

Parameter “Number of output channels”

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

Options: 2 channel (4 pipe) for heat / cool

1 channel (2 pipe) for heat / cool

Select "2 channel (4 pipe) for heat / cool", set the number of output channels of the fan coil to 4 pipes, that is, the fan coil can have cooling and heating at the same time, activate the two communication objects "Heating value (control) ", " Refrigeration value (control) ";

Select "1 channel (2 pipe) for heat / cool", 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 1 communication object "Control value control) ", whether it is cooling or heating can be set through the communication object" Mode active / inactive "(send 01 to the communication object to activate the cooling mode, send 03 to activate the heating mode)

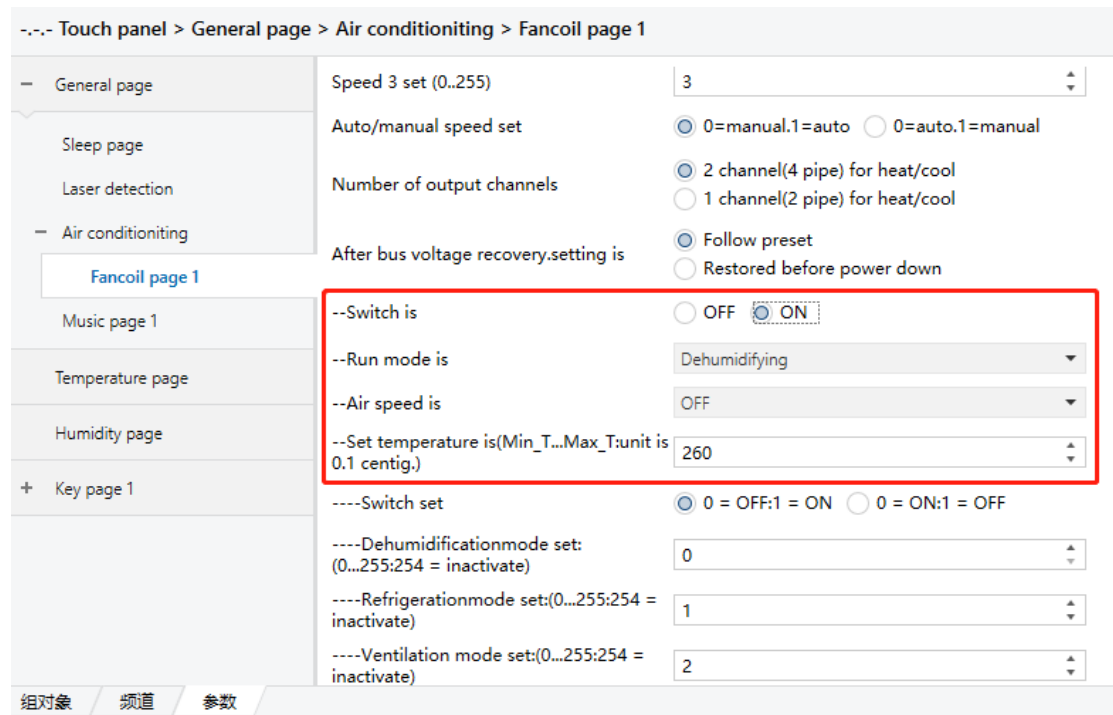
Parameter “After bus voltage recovery, setting is”

This parameter is used to set the state of the fan coil after the device bus restores power.

Optional: Follow preset

Restored before power down

Select "Follow preset", and the state of the fan coil unit will be set according to the preset after the power supply of the device bus is restored, as set by the following 4 parameters, as shown in the following figure:



Parameter “--Switch is”

This parameter sets the switch state of the fan coil.

Optional: Off

On

Select "Off", the switch state of the fan coil is off;

Select "On", the switch state of the fan coil is on.

Parameter “--Run mode is”

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

Options: Dehumidifying

Refrigeration

Ventilation

Heating

Select "dehumidifying", the fan coil operation mode is dehumidification;

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

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

Select "Heating", the fan coil operation mode is heating.

Parameter “--Air speed is”

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

Optional: Off

Speed 1

Speed 2

Speed 3

Speed auto

Select "Off", indicating that the wind speed of the fan coil is off;

Select "Speed 1", indicating that the wind speed of the fan coil is equal to 1;

Select "Speed 2", which means that the wind speed of the fan coil is 2 equal winds;

Select "Speed 3", indicating that the wind speed of the fan coil is 3th class;

Select "Speed auto" to set the wind speed of the fan tray to automatic wind speed.

Parameter “--Set temperature is(Min_T...Max_T: unit is 0.1centing)”

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

Range: the range set by the **parameter "The minimum temperature is (Min_T: 1 ... 1000; unit is 0.1centing)" and the parameter "The maximum temperature is (Max_T: 1 ... 1000; unit is 0.1centing)"**, Inside, unit: 0.1 °C

Select "restored before power down" to save the state of the fan coil after the device bus is restored to the state before power failure.

Second Group: Remote

Parameter “Switch set”

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

Options: 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, the fan coil switch status is off, and the message 1 receives the fan coil status is on;

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

When the screen displays "OFF" communication object "Remote control switch" issue 00;

Select "0 = ON; 1 = OFF", the communication object "Remote control switch, CH1" will issue 00 when the screen is turned on, and the communication object "Remote control switch" will issue 01 when the screen displays "OFF".

Parameter “Dehumidification/Refrigeration/Ventilation/Heating mode set (0...255;254=inactive)”

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

Range: 0... 255, 254 means disabled

Parameter “Setting of off/speed 1/speed 2/speed 3/speed auto(0...255;254= inactive)”

This parameter sets the remote control value of the fan coil wind speed. The communication object "Remote control speed" receives the remote control value set by the corresponding wind speed and enters the corresponding wind speed level.

Range: 0... 255, 254 means disabled

The third group:Feedback (Fan coil)**Parameter “Speed object set”**

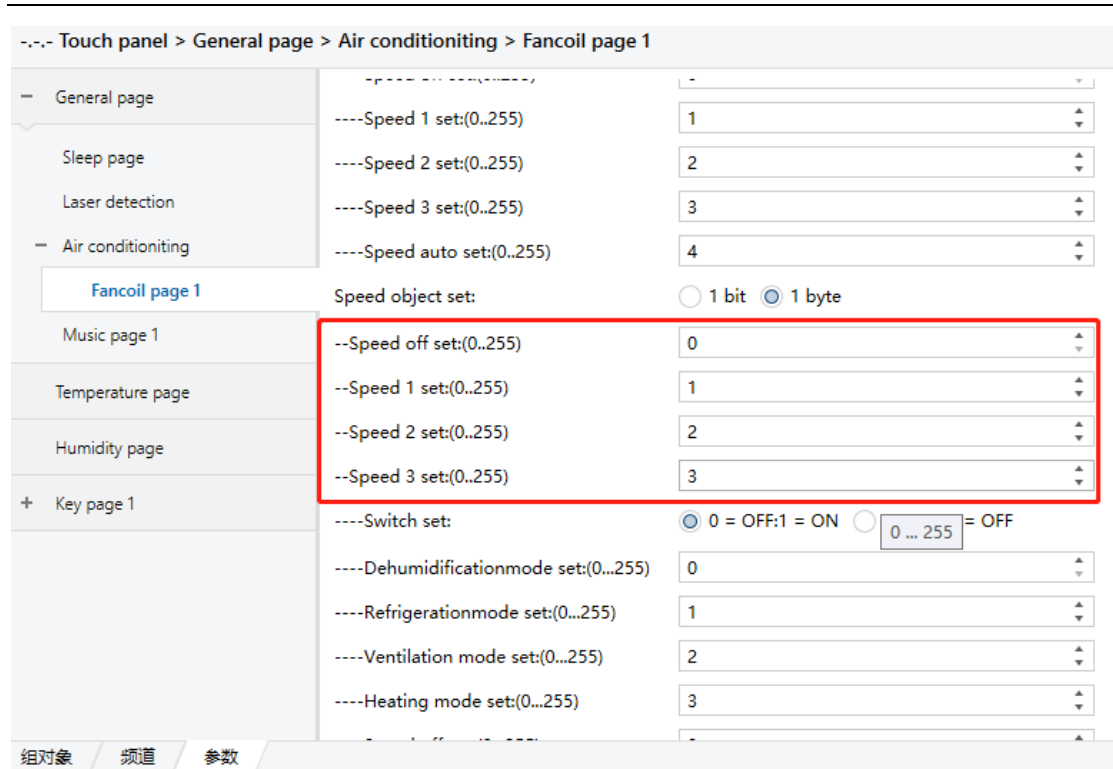
This parameter sets the object type of the wind speed feedback value.

Available options: 1bit

1byte

Select "1bit", the object type of wind speed feedback value is 1bit, and the communication objects are "Speed 1 (feedback)", "Speed 2 (feedback)", "Speed 3 (feedback)";

Select "1byte", the object type of wind speed feedback value is 1byte, and the communication object is "Speed 1byte (control)". Activate 4 parameters, as shown below:



Parameter “Speed off/speed 1/speed 2/speed 3 (0...255)”

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

Range: 0... 255

Fourth group:Feedback (TFT)

Parameter “Switch set”

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

Options: 0 = OFF; 1 = ON

0 = ON; 1 = OFF

Select "0 = OFF; 1 = ON", turn on the air conditioner by tapping the screen, the communication object "Feedback switch, CH1" sends 01, turn off the air conditioner, the communication object "Feedback switch, CH1" sends 00;

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

Parameter “Dehumidification/Refrigeration/Ventilation/Heating mode set (0...255;254=inactive)”

This parameter sets the feedback value of the fan coil working mode (dehumidification / cooling / ventilation / heating). By clicking the screen to modify the mode, the communication object "Feedback mode, CH1" sends the corresponding feedback value to the bus.

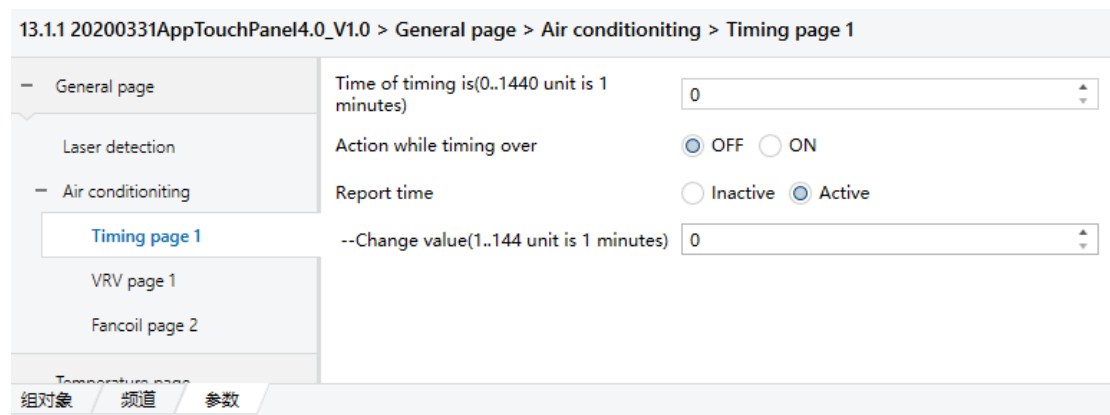
Range: 0... 255, 254 does not work

Parameter “Speed off/speed 1/speed 2/speed 3/speed auto set(0...255;254= inactivate)”

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

Range: 0... 255, 254 does not work

3.2.3.3 Parameter “Timing page 1”



Parameter “Time of timing is(1...144;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 means that the timing is 1 minute.

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

Parameter “Action while timing over”

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

Optional: Off

On

Select "Off", and the air conditioner switch will be off when the timer expires;

Select "On", and the air conditioner switch will be on when the timer expires.

Parameter “Report time”

This parameter sets whether to activate the timing report function.

Optional: Inactive

Active

If you select "activated", activate the timing report function, activate the parameter "change value (1 ... 144 / 1min)", set how long when the timing time changes, then send a message to report the current timing time, the communication object is Timing report ".

3.2.4 Parameter “Temperature page”

13.1.1 20200331AppTouchPanel4.0_V1.0 > Temperature page

<ul style="list-style-type: none"> General page Laser detection Air conditioning <ul style="list-style-type: none"> Timing page 1 VRV page 1 Fancoil page 2 Temperature page Humidity page output function page Key page 1 	<p>Temperature of source <input checked="" type="radio"/> Local <input type="radio"/> External</p> <p>Data type of the temperature value <input checked="" type="radio"/> Integer <input type="radio"/> Floating point</p> <p>Transmit current temperature value Periodic</p> <p>--Cycle is (1...255 unit : 1min) 10</p> <p>Calibration of temperature is Addition 1 ... 255</p> <p>--Calibration value is(0...255 unit is 0.1 centig.) 20</p> <p>Temperature alarm function of is <input type="radio"/> Inactive <input checked="" type="radio"/> Active</p> <p>--Upper limit of temperature is(1...1000 unit is 0.1 centig.) 320</p> <p>--Lower limit of temperature is(1...1000 unit is 0.1 centig.) 300</p> <p>--hysteresis of temperature alarm is (0...255 unit is 0.1 centig.) 5</p> <p>--if current temperature > upper.telegram value is <input checked="" type="radio"/> 0 <input type="radio"/> 1</p> <p>--if current temperature < lower.telegram value is <input type="radio"/> 0 <input checked="" type="radio"/> 1</p>
--	---

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Parameter “Temperature of source”

This parameter sets the detection source of the ambient temperature.

Optional: Local

External

Select "local" to indicate that the ambient temperature detection source is the temperature and humidity sensor that comes with the panel;

Selecting "External" means that the source of the ambient temperature detection comes from the outside, and is accessed through the communication object "External temperature".

Parameter “data type of the temperature value”

Set the data type of the ambient temperature value.

Optional: Integer

Floating point

Select "integer" to indicate that the ambient temperature value is integer data;

Select "Floating point" to indicate that the ambient temperature value is floating point data, and the locally collected ambient temperature data type is floating point type.

Parameter “transmit current temperature value”

Optional: None

After changed

Periodic

Selecting "After changed" means that the current temperature value is sent to the bus when the current temperature changes. As for how much the current temperature value is reported, it is set by the parameter "—change value (1 ... 100 unit: 0.1centig.)".

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

Parameter “Calibration of temperature is”

Used to set whether to activate the function of calibrating the current temperature.

Optional: Inactive

Addition

Subduction

Select "Addition", the direction of current temperature calibration is increasing; select "Subduction", the direction of current temperature calibration is subtracting, the calibration value is set by the parameter "Calibration value is (0 ... 255, unit is 0.1 centig)"

Parameter “temperature alarm function of is”

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

Optional: Inactive

Active

Select "Active" to activate the temperature alarm function, there are 5 relevant parameters, see below:

Parameter “--Upper limit of temperature is(1...1000;unit is 0.1centing)”

This parameter is used to set the upper limit of the temperature alarm. You can also modify the upper limit of the temperature through 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 0.1centing)”

This parameter is used to set the lower limit value of the temperature alarm, and the lower limit value of the temperature can also be modified 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 0.1centing)”

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

Range: 0... 255, unit: 0.1 °C

Parameter “If current temperature>upper, telegram value is”

This parameter is used to set the data sent if the current temperature is greater than the set upper temperature limit message.

Optional: "0"

"1"

Select "0", if the current temperature is greater than the set upper temperature limit, the data sent by the communication object "Temperature alarm status" will send 00.

Select "1", if the current temperature is greater than the set temperature upper limit message, send 01 through the communication object "Temperature alarm status".

Parameter “If current temperature<lower, telegram value is”

This parameter is used to set the data sent if the current temperature is lower than the set temperature lower limit message.

Optional: "0"

"1"

Select "0", if the current temperature is less than the set temperature lower limit message, the data sent by the communication object "Temperature alarm status" send 00.

Select "1", if the current temperature is lower than the set temperature lower limit message, the data sent by the communication object "Temperature alarm status" send 01.

Note:

1. The communication object "temp.alarm activate" is whether to activate the temperature alarm function. Writing 00 through the bus means turning off the temperature alarm function, and writing 01 means turning on the temperature alarm function.

2. As shown in the red box above, first write 01 to the temperature alarm function through the communication object "temp.alarm activate". When the current temperature is greater than the set upper temperature limit of 32.5 degrees (the set upper temperature limit Hysteresis 0.5 needs to be added, and the set lower temperature limit needs to be minus hysteresis 0.5), the communication object "Temperature alarm status" sends 00 (when the temperature is lower than 31.5 °C and then greater than 32.5 °C, the communication object "Temperature alarm status" is still 00 will be sent; when the temperature drops and is between 32 °C and 31.5 °C, again greater than 32.5 °C, the communication object “Temperature alarm status” will 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 increases 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).

3.2.6 Parameter “Humidity page”

13.1.1 20200331AppTouchPanel4.0_V1.0 > Humidity page

General page	Humidity of source	<input checked="" type="radio"/> Local <input type="radio"/> External
Laser detection	Data type of the humidity value	<input checked="" type="radio"/> Integer <input type="radio"/> Floating point
Air conditioning	Transmit current humidity value	None
Timing page 1	Calibration of humidity is	Inactive
VRV page 1	Humidity alarm function of is	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Fancoil page 2	--Upper limit of humidity is(1...1000 unit is 0.1%)	700
Temperature page	--Lower limit of humidity is(1...1000 unit is 0.1%)	500
Humidity page	--hysteresis of humidity alarm is(0...255 unit is 0.1%)	50
output function page	--if current humidity > upper.telegram value is	<input type="radio"/> 0 <input checked="" type="radio"/> 1
Key page 1	--if current humidity < lower.telegram value is	<input checked="" type="radio"/> 0 <input type="radio"/> 1

组对象 频道 参数

Parameter “Humidity of source”

This parameter sets the source of ambient humidity detection.

Optional: Local

External

Select "local" to indicate that the source of ambient humidity detection is the temperature and humidity sensor that comes with the panel;

Select "External" to indicate that the source of environmental humidity detection comes from the outside, and connect through the communication object "External humidity".

Parameter “data type of the Humidity value”

Set the data type of the ambient humidity value.

Optional: Integer

Floating point

Select "integer" to indicate that the ambient humidity value is integer data;

Select "Floating point" to indicate that the ambient humidity value is floating point data, and the local humidity data type collected is floating point.

Parameter “transmit current humidity value”

Optional: None

After Changed

Periodic

Select "After changed" to send the current humidity value to the bus when the humidity changes. As for how much the current humidity value is reported, it is set by the parameter "—change value (1 ... 100 unit: 0.1centig.)".

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

Parameter “Calibration of humidity is”

Used to set whether to activate the function of calibrating the humidity value.

Optional: Inactive

Addition

Subduction

Select "Addition", the direction of calibration is to increase; select "Subduction", the direction of calibration is to subtract, the calibration value is set by the parameter "Calibration value is (0 ... 255, unit is 0.1 centig)"

Parameter “Humidity alarm function of is”

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

Optional: Inactive

Active

Select "Active" to activate the humidity alarm function, there are 5 relevant parameters, see below:

Parameter “--Upper limit of Humidity is(1...1000;unit is 0.1centing)”

This parameter is used to set the upper limit value of the humidity alarm, and the upper limit value of the humidity can also be modified through 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 0.1centing)”

This parameter is used to set the lower limit value of the humidity alarm, and the lower limit value of the humidity can also be modified 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 0.1centing)”

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

Range: 0... 255, unit: 0.1 °C

Parameter “If current humidity>upper, telegram value is”

This parameter is used to set the data sent if the current humidity is greater than the set humidity upper limit message.

Optional: "0"

"1"

Select "0", if the current humidity is greater than the set humidity upper limit, the communication object "humidity alarm status" will send 00;

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

Parameter “If current humidity<lower, telegram value is”

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

Optional: "0"

"1"

Select "0", if the current humidity is lower than the set humidity lower limit, the communication object "humidity alarm status" will send 00;

Select "1", if the current humidity is lower than the set humidity lower limit, the communication object "humidity alarm status" will send 01.

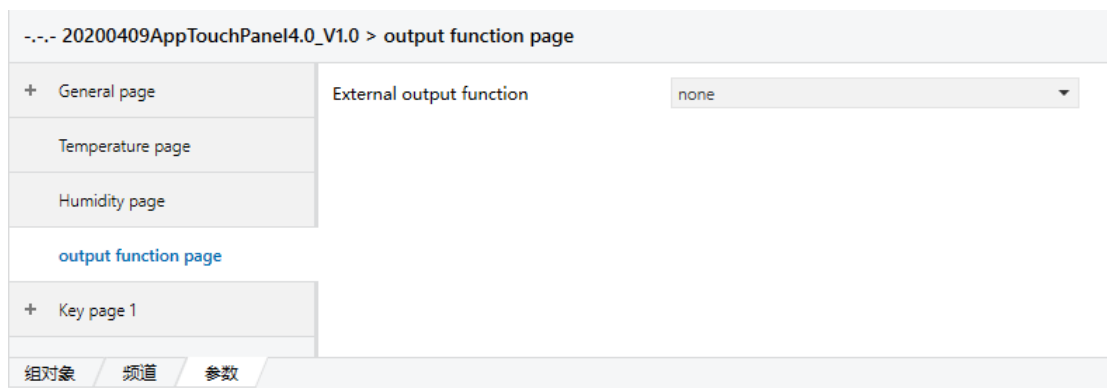
Note:

1. The communication object "humidity alarm activate" is whether to activate the humidity alarm function. Writing 00 through the bus means turning off the humidity alarm function, and writing 01 means turning on the humidity alarm function.

