K-BUS

Push Button Sensor with LCD, 55mm_V1.5

CHPBL-03/00.1.00

CHPBL-03/00.2.00

CHPBL-03/00.2.01

KNX/EIB

注意事项

1、请远离强磁场、高温、潮湿等环境；

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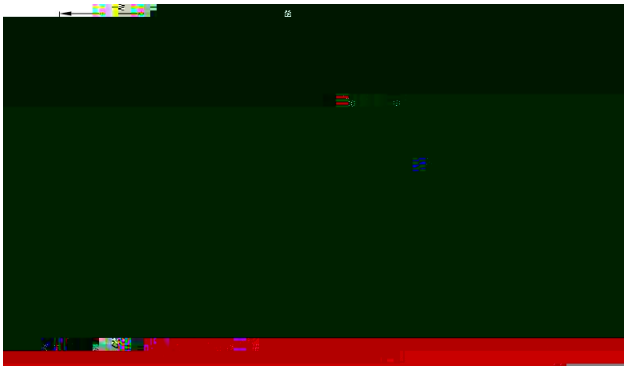
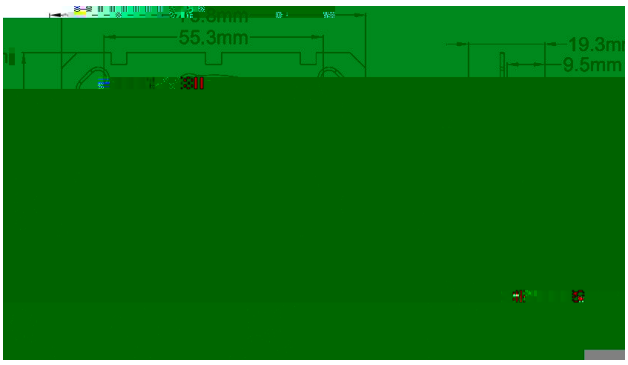
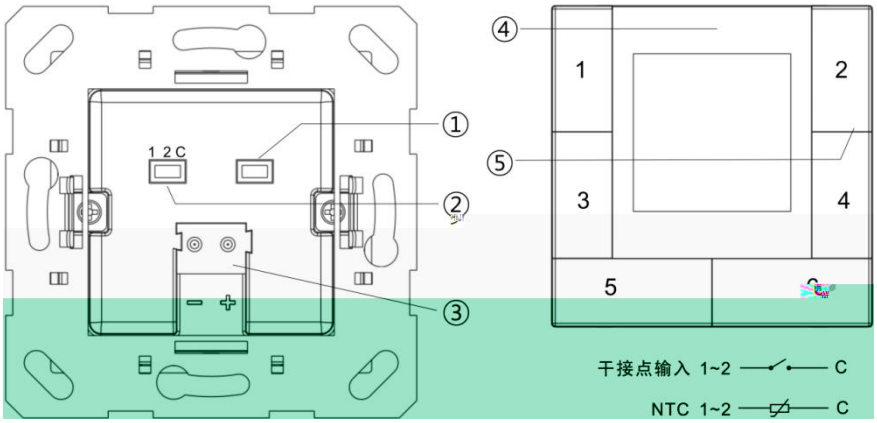
	21-30V DC, KNX
	<18mA 24V <15mA 30V <450mW
2	10K NTC
KNX	(/)
	1 3 <5m
LED	LED
LED	LED
15cm	30cm
	– 5 °C ... 45 °C
	– 25 °C ... 55 °C – 25 °C ... 70 °C
	<93%
70.8 x 70.8 x 19.3 mm 80 76.8 x 76.8 x 19.3 mm 86	
80 86	
0.05kg	

3.1.





3.2.



LED

KNX LED

/

2 5 5 3

4 4 3

Push Button Sensor with LCD,55mm/1.2	**356**	**500**	**500**	**338**

! / ! k

! ! ! k

k

k

2 / k

! ! / /

k

B k

12 k

! ! k

! ! RGB ! RGBW ! ! ! ! !

! ! ! RTC ! ! k

! ! ! ! k

FCU ! / ! ! ! !

! ! 2 PI

VRF VRF KNX VRF !

! ! !

PI k

PM2.5/CO2/VOC k 1bit 1byte

k

k

5

k

/ / /

k

! 2/4 / ! 4 ! !

! ! ! ! ! 2 PI

-10~10°C

k

V0.0.18 k

8 8 1 k

! ! ! ! ! ! ! k

8 8

1bit/1byte/2byte/3byte/6byte k

ETS

5.1.

ETS

❖ KNX k

KNX

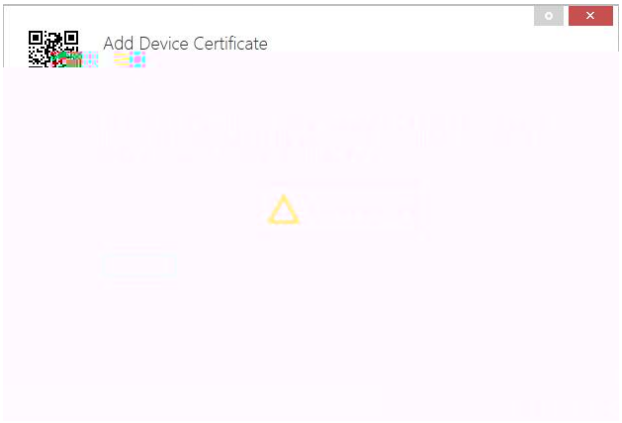
k

❖ KNX k FDSK =

ETS

✧ ETS 5.1 (2) k

QR k



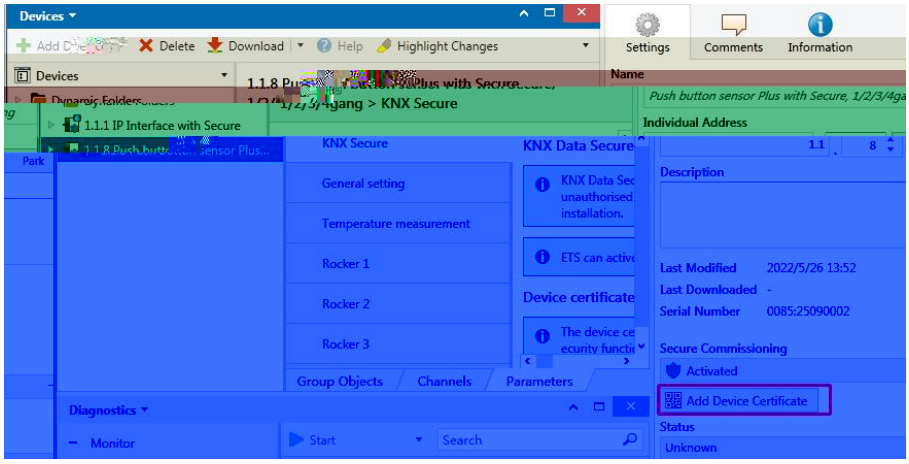
5.1(2) Add Device Certificate

✧ ETS k

“Security” 5.1(3) k

“Add Device Certificate” 5.1(4) k

5.1(3) Add Device Certificate



5.1(4) Add Device Certificate

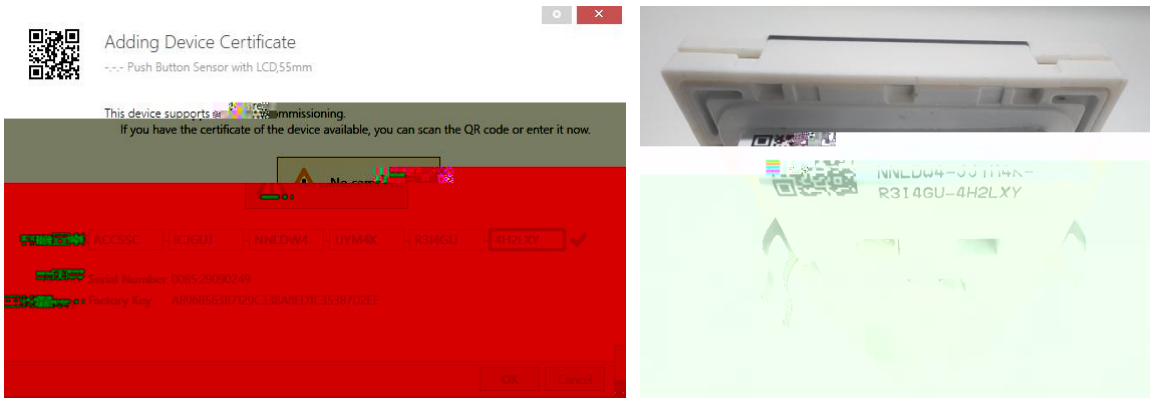
✧ FDSK k

FDSK **KNX** k

FDSK FDSK ETS 5.1(5) k

ETS

FDSK k

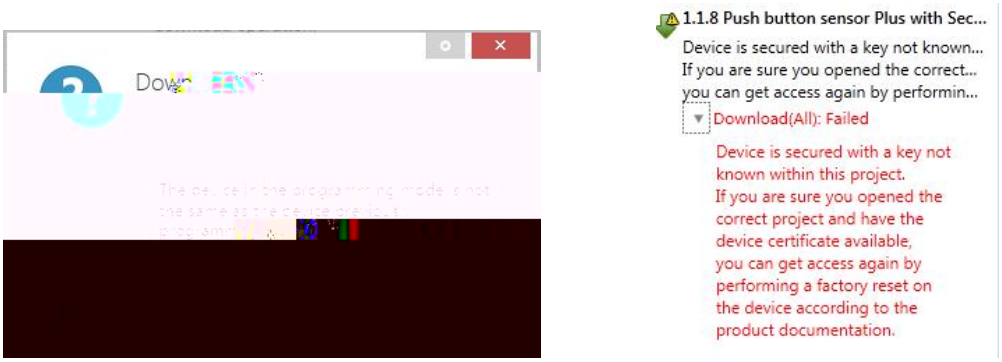


5.1(5)

k

5.1(6) “Yes” “Add Device Certificate” FDSK

5.1(6) k



5.1(6)

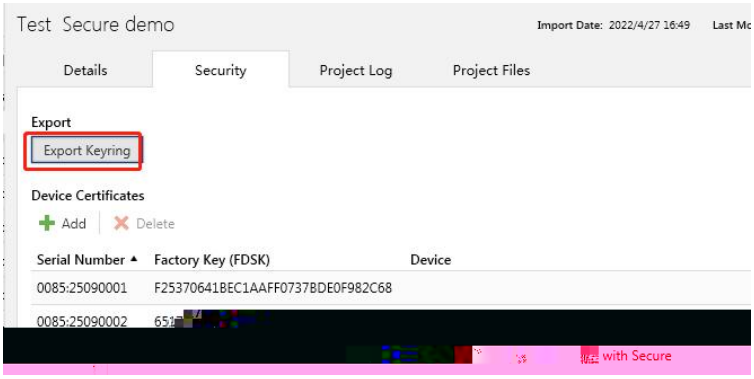
FDSK k

“Add Device Certificate” k

5.1(7)

ETS

5.1(8) .knxkeys k



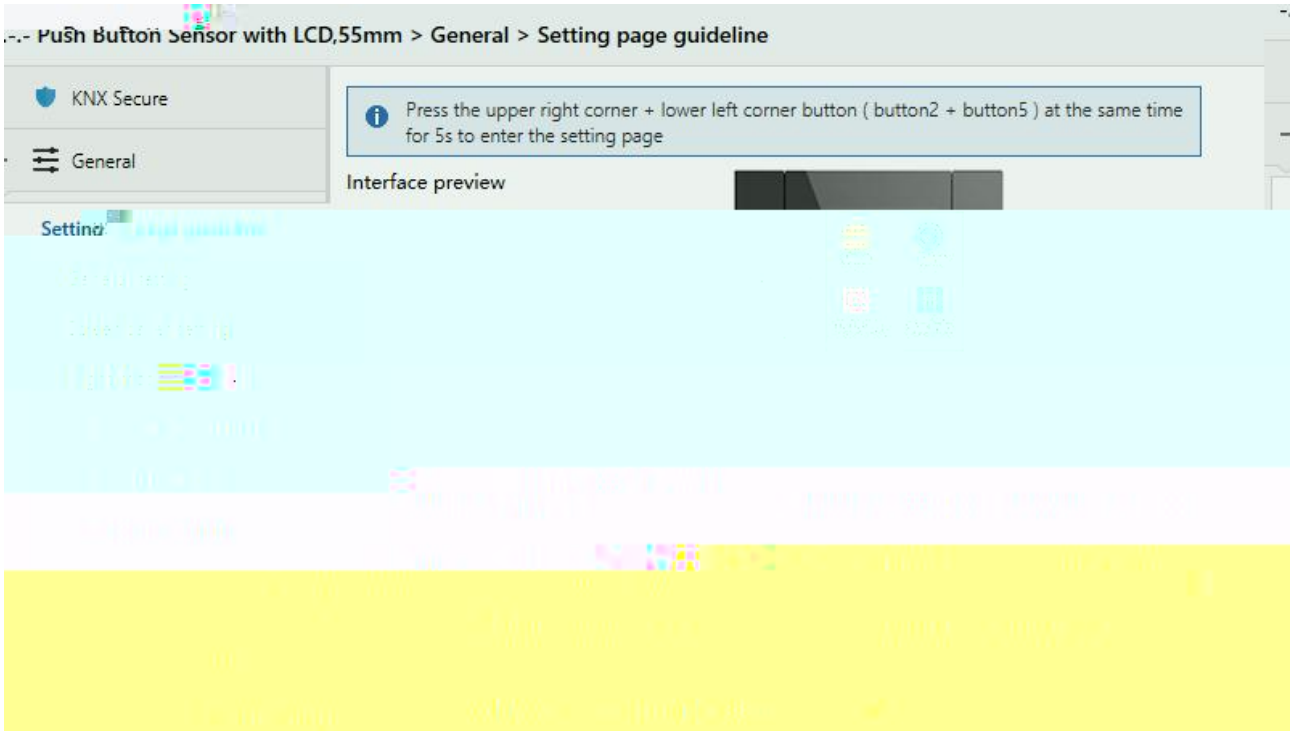
5.1(8)

KNX USB , ETS

k

5.2. “General”

5.2.1. “Setting page guideline”



5.2.1 “KNX Secure”

7.5 k

”Allow to access setting function”

k

KNX/

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

k “0” “In operation” k “0” “In operation” “1”

k **0…240 0=**

k

"Date and Time can be changed via bus"

/ k

“Date” “Time” k

RTC ®10ppm k

"Status object read request after restart"

k 100ms k

"Long operation for button after [5...250]*0.1s"

k **5..250**

Screen display setting

"Interface Language"

k

Chinese

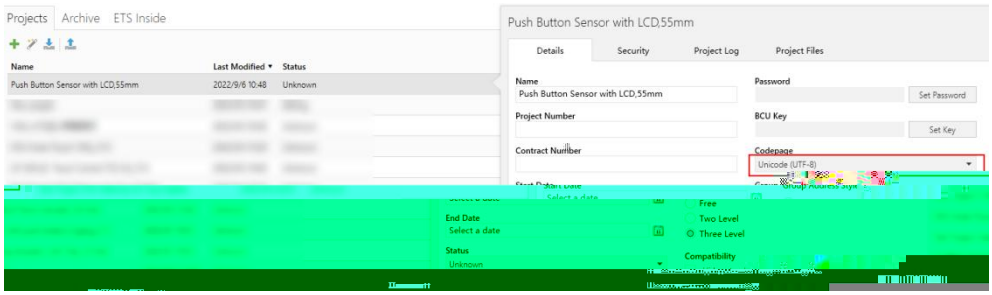
English

German

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

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

UTF-8



"UI theme is"

(UI) k

Dark style

Light style

k

"Font size (only apply to push button sensor function)"

k

Large

Small

Extension function

"Screen saver"

k

"Night mode"

k

"Proximity function"

k

"Alarm function"

k

"Panel locking function"

k

Disable

Unlock=1/Lock=0

Unlock=0/Lock=1

"Allow to wake up for button operation or proximity trigger when the screen is off and locked"

k

"Send extension scene command when locking"

"Send extension scene command when locking at day"

"Send extension scene command when locking at night"

k

/ k

k

"Scene NO."

k 0~63 k

Scene NO.1

Scene NO.2

Scene NO.3

...

Scene NO.64

Brightness setting

"Screen brightness in normal mode"

(/) k

20%

...

90%

100%

"Screen brightness" k

"Screen brightness in night mode"

k (/) k

20%

...

90%

100%

Unchanged

"Screen brightness" k

"Unchanged"

k

"Screen brightness can

k

"Screen brightness" k

k k

k

"Delay time for turn off screen[0...255]s"

"Delay time for turn off screen[0...255]s at day"

"Delay time for turn off screen[0...200]s at night"

k **0..255**

0..255 **0..200**

0 1 "Screen on/off" / k

"Button command execute when screen is off"

k

"Orientation LED active when screen is off"

LED □ □ □ □ □

k

10%

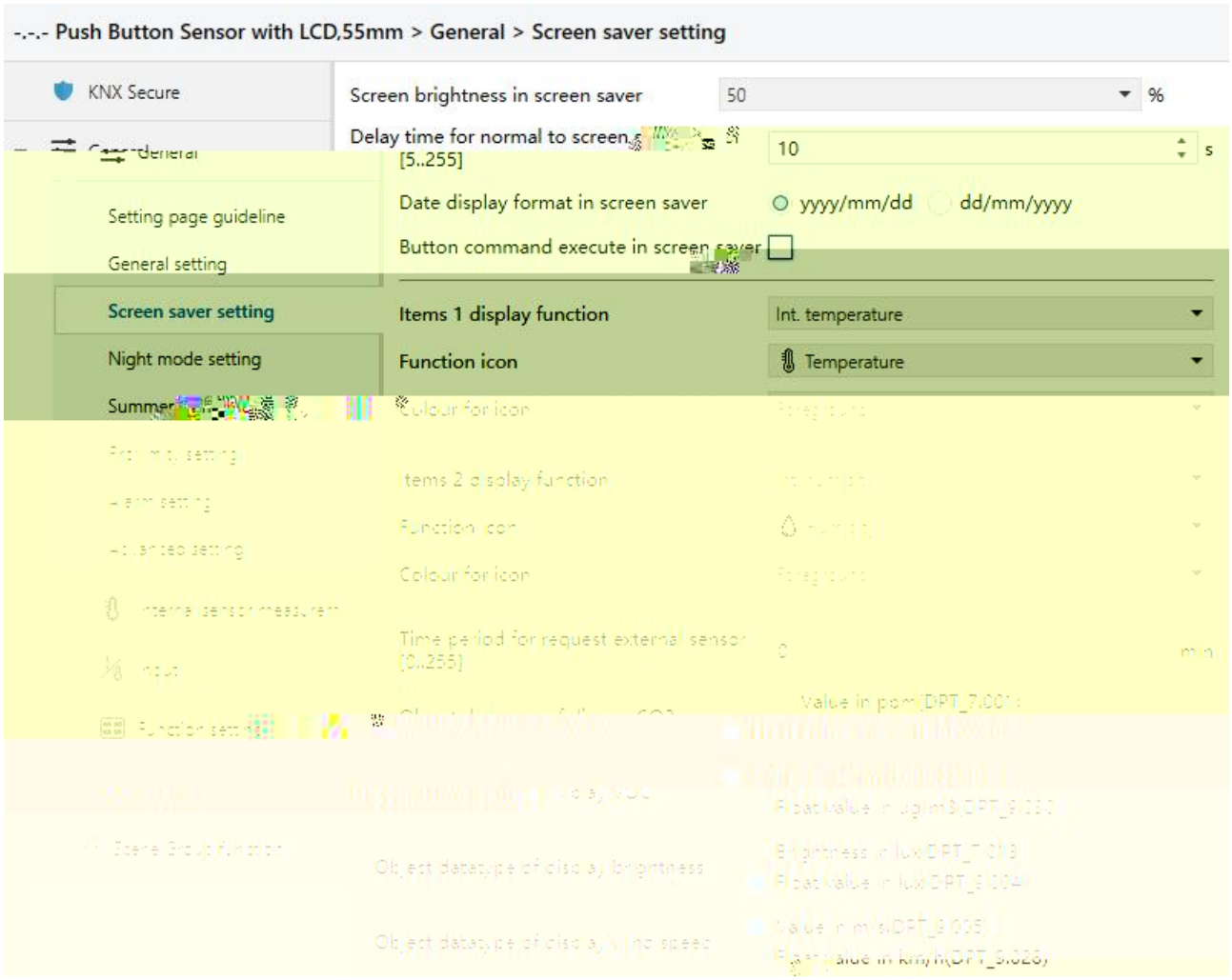
20%

...

90%

100%

5.2.3. “Screen saver setting”



5.2.3 “Screen saver setting”

"Screen brightness in screen saver"

k

20%

30%

40%

50%

"Delay time for normal to screen saver [5..255]s"

k **5..255**

"Date display format in screen saver"

k

yyyy/mm/dd

dd/mm/yyyy

yyyy mm dd k

"Button command execute in screen saver"

k

"Items x display function" x=1~2

2 k

None	**VOC**
Int. temperature	**CO2**
Int. humidity	**Brightness**
Ext. temperature	**Wind speed**
Ext. humidity	

"None" k

"Function icon"

k

Light on

Light off

...

PM10

8.1 k

"Colour for icon"

k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

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

0 k

0..255

"Object datatype of display CO2"

CO2 k

Value in ppm(DPT_7.001)

Float value in ppm(DPT_9.008)

"Object datatype of display VOC"

VOC k

Value in ug/m3(DPT_7.001)

Float value in ug/m3(DPT_9.030)

"Object datatype of display brightness"

k

Brightness in lux(DPT_7.013)

Float value in lux(DPT_9.004)

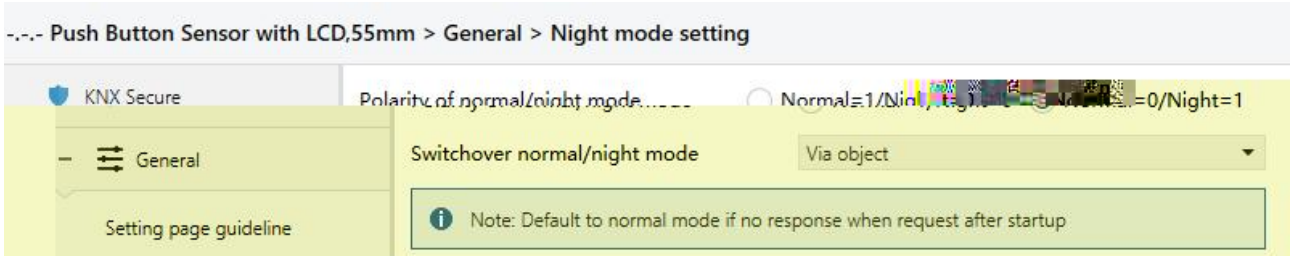
"Object datatype of display wind speed"

k

Value in m/s(DPT_9.005)

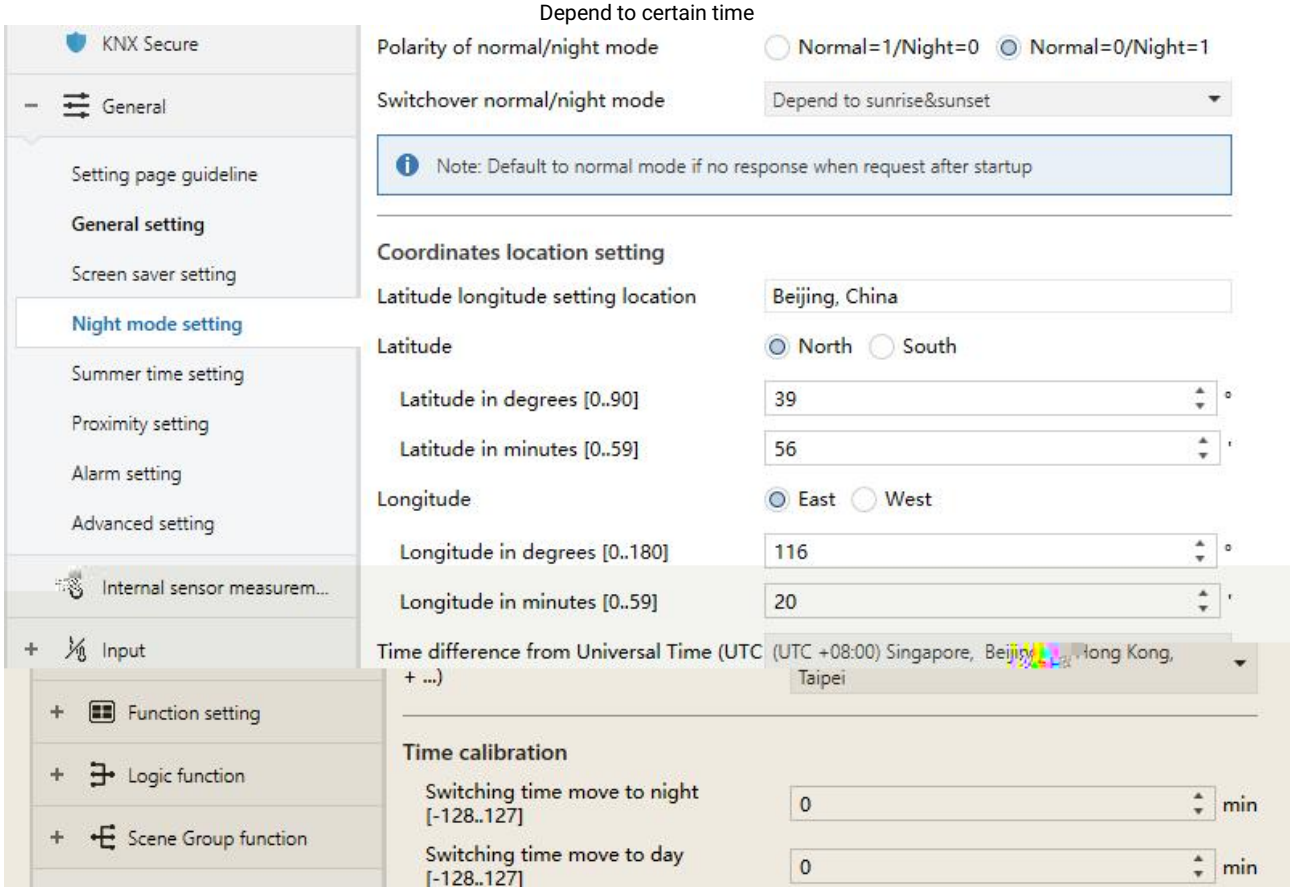
Float value in km/h(DPT_9.028)

5.2.4. "Night mode setting"



Via object

Depend to certain time



Depend to sunrise&sunset

5.2.4 “Night mode setting”

“Polarity of normal/night mode”

/ k

Normal=1/Night=0

Normal=0/Night=1

“Switchover normal/night mode”

/ “Night mode” k

Via object

Depend to certain time

Depend to sunrise&sunset

Via object k

Depend to certain time / k 18 30

6 30 k

Depend to sunrise&sunset / k

116°20' ! 39°56' k

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

k ! **LED**

k

“Depend to certain time” k

“Time for switch to night at”

k **00:00-23:59**

“Time for switch to normal(day) at”

k **00:00-23:59**

“Depend to sunrise&sunset” k

Coordinates location setting

“Latitude longitude setting location”

“Beijing,China” k

“Latitude”

k

7UH

K-B

“Latitude in d e -90-]”

“Latitude in minutes [0-59]”

39°56'

“Longitude”

Time calibration

- **“Switching time move to night [-128..127]min”**

  k

  k **-128..127**

- **“Switching time move to day [-128..127]min”**

  k

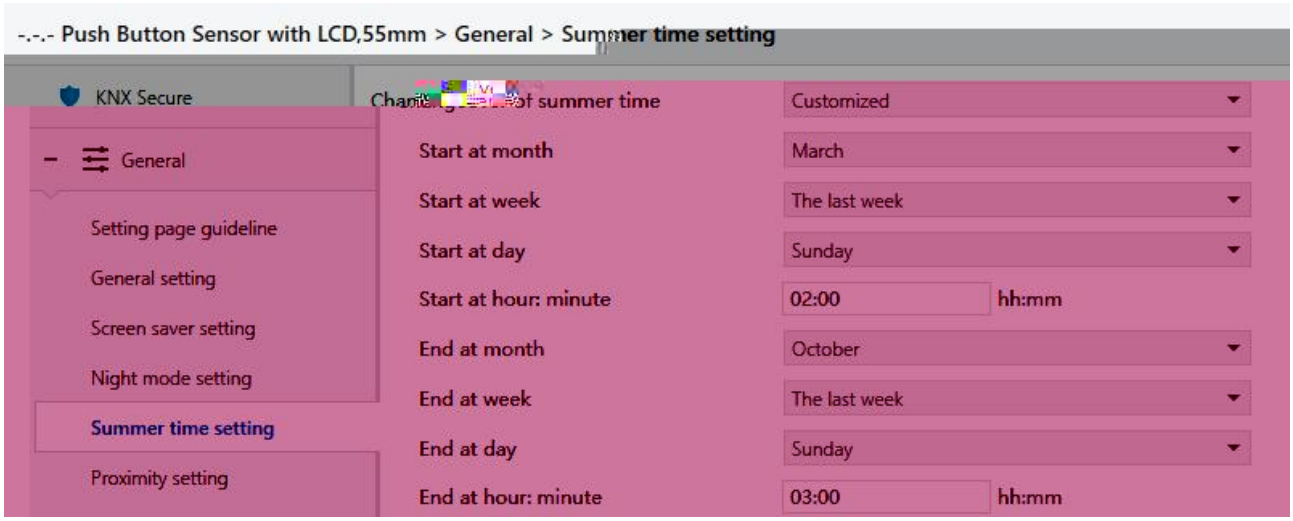
  k **-128..127**

-10min 10min 10min

10min k

5.2.5 k

5.2.5. “Summer time setting”



5.2.5 “Summer time setting”

"Changeover of summer time"

k

No active

Always

Customized

No: k

Always k

Customized setting k

"Customized setting", k

- **"Start at month"**
- **"End at month"**

k

January

February

...

December

- **"Start at week"**
- **"End at week"**

k

The first week

The second week

...

The last week

- **“Start at day”**
- **“End at day”**

k

Monday

Tuesday

...

