User Manual

KNX Smart Touch S3



Plastic button model:

CHTF-3.3/3.1.01(Gray)

Glass/Metal button model:

CHTF-3.3/3.2.xy

(x=1:Glass; x=2:Metal)

(y=0: White; y=1: Black; y=3: Gray; y=4: Golden)

Attentions

1. **Please keep devices away from strong magnetic field, high temperature, wet environment;**



2. **Do not fall the device to the ground or make them get hard impact;**



3. **Do not use wet cloth or volatile reagent to wipe the device;**



4. **Do not disassemble the devices.**

Contents

Chapter 1 Summary 1
Chapter 2 Technical Date 3
Chapter 3 Dimension and Structural Diagram 4
3.1 Dimension Diagram 4
3.2 Structural Diagram 5
3.3 Installation Instruction 6
Chapter 4 Project Design and Programming 7
Chapter 5 Parameter setting description in the ETS 11
5.1 KNX Secure 11
5.2 Parameter window "General" 16
5.2.1 Parameter window "General setting" 16
5.2.2 Parameter window "Proximity setting" 20
5.2.3 Parameter window "Advanced setting" 22
5.3 Parameter window "Home page" 23
5.3.1 Parameter window "Function" 23
5.3.2 Parameter window "Item x"(x=1~2) 25
5.4 Parameter window "Function page setting" 28
5.4.1 Parameter window "Page x"(x=1~6) 28
5.4.2 Parameter window "Icon x"(x=1~6) 30
5.4.3 Parameter window of basic function 32
5.5 Parameter window"Internal temperature measurement" 74
5.6 Parameter window"HVAC controller" 78
5.6.1 Parameter window"Controller X"(x=1~6) 79
5.6.2 Parameter window"Controller x - Ventilation"(x=1~6) 109
5.7 Parameter window"Button" 116
5.8 Parameter window"Logic" 118
5.8.1 Parameter window "AND/OR/XOR" 120
5.8.2 "Gate forwarding"parameter window 122
5.8.3 "Threshold comparator"parameter window 124
5.8.4 "Format convert"parameter window 127
5.8.5 "Gate function"parameter window 129
5.8.6 "Delay function"parameter window 131
5.8.7 "Staircase lighting"parameter window 132
5.9 "Scene Group"parameter window 134
5.10 Parameter window"Voice reminder" 139
5.11 Parameter window"IO function" 143
Chapter 6 Description of Communication Object 146
6.1 "General" Communication object 146
6.2 "Proximity setting" Communication object 147
6.3 "Internal sensor" Communication object 148
6.4 "HVAC controller" Communication object 150

6.4.1 “Room temperature controller” Communication object 150
6.4.2 “Ventilation controller” Communication object 157
6.5 “Home page” Communication object 158
6.6 “Function page setting” Communication object 160
6.6.1 Basic Function Communication Object 160
6.6.2 “Air conditioner control” Communication object 175
6.6.3 “Room temperature unit control” Communication object 178
6.6.4 “Ventilation system control” Communication object 182
6.6.5 “Audio control”Communication object 185
6.7 “Logic” Communication object 189
6.7.1 “AND/OR/XOR” Communication object 189
6.7.2 “Gate forwarding” Communication object 190
6.7.3 “Threshold comparator” Communication object 190
6.7.4 “Format convert” Communication object 191
6.7.5 “Gate function” Communication object 195
6.7.6 “Delay function” Communication object 196
6.7.7 “Staircase lighting” Communication object 197
6.8 “Scene Group” Communication object 198
6.9 “Voice reminder” Communication object 199
6.10 “IO function” Communication object 200

Chapter 1 Summary

KNX Smart Touch S3 is a 3.3-inch KNX smart control panel with a screen resolution of up to 480*320. In addition to integrating KNX device control, it also connects to a SIP intercom system, combining indoor and outdoor communication into one entity.

The smart control integrates lighting, switches, dimming, curtains, value sender, color temperature, color control (RGB, RGBW, RGBCW),audio control,room temperature control, Air conditioner,Ventilation system control, etc. It not only supports the display of air quality sensor readings and device status but also integrates various sensors such as proximity detection, light intensity detection, and temperature and humidity detection to meet most daily application needs. As an indoor intercom device, it supports wireless network access and features such as contact management, SIP video intercom calls, and one-touch group calls. It also supports functions like screen savers, screen locking, password access, and label prompts.

KNX Smart Touch S3 powered from KNX bus, and need a 12-30V DC auxiliary supply voltage. It is available to assign the physical address and configure the parameters by engineering design tools ETS with .knxprod (support edition ETS5.7 or higher).

The main functions are summarized as follows:

- 3.3-inch color IPS capacitive touchscreen with a retina display and a resolution of 320×480.
- Home page function, supporting the display of air quality information and quick access to device scene shortcuts.
- Basic control functions, including switching, dimming, curtains, and scenes; as well as other control functions, such as color and color temperature control (RGB,

RGBW, and color temperature), background music control, and HVAC control (temperature control, air conditioning, and ventilation).

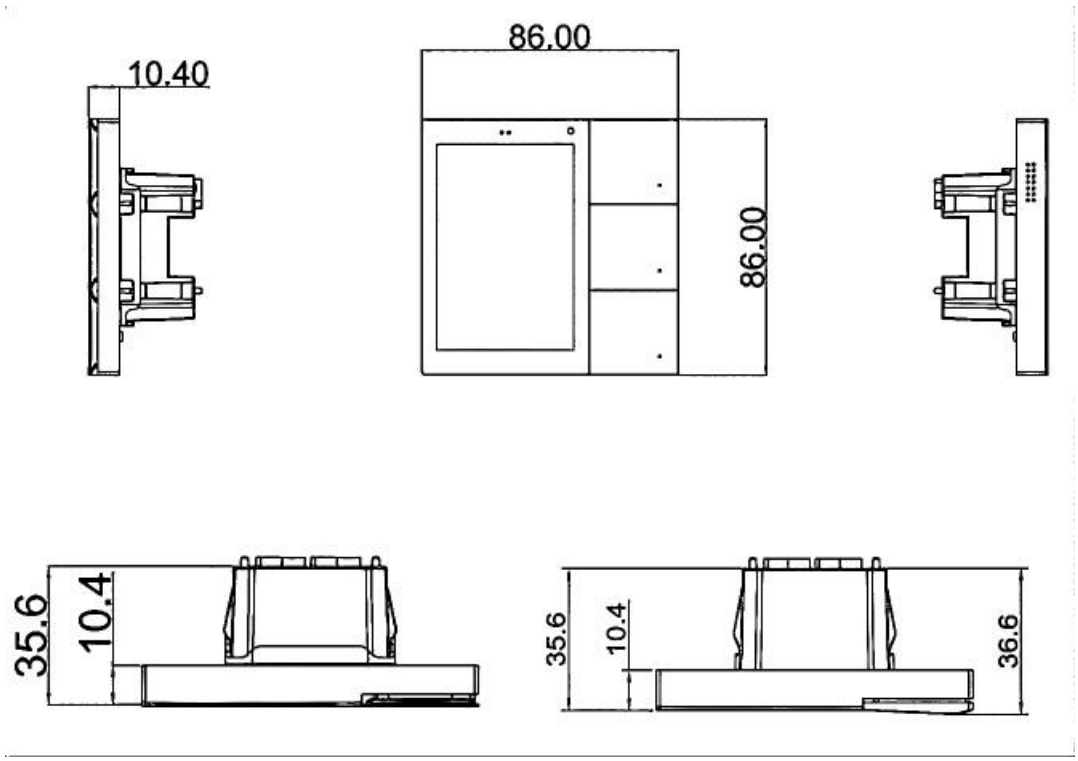
- Scene group function and logic function.
- Security features, including password protection, screen saver, and screen lock.
- Proximity detection function, with manual screen brightness adjustment.
- Built-in temperature and humidity sensor.
- Buttons can be used as shortcuts for the touchscreen and feature RGB indicator lights.
- Supports up to 8 voice reminder functions.
- Supports up to 20 general-purpose I/O functions.

Chapter 2 Technical Date

Power Supply	Bus voltage	21-30V DC, via the KNX bus
	Bus current	<4mA/24V DC, <3mA/30V DC
	Bus consumption	<90mW
Auxiliary Supply	Voltage	12-30V DC
	Current	<95mA/24V DC, <80mA/30V DC
	Consumption	<2.4W
Connection	KNX	Bus connection terminal(Red/Black)
	Auxiliary Supply	Bus connection terminal(Yellow/White)
Proximity sensor	Normal:30cm	Standard:50cm Enhanced:80cm
Temperature sensor		-40-80℃
Humidity sensor		0-100%
Temperature	Operation	– 5 °C ... + 45 °C
	Storage	–25 °C ... + 55 °C
	Transport	– 25 °C ... + 70 °C
Environment	Humidity	<93%, except dewing
Installation	European Standard 80 flush-mounted back box or Chinese Standard 86 flush-mounted back box	

Chapter 3 Dimension and Structural Diagram

3.1 Dimension Diagram



CHTF-3.3/3.2.xy CHTF-3.3/3.1.01

Model	Dimension
CHTF-3.3/3.1.01(Plastic button)	86*86*36.6mm
CHTF-3.3/3.2.xy(Glass/metal button)	86*86*35.6mm

Fig.3.1 KNX Smart Touch S3 dimension diagram

3.2 Structural Diagram

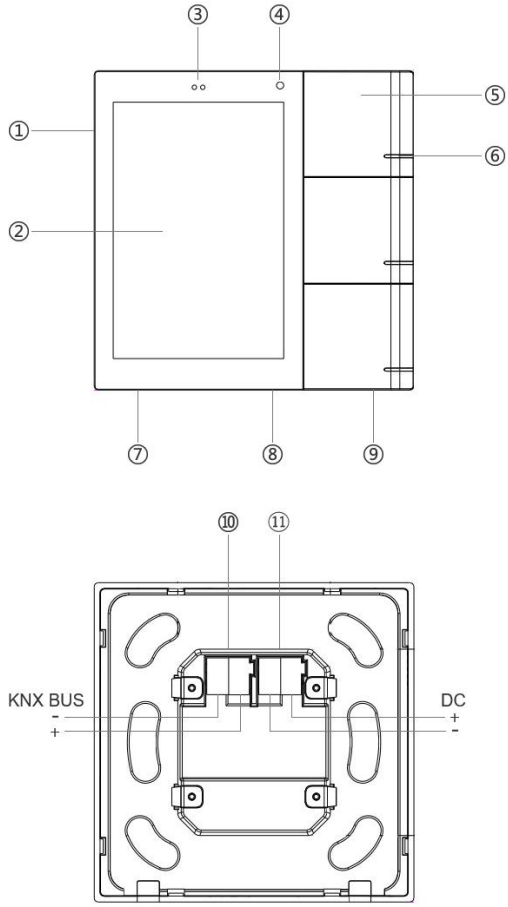


Fig.3.2 KNX Smart Touch S3 structural diagram

①Loudspeaker ②Touch and display area ③Proximity sensor ④brightness sensor ⑤Physical buttons ⑥Button indicator light	⑦Reset button ⑧Microphone ⑨ Internal temperature and humidity sensor ⑩KNX bus connection terminal ⑪Auxiliary supply connection terminal

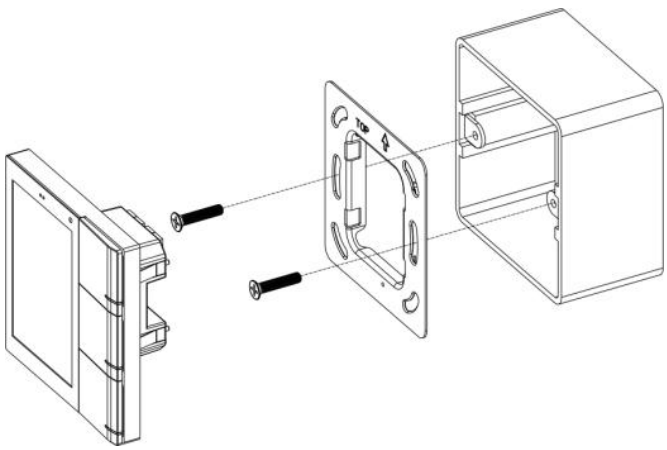
3.3 Installation Instruction

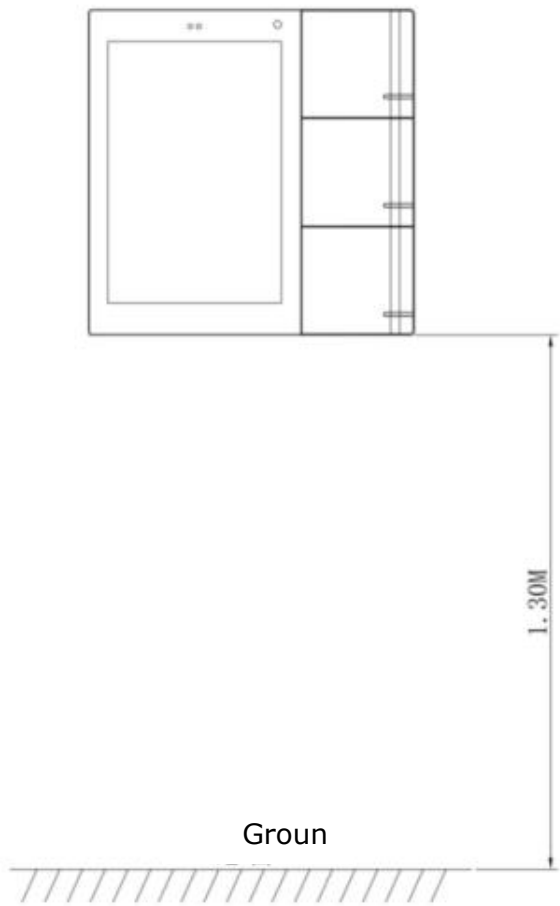
1. First, remove the mounting plate and secure it to the 86 box using the provided screws.

2. After removing the entire unit, connect the wiring interfaces and snap the unit onto the mounting plate.

3. The recommended installation height is 1.3 meters.

Note: If you encounter any issues during installation, do not forcefully press or install. First, ensure the wall surface is level and check the mounting bracket.





Chapter 4 Project Design and Programming

Application	Maximum of communication objects	Maximum number of group addresses	Maximum number of associations	Secure group addresses
KNX Smart Touch S3/1.0	**1102**	**1500**	**1500**	**1200**

General function

The general functions include device heartbeat packets, KNX message interval settings, bus update date and time, power-on request for device status, delay auto-exit function settings, and support for whole-device screen lock.

Additionally, you can choose whether to enable other functions, such as security password, screen display, screen brightness, and screen saver functions.

Homepage shortcut function

The home page supports the display of two air quality status bars and time information, as well as four shortcuts that can link to devices or scenes on the function pages.

The types of air information include temperature, humidity, PM2.5, PM10, CO2, VOC, AQI, illuminance, wind speed, and rain status.

AQI, PM2.5, PM10, VOC, CO2, and illuminance are detected through external sensors, while temperature and humidity can be selected from either internal or external sources.

Function Page Settings

The function pages adopt a grid display style, where each tile can be configured to link to specific functions. Up to six function pages are supported, with each page accommodating a maximum of six icons. Independent locking/unlocking of each icon device is also supported.

The functional points include basic control functions such as switching, dimming, curtains, and scenes, as well as other control functions like color and color temperature control (RGB, RGBW, and color temperature), background music control, and HVAC control (temperature control, air conditioning, and ventilation).

Button Functions

Mechanical buttons can be configured to link to touch functions. Each button can activate or disable functions and can link to devices or scenes on the function pages.

Indicator Light Functions

The brightness level of the indicator light is adjustable and can vary based on day/night status.

The indicator light turns off when the LCD screen is off and turns on simultaneously when the screen is awakened.

The configuration of the indicator light is based on the button settings.

HVAC Controllers

Supports up to six independently configurable controllers for integration with thermostats or ventilation controllers.

Thermostat: Supports control mode input, heating/cooling systems, operation modes, temperature setpoints, fan speed, window linkage, presence detection linkage, temperature upper/lower thresholds, and two-point and PI control algorithms. Additionally, it allows for relative temperature adjustment with optional upper/lower limits for temperature offset (-10° C to 10° C), which can be sent to the bus when enabled.

Ventilation Controller: Supports automatic control linked to PM2.5/CO2/VOC levels. It also supports selectable output types of 1-bit or 1-byte.

Logic Functions

Supports up to eight logic channels, with each channel supporting up to eight inputs and one logic result output.

Logic functions include AND, OR, XOR, gate conversion, threshold comparison, format conversion, gate functions, delay functions, and staircase light functions.

Scene Group Functions

Supports up to eight scene group channels, with each group supporting up to eight configurable outputs. The data type for each output can be selected as 1-bit, 1-byte, or 2-byte.

SIP Video Intercom

Supports video intercom with S-series products, allowing the search and addition of

other SIP devices on the local network to the contact list.

Supports one-to-one and group calls to S-series smart screens, with group calls supporting up to 16 devices.

Can connect to cloud-based SIP servers for video intercom with other cloud devices.

Supports door intercom calls to smart screens, with features like image preview, video intercom, and door unlocking.

IoT Gateway

Supports connecting local smart home devices to the cloud for remote control via the Vison Smart Home APP.

Supports custom scene creation via the Vison Smart Home APP for scene-based control.

Allows users to switch themes on the smart screen via the Vison Smart Home APP.

Voice Reminders

Supports up to eight voice reminders.

Allows configuration of the content and style displayed on the S3 smart screen when a voice reminder is triggered.

Supports stopping voice playback via the bus.

Supports setting voice playback duration and automatic repeat interval.

Chapter 5 Parameter setting description in the ETS

5.1 KNX Secure

KNX Smart Touch S3 is a KNX device that complies with the KNX secure standard. That is, you can run the device in safe way.

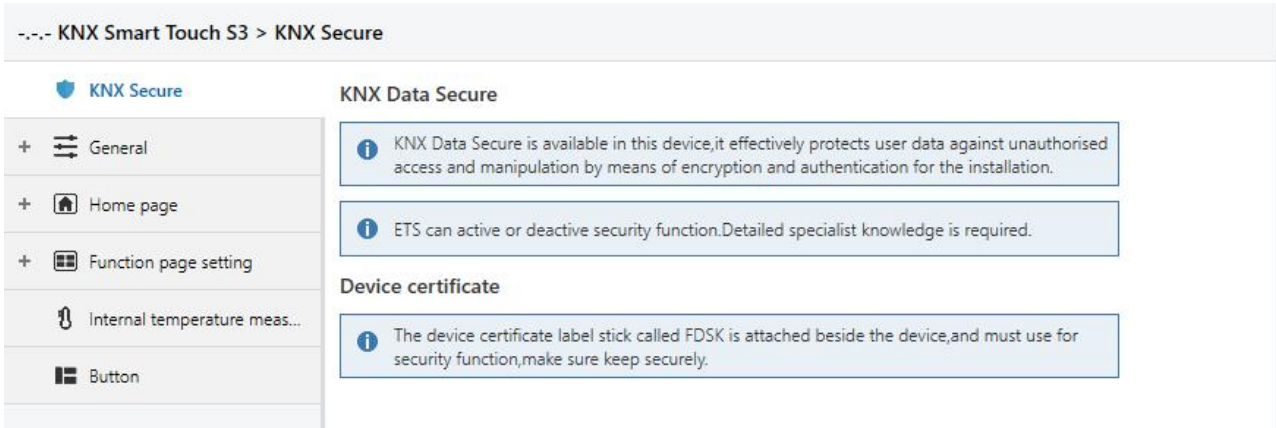
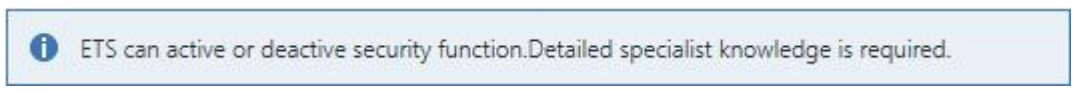


Fig. 5.1 (1) "KNX Secure" parameter window

The device with KNX secure will be displayed notes on ETS, as shown as Fig.5.1(1).





KNX data security is available on this device, effectively protecting user data from unauthorized access and operations through encryption and installation authentication. ETS can activate or deactivate the security function, which requires detailed professional knowledge.



A device certificate label named FDSK is attached to the device for security functions. Please ensure it is kept securely.

If secure commissioning is actived in ETS project, the following information must be considered during device debugging:



❖ It is essential to assign a project password as soon as a KNX Secure device is imported into a project. This will protect the project against unauthorized access.

The password must be kept in a safe place – access to the project is not possible without it (not even the KNX Association or device manufacturer will be able to access it)!

Without the project password, the commissioning key will not be able to be imported.

❖ A commissioning key is required when commissioning a KNX Secure device (first download). This key (FDSK = Factory Default Setup Key) is included on a sticker on the side of the device, and it must be imported into the ETS prior to the first download:

✧ On the first download of the device, a window pops up in the ETS to prompt the user to enter the key, as shown in Fig.5.1 (2) below.

The certificate can also be read from the device using a QR scanner (recommended).

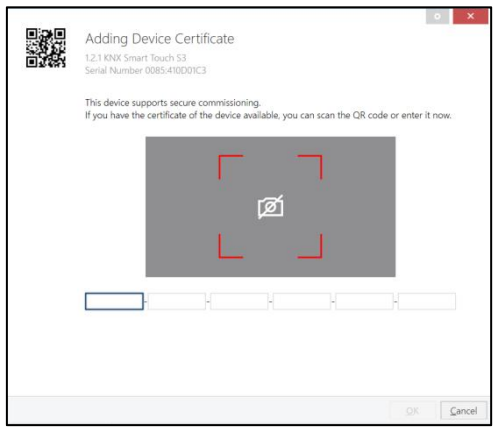


Fig. 5.1(2) Add Device Certificate window

✧ Alternatively, the certificates of all Secure devices can be entered in the ETS beforehand.

This is done on the "Security" tab on the project overview page, as shown in Fig.5.1(3) below.

The certificates can be also added to the selected device in the project, as shown in Fig.5.1(4).

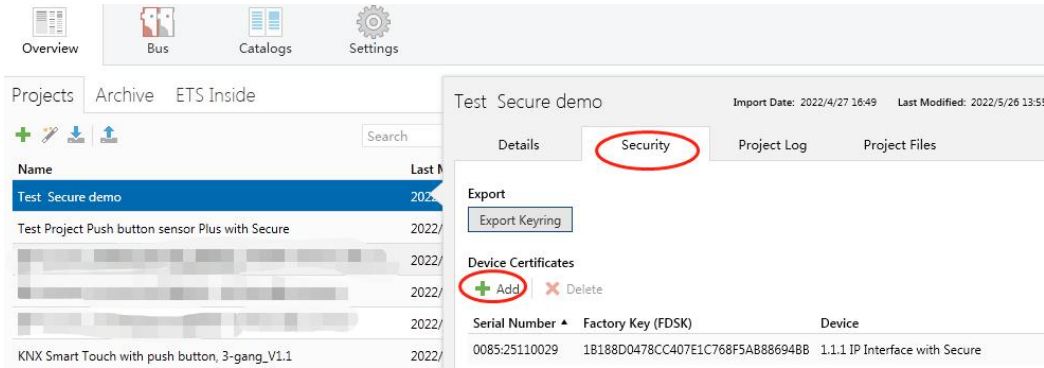


Fig. 5.1(3) Add Device Certificate

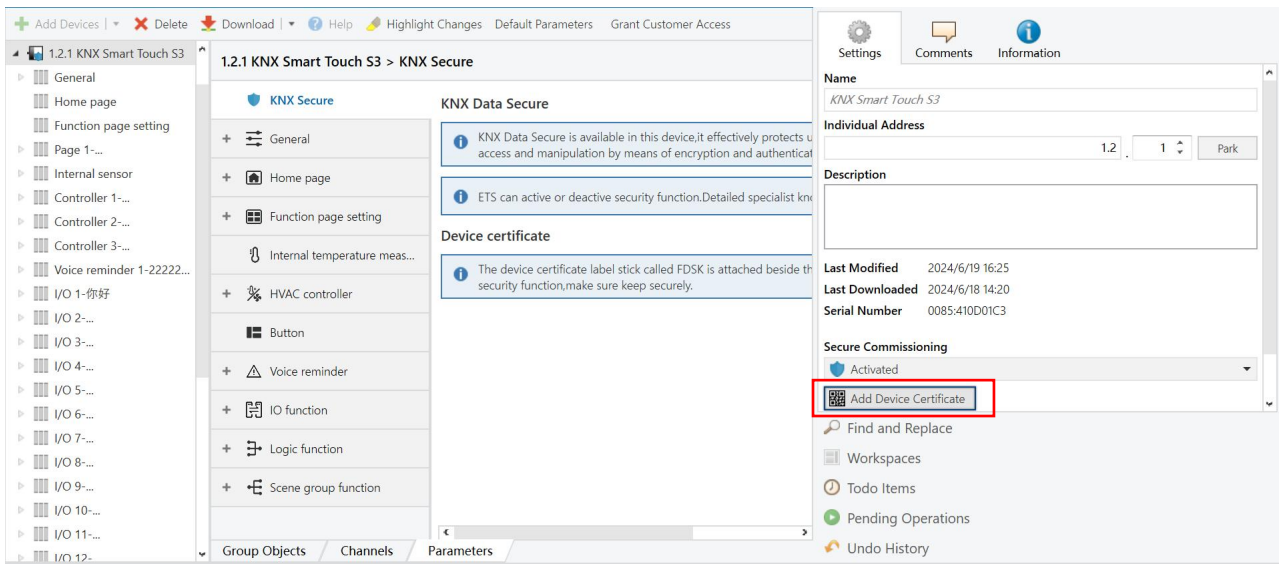


Fig. 5.1(4) Add Device Certificate

✧ There is a FDSK sticker on the device, which is used for viewing FDSK number.

Without the FDSK, it will no longer be possible to operate the device in KNX Secure mode after a reset.

The FDSK is required only for initial commissioning. After entering the initial FDSK, the ETS will assign a new key, as shown in Fig.5.1(5) below.

The FDSK will be required again only if the device was reset to its factory settings (e.g. If the device is to be used in a different ETS project).

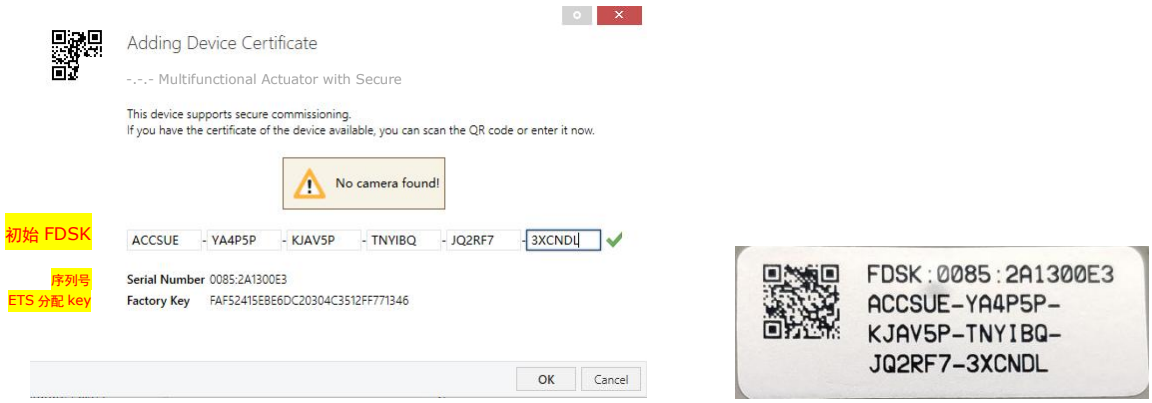


Fig. 5.1(5)

Example:

If this application in the project needs to be tried with another device, it is no longer the original device. When the application is downloaded to a new device, the following prompt will appear on the left of Fig.5.1(6), click yes, the Add Device Certificate window will appear, then enter the initial FDSK of the new device, and you need to reset the device to the factory settings (it is not required if the device is still factory default; If it has been used, it will be required to reset, otherwise the following error message will appear on the right of Fig.5.1(6)), and then the device can be successfully downloaded again.

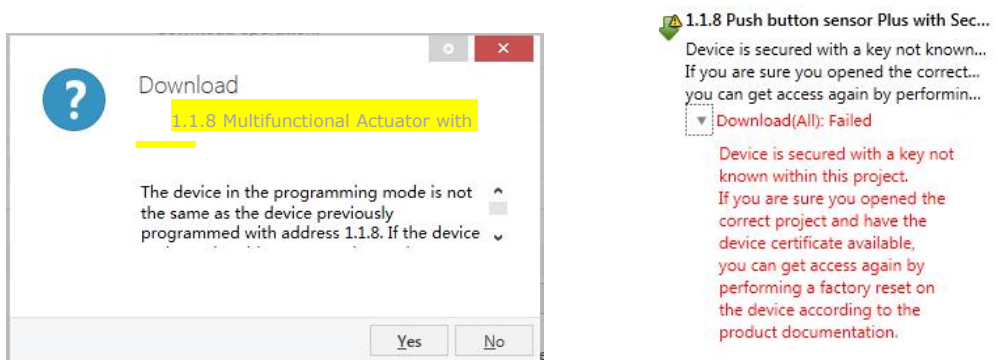


Fig. 5.1(6) Example

Whether the device is replaced in the same project, or the device is replaced in a different project, the processing is similar: **Reset the device to the factory settings, then reassign the FDSK.**

After the device is downloaded successfully, the label Add Device Certificate turns gray, indicating that the key for this device has been assigned successfully, as shown in Fig.5.1(7) below.

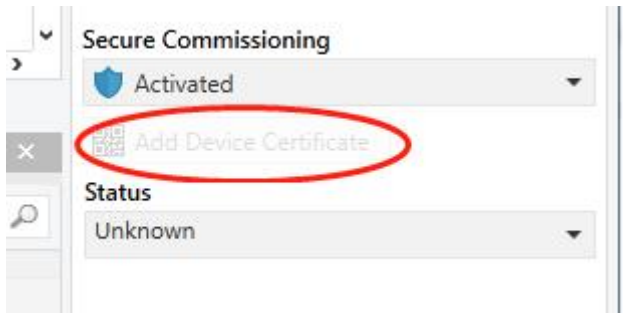


Fig. 4.1(7)

ETS generates and manages keys:

Keys and passwords can be exported as needed to the use of security keys outside of the associated ETS projects. As shown in Fig.5.1(8) below, the file extension is .knxkeys.

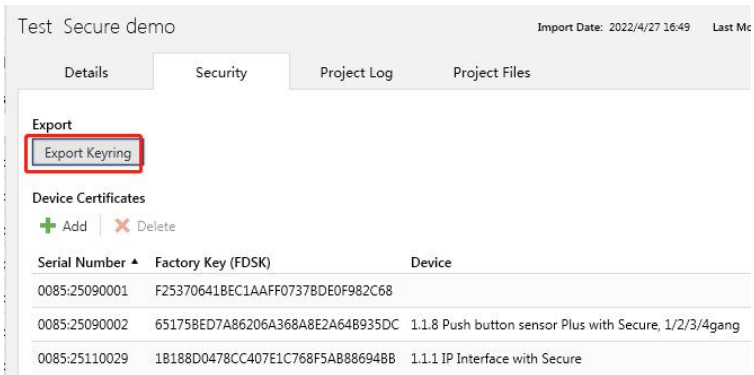


Fig. 5.1(8)

Note: Any USB interface used for programming a KNX Secure device must support "long frames". Otherwise ETS will report a download failure information, as shown below.

5.2 Parameter window "General"

5.2.1 Parameter window "General setting"

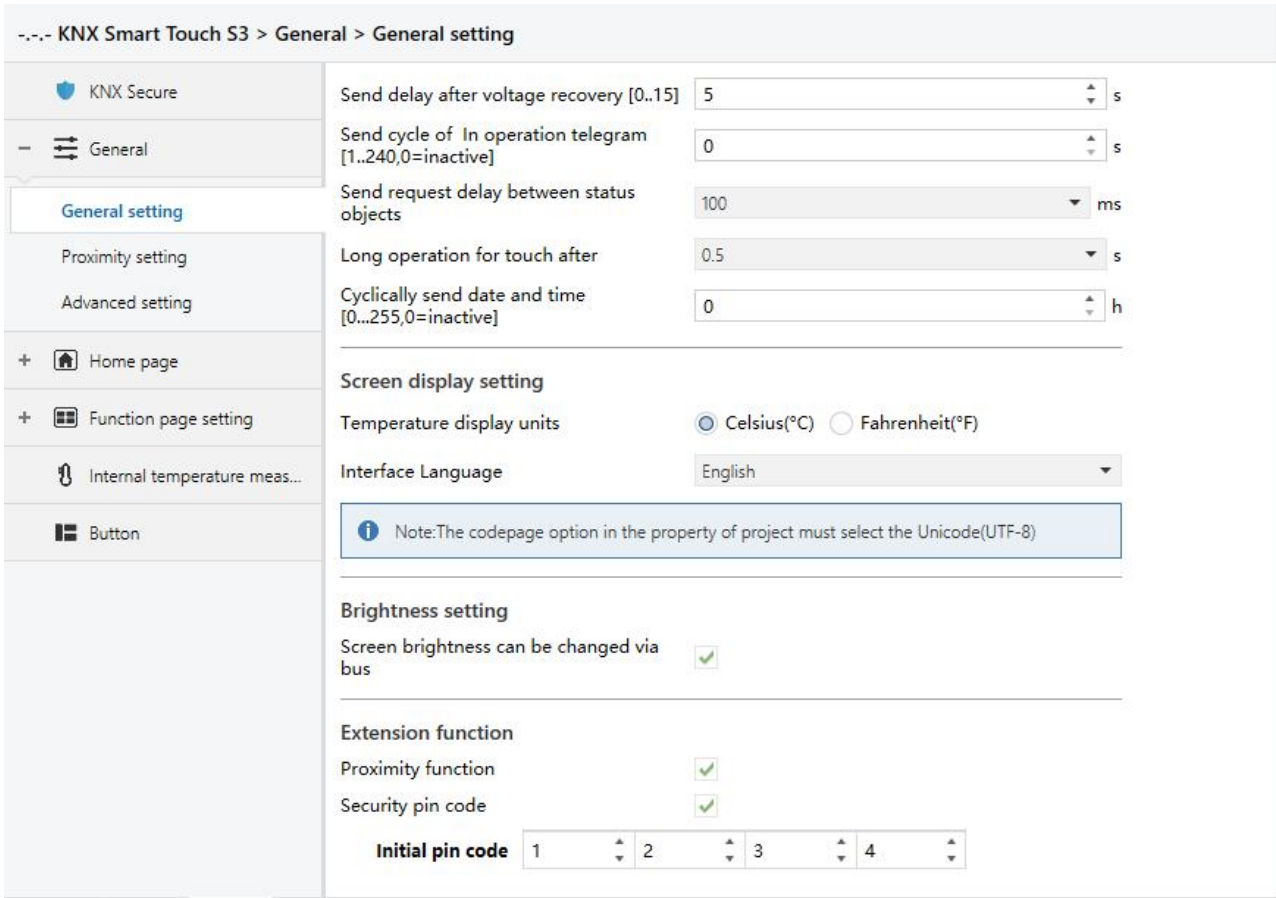


Fig.5.2.1 "General setting" parameter window

Parameter"Send delay after voltage recovery [0..15]s"

This parameter is for setting the delay time to send to bus after the device voltage recovery. Options: **0..15**

The setting dose not contain the device initialization time, and bus telegrams received during delay time will be recorded.

Parameter"Send cycle of In operation telegram [1..240,0=inactive]s"

This parameter is for setting the time interval when this device cycle send telegrams through the bus to indicate this module in normal operation. When set to "0", the object "in

operation" will not send a telegram. If the setting is not "0", the object "In operation" will send a telegram according to the set period time with logic "1" to the bus. Options: **0...240s, 0= inactive**

As to reduce the bus load as much as possible, the maximum time interval should be selected according to actual needs.

Parameter"Send request delay between status objects"

This parameter is setting for the the delay between sending status object request telegram.

Options:

50ms

100ms

200ms

Parameter"Long operation for touch after"

This parameter is for setting the trigger time of the long operation for touch on the screen. Options:

0.5s

1.0s

2.0s

3.0s

Parameter"Cyclically send date and time [0..255,0=inactive]h"

This parameter is uesd to set the cycle for cyclically sending the date and time to the bus.

When setting to 0, it will not sent.

Options: **0...255**

Screen display setting

Parameter"Temperature display units"

This parameter is for setting temperature display units.Options:

Celsius(°C)

Fahrenheit(°F)

Parameter"Interface Language"

This parameter is for setting interface language.Options:

Chinese(Simplified) 中文(简体) **Spanish 西班牙语**

Chinese(Traditional) 中文(繁体) **Russian 俄罗斯语**

English 英文 **Italian 意大利语**

German 德语 **Greek 希腊语**

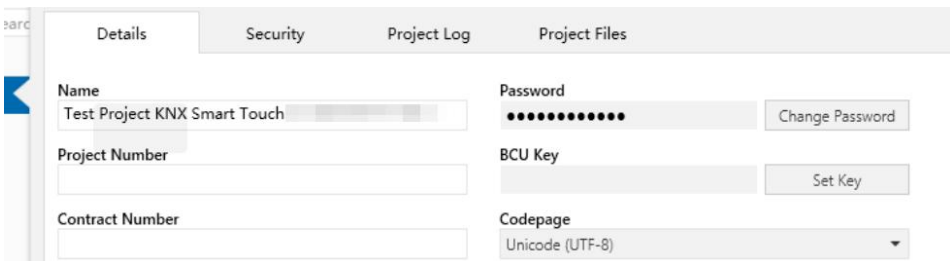
French 法语 **Other 其他**

Displays the note when Chinese is selected:

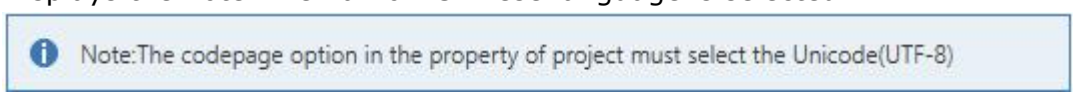


If you need to select Chinese, please first configure the code page to UTF-8, otherwise some Chinese content may be displayed abnormally.

UTF-8 setting as shown as follow:



Displays the note when a non-Chinese language is selected:



——Parameter "Language name"

When the interface language is set to "Other," this parameter becomes visible and is used to input the name of the language. The device will search the library for a matching language based on the name to display. If no match is found, English will be displayed by default. **Note: Please contact the manufacturer for information on whether it is supported and what information can be entered.**

Based on the UTF-8 encoding method, the relationship between the configuration end (ETS) and the display end (device S3) is as follows:

1. Simplified Chinese, Traditional Chinese: ETS can input a field of up to 9 Chinese characters, but only 6 Chinese characters can be displayed on the device.
2. English: ETS can input a field of up to 18 letters, which can be fully displayed on the device.
3. Other languages: ETS can input a field of up to 18 special characters, but only 9 characters can be displayed on the device.

Brightness setting

Parameter"Screen brightness can be changed via bus"

This parameter is for setting whether to adjust screen brightness via bus. If enabled, object "Screen backlight brightness" is visible which is used to change screen brightness.

Extension function

Parameter"Proximity function"

When this parameter is enabled, the "Proximity function" setting is visible.

Parameter"Security pin code"

Set whether the screen access password is enabled. When the access password is enabled, the screen lock will default to password verification. However, account unbinding and factory reset are not associated with the password. Password verification needs to be

enabled on the APP or the device in order to associate them with the password.

Parameter"Initial pin code"

Set the initial user password, which can be modified later on the device or via the APP. It is a 4-digit number.

5.2.2 Parameter window "Proximity setting"

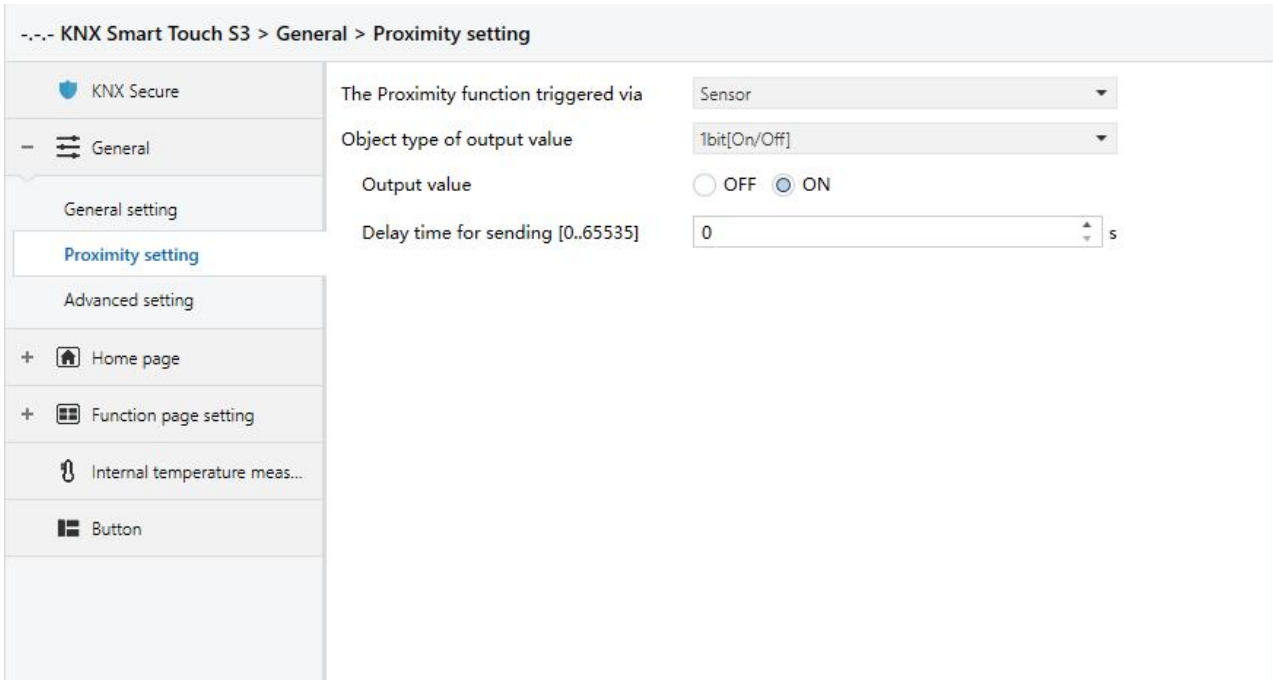


Fig.5.2.2 "Proximity setting" parameter window

Parameter"The Proximity function triggered via "

This parameter is for setting the trigger source of proximity function. Options:

Sensor

Proximity object

Sensor or Proximity object

When "Proximity object" is selected, not send output value when proximity triggered via object.

Parameters as follow are visible when "Sensor" or "Sensor or Proximity object" is selected.

Parameter"Object type of output value "

This parameter is for setting the object type of output value to the bus when proximity approaching. Options:

No reaction

1bit[On/Off]

1byte[scene control]

1byte[0..255]

1byte[0..100%]

——Parameter"Output value"

The parameter is visible when "Send a value" is selected. These parameters are set the output value sending to the bus when proximity approaching, the range of value is determined by the data type.

——Parameter"Delay time for sending [0..65535]s"

The parameter is visible when "Send a value" is selected. This parameter is set the delay time for sending telegram.

When a person is detected approaching, Options: **0..65535**

5.2.3 Parameter window "Advanced setting"

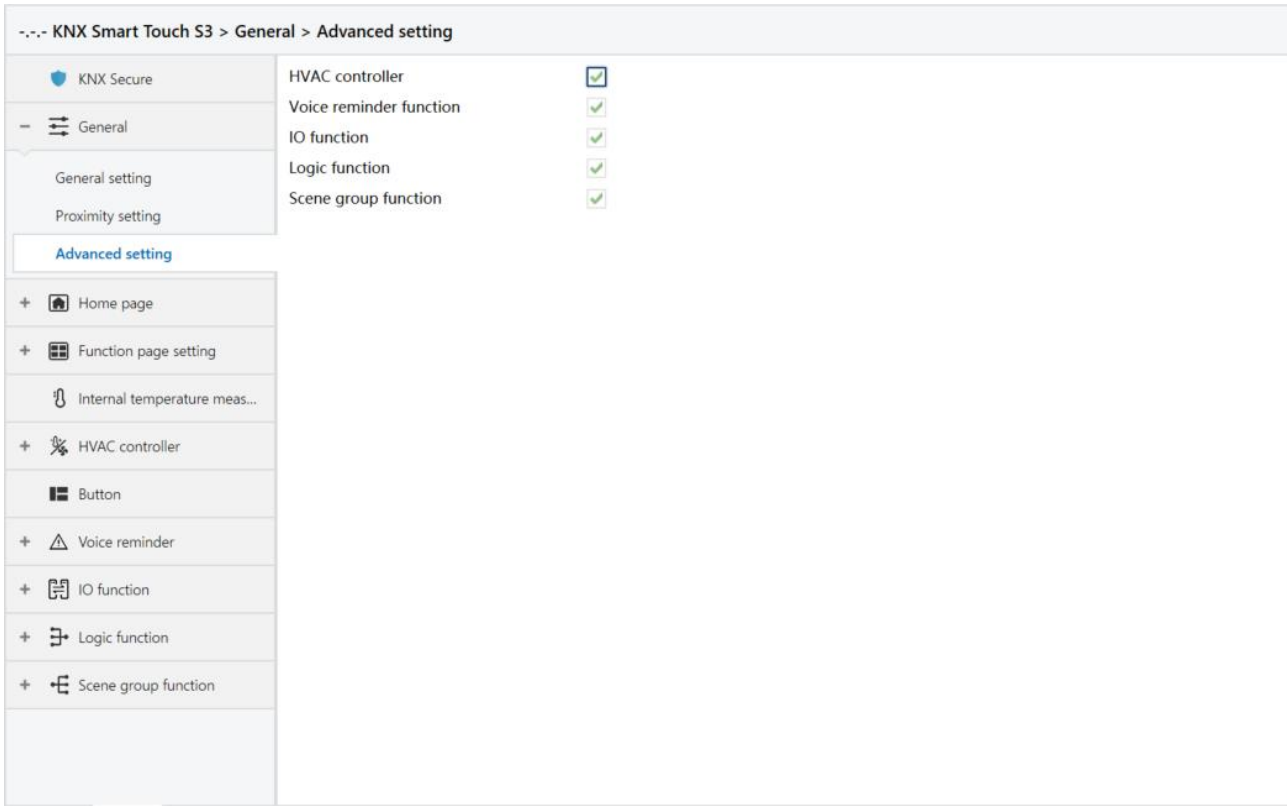


Fig.5.2.3 "Advanced setting" parameter window

Parameter "HVAC controller"

When this parameter is enabled, the HVAC controller settings interface becomes visible.

Parameter "Voice reminder function"

When this parameter is enabled, the settings interface for the voice reminder function becomes visible.

Parameter "IO function"

When this parameter is enabled, the settings interface for the IO function becomes visible.

Parameter "Logic function"

When this parameter is enabled, the settings interface for the logic function becomes visible.

Parameter "Scene group function"

When this parameter is enabled, the settings interface for the scene group function becomes visible.

5.3 Parameter window "Home page"

5.3.1 Parameter window "Function"

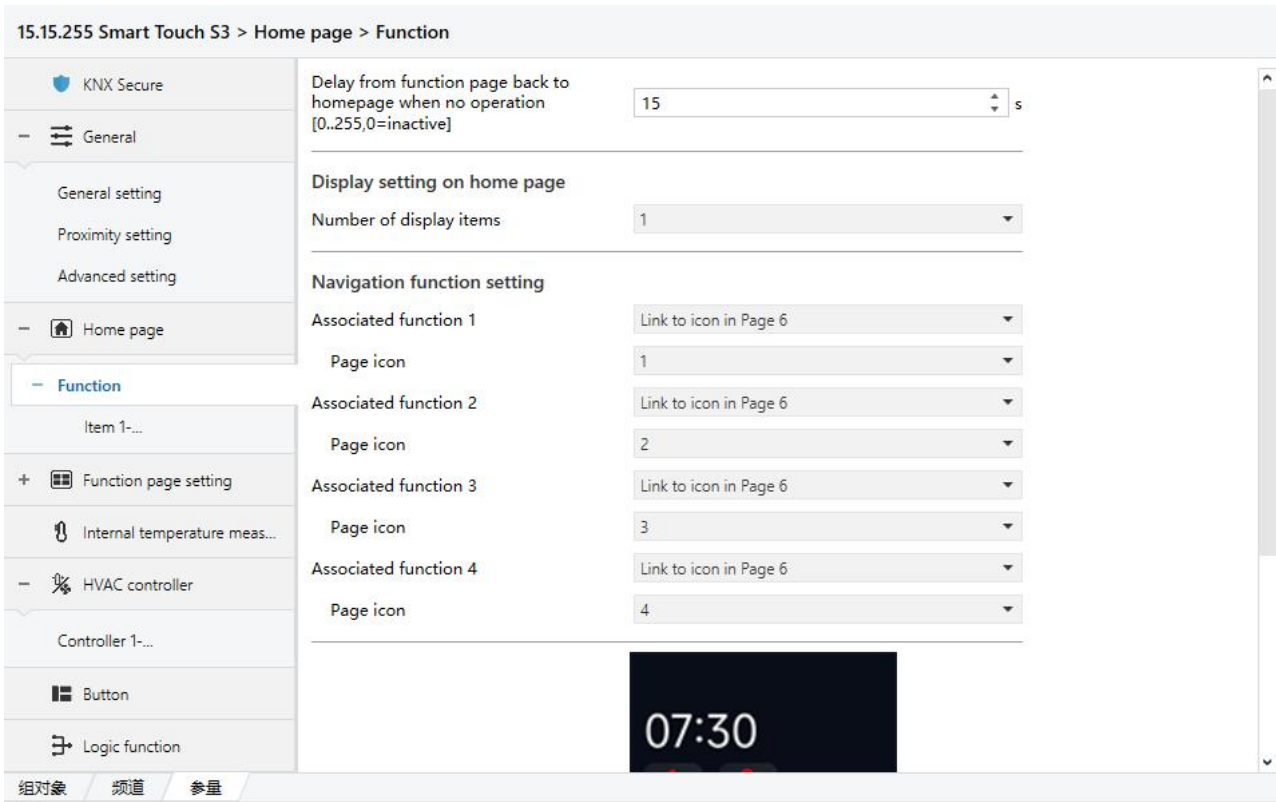


Fig.5.3.1 "Function" parameter window

Parameter"Delay time for back to homepage after no operation[0..255,0=inactive]s"

This parameter is for setting the delay time from function page back to home page

when no operation on the device. Options: **0...255**

When setting to 0, it will not return to the home page automatically.

