Smart Touch Screen Panel

Manual -Ver2.1

TS0401

Content

1.Overview

This manual provides you with detailed technical information on the smart touch screen panel, including installation and programming details, and explains how to use the smart touch screen panel based on examples of practical use.
The smart touch screen panel can be mounted in a standard 86 bottom box for easy installation and removal.
Smart touch screen panel compared to the ordinary button panel, it can display the screen through the LCD, send a beep, set several functions in one and through the human-computer interaction interface can be very convenient, very clear operation.
Installed as a system together with other loads via EIB/ KNX bus.
Using the engineering design tool software ETS to set up and operate the entire system.

2. Product and Function Overview

2.1 Product Description

Smart touch screen panel is mainly used in building and home control system，installed as a system together with other devices on the bus. And the functions are simple and intuitive to operate, users can plan and systematically execute these functions according to their needs.
Smart touch screen panel with 11 normal functions and 8 general functions, each with 16 channels, and can be used to control switches, curtains, dimming, scenes, air conditioner, HVAC, fresh air, floor heating, background music and display air quality data, power parameter data, etc.
Smart touch screen Panel is a standard 86 bottom box mounting device. It is connected to the EIB / KNX system via the EIB bus and uses the engineering tool ETS software (version ETS4 or higher) for the assignment of physical and group addresses and the setting of parameters
The smart touch screen panel is connected directly to the bus via terminal blocks and requires 24 V DC auxiliary power.

2.2 Function Overview

Product name	Product type	Function description
Touch Screen Panel	TS0401	（1）4.0-inch color TFT，Resolution 720x720，Capacitive touch screen； （2）Home page navigation，quickly link to sub-functions based on navigation pages； （3）With on/off, dimming, curtain, scene and value sending functions； （4）RGB,RGBW dimming control and color temperature adjustment control； （5）Air conditioner function control，includes split and air conditioner gateway types； （6）HVAC functional control，Including fan coil control； （7）Floor heating control，Including timing strategy control for floor heating； （8）Fresh air system control，the control strategy of fresh air can be set according to the indoor air quality level； （9）Background music control； （10）Air quality data show，including AQI,PM2.5，PM10，HCHO，TVOC，CO2,etc. ； （11）Energy test data show，Including current, voltage, power, power factor, electrical energy, etc.； （12）16 timer function, realize various daily timing operations；

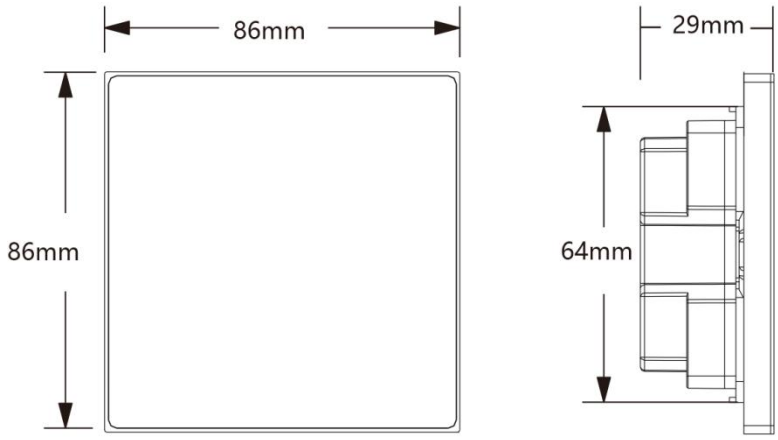
		(13) 8 scenes module function，Flexible to achieve a variety of scene control; (14) Time and date display; (15) Screen brightness adjustment; (16) Temperature, humidity and air quality display; (17) With secret and screen saver，optional clock for screensavers.

3.Detailed Parameters

Bus voltage	21-30V DC，power from KNX bus
Auxiliary power supply voltage	24 V DC
Bus current	< 12 mA
Auxiliary current	< 60mA
Bus power	< 360mW
Operating temperature	-5°...+45°C
Storage temperature	-25°...+55°C
Transport temperature	-25°...+70°C
Relative humidity	max 90%
Shell material	Metal +PC
Dimension (H x W x D)	86X86X29 mm
Weight (approx.)	Approx 150g
Installation method	86 bottom box

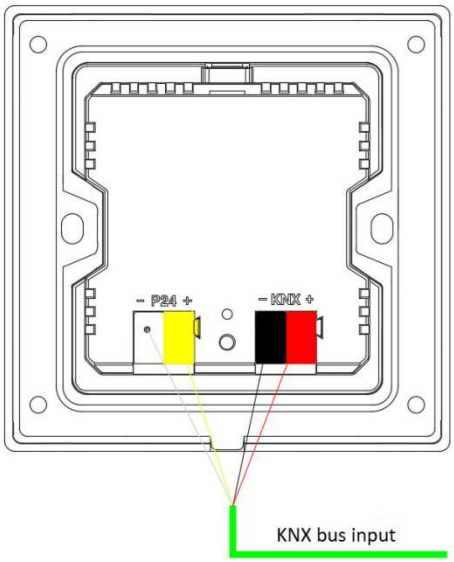
4.Dimensional Drawing and Exemplary Circuit Diagram

4.1 Dimension Drawing



Dimensional drawing

4.2 Exemplary Circuit Diagram



Exemplary circuit diagram

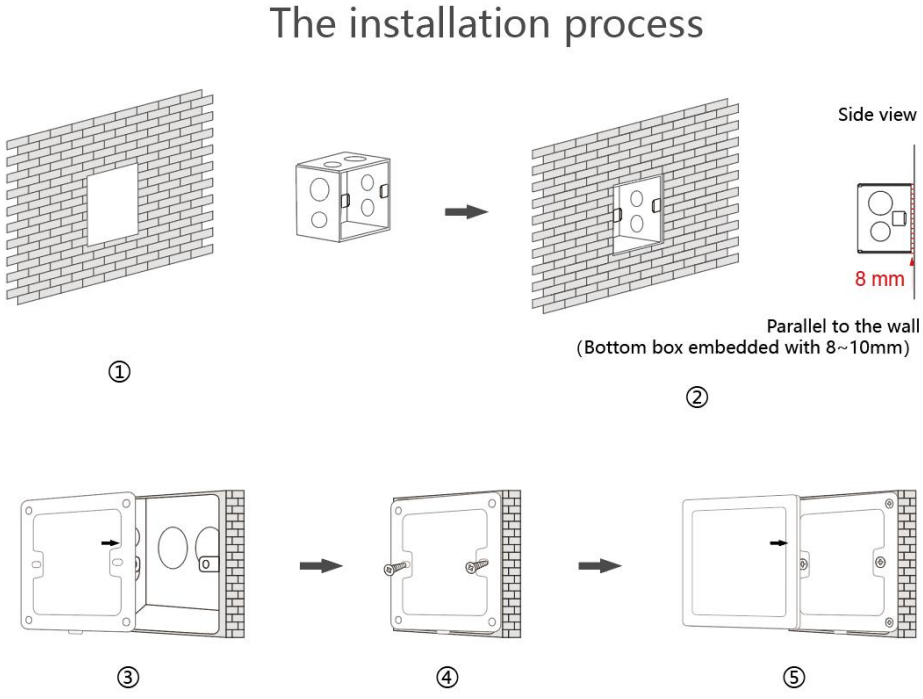
5. Installation Instructions

5.1 Product Installation Instructions

(1) Take off the iron piece embedded in the back cover of the smart touch screen panel and install it on the standard 86 bottom box, tighten the fixing screws;

(2) Align the smart touch screen panel to adsorb on the fixed iron sheet;

(3) The smart touch screen panel is a magnetically fixed product. To remove the product, please gently pry from the recessed area under the panel.



6 . Parameter Setting

6.1 Basic settings

The following is an example of setting parameters in ETS5.

Open the smart touch sceen Panel parameter setting interface in ETS5，as shown in Figure 6.1.1.

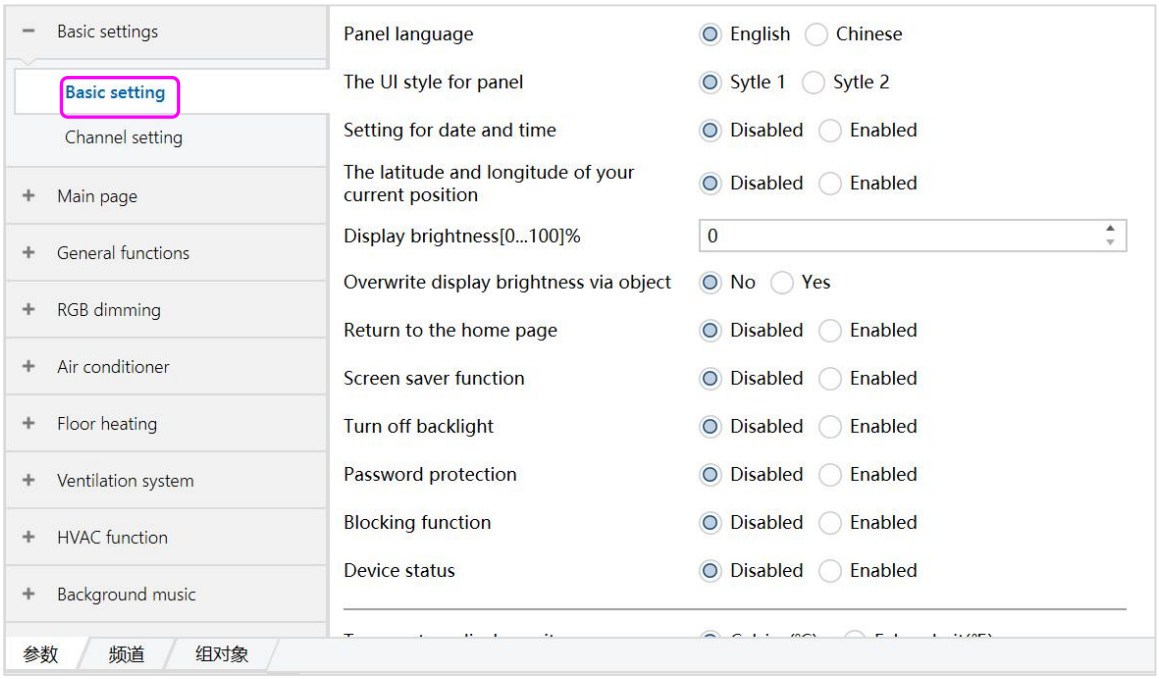


Figure 6.1.1

（1）Click on the option in the red box above to set the relevant parameters，as shown in Figure 6.1.1.

Parameter	Description
Panel language	Panel language，options：English, Chinese
UI style for panel	UI style for panel，options：Sytle 1, Sytle 2
Setting for date and time	Setting for date and time, options：Enabled, Disabled. When “Enabled” is selected，the following two parameters will appear: ① “Overwrite date and time via object”，options：No, Yes: ② “Send date and time to bus” options：No, Yes. When “yes” is selected，parameter “Cycle time for sending” can be set to: 1 seconds, 2 seconds.....120minutes.
The latitude and longitude of your current position	Not yet activated
Display brightness[0...100]%	Display brightness，options：0%,1%,2%.....100%。
Overwrite display brightness via object	Overwrite display brightness via object, options：Enabled, Disabled
Return to the home page	Return to the home page, options：Enabled, Disabled. When “Enabled” is selected，“Time to return after no operation” can be set to: 1 seconds , 2 seconds ..... 120 minutes.
Screen saver function	Screen saver function，options：Enabled, Disabled. When “Enabled” is selected，the

	following four parameters will appear: ① "Screen saver", options: Clock, Album; (Note: Album function is not yet activated) ② "Brightness for screen saver [0...100]% saver" can be set to: 0%, 1%, 2% ..... 100%; ③ "Time to enter the screensaver after no operation [0 ... 65535]s" can be set to: 0, 1, 2.....65535; ④" Enter screensaver via object" can be set to: No, Yes. When "yes" is selected, parameter "Activate value" will appear, options: On is activation, Off is activation
Turn off backlight	Turn off backlight, options: Enabled, Disabled. When "Enabled" is selected, "Time to turn off backlight[0..65535]s" can be set to: 0,1,2.....65535.
Turn off backlight via object	Turn off backlight via object, options: No, Yes. When "yes" is selected, parameter "Activate value" will appear, options: On is activation, Off is activation.
Password protection	Password protection, options: Enabled, Disabled, When "Enabled" is selected, the following four parameters will appear: ① "Password(number only, four Numbers)"; ② "Enter password protection via object", options: No, Yes. When "yes" is selected, parameter "Activate value" will appear, options: On is activation, Off is activation.
Blocking function	Blocking function, options: Enabled, Disabled. When "Enabled" is selected, the following two parameters will appear: ① "Blocking function", options: blocking = 1, unblocking =0, blocking = 0, unblocking =1; ② "Blocking value after voltage recovery", options: unblocking, blocking, as before voltage failure.
Device status	Device status, options: Enabled, Disabled. When "Enabled" is selected, the following parameter will appear: "Cycle time for sending" can be set to: 1 seconds, 2 seconds..... 120 minutes.
Temperature unit display	Temperature unit display, options: Celsius(°C), Fahrenheit(°F)
The source of temperature display	Display the source of temperature, options: Internal sensor, External sensor. (1) When "Internal sensor" is selected, the following parameters will appear: ① "Internal temperature Calibration [-100..100]*0.1℃" can be set to: -100, -101,-102.....100; ② "Overwrite temperature Calibration via object", options: No, Yes; ③ "Send internal temperature", options: No, yes. When "yes" is selected, the following parameter will appear: "Cycle time for sending temperature" can be set to: 1 seconds, 2 seconds..... 120 minutes; "Send value in the event of changes[5.255]*0.1(℃)" can be set to: 1 seconds ,2 seconds.....120minutes; ④ "Check error for internal temperature", options: No, yes. When "yes" is selected, the following parameter will appear: "Cycle time for sending error" can be set to: 1 seconds ,2 seconds.....120 minutes; (2) When "External sensor" is selected, the following parameters will appear: ① "Monitoring period for External temperature(min)" can be set to: 0.1.2.....255; ② "Read external temperature after monitor period expire", options: No, Yes; ③ "The source of humidity display", options: Internal sensor, External sensor:
The source of humidity display	The source of humidity display, options: Internal sensor, External sensor. When "Internal sensor" is selected, the following parameters will appear: "Send internal humidity", options: No, yes. When "yes" is selected, the following parameter will appear: ① "Cycle time for sending humidity", can be set to: 1 seconds ,2 seconds.....120 minutes;② "Send value in the event of changes[1..100]%", can be set to: 1,2,3.....100;
Temperature display for main page	Temperature display for main page, options: Enabled, Disabled

Humidity display for main page	Humidity display for main page，options：Enabled, Disabled
Air quality 1 display for main page	Air quality 1 display for main page，options：Enabled, Disabled. When "Enabled" is selected, the following parameter will appear：①Channel select (Air quality 1 display), options：channel 1 ,channel 2,channel3……channel 16；② Item select (Air quality 2 display)，options：item1,item2,item2……item9
Air quality 2 display for main page	Air quality 2 display for main page，options：Enabled, ,Disabled. When "Enabled" is selected, the following parameters will appear：①Channel select (Air quality 2 display)，options：channel 1 ,channel 2,channel3……channel 16；②Item select (Air quality 2 display)，options：item1,item2,item2……item9
Air quality 3 display for main page	Air quality 3 display for main page，options：Enabled, Disabled. When "Enabled" is selected, the following parameter will appear：①Channel select (Air quality 3 display)，options：channel 1 ,channel 2,channel3……channel 16；②Item select (Air quality 3 display)，options：item1,item2,item2……item9
Setting for reading object	Setting for reading object，options：Enabled, Disabled. When "Enabled" is selected, the following parameters will appear：① "Delay time for reading at voltage recovery(*0.1s)" can be set to：0,1,2,3……255；② "The time between each reading telegram(0.1s)" can be set to：0,1,2,3……255；③ "Setting reading time when it's running normally"，options：Disabled, Periodic reading, Read at specified time. ④When "Periodic reading" is selected, the parameter "The time for periodic reading" can be set to：10min,15min……48h;⑤When "Read at specified time" is selected, the parameter "The time point for reading(hour)" can be set to：0,1,2……23； "The time point for reading(minute)" can be set to：0,1,2……59；

（2）Click on the option in the red box below to set the relevant parameters of Channel1~Channe16, as shown in Figure 6.1.2,

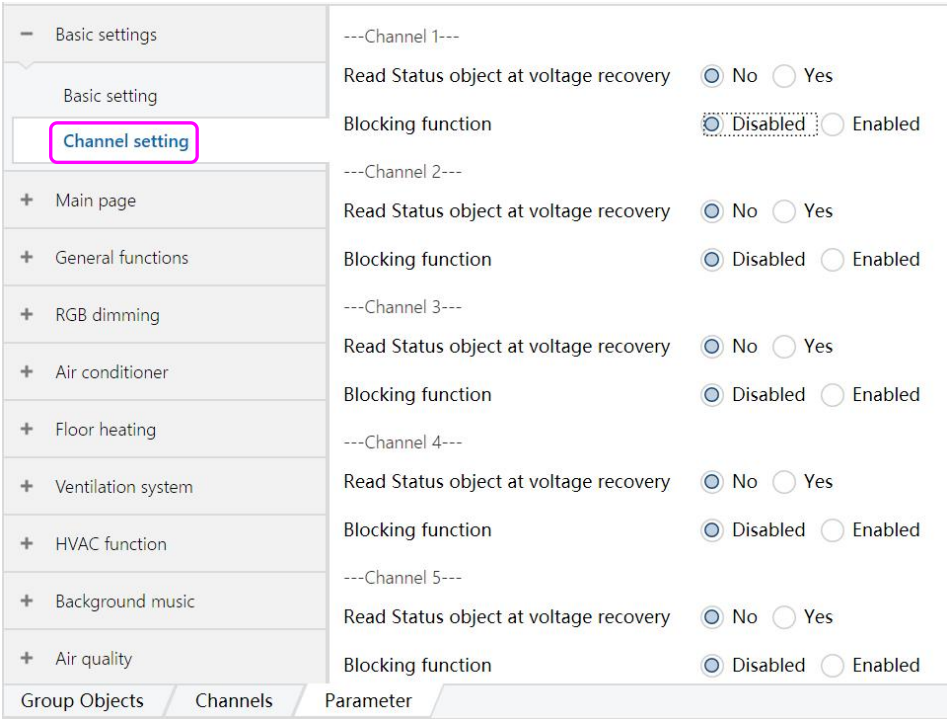


Figure 6.1.2

1. Read Status object at voltage recovery, options：No,Yes；

2 .Blocking function, options：Enabled, Disabled. When “Enabled” is selected, the following parameters will appear：① “Blocking function ”，options：blocking = 1, unblocking =0; blocking = 0, unblocking =1 ② “Blocking value after voltage recovery ”，options：unblocking, blocking, as before voltage failure. The options in the red box as shown in Figure 6.1.3 are displayed.

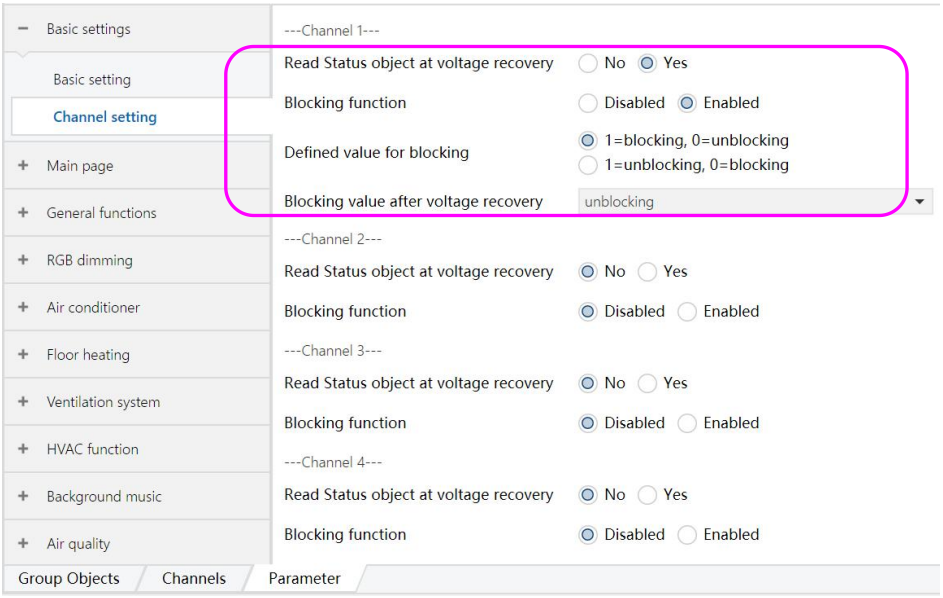


Figure 6.1.3

6.2 Main page

（1）Click the option in the red box below to set the relevant parameters，as shown in Figure 6.2.1

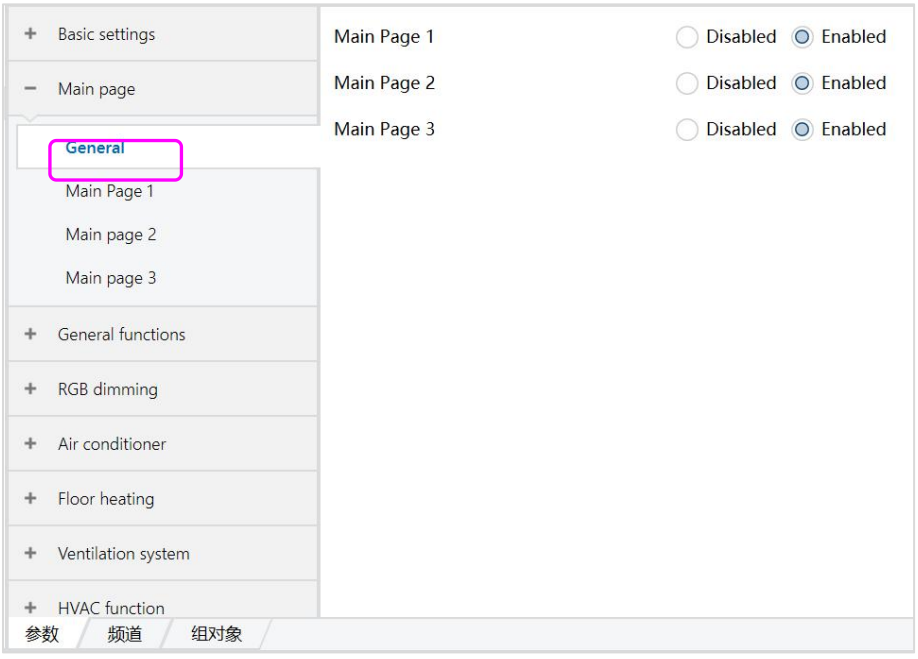


Figure 6.2.1

Click the General option, the parameter "Main page1-Main page3" appears, and three main pages can be selected. When "Enabled" is selected, the options in the red box are shown as in Figure 6.2.2:

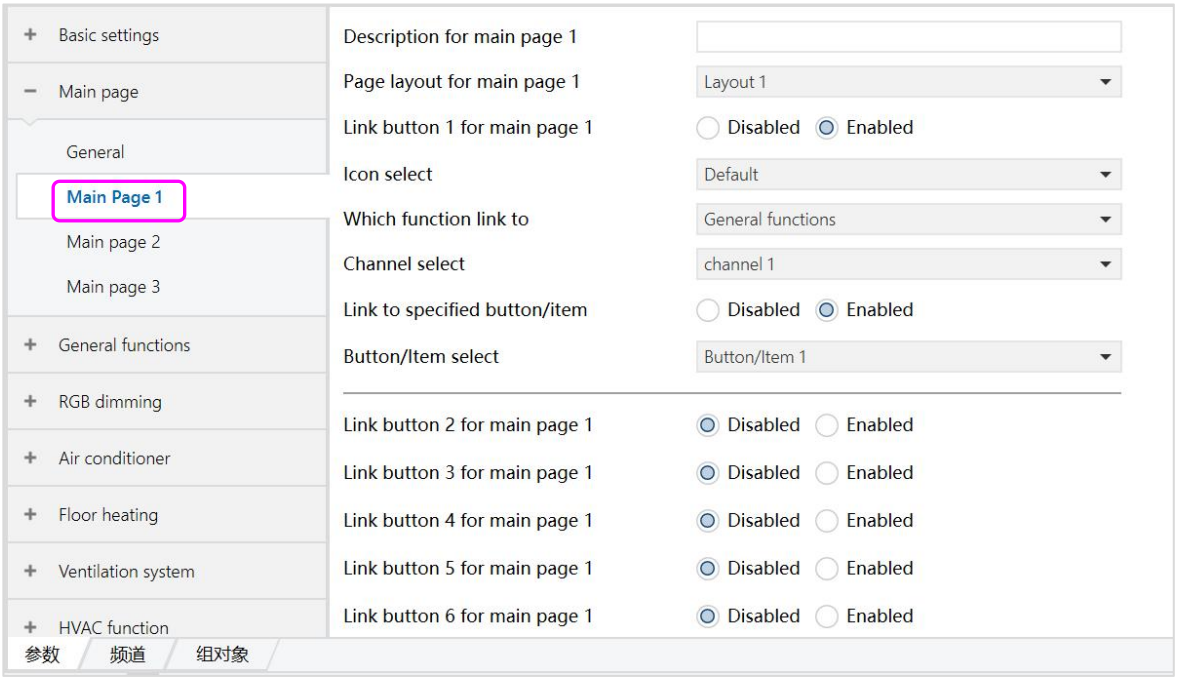


Figure 6.2.2

(2) Click the options in the red box above to set the relevant parameters, as shown in Figure 6.2.2

Parameter	Description
Description for main page 1	Description for main page 1, maximum input content allowed 24 bytes (8 chinese characters).
Page layout for main page 1	Page layout for main page 1, options: Layout 1, Layout 2, Layout 3
Link button 1 for main page 1	Link button 1 for main page 1, options: Enabled, Disabled. When "Enabled" is selected, the following parameters will appear: ① "Icon select" can be set to: Default, Icon1, Icon2, Icon3 ……Icon30; ② "Which function link to" can be set to: General functionsl, RGB dimming, Air conditioner, Floor heating, Ventilation system, HVAC, Air quality, Energy data, Background music. ③ "Channel selest" can be set to: channel 1, channel 2, channel 3…… channel 16; ③When "Channel select" is selected as General functions, Air quality, Energy data, the: parameter "Link to specified button/item" will appear, options: Enabled, Disabled. When "Enabled" is selected, the following parameters will appear: "Button/Item select" can be set to: Button/Item1,Button/Item 2,Button/Item 3……Button/Item 12;
Link button X for main page Y(X=1~16,Y=1~3), the content is the same as the above description.	

6.3 General functions

(1) Click the option in the red box below to set the relevant parameters, as shown in Figure 6.3.1

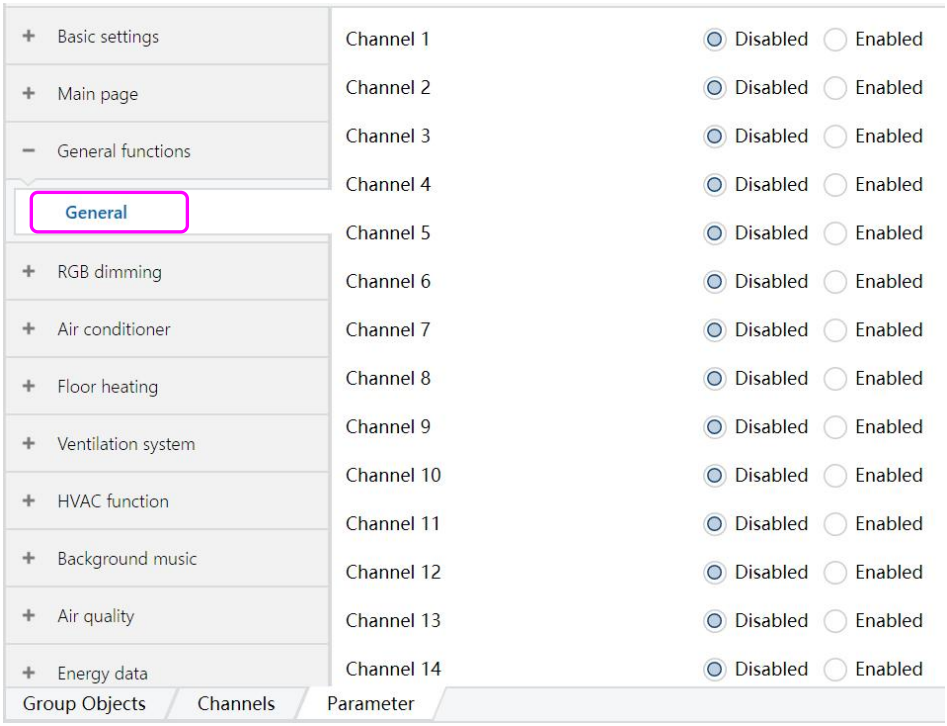


Figure 6.3.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 general function channels are available, for example, "Channel 1" . When "Enabled" is selected, the options in the red box are shown as in Figure 6.3.2:

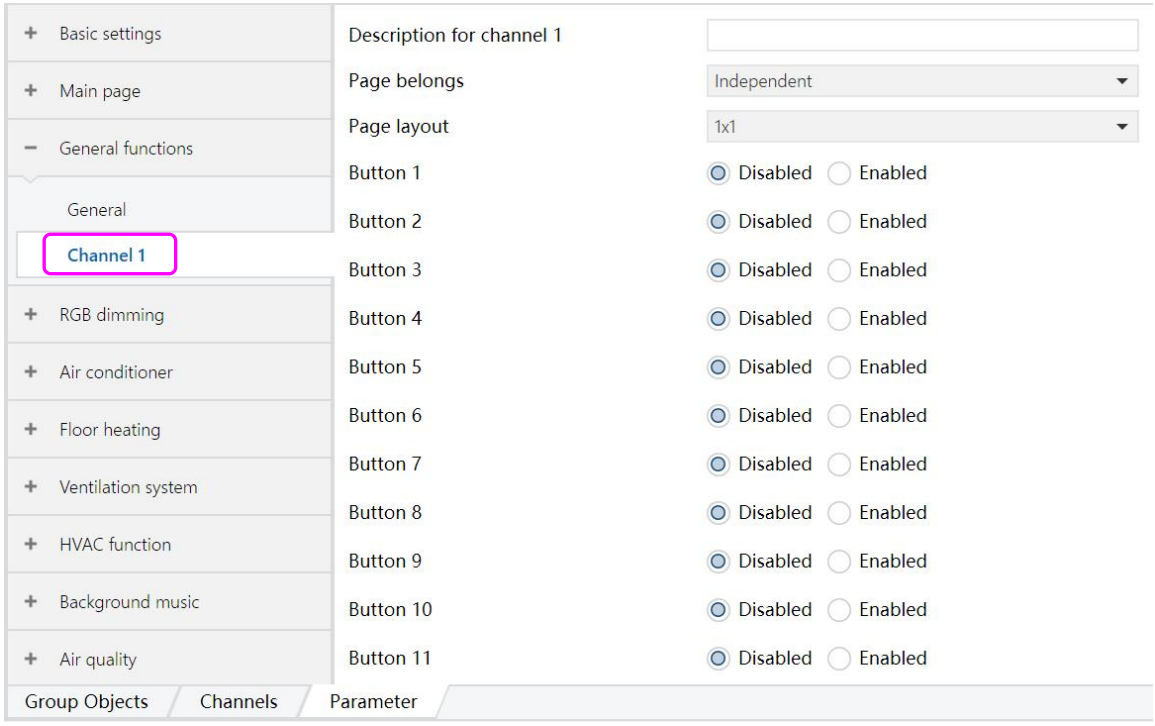
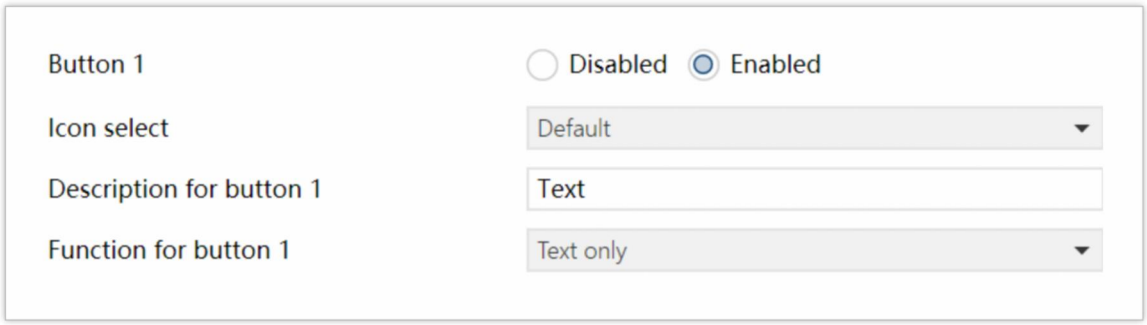


Figure 6.3.2

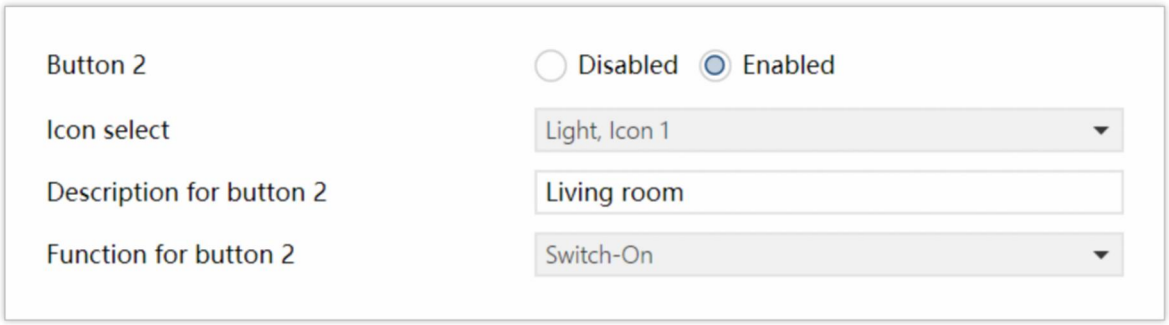
Parameter	Description
Description for channel 1	Description for channel 1, maximum input content allowed 24 bytes (8 chinese characters)
Page belongs	Not yet activated.

Page layout	Not yet activated.
Button 1 - Button 12	Each channel has 12 Buttons for general function, each Button can be set to: Enabled, Disabled. When "Enabled" is selected, the following parameters will appear: ① "Icon select", options: Default, Icon1, Icon2, Icon3 ..... Icon30; ② "Description for button1 " indicates that button 1 maximum input content allowed 24 bytes;③ "Function for button1 " indicates the function of button 1, optional functions for each button: 1. "Text only"; 2. "Switch-On"; 3. "Switch-Off"; 4. "Switch-Toggle"; 5. "Curtain-Open/Close/Stop"; 6. "Venetian blinds"; 7. "Curtain/Roller shutter/Awning"; 8. "Dimming"; 9. "Scene control"; 10. "Value display"; 11. "Link button";

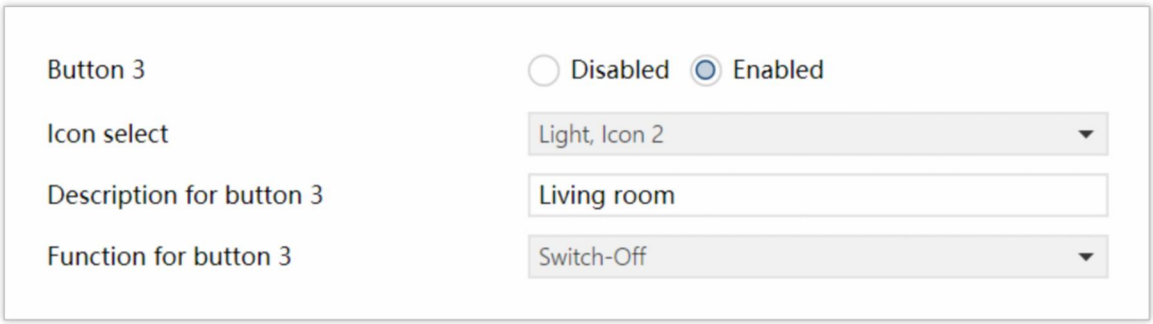
6.3.1 Text only



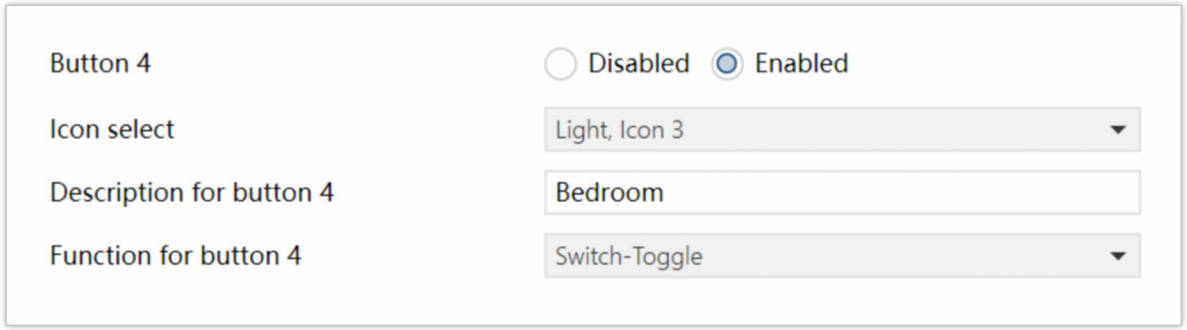
6.3.2 Switch On



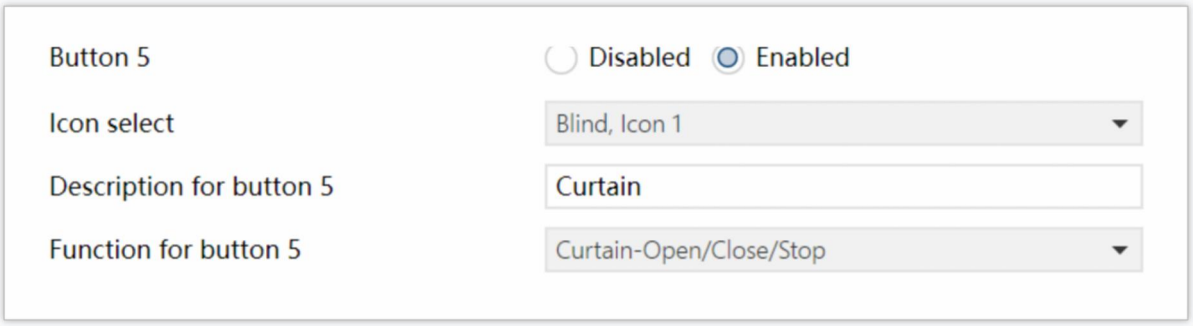
6.3.3 Switch Off



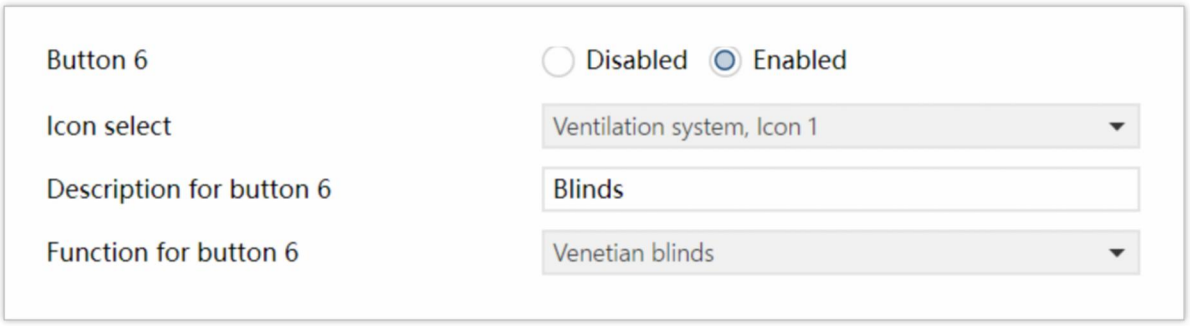
6.3.4 Switch Toggle



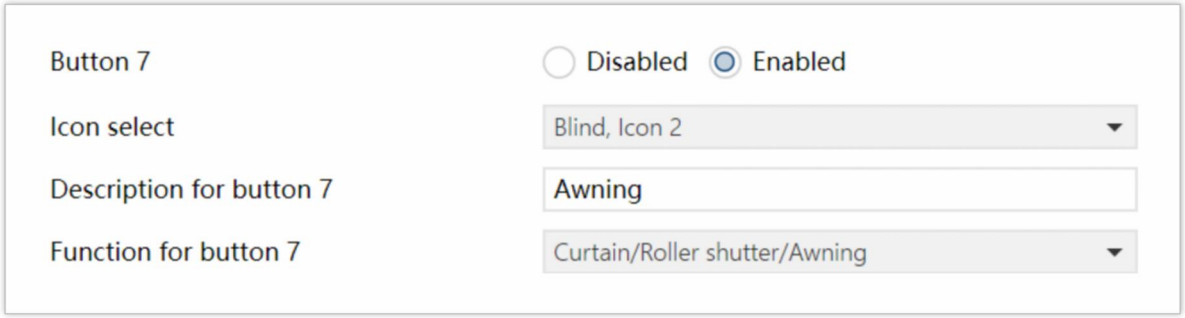
6.3.5 Curtain-Open/Close/Stop



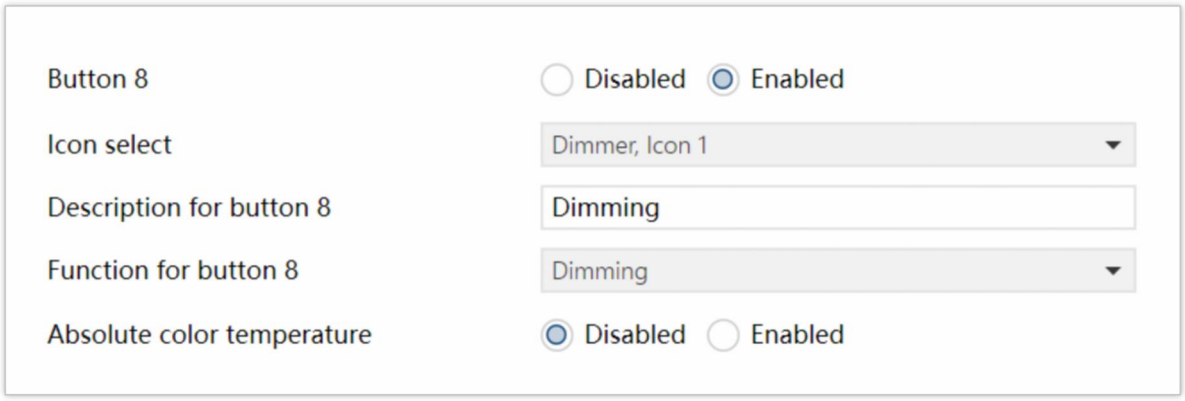
6.3.6 Venetian blinds



6.3.7 Curtain/Roller shutter/Awning

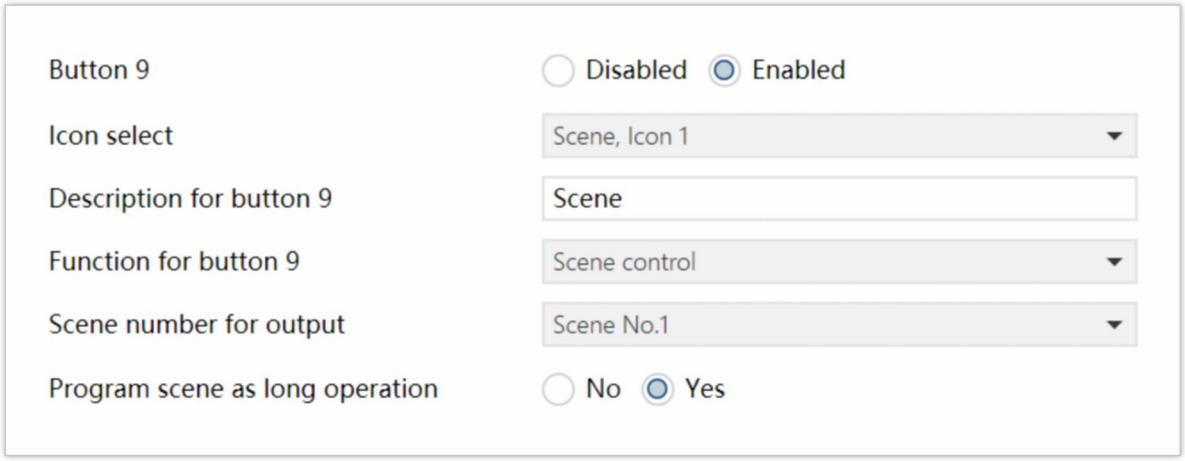


6.3.8 Dimming



"Absolute color temperature" can be set to: Disabled, Enabled.

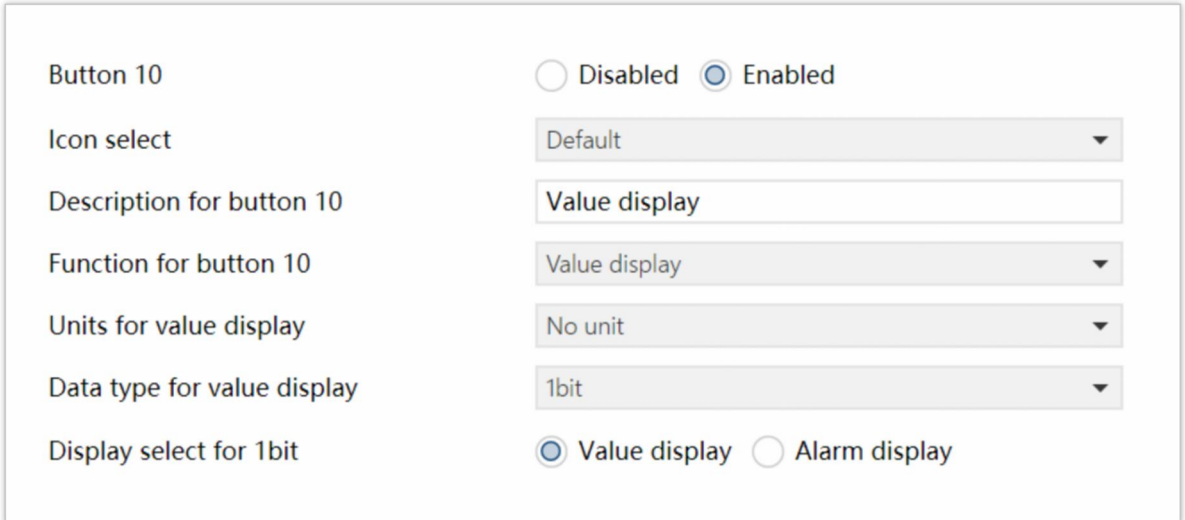
6.3.9 Scene control



(1) "Scene number for output" can be set to: Scene No.1,Scene No.2,Scene No.3.....Scene No.64.