Sunday

- **“Start at hour: minute”**
- **“End at hour: minute”**

k **00:00-23:59**

3 02h:00min 11

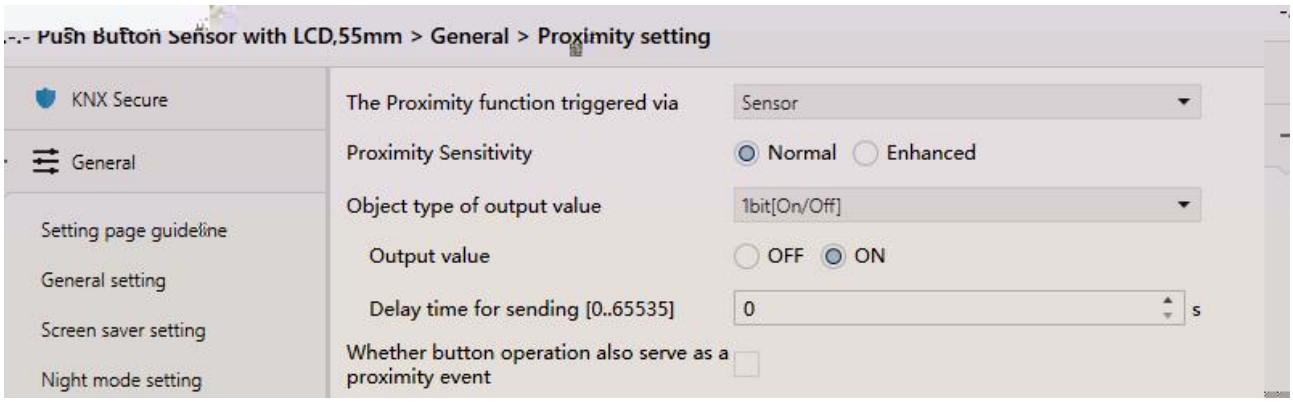
02h:00min

03h:00min 02h:00min k

! k

k

5.2.6. “Proximity setting”



5.2.6 “Proximity setting”

“The Proximity function triggered via”

k

Sensor

Proximity object

Sensor or Proximity object

“Sensor or Proximity object” k

“Sensor” “Sensor or Proximity object” k

“Sensor sensitivity”

k

Normal

Enhanced

15cm 30cm k

“Object type of output value”

k

No reaction

1bit[On/Off]

1byte[scene control]

1byte[0..255]

1byte[0..100%]

2byte[0..65535]

“No reaction” k

- **“Output value”**

/

k

- **“Delay time for sending [0..65535]s”**

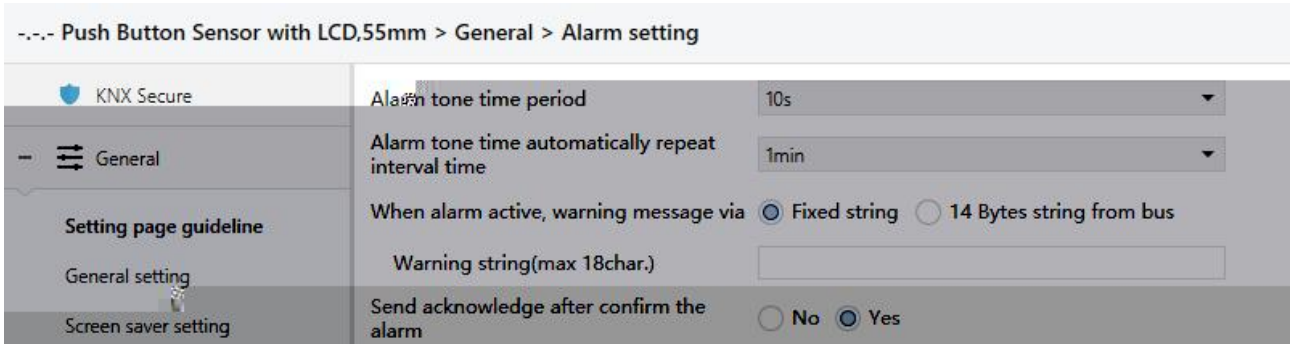
k **0..65535**

“Whether button operation also serve as a proximity event”

k

k

5.2.7. “Alarm setting”



5.2.7 “Alarm setting”

"Alarm tone time period"

k

k

Disable

10s

20s

...

25min

30min

Disable

k

"Alarm tone time automatically repeat interval time"

k

k

Disable

10s

20s

...

25min

30min

Disable

k

"When alarm active, warning message via"

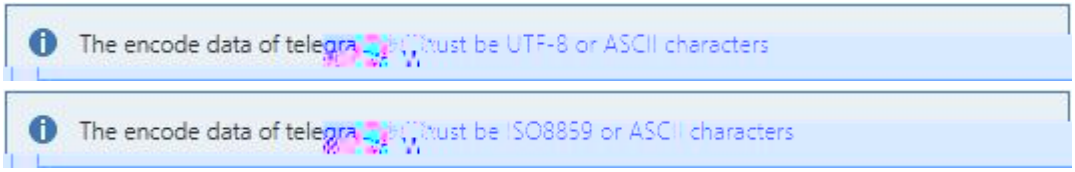
ETS

14byte k

Fixed string

14 Bytes string from bus

“14 Bytes string from bus”



UTF-8 **ASCII**

ISO8859 **ASCII** k

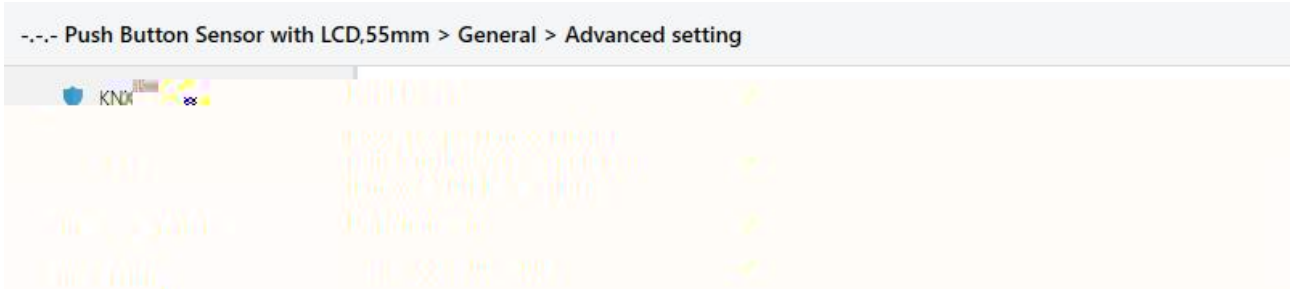
“Warning string(max 18char.)”

“Fixed string” k k

“Send acknowledge after confirm the alarm”

1bit k

5.2.8. “Advanced setting”



5.2.8 “Advanced setting”

“Input interface”

k

“Room temperature controller (This function only support from firmware V0.0.18 or higher.)”

k

V0.0.18 **ETS**

k

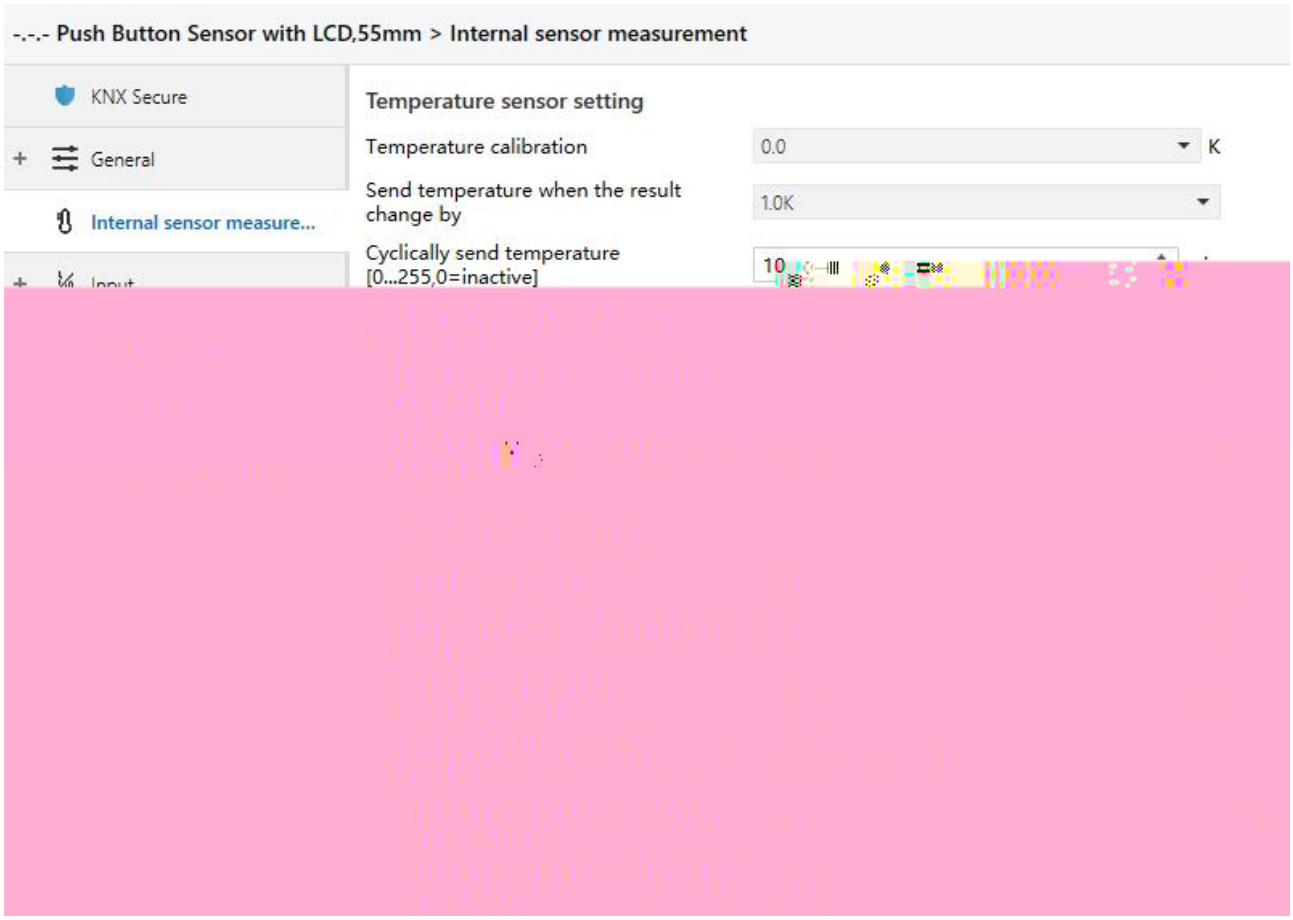
“Logic function”

k

“Scene group function”

k

5.3. “Internal sensor measurement”



5.3 “Internal sensor measurement”

!

k

Temperature sensor setting

“Temperature calibration”

k

-5.0K

...

0.0K

.0K

30

k

"Send temperature when the result change by"

k Disable k

Disable

0.5K

1.0K

...

10.0K

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

k 0 k 0..255

k

"Send alarm telegram for low/high temperature"

/ k

No respond

Respond after read only

Respond after change

No respond

Respond after read only

" Low temperature alarm

Respond after change " Low temperature alarm"/" High temperature alarm" k

"Respond after read only" "Respond after change" k

• • **"Threshold value for low temperature alarm [0..15]-C"**

k k

0°C

1°C

...

15°C

• • **"Threshold value for high temperature alarm [30..45]-C"**

k k

30°C

31°C

...

45°C

Humidity sensor setting

"Humidity calibration"

k **-20% / -15% / -10% / -5% / -3% / -1% / 0% / 1% / 3% / 5% / 10% / 15% / 20%**

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

k 0 k **0..20**

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

k 0 k **0..255**

k

"Send alarm telegram for low/high humidity"

/ k

No respond

Respond after read only

Respond after change

No respond

Respond after read only

" Low humidity alarm"/" High humidity alarm"

Respond after change " Low humidity alarm"/" High humidity alarm"

k

"Respond after read only" "Respond after change" k

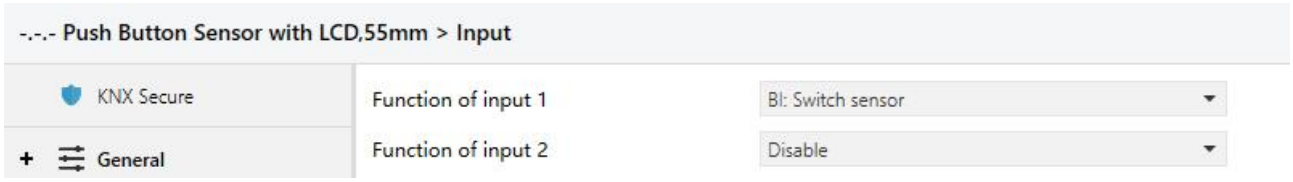
- **"Threshold value for low humidity alarm [5..20]%"**

k k **5..20**

- **"Threshold value for high humidity alarm [70..85]%"**

k k **70..85**

5.4. “Input”



5.4 “Input”

“Function of input x”(x=1, 2)

k k

k

Disable

Temperature probe(NTC 10K)

BI: Switch sensor

BI: Scene control

BI: Send String(14bytes)

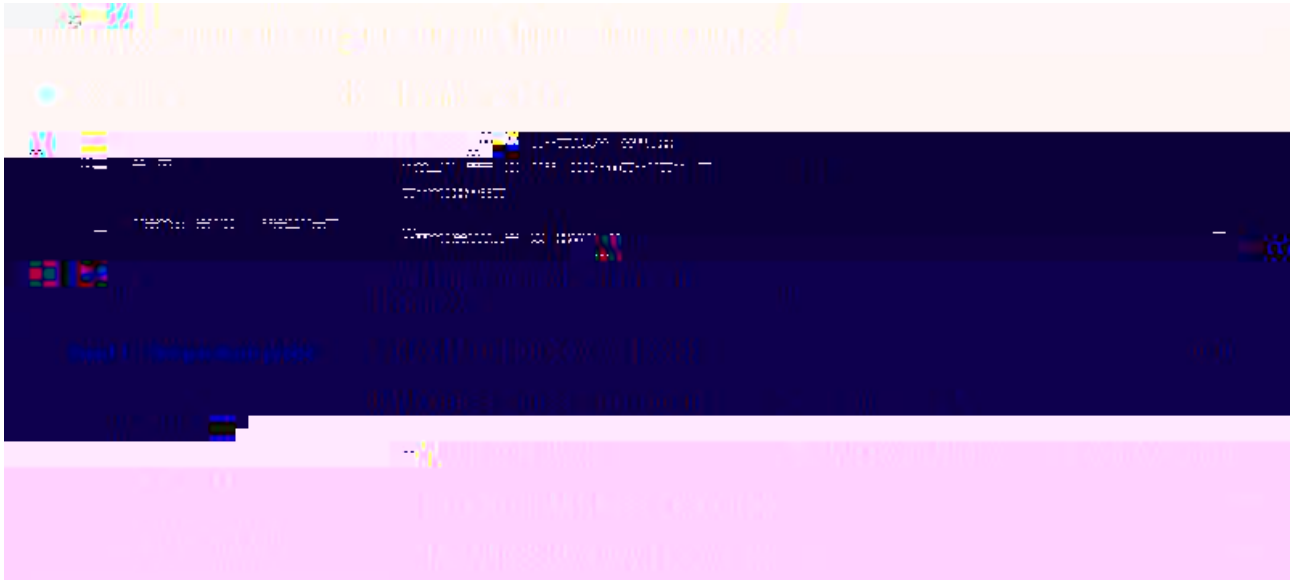
B

! ! / /

k

k

5.4.1.



5.4.1

"Description (max 30char.)"

k

"B value of temperature sensor(must refer to the characteristic of component)"

NTC B k

3275

3380

...

4200

k **B**

k

"Temperature calibration"

k

-5.0K

...

0.0K

...

5.0K

"Send temperature when the result change by"

k Disable k

Disable

0.5K

1.0K

...

10.0K

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

k 0 k **0..255**

"Reply error of sensor measurement"

k

No respond

Respond after read only

Respond after change

No respond

Respond after read only

" Temperature error report, Sensor"

Respond after change " Temperature error report, Sensor"

k

“Respond after read only” “Respond after change” k

- **“Object value of error”**

k

0=no error/1=error

1=no error/0=error

0=no error/1=error 0 1

1=no error/0=error k

- **“Upper threshold value for error report”**

k k

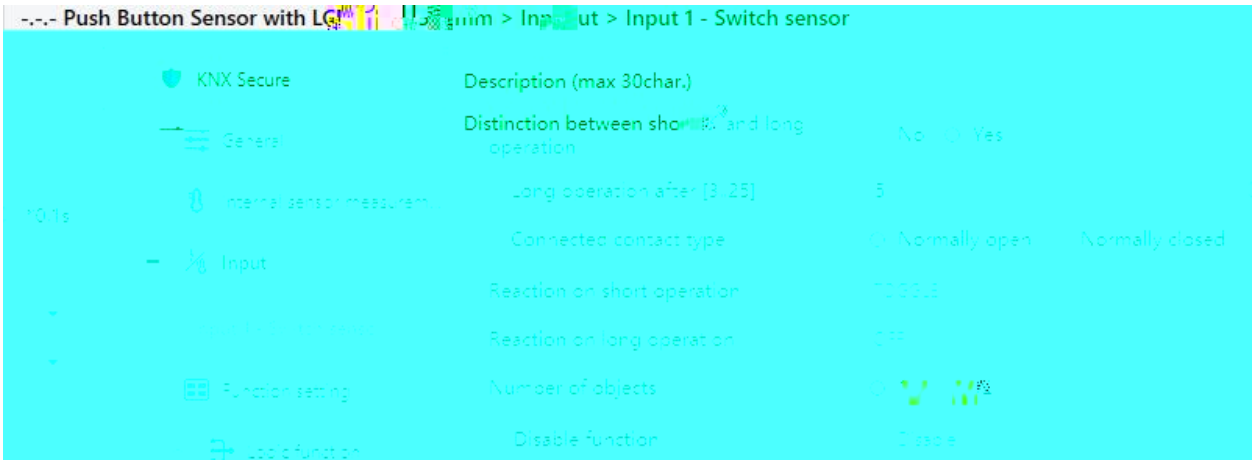
40°C / 45°C / 50°C / 55°C / 60°C / 70°C

- **“Lower threshold value for error report”**

k k

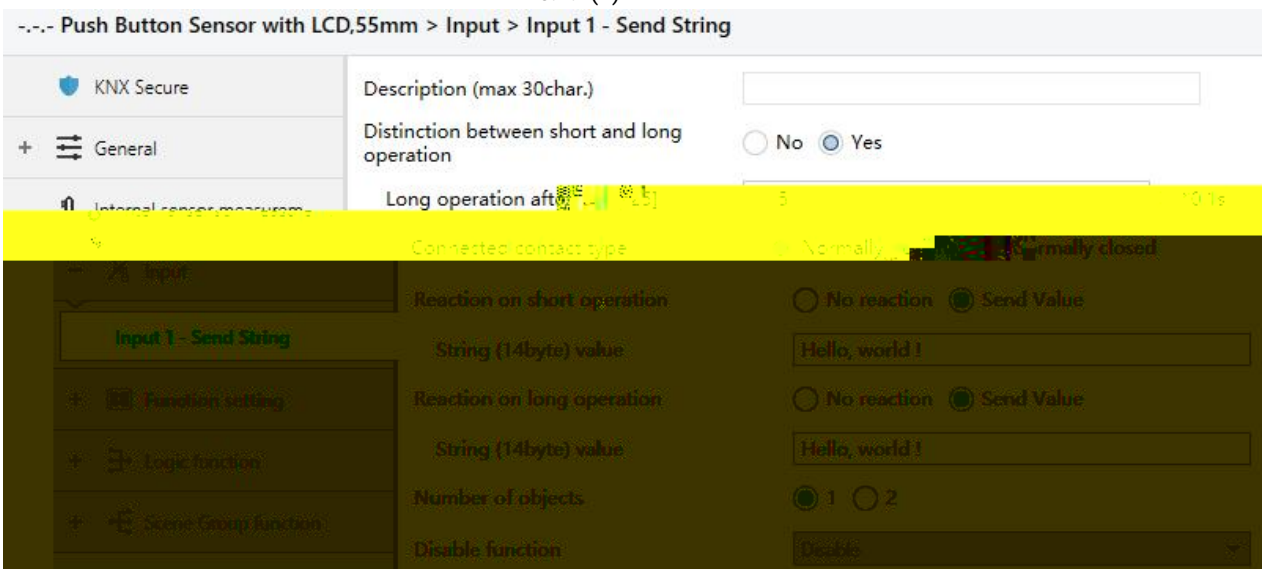
10°C / 5°C / 0°C / -5°C / -10°C / -20°C

5.4.2.



5.4.2(1)

5.4.2(2)



5.4.2(3)

"Description (max 30char.)"

k

"Distinction between short and long operation"

k

No

Yes

“Long operation after [3..25]*0.1s”

/ k

k **3..25**

“Connected contact type”

/ k k

Normally open

Normally closed

“BI: Switch sensor”, k

“Reaction on short/long operation”

/ k

k

No reaction

OFF

ON

TOGGLE

No action k

ON k

OFF k

TOGGLE k

- **“Reaction on close/open the contact”**

/ k

k

No reaction

OFF

ON

TOGGLE

- **“Send object value after voltage recovery (valid if reaction is not toggle)”**

/ “TOGGLE” “No reaction”

k

No

Yes

“BI: Scene control”, k

- **“Reaction on short/long operation”**

/ k

k

No reaction

Recall scene

Store scene

- **“Reaction on close/open the contact”**

/ k

k

No reaction

Recall scene

Store scene

- **“8 bit scene number”**

“Recall scene” “Store scene” k

Scene NO.1~64 **0~63**

“BI: Send String(14bytes)”, k

- **“Reaction on short/long operation”**

/ k

No reaction

Send Value

- **“Reaction on close/open the contact”**

/ k

No reaction

Send Value

- **“String (14byte) value”**

“Send Value” k k

- **“Send object value after voltage recovery”**

/ k

No

Yes

"Number of objects"

"Reaction on long/open operation" "No reaction" k /

1 2 k

1

2

"Disable function"

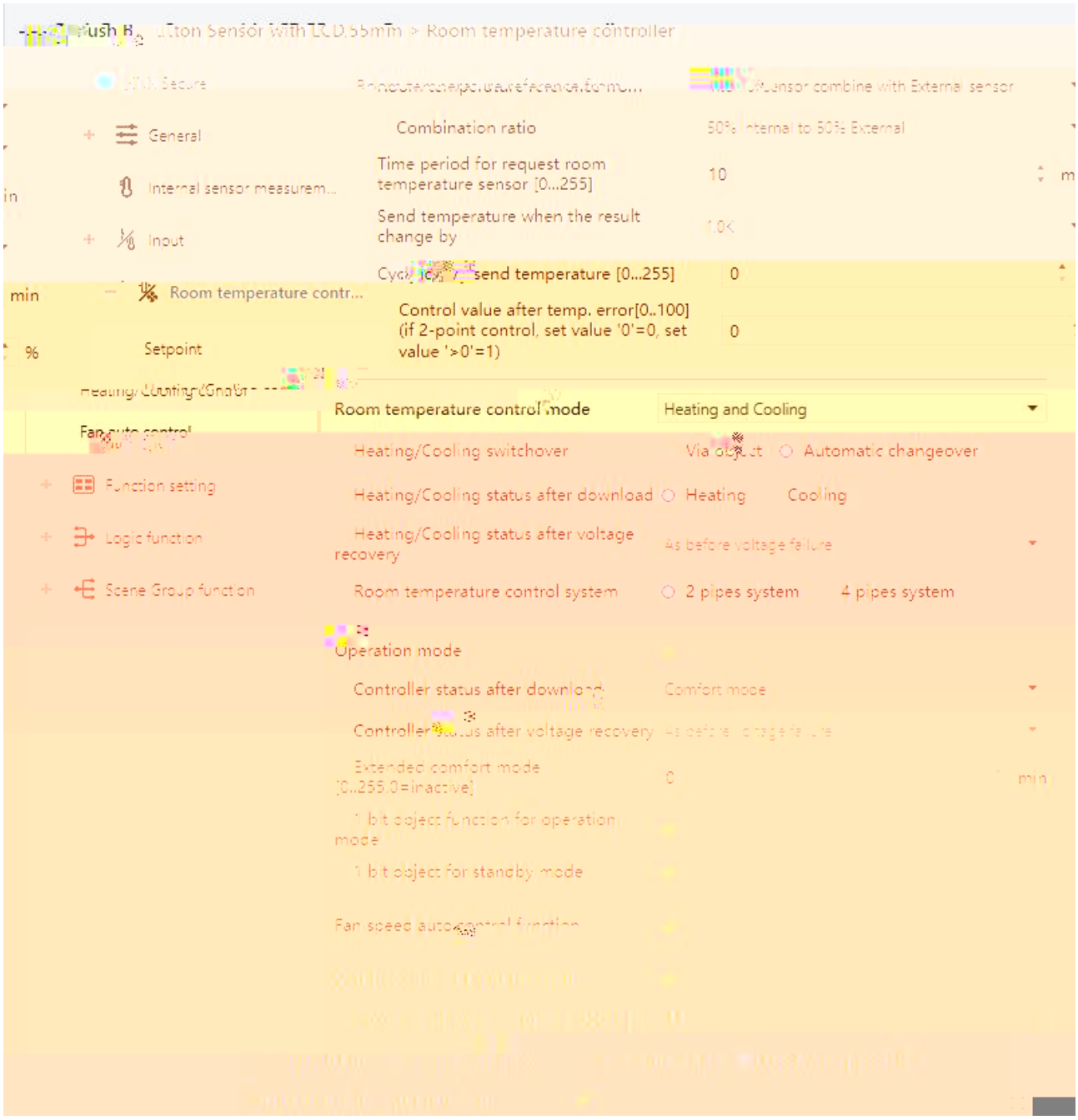
k / k

Disable

Disable=1/Enable=0

Disable=0/Enable=1

5.5. “Room temperature controller”



5.5 “Room temperature controller”

“Room temperature reference from”

k

Internal sensor

External sensor

Internal sensor combine with External sensor

“Internal sensor measurement” 5.3 k

- **“Time period for request room temperature sensor [0...255]min”**

“...External sensor” k k

0..255

“Internal sensor combine with External sensor” **k**

- **“Combination ratio”**

k

10% Internal to 90% External

20% Internal to 80% External

...

90% Internal to 10% External

“40% Internal to 60% External” 40% 60%

= ×40% + ×60%

k

k

- **“Send temperature when the result change by”**

k Disable k

Disable

0.5K

1.0K

...

10K

“Cyclically send temperature [0...255]min”

0 k 0..255

k

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

k 0..100

0 0 0

1 k

“Room temperature control mode”

k

Heating

Cooling

Heating and Cooling

“Heating and Cooling” k

“Heating/Cooling switchover”

/ k

Via object

Automatic changeover

“Heating/Cooling status after download”

RTC / k

Heating

Cooling

- **“Heating/Cooling status after voltage recovery”**

RTC / k

Heating

Cooling

As before voltage failure

As before voltage failure k

k

- **“Room temperature control system”**

RTC k

2 pipes system

4 pipes system

2 pipes system k

4 pipes system

k

“Operation mode”

RTC k

! ! 4 1bit 1byte

k

k

- **“Controller status after download”**

RTC k

Comfort mode

Standby mode

Economy mode

“Controller status after voltage recovery”

RTC k

Comfort mode

Standby mode

Economy mode

Frost/heat protection

As before voltage failure

“Extended comfort mode [0..255,0=inactive]min”

k >0 1bit “Extended comfort mode”

k **0..255**

1 1

k k

/ k

“1 bit object function for operation mode”

1bit k 1

! 0 k

“1 bit object for standby mode”

k 1bit k

k

“Initial setpoint temperature (-C)”

k

10.0

10.5

...

35.0

Automatic H/C mode changeover dead zone /

“ Upper/Lower dead zone”

“Heating and Cooling” “Automatic changeover” k

/ k

0.5K

1.0K

...

10K

+

- k

"Fan speed auto.control function"

k

"Window contact input function"

k k

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

k

k

0..65535

- **"Controller mode for open window"**

k open

k ! /

k k

Economy mode

Frost/heat protection

"Bus presence detector function"

k k

k /

k

k

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

k k

k

5°C

6°C

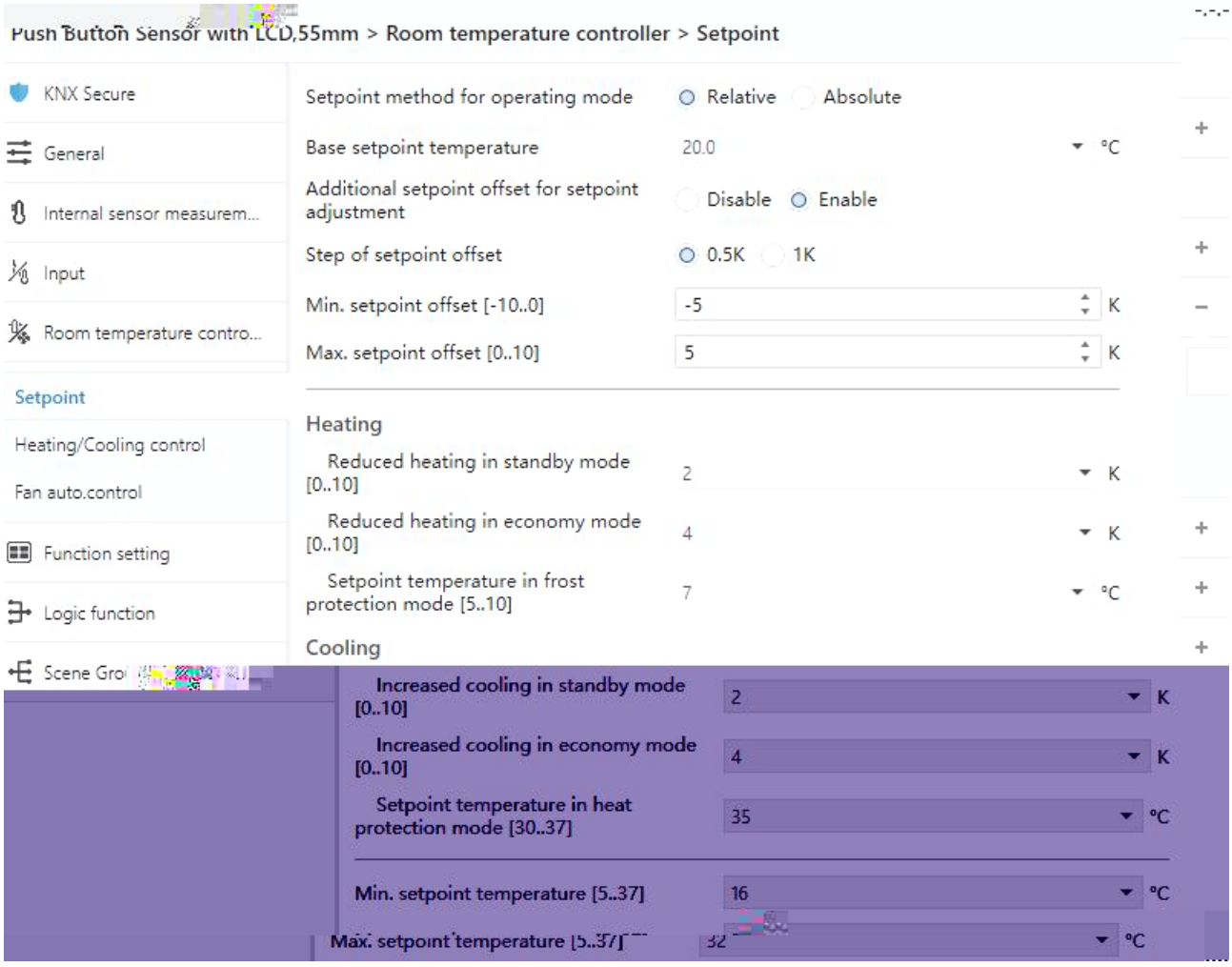
...