2. As shown in the figure above, write 01 to the humidity object via the communication object

"Humidity alarm activate" to start the humidity alarm function. When the current humidity is greater than the set humidity upper limit value of 75% (the set humidity upper limit value needs to be added with a hysteresis of 5% , The set lower limit of humidity needs to be deducted 5%), the communication object "Humidity alarm status" sends 01; when the current humidity is less than the set humidity lower limit value of 45%, the communication object "Humidity alarm status" sends 00 .

3.3 Parameter “output function page”



Parameter “external output function”

This parameter is used to set the external output function.

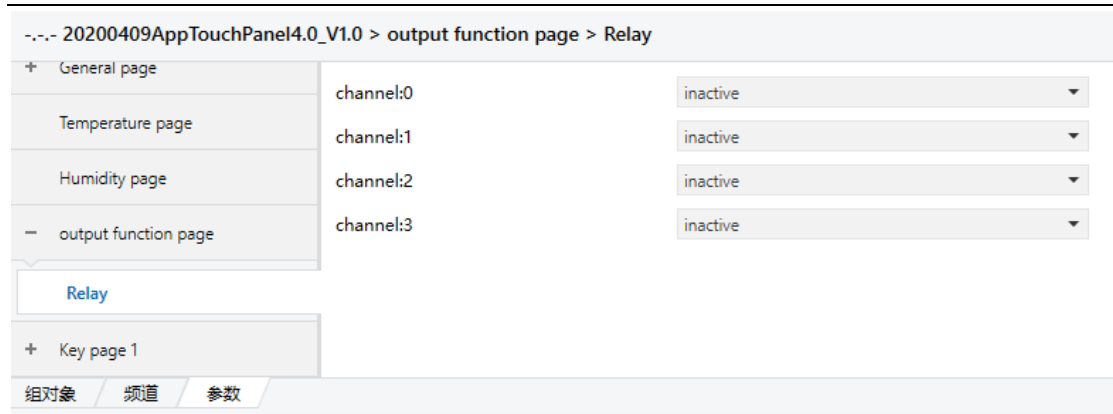
Optional: None

Relay function

Dimming function

3.3.1 Parameter “Relay”

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



Parameter “channel x”

This parameter is used to set the function of the relay channel.

Optional: Inactive

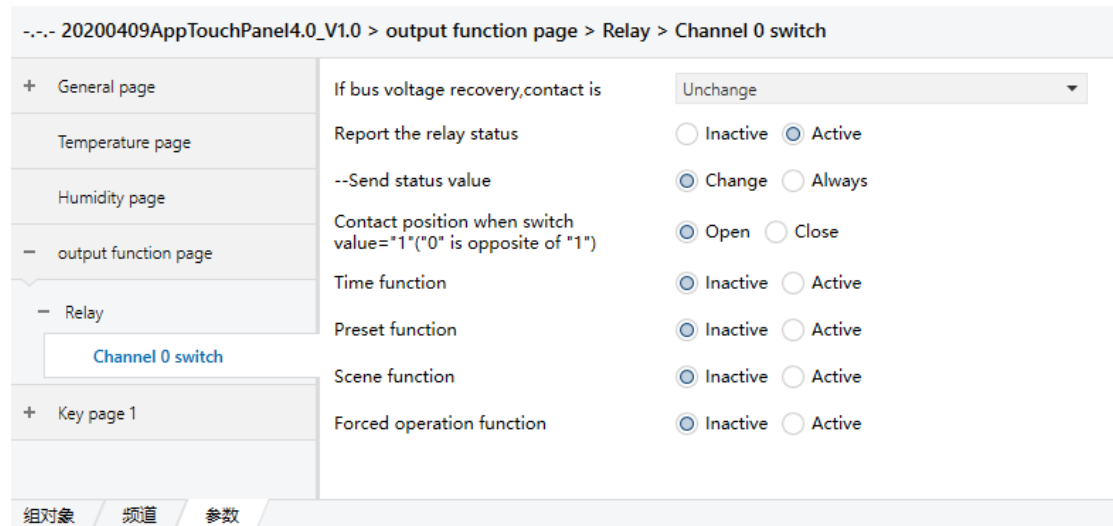
Switch

Curtain

Dry contact

3.3.1.1 Parameter “channel x switch”

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



Parameter “If bus voltage recovery, contact is”

This parameter sets the contact status of the switch when the bus returns to power.

Optional: Unchanged

Open

Close

As before bus voltage fail

If "Unchanged" is selected, the relay contacts of this channel will not change when the bus is powered on; (to be initialized)

If "Open" is selected, the relay contact of this channel will be opened when the bus is powered on, and the channel will be closed (OFF);

If "Close" is selected, the relay contact of this channel is closed when the bus is powered on, and the channel is opened (ON);

If "As before bus voltage fail" is selected, the relay contacts of this channel will return to the state before power off when the bus is powered on.

Parameter "Report the relay status"

This parameter sets whether to enable the function of reporting relay status.

Available options: Inactive

Active

Select "Active" to enable reporting the status of the relay and activate the parameter "send status value".

Parameter "--Send status value"

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

Available options: Change

Always

Selecting Change means that the switch state value will be issued only when the state of the relay contact changes;

Selecting Always means that the switch status value is issued regardless of whether the relay contact status changes.

Parameter "contact position when switch value='1'('0' is opposite of '1')"

This parameter sets the position of the contact when the value of the communication object "switch" message is 1.

Optional: Open

Close

Select "Open" to indicate that the contact opens when the communication object "switch" message value is 1, and the contact closes when it is 0;

Selecting "Close" means 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 at 1 contact closed, 0 contact opened, regardless of the parameter "contact position when switch value = '1' ('0' is opposite of '1')";

Parameter "Time function"

This parameter sets whether to enable the timing function.

Available options: Inactive

Active

Select Inactive to disable the timing function;

Select Active to enable the timing function. For details, please refer to the window below 3.3.1.1.1.

Parameter “Preset function”

This parameter sets whether to enable the preset function.

Available options: Inactive

Active

Select Inactive to disable the preset function;

Select Active to enable the preset function. For details, please refer to the window below 3.3.1.1.2.

Parameter “Scene function”

This parameter sets whether to enable the scene function.

Available options: Inactive

Active

Select Inactive to disable the scene function;

Select Active to enable the scene function. For details, please refer to the following window 3.3.1.1.3.

Parameter “Forced operation function”

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

Available options: Inactive

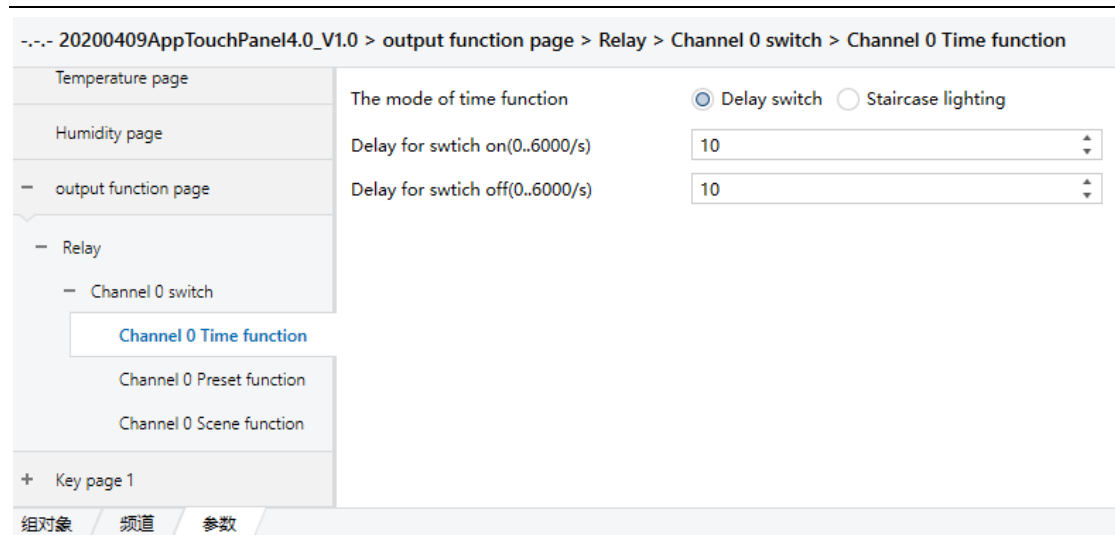
Active

Select Inactive to disable the forced operation function;

Select Active to enable the forced operation function.

3.3.1.1.1 Parameter “channel x time function”

This parameter is displayed when "active" is selected for "Time function" under "channel x switch". As shown below.



Parameter “The mode of time function”

This parameter sets the mode of the timing function.

Optional: Delay Switch

Staircase lighting

Select Delay switch to indicate that the mode of the timing function is a delay switch. For parameters, see A. Delay switch below;

Select Staircase lighting to indicate the mode of the timing function is staircase lighting. For parameters, see B. Staircase lighting below.

A. Delay switch

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

This parameter sets the delay time for opening the switch.

Range: 0 ~ 6000, unit: second

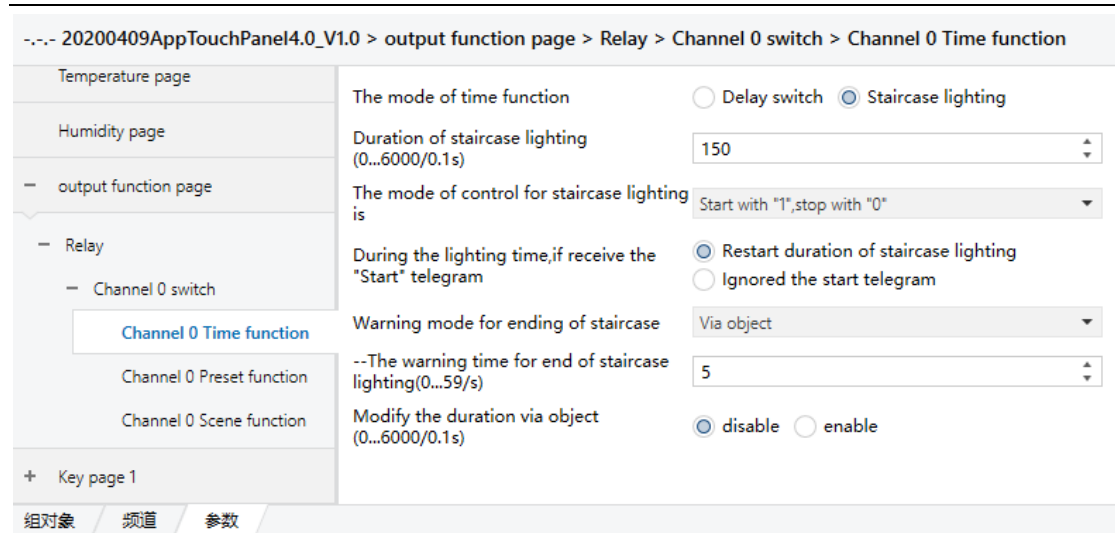
Parameter “Delay for switch off (0...6000/s)”

This parameter sets the delay time for turning off the switch.

Range: 0 ~ 6000, unit: second

B. Staircase lighting

It is displayed when the parameter "The mode of time function" selects "Staircase lighting". The parameters are shown in the figure below.



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

This parameter sets the duration of staircase lighting.

Range: 0 ~ 6000, unit: 0.1 second

Parameter “The mode of control for staircase lighting is”

This parameter setting controls the staircase light mode.

Optional: 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 the communication object "output of staircase lighting" receives a logic value of 01 when the staircase light is on, and when the reception logic value is 00 the staircase light is off;

Select Start with ‘1’, no active with ‘0’ means that the communication object “output of staircase lighting” receives the logic value of 01 when the staircase light is on, and does not do anything when receiving the logic value of 00;

Select Start with ‘0/1’, can’t be stop means that when the communication object “output of staircase lighting” receives a logical value of 00 or 01, the staircase light is on, no matter what other value it receives, it cannot be extinguished.

Parameter “During the lighting time, if receive ‘Start’ telegram”

This parameter sets the action when a 'start' command is received (that is, the communication object "switch" receives 1) during the lighting of the staircase light.

Available options: Restart duration of staircase lighting

Ignored the start telegram

Select Restart duration of staircase lighting to restart calculation of the duration of staircase lighting;

Select Ignored the start telegram to ignore the ‘start’ command.

Parameter “Warning mode for ending of staircase”

This parameter sets the warning mode for ending staircase lighting.

Available options: None

Via object

Flashing the output with ON / OFF

Via object and flashing the output

Two types of warnings are provided:

---- Pre-alarm through communication object: set the value of "Warning of staircase" of communication object to "1" when starting the early warning, and send it to the bus.

---- Warning by flashing light: control output flashes (short switch), the interval between switches is 3 seconds

These two methods can be used independently or mixed. When the parameter selects "via object", it is the warning through the communication object; select "flashing the output with OFF / ON" is the warning through the light flash;

Selecting "via object & flashing the output" is a mixed use warning.

Parameter “The warning time for end of staircase lighting (0...59s)”

This parameter is visible after selecting an early warning mode and is used to set the length of early warning.

Range: 0 ~ 59, unit: second

Note: The warning time here should be shorter than the duration of the staircase lighting. If it is greater than the staircase lighting is turned off before the warning, then the warning function will not work.

Parameter “Modify the duration via object (0...6000/0.1s)”

This parameter sets whether to modify the duration of staircase lighting through the bus.

Optional: Disable

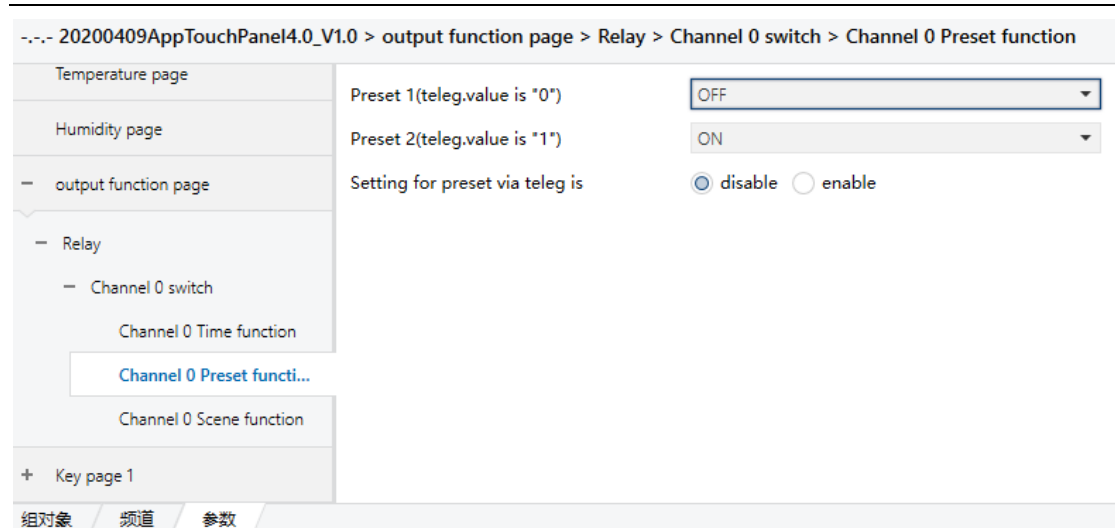
Enable

When "enable" is selected, a 2-byte communication object "Staircase duration" will be activated, and the staircase lighting time can be modified by this communication object;

If "disable" is selected, the lighting time of the stairs cannot be modified via the bus.

3.3.1.1.2 Parameter “channel x Preset function”

This parameter is displayed when "active" is selected for "Preset function" under "channel x switch". As shown below.



The preset value function is used to realize the preset light function. The preset value can be called, and the current switch state can also be saved as a new preset value through the bus.

Two communication objects are used to recall and save preset values. There are two preset values (preset 1 and preset 2) for selection. The value "0" of the communication object corresponds to "preset 1", and the value "1" corresponds to "preset 2".

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

This parameter sets the preset value 1.

Optional: None

- ON
- Off

Selecting none means that when the communication object calls the preset value 1, it has no effect on the channel status;

Selecting ON means that when the communication object calls the preset value 1, the channel status is open;

Selecting Off means 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 preset value 2.

Available options: OFF

- ON
- Last status of contact
- Setting of preset 1

Selecting ON means that when the communication object calls the preset value 1, the channel status is open;

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

The function of selecting "Last status of contact" is: when calling preset value 2 (preset 2), the relay contact of the channel is restored to the previous state (the state before the operation to the

current state). For example, when a video clip is played in a conference room, the light needs to be changed to the video playback mode. At this time, the scene mode to start the video playback is called. When the video playback is completed, the preset value 2 (preset 2) can be called again. The light returns to the mode before playing the video;

The function of selecting “Setting of preset 1” is to restore the channel status to the state set by the preset 1 parameter, which is useful when modifying the preset value via the bus. For example, the preset value of preset value 1 (preset 1) is modified through the bus, and then the switch state can be restored to the state before modification of preset value 1 (preset 1) by calling preset value 2 (preset 2).

Parameter “Setting for preset via teleg is”

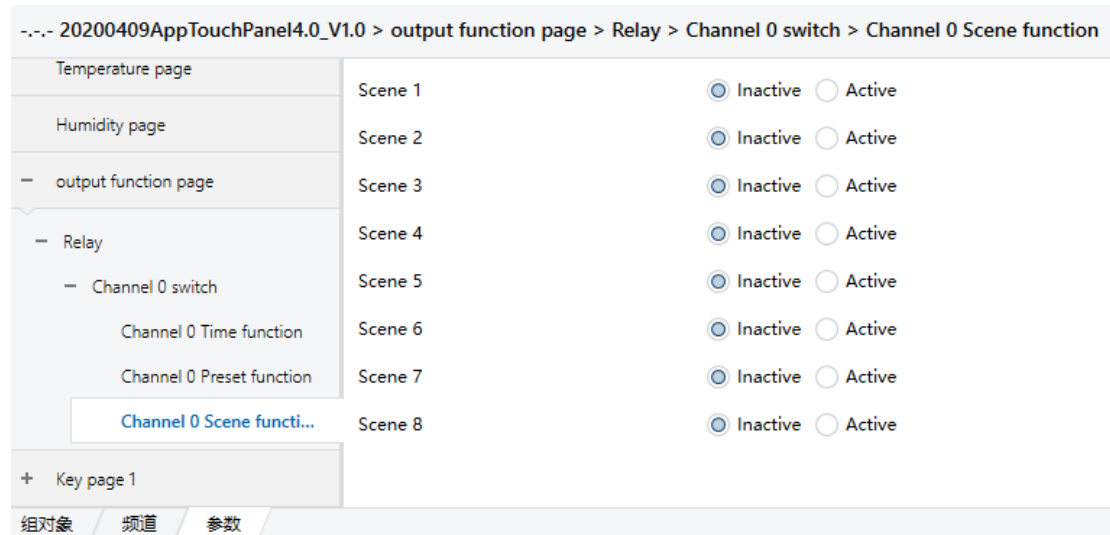
This parameter is used to set whether to allow the preset value to be modified via the bus. When "enable" is selected, the preset value can be modified through the bus. The communication object "Set preset1 / 2" is used to save the current switching state of the channel as the new preset value. When it receives the message "0", the current switch state value is saved as a new preset 1 (preset 1); when it receives the message "1", the current switch state value is saved as a new Preset 2 (preset 2).

Available options: Enable
 Disable

Note: When the bus is powered off, the new preset values will not be lost.

3.3.1.1.3 Parameter “channel x Scene function”

This parameter is displayed when "active" is selected for "Scene function" under "channel x switch". As shown below.



There are eight scene selections in this window, the following uses X to represent the number of scenes X = 1 ... 8

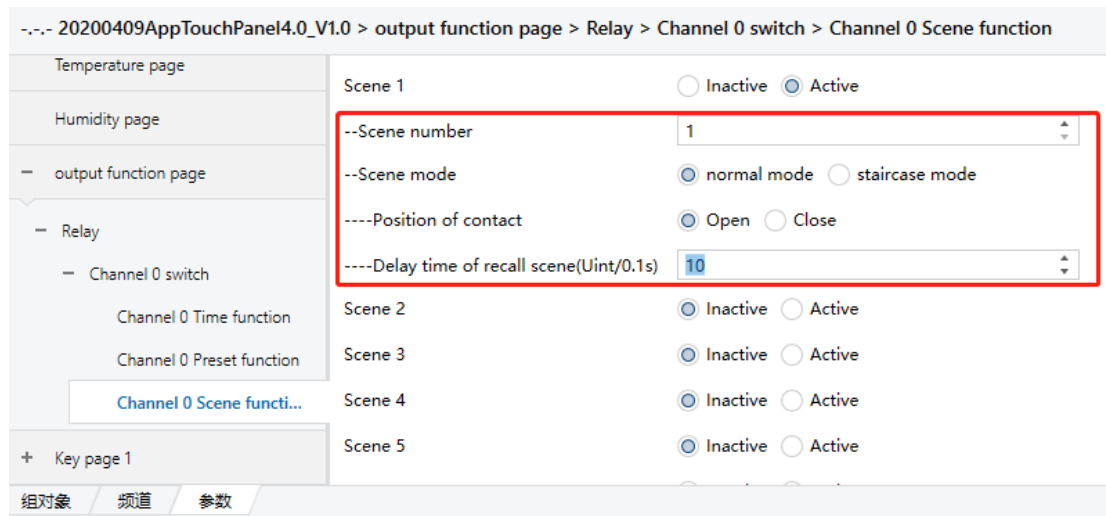
Parameter “Scene X”

This parameter sets whether to enable scene X

Available options: Inactive

Active

Select Active to enable Scene 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 you want to call the scene number must meet the conditions (scene number = enter the value of the call + 1).