(2) "Program scene as long operation" can be set to: No,Yes.

6.3.10 Value display



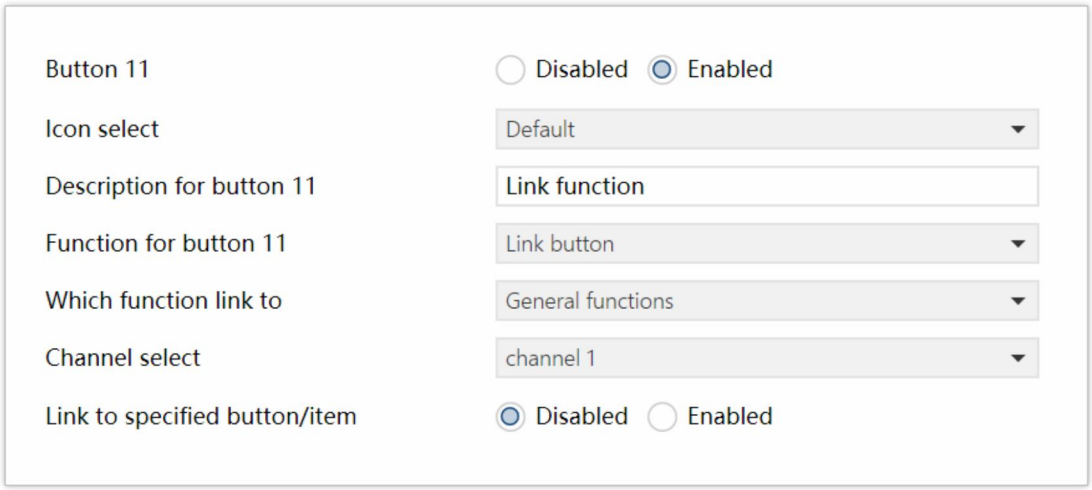
(1) "Units for value display" can be set to: No unit, mA, A, V, W, cosφ, Wh, KWh, ug/m3, mg/m3, ppm, ℃,° F, %, Lux,

h, min, s, ms, m, km.

（2）“Data type for value display” can be set to：1 bit,1byte, 2 byte, 4 byte。

（3）“Display select for 1 bit/1byte” can be set to：Value display, Alarm display；When “Display select for 2byte/4byte” is selected，options：unsigned display, signed display, float display.

6.3.11 Link button



(1) “Which function link to” options：General function ,RGB dimming ,Air conditioner,Floor heating,Ventilation system,HVAC,Air quality,Energy data,Background music.

(2)” Channel select” can be set to：Channel 1,channel 2……channel 16.

(3)” Link to specified button/item” , options：Disabled, Enabled. When “Enabled” is selected, the parameter “button/item select” can be set to: button/item1 ,button/item2,button/item3……button/item12.

6.4 RGB dimming

Click the option in the red box below to set the relevant parameters，as shown in Figure 6.4.1

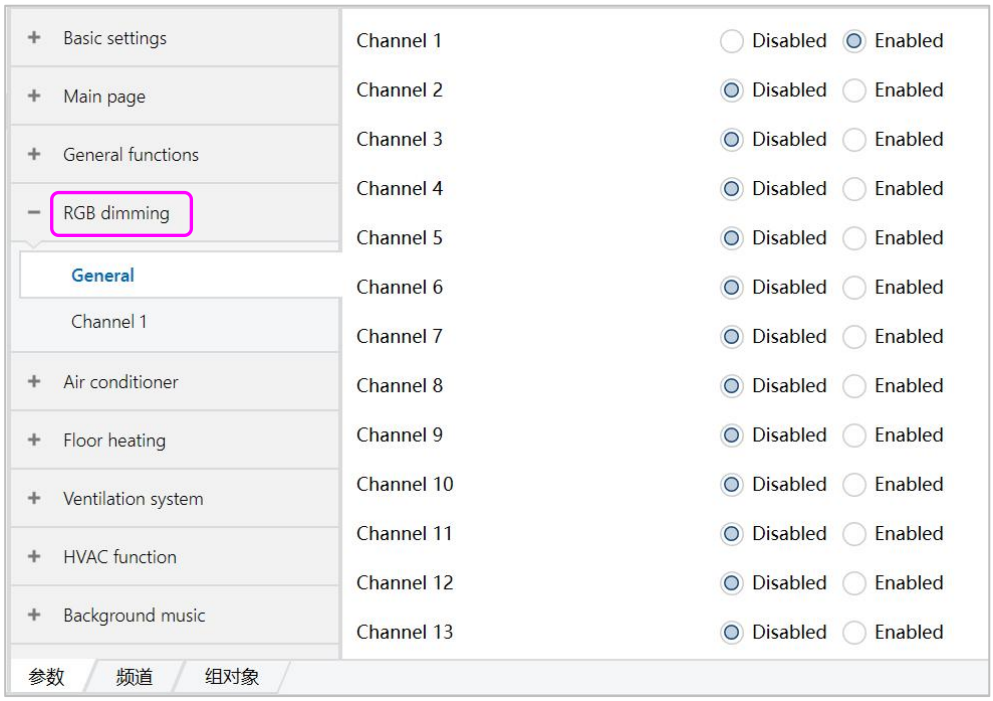


Figure 6.4.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 RGB dimming channels are available, for example, "Channel 1” . When "Enabled" is selected, the options in the red box are shown as in Figure 6.4.2:

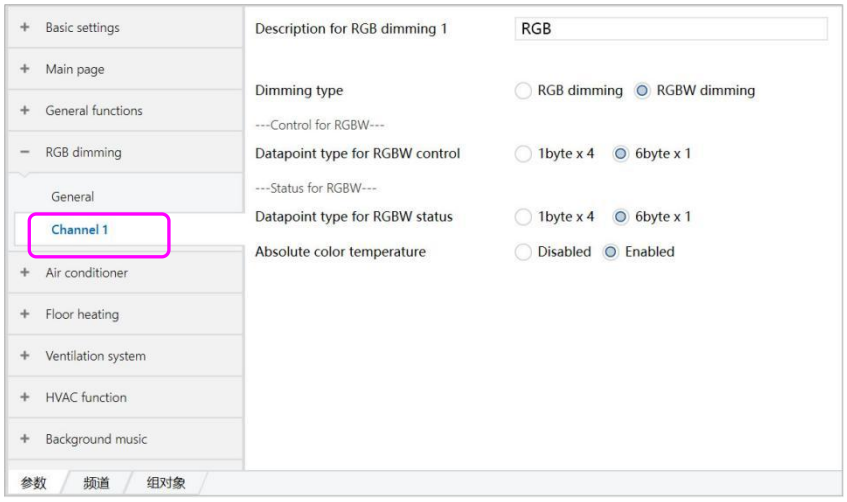


Figure 6.4.2

Parameter	Description
Description for RGB dimming 1	Description for RGB dimming 1, maximum input content allowed 24 bytes（8 chinese characters）.
Dimming type	Dimming type，options："RGB dimming" and " RGBW dimming"（1）When "RGB dimming" is selected，① "Data point type for RGB control" can be set to: 1byte x 3 and 3byte x 1；② "Data point type for RGB status" can be set to：1byte x 3 and 3byte x 1（2）When "RGBW dimming" is selected，① "Data point type for RGBW control" can be set to：1byte x 4 and 6byte x 1；② "Data point type for RGBW status" can be set to：1byte x 4 and 6byte x 1。
Absolute color temperature	Absolute color temperature, options：Enabled, Disabled

6.5 Air conditioner

Click the option in the red box below to set the relevant parameters，as shown in Figure 6.5.1

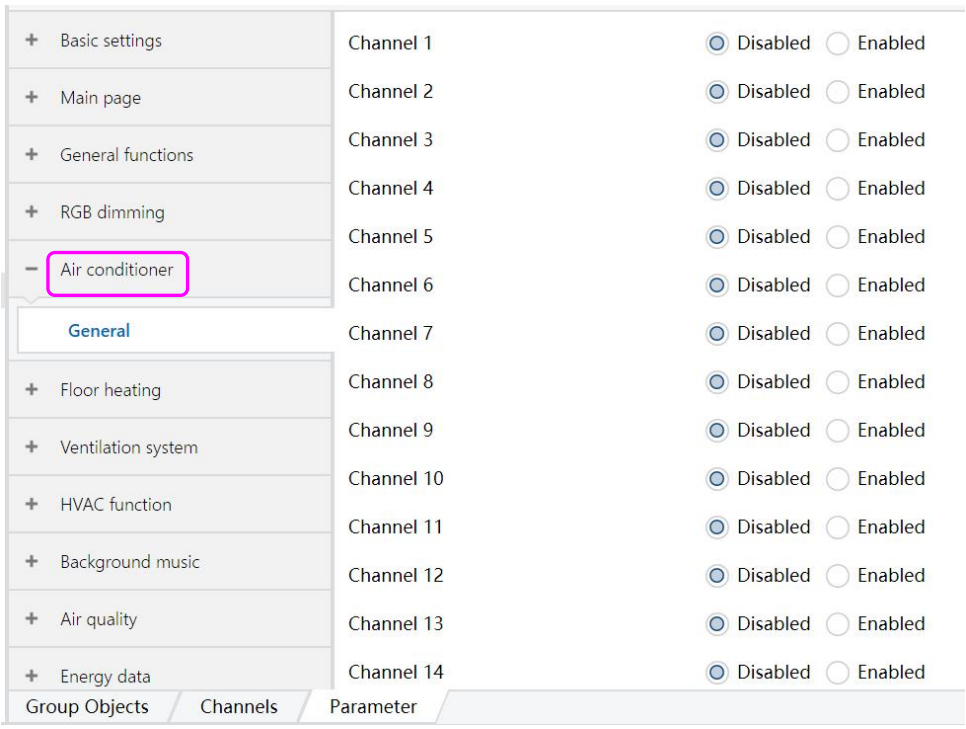


Figure 6.5.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 air comditioner function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.5.2:

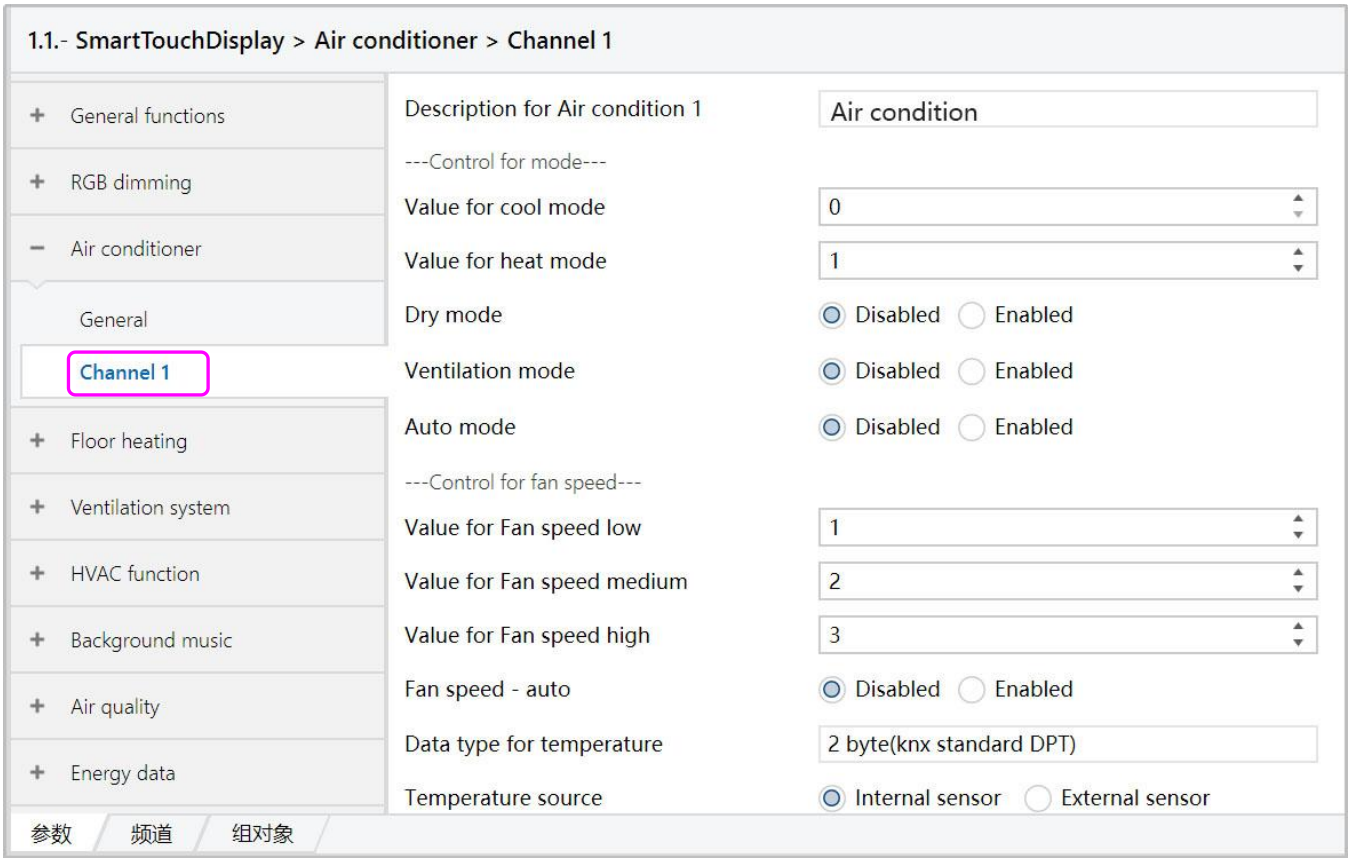


Figure 6.5.2

Parameter	Description
Description for Air condition 1	Description for Air condition 1, maximum input content allowed 24 bytes (8 chinese characters)
Value for cool mode	Value for cool mode, options: 0,1,2,3.....255;
Value for heat mode	Value for heat mode, options: 0,1,2,3.....255;
Dry mode	Dry mode, options: Enabled,Disabled. When "Enabled" is selected, there are following parameters: "Value for dry mode", options: 0,1,2,3.....255;
Ventilation mode	Ventilation mode, options: Enabled, Disabled. When "Enabled" is selected, the parameter "Value for ventilation mode" can be set to : 0,1,2,3.....255;
Auto mode	Auto mode, options: Enabled, Disabled. When "Enabled" is selected, the parameter "Value for auto mode" can be set to: 0,1,2,3.....255;
Value for Fan speed low	Value for fan speed low, options: 0,1,2,3.....255;
Value for Fan speed medium	Value for fan speed medium, options: 0,1,2,3.....255;
Value for Fan speed high	Value for fan speed high, options: 0,1,2,3.....255;
Fan speed - auto	Fan speed - auto, options: Enabled, Disabled. When "Enabled" is selected, the parameter "Value for Fan speed auto" can be set to: 0,1,2,3.....255;
Data type for temperature	Data type for temperature, parameter: 2 byte(KNX standard DPT)
Temperature source	Temperature source, options: " Internal sensor" or "External sensor". When "External sensor" is selected, the parameter "Time period for request external

	sensor(min)" can be set to : 0,1,2,3.....255; the parameter "Read external sensor after voltage recovery" can be set to: No,Yes.
The change in each step for setting temperature	The change in each step for setting temperature，options：0.1,0.5,1,1.5,2;
Min. set temperature [16 ..32℃]	Min. set temperature，options：16 ,17,18.....32℃
Max. set temperature [16..32℃]	Max. set temperature，options：16 ,17,18.....32℃
Fault code	Fault code，options：Disabled,1-byte,2-byte

6.6 Floor heating

Click the option in the red box below to set the relevant parameters，as shown in Figure 6.6.1

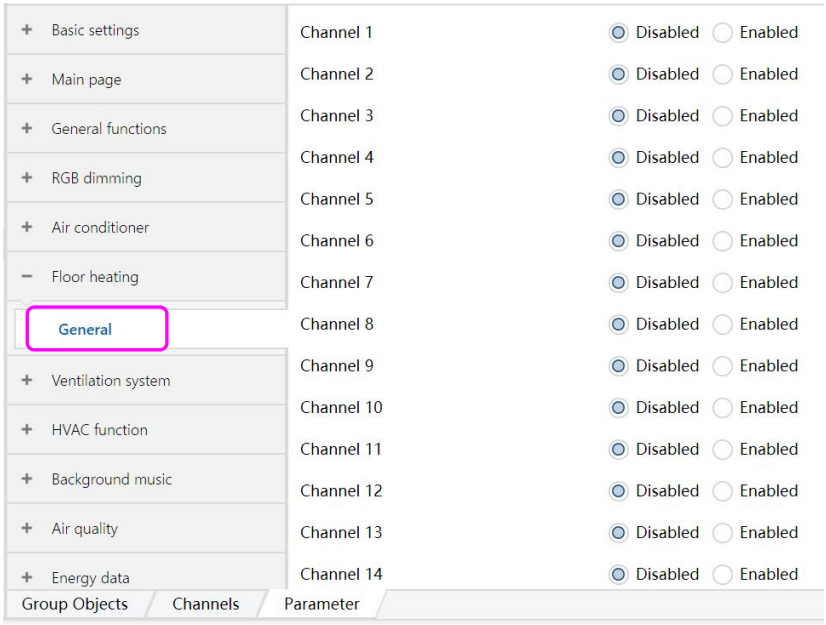


Figure 6.6.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 floor heating function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.6.2:

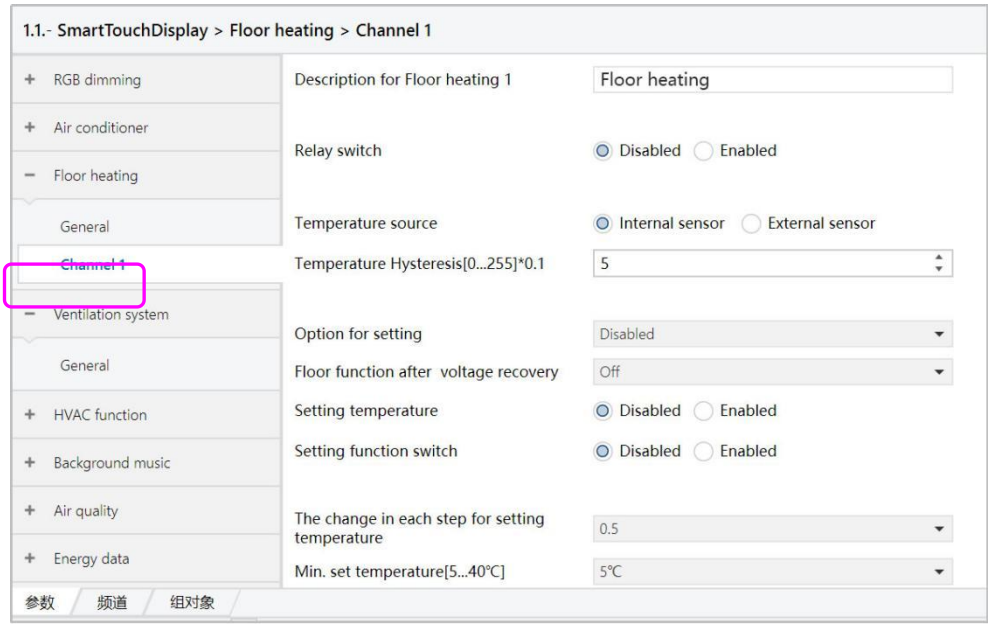


Figure 6.6.2

Parameter	Description
Description for Floor heating 1	Description for Floor heating 1，maximum input content allowed 24 bytes（8 chinese characters）.
Relay switch	Relay switch，options：Enabled, Disabled. When “Enabled” is selected, the parameter “Status relay switch” can be set to：Enabled, Disabled；
Temperature source	Temperature source，options：“ Internal sensor” or “External sensor”. When “External sensor” is selected，there are following parameters: “Time period for request external sensor(min)” , options：0,1,2,3.....255; “Read external sensor after voltage recovery”, options：No,Yes. ⑤ “Temperature Hysteresis[0..255]*0.1” , options：0,1,2,3.....255；
Option for setting	Option for setting，options：” Disabled “, “Read setting object at voltage recovery”, “Send setting as feedback when receiving setting” . When “Disabled” or ” Send setting as feedback when receiving setting “ is selected，the parameter “Floor function after voltage recovery” can be set to: Off, On, As before voltage failure；
Setting temperature	Setting temperature，options：Enabled, Disabled.
Setting function switch	Setting function switch，options：Enabled, Disabled.
The change in each step for setting temperature	The change in each step for setting temperature，options：0.1,0.5,1,1.5,2
Min. set temperature [5..40℃]	Min. set temperature，options：5 ,6,7.....40℃
Max. set temperature [5..40℃]	Max. set temperature，options：5 ,6,7.....40℃
High temperature alarm	High temperature alarm，options：Enabled, Disable. When “Enabled” is selected，there are following parameters：① “Temperature source from the third” , options：No,Yes；② “Trigger value for high temperature alarm”, options：5 ,6, 7.....45；③ “Send value for triggering alarm” , options：Off, On；④ “Cycle time for high temperature alarm[Base]” , options：1s,2s,3s.....30min；⑤ “Cycle time for high temperature alarm [Factor]” , options：0,1,2,3.....255；
Frost protection	Frost protection，options：Enabled, Disabled. When “Enabled” is selected，there are following parameters：① “Temperature source from the third” , options：No, Yes；② “Temp. threshold in Frost protection” , options：0 ,1, 2.....45；③ “Send value for triggering frost protection” , options：Off, On；④ “Cycle time for triggering frost protection [Base]” , options：1s, 2s, 3s.....30min；⑤ “Cycle time for triggering frost protection [Factor]” , options：0, 1, 2, 3.....255；

6.7 Ventilation system

Click on the option in the red box below to set the relevant parameters，as shown in Figure 6.7.1

