# **User manual**

# K-BUS<sup>®</sup> KNX Smart Touch S10\_V1.0 CHTI-10.1/240.1.2x



**KNX/EIB Home and Building Control System** 

# Attentions

1. Please keep devices away from strong magnetic field, high

temperature, wet environment;



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

impact;



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



# 4. Do not disassemble the devices.

S10 series includes KNX Smart Touch S10.

Products name	Product model
KNX Smart Touch S10	CHTI-10.1/240.1.22(Silver)
	CHTI-10.1/240.1.23(Gray)

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# **Chapter 1 Summary**

KNX Smart Touch S10 is a 10.1-inch KNX smart control panel with a screen resolution of up to 1280\*800.In addition to integrating KNX device control, it also connects to a SIP intercom system, combining indoor and outdoor communication into one entity.

The smart control integrates lighting, switches, dimming, curtains, value sender, color temperature, color control (RGB, RGBW, RGBCW), audio control, room temperature control, Air conditioner, Ventilation system control, etc. It not only supports displaying air quality, energy metering, device status, but also support various sensors such as proximity sensor, brightness sensor, temperature and humidity sensors, meets the requirements of most applications. Additionally, it supports schedule, logic function, scene group function to make your life smarter. As an intercom indoor unit, it supports wired network access and features such as address book import, contact management, SIP visual intercom calls, voice messages, security monitoring, virtual zone management, etc. It also supports various functions like SOS, lock screen, password access, etc.

KNX Smart Touch S10 powered from KNX bus, and need a 12-30V DC auxiliary supply voltage or Used POE. It is available to assign the physical address and configure the parameters by engineering design tools ETS with .knxprod ( support edition ETS5.7 or higher ).



# **Chapter 2 Technical Date**

Power Supply	Bus voltage	21-30V DC, via the KNX bus
	Bus current	<3.8mA/24V, <3.4mA/30V
	Bus consumption	<0.1W
Auxiliary Supply	Voltage	12-30V DC
	Current	<350mA/24V, <280mA/30V
	Consumption	<8W
Connection	KNX	Bus connection terminal(Red/Black)
	Auxiliary Supply	2 PIN (Red/Black interface line)
	RJ45(LAN)	For access to intercom system
	RJ45(WAN)	For connect Ethernet
Operation and	push button&LED	For assigning the physical address
Proximity sensor	Normal:30c	m Enhanced:60cm
Temperature	<b>-40-80</b> ℃	
Humidity sensor	0-100%	
Temperature	Operation	– 5 °C + 45 °C
	Storage	–25 °C + 55 °C
	Transport	– 25 °C + 70 °C
Environment	Humidity	<93%, except dewing
Installation	In a conventional 86m	nm or double 60mm wiring box
Dimension/Weight	KNX Smart Touch S10	): 248mm*154.6mm*34.4mm/0.8Kg



# **Chapter 3 Dimension and Structural Diagram**

# 3.1 Dimension Diagram

# 3.1.1 KNX Smart Touch S10



Fig.3.1.1(1) KNX Smart Touch S10



# 3.2 Structural Diagram

## 3.2.1 KNX Smart Touch S10



Fig.3.2.1 KNX Smart Touch S10 structural diagram



(1)Touch and display area	©reset button
<sup>(2)</sup> Proximity sensor and brightness sensor	
③Internal temperature and humidity	()8 dry contact input ports
sensor	8 Auxiliary supply connection terminal
<b>④SPK*2</b>	
⑤Microphone*4	<pre>10Ethernet port*2</pre>

# **3.3 Installation and Disassembly instructions**

3.3.1 KNX Smart Touch S10 Installation and Disassembly instructions

# **Installation instructions 1.Install metal plate to the junction box on the wallwith mounting screws.**

Installation specification:

(1) Device installation adaptability: Single 86 Box and Dual 60 Box, shown as Fig.1;



(2) Install the metal plate, shown as Fig.2;





(3)Screwdriver should not drive too strong when installed, otherwise it will result in the deformation of the metal plate. The recommended strength is  $0.6 \sim 0.8$ N.M( $6 \sim 8$ Kgf.cm).



2.Remove the KNX bus connection terminal on the device and connect it correctly according to the wiring instructions; After wiring, install the KNX bus terminal of the connected wire into the installations, and connect the network cable with the installations, then the wiring installation is finished, as shown in Fig.4;





Fig. 4

#### **3.After connection of the device complete:**

(1)Align the back of the installations to the mounting hole position of the metal plate, requiring the device to be parallel to the wall or the metal plate, push the installations into metal plate and attention should be paid to the shrapnel installation hole of the metal plate, until the shrapnel on the installations ia clamped into the metal plate, , shown as Fig.5; (2)Complete installations installation, shown as Fig.6;



#### **Disassembly instructions**

# 4.After finishing the installation, if disassembly is required, please perform this

#### step:

Pull the installations out toward the horizontal direction and spring buckle and magnetic



attraction fall off, then the disassembly is finished,, shown as Fig.7;





# **Chapter 4 Project Design and Programming**

Application	Maximum of	Maximum number	Maximum	Secure
		0		



	communication	of group	number of	group
	objects	addresses	associations	addresses
KNX Touch/Intercom /1.2	4986	7000	7000	4000

## General function

General function includes security password, screen display, screen brightness,

day/night mode , proximity , LED and ambient lighting settings.

Additionally, you can choose vertical or horizontal display, four default UI styles and set functions such as screen saver and screen lock.

Note: The function of vertical or horizontal display is only applicable to

### software version 4.1.0 or above.

## Homepage shortcut function

On the home page, you can set shortcut operation functions to quickly control commonly used devices.

# **Device function setting**

Adopts a grid UI style, supports up to 120 device and independent lock/unlock for each icon device.

Supports basic control functions including switch, dimming, blinds, value sender, color temperature,

```
color
        control(RGB,RGBW,RGBCW),audio control,room
                                                            temperature
                                                                            control,Air
conditioner, Ventilation System control, Air quality and Energy Metering display, etc.
```



#### Switch indicator

To indicate the switch status of lighting device or other device.

#### **Lighting Control**

It is mainly used for switching lighting device or dimming lighting device. Dimming mode can be relative dimming, brightness dimming, relative+brightness dimming or brightness+colour temperature dimming.

#### **RGB dimming and colour temperature**

It is mainly used for RGB, RGBW and RGBCW LED dimming in absolute dimming way. RGBCW supports RGB lighting, colour temperature and brightness adjustment. And the colour temperature dimming is optional to normal control or directly control..

#### **Curtain and blind control**

To control open/close curtain, roller blind and venetian blind. Support to adjust the position and slat.

#### Air conditioner control

Support to the control function, including power on/off, setpoint temperature, mode, fan speed, vanes swing, timer, etc.

#### Room temperature control function

RTC is mainly used to control the room temperature, automatically and optimally control the heating and cooling according to the use of the room or the needs of the occupants.

Supports manually switching of heating/cooling control, support options for three-level fan speed and auto fan speed, four operation modes: comfort, standby, economy and



protection mode.

The setting temperature supports absolute and relative settings, as well as adjustable temperature range settings. Supports 2-point and PI control.

#### Ventilation system control

Supporting 3-level fan speed adjustment, turn on or off heat recovery, filter life counter, filter overtime alarm and filter reset.

Auto control according to the concentration of PM2.5,VOC or CO2, in addition to setting scene function.

#### Audio control

It is used to control background music playing, for example, power on/off, play/pause, previous track/next track, volume increase/decrease, mute, play modes, track name, artist name, album name, and so on.

#### **Energy metering value display**

Support current, voltage, power and energy (electricity energy) display configuration, these values are received from other actuators or metering gateway.

#### Air quality detected value display

Temperature, humidity, PM2.5, PM10, VOC, CO2, AQI, brightness, wind speed and rain status displays can be set and these values are received from external sensor.

#### Value sender function

Values of different data types can be sent.

#### Scene control

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Short operation for the scene recall, long operation can be set up for the scene storage.

#### Human Centric Lighting (HCL)

Automatically adjust brightness and color temperature based on the set time to create a comfortable lighting environment.

#### Schedule function

Supporting to timely send different types of value, up to 16 schedule. When enable schedule function, schedule can be operated from the screen. In screen, user can enable/disable schedule. In addition, schedule can be disabled through the bus.

#### Scene group function

By calling the scene number, up to eight output telegrams can be triggered. Each output has five different data type options. There are a total of 8 scene group function can be configured.

#### Logic function

Up to support 8 channels of logic, each channel up to support 8 inputs and 1 logic result. Logic function support functions, including AND, OR, XOR, Gate forwarding, Threshold comparator, Format convert, Delay function and Staircase lighting.

#### **Intercom function**

Adopts a grid UI style, supports basic control functions including address book import, contact management, SIP visual intercom calls, voice messages, security monitoring, virtual zone management, etc.

# Chapter 5 Parameter setting description in the ETS

# 5.1 KNX Secure

1.1.1 KNX Smart Touch S10 > KNX Secure

KNX Smart Touch S10 is a KNX device that complies with the KNX secure standard. That is, you can run the device in safe way.

KNX Secure **KNX Data Secure** KNX Data Secure is available in this device, it effectively protects user data against unauthorised 📑 General 6 access and manipulation by means of encryption and authentication for the installation. Home page ETS can active or deactive security function.Detailed specialist knowledge is required. Display view **Device** certificate ₽ KNX Channel The device certificate label stick called FDSK is attached beside the device, and must use for security function, make sure keep securely. 🖻 KNX Scene Internal sensor measureme...

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

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

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

	Activated	•
--	-----------	---

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

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

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

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

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

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

Please scan or enter th download using secure	e device certificates commissioning.	s for all devices in your	r project that you in	tend to
		lo camera <mark>found</mark> !		
·	]-[	H H	]-[	

Fig.5.1(2) Add Device Certificate window

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



This is done on the "Security" tab on the project overview page, as shown in

Fig.5.1(3) below.

The certificates can be also added to the selected device in the project, as shown in

Fig.5.1(4).

TS Edit Workplace Co	ommissioning Diagnost	tics Apps Window					
Overview Bus	Catalogs	Settings					
rojects Archive E	TS Inside			Test Project KN	X Smart Touch S7	20231017-1546	
F 🟸 🕹 🏦			Searc	Details	Security	Project Log	Project Files
Name	Last Mo	dified <b>v</b> Status					
est Project KNX Smart Touch S	57 20231017-1546 2023/11/	/21 9:09 Unknown		Export Export Keyring Device Certificates	elete		
				Serial Number 🔺	Factory Key (FDSK)	Device	•
				0085-241300E3	EAE52/15EBE6DC2030/	C3512EE771346 15 15 2	01 KNX Smart Tou



Devices -	∧ ∂ 🔀	E Properties
Add Devices   • • Searc	ch 🔎	
Devices •	Name	Settings Comments Information
Dynamic Folders	IIII General	Name
▲ 🚛 15.15.201 KNX Smart Touch S7	KNX Channel general	KNX Smart Touch S7
▶ IIII General	KNX Scene	Individual Address
KNX Channel general	III Internal sensor	15.15 201 🗘 Park
KNX Channel 1		Description
KNX Scene		
▶ IIII Internal sensor		Last Modified 2023/11/20 9:41 Last Downloaded - Serial Number - Secure Commissioning

Fig.5.1(4) Add Device Certificate

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

Without the FDSK, it will no longer be possible to operate the device in KNX

Secure mode after a reset.



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

The FDSK will be required again only if the device was reset to its factory settings (e.g.

If the device is to be used in a different ETS project).

				•	×		
	Adding Device Cert	tificate					
	15.15.201 KNX Smart Touch S	57					
	This device supports secure If you have the certificate of	commissioning. the device available, you can s	scan the QR code	e or enter it now.			
		No camera four	nd!				
初始 FDSK	ACCSUE - YA4P5P	- KJAV5P - TNYIBQ	- JQ2RF7	- 3XCNDL	~		
序列号	Serial Number 0085:2A130	0E3			,		
ETS分配key	Factory Key FAF52415EB	E6DC20304C3512FF771346				FDSK:0085:2A1300E3 ACCSUE-YA4P5P- KJAV5P-TNYIBQ-	
				<u>o</u> k <u>c</u>	ancel	JUZKF/-3XUNUL	



#### Example:

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



Fig.5.1(6) Example

the device according to the product documentation.

Whether the device is replaced in the same project, or the device is replaced in a

No

Yes

different project, the processing is similar: Reset the device to the factory settings,

#### then reassign the FDSK.

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



Fig.5.1(7)

ETS generates and manages keys:

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



est Secure de	emo			Import Date: 2022/4/27 16:49	Last N
Details	Security	Project Log	Project Files		
Export Export Keyring	i i				
Device Certificates	5				
🕂 Add 🛛 🗙 🛛	)elete				
Serial Number 🔺	Factory Key (FDSK)		Device		
0085:25090001	F25370641BEC1AAFF0	737BDE0F982C68			
0085:25090002	65175BED7A86206A36	8A8E2A64B935DC	1.1.8 Push button se	nsor Plus with Secure, 1/2/3/	4gang

Fig.5.1(8)

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

# 5.2 Parameter window "General"

#### 5.2.1 Parameter window "General setting"

Parameter window "General setting" shown as Fig.5.2.1, it is mainly for the general setting of the device, such as password setting, day/night mode, summer time setting, proximity setting, security setting etc.



#### 1.1.1 KNX Smart Touch S10 > General > General setting

💙 KNX Secure	Send delay after voltage recovery [015]	0	s
– 芸 General	Send request delay between status objects	100 <b>•</b> n	ns
General setting	Send cycle of In operation telegram [1240,0=inactive]	0	s
Security setting	Delay time for exiting setting status	3.0 👻	s
Night mode setting	Long operation for touch after	0.5 -	s
Coordinates location setting	Cyclically send date and time [0255,0=inactive]	0	h
Summer time setting Proximity setting	Delay time for back to homepage after no operation [0255,0=inactive]	15	s
Advanced setting	Screen display setting		
Home page	Temperature display units	Celsius(°C) Fahrenheit(°F)	
+ 🔝 Display view	Interface Language	English	•
+ 🔐 KNX Channel	Note:The codepage option in the prop	perty of project must select the Unicode(UTF-8)	
+ 🛃 KNX Scene	UI theme is	1	-
1 Internal sensor measureme	Theme preview	Construction of the second sec	
	Date display format	yyyy/mm/dd dd/mm/yyyy	
Exte	ension function		
Nigh	it mode 🗸		
Prox	com function		

Fig.5.2.1 "General setting" parameter window

Parameter "Display mode/

This parameter is for setting the display mode of KNX Smart Touch S10, according to the installation direction of the device. Options:



#### Vertical

#### Horizontal

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

This parameter is for setting the delay time to send to bus after the device voltage

recovery. Options: 0..15

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

Parameter"Send request delay between status objects

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

Options:

50ms	
100ms	
200ms	

ameter"Send cycle of In operation telegram [1..240,0=inactive1s"

This parameter is for setting the time interval when this device cycle send telegrams through the bus to indicate this module in normal operation. When set to  $0^{\circ}$ , the object in operation" will not send a telegram. If the setting is not "0", the object "In operation" will send a telegram according to the set period time with logic "1" to the bus. Options: **0...240s**,

#### 0= inactive

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

Parameter Delay time for exiting setting status

This parameter is for setting the delay time to auto-exit setting status, mainly used for the sub function settings of RTC, Air-condition and Audio control. Telegrams are sent immediately, such as setpoint temperature, specific definition is according to the UI.



Options:

1.0s	
2.0s	
3.0s	
4.0s	
5.0s	

#### Parameter ``Long operation for touch after'

This parameter is for setting the trigger time of the long operation for touch on the

screen. Options:

0.5s	;	
1.0s	;	
2.0s	5	
3.0s		
or <sup>a</sup> Cyclical	Use condidate and time IO 2EE O-reactive lb"	

Parame

This parameter is used to set the cycle for cyclically sending the date and time to the

bus.

When setting to 0, it will not sent.

Options: 0...255

Parameter"Delay time for back to homepage after no

operation[0..255,0=inactive]s'

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

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

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

#### Screen display setting

Parameter"Temperature display units'

This parameter is for setting temperature display units.Options:



## Celsius(°C)

## Fahrenheit(°F)

# Parameter"Interface Language

This parameter is for setting interface language.Options:

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Chinese(Simplified)	Spanish
Chinese(Traditional)	Russian
English	Arabic
German	Polish
French	Portuguese
Other	

Displays the note when Chinese is selected:

● 警告:请务必确保工程属性里的编码页选项为UTF-8,否则中文显示将会异常。

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

Note:The codepage option in the property of project must select the Unicode(UTF-8)

**Note:** For application versions below 4.1.0, the interface language only supports simplified Chinese and English.

#### Parameter"Language name"

This parameter is visible when interface language is selected "Other", used for input language name. The device will search for the corresponding language in the library according to the name and display it. When no corresponding language is searched, there will be displayed English by default.

Currently, the other interface languages supported are norwegian, italian, farsi, hebrew.

Note: When select "Other" language, it is necessary to confirm with the



manufacturer whether the language and the corresponding name is supported.

#### UTF-8 setting as shown as follow:

Projects Archive ET	S Inside		Test Project KNX	( Smart Touch S	16	Import Date: 2023/10/18 14:43 Last Mor			
+ 🗡 📩 土		Searc	Details	Security	Project Log	Project Files			
Name	Last Modified  S	tatus							
Test Project KNX Smart Touch S7	20231017-1546 2023/11/20 14:09 L	Inknown	Name			Password			
			Test Project KNX S	Smart Touch S7 2023	31017-1546	•••••	Change P	assword	
			Project Number			BCU Key			
							Set 8	(ey	
			Contract Number			Codepage			
						Unicode (UTF-8)		-	

This parameter is for setting interface theme style of the screen, with two styles to choose from.Each style comes with a default background image. You can modify it on the screen.Options:

> 1 2 3

Parameter``Date display format''

This parameter is for setting date display style of screen. Options:

yyyy/mm/dd
dd/mm/yyyy

#### **Brightness setting**

Parameter"Screen brightness can be changed via bus?

This parameter is for setting whether to adjust screen brightness via bus. If enabled,

object "Screen backlight brightness" is visible which is used to change screen brightness.

## **Extension function**

Parameter"Night mode

When this parameter is enabled, the "night mode" setting is visible. This function is described in detail in section 5.2.3.



# Parameter"Proximity function

When this parameter is enabled, the "Proximity function" setting is visible. This function is described in detail in section 5.2.5.

# Parameter: Intercom function"

When this parameter is enabled, the "intercom function" is visible on the device side.

Parameter"Extension Sub Panel function(If the device supports)'

This parameter sets the extension Sub panel function, the setting of this part is

meaningful when the device with extension sub panel.

When enabled, you can configure the brightness indication of the ambient light & button LED.

Button functions can be configured on the screen.

## 5.2.2 Parameter window "Security setting"

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Parameter window "Security setting" shown as Fig.5.2.2, it is mainly for setting password function and the object type of output value sent to the bus after device is activated through password.

#### 1.1.1 KNX Smart Touch S10 > General > Security setting

💙 KNX Secure	Common password	1	÷	2	*	3	* *	4	÷	5	*	6	*
- 🛱 General	Output object type when wake-	up screer	n via	1bit[0	Dn/Ot	ff]							•
General setting	Dutput value[On/Off]			) OF	F C								
Security setting													
Night mode setting	Delay time for sending[0255			0									÷ s
Coordinates location setting	Note: Please set the passv	vord on t	he sci	reen a	s requ	uired							
Summer time setting													

图 5.2.2 "Security setting" Parameter 设置界面

# Parameter"Common password"

This parameter is for setting the common pin code, which is used to wake-up screen.

arm/disarm、SOS、call forwarding、enter setting shortcut page and edit page when the device

password is forgotten.

Parameter"Output object type when wake-up screen via password"

This parameter is for setting whether to send telegrams to bus when user wake-up

screen via password. Options:

No reaction

#### 1bit[On/Off]



1byte[scene control]

1byte[0..255]

1byte[0..100%]

Note:The password is set on the screen, if the password is not set on the screen, the setting here will be meaningless.

When "No reaction" is no selected, the following parameter is visible.

----Parameter" Output value[On/Off]"

——Parameter" Output scene NO.[1..64]"

——Parameter" Output value[0..255]"

----Parameter" Output value[0..100%]"

This parameter is for setting the specific sent telegram value according to previous parameter.

Options: OFF/ON / Scene No.1..Scene No.64 / 0..255 / 0..100%

-----Parameter"Delay time for sending[0..255]s"

This parameter is for setting the delay time for sending value. Options: 0...255

KNX/EIB KNX Smart Touch

## 5.2.3 Parameter window "Night mode setting"

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Parameter window "Night setting" shown as Fig.5.2.3, it is mainly for set the time to switch to night or day.

V KNX Secure	Polarity of normal/night mode	Normal=1/Night=0	Normal=0/Night=1	
📑 General	Switchover normal/night mode	Via object		•
General setting	Normal/night mode need send read reques after voltage recovery	t 🔵 No 🧿 Yes		
Security setting	Note: Default to normal mode if no re	esponse when request after	startup	
Night mode setting				
	Via object			
.1 KNX Smart Touch S10 >	• General > Night mode setting			
VKNX Secure	Polarity of normal/night mode	O Normal=1/Night=0	Normal=0/Night=1	
📑 General	Switchover normal/night mode	Depend to certain time		
Conoral sotting	Time for switch to night at	18:00	hh:mm	
Security setting	Time for switch to normal(day) at	06:00	hh:mm	
Night mode setting				
	Depend to certain tim	e		
1 KNX Smart Touch S10 >	General > Night mode setting			
1 KNX Smart Touch S10 >	General > Night mode setting         Polarity of normal/night mode	Normal=1/Night=0	Normal=0/Night=1	
<ul> <li>1 KNX Smart Touch S10 &gt;</li> <li>KNX Secure</li> <li>General</li> </ul>	General > Night mode setting         Polarity of normal/night mode         Switchover normal/night mode	Normal=1/Night=0	Normal=0/Night=1 set	
1 KNX Smart Touch S10 >         KNX Secure         General         General setting	General > Night mode setting         Polarity of normal/night mode         Switchover normal/night mode         Time calibration	Normal=1/Night=0	Normal=0/Night=1 set	-
1 KNX Smart Touch S10 >         KNX Secure         General         General setting         Security setting	General > Night mode setting         Polarity of normal/night mode         Switchover normal/night mode         Time calibration         Switching time move to night [-128127]	Normal=1/Night=0 Depend to sunrise&sun	Normal=0/Night=1 set	 ] m

Depend to sunrise&sunset



## Parameter"Polarity of normal/night mode

This parameter for setting object value of normal/night mode. Options:

Normal=1/Night=0

### Normal=0/Night=1

## arameter Switchover normal/night mode?

This parameter for setting the switchover mode of normal/night status, send status telegrams via object "Night mode" when status change. Options:

#### Via object

#### Depend to certain time

#### **Depend to sunrise&sunset**

Via object: Only switch status via object. Default to normal mode after voltage recovery.

Depend to certain time: Switch the normal/night status based on the specific time. Such as switch 18:30 PM to the night status, 6:30 AM to the normal status.

Depend to sunrise&sunset: Switch the normal/night status based on the sunrise and sunset. The coordinate position of the reference point of sunrise and sunset, such as Beijing, China, needs to be defined, with the center located at east longitude 160°20'and north latitude 39°56'.

When "Via object" is selected, the following parameter is visible, for setting the object via bus to switch to the night or to the normal.

Parameter"Normal/night mode need send read request after voltage recovery'

This parameter for setting whether the object "Night mode" to send read request when bus recovery or finish programming. If send the read request, LED indicates according to setting brightness of responded normal/night mode. Options:

No



Yes

Note: Default to normal mode if no response when request after startup.

When "Depend to certain time" is selected, the following 2 parameters are visible, for setting the time to switch to the night or to the normal.

When "Depend to certain time" is selected, the following 2 parameters are visible,

for setting the time to switch to the night or to the normal.

Parameter"Time for switch to night at"

Parameter"Time for switch to normal (day) at'

This parameter for setting the time point to switch to the nigh/normal status, accurate to minutes.

Options: 00:00-23:59

When "Depend to sunrise&sunset" is selected, the following parameters are

visible, for setting the coordinate position of the reference point of sunrise and

sunset.

Parameter"Switching time move to night [-128..127]min

This parameter for setting the delay time to switch to the night status after reaching to

the time point of sunset. Options: -128..127

Parameter"Switching time move to day [-128..127]min

This parameter for setting the delay time to switch to the day status after reaching to the time point of sunrise. Options: **-128..127** 

For example, if setting -10min, it will switch to day status 10min earlier before the sunrise; if setting 10min, it will switch to day status 10min later after the sunrise.
# 5.2.4 Parameter window "Coordinates location setting"

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Parameter window Coordinates location setting" shown as Fig.5.2.4, it is mainly for set the the coordinate position of the reference point of sunrise and sunset.

Latitude Latitude in degrees [090]	<ul><li>North South</li><li>39</li></ul>	*
Latitude in degrees [090]	39	*
Latitude in minutes [059]	56	* *
Longitude	O East O West	
Longitude in degrees [0180]	116	*
Longitude in minutes [059]	20	*
Time difference from Universal Time (UTC +)	(UTC +08:00) Singapore, Beijing, Hong Kong, Taipei	•
	Longitude Longitude in degrees [0180] Longitude in minutes [059] Time difference from Universal Time (UTC +)	Longitude     Image: Solution of the second se

# Fig.5.2.4 "Coordinates location setting" parameter window

Parameter"Latitude longitude setting location"

Setting the reference point of sunrise and sunset, such as "Beijing, China".

Parameter "Latitude'



Setting whether the reference point of sunrise and sunset is located at south latitude or north latitude. Options:

North

South

Parameter Latitude in degrees [0..90]"

-Parameter" Latitude in minutes [0..59]"

These two parameters for setting latitude, such as Beijing located at north latitude 39°56′.

# Parameter"Latit<u>ude</u>'

Setting whether the base point of sunrise and sunset is located at east longitude or west longitude. Options:

East

West

-Parameter" Longitude in degrees [0..180]"

——Parameter" Longitude in minutes [0..59]"

These two parameters for setting longitude, such as Beijing located at east

longitude116°20'.

Parameter" Time difference from Universal Time (UTC  $\pm ...)^{\prime\prime}$ 

This parameter for setting the time difference from Universal Time. Options:

(UTC -12: 00) International Date Line West

(UTC -11: 00) Samoa

.....



### (UTC +11: 00) Magadan, Salomon Islands, New Caledonia

(UTC +12: 00) Aukland, Wellington, Fiji

# 5.2.5 Parameter window"Summer time setting"

1.1.1 KNX Smart Touch S10 > General > Summer time setting

💙 KNX Secure	Summer time			
📑 General	Start at month	March		-
	Start at week	The last week		-
General setting	Start at day	Sunday		
Security setting	Start at hour: minute	02:00	hh:mm	
Night mode setting				
Coordinates location setting	End at month	October		•
Summer time setting	End at week	The last week		•
Proximity setting	End at day	Sunday		-
Advanced setting	End at hour: minute	03:00	hh:mm	

# Fig.5.2.5 "Summer time setting" parameter window

Parameter" Summer time"

This parameter is for setting whether summer time. Options:

#### Disable

#### Enable



When "Summer time" is enable, the following parameters are visible, for setting

the start or end time of summer time.

----Parameter" Start at month"

—Parameter" End at month"

These parameters for setting summer time start or end at month.Options:

January February

...

December

-Parameter "Start at week"

—Parameter"End at week"

These parameters for setting summer time start or end at week. Options:

The first week

The second week

...

The last week

Parameter"Start at day"

——Parameter"End at day"

These parameters for setting summer time start or end at day. Options:

Monday

Tuesday

...

#### Sunday

#### ——Parameter"Start at hour:minute"

#### ——Parameter"End at hour:minute"

These parameters for setting summer time start or end time, accurate to minutes.

#### Options: 00:00-23:59

Take American time for example, setting summer time start from 02h: 00min, the second Sunday of March to 02h: 00min, the first Sunday of November each year, so during this summer time, when it comes to the start time, system default time will be an hour faster, displayed time on the device will be 03h: 00min; when it comes to the end time, system default time will be an hour slower, displayed time on the device will be 02h:00min.

The start date and the end date cannot be the same. That is, if you set the same month, week, and day, it will be ignored and recovered to default. If only the month and week are set to the same will also be ignored.

#### 5.2.6 Parameter window "Proximity setting"

Parameter window "Proximity setting" as shown as Fig.5.2.6. It is mainly setting proximity function, which can set the telegram when proximity approaching, and the delay time for sending telegram.



> General > Proximity setting		
The Proximity function triggered via	Sensor	
	Seneral > Proximity setting     The Proximity function triggered via	Seneral > Proximity setting     The Proximity function triggered via     Sensor

📑 General	Proximity Sensitivity	O Normal O Enhanced								
General setting	Object type of output value	1bit[On/Off]	•							
General Setting	Output value									
Security setting	Output value	OFF ON								
Night mode setting	Delay time for sending [065535]	0	÷ S							
Coordinates location setting										
Summer time setting										

Fig.5.2.6 "Proximity setting" parameter window

# Parameter"The Proximity function triggered via '

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

# Sensor

# **Proximity object**

# Sensor or Proximity object

When "Sensor or Proximity object" is selected, not send output value when proximity

triggered via object.

**Proximity setting** 

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

#### selected.

# Parameter"Proximity Sensitivity

This parameter is for setting the sensitivity of proximity sensing. Normal sensing

distance is 30cm, enhanced sensing distance is 60cm.

Options:

# Normal

# Enhanced

Parameter"Object type of output value "



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

> 1bit[On/Off] 1byte [scene control]

1byte[0..255]

1byte[0..100%]

–Parameter"Output value[On/Off]"

——Parameter"Output scene NO.[1..64"

——Parameter"Output value[0..255]"

----Parameter"Output value[0..100%]"

These parameters are set the output value sending to the bus when proximity approaching, the range of value is determined by the data type.

-Parameter"Delay time for sending[0..65535]"

This parameter is set the delay time for sending telegram.

When proximity approaching, Options: 0..65535

Note:Multiple departures from close proximity during the delay time will not repeat the message.

# 5.2.7 Parameter window "Advanced setting"

Parameter window "Advanced setting" shown as Fig.5.2.8.Used to enable HVAC controller, human-centric lighting(HCL), schedule function, alarm function, logic function, and scene group function. More details refer to chapter 5.3-5.8.



KNX Secure	Human Centric Lighting(HCL)	
•	HVAC controller	
General	Schedule function	
General setting	Alarm function	
Socurity sotting	Input function	
Security setting	Logic function	
Night mode setting	Scene group function	
Coordinates location setting		
Summer time setting		
Proximity setting		
Advanced setting		

Fig.5.2.7 "Advanced setting" parameter window

# 5.3 Parameter window "HVAC controller"

The parameter "HVAC controller" is visible when enabled in the "Advanced setting"

interface shown in Figure 5.2.8, as shown in Figure 5.3.

🐝 HVAC controller	Number of controllers (max. 6)	1	
×			



Parameter" Number of controllers (max.6)"

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

### 5.3.1 Parameter window "Controller x-Room temperature

# controller(RTC)"(x=1~6)

S10

This parameter window is visible when "Room temperature controller(RTC)" is selected

as the controller type, as shown in Fig. 5.3.1.

1.1.1 KNX Smart To	ouch S10 >	HVAC controller	> Controller 1-	
--------------------	------------	-----------------	-----------------	--

— 💃 HVAC controller	Description (max 30char.)											
Function setting	Controller type	Room temperature controller (F Ventilation controller	RTC)									
- Controller 1	Room temperature reference from	Internal sensor										
Setpoint Heating control	Control value after temp. error[0100] (if 2-point control, set value '0'=0, set va '>0'=1)	alue 0	\$ %									
Fan auto.control												
- 🗴 Schedule function	Room temperature control mode	Heating										
Eurotion cotting	Operation mode	$\checkmark$										
Schedule 1	Controller status after download	Comfort mode	•									
- 🛆 Alarm function	Extended comfort mode [0255,0=inactive]	ry As before voltage failure 0	¢ min									
Function setting	1 bit object function for operation me	ode 🗸										
Alarm 1	1 bit object for standby mode	efault Value: Unchecked										
– 🧏 Input function	Fan speed auto.control function	~										
Function setting	Window contact input function	<b>~</b>										
Input 1	Delay for window contact [065535]	15	* S									
- 🕂 Logic function	Controller mode for open window	C Economy mode O Frost/heat	t protection									
Function setting	Bus presence detector function											

# Fig.5.3.1 "Controller x-Room temperature controller(RTC)"(x=1~6) parameter window

# Parameter "Description (max 30char.)

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



# Parameter"Controller type

This parameter is for setting the controller type.Options:

### Room temperature controller (RTC)

### Ventilation controller

Parameter"Room temperature reference from

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

### Internal sensor

**External sensor** 

### Internal and External sensor combination

When selecting the reference internal sensor, the temperature is determined by the setting of the "Internal sensor" in the parameter interface, more details refer to chapter 5.13.

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

# —Parameter"Combination ratio"

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

> 10% Internal to 90% External 20% Internal to 80% External ...

# 90% Internal to 10% External

For example, if the option is "40% internal to 60% external", then the internal sensor accounts for 40%, the external sensor accounts for 60%, and the control temperature = (internal sensor's temperature  $\times$  40%) + (external sensor's temperature  $\times$  60%), the RTC



function of the device will control and display the temperature according to the calculated temperature.

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

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

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

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

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

> Disable 0.5K 1.0K ... **10K**

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

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

Options: 0..255

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

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

#### 0..100



If 2-Point control, then the parameter value is 0, as well as the control value; if the

parameter value is more than 0, then the control value will be 1.

Parameter"Room temperature control mode "

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

Heating

Cooling

**Heating and Cooling** 

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

Parameter "Heating/Cooling switchover"

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

Via object

Automatic changeover

——Parameter"Heating/Cooling status after download"

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

Heating

Cooling

-Parameter "Heating/Cooling status after voltage recovery"

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

Heating

Cooling

# As before voltage failure

As before voltage failure: When the device is reset after power on, the control mode will

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

### -Parameter" Room temperature control system"

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

#### 2 pipes system

#### 4 pipes system

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

4 pipes system: Has its own inlet and outlet pipes for heating and cooling, and two

valves are needed to control the entry and exit of hot water and cold water respectively.

Parameter"Operation mode

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

#### Parameters as follow are visible when operation mode disabled.

#### Parameter" Initial setpoint temperature"

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

10.0 10.5 ... 35.0

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

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

GVS<sup>®</sup> K-BUS<sup>®</sup> KNX/EIB KNX Smart Touch

5° C 6° C 37° C

Parameters as follow are visible when "Heating/Cooling switchover" and

"Automatic changeover"

is selected.

# ----Parameter" Upper /Lower dead zone"

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

> 0.5К 1.0К ...

10.0K

Under heating control, when the actual temperature(T) > or = the setpoint temperature

+ the upper dead zone, then mode heating switch to cooling;

Under cooling control, when the actual temperature(T) < or = the setpoint temperature

+ the upper dead zone, then mode cooling switch to heating.

# Parameters as follow are visible when operation mode enabled.

# ----Parameter" Controller status after download"

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

Standby mode Comfort mode

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#### Economy mode

#### —Parameter"Controller status after voltage recovery "

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

Comfort mode Standby mode Economy mode Frost/heat protection As before voltage failure

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

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

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

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

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

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

#### —Parameter"1 bit object for standby mode"

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

Parameter"Fan speed auto.control function "



This parameter is for setting whether to enable fan auto control interface is visible. Parameter"Window contact input function

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

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

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

This parameter is visible when RTC operation mode and window contact input function are enabled. Set the delay time to window contact detection. That is, when the window is open within the set value, the window is not open. If the time is out of the set value, the window is open. Options: 0..65535

#### -Parameter"Controller mode for open window"

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

#### Economy mode

#### Frost/heat protection

# Parameter Bus presence detector function"

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

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



# 5.3.1.1 Parameter window "Setpoint"

This parameter window is visible when "Room temperature controller(RTC)" is selected as the controller type and is displayed according to the control mode, as shown in Fig.5.3.1.1.





🔆 HVAC controller	Setpoint method for operating mode	O Relative Absolute	
Function setting	Base setpoint temperature	20.0	•
Controller 1	Additional setpoint offset for setpoint adjustment	O Disable O Enable	
Setpoint	Step of setpoint offset	◎ 0.5K ○ 1K	
Heating control	Min. setpoint offset [-100]	-5	*
Cooling control	Max. setpoint offset [010]	5	÷
Fan auto.control			
Schedule function	Heating		
	Reduced heating in standby mode [010]	2	•
Function setting	Reduced heating in economy mode [010]	4	•
Schedule 1	Setpoint temperature in frost protection mode [510]	7	•
▲ Alarm function	Cooling		
Function setting	Increased cooling in standby mode [010]	2	•
Alarm 1	Increased cooling in economy mode [010]	4	•
₩ Input function	Setpoint temperature in heat protection mode [3037]	35	•
Function setting	Min. setpoint temperature [537]	10	•
Input 1	Max setopint temperature [5, 27]	22	-

Relative





🔆 HVAC controller	Setpoint method for operating mode	Relative Absolute	
Function setting	Heating		
Controller 1	Setpoint temperature in comfort mode [537]	21	•
Setpoint	Setpoint temperature in standby mode [537]	19	•
Heating control	Setpoint temperature in economy mode [537]	17	•
Cooling control Fan auto.control	Setpoint temperature in frost protection mode [510]	7	•
Schedule function	Cooling		
	Setpoint temperature in comfort mode [537]	23	•
Function setting Schedule 1	Setpoint temperature in standby mode [537]	25	•
▲ Alarm function	Setpoint temperature in economy mode [537]	27	•
Function setting	Setpoint temperature in heat protection mode [3037]	35	•
Alarm 1	Note: The heating setpoint must be all	ways less than the cooling setpoint.	
Input function			
-	Min. setpoint temperature [537]	10	•
Function setting	Max. setpoint temperature [537]	32	•

#### Absolute

Fig.5.3.1.1"Setpoint" parameter window

Parameter Setpoint method for operating mode "

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

#### Relative

#### Absolute

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

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

#### Parameters as follow are visible when the setpoint temperature adopts the

K-BUS<sup>®</sup>

#### relative adjustment method.

# Parameter"Base setpoint temperature.

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

10.0 10.5 ... 35.0

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

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

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

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

# Disable

#### Enable

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

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

#### ----Parameter"Step of setpoint offset"

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

0.5K

#### **1K**

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

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

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

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

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

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

Automatic H/C mode changeover dead zone (only for comfort mode)

Parameter"Upper/Lower dead zone



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

> 0.5K 1.0K ... **10K**

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

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

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

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

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

<b>0K</b>	
1K	
10K	

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

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

													_	_									_					 		_				_			_	_	
10000				 		 		A			 					 			- CO		 			_				 100000	- CO					/00000r					
1				 		 					 					 					 	 						 			1 C C C	6 T T							
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These two parameters are for setting the setpoint of economy mode. Options:



**1K** 

•••

10K

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

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

Parameter "Setpoint temperature in frost protection mode  $[5...10]^\circ$  C'

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

5°C 6°C ... 10°C

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

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

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

30°C 31°C ... 37°C

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



Parameters as follow are visible when the setpoint temperature adopts the

#### absolute adjustment method.

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

5°C
6°C
•••
37°C

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

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

5°C
6°C
10°C

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

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

30°C 31°C ... 37°C



1 Note: The heating setpoint must be always less than the cooling setpoint.

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

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

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

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

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

Points 2 and 4 also apply to "Via object".

# Note: for relative/absolute adjustment, in protection mode, the setpoint temperature is only configured via ETS. When the received setpoint value from bus

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is different from the ETS configuration, the value is not updated and returned to the current setpoint temperature, to update synchronously to other devices on the bus.

# 5.3.1.2 Parameter window "Heating control/Cooling control/Heating/Cooling control"

This parameter window is visible when "Room temperature controller(RTC)" is selected as the controller type and is displayed according to the control mode, as shown in Fig.5.3.1.2.