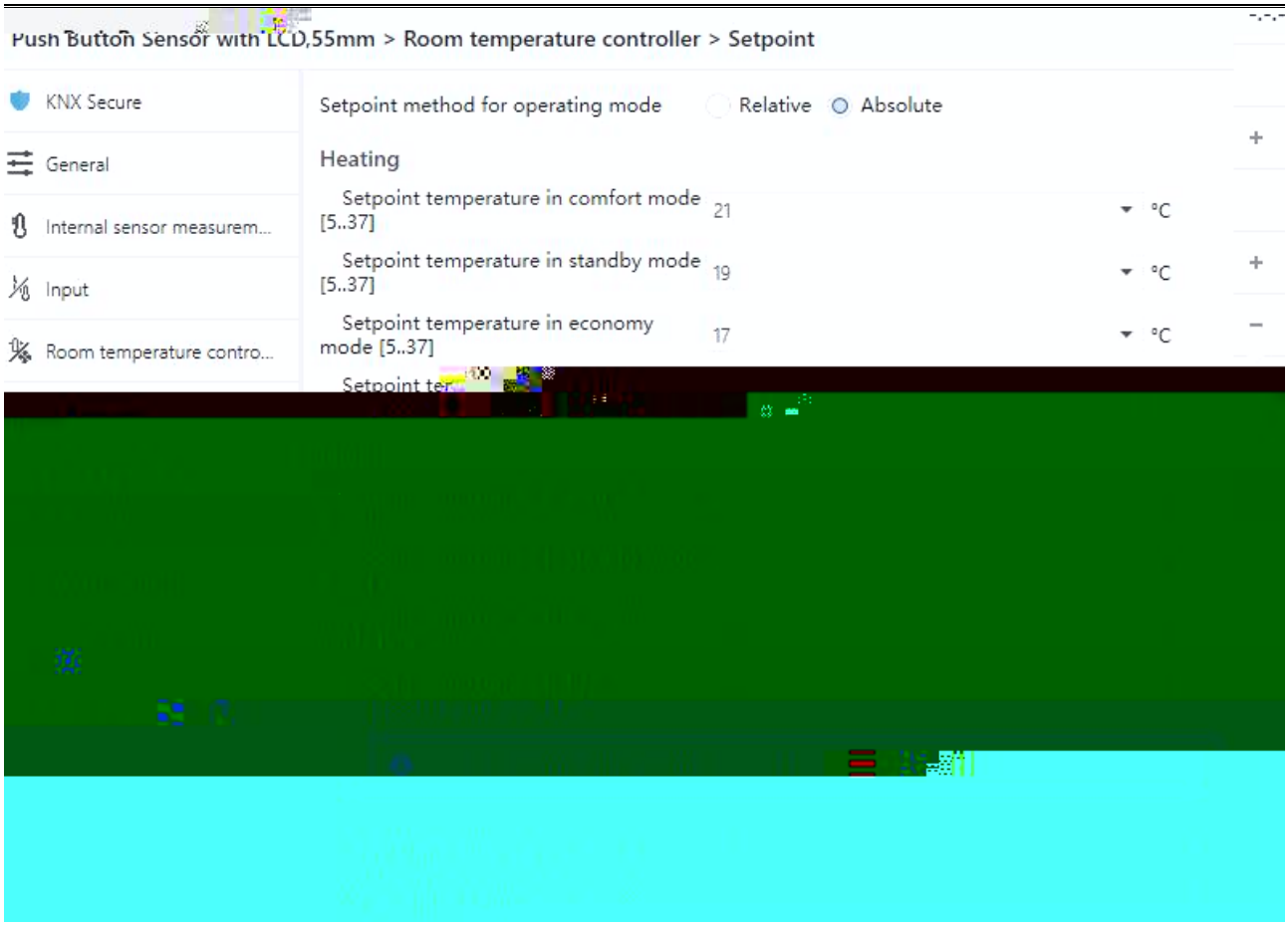
37°C

“Setpoint” k

ETS k

5.5.1. “Setpoint”





5.5.1 “Setpoint”

k

“Setpoint method for operating mode”

k

Relative

Absolute

Relative k

Absolute k

k

2byte“Float offset value” k k

k

- **“Step of setpoint offset”**

/ 1- 0- k

k

0.5K

1K

= + +

/

k **1bit** **Setpoint offset** **2byte** **Float offset value**

k

- **“Min. setpoint offset [-10..0]K”**

k **-10..0**

- **“Max. setpoint offset [0..10]K”**

k **0..10**

0 **ETS** k

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

“Upper/Lower dead zone”

“Heating and Cooling” “Automatic changeover” k

k

0.5K

1.0K

...

10K

+

-

k

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

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

k

0K

1K

...

10K

Heating

Cooling

k

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

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

k

0K

1K

...

10K

Heating

Cooling

k

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

k

5°C

6°C

...

10°C

k

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

k

30°C

31°C

...

37°C

k

k

"Setpoint temperature in comfort mode [5...37]-C"

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

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

! k

5°C

6°C

...

37°C

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

k

5°C

6°C

...

10°C

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

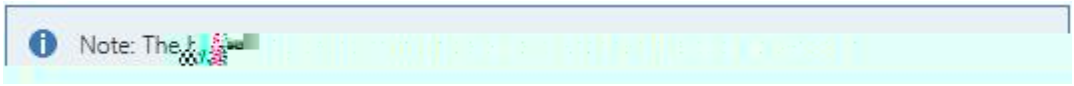
k

30°C

31°C

...

37°C



Heating and Cooling

,

ETS k

k

1.

k

2. k

k

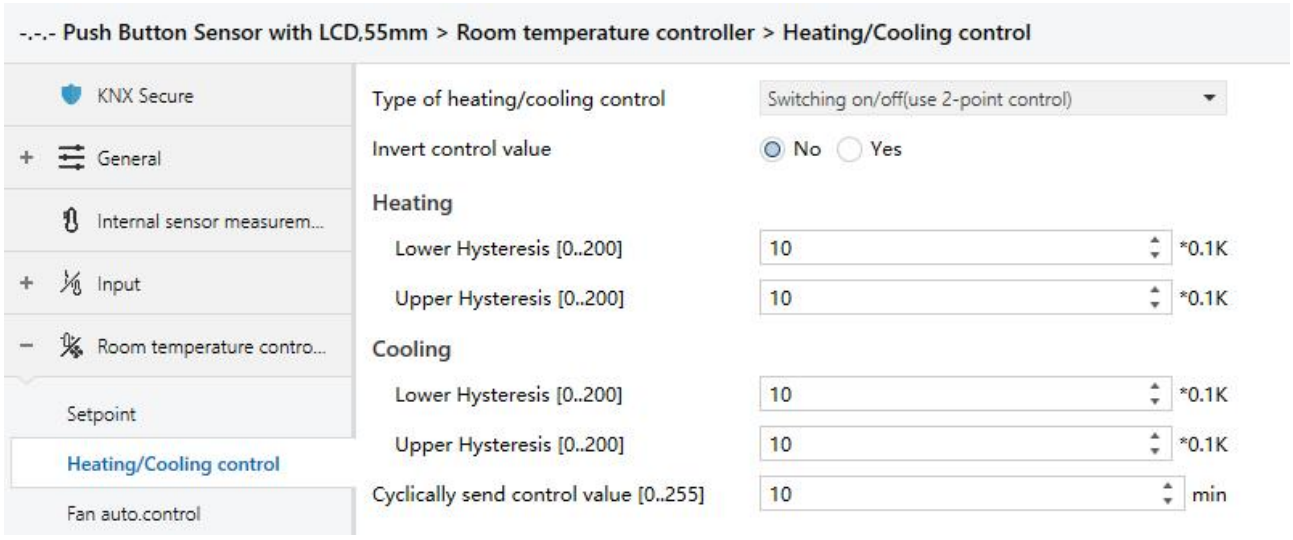
3.

k

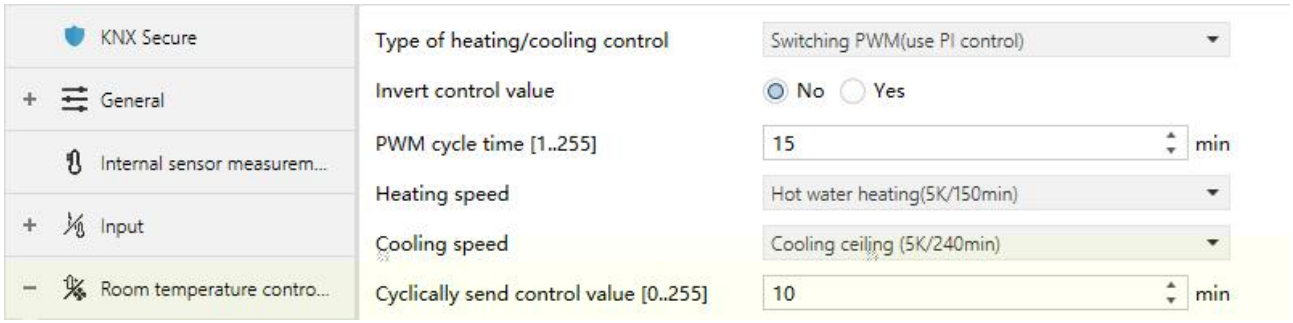
/ ETS k ETS

k

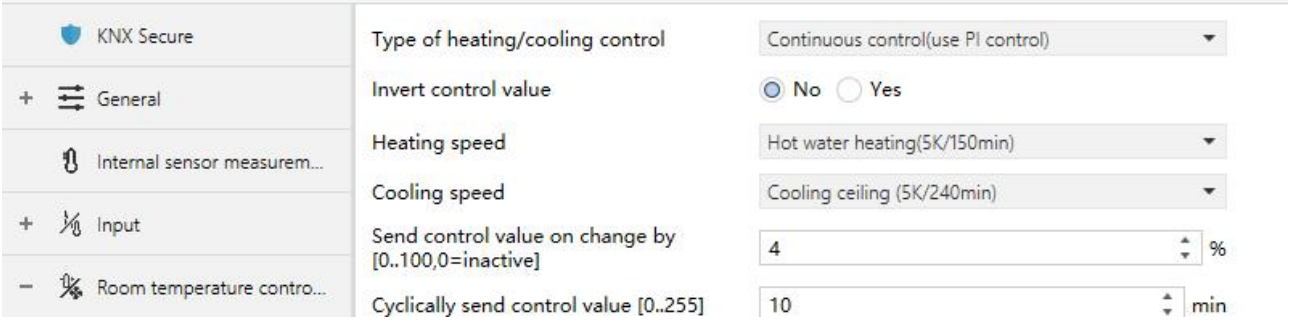
5.5.2. “Heating/Cooling control”



“Switching on/off(use 2-point control)”



“Switching PWM(use PI control)”



"Continuous control(use PI control)"

5.5.2(1). "Heating/Cooling control"

2 4 k

"Type of heating/cooling control"

/ k

Switching on/off(use 2-point control)

Switching PWM(use PI control)

Continuous control(use PI control)

"Invert control value"

k

No

Yes

Yes k

(2 point control)

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

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

RTC k **0..200**

PI (PI control)

- **"Heating speed"**
- **"Cooling speed"**

PI k k

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

Cooling ceiling (5K/240min)

Split unit (4K/90min)

Fan coil unit(4K/90min)

User defined

- **"Proportional range [10..100]*0.1K"(P value)**
- **"Reset time [0..255]min"(I value)**

"User defined" k PI PI k

10..100 (P value)

0..255 (I value)

"PWM cycle time [1...255]min"

"Switching PWM(use PI control)"

10min, 80%

8min 2min /

k

1..255

"Switching PWM (use PI control)" "Continuous control (use PI control)" PI

"Continuous control" PI (1byte)

"Switching PWM" PI "on/off" k

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

"Continuous control (use PI control)"

k **0..100 0**

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

k **0..255**

PI PI :

1

	P	**I**	**PI**	**PWM**
Hot water Heating	5K	150min	Continuous/PWM	15min
Underfloor heating	5K	240min	PWM	15-20min
Electrical heating	4K	100min	PWM	10-15min
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	--

2

	P	**I**	**PI**	**PWM**
Cooling ceiling	5K	240min	PWM	15-20mIn
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	--

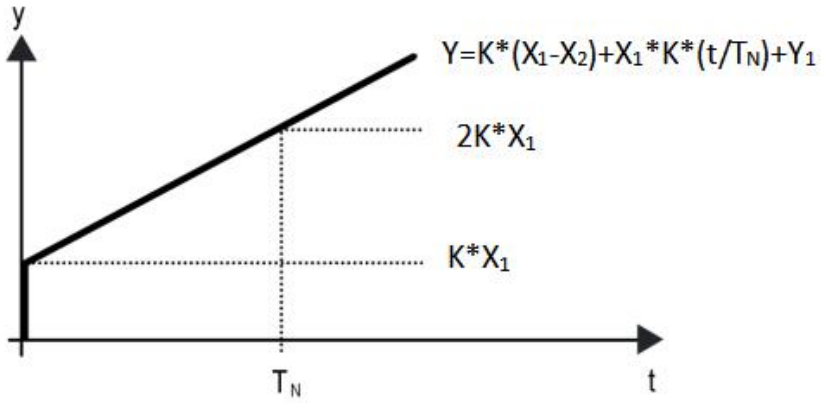
3

“Heating/Cooling speed” “User defined” P

I k PI

k

k 0 k



5.5.2(3) PI

Y

Y1

X1 =

X2 =

T_N

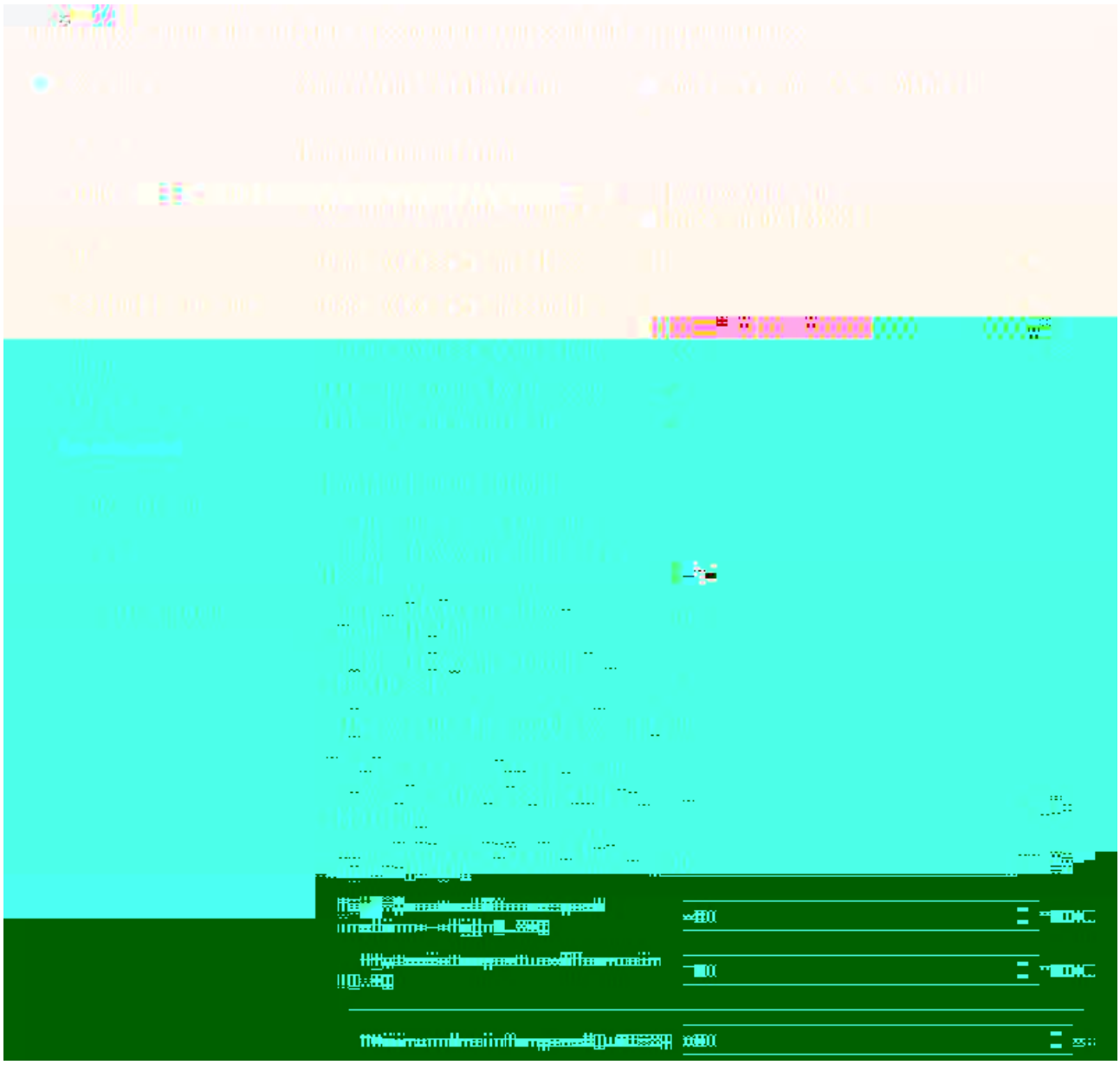
K

PI Y=K*(X1-X2 +X1*K*t/T_N+Y1

PI Y=K X1-X2 +Y2

K:	
K:	
T_N:	
T_N:	

5.5.3. “Fan auto.control”



5.5.3“Fan”

k

“Auto. operation on object value”

k

Auto=1/Man.=0

Auto=0/Man.=1

Auto=1/Man.=0 “Fan automatic operation” “0” “1”

Auto=0/Man.=1 “Fan automatic operation” “1” “0”

k

k

Fan speed output setting

”Object datatype of 1byte fan speed”

1byte k

Fan stage (DPT 5.100)

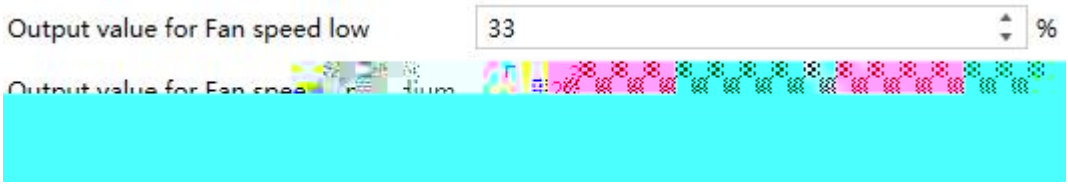
Percentage (DPT 5.001)

” ” “Output value for fan speed low/medium/high”

k 0 k

1..255 /1..100

1byte **< <** **ETS**



”1 bit object function for fan speed”

1bit k 1bit k

” ” “1 bit object for fan speed off ”

k 1bit k

Fan speed control setting

Condition setting for using PI control PI

PI PI

k

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

k 1..255

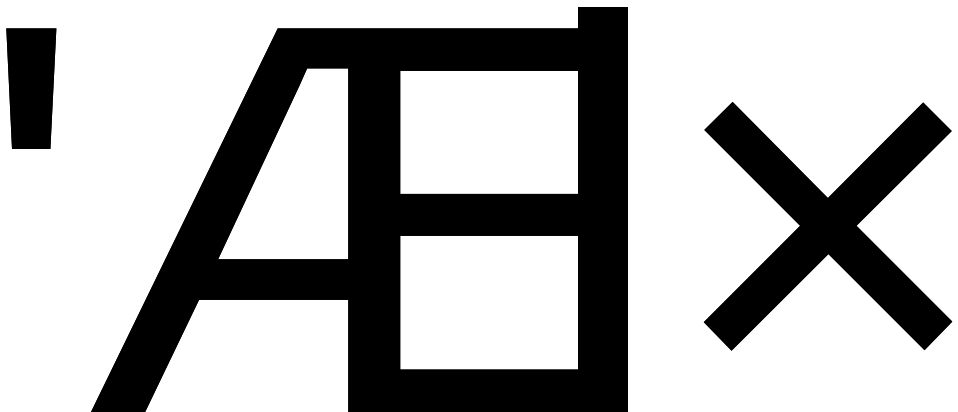
k

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

k -..7«&:$?-* ‴ 6 OM _{'ÆBt_ÆSsJ^j $? & \Q

k 1255

"Threshold value speed me edi->lo l



k

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

k **0..50**

0

10 50 60 + 40 -

40~60 k 40 (

)60 k

Condition setting for using 2-point control

2-point k

-

- k

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

k **1..200**

k

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

k

k **1..200**

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

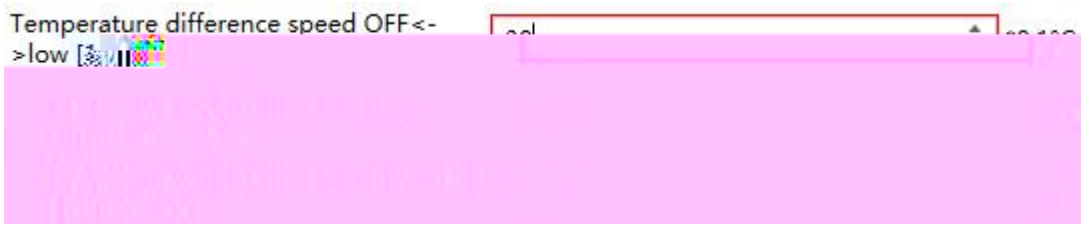
k

k **1..200**

k

OFF <-> <-> <-> k

ETS



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

k **0..50**

0

0.5℃ 1℃ 1.5℃ +

0.5℃ - 0.5℃~1.5℃

k 0.5℃ ( )1.5℃ k

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

k

k

k **0..65535**

0 k

k

5.6. “Function setting”

5.6 “Function setting”

“Function type”

k

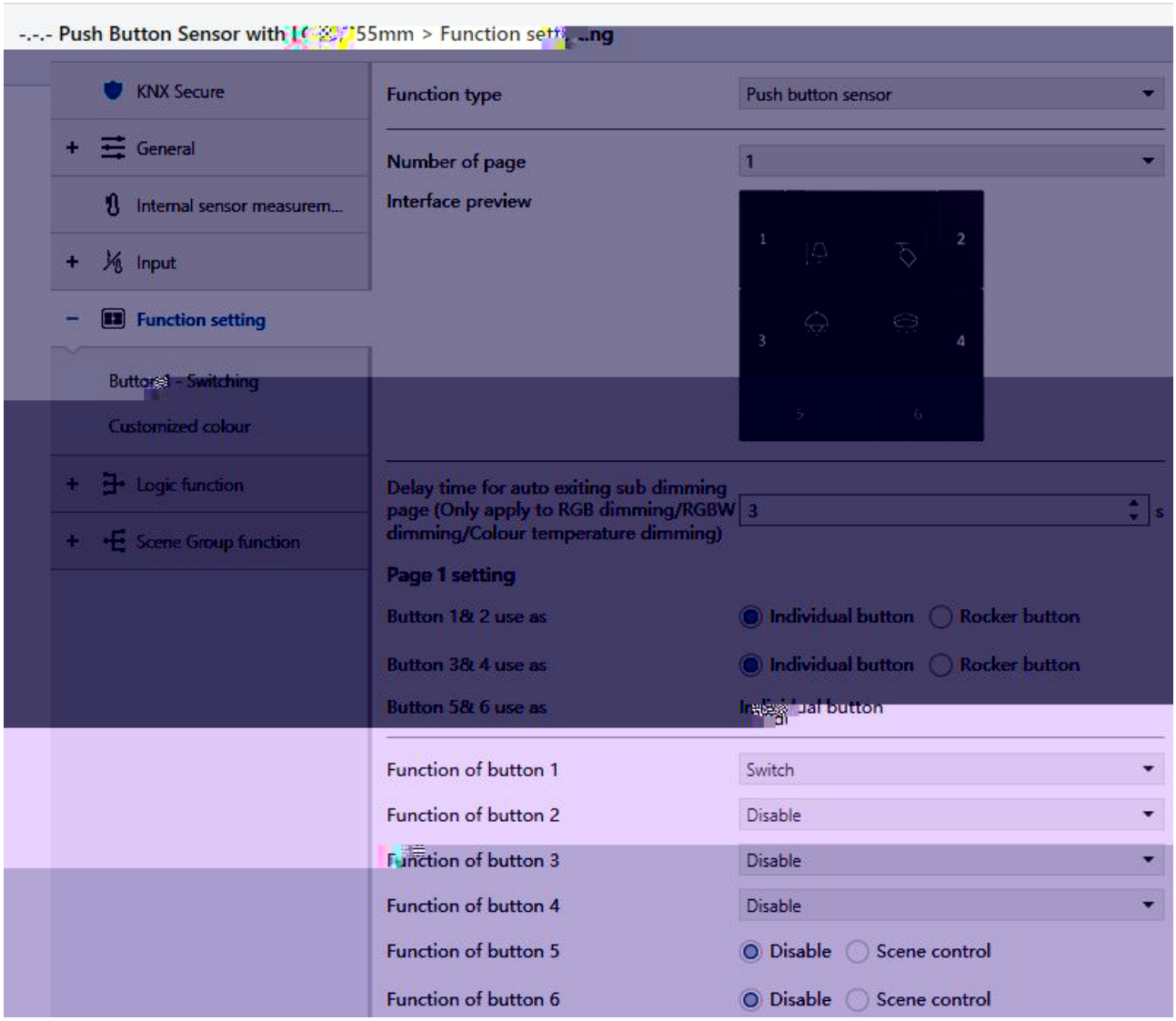
Push button sensor

Multifunction thermostat

Audio control

k

5.6.1. “Push button sensor”



5.6 “Function setting”-“Push button sensor”

”Number of page”

k **1 / 2 / 3**

1 4 2 8 3 12 k

1 2 Button 5 Button 6

k

2 3 2 Button 5 Button 6 k

k

"Delay time for auto exiting sub dimming page

(Only apply to RGB dimming/RGBW dimming/Colour temperature dimming)"

RGB ! RGBW ! k

! UI k **3..10s**

Page x setting (x=1~3) x

"Button y& z use as" y=1/3/5/7/9/11 z=2/4/6/8/10/12

k k

Individual button

Rocker button

"Function of button x" x=1~12

"Individual button" k 12 k

Disable	**Shift register**
Switch	**Multiple operation**
Dimming	**Delay mode**
RGB switching/send value	**RTC operation mode**
RGBW switching/send value	**String(14bytes)**
Colour temperature switching/send	**Status display**

value

Value sender **RGB dimming**

Scene control **RGBW dimming**

Blind **Colour temperature dimming**

1 2 Button 5 Button 6 k

5.5.1.1 5.5.1.2 k

"Function of rocker x" x=1~6

"Rocker button" k 6 k

Disable **Scene control**

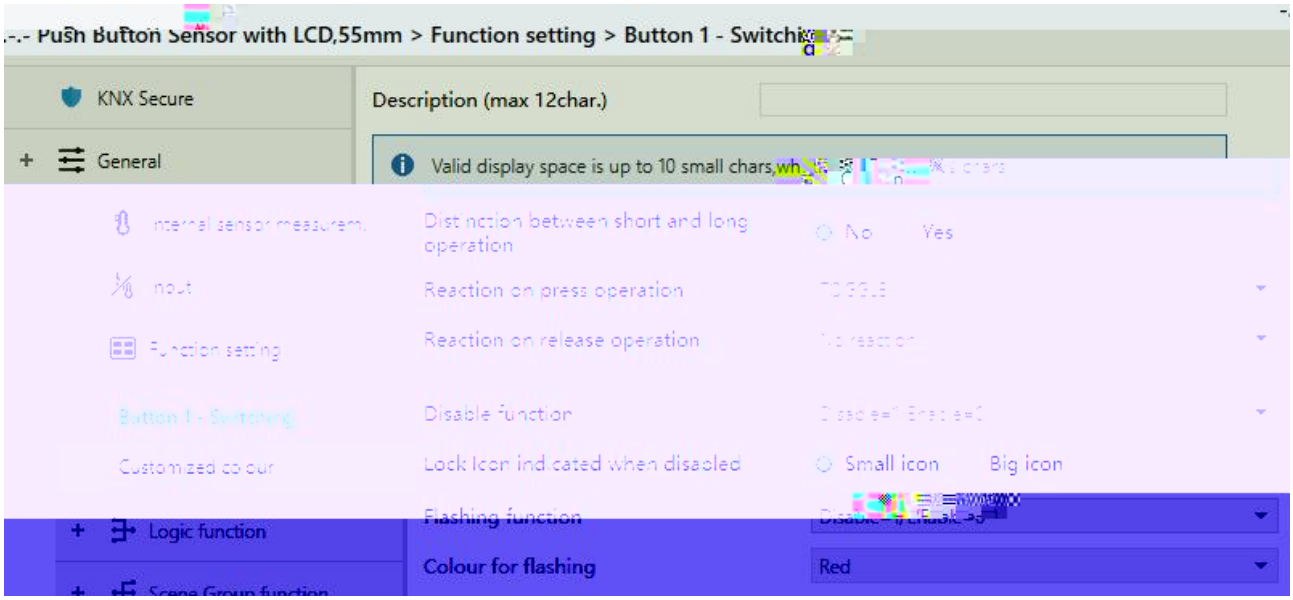
Switch **Blind**

Dimming **Setpoint adjustment**

5.5.1.3 5.5.1.4 k

5.6.1.1.

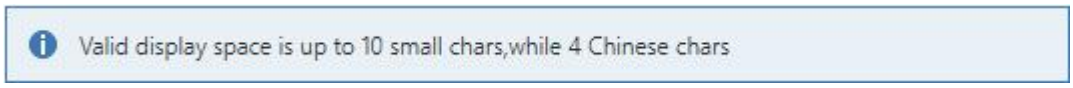
1.