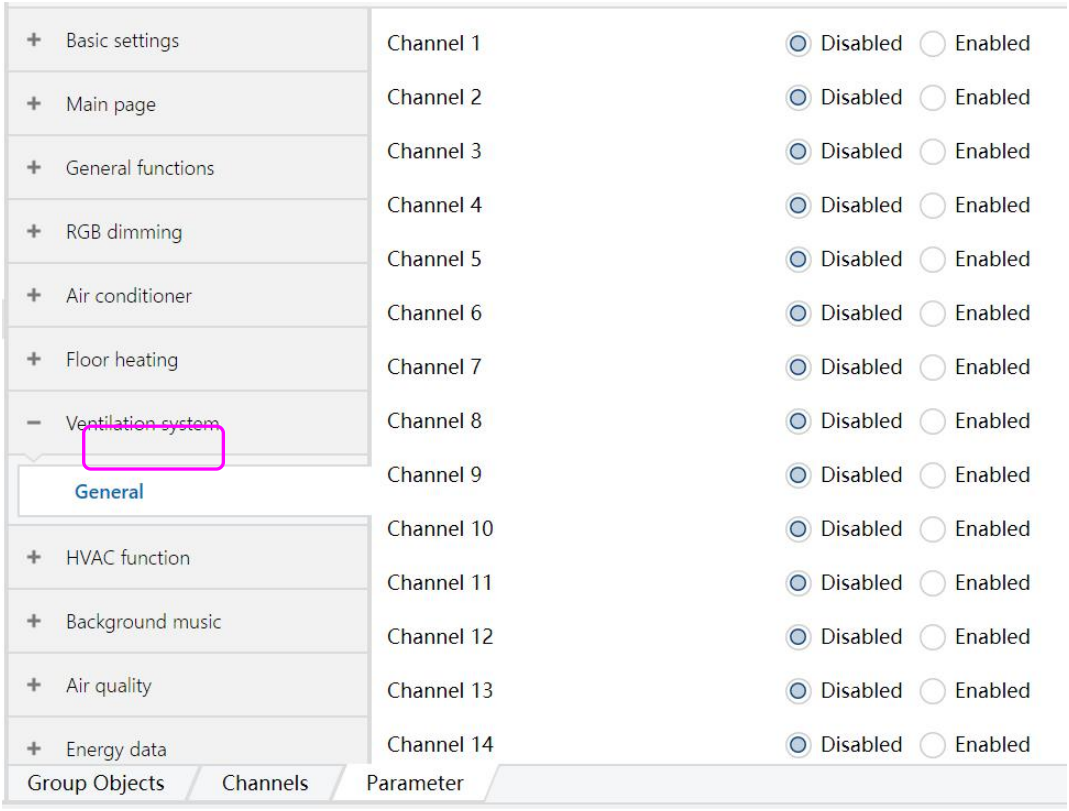


Figure 6.7.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 ventilation system function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.7.2:

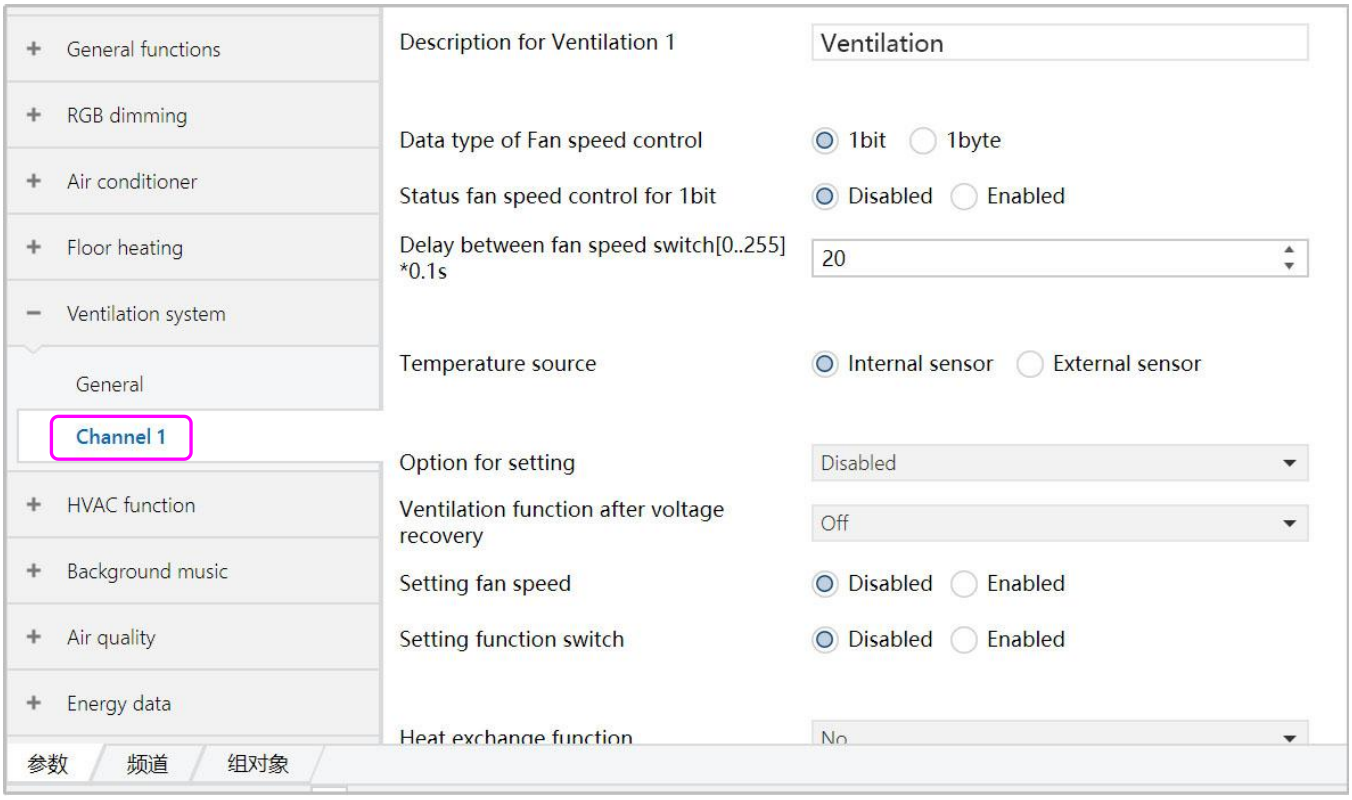


Figure 6.7.2

Parameter	Description
Description for Ventilation 1	Description for Ventilation 1，maximum input content allowed 24 bytes（8 chinese characters）.
Data type of Fan speed control	Data type of fan speed control, options：1 bit or 1 byte. When " 1 bit " is selected, the parameter "Status fan speed control for 1bit" indicates 1bit fan speed control status，options：Enabled, Disabled. When" 1 byte " is selected，the parameter "Value for Fan speed off" indicates the value that represents the wind speed off.，options：0,1,2,3……255；③ "Value for Fan speed low" indicates the value representing the low-level fan speed，options：0,1,2,3……255；④ "Value for Fan speed medium" indicates the value representing the medium -level fan speed，options：0,1,2,3……255；⑤ "Value for Fan speed high" indicates the value representing the high -level fan speed，options：0,1,2,3……255；⑥ "Status fan speed control for 1byte" indicates 1byte of fan speed control status, options：Enabled,Disabled.
Delay between fan speed switch [0..255]*0.1s	Delay between fan speed switch [0..255]* 0.1s,options：0,1,2,3……255；
Temperature source	Temperature source，options：" Internal sensor" or "External sensor". When "External sensor" is selected，the parameter "Time period for request external sensor(min)" can be set to：0,1,2,3……255；"Read external sensor after voltage recovery" can be set to：No,Yes.
Option for setting	Option for setting，options：" Disabled "，"Read setting object at voltage recovery"，"Send setting as feedback when receiving setting". When"Disabled"or "Send setting as feedback when receiving setting " is selected，the parameter "Ventilation function after voltage recovery" can be set to：Off, On, As before voltage failure；
Setting fan speed	Setting fan speed，options：Enabled,Disabled. When "Enabled" is selected，the following five parameters will appear：① "Value for setting Fan speed off" can be set to：0,1,2,3……255；② "Value for setting Fan speed low" can be set to：0,1,2,3……255；③ "Value for setting Fan speed medium" can be set to：0,1,2,3……255；④ "Value for setting Fan speed high" can be set to：0,1,2,3……255；⑤ "Value for setting Fan speed auto" can be set to：0,1,2,3……255；
Setting function switch	Setting function switch，options：Enabled, Disabled.
Heat exchange function	Heat exchange function，options: No; Disabled=0/Enabled=1; Disabled=1/Enabled=0.
Filter counting function	Filter counting function，options：Enabled, Disabled. When "Enabled" is selected，the parameter "Count time[100...10000]*h" can be set to：100,101,102……10000.
Auto. fan speed function	Auto. fan speed function，options：Enabled, Disabled. When "Enabled" is selected，there are following parameters: " Auto. operation via object " ，options：Cannel=0/Auto=1, Cannel=1/Auto=0； "Fan speed control output when air- quality value error" , options：Off, low, Medium, High.
Cycle time for request air-quality value in Auto.(min)	Cycle time for request air-quality value in Auto. (min)，options：0,1,2,3……255；
Air-quality value reference from	Reference of air-quality value，options：PM2.5(μg/m3)；CO2(ppm)；HCHO(mg/m3)；TVOC(mg/m3)
Base of all threshold and hysteresis value	Base of all threshold and hysteresis value，options：①0.01；②0.1；③1；④10.
Factor of hysteresis valuer	Factor of hysteresis valuer，options：0,1,2,3……255；

Factor of threshold value for Off<->Low	Factor of threshold value for Off<->Low，options：0,1,2,3.....65535
Factor of threshold value for Low<->Medium	Factor of threshold value for Low<->Medium，options：0,1,2,3.....65535
Factor of threshold value for Medium<->High	Factor of threshold value for Medium<->High，options：0,1,2,3.....65535
Minimum time in fan speed(s)	Minimum time for changing the fan speed(s)，options：0,1,2,3.....65535

6.8 HVAC function

Click on the option in the red box below to set the relevant parameters，as shown in Figure 6.8.1

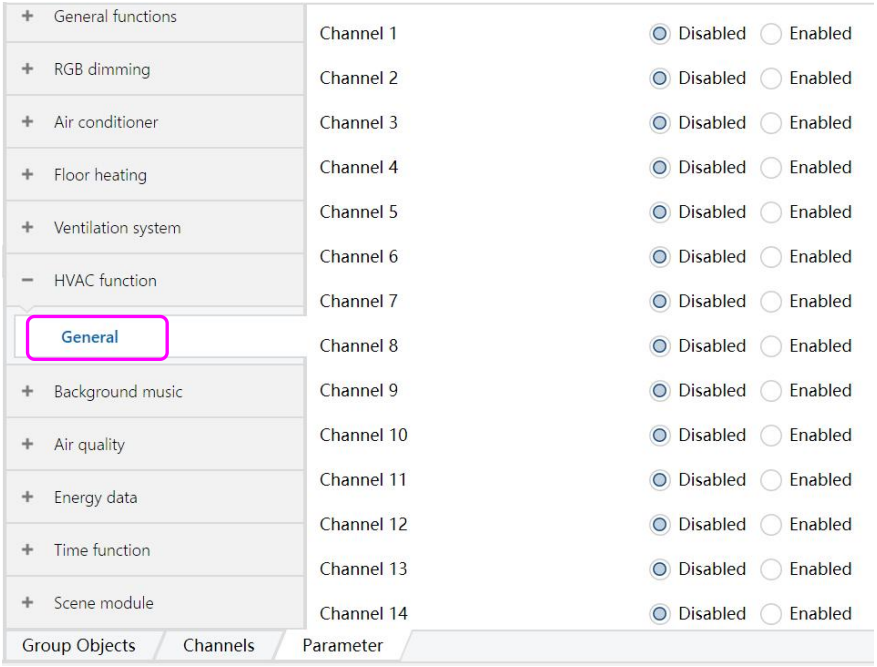


Figure 6.8.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 HVAC function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.8.2:

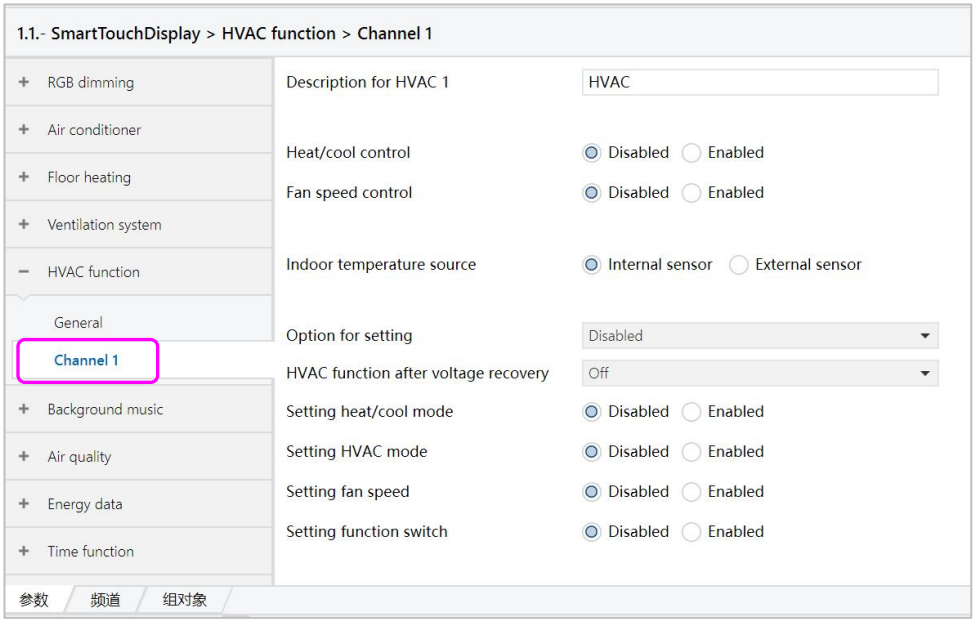


Figure 6.8.2

Parameter	Description
Description for HVAC 1	Description for HVAC 1, maximum input content allowed 24 bytes (8 chinese characters).
Heat/cool control	Heat/cool control, options: Enabled,Disabled;
Fan speed control	Fan speed control, options: Enabled,Disabled;
Indoor temperature source	Indoor temperature source, options: '' Internal sensor" or "External sensor". When "External sensor" is selected, the parameter "Time period for request external sensor(min)" can be set to: 0,1,2,3.....255; "Read external sensor after voltage recovery" can be set to: No, Yes.
Option for setting	Option for setting, options: " Disabled ", "Read setting object at voltage recovery", "Send setting as feedback when receiving setting". When "Disabled" or " Send setting as feedback when receiving setting " is selected, the parameter "HVAC function after voltage recovery" can be set to: Off, On, As before voltage failure:
Setting heat/cool mode	Setting heat/cool mode, options: Enabled, Disabled. When "Enabled" is selected, the parameter "Data type for setting heat/cool mode" can be set to: 1 bit; 1byte; When " 1byte " is selected, the parameter "Value for heat mode" can be set to : 0,1,2,3..... 255; "Value for-cool mode" can be set to: 0,1,2,3.....255;
Setting HVAC mode	Setting HVAC mode, options: Enabled, Disabled. (1) When "Enabled" is selected, the parameter "HVAC mode after voltage recovery" can be set to: Comfort mode; Standby mode; Economy mode; Protection mode; As before voltage failure. (2) "Extended comfort mode [0..255, 10=inactive]*min" can be set to: 0,1,2,3.....255; (3) "Extended economy mode [0..255, 10=inactive]*min" can be set to: 0,1,2,3.....255;
Setting fan speed	Setting fan speed, options: Enabled, Disabled. When "Enabled" is selected, there are following parameters: ① "Value for setting Fan speed off", options: 0,1,2,3.....255; ② "Value for setting Fan speed low", options: 0,1,2,3.....255; ③ "Value for setting Fan speed medium", options: 0,1,2,3.....255; ④ "Value for setting Fan speed high", options: 0,1,2,3.....255; ⑤ "Value for setting Fan speed auto", options: 0,1,2,3.....255;
Setting function switch	Setting function switch, options: Enabled, Disabled.
Setting temperature	Setting temperature, options: Enabled, Disabled.
The change in each step for setting temperature	The change in each step for setting temperature, options: 0.1,0.5,1,1.5,2
Min. set temperature [5..40℃]	Min. set temperature, options: 5 ,6,7.....40℃
Max. set temperature [5..40℃]	Max. set temperature, options: 5 ,6,7.....40℃

6.9 Background music

Click on the option in the red box below to set the relevant parameters, as shown in Figure 6.9.1

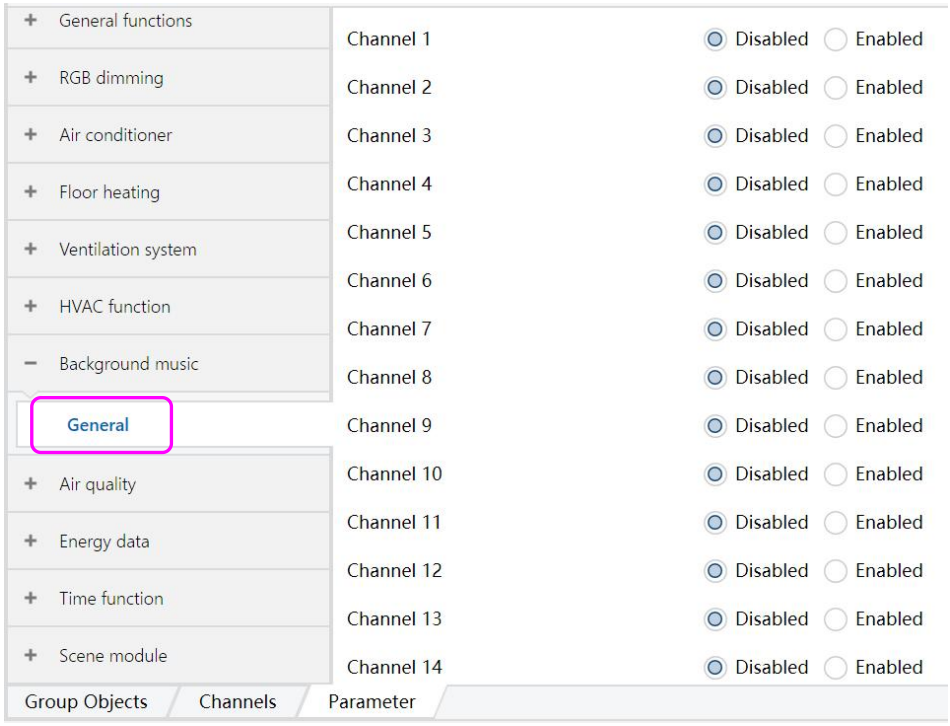


Figure 6.9.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 background music channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.9.2:

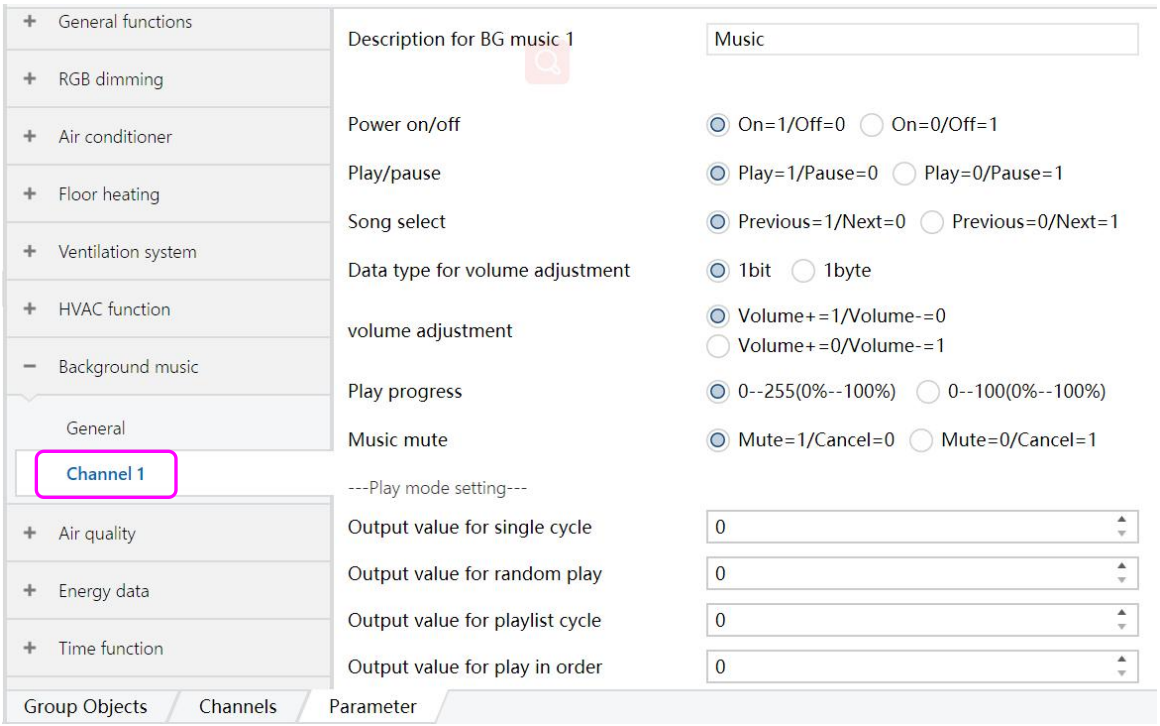


Figure 6.9.2

Parameter	Description
Description for BG music 1	Description for BG music 1, Maximum input content allowed 24 bytes (8 chinese characters).
Power on/off	Power on/off, options: On=1/Off=0 or On=0/Off=1
Play/pause	Play/pause, options: Play=1/Pause=0 or Play=0/Pause=1;

Song select	Song selection, options: Previous=1/Next=0 or Previous=0/Next=1;
Data type for volume adjustment	Data type for volume adjustment, options: 1 bit or 1byte. When "1 bit" is selected, the parameter "volume adjustment" can be set to; Volume+=1/Volume-=0 or Volume+=0/Volume-=1; When" 1byte " is selected, the parameter "Format for volume adjustment" can be set to: 0--255(0%--100%),0--100(0%--100%).
Play progress	Not yet activated
Music mute	Music mute, options: Mute=1/Cancel=0 or Mute=0/Cancel=1
Output value for single cycle	Output value for single cycle, options: 0,1,2,3.....255;
Output value for random play	Output value for random play, options: 0,1,2,3.....255;
Output value for playlist cycle	Output value for playlist cycle, options: 0,1,2,3.....255;
Output value for play in order	Output value for play in order, options: 0,1,2,3.....255;
Type of music source	Type of music source, options: "Media source type 1"; "Media source type 2". When "Media source type 1" is selected, there are following parameters: "Output value for cloud music", options: 0,1,2,3.....255; "Output value for local music", options: 0,1,2,3.....255; "Output value for news information", options: 0,1,2,3.....255, "Output value for language program", options: 0,1,2,3.....255; "Output value for children", options: 0,1,2,3.....255; "Output value for internet radio", options: 0,1,2,3.....255; "Output value for AUX", options: 0,1,2,3.....255; When "Media source type 2" is selected, there are parameters: "Output value for FM", options: 0,1,2,3.....255; "Output value for MP3", options: 0,1,2,3.....255; "Output value for AUX", options: 0,1,2,3.....255; "Output value for DVD", options: 0,1,2,3.....255; "Output value for FM2", options: 0,1,2,3.....255; "Output value for IPOD", options: 0,1,2,3.....255; "Output value for NET-RADIO", options: 0,1,2,3.....255, "Output value for CLOUD-MUSIC", options: 0,1,2,3.....255.