# KNX/EIB KNX Smart Touch

#### 1.1.1 KNX Smart Touch S10 > HVAC controller > Controller 1-... > Heating/Cooling control

+ 🖻 KNX Scene	Type of heating/cooling control	Switching on/off(use 2-point control)
🖞 Internal sensor me	easureme Heating	$\checkmark$
🔆 Human Centric Lig	ghting(H Lower Hysteresis [0200]	10 \$\$ *0.1
– 💃 HVAC controller	Upper Hysteresis [0200]	10 *0.1
	Cooling	
Function setting	Lower Hysteresis [0200]	10 \$ *0.1
<ul> <li>Controller 1</li> </ul>	Upper Hysteresis [0200]	10 0 200 *0.1
Setpoint	Cyclically send control value [0255]	10 🌲 m
Heating/Cooling	control	
Fan auto.control	Additional heating/cooling	$\checkmark$
+ Controller 2	Control type	🔵 1bit 🔘 1byte
+ Controller 3	Invert control value	$\checkmark$
+ Controller 4	Temperature difference to switch on additional heating [-1005]	-25 🗘 *0.1
+ Controller 5	Hysteresis to switch off additional heatin	ng _5 \$ \$0,1
+ Controller 6	[-201]	
+ 🔿 Schadula function	additional cooling [5100]	25 *0.1
	Hysteresis to switch off additional coolin	ng 5 *0.1
- 🛆 Alarm function	[120]	
Function setting	Cyclically send control value [0255]	0 m

Switching on/off(use 2-point control)

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# GVS K-BUS KNX/EIB KNX Smart Touch S10

1.1.1	KNX Smart Touch S10 > HVA	C controller > Controller 1 > Heating	g/Cooling control		
+	🖆 KNX Scene	Type of heating/cooling control	Switching PWM(use PI control)		•
		Invert control value	$\checkmark$		
	0 Internal sensor measureme	PWM cycle time [1255]	15	÷	min
	🔆 Human Centric Lighting(H	Heating speed	Hot water heating(5K/150min)		•
-	🔆 HVAC controller	Cooling speed	Cooling ceiling (5K/240min)		•
	Function setting	Cyclically send control value [0255]	10	*	min
-	Controller 1	Additional heating/cooling	$\checkmark$		
	Setpoint	Control type	🔵 1bit 🧿 1byte		
	Heating/Cooling control	Invert control value	$\checkmark$		
	Fan auto.control	Temperature difference to switch on additional heating [-1005]	-25	▲ ▼	*0.1K
+	Controller 2	Hysteresis to switch off additional heating	-5	*	*0 1K
+	Controller 3	[-201]	-J	Ŧ	0.11
+	Controller 4	Temperature difference to switch on additional cooling [5100]	25	*	*0.1K
+	Controller 5	Hysteresis to switch off additional cooling [120]	5	* *	*0.1K
+	Controller 6	Cyclically send control value [0255]	0	* *	min

Switching PWM(use PI control)



KNX/EIB KNX Smart Touch

1.1.1	KNX Smart Touch S10 > HVA	C controller > Controller 1 > Heating	g/Cooling control		
+	🖆 KNX Scene	Type of heating/cooling control	Continuous control(use PI control)		•
		Invert control value	$\checkmark$		
	U Internal sensor measureme	Heating speed	Hot water heating(5K/150min)		•
	🔅 Human Centric Lighting(H	Cooling speed	Cooling ceiling (5K/240min)		•
-	₩ HVAC controller	Send control value on change by [0100,0=inactive]	5		\$ %
	Function setting	Cyclically send control value [0255]	10		, min
-	Controller 1 Setpoint	Additional heating/cooling			
	Heating/Cooling control	Control type	1 bit 0 1byte		
	Ean auto control	Invert control value	$\checkmark$		
+	Controller 2-	Temperature difference to switch on additional heating [-1005]	-25	*	*0.1k
+	Controller 3	Hysteresis to switch off additional heating [-201]	-5	÷	*0.1
+	Controller 4	Temperature difference to switch on additional cooling [5100]	25	* *	*0.1k
+	Controller 5	Hysteresis to switch off additional cooling	5		*0.14
+	Controller 6	[120]	5	•	
		Cyclically send control value [0255]	0	-	, mir

Continuous control(use PI control)

Fig.5.3.1.2"Heating control/Cooling control/Heating/Cooling control" parameter window

# Parameters of this window display according to control mode and control

# system(2 pipe or 4pipe).

# Parameter"Type of heating/cooling control"

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

> Switching on/off(use 2-point control) Switching PWM(use PI control) Continuous control(use PI control)



# Parameter"Invert control value

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

No

Yes

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

Two parameters as follow are suitable for 2 point control:

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

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

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

Under heating control,

When the actual temperature(T) > the setting temperature + the upper

hysteresis temperature, then will stop heating;

#### When the actual temperature (T) < the setting temperature - the lower

hysteresis temperature, then will start heating.

For example, the lower hysteresis temperature is 1K, the upper hysteresis temperature is 2K, the setting temperature is  $22^{\circ}$ , if T is higher than  $24^{\circ}$ , then it will stop heating; if T is lower than  $24^{\circ}$ , then it will start heating; if T is between  $21 \sim 24^{\circ}$ , then it will maintain the previous status.

Under the cooling control,

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

When the actual temperature (T) > the setting temperature +the upper

#### hysteresis temperature, then will start cooling.

For example, the lower hysteresis temperature is 1K, the upper hysteresis temperature is 2K, the setting temperature is  $26^{\circ}$ C, if T is lower than  $25^{\circ}$ C, then it will stop cooling; if T is lower than  $28^{\circ}$ C, then it will start cooling; if T is between  $28 \sim 25^{\circ}$ C, then it will maintain the previous status.

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

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

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





#### Parameters as follow are suitable for PWN control:

Parameter"PWM cycle time [1…255]min"



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

### Options: **1..255**

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

# Parameters as follow are suitable for PI control:

Parameter"Heating speed'

Parameter "Cooling speed"

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

**Options:** 

Hot water heating (5K/150min) Underfloor heating (5K/240 min) Electrical heating (4K/100min) Split unit (4K/90min) Fan coil unit (4K/90min) **User defined** 

Options



Cooling ceiling (5K/240min)

Split unit (4K/90min)

Fan coil unit(4K/90min)

User defined

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

——Parameter"Reset time [0..255]min"

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

Options: 10..100 (P value)

Options: 0..255 (I value)

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

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

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

(1) Heating

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



heating				
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	

# (2) Cooling

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

# (3) User defined

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

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





Fig.5.3.1.2 (3) control value of PI control mode

Y: control value

- Y1: last control value
- X1: temperature deviation = set temperature actual temperature

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X2: last temperature deviation = set temperature - actual temperature

 $T_N$ : integration time

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

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

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

# Setting and influence of user-defined parameters:

Parameter setting	Effect
K: If the scale range is too small	Quick adjustment, and overshoot will
	occur
K: If the scale range is too small	Slow adjustment, but no overshoot



$T_N$ : If the integration time is too	Quick adjustment, but there will be
short	oscillation
$T_N$ : If the integration time is too	Slow adjustment, no obvious
long	oscillation

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

This parameter is for setting the period for cyclically sending the control value to the bus.

# Options: 0..255

# Parameter"Additional heating"

This parameter is for setting whether to enable additional heating.

# Parameter as follow are visible when "Additional heating" is enable.

# -Parameter"Control type"

This parameter is for setting the control type for the additional heating. Options:

#### 1bit

# 1byte

# Parameter"Invert control value"

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

No

Yes


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

## For additional heating valve:

## ——Parameter"Temperature difference to switch on additional heating

## [-100..-5]\*0.1K"

This parameter is for setting the temperature difference to switch on additional heating

valve. When the actual temperature (T) < (Setpoint temperature + Temperature)

difference), start heating.

. Options:-100...-5

## ——Parameter"Hysteresis to switch off additional heating [-20..-1]\*0.1K"

This parameter is for setting the hysteresis to switch off additional heating.

When the actual temperature (T) > (Setpoint temperature + Temperature difference -

Hysteresis), then will stop heating.

## **Note:** |Hysteresis| < |Temperature difference|, if not meet the condition, they

## can not be configured in ETS, and display red box warning, as shown as follow:

Temperature difference to switch on additional heating [-1005]	-9	÷	*0.1k
Hysteresis to switch off additional heating [-201]	-10	* *	*0.1k

## For additional cooling valve:

## Parameter "Temperature difference to switch on additional cooling

[5..100]\*0.1K"



This parameter is for setting the temperature difference to switch on additional cooling valve. When the actual temperature (T) > (Setpoint temperature + Temperature)difference), start cooling.

Options: 5...100

## ——Parameter"Hysteresis to switch off additional cooling [1..20]\*0.1K"

This parameter is for setting the hysteresis to switch off additional cooling.

When the actual temperature (T) < (Setpoint temperature + Temperature difference -

Hysteresis), then will stop cooling.

Options: 1...20

#### **Note:** |Hysteresis| < |Temperature difference|, if not meet the condition, they

#### can not be configured in ETS, and display red box warning, as shown as follow:

Temperature difference to switch on additional cooling [5100]	19	* *	*0.1K
Hysteresis to switch off additional cooling [120]	20	*	*0.1K

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

This parameter is for setting the period for cyclically sending the control value to the bus.

Options: 0..255

#### 5.3.1.3 Parameter window "Fan auto.control"

This parameter window is visible when "Room temperature controller(RTC)" is selected as the controller type and fan speed auto.control function is enabled, as shown in Fig.5.3.1.3.



# KNX/EIB KNX Smart Touch

1.1.1	KNX Smart Touch S10 > HVA	AC controller > Controller 1 > Fan auto	.control	
	VKNX Secure	Auto. operation on object value	O Auto=1/Man.=0 O Auto=0/Man.=1	
÷	📑 General	Fan sneed output setting		
	Home page	Object datatype of 1byte fan speed	Fan stage (DPT_5.100)	
	Display view	Output value for fan speed low	23	<b>*</b> 9
	📲 KNX Channel	Output value for fan speed medium	67	• ·
	🖆 KNX Scene	Output value for fan speed high	100	\$ 9
	Scene 1	1 bit object function for fan speed		
	Internal sensor measureme	Fan speed control setting		
	Human Centric Lighting(H	Condition setting for using PI control		
	₩ H\/AC controller	[1255]	80	*
		Threshold value speed low<>medium [1255]	150	*
	Function setting Controller 1	Threshold value speed medium<>high [1255]	200	*
	Setpoint	Hysteresis threshold value in +/-[050]	10	*
	Heating/Cooling control	Condition setting for using 2-point control		
	Fan auto.control	Temperature difference speed OFF<>low [1200]	20	*0.1
	Controller 2	Temperature difference speed low< >medium [1200]	30	*0.1
	Controller 3	Temperature difference speed medium<	40	*0.1
	Controller 4	>nign [1200] Hysteresis temperature difference in [050]	10	*0.1
	Controller 4-			
	Controller +	Minimum time in fan speed [065535]	60	*

Fig.5.3.1.3"Fan" parameter window

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

Parameter"Auto. operation on object value"



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

Auto=1/Man.=0

### Auto=0/Man.=1

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

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

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

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

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

#### Fan speed output setting

Parameter"Object datatype of 1byte fan speed'

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

#### Percentage (DPT\_5.001)

## Fan stage (DPT\_5.100)

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

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

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

Note: the out value and status value must meet the condition low<medium<high, if not, they can not be configured on ETS, and display red box warning, as shown as follow:



Output value for fan speed low	3	*
Output value for fan speed medium	2	\$
Output value for fan speed high	3	÷

## Parameter 1 bit object function for fan speed

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

## -Parameter"1 bit object for fan speed off "

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

## Fan speed control setting

### Condition setting for using PI control

Under PI control, control value is PI operated within program, controller will power

on/off fan or switch fan speed according to the threshold range of the control values. Parameter"Threshold value speed OFF<-->low [1..255]"

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

If the control value is greater than or equal to this setting threshold value, low-level fan

speed will start running; if the control value is less than this setting threshold value, the fan will be turned off.

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

Define the threshold value for switching the fan speed to medium fan speed, if the

control value is greater than or equal to this setting threshold, the medium fan speed will

start running. Options: 1..255

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

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

## 1..255

Tip: The controller evaluates the threshold in ascending order.

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First check  $\rightarrow$ OFF <->low fan speed threshold  $\rightarrow$ low fan speed <->medium fan speed  $\rightarrow$ medium fan speed <->high fan speed.

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

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

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

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

#### Options: 0..50

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

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

#### Condition setting for using 2-point control

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



Cooling: Temperature difference = actual temperature - setpoint temperature;

Heating: Temperature difference = setpoint temperature - actual temperature.

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

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

Options: 1..200

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

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

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

Options: 1..200

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

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

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

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

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

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

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

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

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

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

#### Options: 0..65535

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

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

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## **5.3.2** Parameter window "Cotroller x-Ventilation controller"(x=1~6)

This parameter window is visible when "Ventilation controller" is selected as the controller type, which realizes the automatic control of wind speed, and the linkage control of wind speed with PM2.5, CO2, VOC detection value, as shown in Fig.5.3.2.



1.1.1 KNX Smart Touch S10 > HV	AC controller > Controller 1		
💙 KNX Secure	Description (max 30char.)		
+ 🚔 General	Controller type	Room temperature controller (RTC)     Ventilation controller	
Home page	Auto.operation on object value	O Auto=1/Man.=0 Auto=0/Man.=1	
+ 🔝 Display view	State of Auto.operation after startup	O Disable C Enable	
+ 8 KNX Channel	Fan speed output setting		
– 🖻 KNX Scene	Object datatype of 1byte fan speed	<ul><li>Fan stage (DPT_5.100)</li><li>Percentage (DPT_5.001)</li></ul>	
Scene 1	Output value for fan speed low	33	%
Internal sensor measureme	Output value for fan speed medium	67	%
- 🔆 Human Centric Lighting(H	Output value for fan speed high	100	%
– 💃 HVAC controller	Fan speed control setting		
Function setting	Control value reference from	PM2.5	•
Controller 1	Object datatype of PM2.5	<ul> <li>Value in ug/m3(DPT_7.001)</li> <li>Float value in ug/m3(DPT_9.030)</li> </ul>	
+ Controller 2	Period for request control value	10	min
+ Controller 3 + Controller 4	The fan speed status when the control value error	OFF	•
+ Controller 5	Threshold value OFF<>speed low [1999]	35	*
+ Controller 6	Threshold value speed low<>medium [1999]	75	* *
+ 🔇 Schedule function	Threshold value speed medium<>high [1999]	115	* *

Fig.5.3.2 "Cotroller x-Ventilation controller"( $x=1\sim6$ ) parameter window

Parameter"Auto. operation on object value"

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

Options:

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

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

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

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

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

Parameter``State of Auto.operation after startup"

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

#### Disable

#### Enable

#### Fan speed output setting

Parameter"Object datatype of 1byte fan speed

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

## Fan stage (DPT 5.100)

## Percentage (DPT 5.001)

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

These three parameters are for setting the value sent for each fan speed switchover. Fan

speed off when value is 0. Options according to fan object datatype: 1..255 /1..100

## Fan speed control setting

Parameter "Control value reference from"

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

> PM2.5 **CO2** VOC



## Parameter" Object datatype of PM2.5/VOC"

These parameters are for setting the datatype of PM2.5/VOC. Datatype determines

object type, select it according to the docking PM2.5 or VOC sensor data type. Options:

### Value in ug/m3(DPT 7.001)

## Float value in ug/m3(DPT 9.030)

- DPT\_7.001: Suitable for integrated value.
- DPT 9.030: Suitable for float value.

Parameter"Object datatype of CO2"

This parameter is for setting the datatype of CO2. Datatype determines object type,

select it according to the docking CO2 sensor data type. Options:

## Value in ppm(DPT 7.001)

## Float value in ppm(DPT 9.008)

DPT 7.001: Suitable for integrated value.

DPT 9.008: Suitable for float value.

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

This parameter is for setting the time period for device to send a control value read

request to external sensor after bus recovery or finish programming . Options: 0..255

Parameter``The fan speed status when the control value error'

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

> Off Low Medium High

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

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

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

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

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

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

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

#### 1..999/1..4000

Tip: The controller evaluates the threshold in ascending order.

First check  $\rightarrow$ OFF <->low fan speed threshold  $\rightarrow$ low fan speed <->medium fan speed  $\rightarrow$ medium fan speed <->high fan speed.

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

The threshold of OFF <-> low fan speed is lower than that of low fan speed <->

medium fan speed, and the threshold of low fan speed <-> medium fan speed is

lower than that of medium fan speed <-> high fan speed.

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

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

#### Options: 10..30/100..400

For example, the control type is CO2, the Hysteresis value is 100 and the threshold is 450, then the upper limit threshold 550 (Threshold value+Hysteresis value) and the lower



limit threshold 350 (Threshold value-Hysteresis value). When the control value is between  $350 \sim 550$ , fan action will not be caused, and the previous status will still be maintained. Only less than 350 or greater than or equal to 550 will change the running status of the fan. As shown in the following figure:



#### Note:

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

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

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

For example (1):

Take PM2.5 as an example

OFF <-> Low fan speed threshold value is 35

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

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

Hysteresis value is 25

The fan speed of the fan turbine increases from OFF:

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

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

The high fan speed will change at a control value of 50 (<75-25), and new fan speed will be low fan speed (because 50 is between 35 and 55, irrespective of hysteresis), so the fan speed is ignored.

For example(2):

Take PM2.5 as an example

**OFF** <-> Low fan speed threshold value is 20

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

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

Hysteresis value is 10

When fan speed is increasing from OFF:

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

When the control value 41 is received, the new speed will be at

medium(because the hysteresis is ignored when the value 41 is between 40

and 70), therefore the low speed is ignored.

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

When Fan Speed decreasing from high:

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

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



#### the medium speed is ignored.

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

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

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

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

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

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

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



## 5.4 Parameter window "Human Centric Lighting(HCL)"

The parameter "Human Centric Lighting(HCL)" is visible when enabled in the "Advanced setting" interface shown in Fig.5.2.8, as shown in Fig.5.4. It is mainly for setting related parameters of brightness and colour temperature.



# KNX/EIB KNX Smart Touch

#### 1.1.1 KNX Smart Touch S10 > Human Centric Lighting(HCL)

VNX Secure	Switching time	Depend to certain time	
– 📑 General	HCL behavior after voltage recovery	Stop running •	
General setting	HCL behavior at receiving switch control telegram "Off"	Ignore, and keep running O Stop running	
Security setting	HCL behavior at receiving other control telegram from bus	Ignore, and keep running	
Coordinates location setting	Colour temperature control type	<ul> <li>Normal</li> <li>Directly(with warm/cool white algorithm)</li> </ul>	
Summer time setting Proximity setting	Control brightness via HCL	O Disable C Enable	
Advanced setting	Time 1	✓	2
Home page	Time	06:00 -	
+ 🗈 Display view	Colour temperature preset	2700 🗘 k	1
+ 🔐 KNX Channel	Time	08:00	
+ 🖻 KNX Scene	Colour temperature preset	4000 🗘 k	(
🕄 Internal sensor measureme	Time 3	✓ 10:00 ▼	
• Q Human Centric Lighting(	Colour temperature preset	5000 🌲 k	:
– 💃 HVAC controller	Time 4	✓	
Function setting	Time Colour temperature preset	12:00 <b>•</b>	
- Controller 1	Time 5	<ul> <li>✓</li> </ul>	

"Human Centric Lighting(HCL)-Depend to certain time





# KNX/EIB KNX Smart Touch

1.1.1 KNX Smart Touch S10 > Hun	nan Centric Lighting(HCL)		
VNX Secure	Switching time	<ul> <li>Depend to certain time</li> <li>Depend to sunrise&amp;sunset</li> </ul>	
– 🚅 General	HCL behavior after voltage recovery	Stop running	•
General setting	HCL behavior at receiving switch control telegram "Off"	O Ignore, and keep running O Stop running	
Security setting	HCL behavior at receiving other control telegram from bus	Ignore, and keep running	•
Coordinates location setting	Colour temperature control type	<ul> <li>Normal</li> <li>Directly(with warm/cool white algorithm)</li> </ul>	
Proximity setting	Time 1	✓	
Advanced setting	Time	Sunrise +-Omin	•
Home page	Colour temperature preset	2700	К
+ 📰 Display view	Brightness preset Time 2	50 <b>▼</b>	%
+ 层 KNX Channel	Time	Sunrise +2h	•
+ 🖻 KNX Scene	Colour temperature preset	4000	К
Internal sensor measureme	Brightness preset	100 👻	%
Q Human Centric Lighting(	Time	Sunrise +4h	•
– 💃 HVAC controller	Colour temperature preset	5000	К
Function actting	Brightness preset	100 -	%
Function setting	Time 4	$\checkmark$	
- Controller 1	Time	Sunrise +5h	•

"Human Centric Lighting(HCL)-Depend to sunrise&sunset"

## Fig.5.4 "Human Centric Lighting(HCL)" parameter window

# Parameter"Switching time"

This parameter is for setting the method of switching time. Options:

## Depend to certain time

#### **Depend to sunrise&sunset**



Parameter"HCL behavior after voltage recovery

This parameter is for setting running behavior of HCL after voltage recovery. Options:

Start running

Stop running

As before voltage failure

Parameter"HCL behavior at receiving switch control telegram "Off""

This parameter is for setting running behavior of HCL when receiving switch control telegram "Off".

Options:

## Ignore, and keep running

#### Stop running

Ignore, and keep running: ignore the receiving telegram and keep running HCL, no display the object "Switch control";

Stop running: stop running HCL.

Parameter"HCL behavior at receiving other control telegram from bus'

This parameter is for setting running behavior of HCL when receiving other control telegram from bus.

Options:

Ignore, and keep running

Ignore, but stop running

Update preset value, and keep running

#### Update preset value, and stop running

Ignore, and keep running: ignore the receiving telegram and keep running HCL; Ignore, but stop running: ignore the receiving telegram but stop running HCL;

Update preset value, and keep running: update the current brightness or colour temperature when receiving their telegrams, and keep running HCL;

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Update preset value, and stop running: update the current brightness or colour temperature when receiving their telegrams, but stop running HCL.

Note: telegrams received during that time period, update the parameter presets for that time period. In the HCL stops running, it is not logged. Updated presets will be saved when voltage failure.

## Parameter"Colour temperature control type"

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

#### Normal

#### Directly(with warm/cool white algorithm)

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

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

#### Parameter"Control brightness via HCL"

This parameter is visible when previous parameter is selected "Normal". Set whether to control brightness via HCL.

Parameters as follow are used to preset the brightness and colour temperature for each time period, up to set 10 time periods:

#### Parameter``Time X(X=1-10)"

When enabled, three parameter as follow are visible. This parameter is for setting whether to enable time x.



#### —Parameter"Time"

This parameter is for setting the preset time period, options are different according to the method of switching time.

When "Depend to certain time" is selected, options:

00:00	
01:00	
02:00	
23:00	

When "Depend to sunrise&sunset" is selected, options:

Sunrise -5h	Sunset +-0min
Sunrise -4h	Sunset +30min
	Sunset +1h
Sunrise -1h	
Sunrise -30min	Sunset +4h
Sunrise +-0min	Sunset +5h

#### ——Parameter"Colour temperature preset"

This parameter is for setting the preset colour temperature. Options: 2000..7000K

#### —Parameter"Brightness preset"

This parameter is visible when control type of colour temperature is selected "Normal" and the parameter "Control brightness via HCL" is enabled, or the type is selected "Directly(with warm/cool white algorithm)". Set the preset brightness. Options:





	_
0%	
5%	
10%	
95%	
100%	

## 5.5 Parameter window "Schedule function"

The parameter "schedule function" is visible when enabled in the "Advanced setting" interface shown in Fig.5.2.8, as shown in Fig.5.5,up to 16 time functions can be configured.



#### Fig.5.5 "schedule function" parameter window



This parameter is for setting the number of timers.Options:1....16



#### 5.5.1 Parameter window "Schedule X"

∑8 input ionetion	Enable							
	Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Alarm 1	Schedule	e configura	tion					
Function setting	Schedule c	lisable functi	on	Disable				•
▲ Alarm function	Output va	alue[0255]		127				*
Schedule 1	Object datatype		1byte u	1byte unsigned value			•	
Function setting	Object type of schedule		1byte	1byte			•	
Schedule function	Overwrite download	the schedule	setting during	9				
Controller 6	Description	n for schedul	e					

Fig.5.5.1 "Schedule X"parameter window

## Parameter"Description for schedule function

This parameter is for setting the description of schedule function, up to 18 characters

can be input (up to 6 Chinese characters are supported).

Parameter"Overwrite the schedule function setting during download '

This parameter is for setting whether to overwrite the schedule function setting during download.

If enabled, the schedule function on screen is subject to the ETS configuration after the application is downloaded.

If disabled, if the channel is already activated, the ETS configuration will not be transmitted to screen, but it is not activated at first, the channel of schedule function on screen is subject to the ETS.

## Parameter"Object type of schedule function

This parameter is for setting the data type of the sending value when timing time of



schedule x arrives. Options:

1bit

1byte

2byte

## Parameter "Object datatype"

This parameter is for defining the data type of 1byte or 2byte.

When 1byte, Options:

1byte unsigned value

1byte[scene control]

**HVAC** mode

When 2byte, Options:

#### 2byte unsigned value

## **Temperature value**

## Parameter"Output value/ scene No.[...]"

This parameter is for setting the telegram value to be sent when it arrives the time of time x. The range depends on the options of the previous parameter.

## Parameter "Schedule disable function

This parameter is for setting whether time function can be disables or enabled via the object, or setting the trigger value of enable/disable timing. Options:

Disable

Disable=0/Enable=1

## Disable=1/Enable=0

The following parameters are for setting the time of time x, when time arrives, perform time x.



Parameter"Monday/Tuesday/Wednesday/Thursday/Friday/Saturday/Sunday

This parameter is for setting the day of a week to enable schedule x.

Parameter"Time"

This parameter is for setting the specific time of time x. Options:

Hours: 0..23

Minutes: 0..59

Note: The accuracy of RTC real-time clock inside the device is  $\pm$  20ppm.

## 5.6 Parameter window "Alarm function"

The parameter "Alarm function" is visible when enabled in the "Advanced setting" interface shown in Fig.5.2.8, as shown in Fig.5.6, up to 24 alarm functions can be configured.



Alarm function	Max. duration of acoustic alarm signal	1min	•
	Alarm signal is repeated automatically after	5min	-
Function setting			
Alarm 1	Number of alarms (max. 24)	1	÷

Fig.5.6 "Alarm function" parameter window

## Parameter"Max. duration of acoustic alarm signal"

This parameter is for setting the time period of alarm tone. When receive the alarm telegram, play alarm tone immediately, if currently playing and it will not be interrupted and will not be re-timed. If receive the cancel alarm telegram when playing, it will be interrupted immediately. Options:

Disable
10s
20s
25min
30min
isable the alarm tone plavin

Disable: disable the alarm tone playing function;

Other options: the playing period of alarm tone.

Parameter"Alarm signal is repeated automatically after.

This parameter is for setting the interval at which alarm tone time automatically repeat, and the timing is only related to when the last play ended. Options:

## Disable

10s





#### 20s

•••

25min

#### 30min

Disable: disable the alarm tone repeat function;

Other options: when a playing period complete, it will automatically play again after a delay of the setting time.

Parameter"Number of alarms (max.24) "

This parameter is for setting the number of alarms. Options: 1...24

The encode data of telegram must be ISO8859 or ASCII characters.

The encode data of alarm telegram is associated with interface language, when it is selected Simplified Chinese, Traditional Chinese, Russian or Greek, use UTF-8; while other languages, use ISO8859.



## 5.6.1 Parameter window "Alarm x"(x=1~24)

Parameter window "Alarm x "(x=1 $\sim$ 24) as shown as Fig.5.6.1. It is mainly setting alarm

#### function.

1.1.1 KNX Smart Touch S10 > Alarm function > Alarm 1-...

– 🔬 Alarm function	Description for alarm	
Eurotion setting	When alarm active, warning message via	14 Bytes string from bus O Fixed string
Tunction setting	Warning string(max 18char.)	
Alarm 1	Send acknowledge after confirm the alarm	$\checkmark$
– 🧏 Input function	As a security area equipment alarm	

Fig.5.6.1 "Alarm  $x''(x=1\sim24)$  parameter window

Parameter" Description for alarm

This parameter is for setting the description of alarm function, up to 18 characters can be input (up to 6 Chinese characters are supported).

Parameter"When alarm active, warning message via"

When alarm activated, this parameter is for setting input type of warning message,

either by displaying a fixed string entered by ETS on the screen or by receiving a 14byte string from the bus. Options:

#### **Fixed string**

## 14 Bytes string from bus

Parameter"Warning string(max 18char.)"

This parameter is visible when previous parameter is selected "Fixed string". Set the indicate text when alarm activated.

Parameter"Send acknowledge after confirm the alarm



This parameter is for setting whether to send a 1bit acknowledge telegram, the action that only needs to be processed when the user clicks on the screen to acknowledge the warning message.

Parameter"As a security area equipment alarm

This parameter is for setting whether the device functions as a security area equipment alarm.

If enabled, the device will be displayed in the alarm equipment list in the equipment alarm settings.

If disabled, it will function as a regular alarm.

## 5.7 Parameter window "Logic function"

The parameter "Logic function" is visible when enabled in the "Advanced setting" interface shown in Fig.5.2.8, as shown in Fig.5.7. It is mainly setting logic function, up to 8 logic functions can be configured.

+ 📰 Display view	1st Logic function	$\checkmark$
► 🔐 KNX Channel	2nd Logic function	$\checkmark$
	3rd Logic function	$\checkmark$
🕨 🖺 KNX Scene	4th Logic function	
1.1 KNX Smart Touch S10	) > Logic function > 1st Logic function	
General	Description for logic function	



Fig.5.7 "Logic function" parameter window

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

This parameter is for setting the setting interface of logic function, display

corresponding logic function page when select. Up to enable 8 logic functions.

Parameter "Description for logic function

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

characters.

Parameter"Function of channel '

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

AND OR XOR Gate forwarding **Threshold comparator Format convert Gate function Delay function** Staircase lighting

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



## 5.7.1 Parameter window "AND/OR/XOR"

茸 General	Description for logic function		
Home page	Function of channel	AND	1
I.1 KNX Smart Touch S10 > Logi	: function > 1st Logic function		
📑 General	Input b	Disconnected	
-	Default value	0 0 1	
Home page	Input c	Disconnected	,
Display view	Default value	O ○ 1	
8 KNX Channel	Input d	Disconnected	
🖻 KNX Scene	Default value	◎ 0 ○ 1	
	Input e	Disconnected	
u internar sensor measureme	Default value	◎ 0 ○ 1	
• <b>Q</b> • Human Centric Lighting(H	Input f	Disconnected	
🖌 💃 HVAC controller	Default value	O ○ 1	
Schedule function	Input g	Disconnected	
- 🛆 Alarm function	Default value	◎ 0 ○ 1	
Input function	Input h	Disconnected	
Logic function	Default value	0 1	
Function setting	Result is inverted	Vino Vies	
1st Logic function	Read input object value after bus voltage recovery	O No Ves	
- 🕂 Scene group function	Output send when	Receiving a new telegram	
		<ul> <li>Every change of output object</li> </ul>	
Function setting	Send delay time: Base	None	
- Group 1	Factor: 1255	1	

Fig.5.7.1 "Logic function\_AND/OR/XOR" parameter window

#### Parameter``Input a/b/c/d/e/f/g//h´´

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

#### Disconnected

Normal

#### Inverted

Disconnected: not to calculate;

Normal: to directly calculate the input value;

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

#### value.

#### —Parameter"Default value"

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

0 1

## Parameter"Result is inverted

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

No

#### Yes

No: output directly; Yes: output after inverting.

Parameter"Read input object value after bus voltage recovery"

This parameter is for setting whether to send the read request to the logic input object

after device bus recovery or finish programming.

Parameter"Output send when'

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



Receiving a new telegram

## Every change of output object

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

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

## Tip: when in the first time to logic calculate, the logic result will be sent even if

#### it has no change.

Parameter'	Send delay time"	
Base:	None	
	0.1s	
	1s	
	10s	
	25s	

#### Factor: 1..255

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



### 5.7.2 Parameter window "Gate forwarding"

#### 1.1.1 KNX Smart Touch S10 > Logic function > 1st Logic function-...

Home page	Description for logic function		
	Function of channel	Gate forwarding	•
+ 🔝 Display view	Object type of Input/Output	1bit	•
+ 🔐 KNX Channel	Default scene NO. of Gate after startup [1~64.0=inactive]	0	▲ ۳
+ 🖻 KNX Scene			
Internal sensor measureme	1->Gate trigger scene NO. is [1~64,0=inactive]	0	▲ ▼
Human Centric Lighting(H	Input A send on	Output A	•
	Input B send on	Output B	•
+ 🧏 HVAC controller	Input C send on	Output C	-
+ 🔇 Schedule function	Input D send on	Output D	•

#### Fig.5.7.2 "Logic function\_Gate forwarding" parameter window

P	a	a	m	e	te	91	<b>a</b> (	0	b	je	C	t	t	YI	0.6	9	0	f	E	١ţ	υ	It	/	0	) U	t	p.		t"																						
		Т	hi	s	p	ar	a	m	ne	te	er	i	s	fc	or	S	e	tti	in	g	t	he	e	0	bj	je	ct	t t	ty	p'	e	0	f i	in	р	ut	/c	bu	iti	οι	ıt.	(	Эр	oti	0	n٩	5:	 	 	 	•

	_	-	 -	-	-	
1bit						
4bit						
1by	e					

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

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

#### Options: 1..64, 0=inactive

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

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



This parameter is for setting scene number of logic gate forwarding. Up to 8 trigger

scene number can be set for each logic. Options: 1..64, 0=inactive

## ----Parameter"Input A/B/C/D send on"

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

> **Output A Output B**

...

## **Output B,C,D**

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


### 5.7.3 Parameter window "Threshold comparator"

#### 1.1.1 KNX Smart Touch S10 > Logic function > 1st Logic function-... Description for logic function Home page Function of channel Threshold comparator -Display view Threshold value data type 1byte unsigned value (DPT5.010) ₽ KNX Channel Threshold value 0 If Object value < Threshold value Do not send telegram 🖆 KNX Scene If Object value=Threshold value Do not send telegram Internal sensor measureme... If Object value!=Threshold value Do not send telegram O Human Centric Lighting(H... If Object value>Threshold value Do not send telegram 💃 HVAC controller If Object value <= Threshold value Do not send telegram If Object value>=Threshold value Do not send telegram Schedule function Receiving a new telegram ▲ Alarm function Output send when Every change of output object ⅓ Input function Send delay time: Base None \$ Factor: 1..255 1 - Logic function

Fig.5.7.3 "Logic function\_Threshold comparator" parameter window

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

	4bit value (DPT3.007)	4byte unsigned
value[04294967	7295]	
	1byte unsigned value (DPT5.010)	Ext. temperature value
(DPT 9.001)		
	2byte unsigned value (DPT7.001)	Ext. humidity value (DPT
9.007)		
	2byte signed value (DPT8.x)	Illuminance value (DPT
9.004)		



2byte float value (DPT9.x)

### —Parameter "Threshold value "

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

Options:

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

```
2byte unsigned value (DPT7.001) 0..65535 / 2byte signed value (DPT8.x)
```

### -32768..32767 /

2byte float value (DPT9.x) -670760...670760 / 4byte unsigned

### value[0..4294967295] 0..4294967295 /

Ext. temperature value (DPT 9.001) -20..95°C / Ext. humidity value (DPT 9.007)

### 0..100% /

Illuminance value (DPT 9.004) 0..65535lux

Parameter "If Object value<Threshold value" Parameter "If Object value=Threshold value" Parameter "If Object value!=Threshold value" Parameter "If Object value>Threshold value"

Parameter "If Object value<=Threshold value"

Parameter"If Object value>=Threshold value"

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



Do not send telegram

K-BUS®

Send value "0"

### Send value "1"

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

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

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

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

Parameter"Output send when'

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

### Receiving a new telegram

### Every change of output object

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

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

Tip: when in the first time to logic algorithm, the logic result will be sent even

### if it has no change.

Parameter"Send delay time:"

Base:

None

0.1s



... 25s

#### Factor: 1..255

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

#### 5.7.4 Parameter window "Format convert"

1.1.1 KNX Smart Touch S10	> Logic function > 1st Logic function		
Home page	Description for logic function		
	Function of channel	Format convert	•
+ 📰 Display view	Function	2x1Bit>1x2Bit	•
+ 🔐 KNX Channel	Output send when	O Receiving a new telegram	
+ 🛃 KNX Scene		<ul> <li>Every change of output object</li> </ul>	



Parameter "Function"

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

2x1bit-->1x2bit 8x1bit-->1x1byte 1x1byte-->1x2byte 2x1byte-->1x2byte 2x2byte-->1x4byte 1x1byte-->8x1bit 1x2byte-->2x1byte



### 1x4byte-->2x2byte

1x3byte-->3x1byte

3x1byte-->1x3byte

## Parameter"Output send when'

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

#### Receiving a new telegram

### Every change of output object

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

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

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



### 5.7.5 Parameter window "Gate function"



#### Fig.5.7.5 "Gate function" parameter window

Parameter``Object type of Input/Output'

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

1bit[On/Off] 1byte[0...100%] 1byte[0...255] 2byte[Float] 2byte[0...65535]

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

#### Parameter "Filter function "

This parameter is visible when "1bit[On/Off]" is selected. Set whether to filter On or Off telegram, only pass one of them or pass all. Options:

> Deactivate **On filter out Off filter out**



Deactivate: Do not filter the On or Off telegrams;

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

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

### -Parameter"Value output "

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

#### Normal

#### Inverted

### Parameter"Gate object value"

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

### Normal

### Inverted

Parameter"Gate status after voltage recovery"

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

### Disable

### Enable

### Parameter' Save input signal when gate close"

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

### No

### Yes

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

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



### 5.7.6 Parameter window "Delay function"

1.1.1 KNX Smart Touch S10	> Logic function > 1st Logic function		
-	Description for logic function		
Home page	Function of channel	Delay function	•
+ 🔝 Display view	Object type of Input/Output	1bit[On/Off]	•
+ 层 KNX Channel	Delay time [06500]	10	\$

### Fig.5.7.6 "Delay function" parameter window

Parameter"Object type of Input/Output"

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

1bit[On/Off] 1byte[0..100%] 1byte[0..255] 2byte[Float] 2byte[0..65535]

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

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

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



### 5.7.7 Parameter window "Staircase lighting"



### Fig.5.7.7 "Staircase lighting"parameter window



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



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

#### 1bit

### 1byte

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

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

on.

可选项: 10..6500

Parameter"Send value 1 when trigger



# Parameter"Send value 2 after duration time'

These parameters are for setting the value to send. Send value 1 when trigger, and then

send value 2 after duration time. Options display according to the output object datatype.

When 1 bit, options:

OFF

ON

When 1 byte , options: 0..255

Parameter``Retriggering'

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

Disable

Enable

## 5.8 Parameter window "Scene group function"

The parameter "Scene group function" is visible when enabled in the "Advanced setting" interface shown in Fig. 5.2.8, as shown in Fig.5.8(1) ,Fig.5.8(2) and Fig.5.8(3). It is mainly



setting scene group function, up to 8 scene group functions can be configured, each group

#### with 8 outputs.



N. Human Contric Lighting/H

### Fig.5.8(1) "Scene Group function" parameter window



### Fig.5.8(2) "Group X"parameter window



	Description for Output 1 function		
Home page	Description for output i function		
	Object type of Output 1	1bit	-
Display view	1->Output 1 trigger scene NO is	- Down	
	[1~64,0=inactive]	0	v
B KNX Channel			
	Object value of Output 1		
🖻 KNX Scene	Delay time for sending [0255]	0	÷ *0.1
ℜ Internal sensor measureme	·		
0	2->Output 1 trigger scene NO. is	0	*
🔅 Human Centric Lighting(H	[1~64,0=inactive]	0	Ψ
	Object value of Output 1	0 1	
🐝 HVAC controller		inter control	. Variante
	Delay time for sending [0255]	0	÷0.1
Schedule function			

### Fig.5.8(3) "Output Y function" parameter window

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

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

groups.

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

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

As 8 group functions are the same, and 8 output functions of each group as well, the

following description only about one output of a group.

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

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

characters.