Parameter “Scene mode”

This parameter sets the scene mode.

Available options: Normal mode

Staircase mode

Selecting Normal mode means that the relay delayed opening and closing mode in the normal state is called. For parameters, see A. Normal_mode;

Select Staircase mode to indicate the continuous lighting mode of staircase lights. For parameters, see D. Staircase mode.

A. Normal mode

Parameter “Position of contact”

This parameter sets the status of the relay contacts in scenario X.

Optional: Open

Close

Select the “Open” contact to open, the channel is closed;

Select the “Close” contact to close and the channel to open.

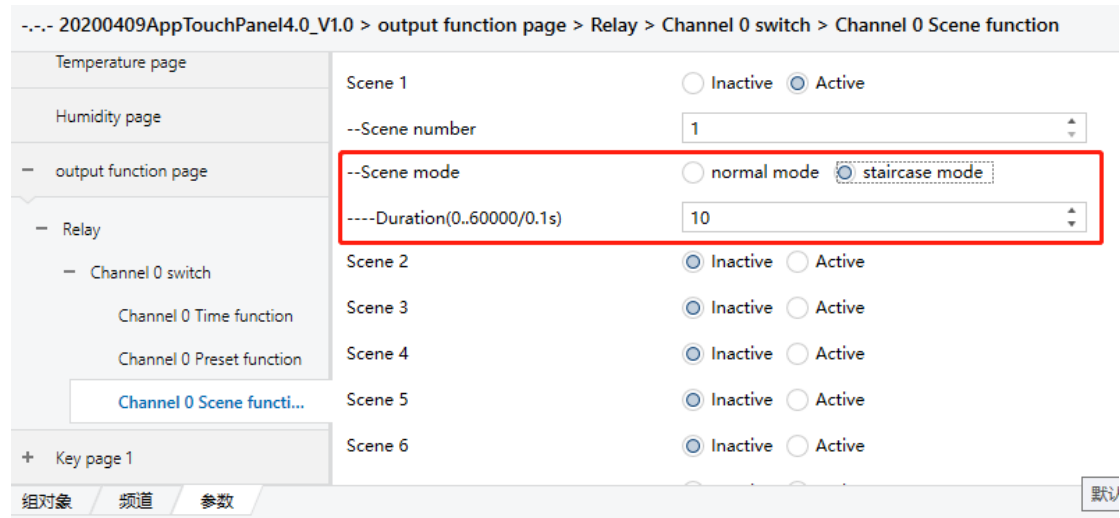
Parameter “Delay time of recall scene”

This parameter sets the delay time of scene X.

Range: 0 ... 65535, unit: 0.1 second

D. Staircase mode

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



Parameter “Duration (0...60000/0.1s)”

This parameter sets the continuous lighting time of the scene X in the staircase lighting mode.

Range: 0 ... 60000, unit: 0.1 second

3.3.1.2 Parameter “channel x Curtain”

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

Note: When the curtain function is turned on, channels 1 and 2 must be selected at the same time, which means curtain channel 1 (the same applies to channels 3 and 4);

--- 20200409AppTouchPanel4.0_V1.0 > output function page > Relay > Channel 0 Curtain

+ General page	Curtain control mode	<input checked="" type="radio"/> normal control <input type="radio"/> dry contact control
Temperature page	Reaction on bus voltage recovery	no reaction
Humidity page	Pause on change in direction(1..255/0.1s)	10
- output function page	Report position("0"=top,"255"=bottom)	<input checked="" type="radio"/> NO <input type="radio"/> YES
- Relay	Operating mode	<input checked="" type="radio"/> blind <input type="radio"/> shutter
Channel 0 Curtain	Up/Down value	<input checked="" type="radio"/> "0"= up,"1"= down <input type="radio"/> "0"= down,"1"= up
- Key page 1	Open/Close value	<input checked="" type="radio"/> "0"=open,"1"= close <input type="radio"/> "1"=open,"0"= close
Key page block 1	Duration to turn slat from 0%-100% (5...255/0.1s)	20
	Duration of slat adjustment (5...255/0.1s)	5
	Position of slat after arriving on lower end position(0%...100%/255"=inactive)	255
	Scene function	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
	Total travel time(1...1000/1s)	10

组对象 频道 参数

Parameter “Reaction on bus voltage recovery”

This parameter sets the operation state of the curtain after the bus restores power.

Options: No reaction

Up

Down

Stop

Select "No reaction" to indicate that the curtain does not react when the bus is powered on

Select "Up" to indicate that the curtain moves upwards and moves to the top;

Select "Down" to indicate that the curtain moves downwards and moves to the bottom;

Select "Stop" to stop the curtain movement.

Parameter “Pause on change in direction (1...255/0.1s)”

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

Range: 1... 255, unit: 0.1 second

Parameter “Report position (“0” =top, “255” =bottom)”

This parameter sets whether to report the position of the curtain. Among them, 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

Select "Blind" to indicate that the curtain operating mode is the bladed mode, see A.blind description;

Select "Shutter" to indicate that the curtain operating mode is the bladeless mode, see B.shutter description.

A. blind

Parameter “Up/Down value”

Optional: "0" = up, "1" = down

"0" = down, "1" = up

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

Selecting "" 0 "= down," 1 "= up" means that the communication object "Move curtain up / down" sends 00 curtains down to the bottom and 01 curtains up to the top.

Parameter “Open/Close value”

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

"0" = close, "1" = open

Selecting "0" = open, "1" = close means that the communication object "Adjustment stop / up / down" fully opens the blind blade when receiving message 0, and the angle value is 0%, and completely closes the blind blade when receiving message 1. , The angle value is 100%;

Choose "0" = close, "1" = open, the opposite.

Parameter “Duration to turn slat from 0%-100% (5...255/0.1s)”

This parameter sets the duration from which the curtain angle runs 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 for 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)" is set to 20, and the parameter "Duration of salt adjustment (5 ... 255 / 0.1s)" is set 5. The total adjustment time of the angle is 2s, which is adjusted in 4 steps. The adjustment time of each step is 0.5s, and each step is adjusted by 25%. The communication object of the 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 angle position when the curtain height runs to the bottom (100%).

Range: 0% ... 100%, 255 means no value is enabled.

Parameter “Total travel time (1...6000/1s)”

This parameter sets the whole time (height + angle) of curtain running.

Range: 1... 1000, unit: second

Note: 1. Curtain height full time = total full time-angle full time;

2. When the height of the curtain moves to the top (0%), the angle must be 0%;

3. When the curtain executes the upward movement instruction, first move the angle to 0%, then move the height to the specified position, and then restore the angle; when execute the downward movement instruction, first move the angle to 100%, and then move the height to Specify the position, and then restore the angle;

4. When the default curtain is adjusted in the whole process, the time is the total time plus 5% of the whole time, for example, the whole time is 10s, $10 + 10 * 5\% = 10.5s$

Parameter “Scene function”

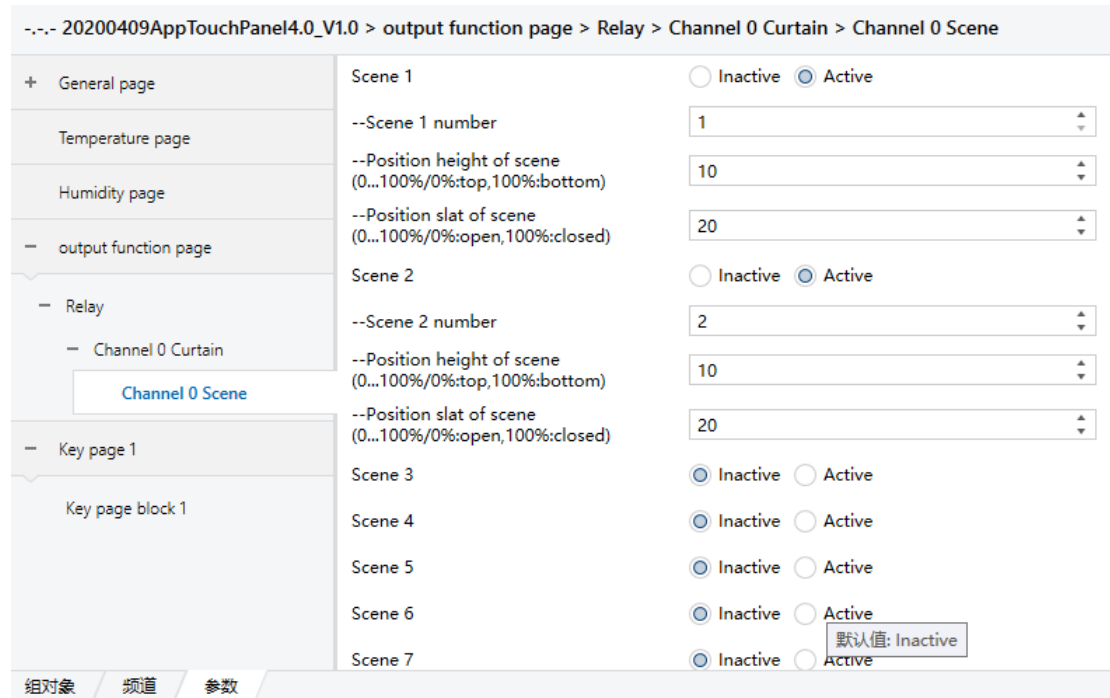
This parameter sets whether to activate the curtain scene function.

Available options: Inactive

Active

Select "inactive" to deactivate the scene function

Select "active" to activate the scene function. For the parameter interface, refer to the following figure:



There are eight scene selections in this window, the following uses X to represent the number of scenes X = 1 ... 8

Parameter “Scene X”

This parameter sets whether to enable scene X.

Available options: Inactive

Active

Select Inactive to disable scenario X;

Select Active to enable Scene 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.

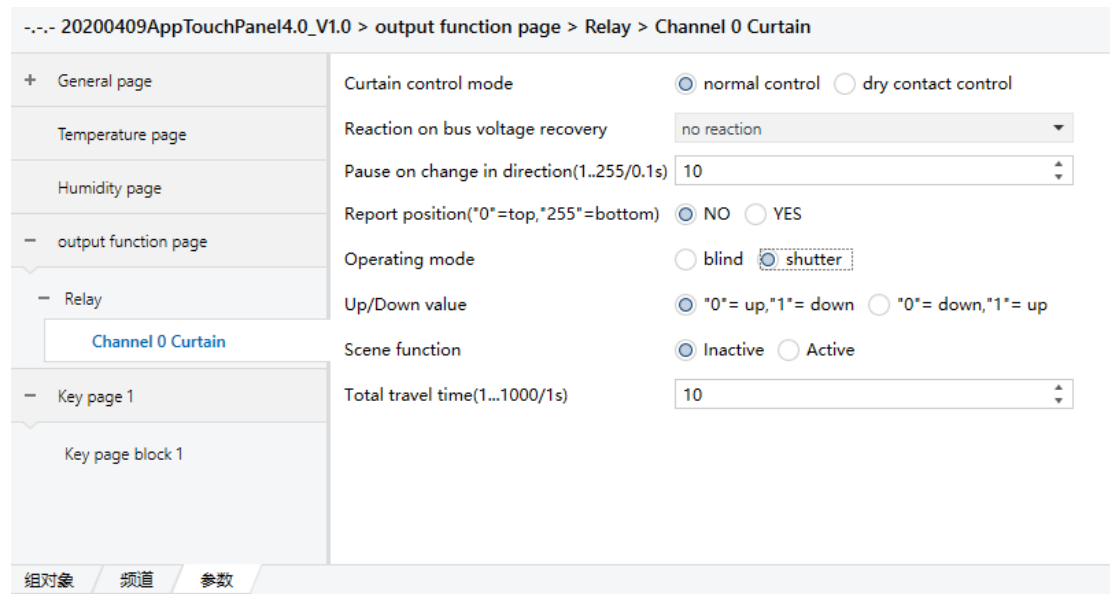
Range: 0 ... 100%, 0% means the height moves to the top, 100% means the height moves to the bottom.

Parameter “Position salt of scene (0...100%/0%: open, 100%: colsed)”

This parameter sets the angular position of scene X.

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

B. shutter



Parameter “Up/Down value”

Optional: "0" = up, "1" = down

"0" = down, "1" = up

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

Selecting "" 0 "= down," 1 "= up" means that the communication object "Move curtain up / down" sends 00 curtains down to the bottom and 01 curtains up to the top.

Parameter “Total travel time (1...1000/1s)”

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

Range: 1... 1000, unit: second

Parameter “Scene function”

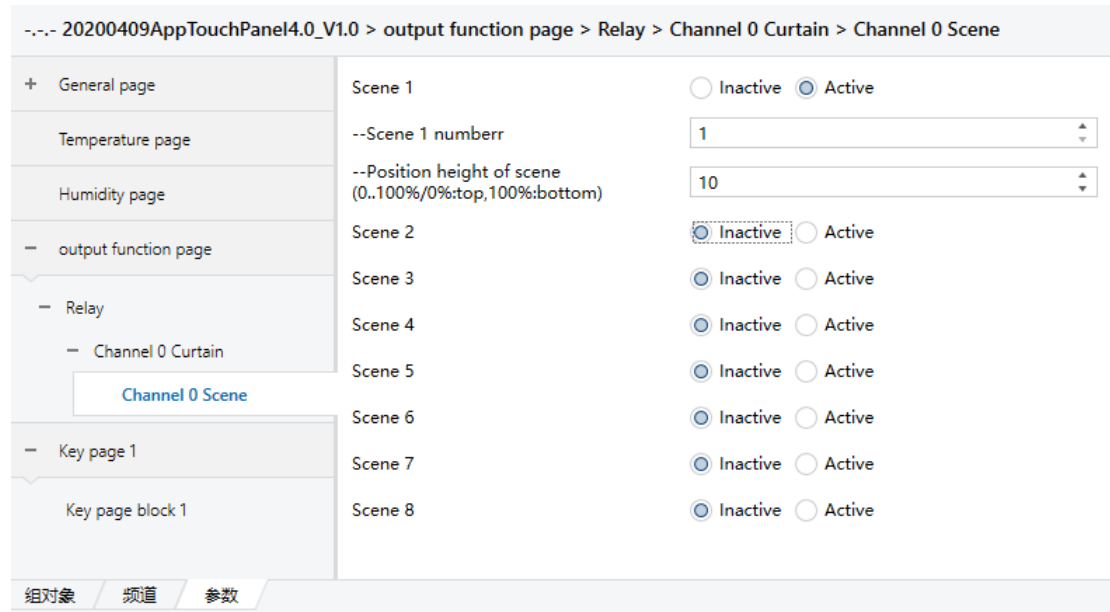
This parameter sets whether to activate the curtain scene function.

Available options: Inactive

Active

Select "Inactive" to deactivate the scene function

Select "Active" to activate the scene function. For the parameter interface, refer to the following figure:



There are eight scene selections in this window, the following uses X to represent the number of scenes X = 1 ... 8

Parameter “Scene X”

This parameter sets whether to enable scene X.

Available options: Inactive

Active

Select Inactive to disable scenario X;

Select Active to enable Scene X.

Parameter “Scene X number”

This parameter sets the scene number of scene X.

Range: 1 ... 64

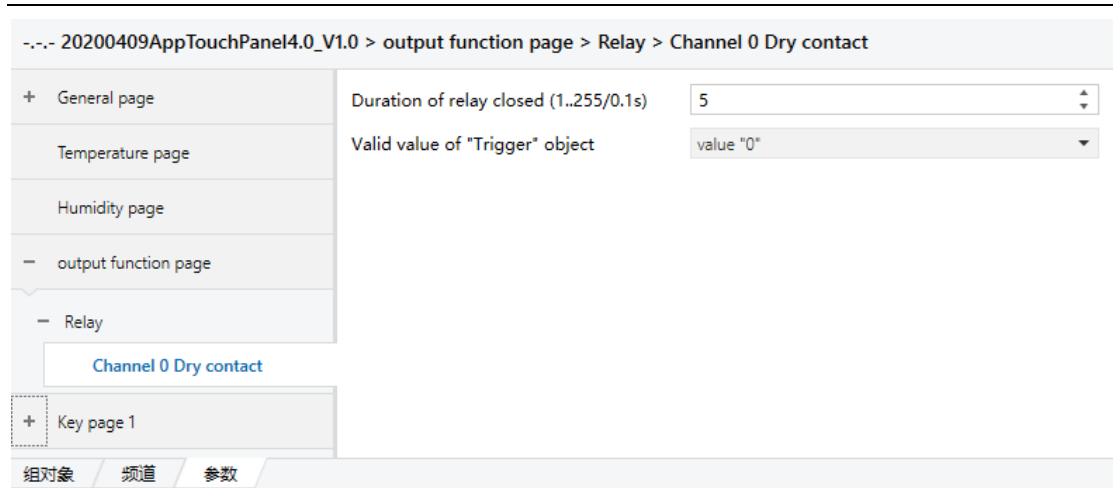
Parameter “Position height of scene (0...100%/0%: top, 100%: bottom)”

This parameter sets the height position of scene X.

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

3.3.1.3 Parameter “channel x Dry contact”

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



Parameter “Duration of relay closed (1...255/0.1s)”

This parameter sets the duration of the relay off.

Range: 1... 255, unit: 0.1s

Parameter “Valid value of “Trigger” object”

This parameter sets the effective value of the trigger relay.

Optional: Value "0"

Value "1"

Value "0/1"

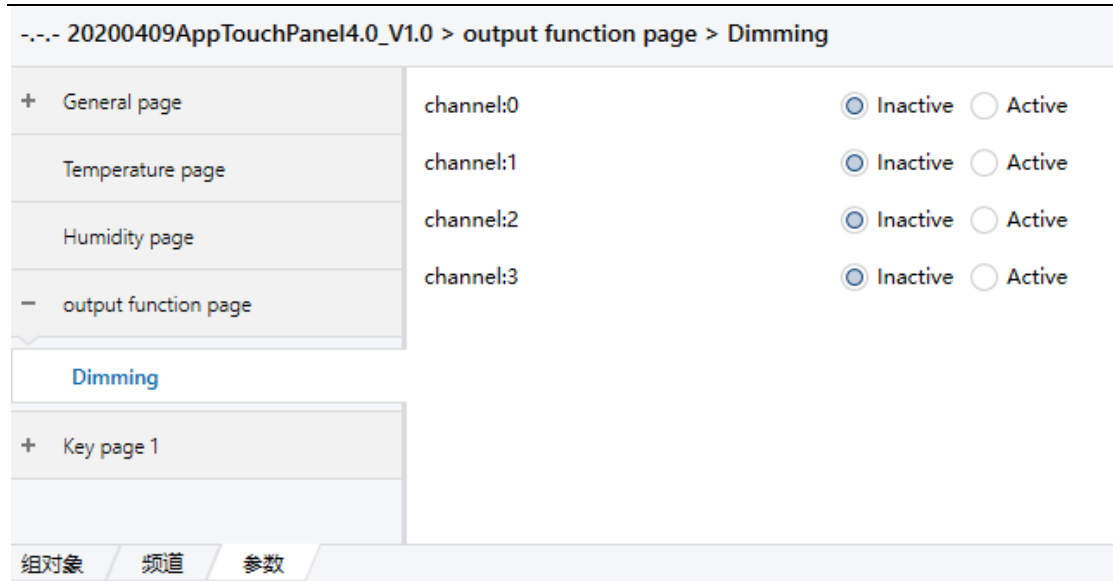
Selecting "value" 0 "" means that the effective value of the trigger relay is 00.

Selecting "value" 0 "" means that the effective value of the trigger relay is 01.

Selecting "value" 0/1 "" means that the effective value of the trigger relay is 00/01.