Parameter"Number of display items"

The environmental information displayed on the home screen can show up to two metrics, which can include temperature, humidity, PM2.5, PM10, CO2, VOC, illuminance, wind speed, AQI, and rain. Options:

None

1

2

Parameter"Associated function x"(x=1~4)

The home page supports adding device or scene shortcuts via ETS software or the APP. The home page allows a maximum of four scene/device shortcut cards. Deleting cards is supported through the APP. If no cards are configured, the user will be prompted with "Please use the Vison Smart Home APP to add device/scene shortcuts." Options:

None

Link to icon in Page 1

Link to icon in Page 2

Link to icon in Page 3

Link to icon in Page 4

Link to icon in Page 5

Link to icon in Page 6

5.3.2 Parameter window "Item x"(x=1~2)

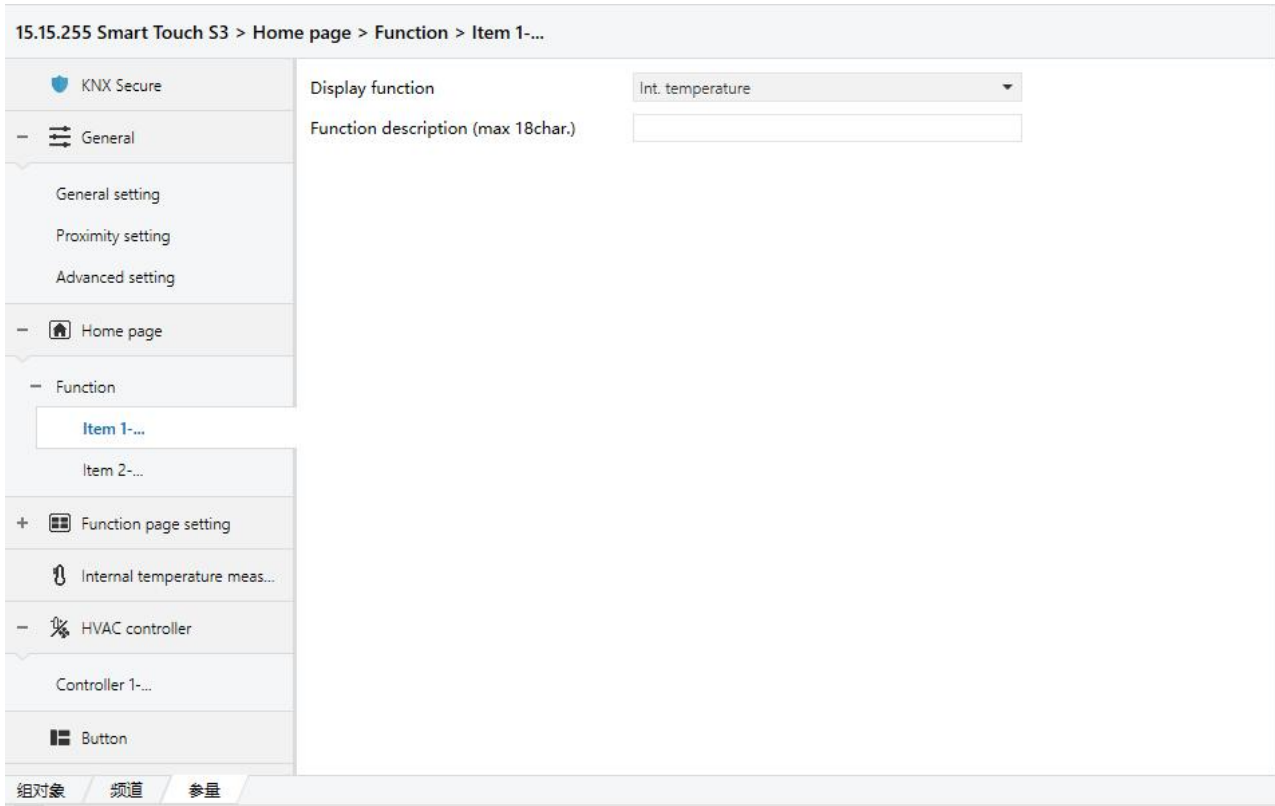


Fig.5.3.2 "Item x" parameter window

Parameter"Display function"

This parameter is for displaying the environmental information. Options：

Int. temperature

Ext. Temperature

Int. humidity

Ext. humidity

PM2.5

PM10

VOC

CO2

AQI

Brightness

Wind speed

Rain

Parameter"Function description (max 18char.)"

This parameter is for setting the function description of channel device,,up to 18 characters.

Parameter"Object datatype of display PM2.5/PM10/VOC"

This parameter becomes visible when "PM2.5/PM10/VOC" is selected for status indication. It is used to set the data point type for PM2.5/PM10/VOC

Options：

Value in ug/m3(DPT_7.001)

Float value in ug/m3(DPT_9.030)

Parameter"Object datatype of display CO2"

This parameter is visible when "CO2" is selected for status indication. It is used to set the data point type for CO2.

Options：

Value in ppm(DPT_7.001)

Float value in ppm(DPT_9.008)

Parameter"Object datatype of display brightness"

This parameter becomes visible when "Brightness" is selected for status indication. It is used to set the data point type for illuminance.

Options：

Brightness in lux(DPT_7.013)

Float value in lux(DPT_9.004)

Parameter"Object datatype of display wind speed"

This parameter becomes visible when "Wind Speed" is selected for status indication. It is used to set the data point type for wind speed.

Options：

Value in m/s(DPT_9.005)

Float value in km/h(DPT_9.028)

——Parameter"Status text for rain (1-ON)"and Parameter"Status text for no rain (0-OFF)"

These two parameters are visible when "Rain" is selected for status indication. They are used to set the dynamic text indicators for "rainy" and "rain-free" conditions, and also control the dynamic icons corresponding to these states.

——Parameter"Time period for request external sensor [0..255]min"

This parameter is visible when an external sensor is selected. It is used to set the time interval for reading external air quality information. A read request is sent by default upon power-on reset and completion of programming; no read request is sent when the value is 0. Optional values: 0..255

Parameter"Text for unit"

This parameter is visible when "PM2.5/PM10/VOC/CO2/AQI/Brightness/Wind Speed" is selected. It is used to set the text for units.

5.4 Parameter window "Function page setting"

5.4.1 Parameter window "Page x"(x=1~6)

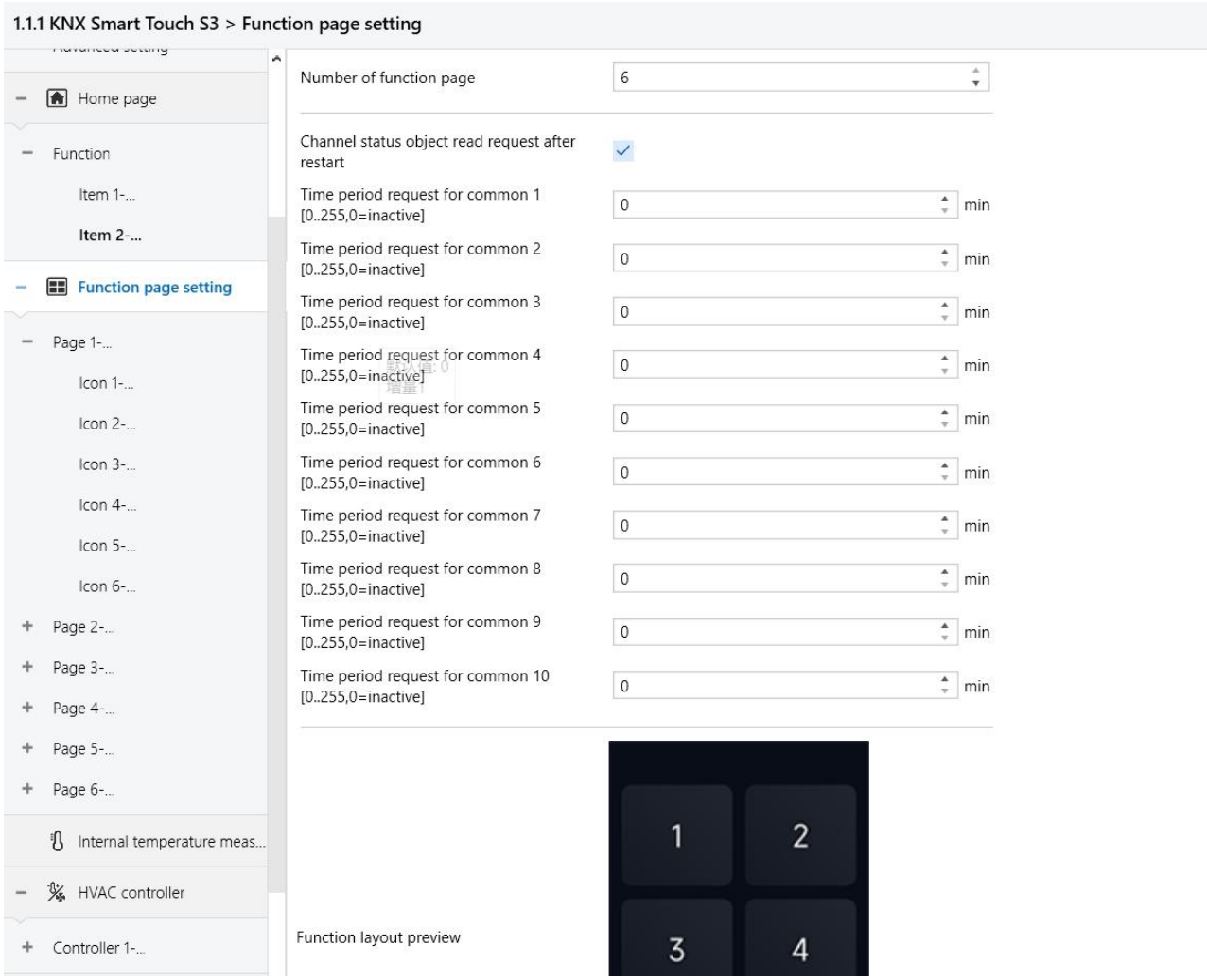


Fig.5.4.1(1) "Function page setting" parameter window

Parameter "Number of function page"

This parameter is used to set the number of function pages, with a maximum support of 6 function pages.

Parameter "Channel status object read request after restart"

This parameter is used to set whether a device status read request message is sent when the device restarts, so as to query the current status of each device and update the

display.

Parameter"Time period request for common x [0..255,0=inactive]"(x=1~10)

This parameter is used to set the request cycle for querying the online status of KNX universal devices.Options：**0..255**

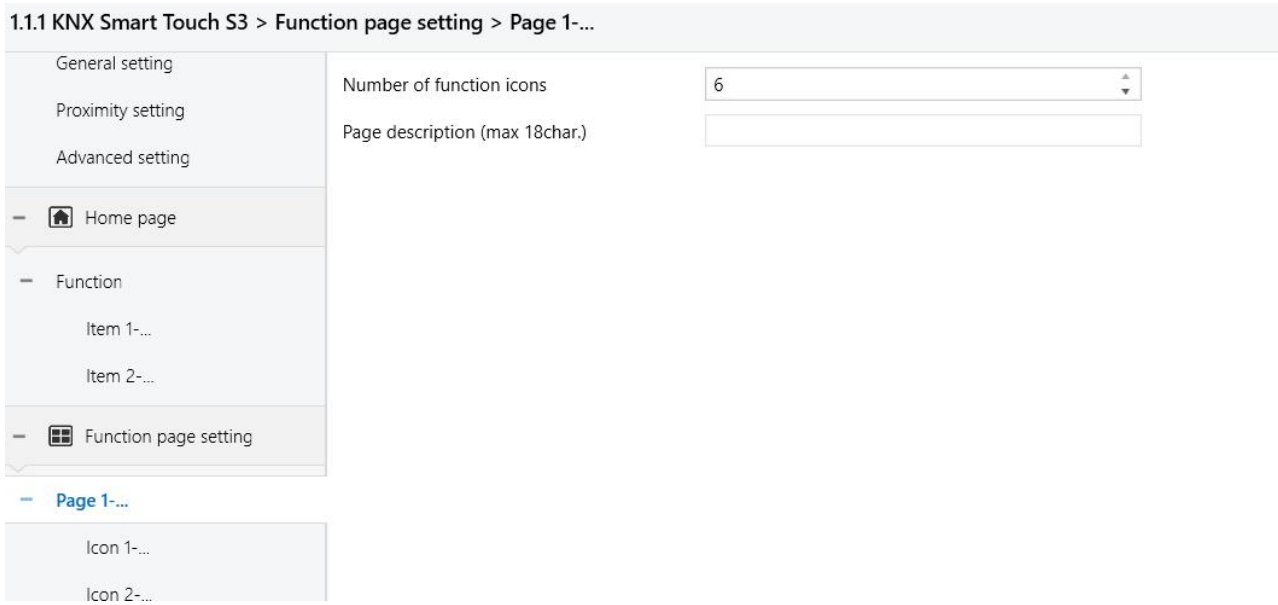


Fig.5.4.1(2) "Page x" parameter window

Parameter "Number of function icons"

This parameter is used to set the number of icons on the current function page, with a maximum of 6 icons supported per function page. A preview interface is displayed below this parameter according to the selected option.Options：

1

2

3

4

5

6

Parameter"Page description (max 18char.)"

This parameter is for setting the function description of channel device,,up to 18 characters.The device can display a maximum of 6 Chinese characters or 18 English letters in practice.

Parameter"Icon x"(x=1~6)

This parameter setting enables the icon settings on the function page. Once enabled, the corresponding interface will be displayed.

5.4.2 Parameter window "Icon x"(x=1~6)

This chapter explains the functions of switches, dimming, curtains, colors, color temperatures, value sending, and scenes on the function page.

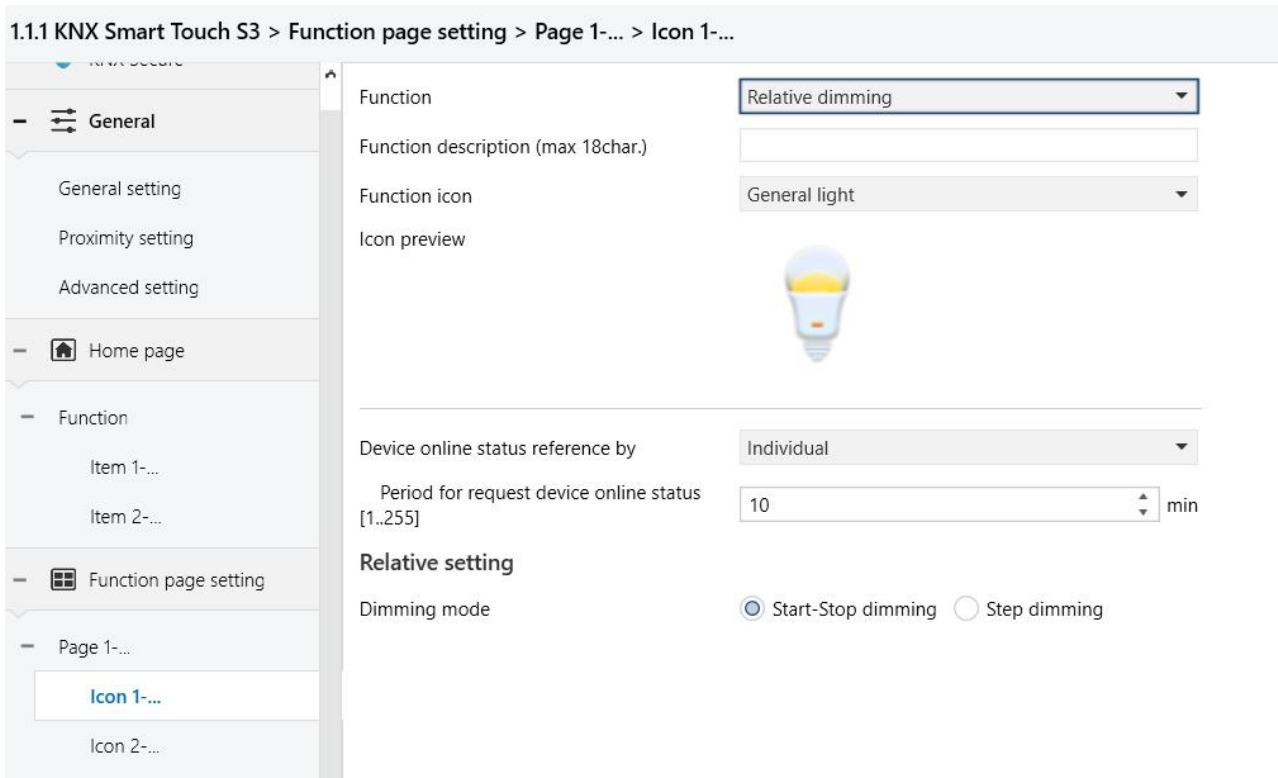


Fig.5.4.2 "Icon x" parameter window

Parameter"Function"

This parameter is for setting the device function.Options:

Press/Release switch

Switch

Relative dimming

Brightness dimming

RGB dimming

RGBW dimming

RGBCW dimming

Colour temperature dimming

Curtain step/move

Roller blind step/move

Curtain position

Roller blind position

Venetian blind position and slat

Air conditioner

Room temperature unit

Ventilation system

Audio control

Value sender

Status display

Scene

Parameter"Function description (max 18 char.)"

This parameter is for setting the function description of channel device,,up to 18 characters.The device can actually display a maximum of 6 Chinese characters or 18 English letters.

Parameter"Function icon"

This parameter is for setting the icon of channel device.

The default icons corresponding to the function and the icons corresponding to the options are described in the appendix.

Chapters as follow explain the device function separately.

5.4.3 Parameter window of basic function

5.4.3.1 Switch

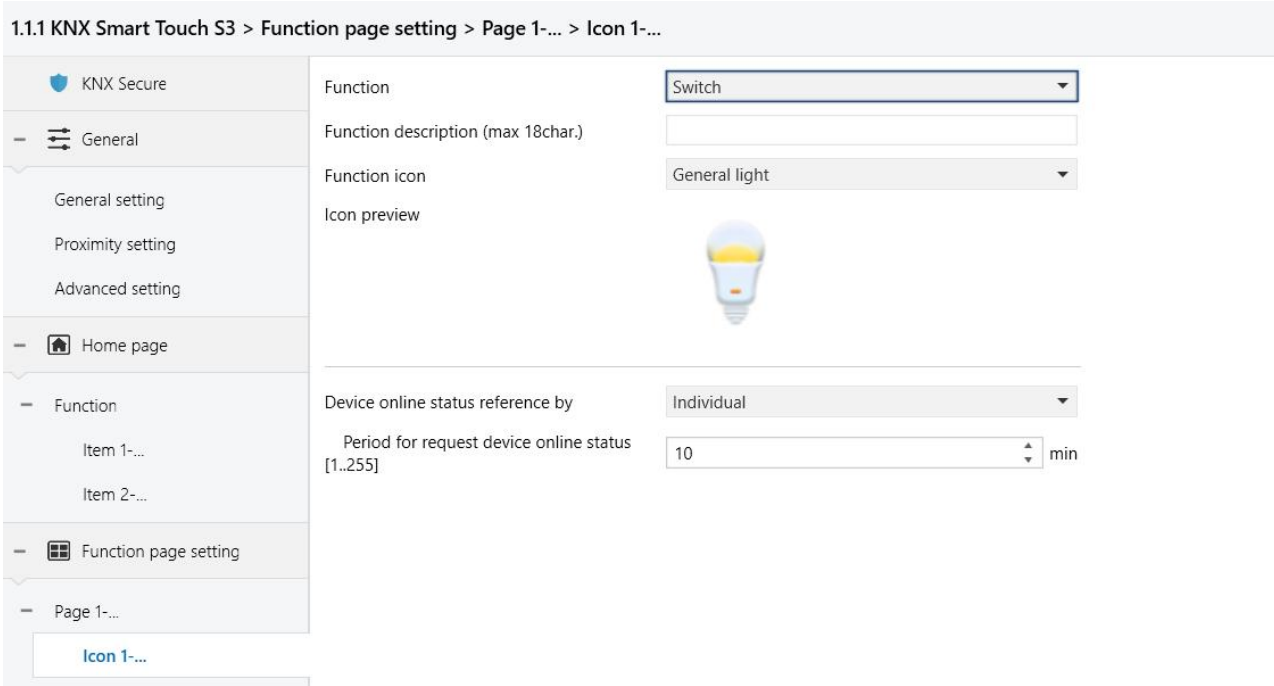


Fig.5.4.2.1 (1) “swtich”parameter window

Parameter“Device online status reference by”

This parameter is for setting the reference type for sending read requests to KNX devices on the bus.Options:

Individual

Common 1

...

Common 10

Always online

Note:(Press/Release switch and value transmission, read-only display "Always online".)

——Parameter“ Period for request device online status [1..255] min”

This parameter is visible when previous parameter is selected “Individual”. Set the time period for individual device online status requests.Options: **0...255**

5.4.3.2 Press/Release switch

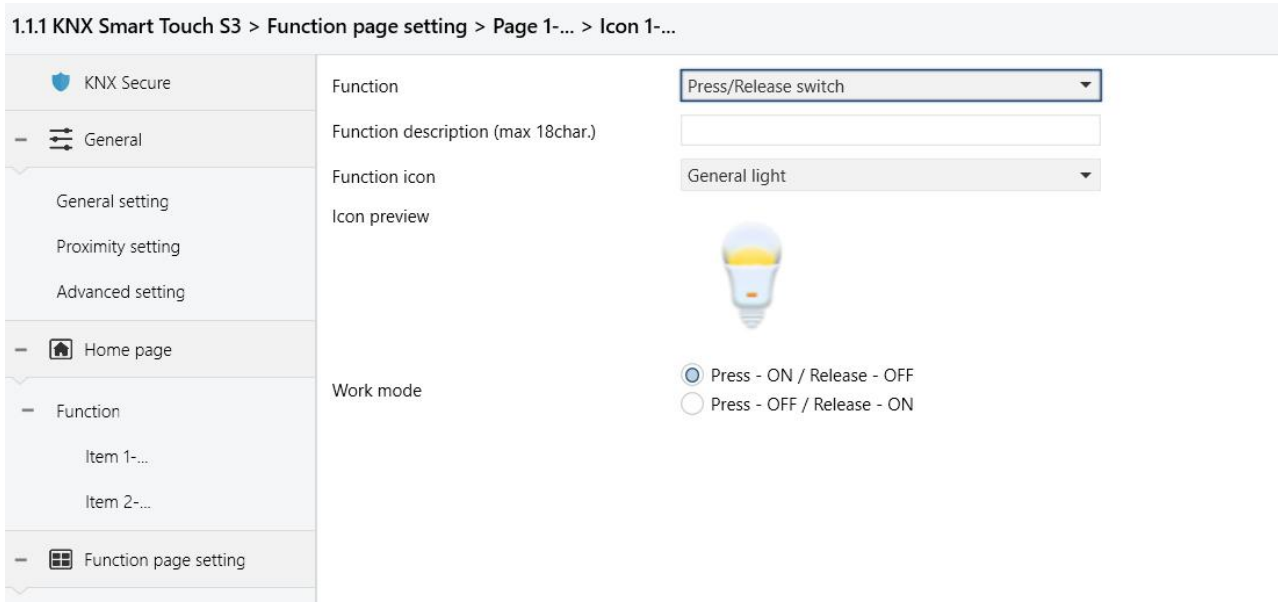


Fig.5.4.2.1 (2) ”Press/Release switch” parameter window

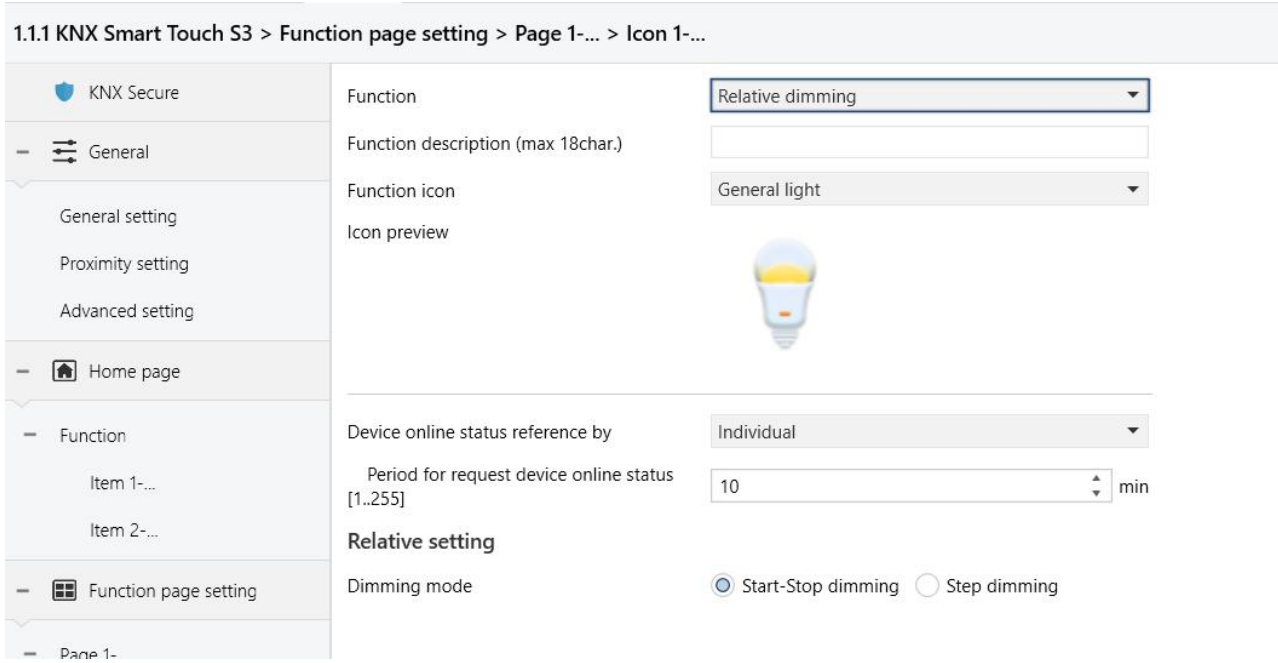
Parameter“Work mode”

This parameter is for setting the work mode for Press/Release switch. Options:

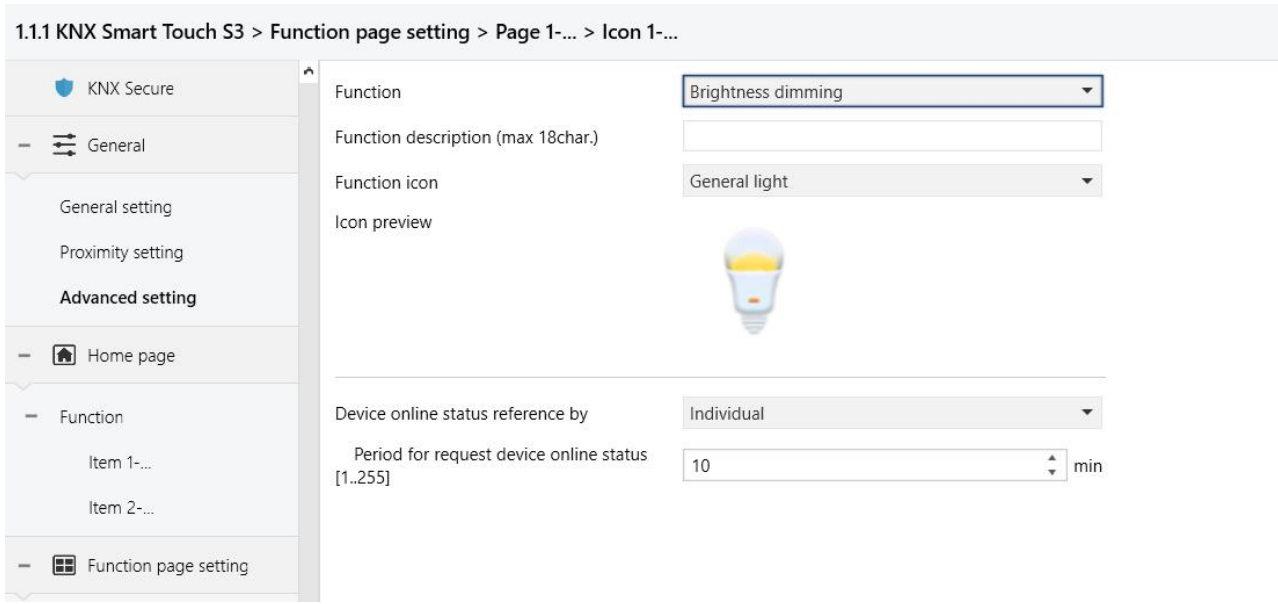
Press - ON / Release - OFF

Press - OFF / Release - ON

5.4.3.3 Relative dimming/brightness dimming



Relative dimming



Brightness dimming

Fig.5.4.2.1 (3) "Relative dimming&Brightness dimming"parameter window

The following parameters are visible when "Relative dimming" is selected.

Parameter"Device online status reference by"

This parameter is used to set the reference type for sending read requests to the bus KNX devices.Options：

Individual

Common x(x=1~10)

Always online

——parameter"Period for request device online status[1..255]"

This parameter is visible when "individual" is selected. It is used to set the time interval for online status requests of a single device.Options：1..255

Parameter"Dimming mode"

This parameter is used to set the mode of relative dimming.Options：

Start-Stop dimming

Step dimming

Start-stop dimming：Start-stop dimming mode: when dimming, a dimming-down or dimming-up message is sent; when ending dimming, a stop message is sent. In the start-stop dimming mode, dimming messages do not need to be sent cyclically.

Steps dimming：Gradual dimming mode: dimming messages are sent cyclically, and when dimming ends, a stop dimming message is sent immediately.

——Parameter" Step size"

Select "Step dimming" for the dimming method, and this parameter will be visible. Set the brightness (as a percentage) that can be changed by cyclically sending a dimming message.Options：

100%

50%

25%

12.5%

6.25%

3.13%

1.56%

——参数" Interval of tele. cyclic send [0..25,0=send once]*0.1s"

When the dimming mode is set to "Step dimming", this parameter is visible. It is used to set the time interval for cyclically sending dimming messages. Options：**0..255, 0=send only once**

The following parameters are visible when "Brightness dimming" is selected.

Parameter"Device online status reference by"

This parameter is used to set the reference type for sending read requests to the bus KNX devices.Options：

Individual

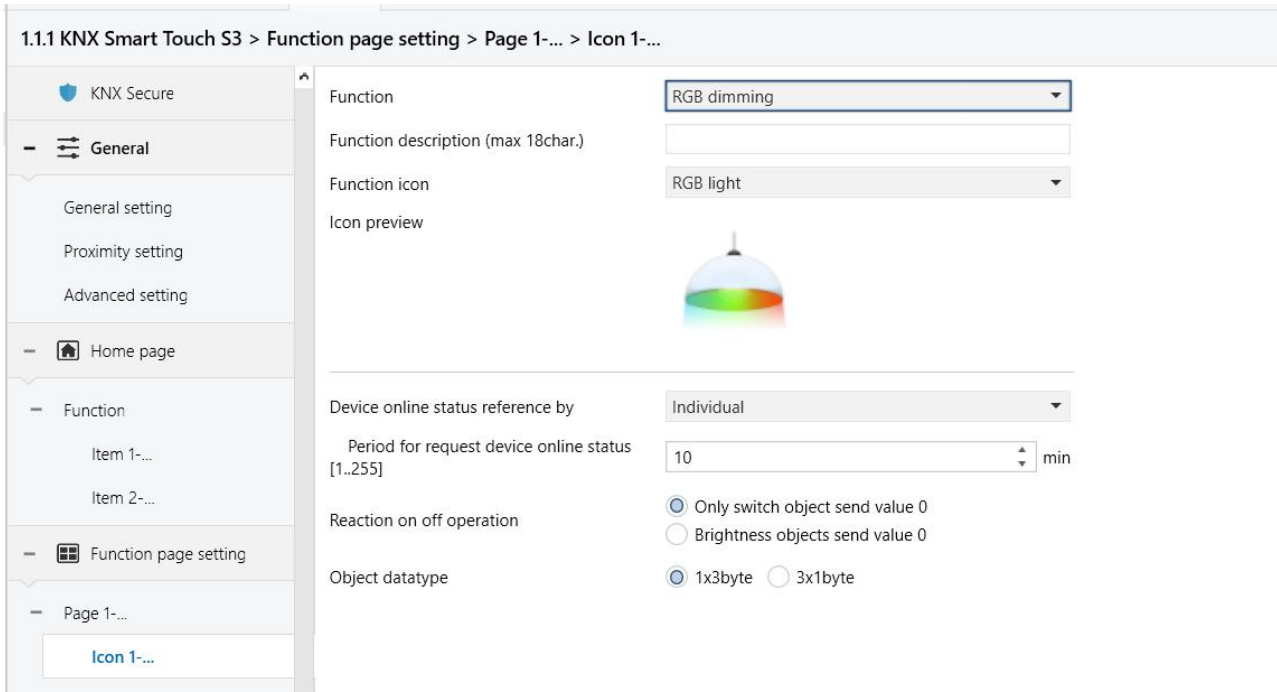
Common x(x=1~10)

Always online

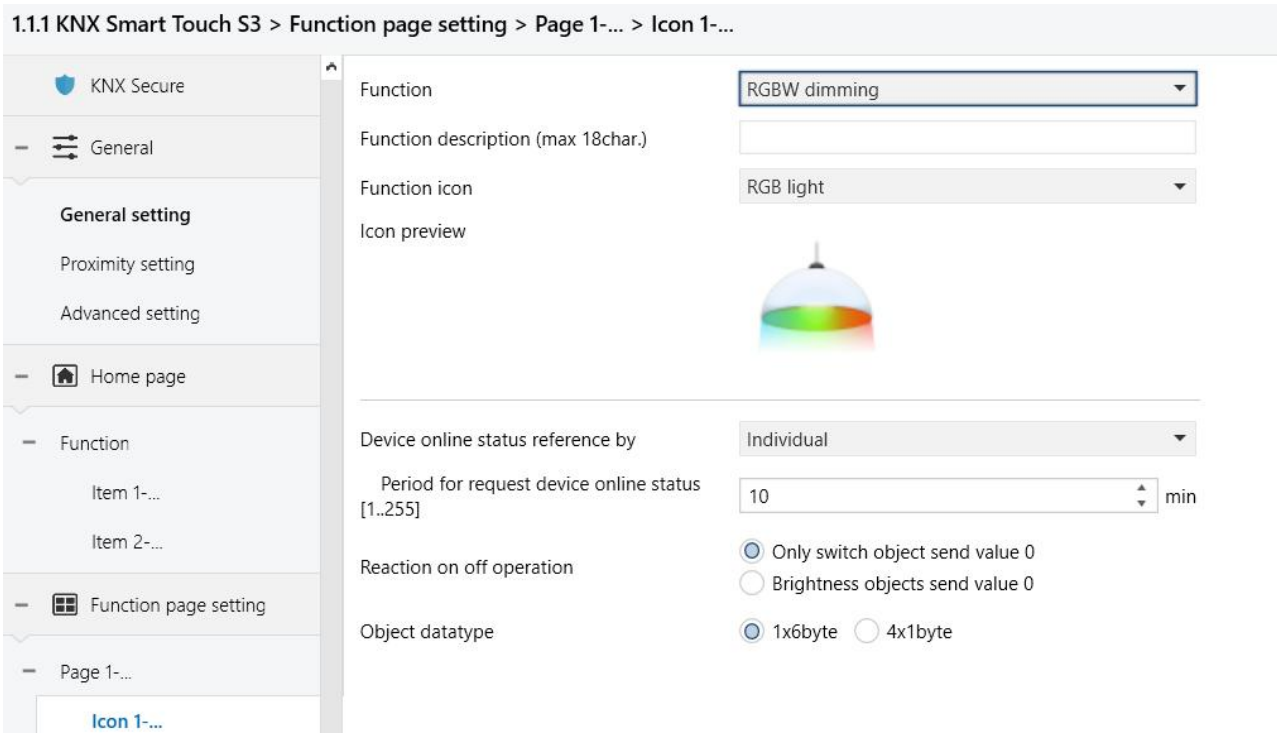
——parameter"Period for request device online status[1..255]"

This parameter is visible when "individual" is selected. It is used to set the time interval for online status requests of a single device.Options：1..255

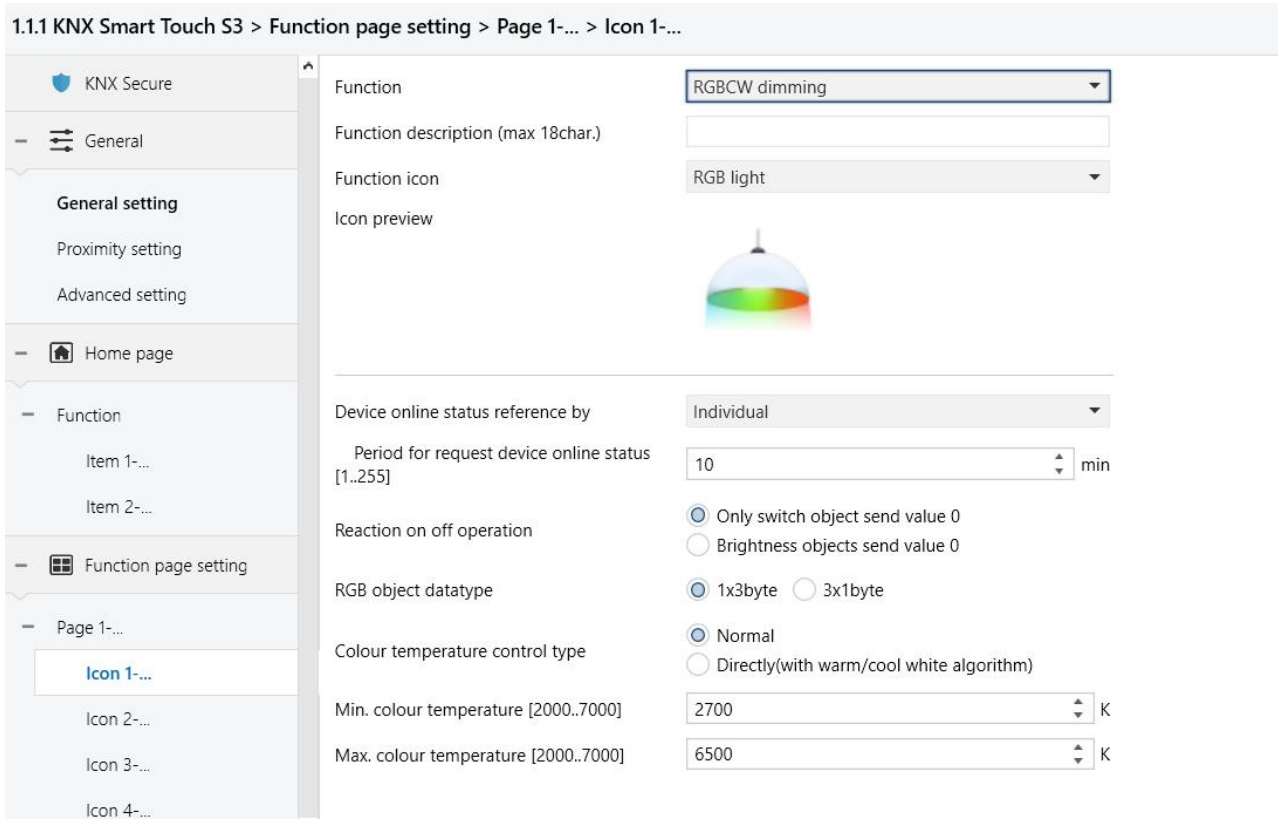
5.4.3.4 RGB/RGBW/RGBCW/Color temperature dimming



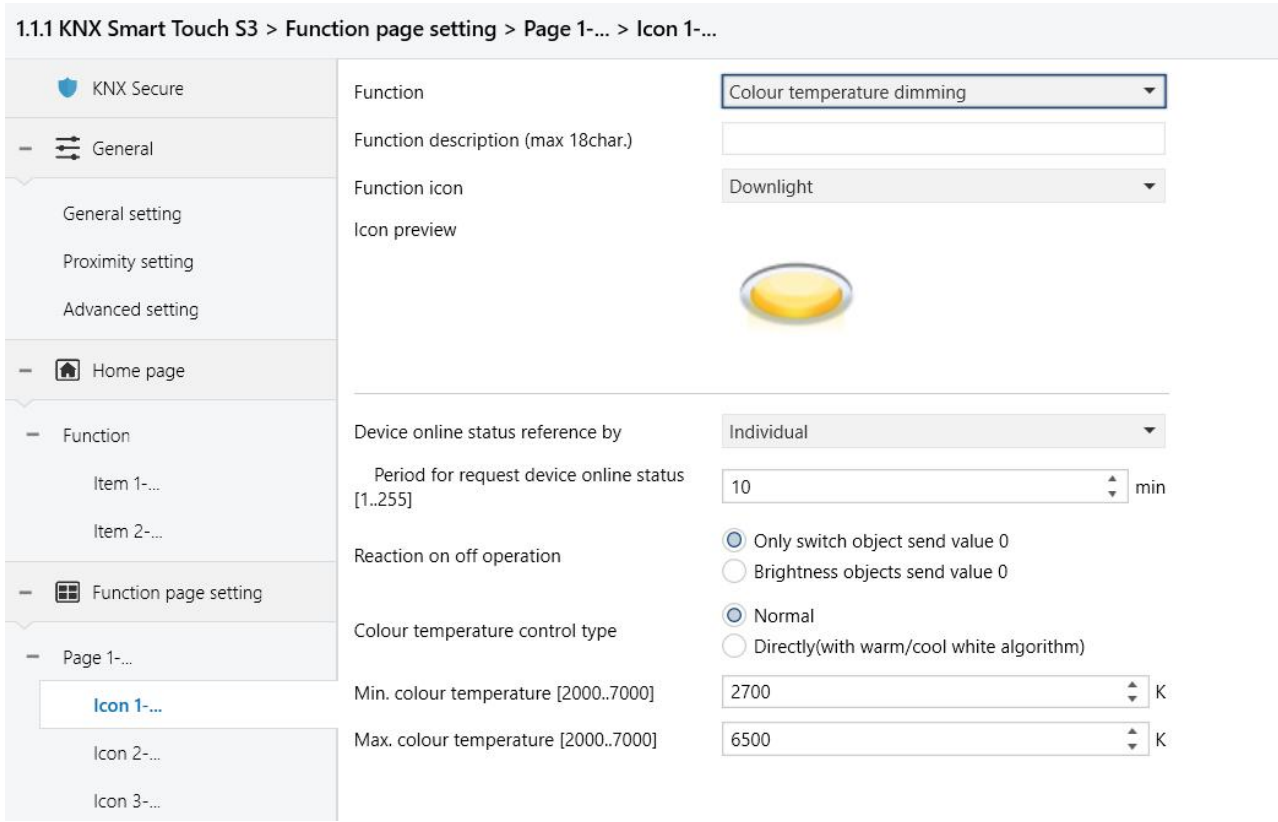
RGB dimming



RGBW dimming



RGBCW dimming



Color temperature dimming

Fig.5.4.2.1 (4)" RGB&RGBW&RGBCW&Color temperature dimming"parameter windows

Parameter"Reaction on 'OFF' operation"

This parameter is for setting whether send switch telegram 0 when the switch button is operated off, or whether send brightness telegram 0. Options:

Only switch object send value 0

Brightness objects send value 0

Parameter"Object datatype"/"RGB object datatype "

This parameter is for setting the object datatype of RGB or RGBW.

Options:**1x3byte/3x1byte/1x6byte/4x1byte**

Suitable for RGB/RGBCW type：

1x3byte

3x1byte

Suitable for RGBW type:

1x6byte

4x1byte

Parameters as follow are visible when "RGBCW dimming" is selected, used for setting colour temperature dimming.

Parameter"Colour temperature control type"

This parameter is for setting the control type of colour temperature. Options:

Normal

Directly(with warm/cool white algorithm)

Normal: Send value of 1byte brightness and 2 byte colour temperature;

Directly(with warm/cool white algorithm): Directly control, the has been built-in "Brightness + Colour Temperature"and Warm/cool white brightness, that is 2 objects of 1 byte, which is used for output brightness adjustment to control warm white LED and cool white LED.

——Parameter"Status feedback object"

This parameter is visible when previous parameter is selected "Directly(with warm/cool white algorithm)". Set the status feedback object. Options:

Brightness+Colour Temperature

Warm/cool white brightness

Brightness+Colour Temperature: Feedback of Brightness+Colour Temperature is to communicate accurately with the data from the other panels.

Warm/cool white brightness: Feedback of Warm/cool white brightness is to communicate with actuator.

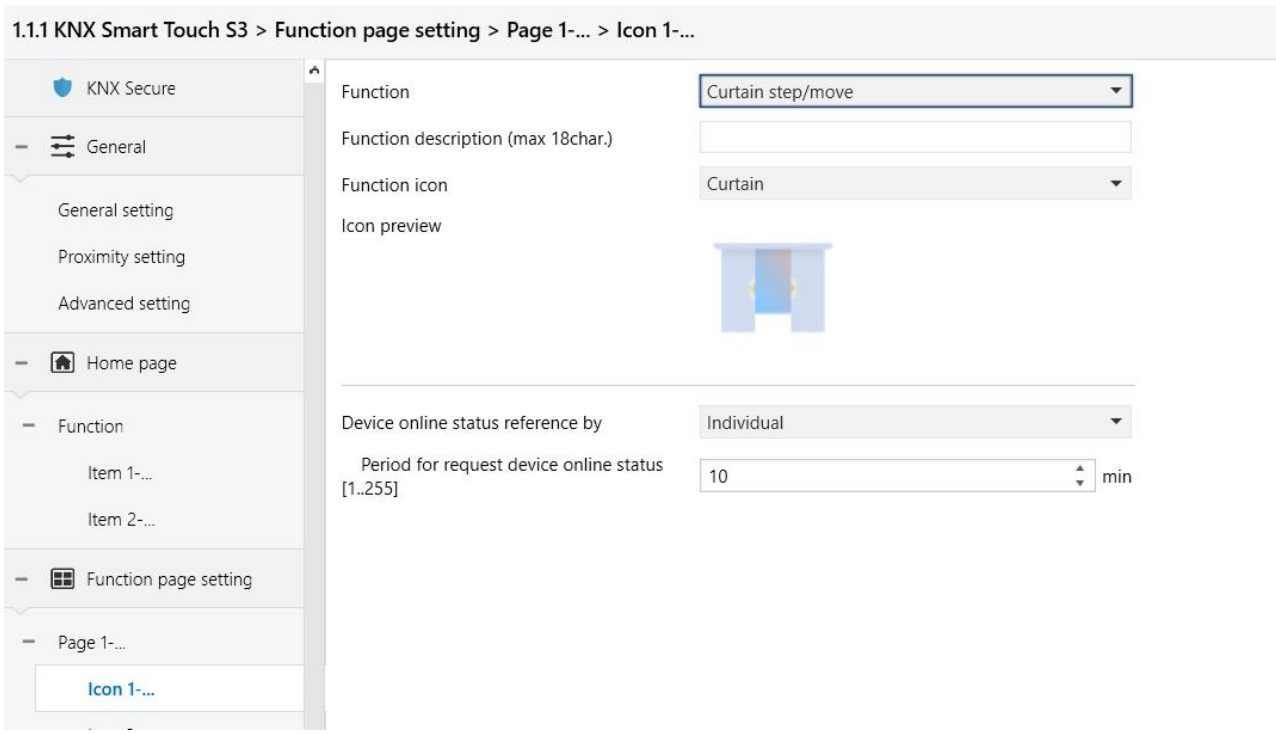
Parameter"Min. colour temperature [2000..7000]K"

Parameter"Max. colour temperature [2000..7000]K"

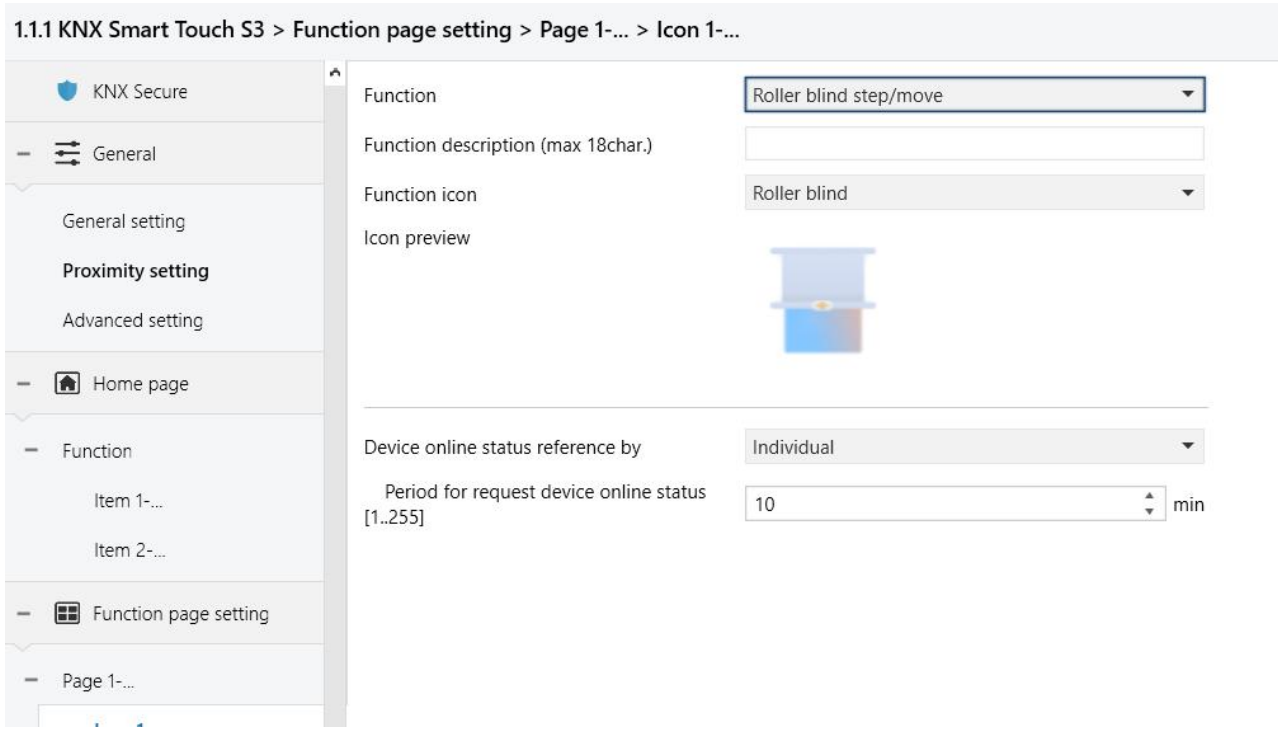
These parameters are for setting the upper and lower limit threshold of colour temperature.