5.6.1.1(1)

"Description (max 12char.)"

12 k



10 **4** **k**

"Distinction between short and long operation"

/ k

No

Yes

"Yes" k

"Reaction on short/press operation"

"Reaction on long/release operation"

/ / k

k

No reaction

OFF

ON

TOGGLE

No reaction k

ON

OFF

TOGGLE

k

"Number of objects"

"Reaction on long/release operation" "No reaction" k

1 2 k

1

2

"Disable function"

/ k

Disable

Disable=1/Enable=0

Disable=0/Enable=1

"Lock icon indicated when disabled"

"Disable=1/Enable=0" "Disable=0/Enable=1" k

k

Small icon

Big icon

1 k

k

Status display k

"Flashing function"

k

Disable

Disable=1/Enable=0

Disable=0/Enable=1

"Colour for flashing"

"Disable=1/Enable=0" "Disable=0/Enable=1" k

k

Foreground Cyan

Pink **Customized colour 5** **5**

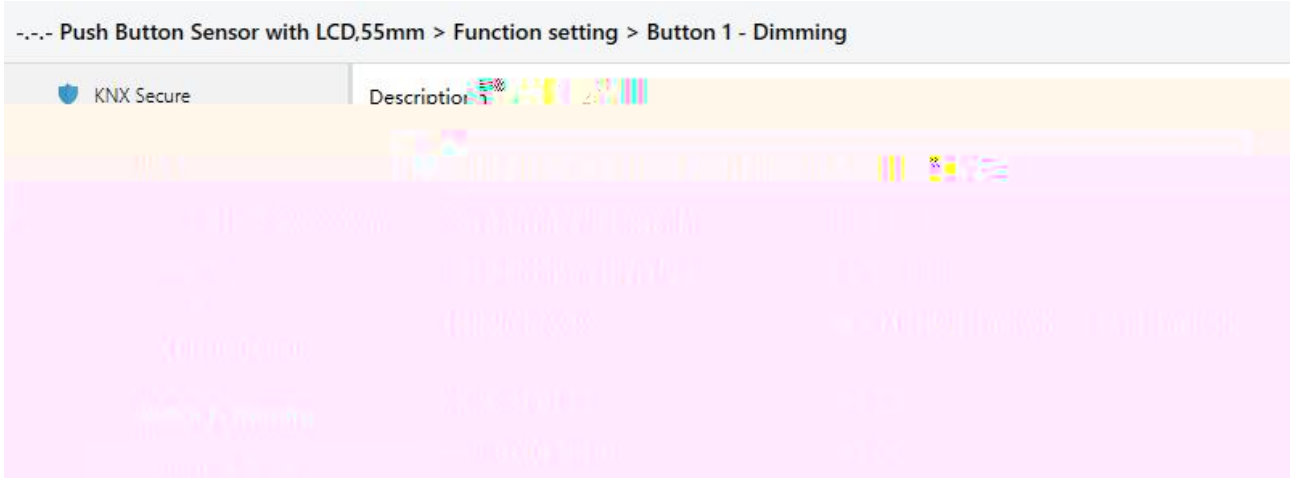
Switch ! **Dimming** **Blind** k

k

7.1 k

k

2.



5.6.1.1(2)

"Reaction on short operation"

k

No reaction

OFF

ON

TOGGLE

No reaction k

ON

OFF

TOGGLE k

"Reaction on long operation"

k

No reaction

Brighter

Darker

Brighter/Darker

No reaction k

Brighter k

Darker

Brighter/darker k

TOGGLE

k

k

"Dimming mode"

"No reaction" k k

Start-Stop dimming

Step dimming

Start-stop dimming

k k

Steps dimming k

“ Step size”

“Step dimming” k k

100%

50%

...

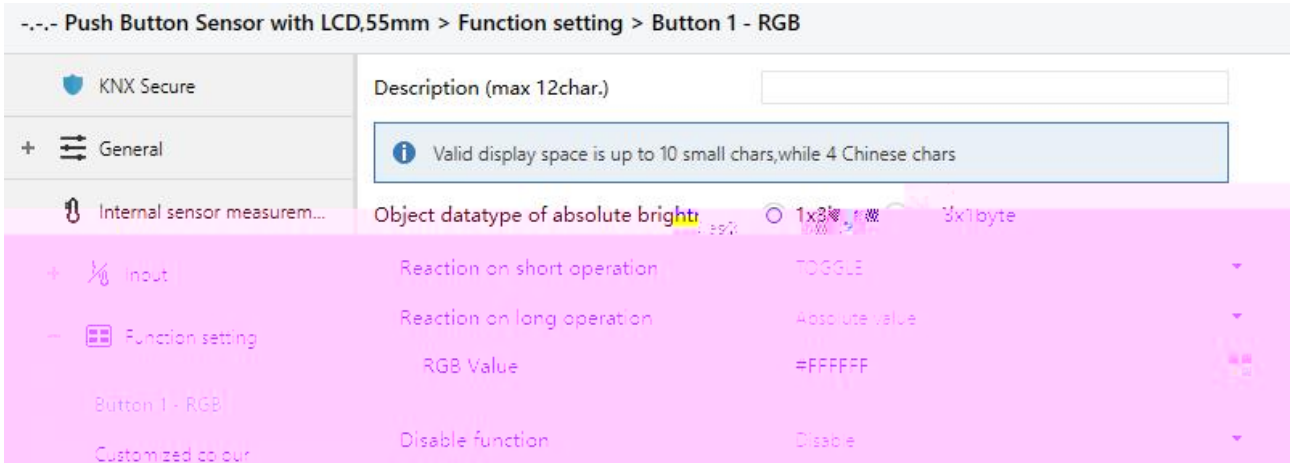
1.56%

“ Interval of tele. cyclic send [0..25,0=send once]*0.1s”

“Step dimming” k k

0..25 0=

3.RGB /



5.6.1.1(3) RGB /

“Object datatype of absolute brightness”

k

1x3byte **3byte** **RGB**

3x1byte **1byte** **RGB**

"Reaction on short operation"

"Reaction on long operation"

/ k

No reaction

OFF

ON

TOGGLE

Absolute value

"Absolute value" k

"RGB Value"

/ RGB k **#000000..#FFFFFF**

4.RGBW /

5.6.1.1(4) RGBW /

"Object datatype of absolute brightness"

k

1x6byte **6byte** **RGBW**

4x1byte **1byte** **RGBW**

"Reaction on short operation"

"Reaction on long operation"

/ k

No reaction

OFF

ON

TOGGLE

Absolute value

"Absolute value" k

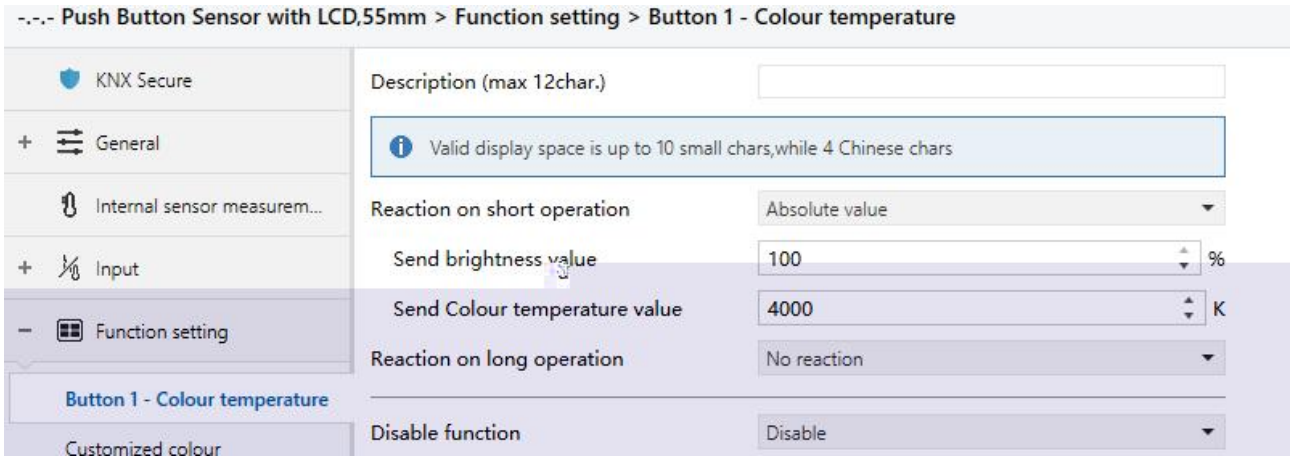
"RGB Value"

/ RGB k **#000000..#FFFFFF**

"White Value"

/ k **0..255**

5. /



5.6.1.1(5) /

"Reaction on short operation"

"Reaction on long operation"

/ k

No reaction

OFF

ON

TOGGLE

Absolute value

"Absolute value" k

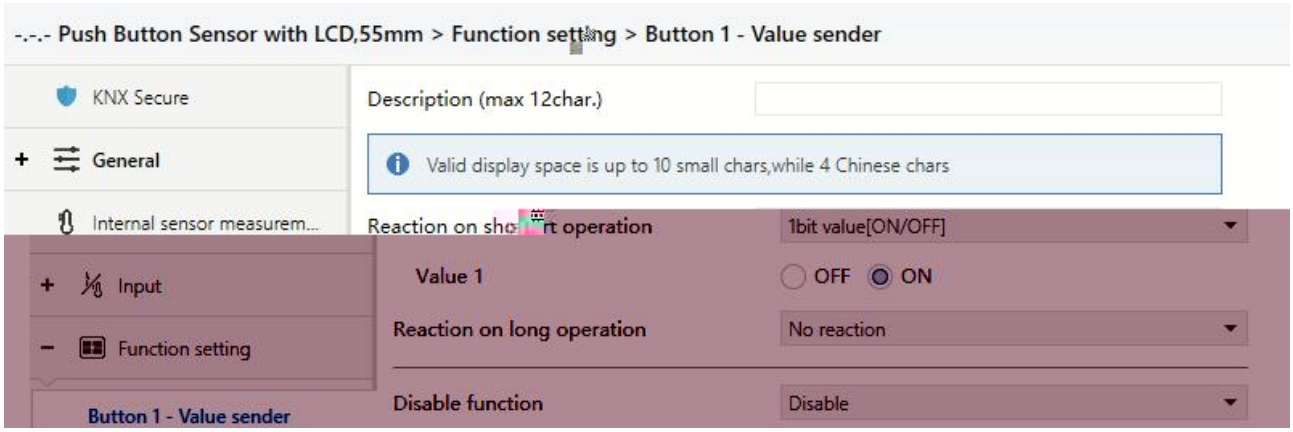
- **"Send brightness value"**

/ k **0..100**

- **"Send Colour temperature value"**

/ k **1000..10000**

6.



5.6.1.1(6)

"Reaction on short operation"

"Reaction on long operation"

/ k

No reaction

1bit value[On/Off]

2bit value[0..3]

4bit value[0..15]

1byte value[0..255]

2byte value[0..65535]

2byte float value

4byte value[0..4294967295]

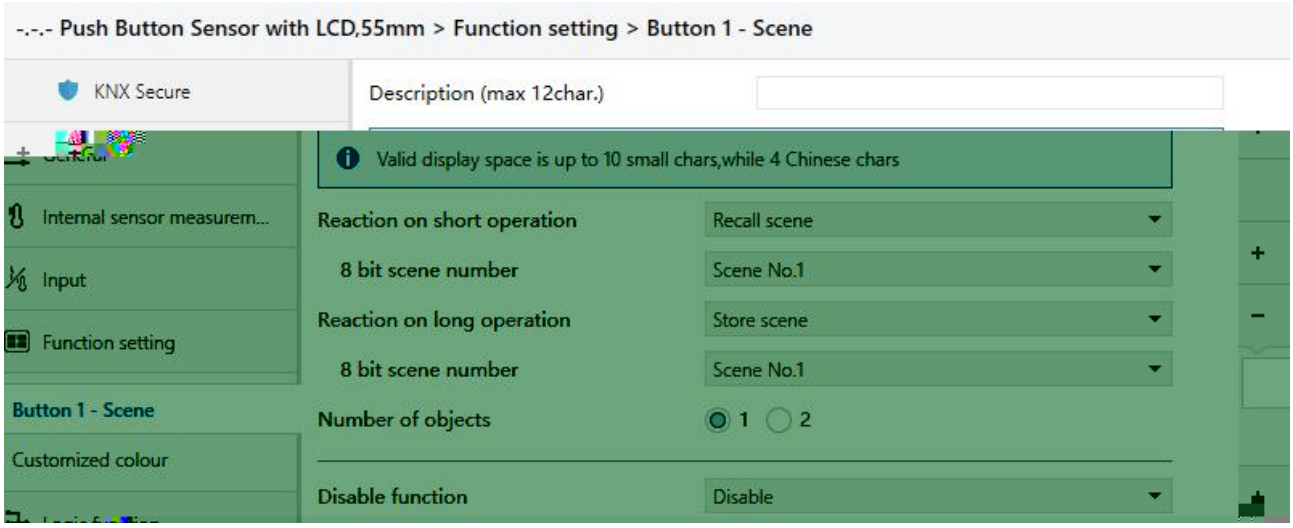
4byte float value

"No reaction" k

"Value 1/2"

/ 1/ 2 k k

7.



5.6.1.1(7)

"Reaction on short operation"

"Reaction on long operation"

/ k

No reaction

Recall scene

Store scene

"8 bit scene number"

"No reaction" k

Scene NO.1

Scene NO.2

Scene NO.3

...

Scene NO.64

0~63

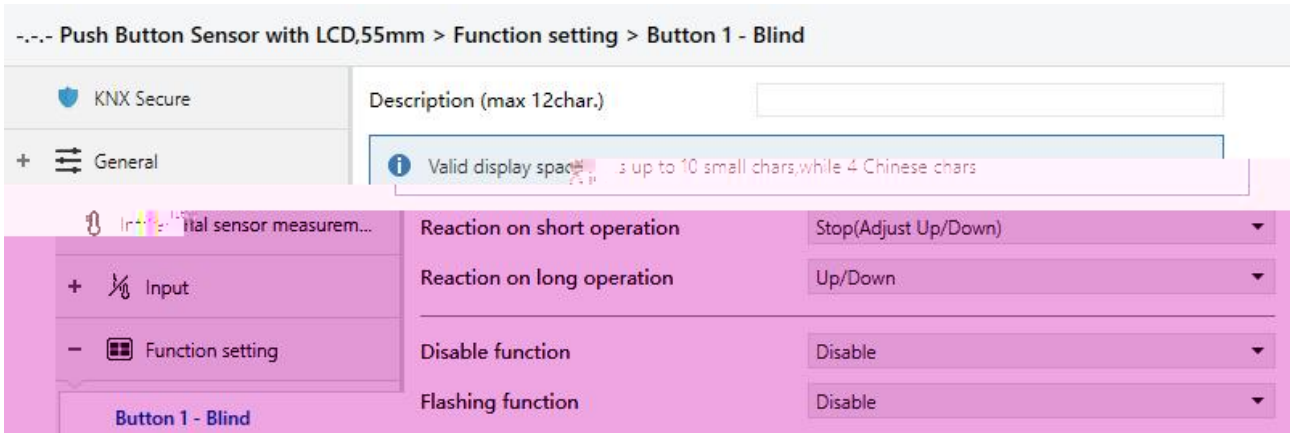
"Number of objects"

"No reaction" k 1 2 k

1

2

8.



5.6.1.1(8)

"Reaction on short operation"

"Reaction on long operation"

k

No reaction

Up

Down

Up/Down

Stop(Adjust Up)

Stop(Adjust Down)

Stop(Adjust Up/Down)

No reaction k

Up

Down

Up/Down / k

Stop (Adjust Up)

Stop (Adjust Down)

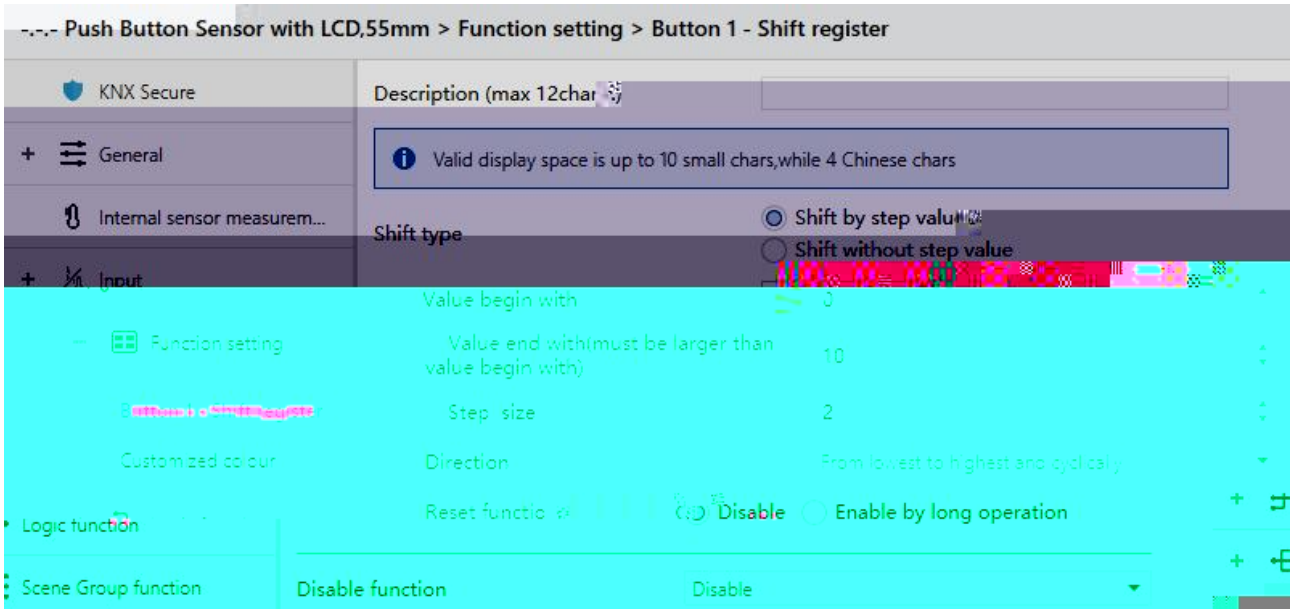
Stop (Adjust Up/Down) / k

“ Interval of tele. cyclic send [0..25,0=send once]*0.1s ”

“Stop...” k k

0..25 0

9.



5.6.1.1(9)

“Shift type”

k

Shift by step value

Shift without step value

Shift by step value

k

Shift without step value 10

k

“Shift by step value” k

- **“Value begin with”**

k **0..240**

- **“Value end with(must be larger than value begin with)”**

k **1..250**

> **ETS**

- **“Step size”**

k **0..240**

“Shift without step value” k

“Object datatype”

k

1byte unsigned value

Scene number

HVAC mode

1byte percentage

- **“Shift number”**

10 k

“1byte unsigned value”！“Scene number” “1byte percentage” **0/1/2../10**

“HVAC mode” **1/2/3/4**

“Value x”(x=1~10 x=1~4)

k

“1byte unsigned value” **0..255**

“Scene number”

Scene NO.1

Scene NO.2

Scene NO.3

...

Scene NO.64

“HVAC mode”

Comfort mode

Standby mode

Economy mode

Frost/heat protection

“1byte percentage”

0%

1%

...

100%

“Direction”

k

From lowest to highest and stop to the end

From highest to lowest and stop to the begin

From lowest to highest and cyclically

From highest to lowest and cyclically

From lowest to highest and stop to the end k

From highest to lowest and stop to the begin k

From lowest to highest and cyclically k

From highest to lowest and cyclically k

"Reset function"

k

Disable

Enable by long operation

Disable

Enable by long operation k

10.

5.6.1.1(10)

"Object type for object x"(x=1~4)

/ k

Disable

1Bit_On/Off

1Bit_Up/Down

1Byte_RecallScene

1Byte_StoreScene

1Byte_Percentage

1Byte_Unsigned value

14Byte_String

object1 **14Byte** k

"Function of short operation"

"Function of long operation"

k

"1Bit_On/Off"

No reaction

OFF

ON

TOGGLE

"1Bit_Up/Down"

No reaction

Up

Down

Up/Down

"1byte..." "14Byte_String"

No reaction

Send Value

- **“Value x...” (x=1~2)**

“1byte...” “Send Value” k k

k

- **“String (10byte) value”**

“14Byte_String” “Send Value” k

10 k

11.

5.6.1.1(11)

“Object type for short operation”

“Object type for long operation”

/ k

Disable

1Bit_On/Off

4Bit_Dimming

1Byte_Unsigned value

“Disable” k

- **“Send mode”**

k

No action when operation,delay then send value1 **1**

No action when operation,delay then send value2 **2**

Send value1 when operation,delay then send value2 **1** **2**

Send value2 when operation,delay then send value1 **2** **1**

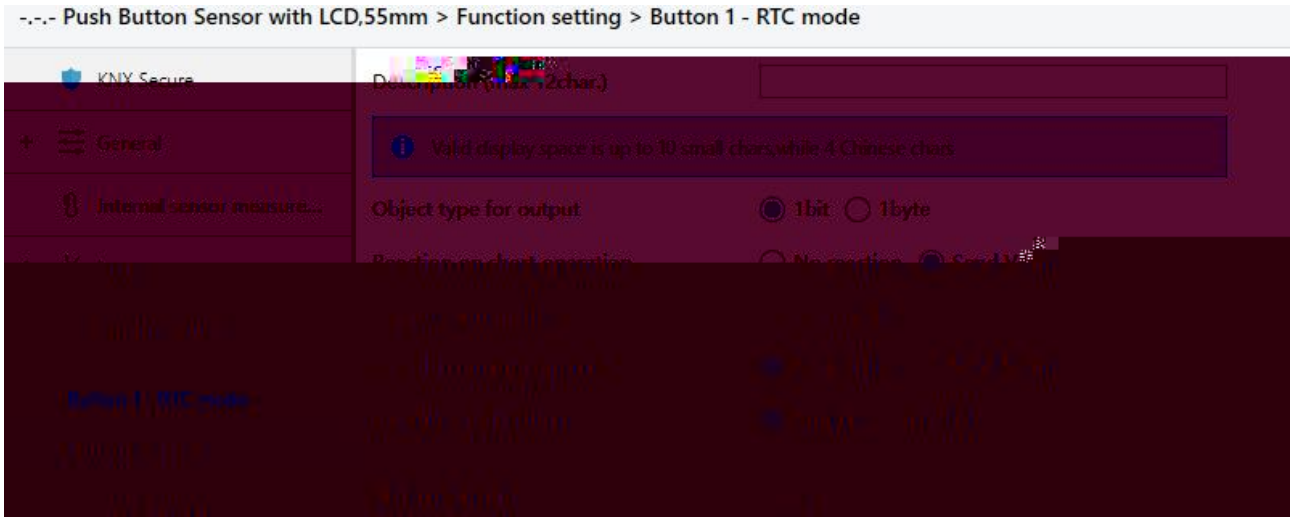
- **“Delay time [0..6500]s”**

k **0..6500**

- **“Value x” (x=1~2)**

1/ 2 k k

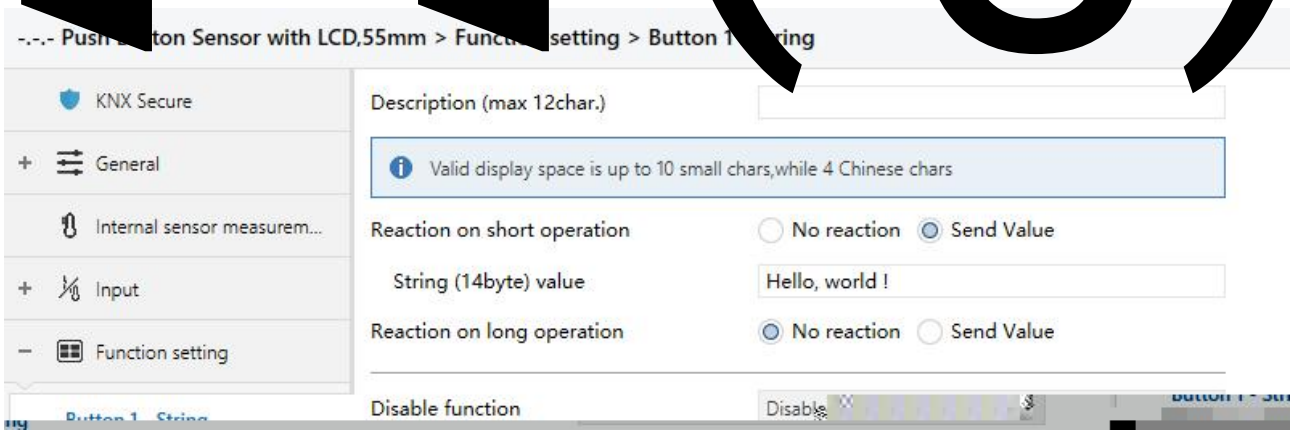
12.



5.6.1.1(12)

KNX/

13. 4bytes)



6.1.1(13) (14bytes)

"ObjecStype for long operation"

/ k

No reaction

Send Value

Int. temperature value (DPT 9.001)	**2byte unsigned value (DPT 7.001)**
Int. humidity value (DPT 9.007)	**2byte lux value (DPT 9.004)**
Ext. temperature value (DPT 9.001)	**2byte float value (DPT 9.x)**
Ext. humidity value (DPT 9.007)	**4byte unsigned value (DPT 12.001)**
1byte percent value (DPT 5.001)	**4byte float value (DPT 14.x)**
1byte unsigned value (DPT 5.010)	**14byte strings (DPT 16.001)**

“14byte strings (DPT 16.001)” k

“Text for unit”

k

“...temperature...” **°C**

“...humidity...” “1byte percent value...” **%**

5 k

“Time period for request external value [0...255]min”

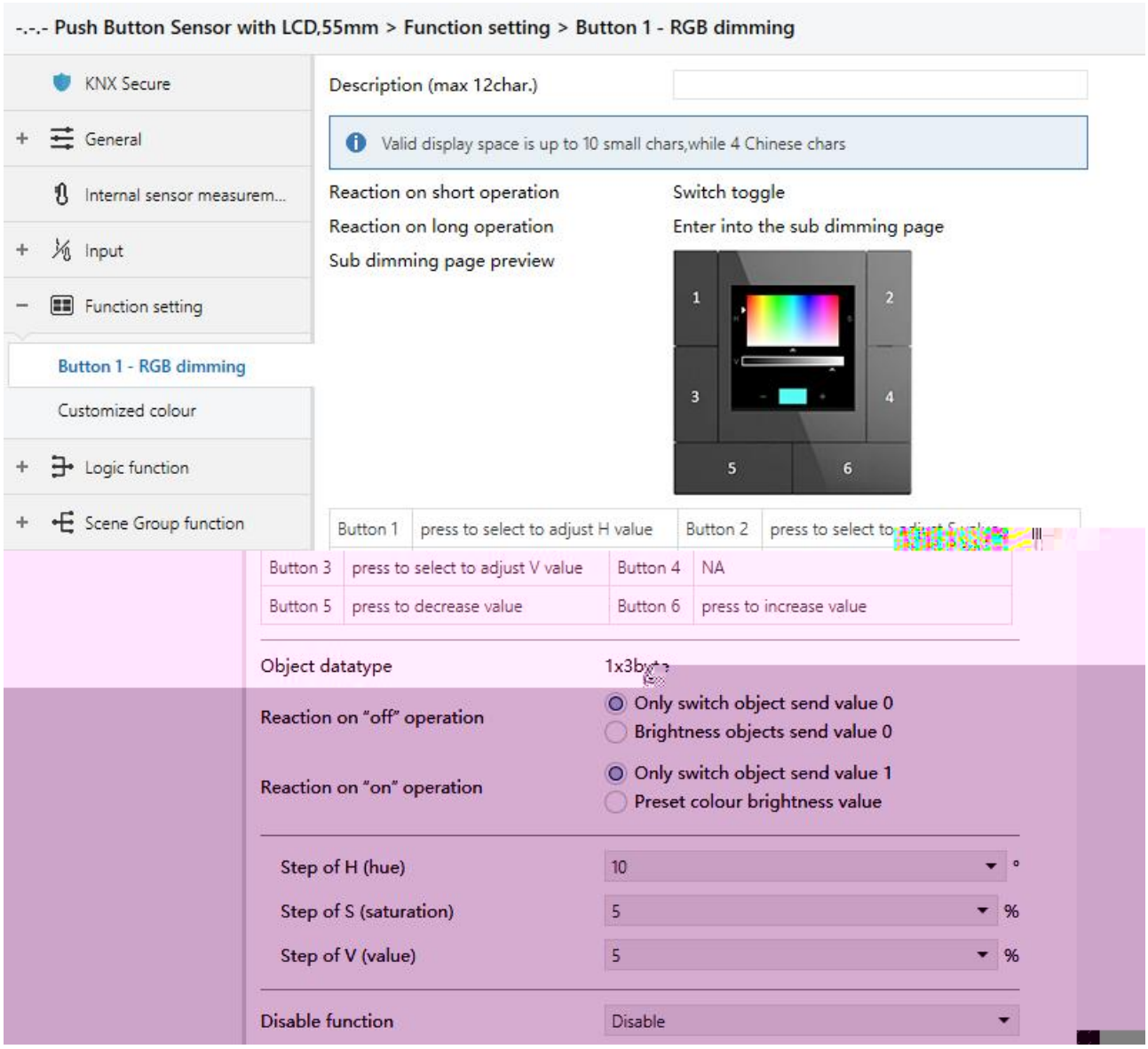
k k

0..255

k

k

15.RGB



5.6.1.1(15) RGB

"Reaction on short operation"

"Reaction on long operation"

/ k

k

7.1.1 k

"Object datatype"

RGB k

1x3byte 3byte RGB

"Reaction on off operation"

0 0 k

Only switch object send value 0

Brightness objects send value 0

"Reaction on on operation"

1 k

Only switch object send value 1

Preset colour brightness value

"RGB value"

"Preset colour brightness value" k RGB k

#000000 ....#FFFFFF

"Step of H (hue)"

k

10°

...