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

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

1bit

1byte





2byte

RGB

RGBW

### — Parameter "Object datatype"

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

When the datatype is 1byte, options:

1byte unsigned value

### **HVAC** mode

When the datatype is 2byte, options:

### 2byte unsigned value

### **Temperature value**

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

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

### —Parameter"Object value of Output Y"

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

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

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

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

Comfort mode Standby mode Economy mode Frost/heat protection

114



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

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

-5°C -4°C ... 45°C

参数"RGB value of Output y"

When the datatype is RGB this parameter is visible, used for setting the RGB value of output y. Options: #000000...#FFFFFF

—参数"White value of Output y"

When the datatype is RGBW this parameter is visible, used for setting the white value of output y. Options: 0.255

#### Parameter" Delay time for sending [0...255]\*0.1s " \_\_\_\_

This parameter is for setting the delay time for sending the output value to the bus. Options: 0..255





5.9 Parameter window "Home page"

1.1.	.1 KNX Smart Touch S10 > Hor	ne page		
	🛡 KNX Secure	Overwrite the home page : download	setting during 🧹	
ŀ	🚍 General	Widget selection in th	e home page	
	Home page	Number of widgets (max. 2 scenes)	24 channels or 12	Å. •
	Display view	•	•	•
	🖶 KNX Channel		• •	• • •
	🖻 KNX Scene	Note: If the channel	or scene is not enabled, it can not be selecte	d.
	ပြီ Internal sensor measureme			
	Human Centric Lighting(H			
	₩ HVAC controller	Lavout preview	(10:28)	1 3 5
	Schedule function		e e e e e e e e e e e e e e e e e e e	2 4 6
-	Alarm function		(*) <sup>1</sup> That <sup>1</sup> T	
-	⅓ Input function	Function layout	Function including	Preview
	➔ Logic function		Press/Release switch,Switch, Relative dimming,RGB dimming,RGBW dimming.RGBCW dimming.Energy	_
	Function setting	Single grid	metering, Temperature sensor, Humidity sensor, PM2.5 sensor, PM10 sensor, VOC	1
	1st Logic function		sensor,AQI sensor, CO2 sensor,Brightness sensor,Wind sensor,I/O sensor,Value sender.Scene	
F	← Scene group function	Horizontal double grid	Curtain step/move, Roller blind step/move, Curtain position, Roller blind position, Venetian blind position and slat, Air	1

Fig.5.9 "Home page"parameter window

Parameter``Overwrite the home page setting during download''

This parameter is for setting whether to overwrite the home page setting during the download.



### Widget selection in the home page

Parameter"Number of widgets (max.24 channels or scenes)

This parameter is for setting the number of widgets.Options: 1...24

The device are options: Channel 1... Channel 120/Scene 1-Scene 30



# 5.10 Parameter window "Display view"

#### 1.1.1 KNX Smart Touch S10 > Display view

	💗 KNX Secure	Setting for are	ea view							
+	📑 General	Number of are	1						*	
	Home page			G	ng Room Maste	Room	Guest Room	Children Study	Tolet 1F	Toll 🚍
+	Display view			<b>P</b>						1
+	🔐 KNX Channel	Layout preview		6						
+	🖆 KNX Scene			۲	2	4	6	8	10	1
	Internal sensor measureme	-								
	🔅 Human Centric Lighting(H	Category sett	ing for device view	1						
+	₩ HVAC controller	Item	Category name description	Function	n includin	g				
+	Schedule function	Lighting	Lighting	Switch, Re Relative& dimming,	elative dim Brightness RGBCW d	iming dimi limmi	, Brightn ming, RG ing, Colo	ess dimmir B dimming ur tempera	ng, I, RGBW ature dim	nming
+	▲ Alarm function			Curtain st	ep/move,	Rolle	r blind st	ep/move, (	Curtain	
+	⅓ Input function	Curtain	Curtain	position, l slat	Roller blin	d pos	ition, Ver	etian blind	d positio	n and
-	➔ Logic function	HVAC	HVAC	Air condit system	ioner, Roc	om tei	mperatur	e unit, Ver	itilation	
		Audio	Audio	Audio cor	ntrol					
	Function setting	Energy	Energy	Energy m	etering					
	1st Logic function	Environment	Environment	Temperat sensor, VC sensor, W	ure senso DC sensor, ind senso	r, Hun AQI r	nidity ser sensor, C	isor, PM2.5 O2 sensor,	sensor, Brightn	PM10 ess
+	<b>T</b> scene group function	I/O Sensor	I/O Sensor	I/O senso	r					
		Other	Other	Press/Rele	ease switc	h, Val	ue sende	r		
	5					25				
-	- Logic function									

- Function setting 1st Logic function-...
- •E Scene group function +



Layout preview



Fig.5.10 "Display view"parameter window

### Setting for area view

Parameter"Number of areas (max.12)"

This parameter is for setting the number of areas.Options:1....12

### Category description setting for device view

Item	Function including
Lighting	Switch, Relative dimming,Brightness dimming, Relative dimming, Relative&Brightness dimming, RGB dimming, RGBW dimming, RGBCW dimming, Colour temperature dimming
Curtain	Curtain step/move, Roller blind step/move, Curtain position, Roller blind position, Position, Venetian blind position and slat.
HVAC	Air conditioner, Room temperature unit, Ventilation system.
Audio	Audio control
Energy	Energy metering
Environment	Temperature sensor Humidity sensor, PM2.5 sensor, PM10 sensor, VOC sensor, AQI sensor, CO2 sensor, Brightness sensor, Wind sensor.
I/O Sensor	I/O sensor
Other	Press/Release switch, Value sender

# GVS<sup>®</sup> K-BUS<sup>®</sup> KNX/EIB KNX Smart Touch S10

# 5.11 Parameter window "KNX Channel"

#### 1.1.1 KNX Smart Touch S10 > KNX Channel

KNX Secure	Number of channels (max. 240)	1	▲ ▼
+ 🚔 General	For 14 Bytes string from bus, The enc characters.	ode data of telegram must be ISO8859 or ASCII	
Home page			
+ 🔝 Display view	Channel status object read request after restart	$\checkmark$	
+ 🔐 KNX Channel	Time period request for common 1 [0255,0=inactive]	0	min
+ 🖻 KNX Scene	Time period request for common 2 [0255,0=inactive]	0	min
1 Internal sensor measureme	Time period request for common 3 [0255,0=inactive]	0	min
🔅 Human Centric Lighting(H	Time period request for common 4 [0255,0=inactive]	0	min
+ 💃 HVAC controller	Time period request for common 5 [0255,0=inactive]	0	min
+ 🔇 Schedule function	Time period request for common 6 [0255,0=inactive]	0	min
	Time period request for common 7 [0255,0=inactive]	0	min
+ 🏂 Input function	Time period request for common 8 [0255,0=inactive]	0	min
- 🔁 Logic function	Time period request for common 9 [0255,0=inactive]	0	min
Function setting 1st Logic function	Time period request for common 10 [0255,0=inactive]	0	min
+ •E Scene group function	PM2.5/PM10 monitoring level indic	ation setting	
	Number of level	1	•

- - - -





KNX/EIB KNX Smart Touch

Home page	PM2.5/PM10 monitoring level in	ndication setting	
	Number of level	1	•
+ 📰 Display view	For level 0		
+ 🔐 KNX Channel	Colour setting	Green	•
+ 🖆 KNX Scene	Threshold for level 0<->level 1	35	÷
🕄 Internal sensor measureme	Colour setting	Light blue	•
☆ Human Centric Lighting(H	AQI monitoring level indication	setting	
+ 💃 HVAC controller	Number of level	1	•
+ 🔇 Schedule function	For level 0	Green	•
+ 🛆 Alarm function	Threshold for level 0<->level 1	50	\$
+ 🧏 Input function	Colour setting	Light blue	•
- 3- Logic function	CO2 level indication setting		
Function setting	Number of level	1	•
1st Logic function	For level 0		
+ Crons group function	Colour setting	Green	•
	Threshold for level 0<->level 1	350	Å V
	Colour setting	Light blue	٠

#### Fig.5.11 "KNX Channel"parameter window

Parameter"Number of channels (max.120)'

This parameter is for setting the number channels. Options: 1...120

Parameter Channel status object read request after restart

This parameter is for setting whether to send channel status object read request after restart.

Parameter Time period request for common X [0..255,0=inactive] , (X=1-10)  $^{\prime\prime}$ 

This parameter is for setting time period request for querying the online status of the generic device.Options: 0...255min

KNX/EIB KNX Smart Touch

### PM2.5/PM10/AQI/CO2/ monitoring level indication setting

S K-BUS

### PM2.5/PM10/AQI/CO2

S10

Parameter"Number of level

This parameter is for setting number of level.Options: 1...5

Parameter<sup>\*\*</sup>Colour setting<sup>\*</sup>

This parameter is for setting the color of UI display fo each level.Options:

	Green
	Light blue
	Yellow
	Orange
	Red
	Dark red
arameter"Thres arameter"Thres arameter"Thres arameter"Thres arameter"Thres	hold for level 0<->level 1" hold for level 1<->level 2" hold for level 2<->level 3" hold for level 3<->level 4" hold for level 4<->level 5"

This parameter is for setting the threshold for each level.Options: 1...500/1...999



### 5.11.1 Parameter window "Channel X"(X=1~240)

KNX Secure	Function	Switch	•
🕨 📑 General	Function description (max 18 char.)		
Home page	Function icon	General light	•
<ul> <li>Display view</li> </ul>		_	
- 🔐 KNX Channel		<b>_</b>	
Channel 1			
			_
► 🖻 KNX Scene	Device online status reference by	Individual	-

### Fig.5.11.1 "Channel X"parameter window

# Parameter"Function"

This parameter is for setting the device function. Channel 1-120 Options:



G\		S	
S10	_		

Press/Release swite	ch		Ventilation system
Switch			Ventilation system(with auto fan
Relative dimming			speed)
Brightness dimming	l		Audio control
Relative&Brightness	s dimming		Audio control(with on/off)
RGB dimming	RGB		Audio control(play mode)
RGBW dimming	RGBW		Audio control(track information)
RGBCW dimming	RGBCW		Audio control(track information &
Colour temperature	dimming		playlist)
Curtain step/move			Energy metering(power & energy)
Roller blind step/m	ove		Energy metering(power & energy
Curtain position			& current)
Roller blind position	1		Energy metering(power & energy
Venetian blind posit	ion and slat		& current & voltage)
Air conditioner			Temperature sensor
Air conditioner(with	swing)		Humidity sensor
Room temperature	unit		PM2.5 sensor
Room temperature	unit(with on,	/off)	PM10 sensor
Room temperature	unit(with	operation	VOC sensor
mode)			AQI sensor
Room temperature	unit(with	on/off &	CO2 sensor
operation mode )			Brightness sensor
Room temperature	unit(with	operation	Wind sensor
mode & fan speed)			I/O sensor
			Value sender

K-BUS<sup>®</sup>

This parameter is for setting the device function. Channel 121-240 Options:





Press/Release switch Switch Relative dimming Brightness dimming Relative&Brightness dimming RGB dimming RGB RGBW dimming RGBW

Colour temperature dimming

Curtain step/move Roller blind step/move Curtain position Roller blind position Venetian blind position and slat Value sender

Parameter"Function description (max 18 char.)"

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

characters.

Parameter"Function icon"

This parameter is for setting the icon of channel device. Options:

General light Ceiling light ... AQI

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

Chapters as follow explain the device function separately.



### 5.11.2 Parameter window of basic function

This chapter explains the basic functions, including switch,dimming,blinds,value sender,color temperature,color control(RGB,RGBW,RGBCW),audio control,room temperature control,Air conditioner,

Ventilation System control, Air quality and Energy Metering display, etc.

### 5.11.2.1.Switch

1.1.1 KNX Smart Touch S10	> KNX Channel > Channel 1		
🛑 KNX Secure	Function	Switch	2 <b>.</b>
+ 芸 General	Function description (max 18 char.)		
Home page	Function icon	General light	•
+ 📰 Display view		_	
– 🔐 KNX Channel		<b>_</b>	
Channel 1			
+ 🖻 KNX Scene	Device online status reference by	Always online	•

#### Fig.5.11.2(1) "Switch" parameter window

### Parameter"Device online status reference by/

This parameter is for setting the reference type for sending read requests to KNX

devices on the bus.Options:

# Individual Common 1 ... Common 10 Always online



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

----Parameter" Period for request device online status [1..255] min"

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



### 5.11.2.2.Press/Release switch

```
1.1.1 KNX Smart Touch S10 > KNX Channel > Channel 1-...
```

KNX Secure	Function	Press/Release switch	•
+ \Xi General	Function description (max 18 char.)	General light	•
Home page	Icon preview	General light	
+ 🔝 Display view		_	
- 🔐 KNX Channel			
Channel 1			
+ 🖻 KNX Scene	Device online status reference by	Always online	
Internal sensor measureme	Work mode	Press - ON / Release - OFF     Press - OFF / Release - ON	
🔅 Human Centric Lighting(H	lcon display	OFF ON	

### Fig.5.11.2(2)"Press/Release switch" parameter window

### Parameter"Work mode"

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

## Press - ON / Release - OFF

#### Press - OFF / Release - ON

Parameter"Icon display

This parameter is for setting the indication status of the icons on the screen.Options:

# OFF ON



### 5.11.2.3.Relative dimming/brightness dimming/Relative&brightness

### dimming

💙 KNX Secure	Function	Relative dimming	•
+ 芸 General	Function description (max 18 char.)		
Home page	Function icon	General light	•
+ 📰 Display view		_	
- 🔐 KNX Channel		-	
Channel 1			
+ 🛋 KNIX Scene	Device online status reference by	Always online	•

#### Relative dimming

#### 1.1.1 KNX Smart Touch S10 > KNX Channel > Channel 1-...

VKNX Secure	Function	Brightness dimming	•
+ 芸 General	Function description (max 18 char.)		
Home page	Function icon Icon preview	General light	•
+ 🔝 Display view			
– 8 KNX Channel		-	
Channel 1			
+ 🛃 KNX Scene	Device online status reference by	Always online	•
1 Internal sensor measureme	Min. brightness value [050]	0	<b>*</b> %
• Human Centric Lighting(H	Max. brightness value [51100]	100	÷ %

#### Brightness dimming



VIX Secure	Function	Relative&Brightness dimming	•
+ 🗮 General	Function description (max 18 char.)		
Home page	Function icon	General light	
Display view		_	
B KNX Channel		-	
Channel 1			
Channel 1	Device online status reference by	Always online	
Channel 1  KNX Scene  Internal sensor measureme	Device online status reference by Min. brightness value [050]	Always online	÷

Relative&Brightness dimming

## Fig.5.11.2(3) "Relative/brightness dimming" parameter window

The	following	parameters	are	visible	when	"Brightness
dimmir	ng/Relative&E	Brightness dimm	ing" is s	elected.		
Param	eter"Min. brig	htness value [0.	.50]%"			
This	s parameter is f	or setting the lowe	er limit th	reshold of br	rightness. O	ptions: <b>050</b>
Param	eter``Max. brig	htness value [5	1100]%	67		

This parameter is for setting the upper limit threshold of brightness. Options:

51..100



### 5.11.2.4.Colour temperature dimming

#### 1.1.1 KNX Smart Touch S10 > KNX Channel > Channel 1-... KNX Secure Function Colour temperature dimming Function description (max 18 char.) + \Xi General Function icon Downlight Home page Icon preview Display view *用* KNX Channel Channel 1-... Device online status reference by Always online ₱ KNX Scene Internal sensor measureme... Only switch object send value 0 Reaction on 'OFF' operation Brightness objects send value 0 • Human Centric Lighting(H... Only switch object send value 1 Reaction on 'ON' operation Preset brightness value 🐝 HVAC controller Colour temperature control type Normal(with 2byte absolute value) Schedule function ‡ К Min. colour temperature [2000...7000] 2700 ▲ Alarm function + 6500 \$ К Max. colour temperature [2000...7000]

#### Color temperature dimming

### Fig.5.11.2(4) "Colour temperature dimming" parameter window

### Parameter"Reaction on 'OFF' operation'

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

### Only switch object send value 0

### Brightness objects send value 0

Parameter"Reaction on 'ON' operation

This parameter is for setting whether send switch telegram 1 when the switch button is operated on, or whether send colour brightness telegram . Options:

### Only switch object send value 1



#### Preset colour brightness value

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

### ——Parameter"Brightness value"

This parameter is for setting the visible preset value of brightness.Options: 0...100% Parameter<sup>\*\*</sup>Colour temperature control type<sup>#\*</sup>

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

Normal(with 2byte absolute value) Normal(with 1byte percentage value) Directly(with warm/cool white algorithm)

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

Directly(with warm/cool white algorithm): Directly control, the has been built-in

"Brightness + Colour Temperature" and Warm/cool white brightness, that is 2 objects of 1

byte, which is used for output brightness adjustment to control warm white LED and cool white LED.

### ——Parameter"Status feedback object"

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

### **Brightness+Colour Temperature**

### Warm/cool white brightness

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

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

Parameter``Min. colour temperature [2000. 7000]K''



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

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

temperature.

Options: 2000..7000

### 5.11.2.5.RGB/RGBW/RGBCW/ dimming

1.1.1 KNX Smart Touch S10 > KNX	Channel > Channel 1	
💙 KNX Secure	Function	RGB dimming
+ 📑 General	Function description (max 18 char.)	
Home page	Function icon	RGB light 👻
+ 🔝 Display view		
– 📲 KNX Channel		
Channel 1	· · · · · · · · · · · · · · · · · · ·	
+ 🖻 KNX Scene	Device online status reference by	Always online
1 Internal sensor measureme	Reaction on 'OFF' operation	Only switch object send value 0
Human Centric Lighting(H	N	Only switch objects send value 1
+ 💃 HVAC controller	Reaction on 'ON' operation	Preset colour brightness value
+ 🚯 Schedule function	Object datatype	1x3byte 3x1byte

RGB dimming



1.1.1 KNX Smart Touch S10 > KNX	Channel > Channel 1		
💙 KNX Secure	Function	RGBW dimming	
+ 📑 General	Function description (max 18 char.) Function icon Icon preview		
Home page		RGB light	
+ III Display view			
- ⊟ KNX Channel			
Channel 1			
+ 🖻 KNX Scene	Device online status reference by	Always online	
1 Internal sensor measureme	Reaction on 'OFF' operation	Only switch object send value 0	
Human Centric Lighting(H		Brightness objects send value 0	
+ 💃 HVAC controller	Reaction on 'ON' operation	<ul> <li>Only switch object send value 1</li> <li>Preset colour brightness value</li> </ul>	
+ 🔇 Schedule function	Object datatype	O 1x6byte ○ 4x1byte	
	RGBW dimming	3	



1.1.1 KNX Smart Touch S10 > KNX	Channel > Channel 1		
VKNX Secure	Function	RGBCW dimming	•
+ 📑 General	Function description (max 18 char.)		
Home page	Function icon	RGB light	•
+ 🔝 Display view		-	
- 🔐 KNX Channel			
Channel 1	-		
+ 🖻 KNX Scene	Device online status reference by	Always online	•
1 Internal sensor measureme	Reaction on 'OFF' operation	Only switch object send value 0	
🔅 Human Centric Lighting(H		Brightness objects send value 0	
+ 💃 HVAC controller	Reaction on 'ON' operation	Preset colour brightness value	
+ 🔇 Schedule function	RGB object datatype	1x3byte 3x1byte	
+ Alarm function	Colour temperature control type	Normal(with 2byte absolute value)	•
	Min. colour temperature [20007000]	2700	🖡 K
+ 🎢 Input function	Max. colour temperature [20007000]	6500	С, К

#### **RGBCW** dimming

#### Fig.5.11.2(5) "RGB/RGBW/RGBCW dimming" parameter window

# Parameter Reaction on OFF operation

This parameter is for setting whether send switch telegram 0 when the switch button is

operated off, or whether send brightness telegram 0. Options:

#### Only switch object send value 0

#### Brightness objects send value 0

### Parameter"Reaction on 'ON' operation'

This parameter is for setting whether send switch telegram 1 when the switch button is operated on, or whether send colour brightness telegram . Options:



Only switch object send value 1

### Preset colour brightness value

The following parameters are visible when "Preset colour brightness value" is selected.

### ——Parameter"RGB value"

This parameter is for setting the visible preset value of

### RGB.Options:000000 ....#FFFFFF

### -----Parameter"White brightness value"

This parameter is for setting the visible preset value of white brightness.Options: 0..255

### -----Parameter"Brightness value"

This parameter is for setting the visible preset value of brightness.Options: 0..255

Parameter"Object datatype"/"RGB object datatype '

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

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

Suitable for RGB/RGBCW type:

### 1x3byte

### 3x1byte

Suitable for RGBW type:

1x6byte

### 4x1byte

# Parameters as follow are visible when "RGBCW dimming" is selected, used for

### setting colour temperature dimming.

### Parameter<sup>®</sup>Colour temperature control type

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


# Normal(with 2byte absolute value) Normal(with 1byte percentage value) Directly(with warm/cool white algorithm)

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

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

# -Parameter "Status feedback object"

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

# **Brightness+Colour Temperature**

# Warm/cool white brightness

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

Warm/cool white brightness: Feedback of Warm/cool white brightness is to

communicate with actuator.

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

Parameter`Max. colour temperature [2000..7000]K'

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

temperature.

Options: 2000..7000



# 5.11.2.6.Curtain and blind control

		Period for request device online status	10	t min
+	😤 KNX Scene	Device online status reference by	Individual	•
	Channel 1			
-	礐 KNX Channel			
+	Display view			
	Home page	lcon preview		
		Function icon	Curtain	•
+	<b>∓</b> General	Function description (max 18 char.)		
	💗 KNX Secure	Function	Curtain step/move	•

#### Curtain step/move

VINX Secure	Function	Roller blind step/move	•
+ 🛱 General	Function description (max 18 char.)		
Home page	Function icon	Roller blind	•
+ 🔝 Display view	Icon preview		
岩 KNX Channel			
Channel 1			
Channel 1 + 🖻 KNX Scene	Device online status reference by	Individual	-

Roller blind step/move



#### 1.1.1 KNX Smart Touch S10 > KNX Channel > Channel 1-... KNX Secure Function Curtain position • Function description (max 18 char.) 📑 General ÷ Curtain Function icon \Lambda Home page Icon preview Display view ₽ KNX Channel Channel 1-... Device online status reference by Individual • 🖻 KNX Scene Period for request device online status ‡ min 10 [1...255] Internal sensor measureme...

#### Curtain position

#### 1.1.1 KNX Smart Touch S10 > KNX Channel > Channel 1-... KNX Secure Function Roller blind position • Function description (max 18 char.) \Xi General Function icon Roller blind Home page Icon preview Display view ₽ KNX Channel Channel 1-... Device online status reference by Individual • 🖻 KNX Scene Period for request device online status 🗘 min 10 [1...255] Internal sensor measureme...

#### Roller blind position



I.1.1 KNX Smart Touch S10 > KNX	(Channel > Channel 1		
🔹 KNX Secure	Function	Venetian blind position and slat	¥
+ 茸 General	Function description (max 18 char.) Function icon Icon preview		
Home page		Venetian blind	•
+ 📰 Display view			
– 🔐 KNX Channel			
Channel 1			
+ 🛃 KNX Scene	Device online status reference by Period for request device online status [1255]	Individual	•
Internal sensor measureme		10	‡ mir

Venetian blind position and slat

#### Fig.5.11.2(6)"Curtain and blind control"parameter window

Parameter"Device online status reference by"

This parameter is for setting the reference type for sending read requests to KNX

devices on the bus.Options:

Individual Common 1 ... Common 10 **Always online** 

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

#### -Parameter" Period for request device online status [1..255] min"

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

# 5.11.2.7.Air conditioner control

S10

/S° K-BUS°

🔍 KNX Secure	Function	Air conditioner		•
- 🛱 General	Function description (max 18 char.)			
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Air conditioner 1		•
Summer time setting Proximity setting Extension Sub Panel setting	Device online status reference by Period for request device online status [1255]	Individual	*	• min
Advanced setting <ul> <li>Home page</li> </ul>	Interface display temperature	<ul> <li>Setpoint temperature</li> <li>Actual temperature</li> </ul>		
+ Display view	Room temperature reference from Period for request external sensor [0255]	Internal sensor O External sensor	\$	min
+ Channel 1	Object datatype of setpoint	Value in °C (DPT_5.010) Float value in °C (DPT_9.001)		
+ 😤 KNX Scene	Setpoint temperature adjustment step	1K		
1 Internal temperature meas	Min. setpoint temperature [1632] Max. setpoint temperature [1632]	16 32	•	°C °C
- 💃 HVAC controller	Timer	<ul> <li>Image: A start of the start of</li></ul>		-
Controller 1	Protection setting			
+ 🕚 Weekly timer function	ON/OFF protection Setpoint protection Control mode protection Fan protection			

Air conditioner(External sensor)







· · · · · · · · · · · · · · · · · · ·			
	Function	Air conditioner(with swing)	•
General setting	Function description (max 18 char.)	Air conditioner 2	*
Security setting	Icon preview		
Night mode setting			
Coordinates location setting			
Summer time setting			
Proximity setting	Device online status reference by	Individual	•
Extension Sub Panel setting Advanced setting	Period for request device online status [1255]	10	‡ min
Home page	Interface display temperature	<ul> <li>Setpoint temperature</li> <li>Actual temperature</li> </ul>	
Display view	Room temperature reference from	O Internal sensor O External sensor	
₽ KNX Channel		Value in °C (DPT 5.010)	
Channel 1	Object datatype of setpoint	Float value in °C (DPT_9.001)	
	Setpoint temperature adjustment step	1K	
🖆 KNX Scene	Min. setpoint temperature [1632]	16	▼ °C
1 Internal temperature meas	Max. setpoint temperature [1632]	32	<b>▼</b> °C
₩ HVAC controller	Timer	×	5
- Controller 1	Protection setting		
Setpoint	ON/OFF protection		
Heating/Cooling control	Setpoint protection		
Fan auto.control	Control mode protection		
Ö Human Centric Lighting/H	Vanes swing protection		
A numan centric Lighting(H	10000		

Air conditioner(with swing)

Fig.5.11.2(7) "Air conditioner control" parameter window



#### Parameter"Interface display temperature'

This parameter is for setting the interface display temperature under the normal status. Options:

#### Setpoint temperature

#### Actual temperature

Note: If display room temperature, only switch to display setpoint

temperature when firstly operate temperature increase/decrease button, and not

#### send telegram.

#### ——Parameter"Room temperature reference from"

Setting the resource of the air condition function temperature reference. Options:

#### Internal sensor

#### External sensor

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

This parameter is visible when "External sensor" is selected. Set the time period for read

request external temperature sensor. Options: 0..255

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

Parameter"Object datatype of setpoint"

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

### Value in °C (DPT\_5.010)

### Float value in °C (DPT\_9.001)

Parameter"Setpoint temperature adjustment step"

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

0.5K



#### 1K

When select "Value in °C (DPT\_5.010)", only 1K

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

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

16°C			
17°C			
32°C			

#### Parameter "Timer'

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

#### Note: The bus only disable timer function temporarily.

#### Protection setting

Parameter" ON/OFF protection" Parameter "Setpoint protection" Parameter" Mode protection" Parameter" Fan protection" Parameter" Vanes swing protection

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



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

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



# 5.11.2.8.Room temperature unit control

💙 KNX Secure	Function	Room temperature unit	•
- 🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Heating/Cooling	•
Summer time setting Proximity setting Extension Sub Panel setting	Device online status reference by Period for request device online status [1255]	Individual	• min
Advanced setting	Controller from	O Local ○ Bus	
Home page	Interface display temperature	Setpoint temperature	
+ 🔳 Display view	Room temperature reference from	Actual temperature     Internal sensor     External sensor	
- 8₽ KNX Channel	Period for request external sensor [0255]	10 ‡	min
Channel 1			
+ 📸 KNX Scene	Object datatype of setpoint adjustment Setpoint temperature adjustment step	○ 1bit (DPT_1.007) ○ 2byte (DPT_9.001) ○ 0.5K ○ 1K	
1 Internal temperature meas	Min. setpoint temperature [537]	10	
- 💃 HVAC controller	Max. setpoint temperature [537]	32	
Controller 1	Control mode	Heating	¥
+ 🕚 Weekly timer function	Timer		
	Protection setting Setpoint protection		

Room temperature unit(External sensor)





VNX Secure	Function	Room temperature unit(with on/off)	*
🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Heating/Cooling	•
Summer time setting Proximity setting	Device online status reference by	Indivídual	•
Extension Sub Panel setting	[1255]	10 ‡	min
Advanced setting	Controller from	O Local O Bus	
🗭 Home page	Interface dicalay temperature	Setpoint temperature	
Display view	Interface display temperature	Actual temperature	
	Room temperature reference from	🔵 Internal sensor 🔘 External sensor	
₽₽ KNX Channel	Period for request external sensor	10 ‡	min
Channel 1	[023]		-
😤 KNX Scene	Power on/off after download	OFF O ON	•
Internal temperature meas		belore voltage tallule	
₩ HVAC controller	Object datatype of setpoint adjustment	O 1bit (DPT_1.007) O 2byte (DPT_9.001)	
	Setpoint temperature adjustment step	0 0.5K 1K	
Controller 1	Min. setpoint temperature [537]	10 .	• °C
🗴 Weekly timer function	Max. setpoint temperature [537]	32	• •C
	Control mode	Heating	•
	Timer		
₩ HVAC controller	Protection setting ON/OFF protection		
Controllor 1	Setpoint protection		

Room temperature unit(with on/off)-External sensor





VIX Secure	Function	Room temperature unit(with operation mode)	•
- 🛱 General	Function description (max 18 char.)		
General setting	Function icon Icon preview	Heating/Cooling	•
Security setting		1	
Night mode setting			
Coordinates location setting			
Summer time setting	0	1	
Proximity setting	Device online status reference by	Individual	*
Extension Sub Panel setting	Period for request device online status [1255]	10 ‡	min
Advanced setting	Controller from	O Local O Bus	
Home page	Interface display temperature	Setpoint temperature	
+ 🔳 Display view	Room temperature reference from	Actual temperature     Internal sensor     External sensor	
- BE KNX Channel	Period for request external sensor [0255]	10 ‡	min
Channel 1			
+ S VNV Crana	Object datatype of setpoint adjustment	O 1bit (DPT_1.007) O 2byte (DPT_9.001)	
	Setpoint temperature adjustment step	© 0.5K () 1K	
1 Internal temperature meas	Min. setpoint temperature [537]	10 .	• °C
- 💃 HVAC controller	Max. setpoint temperature [537]	32	• °C
Controller 1	Control mode	Heating	•
+ 🗴 Weekly timer function	Timer		
	Protection setting		
	Setpoint protection		
	Operation mode protection	1	

Room temperature unit(with operation mode)-External sensor





VNX Secure	Function	Room temperature unit(with on/off & operation mode)	•
茸 General	Function description (max 18 char.)		_
General setting	Function icon	Heating/Cooling	٠
Security setting	Icon preview	N/	
Night mode setting			
Coordinates location setting			
Summer time setting			
Proximity setting	Device online status reference by	Individual	•
Extension Sub Panel setting	Period for request device online status	10	min
Advanced setting	[1255]		
Home page	Controller from	O Local O Bus	
	Interface display temperature	Setpoint temperature	
Display view	interface display temperature	Actual temperature	
8₽ KNX Channel	Room temperature reference from	O Internal sensor O External sensor	
Channel 1	Period for request external sensor [0255]	10	min
😤 KNX Scene	Power on/off after download	OFF ON	
1 Internal temperature meas	Power on/off after voltage recovery	Before voltage failure	•
₩ HVAC controller	Object datatype of setpoint adjustment	O 1bit (DPT_1.007) O 2byte (DPT_9.001)	
Controller 1	Setpoint temperature adjustment step	◎ 0.5K ○ 1K	
<b>A</b>	Min. setpoint temperature [537]	10	• °C
Weekly timer function	Max. setpoint temperature [537]	32	• °C
	Control mode	Heating	•
	Timer		
乳 Internal temperature me	Protection setting		
-	ON/OFF protection		
1 HVAC controller	Setpoint protection		
Controller 1-	Operation mode protection	>	
controller r			

Room temperature unit(with on/off & operation mode )-External sensor





<ul> <li>KNX Secure</li> <li>General</li> <li>General setting</li> <li>Security setting</li> <li>Night mode setting</li> <li>Coordinates location setting</li> </ul>	Function Function description (max 18 char.) Function icon Icon preview	Room temperature unit(with operation mode & fan speed) Heating/Cooling	•
Summer time setting Proximity setting Extension Sub Panel setting Advanced setting	Device online status reference by Period for request device online status [1255]	Individual	• min
<ul> <li>Home page</li> <li>Display view</li> </ul>	Controller from Interface display temperature	<ul> <li>Local Bus</li> <li>Setpoint temperature</li> <li>Actual temperature</li> </ul>	
- B⊒ KNX Channel + Channel 1	Room temperature reference from Period for request external sensor [0255]	Internal sensor O External sensor	min
KNX Scene Internal temperature meas	Object datatype of setpoint adjustment Setpoint temperature adjustment step	<ul> <li>1bit (DPT_1.007)</li> <li>2byte (DPT_9.001)</li> <li>0.5K</li> <li>1K</li> </ul>	
HVAC controller	Min. setpoint temperature [537] Max. setpoint temperature [537]	10 32	<ul><li>• ℃</li></ul>
Controller 1  Weekly timer function	Control mode Timer	Heating	•
₩ HVAC controller	Protection setting		
Controller 1	Setpoint protection Operation mode protection		

Room temperature unit(with operation mode & fan speed)-External sensor





VKNX Secure	Function	Room temperature unit(with on/off & operation mode & fan speed)
- 🛱 General	Function description (max 18 char.)	
General setting	Function icon	Heating/Cooling
Security setting	Icon preview	
Night mode setting		1
Coordinates location setting		7
Summer time setting		
Proximity setting	Device online status reference by	Individual
Extension Sub Panel setting	Period for request device online status	10 *
Advanced setting	[1255]	iu + mi
A Home page	Controller from	O Local O Bus
	Interface display temperature	Setpoint temperature
+ 🔳 Display view		Actual temperature
- 🖉 KNX Channel	Room temperature reference from	O Internal sensor O External sensor
+ Channel 1	<ul> <li>Period for request external sensor [0255]</li> </ul>	10 🌲 mi
+ 😤 KNX Scene	Power on/off after download	OFF ON
1 Internal temperature meas	Power on/off after voltage recovery	Before voltage failure
– 🎉 HVAC controller	Object datatype of setpoint adjustment	O 1bit (DPT_1.007) O 2byte (DPT_9.001)
Controller 1	Setpoint temperature adjustment step	◎ 0.5K ○ 1K
•	Min. setpoint temperature [537]	10 👻 °
+ Weekly timer function	Max. setpoint temperature [537]	32 👻 ి(
	Control mode	Heating
	Timer	
🖌 🗃 KNX Scene		
1 Internal temperature meas	ON/OFF protection	
12 100	Setpoint protection	
- K HVAC controller	Operation mode protection	
Controller 1-	Fan protection	

Room temperature unit(with on/off & operation mode & fan speed)-External sensor

Fig.5.11.2(8) "Room temperature unit control" parameter window





Summer time setting	Object datatype of 1byte fan speed	<ul> <li>Fan stage (DPT_5.100)</li> <li>Percentage (DPT_5.001)</li> </ul>		
Proximity setting	Output value for fan speed			
Extension Sub Panel setting	Output value for fan speed low	33	÷	
Advanced setting	Output value for fan speed medium	67	+	
- Home page	Output value for fan speed high	100	Ŷ	
Display view	Status feedback for fan speed Status value for fan speed low	33	\$	Ĩ
₽₽ KNX Channel	Status value for fan speed medium	67	\$	
- Channel 1-	Status value for fan speed high	100	÷	
Channel P.J.	Automatic operation function			

# Fig.5.11.2(9) "Fan" parameter window

# Parameter"Controller from"

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

> Local Bus

# Parameter"Interface display temperature"

This parameter is for setting the interface display temperature under the normal status. Options:

#### Setpoint temperature

#### Actual temperature

Note: If display room temperature, only switch to display setpoint temperature when firstly operate temperature increase/decrease button, and not send telegram.

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#### —Parameter"Room temperature reference from"

This parameter is visible when "Actual temperature" is selected.Set the resource of the temperature reference. Options:

Internal sensor

#### External sensor

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

This parameter is visible when "External sensor" is selected. Set the time period for read

request external temperature sensor. Options: 0..255

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

Parameter"Object datatype of setpoint adjustment"

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

### 1bit (DPT\_1.007)

### 2byte (DPT\_9.001)

Parameter"Setpoint temperature adjustment step"

This parameter is visible when "2byte (DPT\_9.001 " is selected. Set the step value of setpoint temperature. Options:

#### 0.5K

### 1K

#### arameter"Min/Max. setpoint temperature [5..37] C"

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

Options: 5...37

Parameter"Control mode



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

Heating

Cooling

Heating and Cooling

Parameter "Timer

This parameter is for setting whether to enable timer function, display corresponding

object when enable. User can set the time on the screen.

### Note: The bus only disable timer function temporarily.

#### Protection setting

Parameter "ON/OFF protection"

Parameter"Setpoint protection

Parameter"Control mode protection

Parameter "Operation mode protection"

Parameter"Fan protection'

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

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

#### Note: The display conditions for this part of the parameter

1. The parameters of ON/OFF protection will only be displayed for temperature control types with ON/OFF.

2. Control mode protection is visible when Heating and Cooling is selected;

3. Temperature control type with operation mode will only show the parameters of operation mode protection.

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4. Temperature control type with fan speed will only show the parameters of Fan protection.

Parameters as follow are visible when "Room temperature unit(with on/off)" or

"Room temperature unit(with on/off & operation mode)" or "Room

temperature unit(with on/off & operation mode & fan speed)" is selected.

Parameter``Power on/off after download'

K-BUS®

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

Options:

OFF

ON

Parameter"Power on/off after voltage recovery

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

OFF 关 ON 开

#### Before voltage failure

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

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

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

#### Parameters as follow are visible when "Room temperature unit(with operation

#### mode & fan speed)" is selected. Shown as Fig. 5.11.2.1(8)

Parameter"Object datatype of 1byte fan speed"

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

#### Fan stage (DPT 5.100)



## Percentage (DPT 5.001)

K-BUS<sup>®</sup>

#### Output value for fan speed

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

These three parameters are for setting the value sent for each fan speed switchover,

support 3 fan speeds low, medium, high. Options according to fan object datatype:

#### 0..255/0..100

#### Status feedback for fan speed

Parameter``Status value for fan speed low/medium/high''.

These parameters are for setting the status feedback value for each fan speed, support 3 fan speeds low, medium, high. Device updates display according to feedback value.

Options according to fan object datatype: 0..255/0..100

Parameter"Automatic operation function"

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



# 5.11.2.9.Ventilation system control

Summer time setting	Function	Ventilation system	•
Proximity setting	Function description (max 18 char.)		
Extension Sub Panel setting	Function icon	Ventilation	•
Advanced setting	Icon preview		
Home page		(63)	
Display view		C	
B₽ KNX Channel	l		
	Device online status reference by	Individual	•
Channel 1	Period for request device online status	10	‡ <mark>min</mark>
<ul> <li>KNX Scene</li> </ul>			
1 Internal temperature meas	Power on/off after download	OFF O ON	
a 111.0	Power on/off after voltage recovery	Before voltage failure	•
K HVAC controller	Default fan speed after ventilation on	Low	•
- Controller 1			
Setopint	Object datatype of 1byte fan speed	Fan stage (DPT_5.100)	
Serpoint		Percentage (DPT_5.001)	
Heating/Cooling control	Output value for fan speed		
Fan auto.control	Output value for fan speed low	1	* *
🔅 Human Centric Lighting(H	Output value for fan speed medium	2	*
	Output value for fan speed high	3	÷
•	Status feedback for fan speed		
Alarm function	Status value for fan speed low	1	÷
Alarm 1	Status value for fan speed medium	2	\$
Alarm 2	Status value for fan speed high	3	÷
Alarm 3	Heat recovery function	~	
Alarm 4	Filter timer counter	~	
Alarm E-	Evaluation time [100_10000]	1000	* h
	Evaluation time [100m10000]		- III

Ventilation system





💙 KNX Secure	Function	Ventilation system(with auto fan speed)		•
- 🛱 General	Function description (max 18 char.)			
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Ventilation		•
Summer time setting Proximity setting	Device online status reference by	Always online		•
Extension Sub Panel setting	Power on/off after download	OFF O ON		
Advanced setting	Power on/off after voltage recovery	Before voltage failure		•
Home page	Default fan speed after ventilation on	Low		¥
+  Display view	Object datatype of 1byte fan speed	<ul> <li>Fan stage (DPT_5.100)</li> <li>Percentage (DPT_5.001)</li> </ul>		
	Output value for fan speed			
Channel 1	Output value for fan speed low	33	+	%
+ 😤 KNX Scene	Output value for fan speed medium	67	+	%
1 Internal temperature meas	Output value for fan speed high	100	× v	%
- 💃 HVAC controller	Status feedback for fan speed Status value for fan speed low	33	\$	96
Controller 1	Status value for fan speed medium	67	\$	%
+ 🗴 Weekly timer function	Status value for fan speed high	100	*	%
	Heat recovery function Filter timer counter	> >		
	Evaluation time [10010000]	1000	÷	h
	Air Quality value reference from	PM2.5		•
	Object datatype of PM2.5	<ul> <li>Value in ug/m3(DPT_7.001)</li> <li>Float value in ug/m3(DPT_9.030)</li> </ul>		

Ventilation system(with auto fan speed)

# Fig.5.11.2(10) "Ventilation system control" parameter window

Parameter"Power on/off after download"



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

OFF

ON

Parameter Power on/off after voltage recovery

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

> OFF 关 开 ON

# Before voltage failure

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

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

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

when voltage recovery.

arameter"Default fan speed after ventilation on'

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

Low

Medium

Hiah

Last status

Parameter "Object datatype of 1 byte fan speed"

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

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

Output value for fan speed



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

These three parameters are for setting the value sent for each fan speed switchover,

support 3 fan speeds low, medium, high. Options according to fan object datatype:

## 0..255/0..100

#### Status feedback for fan speed

Parameter Status value for fan speed low/medium/high

These parameters are for setting the status feedback value for each fan speed, support

3 fan speeds low, medium, high. Device updates display according to feedback value.