Options: **2000..7000**

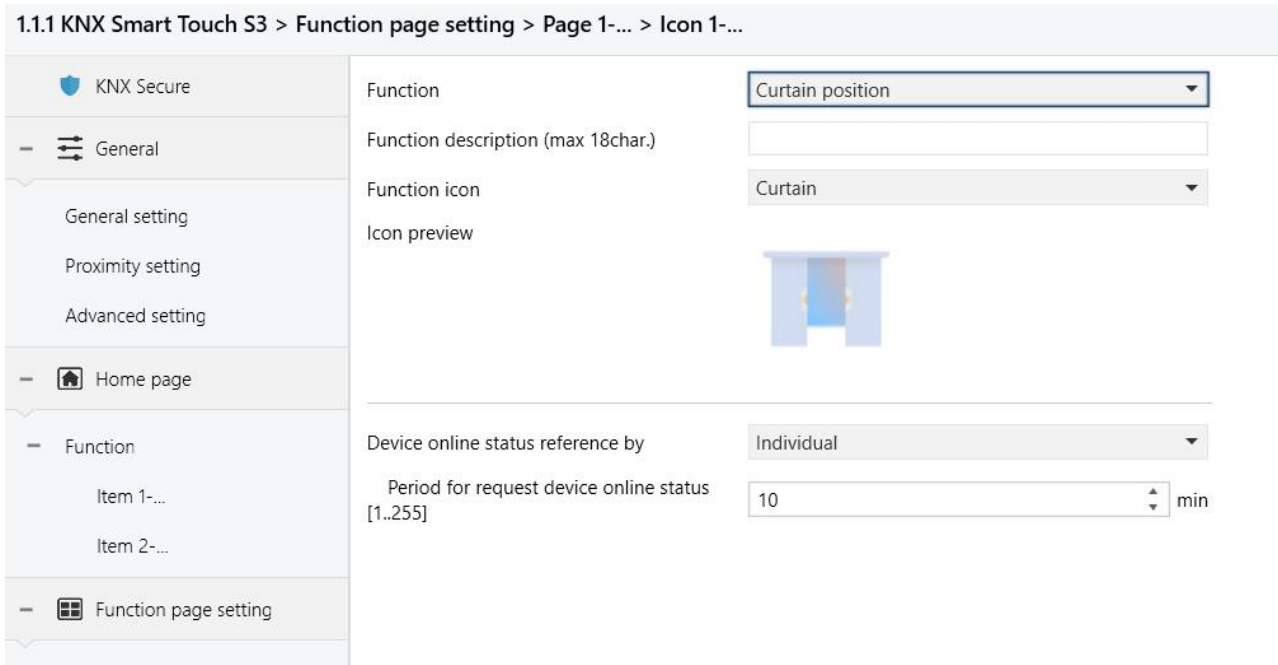
5.4.3.5 Curtain and blind control



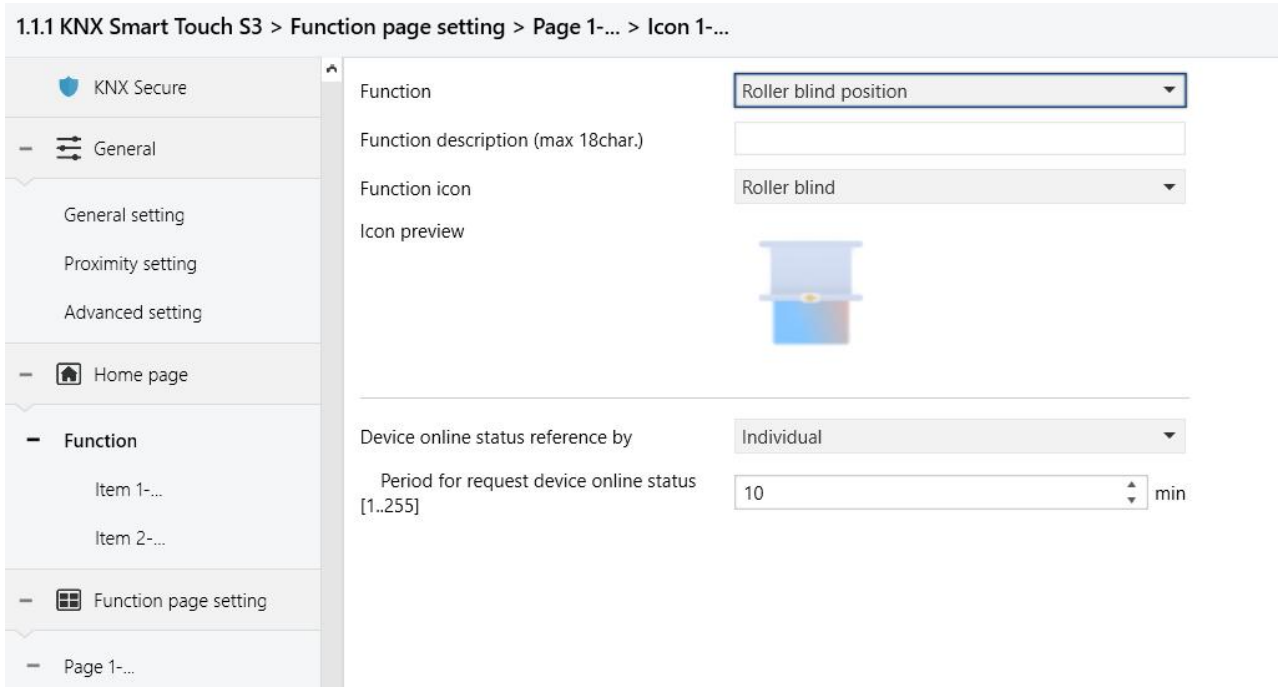
Curtain step/move



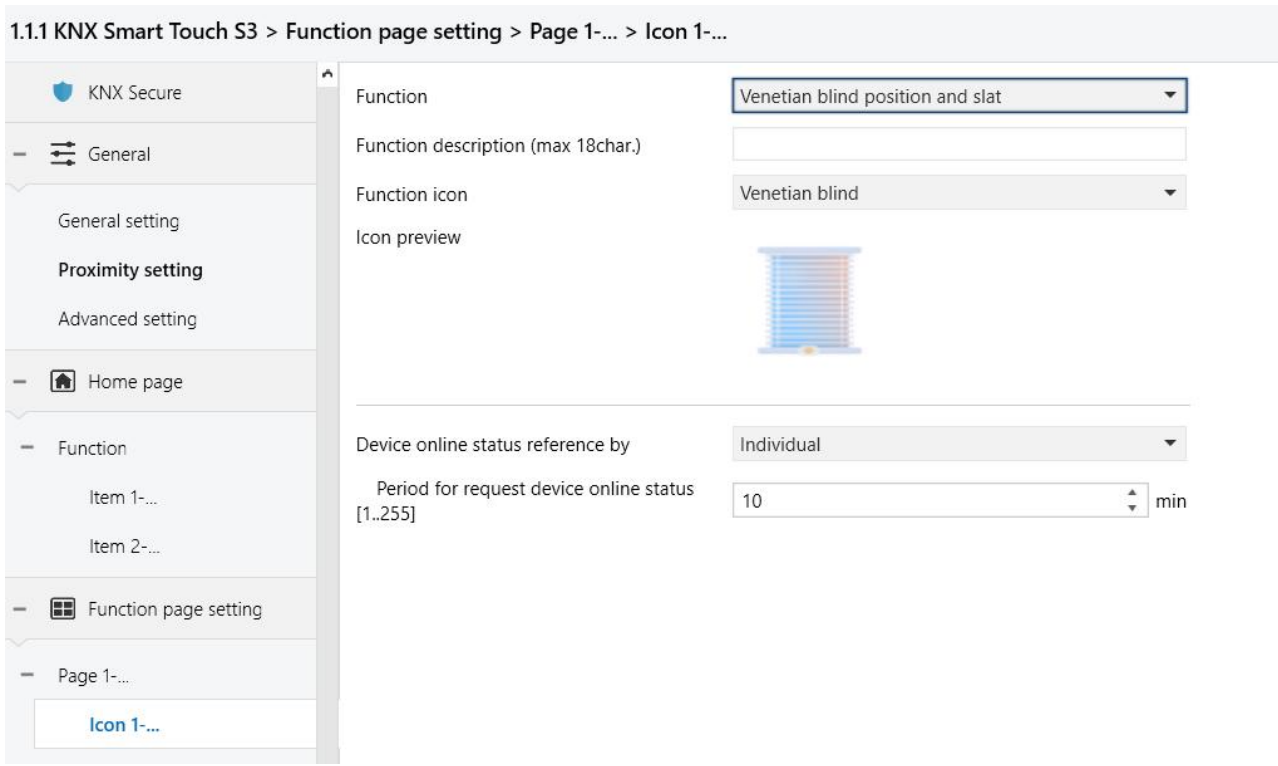
Roller blind step/move



Curtain position



Roller blind position



Venetian blind position and slat

Fig.5.4.2.1 (5) "Curtain and blind control"parameter windows

Parameter"Device online status reference by"

This parameter is for setting the reference type for sending read requests to KNX devices on the bus.Options:

Individual

Common 1

...

Common 10

Always online

Note:(Press/Release switch and value transmission, read-only display "Always online".)

——Parameter“ Period for request device online status [1..255] min”

This parameter is visible when previous parameter is selected “Individual”. Set the time period for individual device online status requests.Options:**0...255**

5.4.3.6 Value sender

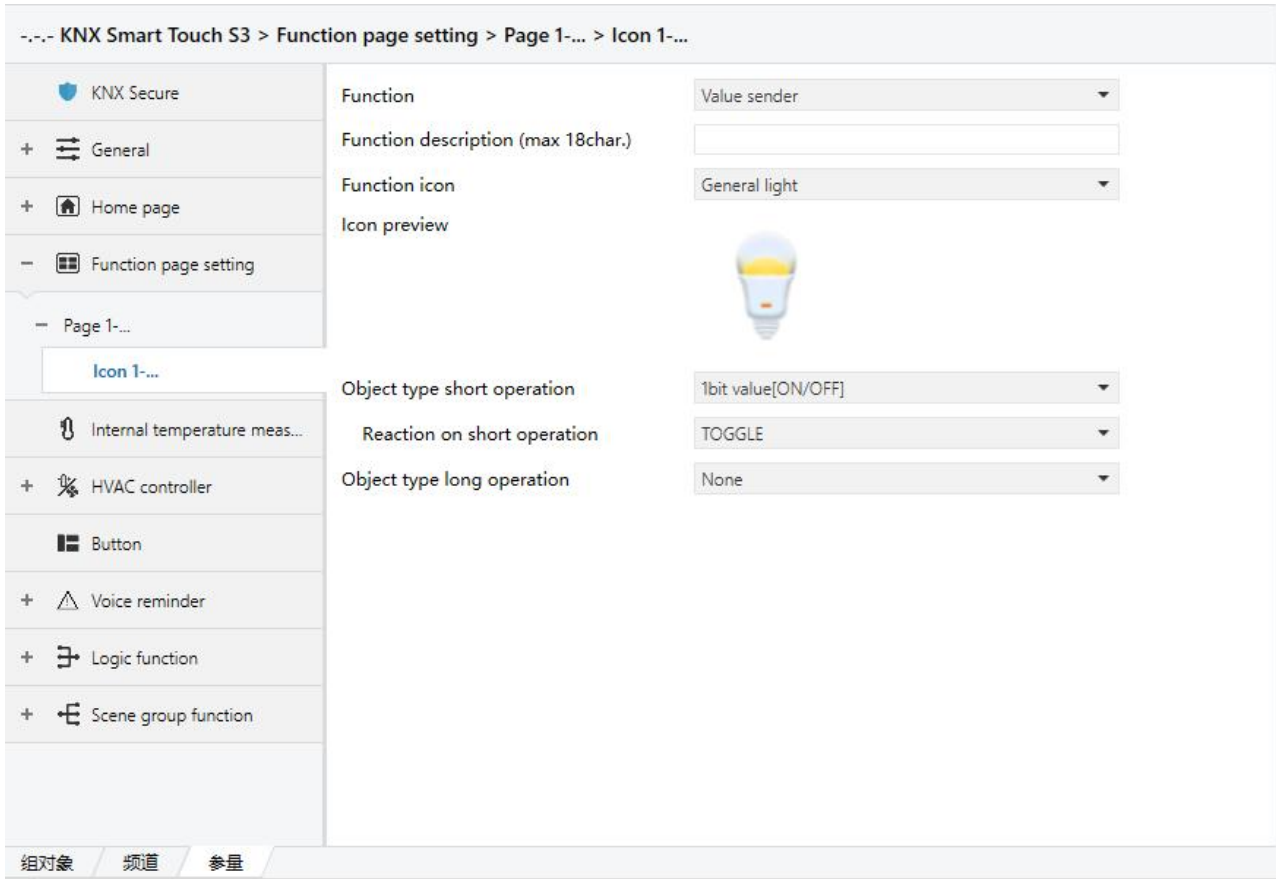


Fig.5.4.2.1 (6) "Value sender"parameter window

Parameter"Object type of short operation"

Parameter"Object type of long operation"

These two parameters are for setting the sending datatype when the button is in a short / long operation.

Options:

None

1bit value[ON/OFF]

2bit/4bit value

1byte value[0..255]

2byte value[0..65535]

2byte float value

4byte value[0..4294967295]

4byte float value

——Parameter"Object datatype"

This parameter is visible when select "2bit/4bit value". Set the datatype 2bit or 4bit. Options:

2bit value[0..3]

4bit value[0..15]

Parameter"Reaction on short operation"

Parameter"Reaction on long operation"

These two parameters are for setting the sending data value when perform short/long operation. Value range is according to the datatype selected by previous parameter.

When select 1 bit, options:

OFF

ON

TOGGLE

When select 2bit/4bit/1byte/2byte/4byte, options:

Value 1

Alternating Value1/Value2

——Parameter"Value 1"

This parameter is visible when 2bit/4bit/1byte/2byte is selected. Set the sending value 1 when perform short/long operation. Options are according to the object datatype: **0~3 / 0..15 / 0..255 / 0..65535 / -670760~670760 / 0~4294967295 / -3.40...~3.40...**

——Parameter"Value 2"

This parameter is visible when 2bit/4bit/1byte/2byte/4byte is selected, and "Alternating

Value1/Value2". Set the sending value 2 when perform short/long operation. Options are according to the object datatype: **0~3 / 0..15 / 0..255 / 0..65535 / -670760~670760 / 0~4294967295 / -3.40...~3.40...**

5.4.3.7 Scene

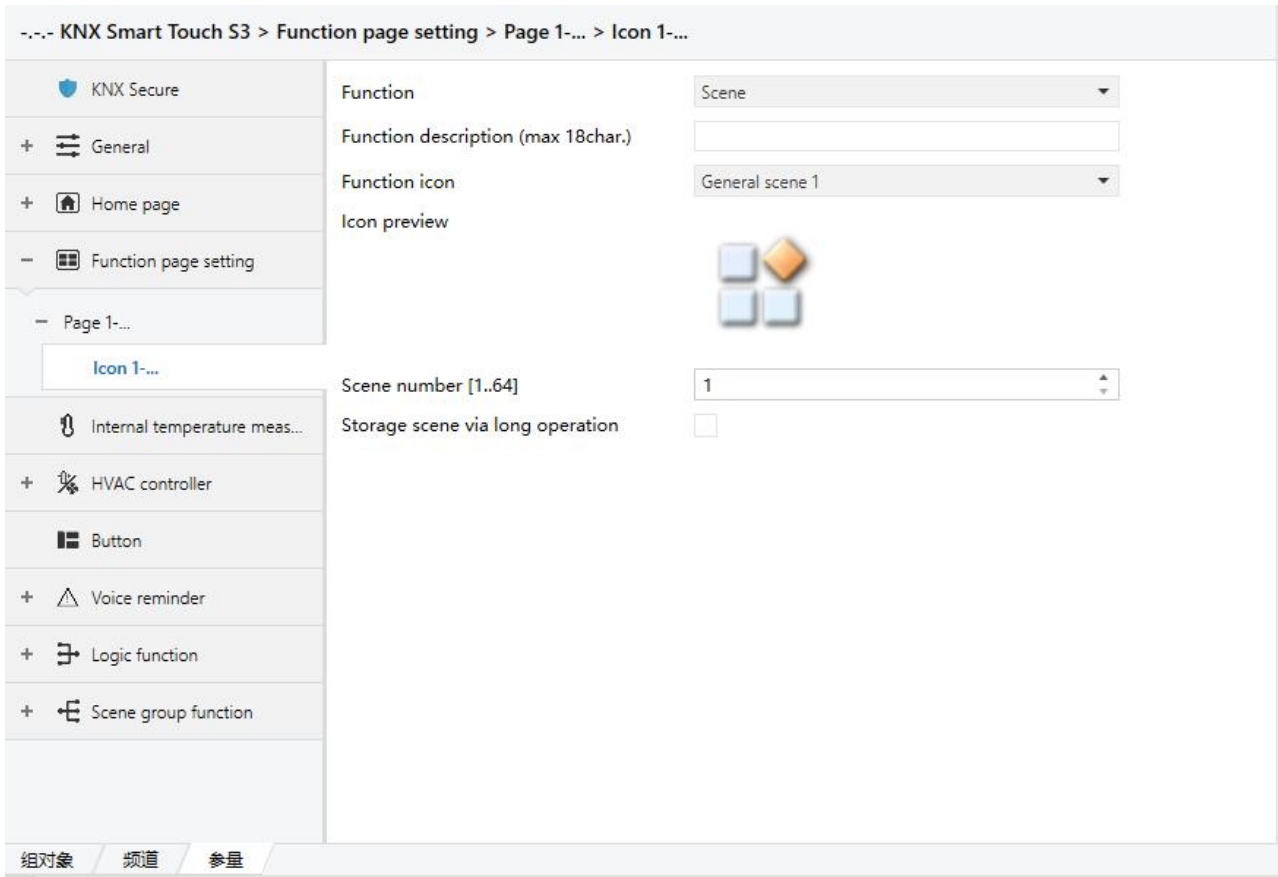


Fig.5.4.2.1 (7) "scene"parameter window

arameter"Scene number [1..64]"

This parameter is for setting the scene number.Options:**1...64**

Parameter"Storage scene via long operation"

This parameter is for setting whether to enable long press to save the scene.

5.4.3.8 Status display

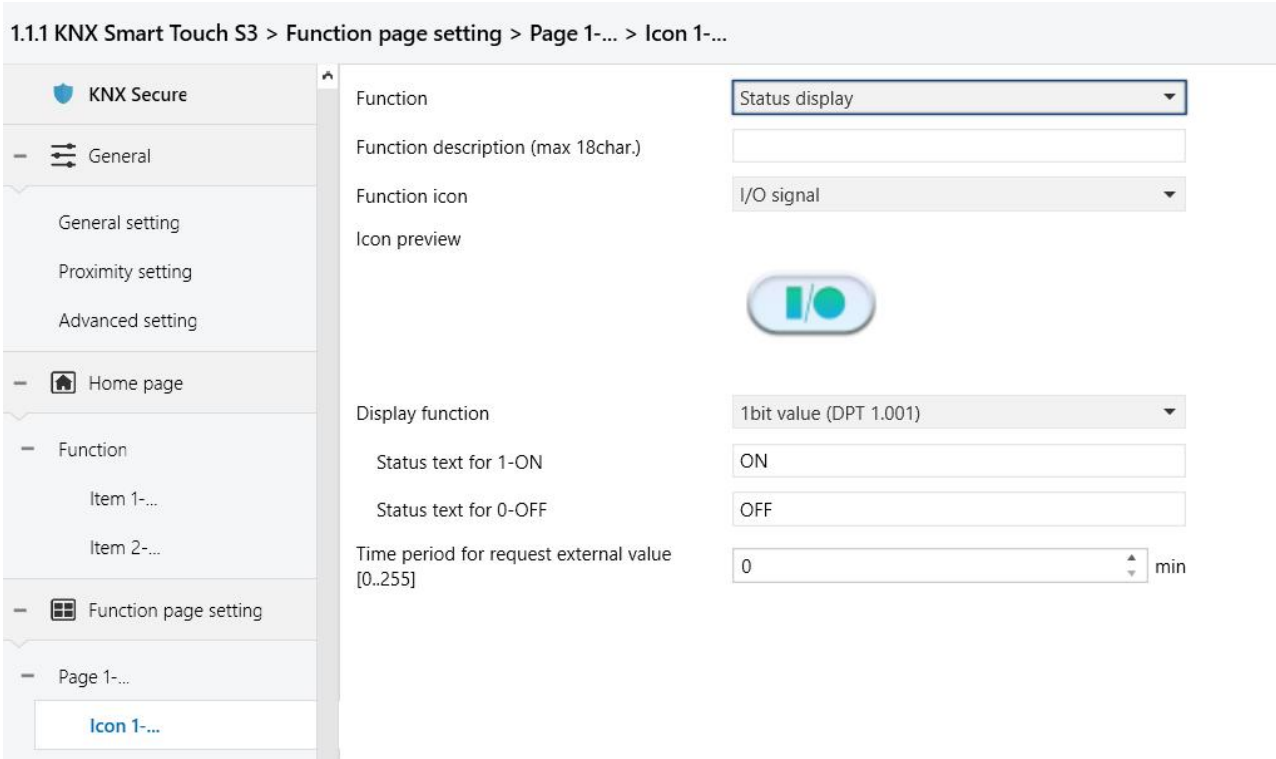


Fig.5.4.2.1(8) "status display"parameter window

Parameter"Display function"

This parameter sets the object data type for the status display function.Options：

Int. temperature value (DPT 9.001)

Int. humidity value (DPT 9.007)

Ext. temperature value (DPT 9.001)

Ext. humidity value (DPT 9.007)

1bit value (DPT 1.001)

1byte percent value (DPT 5.001)

1byte unsigned value (DPT 5.010)

2byte unsigned value (DPT 7.001)

2byte lux value (DPT 9.004)

2byte float value (DPT 9.x)

4byte unsigned value (DPT12.001)

4byte float value (DPT14.x)

14byte value (DPT16.001)

——parameter"Status text for 1-ON"

——parameter"Status text for 0-OFF"

When the data type is set to 1bit, these two parameters are visible.This parameter is used to customize the display description of status on and off, such as for displaying occupied/unoccupied, unlock/lock, open/close the window, power on/off, etc., with 4 characters in Chinese and 12 characters in English.

——parameter"Text for unit"

This parameter is visible when the data type is set to 1-byte unsigned value or 2-byte. Set the description of the display unit.

Parameter" Period for request external sensor [0...255]min"

This parameter is for setting the time period for read request external sensor.

Options:**0..255**

5.4.3.9 Air conditioner control

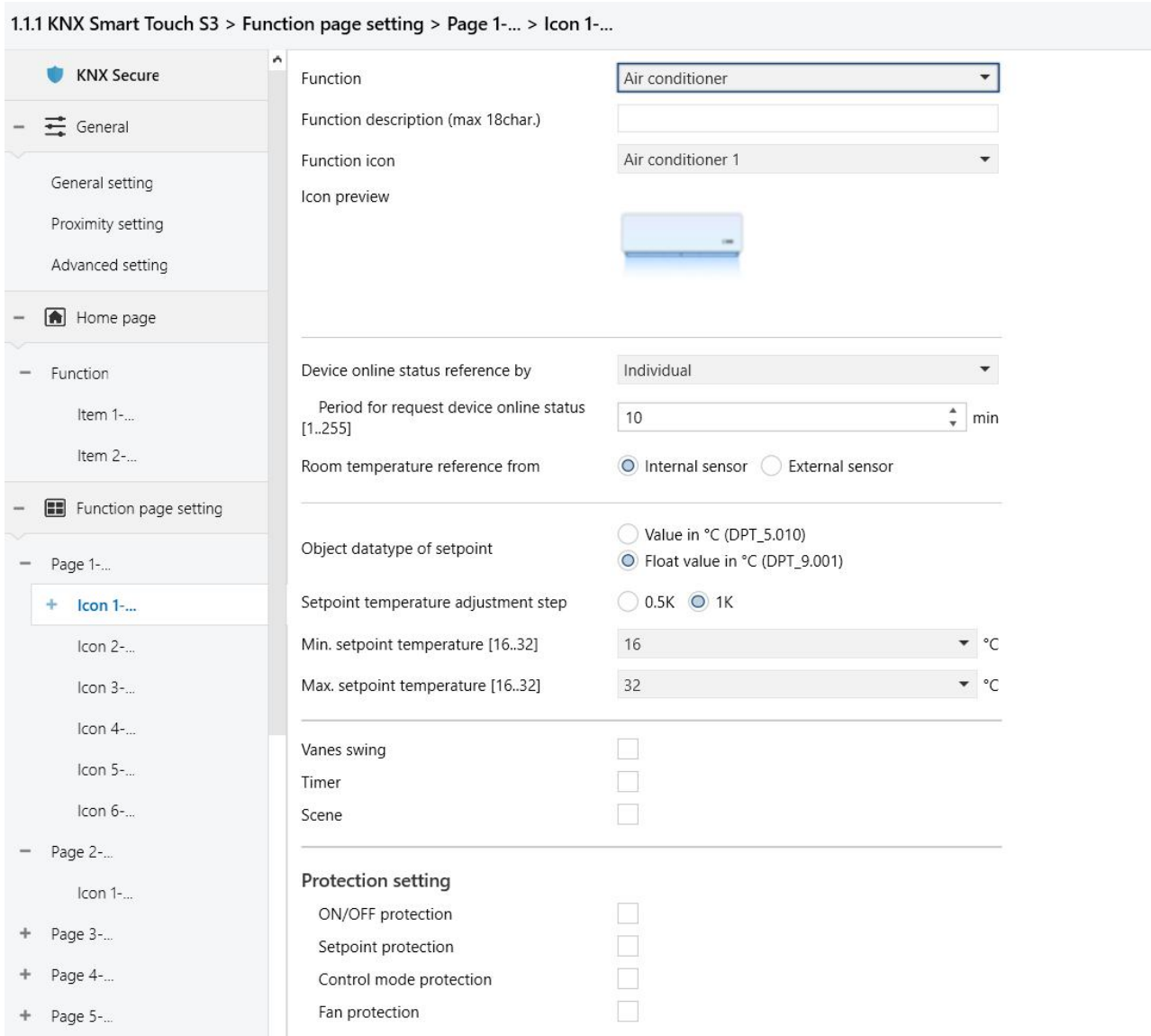


Fig.5.4.2.2(1) "Air conditoner control"parameter window

Parameter"Device online status reference by"

This parameter is for setting the reference type for sending read requests to KNX devices on the bus.Options:

Individual

Common 1

...

Common 10

Always online

——Parameter“ Period for request device online status [1..255] min”

This parameter is visible when previous parameter is selected “Individual”. Set the time period for individual device online status requests.Options:**0...255**

Parameter“Room temperature reference from”

This parameter sets the temperature reference source for the air conditioning function.Options：

Internal sensor

External sensor

——parameter“Time period for request room temperature sensor [0...255]min”

When "External sensor" is selected, this parameter is visible. Set the time interval at which the device sends read requests for room temperature to the external temperature sensor.

Options：**0..255**

Note: By default, a read request will be sent when the device restarts.

Parameter“Object datatype of setpoint”

This parameter sets the data type of the temperature setpoint.Options：

Value in °C (DPT_5.010)

Float value in °C (DPT_9.001)

Parameter“Setpoint temperature adjustment step”

This parameter is for setting step value of setpoint temperature. Options display according to datatype:

0.5K

1K

When select "Value in °C (DPT_5.010)", only **1K**

Parameter"Min/Max. setpoint temperature [16..32]° C"

These parameters are for setting the adjustable range of the setpoint temperature, the minimum value should be less than the maximum value. If the setpoint temperature beyond the limited range, will output the limited temperature. Options:

16°C

17°C

...

32°C

Parameter"Vanes swing"

This parameter setting enables or disables the air sweeping function; when enabled, the corresponding object will be displayed.

Parameter"Timer"

This parameter is for setting whether to enable timer function, display corresponding object when enable. User can set the time on the screen.

Note: The bus only disable timer function temporarily.

Parameter"Scene"

This parameter setting enables or disables the built-in scene function. When enabled, the corresponding objects and setting interfaces will be displayed. It can be associated with switches, modes, wind speeds, and set temperature

——parameter"Send delay between telegrams"

When the scene function is enabled, this parameter is visible. It sets the interval for delayed message sending.Options：

Disable

100ms

300ms

500ms

Protection setting

Parameter"ON/OFF protection"

Parameter"Setpoint protection"

Parameter"Mode protection"

Parameter"Fan protection"

Parameter" Vanes swing protection"

The parameter "Vanes swing protection" is displayed when the function "Air conditioner (with swing)" is selected.

These parameters are for setting to whether to enable protection function, that is some functions only display and not allow user to operate. Protection function support to ON/OFF, setpoint value, mode, fan speed control, swing control.

For protection function, user can not operate screen or shortcut button, but still process received status.

Air conditioning mode setting interface

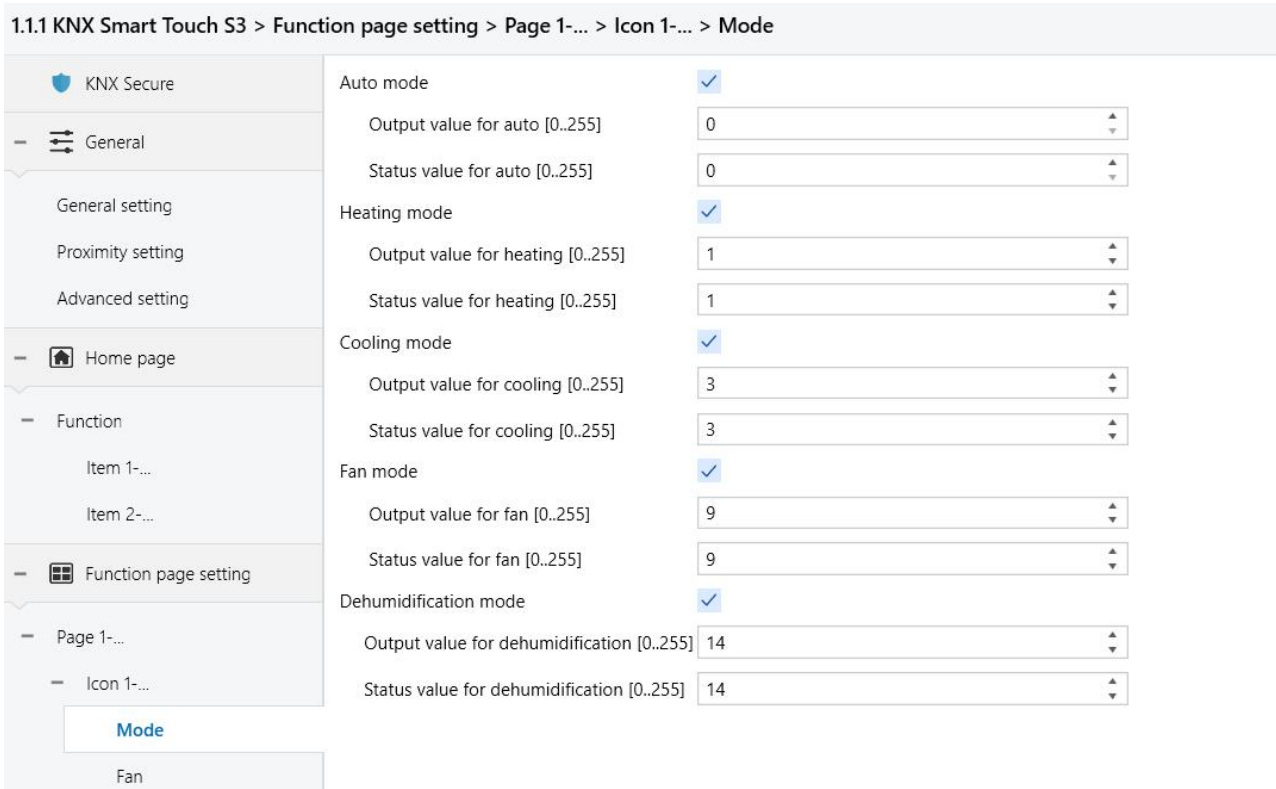


Fig.5.4.2.2(2) "Air-condition mode"parameter window

Parameter"Auto/Heating/Cooling/Fan/Dehumidification mode"

When these parameters are enabled, the corresponding mode setting parameters become visible.

——parameter "Output value for auto/heating/cooling/fan/dehumidification [0..255]"

These parameters are visible when the mode is enabled, and they set the output values for switching to each mode.Options：**0..255**

——parameter"Status value for auto/heating/cooling/fan/dehumidification [0..255]"

These parameters are visible when the mode is enabled, and they set the status feedback values for each mode.Options：**0..255**

Air conditioning wind speed setting

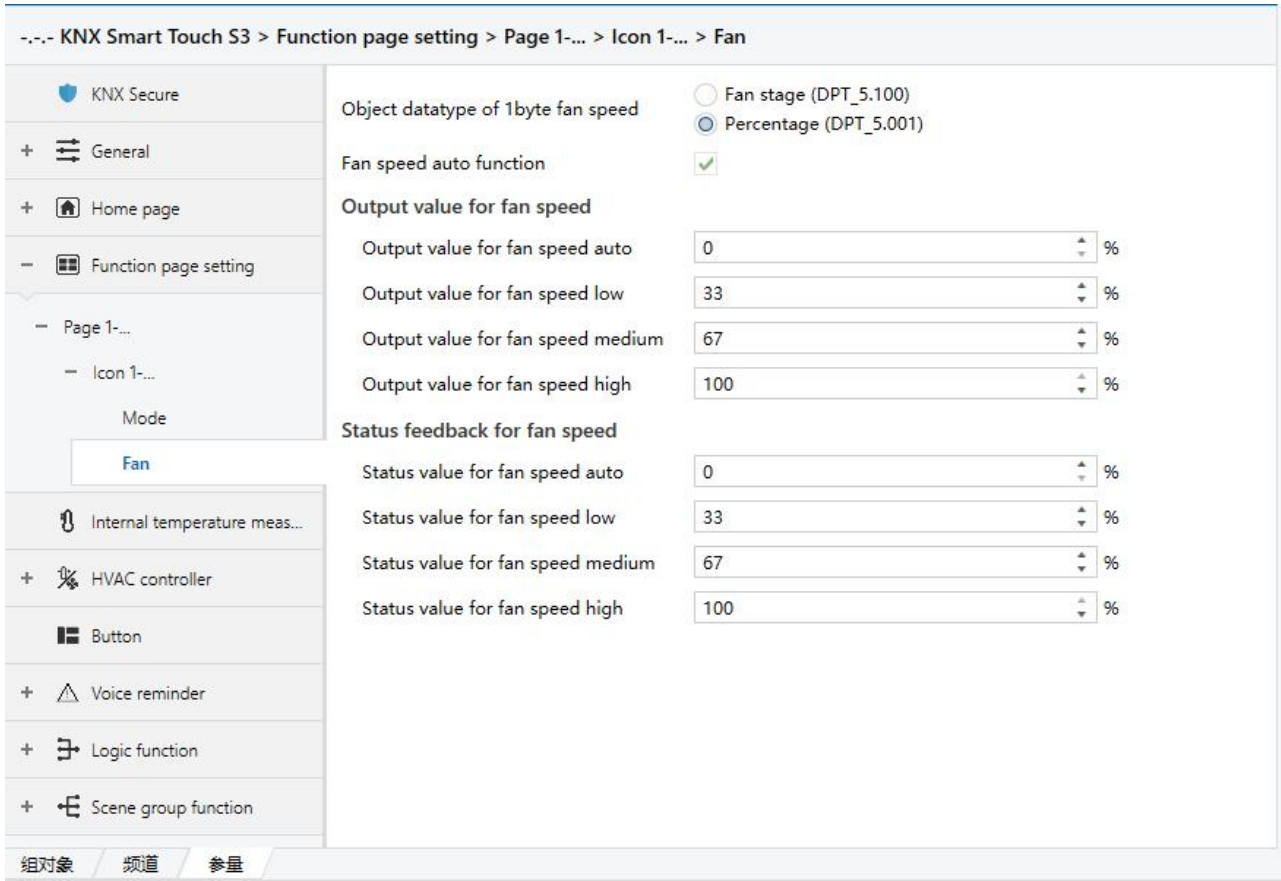


Fig.5.4.2.2(3) Fan setting

parameter"Object datatype of 1byte fan speed"

This parameter is used to set the data type of the 1-byte wind speed object.可选项：

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

parameter"Fan speed auto function"

This parameter is used to set whether to enable the automatic wind speed function. After enabling, the corresponding objects and parameter settings will be displayed.

——parameter"Output value for fan speed auto/low/medium/high"

These parameter settings switch to the output values of each wind speed gear,

supporting 4 wind speeds: automatic, low, medium, and high. The optional items are displayed according to the object type of the previous parameter.Options：**0..255/0..100**

Status feedback for fan speed

——parameter"Status value for fan speed auto/low/medium/high"

These parameter settings configure the status feedback values for each wind speed level, supporting 4 wind speeds: automatic, low, medium, and high. The device will update and display the wind speed based on the feedback values. The optional items are displayed according to the object type of the previous parameter：**0..255/0..100**

Air conditioning scene setting interface, where scene functions are only visible when enabled

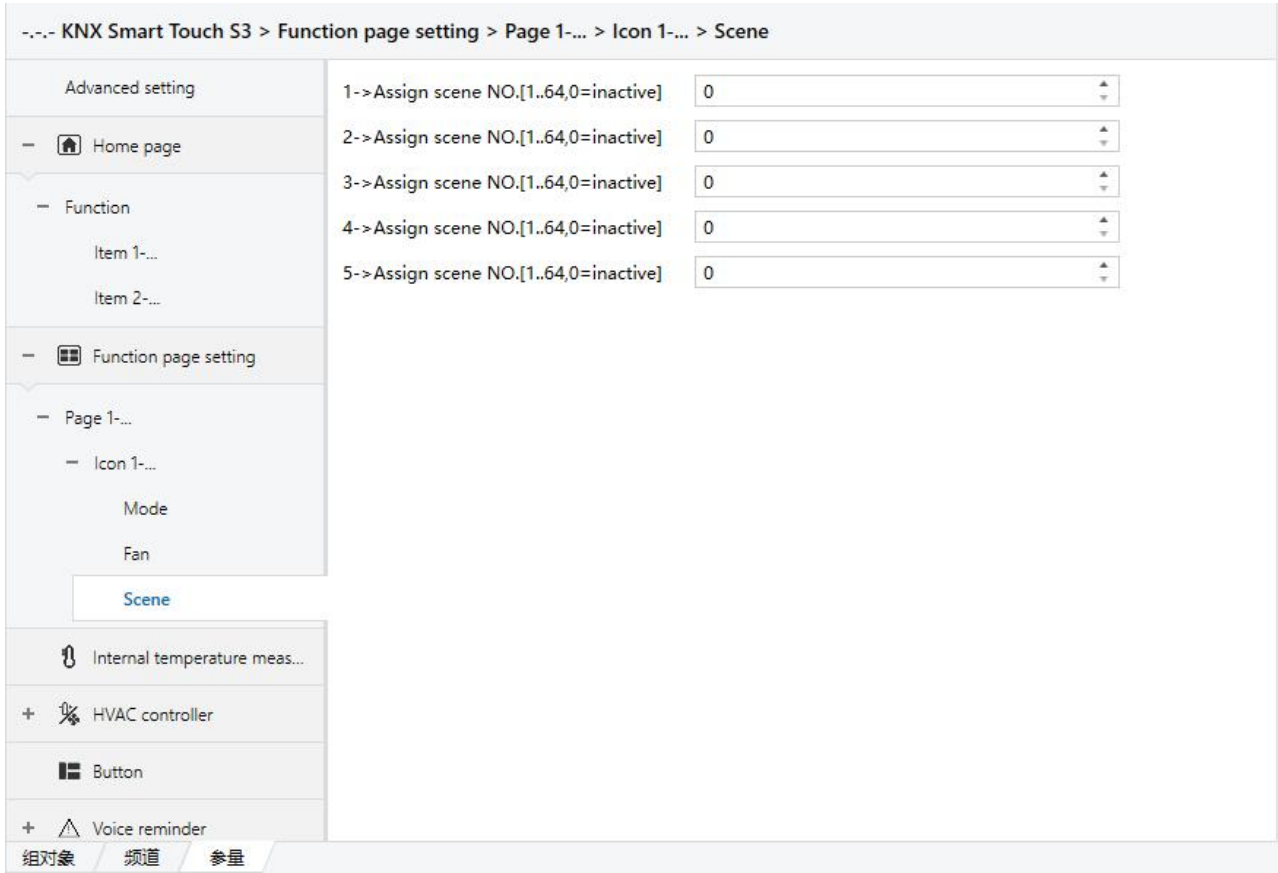


Fig.5.4.2.2(4) Air-condition-scene setting

parameter"x->Assign scene NO.[1..64,0=inactive]"(x=1~5)

This parameter sets the scenario number for which the trigger is activated. It can support up to 5 trigger scenarios.Options：**0..64, 0=inactive**

——parameter"ON/OFF"

This parameter sets the switch status.Options：

Unchange

OFF

ON

When the switch status is selected as OFF, the following three parameters are invisible.

——Parameter"Temperature"

This parameter setting sets the temperature status.Options：

Unchange

16°C

17°C

..

32°C

——parameter"Mode"

This parameter sets the mode status.Options：

Unchange

Auto

Heating

Cooling

Fan

Dehumidification

——parameter"Fan"

This parameter sets the wind speed status.Options：

Unchange

Auto

Low

Medium

High

Note: The switch, temperature, mode and wind speed are sent in sequence. If the execution is not completed during the delay period and a new command comes in, the new command will be executed. Unexecuted operations are ignored.

5.4.3.10 Room temperature unit

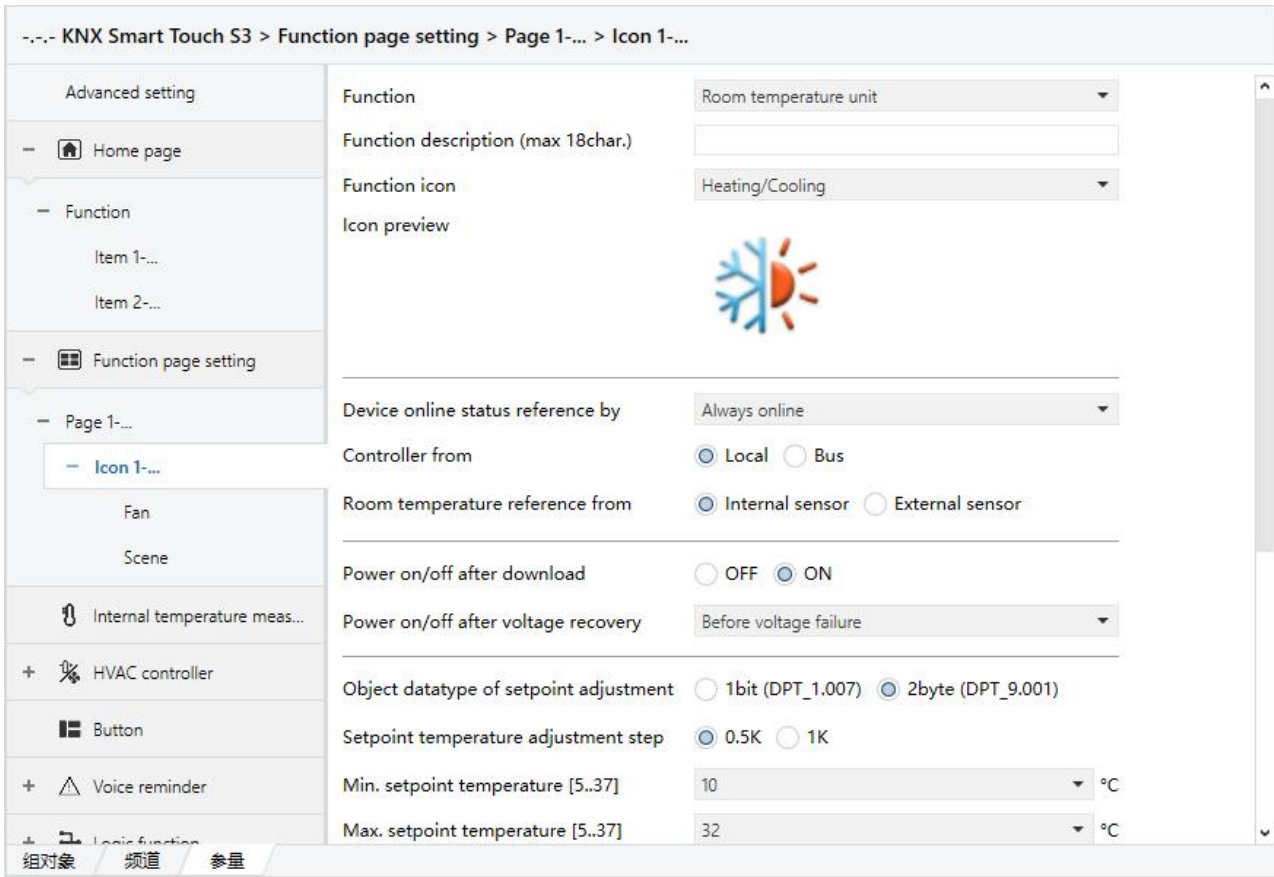


Fig.5.4.2.3(1) Room temperature unit

Parameter"Controller from"

This parameter is for setting the controller is from the local or bus. If select the local controller, it no need to send the read request of the setting temperature, control mode and operation mode when power on or bus recovery (because the device cannot respond to its own request). Options:

Local

Bus

parameter"Room temperature reference from"

This parameter set the resource of the temperature reference. Options:

Internal sensor

External sensor

——Parameter"Period for request external sensor [0...255]min"

This parameter is visible when "External sensor" is selected. Set the time period for read request external temperature sensor. Options: **0..255**

Note: Send read request as default when the device voltage recovery.

Parameter"Power on/off after download"

This parameter is for setting the power on/off status of RTC interface after download. Options:

OFF

ON

Parameter"Power on/off after voltage recovery"

This parameter is for setting the power on/off status of RTC interface after device voltage recovery. Options:

OFF

ON

Before voltage failure

OFF: Device will power off when voltage recovery, the screen can not be operated,except for the power icon.

ON: Device will power on when voltage recovery, the screen can be operated;

Before voltage failure: Device will return to the power status as before voltage failure when voltage recovery.

Parameter"Object datatype of setpoint adjustment"

This parameter is for setting the object datatype of setpoint temperature. Options:

1bit (DPT_1.007)

2byte (DPT_9.001)

Parameter"Setpoint temperature adjustment step"

This parameter is visible when "2byte (DPT_9.001 " is selected. Set the step value of setpoint temperature. Options:

0.5K

1K

Parameter"Min/Max. setpoint temperature [5..37]° C"

These parameters are for setting the adjustable range of the setpoint temperature, the minimum value should be less than the maximum value. If the setpoint temperature beyond the limited range, the will output the limited temperature.

Options：**5...37**

Parameter"Control mode"

This parameter is for setting the RTC control mode. Options:

Heating

Cooling

Heating and Cooling

Parameter"Operation mode"

This parameter sets whether to enable the room operation mode. After enabling it, the corresponding object will be displayed. Supports four modes: comfort, standby, energy saving and protection.

Parameter"Fan "

This parameter setting determines whether wind speed control is enabled. Once enabled, the corresponding object and setting interface will be displayed.

Parameter"Timer"

This parameter is for setting whether to enable timer function, display corresponding object when enable. User can set the time on the screen.

Note: The bus only disable timer function temporarily.

Parameter"Scene"

This parameter sets whether to enable the built-in scene function. After enabling it, the corresponding object and setting interface will be displayed. It can be associated with switches, operation modes/set temperatures.

Protection setting

Parameter"ON/OFF protection"

Parameter"Setpoint protection"

Parameter"Control mode protection"

Parameter"Operation mode protection"

Parameter"Fan protection"

These parameters are for setting to whether to enable protection function, that is some functions only display and not allow user to operate. Protection function support to ON/OFF, setpoint value, control mode, operation mode, fan speed control.

For protection function, user can not operate screen or shortcut button, but still process received data.