40°

60°

"Step of S (saturation)"

k

5%

10%

20%

"Step of V (value)"

k

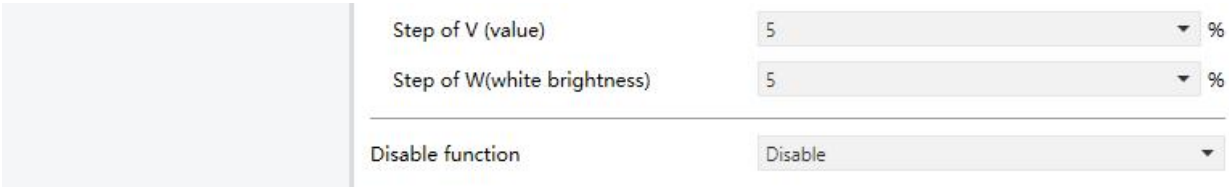
5%

10%

20%

16.RGBW

5.6.1.1(16) RGBW



5.6.1.1(16) RGBW

"Reaction on short operation"

"Reaction on long operation"

/ k

k

7.1.2 k

"Object datatype"

RGBW k

1x6byte **6byte** **RGBW**

3byte+1byte **3byte** **1byte** **RGBW**

"Reaction on off operation"

0 0 k

Only switch object send value 0

Brightness objects send value 0

"Reaction on on operation"

1 k

Only switch object send value 1

Preset colour brightness value

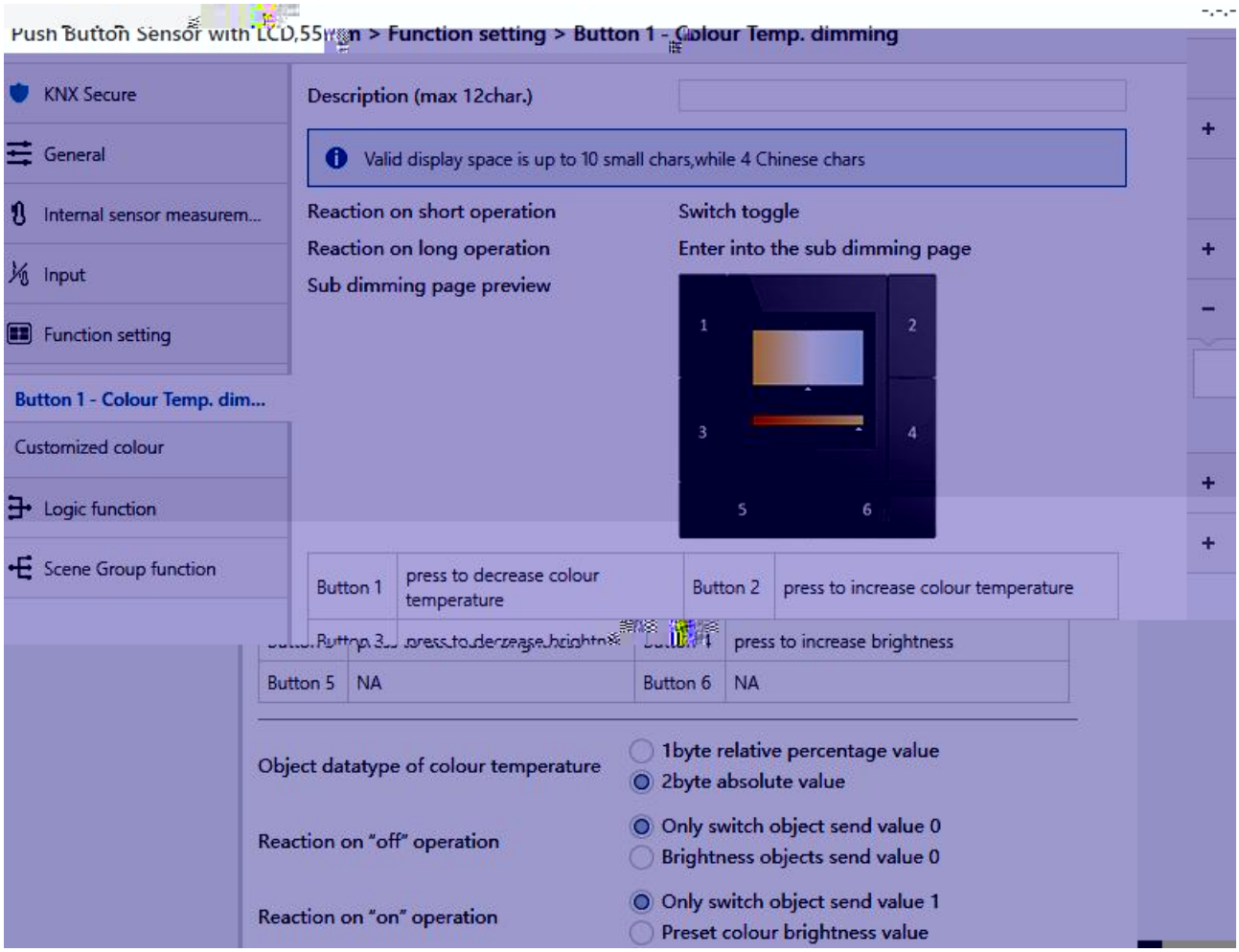
"RGB value"

"Preset colour brightness value" k RGB k

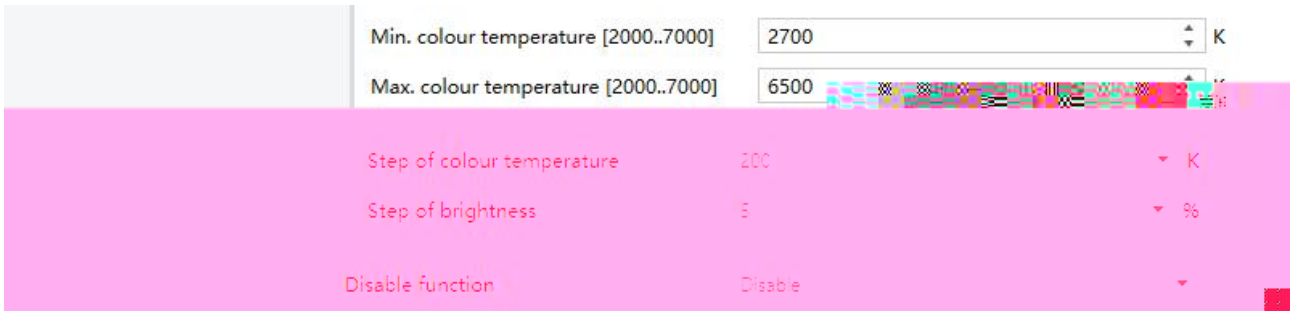
10%

20%

17.



5.6.1.1(17) (1)



5.6.1.1(17) (2)

"Reaction on short operation"

"Reaction on long operation"

/ k

k

7.1.3 k

"Object datatype of colour temperature"

k

1byte relative percentage value

2byte absolute value

"1byte relative percentage value" 0/1-10V

ETS 0~100%

"2byte absolute value" KNX

ETS k

"Reaction on off operation"

0 0 k

Only switch object send value 0

Brightness objects send value 0

"Reaction on on operation"

1 k

Only switch object send value 1

Preset colour brightness value

“Brightness is”

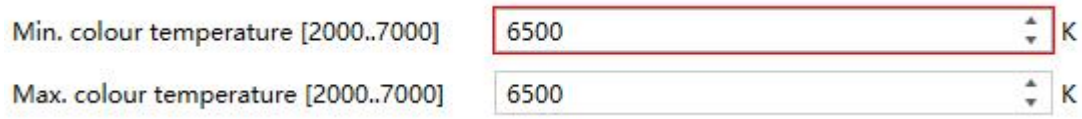
“Preset colour brightness value” k k

0..100%

“Min./Max. colour temperature [2000..7000]K”

k **2000..7000**

ETS



“Step of colour temperature”

k

100K

200K

500K

1000K

“Step of brightness”

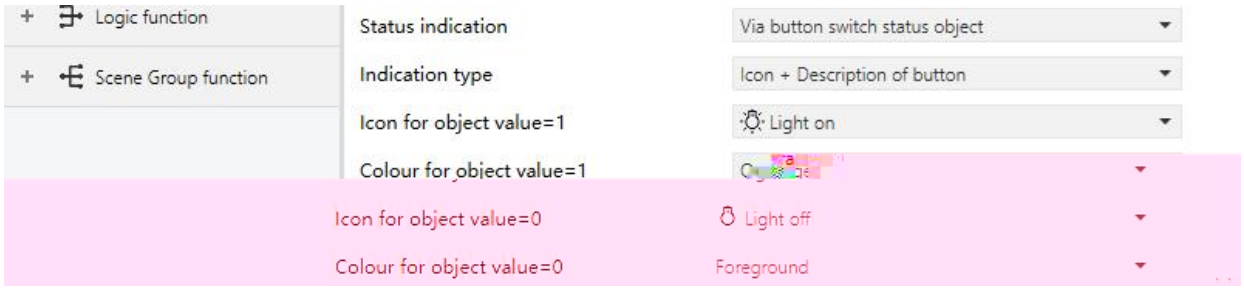
k

5%

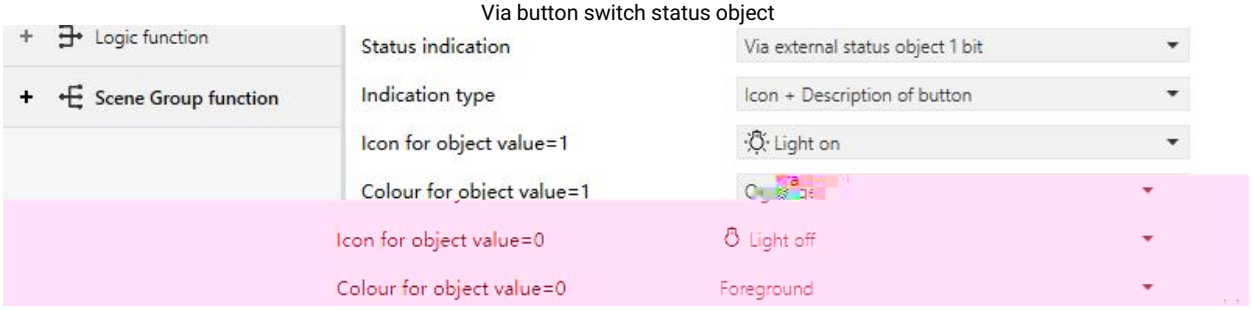
10%

20%

5.6.1.2.

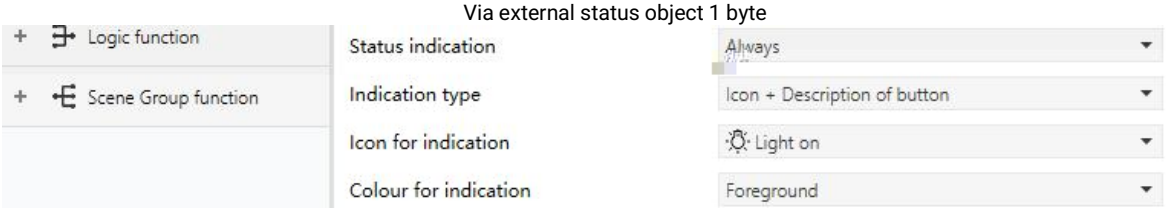


Via button switch status object



Via external status object 1 bit

Via external status object 1 byte



Always

5.6.1.2

1 Button 5 ! Button 6

k

"Status indication"

k

! ! RGB / ! RGBW / ! /

! RGB ! RGBW k

Via button switch status object

Via external status object 1 bit

Via external status object 1 byte

Always

! ! ! ! !

k

Via external status object 1 bit

Via external status object 1 byte

Always

Indicate button press

(14bytes)

Always

Indicate button press

Always k

Via button switch status object

Via external status object 1 bit 1bit

Via external status object 1 byte 1byte

Always k

Indicate button press 2 0.5s 0.5s

k

"Indication type"

k

! ! RGB / ! RGBW / ! / ! !

! ! ! ! ! ! RGB ! RGBW

Description of button

Icon only

Icon + Description of button

(14bytes) **Icon + Description of button** k

"Description (max 12char.)" k

"Via button switch status object" **"External status object 1 bit"**

"Icon for object value=1"

"Icon for object value=0"

"Icon..." k 1 0 k

Light on

Light off

...

PM10

8.1 k

"Colour for object value=1"

"Colour for object value=0"

1 0 k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

"Via external status object 1 byte"

"Object datatype"

k

1byte[0..255]

1byte[0..100%]

"Threshold compare type"

k

Between the threshold value

Equal to the threshold value

"Number of threshold"

k

"Between the threshold value" **1 / 2 / 3 / 4**

"Equal to the threshold value" **1 / 2 / 3 / 4 / 5**

"Threshold value x is" (x=1~5)

k

0..255 / 0..100

k

"Icon is"

"Icon..." k k

Light on

Light off

...

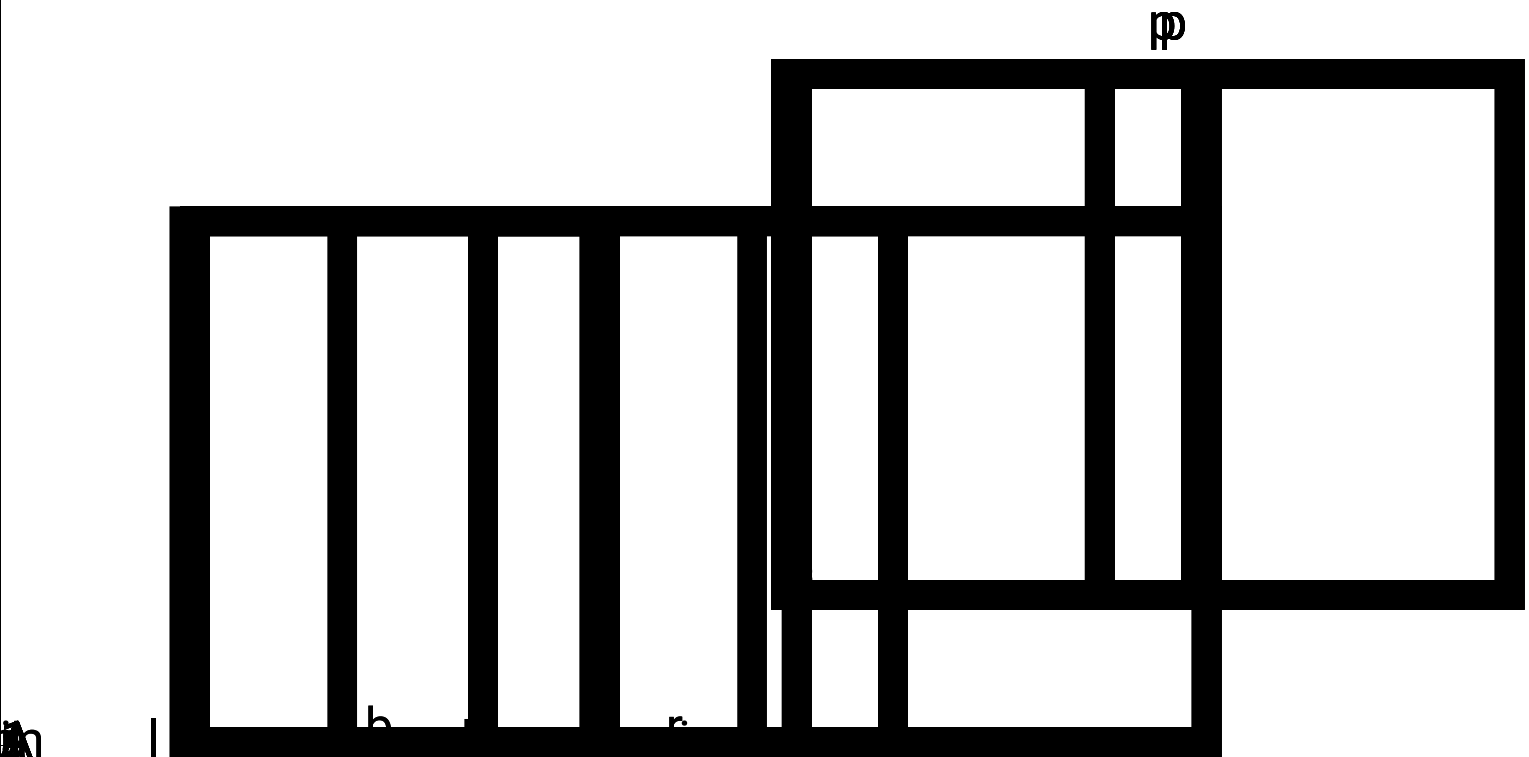
PM10

8.1 k

“Colour is”

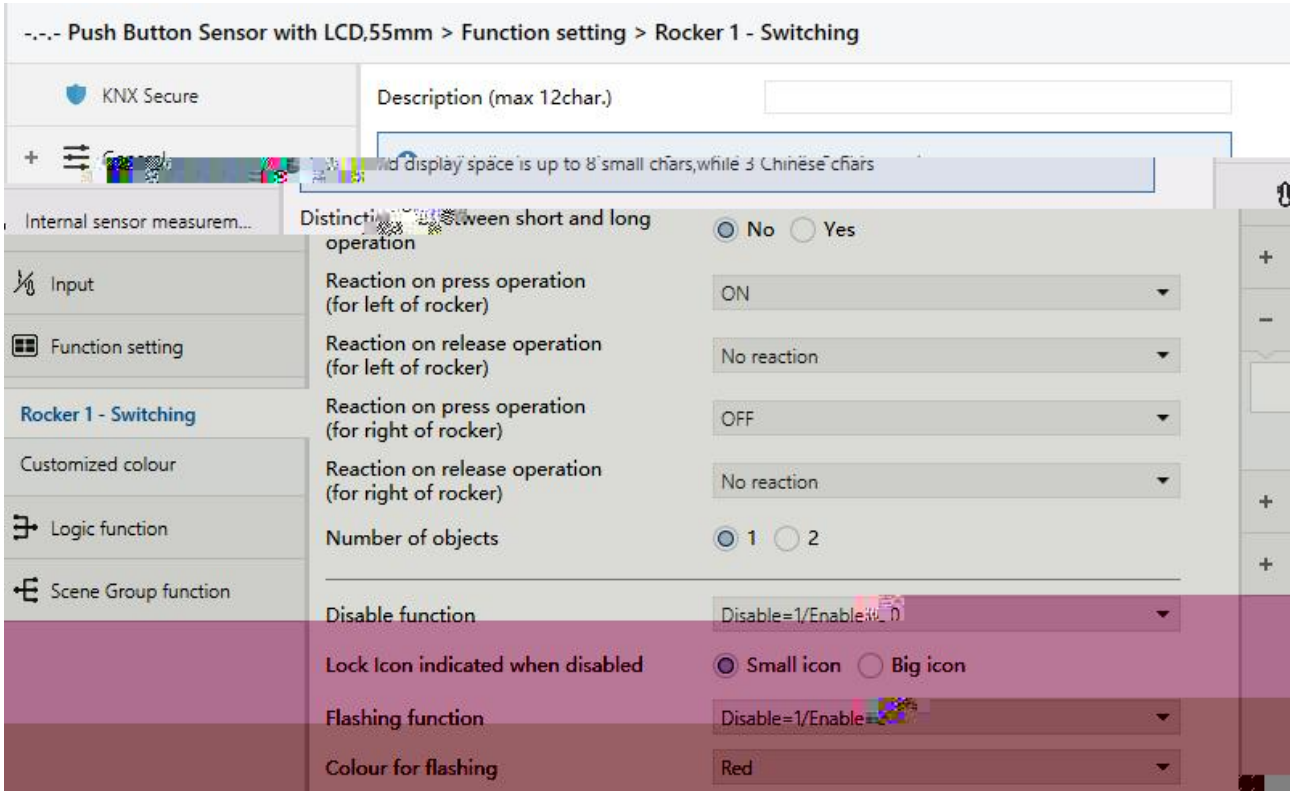
k

"Colour for indicatiu



5.6.1.3.

1.


-.-.- Push Button Sensor with LCD,55mm > Function setting > Rocker 1 - Switching
KNX Secure
Description (max 12char.)
Internal sensor measurem...
Input
Function setting
Rocker 1 - Switching
Customized colour
Logic function
Scene Group function
operation
No
Yes
Reaction on press operation (for left of rocker)
ON
Reaction on release operation (for left of rocker)
No reaction
Reaction on press operation (for right of rocker)
OFF
Reaction on release operation (for right of rocker)
No reaction
Number of objects
1
2
Disable function
Lock Icon indicated when disabled
Small icon
Big icon
Flashing function
Colour for flashing
Red

5.6.1.3(1)

"Reaction on short/press operation (for left/right of rocker)"

"Reaction on long/release operation (for left/right of rocker)"

/ / / k

k

No reaction

OFF

ON

TOGGLE

No reaction k

ON

OFF

TOGGLE

k

"Number of objects"

1 2 k

1

2

"Disable function"

/ k

Disable

Disable=1/Enable=0

Disable=0/Enable=1

"Lock Icon indicated when disabled"

"Disable=1/Enable=0" "Disable=0/Enable=1" k

k

Small icon

Big icon

1 k

k

"Flashing function"

k

Disable

Disable=1/Enable=0

Disable=0/Enable=1

"Colour for flashing"

"Disable=1/Enable=0" "Disable=0/Enable=1" k

k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**

Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

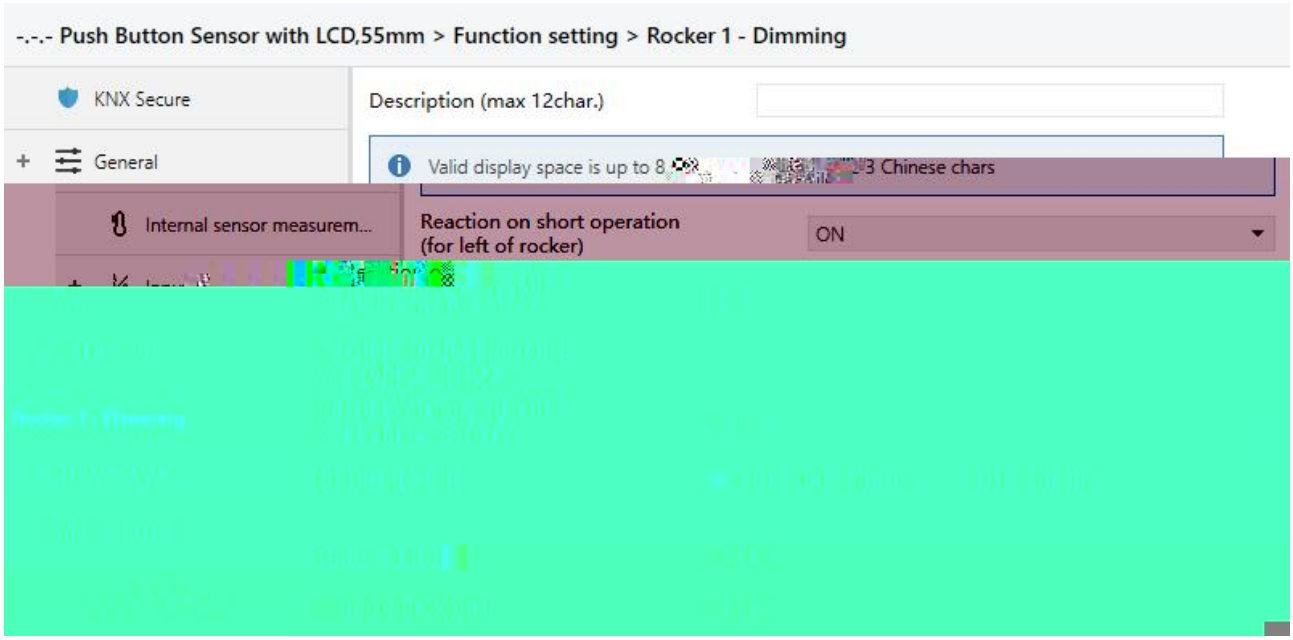
Switch ! **Dimming** **Blind** k

k

7.1 k

k

2.



5.6.1.3(2)

"Reaction on short operation (for left/right of rocker)"

/ k

No reaction

OFF

ON

TOGGLE

No reaction k

ON

OFF

TOGGLE k

"Reaction on long operation (for left/right of rocker)"

/

k

No reaction

Brighter

Darker

Brighter/Darker

No reaction k

Brighter k

Darker

Brighter/darker k

TOGGLE

k

k

"Dimming mode"

k

Start-Stop dimming

Step dimming

Start-stop dimming

k k

Steps dimming k

- **“ Step size”**

  “Step dimming” k k

  100%

  50%

  ...

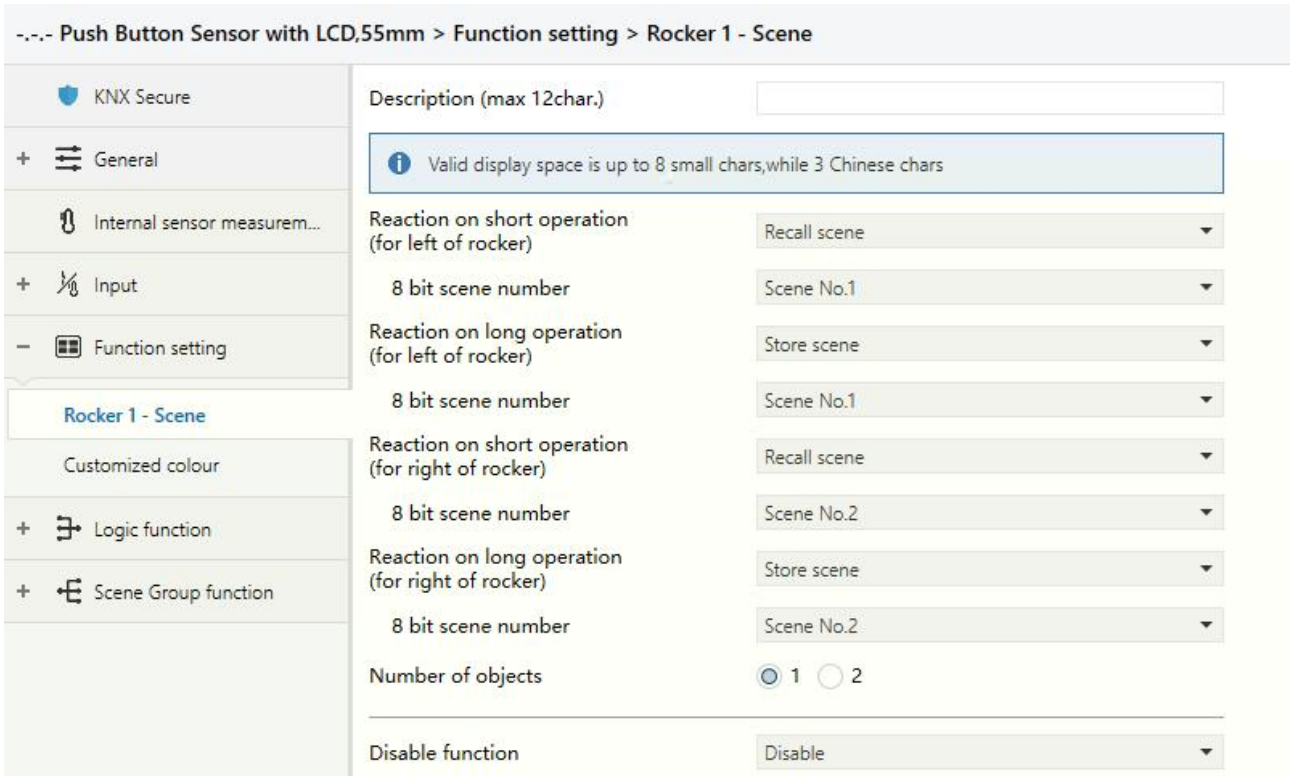
  1.56%

- **“ Interval of tele. cyclic send [0..25,0=send once]*0.1s”**

  “Step dimming” k k

  0..25 0=

3.



5.6.1.3(3)

"Reaction on short operation (for left/right of rocker)"

"Reaction on long operation (for left/right of rocker)"

/ / k

No reaction

Recall scene

Store scene

"8 bit scene number"

"No reaction" k

Scene NO.1

Scene NO.2

Scene NO.3

...

Scene NO.64

0~63

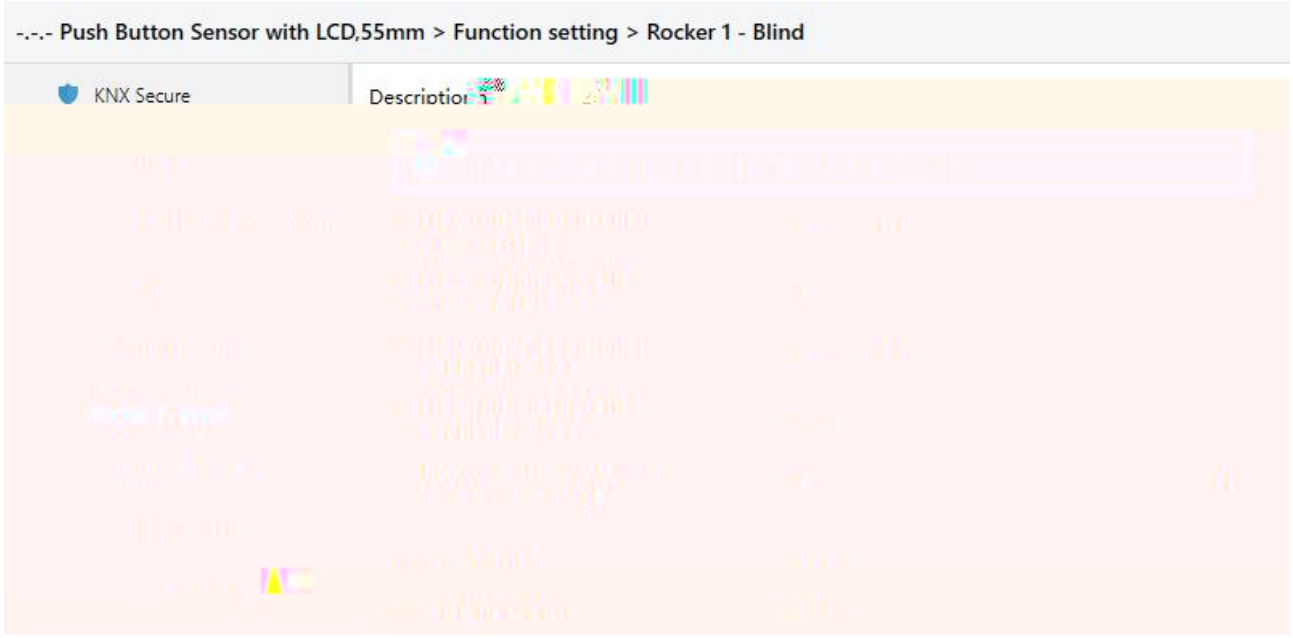
"Number of objects"

1 2 k

1

2

4.