6.10 Air quality

Click on the option in the red box below to set the relevant parameters, as shown in Figure 6.10.1

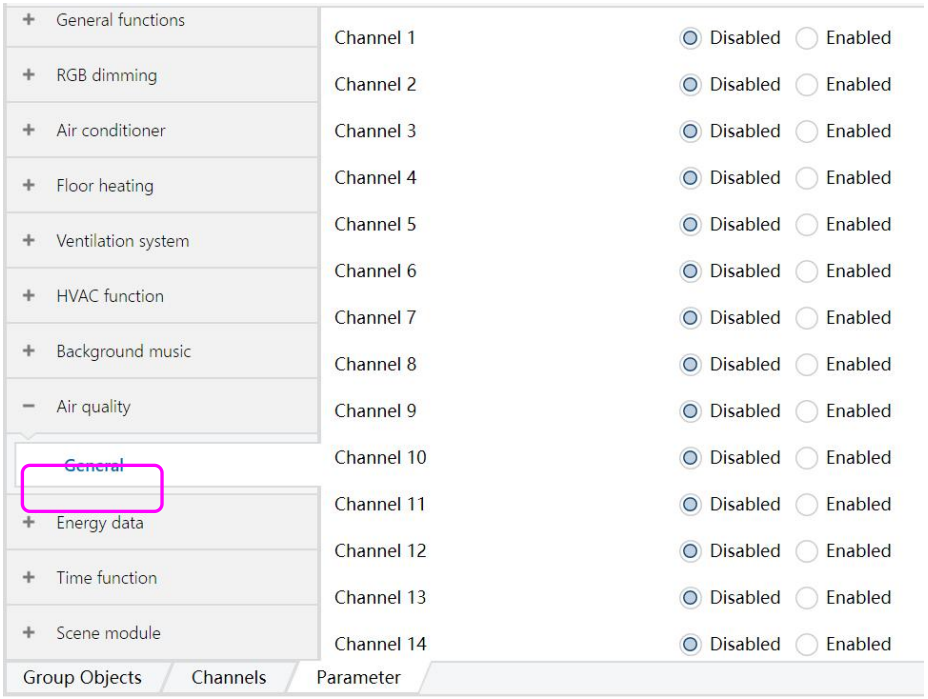


Figure 6.10.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 air quality display function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.10.2:

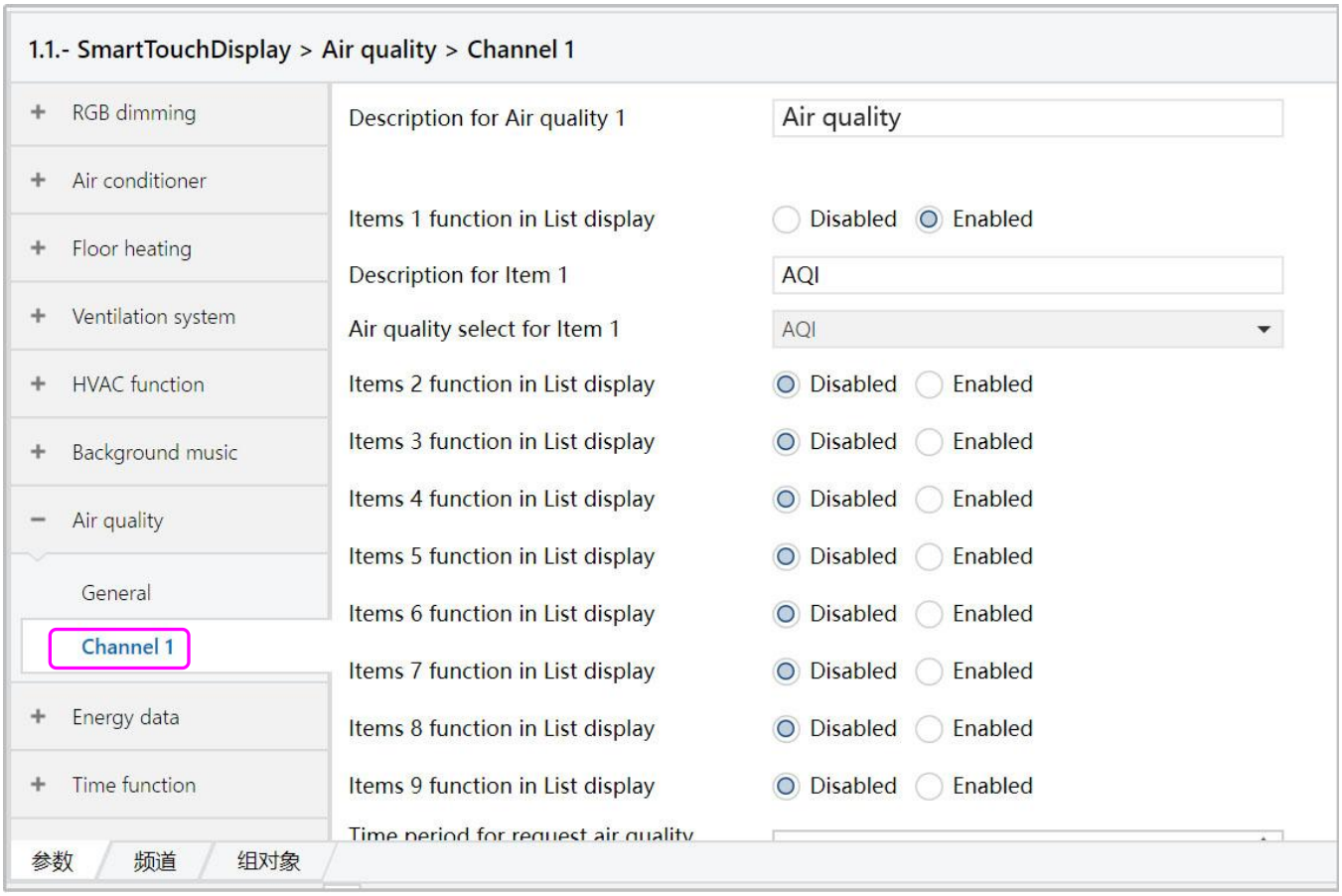


Figure 6.10.2

Parameter	Description
Description for Air quality 1	Description for Air quality 1，maximum input content allowed 24 bytes.
Items 1 function in List display - Items 9 function in List display	Items 1 function in List display，each channel can display 9 item functions, options：Enabled,Disabled. When "Enabled" is selected，the following parameters will display. "Description for Item 1"，indicates the description of item 1， maximum input content allowed 24 bytes；"Air quality select for Item 1" can be set to：①AQI(Air Quality Index)；②Temperature；③Humidity;④PM2.5；⑤PM10；⑥HCHO；⑦TVOC；⑧CO2；⑨CO
Time period for request air quality (min),0=disable	Time period for request air quality (min)，0 = disabled, options：0,1,2,3.....255.

6.11 Energy data

Click on the option in the red box below to set the relevant parameters，as shown in Figure 6.11.1

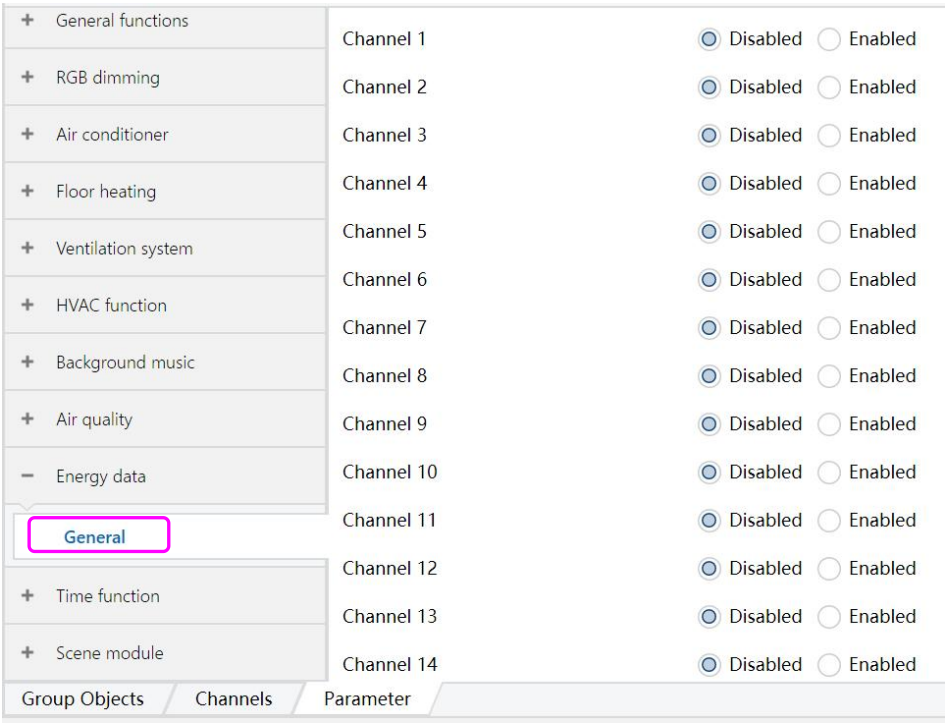


Figure 6.11.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 energy data display function channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.11.2:

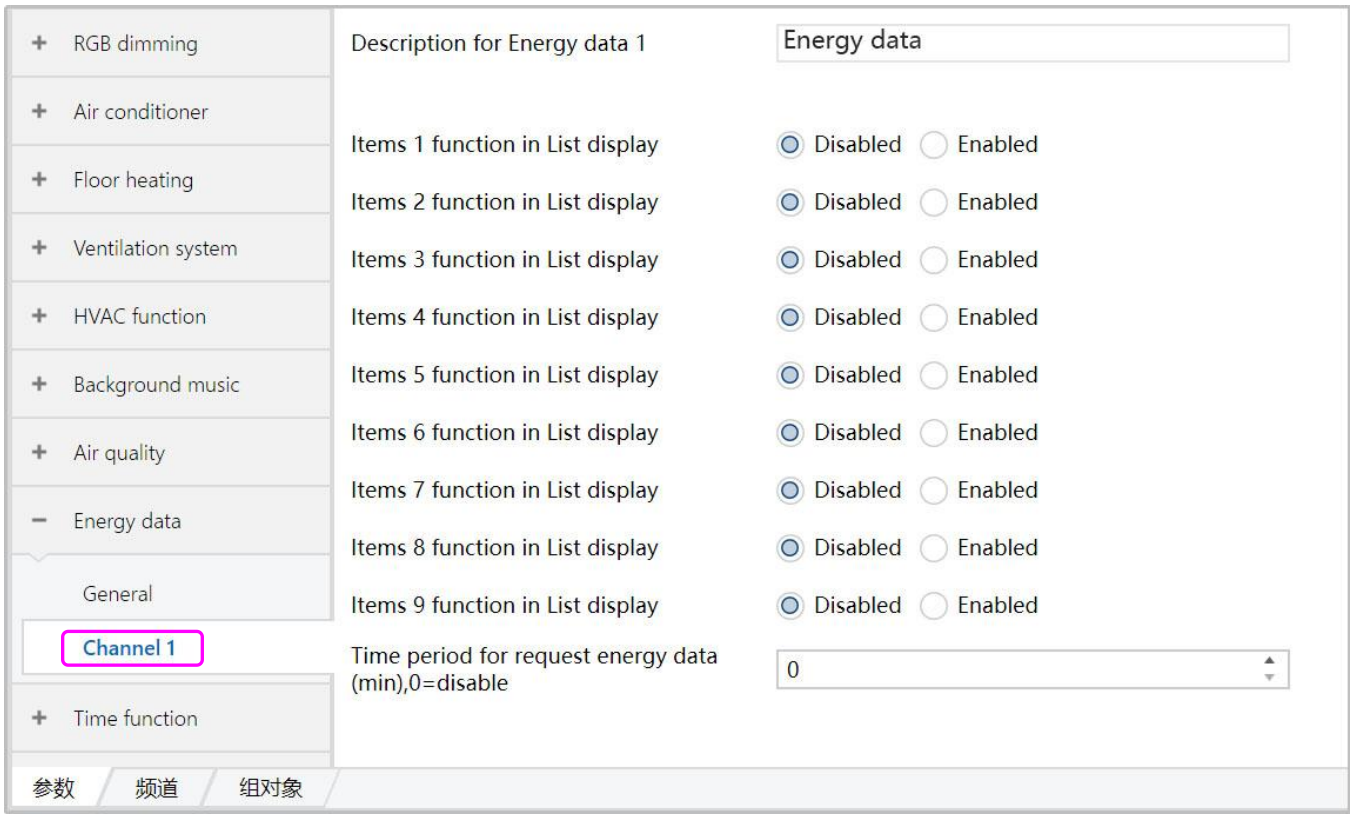


Figure 6.11.2

Parameter	Description
Description for Energy data 1	Description for Energy data 1，Maximum input content allowed 24 bytes.
Items 1 function in List display - Items 9 function in List display	Items function in List display, each channel can display 9 item functions, options: Enabled,Disabled. When "Enabled" is selected，the parameter "Description for Item 1" indicates the description of item 1, the maximum allowed input content is 24 bytes. " Energy data select for Item 1 " can be set to: ①Current, with parameter "Data point for current" , options: Value in mA(DPT 7.012) ,Value in A(DPT 14.019); ② Voltage, with parameter "Display format for voltage" , options: X,X.X,X.XX; ③Power, with parameter "Display format for Power" , options: X,X.X,X.XX; ④Power factor; ⑤Electric energy, with parameter "Display format for Electric energy" , options: Value in Wh(DPT 13.010),Value in kWh(DPT 13.013)。
Time period for request Energy data (min), 0=disable	Time period for request Energy data (min)，0 = disabled, options: 0,1,2,3.....255.

6.12 Time functions

(1) Click on the option in the red box below to set the relevant parameters，as shown in Figure 6.12.1

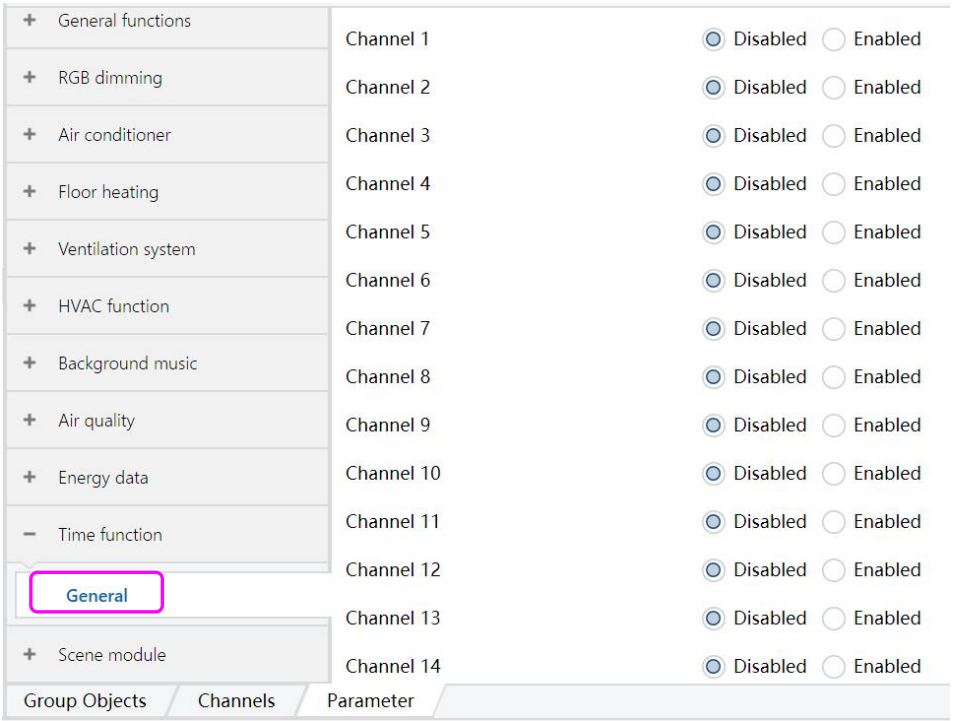


Figure 6.12.1

Click the General option, the parameter "Channel 1~Channel 16" appears, 16 channels are available, for example, "Channel 1" . When "Enabled" is selected, the options in the red box are shown as in Figure 6.12.2:

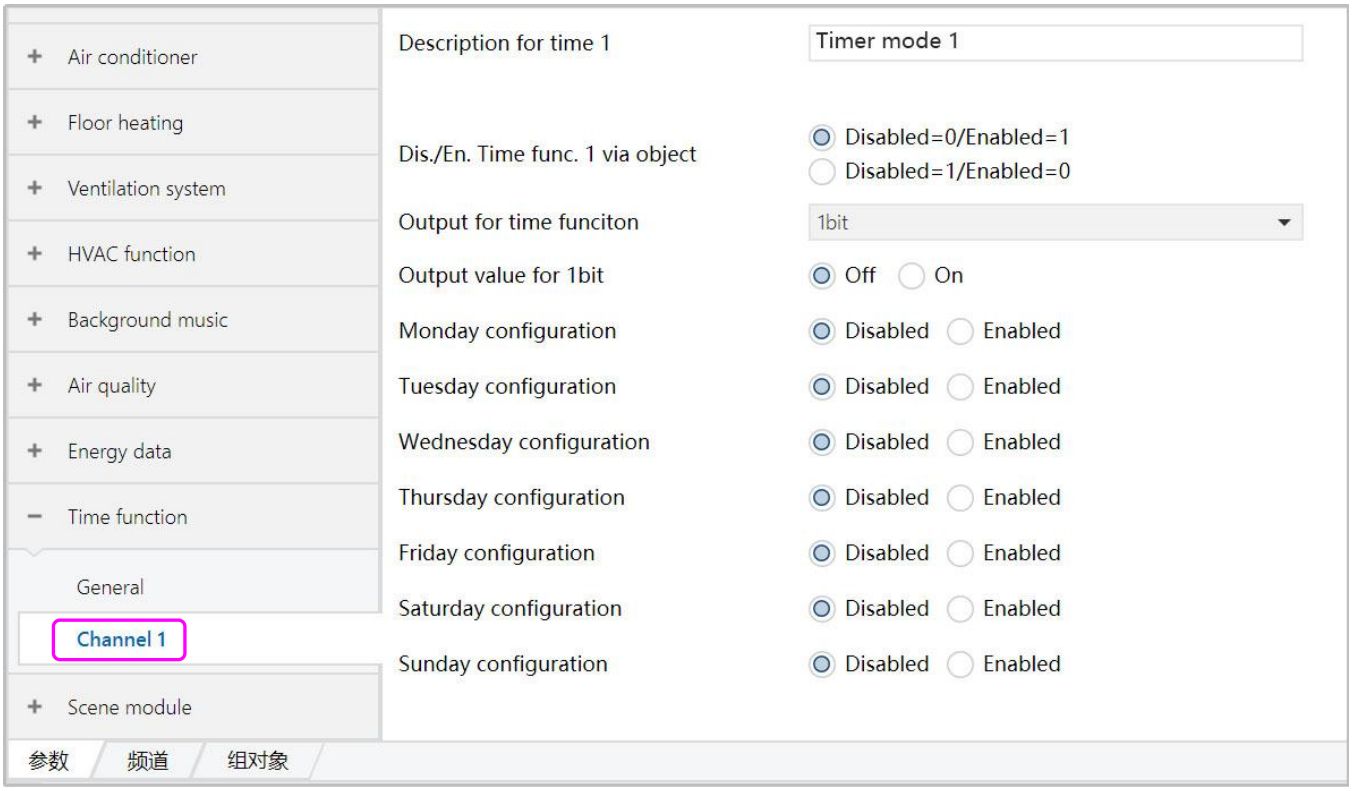


Figure 6.12.2

Paramter	Description
Description for channel 1	Description for channel 1，Maximum input content allowed 24 bytes（8 chinese characters）.
Dis./En. Time func. 1 via object	Timing switch object，options：Disabled=0/Enabled=1 or Disabled=1/Enabled=0;
Output for time function	Output for time function, options：1bit, 1byte(unsigned value), 1byte(scene number), 2byte(unsigned value); ① When 1bit is selected，the parameter “Output value for 1bit” can be set to：off,on.② When 1byte(unsigned value) is selected，the parameter “Output value for 1byte(unsigned value)”can be set to: 0,1,2.....255；③ When 1byte(scene number) is selected, the parameter “Output value for 1byte(scene number)” can be set to: 0,1,2..... 64；④When 2byte(unsigned value）is selected，the parameter “Output value for 2byte(unsigned value）” can be set to: 0,1,2.....65535；
Monday configuration - Sunday configuration	Timing can be configured once for each channel each day, e.g., Monday, options: Enabled, Disabled. When “Enabled” is selected, the following parameters display: ①“Timing mode”, options：“Normal mode” or “Sunrise/sunset mode”. When “Normal mode” is selected, , there are following parameters. ① “Hour at xx for Monday” can be set to: 0,1,2.....23； ② “Minute at xx for Monday” can be set to：0,1,2.....59； When “Sunrise/sunset mode” is selected， the following parameters will display. ③” Sunrise or sunset” can be set to: Sunrise, sunset; ④“Before or after”can be set to：Before, after；⑤“Hour at xx for Monday” can be set to：0,1,2.....23；⑥ “Minute at xx for Monday” can be set to：0,1,2.....59；（Red font means that some functions are not yet activated）.