The temperature control wind speed setting interface can only be seen when the wind speed function is enabled

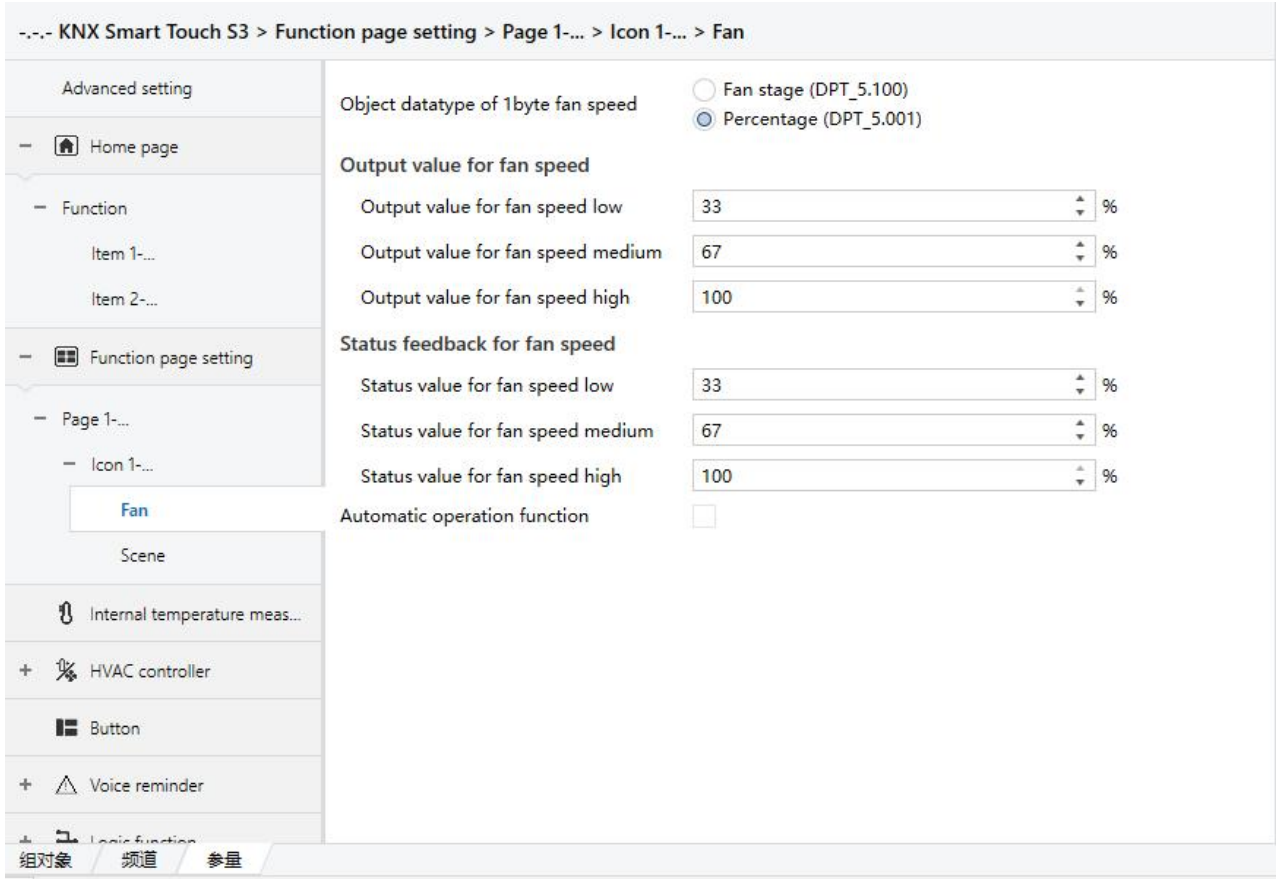


Fig.5.4.2.3(2) Fan setting

Parameter"Object datatype of 1byte fan speed"

This parameter is for setting the object datatype of 1 byte fan speed. Options:

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

Output value for fan speed

Parameter"Output value for fan speed low/medium/high"

These three parameters are for setting the value sent for each fan speed switchover, support 3 fan speeds low, medium, high. Options according to fan object datatype:

0..255/0..100

Status feedback for fan speed

Parameter"Status value for fan speed low/medium/high"

These parameters are for setting the status feedback value for each fan speed, support 3 fan speeds low, medium, high. Device updates display according to feedback value. Options according to fan object datatype: **0..255/0..100**

Parameter"Automatic operation function"

This parameter is for setting whether to enable fan speed auto function, display corresponding object when enable.

The temperature control scene setting interface can only be seen when the scene function is enabled

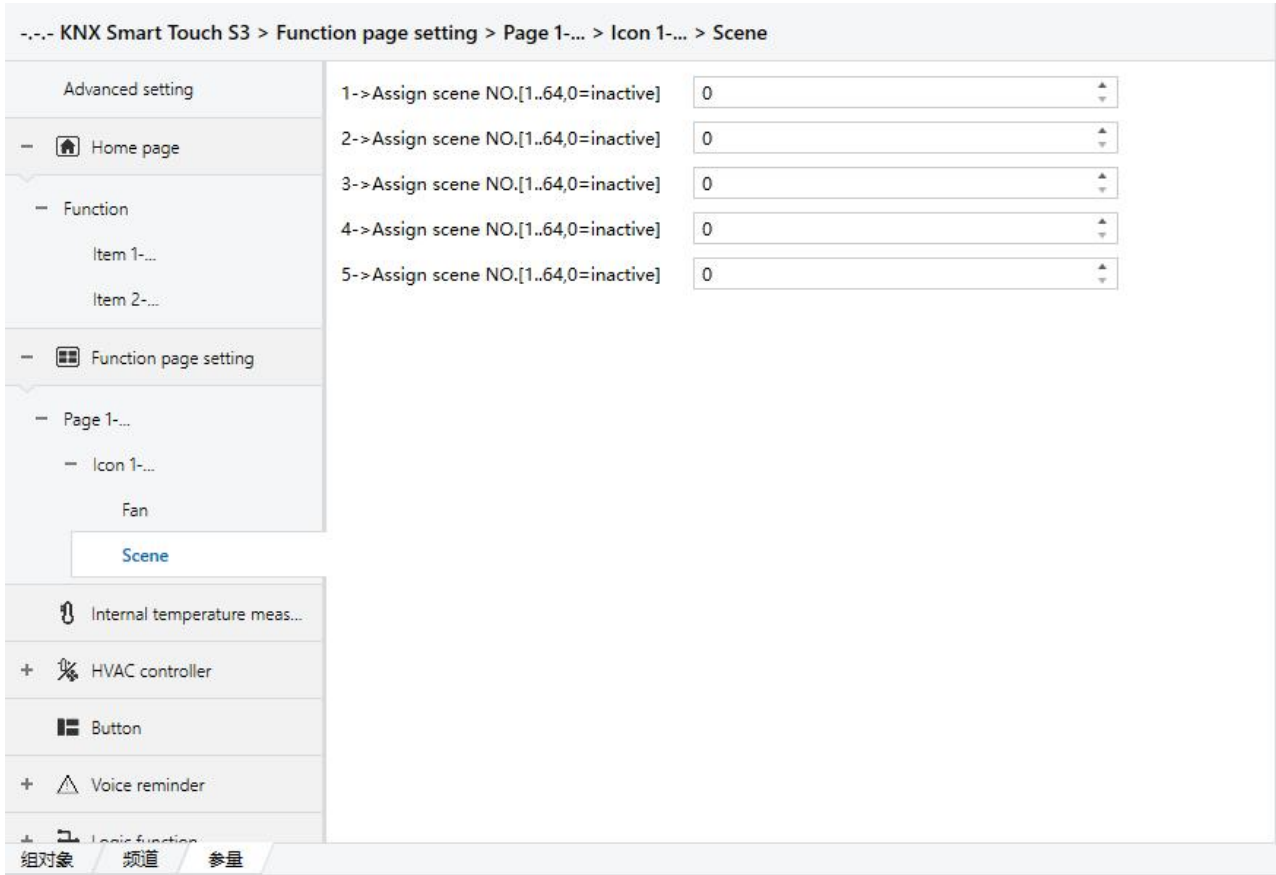


Fig.5.4.2.3(3) Room temperature unit-scene setting

parameter"x->Assign scene NO.[1..64,0=inactive]"(x=1~5)

This parameter sets the scenario number for which the trigger is activated. It can support up to 5 trigger scenarios.Options：**0..64, 0=inactive**

——parameter"ON/OFF"

This parameter sets the switch status.Options：

Unchange

OFF

ON

When the switch status is selected as OFF, the following three parameters are invisible.

——Parameter"Temperature"

This parameter is visible when the operation mode is not enabled. Set the temperature status.Options：

Unchange=0

5°C

6°C

..

37°C

——Parameter"Operation mode"

This parameter is visible when the operation mode is enabled. Set the operation mode status.Options：

Unchange

Comfort mode

Standby mode

Economy mode

Frost/heat protection

5.4.3.11 Ventilation system control

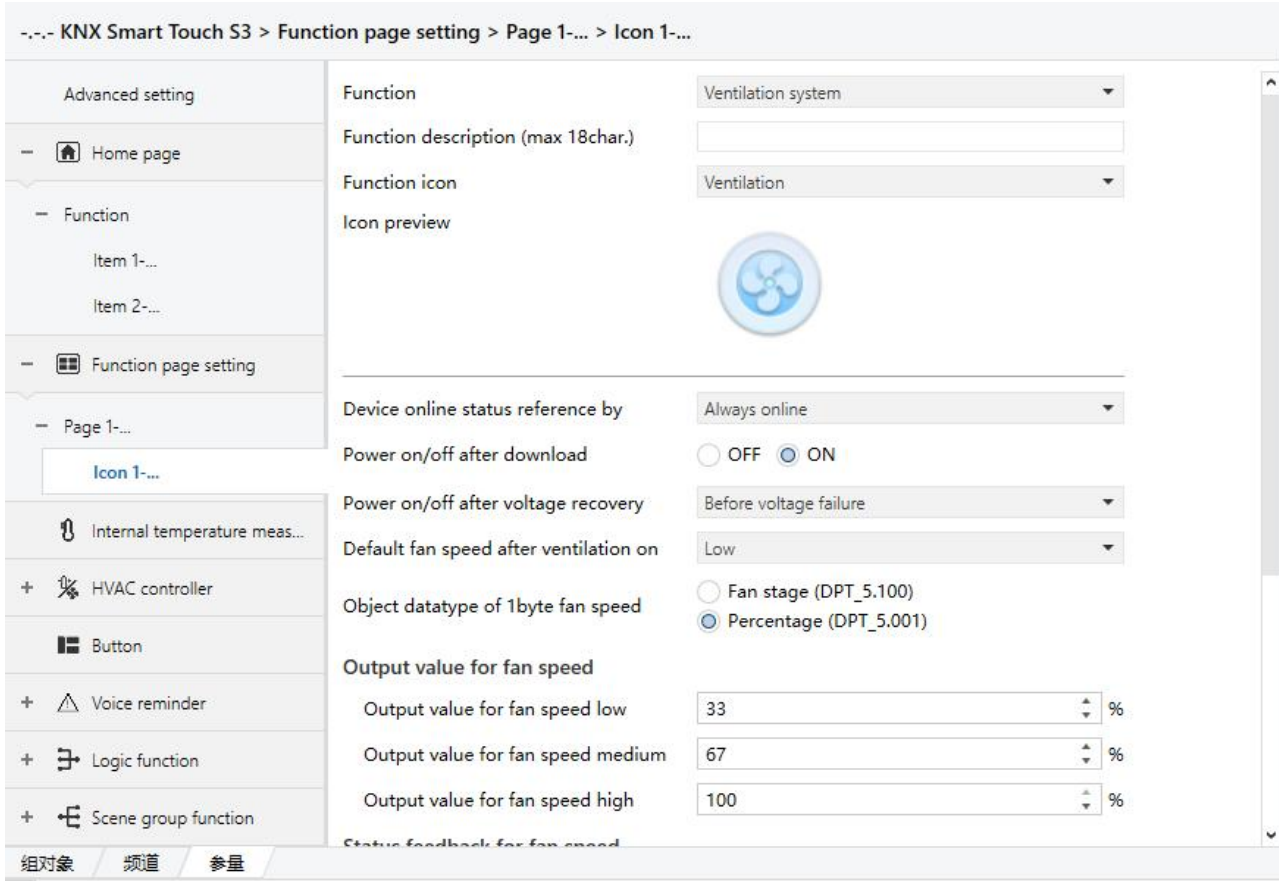


Fig.5.4.2.4 Ventilation system setting

Parameter"Power on/off after download"

This parameter is for setting the power on/off status of ventilation system interface after download. Options:

OFF

ON

Parameter"Power on/off after voltage recovery"

This parameter is for setting the power on/off status of ventilation system interface after device voltage recovery. Options:

OFF

ON

Before voltage failure

OFF: Device will power off when voltage recovery, screen can not be operated, except for the icons of filter reset and power;

ON: Device will power on when voltage recovery, screen can be operated;

Before voltage failure: Device will return to the power status as before voltage failure when voltage recovery.

Parameter"Default fan speed after ventilation on"

This parameter is for setting the initial fan speed after power on. Options:

Low

Medium

High

Last status

Parameter"Object datatype of 1byte fan speed"

This parameter is for setting the object datatype of 1 byte fan speed. Options:

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

Output value for fan speed

Parameter"Output value for fan speed low/medium/high"

These three parameters are for setting the value sent for each fan speed switchover, support 3 fan speeds low, medium, high. Options according to fan object datatype:

0..255/0..100

Status feedback for fan speed

Parameter"Status value for fan speed low/medium/high"

These parameters are for setting the status feedback value for each fan speed, support 3 fan speeds low, medium, high. Device updates display according to feedback value. Options according to fan object datatype: **0..255/0..100**

Parameter"Automatic operation function"

This parameter is used to set the automatic control of wind speed to be enabled. Once enabled, the corresponding object will be displayed.

Parameter"Heat recovery function"

This parameter sets whether to enable the heat exchange function. Once enabled, the corresponding object will be displayed.

Parameter"Filter timer counter"

This parameter is for setting whether to enable heat recovery function, display corresponding object and parameter when enable.

——Parameter"Evaluation time [100..10000]h"

This parameter is for setting the service life of the filter. Options: **100..10000**

If the filter takes longer than the setting time, the filter will send an alarm and prompt to clean the filter.

The life of the filter can be reset through the object "Filter timer reset".

The life of the filter can be counted by the object "Filter timer counter". The counting duration is in hours. The counting value will be sent to the bus when it has changed, and the counting duration of filter can be modified by object "Filter timer counter change" through the bus.

Parameter"Scene function"

This parameter sets whether to enable the built-in scene function. After enabling it, the corresponding object and setting interface will be displayed. Wind speed and heat exchange can be associated.

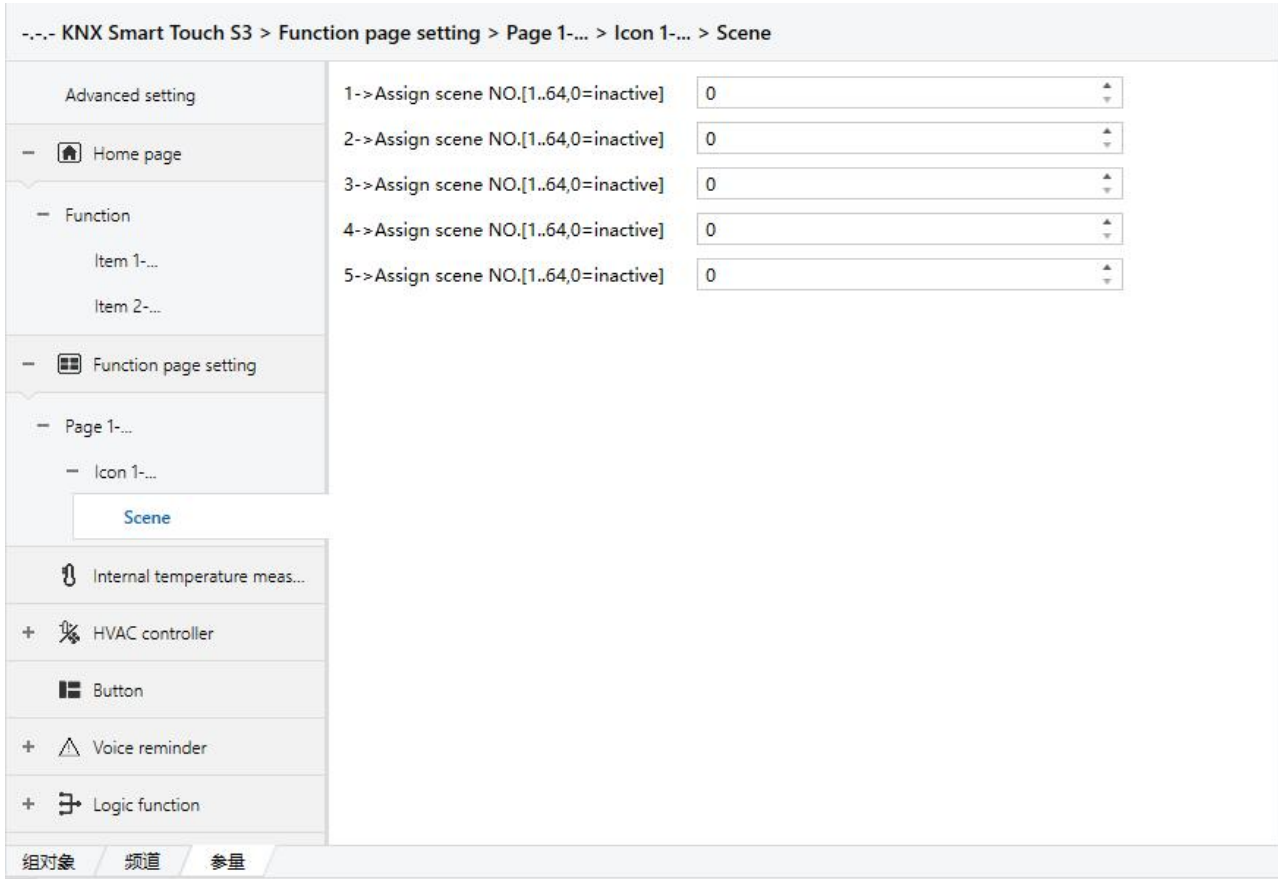


Fig.5.4.2.4(2) Ventilation system-scene setting

parameter"x->Assign scene NO.[1..64,0=inactive]"(x=1~5)

This parameter sets the scenario number for which the trigger is activated. It can support up to 5 trigger scenarios.Options：**0..64, 0=inactive**

——parameter"Fan"

This parameter sets the wind speed status of scene x,options：

Unchange

OFF

Low

Medium

High

When the scene status is selected as OFF, the following parameters are not visible

——parameter"Heat recovery"

This parameter is visible when the heat exchange function is enabled. Set the heat exchange status of scene x.Options：

Unchange

OFF

ON

5.4.3.12 Audio control

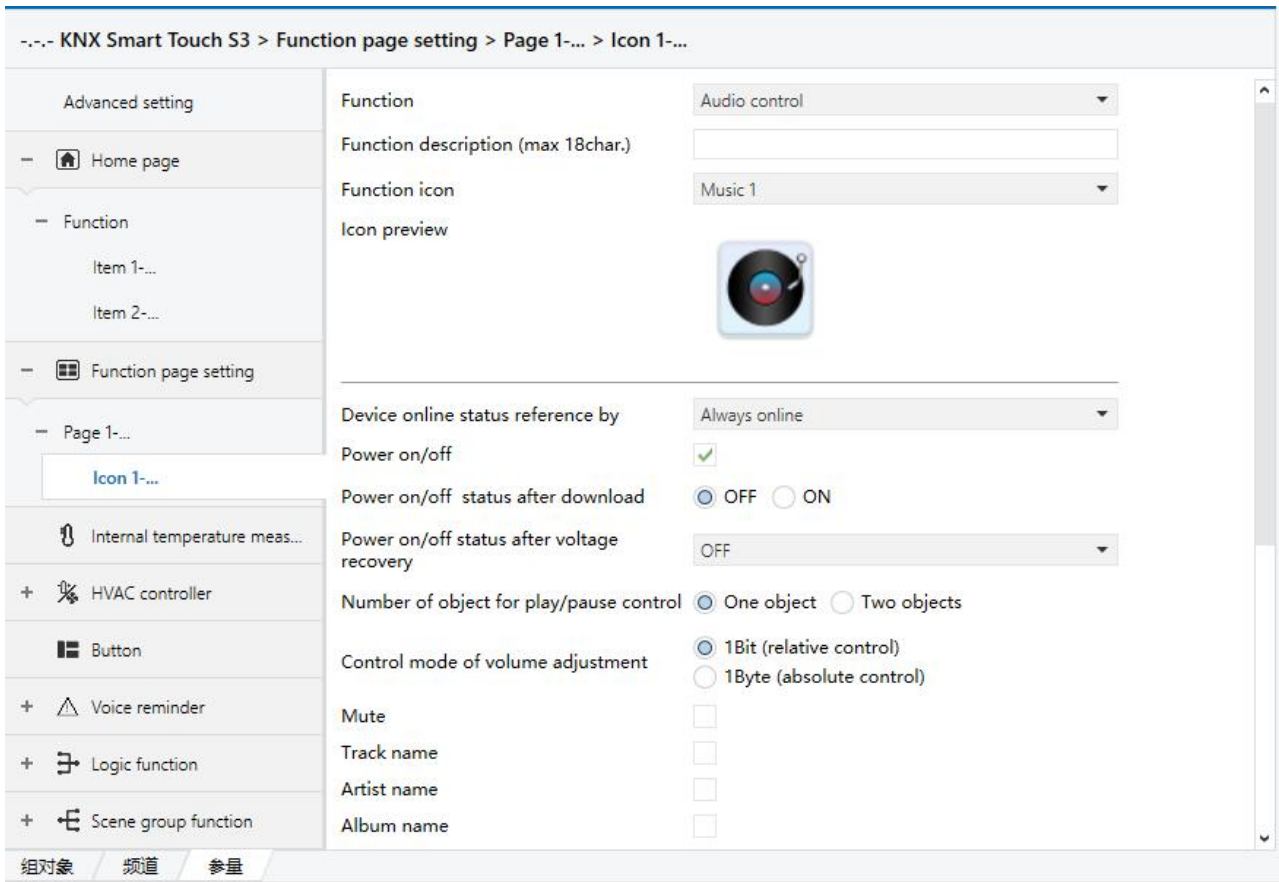


Fig.5.4.2.5 Audio control setting

Parameter"Power on/off"

This parameter is for setting the power on/off function.

Parameter" Power on/off status after download"

This parameter is for setting the power on/off status of audio control interface after download. Options:

OFF

ON

Parameter" Power on/off status after voltage recovery"

This parameter is for setting the power on/off status of audio control interface after device voltage recovery. Options:

OFF

ON

Before voltage failure

OFF: Device will power off when voltage recovery, screen can not be operated;

ON: Device will power on when voltage recovery, screen can be operated;

Before voltage failure: Device will return to the power status as before voltage failure when voltage recovery.

Parameter" Number of object for play/pause control"

This parameter is for setting the number of objects that control play/pause, 1 common object or 2 separate objects. Options:

One object

Two objects

Parameter"Control mode of volume adjustment"

This parameter is for setting the data type for volume adjustment.Options：

1Bit (relative control)

1Byte (absolute control)

At 1bit, it supports volume increase and decrease as well as mute functions. When it is

1byte, only 1byte objects are supported for volume adjustment, and can set the maximum volume.

——Parameter "Object datatype"

This parameter is visible when 1byte is selected.This parameter is for setting the object datatype of volume. Options:

Percentage (DPT_5.001)

Percentage (DPT_5.004)

——Parameter"Max. volume value [10..100]%"

This parameter is visible when 1byte is selected.This parameter is for setting the maximum volume value. Options:**10..100**

Parameter"Mute"

This parameter is for setting mute function.

Parameter "Track name"

This parameter sets whether to display the track name.

Note: The character encoding of the track name message is related to the interface language. When Simplified Chinese is selected, UTF-8 is used; when other languages are selected, ISO8859 is used. The same applies to the messages for singer names and album names.

Parameter"Artist name"

This parameter sets whether to display the artist name.

Parameter"Album name"

This parameter sets whether to display the album name.

Parameter"Play mode"

This parameter sets whether to enable the playback function. After enabling, the following parameter Settings will be displayed.

Parameter" Play in single cycle mode"

This parameter is for setting whether to enable play in single cycle mode. Display two parameters as follow when enable.

——Parameter"Output value for play in single cycle"

This parameter is for setting the output value for play in single cycle. Options: **0..255**

——Parameter"Status value for play in single cycle"

This parameter is for setting the status value for play in single cycle. Device will update the play mode displayed on the screen according to the feedback value. Options: **0..255**

Parameter" Play in order mode"

This parameter is for setting whether to enable play in order mode. Display two parameters as follow when enable.

——Parameter"Output value for play in order"

This parameter is for setting the output value for play in order. Options: **0..255**

——Parameter"Status value for play in order"

This parameter is for setting the status value for play in order. Device will update the play mode displayed on the screen according to the feedback value. Options: **0..255**

Parameter" Play in random mode"

This parameter is for setting whether to enable play in random mode. Display two parameters as follow when enable.

——Parameter"Output value for play in random"

This parameter is for setting the output value for play in random. Options: **0..255**

——Parameter"Status value for play in random"

This parameter is for setting the status value for play in random. Device will update the play mode displayed on the screen according to the feedback value. Options: **0..255**

5.5 Parameter window"Internal temperature measurement"

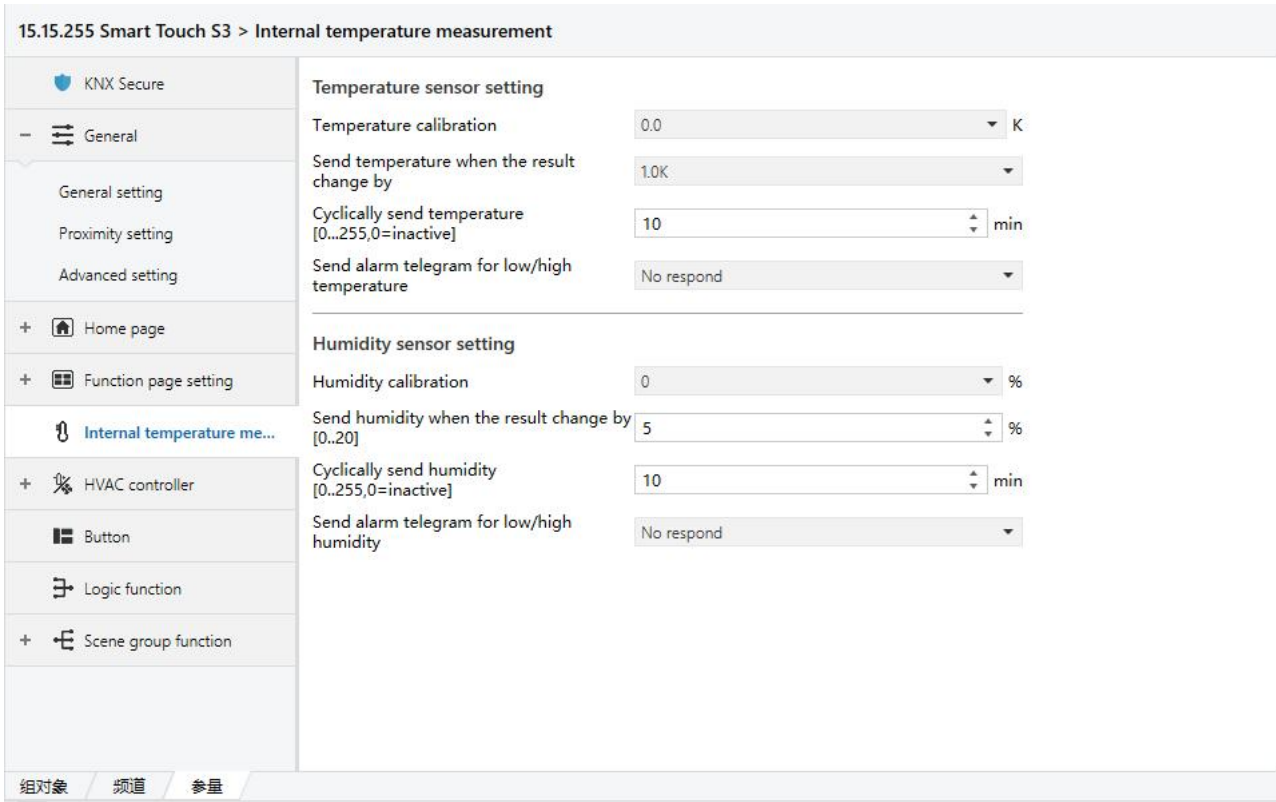


Fig.5.5 "Internal temperature measurement" setting

The following parameters is used for setting the calibration value, sending condition and error report of internal sensor. If internal sensor is selected for other functions as well, please refer to this section.

Temperature sensor setting

Parameter"Temperature calibration"

This parameter is for setting the temperature calibration value of the internal sensor, that is, to calibrate the measured value of internal sensor to make it closer to the current ambient temperature. Options:

-5K

...

0K

...

5K

Note: after the device is powered on, the stability time of internal sensor detection will take 30 minutes, therefore, the detected temperature value in the early stage of device work may be inaccurate.

Parameter"Send temperature when the result change by "

This parameter is for setting when temperature turns to a certain value, whether to enable to send the current temperature value to the bus. Not send when disable. Options:

Disable

0.5K

1.0K

...

10K

Parameter"Cyclically send temperature [0...255,0=inactive]min"

Setting the time for cyclically sending the temperature detection value to the bus. Options: **0..255**

This period is independent and starts time counting after programming completion or reset. Transmission change has no affect on this period.

Parameter"Send alarm telegram for low/high temperature"

This parameter is for setting condition of sending telegram when low/high temperature alarm. Options:

No respond

Respond after read only

Respond after change

Respond after read only: Only when the device receives a read alarm from other bus device or bus will the object "Low temperature alarm"/" High temperature alarm" send the

alarm status to the bus.

Respond after change: the object " Low temperature alarm"/" High temperature alarm" will immediately send the telegram to the bus to report the alarm value when the alarm status has changed.

This parameter is for setting the threshold value for low temperature alarm. When the temperature lower than low threshold, low temperature alarm object will send telegram.
Options:

0°C

1°C

...

15°C

——Parameter"Threshold value for high temperature alarm [30..45]° C"

This parameter is for setting the threshold value for high temperature alarm. When the temperature higher than high threshold, high temperature alarm object will send telegram.
Options:

30°C

31°C

...

45°C

Humidity sensor setting

Parameter"Humidity calibration"

This parameter is for setting the humidity calibration value of the internal sensor, that is, to calibrate the measured value of internal sensor to make it closer to the current ambient humidity.

Options:**-20% / -15% / -10% / -5% / -3% / -1% / 0% / 1% / 3% / 5% / 10% / 15% / 20%**

Parameter "Send humidity when the result change by [0..20]%"

This parameter is for setting when humidity turns to a certain value, whether to enable to send the current humidity value to the bus. Not send when value is 0.Options: **0..20**

Parameter "Cyclically send humidity [0..255,0=inactive]min"

Setting the time for cyclically sending the humidity detection value to the bus. Options: **0..255**

This period is independent and starts time counting after programming completion or reset. Transmission change has no affect on this period.

Parameter "Send alarm telegram for low/high humidity"

This parameter is for setting condition of sending telegram when low/high humidity alarm. Options:

No respond

Respond after read only

Respond after change

Respond after read only: Only when the device receives a read alarm from other bus device or bus will the object " Low humidity alarm"/" High humidity alarm" send the alarm status to the bus;

Respond after change: the object " Low humidity alarm"/" High humidity alarm" will immediately send the telegram to the bus to report the alarm value when the alarm status has changed.

These two parameters as follow are visible when "Respond after read only" or "Respond after change" are selected.

Parameters as follow are visible when "Respond after read only" or "Respond after change" is selected.

——Parameter"Threshold value for low humidity alarm [5..20]%"

This parameter is for setting the threshold value for low humidity alarm. When the humidity lower than low threshold, low humidity alarm object will send telegram. Options: **5..20**

——Parameter"Threshold value for high humidity alarm [70..85]%"

This parameter is for setting the threshold value for high humidity alarm. When the humidity higher than high threshold, high humidity alarm object will send telegram. Options: **70..85**

5.6 Parameter window"HVAC controller"

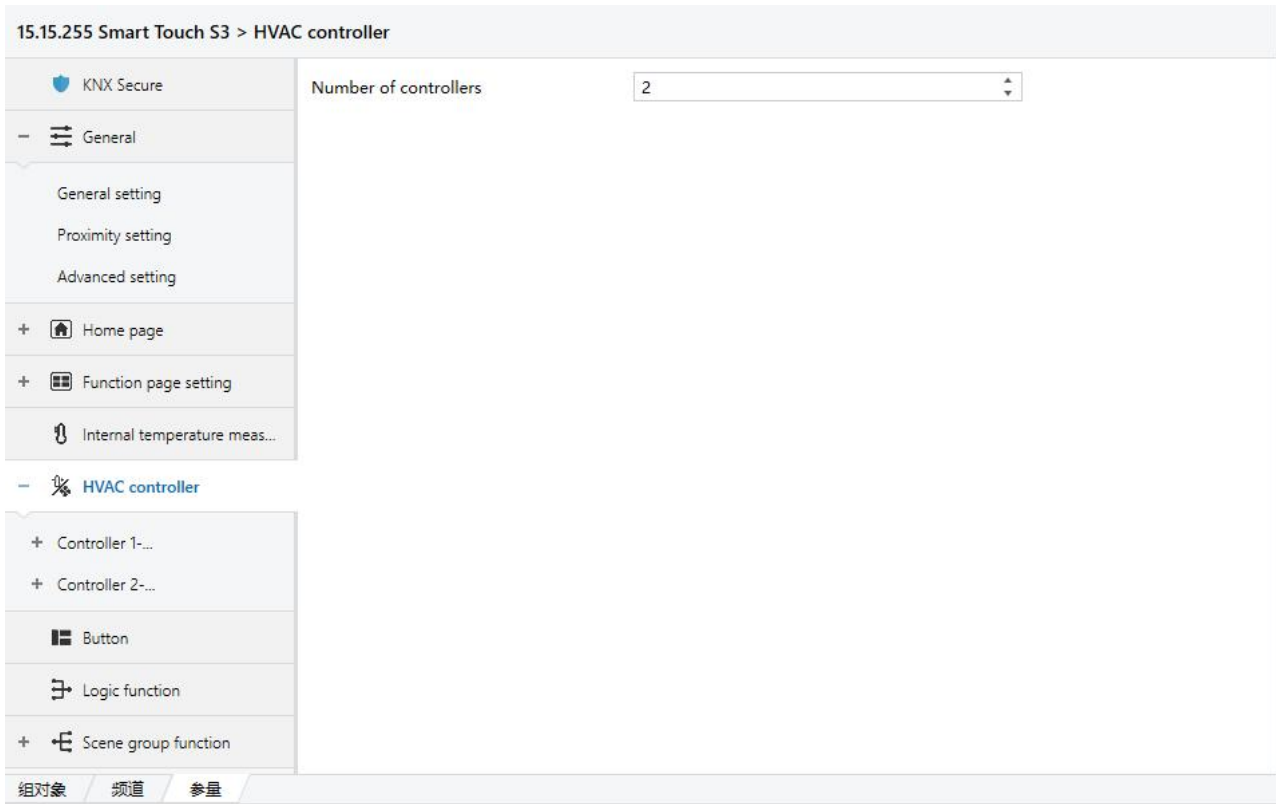
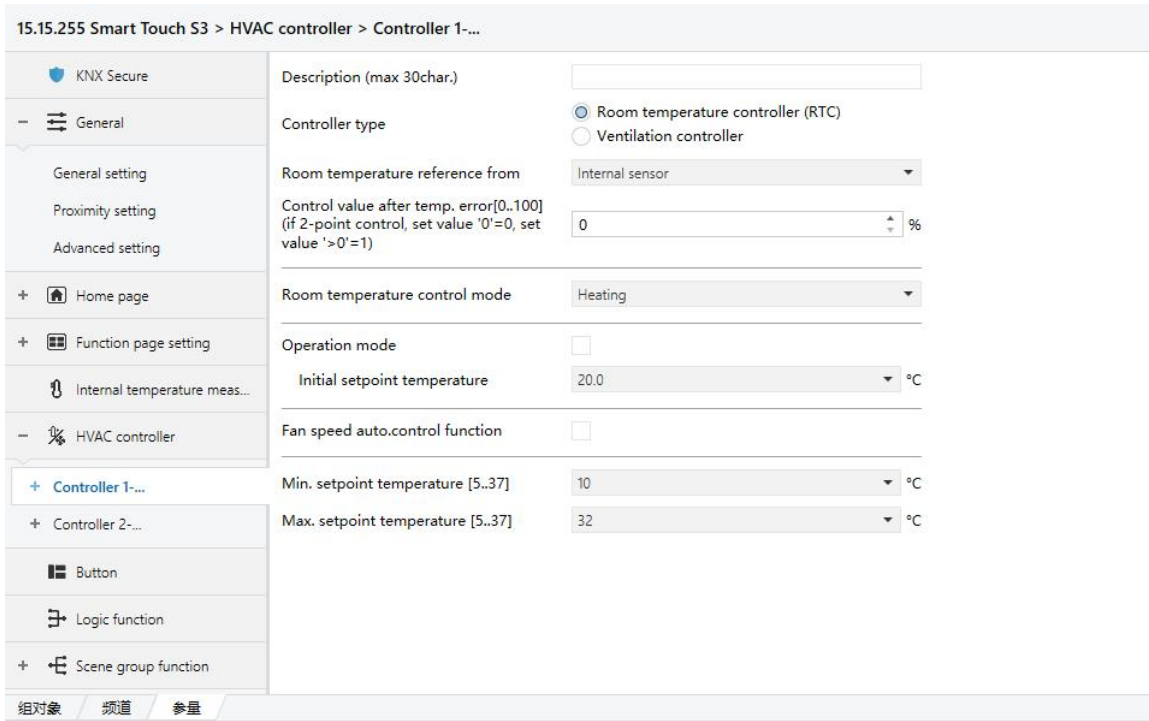


Fig.5.6“HVAC controller” setting

Parameter“ Number of controllers (max.6)”

This parameter sets the number of controllers.Options:**1-6**

5.6.1 Parameter window“Controller X”(x=1~6)



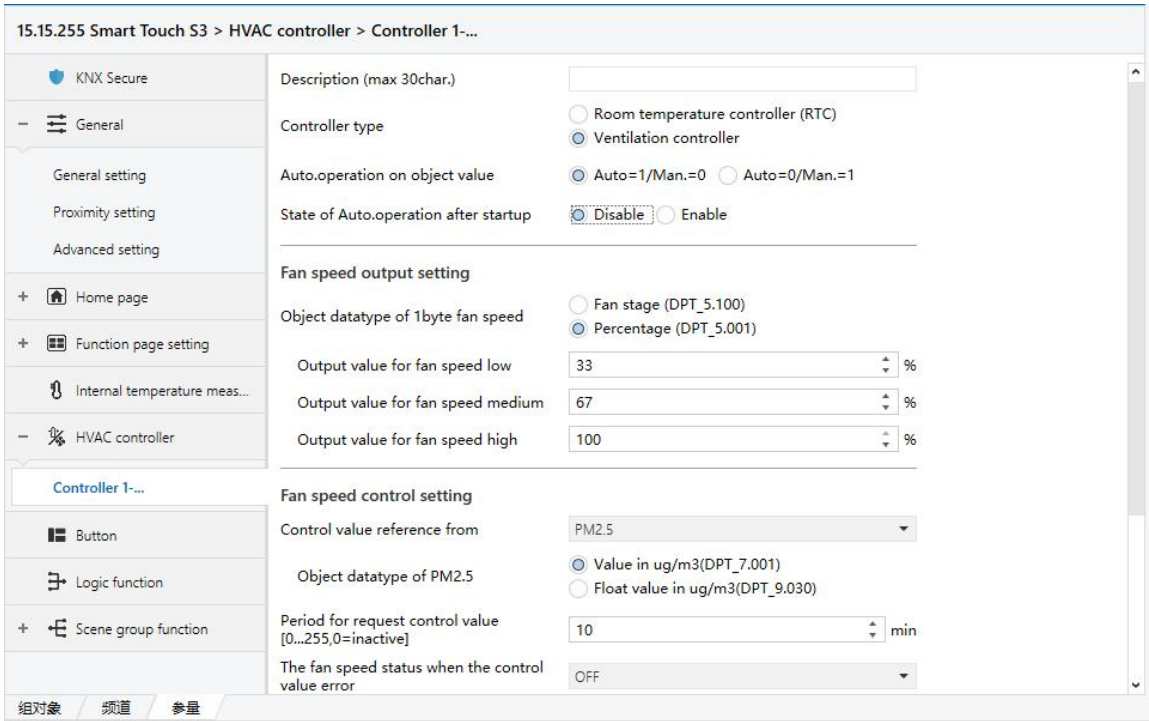


Fig.5.6.1 "Controller x" setting

Parameter"Description (max 30char.) "

This parameter is for setting the name description for controller x,up to input 30 characters.

Parameter"Controller type "

This parameter is for setting the controller type.Options:

Room temperature controller (RTC)

Ventilation controller

Parameter"Room temperature reference from "

This parameter is for setting the resource of the RTC function temperature reference. Options:

Internal sensor

External sensor

Internal and External sensor combination

Parameter is visible when"External sensor" is selected.

——parameter"Period for request external sensor [0...255,0=inactive]"

This parameter sets the time interval for the device to send temperature reading requests to the external temperature sensor.Options：**0...255min**

Parameters as follow are visible when "Internal sensor combine with External sensor" is selected.

——Parameter"Combination ratio"

This parameter is for setting the internal sensor and the external sensor to measure the specific gravity of the temperature. Options:

10% Internal to 90% External

20% Internal to 80% External

...

90% Internal to 10% External

For example, if the option is "40% internal to 60% external", then the internal sensor accounts for 40%, the external sensor accounts for 60%, and the control temperature = (internal sensor's temperature × 40%) + (external sensor's temperature × 60%), the RTC function of the device will control and display the temperature according to the calculated temperature.

When two sensors are combined for detection, when one sensor is in error, the temperature value detected by the other sensor is used.

——Parameter"Period for request external sensor [0...255,0=inactive]min"

This parameter is for setting the time period for read request external temperature sensor. Options: **0..255**

——Parameter"Send temperature when the result change by [0...10]K"

This parameter is for setting when temperature turns to a certain value, whether to enable to send the current temperature value to the bus. Not send when disable. Options:

Disable

0.5K

1.0K

...

10K

——Parameter"Cyclically send temperature [0...255,0=inactive]min"

Setting the time for cyclically sending the temperature detection value to the bus. Not send when value is 0.

Options: **0..255**

Parameter"Control value after temp. error [0..100]%(if 2-point control, set value '0'=0, set value '>0'=1) "

This parameter is for setting the control value when temperature error occur. Options: **0..100**

If 2-Point control, then the parameter value is 0, as well as the control value; if the parameter value is more than 0, then the control value will be 1.

Parameter"Room temperature control mode "

This parameter is for setting room temperature control mode. Options:

Heating

Cooling

Heating and Cooling

Parameters as follow are visible when "Heating and Cooling" is selected

——Parameter"Heating/Cooling switchover"

This parameter is for setting the switchover way of Heating/Cooling. Options:

Via object

Automatic changeover

——Parameter"Heating/Cooling status after download"

This parameter is for setting the heating/cooling control mode of device when power on RTC after download.Options:

Heating

Cooling

——Parameter"Heating/Cooling status after voltage recovery"

This parameter is for setting the heating/cooling control mode of device when power on RTC after voltage recovery. Options:

Heating

Cooling

As before voltage failure

As before voltage failure：When the device is reset after power on, the control mode will recover as before voltage failure. If it is the first time the device is used or a newly enabled device function, the control mode after the device is started is in an uncertain state, and it needs to be manually selected at this time.

——Parameter" Room temperature control system"

This parameter is for setting the type of RTC control system, that is, pipe types of fan coil water inlet/outlet. Options:

2 pipes system

4 pipes system

2 pipes system: Shares an inlet and outlet pipe for heating and cooling, that is, both hot and cold water are controlled by a valve.

4 pipes system: Has its own inlet and outlet pipes for heating and cooling, and two valves are needed to control the entry and exit of hot water and cold water respectively.

Parameter"Operation mode "

This parameter is for setting whether to enable RTC operation mode.

After the room operation mode is enabled, it supports 4 modes: comfort, standby, economy, and protection. It also supports 1-bit and 1-byte data types, as well as presetting a certain operation mode during downloading and power-on.

Parameters as follow are visible when operation mode enabled.

——Parameter" Controller status after download"

This parameter is for setting the operation mode when power on RTC after download. Options:

Standby mode

Comfort mode

Economy mode

——Parameter"Controller status after voltage recovery "

This parameter is for setting the operation mode when power on RTC after voltage recovery. Options:

Comfort mode

Standby mode

Economy mode

Frost/heat protection

As before voltage failure

——Parameter"Extended comfort mode [0..255,0=inactive] min"

This parameter is for setting the extended time of comfort mode. When value >0, activate the extended, and 1 bit object "Extended comfort mode" is visible. Options: **0..255**

When object receives telegram 1, comfort mode activation. If receive telegram 1 again during the delay time, the time is retiming. And comfort mode will return to previous operation mode once finish the timing. Exit the comfort mode when a new operation mode in delay time.

Switch operation will quit the timing, and heating/cooling switchover will not.

——Parameter"1 bit object function for operation mode"

This parameter is for setting whether to enable 1 bit objects of operation mode are visible. Corresponding mode activation when objects send telegram 1; Perform standby mode when object values of comfort, economy, protection received from the bus are 0.

——Parameter"1 bit object for standby mode"

This parameter is visible when previous parameter enabled. Set whether to enable 1 bit object of standby mode is visible.

Parameters as follow are visible when operation mode disabled.

——Parameter" Initial setpoint temperature"

This parameter is for setting the initial value of setpoint temperature. Options:

10.0

10.5

…

35.0

——Parameter"Min./Max. setpoint temperature [5..37] "

This parameter is for setting limit the adjustable range of the setpoint temperature, the minimum value should be less than the maximum value. If the setpoint temperature beyond the limited range, the will output the limited temperature. Options:

5° C

6° C

37° C

Parameters as follow are visible when "Heating/Cooling switchover" and "Automatic changeover" is selected.

——Parameter" Upper /Lower dead zone"

This parameter is for setting the dead zone range of auto switchover heating/cooling. Options:

0.5K

1.0K

...

10.0K

Under heating control, when the actual temperature(T) > or = the setpoint temperature + the upper dead zone, then mode heating switch to cooling;

Under cooling control, when the actual temperature(T) < or = the setpoint temperature + the upper dead zone, then mode cooling switch to heating.

Parameter"Fan speed auto.control function "

This parameter is for setting whether to enable fan auto control interface is visible.

Parameter"Window contact input function "

This parameter is visible when RTC operation mode enabled. Set whether to link to window contact status.

Parameters as follow are visible when"Window contact input function" enabled.

——Parameter"Delay for window contact [0..65535]s"

This parameter is visible when RTC operation mode and window contact input function are enabled. Set the delay time to window contact detection. That is, when the window is open within the set value, the window is not open. If the time is out of the set value, the

window is open. Options: **0..65535**

——Parameter"Controller mode for open window"

This parameter is visible when RTC operation mode and window contact input function are enabled. If window status is open, perform corresponding operation according to configuration. (For the operation mode, the Switch and Setpoint temperature, as well as Heating/Cooling mode are recorded in the background if a control telegram is received, and performed after the window is closed. If no logging is received, return to the mode before the window was opened.) Options:

Economy mode

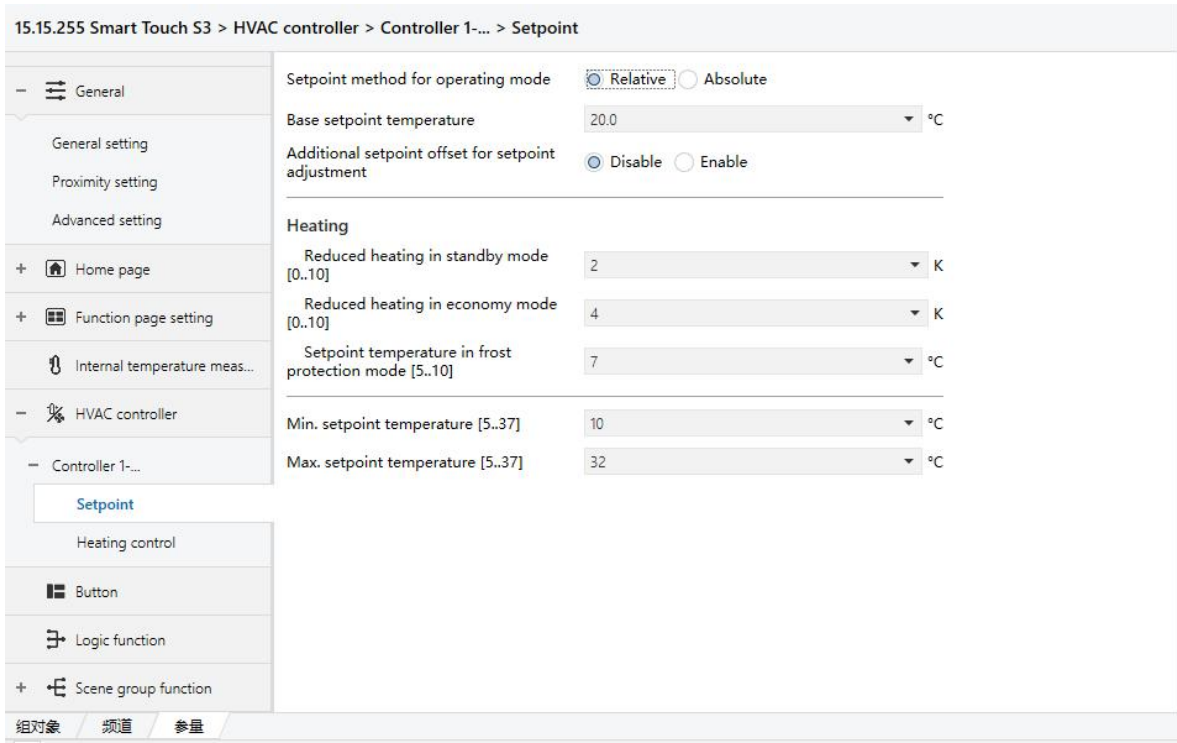
Frost/heat protection

Parameter"Bus presence detector function"

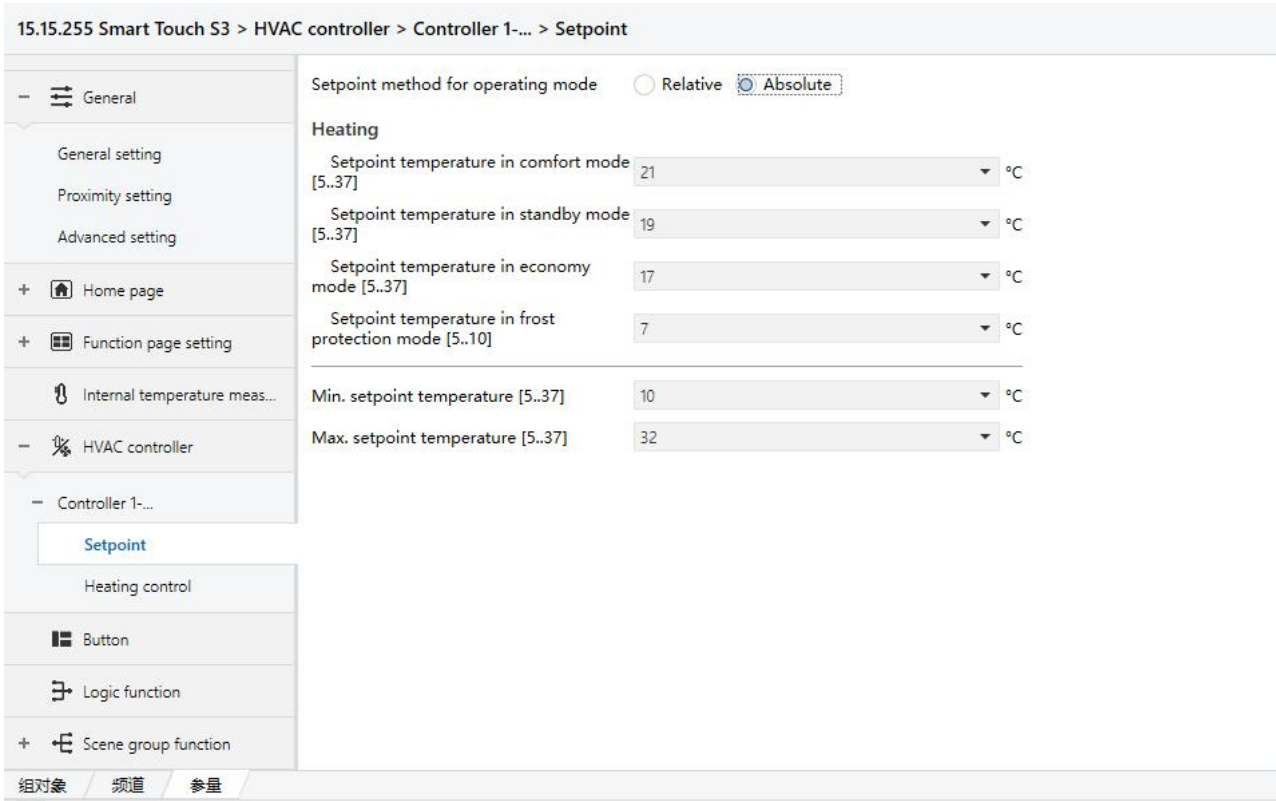
This parameter is visible when RTC operation mode enabled. Set whether to link to bus presence detector status.