5.6.1.3(4)

"Reaction on short operation (for left/right of rocker)"

"Reaction on long operation (for left/right of rocker)"

/ k

No reaction

Up

Down

Up/Down

Stop(Adjust Up)

Stop(Adjust Down)

Stop(Adjust Up/Down)

No reaction k

Up

Down

Up/Down /

k

Stop (Adjust Up)

Stop (Adjust Down)

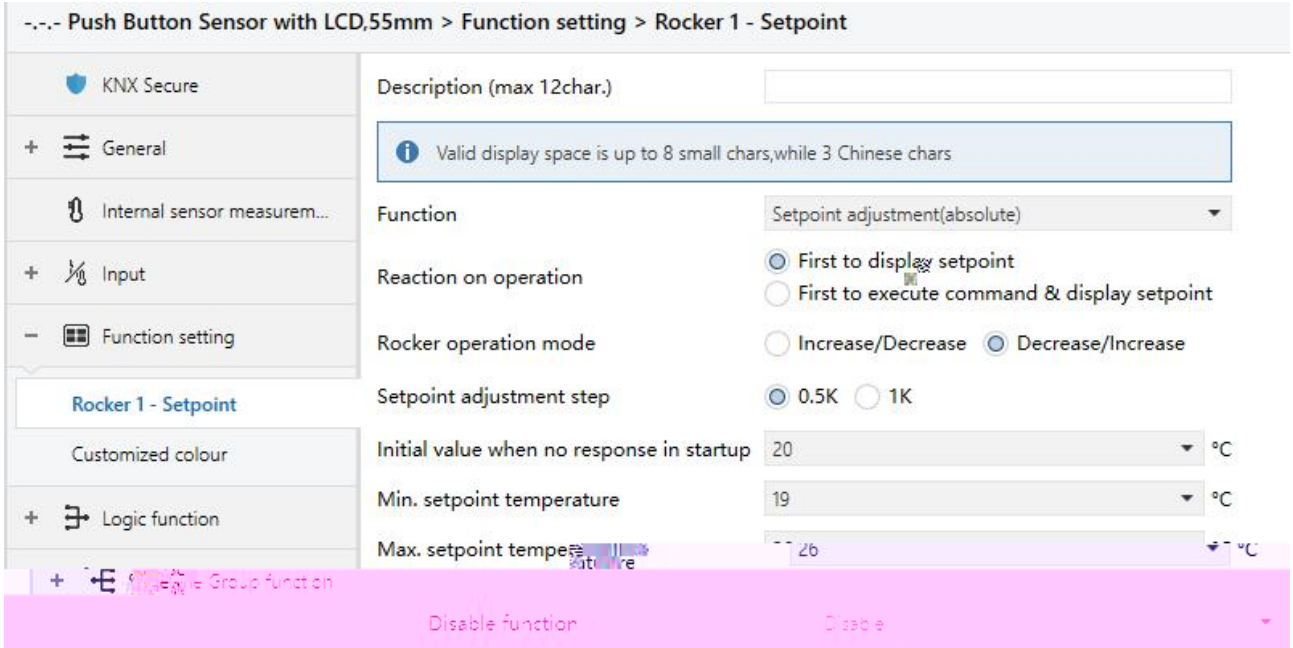
Stop (Adjust Up/Down) /

k

“ Interval of tele. cyclic send [0..25,0=send once]*0.1s ”

k **0..25 0**

5.



5.6.1.3(5)

"Function"

k

Setpoint adjustment(absolute)

Offset Increase/Decrease(relative)

Offset setpoint adjustment(relative)

Setpoint adjustment(absolute)

Offset Increase/Decrease(relative) 1bit

Offset setpoint adjustment(relative) k

"Reaction on operation"

k

First to display setpoint

First to both execute command and display setpoint

"Rocker operation mode"

k

Increase/Decrease

Decrease/Increase

Increase/Decrease

Decrease/Increase k

"Setpoint adjustment step"

"Setpoint adjustment (absolute)" "Offset setpoint adjustment (relative)"

k k

0.5K

1K

21°C 0.5 21.5°C

21°C 0.5 20.5°C

1K 0K 1K

-1K -2K k

“Setpoint adjustment (absolute)”

“Initial value when no response in startup”

k

5°C

6°C

...

37°C

“Min./Max. setpoint temperature”

k

5°C

6°C

...

37°C

k

ETS k

“Offset setpoint adjustment (relative)”

”Initial value when no response in startup (K)”

k

-10..10

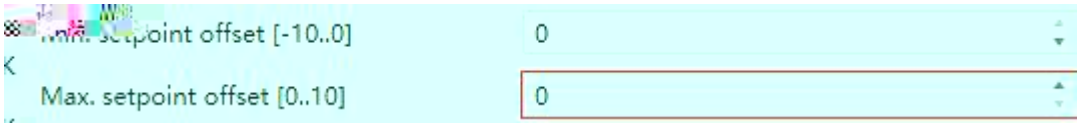
”Min. setpoint offset [-10..0]K”

( ) k **-10..0**

”Max. setpoint offset [0..10]K”

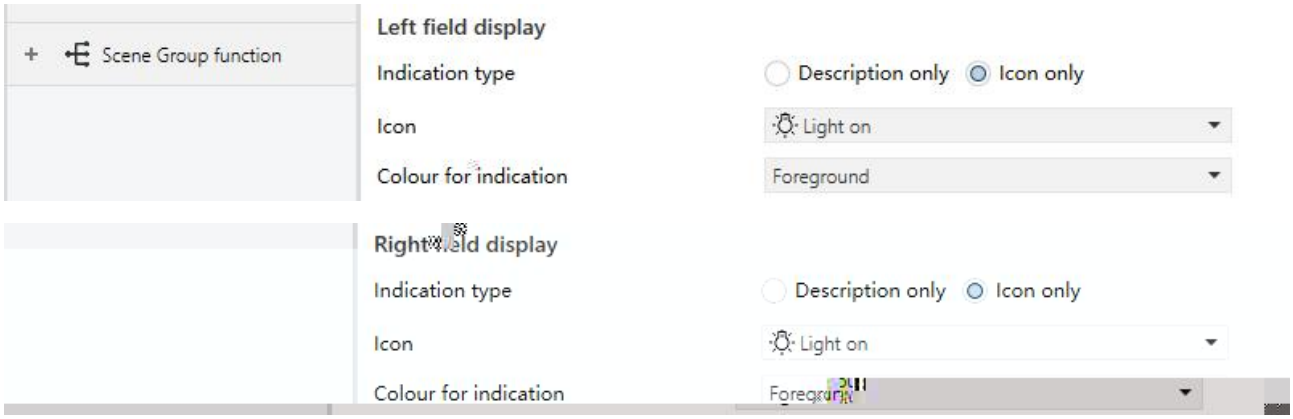
k **0..10**

0 **ETS**



5.6.1.4.

/



5.6.1.4(1) /

"Indication type"

/ k

Description only

Icon only

"Description (max 7char.)"

/ 7 k

"Icon"

"Icon only" k k

Light on

Light off

...

PM10

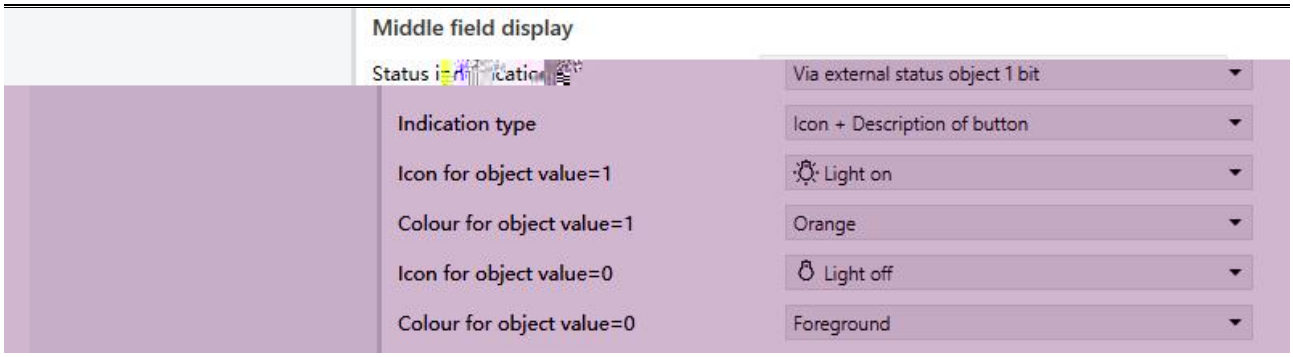
8.1 k

"Colour for indication"

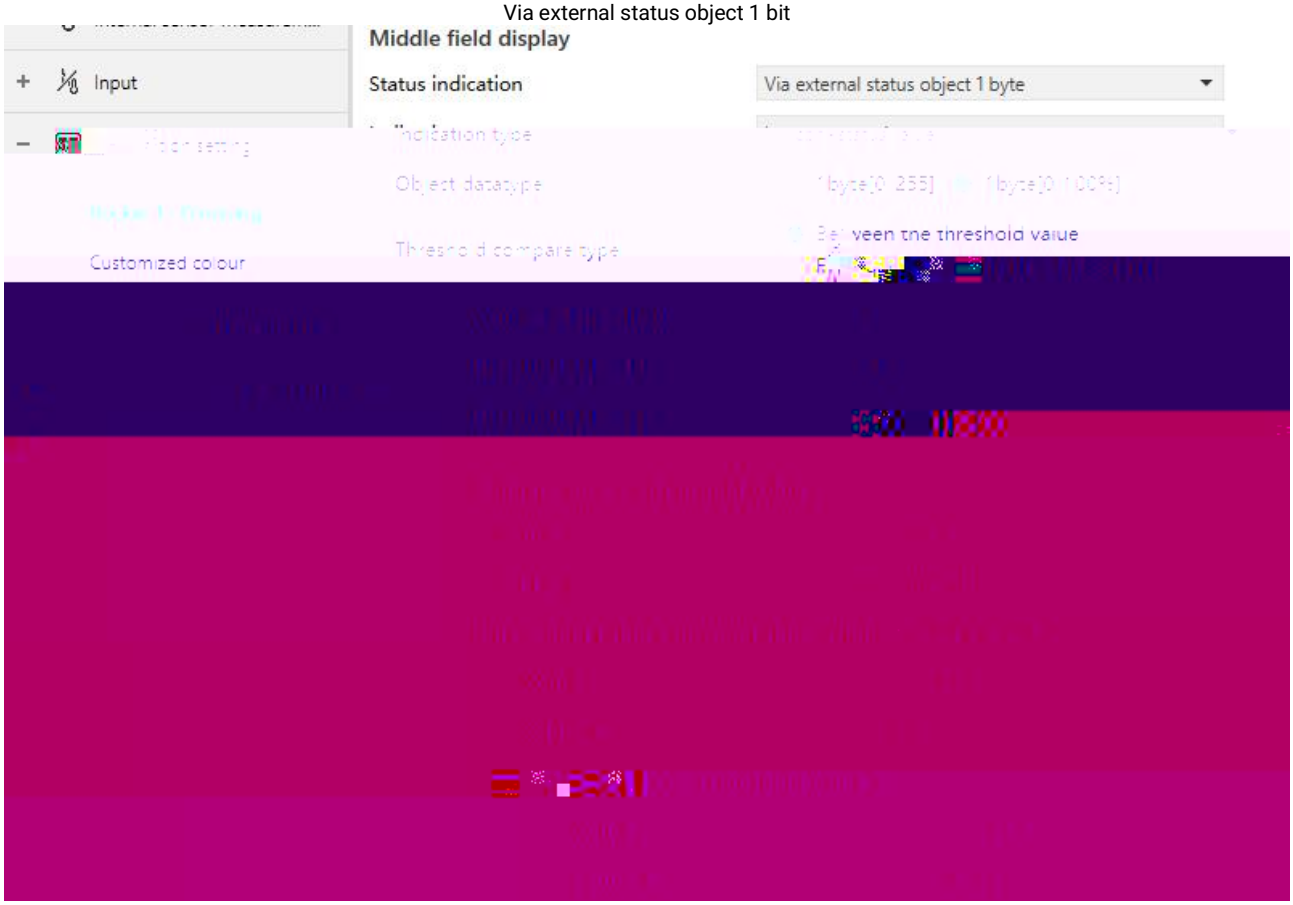
k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

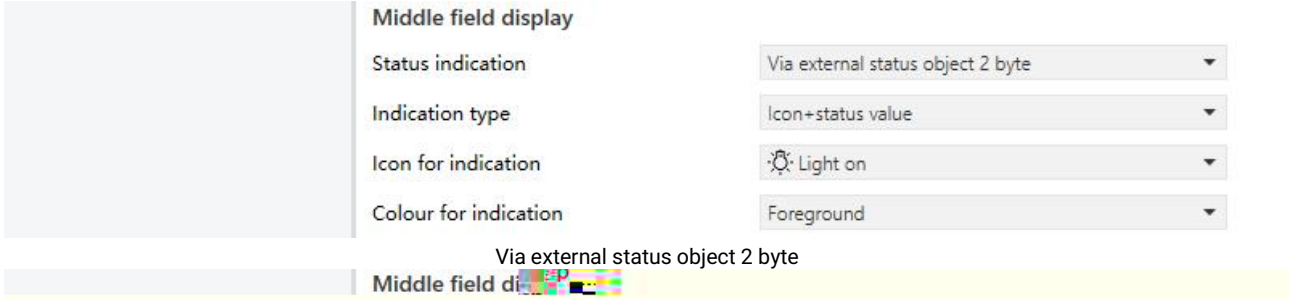
Via button switch status object



Via external status object 1 bit

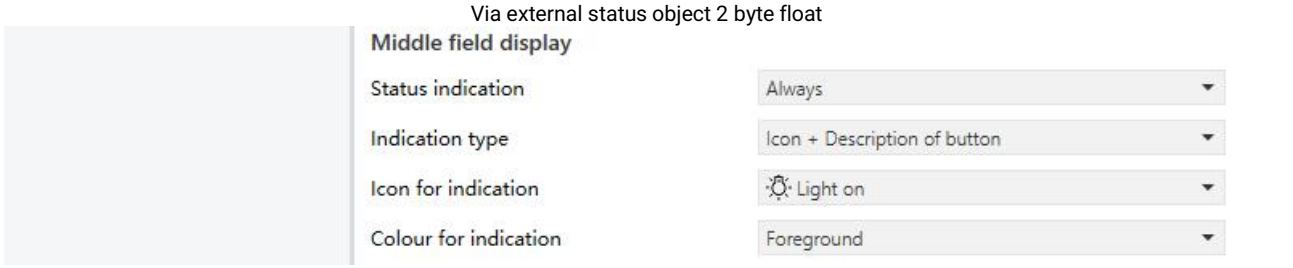


Via external status object 1 byte



Via external status object 2 byte

Via external status object 2 byte float



Always

5.6.1.4(2)

"Status indication"

k

Via button switch status object

Via external status object 1 bit

Via external status object 1 byte

Always

Via button switch status object

Via external status object 2 byte

Via external status object 1 bit

Via external status object 2 byte float

Always

Via button switch status object

Via external status object 1 bit 1bit

Via external status object 1 byte 1byte

Via external status object 2 byte

Via external status object 2 byte float

Always k

Description of button

Icon only

Icon + Description of button

Status value

Icon+status value

Int.temp + status value

“Status value” “...status value”

“Int.temp + status value” “Via button switch status object” “Via external status object 1 bit” “Always” “Status value” “...status value”

Light on

Light off

...

PM10

8.1 k

"Colour for object value=1"

"Colour for object value=0"

1 0 k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

"Via external status object 1 byte"

"Object datatype"

k

1byte[0..255]

1byte[0..100%]

"Threshold compare type"

k

Between the threshold value

Equal to the threshold value

"Threshold compare type"

k

"Between the threshold value" **1 / 2 / 3 / 4**

"Equal to the threshold value" **1 / 2 / 3 / 4 / 5**

"Threshold value x is" (x=1~5)

k

0..255 / 0..100

k

"Icon is"

"Icon..." k k

Light on

Light off

...

PM10

8.1 k

“Colour is”

k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

“Via external status object 2 byte float”

“Temperature display units”

DPT 9.001 temperature k

Celsius(°C)

Fahrenheit(°F)

Kelvins(K)

k

“Via external status object 2 byte...” **“Always”**

"Icon for indication"

Icon... k k

Light on

Light off

...

PM10

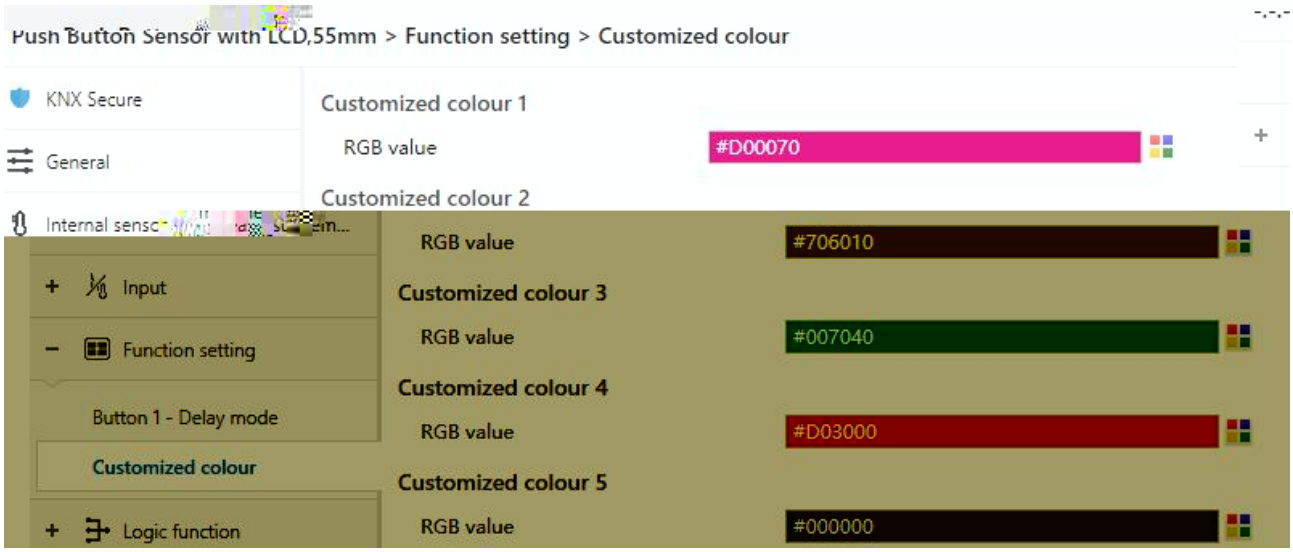
8.1 k

"Colour for indication"

k

Foreground	**Cyan blue**	
Red	**Cyan**	
Dark green	**Coffee**	
Blue	**Light orange**	
Yellow	**Customized colour 1**	**1**
Orange	**Customized colour 2**	**2**
Purple	**Customized colour 3**	**3**
Grey	**Customized colour 4**	**4**
Pink	**Customized colour 5**	**5**

5.6.1.5. “Customized colour”



5.6.1.5

5.6.2. “Multifunction thermostat”

5.6.2 “Function setting”-“Multifunction thermostat”

“Room temperature control function as”

k

Disable

FCU control

VRF control

“Floor heating function”

k

"Ventilation function"

k

"Delay time for exiting setting status"

! ! k

UI k

0.5s

1.0s

2.0s

3.0s

! !

7.2 k

5.6.2.1. “FCU

KNX/E

Single FCU

Master FCU k

Slave FCU FCU

k

"Room temperature reference from"

k

Internal sensor

External sensor

Internal sensor combine with External sensor

"Internal sensor measurement" 5.3 k

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

"...External sensor" k k

0..255

"Internal sensor combine with External sensor" k

"Combination ratio"

k

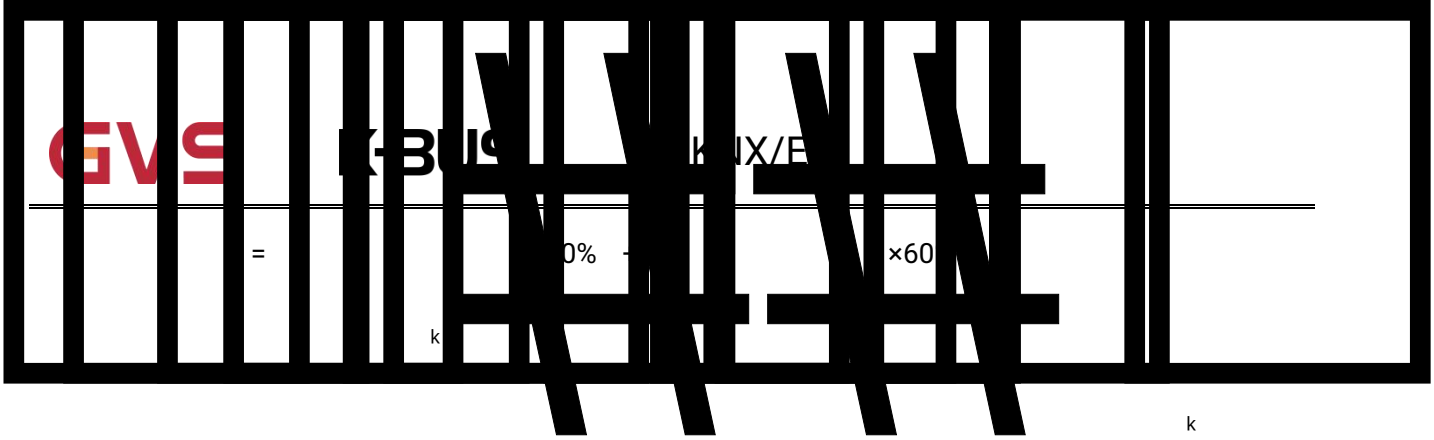
10% Internal to 90% External

20% Internal to 80% External

...

90% Internal to 10% External

"40% Internal to 60% External" 40% 60%



= 0% ×60

k k

- **“Send temperature when the result change by [0...10]K”**

k Disable k

Disable

0.5K

1.0K

...

10.0K

- **“Cyclically send temperature [0...255,0=inactive]min”**

0 k **0..255**

k

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

“Slave” k k **0..100**

0 0

k

"Setpoint temperature adjustment step"

k

0.5K

1K

Min./Max. setpoint temperature [5..37]-C

k

5°C

6°C

...

37°C

k

ETS k

"Power on/off function "

k

Disable

Via button only

Via object only

Via both button and object

Disable

Via button only

Via object only

Via both button and object k

"Power on/off status after download "

"Slave" k FCU k

OFF

ON

"Power on/off status after voltage recovery"

"Slave" k FCU k

OFF

ON

As before voltage failure

OFF

ON FCU

As before voltage failure FCU

k

"Room temperature control mode"

k

Heating

Cooling

Heating and Cooling

"Heating and Cooling" k

"Heating/Cooling switchover"

/ k

Only via button

Only via object

Via both button and object

Automatic changeover

“Slave” **Only via object** k

- **“Heating/Cooling status after download”**

“Slave” k / k

Heating

Cooling

- **“Heating/Cooling status after voltage recovery”**

“Slave” k / k

Heating

Cooling

As before voltage failure

As before voltage failure k

k

- **“Room temperature control system”**

“Slave” k k

2 pipes system

4 pipes system

2 pipes system k

4 pipes system k

"Room temperature operation mode"

k

! ! 4 1byte

k

k

"Controller status after download"

"Slave" k FCU k

Comfort mode

Standby mode

Economy mode

"Controller status after voltage recovery"

"Slave" k FCU k

Comfort mode

Standby mode

Economy mode

Frost/heat protection

As before voltage failure

“Extended comfort mode [0..255,0=inactive]min”

“Slave” k k >0 1bit

“Extended comfort mode” k **0..255**

1 1

k k

/ k

“1 bit object function for operation mode”

“Master” k 1bit k

1bit 1 k

! 0 k

“1 bit object for standby mode”

k 1bit k

1bit k

k

“Initial setpoint temperature (-C)”

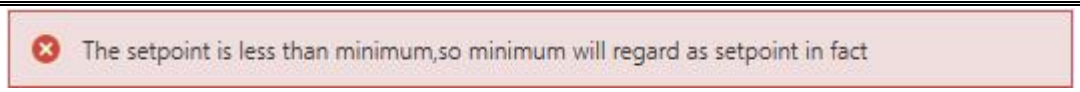
“Slave” k k

10.0

10.5

...

35.0



Automatic H/C mode changeover dead zone /

“ Upper/Lower dead zone”

“Slave” k “Heating and Cooling” “Automatic changeover” k / k

0.5K

1.0K

...

10.0K

+

- k

”Window contact input function”

“Slave” k k k

“Delay for window contact [0..65535]s”

k **0..65535**

“Controller mode for open window”

open k

! / k

k

Economy mode

Frost/heat protection

"Bus presence detector function"

"Slave" k k k

k /

k

k k

"Fan"

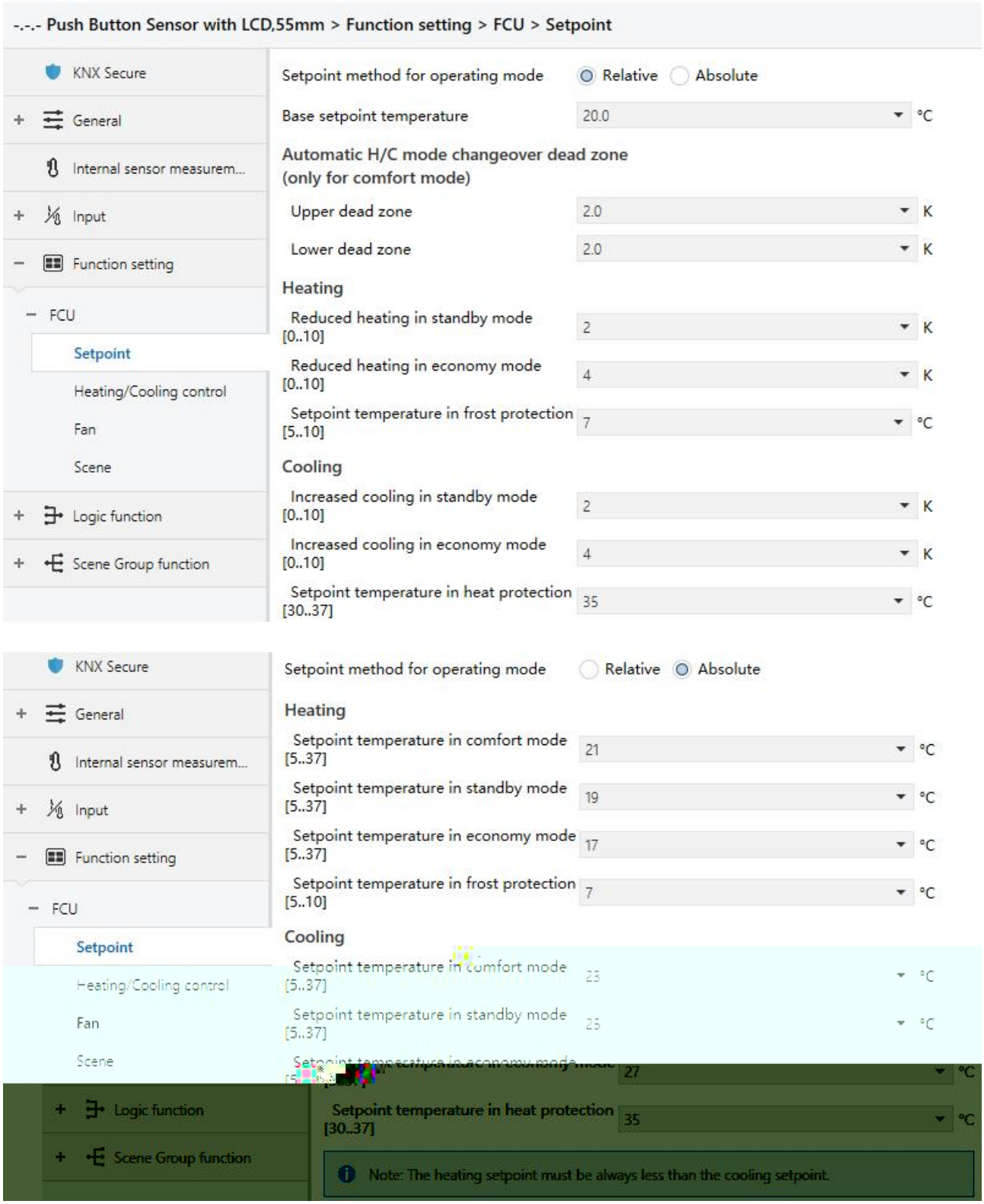
k

"Scene"

"Slave" k k !

/ k

5.6.2.1.1. “Setpoint”



5.6.2.1.1 “Setpoint”

“Slave” k FCU k

"Setpoint method for operating mode"

k

Relative

Absolute

Relative k

Absolute k

k

"Base setpoint temperature (-C)"

k

10.0

10.5

...

35.0

"Base temperature setpoint, status"

k

The setpoint is less than minimum,so minimum will regard as setpoint in fact

The setpoint is greater than maximum,so maximum will regard as setpoint in fact

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

"Upper/Lower dead zone"

"Heating and Cooling" "Automatic changeover" k

k

0.5K

1.0K

...

10.0K

+

-

k

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

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

k

0K

1K

...

10K

Heating

Cooling

k

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

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

k

0K

1K

...

10K

Heating

Cooling k

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

k

5°C

6°C

...

10°C

k

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

k

30°C

31°C

...

37°C

k

k

"Setpoint temperature in comfort mode [5...37]-C"

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

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

! k

5°C

6°C

...

37°C

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

k

5°C

6°C

...

10°C

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

k

30°C

31°C

...