3.3.2 Parameter “Dimming”

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



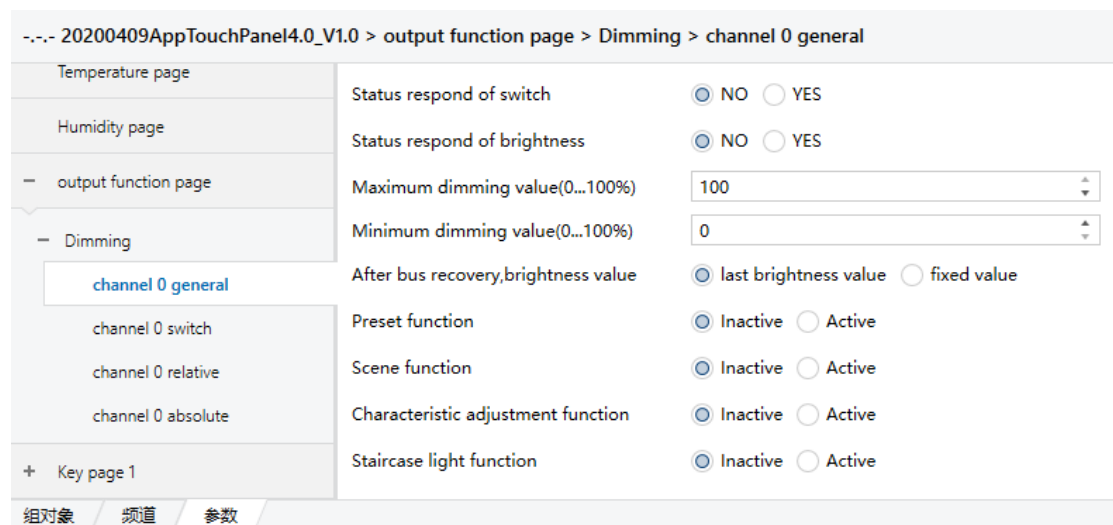
Parameter “channel x”

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

Optional: Inactive

Active

3.3.2.1 Parameter “channel x general”



Parameter “Status responded of switch”

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

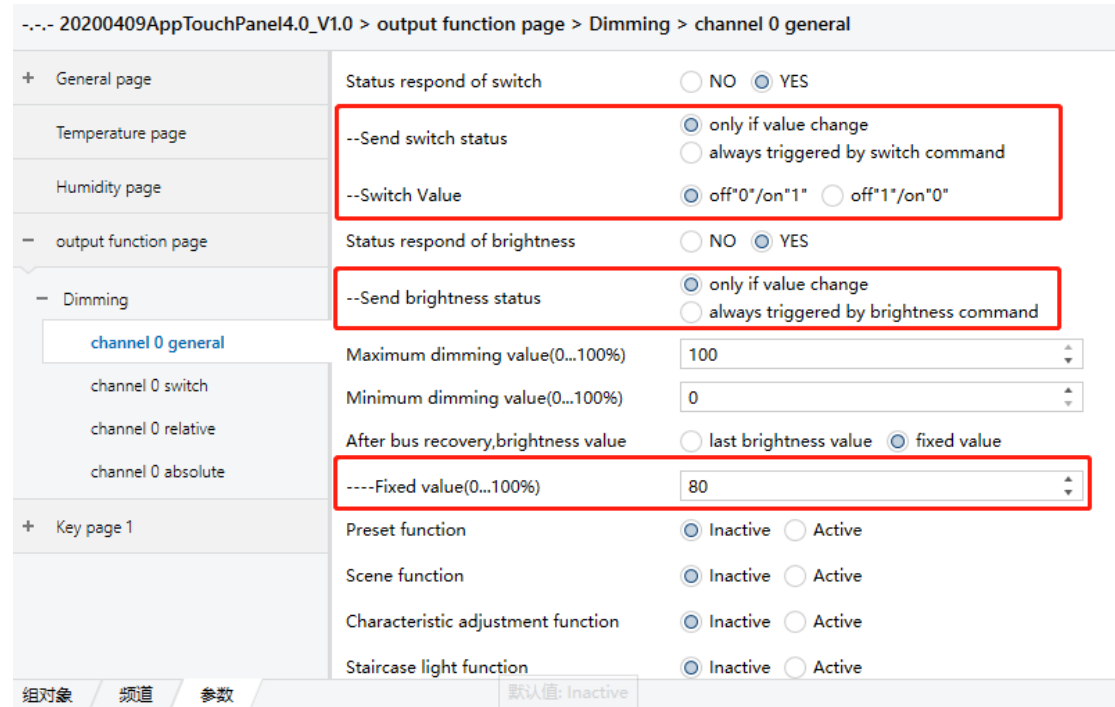
Optional: NO

YES

Select "NO", the status of the switch is not sent;

Select "YES" to send the status of the switch.

The interface of parameter setting is shown in the figure:



Parameter “Send switch status”

This parameter sets the way to send the status of the switch.

Optional: Only if value change

Always triggered by switch command

Select "Only if value change", set the switch state change will be issued;

Select "Always triggered by switch command", as long as the trigger switch sends the current switch status to the bus.

Parameter “Switch Value”

This parameter sets the state value of the switch.

Available options: Off "0" / on "1"

Off "1" / on "0"

Select Off "0" / on "1", the status value of the switch is 00 for closing the switch, 01 for opening the switch;

Select Off "1" / on "0", the state value of the switch is 00 for opening the switch, 01 for closing the switch.

Parameter “Status response of brightness”

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

Optional: NO

YES

Select "NO", do not send the brightness value;

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

Parameter “Send brightness status”

This parameter sets the way to send the brightness value.

Optional: Only if value change

Always triggered by brightness command

Select "only if value change", and set the way to send the brightness value as the brightness value is changed and sent out.

Select "always triggered by brightness command", as long as the brightness command is triggered, the current brightness value is sent to the bus.

Parameter “Maximum dimming value (0...100%)”

This parameter sets the maximum dimming value.

Range: 0... 100%

Parameter “Minimum dimming value (0...100%)”

This parameter sets the minimum dimming value.

Range: 0... 100%

Note: The decimal numbers corresponding to 0... 100% are shown in the figure below

```
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};
```

Parameter “After bus recovery, brightness value”

This parameter sets the brightness value after bus recovery.

Optional: Last brightness value

Fixed value

Select "Last brightness value", the brightness value after bus recovery is the last brightness value;

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

Parameter “Preset function”

Whether the parameter setting activates the preset function, select “active” to activate the preset function. For the introduction, see “3.3.2.1.1 Parameter setting window channel x preset”.

Parameter “Scene function”

Whether this parameter sets whether to activate the scene function, select "active" to activate this function, and the introduction can be seen in "3.3.2.1.2 Parameter setting window channel x scene"

Parameter “characteristic adjustment function”

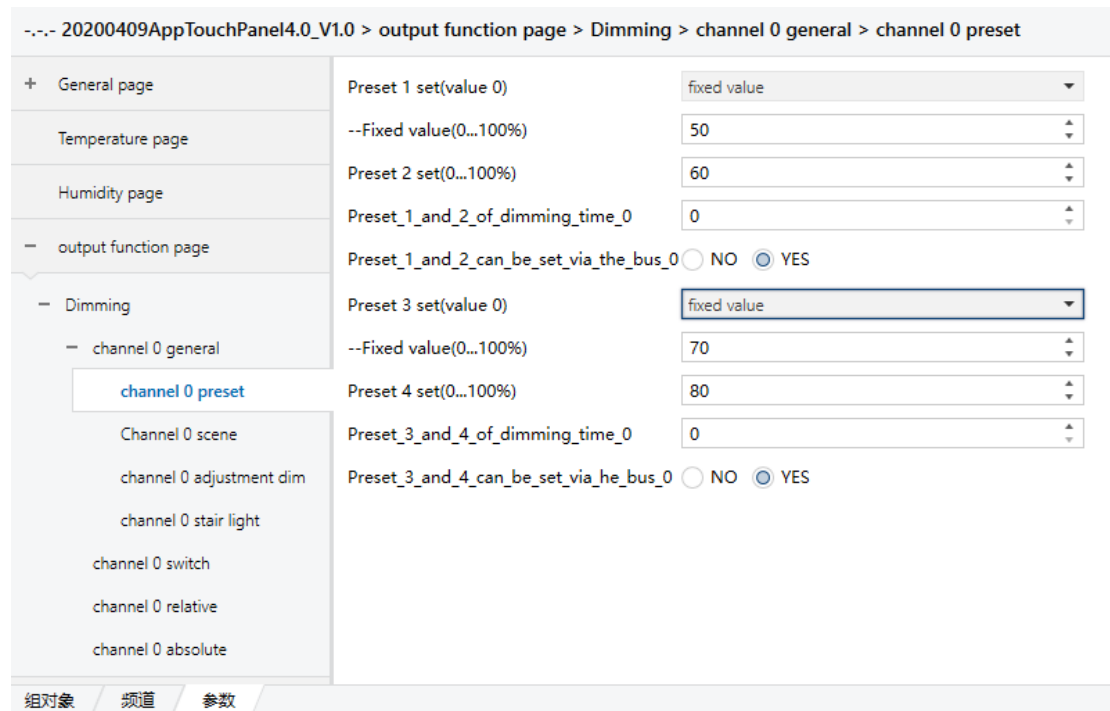
Whether the parameter setting activates the characteristic dimming function. Selecting "active" means activating the function. For the introduction, see "3.3.2.1.3 Parameter setting window channel x adjustment dim".

Parameter “staircase light function”

Whether the parameter setting activates the feature adjustment function. Select "active" to activate the function. For the function description, see "3.3.2.1.4 Parameter setting window channel x stair light".

3.3.2.1.1 Parameter “channel x preset”

The preset function is divided into two parts: "Preset 1 and 2" and "Preset 3 and 4". The functions of these two parts 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 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.

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 indicate that the value of preset 1 (preset 3) is restored to the value of the last preset function.

Selecting "Reset to parameterized value before preset 2/4" means that the value of preset 1 (preset 3) is reset 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, unit: 0.1 second, 0 is immediately

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

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

Optional: NO

YES

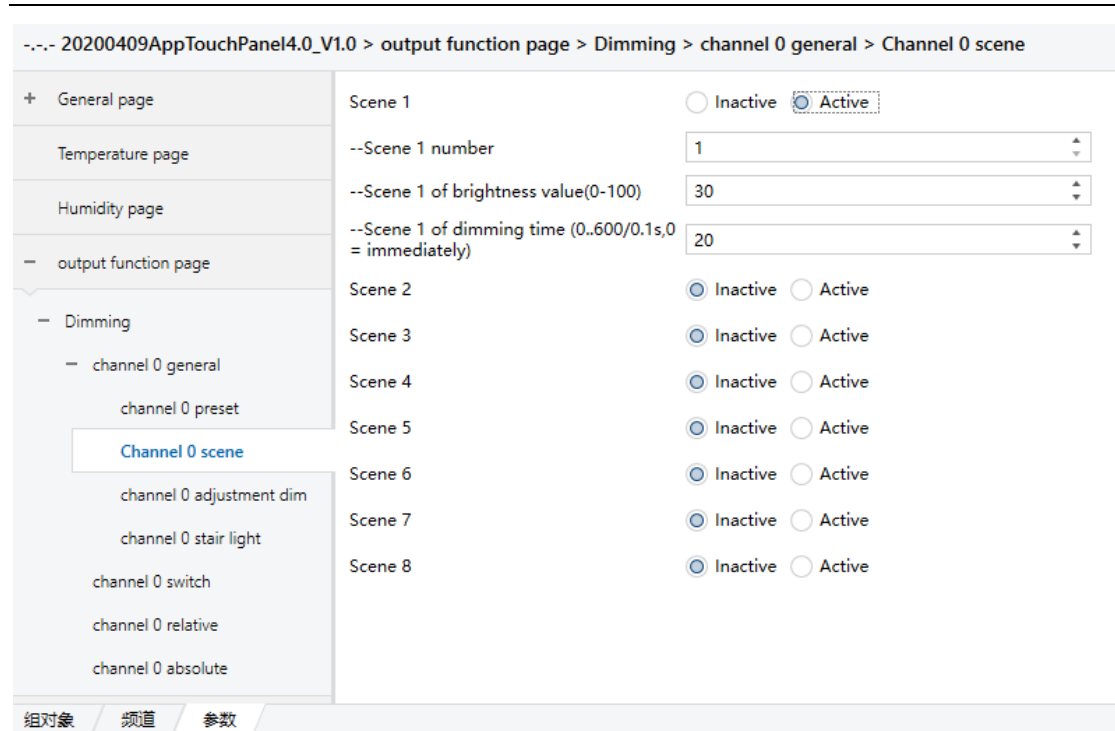
Select "NO", do not set the value of preset 1 and 2 (preset 3 and 4) through the bus;

Select "YES" and set the value of preset 1 and 2 (preset 3 and 4) through the bus.

3.3.2.1.2 Parameter “channel x scene”

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

Where x represents 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 three parameters, as shown in the figure above.

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, unit: 0.1 second, 0 is immediately

3.3.2.1.3 Parameter “channel x adjustment dim”

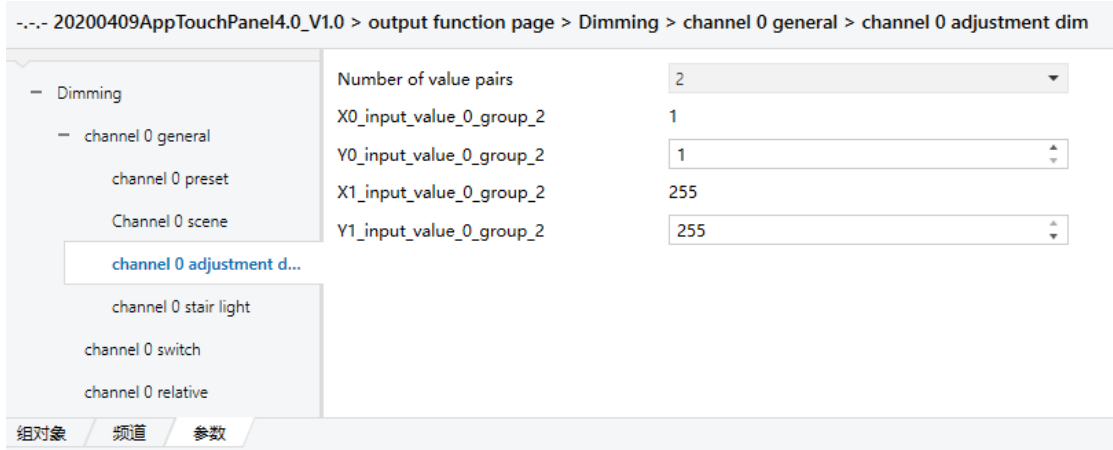


Figure 3.3.2.1.3-1 "adjustment dim" parameter setting interface

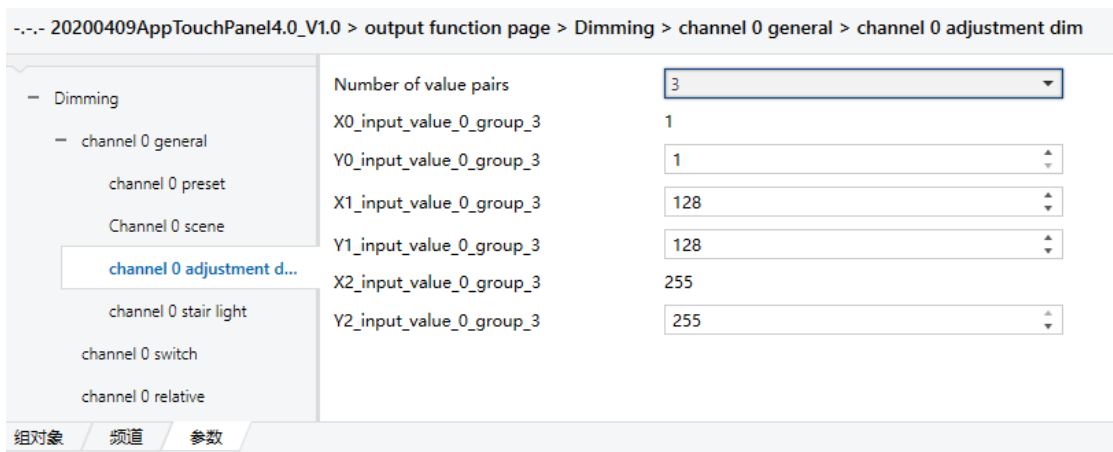


Figure 3.3.2.1.3-2 "adjustment dim" parameter setting interface

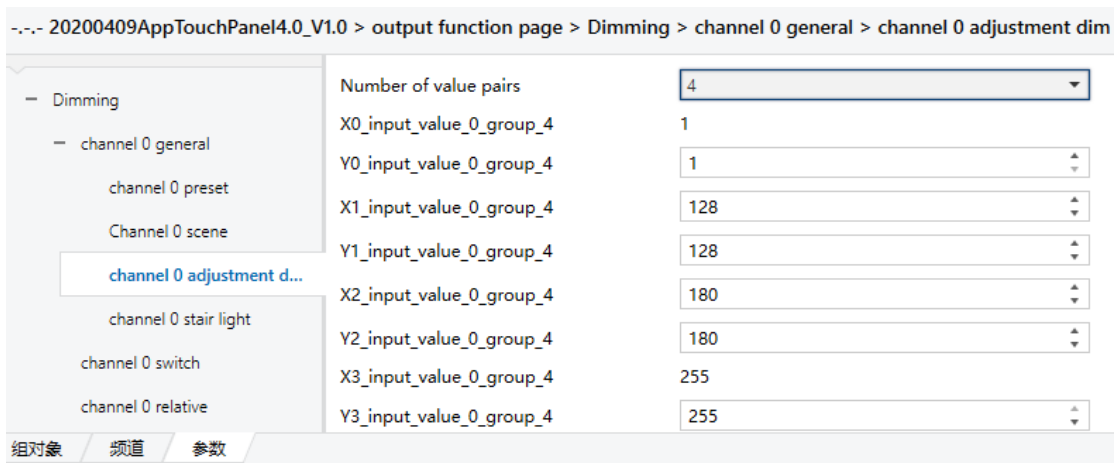


Figure 3.3.2.1.3-3 "adjustment dim" parameter setting interface

Parameter “Number of value pairs”

This parameter sets the number of value pairs.

Available options: 2

3

4

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

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

Select "4" to activate 4 pairs of value pairs, X0 / Y0, X1 / Y1, X2 / Y2, X3 / Y3, as shown in Figure 3.3.2.1.3-3.

Parameter “X0/X1/X2/X3 input value (1...255)”

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

Range: 1... 255

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. Relationship of X value: $X_0 < X_1 < X_2 < X_3$, Relationship of Y value: $Y_0 < Y_1 < Y_2 < Y_3$;

2. When the feature dimming function is turned on, when dimming (absolute dimming / relative dimming, etc.), the relationship between the input dimming value and the output dimming value needs to be calculated by the formula, which 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 “channel x stair light”

20200409AppTouchPanel4.0_V1.0 > output function page > Dimming > channel 0 general > channel 0 stair light

output function page

Dimming

channel 0 general

channel 0 preset

Channel 0 scene

channel 0 adjustment dim

channel 0 stair light

channel 0 switch

channel 0 relative

channel 0 absolute

Brightness value after switch on(0..100) 80

Time duration in is(1..65500/0.1s) 100

After staircase time dimming to base brightness(0..100%) 30

The dimming time of staircase light (0..600/0.1s,0 = immediately) 10

Recalculate duration time while trigger NO YES

Reaction on switching off via object "switch" no_reaction

Brightness value during permanent ON (0..100%) 20

Restart of staircase time after end of permanent ON NO YES

Warning during dimming down NO YES

--Send value send "0" send "1"

组对象 频道 参数

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, unit: 0.1 second

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

This parameter sets the brightness value returned after the dimming of the stair light.

Range: 0... 100%

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

This parameter sets the dimming time when the staircase lamp returns to the set brightness value.

Range: 0... 600, unit: 0.1 second, 0 is immediately

Parameter “Recalculate duration time while trigger”

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

Optional: NO

YES

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

Select “YES”, the duration should be recalculated when the stair light is triggered again.

Parameter “Reaction on switching off via object “switch””

This parameter sets the state of the switch when the switch is closed by the communication object "switch".

Options: No reaction

Base brightness value

Switch off

Select "No reaction" and close the switch through the communication object "switch". The state of the switch will change to no reaction, that is, it will remain the same.

Select "Base brightness value", and close the switch through the communication object "switch". The state of the switch changes back to the set brightness base value.

Select "Switch off", and the state of the switch changes to switch off when the communication object "switch" is used to close the switch.

Parameter “Brightness value during permanent ON(0...100%)”

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

Range: 0... 100%

Parameter “Restart of staircase time after end of permanent ON”

This parameter sets whether to recalculate the staircase lamp time after the switch state is permanently turned on.

Optional: NO

YES

Select "NO", the staircase lamp time will not be recalculated after the switch state is permanently on. *(The delay function of the stairs lights will not work after triggering)*

Select "YES", recalculate the staircase lamp time after the switch state is permanently on.

Note: When the parameter "Restart of staircase time after end of permanent ON" selects "YES", when the setting value of the parameter "brightness value during permanent ON" is smaller than the setting value of the parameter "after staircase time dimming to base brightness", the permanent opening ends The staircase light time will not be recalculated afterwards.

Parameter “Warning during dimming down”

This parameter sets whether to issue a warning after the dimming time ends, and the communication object is "Warning staircase lighting".

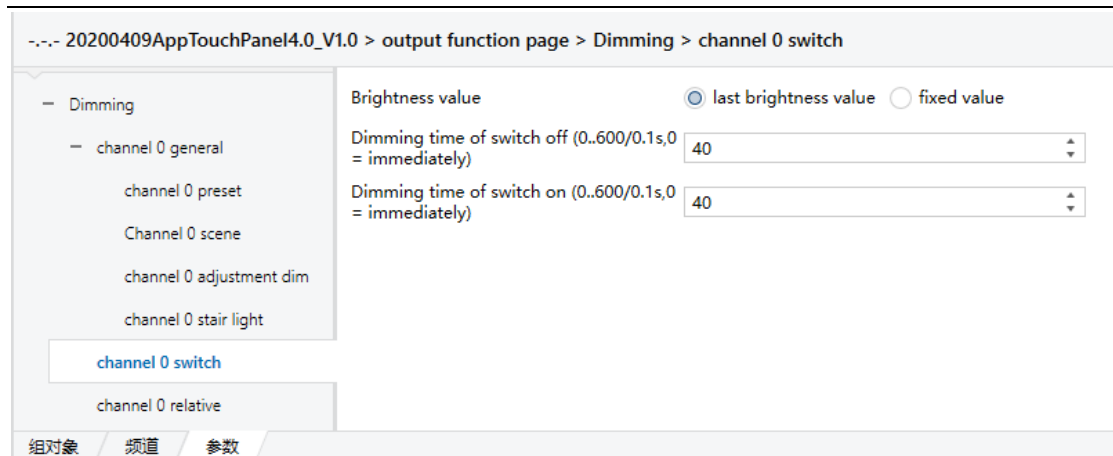
Optional: NO

YES

Select "NO", do not issue a warning after the dimming time ends;

Select "YES", a warning will be issued after the dimming time is over, the warning value is set by the parameter "Send value".