If presence is detected, enter the comfort mode and recovery original mode after leaving. If there is a telegram/manual to adjust the mode, it will not recovery the previous mode after leaving. (If receive presence status cyclically, no comfort mode retriggered, and only can be after leaving.)

5.6.1.1 Parameter window“Setpoint”



Relative setting



Absolute setting

Fig.5.6.1.1 "Setpoint" parameter window

此界面的参数在 RTC 操作模式使能可见，根据控制模式显示。

Parameter"Setpoint method for operating mode "

This parameter is for setting the setpoint method for operating mode. Options:

Relative

Absolute

Relative: Relative adjustment, the setting temperature of economy mode and standby mode will refer to the defined temperature setpoint.

Absolute: Absolute adjustment, each mode has its independent temperature setpoint.

Parameters as follow are visible when the setpoint temperature adopts the

relative adjustment method.

Parameter"Base setpoint temperature "

This parameter is for setting the basic setpoint temperature, form witch the initial setpoint temperature of the room comfort mode is obtained. Options:

10.0

10.5

...

35.0

The setpoint value will be modified through object "Base setpoint adjustment", then the new value will be stored after the device power off.

Current basic setpoint temperature = modified basic setpoint temperature +/- accumulated offset(if existence)

When adjusting the setpoint temperature of current operation mode, the setpoint value will be changed with it, but the relative temperature of each mode is unchanged. Relative temperature of standby, economy and comfort mode is set by the parameters as follows.

Parameter"Additional setpoint offset for setpoint adjustment "

This parameter is for setting whether to enable additional setpoint offset function for setpoint adjustment, mainly used to adjust setpoint temperature by 1 bit object. Options:

Disable

Enable

Increase/decrease offset by 1 bit object "Setpoint offset", adjust the setpoint temperature indirectly, and send offset value to the bus by 2 byte object "Float offset value". Also reset the offset value by 1 bit object "Setpoint offset reset", modified the offset value by 2 byte object "Float offset value". Save the offset value when control mode and operation mode changed.

Parameters as follow are visible when"Additional setpoint offset for setpoint adjustment" enabled.

——Parameter"Step of setpoint offset"

This parameter is for setting step value of setpoint offset increased/decreased when receiving telegrams. Telegram 1- increase, telegram 0- decrease. Accumulated offset can be saved when power off. Options:

0.5K

1K

Setpoint temperature of current mode = base temperature + fix offset of mode + accumulated additional offset

Note: Fix offset of mode is the offset of standby and economy modes compared to comfort mode, which is decided by the follow parameters of heating/cooling. Accumulated additional offset is adjusted by 1bit object "Setpoint offset", or directly modified the offset value by 2 byte object "Float offset value".

——Parameter"Min. setpoint offset [-10..0]K"

This parameter is for setting the maximum offset allowed when negative offset (setpoint temperature is decreased). Options: **-10..0**

——Parameter"Max. setpoint offset [0..10]K"

This parameter is for setting the maximum offset allowed when forward offset (setpoint temperature is increased). Options: **0..10**

Parameter"Upper/Lower dead zone "

These two parameters are visible when control mode "Heating and Cooling" is selected, and "Automatic changeover" is selected. Setting the dead zone range of auto switchover heating/cooling. Options:

0.5K

1.0K

...

10K

Under heating control, when the actual temperature(T) > or = the setpoint temperature + the upper dead zone, then mode heating switch to cooling;

Under cooling control, when the actual temperature(T) < or = the setpoint temperature + the upper dead zone, then mode cooling switch to heating.

Parameter"Reduced heating in standby mode [0...10]K"

Parameter"Increased cooling in standby mode [0...10]K"

These two parameters are for setting the setpoint of standby mode. Options:

0K

1K

...

10K

Heating：The setpoint of standby mode is the temperature setpoint minus the reference value.

Cooling：The setpoint of standby mode is the temperature setpoint plus the reference value.

Parameter"Reduced heating in economy mode [0...10]K"

Parameter"Increased cooling in economy mode [0...10]K"

These two parameters are for setting the setpoint of economy mode. Options:

0K

1K

...

10K

Heating: The setpoint of economy mode is the temperature setpoint minus the reference value;

Cooling: The setpoint of economy mode is the temperature setpoint plus the reference value.

Parameter"Setpoint temperature in frost protection mode [5...10]° C"

This parameter is for setting the setpoint of frost protection mode. Options:

5°C

6°C

...

10°C

Under the frost protection mode, when room temperature reduce to the setpoint, the controller will trigger a control telegram so that related heating controller will output heating control to prevent the temperature from being too low.

Parameter"Setpoint temperature in heat protection mode [30...37]° C"

This parameter is for setting the setpoint of heat protection mode. Options:

30°C

31°C

...

37°C

Under the heat protection mode, when room temperature raise to the setpoint, the controller will trigger a control telegram so that related cooling controller will output cooling control to prevent the temperature from being too high.

Parameters as follow are visible when the setpoint temperature adopts the absolute adjustment method.

Parameter" Setpoint temperature in comfort [5--37]° C"

Parameter "Setpoint temperature in standby mode [5...37]° C"

Parameter "Setpoint temperature in economy mode [5...37]° C"

These parameters are for setting the setpoint temperature in comfort, standby and economy mode when heating or cooling. Options:

5°C

6°C

...

37°C

Parameter"Setpoint temperature in frost protection mode [5~10] "

This parameter is for setting the setpoint temperature in frost protection mode when heating. Options:

5°C

6°C

...

10°C

Parameter"Setpoint temperature in heat protection mode [30...37] "

This parameter is for setting the setpoint temperature in heat protection mode when cooling. Options:

30°C

31°C

...

37°C



For absolute adjustment mode, "Heating and Cooling" and "Automatic changeover" are selected, the note is visible. The heating setpoint value must be less than or equal to the cooling of the same operation mode, if not, it can not be configured on ETS. It is also applied to "Via object"

1.When the ambient temperature is higher than the setpoint temperature of current mode, it is changed to cooling mode; When the ambient temperature is lower than the

setpoint temperature of current mode, it is changed to heating mode.

2.In the same operation mode, the setpoint temperature difference between cooling and heating remains constant, whether it is written from the bus or adjusted on the panel. That is, when adjust the setpoint temperature, it need to update cooling and heating setpoint temperature of current operation mode at the same time.

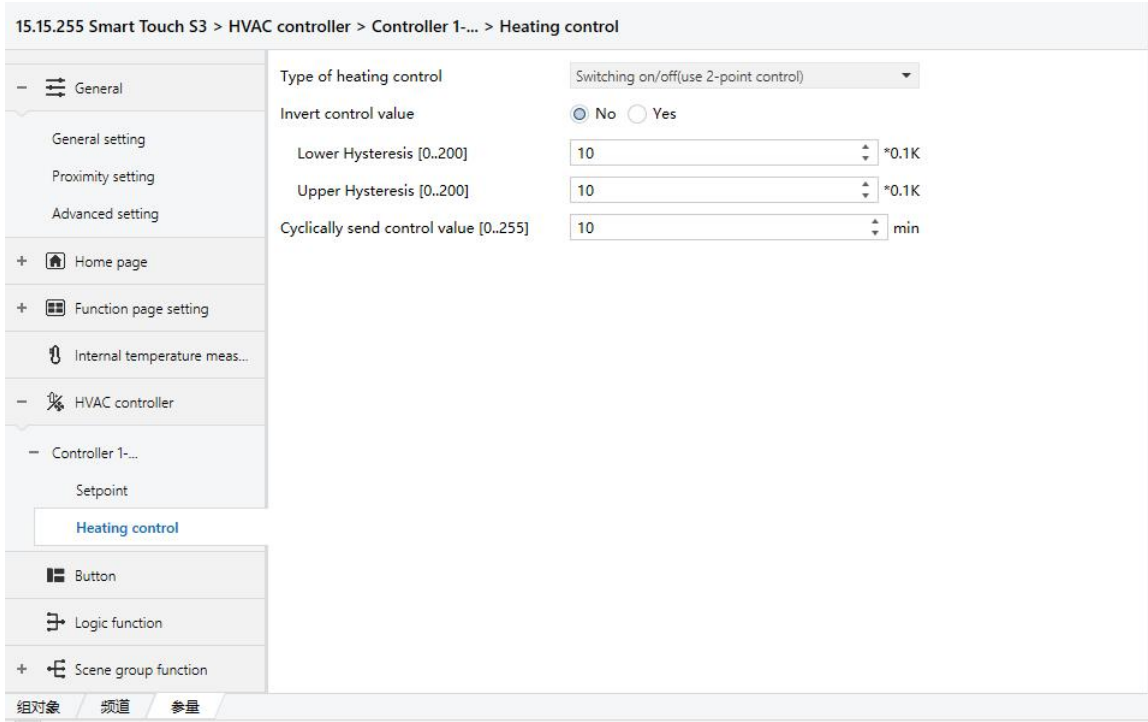
3.For the abnormal configuration where the heating setpoint value is greater than the cooling, it is depend on the setpoint temperature and ambient temperature to adjust heating/cooling mode, that is, change to cooling when ambient temperature is higher than the setpoint temperature in the current operation mode of cooling, while change to heating when ambient temperature is lower than the setpoint temperature in the current operation mode of cooling.

4.When receiving setpoint temperature from bus, it is still necessary to limit the value according to the high and low thresholds, that is heating and cooling temperature neither can not be lower than the min., or can not be higher than the max..

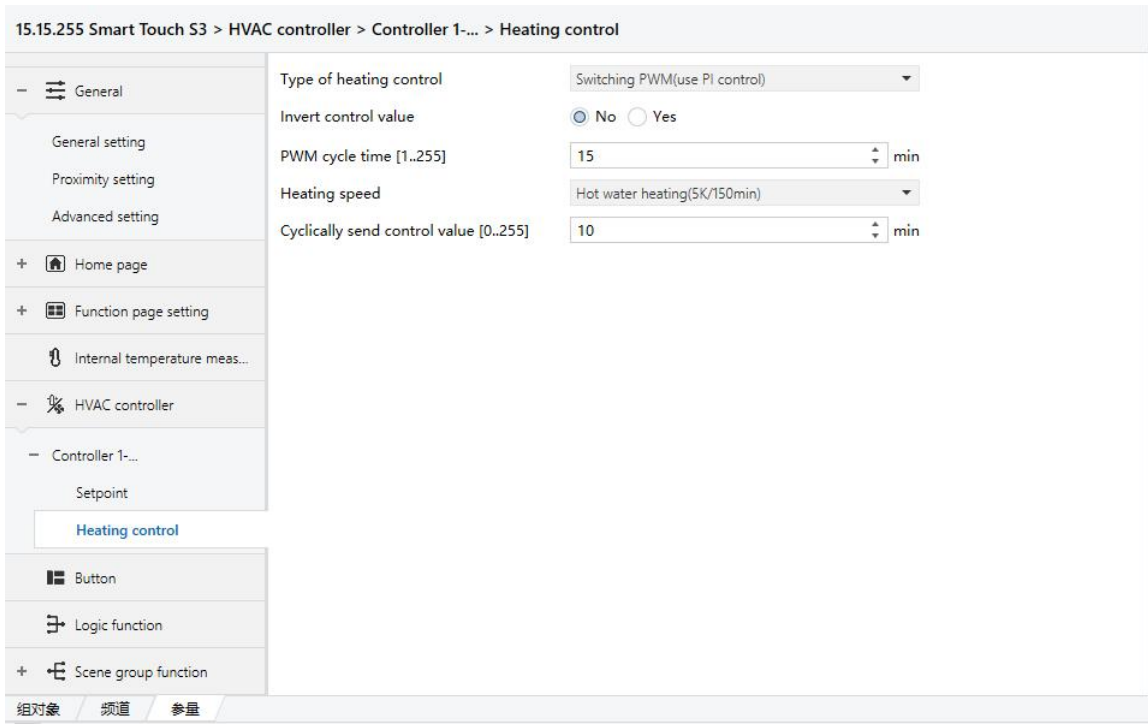
Points 2 and 4 also apply to “Via object”.

Note: for relative/absolute adjustment, in protection mode, the setpoint temperature is only configured via ETS. When the received setpoint value from bus is different from the ETS configuration, the value is not updated and returned to the current setpoint temperature, to update synchronously to other devices on the bus.

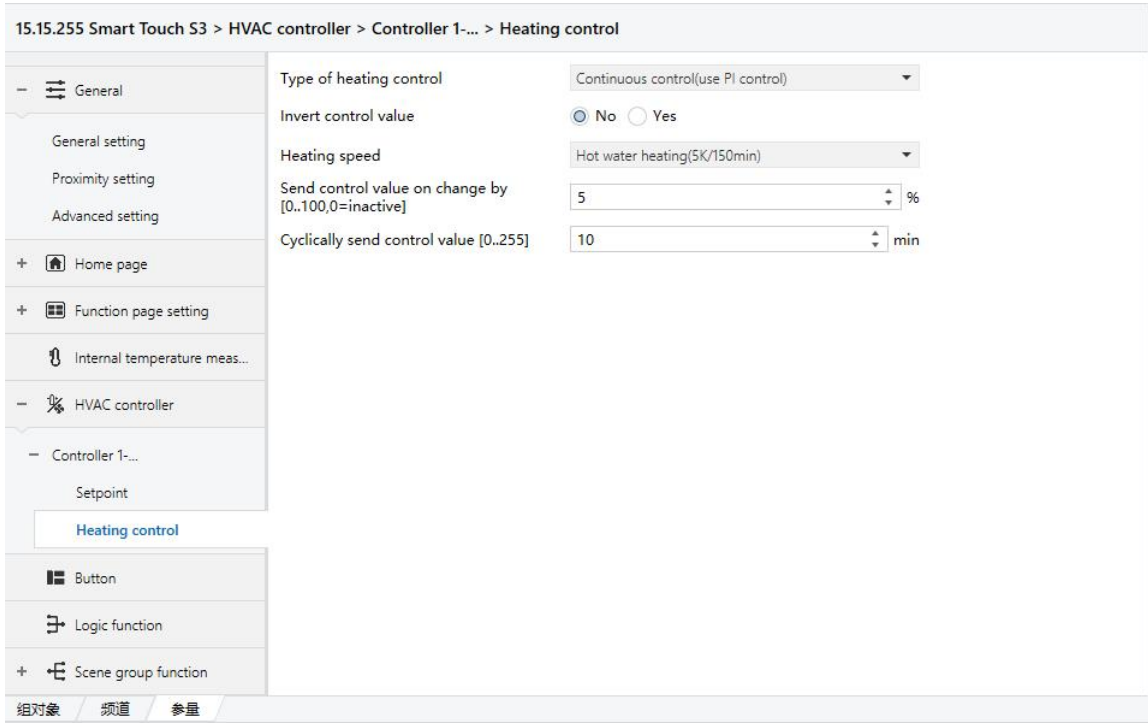
5.6.1.2 Parameter window"Heating/Cooling control"



"Switching on/off(use 2-point control)"setting



"Switching PWM(use PI control)"setting



"Continuous control(use PI control)"setting

Fig.5.6.1.2(1) "Heating/Cooling control" parameter window

Parameters of this window display according to control mode and control system(2 pipe or 4pipe).

Parameter"Type of heating/cooling control"

This parameter is visible when selecting "Heating and Cooling & 2-pipe" option,setting the type of heating/cooling control. Different control types are suitable for controlling different temperature controllers. Options:

Switching on/off(use 2-point control)

Switching PWM(use PI control)

Continuous control(use PI control)

Parameter"Invert control value"

This parameter is for setting whether to invert control value or normal sending control value, so that the control value will be suitable for the valve type. Options:

No

Yes

Yes: Sending the control value to the bus through objects after inverting the control value.

Two parameters as follow are suitable for 2 point control:

Parameter"Lower Hysteresis [0...200]*0.1K"

Parameter"Upper Hysteresis [0...200]*0.1K"

These two parameters are for setting the lower/upper hysteresis temperature in HVAC heating or cooling. Options: **0..200**

Under heating control,

When the actual temperature(T) > the setting temperature + the upper hysteresis temperature, then will stop heating;

When the actual temperature(T) < the setting temperature - the lower hysteresis temperature, then will start heating.

For example, the lower hysteresis temperature is 1K, the upper hysteresis temperature is 2K, the setting temperature is 22℃, if T is higher than 24℃, then it will stop heating; if T is lower than 24℃,then it will start heating; if T is between 21~24℃, then it will maintain the previous status.

Under the cooling control,

When the actual temperature (T) < the setting temperature -the lower hysteresis temperature, then will stop cooling;

When the actual temperature (T) > the setting temperature +the upper hysteresis temperature, then will start cooling.

For example, the lower hysteresis temperature is 1K, the upper hysteresis temperature is 2K, the setting temperature is 26℃, if T is lower than 25℃, then it will stop cooling; if T is lower than 28℃, then it will start cooling; if T is between 28~25℃, then it will maintain the previous status.

2-point control mode is a very simple control mode. When adopting this control mode, it is necessary to set the upper hysteresis temperature and the lower hysteresis temperature through parameters. When setting the hysteresis temperature, the following effects need to be considered

1. When hysteresis interval is small, the temperature range will be small, however, frequent sending of control value will bring large load to the bus;

2. When hysteresis interval is large, the switch switching frequency will be low, but it is easy to cause uncomfortable temperature change.

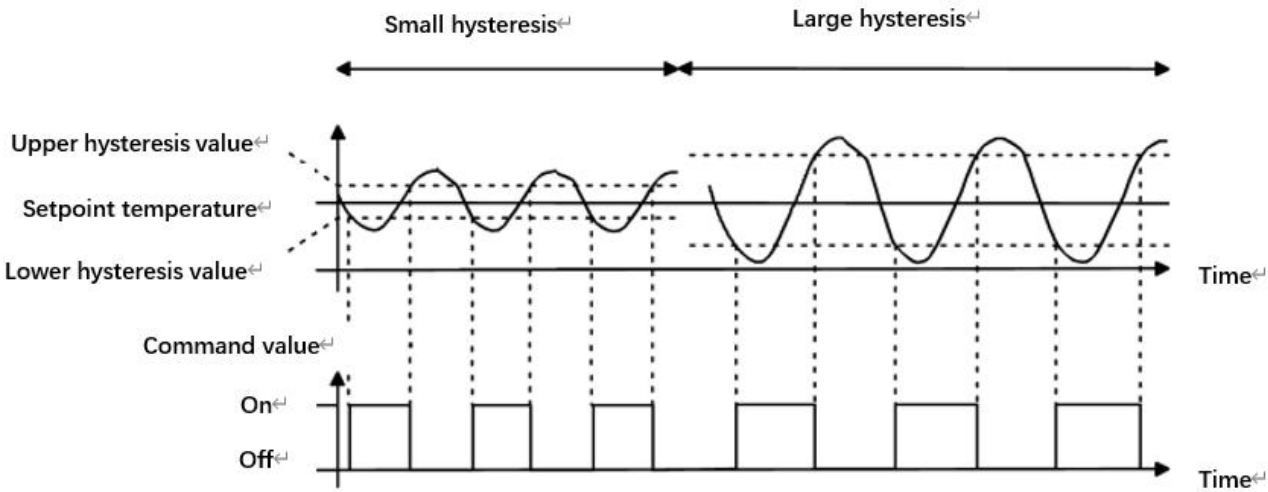


Fig.5.4.1.2(2) Effects of hysteresis on control value switch action(heating) under2-point control mode

Parameters as follow are suitable for PI control:

Parameter"Heating speed"

Parameter "Cooling speed"

These two parameters are for setting the responding speed of heating or cooling controller. Different responding speeds are suitable for different environments.

Options:

Hot water heating (5K/150min)

Underfloor heating (5K/240 min)

Electrical heating (4K/100min)

Split unit (4K/90min)

Fan coil unit (4K/90min)

User defined

Options

Cooling ceiling (5K/240min)

Split unit (4K/90min)

Fan coil unit(4K/90min)

User defined

——Parameter"Proportional range [10..100]*0.1K"

——Parameter"Reset time [0..255]min"

These two parameters are visible when "User defined" is selected. Set the PI value of PI controller.

Options: **10..100 (P value)**

Options: **0..255 (I value)**

Parameters as follow are suitable for PWN control:

Parameter"PWM cycle time [1…255]min"

This parameter is only visible when the control type is "Switching PWM(use PI control)". Set the period of the control object cycle to send the switch value, the object sends the switch value according to the duty cycle of the control value. For example, if the set period is 10 min and the control value is 80%, then the object will send an open telegram for 8 min. If the control value is changed, the time duty ratio of the on/ off telegram of the object will also change, but the period is still the time of parameter setting.

Options: **1..255**

The PI values of "Switching PWM (use PI control)" and "Continuous control (use PI control)" are the same, only different in control objects, the control object of "Continuous control" output PI value(1byte) directly, while the control value of "Switching PWM" output a "on/off" telegram according to the duty cycle of the control value.

Parameter"Send control value on change by [0...100,0=inactive]"

This parameter is visible when control type is "Continuous control (use PI control)", for setting the changing value of the control value to be sent to the bus. Options: **0..100, 0= inactive**

Parameter "Cyclically send control value [0...255]min"

This parameter is for setting the time period for cyclically sending control values to the bus.Options：0..255

In PI control mode, the predefined control parameters of each PI controller in heating or cooling system are recommended as follows:

(1) Heating

Heating type	P value	I value(integration time)	Recommended PI control type	Recommended PWM period
Hot water Heating	5K	150min	Continuous/PWM	15min
Underfloor heating	5K	240min	PWM	15-20min
Electrical heating	4K	100min	PWM	10-15min
Split unit	4K	90min	PWM	10-15min
Fan coil	4K	90min	Continuous	--

unit				

(2) Cooling

Cooling type	**P value**	**I value(integration time)**	**Recommended PI control type**	**Recommended PWM period**
Cooling ceiling	5K	240min	PWM	15-20mIn
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	--

(3) User defined

When the parameter"Heating/Cooling speed" is set to "User defined", the parameter value of P (scale factor) and I (integration time) can be set through the parameter. When adjusting the parameters, refer to the fixed PI value mentioned in the above table. Even if the control parameters are adjusted slightly, the control behavior will be significantly different.

In addition, the integration time should be set properly. If the integration time is too long, the adjustment will be slow, and the oscillation will not be obvious; if the integration time is too small, the adjustment will be fast, but the oscillation will occur. 0 means the integral term is not used.

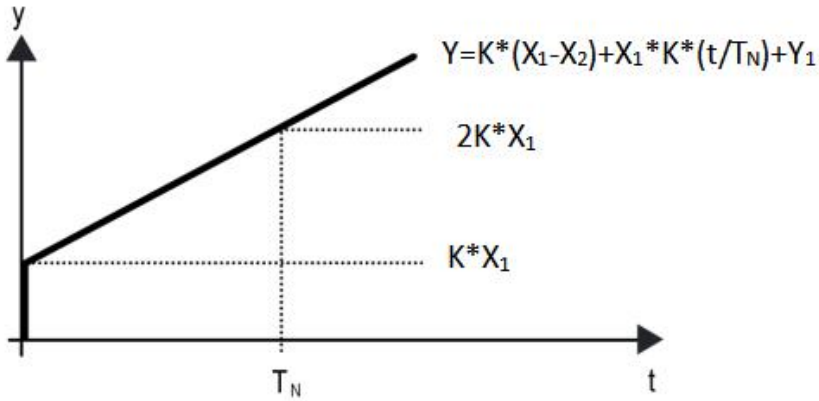


Fig.5.4.1.2(3)

PIcontrol value of PI control mode

Y: control value

Y1: last control value

X1: temperature deviation = set temperature - actual temperature

X2: last temperature deviation = set temperature - actual temperature

T_N: integration time

K: scale factor (the scale factor is not zero)

PI control algorithm: $Y = K * (X1-X2) + X1 * K * t / T_N + Y1$

When the integration time is set to zero, the PI control algorithm is: Y = K (X1-X2) + Y2

Setting and influence of user-defined parameters:

Parameter setting	Effect
K: If the scale range is too small	Quick adjustment, and overshoot will occur
K: If the scale range is too small	Slow adjustment, but no overshoot
T_N: If the integration time is too short	Quick adjustment, but there will be oscillation
T_N: If the integration time is	Slow adjustment, no obvious

too long	oscillation

5.6.1.3 Parameter window"Fan auto.control"

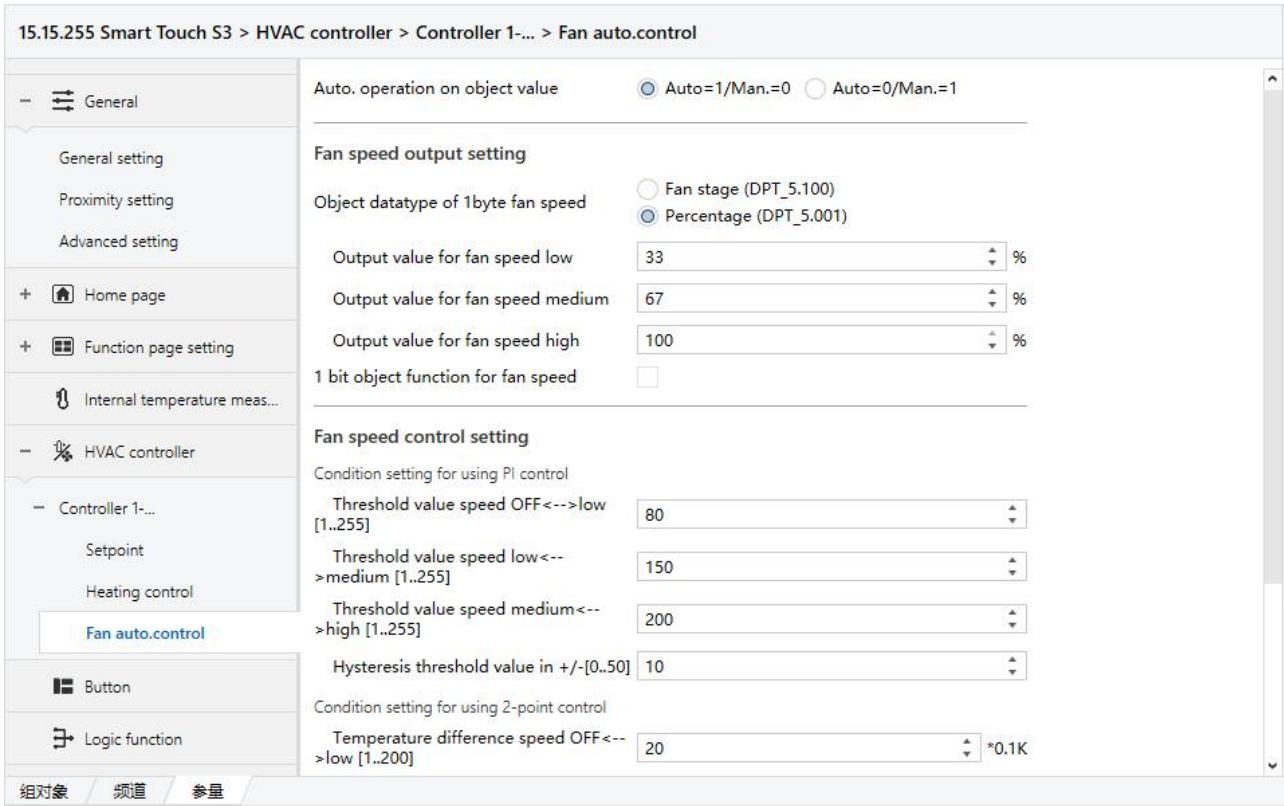


Fig.5.6.1.3 "Fan auto.control" parameter window

Parameters of this window are visible when fan auto control enabled.

Parameter"Auto. operation on object value"

This parameter is for setting the telegram value to activate automatic operation.

Options:

Auto=1/Man.=0

Auto=0/Man.=1

Auto=1/Man.=0: When the object "Fan automatic operation" receives the telegram

value "1", activate the automatic operation, when receive "0", exit the automatic operation.

Auto=0/Man.=1: When the object "Fan automatic operation" receives the telegram value "0", activate the automatic operation, when receive "1", exit the automatic operation.

After power-on, automatic operation is not activated by default.

Fan speed output setting

Parameter"Object datatype of 1byte fan speed"

This parameter is for setting the object datatype of 1 byte fan speed. Options:

Percentage (DPT_5.001)

Fan stage (DPT_5.100)

——Parameter"Output value for fan speed low/medium/high"

These three parameters are for setting the value sent for each fan speed switchover. Fan speed off when value is 0.

Options according to fan object datatype:**1..255 /1..100%**

Parameter"1 bit object function for fan speed"

This parameter is for setting whether to enable 1 bit object function for fan speed. 1 bit control objects of each fan speed are visible when enabled.

——Parameter"1 bit object for fan speed off "

This parameter is visible when previous parameter is enabled. Set whether to enable 1 bit object of fan speed off .

Fan speed control setting

Condition setting for using PI control

Under PI control, control value is PI operated within program, controller will power on/off fan or switch fan speed according to the threshold range of the control values.

Parameter"Threshold value speed OFF<-->low [1..255]"

Define threshold value for off-fan and low-level fan speeds, options: **1..255**

If the control value is greater than or equal to this setting threshold value, low-level fan speed will start running; if the control value is less than this setting threshold value, the fan will be turned off.

Parameter"Threshold value speed low<-->medium [1..255]"

Define the threshold value for switching the fan speed to medium fan speed, if the control value is greater than or equal to this setting threshold, the medium fan speed will start running. Options: **1..255**

Parameter"Threshold value speed medium<-->high [1..255]"

Define the threshold for switching the fan speed to high fan speed, if the control value is greater than or equal to this setting threshold, the high fan speed will start running. Options: **1..255**

Tip: The controller evaluates the threshold in ascending order.

First check →OFF <->low fan speed threshold →low fan speed <->medium fan speed →medium fan speed <->high fan speed.

The correctness of functional execution is guaranteed only in this case:

The threshold of OFF <-> low fan speed is lower than that of low fan speed <-> medium fan speed, and the threshold of low fan speed <-> medium fan speed is lower than that of medium fan speed <-> high fan speed.

Parameter"Hysteresis threshold value in +/-[0..50]"

This parameter is for setting the hysteresis value of the threshold value, which can avoid the unnecessary action of the fan when the control value fluctuates near the threshold. Options: **0..50**

If value is 0, no hysteresis. Fan switch to speed once control value greater than threshold value;

Suppose that hysteresis value is 10 and the threshold is 50, then the upper limit threshold 60 (Threshold value+Hysteresis value) and the lower limit threshold 40 (Threshold value-Hysteresis value). When the control value is between 40 ~60, fan action will not be caused, and the previous status will still be maintained. Only less than 40 or greater than or equal to 60 will change the running status of the fan.

Condition setting for using 2-point control

Under 2-point control, controller will decide the fan power on/off or fan speed according to the temperature difference between the actual temperature and setpoint temperature.

Cooling: Temperature difference = actual temperature - setpoint temperature;

Heating: Temperature difference = setpoint temperature - actual temperature.

Parameter"Temperature difference speed OFF<-->low[1..200]*0.1K"

This parameter is for setting the temperature difference between off-fan and low-level fan speeds.

Options: **1..200**

If the temperature difference is greater than or equal to this setting temperature difference, low-level fan speed will start running; if less than this setting temperature difference, the fan will be turned off.

Parameter"Temperature difference speed low<-->medium [1..200]*0.1K"

Define the temperature difference for switching the fan speed to medium fan speed, if the control value is greater than or equal to this setting temperature difference, the medium fan speed will start running.

Options: **1..200**

Parameter"Temperature difference speed medium<-->high [1..200]*0.1K"

Define the temperature difference for switching the fan speed to high fan speed, if the control value is greater than or equal to this setting temperature difference, the high fan speed will start running. Options: **1..200**

Parameter"Hysteresis temperature difference in [0..50] *0.1K"

This parameter is for setting the hysteresis value of the temperature difference, which can avoid the unnecessary action of the fan when the control value fluctuates near the temperature difference. Options: **0..50**

If value is 0, no hysteresis. Fan switch to speed once control value greater than temperature difference;

Suppose that hysteresis value is 0.5℃ and the temperature difference is 1℃, then the upper limit temperature difference 1.5℃ (Temperature difference+Hysteresis value) and the lower limit temperature difference 0.5℃ (Temperature difference-Hysteresis value). When the control value is between 0.5℃~1.5℃, fan action will not be caused, and the previous status will still be maintained. Only less than 0.5℃ or greater than or equal to 1.5℃ will change the running status of the fan.

Parameter"Minimum time in fan speed [0..65535]"

Defines the residence time of the fan from the current fan speed to a higher fan speed or lower fan speed, that is, the minimum time for a fan speed operation.

If you need to switch to another fan speed, you need to wait for this period of time before switching.

If the current fan speed has been running long enough, the fan speed can be changed quickly.

Options: **0..65535**

0: there is no minimum running time, but the delay switching time of fan speed still needs to be considered.

Note: The residence time for this parameter setting is only enabled in Auto mode.

5.6.2 Parameter window"Controller x - Ventilation"(x=1~6)

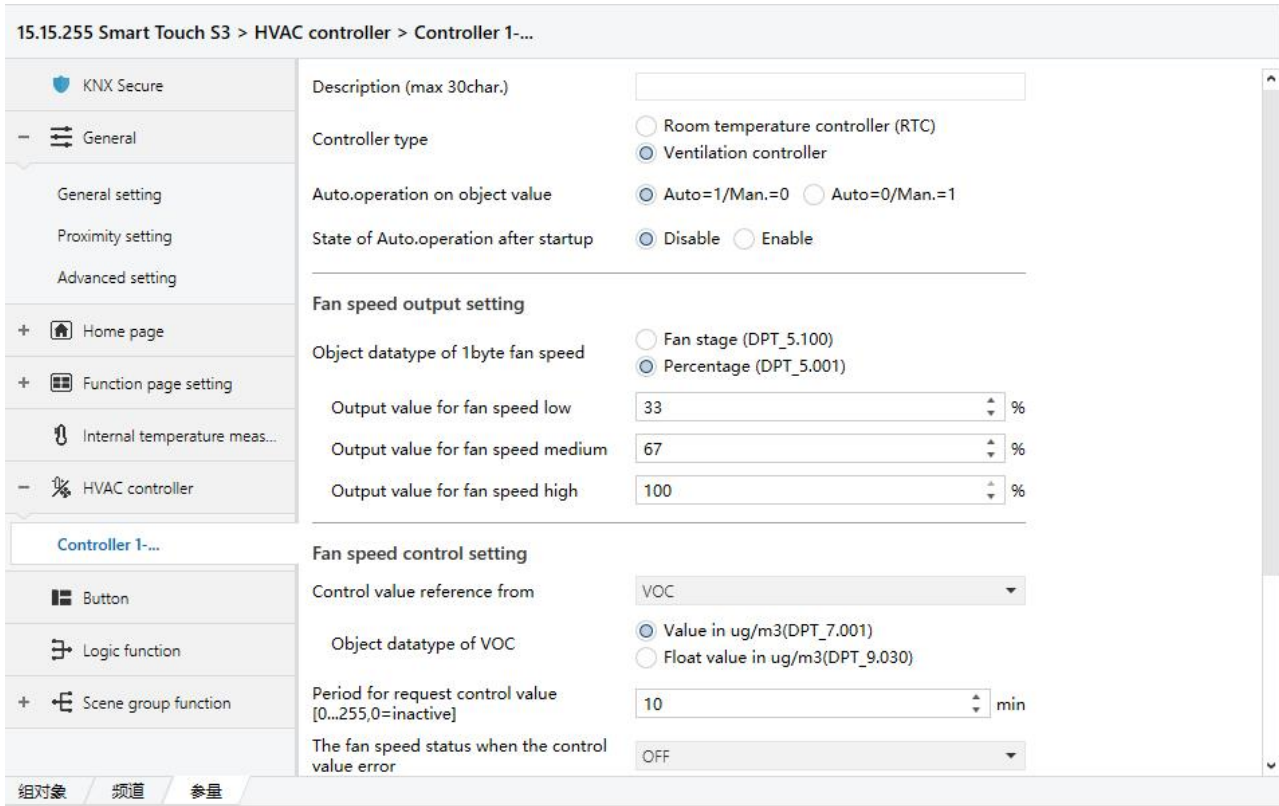


Fig.5.6.2 "Controller x - Ventilation" parameter window

Parameter"Auto. operation on object value"

This parameter is for setting the telegram value to activate automatic operation.

Options:

Auto=1/Man.=0

Auto=0/Man.=1

Auto=1/Man.=0: When the object "Fan automatic operation" receives the telegram value "1", activate the automatic operation, when receive "0", exit the automatic operation.

Auto=0/Man.=1: When the object "Fan automatic operation" receives the telegram

value "0", activate the automatic operation, when receive "1", exit the automatic operation.

After power-on, automatic operation is not activated by default.

Parameter"State of Auto.operation after startup"

This parameter is for setting whether to enable state of Auto.operation after startup the device. Options:

Disable

Enable

Fan speed output setting

Parameter"Object datatype of 1byte fan speed"

This parameter is for setting the object datatype of 1 byte fan speed. Options:

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

——Parameter"Output value for fan speed low/medium/high"

These three parameters are for setting the value sent for each fan speed switchover. Fan speed off when value is 0. Options according to fan object datatype: **1..255 /1..100**

Fan speed control setting

Parameter"Control value reference from"

This parameter is for setting the reference of control value under automatic operation. Options:

PM2.5

CO2

VOC

Parameter" Object datatype of PM2.5/VOC"

These parameters are for setting the datatype of PM2.5/VOC. Datatype determines object type, select it according to the docking PM2.5 or VOC sensor data type. Options:

Value in ug/m3(DPT 7.001)

Float value in ug/m3(DPT 9.030)

DPT_7.001: Suitable for integrated value.

DPT_9.030: Suitable for float value.

Parameter"Object datatype of CO2"

This parameter is for setting the datatype of CO2. Datatype determines object type, select it according to the docking CO2 sensor data type. Options:

Value in ppm(DPT 7.001)

Float value in ppm(DPT 9.008)

DPT_7.001: Suitable for integrated value.

DPT_9.008: Suitable for float value.

Parameter"Period for request control value [0...255,0=inactive]min"

This parameter is for setting the time period for device to send a control value read request to external sensor after bus recovery or finish programming . Options: **0..255**

Parameter"The fan speed status when the control value error"

This parameter is for setting the default fan speed of ventilation system when control value is error. Options:

Off

Low

Medium

High

Parameter"Threshold value OFF<-->speed low [1..999]/ [1...4000]"

Define threshold value for off-fan and low-level fan speeds, options: **1..999/1..4000**

If the control value is greater than or equal to this setting threshold value, low-level fan speed will start running; if the control value is less than this setting threshold value, the fan will be turned off.

Parameter"Threshold value speed low<-->medium [1..999]/ [1...4000]"

Define the threshold value for switching the fan speed to medium fan speed, if the control value is greater than or equal to this setting threshold, the medium fan speed will start running. Options: **1..999/1..4000**

Parameter"Threshold value speed medium<->high [1..999]/ [1...4000]"

Define the threshold for switching the fan speed to high fan speed, if the control value is greater than or equal to this setting threshold, the high fan speed will start running. Options: **1..999/1..4000**

Tip: The controller evaluates the threshold in ascending order.

First check →OFF <->low fan speed threshold →low fan speed <->medium fan speed →medium fan speed <->high fan speed.

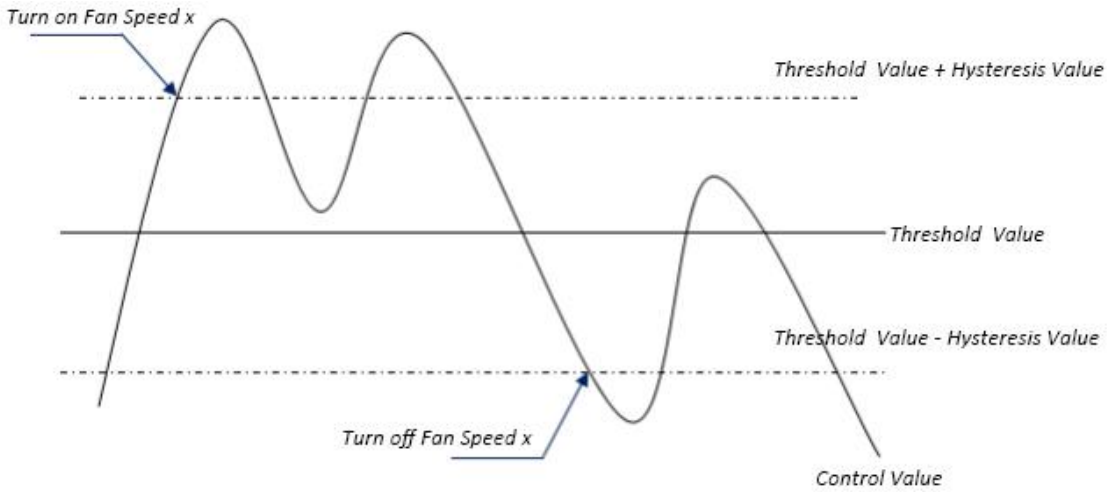
The correctness of functional execution is guaranteed only in this case:

The threshold of OFF <-> low fan speed is lower than that of low fan speed <-> medium fan speed, and the threshold of low fan speed <-> medium fan speed is lower than that of medium fan speed <-> high fan speed.

Parameter"Hysteresis value is threshold in +/- [10...30]/[100..400]"

This parameter is for setting the hysteresis value of the threshold value, which can avoid the unnecessary action of the fan when the control value fluctuates near the threshold. Options: **10..30/100..400**

For example, the control type is CO2, the Hysteresis value is 100 and the threshold is 450, then the upper limit threshold 550 (Threshold value+Hysteresis value) and the lower limit threshold 350 (Threshold value-Hysteresis value). When the control value is between 350 ~550, fan action will not be caused, and the previous status will still be maintained. Only less than 350 or greater than or equal to 550 will change the running status of the fan. As shown in the following figure:



Note:

When hysteresis is enabled, if the threshold overlap occurs, fan action is specified as follows:

1) Hysteresis determines the control point where Fan speed conversion occurs;

2) If Fan speed conversion occurs, new fan speed is determined by control value and threshold value, irrespective of hysteresis.

For example (1):

Take PM2.5 as an example

OFF <-> Low fan speed threshold value is 35

Low fan speed <->Medium fan speed threshold value is 55

Medium fan speed <-> High fan speed threshold value is 75

Hysteresis value is 25

The fan speed of the fan turbine increases from OFF:

Fan OFF status will change at a control value of 60 (≥25+35), and new fan speed will be the mid-fan speed (because 60 is between 55 and 75, irrespective of hysteresis at this time), so the low fan speed is ignored;

The behavior of fan speed when descending from a high fan speed:

The high fan speed will change at a control value of 50 (<75-25), and new fan

speed will be low fan speed (because 50 is between 35 and 55, irrespective of hysteresis), so the fan speed is ignored.

For example(2):

Take PM2.5 as an example

OFF <-> Low fan speed threshold value is 20

Low fan speed <->Medium fan speed threshold value is 40

Medium fan speed <-> High fan speed threshold value is 70

Hysteresis value is 10

When fan speed is increasing from OFF:

The OFF status will be turned when the control value is 30（≥20+10）

When the control value 41 is received, the new speed will be at medium(because the hysteresis is ignored when the value 41 is between 40 and 70), therefore the low speed is ignored.

When the control value 39 is received, the new speed will be at low (because the hysteresis is ignored when the value 39 is between 20 and 40)

When Fan Speed decreasing from high:

The high speed will be turned when the control value is 60（<70-10）

When the control value 39 is received, the new speed will be at low(because the hysteresis is ignored when the value 39 is between 20 and 40),therefore the medium speed is ignored.

3) **When the control value is 0,the fan will be off at any circumstances.**

Parameter"Minimum time in fan speed [0..65535]s"

Defines the residence time of the fan from the current fan speed to a higher fan speed or lower fan speed, that is, the minimum time for a fan speed operation. Options: **0..65535**

If you need to switch to another fan speed, you need to wait for this period of time before switching.

If the current fan speed has been running long enough, the fan speed can be changed quickly.

0: there is no minimum running time, but the delay switching time of fan speed still needs to be considered.

Note: The residence time for this parameter setting is only enabled in Auto mode.

5.7 Parameter window"Button"

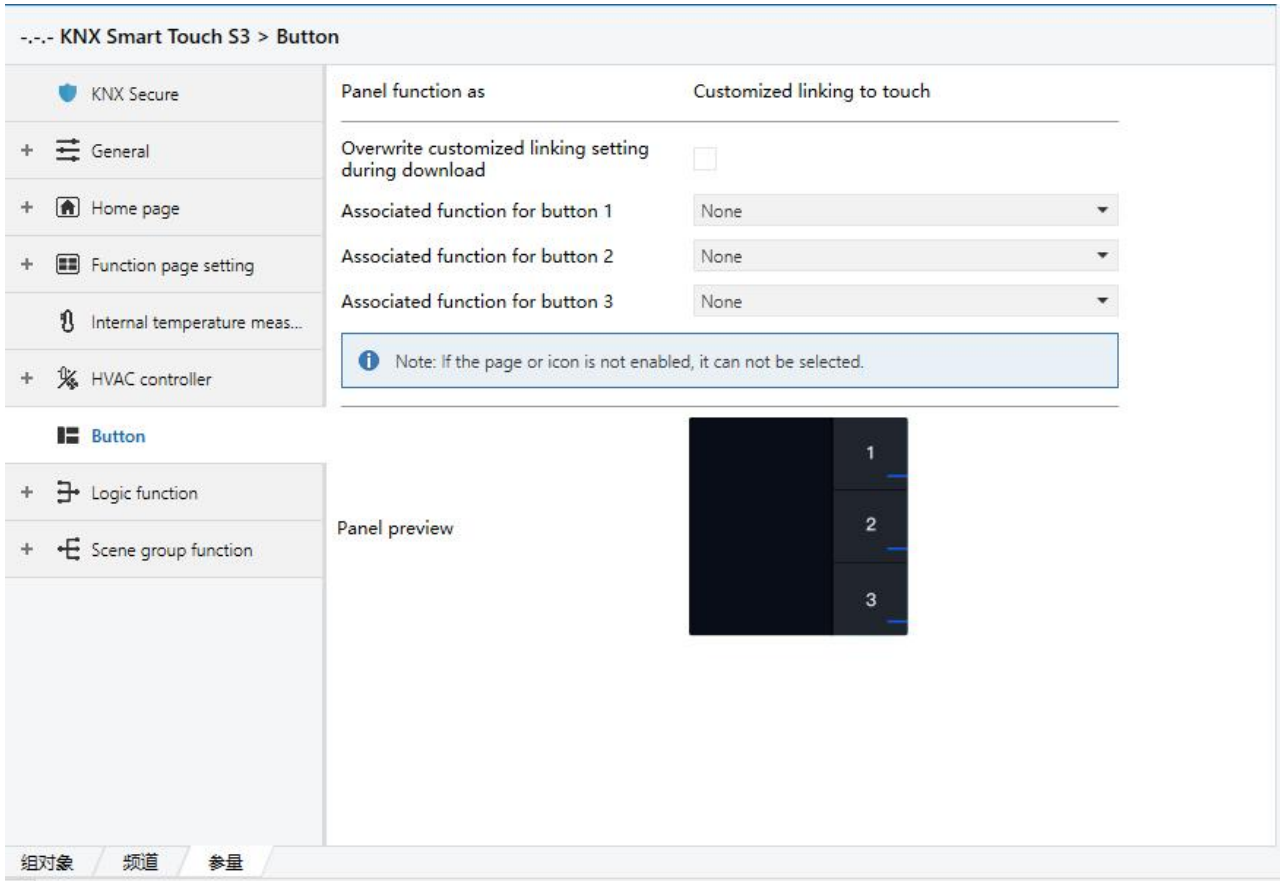


Fig.5.7 "Button" parameter window

Parameter "Panel function as"

Customized linking to touch：The mechanical keys serve as shortcut keys for the touchscreen control functions.

Parameter "Overwrite customized linking setting during download"

This parameter is for setting whether ETS will overwrite the shortcut key link after downloading. If yes, the key functions will be determined by the database parameters. If no, the key functions that are linked will be retained. If the key functions that are not linked will be determined by the database parameters.

Parameter "Associated function for button 1/2/3"

Used to set the function pages associated with each key.According to the number of selectable function pages.Options：

None

Link to icon in page 1

Link to icon in page 2

...

Link to icon in page 6

Note: When the panel is used as a shortcut key, ETS can preset a function link for each key, which can be linked to the icon on the page.

——Parameter “ Icon number”

This parameter is used to set the icon number associated with the key. The icon number is displayed up to 6 based on the number of Icons in the function page.Options：

1

2

...