Options according to fan object datatype: 0..255/0..100

Parameter"Heat recovery function

This parameter is for setting whether to enable heat recovery function, display

corresponding object when enable.

### Parameter"Filter timer counter

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

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

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

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

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

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

arameter"Air Quality value reference from



This parameter sets the sensor value that is displayed during automatic

operation.Options

PM2.5

**CO2** 

VOC

Parameter`` Object datatype of PM2.5"

This parameter is for setting the data type of PM2.5. Options:

Value in ug/m3(DPT\_7.001)

Float value in ug/m3(DPT\_9.030)

Parameter" Object datatype of VOC"

This parameter is for setting the data type of VOC. Options:

Value in ug/m3(DPT\_7.001)

Float value in ug/m3(DPT\_9.030)

Parameter" Object datatype of CO2

This parameter is for setting the data type of CO2. Options:

Value in ppm(DPT\_7.001)

Float value in ppm(DPT\_9.008)



# 5.11.2.10.Audio control

KNX Secure	Function	Audio control	•
- 🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Music 1	•
Summer time setting Proximity setting	Device online status reference by	Always online	•
Extension Sub Panel setting	Number of object for play/pause control	© 1 ◯ 2	
Advanced setting	Number of object for next/previous track control	O 1 O 2	
Home page		Percentage (DPT 5 001)	
+ 🔳 Display view	Object datatype of volume	Percentage (DPT_5.004)	
- 😤 KNX Channel	Max. volume value [10100]	100	¢ 9
~	Mute	~	

Audio control

VNX Secure	Function	Audio control(with on/off)	*
- 🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Music 1	
Summer time setting Proximity setting	Device online status reference by	Common 2	*
Extension Sub Panel setting	Power on/off status after download		
Advanced setting	Power on/off status after voltage recovery	Before voltage failure	•
Home page	Number of object for play/pause control	◎ 1 ○ 2	
+ 📰 Display view	Number of object for next/previous track control	0 1 0 2	
- 🖉 KNX Channel	Mute		

Audio control(with on/off)







VIX Secure	Function	Audio control(play mode)	•
📑 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Music 1	·
Summer time setting Proximity setting	Device online status reference by	Common 2	
Extension Sub Panel setting	Number of object for play/pause contro	l 🔘 1 🔵 2	
Advanced setting	Number of object for next/previous trac	<sup>k</sup> 🔘 1 🔵 2	
Home page	Mute		
Display view			
8₽ KNX Channel	Play mode setting Play in single cycle mode	<b>v</b>	
Channel 1	Output value for play in single cycle	1	\$
Channel 2	Status value for play in single cycle	1	\$
Channel 3	Play in order mode	~	
Channel 4	Output value for play in order	2	÷
Channel 5-	Status value for play in order	2	÷
	Play in random mode	$\checkmark$	
Channel b	Output value for play in random	3	÷
😤 KNX Scene	Status value for play in random	3	\$

Audio control(play mode)







KNX Secure	Function	Audio control(track information)	•
茸 General	Function description (max 18 char.)		
General setting Security setting	Function icon Icon preview	Music 1	•
Night mode setting Coordinates location setting			
Summer time setting Proximity setting	Device online status reference by	Common 2	•
Extension Sub Panel setting Advanced setting	Number of object for play/pause control Number of object for next/previous track	<ul> <li>1 2</li> <li>1 2</li> </ul>	
Home page	control	Descentage (DDT 5 001)	
Display view	Object datatype of volume	Percentage (DPT_5.004)	
8 KNX Channel	Max. volume value [10100]	100	÷ %
	wiute		

#### Audio control(track information)

VNX Secure	Function	Audio control(track information & playlist)	•
- 🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	Music 1	•
Summer time setting Proximity setting	Device online status reference by	Common 2	•
Extension Sub Panel setting	Number of object for play/pause control	© 1 ◯ 2	
Advanced setting	Number of object for next/previous track control	◎ 1 ○ 2	
Home page		Percentage (DPT 5 001)	
+ 🔳 Display view	Object datatype of volume	Percentage (DPT_5.004)	
- <i>B</i> ₽ KNX Channel	Max. volume value [10100]	100	÷ 9
	Mute		

Audio control(track information+playlist)

# Fig.5.11.2(11) "Audio control" parameter window

Parameter" Number of object for play/pause control"



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



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

> 1 2

# arameter``Mute'

This parameter is visible when 1 bit is selected. Set whether to enable mute function.

# Parameters as follow are visible when "Audio control(with on/off)" is selected.

Parameter" Power on/off status after download"

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

OFF ON arameter" Power on/off status after voltage recovery'

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

OFF

ON

#### Before voltage failure

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

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



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

# Parameters as follow are visible when "Audio control/Audio control(track

### information)/Audio control(track information+playlist)" is selected.

Parameter" Object datatype of volume"

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

Percentage (DPT\_5.001)

Percentage (DPT\_5.004)

arameter" Max. volume value [10..100]%'

This parameter is for setting the maximum volume value. Options: **10..100** 

# Parameters as follow are visible when "Audio control(play mode)" is selected.

#### Play mode setting

Parameter" Play in single cycle mode'

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

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

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

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

This parameter is for setting the status value for play in single cycle. Device will update

the play mode displayed on the screen according to the feedback value. Options: 0..255

Parameter" Play in order mode

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

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### —Parameter"Output value for play in order"

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

#### —Parameter"Status value for play in order"

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

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

#### —Parameter"Output value for play in random"

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

#### —Parameter"Status value for play in random"

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

# 5.11.2.11. Energy metering value display

S10

Parameter window "Energy Metering display" as shown as Fig.5.11.2(12), for setting the function of energy metering display, current, voltage, power and energy can be set to display.

V KNX Secure	Function	Energy metering(power & energy)		•
茸 General	Function description (max 18 char.)			
General setting	Function icon Icon preview	Energy		•
Security setting				
Night mode setting				
Coordinates location setting				
Summer time setting				
Summer time setting				
Proximity setting	Device online status reference by	Individual		•
Proximity setting Extension Sub Panel setting	Device online status reference by Period for request device online status [1255]	Individual	* *	• min
Proximity setting Extension Sub Panel setting Advanced setting	Device online status reference by Period for request device online status [1255]	Individual 10 O Float value in kW (DPT 9.024)	¢	• min
Proximity setting Extension Sub Panel setting Advanced setting	Device online status reference by Period for request device online status [1255] Object datatype of power	Individual 10 © Float value in kW (DPT 9.024) © Float value in W (DPT 14.056)	÷	• min
Proximity setting Extension Sub Panel setting Advanced setting Home page	Device online status reference by Period for request device online status [1255] Object datatype of power	Individual 10 © Float value in kW (DPT 9.024) Float value in W (DPT 14.056) Value in Wh (DPT 13.010)	¢	• ] min
Proximity setting Extension Sub Panel setting Advanced setting Home page E Display view	Device online status reference by Period for request device online status [1255] Object datatype of power Object datatype of energy	Individual 10 © Float value in kW (DPT 9.024) Float value in W (DPT 14.056) Value in Wh (DPT 13.010) © Value in kWh (DPT 13.013)	*	• min

Energy metering(power & energy)





KNX Secure	Function	Energy metering(power & energy & current)	•
🛱 General	Function description (max 18 char.)		
🗎 Home page	Function icon	Energy	•
Display view		(m)	
8₽ KNX Channel			
Channel 1			
ci 13	Device online status reference by	Common 2	•
Channel 2			
Channel 3	Object datatype of current	Float value in mA (DPT 9.021)	•
Channel 2 Channel 3 Channel 4	Object datatype of current Object datatype of power	Float value in mA (DPT 9.021) Float value in kW (DPT 9.024) Float value in W (DPT 14.056)	•
Channel 2 Channel 3 Channel 4 Channel 5 Channel 6	Object datatype of current Object datatype of power Object datatype of energy	Float value in mA (DPT 9.021)  Float value in kW (DPT 9.024) Float value in W (DPT 14.056) Value in Wh (DPT 13.010) Value in kWh (DPT 13.013)	•

#### Energy metering(power & energy & current)

KNX Secure	Function	Energy metering(power & energy & current & voltage)	•
+ 🛱 General	Function description (max 18 char.)		
Home page	Function icon	Energy	•
+ 🔝 Display view	Icon preview		
- BE KNX Channel		<u>~</u>	
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 3	The second s		
Channel 4	Object datatype of current	Float value in mA (DPT 9.021)	•
Channel 5	Object datatype of voltage	Float value in mV (DPT 9.020)	
Channel 6-	object datatype of voltage	Float value in V (DPT 14.027)	
Channel 04	Object datatype of power	Float value in kW (DPT 9.024)	
+ 🗂 KNX Scene		Float value in W (DPT 14.056)	
	Object datature of energy	Value in Wh (DPT 13.010)	
U Internal temperature meas	object datatype of energy	Value in kWh (DPT 13.013)	
	Period for request meter value [0255]	0	‡ min

Energy metering(power & energy & current & voltage)

Fig.5.11.2(12) "Energy metering value display" parameter window



#### Parameter" Object datatype of power'

This parameter is for setting the data type of power metering display items. Options:

Float value in kW (DPT 9.024)

Float value in W (DPT 14.056)

Parameter<sup>®</sup> Object datatype of energy

This parameter is for setting the data type of energy metering display items. Options:

Value in Wh (DPT 13.010)

Value in kWh (DPT 13.013)

Parameter`` Period for request meter value [0...255]min'

This parameter is for setting the time period for the request meter value of the device

sent to external metering actuator. Options: 0...255

#### Parameters as follow are visible when "Energy metering(power & energy &

current) or "Energy metering(power & energy & current & voltage)" is selected.

Parameter" Object datatype of current"

This parameter is for setting the data type of current metering display items. Options:

Value in mA (DPT 7.012)

Float value in mA (DPT 9.021)

Float value in A (DPT 14.019)

#### Parameters as follow are visible when"Energy metering(power & energy &

current & voltage)" is selected.

Parameter`` Object datatype of voltage'

This parameter is for setting the data type of voltage metering display items. Options:

Float value in mV (DPT 9.020)



# Float value in V (DPT 14.027)

# 5.11.2.12.Temperature/Humidity sensor

VIX Secure	Function	Temperature sensor	•
+ 🕂 General	Function description (max 18 char.)		
Home page	Function icon	Temperature 1	•
+ 📰 Display view	Interface • 1992/2013	ΞÎ	
- 8 KNX Channel		٩	
Channel 1			
Channel 2	Device online status reference by	Common 2	*
Channel 3 Channel 4	Period for request external sensor [0255]	0	‡ min
Channel 5	Alarm	~	
Channel 6	Threshold value for low temperature alarm [015]	0	<b>▼</b> °C
+ 😤 KNX Scene	Threshold value for high temperature alarm [3045]	45	<b>▼</b> °C

#### Temperature sensor

VNX Secure	Function	Humidity sensor	-
+ 茸 General	Function description (max 18 char.)		
Home page	Function icon Icon preview	Humidity	
+ 🔳 Display view	ADDOUGH ALL ADDOUGHSS	<b>A</b> •	
- B₽ KNX Channel			
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 3 Channel 4	Period for request external sensor [0255]	0	‡ min
Channel 5	Alarm	~	
Channel 6	Threshold value for low humidity alarm [520]	5	\$ %
+ 🗂 KNX Scene	Threshold value for high humidity alarm [7085]	85	÷ %

Humidity sensor

# Fig.5.11.2(13) "Temperature/Humidity sensor" parameter window



#### Parameter" Alarm"

This parameter for setting the whether to enable the alarm function. Applicable to

Temperature sensor, Humidity sensor, VOC, PM2.5 sensor, PM10 sensor, AQI sensor,

CO2 sensor.

Parameter" Threshold for low temperature alarm [0...15]"

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

0°C	
1°C	
15°C	
arameter" Thresh	old for high temperature alarm [3045]"

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

30°C	
31°C	
45°C	

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

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

Options: 5..20
GVS<sup>®</sup> K-BUS<sup>®</sup> KNX/EIB KNX Smart Touch

Parameter" Threshold for high humidity alarm [70…85]%"

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

70..85

71.

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

This parameter is for setting the time period to read external sensor, send read requests by default after bus recovery or finish programming.Options:**0..255** 

### 5.11.2.13 Air quality detected value display

Parameter window "Air Quality display" as shown as Fig.5.11.2(14), for setting the function of air quality display, temperature, humidity, PM2.5, PM10, VOC, CO2, AQI, brightness, wind speed can be set to display.





💙 KNX Secure	Function	PM2.5 sensor	•
• 🗮 General	Function description (max 18 char.)		
General setting Security setting Night mode setting Coordinates location setting	Function icon Icon preview	PM2.5	•
Summer time setting Proximity setting Extension Sub Panel setting	Device online status reference by Period for request device online status [1255]	Individual	↓ min
Advanced setting	Object datatype of PM2.5	Value in ug/m3(DPT_7.001) Float value in ug/m3(DPT_9.030)	1
Display view	Text for unit Period for request external sensor	0	‡ min
· 🔐 KNX Channel	Monitoring level indication		
Channel 1	Alarm	<b>v</b>	
希 KNX Scene	PM2.5 alarm value [100999]	150	ug/m3

PM2.5 sensor





💙 KNX Secure	Function	PM10 sensor	*
<b>≓</b> General	Function description (max 18 char.)		
Home page	Function icon	PM10	•
Direlauviau	Icon preview		
		PM10	
B≌ KNX Channel			
Channel 1		and the second	
Channel 2	Device online status reference by	Common 2	•
Channel 3	Object datatype of PM10	O Value in ug/m3(DPT_7.001)	
Channel 4		Float value in ug/m3(DPT_9.030)	
Channel 5	Text for unit		
Channel 6	[0255]	0	min
😤 KNX Scene	Monitoring level indication		
1 Internal temperature meas	Alarm	✓	
	PM10 alarm value [100999]	150 ‡ ug	g/m3
	PM10 s	sensor	
🖤 KNX Secure	Function	VOC sensor	•
➡ General	Function description (max 18 char.)		
	Function icon	VOC	•
(f) Home page	Icon preview		
Display view			
8₽ KNX Channel		VOC	
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 3		Nelus in us (m2/DBT 7 001)	
Channel 4	Object datatype of VOC	Float value in ug/m3(DPT_9.030)	
Channel 5	Text for unit		
	Period for request external sensor	0	‡ mir
Channel 6	[0255]		
Channel 6 The KNX Scene	[U255] 		

VOC sensor





V KNX Secure	Function	AQI sensor	•
<b>፰</b> General	Function description (max 18 char.)		
Home page	Function icon	AQI	*
Display view			
B KNX Channel		AQI	
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 3	Text for unit		
Channel 3 Channel 4	Text for unit Period for request external sensor 102551	0	‡ mir
Channel 3 Channel 4 Channel 5 Channel 6-	Text for unit Period for request external sensor [0255] Monitoring level indication	0	\$ mir
Channel 3 Channel 4 Channel 5 Channel 6	Text for unit Period for request external sensor [0255] Monitoring level indication	0	‡ mir
Channel 3 Channel 4 Channel 5 Channel 6	Text for unit Period for request external sensor [0255] Monitoring level indication Alarm AQI alarm value [100500]	0	, mir

AQI sensor

💙 KNX Secure	Function	CO2 sensor	•
+ 🗮 General	Function description (max 18 char.)		
Home page	Function icon Icon preview	CO2	•
+ 🔳 Display view			
- BE KNX Channel			
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 3	Object datatype of CO2	Value in ppm(DPT_7.001)	
Channel 5	Text for unit		
Channel 6	Period for request external sensor [0255]	0	‡ min
+ 🗃 KNX Scene	Monitoring level indication		
1 Internal temperature meas	Alarm	<b>v</b>	
	CO2 alarm value [10005000]	2000	‡ ppm

CO2 sensor





🔍 KNX Secure	Function	Wind sensor	•
General	Function description (max 18 char.)		
🔝 Home page	Function icon	Wind speed	•
📰 Display view		ച	
8₽ KNX Channel		P	
Channel 1			
Channel 2	Device online status reference by	Common 2	•
Channel 2		Float value in m/s(DPT 9.005)	-
Channel 5	Object datature of wind speed		
Channel 4	Object datatype of wind speed	Float value in km/h(DPT_9.028)	
Channel 4 Channel 5	Object datatype of wind speed Text for unit	Float value in km/h(DPT_9.028)	
Channel 4 Channel 5 Channel 5	Object datatype of wind speed Text for unit Period for request external sensor [0255]	Float value in km/h(DPT_9.028)	÷ min
Channel 5 Channel 5 Channel 6	Object datatype of wind speed Text for unit Period for request external sensor [0255] Alarm	Float value in km/h(DPT_9.028)	‡ min

Wind sensor

VNX Secure	Function	Brightness sensor	•
+ 🗮 General	Function description (max 18 char.)		
🗎 Home page	Function icon Icon preview	Brightness	•
+ 🔳 Display view	Trainin Clarin ( and the service)		
- 🖅 KNX Channel			
Channel 1	·	•	
Channel 2	Device online status reference by	Common 2	•
Channel 3 Channel 4	Object datatype of brightness(lux)	Value in lux (DPT 7.013) Float value in lux (DPT 9.004)	
Channel 5	Text for unit		
Channel 6	Period for request external sensor [0255]	0	‡ <mark>min</mark>
+ 🖆 KNX Scene			
1 Internal temperature measurem	1		

Brightness sensor

Fig.5.11.2(14) "Air quality detected value display" parameter window



### 教``Text for unit'

This parameter is for setting custom text, the unit is determined by the data point type when the default value is null.

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

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

### Options: 0..255

Parameter`` Monitoring level indication'

This parameter is only visible when the functions "PM2.5 sensor", "PM10 sensor", "AQI

sensor", "CO2 sensor" are selected. Sets whether enable the monitoring level indication, so

that the icon displays different colors according to the change of the value.

For detailed configuration instructions, please refer to chapter 5.11.

### Parameters as follow are visible when "PM2.5 sensor" is selected.

Parameter" Object datatype of PM2.5"

This parameter is for setting the data type of PM2.5. Options:

### Value in ug/m3(DPT\_7.001)

### Float value in ug/m3(DPT\_9.030)

Parameter" Alarm"

This parameter is for setting whether to enable the PM2.5 alarm.

### —Parameter" PM2.5 alarm value [100....999]ug/m3"

This parameter is visible when the previous parameter is enabled. When the PM2.5 higher than PM2.5 threshold, PM2.5 alarm object will send telegram. Options:**100...999** 

### Parameters as follow are visible when "PM10 sensor" is selected.

Parameter" Object datatype of PM10"

This parameter is for setting the data type of PM10. Options:

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### Value in ug/m3 (DPT 7.001)

### Float value in ug/m3 (DPT 9.030)

Parameter" Alarm"

This parameter is for setting whether to enable the PM10 alarm.

### —Parameter" PM10 alarm value [100....999]ug/m3"

This parameter is visible when the previous parameter is enabled. When the PM10

higher than PM10 threshold, PM10 alarm object will send telegram. Options: 100...999

### Parameters as follow are visible when "VOC sensor" is selected.

Parameter' Object datatype of VOC'

This parameter is for setting the data type of VOC. Options:

### Value in ug/m3 (DPT 7.001)

Float value in ug/m3 (DPT 9.030)

Parameter``Alarm''

This parameter is for setting whether to enable the VOC alarm.

### ——Parameter" VOC alarm value [100....900]ug/m3"

This parameter is visible when the previous parameter is enabled. When the VOC higher

than VOC threshold, VOC alarm object will send telegram. Options: 100...900

### Parameters as follow are visible when "AQI sensor" is selected.

Parameter" Alarm'

This parameter is for setting whether to enable the AQI alarm.

### — Parameter" AQI alarm value [100....500]"

This parameter is visible when the previous parameter is enabled. When the AQI higher

than AQI threshold, AQI alarm object will send telegram. Options: 100...500

### Parameters as follow are visible when "CO2 sensor" is selected.

Parameter`` Object datatype of CO2"

This parameter is for setting the data type of CO2. Options:

### Value in ppm(DPT\_7.001)

### Float value in ppm(DPT\_9.008)

Parameter``Alarm''

This parameter is for setting whether to enable the CO2 alarm.

### —Parameter" CO2 alarm value [1000....5000]ppm"

This parameter is visible when the previous parameter is enabled. When the CO2 higher

than CO2 hreshold, CO2 alarm object will send telegram. Options: 1000...5000

### Parameters as follow are visible when "Brightness sensor" is selected.

Parameter" Object datatype of brightness(lux)

This parameter is for setting the data type of brightness. Options:



Value in lux(DPT\_7.013)

Float value in lux(DPT\_9.004)

Parameters as follow are visible when "Wind sensor" is selected.

Parameter" Object datatype of wind speed"

This parameter is for setting the data type of wind speed. Options:

Float value in m/s(DPT\_9.005)

Float value in km/h(DPT\_9.028)

Parameter" Alarm"

This parameter is for setting whether to enable the wind alarm.

—Parameter" Wind alarm value [5..50]m/s"

——Parameter" Wind alarm value [20..150]km/h"

This parameter is visible when the previous parameter is enabled. When the wind higher than wind threshold, wind alarm object will send telegram. Options:**5...50/20...150** 



### 5.11.2.14.I/O sensor

🔍 KNX Secure	Function	I/O sensor	-
☵ General	Function description (max 18 char.)		
Home page	Function icon Icon preview	I/O signal	•
Display view			
₽₽ KNX Channel			
Channel 1			
Channel 2	Device online status reference by	Common 2	¥
Channel 2 Channel 3	Device online status reference by Status text for 1-ON	Common 2 ON	÷
Channel 2 Channel 3 Channel 4	Device online status reference by Status text for 1-ON Status text for 0-OFF	Common 2 ON OFF	• 
Channel 2 Channel 3 Channel 4 Channel 5	Device online status reference by Status text for 1-ON Status text for 0-OFF Period for request external sensor	Common 2 ON OFF	*

Fig.5.11.2(15) "I/O sensor"parameter window

# Parameter" Status text for 1-0N Parameter' Status text for 0-OFF

This parameter is used to customize the display description of status on and off, such as

for displaying occupied/unoccupied, unlock/lock, open/close the window, power on/off, etc.,

with 4 characters in Chinese and 12 characters in English.

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

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

### Options: 0..255



### 5.11.2.15.Value sender

VKNX Secure	Function	Value sender	•
+ 茸 General	Function description (max 18 char.)		
Home page	Function icon Icon preview	General light	•
+ 📰 Display view		_	
- 8₽ KNX Channel			
Channel 1		-	
Channel 2	Device online status reference by	Always online	
Channel 3	Object type of short operation	1bit value[ON/OFF]	*
Channel 4	Reaction on short operation	TOGGLE	•
Channel 5 Channel 6	Object type of long operation	None	•
- 🍯 KNX Scene	lcon display	OFF ON	

Fig.5.11.2(16) "Value sender" parameter window



These two parameters are for setting the sending datatype when the button is in a short

/ long operation.

Options:

# None 1bit value[ON/OFF] 2bit/4bit value 1byte value[0..255] 2byte value[0..65535] **2byte float value** 4byte value[0..4294967295]



# GVS<sup>®</sup> K-BUS<sup>®</sup>

### 4byte float value

### —Parameter"Object datatype"

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

Options:

### 2bit value[0..3]

### 4bit value[0..15]

Parameter"Reaction on short operation'

Parameter"Reaction on long operation'

These two parameters are for setting the sending data value when perform short/long

operation. Value range is according to the datatype selected by previous parameter.

When select 1 bit, options:

OFF

ON

### TOGGLE

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

Value 1

### Alternating Value1/Value2

### — Parameter "Value 1"

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

### 0..15 / 0..255 / 0..65535 / -670760~670760 / 0~4294967295 / -3.40...~3.40...

### —Parameter"Value 2"

This parameter is visible when 2bit/4bit/1byte/2byte/4byte is selected, and "Alternating Value1/Value2". Set the sending value 2 when perform short/long operation. Options are



according to the object datatype: 0~3 / 0..15 / 0..255 / 0..65535 / -670760~670760

# / 0~4294967295 / -3.40...~3.40...

Parameter"Icon display

This parameter is for setting the indication status of the icon on the screen. Options:

OFF ON

# 5.12 Parameter window "KNX Scene"

1.1.1 KNX Sma	art Touch S10 > KNX	Scene							
💙 KNX S	ecure	Number of scenes (max. 30)	1						▲ ▼
+ 📑 Genera	al								=
Home	page			1	3	5	7	9	1
+ 📰 Display	/ view	Layout preview	<b>9</b>						
+ <i>8</i> ₽ KNX C	hannel			2	4	6	8	10	1
+ 🖻 KNX S	cene		U						

Fig.5.12(1) "KNX Scene" parameter window



VNX Secure	Function description (max 18 char.)		
+ 📑 General	Function image	General scene 1	•
Home page	Image preview		
+ 🔝 Display view		1000	
► 📴 KNX Channel		-	
– 皆 KNX Scene			
Scene 1	Scene number [164]	1	* *
1 Internal censor measure	Storage scene via long operation		

### Fig.5.12(2) "Scene X"parameter window

### Parameter" Number of scenes (max.30)"

This parameter is for setting the number of scenes.Options:1...30

Parameter<sup>®</sup> Function description (max 18char.)

This parameter is for setting the description of scene function, up to 18 characters can

be input.

Parameter Function image

This parameter is for setting the background image for the scene function.Options:

**General scene 1 General scene 1** ... Romantic Play Parameter "Image preview"

This parameter displays the scene preview image.

Parameter"Scene number [1..64]



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

Parameter "Storage scene via long operation"

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

# 5.13 Parameter window "Internal sensor measurement"

1.1.1 KNX Smart Touch S10 > Inte	ernal sensor measurement		
💙 KNX Secure	Temperature sensor setting		
+ 芸 General	Temperature calibration	0.0	•
Home page	Send temperature when the result change by	1.0K	
	Cyclically send temperature [0255,0=inactive]	10	‡ m
<ul> <li>Display view</li> </ul>	Send alarm telegram for low/high	No respond	
+ 8₽ KNX Channel			
– 🛃 KNX Scene	Humidity sensor setting		
Scene 1	Humidity calibration	0	•
Internal sensor measure	Send humidity when the result change by [020]	5	* *
Ö Uluman Cantaia Liaktian(I)	Cyclically send humidity [0255,0=inactive]	10	‡ m
• Human Centric Lighung(H	Send alarm telegram for low/high humidity	No respond	
NY LIVAC sector			

### Fig.5.13 "Internal sensor measurement" parameter window

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

**Temperature sensor setting** 



# Parameter"Temperature calibration"

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

> -5K ... 0K ... 5K

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

Parameter"Send temperature when the result change by "

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

	Disable
	0.5K
	1.0K
	10K
?arameter``C	clically send temperature [0255,0=inactive]m

Setting the time for cyclically sending the temperature detection value to the bus.

Options: 0..255

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



Parameter"Send alarm telegram for low/high temperature

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

### No respond

### **Respond after read only**

### **Respond after change**

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

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

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

### -Parameter"Threshold value for low temperature alarm [0..15]° C"

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

> **0°C 1°C** ... 15°C

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

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



Options:

30°C 31°C ... 45°C

### Humidity sensor setting

### Parameter"Humidity calibration'

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

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

10% / 15% / 20%

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

This parameter is for setting when humidity turns to a certain value, whether to enable to send the current humidity value to the bus. Not send when value is 0.Options: **0..20** Parameter Cyclically send humidity [0..255,0=mactive]mm

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

### 0..255

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

Parameter``Send alarm telegram for low/high humidity

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

### No respond

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**Respond after read only** 

### Respond after change

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

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

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

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

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

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

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

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



# **Chapter 6 Description of Communication Object**

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

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



"T" means the object has the transmission function; "U" means the value of the

object can be updated.

# 6.1 "General" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
∎≵ 1	General	In operation			1 bit	С	R	1.55	Т	- 53	switch	Low
∎‡ 2	General	Date			3 bytes	С	-	W	-	-	date	Low
<b>■‡</b>  3	General	Time			3 bytes	С	5	W	5	1.53	time of day	Low
∎‡ 4	General	Screen brightness			1 byte	С	-	W	-		percentage (0100%)	Low

NO.	Name	<b>Object Function</b>	Data	Flag	DPT
			Туре		



1	General	In operation	1bit	C,R,T	1.001 switch							
Т	he commu	nication object is us	sed to perio	dically send	a telegram "1" to the bus to							
indica	ite that the	device is working p	roperly.									
2/3	General	Date/Time	3byte	C,W,T	11.001 date							
					10.001 time of day							
Т	The communication object is used to modify the display date on the screen through the											
bus.												
V	With Cyclic Send enabled, the current time and date can be sent to the bus periodically											
to fac	ilitate sync	hronization of the ti	me and date	e of other d	evices.							
Ν	ote: When	the time is set to au	to update or	n the device	, the bus modification is invalid.							
4	General	Screen	1byte	C,W	5.001							
		brightness			percentage(0100%)							
Т	he commur	nication object is use	ed to modify	the backlig	ht brightness of the screen.							
В	rightness o	utput range: 10~10	0%, when tł	ne telegram	value is less than 10%, directly							
outpu	output 10% brightness.											
The object is visible when the parameter "Screen brightness can be changed via bus" is												
enable.												
N	ote: The l	ous modification is	s invalid w	hen the sc	reen backlight brightness is							

set to adjust automatically on the device side.

Table 6.1 "General" communication object

# 6.2 "Internal sensor" Communication Object

S10

Ν	lumber *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎‡ 5		Internal sensor	Temperature value			2 bytes	С	R	- 75	Т	-	temperature (°C)	Low
∎‡ 6		Internal sensor	Low temperature alarm			1 bit	С	R	-	Т	с. С	alarm	Low
∎₽7		Internal sensor	High temperature alarm			1 bit	С	R	-	Т		alarm	Low
∎‡ 8		Internal sensor	Humidity value			2 bytes	С	R	-	Т	2	humidity (%)	Low
∎‡ 9		Internal sensor	Low humidity alarm			1 bit	С	R	-	Т		alarm	Low
■2 10		Internal sensor	High humidity alarm			1 bit	С	R	-	Т	0	alarm	Low

### Fig.6.2 "Internal sensor" communication object

NO.	Name	<b>Object Function</b>	Data	Flag	DPT					
			Туре							
5	Internal	Temperature value	2byte	C,R,T	9.001 temperature					
	sensor									
Т	he communicati	on object is used for tra	ansmitting th	e temperat	ure value detected by					
the b	uilt-in temperati	ure sensor of the device	to the bus.	Range:-50 <sup>~</sup>	<b>~99.8</b> ℃					
6	Internal	Low temperature	1bit	C,R,T	1.005 alarm					
	sensor	alarm								
The communication object is used to send the low temperature alarm signal to bus,										
when	temperature lo	wer than low threshold	that defined	by paramet	er.					
7	Internal	High temperature	1bit	C,R,T	1.005 alarm					
	sensor	alarm								
т	he communicati	on object is used to se	nd the high t	temperatur	e alarm signal to bus,					
when	temperature high	gher than high threshol	d that define	d by param	eter.					
10	Internal	Humidity value	2byte	C,R,T	9.007 humidity					
	sensor									
т	he communicat	ion object is used to s	send humidit	y measure	ments sent from the					
humi	dity sensor on th	ne bus. Range:0~100%								
11	Internal	Low humidity	1bit	C,R,T	1.005 alarm					





	sensor	alarm									
т	The communication object is used to send the low humidity alarm signal to bus, when										
humidity lower than low threshold that defined by parameter.											
12	Internal	High h	umidity	y 1bit C,R,T 1.005 alarm							
	sensor	alarm									
т	The communication object is used to send the high humidity alarm signal to bus, when										
humidity higher than high threshold that defined by parameter. The threshold is defined by											
the p	arameter.										

Table 6.2 "Internal sensor" communication object

# 6.3 "Logic" Communication Object

# 6.3.1 "AND/OR/XOR" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b> ↓</b>  11	1st Logic	Input a			1 bit	C	-	W	Т	U	boolean	Low
12	1st Logic	Input b			1 bit	C	2	W	Т	U	boolean	Low
13	1st Logic	Input c			1 bit	C	÷	W	Т	U	boolean	Low
14	1st Logic	Input d			1 bit	С	2	W	Т	U	boolean	Low
15	1st Logic	Input e			1 bit	С		W	Т	U	boolean	Low
16	1st Logic	Input f			1 bit	C	-	W	Т	U	boolean	Low
17	1st Logic	Input g			1 bit	C		W	Т	U	boolean	Low
₹ 18	1st Logic	Input h			1 bit	С	2	W	Т	U	boolean	Low
12 19	1st Logic	Logic result			1 bit	С	÷	-	Т	-	boolean	Low

Fig.6.3.1 "AND/OR/XOR" communication object

NO.	Name	Object	Data Type	Flag	DPT							
		Function										
11//18	1st Logic-	Input X	1 bit	C,W,T,U	1.002							
	<b>{{}}</b>				boolean							
The nar	ne in parentheses	changes with the	parameter "De	scription for log	ic function". If							
description is empty, display "1st Logic- $\{\{\}\}$ " by default. The same below.												
The con	The communication object is used to receive the value of logical input Input x.											



19	1st Logic-	Logic result	1 bit	С,Т	1.002						
	<b>{{}}</b>				boolean						
The communication object is used to send the results of logical operation.											

Table 6.3.1 "AND/OR/XOR" communication object

# 6.3.2 "Gate forwarding" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
<b> ↓</b>  11	1st Logic	Gate value select			1 byte	С	-	W	-		scene number	Low
<b>I‡</b>  12	1st Logic	Input A			1 bit	С	2	W	5	22	switch	Low
I <b>≵</b>  13	1st Logic	Input B			1 bit	C	-	W	~	1.4	switch	Low
<b>I</b> ≵ 14	1st Logic	Input C			1 bit	С	2	W	2	728	switch	Low
≠ 15	1st Logic	Input D			1 bit	С	-	W	-		switch	Low
₹ 16	1st Logic	Output A			1 bit	С	2	-	T	72	switch	Low
₽ 17	1st Logic	Output B			1 bit	C	-	-	Т	1.00	switch	Low
≵18	1st Logic	Output C			1 bit	С	2	14	Т	22	switch	Low
19	1st Logic	Output D			1 bit	C	-	-	Т	1.00	switch	Low

### Fig.6.3.2 "Gate forwarding" communication object

NO.	Name	Object	Data Type	Flag	DTP
		Function			
11	1st Logic-	Gate value	1byte	C,W	17.001
	{{}}	select			scene
					number
The cor	nmunication ob	ject is used to se	lect the scene of log	jical gate forw	varding.
12//15	1st Logic-	Input X	1bit/4bit/1byte	C,W	1.001
	<b>{{}}</b>				switch



KNX/EIB KNX Smart Touch

output value is the same as the input value, but one input can be forwarded into one or more

outputs, set by parameters.

Table 6.3.2 "Gate forwarding" communication object

# 6.3.3 "Threshold comparator" Communication Object

**VS**<sup>°</sup> K-BUS<sup>°</sup>

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Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
<b> </b> ¢ 11	1st Logic	Threshold value input			1 byte	С		W	-	U	counter pulses (0255)	Low
19	1st Logic	Logic result			1 bit	С	828	2	Т	120	boolean	Low

Fig.6.3.3 "Threshold comparator" communication object	ct
-------------------------------------------------------	----

NO	Name	<b>Object Function</b>	Data	Flag	DTP
-			Туре		
11	1st Logic-	Threshold value	4bit	C,W,U	3.007 dimming
	{{}}	input	1byte		5.010 counter pulses
			2byte		7.001 pulses
			4byte		12.001 counter pulses



						8.x signed value
						9.x float value
						9.001 temperature
						9.007 humidity
						9.004 lux
Т	he com	nmunicati	on object is used to in	put thresho	ld value.	
19	1st	Logic-	Logic result	1bit	C,T	1.002 boolean
	{{}}	}				
Т	he com	nmunicati	on object is used to se	end the resu	ults of logi	ical operation. That is, the
value	e that s	should be	e sent after the object	t input thre	shold is c	compared with the setting
thres	shold va	alue.				

Table 6.3.3 "Threshold comparator" communication object

### 6.3.4 "Format convert" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■之 11	1st Logic	Input 1bit-bit0			1 bit	С	- 75	W	-	U	boolean	Low
∎‡ 12	1st Logic	Input 1bit-bit1			1 bit	С	-	W	-	U	boolean	Low
■‡ 19	1st Logic	Output 2bit			2 bit	С		-	Т	-	switch control	Low

"2x1bit --> 1x2bit"function: converts two 1bit values to a 2bit value, such as Input

# bit1=1, bit0=0--> Output 2bit=2

Nu	mber *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎‡ 11		1st Logic	Input 1bit-bit0			1 bit	С	-	W	-	U	boolean	Low
■2 12		1st Logic	Input 1bit-bit1			1 bit	С	2	W	2	U	boolean	Low
13		1st Logic	Input 1bit-bit2			1 bit	C	-	W	-	U	boolean	Low
∎‡ 14		1st Logic	Input 1bit-bit3			1 bit	С	2	W	2	U	boo <mark>l</mark> ean	Low
15		1st Logic	Input 1bit-bit4			1 bit	С		W	-	U	boolean	Low
■ 2 16		1st Logic	Input 1bit-bit5			1 bit	С	2	W	2	U	boolean	Low
■2 17		1st Logic	Input 1bit-bit6			1 bit	C		W	-	U	boolean	Low
∎‡ 18		1st Logic	Input 1bit-bit7			1 bit	С	2	W	2	U	boolean	Low
19		1st Logic	Output 1byte			1 byte	C	-		Т		counter pulses (0255)	Low



"8x1bit --> 1x1byte"function: converts eight 1bit values to a 1byte value, such as Input

bit2=1, bit1=1, bit0=1, other bits are 0--> Output 1byte=7

	Number *	Name	<b>Object Function</b>	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
<b>1</b>	11	1st Logic	Input 1byte			1 byte	С	-	W	-	U	counter pulses (0255)	Low
<b>;</b>	19	1st Logic	Output 2byte			2 bytes	С	-	2	Т	-	pulses	Low

"1x1byte --> 1x2byte"function: converts one 1byte values to a 2byte value, such as

Input 1byte=125--> Output 2byte=125.Although the value remains the same, the data

type of the value is different.