3.3.2.2 Parameter “channel x switch”



Parameter “brightness value”

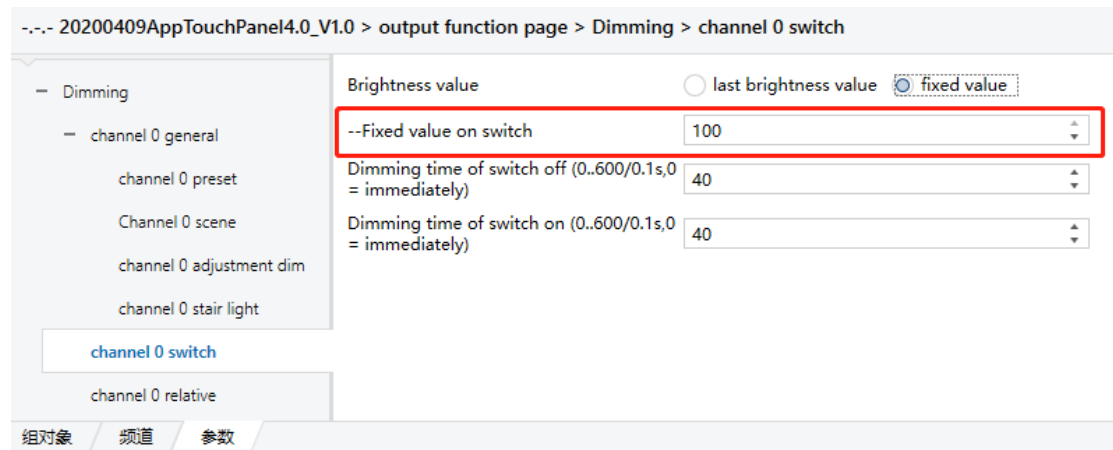
This parameter sets the brightness value when the switch state is turned on.

Optional: Last brightness value

Fixed value

Select "Last brightness value", the brightness value when the switch is on is the last brightness value.

Select "Fixed value", the brightness value when the switch state is open is a fixed value, activate a parameter, 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.

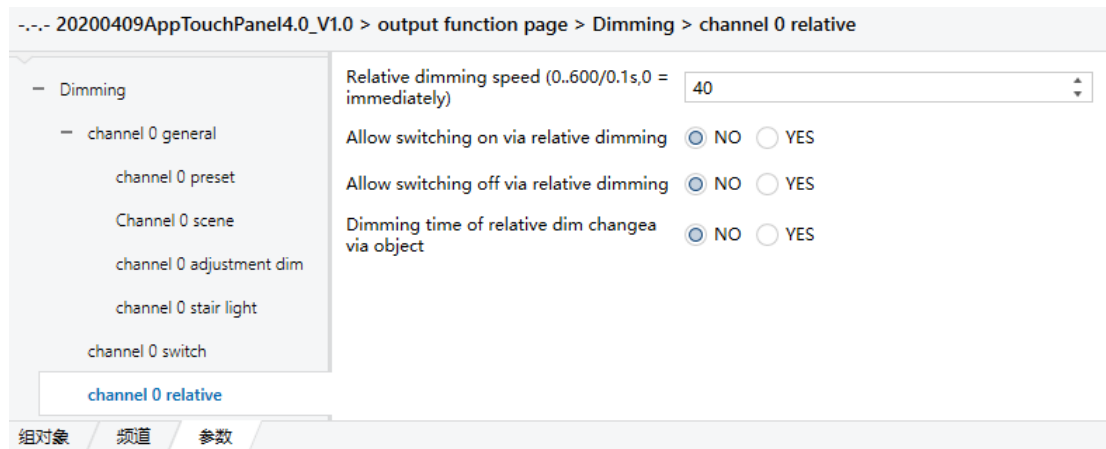
Range: 0... 600, unit: 0.1 second, 0 is immediately

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

This parameter sets the dimming time when the switch is turned on.

Range: 0... 600, unit: 0.1 second, 0 is immediately

3.3.2.3 Parameter “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, unit: 0.1 second, 0 is immediately

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 through relative dimming;

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

Parameter “Allow switching off via relative dimming”

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

Optional: NO

YES

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

Select "YES" to allow the switch to be closed by relative dimming.

Parameter “Dimming time of relative dim chang via object”

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

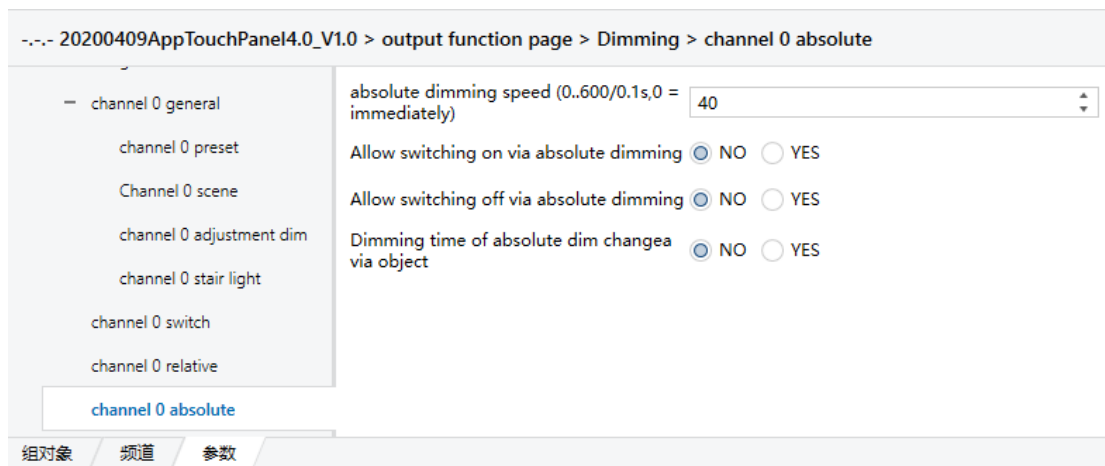
Optional: NO

YES

Select "NO", do not change the dimming time of relative dimming through the communication object;

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

3.3.2.4 Parameter “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, unit: 0.1 second, 0 is immediately

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

Selecting "NO" does not allow the switch to be turned on by absolute dimming.

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

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

Selecting "NO" does not allow the switch to be turned off by absolute dimming.

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

Parameter “Dimming time of absolute dimming changable via object”

This parameter sets whether to change the dimming time of absolute dimming through the communication object. The communication object is "Dimming time of value".

Optional: NO

YES

Select "NO", do not change the dimming time of absolute dimming through the communication object.

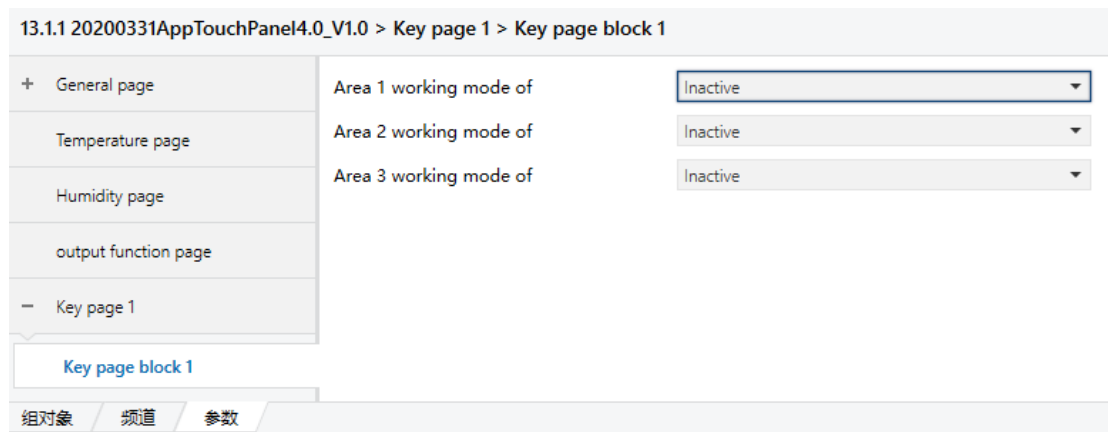
Select "YES" to change the dimming time of absolute dimming through the communication object.

3.4 Parameter “Key page block x”

Each interface is divided into 3 areas, and the working mode of each area has two options to choose from: multigang button and single button. This setting interface is used to define the function of each module.

Remarks: “X” represents the number of pages, the range of “X” is set according to the parameter “set the number of key pages” in the parameter setting interface “General page”, the maximum range is 1 ... 10;

“Z” represents the number of areas on the page, the range is 1 ... 3.



Parameter “Area z working mode of”

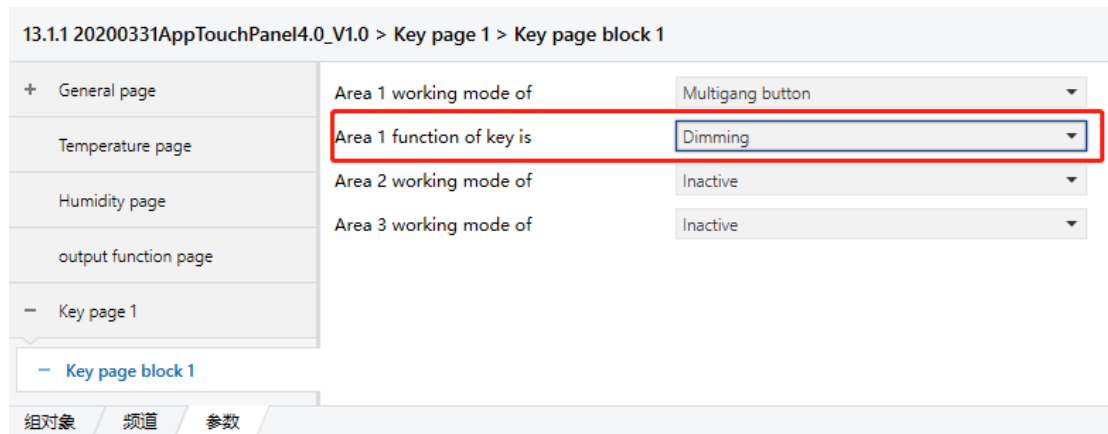
This parameter is used to set the zone z working mode.

Optional: Inactive

Mulligang button

Single button

Selecting "Multigang button" means that only one function module is displayed in this area, and one parameter is activated, as shown in the following figure:



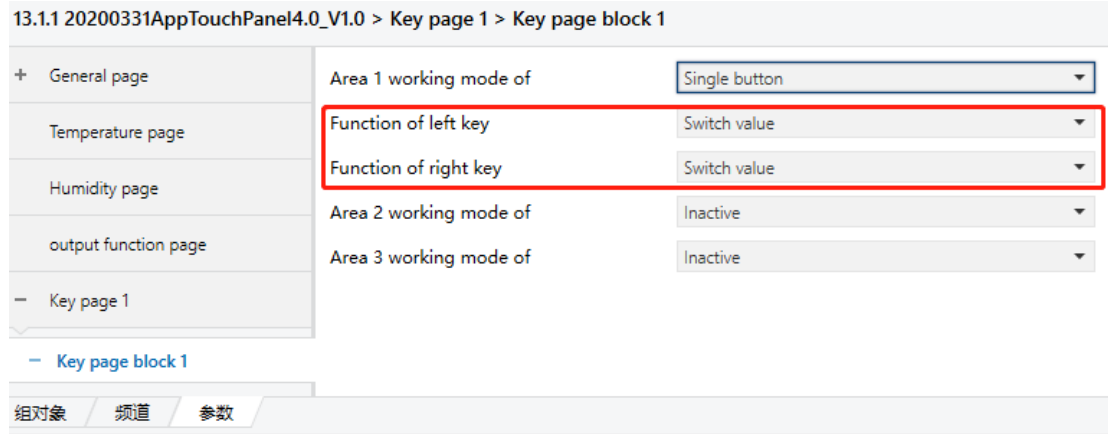
Parameter “Area z function of key is”

This parameter is used to set the function of the module.

Options: Dimming

Shutter
Thermostatic controller

Selecting "Single button" means that two function modules can be displayed in this area, and two parameters are activated, as shown in the following figure:



Parameter “function of left/right key”

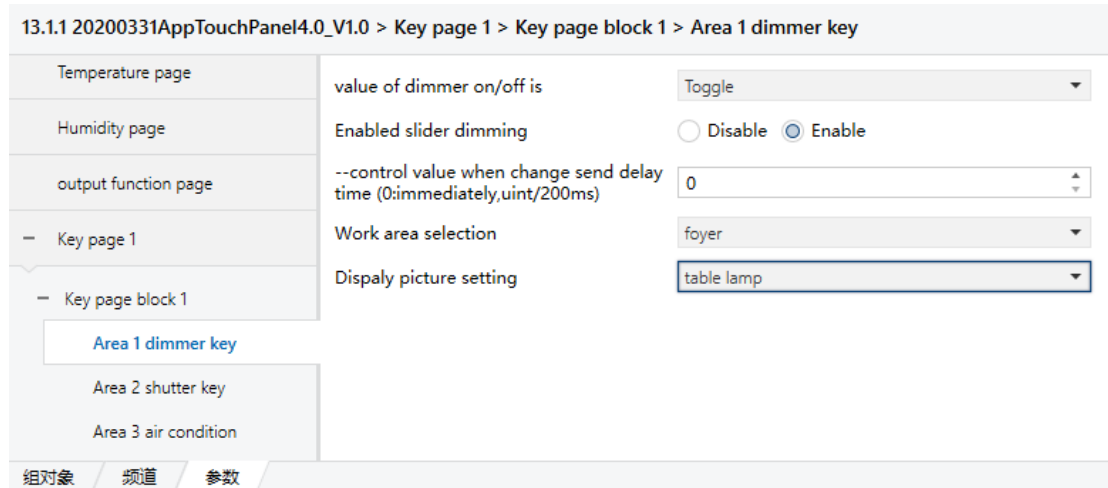
Used to set the function of the left / right module in this area.

Optional: Scene

- Switch value
- Environmental detection display
- Jump
- System set

3.4.1 Parameter “Area z dimmer key”

When the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Mulligang button", and the parameter "Area z function of key is" selects "Dimming", this parameter setting interface can be seen, its specific parameters See the picture below:



Parameter “value of dimmer on/off is”

The communication object is "dimmer on / off for short key".

Optional: Toggle

ON

OFF

Select "Toggle", short press the corresponding dimming module on the page to send data 01,00,01,00,01,00 ...

Select "ON", short press the corresponding dimming module on the page to send data 01;

Select "OFF", short press the corresponding dimming module on the page to send data 00.

Parameter “Enabled slider dimming”

This parameter sets whether to activate the dimming function of the sliding scroll bar.

Optional: Disable

Enable

Select “Enable” to activate the function, the parameter “—control value when change send delay time (0: immediately.uint / 200ms)” appears, set the interval time for sending the dimming value (ie the delay after the dimming value is changed Time to send out the dimming value).

Parameter “Work area selection”

This parameter sets the area name corresponding to the device.

Available options: Foyer

Hall

Parlour

...

Chinese kitchen

User defined

None

When "User defined" is selected, the area name and icon name are customized together. The name of the custom area can be downloaded through the host computer. For the operation steps of the host computer, see "2.4 Name and Icon of the Custom Area"

Parameter “Display picture setting”

This parameter sets the dimming icon.

Available options: Table lamp

Pendant lamp

Decoration lamp

...

Reading light

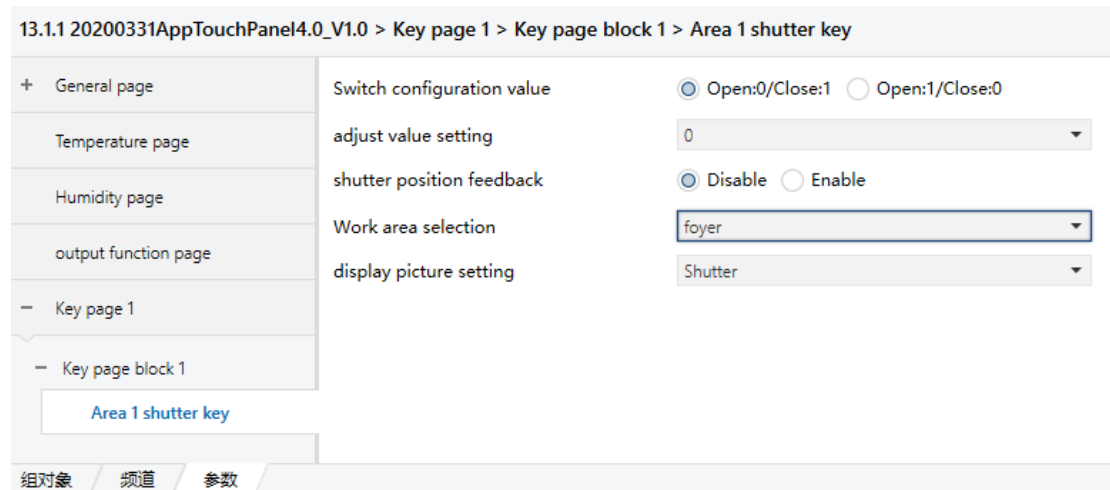
User defined

When "User defined" is selected, the icon is customized without icon name. The customized icon can be downloaded through the host computer. For the operation steps of the host computer, see "2.4 Customized Area Name and Icon".

3.4.2 Parameter “Area z shutter key”

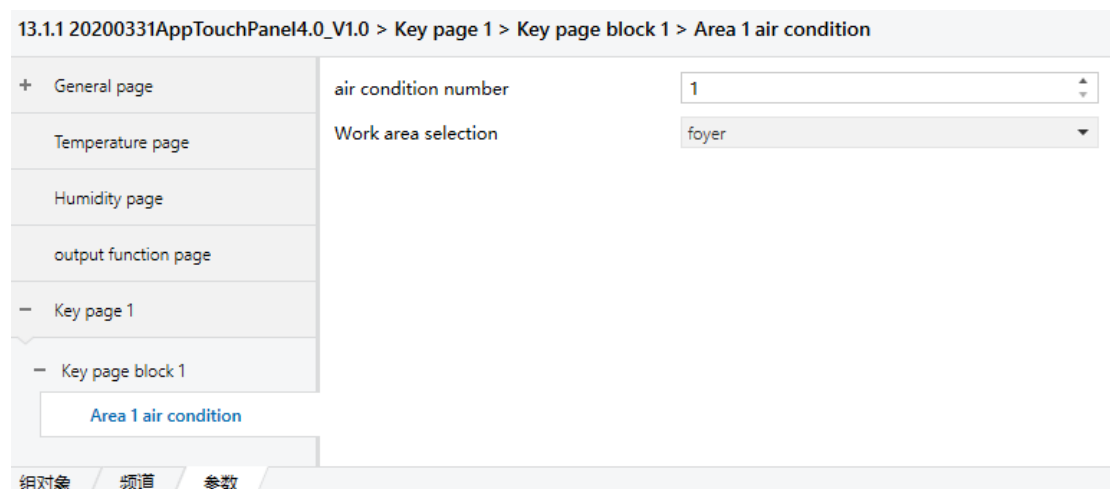
It may be modified in the future, keep it first

When the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Mulligang button", and the parameter "Area z function of key is" selects "Shutter", this parameter setting interface can be seen, its specific parameters See the picture below:



3.4.3 Parameter “Area z air condition”

This parameter setting interface is visible when the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Mulligang button" and the parameter "Area z function of key is" selects "Thermostatic controller" The parameters are shown in the figure below:



Parameter “air condition number”

The corresponding air conditioning module in this parameter setting page adjusts the number of

air conditioners, which is related to how many air conditioning channels are turned on by the parameter “The number of channel setting” in the parameter setting interface “3.2.3 Parameter setting interface Air conditioning”.

Maximum range: 1... 10

Parameter “Work area selection”

This parameter sets the area name corresponding to the device.

Available options: Foyer

Hall

Parlour

...

Chinese kitchen

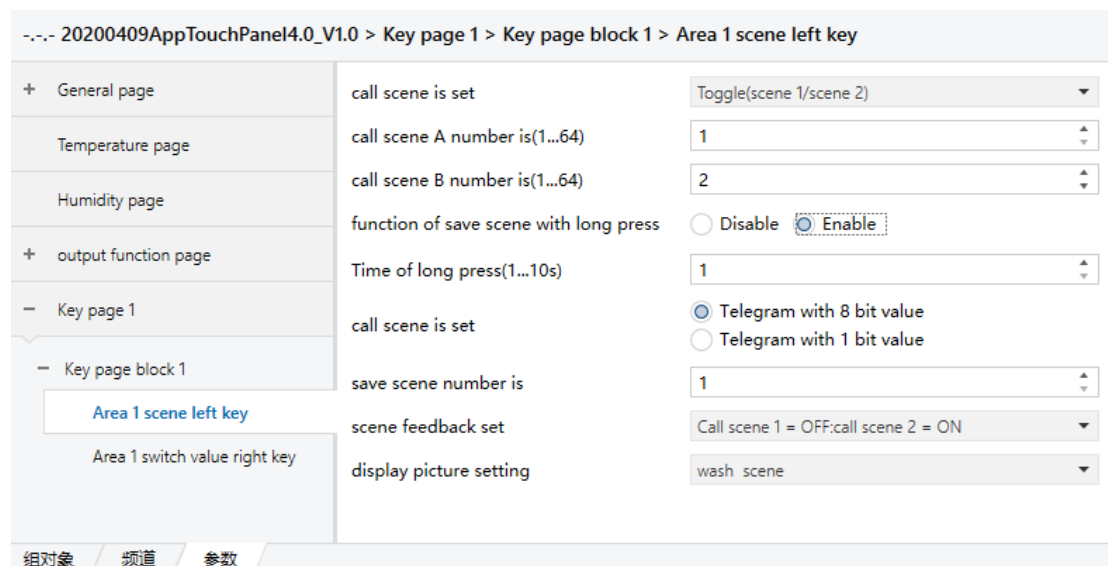
User defined

None

When "User defined" is selected, the area name and icon name are customized together. The name of the custom area can be downloaded through the host computer. For the operation steps of the host computer, see "2.4 Name and Icon of the Custom Area"

3.4.5 Parameter “Area z scene left/right key”

This parameter setting interface is visible when the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Single button" and the parameter "function of left / right key" selects "scene". See the picture below:



Parameter “Call scene is set”

This parameter sets the short-press-corresponding scene module in the page-recalled scene.