6

5.8 Parameter window"Logic"

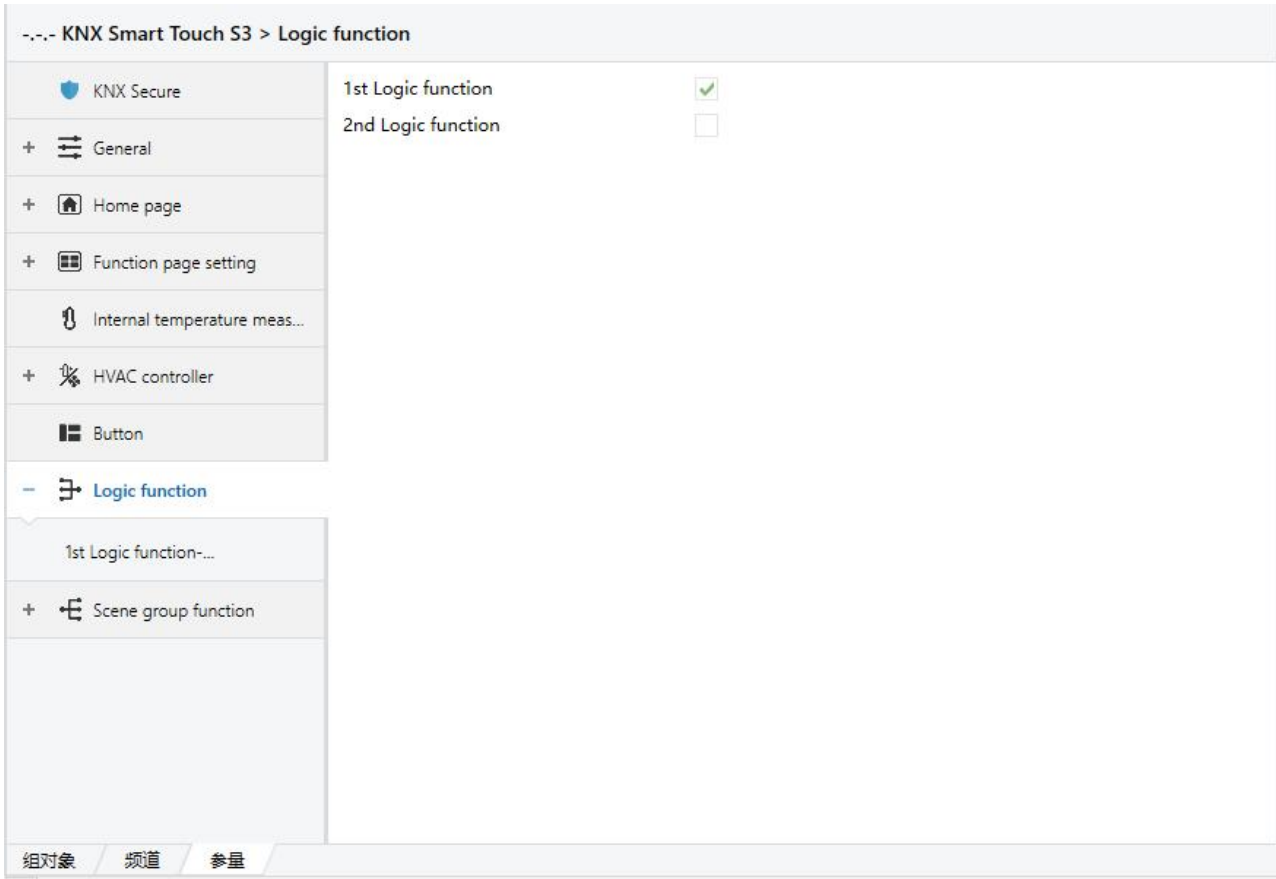


Fig.5.8 "Logic function setting" parameter window

Parameter"1st/2nd/3rd... Logic function "

This parameter is for setting the setting interface of logic function, display corresponding logic function page when select. Up to enable 8 logic functions.

Parameter"Description for logic function "

This parameter is for setting the name description for logic function, up to input 30 characters.

Parameter"Function of channel "

This parameter is for setting function of the channel. Options:

AND

OR

XOR

Gate forwarding

Threshold comparator

Format convert

Gate function

Delay function

Staircase lighting

AND/OR/XOR: as the parameter is similar to the communication object (only the logic algorithm is different), the following parameters taking one options for example.

5.8.1 Parameter window "AND/OR/XOR"

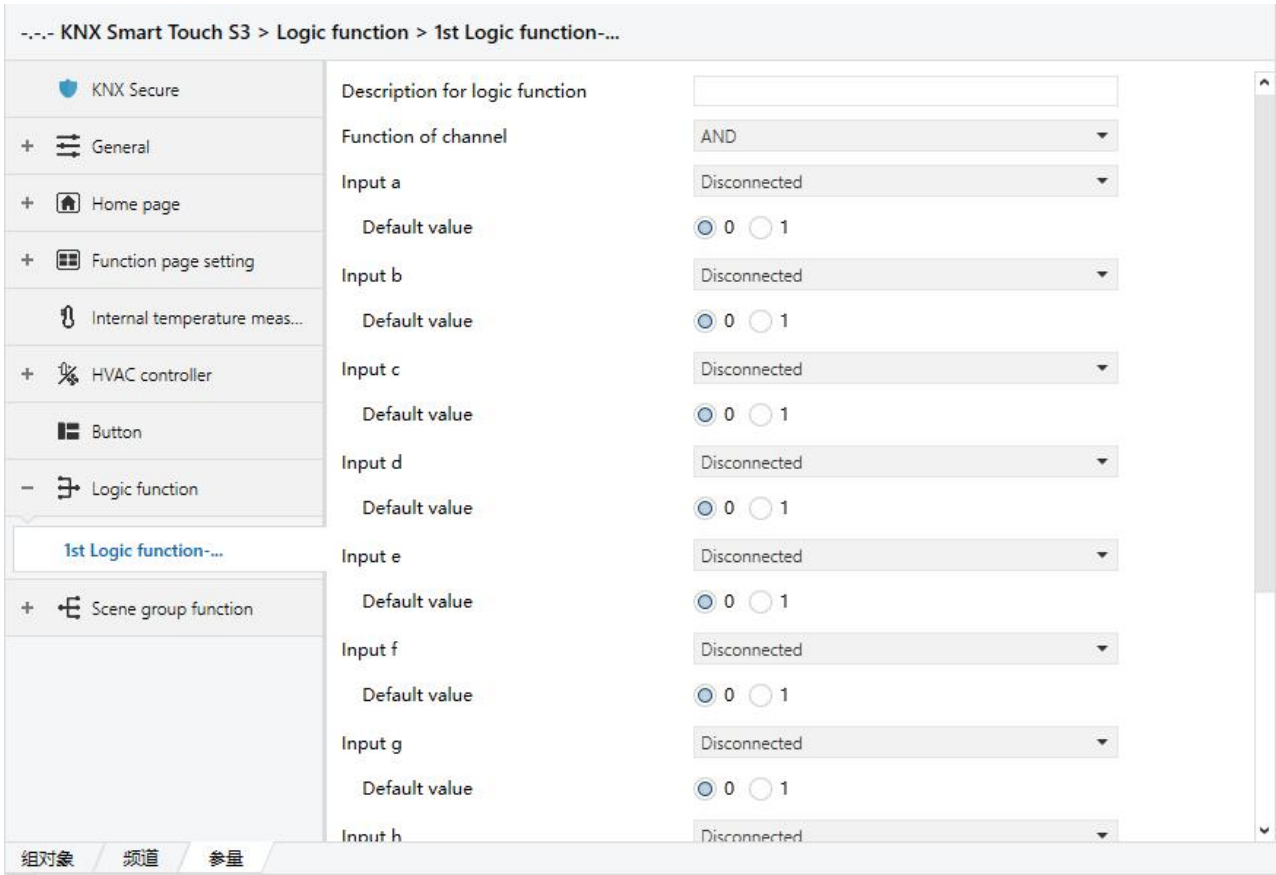


Fig.5.8.1 "AND/OR/XOR" parameter window

Parameter"Input a/b/c/d/e/f/g//h"

This parameter is for setting whether input x to calculate, whether to normally calculate or inverted calculate. Options:

Disconnected

Normal

Inverted

Disconnected: not to calculate;

Normal: to directly calculate the input value;

Inverted: invert the input value, then to calculate. **Note: not to invert the initiate value.**

——Parameter"Default value"

This parameter is for setting the initial value of logic input x. Options:

0

1

Parameter"Result is inverted"

This parameter is for setting whether to invert the logic calculation result. Options:

No

Yes

No: output directly; Yes: output after inverting.

Parameter"Read input object value after bus voltage recovery"

This parameter is for setting whether to send the read request to the logic input object after device bus recovery or finish programming.

Parameter"Output send when"

This parameter is for setting the condition of sending logic result. Options:

Receiving a new telegram

Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Tip: when in the first time to logic calculate, the logic result will be sent even if it has no change.

Parameter"Send delay time"

Base: **None**

0.1s

1s

...

10s

25s

Factor: **1..255**

This parameter is for setting the delay time for sending the logic calculation result to the bus. Delay time = Base × Factor, if option "None" of Base is selected, then there is no delay.

5.8.2 "Gate forwarding"parameter window

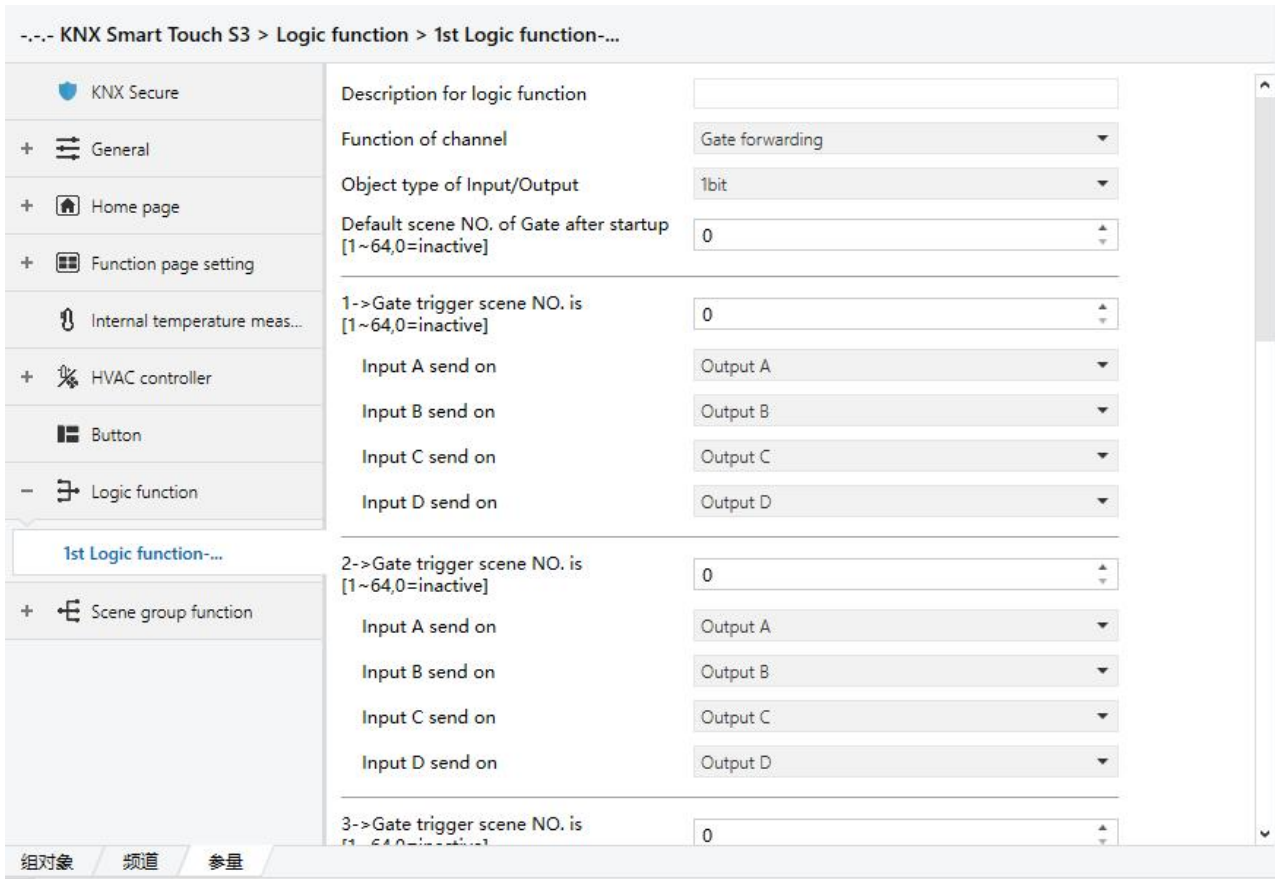


Fig.5.8.2 "Gate forwarding" parameter window

Parameter"Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit

4bit

1byte

Parameter"Default scene NO. of Gate after startup [1..64, 0=inactive]"

This parameter is for setting the initial scene where logical gate forwarding can be performed by default after device starts, which needs to be configured in the parameters.

Options：**1..64, 0=inactive**

Note: gate scene is recommended to be selected before operating, or it will enable the initiate scene by default.

Parameter"x->Gate trigger scene NO.[1..64,0=inactive]" (x:1~8)

This parameter is for setting scene number of logic gate forwarding. Up to 8 trigger scene number can be set for each logic. Options: **1..64, 0=inactive**

——Parameter"Input A/B/C/D send on"

This parameter is for setting the output of input X (X=A/B/C/D) after gate forwarding. Options:

Output A

Output B

...

Output B,C,D

According to the options, one input can be forwarded into one or more outputs, the output value is the same as the input value.

5.8.3 "Threshold comparator"parameter window

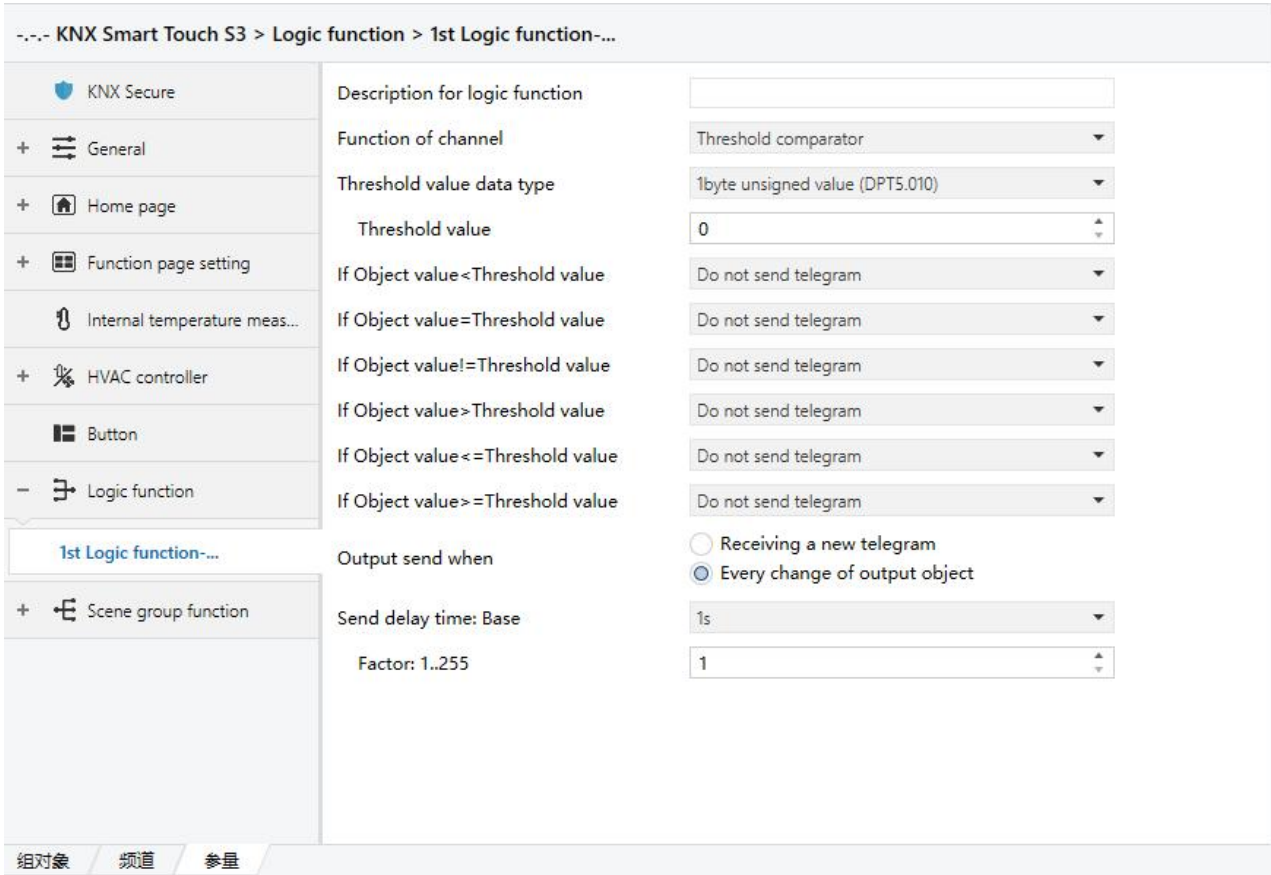


Fig.5.8.3 "Threshold comparator" parameter window

Parameter "Threshold value data type"

This parameter is for setting the threshold value data type. Options:

4bit value (DPT3.007) **4byte unsigned value[0..4294967295]**

1byte unsigned value (DPT5.010) **Ext. temperature value (DPT 9.001)**

2byte unsigned value (DPT7.001) **Ext. humidity value (DPT 9.007)**

2byte signed value (DPT8.x) **Illuminance value (DPT 9.004)**

2byte float value (DPT9.x)

——Parameter "Threshold value "

This parameter is for setting threshold value, the range depends on the data type. Options:

4bit value (DPT3.007) 0..15 /1byte unsigned value (DPT5.010) 0..255 /

2byte unsigned value (DPT7.001) 0..65535 / 2byte signed value (DPT8.x) -32768..32767 /

2byte float value (DPT9.x) -670760...670760 / 4byte unsigned value[0..4294967295] 0..4294967295 /

Ext. temperature value (DPT 9.001) -20..95℃ / Ext. humidity value (DPT 9.007) 0..100% /

Illuminance value (DPT 9.004) 0..65535lux

Parameter"If Object value<Threshold value"

Parameter "If Object value=Threshold value"

Parameter "If Object value!=Threshold value"

Parameter"If Object value>Threshold value"

Parameter "If Object value<=Threshold value"

Parameter"If Object value>=Threshold value"

These parameters are for setting the logic result values that should be sent when threshold value less than, equal to, not equal to, greater than, less than and equal to, or greater and equal to the setting valve. When object datatype is selected "2byte float value (DPT9.x)" or "Illuminance value (DPT 9.004)", can only set the object value less than or greater than threshold value. Options:

Do not send telegram

Send value "0"

Send value "1"

Do not send telegram: not consider to select this option;

Send value "0"/"1": when condition is satisfied, send telegram 0 or1.

If there is a conflict between the setting options of the parameters, it is based on the value that should be sent, which meets the final parameter condition.

For example: parameter "If Object value=Threshold value" is set to be "Send value "0" "; parameter "If Object value<=Threshold value" is set to be "Send value "1" "; when object value is equal to the threshold value, then the logic result will send "1".

Parameter"Output send when"

This parameter is for setting the condition of sending logic result. Options:

Receiving a new telegram

Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Tip: when in the first time to logic algorithm, the logic result will be sent even if it has no change.

Parameter"Send delay time:"

Base:

None

0.1s

1s

...

25s

Factor: **1..255**

This parameter is for setting the delay time for sending the logic algorithm result to the bus. Delay time = Base x Factor, if option "None" of Base is selected, then there is no delay.

5.8.4 "Format convert"parameter window

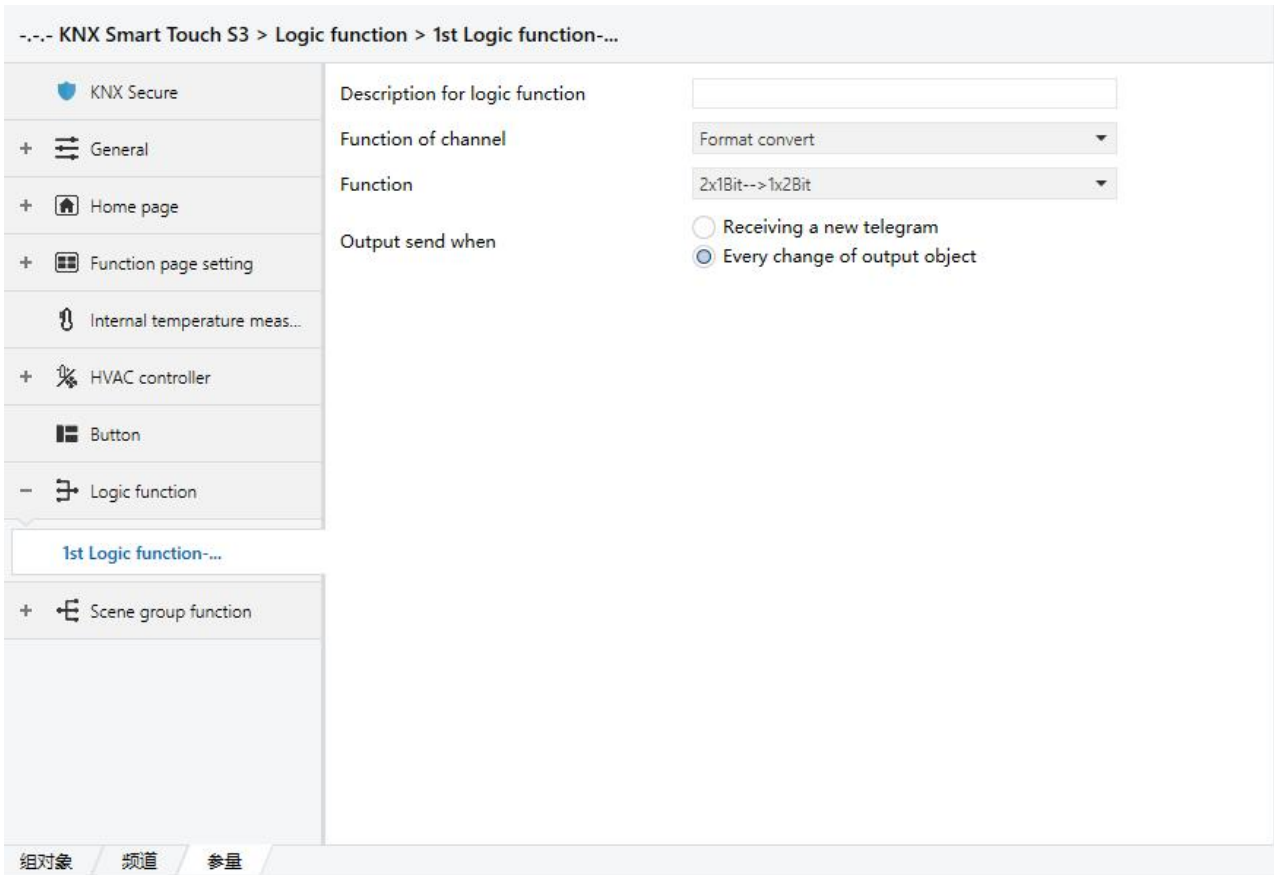


Fig.5.8.4 "Format convert" parameter

Parameter"Function"

This parameter is for setting the format convert type. Options:

2x1bit-->1x2bit

8x1bit-->1x1byte

1x1byte-->1x2byte

2x1byte-->1x2byte

2x2byte-->1x4byte

1x1byte-->8x1bit

1x2byte-->2x1byte

1x4byte-->2x2byte

1x3byte-->3x1byte

3x1byte-->1x3byte

Parameter"Output send when"

This parameter is for setting the condition of sending logic result. Options:

Receiving a new telegram

Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Tip: when in the first time to logic algorithm, the logic result will be sent even if it has no change.

5.8.5 "Gate function"parameter window

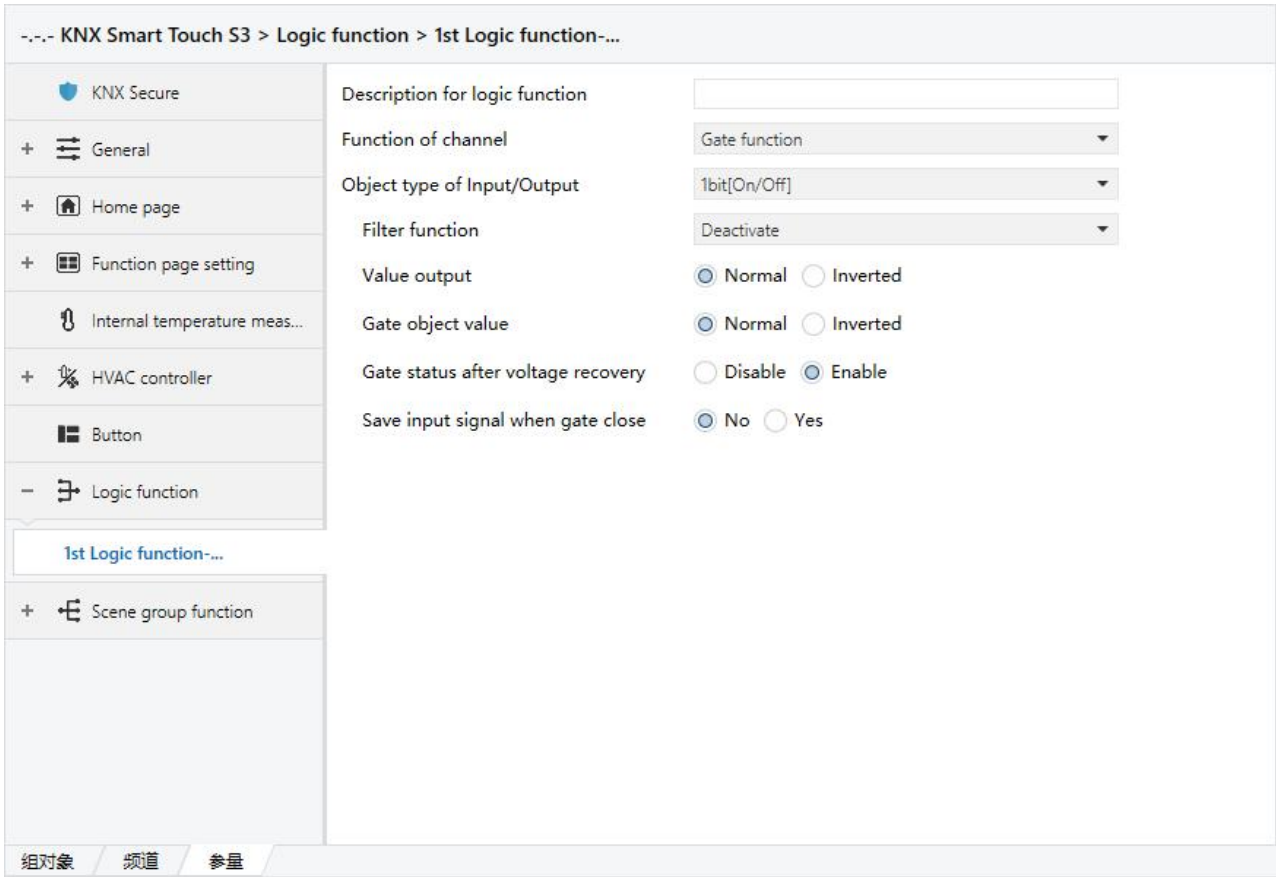


Fig.5.8.5 "Gate function" parameter window

Parameter "Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit[On/Off]

1byte[0...100%]

1byte[0...255]

2byte[Float]

2byte[0...65535]

Parameter as follow are visible when "1bit[On/Off]" is selected.

——Parameter "Filter function "

This parameter is visible when "1bit[On/Off]" is selected. Set whether to filter On or Off

telegram, only pass one of them or pass all. Options:

Deactivate

On filter out

Off filter out

Deactivate: Do not filter the On or Off telegrams;

On filter out: Off can pass, On cannot pass;

Off filter out: On can pass, Off cannot pass.

——Parameter "Value output "

This parameter is for setting whether to invert the value then output it. Options:

Normal

Inverted

Parameter "Gate object value"

This parameter is for setting whether to invert the gate object value then output it. Options:

Normal

Inverted

Parameter "Gate status after voltage recovery"

This parameter is for setting the gate status after power on. Options:

Disable

Enable

Parameter " Save input signal when gate close"

This parameter is for setting whether to save input signal on gate close. Options:

No

Yes

No: disable to save the input, the input values received during the gate closing period are ignored;

Yes: enable to save the input, the input values received during the gate closing period are output when gate is open (whether the input value is changed or not).

5.8.6 "Delay function"parameter window

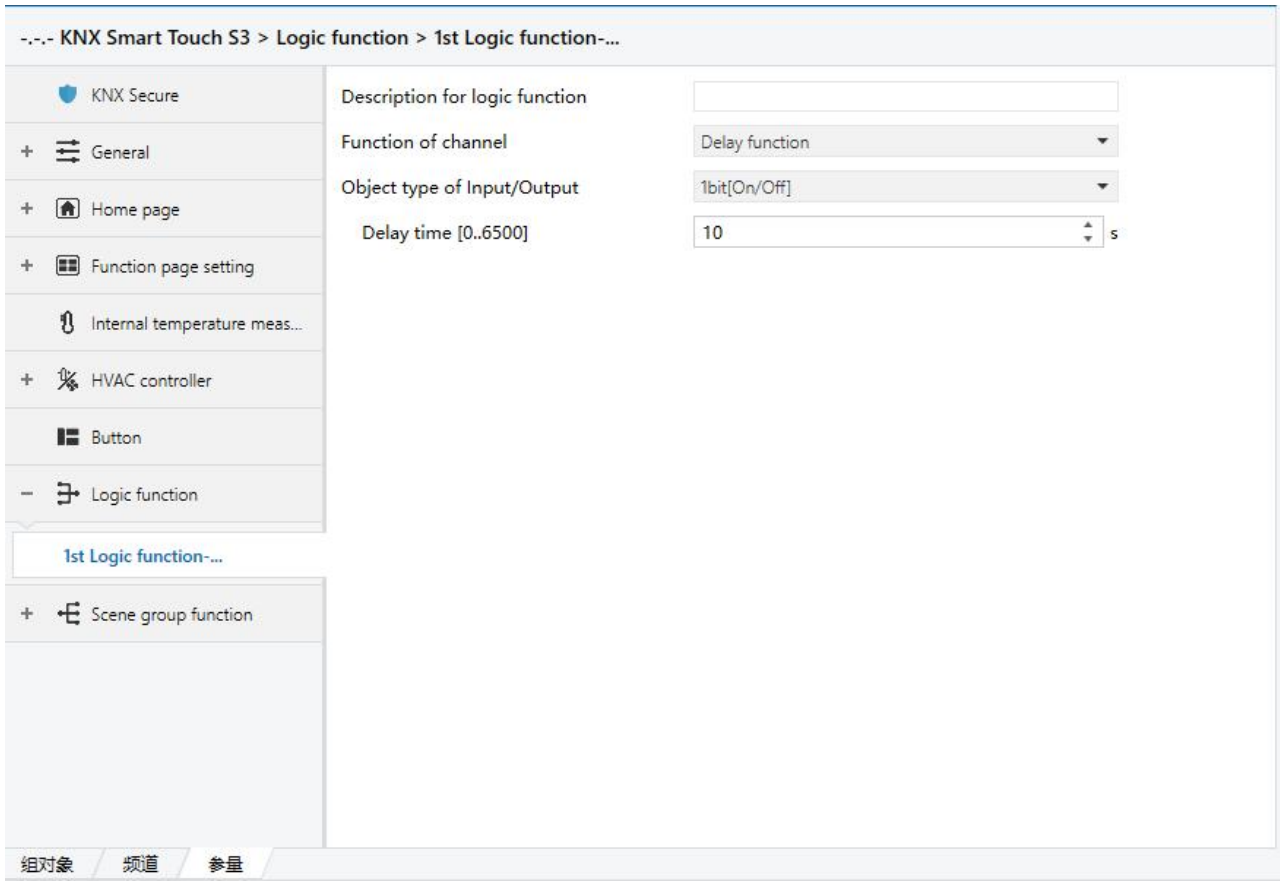


Fig.5.8.6 "Delay function" parameter window

Parameter "Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit[On/Off]

1byte[0..100%]

1byte[0..255]

2byte[Float]

2byte[0..65535]

Parameter "Delay time [0..6500]s"

This parameter is for setting the delay time that output object forwards the value when the input object receives the telegram. Options: **0..6500**

Note: Receive telegram again in delay time, re-timing.

5.8.7 "Staircase lighting"parameter window

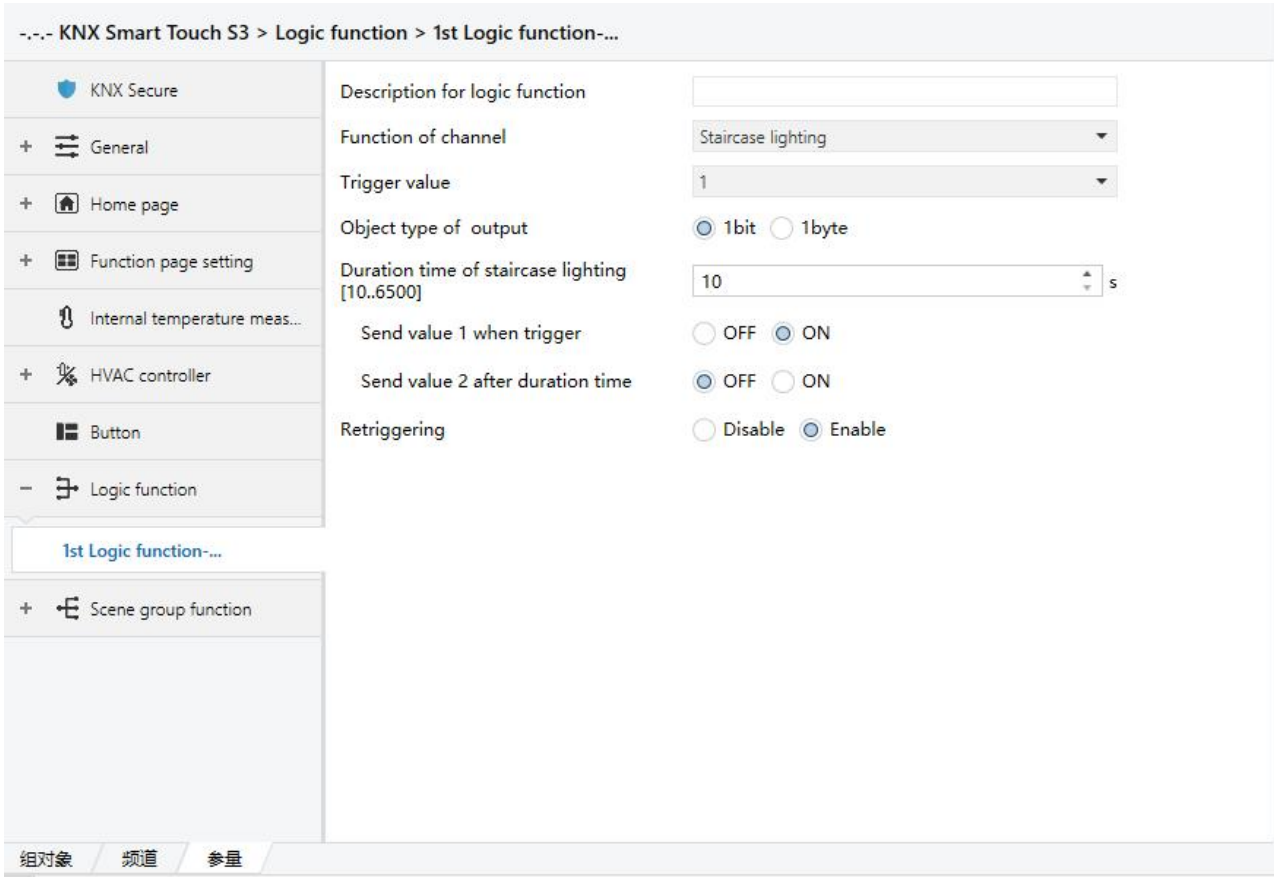


Fig.5.8.7 "Staircase lighting" parameter window

Parameter"Trigger value"

This parameter is for setting the telegram value of the object "Trigger value". Options:

0

1

0 or 1

Parameter"Object type of output"

This parameter is for setting the object type of output. Options:

1bit

1byte

Parameter"Duration time of staircase lighting[10..6500]s"

This parameter is for setting duration time of staircase lighting after the stair light power on.

Options：**10..6500**

Parameter"Send value 1 when trigger "

Parameter"Send value 2 after duration time"

These parameters are for setting the value to send. Send value 1 when trigger, and then send value 2 after duration time. Options display according to the output object datatype.

When 1 bit, options:

OFF

ON

When 1 byte, options: **0..255**

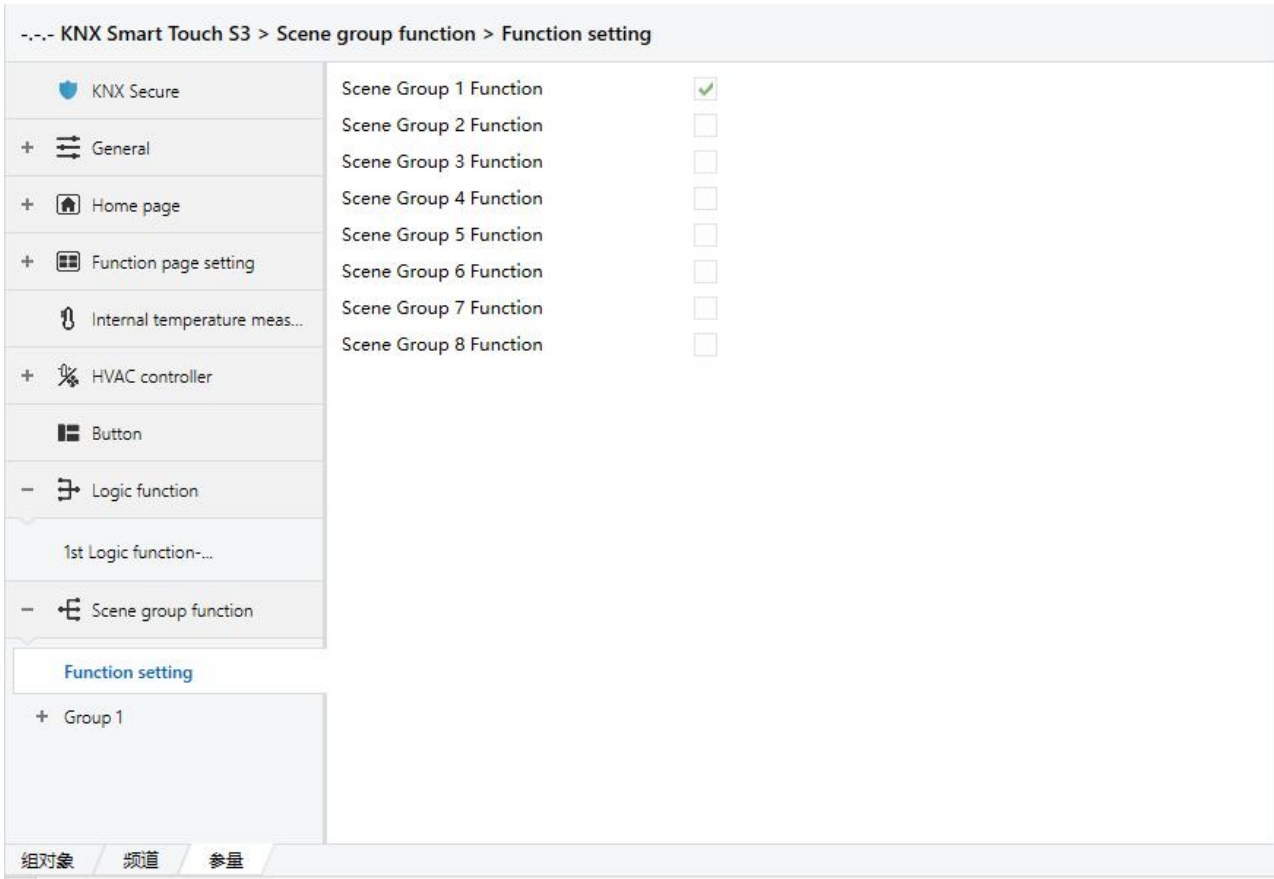
Parameter "Retriggering"

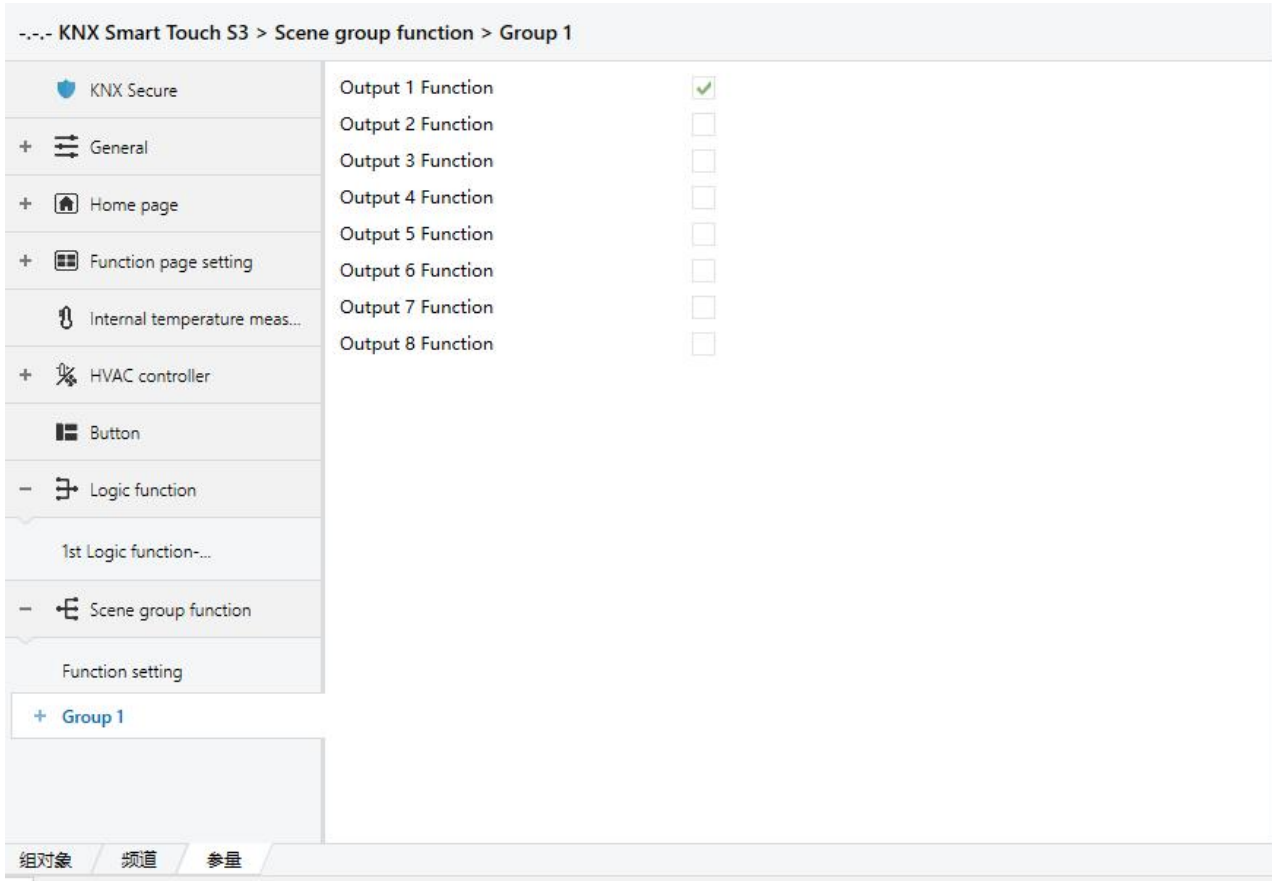
This parameter is for setting whether to trigger re-timing when received trigger value in delay time. Options:

Disable

Enable

5.9 "Scene Group"parameter window




-.-.- KNX Smart Touch S3 > Scene group function > Group 1
KNX Secure
General
Home page
Function page setting
Internal temperature meas...
HVAC controller
Button
Logic function
1st Logic function-...
Scene group function
Function setting
Group 1
Output 1 Function
Output 2 Function
Output 3 Function
Output 4 Function
Output 5 Function
Output 6 Function
Output 7 Function
Output 8 Function
组对象
频道
参量

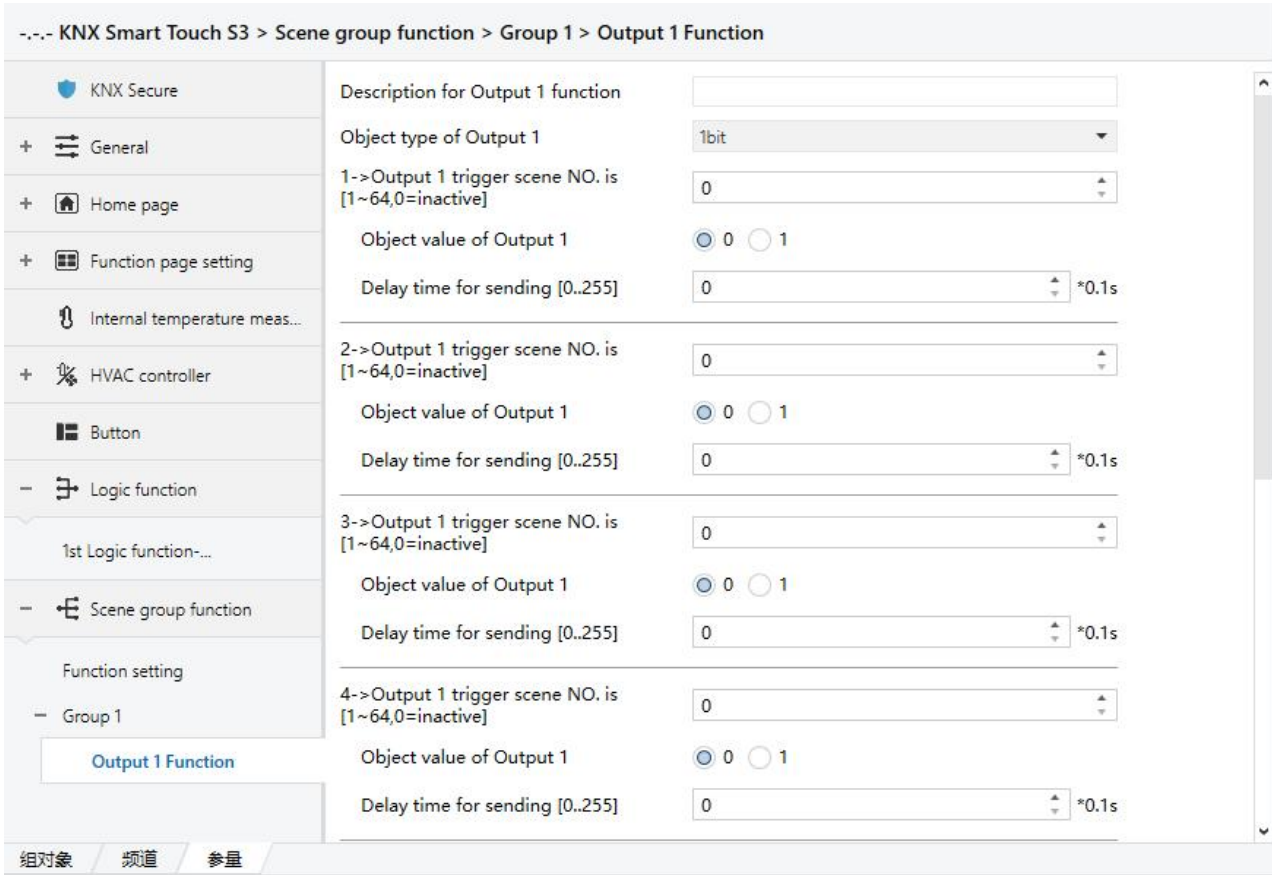


Fig.5.9 "Scene Group" parameter window

Parameter "Scene Group X Function,(X=1-8)"

This parameter is for setting whether to enable scene group x function, up to 8 scene groups.

Parameter "Output Y Function,(Y=1-8)"

This parameter is for setting whether to enable output Y of scene group X, up to 8 output functions for each scene group.

As 8 group functions are the same, and 8 output functions of each group as well, the following description only about one output of a group.

Parameter "Description for Output Y function,(Y=1-8)"

This parameter is for setting the name description for output Y of group X, up to input 30 characters.

Parameter "Object type of Output Y,Y=(1-8)"

This parameter is for setting the object type of output Y of group X. Options:

1bit

1byte

2byte

RGB

RGBW

——Parameter"Object datatype"

This parameter is for setting the datatype of 1byte or 2byte.

When the datatype is 1byte, options:

1byte unsigned value

HVAC mode

When the datatype is 2byte, options:

2byte unsigned value

Temperature value

Parameter "z->Output 1 trigger scene NO. is [1~64,0=inactive],(z=1-8)"

This parameter is for setting the triggered scene number of output y of group x. Up to 8 triggered scene of each output can be configured. Options:**0..64, 0=inactive**

——Parameter"Object value of Output Y"

This parameter is for setting the output value, the range depends on the data type of output Y.

When the datatype is 1bit, options: **0..1**

When the datatype is 1byte-1byte unsigned value, options: **0..255**

When the datatype is 1byte-HVAC mode, options:

Comfort mode

Standby mode

Economy mode

Frost/heat protection

When the datatype is 2byte-2byte unsigned value, options: **0..65535**

When the datatype is 2byte-Temperature value, options:

-5°C

-4°C

...