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 11	1st Logic	Input 1byte-low			1 byte	С	-	W	-	U	counter pulses (0255)	Low
■≵ 12	1st Logic	Input 1byte-high			1 byte	С	2	W	ς.	U	counter pulses (0255)	Low
∎≵ 19	1st Logic	Output 2byte			2 bytes	С	5		Т	-	pulses	Low

"2x1byte --> 1x2byte"function: converts two 1byte values to a 2byte value, such as

Input 1byte-low = 255 (\$FF), Input 1byte-high = 100 (\$64) --> Output 2byte = 25855 (\$64

### FF)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 11	1st Logic	Input 2byte-low			2 bytes	С	-	W	-	U	pulses	Low
■2 12	1st Logic	Input 2byte-high			2 bytes	С	-	W	υ.	U	pulses	Low
∎≵ 19	1st Logic	Output 4byte			4 bytes	С	2		T	-	counter pulses (unsign.	Low

"2x2byte --> 1x4byte"function: converts two 2 byte values to a 4byte value, such as Input 2byte-low = 65530 (\$FF FA), Input 2byte-high = 32768 (\$80 00)--> Output 2byte = 2147549178 (\$80 00 FF FA)

Number *	Name	<b>Object Function</b>	Description	Group Address	Length	с	R	W	Т	U	Data Type	Priority
■之 11	1st Logic	Input 1byte			1 byte	С	-	W	- :	U	counter pulses (0255)	Low
∎≵ 12	1st Logic	Output 1bit-bit0			1 bit	С	2	120	Т	-	boolean	Low
■≵ 13	1st Logic	Output 1bit-bit1			1 bit	C	-	878	Т	5.75	boolean	Low
∎‡ 14	1st Logic	Output 1bit-bit2			1 bit	С	2	123	Т	1	boolean	Low
■之 15	1st Logic	Output 1bit-bit3			1 bit	С	-	878	Т	5.55	boolean	Low
∎‡ 16	1st Logic	Output 1bit-bit4			1 bit	С	2	120	Т	-	boolean	Low
■之 17	1st Logic	Output 1bit-bit5			1 bit	С	-	878	Т	5.75	boolean	Low
∎‡ 18	1st Logic	Output 1bit-bit6			1 bit	С	2	123	Т	1	boolean	Low
■≵ 19	1st Logic	Output 1bit-bit7			1 bit	C	-	878	Т	5.75	boolean	Low

"1x1byte --> 8x1bit" function: converts one 1byte values to eight 1but value, such as Input 1byte=200 --> Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1

Number \* Name Description Group Address Length C R W T U **Object Function** Data Type Priority ∎‡ 11 W -1st Logic-... Input 2byte 2 bytes C e. U pulses Low **1**8 Output 1byte-low 1 byte C -- T counter pulses (0..255) Low 1st Logic-... 19 1st Logic-... Output 1byte-high 1 byte C - - T counter pulses (0..255) Low

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"1x2byte --> 2x1byte"function: converts one 2byte values to two 2byte value, such as Input 2byte = 55500 (\$D8 CC) --> Output 1byte-low = 204 (\$CC), Output 1byte-high =216

(\$D8)

Number *	Name	<b>Object Function</b>	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 11	1st Logic	Input 4byte			4 bytes	С	-	W	-	U	counter pulses (unsig	nLow
∎≵ 18	1st Logic	Output 2byte-low			2 bytes	С	-	12	Т	-	pulses	Low
■‡ 19	1st Logic	Output 2byte-high			2 bytes	С			Т		pulses	Low

"1x4byte --> 2x2byte"function: converts one 4byte values to two 2byte value, such as Input 4byte = 78009500 (\$04 A6 54 9C) --> Output 2byte-low = 21660 (\$54 9C), Output 2byte-high =1190 (\$04 A6)

Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
∎≵ 11	1st Logic	Input 3byte			3 bytes	С	-	W	-	U	RGB value 3x(0255)	Low
■≵ 17	1st Logic	Output 1byte-low			1 byte	С	-	-	Т	-	counter pulses (0255)	Low
■2 18	1st Logic	Output 1byte-middle			1 byte	С			Т	870	counter pulses (0255)	Low
■之 19	1st Logic	Output 1byte-high			1 byte	С	20	14	Т	-	counter pulses (0255)	Low

"1x3byte --> 3x1byte"function: converts one 3byte values to three 1byte value, such as Input 3byte = \$78 64 C8--> Output 1byte-low = 200 (\$C8) , Output 1byte-middle = 100 (\$64) , Output 1byte-high =120 (\$78)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■之 11	1st Logic	Input 1byte-low			1 byte	С	-	W	Ξ.	U	counter pulses (0255)	Low
■≵ 12	1st Logic	Input 1byte-middle			1 byte	С	2	W	2	U	counter pulses (0255)	Low
∎≵ 13	1st Logic	Input 1byte-high			1 byte	C	Ξ.	W	÷	U	counter pulses (0255)	Low
∎‡ 19	1st Logic	Output 3byte			3 bytes	С	2	120	Т	2	RGB value 3x(0255)	Low

"3x1byte --> 1x3byte"function: converts three 1byte values to a 3byte value, such as Input 1byte-low = 150 (\$96), Input 1byte-middle = 100 (\$64), Input 1byte-high = 50 (\$32)--> Output 3byte = \$32 64 96

Fig.6.3.4 "Format convert" communication object

NO	Name		Object	Data	Flag	DTP
			Function	Туре		
11	1st	Logic-	Input	1bit	C,W,U	1.002 boolean





	{{}}		1byte		5.010 counter pulses							
			2byte		7.001 pulses							
			3byte		12.001 counter pulses							
			4byte		232.600 RGB value							
					3x(0255)							
٦	The communication object is used to input a value that needs to be converted.											
19	1st Logic-	Output	1bit	С,Т	1.002 boolean							
	<b>{{}}</b>		2bit		2.001 switch control							
			1byte		5.010 counter pulses							
			2byte		7.001 pulses							
			3byte		12.001 counter pulses							
			4byte		232.600 RGB value							
					3x(0255)							
Г	The communication object is used to output the converted value.											

Table 6.3.4 "Format convert" communication object

# 6.3.5 "Gate function" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
<b>■</b> ‡ 11	1st Logic	Input			1 bit	С		W	1.75	1.55	switch	Low
∎⊉ 12	1st Logic	Gate input			1 bit	С	-	W		-	boolean	Low
∎⊉ 19	1st Logic	Output			1 bit	С	1.7	5	Т	1.53	switch	Low



5.010

pulses

9.001

temperature

counter

		I	-ig.6.3.5 "Gate fu	nction"comm	unication object			
NO	Name		Object	Data	Flag	DTP		
-			Function	Туре				
11	1st	Logic-	Input	1bit	C,W	1.001 switch		
	{{}}}			1byte		5.001 percentage		
				2byte		5.010 counter		
						pulses		
						9.001		
						temperature		
						7.001 pulses		
Т	he comm	nunicatio	n object is used to	o input a valu	e that needs to	gate filter.		
12	1st	Logic-	Gate input	1bit	C,W	1.002 boolean		
	{{}}							
Tł	ne commi	unication	object is used to	control the sv	witch status of ga	ite input. Input signal		
is alle	owed to p	bass whe	n gate open, ther	n output, and	the current inpu	t status is still sent if		
there is a change; Can not pass when gate close.								
19	1st	Logic-	Output	1bit	C,T	1.001 switch		
	<b>{{}}</b>			1byte		5.001 percentage		

7.001 pulses The communication object is used to output the value after gate filtering. Only when gate input status is open, output is available, defined by the object "Gate input".

2byte



Table 6.3.5 "Gate function" communication object

### 6.3.6 "Delay function" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■之 11	1st Logic	Input			1 bit	С	-	W	-	-	switch	Low
∎≵ 19	1st Logic	Output			1 bit	С	2	-	Т	2	switch	Low
		Inpu	t/Output	- 1bit[On/C	Off]	10	1420		1 12 10		1.000.0001	12321-05
Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
■之 11	1st Logic	Input			1 byte	С		W	1.7	1.73	percentage (0100%)	Low
19	1st Logic	Output			1 byte	C	-	-	т	-	percentage (0100%)	Low
Number *	Name	Input/	Output -	1byte[010	00%]	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  11	1st Logic	Input			1 byte	С	-	W	-	-	counter pulses (0.255)	Low
∎‡ 19	1st Logic	Output			1 byte	С	2	82	Т	-	counter pulses (0.255)	Low
		Input	/Output ·	- 1byte[02	255]							

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎⊉ 11	1st Logic	Input			2 bytes	С	-	W	-	879	temperature (°C)	Low
∎‡ 19	1st Logic	Output			2 bytes	С	-	-	Т	-	temperature (°C)	Low

Input/Output - 2byte[Float]

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
■之 11	1st Logic	Input			2 bytes	С		W		ē	pulses	Low
■之 19	1st Logic	Output			2 bytes	С	-	-	Т	-	pulses	Low

Input/Output - 2byte[0..65535]

Fig.6.3.6 "Delay function" communication object

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NO.	Name		Object	Data	Flag	DTP
			Function	Туре		
11	1st	Logic-	Input	1bit	C,W	1.001 switch
	{{}}			1byte		5.001 percentage
				2byte		5.010 counter pulses
						9.001 temperature
						7.001 pulses
Т	he comm	nunicatio	n object is used t	o input a valu	ue that nee	ds to delay.
19	1st	Logic-	Output	1bit	С,Т	1.001 switch
	{{}}			1byte		5.001 percentage
				2byte		5.010 counter pulses
						9.001 temperature
						7.001 pulses
Т	he comm	nunicatio	n object is used to	o output that	needs to de	elay converted value, delay
time	is define	d by the	parameter.			

S10

Table 6.3.6 "Delay function" communication object

S K-BUS KNX/EIB KNX Smart Touch

S1(

# 6.3.7 "Staircase lighting" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
<mark>■</mark> ‡ 11	1st Logic	Trigger value			1 bit	С	-	W	-		trigger	Low
∎‡ 12	1st Logic	Light-on duration time			2 bytes	С	Ξ.	W	с,	2	time (s)	Low
∎‡ 19	1st Logic	Output			1 bit	C	2	-	Т	-	switch	Low

NO.	Name		<b>Object Function</b>	Data Type	Flag	DTP				
11	1st	Logic-	Trigger value	1bit	C,W	1.017 trigger				
	{{}}	}								
Th	e comm	nunicatior	n object is used to rece	eive the value to	o trigger	staircase lighting.				
12	1st	Logic-	Light-on duration	2byte	C,W	7.005 time(s)				
	{{}}	}	time							
Th	e comm	nunicatior	n object is used to mo	dify the stairca	se light-o	on duration time, the				
modifi	ed rang	e is refere	enced from the range of	defined by the p	aramete	r, take the limit value				
if exce	eded.									
19	1st	Logic-	Output	1bit/1byte	С,Т	1.001 switch				
	{{}}	}				5.010 counter				
						pulses				
Th	e comm	unicatior	object is used to outp	out telegram val	ues wher	n triggered. Telegram				
value	value is determined by the parameter setting datatype.									

Table 6.3.7 "Staircase lighting" communication object

# 6.4 "Scene Group setting" Communication Object

VS° K-BUS°

S10

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 83	Scene Group	Main scene trigger			1 byte	С	8	W	73	5.72	scene number	Low
■컱 84	1st Scene Group-Output 1	1bit value			1 bit	С	-		Т	10	switch	Low

### 1 bit value

	Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
12	33	Scene Group	Main scene trigger			1 byte	С	75	W	-	879	scene number	Low
<b>■</b> ‡ 8	34	1st Scene Group-Output 1	1byte unsigned value			1 byte	С	-	2	Т	-	counter pulses (0255)	Low

### 1 byte

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 83	Scene Group	Main scene trigger			1 byte	С	5	W	5	5	scene number	Low
<b>■</b> ‡ 84	1st Scene Group-Output 1	HVAC mode			1 byte	С	~	-	Т	-	HVAC mode	Low

#### HVAC mode

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
■≵ 83	Scene Group	Main scene trigger			1 byte	С	-	W	-	5 <b></b>	scene number	Low
∎≵ 84	1st Scene Group-Output 1	2byte unsigned value			2 bytes	С	2	82	Т	828	pulses	Low

#### 2byte unsigned value

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 83	Scene Group	Main scene trigger			1 byte	С	-	W	-		scene number	Low
∎≵ 84	1st Scene Group-Output 1	Temperature			2 bytes	С	-2	2	Т	121	temperature (°C)	Low

### Temperature

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 83	Scene Group	Main scene trigger			1 byte	С	-	W	-	-	scene number	Low
∎‡ 84	1st Scene Group-Output 1	RGB value			3 bytes	С	2	20	Т	2	RGB value 3x(0255)	Low

### RGB value

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 83	Scene Group	Main scene trigger			1 byte	С	-	W	-	-	scene number	Low
■2 84	1st Scene Group-Output 1	RGBW value			6 bytes	С	-	-	Т	57	RGBW value 4x(01009	6) Low



RGBW value

Fig.6.4 "Scene Group setting" communication object

NO.	Name	<b>Object Function</b>	Dat	Fla	DPT
			а	g	
			Тур		
			е		
83	Scene Group	Main scene	1byt	С,	17.001 scene number
		trigger	е	w	
т	his communication object trig	ggers each output in t	he scer	ne grou	up to send a specific value to
the b	us by recalling the scene nur	mber. Telegrams: 0	63		
84	1st Scene	1bit value	1bit	С,Т	1.001 switch
	Group-{{Output X}}	1byte unsigned	1byt		5.010 counter pulses
		value	е		20.102 HVAC mode
		HVAC mode	2byt		7.001 pulses
		2byte unsigned	е		9.001 temperature
		value	3byt		232.600 RGB value
		Temperature	е		3x(0255)
		RGB value	6byt		251.600
		RGBW value	е		DPT_Colour_RGBW
v	/hen a scene is recalled, the o	communication object	is used	l to se	nd the corresponding output

value of the scene to the bus. If the output is not set to this scene, it will not be sent.




A total of 8 scene groups can be set up, with 8 outputs per group.

Table 6.4 "Scene Group setting" communication object

# 6.5 "HVAC controller" Communication Object

# 6.5.1 "Room temperature controller (RTC) " Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 148	Controller 1	Power on/off			1 bit	С	R	W		-	switch	Low
■≵ 149	Controller 1	External temperature sensor			2 bytes	С	-	W	Т	U	temperature (°C)	Low
■≵ 150	Controller 1	Base setpoint adjustment			2 bytes	C	÷	W	÷	-	temperature (°C)	Low
■2 151	Controller 1	Setpoint offset			1 bit	С	-	W	-	2	step	Low
■2 152	Controller 1	Float offset value			2 bytes	С		W	-		temperature differenc	Low
<b>■‡</b>  153	Controller 1	Setpoint offset reset			1 bit	C	2	W	-	2	reset	Low
■≵ 154	Controller 1	Heating/Cooling mode			1 bit	C	÷	W	-	-	cooling/heating	Low
■₽ 155	Controller 1	Operation mode			1 byte	С	2	W	2	-	HVAC mode	Low
■2 156	Controller 1	Comfort mode			1 bit	С	÷	W	÷	-	enable	Low
<b>■↓</b> 157	Controller 1	Economy mode			1 bit	C	2	W	-	2	enable	Low
<b>■‡</b> 158	Controller 1	Frost/Heat protection mode			1 bit	C	÷	W	÷		enable	Low
■之 159	Controller 1	Standby mode			1 bit	С	-	W	-	2	enable	Low
<b>■‡</b>  160	Controller 1	Extended comfort mode			1 bit	С	÷	W	÷	-	acknowledge	Low
<b>■‡</b> 161	Controller 1	Fan automatic operation			1 bit	С	2	W	-	2	enable	Low
■‡ 162	Controller 1	Window contact			1 bit	C	÷	W	Т	U	window/door	Low
■컱 163	Controller 1	Presence detector			1 bit	С	-	W	Т	U	occupancy	Low
<b>■‡</b>  164	Controller 1	Actual temperature, status			2 bytes	С	R	-	Т	-	temperature (°C)	Low
■之 165	Controller 1	Base temperature setpoint, status			2 bytes	C	R	-2	Т	-	temperature (°C)	Low
■‡ 166	Controller 1	Setpoint offset, status			2 bytes	C	R	-	Т	-	temperature differenc	. Low
<b>■‡</b> 167	Controller 1	Current temperature setpoint, status			2 bytes	С	R	-2	Т	-	temperature (°C)	Low
■‡ 168	Controller 1	Heating/Cooling mode, status			1 bit	С	R	-	Т	-	cooling/heating	Low
■컱 169	Controller 1	Operation mode, status			1 byte	С	R	2	Т	-	HVAC mode	Low
<b>■‡</b>  170	Controller 1	Comfort mode, status			1 bit	C	R	-	Т	-	enable	Low
<b>■‡</b> 171	Controller 1	Economy mode, status			1 bit	C	R	72	Т	2	enable	Low
<b>■‡</b> 172	Controller 1	Frost/Heat protection mode, status			1 bit	С	R		Т	-	enable	Low
<b>■‡</b> 173	Controller 1	Standby mode, status			1 bit	C	R	2	Т	2	enable	Low
<b>2</b> 174	Controller 1	Heating control value			1 byte	С	R	-	Т	-	percentage (0100%)	Low
■≵ 175	Controller 1	Cooling control value			1 byte	С	R	22	Т	-	percentage (0100%)	Low
<b>■</b> ≵ 176	Controller 1	Fan speed			1 byte	С	-	-	Т	-	percentage (0100%)	Low
<b>₽2</b> 177	Controller 1	Fan speed low			1 bit	C	2	12	Т	2	switch	Low
<b>■‡</b> 178	Controller 1	Fan speed medium			1 bit	C	÷		Т	-	switch	Low
<b>■‡</b>  179	Controller 1	Fan speed high			1 bit	С	2	22	Т	2	switch	Low
<mark>■</mark> ≵ 180	Controller 1	Fan speed off			1 bit	С	÷		Т	-	switch	Low
<b>∎⊉</b> 181 C	Controller 1	Additional Heating control value		1	bit (	R	-	т			switch	低
<b>■</b> ‡ 181 (	Controller 1	Additional Heating/Cooling cont	rol value		1 bit	С	R	×	т	-	switch	低
■≵ 182 (	Controller 1	Additional Cooling control value			1 bit	С	R	5	Т		switch	低

# Fig.6.5.1 "Room temperature controller(RTC)" communication object

Flag

DPT

1.001 switch

bus to control RTC

Data



NO.

Name

			Туре	
148	Controller	Power on/off	1bit	C,W,R
	X-{{}}			
Т	he communicatior	object is used to receive the	telegram	from the
powe	r on/off. Telegram	IS:		

**Object Function** 

1——On

0--Off

The name in parentheses changes with the parameter "Description (max 30 char.)". If description is empty, display "Controller 1 - ..." by default. The same below.

149	Controller	External	temperature	2byte	C,W,T	9.001		
	X-{{}}	sensor			,U	temperature		
Т	The communication object is used to receive the temperature value detected by the							
temp	temperature sensor of the device form the bus. Range:-50~99.8 $^\circ\!\!\!\!\!^\circ$							
150	Controller	Current	setpoint	2byte	C,W	9.001		
	X-{{}}	adjustment				temperature		
		Base	setpoint					
		adjustment						



"Current setpoint adjustment" is visible when operation mode is not enabled, and under absolute adjustment. Used to modify the base value of the set temperature; and to modify set temperature value of current room operation mode when absolute adjustment.

"Base setpoint adjustment" is visible only when relative adjustment, used to modify the base value of the set temperature, that is, the temperature setting value of the comfort mode, and the setting temperature of the standby mode and the economy mode changes according to the relative change. In any case, the temperature setting value of the protection mode cannot be modified by the bus.

151	Controller	Setpoint offset	1bit	C,W	1.007 step
	X-{{}}				

The communication object is visible only when absolute adjustment, and offset function enabled. Used to adjust the offset to adjust setpoint temperature indirectly. The step value set according to the parameter. Telegrams:

1 ——Increase the offset in the forward direction

0 — Decrease the offset in the negative direction

152	Controller	Float offset value	2byte	C,W	9.002
	X-{{}}				temperature
					difference

The communication object is visible only when absolute adjustment, and offset function enabled. Used to modify the accumulated offset via 2 byte float value.

153	Controller	Setpoint offset reset	1bit	C,W	1.015 reset
	X-{{}}				

The communication object is visible only when absolute adjustment, and offset function enabled. Reset offset value when telegram is 1.





154	Controller	Heating/Cooling mode	1bit	C,W	1.100				
	X-{{}}				cooling/heating				
Т	he communicatior	n object is used for switching	the heat	ing and o	cooling via the bus.				
Teleg	irams:								
	1 ——Heating								
	0 ——C	Cooling							
155	Controller	Operation mode 1byte C,W		20.102 HVAC					
	X-{{}}				mode				
156	Controller	Comfort mode	1bit	C,W	1.003 enable				
	X-{{}}								
157	Controller	Economy mode	1bit	C,W	1.003 enable				
	X-{{}}								
158	Controller	Frost/Heat protection	1bit	C,W	1.003 enable				
	X-{{}}	mode							
159	Controller	Standby mode	1bit	C,W	1.003 enable				
	X-{{}}								
Т	hese communication	objects are visible when the "ope	ration mod	le" and	"1-bit object function				
for op	eration mode" are er	abled.They are used to control t	he RTC o	peration	mode via the bus.				
	Obj	ect 156 Comfort mode							
	Object 157—— Standby mode								
	Object 158— Economy mode								
	Object 159—— Protection mode								
W	When the object re	ceives the telegram "1", the co	orrespond	ding mode	e is activated. When				



1 bit standby object is not enable, and the telegrams of comfort, economy, protection mode are 0, is standby mode. When 1 bit standby object is enable, standby object receives "1" activates standby mode, 0 is no processing.

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

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

1——Activate comfort mode

0-No sense

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

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

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

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

Telegram:

1——Activate auto

0—Exit auto

162	Controller	Window contact	1bit	C,W,T	1.019
	X-{{}}			<b>,</b> U	Window/door

The communication object is used to receive the switch status of window contact.

Telegrams:



	1——The window is open							
	0——The window is close							
163	Controller	Presence d	resence detector 1bit C,W,T 1.					
	X-{{}}				,U	occupancy		
т	he communication	object is use	d to receive the r	room occ	upancy st	atus from presence		
detec	tor. Telegrams:							
	1—	-Occupied						
	0—	—Unoccupied	I					
164	Controller	Actual	temperature,	2byte	C,R,T	9.001		
	X-{{}}	status				temperature		
Т	he communication	n object is vi	sible when temp	erature	reference	of RTC function is		
comb	ination of internal	and external	sensor. Used to	send the	actual te	mperature after the		
comb	ination to the bus				l	1		
165	Controller	Base	temperature	2byte	C,R,T	9.001		
	X-{{}}	setpoint, s	tatus			temperature		
т	he communication	object is vis	ible only when re	elative a	djustmen	t. Used to send the		
curre	nt base set tempe	rature to the	bus.		I			
166	Controller	Setpoint of	fset, status	2byte	C,R,T	9.002		
	X-{{}}					temperature		
						difference		
т	he communicatior	object is vis	ible only when re	elative a	djustmen	t. Used to send the		
accur	accumulated offset value of base set temperature to the bus.							
167	Controller	Current	temperature	2byte	C,R,T	9.001		
	X-{{}}	setpoint, s	tatus			temperature		





Т	The communication object is used to send current set temperature to the bus.							
168	Controller	Heating/Cooling mode,	1bit	C,R,T	1.100			
	X-{{}}	status			cooling/heating			
т	The communication object is used to feedback the telegram of switching cooling and							
heati	ng function to the	bus.						
169	Controller	Operation mode, status	1byte	C,R,T	20.102 HVAC			
	X-{{}}				mode			
170	Controller	Comfort mode, status	1bit	C,R,T	1.003 enable			
	X-{{}}							
171	Controller	Economy mode, status	1bit	C,R,T	1.003 enable			
	X-{{}}							
172	Controller	Frost/Heat protection	1bit	C,R,T	1.003 enable			
	X-{{}}	mode, status						
173	Controller	Standby mode, status	1bit	C,R,T	1.003 enable			
	X-{{}}							

These communication objects are visible when the "operation mode" and "1-bit object function for operation mode" are enabled. They are used to send RTC operation mode status to the bus.

Object 170— Comfort mode

Object 171— Economy mode

Object 172— Protection mode

Object 173—— Standby mode

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



mode only when standby object send 1.

Note: no requirement to send mode status to the bus when switchover via bus.

The same is fan speed and other operation.

174	Controller	Heating control value	1 bit /	C.R.T	1.001
	Controller		10107	C/10/1	11001
	X-{{}}	Heating/Cooling control	1byte		switch/5.001
		value			percentage
175	Controller	Cooling control value	1bit/	C,R,T	1.001
	X-{{}}		1byte		switch/5.001
					percentage

The communication object is used to send control value of heating or cooling function to the bus. Object datatype is according to parameter setting.

176	Controller	Fan speed	1byte	C,T	5.001
	X-{{}}				percentage
					5.100 fan stage
177	Controller	Fan speed low	1bit	C,T	1.001 switch
	X-{{}}				
178	Controller	Fan speed medium	1bit	C,T	1.001 switch
	X-{{}}				
179	Controller	Fan speed high	1bit	C,T	1.001 switch
	X-{{}}				
180	Controller	Fan speed off	1bit	C,T	1.001 switch
	X-{{}}				

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

1bit object is visible according to the parameter setting :



Object 177—Low fan speed

Object 178—Medium fan speed

Object 179—High fan speed

Object 180—Fan speed off

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

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

181	Controller	Additional	heating	1bit/	C,R,T	1.001
	X-{{}}	control value		1byte		switch/5.001
		Additional				percentage
		heating/cooling	control			
		value				
182	Controller	Additional	cooling	1bit/	C,R,T	1.001
	X-{{}}	control value		1byte		switch/5.001
						percentage

These communication object is used to send control value of additional heating or cooling function to the bus.

1bit: telegrams: 1-switch on the valves,0-switch off the valve

1byte: telegrams: 100%-switch on the valves, 0%-switch off the valve

Table 6.5.1 "Room temperature controller(RTC)" communication object



# 6.5.2 "Ventilation controller" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
<b>■‡</b>  148	Controller 1	Fan automatic operation			1 bit	С	R	W	÷	-	enable	Low
<b>■‡</b> 149	Controller 1	PM 2.5 value			2 bytes	С	2	W	Т	U	pulses	Low
■≵ 176	Controller 1	Fan speed			1 byte	C	÷		Т	-	percentage (0100%)	Low

Fig.6.5.2 "Ventilation controller" communic	cation	object
---------------------------------------------	--------	--------

NO.	Name	<b>Object Function</b>	Data	Flag	DPT					
			Тур							
			е							
148	Controller	Fan automatic	1bit	C,R,W	1.003 enable					
	X-{{}}	operation								
Т	he communicatior	object is used to activation	te the f	an autom	atic operation via the bus.					
Teleg	Telegram:									
	1——Activate auto									
	0——Exit auto									
149	Controller	PM 2.5 value	2byt	C,W,T	7.001 pulse					
	X-{{}}	VOC value	е	,U	9.030					
		CO2 value			concentration(ug/m3)					
					9.008					
					parts/million(ppm)					
Т	he communicatior	object is used to receive	the inp	ut of the l	PM2.5/VOC/CO2 value. The					
data	type of object is s	et by the parameter.Ran	ge:0~9	99ug/m <sup>3</sup>	or 0~4000ppm.					
176	Controller	Fan speed	1byt	С,Т	5.001 percentage					
	X-{{}}		е		5.100 fan stage					
т	he communicatior	n object is used to send t	he fan s	speed und	ler auto control to the bus.					
Corre	sponding telegrar	ns of each fan speed are	determ	nined by p	parameter setting.					



 Table 6.5.2 "Ventilation controller" communication object

# 6.6 "Human Centric Lighting(HCL)" Communication Object

Number	* Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■₽ 358	Human Centric Lighting(	Start HCL			1 bit	С	-	W	-	-	start/stop	Low
■2 359	Human Centric Lighting(	HCL status			1 bit	С	R	623	Т	2	state	Low
■2 360	Human Centric Lighting(	Brightness value			1 byte	C	Ξ.	-	Т	-	percentage (0100%)	Low
■2 361	Human Centric Lighting(	Colour temperature value			2 bytes	C	2	121	Т	2	absolute colour tempe	Low
■≵ 364	Human Centric Lighting(	Switch control			1 bit	С	-	W			switch	Low
■2 365	Human Centric Lighting(	Brightness control value			1 byte	C	2	W	2	2	percentage (0100%)	Low
■2 366	Human Centric Lighting(	Colour temperature control value			2 bytes	C	-	W	Ξ.	-	absolute colour tempe	Low

Normal

■2 362	Human Centric Lighting(HCL)	Warm white brightness	1 byte	C		×	Т	-	percentage (0100%)	低
<b>■‡</b>  363	Human Centric Lighting(HCL)	Cool white brightness	1 byte	С		-	Т		percentage (0100%)	低
■2 364	Human Centric Lighting(HCL)	Switch control	1 bit	C	(i= )	W		-	switch	低
₩2 367	Human Centric Lighting(HCL)	Warm white brightness control value	1 byte	С		W	150		percentage (0100%)	低
■\$ 368	Human Centric Lighting(HCL)	Cool white brightness control value	1 byte	С	( <b>4</b> )	W	1941	2 <b>.</b>	percentage (0100%)	低

Directly(with warm/cool white algorithm)

## Fig.6.6 "Human Centric Lighting(HCL)" communication object

NO	Name	<b>Object Function</b>	Data	Flag	DPT
•			Туре		
35	Human	Start HCL	1bit	C,W	1.010 start/stop
8	Centric				
	Lighting(HCL				
	)				
٢	The communication	on object is used to start th	ie settin	g of HCI	Telegrams:
	1-	–—Start			
	0-	–—Stop			
35	Human	HCL status	1bit	C,R,T	1.011 state
9	Centric				
	Lighting(HCL				





	)								
Т	he communicatio	n object is used to send t	ne statu	s telegra	am of HCL to bus.				
36	Human	Brightness value	1byt	C,T	5.001				
ο	Centric		e		percentage(0100%)				
	Lighting(HCL								
	)								
36	Human	Brightness control	1byt	C,W	5.001				
5	Centric	value	е		percentage(0100%)				
	Lighting(HCL								
	)								
Т	These two parameters are visible when control brightness via HCL. Telegrams: 0100%								
C	)bi.360: used for	sending dimming telegram	s to the	bus, tha	t is, sending the brightness				
	· · · · · · · · · · · · · · · · · · ·			200, 010					
value									
	Dbj.365: used for	receiving brightness statu	is respor	nded fro	m bus.				
36	Human	Colour temperature	2byt	C,T	7.600 absolute colour				
1	Centric	value	е		temperature				
	Lighting(HCL								
	)								
36	Human	Colour temperature	2byt	C,W	7.600 absolute colour				
6	Centric	control value	е		temperature				
	Lighting(HCL								
	)								
т	hese two comm	unication objects apply	to norm	al conti	rol of colour temperature				
adius	stment Telearam	s 2000 7000 K							
		5. 2000							

Obj.361: used for sending the control telegram of the colour temperature to the bus.





0	Obj.366: used for receiving the control telegram of the colour temperature from bus.									
36	Human	Warm	white	1byt	С,Т	5.001				
2	Centric	brightness		е		percentage(0100%)				
	Lighting(HCL									
	)									
36	Human	Warm	white	1byt	C,W	5.001				
7	Centric	brightness	control	е		percentage(0100%)				
	Lighting(HCL	value								
	)									

These two communication objects apply to the warm white brightness in directly control.

Telegrams: 0...100%

Obj.362: used for sending the warm white dimming telegram to the bus, that is, sending the warm white brightness value.

Obj.367: used for receiving the warm white brightness status responded from bus.

36	Human	Cool white brightness	1byt	С,Т	5.001
3	Centric		е		percentage(0100%)
	Lighting(HCL				
	)				
36	Human	Cool white brightness	1byt	C,W	5.001
8	Centric	control value	е		percentage(0100%)
	Lighting(HCL				
	)				

These two communication objects apply to the cool white brightness in directly control.

Telegrams: 0...100%

Obj.363: used for sending the cool white dimming telegram to the bus, that is, sending



the cool brightness value.

Obj.368: used for receiving the cool white brightness status responded from bus.

36	Human	Switch control	1bit	C,W	1.001 switch							
4	Centric											
	Lighting(HCL											
	)											
D	ouring HCL runnin	g, stop running HCL when	receive	the tele	gram of switch control OFF							
from bus, the communication object is to receive the telegram of switch control. That is												
teleg	telegram 0 is stop, 1 is meaningless.											

Table 6.6 "Human Centric Lighting(HCL)" communication object

# 6.7 "Schedule function" Communication Object

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Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₿ 369	Schedule 1	On/Off			1 bit	С	2	4	Т	-	switch	Low
≵ 370	Schedule 1	Disable/Enable			1 bit	С		W	σ.	-	enable	Low
Number *	Name	Object Function	Description	Group Address	Length	С	R	w	Т	U	Data Type	Priority
<b>I</b> ≵ 369	Schedule 1	1byte unsigned value			1 byte	С	÷	i el	Т	-	counter pulses (0255)	Low
Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
₽369	Schedule 1	HVAC mode			1 byte	C	4	÷	Т	-	HVAC mode	Low
Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
■≵ 369	Schedule 1	Scene control			1 byte	С	-	(19)	T		scene number	Low
Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
12 369	Schedule 1	2byte unsigned value			2 bytes	С	Ξ.	1993	T	10-0	pulses	Low
Number *	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
₹ 369	Schedule 1	Temperature value			2 bytes	C	-	-	Т	-	temperature (°C)	Low

Fig.6.7 "Schedule function" communication object

NO.	Name	<b>Object Function</b>	Data Type	Flag	DPT
369	Schedule	On/Off	1bit	С,Т	1.001 switch
	X-{{}}	1byte unsigned	1byte		5.010 counter
		value	1byte		pulses(0255)
		HVAC mode	1byte		20.102 HVAC mode
		Scene control	2byte		17.001 scene number
		2byte unsigned	2byte		7.001 pulses
		value			9.001 temperature
		Temperature			
		value			

The communication object is used to send the preset telegram value of the time function to the bus, and the schedule function, default value and object type are set by the parameters. When the time is up, send the default telegram value to the bus. A total of 16 timing(x = 16) can be set.





370	Schedule	Disable/Enable	1bit	C,W	1.003 enable						
	X-{{}}										
TI	The communication object is used to disable/enable schedule function x. The										
disable/enable telegram value is specifically defined by the parameter. When disable,											
schedule x function will be disable.											

Table 6.7 "Schedule function" communication object

# 6.8 "Alarm function" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₹ 401	Alarm 1	Alarm acknowledge			1 bit	С	-	8.0	Т	-	acknowledge	Low
₹ 402	Alarm 1	Alarm message			14 bytes	С	2	W	2	2	Character String (IS	O 8Low
₹ 403	Alarm 1	Alarm input			1 bit	C	-	W	Т	U	alarm	Low

# Fig.6.8 "Alarm function" communication object

NO.	Name	<b>Object Function</b>	Data	Flag	DPT							
			Туре									
401	Alarm	Alarm	1bit	C,T	1.016 acknowledge							
	X-{{}}	acknowledge										
v	When the user clicks on the screen to acknowledge the warning message, the											
communication object sends an acknowledge telegram to the bus, and the telegram value is												
1.												
402	Alarm	Alarm message	14byt	C,W	16.001 character string							
	X-{{}}		е		(ISO 8859-1)							
т	he communicat	tion object is used to	o receive	the warr	varning message displayed on the							
screen from bus. When no value is received initially, the warning pop-up is displayed empty.												
403	Alarm	Alarm input	1bit	C,W,T,	1.005 alarm							
	X-{{}}			U								

The communication object is used to receive the alarm signal from bus. Telegrams:



0 — No alarm

1 — Alarm

Table 6.8 "Alarm function" communication object

# 6.9 "KNX Channel general" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	C	R	W	т	11	Data Type	Priority
Humber	Hume	object runction	Description	oroup nuaress	Length	-			1.16		Data Type	rnonty
473	KNX Channel general	Device online common 1, status			1 bit	C	-	W	T	U	switch	Low

NO.	Name	Object	Data Type	Flag	DPT
		Function			
473482	KNX Channel	Device	1bit	C,W,T,U	1.* 1-bit
	general	online			
		common X,			
		status			

# Fig.6.9 "KNX Channel general" communication object

The communication object is displayed when the parameter "Time period request for common x" is greater than 0.

The communication object is used to periodically send a read request telegram for the online status of a generic device in order to query the current online status of each generic device.



Table 6.9 "KNX Channel general" communication object

# 6.10 "KNX Channel X" Communication Object

Channel 1 to 120: Each channel has 21objects. A total of 120\*21=2520 objects, support switching, dimming, color temperature, curtains, air conditioning, fresh air, floor heating, background music, etc.

Channel 121 to 240: Each channel has 16 objects. A total of 120\*16=1920 objects. Only simple switch, dimming, color temperature, curtain, and value sending functions can be configured.

Nu	umber *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	l .	KNX Channel 1	Device online, status			1 bit	С	17	W	Т	U	switch	Low
■2 484	t.	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low

NO.	Name		e Object Data Type			DPT
			Function			
483	KNX	Channel	Device	1bit	C,W,T,U	1.001

Fig 6 10 "KNX Channel X" communication object



	X-{{}}	online,			switch							
		status										
Th	is communication obje	ect is visible w	hen the device	e online status	reference by							
``indivi	dual".											
Th	The communication object is used to periodically send a read request telegram for the											
online	online status of a generic device in order to query the current online status of each generic											
device	<u>.</u>											
484	KNX Channel	Locking	1bit	C,W	1.003							
	X-{{}}	object			enable							
Sı	itable for all of the follo	wing functions,	except sensors	, energy meteri	ng devices.							
The communication object is used to lock/unlock the icon function.												
	1-unlock											
	0-lock											

Table 6.10 "KNX Channel X" communication object

# 6.10.1 "Switch" Communication Object

■\$ 485	KNX Channel 1	Switch	1 bit	C	4	-	Т	( <b>14</b> )	switch	低
■≵ 490	KNX Channel 1	Switch, status	1 bit	С	-	W	Т	U	switch	低

Switch



**₽‡**|485 KNX Channel 1-... Switch 1 bit C - - T - switch 低

Press/Release switch

NO.	Name	Object	Data	Flag	DPT					
		Function	Туре							
485	KNX Channel	Switch	1bit	C,T	1.001 switch					
	X-{{}}									
This	communication object	ct apply to swi	tch, press,	/release switch,	relative/brightness					
dimming	, colour and colour te	emperature cont	trol. Telegi	rams:						
	1——Turn	on the light								
	0Turn	off the light								
490	KNX Channel	Switch,	1bit	C,W,T,U	1.001 switch					
	X-{{}}	status			3.007 dimming					
The communication object is used to receive the on / off status from other bus devices,										
and feed	back to screen display	, applies to swi	tch, relativ	ve/brightness din	nming, brightness+					
colour te	mperature control an	d switch indicat	tor.							

Table 6.10.1"Switch" communication object



## 6.10.2 "Relative/Brightness/Relative&Brightnes dimming" Communication

# Object

485	KNX Channel 1	Switch	1 bit	C	0	-	Т	5	switch	低
<b>■‡</b>  486	KNX Channel 1	Relative dimming	4 bit	С	-	W	Т	-	dimming control	低
<b>■</b> ≵ 490	KNX Channel 1	Switch, status	1 bit	C	ā.	W	T	U	switch	低
			Relative dimming							
485	KNX Channel 1	Switch	1 bit	С	-		Т	-	switch	低
■2 487	KNX Channel 1	Brightness dimming	1 byte	С	2	12	Т	-	percentage (0100%)	低
■2 490	KNX Channel 1	Switch, status	1 bit	С	-	W	Т	U	switch	低
∎≵ 491	KNX Channel 1	Brightness, status	1 byte	С	12	W	т	U	percentage (0100%)	低
			Brightness dimming							
₩₹ 485	KNX Channel 1	Switch	1 bit	С		-	т	878	switch	低
₩2 486	KNX Channel 1	Relative dimming	4 bit	С	-	12	Т	- 23	dimming control	低
₩₹ 487	KNX Channel 1	Brightness dimming	1 byte	С			Т	878	percentage (0100%)	低
₩2 490	KNX Channel 1	Switch, status	1 bit	С	-	W	Т	U	switch	低
∎≵ 491	KNX Channel 1	Brightness, status	1 byte	С		W	т	U	percentage (0100%)	低

### Relative&Brightness dimming

# Fig.6.10.2 "Relative/Brightness/Relative&Brightnes dimming" communication object

NO.	Name		<b>Object Function</b>	Data	Flag	DPT
				Туре		
486	KNX	Channel	Relative	4bit	C,W,T	3.007 dimming control
	X-{{}	•}	dimming			
т	he commu	unication ob	ject applies to relativ	ve dimm	ning, is us	ed for sending the relative
dimm	ning telegr	ram to the b	ous, such as brighter,	, darker	, or stop-	dimming telegram.
487	ких	Channel	Brightness	1byt	С,Т	5.001
	X-{{}	•}	dimming	е		percentage(0100%)
491	KNX	Channel	Brightness,	1byt	C,W,T,	5.001
	X-{{}	•}	status	е	U	percentage(0100%)
т	hese two	communica	tion objects apply to	brightn	ess dimm	ing. Telegrams: 0~100%

Obj.487: used for sending dimming telegrams to the bus, that is, sending the brightness value.

Obj.491: used for receiving brightness status responded from dimming actuator.