37°C

Note: The k

Heating and Cooling

ETS k

2. k

k

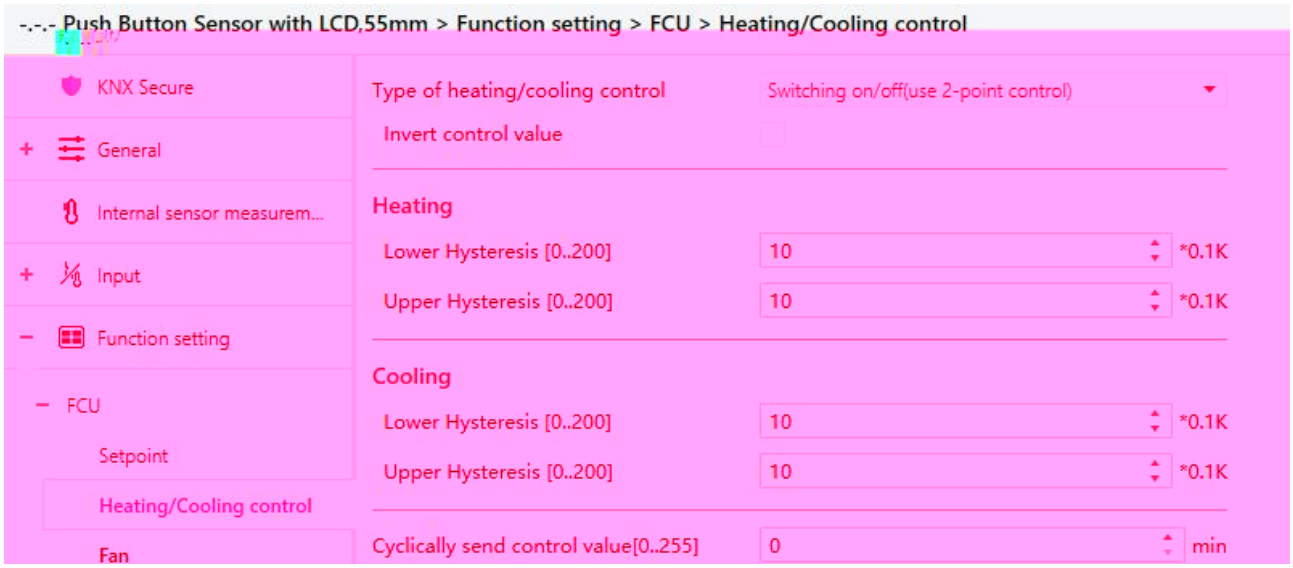
3.

k ETS

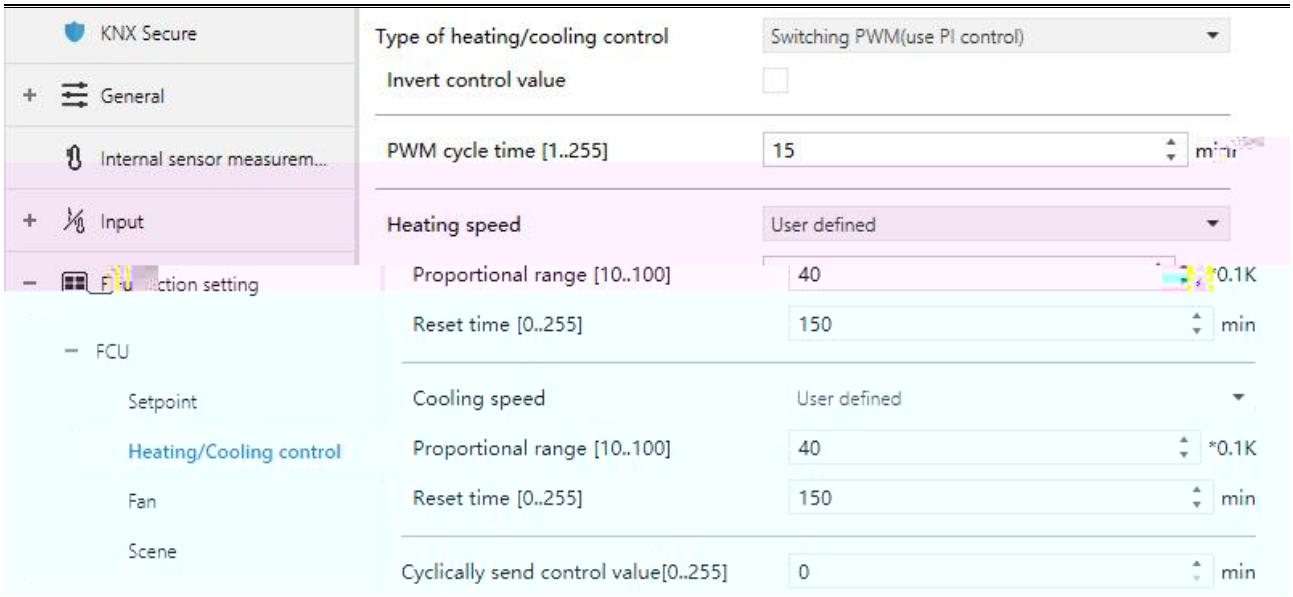
/ **ETS**

k

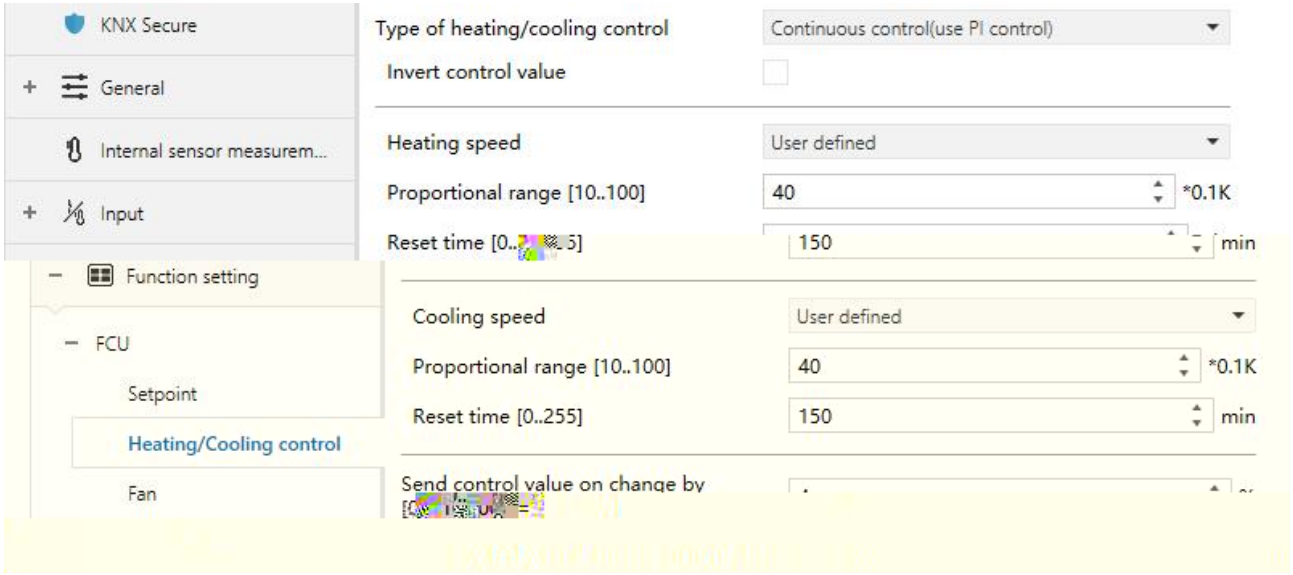
5.6.2.1.2. “Heating/Cooling control”



“Switching on/off(use 2-point control)”



"Switching PWM(use PI control)"



"Continuous control(use PI control)"

5.6.2.1.2(1) "Heating/Cooling control"

"Slave" k 2 4 k

"Type of heating/cooling control"

/ k

Switching on/off(use 2-point control)

Switching PWM(use PI control)

Continuous control(use PI control)

"Invert control value"

k

k

(2 point control)

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

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

FCU k **0..200**

T > **+**

T < **-** k

1K 2K 22℃ T 24℃

T 21℃ T 21~24℃ k

T < **-**

T > **+** k

1K 2K 26℃ T 25℃

T 28℃ T 28~25℃ k

1.

2. k

5.6.2.1.2(2) ( )

PI (PI control)

" "PWM cycle time [1...255]min"

"Switching PWM(use PI control)"

10min, 80%

8min 2min /

k

1..255

"Switching PWM (use PI control)" "Continuous control (use PI control)" PI

"Continuous control" PI (1byte)

"Switching PWM" PI "on/off" k

- "Heating speed"
- "Cooling speed"

PI k k

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

Cooling ceiling (5K/240min)

Split unit (4K/90min)

Fan coil unit(4K/90min)

User defined

- **"Proportional range [10..100]*0.1K"(P value)**
- **"Reset time [0..255]min"(I value)**

"User defined" k PI PI k

10..100 (P value)

0..255 (I value)

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

"Continuous control (use PI control)"

k **0..100 0**

PI **PI** **:**

1

	P	**I**	**PI**	**PWM**
Hot water Heating	5K	150min	Continuous/PWM	15min
Underfloor heating	5K	240min	PWM	15-20min
Electrical heating	4K	100min	PWM	10-15min
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	--

2

	P	**I**	**PI**	**PWM**
Cooling ceiling	5K	240min	PWM	15-20mIn
Split unit	4K	90min	PWM	10-15min
Fan coil unit	4K	90min	Continuous	--

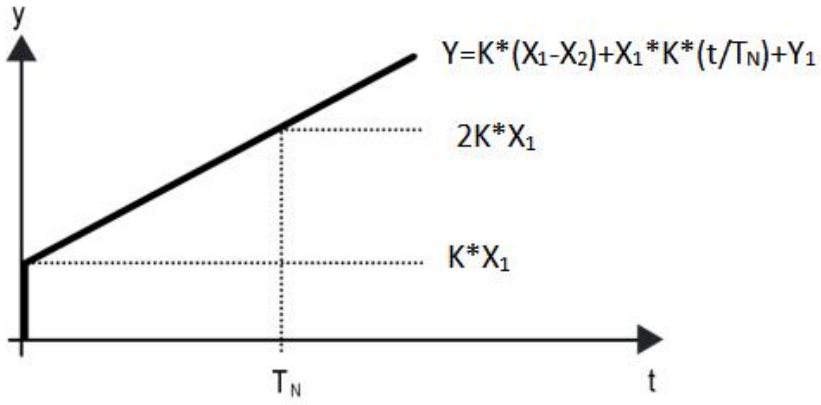
3

"Heating/Cooling speed" "User defined" P

I k PI

k

k 0 k



5.6.2.1.2(3) PI

Y

Y1

X1 =

X2 =

T_N

K

PI Y=K*(X1-X2 +X1*K*t/T_N+Y1

PI Y=K X1-X2 +Y2

K:	
K:	
T_N:	
T_N:	

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

k **0..255**

5.6.2.1.3. “Fan”

5.3.2.3 “Fan”

k k

“Object datatype of 1byte fan speed”

1byte k

Percentage (DPT_5.001)

Fan stage (DPT_5.100)

Output value for fan speed

- **“Output value for fan speed low/medium/high”**

k 0 k

1..255 /1..100

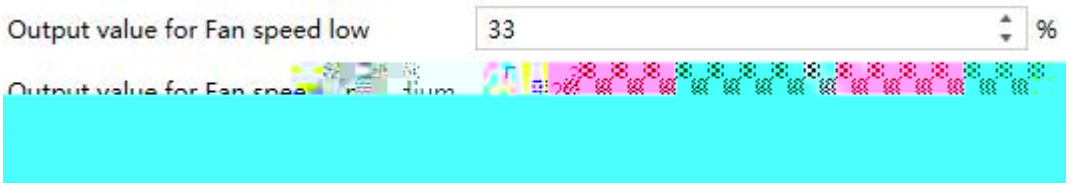
Status feedback for fan speed

- **“Status value for fan speed low/medium/high”**

k k

1..255 /1..100

1byte < < ETS



“Automatic operation function”

k

Disable

Local controller

External controller

“Slave” “Local controller” k

“Local controller”

Fan speed auto control setting

Condition setting for using PI control PI

PI PI

k

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

k **1..255**

k

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

k

k **1..255**

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

k

k **1..255**

k

OFF <-> <-> <-> <-> **k**

OFF <-> <-> <-> <->

k

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

k **0..50**

0

10 50 60 + 40 -

40~60 k 40 (

)60 k

Condition setting for using 2-point control

2-point k

-

- k

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

k **1..200**

k

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

k

k **1..200**

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

k

k **1..200**

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

k **0..50**

0

0.5℃ 1℃ 1.5℃ +

0.5℃ - 0.5℃~1.5℃

k 0.5℃ ( )1.5℃ k

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

PI 2 k

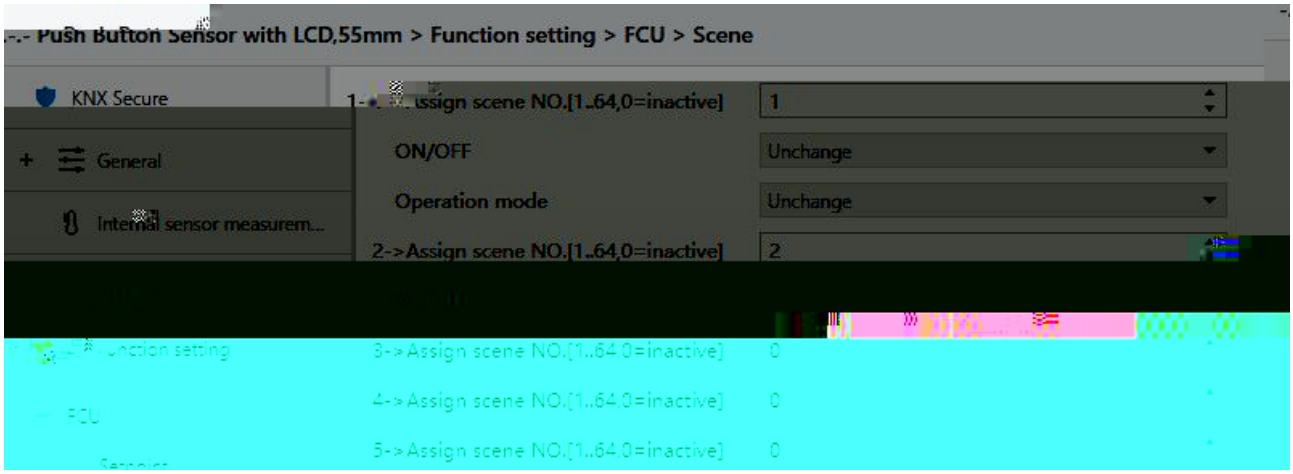
k

k

k **0..65535**

0 k

5.6.2.1.4. "Scene"



5.6.2.1.4 "Scene"

"Slave" k k

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

k 5 k **0..64 0=**

k

k

0

"ON/OFF"

OFF

ON

Unchange

OFF

"Temperature"

k

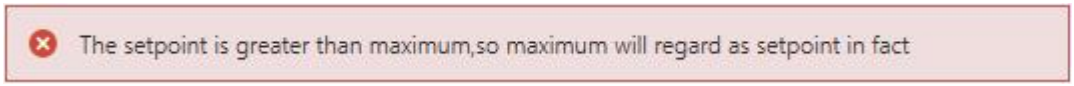
5°C

6°C

..

37°C

Unchange



"Operation mode"

k

Comfort mode

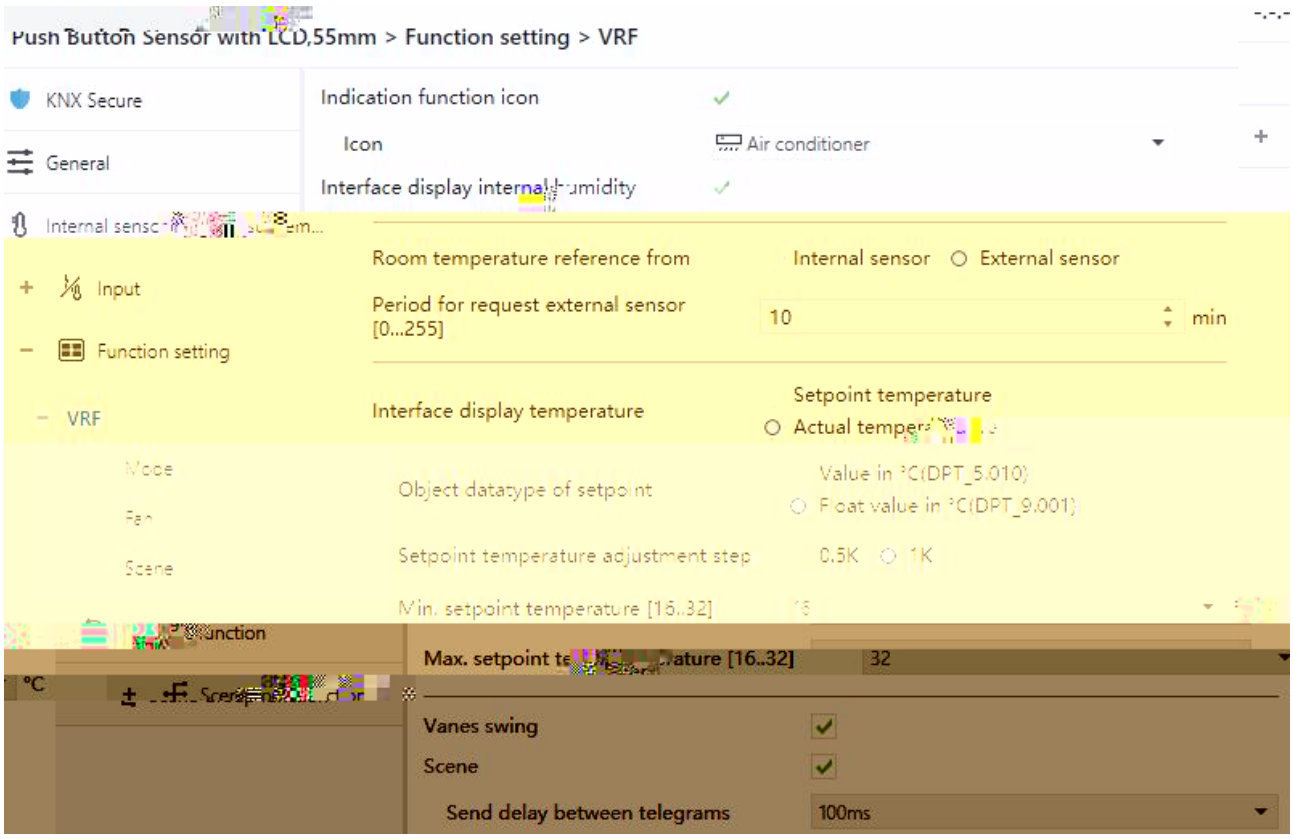
Standby mode

Economy mode

Frost/heat protection

Unchange

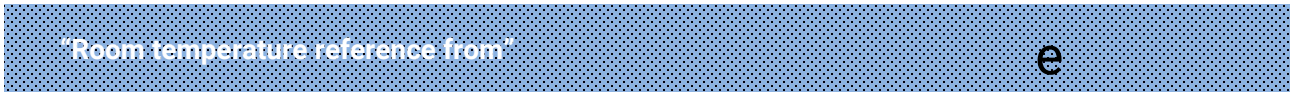
5.6.2.2. “VRF setting”



5.6.2.2 “VRF setting”

“Internal sensor measurement”

5.3 k



k

Internal sensor

External sensor

“Internal sensor measurement” 5.3 k

“Peria E !r

"Setpoint temperature adjustment step"

k

0.5K

1K

"Value in °C (DPT_5.010)" **1K**

Min./Max. setpoint temperature [16..32]-C

k k

16°C

17°C

...

32°C

k

ETS k

"Vanes swing"

k 1bit =1/ =0 k

/ 7.2.4 k

"Scene"

k ! ! !

k

"Send delay between telegrams"

k k

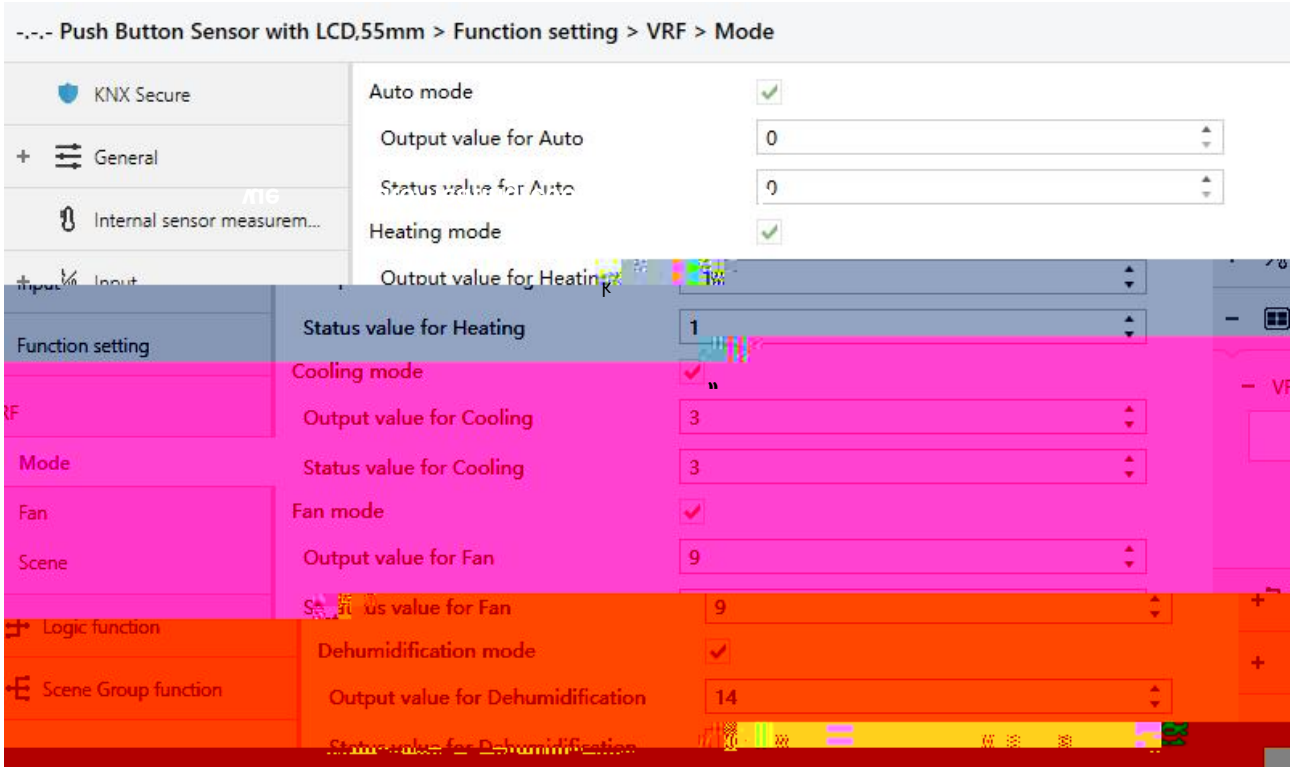
Disable

100ms

300ms

500ms

5.6.2.2.1. “Mode”



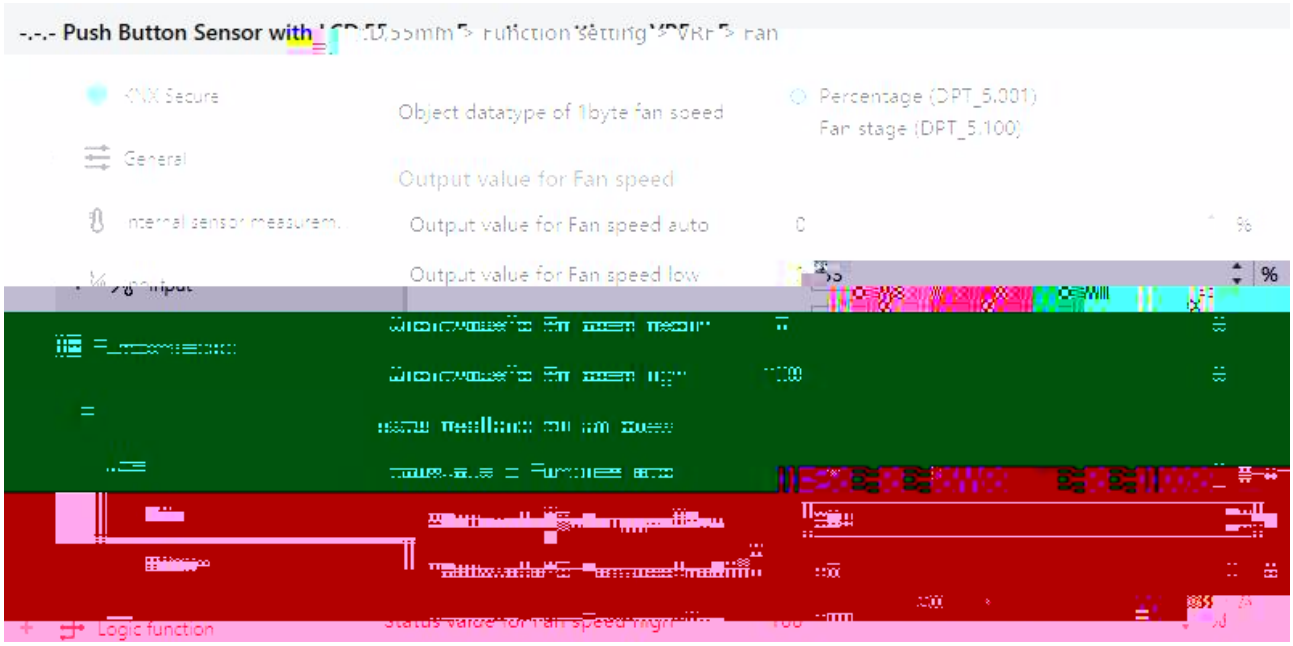
5.6.2.2.1 “Mode”

”Auto/Heating/Cooling/Fan/Dehumidification mode

k

”Output value for auto/heating/cooli

5.6.2.2.2. “Fan”



5.6.2.2.2 “Fan”

“Object datatype of 1byte fan speed”

1byte k

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

Output value for fan speed

“Output value for fan speed auto/low/medium/high”

! ! ! 4 k

0..255/0..100

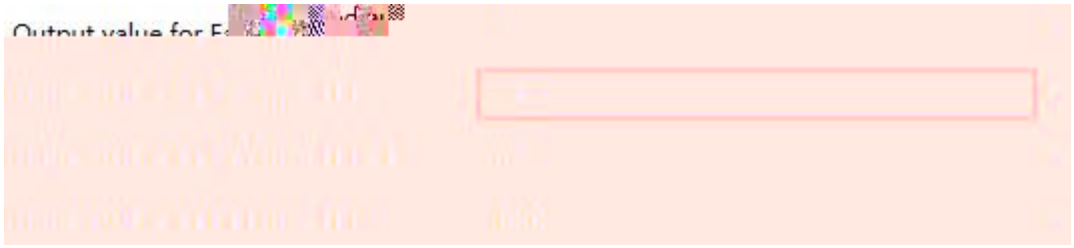
Status feedback for fan speed

“Status value for fan speed auto/low/medium/high”

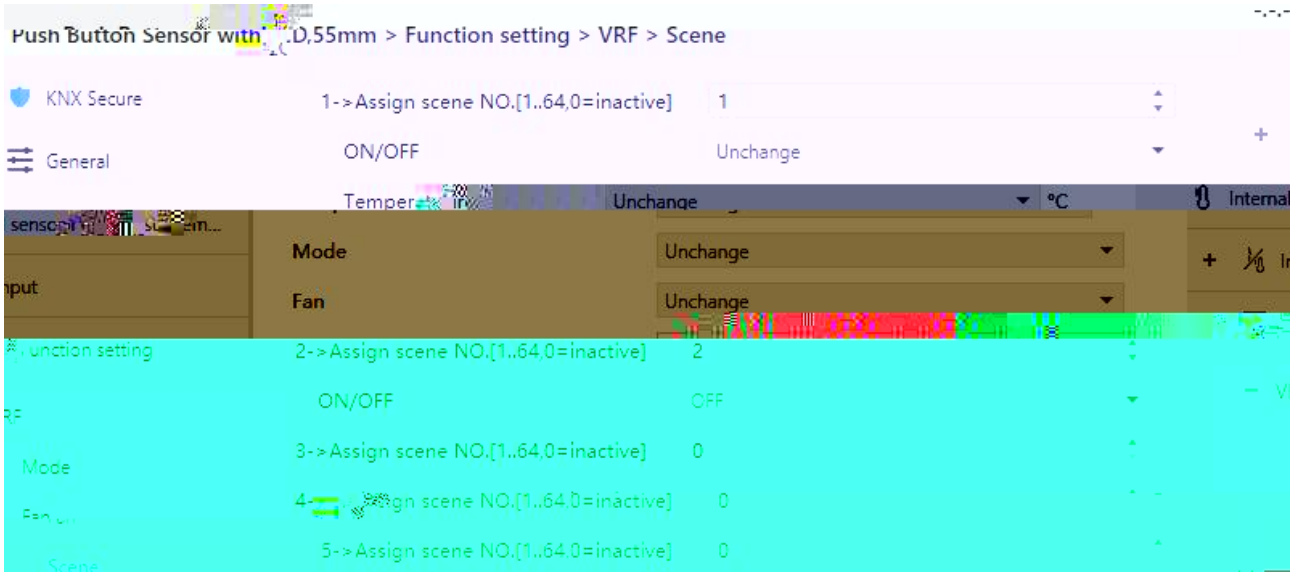
! ! ! 4 k

k **0..255/0..100**

< < k ETS



5.6.2.2.3. “Scene”



5.6.2.2.3 “Scene”

k

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

k 5 k **0..64 0=**

0

“ON/OFF”

OFF

ON

Unchange

OFF

"Temperature"

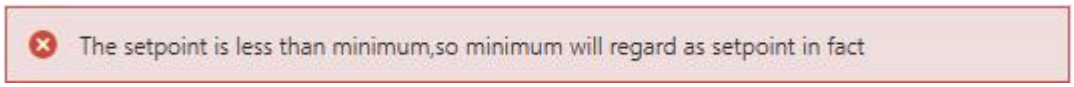
16°C

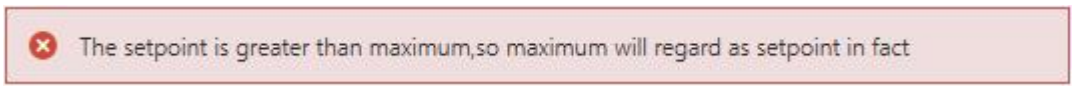
17°C

..