6.13 Scene module

（1）Click on the option in the red box below to set the relevant parameters，as shown in Figure 6.13.1

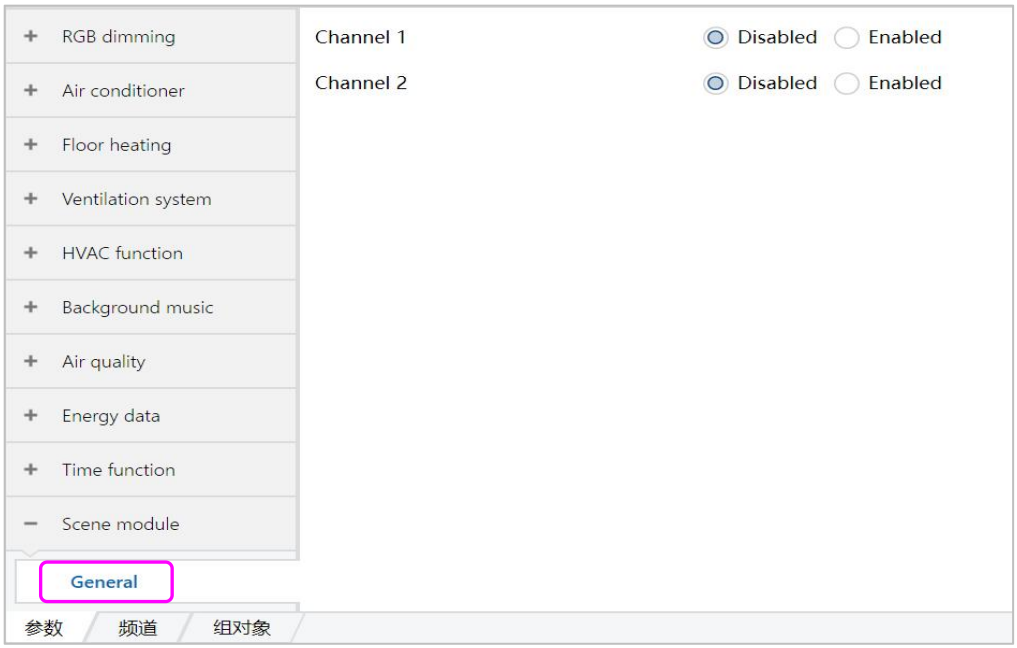


Figure 6.13.1

Click the General option, the parameter "Channel 1~Channel 8" appears, 8 channels are available, for example, "Channel 1". When "Enabled" is selected, the options in the red box are shown as in Figure 6.13.2:

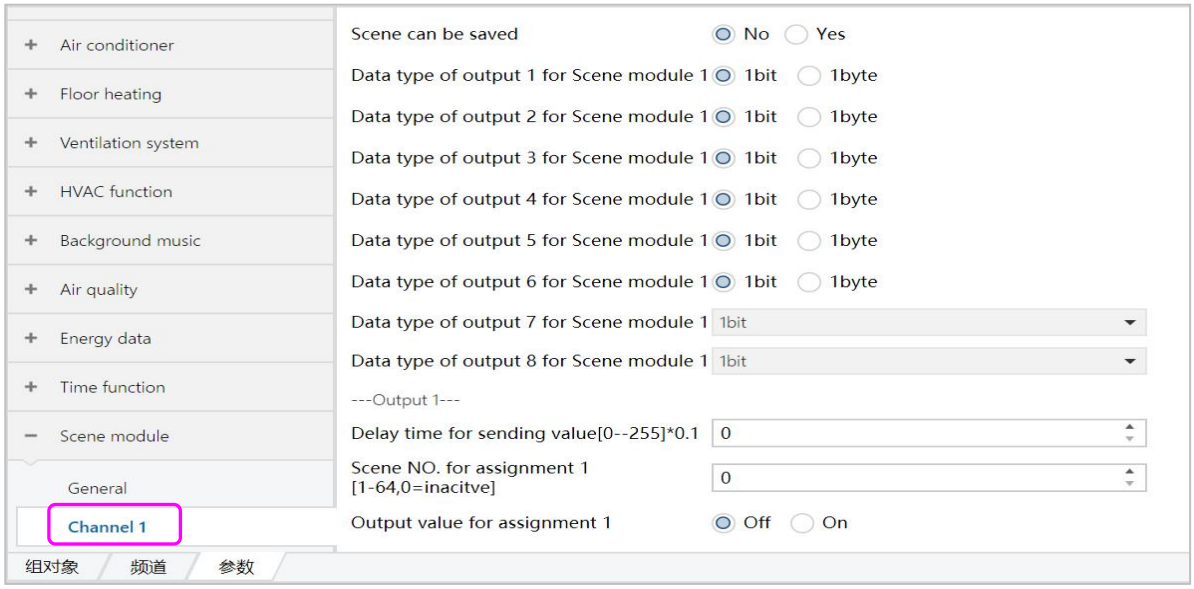


Figure 6.13.2

Parameter	Description
Scene can be saved	Scene can be saved, options: No,Yes. When " Yes" is selected, the parameter "Overwrite scenes for download" can be set to: No,Yes.
Data type of output 1 for Scene module 1	Data type of output 1 for Scene module 1, options: 1 bit or 1 byte. When "1 bit" is selected, the parameter under output 1 "Output value for assignment 1-8" can be set to: Off, On. When"1 byte"is selected,the parameter under output 1"Output value for assignment 1-8" can be set to: 0-255; (The corresponding outputs are the parameters of output 1)

Data type of output 2 for Scene module 1	Data type of output 2 for Scene module 1，options：1 bit or 1 byte. When “1 bit” is selected，the parameter under output 2 “Output value for assignment 1-8” can be set to: Off, On. When“1 byte”is selected，the parameter under output 1“Output value for assignment 1-8” can be set to: 0-255； (The corresponding outputs are the parameters of output 2)
Data type of output 3 for Scene module 1	Data type of output 3 for Scene module 1，options：1 bit or 1 byte. When “1 bit” is selected，the parameter under output 3 “Output value for assignment 1-8” can be set to: Off, On. When“1 byte”is selected，the parameter under output 1“Output value for assignment 1-8” can be set to: 0-255； (The corresponding outputs are the parameters of output 3)
Data type of output 4 for Scene module 1	Data type of output 4 for Scene module 1，options：1 bit or 1 byte. When “1 bit” is selected，the parameter under output 4 “Output value for assignment 1-8” can be set to: Off, On. When“1 byte”is selected，the parameter under output 1“Output value for assignment 1-8” can be set to: 0-255； (The corresponding outputs are the parameters of output 4)
Data type of output 5 for Scene module 1	Data type of output 5 for Scene module 1，options：1 bit or 1 byte. When “1 bit” is selected，the parameter under output 5 “Output value for assignment 1-8” can be set to: Off, On. When“1 byte”is selected，the parameter under output 1“Output value for assignment 1-8” can be set to: 0-255； (The corresponding outputs are the parameters of output 5)
Data type of output 6 for Scene module 1	Data type of output 6 for Scene module 1，options：1 bit or 1 byte. When “1 bit” is selected，the parameter under output 6 “Output value for assignment 1-8” can be set to: Off, On. When“1 byte”is selected，the parameter under output 1“Output value for assignment 1-8” can be set to: 0-255； (The corresponding outputs are the parameters of output 6)
Data type of output 7 for Scene module 1	Data type of output 7 for Scene module 1，options：1 bit，1 byte or 2 byte. When “1 bit” is selected，the parameter under output 7 “Output value for assignment 1-8” can be set to: Off, On. When “1 byte” is selected，the parameter under output 1 “Output value for assignment 1-8” can be set to: 0-255. When “2 byte” is selected，the parameter under output 1 “Output value for assignment 1-8” can be set to: 0-65535； (The corresponding outputs are the parameters of output 7)
Data type of output 8 for Scene module 1	Data type of output 8 for Scene module 1，options：1 bit，1 byte or 2 byte. When “1 bit” is selected，the parameter under output 8 “Output value for assignment 1-8” can be set to: Off, On. When “1 byte” is selected，the parameter under output 1 “Output value for assignment 1-8” can be set to: 0-255. When “2 byte” is selected，the parameter under output 1 “Output value for assignment 1-8” can be set to: 0-65535； (The corresponding outputs are the parameters of output 8)
Delay time for sending value [0--255]*0.1	Delay time(s) for sending value , options：0,1,2.....255；
Scene NO. for assignment 1[1-64.0=inacitve	Scene NO. for assignment 1 (0=inactive) , options：0,1,2.....64；

7. Communication Objects

The communication object is the medium for the device to communicate with other devices on the bus, that is only the communication object can communicate on the bus. The function of each communication object is described in detail below as shown in Figure 7.1.1, and the specific functions are shown in Table.

Note: in the column of table properties, "C" represents the communication function enable of the communication object, "W" represents the value of the communication object can be rewritten through the bus, "R" represents the value of the communication object can be read through the bus, "T" represents the communication object has the transmission function, and "U" represents the value of the communication object can be updated.

7.1 Basic settings

1	Basic settings	Date	3 bytes	C	-	W	T	U	date	低
2	Basic settings	Time	3 bytes	C	-	W	T	U	time of day	低
3	Basic settings	Date-output	3 bytes	C	R	-	T	-	date	低
4	Basic settings	Time-output	3 bytes	C	R	-	T	-	time of day	低
5	Basic settings	Brightness of screen	1 byte	C	-	W	T	U	percentag...	低
6	Basic settings	Enter screen saver	1 bit	C	-	W	T	U	switch	低
7	Basic settings	Turn off screen	1 bit	C	-	W	T	U	switch	低
8	Basic settings	Enter password prot...	1 bit	C	-	W	T	U	switch	低
9	Basic settings	Device block	1 bit	C	-	W	T	U	enable	低
10	Basic settings	Device status	1 bit	C	R	-	T	-	switch	低
11	Basic settings	Calibrate internal te...	2 bytes	C	-	W	T	U	temperatu...	低
12	Basic settings	Send internal temp.	2 bytes	C	R	-	T	-	temperatu...	低
13	Basic settings	Alarm for internal te...	1 bit	C	R	-	T	-	alarm	低
15	Basic settings	Send internal humidity	2 bytes	C	R	-	T	-	humidity (%)	低

Figure 7.1

No.	Name	Communication object function	Data type	Property
1,2	Basic settings	Date, Time	3byte	C,W,T,U
This communication object is enabled when the parameter " Setting for date and time " selects "Enabled" and the parameter “Overwrite date and time via object” selects “Yes”. This communication object is used to set the date and time of the device.				
3,4	Basic settings	Date-output, Time-output	3byte	C,R,T
This communication object is enabled when the parameter " Setting for date and time " selects "Enabled" and the parameter “Send date and time to bus” selects “Yes”. This communication object is used to read the date and time of the device.				
5	Basic settings	Brightness of screen	1byte	C,W, T,U
This communication object is enabled when the parameter " Overwrite display brightness via object " selects " Enabled ". This communication object is used to overwrite display brightness via object.				
6	Basic settings	Enter screen saver	1 bit	C,W,T,U

This communication object is enabled when the parameter " Enter screensaver via object " selects "Yes". This communication object is used to turn on / off the screen saver function.				
7	Basic settings	Turn off screen	1 bit	C,W,T,U
This communication object is enabled when the parameter " Turn off backlight " selects " Enabled " and the parameter "Turn off backlight via object" selects "Yes". This communication object is used to turn on / off the screen brightness.				
8	Basic settings	Enter password protection	1 bit	C,W,T,U
This communication object is enabled when the parameter " Password protection " selects " Enabled " and the parameter "Enter password protection via object" selects "Yes". This communication object is used for password protection.				
9	Basic settings	Device block	1 bit	C,W,T,U
This communication object is enabled when the parameter " Blocking function " selects " Enabled ". This communication object is used to turn on / off the blocking function.				
10	Basic settings	Device status	1 bit	C,R,T
This communication object is enabled when the parameter " Device status " selects " Enabled ". This communication object is used to read the device status.				
11	Basic settings	Calibrate internal temp	2 bytes	C, W,T,U
This communication object is enabled when the parameter " The source of temperature display " selects " Internal sensor " and the parameter "Overwrite temperature Calibration via object" selects "Yes". This communication object is used for temperature calibration.				
12	Basic settings	Send internal temp.	2 bytes	C,R, T
This communication object is enabled when the parameter " The source of temperature display " selects " Internal sensor " and the parameter "Send internal temperature" selects "Yes". This communication object is used to send the internal temperature.				
13	Basic settings	Alarm for internal temp.	1 bit	C,R, T
This communication object is enabled when the parameter " The source of temperature display " selects " Internal sensor " and the parameter "Check error for internal temperature" selects "Yes". This communication object is used to check for internal temperature errors.				
14	Basic settings	Recv external temp.	2 bytes	C, W,T,U
This communication object is enabled when the parameter " The source of temperature display " selects " External				

sensor ". This communication object is used for external temperature functions。				
15	Basic settings	Send internal humidity	2 bytes	C,R, T
This communication object is enabled when the parameter " The source of humidity display " selects " Internal sensor " and the parameter "Send internal humidity" selects "Yes". This communication object is usedto send the internal humidity.				
16	Basic settings	Recv external humidity	2 bytes	C, W,T,U
This communication object is enabled when the parameter " The source of humidity display " selects " External sensor ". This communication object is used to send the external humidity.				

7.2 General functions

23	Channel 1-Button 1, Switch On / Off		1 bit	C	R	-	T	-	switch	低			

Switch-Off, Switch-On

23	Channel 1-Button 1, Switch	On / Off	1 bit	C	R	-	T	-	switch	低			
24	Channel 1-Button 1, Status switch	On / Off	1 bit	C	-	W	T	U	switch	低			

Switch-Toggle

23	Channel 1-Button 1, Curtain	Open / Close	1 bit	C	R	-	T	-	open/close	低			
24	Channel 1-Button 1, Curtain	Stop / Step	1 bit	C	R	-	T	-	step	低			

Curtain-Open/Close/Stop

23	Channel 1-Button 1, Blind	Up / Down	1 bit	C	R	-	T	-	up/down	低			
24	Channel 1-Button 1, Blind	Stop / Step	1 bit	C	R	-	T	-	step	低			
25	Channel 1-Button 1, Blind	Position-0..100%	1 byte	C	R	-	T	-	percentag...	低			
26	Channel 1-Button 1, Blind	Slat-0..100%	1 byte	C	R	-	T	-	percentag...	低			
27	Channel 1-Button 1, Blind	Status position-0..10...	1 byte	C	-	W	T	U	percentag...	低			
28	Channel 1-Button 1, Blind	Status slat-0..100%	1 byte	C	-	W	T	U	percentag...	低			

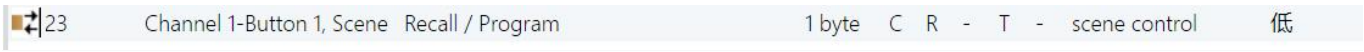
Venetian blinds

23	Channel 1-Button 1, Roller shutter	Up / Down	1 bit	C	R	-	T	-	up/down	低			
24	Channel 1-Button 1, Roller shutter	Stop / Step	1 bit	C	R	-	T	-	step	低			
25	Channel 1-Button 1, Roller shutter	Position-0..100%	1 byte	C	R	-	T	-	percentag...	低			
26	Channel 1-Button 1, Roller shutter	Status position-0..10...	1 byte	C	-	W	T	U	percentag...	低			

Curtain/Roller shutter/Awning

23	Channel 1-Button 1, Dimmer	Switch-On / Off	1 bit	C	R	-	T	-	switch	低			
24	Channel 1-Button 1, Dimmer	Stauts switch-On / Off	1 bit	C	-	W	T	U	switch	低			
25	Channel 1-Button 1, Dimmer	Position-0..100%	1 byte	C	R	-	T	-	percentag...	低			
26	Channel 1-Button 1, Dimmer	Status position-0..10...	1 byte	C	-	W	T	U	percentag...	低			

Dimming



Scene control

Value display

Figure 7.1 “Channel 1（Function for button 1）” communication object

22	Channel 1-Blocking func	Unblocking/Blocking	1bit	C, W,T,U
This communication object is enabled when the parameter " General functions " selects " General " and at the same time “Channel 1” selects “Enabled”. This communication object is used to switch on/off the blocking function of channel 1. Serial numbers (95,168,241,314,387,460,533,606,679, 752,825,898,971,1044,1117) are the same.				
23	Channel 1-Button 1，Switch	On/ off	1bit	C,R, T
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time “Button X”（X=1~12) selects “Enabled”, then “Function for button 1” selcects “Switch-On” or “Switch-Off”. This communication object is used to read the on/off status of the channel 1 lamp.				
23	Channel 1-Button 1，Switch	On/ off	1bit	C,R, T
24	Channel 1-Button 1，Status Switch	On/Off	1bit	C, W,T,U
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time “Button X”（X=1~12) selects “Enabled”, then “Function for button 1” selcects “Switch-Toggle”. Obj.1：This communication object is used to read the on/off status of the channel 1 lamp. Obj.2：This communication object is used to send channel 1 on/off message to the bus to control the on/off of the lamp.				
23	Channel 1-Button 1, Curtain	Open/ Close	1bit	C,R, T
24	Channel 1-Button 1, Curtain	Stop / Step	1bit	C,R, T
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time “Button X”（X=1~12) selects “Enabled”, then “Function for button 1” selcects “Curtain-Open/Close/Stop”. Obj.1：This communication object is used to read the on/off status of channel 1 curtains. Obj.2：This communication object is used to read the pause/start status of channel 1 curtains.				
23	Channel 1-Button 1, Blind	Up/ Down	1bit	C,R, T
24	Channel 1-Button 1, Blind	Stop / Step	1bit	C,R, T
25	Channel 1-Button 1, Blind	Position-0..100%	1 bytes	C,R, T

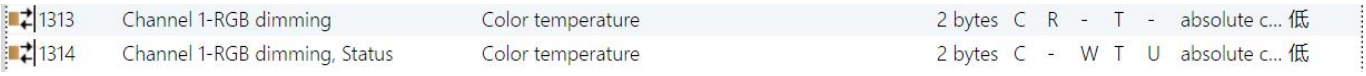
26	Channel 1-Button 1, Blind	Slat-0..100%	1 bytes	C,R, T
27	Channel 1-Button 1, Blind	Status positnn-0..100%	1 bytes	C, W,T,U
28	Channel 1-Button 1, Blind	Status slat-0..100%	1 bytes	C,W,T,U
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time "Button X" (X=1~12) selects "Enabled", then "Function for button 1" selcects "Venetian blinds". Obj.1: This communication object is used to read the up/down status of channel 1 blinds. Obj.2: This communication object is used to read the pause/start status of channel 1 blinds. Obj.3: This communication object is used to read the percentage of channel 1 blinds positions. Obj.4: This communication object is used to read the percentage of channel 1 blinds angle. Obj.5: This communication object is used to send a percentage message of channel 1 to the bus to control the blinds position. Obj.6: This communication object is used to send a percentage message of channel 1 to the bus to control the blinds angle.				
23	Channel 1-Button 1, Roller shutter	Up/ Down	1bit	C,R, T
24	Channel 1-Button 1, Roller shutter	Stop / Step	1bit	C,R, T
25	Channel 1-Button 1, Roller shutter	Position-0..100%	1 bytes	C,R, T
26	Channel 1-Button 1, Roller shutter	Status positnn-0..100%	1 bytes	C,W,T,U
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time "Button X" (X=1~12) selects "Enabled", then "Function for button 1" selects "Curtain/Roller shutter/Awning". Obj.1: This communication object is used to read the up/down status of channel 1 roller shutter. Obj.2: This communication object is used to read the pause/start status of channel 1 roller shutter. Obj.3: This communication object is used to read the percentage of channel 1 roller shutter positions. Obj.4: This communication object is used to send a percentage message of channel 1 to the bus to control the roller shutter position.				
23	Channel 1-Button 1, Dimmer	Switch-On /off	1bit	C,R, T
24	Channel 1-Button 1, Dimmer	Stauts witch-On /Off	1 bytes	C,W,T,U
25	Channel 1-Button 1, Dimmer	Position-0..100%	1bit	C,R, T
26	Channel 1-Button 1, Dimmer	Status position-0..100%	1 bytes	C, W,T,U
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time "Button X" (X=1~12) selects "Enabled", then "Function for button 1" selects "Dimming". Obj.1: This communication object is used to read the on/off status of channel 1 dimmer. Obj.2: This communication object is used to send channel 1 on/off message to the bus to control the on/off of the dimmer. Obj.3: This communication object is used to read the percentage of channel 1 dimmer positions. Obj.4: This communication object is used to send a percentage message of				

channel 1 to the bus to control the dimmer.				
23	Channel 1-Button 1, Scene	Recall / Program	1 bytes	C,R, T
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time “Button X” (X=1~12) selects “Enabled” , then “Function for button 1” selects “Scene control” . This communication object is used to send messages for channel 1 scene recall.				
23	Channel 1-Button 1 Display	1bit	1bit	C,W,T,U
This communication object is enabled when the parameter " General functions " selects " Channel 1 " and at the same time “Button X” (X=1~12) selects “Enabled” , then “Function for button 1” selects “Value display” . This communication object is used to send a message of the channel 1 display value to the bus and controls the size of the data type.				
Note：The communication object of "Channel X (Function for button Y)" is the same as above (X=1~16,Y=1~12, even if the serial number is different)				

7.3 RGB dimming

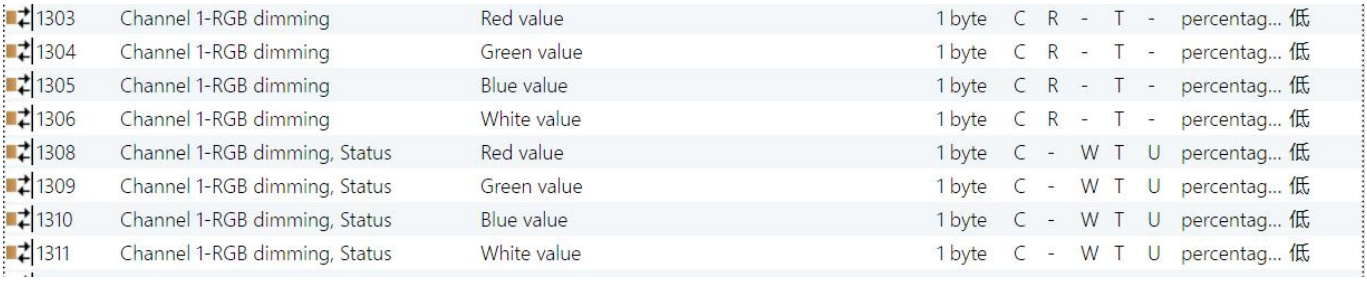
1294	Channel 1-RGB dimming	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
1295	Channel 1-RGB dimming	Red value	1 byte	C	R	-	T	-	percentag...	低
1296	Channel 1-RGB dimming	Green value	1 byte	C	R	-	T	-	percentag...	低
1297	Channel 1-RGB dimming	Blue value	1 byte	C	R	-	T	-	percentag...	低
1299	Channel 1-RGB dimming, Status	Red value	1 byte	C	-	W	T	U	percentag...	低
1300	Channel 1-RGB dimming, Status	Green value	1 byte	C	-	W	T	U	percentag...	低
1301	Channel 1-RGB dimming, Status	Blue value	1 byte	C	-	W	T	U	percentag...	低

RGB dimming



1313	Channel 1-RGB dimming	Color temperature	2 bytes	C	R	-	T	-	absolute c...	低
1314	Channel 1-RGB dimming, Status	Color temperature	2 bytes	C	-	W	T	U	absolute c...	低

Absolute color temperature



1303	Channel 1-RGB dimming	Red value	1 byte	C	R	-	T	-	percentag...	低
1304	Channel 1-RGB dimming	Green value	1 byte	C	R	-	T	-	percentag...	低
1305	Channel 1-RGB dimming	Blue value	1 byte	C	R	-	T	-	percentag...	低
1306	Channel 1-RGB dimming	White value	1 byte	C	R	-	T	-	percentag...	低
1308	Channel 1-RGB dimming, Status	Red value	1 byte	C	-	W	T	U	percentag...	低
1309	Channel 1-RGB dimming, Status	Green value	1 byte	C	-	W	T	U	percentag...	低
1310	Channel 1-RGB dimming, Status	Blue value	1 byte	C	-	W	T	U	percentag...	低
1311	Channel 1-RGB dimming, Status	White value	1 byte	C	-	W	T	U	percentag...	低

RGBW dimming

1294	Channel 1-RGB dimming	Unblocking/Blocking	1 bit	C, W,T,U
1295	Channel 1-RGB dimming	Red value	1 bytes	C,R, T
1296	Channel 1-RGB dimming	Green value	1 bytes	C,R, T
1297	Channel 1-RGB dimming	Blue value	1 bytes	C,R, T
1299	Channel 1-RGB dimming, Status	Red value	1 bytes	C,W,T,U

1300	Channel 1-RGB dimming, Status	Green value	1 bytes	C, W,T,U
1301	Channel 1-RGB dimming, Status	Blue value	1 bytes	C, W,T,U
This communication object is enabled when the parameter " RGB dimming " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Dimming type" selects "RGB dimming". Obj.1: This communication object is used to send a message with the blocking value to the bus to control the channel 1 RGB Unblocking/Blocking. Obj.2: This communication object is used to read the status of the channel 1 RGB red value. Obj.3: This communication object is used to read the status of the channel 1 RGB green value. Obj.4: This communication object is used to read the status of the channel 1 RGB blue value. Obj.5: This communication object is used to send messages of channel 1 RGB red value to the bus to control RGB dimming. Obj.6: This communication object is used to send messages of channel 1 RGB green value to the bus to control RGB dimming. Obj.7: This communication object is used to send messages of channel 1 RGB blue value to the bus to control RGB dimming.				
1313	Channel 1-RGB dimming	Color temperature	2 bytes	C,R, T
1314	Channel 1-RGB dimming, Status	Color temperature	2 bytes	C,W,T,U
This communication object is enabled when the parameter " RGB dimming " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Absolute color temperature" selects "Enabled". Obj.1: This communication object is used to read the status of channel 1 color temperature. Obj.2: This communication object is used to send channel 1 color temperature messages to the bus to control the color temperature.				
1294	Channel 1-RGB dimming	Unblocking/Blocking	1 bit	C, W,T,U
1303	Channel 1-RGB dimming	Red value	1 bytes	C,R, T
1304	Channel 1-RGB dimming	Green value	1 bytes	C,R, T
1305	Channel 1-RGB dimming	Blue value	1 bytes	C,R, T
1306	Channel 1-RGB dimming	White value	1 bytes	C,R, T
1308	Channel 1-RGB dimming	Red value	1 bytes	C,W,T,U
1309	Channel 1-RGB dimming	Green value	1 bytes	C, W,T,U
1310	Channel 1-RGB dimming	Blue value	1 bytes	C, W,T,U
1311	Channel 1-RGB dimming	White value	1 bytes	C, W,T,U
This communication object is enabled when the parameter " RGB dimming " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Dimming type" selects "RGBW dimming". Obj.1: This communication object is used to send a message with the blocking value to the bus to control the channel 1 RGBW Unblocking/Blocking. Obj.2: This communication object is used to read the status of the channel 1 RGBW red value.				