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Table 6.10.2 "Relative/Brightness/Relative&Brightnes dimming"Communication Object

## 6.10.3 "RGB/Colour and colour temperature control" Communication Object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 484	KNX Channel 1	Locking object			1 bit	С	ς.	W	2	2	enable	Low
■之 485	KNX Channel 1	Switch			1 bit	С	Ξ.		Т	-	switch	Low
∎≵ 486	KNX Channel 1	Red dimming value			1 byte	С	9	-	Т	2	percentage (0100%)	Low
<b>■↓</b> 487	KNX Channel 1	Green dimming value			1 byte	С		0.70	Т	-	percentage (0100%)	Low
<b>■↓</b> 488	KNX Channel 1	Blue dimming value			1 byte	С	с.	- 2	Т	2	percentage (0100%)	Low
■≵ 490	KNX Channel 1	Switch, status			1 bit	C		W	т	U	switch	Low
∎≵ 491	KNX Channel 1	Red brightness, status			1 byte	С	0	W	Т	U	percentage (0100%)	Low
₩2 492	KNX Channel 1	Green brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■2 493	KNX Channel 1	Blue brightness, status			1 byte	С	9	W	Т	U	percentage (0100%)	Low

RGB\_3x1byte

Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
KNX Channel 1	Device online, status			1 bit	С	5	W	Т	U	switch	Low
KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
KNX Channel 1	Switch			1 bit	С	5	-	Т	- 53	switch	Low
KNX Channel 1	RGB dimming value			3 bytes	С	-		Т	-	RGB value 3x(0255)	Low
KNX Channel 1	Switch, status			1 bit	С	-	W	Т	U	switch	Low
KNX Channel 1	RGB brightness, status			3 bytes	С		W	Т	U	RGB value 3x(0255)	Low
	Name KNX Channel 1 KNX Channel 1 KNX Channel 1 KNX Channel 1 KNX Channel 1	Name         Object Function           KNX Channel 1         Device online, status           KNX Channel 1         Locking object           KNX Channel 1         Switch           KNX Channel 1         RGB dimming value           KNX Channel 1         Switch, status           KNX Channel 1         Switch, status           KNX Channel 1         RGB dimming value	Name         Object Function         Description           KNX Channel 1         Device online, status            KNX Channel 1         Locking object            KNX Channel 1         Switch            KNX Channel 1         Switch            KNX Channel 1         RGB dimming value            KNX Channel 1         Switch, status            KNX Channel 1         RGB brightness, status	Name         Object Function         Description         Group Address           KNX Channel 1         Device online, status                                                                                                              <	Name         Object Function         Description         Group Address         Length           KNX Channel 1         Device online, status         1 bit           KNX Channel 1         Locking object         1 bit           KNX Channel 1         Switch         1 bit           KNX Channel 1         Switch         3 bytes           KNX Channel 1         RGB dimming value         3 bytes           KNX Channel 1         Switch, status         1 bit           KNX Channel 1         Switch, status         3 bytes	Name         Object Function         Description         Group Address         Length         C           KNX Channel 1         Device online, status         1 bit         C           KNX Channel 1         Locking object         1 bit         C           KNX Channel 1         Switch         1 bit         C           KNX Channel 1         Switch         1 bit         C           KNX Channel 1         RGB dimming value         3 bytes         C           KNX Channel 1         Switch, status         1 bit         C           KNX Channel 1         Bgb brightness, status         3 bytes         C	Name         Object Function         Description         Group Address         Length         C         R           KNX Channel 1         Device online, status         1 bit         C         -           KNX Channel 1         Locking object         1 bit         C         -           KNX Channel 1         Switch         1 bit         C         -           KNX Channel 1         Switch         1 bit         C         -           KNX Channel 1         RGB dimming value         3 bytes         C         -           KNX Channel 1         Switch, status         1 bit         C         -           KNX Channel 1         Switch, status         3 bytes         C         -	Name         Object Function         Description         Group Address         Length         C         R         W           KNX Channel 1         Device online, status         1 bit         C         -         W           KNX Channel 1         Locking object         1 bit         C         -         W           KNX Channel 1         Switch         Switch         1 bit         C         -         W           KNX Channel 1         Switch         Switch         1 bit         C         -         -           KNX Channel 1         RGB dimming value         3 bytes         C         -         W           KNX Channel 1         Switch, status         1 bit         C         -         W           KNX Channel 1         RGB brightness, status         3 bytes         C         -         W	Name         Object Function         Description         Group Address         Length         C         R         W         T           KNX Channel 1         Device online, status         1 bit         C         -         W         T           KNX Channel 1         Locking object         1 bit         C         -         W         T           KNX Channel 1         Switch         Switch         1 bit         C         -         T           KNX Channel 1         Switch         Switch         Switch         3 bytes         C         -         T           KNX Channel 1         RGB dimming value         3 bytes         C         -         T           KNX Channel 1         Switch, status         1 bit         C         -         T           KNX Channel 1         RGB brightness, status         3 bytes         C         -         W         T	Name         Object Function         Description         Group Address         Length         C         R         W         T         U           KNX Channel 1         Device online, status         1 bit         C         -         W         T         U           KNX Channel 1         Locking object         1 bit         C         -         W         T         U           KNX Channel 1         Switch         Switch         1 bit         C         -         W         -           KNX Channel 1         Switch         Switch         Switch         3 bytes         C         -         T         -           KNX Channel 1         RGB dimming value         3 bytes         C         -         W         T         U           KNX Channel 1         Switch, status         1 bit         C         -         W         T         U           KNX Channel 1         RGB brightness, status         3 bytes         C         -         W         T         U	NameObject FunctionDescriptionGroup AddressLengthCRWTUData TypeKNX Channel 1Device online, status1bitC-WTUswitchKNX Channel 1Locking object1bitC-WTUswitchKNX Channel 1Switch51bitC-WTUswitchKNX Channel 1RGB dimming value-1bitC-T-RGB value 3x(0.255)KNX Channel 1Switch, status-1bitC-WTUswitchKNX Channel 1RGB brightness, status-3bytesC-WTURGB value 3x(0.255)

### RGB\_1x3byte

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority	
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low	
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	12	enable	Low	
∎≵ 485	KNX Channel 1	Switch			1 bit	С	-		Т	-	switch	Low	
∎≵ 486	KNX Channel 1	Red dimming value			1 byte	С	2	82	Т	12	percentage (0100%)	Low	
∎≵ 487	KNX Channel 1	Green dimming value			1 byte	С	-	10	Т		percentage (0100%)	Low	
∎≵ 488	KNX Channel 1	Blue dimming value			1 byte	С	2	82	Т	- 2	percentage (0100%)	Low	
∎≵ 489	KNX Channel 1	White dimming value			1 byte	С	-	-	т	-	percentage (0100%)	Low	
∎≵ 490	KNX Channel 1	Switch, status			1 bit	С	2	W	Т	U	switch	Low	
∎≵ 491	KNX Channel 1	Red brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low	
∎‡ 492	KNX Channel 1	Green brightness, status			1 byte	С	2	W	Т	U	percentage (0100%)	Low	
∎≵ 493	KNX Channel 1	Blue brightness, status			1 byte	С	-	W	т	U	percentage (0100%)	Low	
∎≵ 494	KNX Channel 1	White brightness, status			1 byte	С	2	W	Т	U	percentage (0100%)	Low	

RGBW\_4x1byte

# S10



# KNX/EIB KNX Smart Touch

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■2 483	KNX Channel 1	Device online, status			1 bit	С	-	W	т	U	switch	Low
■2 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
₩2 485	KNX Channel 1	Switch			1 bit	С	-	-	Т		switch	Low
■2 486	KNX Channel 1	RGBW dimming value			6 bytes	С	-	12	Т	-	RGBW value 4x(0	100%) Low
■≵ 490	KNX Channel 1	Switch, status			1 bit	С	-	W	Т	U	switch	Low
₩2 491	KNX Channel 1	RGBW brightness, status			6 bytes	С	-	W	Т	U	RGBW value 4x(0	100%) Low

### RGBW\_1x6byte

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎‡ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
∎≵ 485	KNX Channel 1	Switch			1 bit	С	-		Т	-	switch	Low
■≵ 486	KNX Channel 1	Red dimming value			1 byte	С	5		Т	-	percentage (0100%)	Low
■≵ 487	KNX Channel 1	Green dimming value			1 byte	C	-	14	Т	-	percentage (0100%)	Low
∎‡ 488	KNX Channel 1	Blue dimming value			1 byte	С	-	150	Т	-	percentage (0100%)	Low
∎‡ 489	KNX Channel 1	Absolute colour temperature			2 bytes	С	-	-	Т	-	absolute colour tempe.	Low
∎‡ 490	KNX Channel 1	Switch, status			1 bit	С	-	W	Т	U	switch	Low
∎‡ 491	KNX Channel 1	Red brightness, status			1 byte	C	-	W	Т	U	percentage (0100%)	Low
<b>■‡</b>  492	KNX Channel 1	Green brightness, status			1 byte	С	•	W	Т	U	percentage (0100%)	Low
■之 493	KNX Channel 1	Blue brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■之 494	KNX Channel 1	Absolute colour temperature, status			2 bytes	С		W	Т	U	absolute colour tempe.	Low
■≵ 495	KNX Channel 1	Brightness value			1 byte	C	-	14	Т	-	percentage (0100%)	Low
<b>■‡</b>  497	KNX Channel 1	Brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low

### RGBCW\_3x1byte\_Normal

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎ <b>‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■≵ 485	KNX Channel 1	Switch			1 bit	С	÷	( <b>4</b> )	Т	-	switch	Low
<b>■</b> ≵ 486	KNX Channel 1	Red dimming value			1 byte	С	-	5	Т	-	percentage (0100%)	Low
∎‡ 487	KNX Channel 1	Green dimming value			1 byte	С	-	(8 <b>-</b> 61	Т	-	percentage (0100%)	Low
∎≵ 488	KNX Channel 1	Blue dimming value			1 byte	С			т	-	percentage (0100%)	Low
∎≵ 490	KNX Channel 1	Switch, status			1 bit	С	-	W	Т	U	switch	Low
■之 491	KNX Channel 1	Red brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■컱 492	KNX Channel 1	Green brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■컱 493	KNX Channel 1	Blue brightness, status			1 byte	С		W	Т	U	percentage (0100%)	Low
∎≵ 494	KNX Channel 1	Absolute colour temperature, status			2 bytes	C	-	W	Т	U	absolute colour tempe.	Low
■之 495	KNX Channel 1	Warm white brightness			1 byte	С	5		Т	2	percentage (0100%)	Low
■컱 496	KNX Channel 1	Cool white brightness			1 byte	С	-	1	Т	-	percentage (0100%)	Low
■之 497	KNX Channel 1	Brightness, status			1 byte	С	-	W	т	U	percentage (0100%)	Low

### RGBCW\_3x1byte\_Normal\_Directly(..) &Brightness+Colour Temperature

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority	
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	4	W	Т	U	switch	Low	
<b>∎</b> ‡ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low	
■之 485	KNX Channel 1	Switch			1 bit	C	э.	-	Т	-	switch	Low	
■≵ 486	KNX Channel 1	Red dimming value			1 byte	С	-	-	Т	-	percentage (0100%)	Low	
<b>■‡</b>  487	KNX Channel 1	Green dimming value			1 byte	C	н.	-	Т	-	percentage (0100%)	Low	
∎‡ 488	KNX Channel 1	Blue dimming value			1 byte	С	-	-	Т	-	percentage (0100%)	Low	
<b>■‡</b>  490	KNX Channel 1	Switch, status			1 bit	C	э.	W	Т	U	switch	Low	
<b>■</b> ≵ 491	KNX Channel 1	Red brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low	
<b>■‡</b> 492	KNX Channel 1	Green brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low	
₩2 493	KNX Channel 1	Blue brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low	
■之 495	KNX Channel 1	Warm white brightness			1 byte	C	4	-	Т	-	percentage (0100%)	Low	
■≵ 496	KNX Channel 1	Cool white brightness			1 byte	С	-	7	Т	-	percentage (0100%)	Low	
<b>■‡</b> 497	KNX Channel 1	Warm white brightness, status			1 byte	С	э.	W	Т	U	percentage (0100%)	Low	
■2 498	KNX Channel 1	Cool white brightness, status			1 byte	С	-	W	Т	U	percentage (0.,100%)	Low	

### RGBCW\_3x1byte\_Normal\_Directly(..) &Warm/Cool white brightness

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Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
<b>4</b> 83	KNX Channel 1	Device online, status			1 bit	С	-	W	T	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	φ.	W	9	2	enable	Low
■컱 485	KNX Channel 1	Switch			1 bit	C	Ξ.		Т	-	switch	Low
■‡ 486	KNX Channel 1	RGB dimming value			3 bytes	С	2	-27	Т	2	RGB value 3x(0255)	Low
■≵ 489	KNX Channel 1	Absolute colour temperature			2 bytes	С	-	() <b>-</b> 5)	Т	-	absolute colour tempe.	Low
■컱 490	KNX Channel 1	Switch, status			1 bit	С	2	W	Т	U	switch	Low
■컱 491	KNX Channel 1	RGB brightness, status			3 bytes	С	-	W	Т	U	RGB value 3x(0255)	Low
∎≵ 494	KNX Channel 1	Absolute colour temperature, status			2 bytes	С	2	W	Т	U	absolute colour tempe.	Low
■之 495	KNX Channel 1	Brightness value			1 byte	С	ъ 1	(1 <b>-</b> 1)	Т	-	percentage (0100%)	Low
■2 497	KNX Channel 1	Brightness, status			1 byte	С	0	W	Т	U	percentage (0100%)	Low

### RGBCW\_1x3byte\_Normal

Number	* Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■2 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎‡ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	2	enable	Low
■2 485	KNX Channel 1	Switch			1 bit	С	-		Т	-	switch	Low
■2 486	KNX Channel 1	RGB dimming value			3 bytes	С	2	14	Т	2	RGB value 3x(0255)	Low
■2 490	KNX Channel 1	Switch, status			1 bit	С		W	Т	U	switch	Low
■之 491	KNX Channel 1	RGB brightness, status			3 bytes	С	2	W	Т	U	RGB value 3x(0255)	Low
■2 494	KNX Channel 1	Absolute colour temperature, status			2 bytes	С	-	W	Т	U	absolute colour tempe.	Low
■之 495	KNX Channel 1	Warm white brightness			1 byte	С	2	-	Т	2	percentage (0100%)	Low
■2 496	KNX Channel 1	Cool white brightness			1 byte	С		10-	Т	-	percentage (0100%)	Low
<b>1</b> 497	KNX Channel 1-	Brightness status			1 byte	C		W	Т	U	percentage (0, 100%)	Low

### RGBCW\_1x3byte\_Directly(..) &Brightness+Colour Temperature

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 483	KNX Channel 1	Device online, status			1 bit	С	5	W	Т	U	switch	Low
■2 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■2 485	KNX Channel 1	Switch			1 bit	С	5		т		switch	Low
■2 486	KNX Channel 1	RGB dimming value			3 bytes	С	-	120	Т	-	RGB value 3x(0255)	Low
■≵ 490	KNX Channel 1	Switch, status			1 bit	С	5	W	т	U	switch	Low
■之 491	KNX Channel 1	RGB brightness, status			3 bytes	С	-	W	Т	U	RGB value 3x(0255)	Low
■之 495	KNX Channel 1	Warm white brightness			1 byte	С	5		Т	-	percentage (0100%)	Low
■≵ 496	KNX Channel 1	Cool white brightness			1 byte	С	-	(44)	Т	-	percentage (0100%)	Low
■2 497	KNX Channel 1	Warm white brightness, status			1 byte	С	5	W	т	U	percentage (0100%)	Low
■之 498	KNX Channel 1	Cool white brightness, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low

### RGBCW\_1x3byte\_Directly(..) &Warm/Cool white brightness

Numb	er * Name	Object Function	Description	Group Address	Length	C	R	W	Т	U	Data Type	Priority
■2 483	KNX Channel 1	Device online, status			1 bit	С	10	W	Т	U	switch	Low
₩₹ 484	KNX Channel 1	Locking object			1 bit	С	82	W	S2 -	2	enable	Low
■2 485	KNX Channel 1	Switch			1 bit	C		-	Т	-	switch	Low
■2 490	KNX Channel 1	Switch, status			1 bit	С	12	W	Т	U	switch	Low
■2 494	KNX Channel 1	Absolute colour temperature, status			2 bytes	С	10	W	Т	U	absolute colour tempe.	Low
₩2 495	KNX Channel 1	Warm white brightness			1 byte	С	82	-	Т	<u>_</u>	percentage (0100%)	Low
■₹ 496	KNX Channel 1	Cool white brightness			1 byte	C	/-	-	Т	×	percentage (0100%)	Low
∎‡ 497	KNX Channel 1	Brightness, status			1 byte	С	3 <u>2</u> -	W	Т	U	percentage (0100%)	Low
■2 495	KNX Channel 1	Warm white brightness		1 byte	с -		т	-		perc	entage (0100%) 低	
₩2 496	KNX Channel 1	Cool white brightness		1 byte	с -	2	Т	2		perc	entage (0100%) 低	
₩2 497	KNX Channel 1	Warm white brightness, status		1 byte	с -	W	т	U		perc	entage (0100%) 低	
498	KNX Channel 1	Cool white brightness, status		1 byte	C -	W	Т	U		perc	entage (0100%) 低	



Colour temperature dimming

Fig.6.10.3 "Colour and colour temperature control" communication object

NO.	Name	<b>Object Function</b>	Data	Flag	DPT
			Туре		
48	KNX Channel	RGB dimming	3byt	C,T	232.600 RGB value
6	X-{{}}	value	e		3x(0255)
49	KNX Channel	RGB brightness,	3byt	C,W,T,	232.600 RGB value
1	X-{{}}	status	e	U	3x(0255)

These two communication objects are visible when 1x3byte for the RGB object type or 1x3byte for the RGBCW object type is selected. Apply to control brightness of colorful lamp.

Obj.486: Used for sending brightness value of RGB lamp to the bus.

Obj.491: Used for receiving brightness value of RGB lamp from bus.

3-Byte Code for RGB Dimming Object Data Type: U8 U8 U8, as follows:

Змѕв	2	1 <sub>LSB</sub>
R	G	В
υυυυυυυ	υυυυυυυ	υυυυυυυ

R: red dimming value; G: green dimming value; B: blue dimming value.

48	KNX	Channel	RGBW	dimming	6byt	С,Т	251.600		
6	X-{{}}		value		e		DPT_Colour_RGBW		
49	KNX	Channel	RGBW	brightness,	6byt	C,W,T,	251.600		
1	X-{{}}		status		e	U	DPT_Colour_RGBW		
Т	These two communication objects are visible when 1x6byte for the RGBW object type is								



selected. Apply to control brightness of colorful lamp.

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Obj.486: Used for sending brightness value of RGBW lamp to the bus.

Obj.491: Used for receiving brightness value of RGBW lamp from bus.

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

as follows:

6 <sub>MSB</sub>	5	4	3	2	$1_{LSB}$
R	G	В	W	保留	rrrrmRmGmB
					mW
υυυυυυυυ	υυυυυυυ	υυυυυυυυ	υυυυυυυυ	000000	0000BBBB
				00	

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

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

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

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

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

48	KNX Channel	Red dimming	1byt	С,Т	5.001
6	X-{{}}	value	е		percentage(0100
					%)
49	KNX Channel	Red brightness,	1byt	C,W,T,	5.001
1	X-{{}}	status	е	U	percentage(0100
					%)

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



Obj.486: Used for sending brightness value of the control R (red) channel to the bus.

Obj.491: Used for receiving brightness status of the R (red) channel from the bus.

48	KNX Channel	Green dimming	1byt	С,Т	5.001
7	X-{{}}	value	е		percentage(0100
					%)
49	KNX Channel	Green brightness,	1byt	C,W,T,	5.001
2	X-{{}}	status	е	U	percentage(0100
					%)

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

Obj.487: Used for sending brightness value of the control G (green) channel to the bus.

Obj.492: Used for receiving brightness status of the G (green) channel from the bus.

48	KNX Channel	Blue dimming	1byt	C,T	5.001
8	X-{{}}	value	е		percentage(0100
					%)
49	KNX Channel	Blue brightness,	1byt	C,W,T,	5.001
3	X-{{}}	status	е	U	percentage(0100
					%)

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

Obj.488: Used for sending brightness value of the control B (blue) channel to the bus.



Obj.493: Used for receiving brightness status of the B (blue) channel from the bus.

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48	KNX Channel	White dimming	1byt	C,T	5.001
9	X-{{}}	value	e		percentage(0100
					%)
49	KNX Channel	White brightness,	1byt	C,W,T,	5.001
4	X-{{}}	status	e	U	percentage(0100
					%)

These two communication objects are visible when 4x1byte or 3byte+1byte for the RGB object type is selected. Apply to control brightness of lamp.Telegrams: 0...100%

Obj.489: Used for sending brightness value of the control W (white) channel to the bus.

Obj.494: Used for receiving brightness status of the W (white) channel from the bus.

48	КNХ	Channel	Absolute	colour	2byt	С,Т	7.600	absolute
9	X-{{}	}	temperatu	re	е		colour tem	perature
			Percentage colour		1byt		5.001	
			temperature		е		percentage	e(0100
							%)	

These two communication objects apply to colour temperature adjustment. Telegrams: 2000...7000 K

Under normal control, used for sending the control telegram of the colour temperature to the bus.

49	KNX	Channel	Absolute	colour	2byt	C,W,T,	7.600	absolute
4	X-{{}	}	temperatu	re,	е	U	colour tem	perature
			status					



The two communication objects apply to colour temperature adjustment. Telegrams: 2000...7000 K

Under normal or directly control & (Brightness+Colour Temperature), used for receiving the control telegram of the colour temperature from bus.

49	KNX Channel	Percentage colour	1byt	C,W,T,	5.001
4	X-{{}}	temperature,	e	U	percentage(0100
		status			%)

The two communication objects apply to colour temperature adjustment. Telegrams: 2000...7000 K

Under normal control, used for sending the control telegram of the colour temperature to the bus.

49	KNX Channel	Brightness value	1byt	C,T	5.001
5	X-{{}}		е		percentage(0100
					%)
49	KNX Channel	Brightness, status	1byt	C,W,T,	5.001
7	X-{{}}		e	U	percentage(0100
					%)

These two communication objects apply to brightness control. Telegrams: 0...100%

Obj.495: Under normal control, used for sending the dimming telegram of the brightness value to the bus, that is, sending the brightness value.

Obj.497: Under normal or directly control & (Brightness+Colour Temperature), used for receiving the brightness status responded from the dimming actuator.

49	KNX Channel	Warm white	1byt	C,T	5.001
5	X-{{}}	brightness	e		percentage(0100
					%)





49	KNX Channel	Warm white	1byt	C,W,T,	5.001
7	X-{{}}	brightness, status	е	U	percentage(0100
					%)

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

Obj.495: Under directly control, used for sending the warm white dimming telegram to the bus, that is, sending the warm white brightness value.

Obj.497: Under directly control & (Warm/Cool white brightness), used for receiving the warm white brightness status responded from the dimming actuator.

49	KNX Channe	l Cool white	1byt	C,T	5.001
6	X-{{}}	brightness	е		percentage(0100
					%)
49	KNX Channe	l Cool white	1byt	C,W,T,	5.001
8	X-{{}}	brightness, status	e	U	percentage(0100
					%)

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

Obj.496: Under directly control, used for sending the cool white dimming telegram to the bus, that is, sending the cool brightness value.

Obj.498: Under directly control & (Warm/Cool white brightness), used for receiving the cool white brightness status responded from the dimming actuator.

48	KNX Ch	nannel	Switch	1bit	С,Т	1.001 switch
5	X-{{}}					
49	KNX Ch	nannel	Switch, status	1bit	с,w,т,	1.001 switch
0	X-{{}}				U	



This communication object apply to control light switches. Telegrams:

1——switch on the light

0-switch off the light

Obj.485: Used for sending On/Off telegrams to the bus, to control the light on/off.

Obj.490: Used for receiving On/Off status responded from other bus devices.

Table 6.10.3 "Colour and colour temperature control" communication object

# 6.10.4 "Curtain and Blind" Communication object

■₹ 485	KNX Channel 1	Open/Close	1 bit	С	-	÷.	Т	1.	open/close	低
₩\$486	KNX Channel 1	Stop	1 bit	С			Т	050	step	低
■₹ 487	KNX Channel 1	Curtain position	1 byte	C	-	-	Т	-	percentage (0100%)	低
■2 490	KNX Channel 1	Curtain position, status	1 byte	С	-	W	т	U	percentage (0100%)	低

### Curtain position

■≵ 485	KNX Channel 1	Up/Down	1 bit	С	<u>.</u>	12	т	2	up/down	低
∎‡ 486	KNX Channel 1	Stop	1 bit	С	5	(	Т	-	step	低
■≵ 487	KNX Channel 1	Blind position	1 byte	С	9	-	Т	2	percentage (0100%)	低
■≵ 490	KNX Channel 1	Blind position, status	1 byte	С	-	W	Т	U	percentage (0100%)	低

#### Roller blind position

■2 485	KNX Channel 1	Up/Down	1 bit	C	-	· •·	Т	2	up/down	低
■2 486	KNX Channel 1	Stop/Slat adj.	1 bit	С	-	57	Т	5	step	低
487	KNX Channel 1	Blind position	1 byte	С	-	-	Т	-	percentage (0100%)	低
■2 488	KNX Channel 1	Slat position	1 byte	С	-		Т	-	percentage (0100%)	低
■2 490	KNX Channel 1	Blind position, status	1 byte	С	-	W	Т	U	percentage (0100%)	低
■2 491	KNX Channel 1	Slat position, status	1 byte	С	-	W	Т	U	percentage (0100%)	低

### Venetian blind position and slat

485	KNX Channel 1	Open/Close	1 bit	С	-	φ.	Т	-	open/close	低
<b>■</b> ‡ 486	KNX Channel 1	Stop	1 bit	С	5	5	Т	-	step	低

### Curtain step/move

■≵ 485	KNX Channel 1	Up/Down	1 bit	С	÷	-	Т	-	up/down	低
₩\$486	KNX Channel 1	Stop	1 bit	С	5	-	Т	-	step	低

Roller blind step/move

## Fig.6.10.4 "Curtain and blind" communication object





KNX/EIB	
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NO.	Name	<b>Object Function</b>	Data Type	Flag	DPT
485	KNX Channel	Open/Close	1bit	С,Т	1.009 open/close
	X-{{}}				
486	KNX Channel	Stop	1bit	С,Т	1.007 step
	X-{{}}				
487	KNX Channel	Curtain position	1byt	С,Т	5.001
	X-{{}}		e		percentage(0100
					%)
490	KNX Channel	Curtain position,	1byt	с,w,т,	5.001
	X-{{}}	status	е	U	percentage(0100
					%)

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

Obj.485: Used for sending the telegram to the bus, to control curtain open/close.

Telegrams:

1——Close the curtain

0——Open the curtain

Obj.486: Used for sending the telegram to the bus, to stop curtain movement.

Telegrams:

1——Stop

Obj.487: Used for sending a telegram to control the position of the curtain to the bus. Telegrams: 0...100%



Obj.490: Used for receiving a curtain position status in response to the window curtain actuator on the bus. Telegrams: 0...100%

485	KNX	Channel	Up/Down	l	1bit	С,Т	1.008 up/down
	X-{{}	}					
486	KNX	Channel	Stop		1bit	С,Т	1.007 step
	X-{{}	}					
487	ких	Channel	Blind posi	ition	1byt	C,T	5.001
	X-{{}}				е		percentage(0100
							%)
490	ких	Channel	Blind	position,	1byt	C,W,T,	5.001
	X-{{}}		status		e	U	percentage(0100
							%)

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

Obj.485: Used for sending the telegram to the bus, to control blind up/down.

Telegrams:

1-Move down

0—Move up

Obj.487: Used for sending a telegram to control the position of the roller blind to the bus. Telegrams: 0...100%

Obj.490: Used for receiving a roller blind position status in response to the roller blind actuator on the bus. Telegrams: 0...100%

Obj.486 is the same as above.

485	KNX	Channel	Up/Down	1bit	С,Т	1.008 up/down
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	X-{{}	}				
486	ких	Channel	Stop/Slat adj.	1bit	С,Т	1.007 step
	X-{{}	}				
487	KNX	Channel	Blind position	1byte	С,Т	5.001
	X-{{}	}				percentage(0100
						%)
488	ких	Channel	Slat position	1byte	С,Т	5.001
	X-{{}}					percentage(0100
						%)
490	ких	Channel	Blind position,	1byte	C,W,T,	5.001
	X-{{}	}	status		U	percentage(0100
						%)
491	ких	Channel	Slat position,	1byte	C,W,T,	5.001
	X-{{}	}	status		U	percentage(0100
						%)

Venetian blind position and slat: apply to a blind with slat. Support to up, down, stop, position and slat adjustment, position and slat status feedback.

Obj.485、Obj.487 and Obj.490 are same as above.

Obj.486: Used for sending a telegram to the bus to stop the curtain movement or adjust the slat angle. Telegrams:

1—Stop/Slat adj. Down

0—Stop/Slat adj. Up

Obj.488: Used for sending a telegram to control the position of the blind to the bus. Telegrams: 0...100%



Obj.491: Used for receiving a blind position status in response to the blind actuator on

the bus. Telegrams: 0...100%

485	KNX	Channel	Open/Close	1bit	С, Т	1.009 open/close
	X-{{}}					
486	KNX	Channel	Stop	1bit	С, Т	1.007 step
	X-{{}}					

Curtain step/move: these two communication objects apply to open and close curtain. Support to open, close, stop.

Obj.485: Used for sending the telegram to the bus, to control curtain open/close.

Telegrams:

1——Close the curtain

0——Open the curtain

Obj.486: Used for sending the telegram to the bus, to stop curtain movement.

Telegrams:

1—Stop

485	KNX	Channel	Up/Down	1bit	С, Т	1.008 up/down
	X-{{}}					
486	ких	Channel	Stop	1bit	С, Т	1.007 step
	X-{{}}					

Roller blind step/move: these two communication objects apply to roller blind. Support to up, down, stop.

Obj.485: Used for sending the telegram to the bus, to control blind up/down.

Telegrams:



1-Move down

0——Move up

Obj.486 is the same as above.

Table 6.10.4 "Curtain and blind" communication object

# 6.10.5 "Air conditioner control" Communication object

	Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority	
∎‡ 4	.83	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low	
∎₹ 4	84	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low	
∎₹ 4	85	KNX Channel 1	Power on/off			1 bit	C	-	(14)	Т	-	switch	Low	
∎‡ 4	-86	KNX Channel 1	Current setpoint adjustment			2 bytes	С	-		Т	-	temperature (°C)	Low	
■₹ 4	88	KNX Channel 1	Fan speed			1 byte	C	-	(14)	Т	-	percentage (0100%)	Low	
■2 4	.91	KNX Channel 1	Control mode			1 byte	С	-		Т	-	HVAC control mode	Low	
∎‡ 4	.92	KNX Channel 1	Power on/off, status			1 bit	C	-	W	Т	U	switch	Low	
∎‡ 4	.93	KNX Channel 1	External temperature sensor			2 bytes	С	-	W	Т	U	temperature (°C)	Low	
∎‡ 4	94	KNX Channel 1	Current temperature setpoint, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low	
∎‡ 4	96	KNX Channel 1	Fan speed, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low	
∎₹ 4	98	KNX Channel 1	Control mode, status			1 byte	С	-	W	Т	U	HVAC control mode	Low	
=======	00	KNX Channel 1	Timer			1 bit	С	-	W	-	-	enable	Low	

### Air conditioner

485	KNX Channel 1	Power on/off	1 bit	C	-	-	Т	-	switch	低
∎≵ 486	KNX Channel 1	Current setpoint adjustment	1 byte	С	2		Т	2	counter pulses (0255)	低
∎‡ 488	KNX Channel 1	Fan speed	1 byte	С	-	-	Т	-	percentage (0100%)	低
■≵ 489	KNX Channel 1	Vanes swing (1-swing,0-stop)	1 bit	С	-	- 2	Т	2	start/stop	低
∎≵ 491	KNX Channel 1	Control mode	1 byte	С	-	-	Т	-	HVAC control mode	低
∎‡ 492	KNX Channel 1	Power on/off, status	1 bit	С	2	W	Т	U	switch	低
∎‡ 493	KNX Channel 1	External temperature sensor	2 bytes	С	-	W	Т	U	temperature (°C)	低
₩\$ 494	KNX Channel 1	Current temperature setpoint, status	1 byte	С	2	W	T	U	counter pulses (0255)	低
∎≵ 496	KNX Channel 1	Fan speed, status	1 byte	С	-	W	Т	U	percentage (0100%)	低
<b>■‡</b>  497	KNX Channel 1	Vanes swing (1-swing,0-stop), status	1 bit	С	2	W	Т	U	start/stop	低
■‡ 498	KNX Channel 1	Control mode, status	1 byte	C	-	W	Т	U	HVAC control mode	低
<b>₽‡</b>  500	KNX Channel 1	Timer	1 bit	С	2	W	12	2	enable	低

Air conditioner(with swing)


Fig.6.10.5 "Air conditioner control" communication object

NO.	Name	Object Function	Dat	Fla	DPT
			а	g	
			Тур		
			e		
48	KNX Channel	Power on/off	1bit	С,Т	1.001 switch
5	X-{{}}				

The communication object is used to send the power on/off telegram of air condition, to control air condition power on/off on the KNX bus.

48	КNХ	Channel	Current	setpoint	2byt	С,Т	9.001	
6	X-{{}	}	adjustment		e		temperat	ure
					1byt		5.010	counter
					е		pulses	

The communication object is used to adjust setpoint temperature via the bus, and send telegram value to the bus.

Note: the object type is set by parameters, 2byte is suitable for KNX standard, 1byte is KNX non-standard, usually suitable for some customized control classes, the telegram value is the actual temperature value, such as 17  $^\circ\!\!\!\!\!^\circ$  telegram value is 17 (decimal number).

48	KNX Channel	Fan speed	1byt	С,Т	5.001 percentage					
8	X-{{}}		е		5.100 fan stage					
The communication object is used to send control telegram of each fan speed to the bus										
Teleg	ram value is determi	ned by parameter setting data	atype.							

48 KNX Ch	annel Vanes	swing 1	bit C,T	1.010 start/stop
-----------	-------------	---------	---------	------------------





9	X-{{}}	(1-swing,0-stop)			
т	his communication	object is visible when "A	ir con	ditione	er (with swing)" is
selec	ted.Used to send te	egram controlling vanes swing	to the	bus. T	elegrams:
49	KNX Channe	Control mode	1byt	С,Т	20.105 HVAC
1	X-{{}}		е		control mode
Т	he communication o	bject is used to send control tele	egram c	of each	air condition mode to
the b	us. Different telegra	m means different control moc	le.		
0-Aut	to, 1- Heating, 3-Co	oling, 9-Fan, 14-Dehumidity, o	ther res	served	•
49	KNX Channe	Power on/off, status	1bit	С,	1.001 switch
2	X-{{}}			w,	
				T,U	
Т	he communication o	bject is used to receive the pov	ver on/	off tele	egram of air condition
from	the bus, and feedba	ck to screen display. Telegram	s:		
	1——	On			
	0	Off			
49	KNX Channe	External temperature	2byt	C,	9.001
3	X-{{}}	sensor	е	w,	temperature
				T,U	
Т	he communication o	bject is used to receive the roo	om tem	peratı	ire from the bus, and
send	read request cyclica	lly, and feedback to screen dis	play.	1	
49	KNX Channe	Current temperature	2byt	С,	9.001
4	X-{{}}	setpoint, status	e	w,	temperature
			1byt	T,U	5.010 counter
			е		pulses



Т	he comm	unication ob	ject is used to receive the cur	rent set	tpoint	temperature from the
bus,	and feedb	ack to scree	en display.			
49	KNX	Channel	Fan speed, status	1byt	С,	5.001 percentage
6	X-{{}	}		e	w,	5.100 fan stage
					T,U	
Т	he comm	unication ob	pject is used to receive the cu	irrent fa	an spe	ed from the bus, and
feedt	back to sci	reen display	. Telegram value is determine	ed by pa	arame	ter setting datatype.
49	КNХ	Channel	Vanes swing	1bit	С,	1.010 start/stop
7	X-{{}	}	(1-swing,0-stop), status		w,	
					T,U	
Т	his comm	unication o	bject is visible when "Air cor	ditione	r (with	n swing)" is selected.
Used	to receive	e vanes swir	ng status from the bus. Teleg	rams:		
		1——S	wing			
		0 5	top			
		05				
49	KNX	Channel	Control mode, status	1byt	С,	20.105 HVAC
8	X-{{}	}		e	w,	control mode
					T,U	
Т	he commu	unication ob	ject is used to receive the curr	ent con	trol m	ode from the bus, and
feedb	back to sci	reen display	. Different telegram means di	ifferent	contro	ol mode.
0	)-Auto, 1-	Heating, 3-	Cooling, 9-Fan, 14-Dehumidit	y, othe	r rese	rved.
50	ких	Channel	Timer	1bit	С,	1.003 enable
0	X-{{}	}			w	
Т	he comm	unication ob	ject is visible when timer fur	nction e	nabled	d. Used to turn on/off
the ti	iming via	the bus.Tele	egrams:			



1-On

2-Off

Table 6.10.5 "Air conditioner control" communication object

## 6.10.6 "Room temperature unit control" Communication object

Numb	ber *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₩\$ 483		KNX Channel 1	Device online, status			1 bit	С	÷	W	Т	U	switch	Low
■2 484		KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
∎‡ 486		KNX Channel 1	Current setpoint adjustment			2 bytes	С	-	( <b>4</b> )	Т	40	temperature (°C)	Low
∎≵ 487		KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С	-		Т	-	step	Low
■\$ 490		KNX Channel 1	Heating/Cooling mode			1 bit	C	-	( <b>1</b> 4)	Т	-	cooling/heating	Low
<b>■‡</b>  493		KNX Channel 1	External temperature sensor			2 bytes	С	-	W	Т	U	temperature (°C)	Low
∎‡ 494		KNX Channel 1	Current setpoint adjustment, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
∎‡ 495		KNX Channel 1	Current setpoint display, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
∎‡ 498		KNX Channel 1	Heating/Cooling mode, status			1 bit	С	-	W	Т	U	cooling/heating	Low
■2 500		KNX Channel 1	Timer			1 bit	С	-	W	-	-	enable	Low

#### Room temperature unit

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
<b>4</b> 85	KNX Channel 1	Power on/off			1 bit	С	-	-	Т		switch	Low
■2 486	KNX Channel 1	Current setpoint adjustment			2 bytes	С	-	1	Т	-	temperature (°C)	Low
■≵ 487	KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С	-	1. T	Т		step	Low
■2 490	KNX Channel 1	Heating/Cooling mode			1 bit	С	-	12	Т	-	cooling/heating	Low
₩\$ 492	KNX Channel 1	Power on/off, status			1 bit	С	-	W	-	0.70	switch	Low
₩2 493	KNX Channel 1	External temperature sensor			2 bytes	С	-	W	Т	U	temperature (°C)	Low
₩2 494	KNX Channel 1	Current setpoint adjustment, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
₩2 495	KNX Channel 1	Current setpoint display, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
■2 498	KNX Channel 1	Heating/Cooling mode, status			1 bit	С	-	W	Т	U	cooling/heating	Low
<b>₽</b>	KNX Channel 1	Timer			1 bit	С	-	W	-	-	enable	Low

#### Room temperature unit(with on/off)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>↓</b> 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
₹ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	2	enable	Low
₹ 486	KNX Channel 1	Current setpoint adjustment			2 bytes	С	÷	0.00	т	-	temperature (°C)	Low
₹ 487	KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С	2	12	Т	2	step	Low
₹ 490	KNX Channel 1	Heating/Cooling mode			1 bit	С	-		Т	-	cooling/heating	Low
₹ 491	KNX Channel 1	Operation mode			1 byte	С	2	12	т	2	HVAC mode	Low
₹ 493	KNX Channel 1	External temperature sensor			2 bytes	C	÷	W	т	U	temperature (°C)	Low
₹494	KNX Channel 1	Current setpoint adjustment, status			2 bytes	С	2	W	Т	U	temperature (°C)	Low
₹ 495	KNX Channel 1	Current setpoint display, status			2 bytes	C	-	W	Т	U	temperature (°C)	Low
498	KNX Channel 1	Heating/Cooling mode, status			1 bit	С	2	W	Т	U	cooling/heating	Low
₹ 499	KNX Channel 1	Operation mode, status			1 byte	C	-	W	Т	U	HVAC mode	Low
₹ 500	KNX Channel 1	Timer			1 bit	С	2	W	2	20	enable	Low

Room temperature unit(with operation mode)