Optional: Toggle (scene 1 / scene 2)

Scene 1

Scene 2

Select "Toggle (scene 1 / scene 2)" and short press the module to call scene 1 and scene 2

Select "Scene 1", short press the module to call scene 1;

Select "Scene 2", short press the module to call scene 2;

Parameter "Call scene A/B number is (1...64)"

Set the scene value of scene 1 / scene 2.

Range: 1... 64

Parameter "Function of save scene with long press"

This parameter sets whether to activate the function of long press to save the scene.

Optional: Disable

Enable

Select "Enable" to activate the function of long press to save the scene, activate the following 2 parameters:

Parameter "time of long press(1...10s)"

This parameter sets the long press time, that is, long press? The second scene module is determined to be a long press.

Range: 1... 10, unit: second

Parameter "Call scene is set"

This parameter sets the type of data saved in the scene.

Available options: Telegram with 8 bit value

Telegram with 1 bit value

Select "Telegram with 1 bit value", long press the module, the message data type sent by the communication object "save scene 1bit K_x_z" is 1 bit message value 1;

Select "Telegram with 8 bit value", long press the module, the data type of the message sent by the communication object "save scene 1byte K_x_z" is 1byte, and the parameter "Save scene number is (1 ... 64)" appears.

Parameter "Save scene number is (1...64)"

This parameter sets the saved scene number.

Range: 1... 64

Parameter "Feedback setting"

This parameter is used to set the display of the icon on short press.

Options: Call scene 1 = OFF; call scene 2 = ON

Call scene 1 = ON; call scene 2 = OFF

Call scene 1 = ON; else = OFF

Call scene 2 = ON; else = OFF

Select "Call scene 1 = OFF; call scene 2 = ON", short press the module, the communication object "Call scene (1 ... 64)" will emit the scene number corresponding to "scene 1", the icon will be grayed out, and "scene 2" The icon lights up if it corresponds to the scene number.

Select "Call scene 1 = ON; call scene 2 = OFF", short press the module, the communication object "Call scene (1 ... 64)" will emit the scene number corresponding to "scene 1", then light up the icon and issue "scene 2" The icon corresponding to the scene number is grayed out.

Select "Call scene 1 = ON; else = OFF", short press the module, and the communication object "Call scene (1 ... 64)" emits the scene number corresponding to "scene 1", the icon will be lit, otherwise the icon will be grayed out.

Select "Call scene 1 = ON; else = OFF", short press the module, and the communication object "Call scene (1 ... 64)" emits the scene number corresponding to "scene 2", the icon will be lit, otherwise the icon will be grayed out.

Parameter “display picture setting”

Set the scene icon.

Optional: Wash scene

TV mood sence

Return home scene

Dining scene

Romance scene

Leave home scene

Sleep scene

Music scene

Reading scene

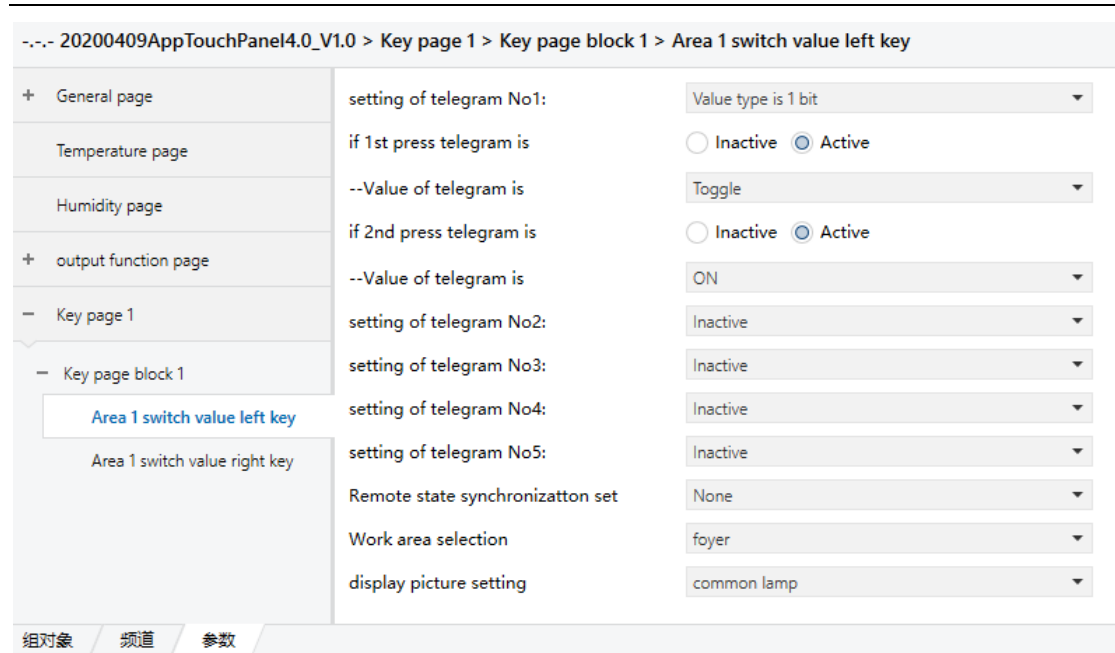
Main switch on

Main switch off

User defined

3.4.5 Parameter “Area z switch value left/right key”

The parameter setting interface can be seen when the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Single button" and the parameter "function of left / right key" selects "switch value". The parameters are shown in the figure below:



Parameter “Setting of telegram NoX”

Parameter “If 1st/2nd press telegram is”

Parameter “—Value of telegram is”

These parameters are used in combination to set the data type and message value of the message sent from the panel to the bus when the module is short-pressed. The communication object is "Output 1bit / 4 bit / 1byte value NoX".

There are 3 options for data types: 1bit, 4bit, 1byte;

Message value range: 0/1, 0 ... 15, 0 ... 255

Parameter “Remote state synchronization set”

This parameter is used to set remote state synchronization.

Optional: None

- Telegram 1
- Telegram 2
- Telegram 3
- Telegram 4
- Telegram 5

Select "None", do not set remote status synchronization;

Select "Telegram 1" and set the remote status synchronization to telegram 1;

Select "Telegram 2" and set the remote status synchronization to telegram 2;

Select "Telegram 3" and set the remote status synchronization to telegram 3;

Select "Telegram 4" and set the remote status synchronization to telegram 4;

Select "Telegram 5" and set the remote status synchronization to telegram 5.

Note: The remote state synchronization is telegram X means that the telegram X object "Output 1bit / 4 bit / 1byte value NoX" is the feedback object, that is, the telegram X object is used to modify the message status and synchronize so that the next message sent out The message is the opposite. {For example: the "First Pressed Value" and "Second Pressed Value" settings of these five messages are ON and OFF respectively, and the value sent by the first press of the button is "First Pressed Value" The value issued by pressing the button for the second time is the "second pressed value", the value issued by pressing the button for the third time is the "first pressed value", and so on. (If the synchronization status is telegram1, the values sent by the five message members are all ON when the button is pressed for the first time, and the message "Output 1bit / 4 bit / 1byte value NoX" corresponding to telegram1 is written to the message OFF, then OFF is synchronized to the value sent out by pressing the button for the second time, then the next time the button is pressed, the value of the five packets are all ON [that is, "first pressed value"])} }

Parameter “display picture setting”

Set the on-off icon.

Optional: Common lamp

Pendant lamp

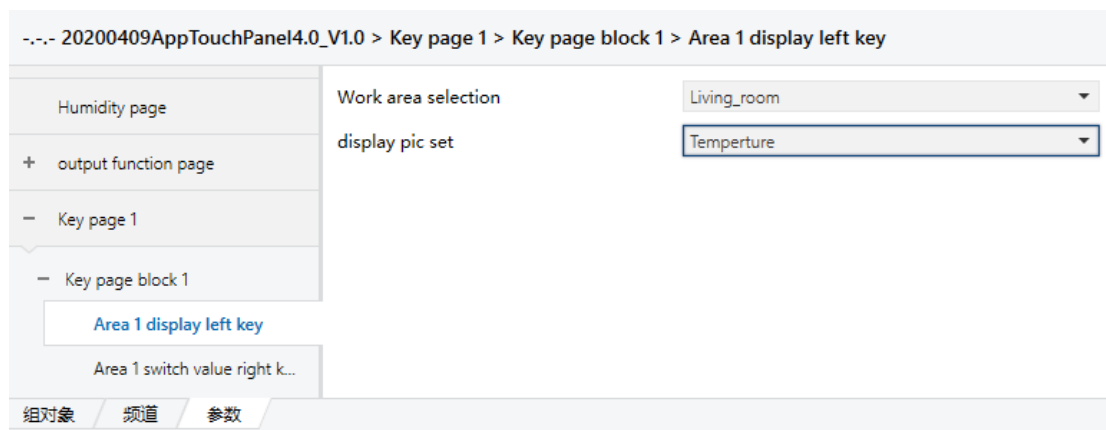
...

Icon8 all on

User defined

3.4.6 Parameter “Area z display left/right key”

This parameter setting interface is visible when the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Single button" and the parameter "function of left / right key" selects "Environmental detection display" The specific parameters are shown in the figure below:



Parameter “Work area selection”

This parameter sets the area name corresponding to the device.

- Options:
- Living_room
 - Bedroom
 - Master_bedroom
 - Toilet
 - Extro bedroom
 - Kitchen
 - Balcony
 - Bathroom
 - Study_room
 - Kids room
 - Elders_room
 - Changeroom
 - Rest room
 - User_defined
 - None

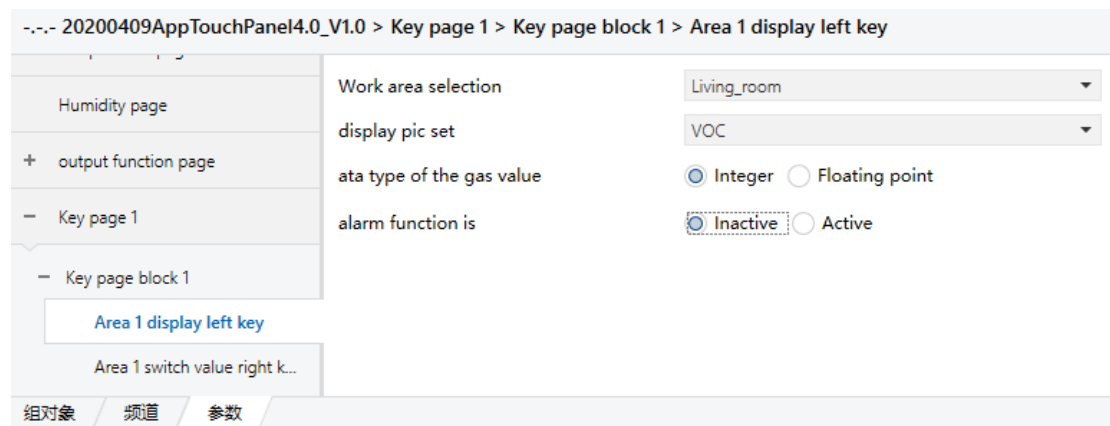
Parameter “display pic set”

This parameter sets the icon of the environment detection gas.

- Optional:
- Temperature
 - Humidity
 - VOC
 - CO2
 - CO
 - User defined

When selecting "VOC / CO2 / CO / User defined", activate the parameters "data type of the gas value" and "alarm function is" as shown in the figure below.

Note: The selection of "VOC" is similar to the selection of "CO2 / CO / User defined" in terms of parameters and communication objects. VOC is used as an example to expand the description; CO2 / CO / User defined gas values are all external input and no local sensor detection.



Parameter “data type of the gas value”

Set the data type of the gas value.

Optional: Integer

Floating point

Select "Integer" to indicate that the data type of the gas value is integer data;

Select "Floating point" to indicate that the data type of the gas value is floating point data.

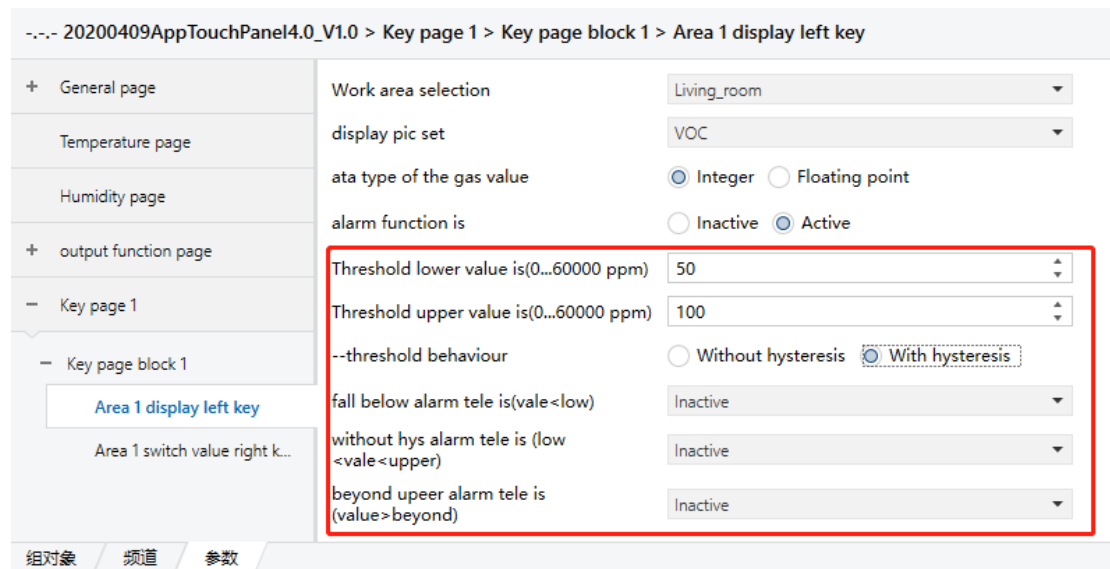
Parameter “alarm function is”

This parameter sets whether to activate the gas alarm function.

Optional: Inactive

Active

Select "Active" to activate the gas alarm function, there are 6 related parameters, as shown below:



Parameter “threshold lower/upper value is(0...60000ppm)”

These two parameters are used to set the minimum / maximum alarm threshold of the gas value.

Range: 0... 60000, unit: ppm

Parameter “—threshold behaviour”

Optional: Without hysteresis

With hysteresis

Select "Without hysteresis", in line with the behavior of the channel setting without hysteresis, the parameters "value <low, telegram is", "upper <value, telegram is" appear;

Select "With hysteresis", the behavior mode that conforms to the channel setting under hysteresis, the parameters "value <low, telegram is", "low <value <upper, telegram is", "upper <value, telegram is" appear.

Parameter “value<low, telegram is”

When the gas value is lower than the minimum alarm threshold, the communication object "falling, 1bit / 4bit / 8bit left / right key" sends an alarm message, and the message value is set by the parameter "--Value set is".

Parameter “low<value<upper, telegram is”

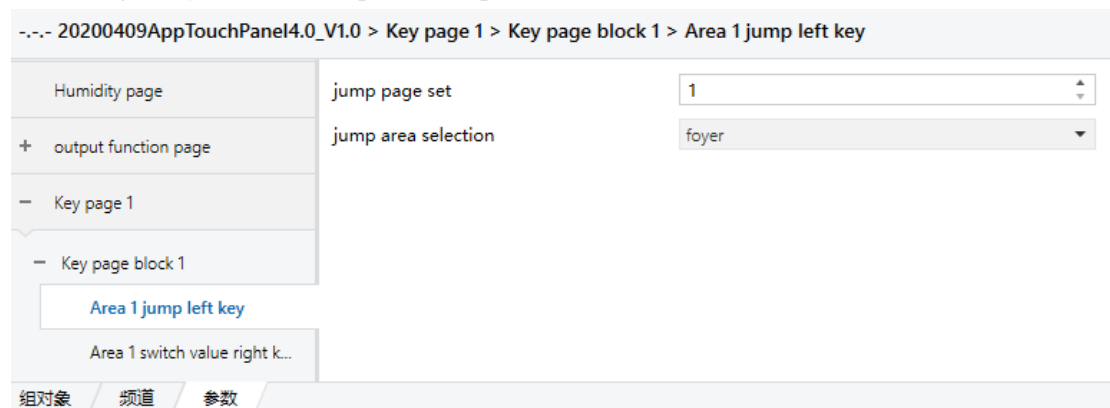
The parameter "—threshold behaviour" is activated when "with hysteresis" is selected. When the gas value is between the lowest alarm threshold and the highest alarm threshold, the communication object "middle, 1bit / 4bit / 8bit left / right key" will give an alarm Message, the message value is set by the parameter "--Value set is".

Parameter “upper<value, telegram is”

When the gas value is higher than the highest alarm threshold, the communication object "beyond, 1bit / 4bit / 8bit left / right key" sends an alarm message, and the message value is set by the parameter "--Value set is"

3.4.7 Parameter “Area z jump left/right key”

The parameter setting interface can be seen when the parameter "Area z working mode of" in the parameter setting interface "Key page block x" selects "Single button" and the parameter "function of left / right key" selects "Jump" See the picture below:



Parameter “Jumps page set”

This parameter sets the page to jump to when the jump module is clicked.

The number of pages that can be set is related to the parameter "set the number of key pages" in the parameter setting interface "3.2. Parameter setting interface General page", the maximum range: 1 ... 10.

Parameter “Jump area selection”

This parameter sets the name of the jump area.

Available options: Foyer

Hall

- Parlour
- ...
- Chinese kitchen
- User defined
- None

4. Communication object

Note: "C" in the column of table properties below means that the communication function of the communication object is enabled, "W" means that the communication object can rewrite the value of other devices, and "R" means that the value of the communication object can be read by other devices, "T" indicates that the communication object has a transmission function, and "U" indicates that the value of the communication object can be rewritten through the bus response message.

4.1 "General" communication object

There are 6 communication objects under "General", as shown in Figure 4.1-1. The specific functions are shown in Table 1-1.

12	General	Current temperature	2 bytes	C	R	-	T	-	2-byte float value, temperature (°C)
1	General	Lock device	1 bit	C	R	W	-	-	1-bit, enable
18	General	Current humidity	2 bytes	C	R	-	T	-	2-byte float value, humidity (%)
3	General	TFT display ON/OFF	1 bit	C	-	W	-	-	1-bit, switch
4	General	Brightness of TFT	1 byte	C	R	W	-	-	8-bit unsigned value, percentage (0..100%)
6	General	Valid action of key	1 bit	C	-	W	T	-	1-bit, boolean
12	General	External temperature	2 bytes	C	R	W	T	-	2-byte float value, temperature (°C)
18	General	External humidity	2 bytes	C	R	W	T	-	2-byte float value, humidity (%)

Figure 4.1-1 General communication object

No.	Object function	Name	Data type	Attribute
1	Lock device	General	1bit	C,R,W
This communication object is used to lock the device. Send 01 to the communication object through the bus to lock the device, unable to operate the touch panel, send 00 to unlock the device.				
3	TFT display ON/OFF	General	1bit	C,W
This communication object is used to switch the display state of the TFT screen. When the message 0 is received, the TFT screen is turned off, and when the message 1 is received, the TFT screen is turned on.				
4	Brightness of TFT	General	1byte	C,R,W
This communication object is used to modify the brightness value of the TFT screen.				
6	Valid action of key	General	1bit	C,W,T
This communication object is a valid key. When the key is first activated, 01 is issued to indicate that the key is pressed, otherwise no data is sent, and the effective key is also related to the value				

of the communication object when the key is first activated: if 00 is sent to the communication object When the key is pressed, the communication object sends data 01 to indicate that the key is pressed; if the communication object sends 01, if the key is pressed, the communication object "Valid action of key" does not send data.				
12	Current temperature External temperature	General	2byte	C,R,T (,W)
When the temperature value is collected by an internal sensor, use the communication object "Current temperature" to send the current temperature value; The external temperature input is adopted for the temperature value, and the ambient temperature value is transmitted with the communication object "External temperature".				
18	Current humidity External humidity	General	2byte	C,R,T (,W)
When the humidity value is collected by an internal sensor, use the communication object "Current humidity" to send the current humidity value; The temperature value is input externally, and the communication object "External humidity" is used to transfer the environmental humidity value.				

Table 1-1 General communication object table

4.2 “screensaver” communication object

There are a total of communication objects under "screensaver", as shown in Figure 4.2-1. The specific functions are shown in Table 2-1.