Obj.3：This communication object is used to read the status of the channel 1 RGBW green value. Obj.4：This communication object is used to read the status of the channel 1 RGBW blue value. Obj.5：This communication object is used to read the status of the channel 1 RGBW white value. Obj.6：This communication object is used to send messages of channel 1 RGBW red value to the bus to control RGBW dimming. Obj.7：This communication object is used to send messages of channel 1 RGBW green value to the bus to control RGBW dimming. Obj.8：This communication object is used to send messages of channel 1 RGBW blue value to the bus to control RGBW dimming. Obj.9：This communication object is used to send messages of channel 1 RGBW white value to the bus to control RGBW dimming.
Note：The communication object of "Channel X" is the same as above (X=1~16, even if the serial number is different)

7.4 Air conditioner

1630	Channel 1-Air conditoner	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
1631	Channel 1-Air conditoner	Switch-On / Off	1 bit	C	R	-	T	-	switch	低
1632	Channel 1-Air conditoner	Status switch-On / Off	1 bit	C	-	W	T	U	switch	低
1633	Channel 1-Air conditoner	Operation mode	1 byte	C	R	-	T	-	HVAC cont...	低
1634	Channel 1-Air conditoner	Status operation mo...	1 byte	C	-	W	T	U	HVAC cont...	低
1635	Channel 1-Air conditoner	Fan speed	1 byte	C	R	-	T	-	percentag...	低
1636	Channel 1-Air conditoner	Status fan speed	1 byte	C	-	W	T	U	percentag...	低
1637	Channel 1-Air conditoner	Setting temperature	2 bytes	C	R	-	T	-	temperatu...	低
1638	Channel 1-Air conditoner	Status setting tempe...	2 bytes	C	-	W	T	U	temperatu...	低
1639	Channel 1-Air conditoner	Actual temperature	2 bytes	C	-	W	T	U	temperatu...	低
1640	Channel 1-Air conditoner	Fault code-1 byte	1 byte	C	-	W	T	U		低
1641	Channel 1-Air conditoner	Fault code-2 byte	2 bytes	C	-	W	T	U		低

Figure 7.4

1630	Channel 1-Air conditioner	Unblocking/Blocking	1 bit	C,W,T,U
1631	Channel 1-Air conditioner	Switch-on/of	1 bit	C,R, T
1632	Channel 1-Air conditioner	Status switch-On/ Off	1 bit	C,W,T,U
1633	Channel 1-Air conditioner	Operation mode	1bytes	C,R, T
1634	Channel 1-Air conditioner	Status operation mode	1bytes	C, W,T,U
1635	Channel 1-Air conditioner	Fan speed	1bytes	C,R, T
1636	Channel 1-Air conditioner	Status fan speed	1bytes	C,W,T,U
1637	Channel 1-Air conditioner	Setting temperature	2bytes	C,R, T
1638	Channel 1-Air conditioner	Status setting temperature	2bytes	C,W,T,U
This communication object is enabled when the parameter " Air conditioner " selects " General " and at the same time “Channel X” (X=1~16) selects “Enabled” . Obj.1：This communication object is used to send a message with the blocking value to the bus to control the unblocking/blocking for the air conditioner channel 1. Obj.2：This				

communication object is used to read the on/off status of Channel 1 AC. Obj.3：This communication object is used to send the channel 1 air conditioner switch on/off message to the bus to control the air conditioner on/off. Obj.4：This communication object is used to read the status of the channel 1 air conditioner operation mode. Obj.5：This communication object is used to send a message for channel 1 air conditioner operation mode to the bus to control the mode of the air conditioner. Obj.6: This communication object is used to read the fan speed status of air conditioner channel 1. Obj.7: This communication object is used to send a fan speed message for channel 1 air conditioner to the bus to control the air conditioner fan speed.Obj.8：This communication object is used to read the status of the channel 1 air conditioner setting temperature. Obj.9：This communication object is used to send a message to the bus for the setting temperature of the channel 1 air conditioner to control the temperature.				
1639	Channel 1-Air conditioner	Actual temperature	2bytes	C,W,T,U
This communication object is enabled when the parameter " Air conditioner " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Temperature source" selects "External sensor". This communication object is used to send a message of the actual temperature for channel 1 air conditioner to the bus to control the temperature of the air conditioner.				
1640	Channel 1-Air conditioner	Fault code-1 byte	1bytes	C,W,T,U
1641	Channel 1-Air conditioner	Fault code-2 byte	2bytes	C, W,T,U
This communication object is enabled when the parameter " Air conditioner " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Fault code" selects "1-byte" / "1-byte". This communication object is used to send a message with a 1-byte/2-byte fault code for channel 1 AC to the bus, controlling the byte size of the fault code.				
Note: The communication object of " Channel X-Air conditioner " is the same as above (X=1~16).				

7.5 Floor heating

1822	Channel 1-Floor heating	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
1823	Channel 1-Floor heating	Relay control-On / Off	1 bit	C	R	-	T	-	switch	低
1824	Channel 1-Floor heating	Status relay-On / Off	1 bit	C	-	W	T	U	switch	低
1825	Channel 1-Floor heating	Actual temperature	2 bytes	C	-	W	T	U	temperatu...	低
1826	Channel 1-Floor heating	Setting temp-Input	2 bytes	C	-	W	T	U	temperatu...	低
1827	Channel 1-Floor heating	Setting temp-Output	2 bytes	C	R	-	T	-	temperatu...	低
1828	Channel 1-Floor heating	Func switch-Input	1 bit	C	-	W	T	U	switch	低
1829	Channel 1-Floor heating	Func switch-Output	1 bit	C	R	-	T	-	switch	低
1830	Channel 1-Floor heating, High temp alar...	Externa temperature	2 bytes	C	-	W	T	U	temperatu...	低
1831	Channel 1-Floor heating, High temp alar...	Send alarm	1 bit	C	R	-	T	-	alarm	低
1832	Channel 1-Floor heating, Frost protection	External temperature	2 bytes	C	-	W	T	U	temperatu...	低
1833	Channel 1-Floor heating, Frost protection	Send alarm	1 bit	C	R	-	T	-	alarm	低

Figure 7.5

1822	Channel 1-Floor heating	Unblocking/Blocking	1 bit	C,W,T,U
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". This communication object is used to back feed the blocking value message of the floor heating channel 1 to the bus.				
1823	Channel 1-Floor heating	Relay control-On/ Off	1 bit	C,R, T
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Relay switch" selects "Enabled". This communication object is used to send the relay on/off status for floor heating channel 1.				
1824	Channel 1-Floor heating	Status relay-On/ Off	1 bit	C, W,T,U
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Relay switch" and "Status relay switch" select "Enabled". This communication object is used to back feed the switch status message of floor heating channel 1 to the bus.				
1825	Channel 1-Floor heating	Actual temperature	2bytes	C, W,T,U
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Temperature source" selects "External sensor". This communication object is used to back feed the status message of the actual temperature for floor heating channel 1 to the bus.				
1826	Channel 1-Floor heating	Setting temp-Input	2bytes	C, W,T,U
1827	Channel 1-Floor heating	Setting temp-Output	2bytes	C,R, T
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Setting temperature" selects "Enabled". Obj.1: This communication object is used to back feed the status message of the setting input temperature for floor heating channel 1 to the bus. Obj.2:This communication object is used to send the status of the setting output temperature for floor heating channel 1.				
1828	Channel 1-Floor heating	Func switch-Input	1 bit	C, W,T,U
1829	Channel 1-Floor heating	Func switch-Output	1 bit	C,R, T
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Setting function switch" selects "Enabled". Obj.1: This communication object is used to back feed the status message of the setting input switch function for floor heating channel 1 to the bus. Obj.2: This communication object is used to send the status of the setting output switch function for floor heating channel 1.				

1830	Channel 1-Floor heating, High temp alarm	Extern temperature	2bytes	C, W,T,U
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "High temperature alarm" selects "Enabled" and "Temperature source from the third" selects "Yes". This communication object is used to back feed back the status message to the bus when the external temperature is selected for the high temperature alarm function of floor heating channel 1.				
1831	Channel 1-Floor heating, High temp alarm	Send alarm	1 bit	C,R, T
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "High temperature alarm" selects "Enabled". This communication object is used to send the status of the alarm sent by the high temperature alarm function of floor heating channel 1.				
1832	Channel 1-Floor heating, Frost protection	External temperature	2bytes	C, W,T,U
1833	Channel 1-Floor heating, Frost protection	Send alarm	1 bit	C,R, T
This communication object is enabled when the parameter " Floor heating " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Frost protection" selects "Enabled" and "Temperature source from the third" selects "Yes". Obj.1: This communication object is used to back feed a status message to the bus when the external temperature is selected for the frost protection function of floor heating channel 1. Obj.2: This communication object is used to send the status of the frost protection function sending alarm for floor heating channel 1.				
Note: The communication object of " Channel X- Floor heating " is the same as above (X=1~16)				

7.6 Ventilation system

2046	Channel 1-Ventilation system	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
2047	Channel 1-Ventilation system	Fan speed 1	1 bit	C	R	-	T	-	switch	低
2048	Channel 1-Ventilation system	Fan speed 2	1 bit	C	R	-	T	-	switch	低
2049	Channel 1-Ventilation system	Fan speed 3	1 bit	C	R	-	T	-	switch	低
2050	Channel 1-Ventilation system	Status fan speed 1	1 bit	C	-	W	T	U	switch	低
2051	Channel 1-Ventilation system	Status fan speed 2	1 bit	C	-	W	T	U	switch	低
2052	Channel 1-Ventilation system	Status fan speed 3	1 bit	C	-	W	T	U	switch	低
2053	Channel 1-Ventilation system	Fan speed-1byte	1 byte	C	R	-	T	-	percentag...	低
2054	Channel 1-Ventilation system	Status fan speed-1byte	1 byte	C	-	W	T	U	percentag...	低
2055	Channel 1-Ventilation system	Actual temperature	2 bytes	C	-	W	T	U	temperatu...	低

2056	Channel 1-Ventilation system	Setting fan speed-In...	1 byte	C	-	W	T	U	percentag...	低
2057	Channel 1-Ventilation system	Setting fan speed-O...	1 byte	C	R	-	T	-	percentag...	低
2058	Channel 1-Ventilation system	Func switch-Input	1 bit	C	-	W	T	U	switch	低
2059	Channel 1-Ventilation system	Func switch-Output	1 bit	C	R	-	T	-	switch	低
2063	Channel 1-Ventilation system	Filter time reset	1 bit	C	-	W	T	U	reset	低
2064	Channel 1-Ventilation system	Filter time alarm	1 bit	C	R	-	T	-	alarm	低
2065	Channel 1-Ventilation system	Filter time counter	2 bytes	C	R	-	T	-	time (h)	低
2066	Channel 1-Ventilation system	Auto mode-Dis./En.	1 bit	C	-	W	T	U	enable	低
2067	Channel 1-Ventilation system	PM2.5 value	2 bytes	C	-	W	T	U		低

Figure 7.6

2046	Channel 1-Ventilation system	Unblocking/Blocking	1bit	C, W,T,U
2047	Channel 1-Ventilation system	Fan speed 1	1bit	C,R, T
2048	Channel 1-Ventilation system	Fan speed 2	1bit	C,R, T
2049	Channel 1-Ventilation system	Fan speed 3	1bit	C,R, T
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". Obj.1: This communication object is used to back feed the blocking value message of the ventilation system channel 1 to the bus. Obj.2: This communication object is used to send the fan speed 1 status of the ventilation system channel 1. Obj.3: This communication object is used to send the fan speed 2 status of the ventilation system channel 1. Obj.4: This communication object is used to send the fan speed 3 status of the ventilation system channel 1.				
2050	Channel 1-Ventilation system	Status fan speed 1	1bit	C,W,T,U
2051	Channel 1-Ventilation system	Status fan speed 2	1bit	C,W,T,U
2052	Channel 1-Ventilation system	Status fan speed 3	1bit	C,W,T,U
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Data type of Fan speed control" selects "1 bit" and "Status fan speed control for 1bit" selects " "Enabled". Obj.1: This communication object is used to back feed the fan speed 1 message of the ventilation system channel 1 to the bus. Obj.2: This communication object is used to back feed the fan speed 2 message of the ventilation system channel 1 to the bus. Obj.3: This communication object is used to back feed the fan speed 3 message of the ventilation system channel 1 to the bus.				
2053	Channel 1-Ventilation system	Fan speed-1byte	1byte	C,R, T
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled" and "Data type of Fan speed control" selects "1 byte". This communication object is used to send the fan speed status for channel 1 of the ventilation system.				

2054	Channel 1-Ventilation system	Status fan speed-1byte	1byte	C, W,T,U
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Data type of Fan speed control" selects "1 byte" and "Status fan speed control for 1byte" selects " "Enabled". This communication object is used to back feed the fan speed messages of the ventilation system channel 1 to the bus.				
2055	Channel 1-Ventilation system	Actual temperature	2byte	C,W,T,U
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Data type of Fan speed control" selects "1 byte" and "Temperature source" selects " "External sensor". This communication object is used to back feed the actual temperature message for channel 1 of the ventilation system to the bus.				
2056	Channel 1-Ventilation system	Setting fan speed-Input	1byte	C,W,T,U
2057	Channel 1-Ventilation system	Setting fan speed-output	1byte	C,R, T
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) and "Setting fan speed" select "Enabled". Obj.1: This communication object is used to back feed the setting inlet fan speed message of ventilation system channel 1 to the bus.Obj.2: This communication object is used to send the setting outlet fan speed status of ventilation system channel 1.				
2058	Channel 1-Ventilation system	Func switch-Input	1bit	C, W,T,U
2059	Channel 1-Ventilation system	Func switch-Output	1bit	C,R, T
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) and "Setting function switch" select "Enabled". Obj.1: This communication object is used to back feed the inlet fan switch messages of ventilation system channel 1 to the bus. Obj.2: This communication object is used to send the status of the outlet fan switch for ventilation system channel 1.				
2060	Channel 1-Ventilation system	Heat exchange-Switch	1bit	C,R, T
2061	Channel 1-Ventilation system	Heat exchange-Status switch	1bit	C, W,T,U
2062	Channel 1-Ventilation system	Heat exchange-Dis./En.	1bit	C,W,T,U
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Heat exchange function " selects "Disabled=0/Enabled=1 " or " Disabled=1/Enabled=0". Obj.1: This communication object is used to send the heating exchange status of channel 1 for the ventilation system. Obj.2: This communication object is used to back feed the heat exchange messages of the				

ventilation system channel 1 to the bus. Obj.3: This communication object is used to back feed the Disabled/Enabled message of the heat exchange for the ventilation system channel 1 to the bus.				
2063	Channel 1-Ventilation system	Filter time reset	1bit	C, W,T,U
2064	Channel 1-Ventilation system	Filter time alarm	1bit	C,R, T,
2065	Channel 1-Ventilation system	Filter time counter	2byte	C,R, T,
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Heat exchange function " selects "Disabled=0/Enabled=1 " or " Disabled=1/Enabled=0". Obj.1: This communication object is used to back feed the message of the filter time reset of the ventilation system channel 1 to the bus.Obj.2: This communication object is used to send the filter time alarm status of channel 1 of the ventilation system. Obj.3: This communication object is used to send the status of the filter time counter for channel 1 of the ventilation system.				
2066	Channel 1-Ventilation system	Auto mode-Dis. /Fn.	1byte	C,W,T,U
2067	Channel 1-Ventilation system	PM2.5 value	2byte	C,W,T,U
2068	Channel 1-Ventilation system	CO2 value	2byte	C, W,T,U
2069	Channel 1-Ventilation system	HCHO value	2byte	C, W,T,U
2070	Channel 1-Ventilation system	TVOC value	2byte	C, W,T,U
This communication object is enabled when the parameter " Ventilation system " selects " General " and at the same time "Channel X" (X=1~16) and "Auto. fan speed function " select "Enabled". Obj.1: This communication object is used to back feed the auto mode on/off message of the ventilation system channel 1 to the bus. Obj.2: This communication object is used to feed the PM2.5 value message for channel 1 of the ventilation system to the bus. Obj.3: This communication object is used to feed the CO2 value message for channel 1 of the ventilation system to the bus. Obj.4: This communication object is used to feed the HCHO value message for channel 1 of the ventilation system to the bus. Obj.5: This communication object is used to feed the TVOC value message for channel 1 of the ventilation system to the bus.				
Note: The communication object of " Channel X- Ventilation system " is the same as above (X=1~16).				

7.7 HVAC function

2462	Channel 1-HVAC	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
2463	Channel 1-HVAC	Heat control-1bit	1 bit	C	R	-	T	-	switch	低
2464	Channel 1-HVAC	Status heat control-1...	1 bit	C	-	W	T	U	switch	低
2465	Channel 1-HVAC	Heat control-1byte	1 byte	C	R	-	T	-	percentag...	低
2466	Channel 1-HVAC	Status heat control-1...	1 byte	C	-	W	T	U	percentag...	低
2467	Channel 1-HVAC	Cool control-1bit	1 bit	C	R	-	T	-	switch	低
2468	Channel 1-HVAC	Status cool control-1...	1 bit	C	-	W	T	U	switch	低
2469	Channel 1-HVAC	Cool control-1byte	1 byte	C	R	-	T	-	percentag...	低
2470	Channel 1-HVAC	Status cool control-1...	1 byte	C	-	W	T	U	percentag...	低
2471	Channel 1-HVAC	Heat/Cool control-1bit	1 bit	C	R	-	T	-	switch	低
2472	Channel 1-HVAC	Status heat/cool con...	1 bit	C	-	W	T	U	switch	低
2473	Channel 1-HVAC	Heat/Cool control-1b...	1 byte	C	R	-	T	-	percentag...	低
2474	Channel 1-HVAC	Status heat/cool con...	1 byte	C	-	W	T	U	percentag...	低
2475	Channel 1-HVAC	Fan speed 1	1 bit	C	R	-	T	-	switch	低
2476	Channel 1-HVAC	Fan speed 2	1 bit	C	R	-	T	-	switch	低
2477	Channel 1-HVAC	Fan speed 3	1 bit	C	R	-	T	-	switch	低
2478	Channel 1-HVAC	Status fan speed 1	1 bit	C	-	W	T	U	switch	低
2479	Channel 1-HVAC	Status fan speed 2	1 bit	C	-	W	T	U	switch	低
2480	Channel 1-HVAC	Status fan speed 3	1 bit	C	-	W	T	U	switch	低
2484	Channel 1-HVAC	Heat and cool mode...	1 bit	C	-	W	T	U	cooling/he...	低
2485	Channel 1-HVAC	Heat and cool mode...	1 bit	C	R	-	T	-	cooling/he...	低
2486	Channel 1-HVAC	Heat and cool mode...	1 byte	C	-	W	T	U	HVAC cont...	低
2487	Channel 1-HVAC	Heat and cool mode...	1 byte	C	R	-	T	-	HVAC cont...	低
2488	Channel 1-HVAC	HVAC mode-Input	1 byte	C	-	W	T	U	HVAC mode	低
2489	Channel 1-HVAC	HVAC mode-Output	1 byte	C	R	-	T	-	HVAC mode	低
2490	Channel 1-HVAC	Setting fan speed-In...	1 byte	C	-	W	T	U	percentag...	低
2491	Channel 1-HVAC	Setting fan speed-O...	1 byte	C	R	-	T	-	percentag...	低
2492	Channel 1-HVAC	Func switch-Input	1 bit	C	-	W	T	U	switch	低
2493	Channel 1-HVAC	Func switch-Output	1 bit	C	R	-	T	-	switch	低
2494	Channel 1-HVAC	Setting temp-Input	2 bytes	C	-	W	T	U	temperatu...	低
2495	Channel 1-HVAC	Setting temp-Output	2 bytes	C	R	-	T	-	temperatu...	低

Figure 7.7

2462	Channel 1-HVAC	Unblocking/Blocking	1bit	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". Obj.1: This communication object is used to back feed the blocking value message of air conditioner channel 1 to the bus.				
2463	Channel 1-HVAC	Heat control-1bit	1bit	C,R,T,
2464	Channel 1-HVAC	Status heat Control-1bit	1bit	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time				

"Channel X" (X=1~16) and " Heat/cool control " select "Enabled" . Obj.1 : This communication object is used to send the heating status of air conditioner channel 1 via 1 bit. Obj.2: This communication object is used to back feed the heating message of the air conditioner channel 1 to the bus via 1bit.				
2465	Channel 1-HVAC	Heat control-1byte	1byte	C,R, T
2466	Channel 1-HVAC	Status heat control-1byte	1byte	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Heat/cool control " select "Enabled" , then "Type of HVAC control " selects "Heating " and "Method of heating control" selects "Continuous control(use Pl control) " . Obj.1 : This communication object is used to send the heating status of air conditioner channel 1 via 1 byte. Obj.2 : This communication object is used to back feed the heating message of the air conditioner channel 1 to the bus via 1byte.				
2467	Channel 1-HVAC	Cool control-1bit	1bit	C,R, T
2468	Channel 1-HVAC	Status Cool control-1bit	1bit	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Heat/cool control " select "Enabled" and " Type of HVAC control " selects "Cooling " Obj.1: This communication object is used to send the cooling status of air conditioner channel 1 via 1bit. Obj.2: This communication object is used to back feed the cooling message of the air conditioner channel 1 to the bus via 1bit.				
2469	Channel 1-HVAC	Cool control-1byte	1byte	C,R, T
2470	Channel 1-HVAC	Status Cool control-1byte	1byte	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Heat/cool control " select "Enabled" , then "Type of HVAC control " selects "Cooling " and "Method of cooling control" selects "Continuous control(use Pl control) " . Obj.1 : This communication object is used to send the cooling status of air conditioner channel 1 via 1byte. Obj.2: This communication object is used to feedback the cooling message of the air conditioner channel 1 to the bus via 1byte.				
2471	Channel 1-HVAC	Heat/Cool control-1bit	1bit	C,R, T
2472	Channel 1-HVAC	Status heat/Cool control-1bit	1bit	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Heat/cool control " select "Enabled" , then "Type of HVAC control " selects "Heating and Cooling" and "Control system" selects "2 pipes system " . Obj.1: This communication object is used to send the heating/cooling status of air conditioner channel 1 via 1bit. Obj.2: This communication object is used to back feed the heating/cooling messages of the air conditioner channel 1 to the bus via 1bit.				