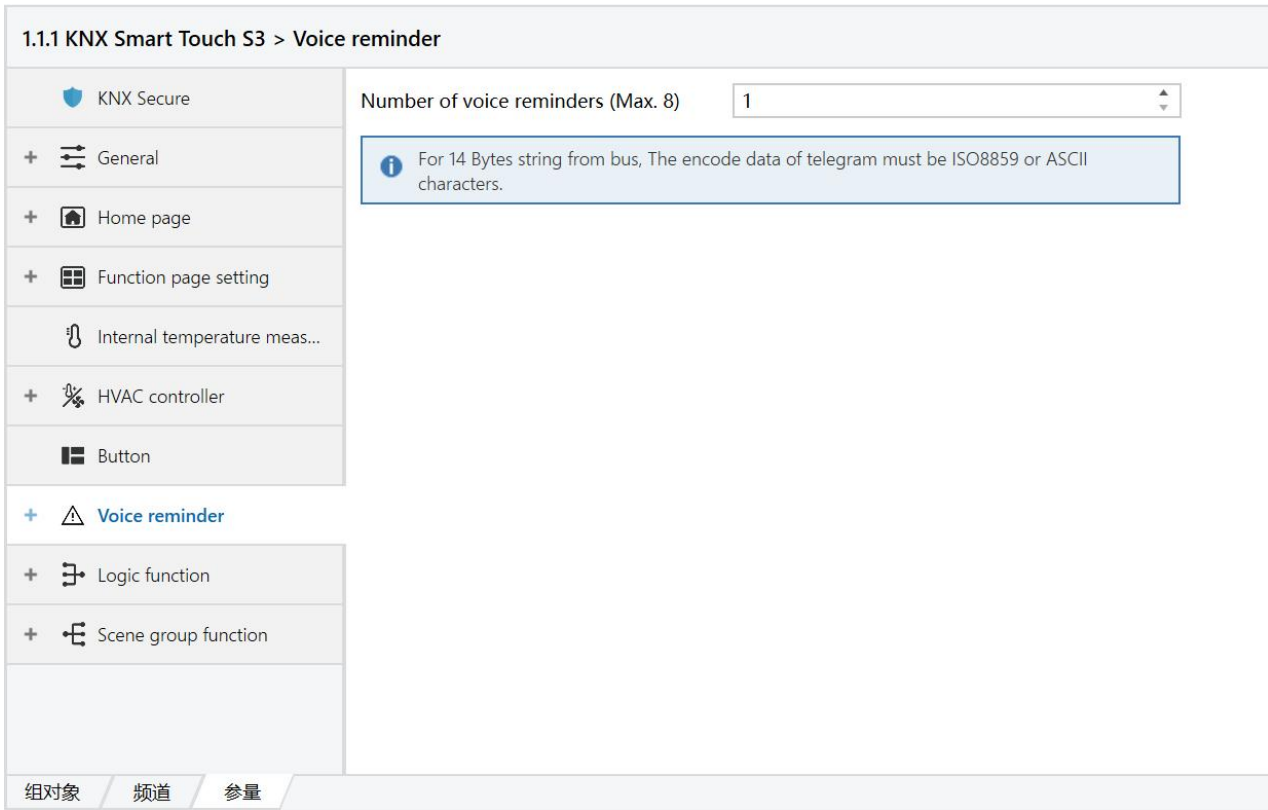
45°C

——parameter "Delay time for sending [0…255]*0.1s"

This parameter is for setting the delay time for sending the output value to the bus.

Options: **0..255**

5.10 Parameter window“Voice reminder”



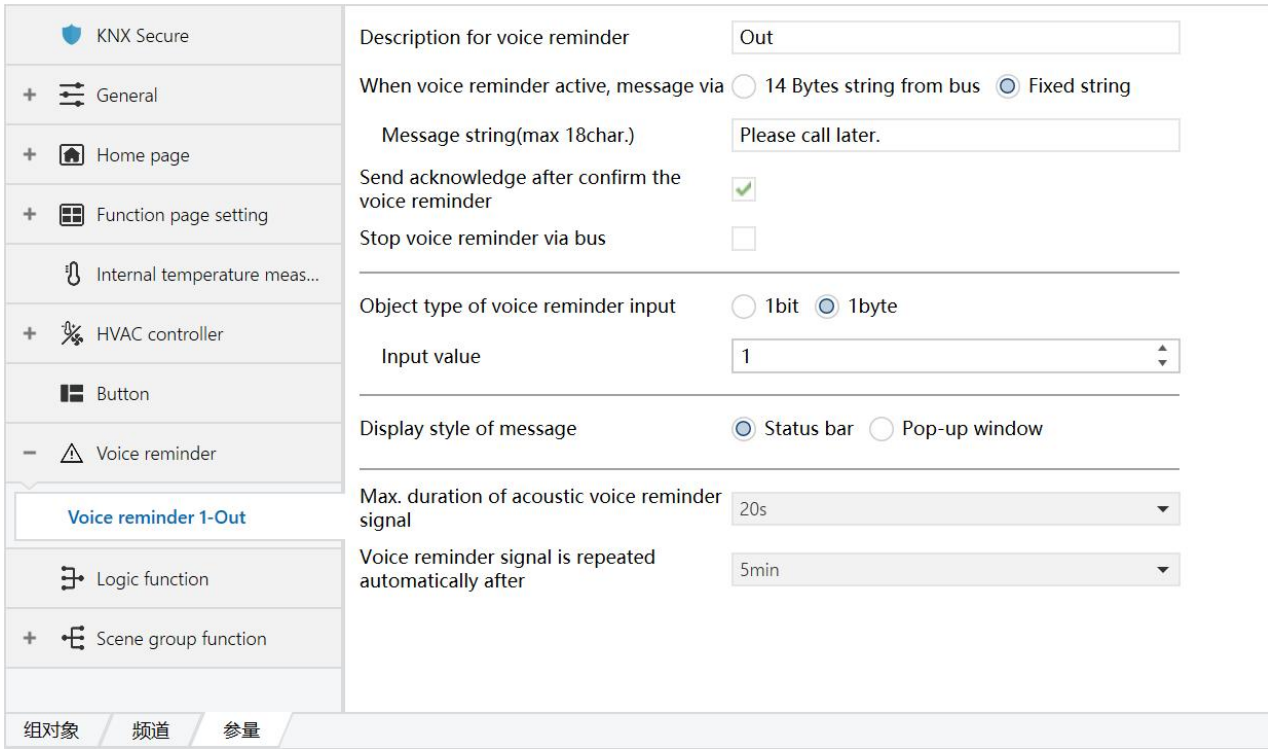


Fig.5.10"Voice reminder" parameter window

Parameter "Number of voice reminders (Max. 8)"

This parameter is for setting the number of voice reminder.After selection, the corresponding number of voice reminder function pages will be displayed. A maximum of 8 voice reminder functions can be set.

Parameter "Description for voice reminder"

This parameter is for setting the name description for the current voice reminder function. A maximum of 18 characters can be entered.

Parameter "When voice reminder active, message via"

This parameter is for setting whether the S4 smart screen displays the fixed characters input via ETS or the 14-byte string received from the bus when the bus activates this voice.Options：

14 Bytes string from bus

Fixed string

Parameter "Message string(max 18char.)"

This parameter is for setting the text information displayed on the S3 smart screen when the voice reminder is playing, with a maximum limit of 18 characters.

Parameter "Send acknowledge after confirm the voice reminder"

This parameter is for setting select whether to send the 1-bit response message 1 to the bus.

Parameter "Stop voice reminder via bus"

This parameter is for setting whether to stop the voice reminder via the bus.

Parameter "Object type of voice reminder input"

This parameter is for setting the type of target that receives the voice playback signal.Options：

1bit

1byte

Parameter"Input value"

This parameter is for setting the target value for receiving the voice playback signal when the "Object type of voice reminder input" is 1 byte.

Options：**0...255**

Parameter"Display style of message"

This parameter is for setting the prompt style for the S4 smart screen information.Options：

Status bar

Pop-up window

Parameter"Max. duration of acoustic voice reminder signal"

This parameter is for setting the playback duration of the voice reminder.Options：

Disable

20s

30s

1min

2min

3min

4min

5min

10min

15min

20min

25min

30min

Parameter "Voice reminder signal is repeated automatically after"

This parameter is for setting the interval for the automatic repetition of voice reminders. After the voice playback ends, it will play automatically at the set interval.Options：

Disable

10s

20s

30s

1min

2min

3min

4min

5min

10min

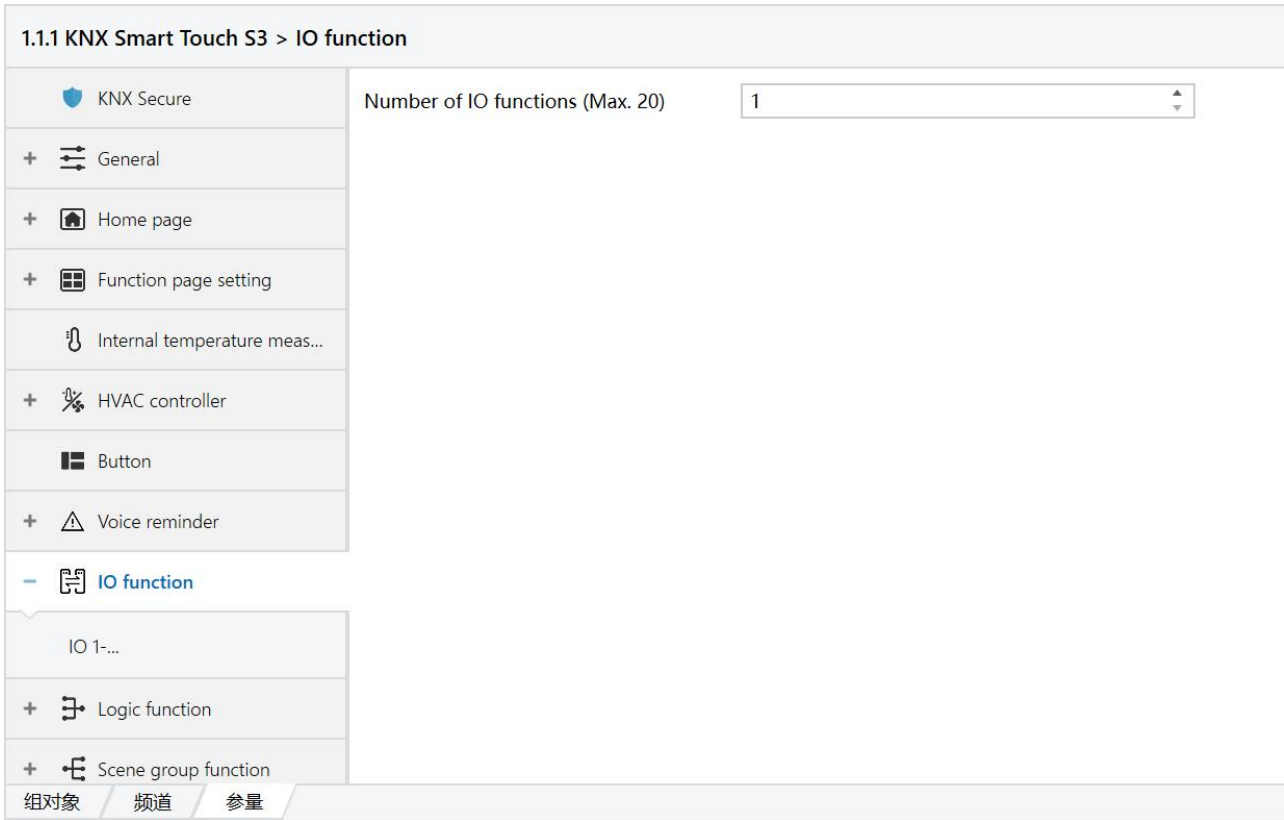
15min

20min

25min

30min

5.11 Parameter window“IO function”



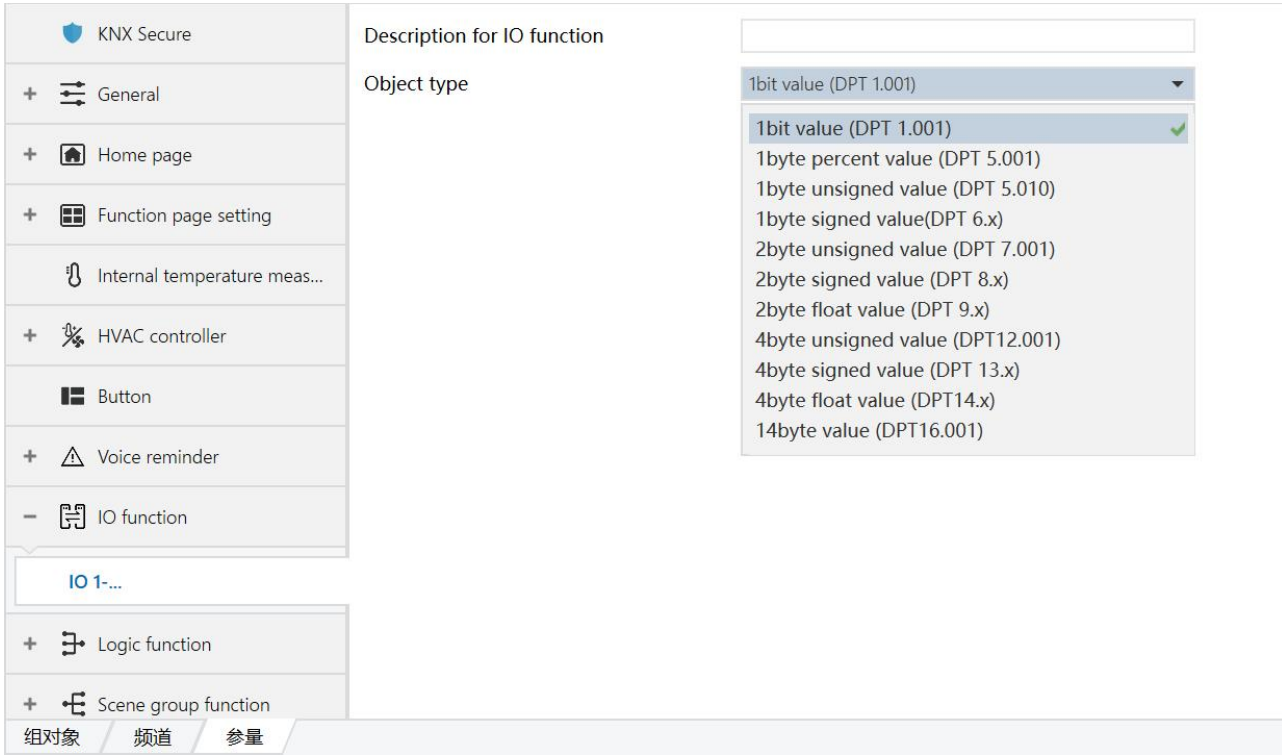


Fig.5.11"IO function" parameter window

IO 功能用于将蓝牙的数据上传到 KNX 总线。

参数"Number of IO functions (Max. 20)"

此参数用于设置通用 IO 通道的数量，选择后显示对应数量的通用 IO 功能页。最多可设置 20 个通用 IO 功能。

参数"Description for IO function"

此参数用于设置当前 IO 功能的名称描述。最多可输入 18 个字符。

参数"Object type"

此参数用于设置通用 IO 的对象数据类型。可选项：

1bit value (DPT 1.001)

1byte percent value (DPT 5.001)

1byte unsigned value (DPT 5.010)

1byte signed value(DPT 6.x)

2byte unsigned value (DPT 7.001)

2byte signed value (DPT 8.x)

2byte float value (DPT 9.x)

4byte unsigned value (DPT12.001)

4byte signed value (DPT 13.x)

4byte float value (DPT14.x)

14byte value (DPT16.001)

Chapter 6 Description of Communication Object

The communication object is the medium to communicate other device on the bus, namely only the communication object can communicate with the bus.

NOTE: "C" in "Flag" column in the below table means enable the communication function of the object; "W" means value of object can be written from the bus; "R" means the value of the object can be read by the other devices; "T" means the object has the transmission function; "U" means the value of the object can be updated.

6.1 "General" Communication object



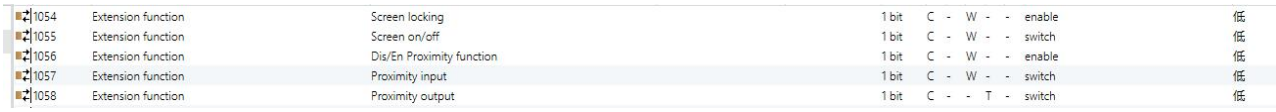
1	General	In operation	1 bit	C	R	-	T	-	switch
2	General	Date	3 bytes	C	-	W	-	-	date
3	General	Time	3 bytes	C	-	W	-	-	time of day
4	General	Screen brightness	1 byte	C	-	W	-	-	percentag...

NO.	Object Function	Name	Data Type	Flag	DPT
1	**In operation**	**General**	**1bit**	**C,R,T**	**1.001 switch**
The communication object is used to periodically send a telegram "1" to the bus to indicate that the device is working properly.					
2/3	**Date/Time**	**General**	**3byte**	**C,W,T**	**11.001 date** **10.001 time of day**
The communication object is used to modify the display date on the screen through the bus. Note: When the time is set to auto update on the device, the bus modification is invalid.					
4	**Screen brightness**	**General**	**1byte**	**C,W**	**5.001 percentage(0..100%)**

This communication object is only used to modify the brightness under the current mode status. For example, if the current status is the normal state, then only the brightness setting under the normal state will be updated, and the brightness under the night state will still be determined by its parameter; if the modification is made under the screen saver, then only the brightness under the screen saver will be modified.

Brightness output range: 10~100%, when the telegram value is less than 10%, directly output 10% brightness.

6.2 "Proximity setting" Communication object



1054	Extension function	Screen locking	1 bit	C	-	W	-	-	enable	低
1055	Extension function	Screen on/off	1 bit	C	-	W	-	-	switch	低
1056	Extension function	Dis/En Proximity function	1 bit	C	-	W	-	-	enable	低
1057	Extension function	Proximity input	1 bit	C	-	W	-	-	switch	低
1058	Extension function	Proximity output	1 bit	C	-	-	T	-	switch	低

1054	**Screen locking**	**Extension function**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to lock the screen. After screen locked, the operation on the screen will not be responded, but can still receive the bus telegram. Telegrams: 0 —— Lock 1 —— Unlock					
1055	**Screen on/off**	**Extension function**	**1bit**	**C,W**	**1.001 switch**
This communication object is used to receive messages from the bus to control screen on/off or to control the LED indicator simultaneously. Message values: 0 —— OFF 1 —— ON					
1056	**Dis/En Proximity function**	**Extension function**	**1bit**	**C,W**	**1.003 enable**

The communication object is used to enable/disable proximity function.					
1057	**Proximity input**	**Extension function**	**1bit**	**C,W**	**1.001 switch**
The communication object is visible when proximity function is triggered by the object. Receive the telegram value from bus: 1——Trigger proximity function 0——Leaving (No proximity)					
1058	**Proximity output**	**Extension function**	**1bit** **1byte**	**C,T**	**1.001 switch** **5.010 counter pulses** **17.001 scene number** **5.001 percentage**
The communication object is determined by the parameter "Object type of output value". When a person is detected approaching the sensing area, the object can send a specified value (1 byte) or ON (1 bit) to the bus. The range of values is determined by the selected data type.					

6.3 "Internal sensor" Communication object

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
5	Internal sensor	Temperature value			2 bytes	C	R	-	T	-	temperature (°C)	Low
6	Internal sensor	Low temperature alarm			1 bit	C	R	-	T	-	alarm	Low
7	Internal sensor	High temperature alarm			1 bit	C	R	-	T	-	alarm	Low
8	Internal sensor	Humidity value			2 bytes	C	R	-	T	-	humidity (%)	Low
9	Internal sensor	Low humidity alarm			1 bit	C	R	-	T	-	alarm	Low
10	Internal sensor	High humidity alarm			1 bit	C	R	-	T	-	alarm	Low

NO.	Object Function	Name	Data Type	Flag	DPT
5	**Temperature value**	**Internal sensor**	**2bytes**	**C,R,T**	**9.001 temperature**
The communication object is used for transmitting the temperature value detected by the built-in temperature sensor of the device to the bus. Range: -50~99.9℃					

6	**Low temperature alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
The communication object is used to send the low temperature alarm signal to bus, when temperature lower than low threshold that defined by parameter. Low-temperature alarm = 1, No alarm = 0					
7	**High temperature alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
The communication object is used to send the high temperature alarm signal to bus, when temperature higher than high threshold that defined by parameter. High-temperature alarm = 1, No alarm = 0					
8	**Humidity value**	**Internal sensor**	**2bytes**	**C,R,T**	**9.007 humidity**
The communication object is used to send humidity measurements sent from the humidity sensor on the bus. Range:0~100%					
9	**Low humidity alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
The communication object is used to send the low humidity alarm signal to bus, when humidity lower than low threshold that defined by parameter. Low humidity alarm = 1, No alarm = 0					
10	**High humidity alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
The communication object is used to send the high humidity alarm signal to bus, when humidity higher than high threshold that defined by parameter. High humidity alarm = 1, No alarm = 0					

6.4 "HVAC controller" Communication object

6.4.1 "Room temperature controller" Communication object

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Controller 1 - RTC	Power on/off			1 bit	C	R	W	-	-	switch	Low
149	Controller 1 - RTC	External temperature sensor			2 bytes	C	-	W	T	U	temperature (°C)	Low
150	Controller 1 - RTC	Base setpoint adjustment			2 bytes	C	-	W	-	-	temperature (°C)	Low
151	Controller 1 - RTC	Setpoint offset			1 bit	C	-	W	-	-	step	Low
152	Controller 1 - RTC	Float offset value			2 bytes	C	-	W	-	-	temperature difference (K)	Low
153	Controller 1 - RTC	Setpoint offset reset			1 bit	C	-	W	-	-	reset	Low
154	Controller 1 - RTC	Heating/Cooling mode			1 bit	C	-	W	-	-	cooling/heating	Low
155	Controller 1 - RTC	Operation mode			1 byte	C	-	W	-	-	HVAC mode	Low
156	Controller 1 - RTC	Comfort mode			1 bit	C	-	W	-	-	enable	Low
157	Controller 1 - RTC	Economy mode			1 bit	C	-	W	-	-	enable	Low
158	Controller 1 - RTC	Frost/Heat protection mode			1 bit	C	-	W	-	-	enable	Low
159	Controller 1 - RTC	Standby mode			1 bit	C	-	W	-	-	enable	Low
160	Controller 1 - RTC	Extended comfort mode			1 bit	C	-	W	-	-	acknowledge	Low
161	Controller 1 - RTC	Fan automatic operation			1 bit	C	-	W	-	-	enable	Low
162	Controller 1 - RTC	Window contact			1 bit	C	-	W	-	U	window/door	Low
163	Controller 1 - RTC	Presence detector			1 bit	C	-	W	-	U	occupancy	Low
164	Controller 1 - RTC	Actual temperature, status			2 bytes	C	R	-	T	-	temperature (°C)	Low
165	Controller 1 - RTC	Base temperature setpoint, status			2 bytes	C	R	-	T	-	temperature (°C)	Low
166	Controller 1 - RTC	Setpoint offset, status			2 bytes	C	R	-	T	-	temperature difference (K)	Low
167	Controller 1 - RTC	Current temperature setpoint, status			2 bytes	C	R	-	T	-	temperature (°C)	Low
168	Controller 1 - RTC	Heating/Cooling mode, status			1 bit	C	R	-	T	-	cooling/heating	Low
169	Controller 1 - RTC	Operation mode, status			1 byte	C	R	-	T	-	HVAC mode	Low
170	Controller 1 - RTC	Comfort mode, status			1 bit	C	R	-	T	-	enable	Low
171	Controller 1 - RTC	Economy mode, status			1 bit	C	R	-	T	-	enable	Low
172	Controller 1 - RTC	Frost/Heat protection mode, status			1 bit	C	R	-	T	-	enable	Low
173	Controller 1 - RTC	Standby mode, status			1 bit	C	R	-	T	-	enable	Low
174	Controller 1 - RTC	Heating control value			1 bit	C	R	-	T	-	switch	Low
175	Controller 1 - RTC	Cooling control value			1 bit	C	R	-	T	-	switch	Low
176	Controller 1 - RTC	Fan speed			1 byte	C	-	-	T	-	percentage (0..100%)	Low
177	Controller 1 - RTC	Fan speed low			1 bit	C	-	-	T	-	switch	Low
178	Controller 1 - RTC	Fan speed medium			1 bit	C	-	-	T	-	switch	Low
179	Controller 1 - RTC	Fan speed high			1 bit	C	-	-	T	-	switch	Low
180	Controller 1 - RTC	Fan speed off			1 bit	C	-	-	T	-	switch	Low

NO.	Object Function	Name	Data Type	Flag	DPT
148	**Power on/off**	**Controller 1 -**	**1bit**	**C,W,R**	**1.001 switch**

This communication object is used to receive messages from the bus to control the on/off status of the thermostat. Message values:

1 —— On

0 —— Off

The name in parentheses changes according to the description of the parameter "Description (max 30char.)". If the parameter description is empty, it will default to displaying "Controller 1 - ...". The same applies to others.

149	**External temperature sensor**	**Controller 1 - {{RTC}}**	**2bytes**	**C,W,T, U**	**9.001 temperature**
This communication object is used to receive temperature measurement values sent from temperature sensors on the bus. Range: -50° C to 99.8° C.					
150	**Current setpoint adjustment Base setpoint adjustment**	**Controller 1 - {{RTC}}**	**2bytes**	**C,W**	**9.001 temperature**
"Current setpoint adjustment" is visible when the operating mode is not enabled and under absolute adjustment. When not enabled, it is used to modify the base value of the set temperature; under absolute adjustment, it is used to modify the temperature setpoint for the current room operating mode. "Base setpoint adjustment" is only visible under relative adjustment and is used to modify the base value of the set temperature, i.e., the temperature setpoint for the comfort mode. The set temperatures for standby and energy-saving modes are adjusted based on the relative change. Under protection mode, only the temperature setpoint for the protection mode is modified.					
151	**Setpoint offset**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.007 step**
This communication object is visible only when relative adjustment is enabled and the offset function is activated. It indirectly adjusts the set temperature by modifying the offset, with the step value determined by the parameter settings. Message values: 1 —— Increase the offset in the positive direction 0 —— Decrease the offset in the negative direction					
152	**Float offset value**	**Controller 1 - {{RTC}}**	**2bytes**	**C,W**	**9.002 temperature difference**
This communication object is visible only when relative adjustment is enabled and the offset function is activated. It modifies the accumulated offset using a 2-byte floating-point					

value.					
153	**Setpoint offset reset**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.015 reset**
This communication object is visible only when relative adjustment is enabled and the offset function is activated. When the message value is 1, the offset is reset.					
154	**Heating/Cooling mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.100 cooling/heating**
This communication object is used to switch between heating and cooling via the bus. Message values: 1 —— Heating 0 —— Cooling					
155	**Operation mode**	**Controller 1 - {{RTC}}**	**1byte**	**C,W**	**20.102 HVAC mode**
156	**Comfort mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.003 enable**
157	**Economy mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.003 enable**
158	**Frost/Heat protection mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.003 enable**
159	**Standby mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.003 enable**
These communication objects are used to control the operating modes of the thermostat via the bus. When 1byte: Object 155 is visible, with message values: 1 - Comfort, 2 - Standby, 3 - Energy-saving, 4 - Protection, other values reserved.					

When 1bit:

Object 156 - Comfort mode

Object 157 - Energy-saving mode

Object 158 - Protection mode

Object 159 - Standby mode

When a message with value "1" is received, the corresponding mode is activated. If the 1bit standby object is not enabled, the thermostat will be in standby mode when the messages for comfort, energy-saving, and protection modes are all 0. If the 1bit standby object is enabled, receiving a "1" on the standby object sets it to standby mode, while "0" is ignored.

160	**Extended comfort mode**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.016 acknowledge**

The communication object is used for triggering time to extended comfort mode.

Telegrams:

1——Activate comfort mode

0——No sense

Activate comfort mode when the object receives telegram 1. If receive again telegram 1 in delay time, time will be timed again. And return the previous operation mode from comfort mode once finish timing. If there is a new operation mode in delay time, exit the comfort mode.

If a switch operation, exit the timing, but switch the heating/cooling will not.

161	**Fan automatic operation**	**Controller 1 - {{RTC}}**	**1bit**	**C,W**	**1.003 enable**

The communication object is used to activate the fan automatic operation via the bus.

Telegram: 1——Activate auto 0——Exit auto					
162	**Window contact**	**Controller 1 - {{RTC}}**	**1bit**	**C,W,T,U**	**1.019 Window/door**
The communication object is used to receive the switch status of window contact. Telegrams: 1——The window is open 0——The window is close					
163	**Presence detector**	**Controller 1 - {{RTC}}**	**1bit**	**C,W,T,U**	**1.018 occupancy**
The communication object is used to receive the room occupancy status from presence detector. Telegrams: 1——Occupied 0——Unoccupied					
164	**Actual temperature, status**	**Controller 1 - {{RTC}}**	**2byte**	**C,R,T**	**9.001 temperature**
The communication object is visible when temperature reference of RTC function is combination of internal and external sensor. Used to send the actual temperature after the combination to the bus.					
165	**Base temperature setpoint, status**	**Controller 1 - {{RTC}}**	**2byte**	**C,R,T**	**9.001 temperature**
The communication object is visible only when relative adjustment. Used to send the current base set temperature to the bus.					

166	**Setpoint offset, status**	**Controller 1 - {{RTC}}**	**2byte**	**C,R,T**	**9.002 temperature difference**
The communication object is visible only when relative adjustment. Used to send the accumulated offset value of base set temperature to the bus.					
167	**Current temperature setpoint, status**	**Controller 1 - {{RTC}}**	**2byte**	**C,R,T**	**9.001 temperature**
The communication object is used to send current set temperature to the bus.					
168	**Heating/Cooling mode, status**	**Controller 1 - {{RTC}}**	**1bit**	**C,R,T**	**1.100 cooling/heating**
The communication object is used to feedback the telegram of switching cooling and heating function to the bus.					
169	**Operation mode, status**	**Controller 1 - {{RTC}}**	**1byte**	**C,R,T**	**20.102 HVAC mode**
170	**Comfort mode, status**	**Controller 1 - {{RTC}}**	**1bit**	**C,R,T**	**1.003 enable**
171	**Economy mode, status**	**Controller 1 - {{RTC}}**	**1bit**	**C,R,T**	**1.003 enable**
172	**Frost/Heat protection mode, status**	**Controller 1 - {{RTC}}**	**1bit**	**C,R,T**	**1.003 enable**
173	**Standby mode, status**	**Controller 1 - {{RTC}}**	**1bit**	**C,R,T**	**1.003 enable**
These communication objects are visible when the “operation mode” and “1-bit object function for operation mode” are enabled.They are used to send RTC operation mode status to the bus. Object 170—— Comfort mode Object 171—— Economy mode					

Object 172—— Protection mode

Object 173—— Standby mode

When a mode is activated, the corresponding object only sends telegram "1". When 1 bit standby object is not enable, activate standby mode when comfort, economy, protection objects send telegram 0 together. When 1 bit standby object is enable, activate standby mode only when standby object send 1.

Note: no requirement to send mode status to the bus when switchover via bus. The same is fan speed and other operation.

174	**Heating control value**	**Controller 1 - {{RTC}}**	**1bit 1byte**	**C,R,T**	**1.001 Switch 5.001 percentage**
175	**Cooling control value**	**Controller 1 - {{RTC}}**	**1bit 1byte**	**C,R,T**	**1.001 Switch 5.001 percentage**
The communication object is used to send control value of heating or cooling function to the bus. Object datatype is according to parameter setting.					
176	**Fan speed**	**Controller 1 - {{RTC}}**	**1byte**	**C,T**	**5.001 percentage 5.100 fan stage**
177	**Fan speed low**	**Controller 1 - {{RTC}}**	**1bit**	**C,T**	**1.001 switch**
178	**Fan speed medium**	**Controller 1 - {{RTC}}**	**1bit**	**C,T**	**1.001 switch**
179	**Fan speed high**	**Controller 1 - {{RTC}}**	**1bit**	**C,T**	**1.001 switch**

180	Fan speed off	Controller 1 - {{RTC}}	1bit	C,T	1.001 switch

These communication objects are used to send control telegrams of the fan speed to the bus.

1bit object is visible according to the parameter setting :

Object 177——Low fan speed

Object 178——Medium fan speed

Object 179——High fan speed

Object 180——Fan speed off

Only the corresponding object sends telegram "1" when switch to a certain fan speed. When 1bit-off object is not enable, all objects send telegrams "0" when switch to fan speed off (The situation apply to connect with fan actuator of GVS);

When 1bit-off object is enable, only 1bit-off object send telegram "1" (The situation apply to connect with fan actuator of other manufacturers).

6.4.2 "Ventilation controller" Communication object

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
148	Controller 1 - ...	Fan automatic operation			1 bit	C	R	W	-	-	enable	低
149	Controller 1 - ...	PM 2.5 value			2 bytes	C	-	W	T	U	pulses	低
176	Controller 1 - ...	Fan speed			1 byte	C	-	-	T	-	percentage (0..100%)	低

NO.	Object Function	Name	Data Type	Flag	DPT
148	Fan automatic operation	Controller 1 - ...	1bit	C,R,W	1.003 enable

The communication object is used to activate the fan automatic operation via the bus. Telegram: 1——Activate auto 0——Exit auto					
149	**PM 2.5 value** **VOC value** **CO2 value**	**Controller 1 - …**	**2bytes**	**C,W,T,U**	**7.001 pulse** **9.030 concentration(ug/m3)** **9.008 parts/million(ppm)**
The communication object is used to receive the input of the PM2.5/VOC/CO2 value. The data type of object is set by the parameter.Range:0~999ug/m3 or 0~4000ppm.					
176	**Fan speed**	**Controller 1 - …**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
The communication object is used to send the fan speed under auto control to the bus. Corresponding telegrams of each fan speed are determined by parameter setting.					

6.5 "Home page" Communication object



序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
358	Home - Item 1	Ext.temperature value			2 bytes	C	-	W	T	U	temperature (°C)	低
358	Home - Item 1	Ext.humidity value			2 bytes	C	-	W	T	U	humidity (%)	低
358	Home - Item 1	PM2.5 value			2 bytes	C	-	W	T	U	pulses	低
358	Home - Item 1	PM10 value			2 bytes	C	-	W	T	U	pulses	低
358	Home - Item 1	VOC value			2 bytes	C	-	W	T	U	pulses	低
358	Home - Item 1	CO2 value			2 bytes	C	-	W	T	U	parts/million (ppm)	低
358	Home - Item 1	AQI value			2 bytes	C	-	W	T	U	pulses	低
358	Home - Item 1	Brightness value			2 bytes	C	-	W	T	U	lux (Lux)	低
358	Home - Item 1	Wind speed			2 bytes	C	-	W	T	U	speed (m/s)	低
358	Home - Item 1	Rain state			1 bit	C	-	W	T	U	switch	低

NO.	Object Function	Name	Data	Flag	DPT

			Type		
358	**Ext.temperature value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**9.001 temperature**
The communication object is used to receive measurement values from external temperature sensors, obtain the corresponding values from the bus, and update them for display on the screen. Range：-50...99.9℃ The name in the parentheses changes according to the description of the parameter "Function description (max 15char.)". If the parameter description is empty, it will display "Home - Icon x" by default. The same applies below.					
358	**Ext.humidity value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**9.007 humidity**
The communication object is used to receive measurement values from external humidity sensors, obtain the corresponding values from the bus, and update them for display on the screen. Range：0~100%					
358	**PM2.5 value** **PM10 value** **VOC value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**7.001 pulse** **9.030** **concentration(ug/m3)**
The communication object is used to receive the measured values of PM2.5/PM10/VOC. It obtains the corresponding values from the bus and updates them for display on the screen, with the unit being ug/m³. Range: 0~999ug/m³. The data type of the object is set by parameters.					
358	**CO2 value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**7.001 pulse** **9.008** **parts/million(ppm)**
The communication object is used to receive the measured values of CO2 and update the corresponding values from the bus for display on the screen, with the unit in ppm. Range: 0~4000ppm, the data type of the object is set by parameters.					
358	**AQI value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**7.001 pulse**

The communication object is used to receive measurements of AQI values and update the corresponding values on the screen from the bus. Range: 0~500					
358	**Brightness value**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**7.013 brightness(lux)** **9.004 lux**
The communication object is used to receive illumination measurement values, updating the corresponding values from the bus to be displayed on the screen, with the unit in lux. Range: 0~65535 lux, the data type of the object is determined by parameters.					
358	**Wind speed**	**Home - Item 1**	**2bytes**	**C,W,T,U**	**9.005 speed** **9.028 wind speed**
The communication object is used to receive wind speed measurements and updates the corresponding values displayed on the screen from the bus. The data type of the object is determined by parameters, with units in m/s or km/h.					
358	**Rain state**	**Home - Item 1**	**1bit**	**C,W,T,U**	**1.001 switch**
The communication object is used to receive messages related to rainy weather conditions, retrieving the corresponding values from the bus to update and display on the screen. Telegram: 1 - Rain 0 - No Rain					

6.6 "Function page setting" Communication object

6.6.1 Basic Function Communication Object

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
360	Function general	Device online common 1, status			1 bit	C	-	W	T	U	switch	低
361	Function general	Device online common 2, status			1 bit	C	-	W	T	U	switch	低
362	Function general	Device online common 3, status			1 bit	C	-	W	T	U	switch	低
363	Function general	Device online common 4, status			1 bit	C	-	W	T	U	switch	低
364	Function general	Device online common 5, status			1 bit	C	-	W	T	U	switch	低
365	Function general	Device online common 6, status			1 bit	C	-	W	T	U	switch	低
366	Function general	Device online common 7, status			1 bit	C	-	W	T	U	switch	低
367	Function general	Device online common 8, status			1 bit	C	-	W	T	U	switch	低
368	Function general	Device online common 9, status			1 bit	C	-	W	T	U	switch	低
369	Function general	Device online common 10, status			1 bit	C	-	W	T	U	switch	低
370	Page 1 - Switch	Device online, status			1 bit	C	-	W	T	U		低

371	Page 1 - 1	Locking object	1 bit	C	-	W	-	-	enable	低			
372	Page 1 - 1	Switch	1 bit	C	-	-	T	-	switch	低			
377	Page 1 - 1	Switch, status	1 bit	C	-	W	T	U	switch	低			
373	Page 1 - 1	Relative dimming	4 bit	C	-	-	T	-	dimming c...	低			
374	Page 1 - 1	Brightness dimming	1 byte	C	-	-	T	-	percentag...	低			
379	Page 1 - 1	Brightness, status	1 byte	C	-	W	T	U	percentag...	低			
373	Page 1 - 1	RGB dimming value	3 bytes	C	-	-	T	-	RGB value...	低			
378	Page 1 - 1	RGB brightness, status	3 bytes	C	-	W	T	U	RGB value...	低			
373	Page 1 - 1	RGBW dimming value	6 bytes	C	-	-	T	-	RGBW val...	低			
378	Page 1 - 1	RGBW brightness, status	6 bytes	C	-	W	T	U	RGBW val...	低			
373	Page 1 - 1	Red dimming value	1 byte	C	-	-	T	-	percentage (0..1...	低			
378	Page 1 - 1	Red brightness, status	1 byte	C	-	W	T	U	percentage (0..1...	低			
374	Page 1 - 1	Green dimming value	1 byte	C	-	-	T	-	percentage (0..1...	低			
379	Page 1 - 1	Green brightness, status	1 byte	C	-	W	T	U	percentage (0..1...	低			
375	Page 1 - 1	Blue dimming value	1 byte	C	-	-	T	-	percentage (0..1...	低			
380	Page 1 - 1	Blue brightness, status	1 byte	C	-	W	T	U	percentage (0..1...	低			
376	Page 1 - 1	Colour temperature value	2 bytes	C	-	-	T	-	absolute c...	低			
381	Page 1 - 1	Colour temperature, status	2 bytes	C	-	W	T	U	absolute c...	低			
382	Page 1 - 1	Brightness value	1 byte	C	-	-	T	-	percentag...	低			
384	Page 1 - 1	Brightness, status	1 byte	C	-	W	T	U	percentag...	低			
382	Page 1 - 1	Warm white brightness	1 byte	C	-	-	T	-	percentag...	低			
384	Page 1 - 1	Warm white brightness, status	1 byte	C	-	W	T	U	percentag...	低			
383	Page 1 - 1	Cool white brightness	1 byte	C	-	-	T	-	percentag...	低			
385	Page 1 - 1	Cool white brightness, status	1 byte	C	-	W	T	U	percentag...	低			
372	Page 1 - 1	Open/Close	1 bit	C	-	-	T	-	open/close	低			
373	Page 1 - 1	Stop	1 bit	C	-	-	T	-	step	低			
372	Page 1 - 1	Up/Down	1 bit	C	-	-	T	-	up/down	低			
373	Page 1 - 1	Stop	1 bit	C	-	-	T	-	step	低			

372	Page 1 - 1	Open/Close	1 bit	C	-	-	T	-	open/close	低				
373	Page 1 - 1	Stop	1 bit	C	-	-	T	-	step	低				
374	Page 1 - 1	Curtain position	1 byte	C	-	-	T	-	percentag...	低				
377	Page 1 - 1	Curtain position, status	1 byte	C	-	W	T	U	percentag...	低				
372	Page 1 - 1	Up/Down	1 bit	C	-	-	T	-	up/down	低				
373	Page 1 - 1	Stop	1 bit	C	-	-	T	-	step	低				
374	Page 1 - 1	Blind position	1 byte	C	-	-	T	-	percentag...	低				
377	Page 1 - 1	Blind position, status	1 byte	C	-	W	T	U	percentag...	低				

372	Page 1 - 11	Up/Down	1 bit	C	-	W	T	-	up/down	Low				
373	Page 1 - 11	Stop/Slat adj.	1 bit	C	-	W	T	-	step	Low				
374	Page 1 - 11	Blind position	1 byte	C	-	-	T	-	percentage (0..100%)	Low				
375	Page 1 - 11	Slat position	1 byte	C	-	-	T	-	percentage (0..100%)	Low				
377	Page 1 - 11	Blind position, status	1 byte	C	-	W	T	U	percentage (0..100%)	Low				
378	Page 1 - 11	Slat position, status	1 byte	C	-	W	T	U	percentage (0..100%)	Low				

372	Page 1 - 1	Send 1bit value	1 bit	C	-	W	T	-	switch	低				
372	Page 1 - 1	Send 2bit value	2 bit	C	-	W	T	-	switch control	低				
372	Page 1 - 1	Send 4bit value	4 bit	C	-	W	T	-	dimming control	低				
372	Page 1 - 1	Send 1byte value	1 byte	C	-	W	T	-	counter pulses (...	低				
372	Page 1 - 1	Send 2byte value	2 bytes	C	-	W	T	-	pulses	低				
372	Page 1 - 1	Send 2byte float value	2 bytes	C	-	W	T	-	2-byte float value	低				
372	Page 1 - 1	Send 4byte value	4 bytes	C	-	W	T	-	counter pulses (...	低				
372	Page 1 - 1	Send 4byte float value	4 bytes	C	-	W	T	-	4-byte float value	低				
374	Page 1 - 1	Send 1bit value, long	1 bit	C	-	W	T	-	switch	低				
374	Page 1 - 1	Send 2bit value, long	2 bit	C	-	W	T	-	switch control	低				
374	Page 1 - 1	Send 4bit value, long	4 bit	C	-	W	T	-	dimming control	低				
374	Page 1 - 1	Send 1byte value, long	1 byte	C	-	W	T	-	counter pulses (...	低				
374	Page 1 - 1	Send 2byte value, long	2 bytes	C	-	W	T	-	pulses	低				
374	Page 1 - 1	Send 2byte float value, long	2 bytes	C	-	W	T	-	2-byte float value	低				
374	Page 1 - 1	Send 4byte value, long	4 bytes	C	-	W	T	-	counter pulses (...	低				
374	Page 1 - 1	Send 4byte float value, long	4 bytes	C	-	W	T	-	4-byte float value	低				
372	Page 1 - 1	Scene	1 byte	C	-	W	T	-	scene control	低				
372	Page 1 - 1	Status display(1bit)	1 bit	C	-	W	T	U	switch	低				

372	Page 1 - 1	Status display(1byte percentage)	1 byte	C	-	W	T	U	percentage (0..1...	低
372	Page 1 - 1	Status display(1byte unsigned)	1 byte	C	-	W	T	U	counter pulses (...	低
372	Page 1 - 1	Status display(2byte unsigned)	2 bytes	C	-	W	T	U	pulses	低
372	Page 1 - 1	Status display(2byte temperature)	2 bytes	C	-	W	T	U	temperature (°C)	低
372	Page 1 - 1	Status display(2byte humidity)	2 bytes	C	-	W	T	U	humidity (%)	低
372	Page 1 - 1	Status display(2byte lux)	2 bytes	C	-	W	T	U	lux (Lux)	低
372	Page 1 - 1	Status display(2byte float)	2 bytes	C	-	W	T	U	2-byte float value	低
372	Page 1 - 1	Status display(4byte unsigned)	4 bytes	C	-	W	T	U	counter pulses (...	低
372	Page 1 - 1	Status display(4byte float)	4 bytes	C	-	W	T	U	4-byte float value	低
372	Page 1 - 1	Status display(14byte char.)	14 bytes	C	-	W	T	U	Character String...	低

Note: When the bus power is restored, each function needs to send status requests based on the status feedback objects.

NO.	Object Function	Name	Data Type	Flag	DPT
360 361 362 363 364 365 367 368 369	**Device online common X, status**	**Function general**	**1bit**	**C,W,T, U**	**1.001 switch**
The communication object is displayed when the parameter "Time period request for					

common x" is greater than 0.					
370	**Device online, status**	**Page 1 - switch**	**1bit**	**C,W,T, U**	**1.001 switch**
The communication object is used to periodically send a read request telegram for the online status of a generic device in order to query the current online status of each generic device.					
371	**Locking object**	**Page 1 - 1**	**1bit**	**C,W**	**1.003 enable**
Suitable for all of the following functions, except sensors, energy metering devices. The communication object is used to lock/unlock the icon function. 1-unlock 0-lock					
372	**Switch**	**Page 1 - 1**	**1bit**	**C,T**	**1.001 switch**
This communication object apply to switch, press/release switch, relative/brightness dimming, colour and colour temperature control. Telegrams: 1——Turn on the light 0——Turn off the light					
377	**Switch, status**	**Page 1 - 1**	**1bit**	**C,W,T, U**	**1.001 switch**
The communication object is used to receive the on / off status from other bus devices, and feedback to screen display, applies to switch, relative/brightness dimming, brightness+ colour temperature control and switch indicator.					
373	**Relative dimming**	**Page 1 - 1**	**4bit**	**C,T**	**1.001 switch**
The communication object applies to relative dimming, is used for sending the relative dimming telegram to the bus, such as brighter, darker, or stop-dimming telegram.					
374	**Brightness dimming**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
379	**Brightness, status**	**Page 1 - 1**	**1byt**	**C,W,T,**	**5.001**

<table>
<tr><td></td><td></td><td></td><td>e</td><td>U</td><td>percentage(0..100%)</td></tr>
<tr><td colspan="6">These two communication objects apply to brightness dimming. Telegrams: 0~100%
Obj.374: used for sending dimming telegrams to the bus, that is, sending the brightness value.
Obj.379: used for receiving brightness status responded from dimming actuator.</td></tr>
<tr><td>373</td><td>RGB dimming value</td><td>Page 1 - 1</td><td>3byt es</td><td>C,T</td><td>232.600 RGB value 3x(0..255)</td></tr>
<tr><td>378</td><td>RGB brightness, status</td><td>Page 1 - 1</td><td>3byt es</td><td>C,W,T, U</td><td>232.600 RGB value 3x(0..255)</td></tr>
<tr><td colspan="6">These two communication objects are visible when 1x3byte for the RGB object type or 1x3byte for the RGBCW object type is selected.Apply to control brightness of colorful lamp.
Obj.373: Used for sending brightness value of RGB lamp to the bus.
Obj.378: Used for receiving brightness value of RGB lamp from bus.
3-Byte Code for RGB Dimming Object Data Type: U8 U8 U8, as follows:
<table><tr><td>3_{MSB}</td><td>2</td><td>1_{LSB}</td></tr><tr><td>R</td><td>G</td><td>B</td></tr><tr><td>UUUUUUUU</td><td>UUUUUUUU</td><td>UUUUUUUU</td></tr></table>R: red dimming value; G: green dimming value; B: blue dimming value.</td></tr>
<tr><td>373</td><td>RGBW dimming value</td><td>Page 1 - 1</td><td>6byt es</td><td>C,T</td><td>251.600 DPT_Colour_RGBW</td></tr>
<tr><td>378</td><td>RGBW brightness, status</td><td>Page 1 - 1</td><td>6byt es</td><td>C,W,T, U</td><td>251.600 DPT_Colour_RGBW</td></tr>
<tr><td colspan="6">These two communication objects are visible when 1x6byte for the RGBW object type is selected. Apply to control brightness of colorful lamp.</td></tr>
</table>

Obj.373: Used for sending brightness value of RGBW lamp to the bus.

Obj.378: Used for receiving brightness value of RGBW lamp from bus.

Encoding of the data type of the 6-byte RGBW dimming object: U8 U8 U8 U8 R8 R4 B4, as follows:

6_{MSB}	5	4	3	2	1_{LSB}
R	G	B	W	保留	r r r r mR mG mB mW
UUUUU UUU	UUUUUU UU	UUUUU UUU	UUUUU UUU	000 00000	0000BBBB

R: red dimming value; G: green dimming value; B: blue dimming value; W: white dimming value;

mR: determines whether the red dimming value is valid, 0 = invalid, 1 = valid;

mG: determines whether the green dimming value is valid, 0 = invalid, 1 = valid;

mB: determines whether the blue dimming value is valid, 0 = invalid, 1 = valid;

mW: Determines whether the white dimming value is valid,0 = invalid,1 =valid.

373	**Red dimming value**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
378	**Red brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T, U**	**5.001 percentage(0..100%)**

These two communication objects are visible when 3x1byte for the RGB object type or 4x1byte for the RGBW object type is selected. Apply to control brightness of lamp, and also support colour temperature adjustment. Telegrams: 0...100%

Obj.373：Used for sending brightness value of the control R (red) channel to the bus.

Obj.378：Used for receiving brightness status of the R (red) channel from the bus.

374	**Green dimming value**	**Page 1 - 1**	**1byt**	**C,T**	**5.001**

			e		**percentage(0..100%)**
379	**Green brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
These two communication objects are visible when 3x1byte for the RGB object type or 4x1byte for the RGBW object type is selected. Apply to control brightness of lamp.Telegrams: 0...100% Obj.374：Used for sending brightness value of the control G (green) channel to the bus. Obj.379：Used for receiving brightness status of the G (green) channel from the bus.					
375	**Blue dimming value**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
380	**Blue brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
These two communication objects are visible when 3x1byte for the RGB object type or 4x1byte for the RGBW object type is selected. Apply to control brightness of lamp.Telegrams: 0...100% Obj.375：Used for sending brightness value of the control B (blue) channel to the bus. Obj.380：Used for receiving brightness status of the B (blue) channel from the bus.					
376	**White dimming value**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
381	**White brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
These two communication objects are visible when 4x1byte or 3byte+1byte for the RGB object type is selected. Apply to control brightness of lamp.Telegrams: 0...100% Obj.376：Used for sending brightness value of the control W (white) channel to the bus.					