789	Time	Set current time	3 bytes	C R W - -	time, time of day
790	Date	Set current date	3 bytes	C R W - -	date, date
791	Time	Current time send to bus	3 bytes	C R - T -	time, time of day
792	Date	Current date send to bus	3 bytes	C R - T -	date, date
793	Weather	Sunny feedback	1 bit	C - W - -	1-bit, boolean
794	Weather	partly cloudy feedback	1 bit	C - W - -	1-bit, boolean
795	Weather	shower feedback	1 bit	C - W - -	1-bit, boolean
796	Weather	heavy rains feedback	1 bit	C - W - -	1-bit, boolean
797	Weather	thunder shower feedback	1 bit	C - W - -	1-bit, boolean
798	Weather	ultraviolet ray feedback	1 bit	C - W - -	1-bit, boolean
800	Sleep	Change screensaver enter time	2 bytes	C R W - -	2-byte unsigned value, pulses
793	Weather	Weather status feedback	1 byte	C - W - -	8-bit unsigned value, counter pulses (0.255)

Figure 4.2-1 screensaver communication object

No.	Object function	Name	Data type	Attribute
7	Set current time	Time	1bit	C,W
This communication object is used to write the current time.				
8	Set current date	Date	1bit	C,R,T
This communication object is used to write the current date.				
9	Current time send to bus	Time	1bit	C,W
The communication object is enabled when the parameter "Activate the current time to send to the bus" selects "active" and is used to periodically send the current time to the bus.				
10	Current date send to bus	Laser detection	1bit	C,R,T
The communication object is enabled when the parameter "Activate the current date to send to the				

bus" selects "active" and is used to periodically send the current date to the bus.				
793	Sunny feedback	Weather	1bit	C,W
794	partly cloudy feedback			
795	shower feedback			
796	heavy rains feedback			
797	thunder shower feedback			
798	ultraviolet ray feedback			
These communication objects appear when the parameter "Weather object type selection" selects "1bit" and is used to switch weather information.				
793	Weather status feedback	Weather	1byte	C,W
This communication object appears when the parameter "Weather object type selection" selects "1byte" and is used to switch weather information. As for which message is received and which weather is switched, the parameter "—Sunny / Partly cloudy / shower / heavy rains / thunder shower / ultraviolet ray feedback value set (0..255) ".				
800	Change screensaver enter time	Sleep	2bytes	C,R,W
This communication object is used to modify the delay time of the screen saver.				

Table 2-1 screensaver communication object table

4.3 “Laser detection” communication object

There are 5 communication objects under "Laser detection", as shown in Figure 4.3-1. For specific functions, see Table 3-1.

7	Laser detection	Laser detection trigger No1	1 bit	C - W - -	1-bit, boolean
8	Laser detection	Laser detection flag No1	1 bit	C R - T -	1-bit, boolean
9	Laser detection	Laser detection trigger No2	1 bit	C - W - -	1-bit, boolean
10	Laser detection	Laser detection flag No2	1 bit	C R - T -	1-bit, boolean
11	Laser detection	Laser detection distance	1 byte	C R - T -	8-bit unsigned value, counter pulses (0..255)

Figure 4.3-1 Laser detection communication object

No.	Object function	Name	Data type	Attribute
7	Laser detection trigger No1	Laser detection	1bit	C,W
This communication object is used to activate or deactivate the laser detection function. As to whether the received message 1 is activated or deactivated, it is set according to the parameter "—Way of trigger by bus".				
8	Laser detection flag No1	Laser detection	1bit	C,R,T
The communication object is activated when the parameter "—if state changed, teleg No. 1 is" selects "Active". When the laser detection distance is 0, wait for the time set by the parameter "—delay time for shut off backlight" to end. Adjust the backlight (the brightness of the backlight is adjusted according to the parameter "—percent value of OLED is" setting), and at the same time, this communication object sends a message 0 to the bus.				
9	Laser detection trigger No2	Laser detection	1bit	C,W
Refer to communication object "Laser detection trigger No1"				

10	Laser detection flag No2	Laser detection	1bit	C,R,T
Refer to communication object "Laser detection flag No1"				
11	Laser detection distance	Laser detection	1byte	C,R,T
This communication object is used to report the distance of the detected object to the bus. When the laser detection function is activated, when the laser sensor detects the object within the maximum detection range, the distance of the object from the panel will be sent to the bus through this communication object In cm.				

Table 3-1 Laser detection communication object table

4.4 “VRV” communication object

Each VRV channel has the same communication object. Taking the communication object of VRV channel 1 as an example, there are 11 communication objects, as shown in Figure 4.4-1. The specific functions are shown in Table 4-1.

445	VRV	Run mode active set.CH1	1 byte	C R W T -	8-bit unsigned value, counter pulses (0..255)
446	VRV	Switch status feedback.CH1	1 bit	C R W T U	1-bit, switch
447	VRV	Temperature feedback.CH1	2 bytes	C R W T U	2-byte float value, temperature (°C)
448	VRV	Air speed feedback.CH1	1 byte	C R W T U	8-bit unsigned value, counter pulses (0..255)
449	VRV	Run mode feedback.CH1	1 byte	C R W T U	8-bit unsigned value, counter pulses (0..255)
450	VRV	Switch ON/OFF.CH1	1 bit	C R W T -	1-bit, switch
451	VRV	Set temperature.CH1	2 bytes	C R W T -	2-byte float value, temperature (°C)
452	VRV	Air speed.CH1	1 byte	C R W T -	8-bit unsigned value, counter pulses (0..255)
453	VRV	Run mode.CH1	1 byte	C R - T -	8-bit unsigned value, counter pulses (0..255)

Figure 4.4-1 VRV communication object

No.	Object function	Name	Data type	Attribute
445	Mode active/inactive	VRV	1byte	C,W
This communication object is used to disable / activate VRV air conditioner operation modes: dehumidification, cooling, ventilation, heating, refreshing, sleeping, automatic, 0x00: active 0x80: inactive; 0: dehu 1: refi 2: vent 3: heat 4: Refreshing 5: Sleep 6: Automatic.				
446	Switch status feedback	VRV	1bit	C,R,W,T,U
<p>Through this feedback object to synchronize the switch status of the air conditioning panel, it is related to the selection of the parameter "Setting of switch":</p> <p>Available options: "0" = "OFF"; "1" = "ON"</p> <p style="padding-left: 40px;">"0" = "ON"; "1" = "OFF"</p> <p>Select "0" = "OFF"; "1" = "ON", when the communication object "AHUX-Switch status feedback" receives 00, the screen displays "OFF", and the communication object "AHUX-Switch status feedback" receives The screen turns on at 01.</p> <p>Select "0" = "ON"; "1" = "OFF", the communication object "AHUX-Switch status feedback" will open the screen when receiving 00, and the communication object "AHUX-Switch status feedback" will display when receiving 01 "OFF".</p>				
447	Temperature feedback	VRV	2byte	C,R,W,T,U
Use this feedback object to synchronize the set temperature of the air conditioning panel.				
448	Air speed feedback	VRV	1byte	C,R,W,T,U

Use this feedback object to synchronize the wind speed rating of the air conditioning panel.				
449	Run mode feedback	VRV	1byte	C,R,W,T,U
Use this feedback object to synchronize the operating mode of the air conditioning panel.				
450	Switch ON/OFF	VRV	1bit	C,R,T
This communication object is used to control the switch state of VRV.				
451	Set temperature	VRV	2byte	C,R,T
This communication object is used to control the set temperature of VRV.				
452	Air speed	VRV	1byte	C,R,T
This communication object is used to control the wind speed of VRV.				
453	Run mode	VRV	1byte	C,R,T
This communication object is used to control the operation mode of VRV.				

Table 4-1 VRV communication object table

4.5 “Fan coil” communication object

Each Fan coil channel has the same communication object. Taking the communication object of Fan coil channel 1 as an example, there are 24 communication objects, as shown in Figure 4.5-1. The specific functions are shown in Table 5-1.

445	Fan coil(control)	Speed 1(control).CH1	1 bit	C R - T -	1-bit, boolean
446	Fan coil(control)	Speed 2(control).CH1	1 bit	C R - T -	1-bit, boolean
447	Fan coil(control)	Speed 3(control).CH1	1 bit	C R - T -	1-bit, boolean
448	Fan coil(control)	Heating value(control).CH1	1 byte	C R - T -	8-bit unsigned value, counter pulses (0..255)
449	Fan coil(control)	Refrigeration value(control).CH1	1 byte	C R - T -	8-bit unsigned value, counter pulses (0..255)
450	Fan coil(terminal)	thermostatic controller speed 1(feedback).CH1	1 bit	C R W - -	1-bit, boolean
451	Fan coil(terminal)	thermostatic controller speed 2(feedback).CH1	1 bit	C R W - -	1-bit, boolean
452	Fan coil(terminal)	thermostatic controller speed 3(feedback).CH1	1 bit	C R W - -	1-bit, boolean
453	Fan coil	Speed auto.CH1	1 bit	C R - T -	1-bit, boolean
454	Fan coil	Mode active/inactive.CH1	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)
455	Fan coil(Remote)	Remote control switch.CH1	1 bit	C - W - -	1-bit, switch
456	Fan coil(Remote)	Remote control mode.CH1	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)
457	Fan coil(Remote)	Remote control speed.CH1	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)
458	Fan coil(Remote)	Remote setting Temperature.CH1	2 bytes	C - W - -	2-byte float value, temperature (°C)
459	Fan coil(TFT)	TFT switch feedback.CH1	1 bit	C R W T -	1-bit, switch
460	Fan coil(TFT)	TFT feedback mode.CH1	1 byte	C R W T -	8-bit unsigned value, counter pulses (0..255)
461	Fan coil(TFT)	TFT feedback speed.CH1	1 byte	C R W T -	8-bit unsigned value, counter pulses (0..255)
462	Fan coil(TFT)	TFT feedback set temperature.CH1	2 bytes	C R W T -	2-byte float value, temperature (°C)
463	Fan coil(control)	Switch(control).CH1	1 bit	C R - T -	1-bit, switch
464	Fan coil(terminal)	thermostatic controller Switch(feedback).CH1	1 bit	C R W - -	1-bit, switch
465	Fan coil	Heating lower threshold.CH1	2 bytes	C R W - -	2-byte float value, temperature (°C)
466	Fan coil	Heating upper threshold.CH1	2 bytes	C R W - -	2-byte float value, temperature (°C)
467	Fan coil	Cooling lower threshold.CH1	2 bytes	C R W - -	2-byte float value, temperature (°C)
468	Fan coil	Cooling upper threshold.CH1	2 bytes	C R W - -	2-byte float value, temperature (°C)

Figure 4.5-1 Fan coil communication object

No.	Object function	Name	Data type	Attribute
445/446/447	Speed 1/2/3(control)	Fan coil	1bit	C,R,T
445	Speed 1byte(control)	Fan coil	1byte	C,R,T
This communication object represents the wind speed of the fan coil. The communication object is related to the selection of the parameter "Speed object set":				
Available options: 1bit				
1byte				

<p>Select "1bit", set the object type of wind speed to 1bit, and the communication objects are "Speed 1 (control)", "Speed 2 (control)", "Speed 3 (control)".</p> <p>Select "1byte", set the object type of wind speed to 1byte, and the communication object to "Speed 1byte (control)".</p>				
448/449	Heating/Refrigeration value(control)	Fan coil	1byte	C,R,T
448	Control value(control)	Fan coil	1byte	C,R,T
<p>This communication object represents the heating / cooling control value. The communication object is related to the parameter "Number of output channels" selection:</p> <p>Options: 2 channel (4 pipe) for heat / cool 1 channel (2 pipe) for heat / cool</p> <p>Select "2 channel (4 pipe) for heat / cool", set the number of output channels of the fan coil to 4 pipes, then the fan coil can have cooling and heating at the same time, and the communication objects are "Heating value (control)" And "Refrigeration value (control)".</p> <p>Select "1 channel (2 pipe) for heat / cool", 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, and the communication object is "Control value (control)" ", For cooling or heating can be set through the communication object" Mode active / inactive "(send 01 to this communication object to activate the cooling mode, send 03 to activate the heating mode).</p>				
453	Speed auto	Fan coil	1bit	C,R,T
<p>This communication object indicates whether the fan coil is in automatic wind state. The communication object is related to the selection of the parameter "Auto / manual speed set":</p> <p>Optional: "0" = manual, "1" = auto "0" = auto, "1" = manual</p> <p>Select "" 0 "= manual," 1 "= auto", then set 0 as manual wind speed, 1 as automatic wind speed, communication object "Speed auto" will issue 01 when in automatic wind speed.</p> <p>Select "0" = auto, "1" = manual ", then set 0 to automatic wind speed, 1 to manual wind speed, and the communication object" Speed auto "will issue 00 when it is in automatic wind speed.</p>				
455	Remote control switch	Fan coil	1bit	C,R,W
<p>This communication object is used to remotely control the switch state of the fan coil. The communication object is related to the selection of the parameter "Switch set":</p> <p>Available options: "0" = "OFF"; "1" = "ON" "0" = "ON"; "1" = "OFF"</p> <p>Select "0" = "OFF"; "1" = "ON", when the screen is turned on, the communication object "Remote control switch" issues 01, and when the screen displays "OFF", the communication object "Remote control switch" issues 00;</p> <p>Select "0" = "ON"; "1" = "OFF", when the screen is turned on, the communication object "Remote control switch" sends 00, and when the screen displays "OFF", the communication object "Remote control switch" sends 01.</p>				
456	Remote control mode	Fan coil	1byte	C,R,W
<p>This communication object is used to remotely control the mode of the fan coil. The communication object is related to the parameter "Dehumidification / Refrigeration / Ventilation / Heating mode set (0 ... 255; 254 = inactivate)".</p>				

457	Remote control speed	Fan coil	1byte	C,R,W
This communication object is used to remotely control the wind speed of the fan coil. The communication object is related to the setting of the parameter "Setting of off / speed 1 / speed 2 / speed 3 / speed auto (0 ... 255; 254 = inactivate)" .				
458	Remote setting set temperature	Fan coil	2byte	C,R,W
This communication object is used to remotely control the temperature of the fan coil.				
463	Switch(control)	Fan coil	1bit	C,R,T
Send the message "1" to the communication object to open the panel, and send the message "0" to close the panel.				
464	Switch(feedback)	Fan coil	1bit	C,R,W
When the panel is switched on and off, the switch status of the panel is fed back to the bus through this object. When the panel is closed, the message "0" is sent, and when the panel is opened, the message "1" is sent.				
450/451/452	Speed 1/2/3(feedback)	Fan coil	1bit	C,R,W
450	Speed 1byte(feedback)	Fan coil	1byte	C,R,W
This communication object is used to feedback the wind speed of the fan coil. The communication object is related to the selection of the parameter "Speed object set": Available options: 1bit 1byte Select "1bit", set the object type of the wind speed feedback in the fan coil to 1bit, and the communication objects are "Speed 1 (feedback)", "Speed 2 (feedback)", "Speed 3 (feedback)" Select "1byte", set the object type of the wind speed feedback in the fan coil to 1byte, and the communication object to "Speed 1byte (feedback)".				
454	Mode active/inactive	Fan coil	1byte	C,R,W
This communication object is used to activate / deactivate the dehumidification, cooling, ventilation and heating modes under the fan coil, 0x00: active 0x80: inactive; 0: dehu 1: refi 2: vent 3: heat.				
459	Feedback Switch	Fan coil	1bit	C,R,T
This communication object is used to send a message to the bus to report the switch status of the fan coil. It is related to the parameter "Switch set" in Feedback. Available options: "0" = "OFF"; "1" = "ON" "0" = "ON"; "1" = "OFF" Select "0" = "OFF"; "1" = "ON", when the screen is turned on, the communication object "Feedback switch" issues 01, and when the screen displays "OFF", the communication object "Feedback switch" issues 00; Select "0" = "ON"; "1" = "OFF", when the screen is turned on, the communication object "Feedback switch" sends 00, when the screen displays "OFF", the communication object "Feedback switch" sends 01.				
460	Feedback mode	Fan coil	1byte	C,R,T
This communication object is used to send a message to the bus to report the current mode of the fan coil. It is related to the setting of the parameter "Dehumidification / Refrigeration / Ventilation / Heating mode set (0 ... 255; 254 = inactivate)".				
461	Feedback speed	Fan coil	1byte	C,R,T

This communication object is used to send a message to the bus to report the current wind speed of the fan coil. It is related to the setting of the parameter "Setting of off / speed 1 / speed 2 / speed 3 / speed auto (0 ... 255; 254 = inactivate)".				
462	Feedback set temperature	Fan coil	2byte	C,R,T
This communication object is used to send the current set temperature value of the fan coil.				
465/467	Heating/ Cooling lower theshold	Fan coil	2byte	C,R,W
Through this communication object, modify the minimum temperature value of the set temperature in the fan coil heating / cooling mode. <i>Conversion via KNX format</i>				
466/468	Heating/ Cooling upper theshold	Fan coil	2byte	C,R,W
Through this communication object, modify the maximum temperature value of the set temperature in the fan coil heating / cooling mode. <i>Conversion via KNX format</i>				

Table 5-1 Fan coil communication object table

4.6 “auto dehumidify” communication object

The automatic dehumidification function of each channel has the same communication object. Taking the communication object of channel 1 as an example, auto dehumidify has 3 communication objects, as shown in Figure 4.6-1. The specific functions are shown in Table 6-1.

471	Auto dehumidification	Active auto dehumidification function.CH1(0:active,0:active)	1 bit	C R W - -	1-bit, boolean
472	Auto dehumidification	Set auto start dehumidification threshold value.CH1	2 bytes	C R W - -	2-byte float value, humidity (%)
473	Auto dehumidification	Set auto stop dehumidification threshold value.CH1	2 bytes	C R W - -	2-byte float value, humidity (%)

Figure 4.6-1 auto dehumidify communication object

No.	Object function	Name	Data type	Attribute
471	Active auto dehumidification fnction	Auto dehumidify	1 bit	C,R,W
This communication object is used to set whether to enter the automatic dehumidification function: send 00 to the communication object to enter automatic dehumidification, send 01 to exit automatic dehumidification.				
472	Set auto start dehumidification threshold value	Auto dehumidify	2 byte	C,R,W
This communication object is used to set the threshold for starting automatic dehumidification.				
473	Set auto stop dehumidification threshold value	Auto dehumidify	2 byte	C,R,W
This communication object is used to set the threshold for ending automatic dehumidification.				

Table 6-1 auto dehumidify communication object table

4.7 “Timing” communication object

The timing function of each channel has the same communication object. Taking the communication object of channel 1 as an example, Timing has a total of 2 communication objects, as shown in Figure 4.7-1. For specific functions, see Table 7-1.

469	Timing	Report.CH1	2 bytes	C	R	-	T	-	2-byte unsigned value, pulses
470	Timing	Timing.CH1	2 bytes	C	R	W	-	-	2-byte unsigned value, pulses

Figure 4.7-1 Timing communication object

No.	Object function	Name	Data type	Attribute
469	Timing	Timing	2byte	C,W
This communication object is used to set the timing time. Sending 1 to the communication object means timing 1min.				
470	Report	Timing	2byte	C,R,T
This communication object is used to send a message to the bus to report the current timing time.				

Table 7-1 Timing communication object table

4.8 “Temperature/humidity alarm” communication object

There are 8 communication objects under "Temperature / humidity alarm", as shown in Figure 4.8-1. The specific functions are shown in Table 8-1.

12	General	External temperature	2 bytes	C	R	W	T	-	2-byte float value, temperature (°C)
14	Alarm	temperature alarm active	1 bit	C	R	W	-	-	1-bit, boolean
15	Alarm	Upper limit of temp. alarm	2 bytes	C	R	W	-	-	2-byte float value, temperature (°C)
16	Alarm	Lower limit of temp. alarm	2 bytes	C	R	W	-	-	2-byte float value, temperature (°C)
17	Alarm	Temperature alarm status	1 bit	C	R	-	T	-	1-bit, boolean
18	General	External humidity	2 bytes	C	R	W	T	-	2-byte float value, humidity (%)
20	Alarm	humidity alarm active	1 bit	C	R	W	-	-	1-bit, boolean
21	Alarm	Upper limit of humidity alarm	2 bytes	C	R	W	-	-	2-byte float value, temperature (°C)
22	Alarm	Lower limit of humidity alarm	2 bytes	C	R	W	-	-	2-byte float value, temperature (°C)
23	Alarm	humidity alarm status	1 bit	C	R	-	T	-	1-bit, boolean

Figure 4.8-1 Temperature/humidity alarm communication object

No.	Object function	Name	Data type	Attribute
14	temperature alarm active	Alarm	1bit	C,R,W
This communication object is used to activate the temperature alarm function: send 01 to the communication object to activate the temperature alarm function; send 00 to deactivate the temperature alarm function.				
15	Upper limit of temp, alarm	Alarm	2byte	C,R,W
This communication object is used to set the upper limit of temperature alarm.				
16	Lower limit of temp, alarm	Alarm	2byte	C,R,W
This communication object is used to set the lower limit of temperature alarm.				
17	Temperature alarm status	Alarm	1bit	C,R,T
This communication object is used to send the temperature alarm message.				

20	humidity alarm active	Alarm	1bit	C,R,W
This communication object is used to activate the humidity alarm function: send 01 to the communication object to activate the humidity alarm function; send 00 to deactivate the humidity alarm function.				
21	Upper limit of humidity alarm	Alarm	2byte	C,R,W
This communication object is used to set the upper limit of the humidity alarm.				
22	Lower limit of humidity alarm	Alarm	2byte	C,R,W
This communication object is used to set the lower limit value of the humidity alarm.				
23	humidity alarm status	Alarm	1bit	C,R,T
This communication object is used to send messages of humidity alarm status.				