2473	Channel 1-HVAC	Heat/Cool control-1byte	1byte	C,R, T
2474	Channel 1-HVAC	Status heat/Cool control-1byte	1byte	C, W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Heat/cool control " select "Enabled", then "Type of HVAC control " selects "Heating and Cooling" and "Control system" selects "2 pipes system ", "Method of heating/cool control" selects "Continuous control(use Pl control) ". Obj.1: This communication object is used to send the heating/cooling status of air conditioner channel 1 via 1byte. Obj.2: This communication object is used to back feed the heating/cooling messages of the air conditioner channel 1 to the bus via 1byte.				
2475	Channel 1-HVAC	Fan speed 1	1bit	C,R, T
2476	Channel 1-HVAC	Fan speed 2	1bit	C,R, T
2477	Channel 1-HVAC	Fan speed 3	1bit	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Fan speed control " select "Enabled". Obj.1: This communication object is used to send the status of fan speed 1 of air conditioner channel 1. Obj.2: This communication object is used to send the status of fan speed 2 of air conditioner channel 1Obj. 3: This communication object is used to send the status of fan speed 3 of air conditioner channel 1.				
2478	Channel 1-HVAC	Status fan speed 1	1bit	C, W,T,U
2479	Channel 1-HVAC	Status fan speed 2	1bit	C,W,T,U
2480	Channel 1-HVAC	Status fan speed 3	1bit	C, W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Fan speed control " select "Enabled", then " Datatype for fan speed control " selects "1bit " and "Status fan speed control for 1bit" selects " "Enabled " . Obj.1: This communication object is used to back feed the fan speed message 1 of air conditioner channel 1 to the bus via 1byte. Obj.2: This communication object is used to back feed the fan speed message 2 of air conditioner channel 1 to the bus via 1byte. Obj.3: This communication object is used to back feed the fan speed message 3 of air conditioner channel 1 to the bus via 1byte.				
2481	Channel 1-HVAC	Fan speed-1byte	1byte	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Fan speed control " select "Enabled", then " Datatype for fan speed control " selects "1byte " . Obj.1: This communication object is used to send the fan speed status of air conditioner channel 1 via 1byte.				
2482	Channel 1-HVAC	Status fan speed-1byte	1byte	C, W,T,U

This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Fan speed control " select "Enabled", then " Datatype for fan speed control " selects "1byte " and "Status fan speed control for 1byte" selects " "Enabled " . Obj.1: This communication object is used to back feed the fan speed message of air conditioner channel 1 to the bus via 1byte.				
2483	Channel 1-HVAC	Actual temperature	2byte	C,W,T,U
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) select "Enabled" and " Indoor temperature source" selects "External sensor" . Obj.1: This communication object is used to back feed the actual temperature message of the air conditioner channel 1 to the bus via 1byte.				
2484	Channel 1-HVAC	Heat and cool mode-Input	1bit	C,W,T,U
2485	Channel 1-HVAC	Heat and cool mode-Output	1bit	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting heat/cool mode " select "Enabled", then " Data type for setting heat/cool model " selects "1bit " . Obj.1: This communication object is used to back feed the heating and cooling input mode messages of air conditioner channel 1 to the bus . Obj.2: This communication object is used to send the status of the heating and cooling output modes of air conditioner channel 1.				
2486	Channel 1-HVAC	Heat and cool mode-Input-byte	1byte	C, W,T,U
2487	Channel 1-HVAC	Heat and cool mode-Output-byte	1byte	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting heat/cool mode " select "Enabled", then " Data type for setting heat/cool model " selects "1byte " . Obj.1: This communication object is used to back feed the heating and cooling input mode messages of air conditioner channel 1 to the bus via 1byte. Obj.2: This communication object is used to send the heating and cooling output mode status of air conditioner channel 1 via 1byte.				
2488	Channel 1-HVAC	HVAC mode-Input	1byte	C,W,T,U
2489	Channel 1-HVAC	HVAC mode-Output	1byte	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting HVAC mode " select "Enabled" . Obj.1: This communication object is used to back feed the air conditioner input mode message of air conditioner channel 1 to the bus via a 1byte.Obj.2: This communication object is used to send the air conditioner output mode status of air conditioner channel 1 via 1byte.				
2490	Channel 1-HVAC	Setting fan speed-Input	1byte	C, W,T,U

2491	Channel 1-HVAC	Setting fan speed-Output	1byte	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting fan speed " select "Enabled". Obj.1: This communication object is used to back feed the setting input fan speed message of air conditioner channel 1 to the bus via 1byte. Obj.2: This communication object is used to send the status of the setting output fan speed of air conditioner channel 1 via 1byte.				
2492	Channel 1-HVAC	Func switch-Input	1bit	C,W,T,U
2493	Channel 1-HVAC	Func switch-Output	1bit	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting function switch " select "Enabled". Obj.1: This communication object is used to back feed the setting input switch function message of air conditioner channel 1 to the bus via 1byte.Obj.2: This communication object is used to send the status of the setting output switch function of air conditioner channel 1 via 1byte.				
2494	Channel 1-HVAC	Setting temp-Input	2bytes	C, W,T,U
2495	Channel 1-HVAC	Setting temp-Output	2bytes	C,R, T
This communication object is enabled when the parameter " HVAC function " selects " General " and at the same time "Channel X" (X=1~16) and " Setting temperature " select "Enabled". Obj.1: This communication object is used to back feed the setting input temperature message of air conditioner channel 1 to the bus via 1byte. Obj.2: This communication object is used to send the status of the setting output temperature of air conditioner channel 1 via 1byte.				
Note: The communication object of " Channel X- HVAC " is the same as above (X=1~16).				

7.8 Background music

3006	Channel 1-Backgro...	Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
3007	Channel 1-Backgro...	Power switch	1 bit	C	R	-	T	-	switch	低
3008	Channel 1-Backgro...	Status power switch	1 bit	C	-	W	T	U	switch	低
3009	Channel 1-Backgro...	Play / Pause	1 bit	C	R	-	T	-	start/stop	低
3010	Channel 1-Backgro...	Play / Pause	1 bit	C	-	W	T	U	start/stop	低
3011	Channel 1-Backgro...	Previous / Next song	1 bit	C	R	-	T	-	up/down	低
3012	Channel 1-Backgro...	Dec / Add volume	1 bit	C	R	-	T	-		低
3015	Channel 1-Backgro...	Play mode	1 byte	C	R	-	T	-		低
3016	Channel 1-Backgro...	Status play mode	1 byte	C	-	W	T	U		低
3017	Channel 1-Backgro...	Play progress	1 byte	C	R	-	T	-		低
3018	Channel 1-Backgro...	Status play progress	1 byte	C	-	W	T	U		低
3019	Channel 1-Backgro...	Music source	1 byte	C	R	-	T	-		低
3020	Channel 1-Backgro...	Status music source	1 byte	C	-	W	T	U		低
3021	Channel 1-Backgro...	Music mute	1 bit	C	R	-	T	-	switch	低
3022	Channel 1-Backgro...	Status music mute	1 bit	C	-	W	T	U	switch	低

Figure 7.8

3006	Channel 1-Background music	Unblocking/Blocking	1bit	C, W,T,U
3007	Channel 1-Background music	Power switch	1bit	C,R, T
3008	Channel 1-Background music	Status power switch	1bit	C, W,T,U
3009	Channel 1-Background music	Play / Pause	1bit	C,R, T
3010	Channel 1-Background music	Play / Pause	1bit	C, W,T,U
3011	Channel 1-Background music	Previous/ Next song	1bit	C,R, T
3012	Channel 1-Background music	Dec/Add volume	1bit	C,R, T
3015	Channel 1-Background music	Play mode	1byte	C,R, T
3016	Channel 1-Background music	Status play mode	1byte	C, W,T,U
3017	Channel 1-Background music	Play progress	1byte	C,R, T
3018	Channel 1-Background music	Status play progress	1byte	C, W,T,U
3019	Channel 1-Background music	Music source	1byte	C,R, T
3020	Channel 1-Background music	Status music source	1byte	C, W,T,U
3021	Channel 1-Background music	Music mute	1bit	C,R, T
3022	Channel 1-Background music	Status music mute	1bit	C, W,T,U

This communication object is enabled when the parameter " Background music " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". Obj.1: This communication object is used to back feed the blocking value message of background music channel 1 to the bus; Obj.2: This communication object is used to send the status of the power switch of background music channel 1; Obj.3: This communication object is used to back feed the power message

of background music channel 1 to the bus; Obj.4: This communication object is used to send the pause/play status of background music channel 1; Obj.5: This communication object is used to back feed the pause/play message of background music channel 1 to the bus via 1byte; Obj.6: This communication object is used to send the status of the previous/next song of background music channel 1; Obj.7: This communication object is used to send the status of decreasing/increasing volume of background music channel 1.Obj.8: This communication object is used to send the status of the play mode of background music channel 1; Obj.9: This communication object is used to back feed the Play Mode message of background music channel 1 to the bus.Obj.10: This communication object is used to send the status of the play progress of background music channel 1; Obj.11: This communication object is used to back feed the play progress message of background music channel 1 to the bus。Obj.12: This communication object is used to send the status of the music source for background music channel 1; Obj.13: This communication object is used to back feed the music source message of background music channel 1 to the bus. Obj.14: This communication object is used to send the status of the music mute for background music channel 1 via 1byte; Obj.15: This communication object is used to back feed the music mute message of background music channel 1 to the bus via 1byte.
Note: The communication object of " Channel X- Background music" is the same as above (X=1~16).

7.9 Air quality

3278	Channel 1-Air quality Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
3279	Channel 1-Air quality Item 1, AQI	2 bytes	C	-	W	T	U		低
3280	Channel 1-Air quality Item 2, AQI	2 bytes	C	-	W	T	U		低
3281	Channel 1-Air quality Item 3, AQI	2 bytes	C	-	W	T	U		低
3282	Channel 1-Air quality Item 4, AQI	2 bytes	C	-	W	T	U		低
3283	Channel 1-Air quality Item 5, AQI	2 bytes	C	-	W	T	U		低
3284	Channel 1-Air quality Item 6, AQI	2 bytes	C	-	W	T	U		低
3285	Channel 1-Air quality Item 7, AQI	2 bytes	C	-	W	T	U		低
3286	Channel 1-Air quality Item 8, AQI	2 bytes	C	-	W	T	U		低
3287	Channel 1-Air quality Item 9, AQI	2 bytes	C	-	W	T	U		低

Figure 7.9

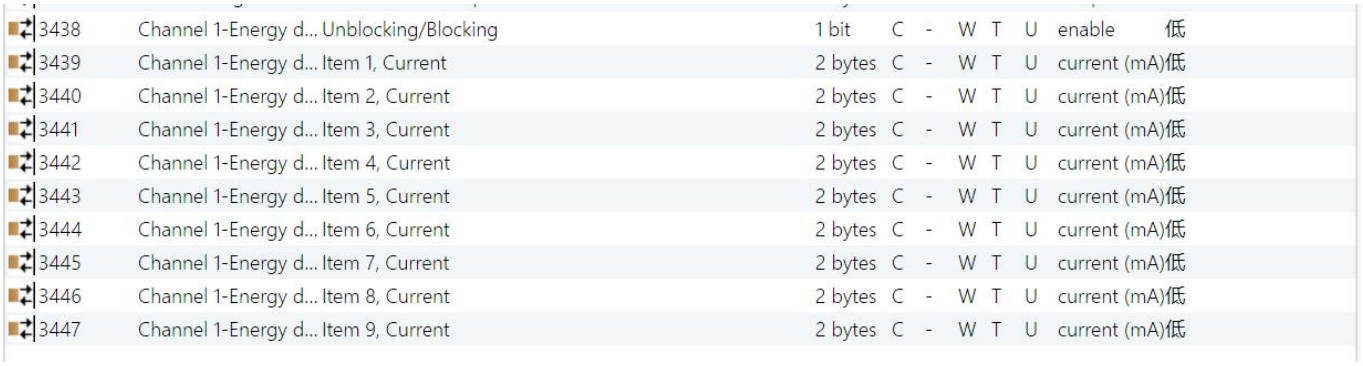
3278	Channel 1-Air quality	Unblocking/Blocking	1bit	C, W,T,U
This communication object is enabled when the parameter " Air quality " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled" . This communication object is used to back feed the blocking value message of air quality channel 1 to the bus;				
3279	Channel 1-Air quality	Item 1, AQ1	2bytes	C, W,T,U
3280	Channel 1-Air quality	Item 2, AQ1	2bytes	C,W,T,U
3281	Channel 1-Air quality	Item 3, AQ1	2bytes	C, W,T,U

3282	Channel 1-Air quality	Item 4, AQ1	2bytes	C,W,T,U
3283	Channel 1-Air quality	Item 5, AQ1	2bytes	C, W,T,U
3284	Channel 1-Air quality	Item 6, AQ1	2bytes	C, W,T,U
3285	Channel 1-Air quality	Item 7, AQ1	2bytes	C, W,T,U
3286	Channel 1-Air quality	Item 8, AQ1	2bytes	C, W,T,U
3287	Channel 1-Air quality	Item 9, AQ1	2bytes	C, W,T,U

This communication object is enabled when the parameter " Air quality " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Items Y function in List display" (Y=1~9) selects "Enabled". Obj.1: This communication object is used to back feed the item one AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.2: This communication object is used to back feed the item two AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.3: This communication object is used to back feed the item three AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.4: This communication object is used to back feed the item four AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.5: This communication object is used to back feed the item five AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.6: This communication object is used to back feed the item six AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.7: This communication object is used to back feed the item seven AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.8: This communication object is used to back feed the item eight AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus; Obj.9: This communication object is used to back feed the item nine AQI/Temperature/Humidity/PM2.0/PM1.0/CHCHO/TVOC/CO2/CO messages of air quality channel 1 to the bus;

Note: The communication object of " Channel X- Air quality" is the same as above (X=1~16).

7.10 Energy data



3438	Channel 1-Energy d... Unblocking/Blocking	1 bit	C	-	W	T	U	enable	低
3439	Channel 1-Energy d... Item 1, Current	2 bytes	C	-	W	T	U	current (mA)	低
3440	Channel 1-Energy d... Item 2, Current	2 bytes	C	-	W	T	U	current (mA)	低
3441	Channel 1-Energy d... Item 3, Current	2 bytes	C	-	W	T	U	current (mA)	低
3442	Channel 1-Energy d... Item 4, Current	2 bytes	C	-	W	T	U	current (mA)	低
3443	Channel 1-Energy d... Item 5, Current	2 bytes	C	-	W	T	U	current (mA)	低
3444	Channel 1-Energy d... Item 6, Current	2 bytes	C	-	W	T	U	current (mA)	低
3445	Channel 1-Energy d... Item 7, Current	2 bytes	C	-	W	T	U	current (mA)	低
3446	Channel 1-Energy d... Item 8, Current	2 bytes	C	-	W	T	U	current (mA)	低
3447	Channel 1-Energy d... Item 9, Current	2 bytes	C	-	W	T	U	current (mA)	低

Figure 7.10

3438	Channel 1-Energy data	Unblocking/Blocking	1bit	C, W,T,U
This communication object is enabled when the parameter " Energy data " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". This communication object is used to back feed the blocking value message of energy data channel 1 to the bus;				
3439	Channel 1-Energy data	Item 1, Current	2bytes	C, W,T,U
3440	Channel 1-Energy data	Item 2, Current	2bytes	C, W,T,U
3441	Channel 1-Energy data	Item 3, Current	2bytes	C, W,T,U
3442	Channel 1-Energy data	Item 4, Current	2bytes	C,W,T,U
3443	Channel 1-Energy data	Item 5, Current	2bytes	C, W,T,U
3444	Channel 1-Energy data	Item 6, Current	2bytes	C, W,T,U
3445	Channel 1-Energy data	Item 7, Current	2bytes	C, W,T,U
3446	Channel 1-Energy data	Item 8, Current	2bytes	C, W,T,U
3447	Channel 1-Energy data	Item 9 Current	2bytes	C, W,T,U
This communication object is enabled when the parameter " Air quality " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled", then "Items Y function in List display" (Y=1~9) selects "Enabled". Obj.1: This communication object is used to feed back the item one current/voltage/power/power factor/electricity messages of energy channel 1 to the bus; Obj.2: This communication object is used to feed back the item two current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.3: This communication object is used to feed back the item three current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.4: This communication object is used to feed back the item four current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.5: This communication				

object is used to feed back the item five current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.6: This communication object is used to feed back the item six current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.7: This communication object is used to feed back the item seven current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.8: This communication object is used to feed back the item eight current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus; Obj.9: This communication object is used to feed back the item nine current/voltage/power/power factor/electricity messages of air quality channel 1 to the bus;
Note: The communication object of " Channel X- Energy data " is the same as above (X=1~16).

7.11 Time function

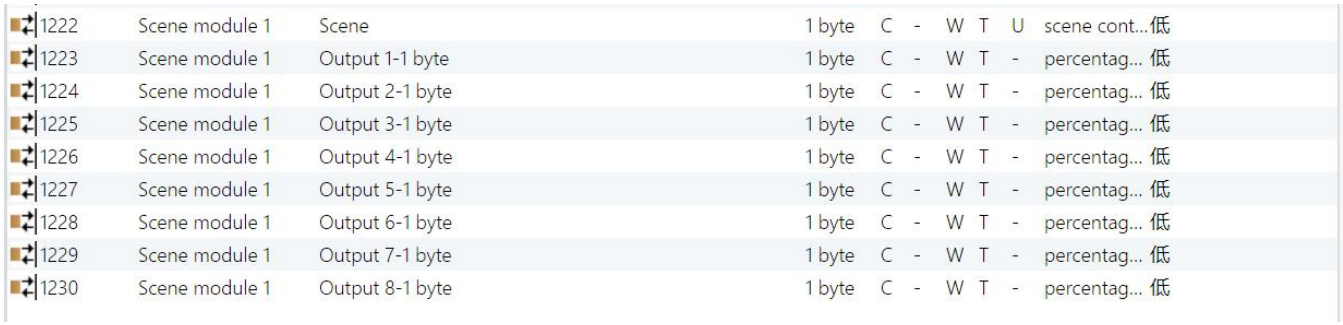
1190	Time function 1	Output - 1 bit	1 bit	C	R	-	T	-	switch	低
1191	Time function 1	Disabled/Enabled	1 bit	C	-	W	T	U	enable	低

Figure 7.11

1190	Time function 1	Output -1 bit	1bit	C,R, T
1191	Time function 1	Disabled/Enabled	1bit	C, W,T,U
This communication object is enabled when the parameter " Time function " selects " General " and at the same time "Channel X" (X=1~16) selects "Enabled". Obj.1: This communication object is used to send the status of the timing output 1 bit of the timing function channel 1; Obj.2: This communication object is used to feed the timing function Enabled/Disabled messages of the timing function channel 1 to the bus.				
Note: The communication object of " Channel X- Time function " is the same as above (X=1~16).				

7.12 Scene module

1222	Scene module 1	Scene	1 byte	C	-	W	T	U	scene cont...	低
1223	Scene module 1	Output 1-1 bit	1 bit	C	-	W	T	-	switch	低
1224	Scene module 1	Output 2-1 bit	1 bit	C	-	W	T	-	switch	低
1225	Scene module 1	Output 3-1 bit	1 bit	C	-	W	T	-	switch	低
1226	Scene module 1	Output 4-1 bit	1 bit	C	-	W	T	-	switch	低
1227	Scene module 1	Output 5-1 bit	1 bit	C	-	W	T	-	switch	低
1228	Scene module 1	Output 6-1 bit	1 bit	C	-	W	T	-	switch	低
1229	Scene module 1	Output 7-1 bit	1 bit	C	-	W	T	-	switch	低
1230	Scene module 1	Output 8-1 bit	1 bit	C	-	W	T	-	switch	低



1222	Scene module 1	Scene	1 byte	C	-	W	T	U	scene cont...	低
1223	Scene module 1	Output 1-1 byte	1 byte	C	-	W	T	-	percentag...	低
1224	Scene module 1	Output 2-1 byte	1 byte	C	-	W	T	-	percentag...	低
1225	Scene module 1	Output 3-1 byte	1 byte	C	-	W	T	-	percentag...	低
1226	Scene module 1	Output 4-1 byte	1 byte	C	-	W	T	-	percentag...	低
1227	Scene module 1	Output 5-1 byte	1 byte	C	-	W	T	-	percentag...	低
1228	Scene module 1	Output 6-1 byte	1 byte	C	-	W	T	-	percentag...	低
1229	Scene module 1	Output 7-1 byte	1 byte	C	-	W	T	-	percentag...	低
1230	Scene module 1	Output 8-1 byte	1 byte	C	-	W	T	-	percentag...	低

Figure 7.12

1222	Scene module 1	Scene	1byte	C,W,T,U
1223	Scene module 1	Output 1-1 bit	1bit	C,R, T
1224	Scene module 1	Output 2-1 bit	1bit	C,R, T
1225	Scene module 1	Output 3-1 bit	1bit	C,R, T
1226	Scene module 1	Output 4-1 bit	1bit	C,R, T
1227	Scene module 1	Output 5-1 bit	1bit	C,R, T
1228	Scene module 1	Output 6-1 bit	1bit	C,R, T
1229	Scene module 1	Output 7-1 bit	1bit	C,R, T
1230	Scene module 1	Output 8-1 bit	1bit	C,R, T

This communication object is enabled when the parameter " Scene module " selects " General " and at the same time "Channel X" (X=1~8) selects "Enabled". Obj.1: This communication object is used to back feed the scene function message of scene mode of channel 1 to the bus. (Activation: Activate scene functions on ETS; Learn: Write, Devices can learn from the previous scene). Obj.2: When the parameter "Data type of output Y for Scene module" (Y=1~8) selects "1 bit", This communication object is used to send the status of the timing output Y-1bit of the scene function channel 1; Obj.3: When the parameter "Data type of output Y for Scene module" (Y=1~8) selects "1 byte", This communication object is used to send the status of the timing output Y-1byte of the scene function channel 1;

Note: The communication object of " Channel X- Scene module " is the same as above (X=1~8).

8 Safe use and maintenance

(1) Read all instructions in detail before use.
(2) Create a good ventilation environment.
(3) In use, pay attention to the moisture-proof, shock-proof, dust-proof.
(4) Strictly forbid to rain, contact with other liquids or corrosive gases.
(5) If it is wet or attacked by liquid, it should be dried in time.
(6) When the machine fails, please contact professional maintenance personnel or our company.

9 Contact

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