Obj.381：Used for receiving brightness status of the W (white) channel from the bus.					
376	**Colour temperature value**	**Page 1 - 1**	**2bytes**	**C,T**	**7.600 absolute colour temperature**
381	**Colour temperature, status**	**Page 1 - 1**	**2bytes**	**C,W,T,U**	**7.600 absolute colour temperature**
These two communication objects apply to colour temperature adjustment.Telegrams: 2000...7000 K Obj.376：Under normal control, used for sending the control telegram of the colour temperature to the bus. Obj.381：Under normal or directly control & (Brightness+Colour Temperature), used for receiving the control telegram of the colour temperature from bus					
382	**Brightness value**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
384	**Brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
These two communication objects apply to brightness control.Telegrams: 0…100% Obj.382: Under normal control, used for sending the dimming telegram of the brightness value to the bus, that is, sending the brightness value. Obj.384: Under normal or directly control & (Brightness+Colour Temperature), used for receiving the brightness status responded from the dimming actuator.					
382	**Warm white brightness**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
384	**Warm white brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
Under the directly control, these two communication objects apply to warm white					

brightness control. Telegrams: 0…100%

Obj.382: Under directly control, used for sending the warm white dimming telegram to the bus, that is, sending the warm white brightness value.

Obj.384: Under directly control & (Warm/Cool white brightness), used for receiving the warm white brightness status responded from the dimming actuator.

383	**Cool white brightness**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
385	**Cool white brightness, status**	**Page 1 - 1**	**1byte**	**C,W,T, U**	**5.001 percentage(0..100%)**

Under the directly control, these two communication objects apply to cool white brightness control. Telegrams: 0…100%

Obj.383: Under directly control, used for sending the cool white dimming telegram to the bus, that is, sending the cool brightness value.

Obj.385: Under directly control & (Warm/Cool white brightness), used for receiving the cool white brightness status responded from the dimming actuator.

372	**Open/Close**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.009 open/close**
373	**Stop**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.007 step**

Curtain position: apply to open and close curtain. Support to open, close, stop, position adjustment and position status feedback.

Obj.372: Used for sending the telegram to the bus, to control curtain open/close. Telegrams:

1——Close the curtain

0——Open the curtain

Obj.373: Used for sending the telegram to the bus, to stop curtain movement. Telegrams:

1——Stop

372	**Up/Down**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.008 up/down**
373	**Stop**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.007 step**

Roller blind position: apply to a roller blind without slat. Support to up, down, stop, position adjustment and position status feedback.

Obj.372: Used for sending the telegram to the bus, to control blind up/down. Telegrams:

1——Move down

0——Move up

Obj.373 is the same as above.

372	**Open/Close**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.009 open/close**
373	**Stop**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.007 step**
374	**Curtain position**	**Page 1 - 1**	**1bytes**	**C,T**	**5.001 percentage(0..100%)**
377	**Curtain position, status**	**Page 1 - 1**	**1bytes**	**C,W,T, U**	**5.001 percentage(0..100%)**

Curtain position: apply to open and close curtain. Support to open, close, stop, position adjustment and position status feedback.

Obj.372: Used for sending the telegram to the bus, to control curtain open/close. Telegrams:

1——Close the curtain

0——Open the curtain

Obj.373: Used for sending the telegram to the bus, to stop curtain movement. Telegrams:

1——Stop

Obj.374: Used for sending a telegram to control the position of the curtain to the bus. Telegrams: 0…100%

Obj.377: Used for receiving a curtain position status in response to the window curtain actuator on the bus. Telegrams: 0…100%

372	**Up/Down**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.008 up/down**
373	**Stop**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.007 step**
374	**Blind position**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
377	**Blind position, status**	**Page 1 - 1**	**1byte**	**C,W,T, U**	**5.001 percentage(0..100%)**

Roller blind position: apply to a roller blind without slat. Support to up, down, stop, position adjustment and position status feedback.

Obj.372: Used for sending the telegram to the bus, to control blind up/down. Telegrams:

1——Move down

0——Move up

Obj.373: Used for sending a telegram to control the position of the roller blind to the bus. Telegrams: 0…100%

Obj.374: Used for receiving a roller blind position status in response to the roller blind actuator on the bus. Telegrams: 0…100%

Obj.377 is the same as above.

372	**Up/Down**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.008 up/down**
373	**Stop/Slat adj.**	**Page 1 - 1**	**1bit**	**C,W,T**	**1.007 step**
374	**Blind position**	**Page 1 - 1**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
375	**Slat position**	**Page 1 - 1**	**1byt**	**C,T**	**5.001**

			e		**percentage(0..100%)**
377	**Blind position, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
378	**Slat position, status**	**Page 1 - 1**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**

Venetian blind position and slat: apply to a blind with slat. Support to up, down, stop, position and slat adjustment, position and slat status feedback.

Obj.372、Obj.374 and Obj.377 are same as above.

Obj.373: Used for sending a telegram to the bus to stop the curtain movement or adjust the slat angle. Telegrams:

1——Stop/Slat adj. Down

0——Stop/Slat adj. Up

Obj.375: Used for sending a telegram to control the position of the blind to the bus. Telegrams: 0…100%

Obj.378: Used for receiving a blind position status in response to the blind actuator on the bus. Telegrams: 0…100%

372	**Send 1bit value** **Send 2bit value** **Send 4bit value** **Send 1byte value** **Send 2byte value** **Send 2byte float value** **Send 4byte value** **Send 4byte float value**	**Page 1 - 1**	**1bit** **2bit** **4bit** **1byte** **2byte** **2byte** **4byte** **2byte**	**C,T,W**	**1.001 switch** **2.001 switch control** **3.007 dimming** **5.010 counter pulses** **7.001 pulses** **9.x float value** **12.001 counter pulses** **14.x float value**

			e **4byte** **e** **4byte**		
374	**Send 1bit value, long** **Send 2bit value, long** **Send 4bit value, long** **Send 1byte value, long** **Send 2byte value, long** **Send 2byte float value, long** **Send 4byte value, long** **Send 4byte float value, long**	**Page 1 - 1**	**1bit** **2bit** **4bit** **1byte** **2byte** **2byte** **4byte** **4byte**	**C,T,W**	**1.001 switch** **2.001 switch control** **3.007 dimming** **5.010 counter pulses** **7.001 pulses** **9.x float value** **12.001 counter pulses** **14.x float value**
These two communication objects are used to send fixed values to the bus. The object type and value range are determined by the data type set by the parameters. Short and long presses can be distinguished and configured independently; when short pressed, object 353 sends a message; when long pressed, object 355 sends a message. When bound to a mechanical button, it only occupies one button.					
372	**Scene**	**Page 1 - 1**	**1byte**	**C,W,T**	**18.001 scene control**
This communication object is used to send messages for scene calls or scene storage. A highest bit value of 1 indicates scene storage, while a highest bit value of 0 indicates a scene					

call. A short press on the icon can trigger a scene call, while a long press can choose whether to save the scene. When the scene indication enable status feedback is active, the properties are C, W, T; when the enable status feedback is not active, the properties are C, T.					
372	**Status display(1bit)** **Status display(1byte percentage)** **Status display(1byte unsigned)** **Status display(2byte unsigned)** **Status display(2byte temperature)** **Status display(2byte humidity)** **Status display(2byte lux)** **Status display(2byte float)** **Status display(4byte unsigned)** **Status display(4byte float)** **Status display(14byte char.)**	**Page 1 - 1**	**1bit** **1byte** **1byte** **2byte** **2byte** **2byte** **2byte** **2byte** **4byte** **4byte** **14byte**	**C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W,T,U** **C,W**	**1.001 switch** **5.001 percentage(0..100%)** **5.010 counter pulses** **7.001 pulses** **9.001 temperature** **9.007 humidity** **9.004 lux(lux)** **9*2byte float value** **12.001 counter pulses** **14.x float value** **16.001 character string (ISO 8859-1)**
This communication object is used to receive data for status display, retrieving the corresponding values from the bus and updating the display on the screen. The object type and value range are determined by the data type set in the parameters. It supports data information in 1bit, 1byte percentage, 1byte integer, 2byte integer, and 2byte floating-point types. For example, the 1bit type can be used to dynamically describe the status of human					

presence, switch locks, open/close windows, and power switches. This function cannot be bound to mechanical buttons.

6.6.2 "Air conditioner control" Communication object

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
371	Page 1 - 1	Locking object			1 bit	C	-	W	-	-	enable	低
372	Page 1 - 1	Power on/off			1 bit	C	-	-	T	-	switch	低
373	Page 1 - 1	Current setpoint adjustment			2 bytes	C	-	-	T	-	temperature (°C)	低
375	Page 1 - 1	Fan speed			1 byte	C	-	-	T	-	percentage (0..100%)	低
376	Page 1 - 1	Vanes swing (1-swing,0-stop)			1 bit	C	-	-	T	-	start/stop	低
378	Page 1 - 1	Control mode			1 byte	C	-	-	T	-	HVAC control mode	低
379	Page 1 - 1	Power on/off, status			1 bit	C	-	W	T	U	switch	低
380	Page 1 - 1	External temperature sensor			2 bytes	C	-	W	T	U	temperature (°C)	低
381	Page 1 - 1	Current temperature setpoint, status			2 bytes	C	-	W	T	U	temperature (°C)	低
382	Page 1 - 1	Fan speed, status			1 byte	C	-	W	T	U	percentage (0..100%)	低
383	Page 1 - 1	Vanes swing (1-swing,0-stop), status			1 bit	C	-	W	T	U	start/stop	低
385	Page 1 - 1	Control mode, status			1 byte	C	-	W	T	U	HVAC control mode	低
386	Page 1 - 1	Timer			1 bit	C	-	W	-	-	enable	低
387	Page 1 - 1	Scene			1 byte	C	-	W	-	-	scene control	低

NO.	Object Function	Name	Data Type	Flag	DPT
371	**Locking object**	**Page 1 - 1**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to lock/unlock the air conditioning function. Telegrams: 0 - Lock 1 - Unlock					
372	**Power on/off**	**Page 1 - 1**	**1bit**	**C,T**	**1.001 switch**
The communication object is used to send the power on/off telegram of air condition, to control air condition power on/off on the KNX bus.					
373	**Current setpoint adjustment**	**Page 1 - 1**	**1byte 2bytes**	**C,T**	**5.010 counter pulses 9.001 temperature**
The communication object is used to adjust setpoint temperature via the bus, and send					

telegram value to the bus.					
375	**Fan speed**	**Page 1 -1**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
The communication object is used to send control telegram of each fan speed to the bus. Telegram value is determined by parameter setting datatype.					
376	**Vanes swing** **(1-swing,0-stop)**	**Page 1 -1**	**1bit**	**C,T**	**1.010 start/stop**
This communication object is visible when "Air conditioner (with swing)" is selected.Used to send telegram controlling vanes swing to the bus. Telegrams: 1——swing 0——stop					
378	**Control mode**	**Page 1 -1**	**1byte**	**C,T**	**20.105 HVAC control mode**
The communication object is used to send control telegram of each air condition mode to the bus. Different telegram means different control mode. 0-Auto, 1- Heating, 3-Cooling, 9-Fan, 14-Dehumidity, other reserved.					
379	**Power on/off, status**	**Page 1 -1**	**1bit**	**C,W,T,U**	**1.001 switch**
The communication object is used to receive the power on/off telegram of air condition from the bus, and feedback to screen display. Telegrams: 1——On 0——Off					
380	**External temperature sensor**	**Page 1 - 1**	**2bytes**	**C,W,T,U**	**9.001 temperature**
The communication object is used to receive the room temperature from the bus, and send read request cyclically, and feedback to screen display.					

381	**Current temperature setpoint, status**	**Page 1 -1**	**1byte 2bytes**	**C,W,T, U**	**5.010 counter pulses 9.001 temperature**
The communication object is used to receive the current setpoint temperature from the bus, and feedback to screen display.					
382	**Fan speed, status**	**Page 1 -1**	**1byte**	**C,W,T, U**	**5.001 percentage 5.100 fan stage**
The communication object is used to receive the current fan speed from the bus, and feedback to screen display. Telegram value is determined by parameter setting datatype.					
383	**Vanes swing (1-swing,0-stop), status**	**Page 1 - 1**	**1bit**	**C,W,T, U**	**1.010 start/stop**
This communication object is visible when "Air conditioner (with swing)" is selected. Used to receive vanes swing status from the bus. Telegrams: 1——Swing 0——Stop					
385	**Control mode, status**	**Page 1 -1**	**1byte**	**C,W,T, U**	**20.105 HVAC control mode**
The communication object is used to receive the current control mode from the bus, and feedback to screen display. Different telegram means different control mode. 0-Auto, 1- Heating, 3-Cooling, 9-Fan, 14-Dehumidity, other reserved.					
386	**Timer**	**Page 1 -1**	**1bit**	**C,W**	**1.003 enable**
The communication object is visible when timer function enabled. Used to turn on/off the timing via the bus.Telegrams: 1-On 2-Off					
387	**Scene**	**Page 1 -1**	**1byte**	**C,W**	**18.001 scene control**

When the scene function is enabled, the communication object is visible. It is used to call/save scenes via the bus.

6.6.3 "Room temperature unit control" Communication object

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
371	Page 1 - 1	Locking object			1 bit	C	-	W	-	-	enable	低
372	Page 1 - 1	Power on/off			1 bit	C	-	-	T	-	switch	低
373	Page 1 - 1	Current setpoint adjustment			2 bytes	C	-	-	T	-	temperature (°C)	低
374	Page 1 - 1	Current setpoint adjustment(1bit)			1 bit	C	-	-	T	-	step	低
375	Page 1 - 1	Fan speed			1 byte	C	-	-	T	-	fan stage (0..255)	低
376	Page 1 - 1	Fan automatic operation			1 bit	C	-	-	T	-	enable	低
377	Page 1 - 1	Heating/Cooling mode			1 bit	C	-	-	T	-	cooling/heating	低
378	Page 1 - 1	Operation mode			1 byte	C	-	-	T	-	HVAC mode	低
379	Page 1 - 1	Power on/off, status			1 bit	C	-	W	-	-	switch	低
380	Page 1 - 1	External temperature sensor			2 bytes	C	-	W	T	U	temperature (°C)	低
381	Page 1 - 1	Current temperature setpoint, status			2 bytes	C	-	W	T	U	temperature (°C)	低
382	Page 1 - 1	Fan speed, status			1 byte	C	-	W	T	U	fan stage (0..255)	低
383	Page 1 - 1	Fan automatic operation, status			1 bit	C	-	W	T	U	enable	低
384	Page 1 - 1	Heating/Cooling mode, status			1 bit	C	-	W	T	U	cooling/heating	低
385	Page 1 - 1	Operation mode, status			1 byte	C	-	W	T	U	HVAC mode	低
386	Page 1 - 1	Timer			1 bit	C	-	W	-	-	enable	低
387	Page 1 - 1	Scene			1 byte	C	-	W	-	-	scene control	低

NO.	Object Function	Name	Data Type	Flag	DPT
371	**Locking object**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to lock/unlock the room temperature unit control function. Telegrams: 0 - Lock 1 - Unlock					
372	**Power on/off**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.001 switch**
The communication object is used to send the power on/off telegram of RTC, to control RTC power on/off on the KNX bus. The system needs to return to the status before voltage failure when voltage recovery,					

and send status request of function point: control mode, operation mode, fan speed, setpoint temperature, external temperature sensor.					
373	**Current setpoint adjustment**	**Page 1 - {{Icon 1}}**	**2bytes**	**C,T**	**9.001 temperature**
The communication object is used to send the power on/off telegram of RTC, to control RTC power on/off on the KNX bus. The system needs to return to the status before voltage failure when voltage recovery, and send status request of function point: control mode, operation mode, fan speed, setpoint temperature, external temperature sensor.					
374	**Current setpoint adjustment(1bit)**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.007 step**
The communication object is visible when object datatype of setpoint temperature adjustment is 1 bit. Through the screen to adjust setpoint temperature, 1 bit object suitable for relatively adjusts, and sent telegram value to the bus.					
375	**Fan speed**	**Page 1 - {{Icon 1}}**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
The communication object is used to send control telegram of each fan speed to the bus. Telegram value is determined by parameter setting datatype.					
376	**Fan automatic operation**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
The communication object is used to send control telegram of fan automatic operation to the bus. Telegrams: 1——Activate auto 0——Cancel auto					
377	**Heating/Cooling mode**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.100 cooling/heating**
The communication object is used to send telegram for switching cooling and heating functions to the bus. Telegrams:					

1——Heating 0——Cooling					
378	**Operation mode**	**Page 1 - {{Icon 1}}**	**1byte**	**C,T**	**20.102 HVAC mode**
The communication object is used to send the telegram of the room operation mode to the bus. Different telegram means different control mode: 1-Comfort, 2-Standby, 3-Economy, 4-Protection, other reserved.					
379	**Power on/off, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.001 switch**
The communication object is used to receive the power on/off telegram of RTC from the bus, and feedback to screen display. Telegrams: 1——On 0——Off					
380	**External temperature sensor**	**Page 1 - {{Icon 1}}**	**2bytes**	**C,W,T,U**	**9.001 temperature**
The communication object is visible when the external sensor is selected.Used to receive the room temperature from the bus, and send read request cyclically, and feedback to screen display.					
381	**Current temperature setpoint, status**	**Page 1 - {{Icon 1}}**	**2bytes**	**C,W,T,U**	**9.001 temperature**
The communication object is used to receive the current setpoint temperature from the bus, and feedback to screen display.					
382	**Fan speed, status**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W,T,U**	**5.001 percentage** **5.100 fan stage**
The communication object is used to receive the current fan speed from the bus, and feedback to screen display. Telegram value is determined by parameter setting datatype.					
383	**Fan automatic operation, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W,T,U**	**1.003 enable**
The communication object is used to receive feedback status of fan automatic operation from the bus. Telegrams:					

1——Automatic 0——Cancel automatic					
384	**Heating/Cooling mode, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W,T,U**	**1.100 cooling/heating**
The communication object is used to receive the heating and cooling status from the bus, and feedback to screen display. Telegrams: 1 ——Heating 0 ——Cooling					
385	**Operation mode, status**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W,T,U**	**20.102 HVAC mode**
The communication object is used to receive the telegram of RTC operation mode from the bus. Different telegram means different control mode: 1-Comfort, 2-Standby, 3-Economy, 4-Protection, other reserved.					
386	**Timer**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
The communication object is visible when timer function enabled. Used to turn on/off the timing via the bus.					
387	**Scene**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W**	**18.001 scene control**
When the scene function is enabled, the communication object is visible. It is used to call/save the scene via the bus.					

6.6.4 "Ventilation system control" Communication object

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
371	Page 1 - 1	Locking object			1 bit	C	-	W	-	-	enable	低
372	Page 1 - 1	Power on/off			1 bit	C	-	-	T	-	switch	低
373	Page 1 - 1	Filter timer counter			2 bytes	C	-	-	T	-	time (h)	低
374	Page 1 - 1	Filter alarm			1 bit	C	-	-	T	-	alarm	低
375	Page 1 - 1	Fan speed			1 byte	C	-	-	T	-	percentage (0..100%)	低
376	Page 1 - 1	Fan automatic operation			1 bit	C	-	-	T	-	enable	低
377	Page 1 - 1	Heat recovery			1 bit	C	-	-	T	-	enable	低
379	Page 1 - 1	Power on/off, status			1 bit	C	-	W	-	-	switch	低
380	Page 1 - 1	Filter timer counter change			2 bytes	C	-	W	-	-	time (h)	低
382	Page 1 - 1	Fan speed, status			1 byte	C	-	W	-	-	percentage (0..100%)	低
383	Page 1 - 1	Fan automatic operation, status			1 bit	C	-	W	-	-	enable	低
384	Page 1 - 1	Heat recovery, status			1 bit	C	-	W	-	-	enable	低
386	Page 1 - 1	Filter timer reset			1 bit	C	-	W	-	-	reset	低
387	Page 1 - 1	Scene			1 byte	C	-	W	-	-	scene control	低

NO.	Object Function	Name	Data Type	Flag	DPT
371	**Locking object**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to lock/unlock the ventilation system control function. Telegrams: 0 - Lock 1 - Unlock					
372	**Power on/off**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.001 switch**
The communication object is used to send the power on/off telegram of ventilation to KNX bus. Telegrams: 1——On 0——Off					
373	**Filter timer counter**	**Page 1 - {{Icon 1}}**	**2bytes**	**C,T**	**7.007 time(h)**
The communication object is used to count the length of the filter. When the count value changes, it can be sent to the bus.The unit of filter time counter is in hours.					
374	**Filter alarm**	**Page 1 - {{Icon**	**1bit**	**C,T**	**1.005 alarm**

		1}}			
When the filter is used for longer than the set value, the communication object issues an alarm to remind the user to replace the filter. Telegram value: 1——Alarm 1—— No alarm					
375	**Fan speed**	**Page 1 - {{Icon 1}}**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
This communication object is used to control the wind speed through the screen and send control messages for each speed setting to the bus. The telegram values are determined by the data type set by the parameters.					
376	**Fan automatic operation**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
This communication object is used for automatic control of wind speed through screen activation and sends messages to the bus. Telegrams: 1 = Activated 0 = Deactivated					
377	**Heat recovery**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
The communication object is visible when the "Heat recovery function" parameter is enabled.Used to send the control command of on/off ventilation system heat recovery, and the status feedback value can also be received. Telegram values: 1——On 0——Off					
379	**Power on/off, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.001 switch**
The communication object is used to receive the power on/off telegram of ventilation from the bus.					
380	**Filter timer counter**	**Page 1 - {{Icon**	**2byte**	**C,W**	**7.007 time(h)**

	change	**1}}**	**s**		
The communication object is visible when the"Filter timer counter" parameter is enabled.Used to modify the time length of the filter usage by the bus.					
382	**Fan speed, status**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W**	**5.001 percentage** **5.100 fan stage**
The communication object is used to receive the status feedback of the fan speed. The specific telegram value corresponding to each fan speed is defined by the parameter.					
383	**Fan automatic operation, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to receive status feedback from automatic fan speed control to the screen.					
384	**Heat recovery, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
The communication object is used to receive the status feedback of heat recovery, and is updated to screen display.					
386	**Filter timer reset**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.015 reset**
The communication object is visible if the parameter "Filter timer counter" is enabled.Used to reset the filter time, and after the filter is reset, the filter time is used to start counting again. Telegram value: 1——Reset					
387	**Scene**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W**	**18.001 scene control**
When the scene function is enabled, the communication object is visible. It is used to call/save the scene via the bus.					

6.6.5 "Audio control"Communication object

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
352	Page 1 - Icon 1	Locking object			1 bit	C	-	W	-	-	enable	Low
353	Page 1 - Icon 1	Power on/off			1 bit	C	-	-	T	-	switch	Low
354	Page 1 - Icon 1	Play=1/Pause=0			1 bit	C	-	-	T	-	start/stop	Low
355	Page 1 - Icon 1	Next track=1/Previous track=0			1 bit	C	-	-	T	-	step	Low
356	Page 1 - Icon 1	Absolute volume			1 byte	C	-	-	T	-	percentage (0..100%)	Low
359	Page 1 - Icon 1	Play mode			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
360	Page 1 - Icon 1	Power on/off, status			1 bit	C	-	W	-	-	switch	Low
361	Page 1 - Icon 1	Play=1/Pause=0, status			1 bit	C	-	W	T	U	start/stop	Low
363	Page 1 - Icon 1	Volume, status			1 byte	C	-	W	T	U	percentage (0..100%)	Low
364	Page 1 - Icon 1	Mute, status			1 bit	C	-	W	T	U	enable	Low
365	Page 1 - Icon 1	Play mode, status			1 byte	C	-	W	T	U	counter pulses (0..255)	Low
366	Page 1 - Icon 1	Track name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
367	Page 1 - Icon 1	Album name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
368	Page 1 - Icon 1	Artist name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
354	Page 1 - Icon 1	Play			1 bit	C	-	-	T	-	enable	Low
358	Page 1 - Icon 1	Pause			1 bit	C	-	-	T	-	enable	Low
361	Page 1 - Icon 1	Play, status			1 bit	C	-	W	T	U	enable	Low
362	Page 1 - Icon 1	Pause, status			1 bit	C	-	W	T	U	enable	Low

序号	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
371	Page 1 - 1	Locking object			1 bit	C	-	W	-	-	enable	低
372	Page 1 - 1	Power on/off			1 bit	C	-	-	T	-	switch	低
373	Page 1 - 1	Play=1/Pause=0			1 bit	C	-	-	T	-	start/stop	低
373	Page 1 - 1	Play			1 bit	C	-	-	T	-	enable	低
377	Page 1 - 1	Pause			1 bit	C	-	-	T	-	enable	低
374	Page 1 - 1	Next track=1/Previous track=0			1 bit	C	-	-	T	-	step	低
375	Page 1 - 1	Volume+=1/Volume-=0			1 bit	C	-	-	T	-	step	低
375	Page 1 - 1	Absolute volume			1 byte	C	-	-	T	-	percentage (0..100%)	低
376	Page 1 - 1	Mute			1 bit	C	-	-	T	-	enable	低
378	Page 1 - 1	Play mode			1 byte	C	-	-	T	-	counter pulses (0..255)	低
379	Page 1 - 1	Power on/off, status			1 bit	C	-	W	-	-	switch	低
380	Page 1 - 1	Play=1/Pause=0, status			1 bit	C	-	W	T	U	start/stop	低
380	Page 1 - 1	Play, status			1 bit	C	-	W	T	U	enable	低
381	Page 1 - 1	Pause, status			1 bit	C	-	W	T	U	enable	低
382	Page 1 - 1	Volume, status			1 byte	C	-	W	T	U	percentage (0..100%)	低
383	Page 1 - 1	Mute, status			1 bit	C	-	W	T	U	enable	低
384	Page 1 - 1	Play mode, status			1 byte	C	-	W	T	U	counter pulses (0..255)	低
385	Page 1 - 1	Track name			14 bytes	C	-	W	T	U	Character String (ISO 88...	低
386	Page 1 - 1	Album name			14 bytes	C	-	W	T	U	Character String (ISO 88...	低
387	Page 1 - 1	Artist name			14 bytes	C	-	W	T	U	Character String (ISO 88...	低

NO.	Object Function	Name	Data Type	Flag	DPT
371	**Locking object**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.003 enable**
This communication object is used to lock/unlock the background music feature.					

Telegram values: 0 - Lock 1 - Unlock					
372	**Power on/off**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.001 switch**
The communication object is visible when power on/off is enabled. Used to send the telegram to the bus. Telegrams: 1——On 0——Off When the switch function is not activated, the system needs to power up and restore to the state before the power loss, and when powering up the bus, it is also necessary to send status requests for the following function points: playback status, mute, volume percentage, playback mode, song name, artist, and album name. When the switch function is activated, there is no need to send request status messages; the default behavior for power-up and restart after download is to be powered off.					
373	**Play=1/Pause=0**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.010 start/stop**
373	**Play**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
377	**Pause**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
The communication object is visible when control play/pause with one object. Used to play/stop the music in the audio module. Telegrams: 1——Play music 0——Pause playing music When two objects are independent, the effective telegram value is 1.					
374	**Next track=1/Previous track=0**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.007 step**
The communication object is visible when control next track/previous track with one					

object. Used to switch the playing track of the audio module, to switch the previous track/the next track. Telegrams: 1——Play the next track 0——Play the previous track					
375	**Volume+=1/Volume-=0**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.007 step**
375	**Absolute volume**	**Page 1 - {{Icon 1}}**	**1byte**	**C,T**	**5.001 percentage** **5.004 percentage**
When 1bit, the communication object is used to adjust volume of the audio module. Telegrams: 1——Increase volume 0——Decrease volume When 1byte, the communication object is used to adjust volume of the audio module. Telegrams value is according to different object types: 0..100 / 0..255					
376	**Mute**	**Page 1 - {{Icon 1}}**	**1bit**	**C,T**	**1.003 enable**
The communication object is visible when mute is enabled. Used to control mute of audio module via the screen. Telegrams: 1——Mute 0——Cancel mute					
378	**Play mode**	**Page 1 - {{Icon 1}}**	**1byte**	**C,T**	**5.010 counter pulses**
The communication object is used to send control telegram of the audio module play mode, different mode telegrams are preset by parameters.					
379	**Power on/off, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W**	**1.001 switch**
The communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.					
380	**Play=1/Pause=0,**	**Page 1 -**	**1bit**	**C,W,T,**	**1.010 start/stop**

	status	**{{Icon 1}}**		**U**	
380	**Play, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W,T, U**	**1.003 enable**
381	**Pause, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W,T, U**	**1.003 enable**
The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display. The communication object is visible when control play/pause with one object. Used to play/stop the music in the audio module. Telegrams: 1——Play music 0——Pause playing music When two objects are independent, the effective telegram value is 1.					
382	**Volume, status**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W,T, U**	**5.001 percentage** **5.004 percentage**
When 1byte, the communication object is used to receive the volume status in audio module, and feed back to screen display. Telegrams value is according to different object types: 0..100 / 0..255					
383	**Mute, status**	**Page 1 - {{Icon 1}}**	**1bit**	**C,W,T, U**	**1.003 enable**
The communication object is visible when mute is enabled. Used to receive the mute status of the audio module from the bus, and feed back to screen display.					
384	**Play mode, status**	**Page 1 - {{Icon 1}}**	**1byte**	**C,W,T, U**	**5.010 counter pulses**
The communication object is used to receive the status feedback of play mode in the audio module, the receiving telegrams should be preset by parameters before the display status on the screen can be updated.					
385	**Track name**	**Page 1 - {{Icon 1}}**	**14bytes**	**C,W,T, U**	**16.001 character string (ISO 8859-1)**
The communication object is used to receive the track name via the bus, and display on the screen.					
386	**Album name**	**Page 1 -**	**14byt**	**C,W,T,**	**16.001 character string (ISO**

		{{Icon 1}}	**es**	**U**	**8859-1)**
The communication object is used to receive the album name via the bus, and display on the screen.					
387	**Artist name**	**Page 1 - {{Icon 1}}**	**14bytes**	**C,W,T,U**	**16.001 character string (ISO 8859-1)**
The communication object is used to receive the artist name via the bus, and display on the screen.					

6.7 "Logic" Communication object

6.7.1 "AND/OR/XOR" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input a			1 bit	C	-	W	T	U	boolean	Low
12	1st Logic	Input b			1 bit	C	-	W	T	U	boolean	Low
13	1st Logic	Input c			1 bit	C	-	W	T	U	boolean	Low
14	1st Logic	Input d			1 bit	C	-	W	T	U	boolean	Low
15	1st Logic	Input e			1 bit	C	-	W	T	U	boolean	Low
16	1st Logic	Input f			1 bit	C	-	W	T	U	boolean	Low
17	1st Logic	Input g			1 bit	C	-	W	T	U	boolean	Low
18	1st Logic	Input h			1 bit	C	-	W	T	U	boolean	Low
19	1st Logic	Logic result			1 bit	C	-	-	T	-	boolean	Low

NO.	Object Function	Name	Data Type	Flag	DPT
11/…/18	**Input x**	**{{1st Logic}}**	**1bit**	**C,W,T,U**	**1.002 boolean**
The communication object is used to receive the value of logical input Input x. The name in parentheses changes with the parameter "Description for logic function". If description is empty, display "1st Logic- {{...}}" by default. The same below.					
19	**Logic result**	**{{1st Logic}}**	**1bit**	**C,T**	**1.002 boolean**
The communication object is used to send the results of logical operation.					

6.7.2 "Gate forwarding" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Gate value select			1 byte	C	-	W	-	-	scene number	Low
12	1st Logic	Input A			1 bit	C	-	W	-	-	switch	Low
13	1st Logic	Input B			1 bit	C	-	W	-	-	switch	Low
14	1st Logic	Input C			1 bit	C	-	W	-	-	switch	Low
15	1st Logic	Input D			1 bit	C	-	W	-	-	switch	Low
16	1st Logic	Output A			1 bit	C	-	-	T	-	switch	Low
17	1st Logic	Output B			1 bit	C	-	-	T	-	switch	Low
18	1st Logic	Output C			1 bit	C	-	-	T	-	switch	Low
19	1st Logic	Output D			1 bit	C	-	-	T	-	switch	Low

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Gate value select**	**{{1st Logic}}**	**1byte**	**C,W**	**17.001 scene number**
The communication object is used to select the scene of logical gate forwarding.					
12/…/15	**Input x**	**{{1st Logic}}**	**1bit 4bit 1byte**	**C,W**	**1.001 switch 3.007 dimming control 5.010 counter pulses(0..255)**
The communication object is used to receive the value of the logic gate input Input x.					
16/../19	**Output x**	**{{1st Logic}}**	**1bit 4bit 1byte**	**C,T**	**1.001 switch 3.007 dimming control 5.010 counter pulses(0..255)**
The communication object is used to output the value forwarded by the logic gate. The output value is the same as the input value, but one input can be forwarded into one or more outputs, set by parameters.					

Table 6.8.2 "Gate forwarding" Communication object

6.7.3 "Threshold comparator" Communication object

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Threshold value input			4 bit	C	-	W	-	U	dimming control	Low

11	1st Logic	Threshold value input	1 byte	C	-	W	-	U	counter pulses (0..255)	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	pulses	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	2-byte signed value	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	2-byte float value	Low
11	1st Logic	Threshold value input	4 bytes	C	-	W	-	U	counter pulses (unsigned)	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	temperature (°C)	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	humidity (%)	Low
11	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	lux (Lux)	Low
19	1st Logic	Logic result	1 bit	C	-	-	T	-	boolean	Low

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Threshold value input**	**{{1st Logic}}**	**4bit** **1byte** **2bytes** **4bytes**	**C,W, U**	**3.007 dimming** **5.010 counter pulses** **7.001 pulses** **12.001 counter pulses** **8.x signed value** **9.x float value** **9.001 temperature** **9.007 humidity** **9.004 lux**
The communication object is used to input threshold value.					
19	**Logic result**	**{{1st Logic}}**	**1bit**	**C,T**	**1.002 boolean**
The communication object is used to send the results of logical operation. That is, the value that should be sent after the object input threshold is compared with the setting threshold value.					

Table 6.8.3 "Threshold comparator" Communication object

6.7.4 "Format convert" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1bit-bit0			1 bit	C	-	W	-	U	boolean	Low
12	1st Logic	Input 1bit-bit1			1 bit	C	-	W	-	U	boolean	Low
19	1st Logic	Output 2bit			2 bit	C	-	-	T	-	switch control	Low

"2x1bit --> 1x2bit"function: converts two 1bit values to a 2bit value, such as Input bit1=1, bit0=0--> Output 2bit=2

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1bit-bit0			1 bit	C	-	W	-	U	boolean	Low
12	1st Logic	Input 1bit-bit1			1 bit	C	-	W	-	U	boolean	Low
13	1st Logic	Input 1bit-bit2			1 bit	C	-	W	-	U	boolean	Low
14	1st Logic	Input 1bit-bit3			1 bit	C	-	W	-	U	boolean	Low
15	1st Logic	Input 1bit-bit4			1 bit	C	-	W	-	U	boolean	Low
16	1st Logic	Input 1bit-bit5			1 bit	C	-	W	-	U	boolean	Low
17	1st Logic	Input 1bit-bit6			1 bit	C	-	W	-	U	boolean	Low
18	1st Logic	Input 1bit-bit7			1 bit	C	-	W	-	U	boolean	Low
19	1st Logic	Output 1byte			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

"8x1bit --> 1x1byte"function: converts eight 1bit values to a 1byte value, such as Input bit2=1, bit1=1, bit0=1,other bits are 0--> Output 1byte=7

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
19	1st Logic	Output 2byte			2 bytes	C	-	-	T	-	pulses	Low

"1x1byte --> 1x2byte"function: converts one 1byte values to a 2byte value, such as Input 1byte=125--> Output 2byte=125.Although the value remains the same, the data type of the value is different.

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
12	1st Logic	Input 1byte-high			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
19	1st Logic	Output 2byte			2 bytes	C	-	-	T	-	pulses	Low

"2x1byte --> 1x2byte"function: converts two 1byte values to a 2byte value, such as Input 1byte-low = 255 ($FF), Input 1byte-high = 100 ($64) --> Output 2byte = 25855 ($64 FF)

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 2byte-low			2 bytes	C	-	W	-	U	pulses	Low
12	1st Logic	Input 2byte-high			2 bytes	C	-	W	-	U	pulses	Low
19	1st Logic	Output 4byte			4 bytes	C	-	-	T	-	counter pulses (unsigned)	Low

"2x2byte --> 1x4byte"function: converts two 2 byte values to a 4byte value, such as Input 2byte-low = 65530 ($FF FA), Input 2byte-high = 32768 ($80 00)--> Output 2byte = 2147549178 ($80 00 FF FA)

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
12	1st Logic	Output 1bit-bit0			1 bit	C	-	-	T	-	boolean	Low
13	1st Logic	Output 1bit-bit1			1 bit	C	-	-	T	-	boolean	Low
14	1st Logic	Output 1bit-bit2			1 bit	C	-	-	T	-	boolean	Low
15	1st Logic	Output 1bit-bit3			1 bit	C	-	-	T	-	boolean	Low
16	1st Logic	Output 1bit-bit4			1 bit	C	-	-	T	-	boolean	Low
17	1st Logic	Output 1bit-bit5			1 bit	C	-	-	T	-	boolean	Low
18	1st Logic	Output 1bit-bit6			1 bit	C	-	-	T	-	boolean	Low
19	1st Logic	Output 1bit-bit7			1 bit	C	-	-	T	-	boolean	Low

"1x1byte --> 8x1bit" function: converts one 1byte values to eight 1but value, such as Input 1byte=200 --> Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 2byte			2 bytes	C	-	W	-	U	pulses	Low
18	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
19	1st Logic	Output 1byte-high			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

"1x2byte --> 2x1byte"function: converts one 2byte values to two 2byte value, such as Input 2byte = 55500 ($D8 CC) --> Output 1byte-low = 204 ($CC), Output 1byte-high =216 ($D8)

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 4byte			4 bytes	C	-	W	-	U	counter pulses (unsigned)	Low
18	1st Logic	Output 2byte-low			2 bytes	C	-	-	T	-	pulses	Low
19	1st Logic	Output 2byte-high			2 bytes	C	-	-	T	-	pulses	Low

"1x4byte --> 2x2byte"function: converts one 4byte values to two 2byte value, such as Input 4byte = 78009500 ($04 A6 54 9C) --> Output 2byte-low = 21660 ($54 9C), Output 2byte-high =1190 ($04 A6)

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 3byte			3 bytes	C	-	W	-	U	RGB value 3x(0..255)	Low
17	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
18	1st Logic	Output 1byte-middle			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
19	1st Logic	Output 1byte-high			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

"1x3byte --> 3x1byte"function: converts one 3byte values to three 1byte value, such as Input 3byte = $78 64 C8--> Output 1byte-low = 200 ($C8) , Output 1byte-middle = 100 ($64) , Output 1byte-high =120 ($78)

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
12	1st Logic	Input 1byte-middle			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
13	1st Logic	Input 1byte-high			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
19	1st Logic	Output 3byte			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low

"3x1byte --> 1x3byte"function: converts three 1byte values to a 3byte value, such as Input 1byte-low = 150 ($96), Input 1byte-middle = 100 ($64), Input 1byte-high = 50 ($32)--> Output 3byte = $32 64 96

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Input …**	**{{1st Logic}}**	**1bit** **1byte** **2bytes** **3bytes** **4bytes**	**C,W,U**	**1.001 switch** **5.010 counter pulses(0..255)** **7.001 pulses** **232.600 RGB value 3x(0..255)** **12.001 counter pulses**
The communication object is used to input a value that needs to be converted.					
19	**Output …**	**{{1st Logic}}**	**1bit** **2bit** **1byte** **2bytes** **3bytes** **4bytes**	**C,T**	**1.001 switch** **2.001 switch control** **5.010 counter pulses(0..255)** **7.001 pulses** **232.600 RGB value 3x(0..255)** **12.001 counter pulses**
The communication object is used to output the converted value.					

Table 6.7.4 "Format convert" Communication object

6.7.5 "Gate function" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 bit	C	-	W	-	-	switch	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low

Input/Output - 1bit[On/Off]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 byte	C	-	W	-	-	percentage (0..100%)	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	percentage (0..100%)	Low

Input/Output - 1byte[0..100%]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 byte	C	-	W	-	-	counter pulses (0..255)	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

Input/Output - 1byte[0..255]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			2 bytes	C	-	W	-	-	temperature (°C)	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	temperature (°C)	Low

Input/Output - 2byte[Float]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			2 bytes	C	-	W	-	-	pulses	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	pulses	Low

Input/Output - 2byte[0..65535]

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Input**	**{{1st Logic}}**	**1bit 1byte 2bytes**	**C,W**	**1.001 switch 5.001 percentage 5.010 counter pulses 9.001 temperature 7.001 pulses**
The communication object is used to input a value that needs to gate filter.					
12	**Gate input**	**{{1st Logic}}**	**1bit**	**C,W**	**1.002 boolean**
The communication object is used to control the switch status of gate input. Input signal					

is allowed to pass when gate open, then output, and the current input status is still sent if there is a change; Can not pass when gate close.					
19	**Output**	**{{1st Logic}}**	**bit 1byte 2bytes**	**C,T**	**1.001 switch 5.001 percentage 5.010 counter pulses 9.001 temperature 7.001 pulses**
The communication object is used to output the value after gate filtering. Only when gate input status is open, output is available, defined by the object "Gate input".					

6.7.6 "Delay function" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 bit	C	-	W	-	-	switch	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low

Input/Output - 1bit[On/Off]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 byte	C	-	W	-	-	percentage (0..100%)	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	percentage (0..100%)	Low

Input/Output - 1byte[0..100%]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 byte	C	-	W	-	-	counter pulses (0..255)	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

Input/Output - 1byte[0..255]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			2 bytes	C	-	W	-	-	temperature (°C)	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	temperature (°C)	Low

Input/Output - 2byte[Float]

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			2 bytes	C	-	W	-	-	pulses	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	pulses	Low

Input/Output - 2byte[0..65535]

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Input**	**{{1st Logic}}**	**1bit 1byte**	**C,W**	**1.001 switch 5.001 percentage**

			2bytes		**5.010 counter pulses** **9.001 temperature** **7.001 pulses**
The communication object is used to input a value that needs to delay.					
19	**Output**	**{{1st Logic}}**	**1bit** **1byte** **2bytes**	**C,T**	**1.001 switch** **5.001 percentage** **5.010 counter pulses** **9.001 temperature** **7.001 pulses**
The communication object is used to output that needs to delay converted value, delay time is defined by the parameter.					

Table 6.7.6 "Delay function" Communication object

6.7.7 "Staircase lighting" Communication object

Numbe	Name	Object Function	Descript	Group Ad	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Trigger value			1 bit	C	-	W	-	-	trigger	Low
12	1st Logic	Light-on duration time			2 bytes	C	-	W	-	-	time (s)	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

NO.	Object Function	Name	Data Type	Flag	DPT
11	**Trigger value**	**{{1st Logic}}**	**1bit**	**C,W**	**1.017 trigger**
The communication object is used to receive the value to trigger staircase lighting.					
12	**Light-on duration time**	**{{1st Logic}}**	**2bytes**	**C,W**	**7.005 time(s)**
The communication object is used to modify the staircase light-on duration time, the modified range is referenced from the range defined by the parameter, take the limit value if exceeded.					

19	**Output**	**{{1st Logic}}**	**1bit** **1byte**	**C,T**	**1.001 switch** **5.010 counter pulses**
The communication object is used to output telegram values when triggered. Telegram value is determined by the parameter setting datatype.					

Table 6.7.7 "Staircase lighting" Communication object

6.8 "Scene Group" Communication object

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
83	Scene Group	Main scene trigger			1 byte	C	-	W	-	-	scene number	Low
84	1st Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	Low
85	1st Scene Group-Output 2	1bit value			1 bit	C	-	-	T	-	switch	Low
86	1st Scene Group-Output 3	1bit value			1 bit	C	-	-	T	-	switch	Low
87	1st Scene Group-Output 4	1bit value			1 bit	C	-	-	T	-	switch	Low
88	1st Scene Group-Output 5	1bit value			1 bit	C	-	-	T	-	switch	Low
89	1st Scene Group-Output 6	1bit value			1 bit	C	-	-	T	-	switch	Low
90	1st Scene Group-Output 7	1bit value			1 bit	C	-	-	T	-	switch	Low
91	1st Scene Group-Output 8	1bit value			1 bit	C	-	-	T	-	switch	Low
83	Scene Group	Main scene trigger			1 byte	C	-	W	-	-	scene number	低
84	1st Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
92	2nd Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
100	3rd Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
108	4th Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
116	5th Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
124	6th Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
132	7th Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
140	8th Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
83	Scene Group	Main scene trigger			1 byte	C	-	W	-	-	scene number	低
84	1st Scene Group-Output 1	1bit value			1 bit	C	-	-	T	-	switch	低
84	1st Scene Group-Output 1	1byte unsigned value			1 byte	C	-	-	T	-	counter pulses (0..255)	低
84	1st Scene Group-Output 1	HVAC mode			1 byte	C	-	-	T	-	HVAC mode	低
84	1st Scene Group-Output 1	2byte unsigned value			2 bytes	C	-	-	T	-	pulses	低
84	1st Scene Group-Output 1	Temperature			2 bytes	C	-	-	T	-	temperature (°C)	低
84	1st Scene Group-Output 1	RGB value			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	低
84	1st Scene Group-Output 1	RGBW value			6 bytes	C	-	-	T	-	RGBW value 4x(0..100%)	低

NO.	Object Function	Name	Data Type	Flag	DPT
83	**Main scene trigger**	**Scene Group**	**1byte**	**C,W**	**17.001 scene number**
This communication object triggers each output in the scene group to send a specific value to the bus by recalling the scene number. Telegrams: 0.. 63					
84	**1bit value** **1byte unsigned value** **HVAC mode** **2byte unsigned value** **Temperature** **RGB value** **RGBW value**	**1st Scene Group-{{Output x}}**	**1bit** **1byte** **2byte** **3byte** **6byte**	**C,T**	**1.001 switch** **5.010 counter pulses** **20.102 HVAC mode** **7.001 pulses** **9.001 temperature** **232.600 RGB value 3x(0..255)** **251.600 DPT_Colour_RGBW**
When a scene is recalled, the communication object is used to send the corresponding output value of the scene to the bus. If the output is not set to this scene, it will not be sent. A total of 8 scene groups can be set up, with 8 outputs per group.					

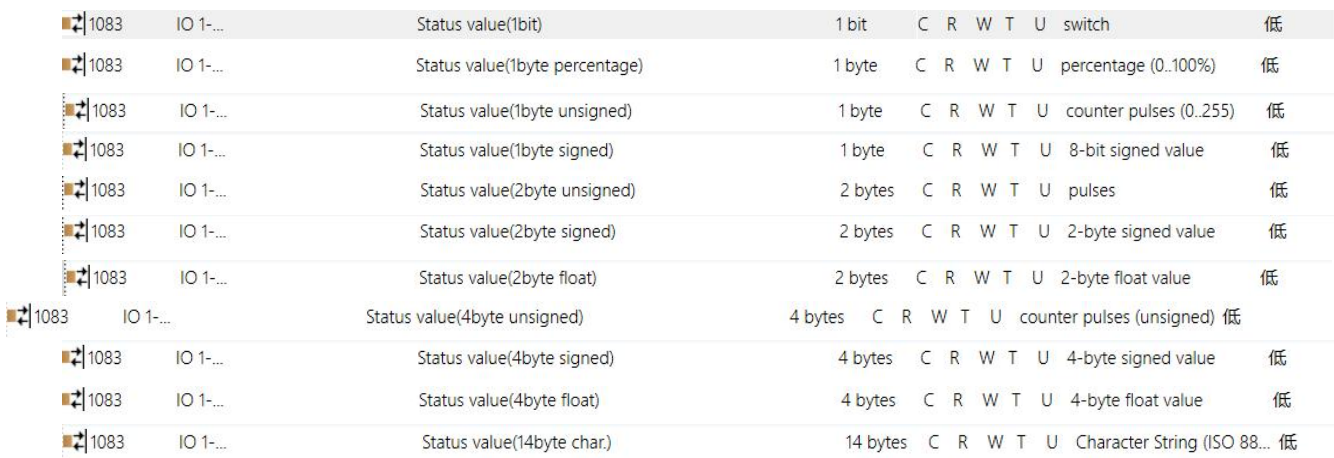
6.9 "Voice reminder" Communication object



NO.	Object Function	Name	Data	Flag	DPT

			Type		
1059	**Reminder acknowledge**	**Voice reminder 1-**	**1bit**	**C,T**	**1.016 acknowledge**
When the parameter "Send acknowledge..." is enabled, it becomes visible. When the user clicks to confirm the information on the screen, an acknowledgment message with value 1 is sent to the bus.					
1060	**Reminder message**	**Voice reminder 1-**	**14byte**	**C,W**	**16.001 character string (ISO 8859-1)**
14 Bytes string from bus is visible. It is used to display information on the screen via object input. When no value is initially received, the pop-up window will show as empty.					
1061	**Reminder**	**Voice reminder 1-**	**1bit 1byte**	**C,W,T,U**	**1.010 start/stop 5.010 counter pulses**
Used to receive voice playback signals: When 1bit: 1 means play voice, 0 means stop voice playback When 1byte: Playback is triggered according to the value set in the parameters					

6.10 "IO function" Communication object



NO.	Object Function	Name	Data	Flag	DPT

			Type		
1083	**Status value(1bit)**	**IO 1-**	**1bit**	**C,W,T,U,R**	**1.001 switch**
1083	**Status value(1byte percentage)**	**IO 1-**	**1byte**	**C,W,T,U,R**	**5.001 percentage(0..100%)**
1083	**Status value(1byte unsigned)**	**IO 1-**	**1byte**	**C,W,T,U,R**	**5.010 counter pulses**
1083	**Status value(1byte signed)**	**IO 1-**	**1byte**	**C,W,T,U,R**	**6.x signed value**
1083	**Status value(2byte unsigned)**	**IO 1-**	**2byte**	**C,W,T,U,R**	**7.001 pulses**
1083	**Status value(2byte signed)**	**IO 1-**	**2byte**	**C,W,T,U,R**	**8.x signed value**
1083	**Status value(2byte float)**	**IO 1-**	**2byte**	**C,W,T,U,R**	**9.x float value**
1083	**Status value(4byte unsigned)**	**IO 1-**	**4byte**	**C,W,T,U,R**	**12.001 counter pulses**
1083	**Status value(4byte signed)**	**IO 1-**	**4byte**	**C,W,T,U,R**	**13.x signed value**
1083	**Status value(4byte float)**	**IO 1-**	**4byte**	**C,W,T,U,R**	**14.x float value**
1083	**Status value(14byte char.)**	**IO 1-**	**14byte**	**C,W,T,U,R**	**16.001 character string (ISO 8859-1)**
This communication object will send specific values to the bus based on the Bluetooth parameter information it receives.					