Table 8-1 Temperature/humidity alarm communication object table

4.9 “Relay” communication object

Relay has 4 channels, and the parameters and communication objects of each channel are the same. Take channel 1 as an example to explain the communication objects of each function.

4.9.1 “switch” communication object

The communication objects of the Switch are shown in Figure 4.9.1-1, and the specific functions are shown in Table 4.9.1-1.

801	Switch,0	Switch	1 bit	C - W - -	1-bit, switch
802	Switch,0	Switch status	1 bit	C R - T -	1-bit, switch
803	Switch,0	Switch time function	1 bit	C - W - -	1-bit, switch
804	Switch,0	Output of staircase lighting	1 bit	C - W - -	1-bit, switch
805	Switch,0	Warning of staircase	1 bit	C - - T -	1-bit, switch
806	Switch,0	Staircase duration	2 bytes	C R W - -	2-byte unsigned value, pulses
807	Switch,0	Call preset 1/2	1 bit	C - W - -	1-bit, switch
808	Switch,0	Set preset 1/2	1 bit	C - W - -	1-bit, switch
809	Switch,0	Scene	1 byte	C R W - -	8-bit unsigned value, counter pulses (0.255)
810	Switch,0	Forced operation	2 bit	C - W - -	1-bit controlled, switch control
804	Switch,0	Output of delay time	1 bit	C - W - -	1-bit, switch

Figure 4.9.1-1 “Switch” communication object

No.	Object function	Name	Data type	Attribute
801	Switch	Switch, X	1bit	C,W
You can send 00 or 01 to the communication object through the bus to change the state of the relay. The specific control state is determined by selecting "open" or "close" for the parameter "Contact position when switch value = ' 1 '". If you select open, the status of sending 00 relay is closed, the channel is open, and the status of sending 01 relay is open, the channel is closed; if you select close, the opposite is true.				
802	Switch status	Switch, X	1bit	C,R,T
This communication object is displayed when "Report the relay status" selects Active, indicating that the status of the relay is reported via the bus. The communication sends 1 to indicate that the				

relay contact is closed and 0 contact is opened.				
803	Switch time Function	Switch, X	1bit	C,W
<p>This communication object is displayed when "Time function" selects Active. If the communication object disables the Time function when it receives message 0, it enables the Time function when it receives message 1.</p> <p><i>Note: cannot be saved after power off</i></p>				
804	Output of delay time	Switch, X	1bit	C,W
<p>This communication object is displayed when "Delay switch" is selected in "The mode of time function" under "Time function", which means the delay control switch. If the communication object receives the message 0, the switch is turned off when the communication object is received. If the communication object receives When the message 1 is reached, the switch is delayed.</p>				
804	Output of staircase lighting	Switch, X	1bit	C,W
<p>This communication object is displayed when "Staircase lighting" is selected in "The mode of time function" under "Time function". It is used to control the state of the staircase lighting. The condition for triggering the staircase lighting is determined by the parameter "The mode of control for staircase lighting is" The choice is decided, choose Start with '1', stop with '0', the communication object receives the message 1 stair light is turned on, 0 stair light is turned off; select Start with '1', no active with '0' then the communication The object receives the message 1 The staircase lighting is turned on, 0 has no effect on the staircase lighting; select Start with '0/1', can't be stop, the communication object receives the message 0/1 staircase lighting is turned on and cannot communicate Subject turns off staircase lighting.</p>				
805	Warning of staircase	Switch, X	1bit	C,T
<p>This communication object is displayed when "Via object" or "Via object and flashing the output" is selected in "Warning mode for ending of staircase" under "Time function". Early warning of the off-on-off state of the lamp.</p>				
806	Staircase duration	Switch, X	2byte	C,W
<p>This communication object is displayed when Enable is selected in "Modify the duration via object" under "Time function", indicating that the duration of the staircase lighting is allowed to be modified via the bus. The data type is 2byte.</p>				
807	Call preset1/2	Switch, X	1bit	C,W
<p>This communication object is displayed when "Preset function" under "Switch" selects Active, which means that the preset value function is called. The preset value has two preset 1 and preset 2. If the communication object receives a message of 0, it calls the preset value of 1, and when it receives a message of 1, it calls the preset value of 2.</p>				
808	Set preset1/2	Switch, X	1bit	C,W
<p>This communication object is displayed when "Enable" is selected in "Setting for preset via teleg.is" under the parameter "Preset function", indicating that the current value is set to a new preset value through the bus. When the communication object receives a 0 message, it will set the current value to a new preset 1 value, and when receiving a 1 message, it will set the current value to a new preset 2 value.</p>				
809	Sence	Switch, X	1byte	C,W
<p>This communication object is displayed when "Preset function" under "Switch" selects Active, indicating that the scene function is called or stored, and its data type is 8bit. Sending an 8bit</p>				

command through this communication object can call or store the scene. The meaning of 8bit instruction is explained in detail below:

Set an 8bit instruction to (binary encoding): FXNNNNNN

F: recall the scene for "0"; store the scene for "1";

X: Not used, does not affect the result

NNNNNN: Scene number (1... 64)

810	Forced operation	Switch, X	2bit	C,W
This communication object is displayed when the parameter "Forced operation function" selects Active, indicating the forced operation function.				

Figure 4.9.1-1 “ Switch ” communication object table

4.9.2 “curtain” communication object

801	Curtain,0	Move curtain up/down	1 bit	C - W - -	1-bit, switch
802	Curtain,0	Adjustment stop/up/down	1 bit	C R W T -	1-bit, switch
803	Curtain,0	Curtain height position	1 byte	C R W T -	8-bit unsigned value, percentage (0..100%)
804	Curtain,0	scene	1 byte	C R W - -	8-bit unsigned value, counter pulses (0..255)
805	Curtain,0	Curtain slat position	1 byte	C R - T -	8-bit unsigned value, percentage (0..100%)
806	Curtain,0	Move slats 0..255	1 byte	C R W - -	8-bit unsigned value, percentage (0..100%)
807	Curtain,0	Move height 0..255	1 byte	C R W - -	8-bit unsigned value, percentage (0..100%)

Figure 4.9.2-1 “curtain” communication object

No.	Object function	Name	Data type	Attribute
801	Move curtain up/down	Curtain, X	1bit	C,W
The communication object indicates that the height of the curtain moves up / down. When the parameter "Up / Down value" selects "0 = up" and "1" = down, the communication object sends 00 to indicate that the height of the curtain moves up to the top, and 01 to indicate the curtain. The height moves down to the bottom; when "0" = down, "1" = up, the communication object sends 00 to indicate that the curtain height moves down to the bottom, and 01 indicates that the curtain height moves up to the top.				
802	Adjustment stop/up/down	Curtain, X	1bit	C,W
The communication object represents the angle adjustment. When the parameter "Open / Close value" selects "0" = open, "1" = close, the communication object sends 00 to indicate that the curtain angle value decreases, and send 01 to indicate that the curtain angle value increases; select When "0" = close, "1" = open, the communication object sends 00 to indicate that the curtain angle value increases, and sends 01 to indicate that the curtain angle value decreases.				
803	Curtain height position	Curtain, X	1byte	C,R,T
The communication object represents the position where the height of the curtain is reported.				
804	Scene	Curtain, X	1byte	C,W
This communication object is displayed when "Scene function" under "Curtain" selects Active, indicating that the scene function is called or stored, and its data type is 8bit. Sending an 8bit command through this communication object can call or store the scene. The meaning of 8bit				

instruction is explained in detail below: Set an 8bit instruction to (binary encoding): FXNNNNNN F: recall the scene for "0"; store the scene for "1"; X: Not used, does not affect the result NNNNNN: Scene number (1... 64)				
805	Curtain salt position	Curtain, X	1byte	C,R,T
This communication object is displayed only when the parameter "Operating mode" selects "blind", indicating the position of the curtain angle.				
806	Move salt 0...255	Curtain, X	1byte	C,W
This communication object is displayed only when the parameter "Operating mode" selects "blind", indicating that the angle value of the curtain can be modified through the bus.				
807	Move height 0...255	Curtain, X	1byte	C,W
The communication object indicates that the height value of the curtain can be modified through the bus.				

Table 4.9.2-1 “curtain” communication object table

4.9.3 “Dry contact” communication object

801	Dry contact,0	Trigger	1 bit	C - W - -	1-bit, switch
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Figure 4.9.3-1 “dry contact” communication object

No.	Object function	Name	Data type	Attribute
801	Trigger	Dry contact	1bit	C,W
This communication object is used to trigger the relay. Select the value "0" in the parameter "Valid value of" Trigger "object" to indicate that the effective value of the trigger relay is "0", that is, send the 00 to your communication object to trigger the relay; The effective value of the trigger relay is "1", that is, the communication of your object sends 01 to trigger the relay; select value "0/1" means that the effective value of the trigger relay is "0/1", that is, the communication of your object sends 00/01 can trigger the relay .				

Table 4.9.3-1 “dry contact” communication object table

4.10 “Dimming” communication object

The 0-10V function has 4 channels, and the communication object of each channel is the same. Taking channel 1 as an example, as shown in Figure 4.10-1, the specific functions are shown in Table 10-1.

841	0-10V,CH0	current switch state	1 bit	C R - T -	1-bit, boolean
842	0-10V,CH0	current brightness value	1 byte	C R - T -	8-bit unsigned value, counter pulses (0..255)
843	0-10V,CH0	Set preset 1 and 2	1 bit	C - W - -	1-bit, boolean
844	0-10V,CH0	Set preset 3 and 4	1 bit	C - W - -	1-bit, boolean
845	0-10V,CH0	Call preset 1 and 2	1 bit	C - W - -	1-bit, boolean
846	0-10V,CH0	Call preset 3 and 4	1 bit	C - W - -	1-bit, boolean
847	0-10V,CH0	Warning staircase lighting	1 bit	C - - T -	1-bit, boolean
848	0-10V,CH0	activate staircase function	1 bit	C R W - -	1-bit, boolean
849	0-10V,CH0	Permanent ON	1 bit	C - W - -	1-bit, boolean
850	0-10V,CH0	Duration of staircase lighting	2 bytes	C R W - -	2-byte unsigned value, pulses
851	0-10V,CH0	switch	1 bit	C - W - -	1-bit, boolean
852	0-10V,CH0	Dimming time of relative	2 bytes	C R W - -	2-byte unsigned value, pulses
853	0-10V,CH0	Relative dimming	4 bit	C - W - -	3-bit controlled, dimming control
854	0-10V,CH0	Dimming time of absolute	2 bytes	C R W - -	2-byte unsigned value, pulses
855	0-10V,CH0	Brightness value	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)
856	0-10V,CH0	Call scene	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)
857	0-10V,CH0	Store scene	1 byte	C - W - -	8-bit unsigned value, counter pulses (0..255)

Figure 4.10-1 “dimming” communication object

No.	Object function	Name	Data type	Attribute
841	Current switch state	0-10V,X	1bit	C,R,T
This communication object is used to send the current switching state. The parameter "Status responded of switching state" is enabled when "YES" is selected. The sending method is set by the parameter "Send". The state value that occurs is set by the parameter "Value" .				
842	Current brightness value	0-10V,X	1byte	C,R,T
This communication object is used to send the current brightness value. The parameter "Status response of brightness state" is enabled when "YES" is selected, and the sending method is set by the parameter "Send".				
843	Set preset 1 and 2	0-10V,X	1bit	C,W
This communication object is used to set presets 1 and 2. Send 00 to this communication object to set preset 1, and 01 to set preset 2.				
844	Set preset 3 and 4	0-10V,X	1bit	C,W
This communication object is used to set presets 3 and 4. Send 00 to the communication object to set preset 3, and send 01 to set preset 4.				
845	Call preset 1 and 2	0-10V,X	1bit	C,W
This communication object is used to call presets 1 and 2. Send 00 to the communication object to call preset 1, and 01 to call preset 2.				
846	Call preset 3 and 4	0-10V,X	1bit	C,W
This communication object is used to call presets 3 and 4. Send 00 to the communication object to call preset 3, and send 01 to call preset 4.				
847	Warning staircase lighting	0-10V,X	1bit	C,T
This communication object is used to issue stair light warning data. The data sent is related to the parameter "Warning during dimming down". Select the parameter "Send value" under "YES".				
848	Activate staircase function	0-10V,X	1bit	C,R,W
This communication object is used to activate the stair light function. Sending 01 to this communication object activates the stair light function, and sending 00 does not activate the stair light function.				
849	Permanent ON	0-10V,X	1bit	C,W
This communication object is used to enter the permanently open function. Send 01 to the communication object to enter the permanently open function, and send 00 to not enter the permanently open function.				

850	Duration of staircase lighting	0-10V,X	2byte	C,W
This communication object is used to modify the absolute dimming time.				
851	Switch	0-10V,X	1bit	C,W
This communication object is used to change the state of the switch. Send the 01 indicator light to the communication object "Switch" and the 00 indicator light to turn off.				
852	Dimming time of relative	0-10V,X	2byte	C,R,W
This communication object is used to modify the relative dimming time.				
853	Relative dimming	0-10V,X	4bit	C,W
This communication object changes the brightness value through relative dimming.				
854	Dimming time of absolute	0-10V,X	2byte	C,R,W
This communication object is used to modify the delay time of staircase lights.				
855	Brightness value	0-10V,X	1byte	C,W
This communication object changes the brightness value through absolute dimming.				
856	Call scene	0-10V,X	1byte	C,W
This communication object is used to call up the scene. Send the communication object with the parameter "Scene number 1 ... 64" and set the corresponding scene number minus 1 to enter the scene.				
857	Store scene	0-10V,X	1byte	C,W
This communication object is used to save the scene. The highest communication object is 1 + scene number minus 1 to save the scene. For example, the scene number of scene 1 is 1, then write 0x80 to save the current brightness value to scene 1.				

Table 10-1 dimming communication object table

4.11 “Key page block” communication object

4.11.1 “Dimming key” communication object

The Dimmer function of each module has the same communication object. Taking the dimming communication object of the first module on page 1 as an example, there are 4 communication objects, as shown in Figure 4.11.1-1. The specific functions are shown in the table 11.1-1.

25	Page 1 area 1.Output Key	Dimmer ON/OFF for short Key	1 bit	C - - T -	1-bit, switch
26	Page 1 area 1.Output Key	Dimmer value Key	1 byte	C - - T -	8-bit unsigned value, percentage (0..100%)
30	Page 1 area 1.Input Key	Feedback of dimmer Key	1 byte	C R W - -	8-bit unsigned value, percentage (0..100%)
31	Page 1 area 1.Input Key	Feedback ON/OFF for short Key	1 bit	C R W - -	1-bit, switch

Figure 4.11.1-1 dimming communication object

No.	Object function	Name	Data type	Attribute
25	Dimming ON/OFF for short	Output	1bit	C,T
This communication object takes effect when switching the dimming function, and the output value is determined by the parameter "value of dimming on / off is".				

26	Dimmer value	Output	1byte	C,T
This communication object plays a role in adjusting the brightness value and is used to send the current dimming value to the bus.				
27	Feedback of dimmer	Input	1byte	C,R,W
The dimming value can be modified through this communication object.				
28	Feedback ON/OFF for short	Input	1bit	C,R,W
This communication object is used to receive the feedback value of the dimmer switch.				

Table 11.1-1 dimming communication object table

4.11.2 “Shutter key” communication object

It may be modified in the future, keep it first

The shutter function of each module has the same communication object. Taking the curtain communication object of the first module on page 1 as an example, there are three communication objects, as shown in Figure 4.11.2-1.

25	Page 1 area 1.Output/Input... Move shutter Key	1 bit	C - W T -	1-bit, up/down
26	Page 1 area 1.Output/Input... Adjust lamella of shutter Key	1 bit	C - W T -	1-bit, boolean
30	Page 1 area 1.Output/Input... curtain position value	1 byte	C R W T -	8-bit unsigned value, percentage (0..100%)

Figure 4.11.2-1 shutter communication object

4.11.3 “Scene key” communication object

The scene function of each module has the same communication object. Taking the scene communication object of the first left module on page 1 as an example, there are 3 communication objects, as shown in Figure 4.11.3-1. The specific functions are shown in the table 11.3-1.

25	Page 1 area 1.Output left Key	Save scene 1 byte left Key	1 byte	C - - T -	scene number, scene number
26	Page 1 area 1.Output left Key	Call scene(1..64)left Key	1 byte	C - W T -	scene number, scene number
30	Page 1 area 1.Input left Key	Feedback of scene left Key	1 byte	C R W - -	8-bit unsigned value, counter pulses (0..255)

Figure 4.11.3-1 scene communication object

No.	Object function	Name	Data type	Attribute
25	Save scene 1 byte	Output	1byte	C,T
This communication object is activated when the long press save function is turned on in the scene, and the value of the message output by long press is set by the parameter. The data type can				

be set to 1bit or 1Byte by parameter "call scene is set"				
26	Call scene(1...64)	Output	1byte	C,W,T
This communication object works under the short press function of the scene, and the scene number output by short press is set by the parameter.				
30	Feedback of scene	Input	1byte	C,R,W
This communication object is the feedback value of the scene function. The value of the written message needs the scene number minus 1.				

Table 11.3-1 scene communication object table

4.11.4 “Switch value key” communication object

The switch value function of each module has the same communication object. Taking the communication object of the first left module on page 1 as an example, there are 5 communication objects, as shown in Figure 4.10-1. For specific functions, see Table 10-1.

25	Page 1 area 1.Output left Key	Output 1 bit value.No1	1 bit	C - W T -	1-bit, boolean
26	Page 1 area 1.Output left Key	Output 1 bit value.No2	1 bit	C - W T -	1-bit, boolean
27	Page 1 area 1.Output left Key	Output 1 bit value.No3	1 bit	C - W T -	1-bit, boolean
28	Page 1 area 1.Output left Key	Output 1 bit value.No4	1 bit	C - W T -	1-bit, boolean
29	Page 1 area 1.Output left Key	Output 1 bit value.No5	1 bit	C - W T -	1-bit, boolean

Figure 4.11.4-1 switch value communication object

No.	Object function	Name	Data type	Attribute
25	Output 1bit/4bit/1byte value.No1	Output	1bit/4bit/1byte	C,W,T
This communication object is activated when the module selects switch value. Press the module and the output message value is set by the parameter. The data type can be set to 1bit, 4bit or 1Byte by the parameter "If 1st / 2nd press telegram is".				
26	Output 1bit/4bit/1byte value.No2	Output	1bit/4bit/1byte	C,W,T
Refer to the communication object "Output 1bit / 4bit / 1byte value.No1"				
27	Output 1bit/4bit/1byte value.No3	Output	1bit/4bit/1byte	C,W,T
Refer to the communication object "Output 1bit / 4bit / 1byte value.No1"				
28	Output 1bit/4bit/1byte value.No4	Output	1bit/4bit/1byte	C,W,T
Refer to the communication object "Output 1bit / 4bit / 1byte value.No1"				
29	Output 1bit/4bit/1byte value.No5	Output	1bit/4bit/1byte	C,W,T
Refer to the communication object "Output 1bit / 4bit / 1byte value.No1"				

Table 11.4-1 switch value communication object table

4.11.5 “Environmental detection display key” communication object

The Display module can display: temperature, humidity, VOC, CO2, CO, etc. Each module has the same communication object. Take the communication object of the first left module on page 1 as an example, as shown in Figure 4.11.5-1 The specific functions are shown in Table 11.5-1.

27	Page 1 area 1.Output left Key	Falling. 1 bit left Key	1 bit	C R W T -	1-bit, boolean
28	Page 1 area 1.Output left Key	Middle. 1 bit left Key	1 bit	C R W T -	1-bit, boolean
29	Page 1 area 1.Output left Key	Beyond. 1 bit left Key	1 bit	C R W T -	1-bit, boolean
30	Page 1 area 1.Input left Key	Gas value left Key	2 bytes	C R W -	2-byte float value, parts/million (ppm)

Figure 4.11.5-1 display communication object

No.	Object function	Name	Data type	Attribute
27	Falling.1bit/4bit/1byte	Output	1bit/4bit/1byte	C,R,W,T
This communication object appears when "VOC / CO2 / CO" is selected in the parameter "display pic set" and the alarm message is activated. When the gas value is lower than the minimum alarm threshold, this communication object sends an alarm message. --Value set is "setting.				
28	Middle.1bit/4bit/1byte	Output	1bit/4bit/1byte	C,R,W,T
When the parameter "display pic set" selects "VOC / CO2 / CO" and the parameter "-threshold behaviour" selects "with hysteresis", the communication object will be activated. When the gas value is between the lowest alarm threshold and the highest alarm threshold, This communication object sends out an alarm message, and the message value is set by the parameter "--Value set is".				
29	Beyond.1bit/4bit/1byte	Output	1bit/4bit/1byte	C,R,W,T
This communication object appears when "VOC / CO2 / CO" is selected in the parameter "display pic set" and the alarm message is activated. When the gas value is higher than the highest alarm threshold, this communication object sends an alarm message. The message value is determined by the parameter "--Value set is "setting.				
30	Gas value	Input	2bytes	C,R,W
This communication object appears when the parameter "display pic set" selects "VOC / CO2 / CO". This communication object is used to pass in the externally detected VOC / CO2 / CO gas value.				

Table 11.5-1 display communication object table