# S10



## KNX/EIB KNX Smart Touch

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	÷	W	T	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	2	enable	Low
■≵ 485	KNX Channel 1	Power on/off			1 bit	C		-	Т	-	switch	Low
■≵ 486	KNX Channel 1	Current setpoint adjustment			2 bytes	C	2	2	Т	2	temperature (°C)	Low
<b>■‡</b>  487	KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С		-	Т	-	step	Low
<b>↓</b> 490	KNX Channel 1	Heating/Cooling mode			1 bit	С	12	2	Т	12	cooling/heating	Low
■2 491	KNX Channel 1	Operation mode			1 byte	С		-	Т	-	HVAC mode	Low
<b>₽‡</b>  492	KNX Channel 1	Power on/off, status			1 bit	С	2	W	-	5	switch	Low
<b>■‡</b>  493	KNX Channel 1	External temperature sensor			2 bytes	С	-	W	Т	U	temperature (°C)	Low
■≵ 494	KNX Channel 1	Current setpoint adjustment, status			2 bytes	C	4	W	Т	U	temperature (°C)	Low
■≵ 495	KNX Channel 1	Current setpoint display, status			2 bytes	С		W	Т	U	temperature (°C)	Low
<b>↓</b> 498	KNX Channel 1	Heating/Cooling mode, status			1 bit	С	2	W	Т	U	cooling/heating	Low
■2 499	KNX Channel 1	Operation mode, status			1 byte	С		W	Т	U	HVAC mode	Low
■2 500	KNX Channel 1	Timer			1 bit	C	12	W	2	12	enable	Low

#### Room temperature unit(with on/off & operation mode)

Number	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎‡ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	-	enable	Low
■≵ 486	KNX Channel 1	Current setpoint adjustment			2 bytes	С	-	878	Т	5.75	temperature (°C)	Low
∎≵ 487	KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С	2	-	Т	-	step	Low
∎≵ 488	KNX Channel 1	Fan speed			1 byte	С	-	878	Т	5.75	percentage (0100%)	Low
■≵ 490	KNX Channel 1	Heating/Cooling mode			1 bit	С	2	-	Т	-	cooling/heating	Low
<b>■‡</b>  491	KNX Channel 1	Operation mode			1 byte	С	-	878	Т	5.75	HVAC mode	Low
∎‡ 493	KNX Channel 1	External temperature sensor			2 bytes	С	21	W	Т	U	temperature (°C)	Low
∎≵ 494	KNX Channel 1	Current setpoint adjustment, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
∎≵ 495	KNX Channel 1	Current setpoint display, status			2 bytes	С	2	W	Т	U	temperature (°C)	Low
■≵ 496	KNX Channel 1	Fan speed, status			1 byte	C	•	W	Т	U	percentage (0100%)	Low
∎≵ 498	KNX Channel 1	Heating/Cooling mode, status			1 bit	С	2	W	Т	U	cooling/heating	Low
■≵ 499	KNX Channel 1	Operation mode, status			1 byte	С	-	W	Т	U	HVAC mode	Low
■≵ 500	KNX Channel 1	Timer			1 bit	С	2	W	2	-	enable	Low

#### Room temperature unit(with operation mode & fan speed)

Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
KNX Channel 1	Locking object			1 bit	С	2	W	2	2	enable	Low
KNX Channel 1	Power on/off			1 bit	С	-	878	Т	-	switch	Low
KNX Channel 1	Current setpoint adjustment			2 bytes	С	2	121	Т	12	temperature (°C)	Low
KNX Channel 1	Current setpoint adjustment(1bit)			1 bit	С	-	878	Т		step	Low
KNX Channel 1	Fan speed			1 byte	С	2	-	Т	-	percentage (0100%)	Low
KNX Channel 1	Heating/Cooling mode			1 bit	С	-	878	Т		cooling/heating	Low
KNX Channel 1	Operation mode			1 byte	С	2	-	Т	12	HVAC mode	Low
KNX Channel 1	Power on/off, status			1 bit	С	-	W	-		switch	Low
KNX Channel 1	External temperature sensor			2 bytes	С	2	W	Т	U	temperature (°C)	Low
KNX Channel 1	Current setpoint adjustment, status			2 bytes	С	-	W	Т	U	temperature (°C)	Low
KNX Channel 1	Current setpoint display, status			2 bytes	С	2	W	Т	U	temperature (°C)	Low
KNX Channel 1	Fan speed, status			1 byte	С	•	W	Т	U	percentage (0100%)	Low
KNX Channel 1	Heating/Cooling mode, status			1 bit	С	2	W	Т	U	cooling/heating	Low
KNX Channel 1	Operation mode, status			1 byte	C	•	W	Т	U	HVAC mode	Low
KNX Channel 1	Timer			1 bit	С	2	W	2	12	enable	Low
	Name       KNX Channel 1       KNX Channel 1	Name     Object Function       KNX Channel 1     Device online, status       KNX Channel 1     Locking object       KNX Channel 1     Power on/off       KNX Channel 1     Power on/off       KNX Channel 1     Current setpoint adjustment       KNX Channel 1     Current setpoint adjustment(Ibit)       KNX Channel 1     Fan speed       KNX Channel 1     Power on/off, status       KNX Channel 1     Operation mode       KNX Channel 1     External temperature sensor       KNX Channel 1     Current setpoint dijustment, status       KNX Channel 1     Current setpoint adjustment, status       KNX Channel 1     Current setpoint display, status       KNX Channel 1     Fan speed, status       KNX Channel 1     Operation mode, status       KNX Channel 1     Operation mode, status	Name     Object Function     Description       KNX Channel 1     Device online, status     KNX Channel 1     Locking object       KNX Channel 1     Power on/off     KNX Channel 1     Fower on/off       KNX Channel 1     Current setpoint adjustment     KNX Channel 1     Current setpoint adjustment(Ibit)       KNX Channel 1     Current setpoint adjustment(Ibit)     KNX Channel 1     Fan speed       KNX Channel 1     Fan speed     KNX Channel 1     Fan speed       KNX Channel 1     Operation mode     KNX Channel 1     Fan speed       KNX Channel 1     Power on/off, status     KNX Channel 1     Fan speed, status       KNX Channel 1     External temperature sensor     KNX Channel 1     Current setpoint adjustment, status       KNX Channel 1     Current setpoint display, status     KNX Channel 1     KNX Channel 1       KNX Channel 1     Fan speed, status     KNX Channel 1     KNX Channel 1       KNX Channel 1     Gurrent setpoint display, status     KNX Channel 1     KNX Channel 1       KNX Channel 1     Fan speed, status     KNX Channel 1     KNX Cha	NameObject FunctionDescriptionGroup AddressKNX Channel 1Device online, statusKNX Channel 1Locking objectKNX Channel 1Power on/offKNX Channel 1Current setpoint adjustmentKNX Channel 1Current setpoint adjustmentKNX Channel 1Current setpoint adjustment(lbit)KNX Channel 1Fan speedKNX Channel 1Power on/off, statusKNX Channel 1Operation modeKNX Channel 1Power on/off, statusKNX Channel 1External temperature sensorKNX Channel 1Current setpoint dijustment, statusKNX Channel 1Current setpoint diplay, statusKNX Channel 1Fan speed, statusKNX Channel 1Current setpoint diplay, statusKNX Channel 1Gurent setpoint diplay, statusKNX Channel 1Fan speed, statusKNX Channel 1Heating/Cooling mode, statusKNX Channel 1Operation mode, statusKNX Channel 1Operation mode, statusKNX Channel 1Timer	NameObject FunctionDescriptionGroup AddressLengthKNX Channel 1Device online, status1 bitKNX Channel 1Locking object1 bitKNX Channel 1Power on/off1 bitKNX Channel 1Current setpoint adjustment2 bytesKNX Channel 1Current setpoint adjustment(1bit)1 bitKNX Channel 1Fan speed1 bitKNX Channel 1Fan speed1 bitKNX Channel 1Power on/off, status1 bitKNX Channel 1Operation mode1 bitKNX Channel 1Power on/off, status1 bitKNX Channel 1External temperature sensor2 bytesKNX Channel 1Current setpoint adjustment, status2 bytesKNX Channel 1Current setpoint display, status2 bytesKNX Channel 1Fan speed, status2 bytesKNX Channel 1Fan speed, status1 bitKNX Channel 1Fan speed, status1 bitKNX Channel 1Gurrent setpoint display, status1 bitKNX Channel 1Fan speed, status1 bitKNX Channel 1Heating/Cooling mode, status1 bitKNX Channel 1Operation mode, status1 bitKNX Channel 1Fan speed, status1 bitKNX Channel 1Operation mode, status1 bitKNX Channel 1Operation mode, status1 bitKNX Channel 1Timer1 bit	NameObject FunctionDescriptionGroup AddressLengthCKNX Channel 1Device online, status1 bitCKNX Channel 1Locking object1 bitCKNX Channel 1Power on/off	NameObject FunctionDescriptionGroup AddressLengthCRKNX Channel 1Device online, status1 bitC-KNX Channel 1Locking object1 bitC-KNX Channel 1Power on/off-1 bitC-KNX Channel 1Current setpoint adjustment-2 bytesC-KNX Channel 1Current setpoint adjustment(1bit)-1 bitC-KNX Channel 1Fan speed-1 bitC-KNX Channel 1Heating/Cooling mode-1 bitC-KNX Channel 1Operation mode-1 bitC-KNX Channel 1Power on/off, status-1 bitC-KNX Channel 1External temperature sensor2 bytesC-KNX Channel 1Current setpoint adjustment, status2 bytesC-KNX Channel 1Current setpoint diplat, status2 bytesC-KNX Channel 1Current setpoint diplat, status2 bytesC-KNX Channel 1Fan speed, status1 bitC-KNX Channel 1Fan speed, status1 bitC-KNX Channel 1Heating/Cooling mode, status1 byteC-KNX Channel 1Fan speed, status1 byteC-KNX Channel 1Operation mode, status1 byteC-KNX Channel 1 <td< td=""><td>NameObject FunctionDescriptionGroup AddressLengthCRWKNX Channel 1Device online, status1 bitC-WKNX Channel 1Locking object1 bitC-WKNX Channel 1Power on/off1 bitC-1 bitC-KNX Channel 1Power on/off-1 bitCKNX Channel 1Current setpoint adjustment-1 bitCKNX Channel 1Current setpoint adjustment(1bit)-1 bitCKNX Channel 1Fan speed-1 bitCKNX Channel 1Heating/Cooling mode-1 bitCKNX Channel 1Operation mode-1 bitCKNX Channel 1External temperature sensor-2 bytesC-WKNX Channel 1Current setpoint adjustment, status-2 bytesC-WKNX Channel 1Current setpoint adjustment, status-2 bytesC-WKNX Channel 1Current setpoint display, status-2 bytesC-WKNX Channel 1Fan speed, status-1 byteC-WKNX Channel 1Heating/Cooling mode, status-1 byteC-WKNX Channel 1Operation mode, status-1 byteC</td></td<> <td>Name     Object Function     Description     Group Address     Length     C     R     W     T       KNX Channel 1     Device online, status     1 bit     C     -     W     T       KNX Channel 1     Locking object     1 bit     C     -     W     T       KNX Channel 1     Power on/off     1 bit     C     -     T       KNX Channel 1     Current setpoint adjustment     2 bytes     C     -     T       KNX Channel 1     Current setpoint adjustment(1bit)     1     C     -     T       KNX Channel 1     Fan speed     1     C     -     T       KNX Channel 1     Fan speed     1     C     -     T       KNX Channel 1     Poertion mode     1     C     -     T       KNX Channel 1     Operation mode     1     bit     C     -     T       KNX Channel 1     Power on/off, status     1     bytes     C     -     W     T       KNX Channel 1</td> <td>NameObject FunctionDescriptionGroup AddressLengthCRWTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Power on/off-1 bitC-WT-KNX Channel 1Current setpoint adjustment-2 bytesC-TKNX Channel 1Current setpoint adjustment(lbit)-1 bitC-TKNX Channel 1Fan speed-1 bitC-T<td>NameObject FunctionDescriptionGroup AddressLengthCRWTUData TypeKNX Channel 1Device online, status1 bitC-WTUswitchKNX Channel 1Locking object1 bitC-WTUswitchKNX Channel 1Power on/off-1 bitC-W-enableKNX Channel 1Current setpoint adjustment-2 bytesC-T-switchKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Fan speed-1 bitC-T-stepKNX Channel 1Operation mode-1 bitC-T-switchKNX Channel 1Power on/off status-1 bitC-T0temperature (*C)KNX Channel 1Power on/off status-1 bitC-WTUtemperature (*C)KNX Channel 1Power on/off status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, sta</td></td>	NameObject FunctionDescriptionGroup AddressLengthCRWKNX Channel 1Device online, status1 bitC-WKNX Channel 1Locking object1 bitC-WKNX Channel 1Power on/off1 bitC-1 bitC-KNX Channel 1Power on/off-1 bitCKNX Channel 1Current setpoint adjustment-1 bitCKNX Channel 1Current setpoint adjustment(1bit)-1 bitCKNX Channel 1Fan speed-1 bitCKNX Channel 1Heating/Cooling mode-1 bitCKNX Channel 1Operation mode-1 bitCKNX Channel 1External temperature sensor-2 bytesC-WKNX Channel 1Current setpoint adjustment, status-2 bytesC-WKNX Channel 1Current setpoint adjustment, status-2 bytesC-WKNX Channel 1Current setpoint display, status-2 bytesC-WKNX Channel 1Fan speed, status-1 byteC-WKNX Channel 1Heating/Cooling mode, status-1 byteC-WKNX Channel 1Operation mode, status-1 byteC	Name     Object Function     Description     Group Address     Length     C     R     W     T       KNX Channel 1     Device online, status     1 bit     C     -     W     T       KNX Channel 1     Locking object     1 bit     C     -     W     T       KNX Channel 1     Power on/off     1 bit     C     -     T       KNX Channel 1     Current setpoint adjustment     2 bytes     C     -     T       KNX Channel 1     Current setpoint adjustment(1bit)     1     C     -     T       KNX Channel 1     Fan speed     1     C     -     T       KNX Channel 1     Fan speed     1     C     -     T       KNX Channel 1     Poertion mode     1     C     -     T       KNX Channel 1     Operation mode     1     bit     C     -     T       KNX Channel 1     Power on/off, status     1     bytes     C     -     W     T       KNX Channel 1	NameObject FunctionDescriptionGroup AddressLengthCRWTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Device online, status1 bitC-WTUKNX Channel 1Power on/off-1 bitC-WT-KNX Channel 1Current setpoint adjustment-2 bytesC-TKNX Channel 1Current setpoint adjustment(lbit)-1 bitC-TKNX Channel 1Fan speed-1 bitC-T <td>NameObject FunctionDescriptionGroup AddressLengthCRWTUData TypeKNX Channel 1Device online, status1 bitC-WTUswitchKNX Channel 1Locking object1 bitC-WTUswitchKNX Channel 1Power on/off-1 bitC-W-enableKNX Channel 1Current setpoint adjustment-2 bytesC-T-switchKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Fan speed-1 bitC-T-stepKNX Channel 1Operation mode-1 bitC-T-switchKNX Channel 1Power on/off status-1 bitC-T0temperature (*C)KNX Channel 1Power on/off status-1 bitC-WTUtemperature (*C)KNX Channel 1Power on/off status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, sta</td>	NameObject FunctionDescriptionGroup AddressLengthCRWTUData TypeKNX Channel 1Device online, status1 bitC-WTUswitchKNX Channel 1Locking object1 bitC-WTUswitchKNX Channel 1Power on/off-1 bitC-W-enableKNX Channel 1Current setpoint adjustment-2 bytesC-T-switchKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Current setpoint adjustment(1bit)-1 bitC-T-stepKNX Channel 1Fan speed-1 bitC-T-stepKNX Channel 1Operation mode-1 bitC-T-switchKNX Channel 1Power on/off status-1 bitC-T0temperature (*C)KNX Channel 1Power on/off status-1 bitC-WTUtemperature (*C)KNX Channel 1Power on/off status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, status-2 bytesC-WTUtemperature (*C)KNX Channel 1Current setpoint adjustment, sta

Room temperature unit(with on/off & operation mode & fan speed)

## Fig.6.10.6 "Room temperature unit control" communication object





NO.	Name		Object Function	Data	Fla	DPT
				Тур	g	
				е		
485	КNХ	Channel	Power on/off	1bit	С,Т	1.001 switch
	X-{{}}	F				

The communication object is used to send the power on/off telegram of RTC, to control RTC power on/off on the KNX bus.

The system needs to return to the status before voltage failure when voltage recovery, and send status request of function point: control mode, operation mode, fan speed, setpoint temperature, external temperature sensor.

486	KNX Channel	Current	setpoint	2byt	C,T	9.001
	X-{{}}	adjustment		е		temperature

The communication object is used to send the power on/off telegram of RTC, to control RTC power on/off on the KNX bus.

The system needs to return to the status before voltage failure when voltage recovery, and send status request of function point: control mode, operation mode, fan speed, setpoint temperature, external temperature sensor.

487	κΝΧ	Channel	Current	setpoint	1bit	С,Т	1.007 step
	X-{{}}	-	adjustment(1bit)				

The communication object is visible when object datatype of setpoint temperature adjustment is 1 bit. Through the screen to adjust setpoint temperature, 1 bit object suitable for relatively adjusts, and sent telegram value to the bus.

1——Increase setpoint

0—Decrease setpoint



488	KNX	Channel	Fan speed	1byt	С,Т	5.001
	X-{{}	•}		e		percentage
						5.100 fan
						stage
Т	he commı	inication obj	ect is used to send control telegra	am of ea	ach far	speed to the bus.
Teleg	ram value	e is determin	ed by parameter setting datatyp	be.		
489	KNX	Channel	Fan automatic operation	1bit	C,T	1.003 enable
	X-{{}	•}				
т	he commu	inication obj	ect is used to send control telegra	am of fa	n auto	matic operation to
the b	us. Telegr	ams:				
		1——Ac	tivate auto			
		0——Ca	ancel auto			
490	КNХ	Channel	Heating/Cooling mode	1bit	С,Т	1.100
	X-{{}	•}				cooling/heatin
						g
т	he commı	unication obj	iect is used to send telegram fo	r switch	ning co	ooling and heating
functi	ions to the	e bus. Telegr	ams:			
		1——He	eating			
	1	0——Co	ooling	1		
491	КNХ	Channel	Operation mode	1byt	С,Т	20.102 HVAC
	X-{{}	•}		е		mode
Т	he commı	unication obj	ect is used to send the telegram	of the	room (	operation mode to
the b	us. Differe	ent telegram	means different control mode:			



1	-Comfort, 2-S	standby,	3-Economy, 4-Protection, other	reserve	ed.	
492	KNX C	hannel	Power on/off, status	1bit	С,	1.001 switch
	X-{{}}				w	
Т	he communica	ation obj	ect is used to receive the power	on/off t	elegra	m of RTC from the
bus, a	and feedback	to scree	n display. Telegrams:			
		1——Or	ı			
		0——Of	f			
493	KNX C	hannel	External temperature	2byt	С,	9.001
	X-{{}}		sensor	е	w,	temperature
					T,U	
Т	he communica	ation obj	ect is visible when the external se	ensor is	selecte	ed.Used to receive
the re	oom tempera	ture fror	n the bus, and send read requ	iest cyc	lically,	, and feedback to
scree	n display.					
494	KNX C	hannel	Current setpoint	2byt	С,	9.001
	X-{{}}		adjustment, status	e	w,	temperature
					T,U	
Т	he communica	ation obj	ect is used to receive the curren	t setpoi	nt tem	perature from the
bus, a	and feedback	to scree	n display.			
495	KNX C	hannel	Current setpoint display,	2byt	С,	9.001
	X-{{}}		status	e	w,	temperature
					T,U	
Т	he communic	ation ob	ject is visible when Setpoint t	empera	ture is	s selected for the
paran	neter "Interf	ace disp	play temperature". Used to	receive	the	current setpoint
temp	erature and to	o display	it on the screen.			
496	KNX C	hannel	Fan speed, status	1byt	С,	5.001





	X-{{}}		e	w,	percentage
				T,U	5.100 fan
					stage
Т	he communication ob	ject is used to receive the curre	nt fan s	peed f	from the bus, and
feedb	ack to screen display	Telegram value is determined b	y parar	neter	setting datatype.
497	KNX Channel	Fan automatic operation,	1bit	С,	1.003 enable
	X-{{}}	status		w,	
				T,U	
Т	he communication obj	ect is used to receive feedback st	atus of	fan au	itomatic operation
from	the bus. Telegrams:				
	1A	utomatic			
	0Ca	ancel automatic			
498	KNX Channel	Heating/Cooling mode,	1bit	С,	1.100
	X-{{}}	status		w,	cooling/heatin
				T,U	g
т	he communication ob	ject is used to receive the heati	ng and	coolin	g status from the
bus, a	and feedback to scree	n display. Telegrams:			
	1	leating			
	0(	Cooling			
499	KNX Channel	Operation mode, status	1byt	С,	20.102 HVAC
	X-{{}}		е	w,	mode
				T,U	
Т	he communication ob	ect is used to receive the telegra	am of R	ТС оре	eration mode from
the b	us. Different telegram	means different control mode:			



1	-Comfort, 2-Standby,	3-Economy, 4-Protection, other	reserv	ed.	
500	KNX Channel	Timer	1bit	С,	1.003 enable
	X-{{}}			w	
Т	he communication ob	ject is visible when timer function	on enat	oled. U	sed to turn on/off

the timing via the bus.

Table 6.10.6 "Room temperature control" communication object

## 6.10.7 "Ventilation system control" Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₹ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
₹484	KNX Channel 1	Locking object			1 bit	С	7	W	.7	-	enable	Low
₹ 485	KNX Channel 1	Power on/off			1 bit	C	-	-	Т	-	switch	Low
₹486	KNX Channel 1	Filter timer counter			2 bytes	С	a.	-	Т	-	time (h)	Low
₹ 487	KNX Channel 1	Filter alarm			1 bit	C		-	Т		alarm	Low
₹ 488	KNX Channel 1	Fan speed			1 byte	С		-	Т	-	percentage (0100%)	Low
₹ 490	KNX Channel 1	Heat recovery			1 bit	C	-	-	Т	-	enable	Low
₹ 492	KNX Channel 1	Power on/off, status			1 bit	С	5	W	:7	5	switch	Low
₹ 493	KNX Channel 1	Filter timer counter change			2 bytes	C	-	W	÷	(e	time (h)	Low
₹ 496	KNX Channel 1	Fan speed, status			1 byte	С	7	W	57	5	percentage (0100%)	Low
₹ 498	KNX Channel 1	Heat recovery, status			1 bit	C		W	-		enable	Low
₹ 499	KNX Channel 1	Filter timer reset			1 bit	С		W	-	-	reset	Low

Ventilation system





Number *	Name	Object Function	Description	Group Address	Length	C	R	W	Т	U	Data Type	Priority
₹483	KNX Channel 1	Device online, status			1 bit	С	-	W	T	U	switch	Low
₹ 484	KNX Channel 1	Locking object			1 bit	С	Ξ.	W	2	2	enable	Low
₹ 485	KNX Channel 1	Power on/off			1 bit	С		0.70	Т	-	switch	Low
₹ 486	KNX Channel 1	Filter timer counter			2 bytes	С	2	-	Т	2	time (h)	Low
₹ 487	KNX Channel 1	Filter alarm			1 bit	С			Т		alarm	Low
₹ 488	KNX Channel 1	Fan speed			1 byte	С	4	-	Т	2	percentage (0100%)	Low
₹ 489	KNX Channel 1	Fan automatic operation			1 bit	С	-		Т	-	enable	Low
≠ 490	KNX Channel 1	Heat recovery			1 bit	С	С.	-	Т	2	enable	Low
₹ 492	KNX Channel 1	Power on/off, status			1 bit	С		W	-	- 1	switch	Low
₽ 493	KNX Channel 1	Filter timer counter change			2 bytes	С	2	W	Ξ.	2	time (h)	Low
<b>↓</b> 494	KNX Channel 1	PM 2.5 value			2 bytes	С	-	W	Т	U	pulses	Low
≠ 496	KNX Channel 1	Fan speed, status			1 byte	С	с.	W	2	2	percentage (0100%)	Low
₹ 497	KNX Channel 1	Fan automatic operation, status			1 bit	С	-	W		-	enable	Low
₹ 498	KNX Channel 1	Heat recovery, status			1 bit	С	2	W	2	2	enable	Low
₹ 499	KNX Channel 1	Filter timer reset			1 bit	C	-	W	-	-	reset	Low

Ventilation system(with auto fan speed)

## Fig.6.10.7" Ventilation system control" communication object

NO.	Name	<b>Object Function</b>	Data	Fla	DPT
			Туре	g	
485	KNX Channel	Power on/off	1bit	С,Т	1.001 switch
	X-{{}}				
т	he communication ob	ject is used to send the p	ower o	n/off te	elegram of ventilation to
KNX I	bus. Telegrams:				

1——On 0——Off





486	KNX	Channel	Filter timer counter	2byt	С,Т	7.007 time(h)
	X-{{}	}		е		
ТІ	he commu	nication obj	ect is used to count the le	ength of	the filte	er. When the count value
chang	ges, it can	be sent to t	he bus.The unit of filter	time cou	inter is	in hours.
487	KNX	Channel	Filter alarm	1bit	С,Т	1.005 alarm
	X-{{}	}				
w	/hen the fi	lter is used f	or longer than the set val	ue, the c	commu	nication object issues an
alarm	i to remino	d the user to	p replace the filter. Teleg	ram valı	le:	-
		11	arm			
		1 N				
499				1	ст	
400		Channel	ran speed	IDyt	C, I	5.001 percentage
	X-{{}	}		е		5.100 fan stage
该	ह communi	ication objec	t 用于发送各档风速的控制	报文到总约	浅上。扎	8文值由 Parameter 设置的
数据 D	Data Type	决定				
489	KNX	Channel	Fan automatic	1bit	C,T	1.003 enable
	X-{{}	}	operation			
TI	he commu	inication obj	ect is visible when Ventil	ation sy	stem (	with auto fan speed) is
select	ted.					
U	sed to ena	able the auto	omatic operation of venti	lation sy	vstem.	
At	fter the d	evice is rese	et or programmed, the a	automat	ic opei	ration is not enabled by
defau	lt. Turn of	ff the machi	ne and manually adjust	the fan	speed	The scene can exit the
auton	natic opera	ation.				
ті	here is no	parameter	definition, default 1 - act	ive, 0 -	inactiv	е.



	X-{{}}	ŀ				
т	he commu	nication ob	ject is visible when the	"Heat re	ecovery	function" parameter is
enabl	ed.Used to	send the c	ontrol command of on/of	f ventila	tion sy	stem heat recovery, and
the st	tatus feedb	ack value c	an also be received. Tele	egram va	alues:	
		1——Or	ı			
		0——Of	f			
492	КNХ	Channel	Power on/off, status	1bit	С,	1.001 switch
	X-{{}}	+			w	
Т	he commu	nication obj	ject is used to receive th	e power	on/of	f telegram of ventilation
from	the bus.					
493	KNX	Channel	Filter timer counter	2byt	С,	7.007 time(h)
	X-{{}}	•	change	е	w	
T	<b>X-{{}</b> }	hinication of	<b>change</b> oject is visible when th	<b>e</b> ne"Filter	<b>w</b> timer	counter" parameter is
T enabl	X-{{}} he commu ed.Used to	nication of modify the	<b>change</b> bject is visible when the time length of the filter	<b>e</b> ne″Filter usage b	<b>w</b> timer y the l	counter" parameter is
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX	mication of modify the <b>Channel</b>	change bject is visible when th time length of the filter CO2 value	e ne"Filter usage b 2byt	w timer y the t	counter" parameter is ous. <b>7.001 pulse</b>
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	mication of modify the <b>Channel</b>	change oject is visible when th e time length of the filter CO2 value	e ne"Filter usage b 2byt e	w timer y the t C, w,T	counter" parameter is ous. 7.001 pulse 9.030
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	mication of modify the <b>Channel</b>	change oject is visible when th e time length of the filter CO2 value	e ne"Filter usage b 2byt e	w timer y the t C, w,T ,U	counter" parameter is ous. 7.001 pulse 9.030 concentration(ug/m
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	modify the <b>Channel</b>	change oject is visible when the time length of the filter CO2 value	e usage b 2byt e	w timer y the t C, W,T ,U	counter" parameter is bus. 7.001 pulse 9.030 concentration(ug/m 3)
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	modify the <b>Channel</b>	change oject is visible when the time length of the filter CO2 value	e usage b 2byt e	w timer y the t C, W,T ,U	counter" parameter is bus. 7.001 pulse 9.030 concentration(ug/m 3) 9.008
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	modify the	change oject is visible when the time length of the filter CO2 value	e ne"Filter usage b 2byt e	w timer y the t C, W,T ,U	counter" parameter is ous. 7.001 pulse 9.030 concentration(ug/m 3) 9.008 parts/million(ppm)
T enabl <b>494</b>	X-{{}} he commu ed.Used to KNX X-{{}}	nication of modify the <b>Channel</b>	change oject is visible when the time length of the filter CO2 value	e ne"Filter usage b 2byt e	w timer y the t C, W,T ,U	counter" parameter is ous. 7.001 pulse 9.030 concentration(ug/m 3) 9.008 parts/million(ppm) (with auto fan speed) is

The communication object is used to receive the input of the CO2 value and get the corresponding value from the bus to be updated to the display in ppm. Range: 0~4000ppm



If the control value of the automatic operation is CO2, the ventilation system can be set to automatically adjust the fan speed according to the concentration of CO2.

						-
494	KNX	Channel	VOC value	2byt	С,	7.001 pulse
	X-{{}}			e	w,T	9.030
					<b>,</b> U	concentration(ug/m
						3)
						9.008
						parts/million(ppm)

This communication object is visible when Ventilation system (with auto fan speed) is selected. The data type of the object is set by the parameter.

The communication object is used to receive the input of the VOC value and get the corresponding value from the bus to be updated to the display in ppm. Range: 0~4000ppm

If the control value of the automatic operation is VOC, the ventilation system can be set to automatically adjust the fan speed according to the concentration of VOC.

494	КNХ	Channel	PM 2.5 value	2byt	С,	7.001 pulse
	X-{{}}	+		е	w,T	9.030
					,U	concentration(ug/m
						3)
						9.008
						parts/million(ppm)

This communication object is visible when Ventilation system (with auto fan speed) is selected. The data type of the object is set by the parameter.



The communication object is used to receive the input of PM2.5 value and get the corresponding value from the bus to be updated to display in ug/m<sup>3</sup>. Range: 0~999ug/m<sup>3</sup>

If the control value of the automatic operation is PM2.5, the ventilation system can be set to automatically adjust the fan speed according to the concentration of PM2.5.

496	KNX Channel	Fan speed, status	1byt	С,	5.001 percentage
	X-{{}}		е	w	5.100 fan stage

The communication object is used to receive the status feedback of the fan speed. The specific telegram value corresponding to each fan speed is defined by the parameter.

497	KNX	Channel	Fan	automatic	1bit	С,	1.003 enable
	X-{{}}	+	operation	, status		w	

This communication object is visible when Ventilation system (with auto fan speed) is selected.

选择 Ventilation system(with auto fan speed).Used to receive status feedback from automatic fan speed control to the screen.

498	KNX	Channel	Heat	recovery,	1bit	С,	1.003 enable
	X-{{}}	-	status			w	

The communication object is visible if the parameter "Heat recovery function" is enabled.Used to receive the status feedback of heat recovery, and is updated to screen display.

499	KNX	Channel	Filter timer reset	1bit	С,	1.015 reset
	X-{{}}				W	

The communication object is visible if the parameter "Filter timer counter" is enabled.Used to reset the filter time, and after the filter is reset, the filter time is used to start counting again. Telegram value:



## 1——Reset

Table 6.10.7" Ventilation system control" communication object

## 6.10.8 "Audio control"Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	w	Т	U	Data Type	Priority
∎≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	12	enable	Low
■2 486	KNX Channel 1	Play=1/Pause=0			1 bit	C	-	-	Т		start/stop	Low
∎≵ 488	KNX Channel 1	Next track=1/Previous track=0			1 bit	С	-	12	Т	22	step	Low
∎≵ 490	KNX Channel 1	Volume+=1/Volume-=0			1 bit	С		-	Т	-	step	Low
■之 491	KNX Channel 1	Mute			1 bit	С	2	-	Т	12	enable	Low
■≵ 493	KNX Channel 1	Absolute volume			1 byte	C	÷	-	Т	-	percentage (0100%)	Low
495	KNX Channel 1	Play=1/Pause=0, status			1 bit	С	2	W	Т	U	start/stop	Low
■2 497	KNX Channel 1	Volume, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■2 498	KNX Channel 1	Mute, status			1 bit	С	2	W	Т	U	enable	Low

#### Audio control

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■ <b>‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎ <b>Հ</b>  484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■ <b>Հ</b>  485	KNX Channel 1	Power on/off			1 bit	С	-	-	Т	-	switch	Low
<b>■↓</b> 486	KNX Channel 1	Play=1/Pause=0			1 bit	С	-	-	Т	-	start/stop	Low
■2 488	KNX Channel 1	Next track=1/Previous track=0			1 bit	С	-	1940) 1	Т	-	step	Low
■ <b>Հ</b>  490	KNX Channel 1	Volume+=1/Volume-=0			1 bit	С	5		Т	-	step	Low
■ <b>‡</b>  491	KNX Channel 1	Mute			1 bit	С	-	-	Т	-	enable	Low
∎ <b>Հ</b>  494	KNX Channel 1	Power on/off, status			1 bit	С	-	W	-	-	switch	Low
■2 495	KNX Channel 1	Play=1/Pause=0, status			1 bit	С	-	W	Т	U	start/stop	Low
■ <b>Հ</b> 498	KNX Channel 1	Mute, status			1 bit	С	-	W	Т	U	enable	Low

Audio control(with on/off)





## KNX/EIB KNX Smart Touch

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	2	W	2	2	enable	Low
486	KNX Channel 1	Play			1 bit	C	-	-	т	-	enable	Low
487	KNX Channel 1	Pause			1 bit	С	2	120	Т	2	enable	Low
<b>■</b> ≵ 488	KNX Channel 1	Next track			1 bit	С	-		Т	-	enable	Low
∎≵ 489	KNX Channel 1	Previous track			1 bit	C	2	12	Т	2	enable	Low
∎≵ 490	KNX Channel 1	Volume+=1/Volume-=0			1 bit	C	-		т	-	step	Low
≠ 491	KNX Channel 1	Mute			1 bit	C	2	12	Т	2	enable	Low
<b>₽</b> ₽ 493	KNX Channel 1	Play mode			1 byte	C	-		т	-	counter pulses (0255)	Low
₩2 495	KNX Channel 1	Play, status			1 bit	С	2	W	Т	U	enable	Low
₩2 496	KNX Channel 1	Pause, status			1 bit	C	-	W	т	U	enable	Low
∎≵ 498	KNX Channel 1	Mute, status			1 bit	С	2	W	Т	U	enable	Low
499	KNX Channel 1	Play mode, status			1 byte	C	-	W	Т	U	counter pulses (0255)	Low

#### Audio control(play mode)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	75	W	Т	U	switch	Low
■≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■‡ 486	KNX Channel 1	Play			1 bit	С	-	-	Т		enable	Low
∎≵ 487	KNX Channel 1	Pause			1 bit	С	-	2	Т	12	enable	Low
₩₹ 488	KNX Channel 1	Next track			1 bit	С	7	-	Т	(17)	enable	Low
■2 489	KNX Channel 1	Previous track			1 bit	С	-	-	Т	-	enable	Low
■‡ 490	KNX Channel 1	Volume+=1/Volume-=0			1 bit	С	-		Т		step	Low
∎‡ 491	KNX Channel 1	Mute			1 bit	С	-	-	Т	-	enable	Low
■≵ 493	KNX Channel 1	Absolute volume			1 byte	С	- 75		Т	(17)	percentage (0100%)	Low
■2 495	KNX Channel 1	Play, status			1 bit	С	-	W	Т	U	enable	Low
₩\$ 496	KNX Channel 1	Pause, status			1 bit	С	-	W	Т	U	enable	Low
₩2 497	KNX Channel 1	Volume, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■‡ 498	KNX Channel 1	Mute, status			1 bit	С		W	Т	U	enable	Low
■2 500	KNX Channel 1	Track name			14 bytes	С	-	W	Т	U	Character String (ISO 8	BLow
<b>■‡</b> 501	KNX Channel 1	Album name			14 bytes	С	-	W	т	U	Character String (ISO 8	BLow
■2 502	KNX Channel 1	Artist name			14 bytes	С	-	W	Т	U	Character String (ISO 8	BLow

#### Audio control(track information)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■≵ 486	KNX Channel 1	Play			1 bit	C	-	-	Т	-	enable	Low
<b>■‡</b>  487	KNX Channel 1	Pause			1 bit	С	5	7	Т	-	enable	Low
∎≵ 488	KNX Channel 1	Next track			1 bit	С	-	-	Т	· •	enable	Low
∎≵ 489	KNX Channel 1	Previous track			1 bit	С	-	7	Т	-	enable	Low
∎≵ 490	KNX Channel 1	Volume+=1/Volume-=0			1 bit	С	-	-	Т	-	step	Low
∎‡ 491	KNX Channel 1	Mute			1 bit	С		-7	Т	-	enable	Low
∎‡ 492	KNX Channel 1	Next playlist=1/Previous playlist=0			1 bit	С	-	-	Т	-	step	Low
∎≵ 493	KNX Channel 1	Absolute volume			1 byte	С	-		Т		percentage (0100%)	Low
■2 495	KNX Channel 1	Play, status			1 bit	С	-	W	Т	U	enable	Low
■之 496	KNX Channel 1	Pause, status			1 bit	С	-	W	Т	U	enable	Low
■2 497	KNX Channel 1	Volume, status			1 byte	С	-	W	Т	U	percentage (0100%)	Low
∎≵ 498	KNX Channel 1	Mute, status			1 bit	С	-	W	Т	U	enable	Low
■\$ 500	KNX Channel 1	Track name			14 bytes	С	-	W	Т	U	Character String (ISO 8	Low
■之 501	KNX Channel 1	Album name			14 bytes	С	-	W	Т	U	Character String (ISO 8	Low
■2 502	KNX Channel 1	Artist name			14 bytes	С	-	W	Т	U	Character String (ISO 8	BLow
■之 503	KNX Channel 1	Playlist name			14 bytes	С	5.5	W	Т	U	Character String (ISO 8	Low

Audio control(track information+playlist)

## Fig.6.10.8 "Audio control" communication object

**GVS K-BUS**<sup>®</sup> KNX/EIB KNX Smart Touch

NO.	Name		<b>Object Function</b>	Data	Flag	DPT			
				Туре					
485	KNX	Channel	Power on/off	1bit	C,T	1.001 switch			
	X-{{}	•}							
TI	he commi	unication of	pject is visible when power on/	off is e	nabled.	Used to send the			
telegr	am to the	e bus. Teleg	rams:						
		1——C	n						
		0——C	ff						
486	KNX	Channel	Play=1/Pause=0	1bit	С,Т	1.010			
	X-{{}	•}	Play			start/stop			
TI	he commu	unication ob	ject is visible when control pla	y/pause	with o	ne object. Used to			
play/s	play/stop the music in the audio module. Telegrams:								
		1——P	lay music						
		0——P	ause playing music						
486	KNX	Channel	Play	1bit	C,T	1.003 enable			



	X-{{}}							
Т	he communication ob	ject is visible when control play,	/pause \	with two	o separate objects.			
Used	to play the music in	the audio module. Telegram :						
	1——P	lay music						
487	KNX Channel	Pause	1bit	С,Т	1.003 enable			
	X-{{}}							
Т	he communication ob	ject is visible when control play,	/pause v	with two	o separate objects.			
Used	Used to stop the music in the audio module. Telegram:							
	1——P	ause playing music						
488	KNX Channel	Next track=1/Previous	1bit	С,Т	1.007 step			
	X-{{}}	track=0						
Т	The communication object is visible when control next track/previous track with one							
objec	t. Used to switch th	ne playing track of the audio	module	, to sv	vitch the previous			
track,	/the next track. Teleg	jrams:						
	1——P	lay the next track						
	0——P	lay the previous track						
488	KNX Channel	Next track	1bit	С,Т	1.003 enable			
	X-{{}}							
Т	he communication ol	pject is visible when control ne	ext track	<td>ous track with two</td>	ous track with two			
separ	separate objects. Used to switch the playing track of the audio module, to switch the next							
track.	track.Telegram							
	1——s	witch the next track						
489	KNX Channel	Previous track	1bit	С,Т	1.003 enable			
	X-{{}}							



The communication object is visible when control next track/previous track with two										
separ	separate objects. Used to switch the playing track of the audio module, to switch the									
previous track.Telegram:										
		1——s	witch the previous track							
490	КNХ	Channel	Volume+=1/Volume-=0	1bit	С,Т	1.007 step				
	X-{{}	•}								
w	/hen 1bit,	the comm	unication object is used to adju	ust volu	ime of	the audio module.				
Teleg	Telegrams:									
		1——Ir	ncrease volume							
	1	0——D	ecrease volume	1		1				
493	493KNXChannelAbsolute volume1bytC,T5.001									
	X-{{}	•}		е		percentage				
						5.004				
						percentage				
w	/hen 1byt	e, the comn	nunication object is used to adj	ust volu	ime of	the audio module.				
Т	elegrams	value is acc	ording to different object types	: 010	0 / 02	55				
491	KNX	Channel	Mute	1bit	С,Т	1.003 enable				
	X-{{}	•}								
TI	he commu	unication ob	ject is visible when mute is ena	abled. U	sed to	control mute of				
audio	module v	via the scree	en. Telegrams:							
	1——Mute									
	0——Cancel mute									
492	492 KNX Channel Next playlist=1/Previo			1bit	С,Т	1.007 step				
	X-{{}} playlist=0									
TI	he commu	unication ob	ject is visible when control nex	t track/	previou	is track with one				





1——Play the next list 0——Play the previous list493KNX X ChannelPlay mode1byt eC,T5.010 pulses493KNX X ChannelPlay mode1byt eC,T5.010 pulsesThe communication object is used to send control telegram of the audio module play mode, different mode telegrams are preset by parameters.1bitC,W1.001 switch494KNX X ChannelPower on/off, status1bitC,W1.001 switchX-{{}}The communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.1bitC,W1.010495KNX X ChannelPlay=1/Pause=0, status play=1/Pause=0, status1bitC,W1.010The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.1bitC,W1.003 enable495KNX X ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitC,W1.003 enable495KNX ChannelPlay, status1bitc,W1.003 enable495 <th>obiec</th> <th colspan="10">object. Used to switch the playing list of the audio module.Telegrams:</th>	obiec	object. Used to switch the playing list of the audio module.Telegrams:									
0Play the previous list     493   KNX   Channel   Play mode   1byt   C,T   5.010   counter     493   KNX   Channel   Play mode   1byt   C,T   5.010   counter     493   KNX   Channel   Play mode   1byt   C,T   5.010   counter     494   KNX   Channel   Power on/off, status   1bit   C,W   1.001 switch     X-{{}}   Power on/off, status   1bit   C,W   1.001 switch   ,T,U     The communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.   1bit   C,W   1.010     495   KNX   Channel   Play=1/Pause=0, status   1bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010   start/stop     The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.   1bit   C,W   1.003 enable     495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     495   KNX   Channel <td>  ,</td> <td></td> <td>1——P</td> <td>lay the next list</td> <td> 5</td> <td></td> <td></td>	,		1——P	lay the next list	5						
493   KNX   Channel X-{{}}   Play mode   1byt e   C,T   5.010   counter pulses     494   X-{{}}   The communication object is used to send control telegram of the audio module play mode, different mode telegrams are preset by parameters.   1bit   C,W   1.001 switch     494   KNX   Channel X-{{}}   Power on/off, status   1bit   C,W   1.001 switch     494   KNX   Channel X-{{}}   Power on/off, status   1bit   C,W   1.001 switch     494   KNX   Channel X-{{}}   Power on/off, status   1bit   C,W   1.001 switch     495   KNX   Channel X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     495   KNX   Channel X-{{}}   Play, status   1bit   C,W   1.003 enable     495   KNX   Channel X-{{}}   Play, status   1bit   C,W   1.003 enable			- ·	lay the previous list							
493   KNX   Channel   Play mode   1byt   C,1   5.010   counter     494   X-{{}}   e   pulses     494   KNX   Channel   Power on/off, status   1bit   C,W   1.001 switch     X-{{}}   Power on/off is status   1bit   C,W   1.010     The communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.   1bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     The communication object is used to receive the status feedback of play/pause in audio   module   module   for multication     Module from bus, and feed back to screen display.   Ibit   C,W   1.003 enable   T,U     The communication object is visible when control play/pause with two separate	402		Channel		1 6.4	СТ	E 010 countor				
x-{{}}   e   puises     The communication object is used to send control telegram of the audio module play mode, different mode telegrams are preset by parameters.   1 bit   C,W   1.001 switch     494   KNX   Channel   Power on/off, status   1 bit   C,W   1.001 switch     X-{{}}   Power on/off, status   1 bit   C,W   1.001 switch     X-{{}}   Power on/off, status   1 bit   C,W   1.001 switch     The communication object is visible when power on/off is embled. Used to receive the status feedback of on/off in audio module from bus.   1 bit   C,W   1.010     495   KNX   Channel   Play=1/Pause=0, status   1 bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1 bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1 bit   C,W   1.010     The communication object is used to receive the status feedback of play.   1.003 enable      495   KNX   Channel   Play, status   1 bit   C,W   1.003 enable     X-{{}}   The communication object is visible when control play/pause with two separate objects.    <	495		Channel	Play mode	IDyt	C, I	S.010 counter				
The communication object is used to send control telegram of the audio module play mode, different mode telegrams are preset by parameters.     494   KNX   Channel X-{{}}   Power on/off, status   1bit I   C,W   1.001 switch     The communication object is visible when power on/off is embled. Used to receive the status feedback of on/off in audio module from bus.   1bit   C,W   1.010     495   KNX   Channel X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     The communication object is used to receive the status feedback of play in audio module from bus.     495   KNX   Channel X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.     495   KNX   Channel X-{{}}   1bit   C,W   1.003 enable     495   KNX   Channel X-{{}}   Play, status   1bit   C,W   1.003 enable     Joint colspan="4">C with two separate objects.     Used to receive the status feedback of play in audio module from bus, and feed back to screen display.     Let communication object is visible when control play/pause with two separate objects.		X-{{}	}}	e puises							
mode, different mode telegrams are preset by parameters.494KNX X-{{}}Power on/off, status power on/off, status1bitC,W T,U1.001 switch494X-{{}}NoNoNoNoNoThe communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.1bitC,W T,U1.0101.010495KNX X-{{}}Play=1/Pause=0, status power on/off is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.1bitC,W power on/off is audio1.003 enable power on/off is audio495KNX X-{{}}Play, status1bitC,W power on/off is audio1.003 enable power on/off is audio495KNX X-{{}}Channel play, status1bitC,W play/pause in audio495KNX X-{{}}Channel play, status1bit play, statusC,W play/pause with two separate objects.495KNX X-{{}}Channel play, status1bit play, statusC,W play/pause with two separate objects.495KNX X-{{}}Channel play, status1bit play, statusC,W play, status1bit play495KNX X-{{}}Channel 	The communication object is used to send control telegram of the audio module play										
494KNX X-{{}}Power on/off, status1bitC,W1.001 switchX-{{}}X-{{}}IbitC,WThe communication object is visible when power on/off is enabled.Used to receive the495KNX X-{{}}Play=1/Pause=0, status1bitC,W1.010X-{{}}Play=1/Pause=0, status1bitC,Wstart/stopThe communication object is used to receive the status feedback of play in audioPlay, status1bitC,W495KNX X-{{}}Play, status1bitC,WThe communication object is visible when control play/pause with two separate objects.1bitC,W495KNX X-{{}}Play, status1bitC,W495KNX X-{}Channel X-{{}}Play, status1bitC,W495KNX X-{}Channel X-{}Play, status1bitC,W495KNX X-{}Channel X-{}Play, status1bitc,W495KNX X-{}Channel X-{}Play, status1bitc,W495KNX X-{}Channel X-{}Ibitc,W495KNX X-{}Channel X-{}Ibitc,W495KNX X-{}Channel X-{}Ibitc,W495KNX X-{}C	mode, different mode telegrams are preset by parameters.										
X-{{}}, T,UThe communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.495KNX X-{{}}Play=1/Pause=0, status I bitI bit C,W T,UC,W start/stopThe communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.I bit C,W The communication object is visible when control play/pause with two separate objects.495KNX Channel Play, status1 bit T,UC,W t.003 enable T,U495KNX Channel C-W The communication object is visible when control play/pause with two separate objects.1.003 enable t.003 enable t.003 enable t.003 enableI audio module from bus, and feed back to play in audio module from bus, and feed back to screen display.495KNX C-Hannel C-W The communication object is visible when control play/pause with two separate objects.Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams: 1——Play music	494KNXChannelPower on/off, status1bitC,W1.001 switch										
The communication object is visible when power on/off is enabled. Used to receive the status feedback of on/off in audio module from bus.     495   KNX   Channel   Play=1/Pause=0, status   1bit   C,W   1.010     X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.   1bit   C,W   1.003 enable     495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     X-{{}}   The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:   1——Play music		X-{{}} ,T,U									
Status feedback of on/off in audio module from bus.     495   KNX   Channel X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     T-{{}}   Image: Communication object is used to receive the status feedback of play.   The communication object is used to receive the status feedback of play.   Image: Communication object is visible when control play/pause with two separate objects.     495   KNX   Channel X-{{}}   Play, status   1bit Image: Communication object is visible when control play/pause with two separate objects.     The communication object is visible when control play/pause with two separate objects.     Used to receive the status feedback of play in audio module from bus, and feed back to screen display.     Image: Im	ТІ	he comm	unication ob	ject is visible when power on/o	off is ena	abled. L	Jsed to receive the				
495   KNX   Channel X-{{}}   Play=1/Pause=0, status   1bit   C,W   1.010     X-{{}}   Image: Communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.   Image: Communication object is used to receive the status feedback of play/pause in audio     495   KNX   Channel X-{{}}   Play, status   Ibit   C,W   1.003 enable     X-{{}}   Play, status   1bit   C,W   1.003 enable   ,T,U     The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:   1——Play music	status	s feedbac	k of on/off i	n audio module from bus.							
X-{{}}   , T,U   start/stop     The communication object is used to receive the status feedback of play/pause in audio module from bus, and feed back to screen display.   1bit   C,W   1.003 enable     495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     X-{{}}   N   Play, status   1bit   c,W   1.003 enable     Screen display.   N   Ibit   c,W   1.003 enable     M   NPlay music   Image: Note: Not:	495	495 KNX Channel Play=1/Pause=0. status 1 hit C.W 1.010									
Image: A fight of the status feedback of the status of the status feedback of the status of the s		X-{{	11	-, ,		TU	start/stop				
KNX   Channel   Play, status   1bit   C,W   1.003 enable     X-{{}}   The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.     1bit   C,W   1.003 enable     X-{{}}   The communication object is visible when control play/pause with two separate objects.     Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:   1——Play music			, ,			/1/0	Starty Stop				
Ine communication object is used to receive the status reedback of play/pause in audio module from bus, and feed back to screen display.     495   KNX   Channel   Play, status   1 bit   C,W   1.003 enable     X-{{}}   Play, status   1 bit   C,W   1.003 enable   ,T,U     The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:     1——Play music					- <b>F</b>						
Module from bus, and feed back to screen display.     495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     X-{{}}   X-{{}}   Ibit   C,W   1.003 enable   T,U   T,U     The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:     1——Play music			unication ob		s reeab	аск ог р	hay/pause in audio				
495   KNX   Channel   Play, status   1bit   C,W   1.003 enable     X-{{}}   X-{{}}   Ibit   C,W   I.003 enable   T,U     The communication object is visible when control play/pause with two separate objects.   Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:   Image: 1Play music	modu	le from b	us, and feed	d back to screen display.							
X-{{}}   ,T,U     The communication object is visible when control play/pause with two separate objects.     Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams:     1——Play music	495	KNX	Channel	Play, status	1bit	C,W	1.003 enable				
The communication object is visible when control play/pause with two separate objects. Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams: 1Play music		X-{{}	}}			, <b>т</b> ,U					
Used to receive the status feedback of play in audio module from bus, and feed back to screen display.Telegrams: $1$ Play music	TI	he commi	unication ob	ject is visible when control play,	/pause v	with two	o separate objects.				
screen display.Telegrams: 1——Play music	Used	to receiv	e the status	s feedback of play in audio mo	dule fro	om bus,	, and feed back to				
1——Play music	screen display.Telegrams:										
			1——P	lay music							
496 KNX Channel Pause, status 1bit C,W 1.003 enable	496	КNХ	Channel	Pause, status	1bit	C,W	1.003 enable				
X-{{}} ,T,U		X-{{}	}}			,T,U					
The communication object is visible when control play/pause with two separate objects		he commi	unication ob	iect is visible when control play	/pause v	with two	separate objects				



Used to receive the status feedback of pause in audio module from bus, and feed back to									
scree	screen display.Telegrams:								
		1——P	ause music						
497	KNX	Channel	Volume, status	1byt	C,W	5.001			
	X-{{}	}}		e	,т,U	percentage			
						5.004			
						percentage			
W	/hen 1byt	e, the com	munication object is used to re	ceive th	ne volu	me status in audio			
modu	le, and fe	ed back to	screen display.						
т	elegrams	value is acc	cording to different object types	: 010	) / 02	55			
498	КNХ	Channel	Mute, status	1bit	C,W	1.003 enable			
	X-{{}	}}			,Τ,U				
Т	he comm	unication ob	pject is visible when mute is er	abled.	Used to	o receive the mute			
status	s of the a	udio module	e from the bus, and feed back t	o screer	n displa	у.			
499	КNХ	Channel	Play mode, status	1byt	C,W	5.010 counter			
	X-{{}	}}		е	,т,U	pulses			
Т	he comm	unication ob	pject is used to receive the stat	tus feed	lback o	f play mode in the			
audio	module,	the receivir	ng telegrams should be preset l	by para	meters	before the display			
status	s on the s	creen can b	e updated.						
500KNXChannelTrack name14byC,W16.001									
X-{{}} te ,T,U character									
string (ISC									
						8859-1)			
The communication object is used to receive the track name via the bus, and display on									
the so	creen.								





501	KNX	Channel	Album name	14by	C,W	16.001	
	X-{{}	}		te	,T,U	character	
						string	(ISO
						8859-1)	

The communication object is used to receive the album name via the bus, and display on

the screen.

502	КNХ	Channel	Artist name	14by	C,W	16.001	
	X-{{}	}		te	,т,U	character	
						string	(ISO
						8859-1)	

The communication object is used to receive the artist name via the bus, and display on the screen.

503	КNХ	Channel	Playlist name	14by	C,W	16.001	
	X-{{}	•}		te	,т,U	character	
						string	(ISO
						8859-1)	

The communication object is used to receive the playlist name via the bus, and display on the screen.

Table 10.6.8 "Audio control" communication object



## 6.10.9 "Energy metering value display"Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 487	KNX Channel 1	Power value			2 bytes	С	2	W	Т	U	power (kW)	Low
■2 488	KNX Channel 1	Energy value			4 bytes	С	÷	W	Т	U	active energy (kWh)	Low

Energy metering(power & energy)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
∎≵ 485	KNX Channel 1	Current value			2 bytes	С	2	W	Т	U	current (mA)	Low
■≵ 487	KNX Channel 1	Power value			2 bytes	С	-	W	Т	U	power (kW)	Low
■≵ 488	KNX Channel 1	Energy value			4 bytes	С	2	W	Т	U	active energy (kWh)	Low

#### Energy metering(power & energy & current)

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
483	KNX Channel 1	Device online, status			1 bit	С	÷.	W	Т	U	switch	Low
₹ 485	KNX Channel 1	Current value			2 bytes	С	୍	W	Т	U	current (mA)	Low
\$486	KNX Channel 1	Voltage value			4 bytes	С	8	W	Т	U	electric potential (V)	Low
₹ 487	KNX Channel 1	Power value			2 bytes	С	्	W	Т	U	power (kW)	Low
<b>↓</b> 488	KNX Channel 1	Energy value			4 bytes	С	×.	W	т	U	active energy (kWh)	Low

Energy metering(power & energy & current & voltage)

Fig.6.10.9 "Energy metering value display" communication object

NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
485	KNX Channel	Current	2byte	C,W,T,U	7.012 current(mA)
	X-{{}}	value			

The communication object is used to receive the current value from the bus and update

it to the screen display.

The display range is 0  $\sim$  65535 mA, and the resolution is 1 mA.

485	KNX Channel	Current	2byte	C,W,T,U	9.021 current(mA)		
	X-{{}}	value					
The communication chiest is used to receive the surrout value from the bus and undate							

The communication object is used to receive the current value from the bus and update



it to the screen display.

The display range is  $-670760 \sim 670760$  mA, and the resolution is 0.01 mA.

485	KNX	Channel	Current 4byte		C,W,T,U	14.019	electric
	X-{{}}		value			current(A)	

The communication object is used to receive the current value from the bus and update it to the screen display.

The display range is -99999999.9~99999999.9A, and the resolution is 0.1A.

486	KNX Channel	Voltage	2byte	C,W,T,U	9.020 voltage(mV)
	X-{{}}	value			

The communication object is used to receive voltage values from the bus and update them to the screen display.

The display range is -670760 mV  $\sim 670760$  mV, and the resolution is 0.1 mV.

486	KNX	Channel	Voltage	4byte	C,W,T,U	14.027	electric
	X-{{}}		value			potential(V)	

The communication object is used to receive voltage values from the bus and update

them to the screen display.

The display range is: -99999999.9~9999999.9V, and the resolution is 0.1V.

487	KNX Channel		Power	2byte	C,W,T,U	9.024 power(kW)
	X-{{}}		value			

The communication object is used to receive the power values from the bus and update them to the screen display.

The display range is: -670760~670760kW, and the resolution is 0.01kW.

487	KNX Channel	Power	4byte	C,W,T,U	14.056 power(W)						
	X-{{}}	value									
The communication object is used to receive the power values from the bus and update											



them to the screen display.

The display range is:  $-999999999.9 \sim 99999999.9W$ , and the resolution is 0.1W.

488	KNX	Channel	Energy	4byte	C,W,T,U	13.010	active
	X-{{}}		value			energy(Wh)	

The communication object is used to receive the electrical values from the bus and update them to the screen display.

The display range is: -2147483648~2147483647Wh, and the resolution is 1Wh.

488	KNX Channel	nnel Energy 4byte C		C,W,T,U	13.013	active
	X-{{}}	value			energy(kWh)	

The communication object is used to receive the electrical values from the bus and update them to the screen display.

The display range is: -2147483648~2147483647kWh, and the resolution is 1kWh.

Table 10.6.9 "Energy metering value display" communication object



## 6.10.10 "Sensor" Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 485	KNX Channel 1	Temperature value			2 bytes	С	2	W	T	U	temperature (°C)	Low
■≵ 486	KNX Channel 1	Low temperature alarm			1 bit	С	R	-	т	-	alarm	Low
₩2 487	KNX Channel 1	High temperature alarm			1 bit	С	R	121	Т	22	alarm	Low

#### Temperature sensor

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 485	KNX Channel 1	Humidity value			2 bytes	С	2	W	Т	U	humidity (%)	Low
■≵ 486	KNX Channel 1	Low humidity alarm			1 bit	C	R		т	-	alarm	Low
■2 487	KNX Channel 1	High humidity alarm			1 bit	С	R	-	Т	21	alarm	Low

#### Humidity sensor

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	υ	switch	Low
∎≵ 485	KNX Channel 1	PM2.5 value			2 bytes	С	2	W	Т	U	pulses	Low
■‡ 486	KNX Channel 1	PM2.5 alarm			1 bit	С	R	-	Т		alarm	Low

#### PM2.5 sensor

Numb	er * Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₩₹ 483	KNX Channel 1	I Device online, status			1 bit	С	-	W	Т	U	switch	Low
₩2 485	KNX Channel 1	I PM10 value			2 bytes	С	2	W	Т	U	pulses	Low
■2 486	KNX Channel 1	I PM10 alarm			1 bit	C	R		Т		alarm	Low

#### PM10 sensor

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	1.0	W	Т	υ	switch	Low
■≵ 485	KNX Channel 1	VOC value			2 bytes	С	-20	W	Т	U	pulses	Low
■≵ 486	KNX Channel 1	VOC alarm			1 bit	С	R	-	т		alarm	Low

#### VOC sensor

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 483	KNX Channel 1	Device online, status			1 bit	С	2	W	т	U	switch	Low
■之 485	KNX Channel 1	AQI value			2 bytes	С	÷.	W	Т	U	pulses	Low
■≵ 486	KNX Channel 1	AQI alarm			1 bit	С	R	50	Т	5.52	alarm	Low

#### AQI sensor

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 483	KNX Channel 1	Device online, status			1 bit	С	53	W	Т	U	switch	Low
■2 485	KNX Channel 1	CO2 value			2 bytes	С	-	W	Т	U	parts/million (ppm)	Low
■≵ 486	KNX Channel 1	CO2 alarm			1 bit	С	R	-	Т		alarm	Low

#### CO2 sensor





Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>■‡</b>  483	KNX Channel 1	Device online, status			1 bit	С	-	W	T	U	switch	Low
■≵ 485	KNX Channel 1	Brightness value(lux)			2 bytes	С	-	W	Т	U	lux (Lux)	Low

			Brightne	ss sensor								
Number *	Name	Object Function	Description	Group Address	Length	с	R	W	Т	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 485	KNX Channel 1	Wind speed			2 bytes	С	2	W	Т	U	speed (m/s)	Low
■2 486	KNX Channel 1	Wind alarm			1 bit	С	R	878	Т	5.75	alarm	Low

#### Wind sensor

Number *	Name	Object Function	Description	Group Address	Length	с	R	W	T	U	Data Type	Priority
■≵ 483	KNX Channel 1	Device online, status			1 bit	С	-	W	Т	U	switch	Low
■≵ 485	KNX Channel 1	I/O signal			1 bit	С	2	W	Т	U	switch	Low

I/O sensor

## Fig.6.10.10 "Sensor" communication object

NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
485	KNX Channel	Temperature	2byte	C,W,T,U	9.001 temperature
	X-{{}}	value			
485	KNX Channel	Humidity value	2byte	C,W,T,U	9.007 humidity
	X-{{}}				
485	KNX Channel	PM2.5 value	2byte	C,W,T,U	7.001 pulse
	X-{{}}				9.030
					concentration(ug/m3)
485	KNX Channel	PM10 value	2byte	C,W,T,U	7.001 pulse
	X-{{}}				9.030
					concentration(ug/m3)
485	KNX Channel	VOC value	2byte	C,W,T,U	7.001 pulse
	X-{{}}				9.030



					concentration(ug/m3)
485	KNX Channel	AQI value	2byte	C,W,T,U	7.001 pulses
	X-{{}}				
485	KNX Channel	CO2 value	2byte	C,W,T,U	7.001 pulse
	X-{{}}				9.008
					parts/million(ppm)
485	KNX Channel	Brightness	2byte	C,W,T,U	7.013 brightness(lux)
	X-{{}}	value(lux)			9.004 lux(lux)
485	KNX Channel	Wind speed	2byte	C,W,T,U	9.005 speed
	X-{{}}				9.028 wind speed
485	KNX Channel	I/O signal	1bit	C,W,T,U	1.001 switch
	X-{{}}				

These communication objects are used to receive air quality information from the bus and update it to the on-screen display. The screen can display settings for temperature, humidity, PM2.5, PM10, VOC, AQI, CO2, brightness, wind speed and I/O signal values.

The data type of the object is set by the parameter.All objects send read requests to the bus on restart.

486	KNX Channel	Low	1bit	C,R,T	1.005 alarm
	X-{{}}	temperature			
		alarm			

The communication object is used for the low temperature alarm object to send an alarm signal to the bus when the temperature falls below a low threshold. The threshold value is defined by the parameter. Telegrams:

1——Low temperature alarm

0——No alarm



487	KNX	Channel	High	1bit	C,R,T	1.005 alarm						
	X-{{}	}	temperature									
			alarm									
Т	his comm	unication ob	pject is used for the	high tem	perature al	arm object to send an alarm						
signa	l to the bu	us when the	e temperature g is a	above a	threshold v	alue. The threshold value is						
define	ed by the	parameter.	Telegrams:									
		1——H	ligh temperature al	arm								
		0——N	lo alarm									
486	KNX	Channel	Low humidity	1bit	C,R,T	1.005 alarm						
	X-{{}	}	alarm									
т	his comm	unication o	bject is used for th	e low hu	umidity ala	rm object to send an alarm						
signa	I to the b	us when th	ne humidity falls be	elow a tl	nreshold va	alue. The threshold value is						
define	defined by the parameter.											
т	elegrams:	1	——Low humidity									
		0-	-—No alarm									
487	KNX	Channel	High humidity	1bit	C,R,T	1.005 alarm						
	X-{{}	}	alarm									
т	his comm	unication o	bject is used for th	e high h	umidity ala	rm object to send an alarm						
signa	l to the bu	is when the	humidity is above a	thresho	old value. Th	ne threshold value is defined						
by th	e paramet	ter.										
т	elegrams:	1	——High humidity									
		0-	–—No alarm									
486	KNX	Channel	PM2.5 alarm	1bit	C,R,T	1.005 alarm						
	X-{{}	}										
486	KNX	Channel	PM10 alarm	1bit	C,R,T	1.005 alarm						



	X-{{]	}}				
486	KNX	Channel	AQI alarm	1bit	C,R,T	1.005 alarm
	X-{{;	}}				
486	КNХ	Channel	CO2 alarm	1bit	C,R,T	1.005 alarm
	X-{{	}}				
486	КNХ	Channel	VOC alarm	1bit	C,R,T	1.005 alarm
	X-{{;	}}				
486	KNX	Channel	Wind alarm	1bit	C,R,T	1.005 alarm
	X-{{	}}				
	1			1	1	

These communication objects are used when PM2.5/PM10/AQI/CO2/VOC/Wind exceeds the alarm value, and the PM2.5/PM10/AQI/CO2/VOC/Wind alarm object sends an alarm signal to the bus. Telegrams:

1——Alarm

0——No alarm

Table 6.10.10 "Sensor" communication object

## 6.10.11 "Value sender" Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	070	enable	Low
■2 485	KNX Channel 1	Send 1bit value			1 bit	С	-	W	Т	-	switch	Low
■2 487	KNX Channel 1	Send 1bit value, long			1 bit	С		W	Т		switch	Low

#### 1bit value[ON/OFF]

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
₹ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-		enable	Low
₹ 485	KNX Channel 1	Send 2bit value			2 bit	С	22	W	Т	72	switch control	Low
₹ 487	KNX Channel 1	Send 2bit value, long			2 bit	C	-	W	Т	1.00	switch control	Low

2bit value[0...3]

# S10





	Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■ <b>‡</b>	484	KNX Channel 1	Locking object			1 bit	С	5	W	5	-	enable	Low
■ <b>‡</b>	485	KNX Channel 1	Send 4bit value			4 bit	С		W	Т	-	dimming control	Low
<b>‡</b>	487	KNX Channel 1	Send 4bit value, long			4 bit	С	5	W	Т	15	dimming control	Low

#### 4bit value[0...15]

	Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>2</b> 4	84	KNX Channel 1	Locking object			1 bit	С	-	W	-	. 75	enable	Low
∎2 4	85	KNX Channel 1	Send 1byte value			1 byte	С	2	W	Т	-	counter pulses (0255)	Low
∎‡ 4	87	KNX Channel 1	Send 1byte value, long			1 byte	C	•	W	Т	5.75	counter pulses (0255)	Low

#### 1byte value[0...255]

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■2 484	KNX Channel 1	Locking object			1 bit	С		W	×.	-	enable	Low
■≵ 485	KNX Channel 1	Send 2byte value			2 bytes	C	<u>_</u>	W	Т	-	pulses	Low
<b>■‡</b>  487	KNX Channel 1	Send 2byte value, long			2 bytes	C	ie.	W	т	-	pulses	Low

#### 2byte value[0...65535]

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
■≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■≵ 485	KNX Channel 1	Send 2byte float value			2 bytes	С	-	W	Т	558	2-byte float value	Low
■₹ 487	KNX Channel 1	Send 2byte float value, long			2 bytes	C	-	W	Т	14	2-byte float value	Low

#### 2byte float value

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■≵ 484	KNX Channel 1	Locking object			1 bit	С	-	W	-	-	enable	Low
■之 485	KNX Channel 1	Send 4byte value			4 bytes	С	2	W	Т	728	counter pulses (unsign.	Low
■2 487	KNX Channel 1	Send 4byte value, long			4 bytes	C	-	W	Т	1.4	counter pulses (unsign.	Low

#### 4byte value[0...4294967295]

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
■≵ 484	KNX Channel 1	Locking object			1 bit	C	ie.	W	ie.	-	enable	Low
■2 485	KNX Channel 1	Send 4byte float value			4 bytes	С	ੁ	W	Т	-	4-byte float value	Low
■2 487	KNX Channel 1	Send 4byte float value, long			4 bytes	C	×	W	Т	-	4-byte float value	Low

4byte float value

## Fig.6.10.11 "Value sender" communication object

NO.	Name		<b>Object Function</b>	Data	Flag	DPT
				Туре		
485	КNХ	Channel	Send 1bit value	1bit	С,Т,	1.001 switch
	X-{{}	}			w	
485	КNХ	Channel	Send 2bit value	2bit	С,Т,	2.001 switch
	X-{{}	}			w	control



485	KNX	Channel	Send 4bit value	4bit	С,Т,	3.007 dimming
	X-{{}	}			w	
485	ких	Channel	Send 1byte value	1byt	С,Т,	5.010 counter
	X-{{}	}		e	w	pulses
485	КNХ	Channel	Send 2byte value	2byt	С,Т,	7.001 pulses
	X-{{}	}		e	w	
485	КNХ	Channel	Send 2byte float value	2byt	С,Т,	9.x float value
	X-{{}	}		e	w	
485	КNХ	Channel	Send 4byte value	4byt	С,Т,	12.001 counter
	X-{{}	}		e	w	pulses
485	клх	Channel	Send 4byte float value	4byt	С,Т,	14.x float value
	X-{{}	}		e	w	

The communication object is used to send the preset output value of the parameter, and if the long press.

operation is distinguished from the short press operation, only the output value of the short press operation is sent. The object type and value range are determined by the data type set by the parameter.

487	КNХ	Channel	Send 1	bit value	e, long	1bit	С,Т,	1.001 swi	tch
	X-{{}	}					w		
487	КNХ	Channel	Send 2	2bit value	e, long	2bit	С,Т,	2.001	switch
	X-{{}	}					w	control	
487	КNХ	Channel	Send 4	bit value	e, long	4bit	С,Т,	3.007 dim	iming
	X-{{}	}					w		
487	КNХ	Channel	Send	1byte	value,	1byt	С,Т,	5.010	counter
	X-{{}	}	long			e	w	pulses	





487	КNХ	Channel	Send	2byte	value,	2byt	С,Т,	7.001 pulses
	X-{{}	•}	long			e	w	
487	KNX	Channel	Send	2byte	float	2byt	С,Т,	9.x float value
	X-{{}	•}	value,	long		e	w	
487	KNX	Channel	Send	4byte	value,	4byt	С,Т,	12.001 counter
	X-{{}	•}	long			e	w	pulses
487	KNX	Channel	Send	4byte	float	4byt	С,Т,	14.x float value
	X-{{}	•}	value,	long		e	w	
Т	he commu	inication obj	ect is vis	sible when	the long	press o	peratio	n is distinguished from

the short press operation, used to send the output value when long operation.

Table 6.10.11 "Value sender" communication object

## 6.11 "KNX Scene" Communication object

Number *	Name	Object Function	Description	Group Address	Length	С	R	W	T	U	Data Type	Priority
<b>■</b> ≵ 3003	Scene 1	Scene			1 byte	С	Ξ.	W	Т	-	scene control	Low

Fig.6.11 "KNX Scene" communication object

NO.	Name	Object	Data	Flag	DPT				
		Function	Туре						
3003//3	Scene	Scene	1byt	C,T,W	18.001 scene control				
032	X-{{}}	control	e						
The comm	The communication object is visible when scene function enabled. Used to recall/storage								

scene via bus.

## Table 6.11 "KNX Scene" communication object



## 6.12 "Input x" Communication object

4953	Input 1	Disable	1 bit	С	70	W -	(7.)	enable	Ŀ	ow
------	---------	---------	-------	---	----	-----	------	--------	---	----

## Fig.6.12 "Input x"communication object

NO.	Name	Object	Data	Flag	DPT				
		Function	Туре						
4953	Input	Disable	1bit	C,W	1.003 enable				
	X-{{}}								
Disable/enable the Input function									

## Table 6.12 "Input x" communication object

### 6.12.1 "Switch" communication object

	Number	Name 💌	<b>Object Function</b>	Linked with	Other Linked	Length	С	R	W	Т	U	Data Type	Priority
2	1954	Input 1	Switch			1 bit	С	5	W	Т	U	switch	Low
	Number	Name 🔻	<b>Object Function</b>	Linked with	Other Linked	Length	с	R	w	т	U	Data Type	Priority
4	954	Input 1	Close, Switch			1 bit	С	-	W	Т	U	switch	Low
1	955	Input 1	Open, Switch			1 bit	С	-	W	Т	U	switch	Low

## Fig.6.12.1 "Switch" communication object

NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
4954	Input	Switch	1bit	C,W,T	1.001 switch
	X-{{}}			,U	
4954	Input	Close,	1 6 1 4	C,W,T	1.001 switch
	X-{{}}	}} Switch ,U		,U	
4954	Input	Short,	1 6 1 4	C,W,T	1.001 switch
	X-{{}}	Switch	TDIC	,U	
4955	Input	Open,	1bit	C,W,T	1.001 switch



	X-{{}}	Switch		,U					
4955	Input	Long, Switch	1bit	с,w,т	1.001 switch				
one object option:No action is displayed during short or long operation/release									

operation.

two object option: When distinguishing between long and short operations, display

short... /long... ; Display close without distinction... /open...

Table 6.12.1 "Switch" communication object

## 6.12.2 "Actual temperature, Sensor" communication object

Number	Name 🔻	Object Function	Linked with	Other Linked	Length	с	R	w	Т	υ	Data Type	Priority	
4954	Input 1	Actual temperature, Sensor			2 bytes	С	R	29 K	Т	2	temperature (°C)	Low	

## Fig.6.12.2 "Actual temperature, Sensor" communication object

NO.	Name	Object Function	Data Type	Flag	DPT
4954	Input X-{{}}	Actual temperatur e, Sensor	2byt e	Actual tempe rature , Senso r	9.001 temperature
4955	Input X-{{}}	Temperatu re error report,	1bit	C,R,T	1.005 alarm


		Sensor			
one objec	t option:No act	ion is displayed	l during	short or l	ong operation/release

operation.

Visible when the option External NTC sensor is selected.

Table 6.12.2 "Actual temperature, Sensor" communication object

# 6.12.3 "Scene" communication object

N	umber	Name *	Object Function	Linked with	Other Linked	Lengt	n C	R	v	νт	U	Data Type	Priority
<b>P</b> 49	54	Input 1	Scene			1 byte	С	-	÷	Т	-	scene control	Low
1	Number	Name 💌	<b>Object Function</b>	Linked with	Other Linked	Length	с	R	w	т	U	Data Type	Priority
<b>1</b>	954	Input 1	Close, Scene			1 byte	С	-	-	Т	- 3	scene control	Low
1 4	955	Input 1	Open, Scene			1 byte	С	÷	÷	Т	- 3	scene control	Low

Fig.6.12.3	"Scene	"commu	nication	object
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NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
4954	Input	Scono	1byt	ст	18.001 scene control
	X-{{}}	Scene	e	C, I	
4954	Input	Close,	1byt	ст	18.001 scene control
	X-{{}}	Scene	e	C, I	
4954	Input	Short,	1byt	ст	18.001 scene control
	X-{{}}	Scene	е	C, I	
4955	Input	Open,	1byt	ст	18.001 scene control
	X-{{}}	Scene	e	C, I	
4955	Input	Long,	1byt	СТ	18.001 scene control
	X-{{}}	Scene	е	C, I	



one object option: No action is displayed during short or long operation/release operation.

two object option: When distinguishing between long and short operations, display short... /long... ; Display close without distinction... /open...

Table 6.12.3 "Scene" communication object

# 6.12.4 "String" communication object



Fig.6.12.4 "String" communication object

NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
4954	Input	String	14by	ст	16.001 character string
	X-{{}}	String	te	C, I	(ISO 8859-1)
4954	Input	Close,	14by	ст	16.001 character string
	X-{{}}	String	te	C, I	(ISO 8859-1)
4954	Input	Short,	14by	ст	16.001 character string
	X-{{}}	String	te	C, I	(ISO 8859-1)
4955	Input	Open,	14by	ст	16.001 character string
	X-{{}}	String	te	C, I	(ISO 8859-1)
4955	Input	Long,	14by	C T	16.001 character string
	X-{{}}	String	te	C, I	(ISO 8859-1)

one object option: No action is displayed during short or long operation/release operation.

two object option: When distinguishing between long and short operations, display



short... /long... ; Display close without distinction... /open...

Table 6.12.4 "String" communication object

# 6.12.5 "Security area status" communication object

	Number	Name 🔻	<b>Object Function</b>	Linked with	Other Linked	Length	с	R	W	т	U	Data Type	Priority
89	4954	Input 1	Security area status			1 byte	С	-	- 1	Т	- (	counter pulses (.	Low

### Fig.6.12.5 "Security area status" communication object

NO.	Name	Object	Data	Flag	DPT
		Function	Туре		
4954	Input	Security	1byt	СРТ	5.010 counter pulses
	X-{{}}	area status	е	С, К, І	
		•	•		

Table 6.12.5 "Security area status" communication object



S10

■2 3033	Extension function	Screen locking	1 bit	С	-	W	-	12	enable	低
■2 3034	Extension function	Screen on/off	1 bit	С	-	W	-		switch	低
■之 3035	Extension function	Wake-up screen trigger, scene NO.	1 byte	С	2	12	Т	22	scene number	低
<b>■‡</b>  3038	Extension function	Night mode	1 bit	С	R		Т	-	day/night	低
■之 3039	Extension function	Summer time status	1 bit	С	2		Т	22	enable	低
■2 3040	Extension function	Dis/En Proximity function	1 bit	C	-	W	-	1.0	enable	低
■2 3041	Extension function	Proximity input	1 bit	С	2	W	20	22	switch	低
■2 3042	Extension function	Proximity output	1 bit	С	×		Т	1.00	switch	低

#### Fig.6.13 "Extension function, Screensaver" communication object

NO.	Name	<b>Object Function</b>	Data	Flag	DPT				
			Туре						
303	Extension	Screen locking	1bit	C,W	1.003 enable				
3	function								
Tł	ne communication o	bject is used to lock the	screen. Afte	er screer	n locked, the operation				
on the	e screen will not be	responded, but can still	receive the	bus tel	egram. Telegrams:				
	0 —-	– Lock							
1 —— Unlock									
303	Extension	Screen on/off	1bit	C,W	1.001 switch				
4	function								
TI	ne communication of	object is used to control t	the screen o	on/off.T	elegrams:				
	0 —	– OFF							
	1 —	— ON							
	-								
303	Extension	Wake-up screen	1bit	С,Т	1.001 switch				
5	function	trigger,1bit	1byte		5.010 counter				
		value/1byte			pulses				



		value/scene NO.			5.001 percentage					
					17.001 scene					
					number					
TI	he communication o	bjects are visible when v	vake-up pas	sword f	unction is enabled and					
outpu	t value is selected.	The range of value is de	termined by	/ the se	lected data type.					
303	Extension	Night mode	1bit	C,R,	1.024 day/night					
8	function			т						
				C,W,						
				T,U						
Tł	he communication o	object is used to send day	y/night stat	us to th	e bus. The telegram is					
define	defined by the parameter.Telegram :									
The object flag is C,W,T,U when the day/night status is switched according to the object,										
receive the telegram value via bus to switch;										
The object flag is C,R,T when the day/night status is switched according to the time										
point	or sunrise and suns	set time, can not receive	the telegra	m value	e via bus to switch.					
303	Extension	Summer time status	1bit	C,T	1.003 enable					
9	function									
Tł	he communication of	bject is used to send the	e status tele	egrams	of the summer time to					
the bu	us. Telegrams:									
	1 —	– Summer time enable								
	-									
	0 —	<ul> <li>Summer time disable</li> </ul>								
304	Extension	Dis/En Proximity	1bit	C,W	1.003 enable					
0	function	function								





<b>304</b> <b>1</b> Th Receiv	Extension function he communication c	Proximity input	1bit	C,W	1.001 switch							
1 Tł Receiv	function he communication c											
Tł Receiv	he communication c											
Receiv		The communication object is visible when proximity function is triggered by the object.										
Receive the telegram value from bus:												
1——Trigger proximity function												
	0——Leaving (No proximity)											
304	Extension	Proximity output	1bit	С,Т	1.001 switch							
2	function		1byte		5.010 counter							
					pulses							
					17.001 scene							
					number							
					5.001 percentage							
304 2	Extension function	Proximity output	1bit 1byte	C,T	1.001 switch 5.010 counter pulses 17.001 scene number 5.001 percentag							

The communication object is determined by the parameter "Object type of output value".

When a person is detected approaching the sensing area, the object can send a specified

value (1 byte) or ON (1 bit) to the bus.

The range of values is determined by the selected data type.

Table 6.13 "Extension function, Screensaver" communication object