32°C

Unchange





"Mode"

Auto

Heating

Cooling

Fan

Dehumidification

Unchange

"Fan"

Auto

Low

Medium

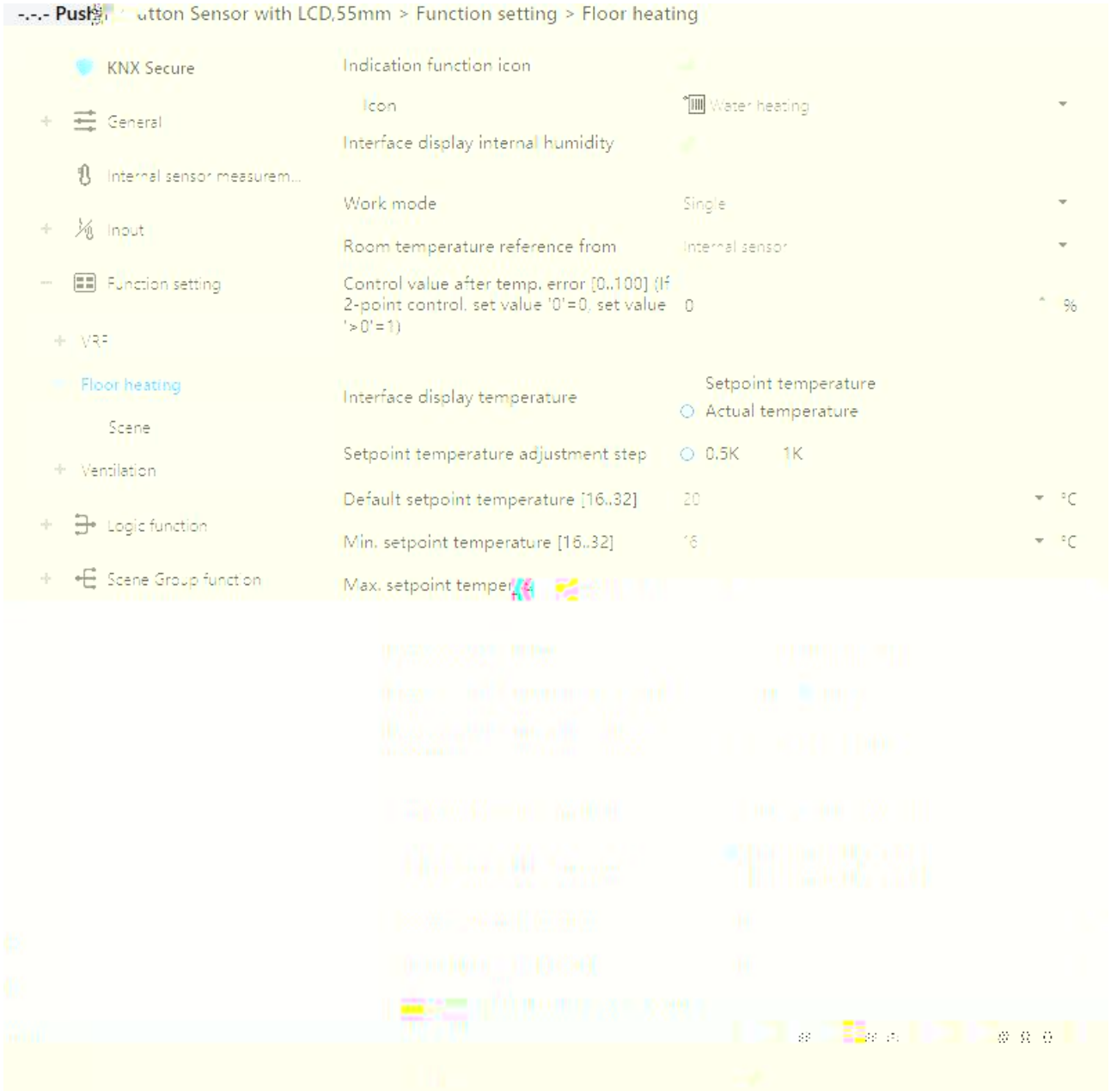
High

Unchange

! ! k

k k

5.6.2.3. “Floor heating setting”



5.6.2.3 “Floor heating setting”

"Indication function icon"

k

• • **"Icon"**

k

Air conditioner

Floor heating

...

Temperature

8.2 k

"Interface display internal humidity"

"Internal sensor measurement"

5.3 k

"Work mode"

k

Single

Master

Slave

Single

Master

Slave

k

"Room temperature reference from"

k

Internal sensor

External sensor

Internal sensor combine with External sensor

"Internal sensor measurement" 5.3 k

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

"...External sensor" k k

0..255

"Internal sensor combine with External sensor" **k**

"Combination ratio"

k

10% Internal to 90% External

20% Internal to 80% External

...

90% Internal to 10% External

"40% Internal to 60% External" 40% 60%

= ×40% + ×60%

k

k

“Send temperature when t esult change ...10]K”

k D ble

Disable

0.5K

1.0K

...

10.0K

“Cyclically send temperature [0...255]min”

0 k **0..255**

k

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

“Slave” k k **0..100**

0 0 0

1 k

“Interface display temperature”

k

Setpoint temperature

Actual

0.5K

1K

Via both button and object

Disable

Via button only

Via object only

Via both button and object k

"Power on/off status after download "

"Slave" k k

OFF

ON

"Power on/off status after power on"

"Slave" k k

OFF

ON

As before voltage failure

OFF

ON

As before voltage failure

k

"Temperature control method"

"Slave" k

Heating on/off (2 point control)

Heating PWM (use PI control) **PWM**

Heating continuous control (use PI control)

“Heating on/off (2 point control)”

k

k

- **“PWM cycle time [1..255] min”**

  “Heating PWM (use PI control)”

  10min, 80%

  8min 2min /

  k **1...255**

- **“Heating speed”**

  PI k k

  Hot water heating (5K/150min)

  Underfloor heating (5K/240 min)

  Electrical heating (4K/100min)

  User defined

- **“Proportional range [10..100]*0.1K”(P value)**

- **“Reset time[0..255]min”(I value)**

  “User defined” k PI PI k

  10..100 (P value)

  0..255 (I value)

- **“Send control value on change by [0..100,0=inactive]%”**

  “Continuous control (use PI control)”

  k **0..100 0**

  PI **5.5.2.1.2** k

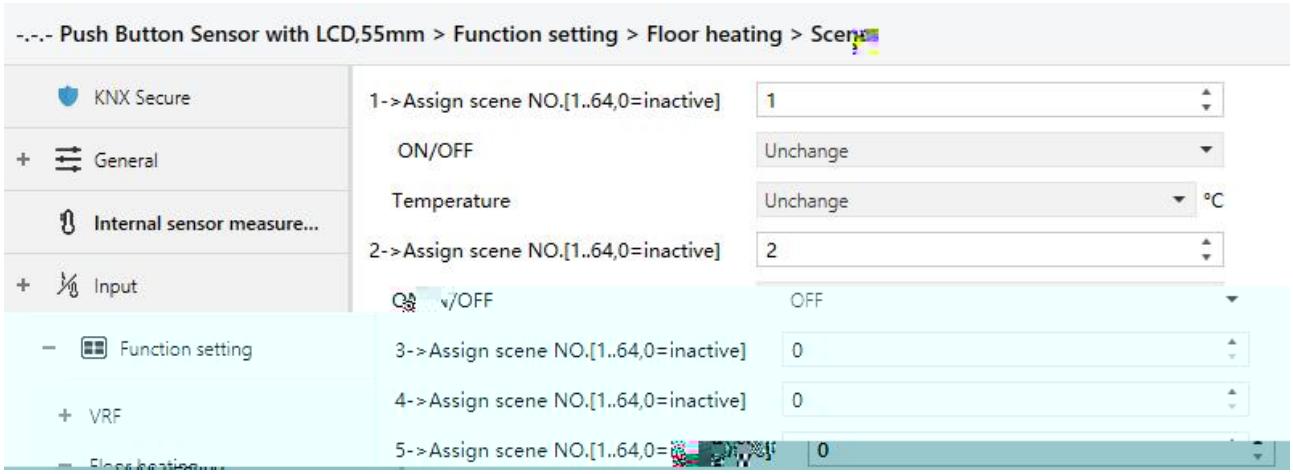
"Cyclically send control value [0..255]min"

PI 2 k **0..255**

"Scene"

"Slave" k k ! k

5.6.2.3.1. "Scene"



5.6.2.3.1 "Scene"

"Slave" k k

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

k 5 k **0..64 0=**

k

k

0

" " "ON/OFF"

OFF

ON

Unchange

OFF

- "Temperature"

16°C

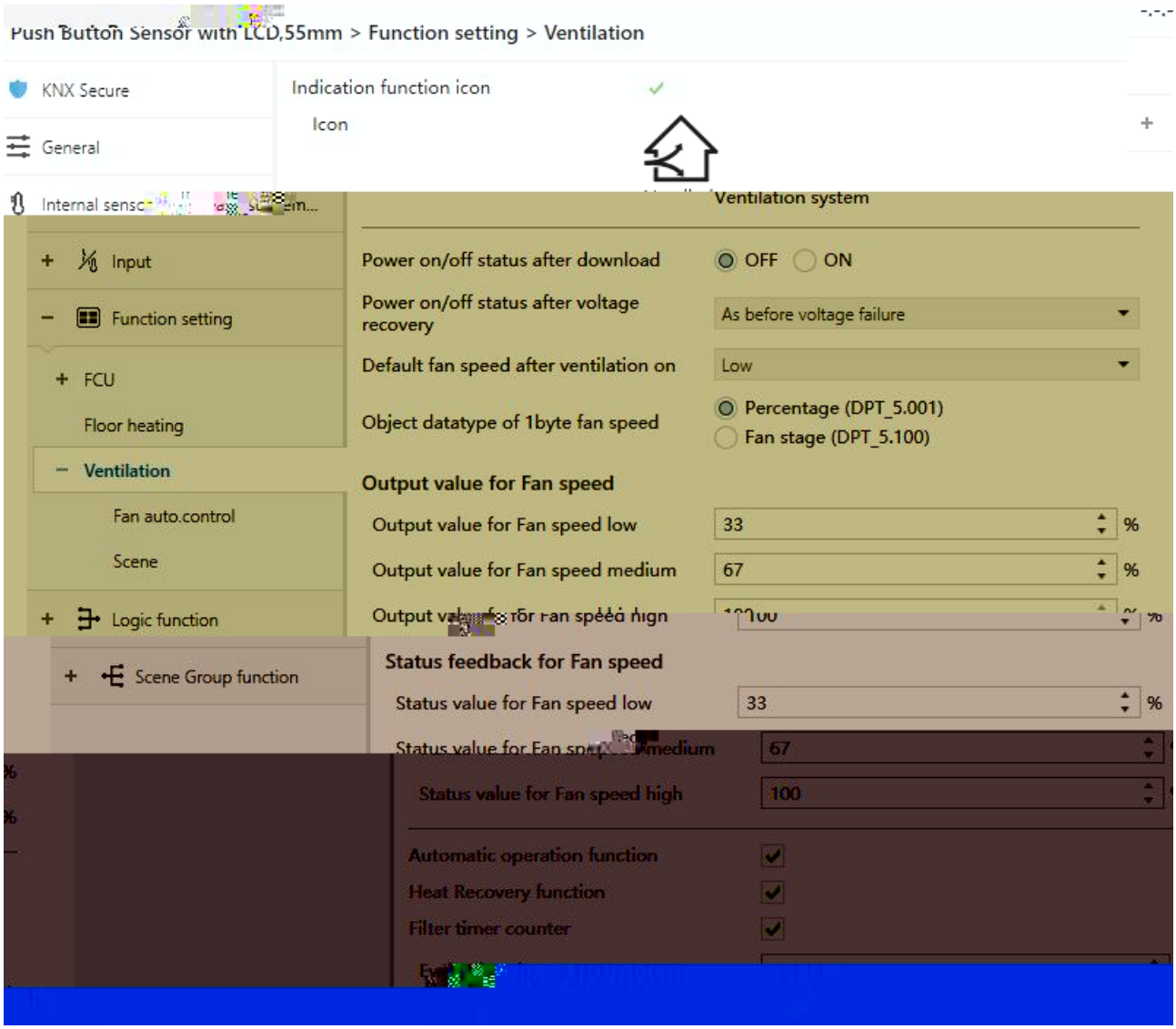
17°C

...

32°C

Unchange

5.6.2.4. “Ventilation setting”



5.6.2.4 “Ventilation setting”

“Indication function icon”

k

“Icon”

k **Ventilation system**

8.2 k

"Power on/off status after download "

k

OFF

ON

"Power on/off status after voltage recovery"

k

OFF

ON

As before voltage failure

OFF !

ON

As before voltage failure k

"Default fan speed after ventilation on"

k

Low

Medium

High

Last status

"Last status" k

"Object datatype of 1byte fan speed"

1byte k

Fan stage (DPT 5.100)

Percentage (DPT 5.001)

Output value for fan speed

- **“Output value for fan speed low/medium/high”**

k 0 k

1..255 /1..100

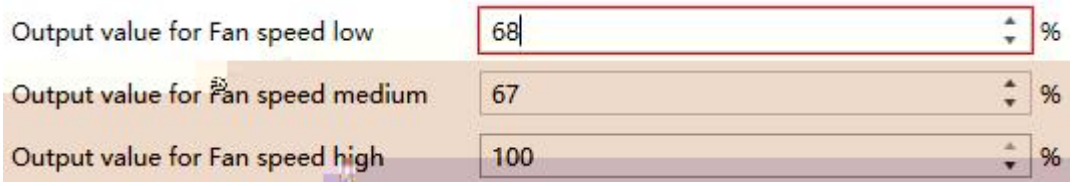
Status feedback for fan speed

- **“Status value for fan speed low/medium/high”**

k k

1..255 /1..100

< < k **ETS**



“Automatic operation function”

k PM2.5 CO2 ！VOC

k 1 0 k

“Filter timer counter”

k

- **“Evaluation time [100..10000]h”**

k k **100..10000**

k

“Filter timer reset” **3s**

k

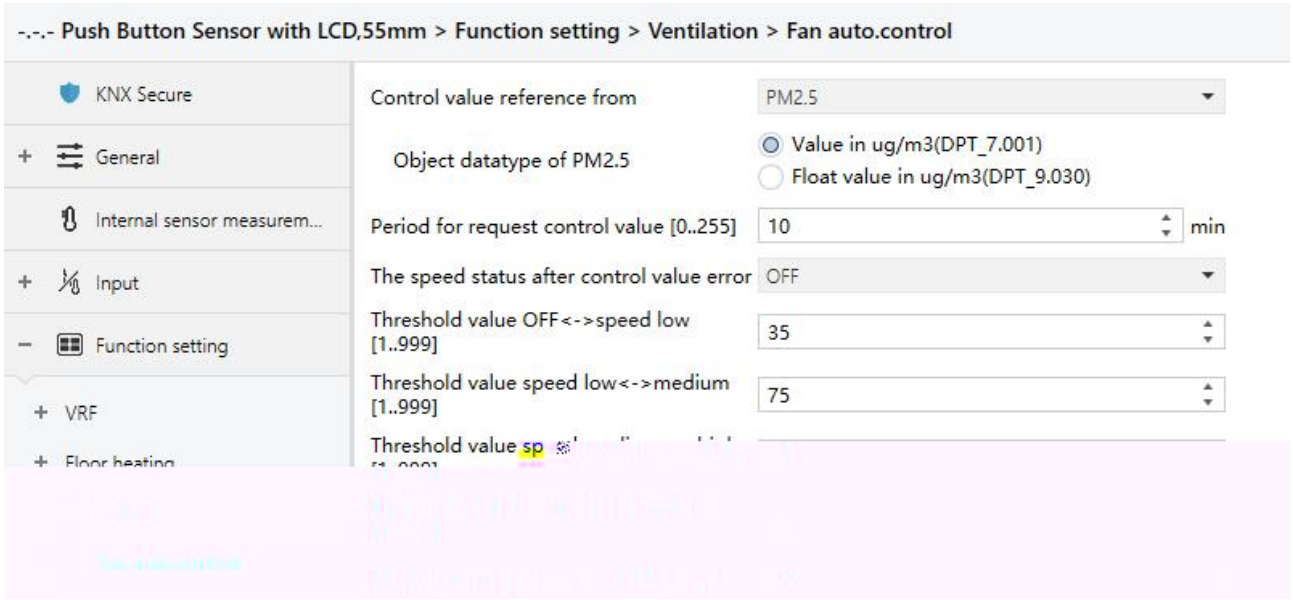
“Filter timer counter”

“Filter timer counter change” k

“Scene”

k k

5.6.2.4.1. “Fan auto.control”



5.6.2.4.1 “Fan auto.control”

k

“Control value reference from”

k

CO2

PM2.5

VOC

" "Object datatype of CO2"

CO2 k CO2 k

Value in ppm(DPT_7.001)

Float value in ppm(DPT_9.008)

DPT_7.001 k

DPT_9.008 k

" "Object datatype of PM2.5/VOC"

PM2.5 VOC k PM2.5

VOC k

Value in ug/m3(DPT_7.001)

Float value in ug/m3(DPT_9.030)

DPT_7.001 k

DPT_9.030 k

"Period for request control value [0...255]min"

PM2.5/VOC/CO2 k

2min k **0..255**

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

k **1..999/1..4000**

k

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

k

k 1..999 ..400

"Threshold valu spee medium<- igh [1..9 9]/ [1..]"

k

& g---"ŒÐ €

k 1..999/1..4000

k

OFF <-> <-> <-> k

OFF <-> <-> <-> <->

k

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

k

10..30/100..400

k

1

PM2.5

OFF <-> 35

<-> 55

<-> 75

25

OFF

OFF 60 25+35 60 55 75

50 <75-25 50 35 55

k

2

PM2.5

OFF <-> 20

<-> 40

<-> 70

10

OFF

OFF 30 20+10 k

41 41 40 70

39 39 20 40 k

60 <70-10 k

39 39 20 40

k

0 k

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

k 0..65535

k

k

0 k

k

5.6.2.4.2. “Scene ”

5.6.2.4.2 “Scene”

k

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

k 5 k **0..64 0=**

0

“Fan”

x

OFF

Low

Medium

High

Unchange

OFF k

“Heat recovery”

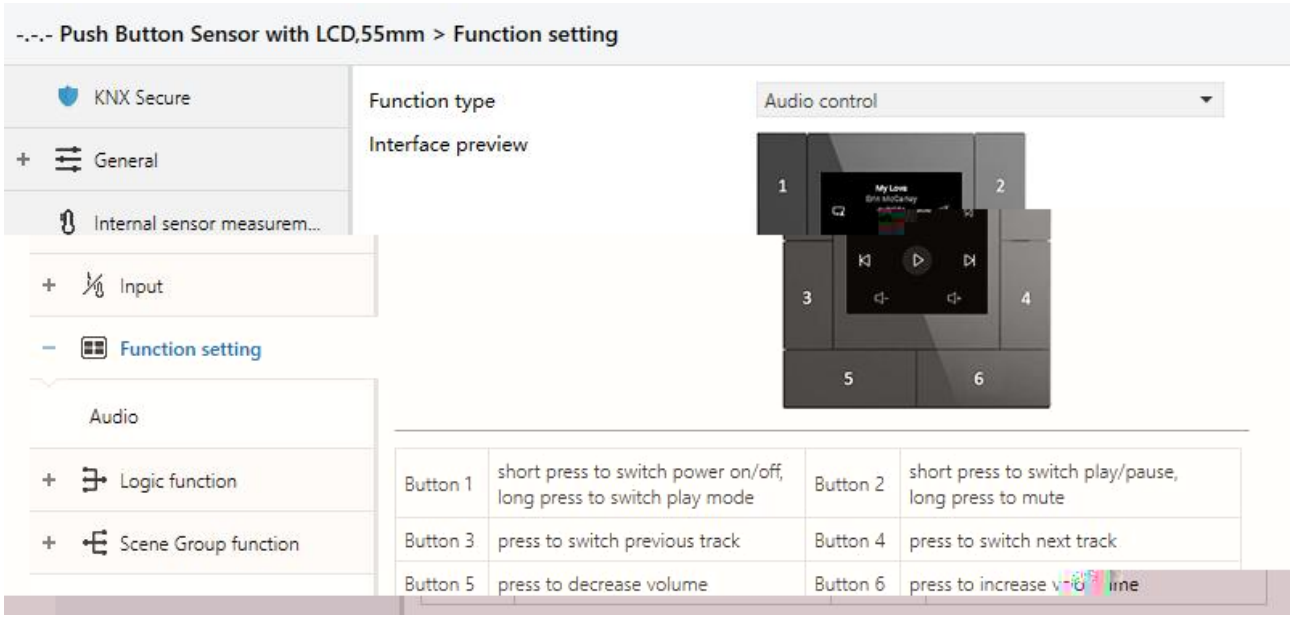
k x

OFF

ON

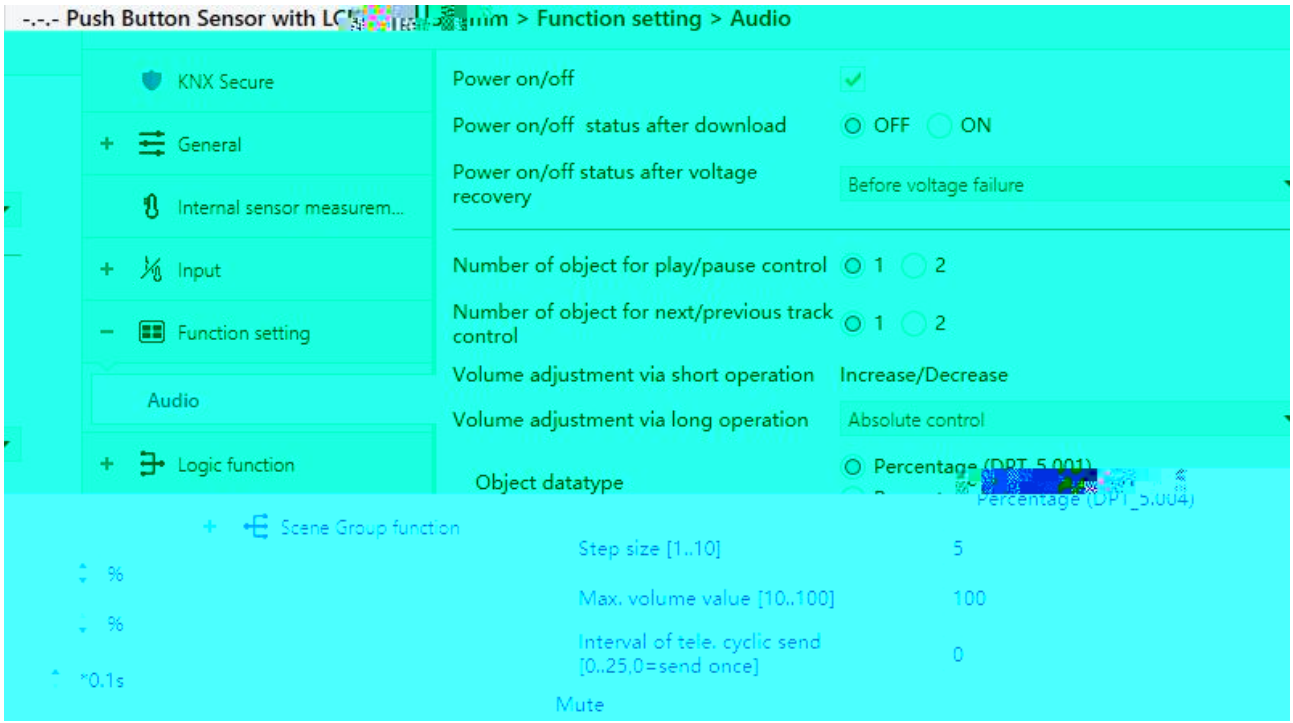
Unchange

5.6.3. “Audio control”

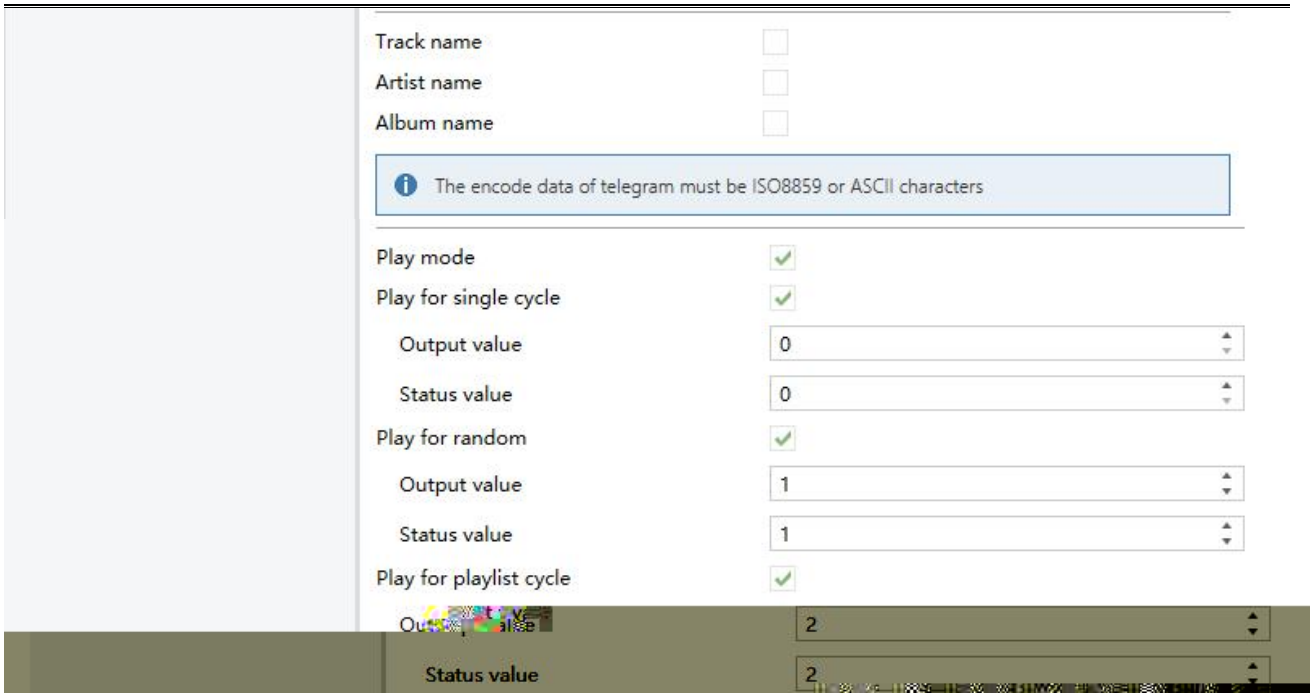


5.6.3(1) “Function setting”-“Audio control”

“Audio control” 7.3 k



5.6.3(2) “Audio control”



5.6.3(2) “Audio control”

“Power on/off”

k

k

k

k

“Power on/off after download ”

k

OFF

ON

“Power on/off after voltage recovery”

k

OFF

ON

As before voltage failure

OFF

ON

As before voltage failure k

"Number of object for play/pause control"

/ 1 2 k

One object

Two objects

"Number of object for next/previous track control"

/ 1 2 k

One object

Two objects

"Volume adjustment via short operation"

k **Increase/Decrease**

"Volume adjustment via long operation"

k

Disable

Relative control

Absolute control

Disable k

Relative control

1bit k

k

k

“Relative control”

- **“Work mode”**

k

Start-stop

Step adjustment

- **“Step size”**

k

“Start-stop” **100%**

“Step adjustment”

100%

50%

...

3.13%

1.56%

50% 10 2 k

“Absolute control”

- **“Object datatype”**

k

Percentage (DPT 5.001)

Percentage (DPT 5.004)

“Step size [1..10]%”

k **1..10**

10% 5% 15% k

“Max. volume value [10..100]%”

k **10..100**

“Interval of tele. cyclic send [0..25,0=send once]*0.1s ”

0 k **0..25**

“Start-stop” **0**

“Mute”

k

“Track name”

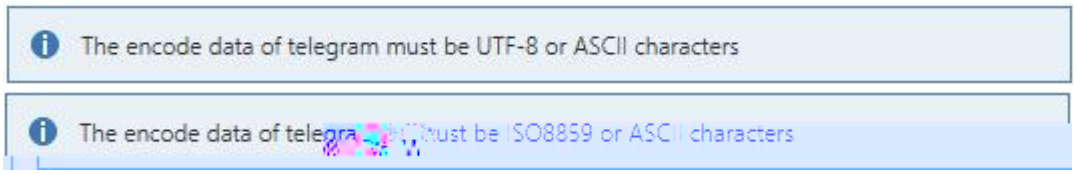
k

“Artist name”

k

“Album name”

k



! ! **UTF-8**

ASCII **ISO8859** **ASCII** k

“Play mode”

k k

Play for single cycle/random play/playlist cycle

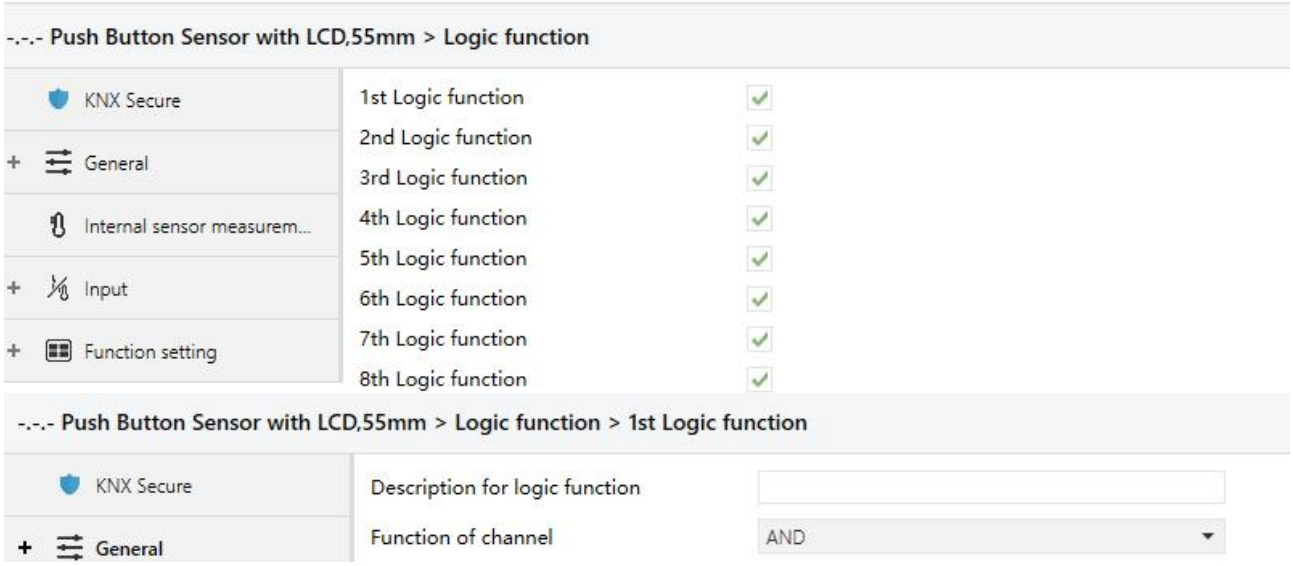
- **“Output value”**

k **0..255**

- **“Status value”**

k k **0..255**

5.7. “Logic”



5.7 “Logic function setting”

“1st/2nd/3rd... Logic function”

k 8 k

”Description for logic function”

k 30 k

”Function of channel”

k

AND

OR

XOR

Gate forwarding

Threshold comparator

Format convert

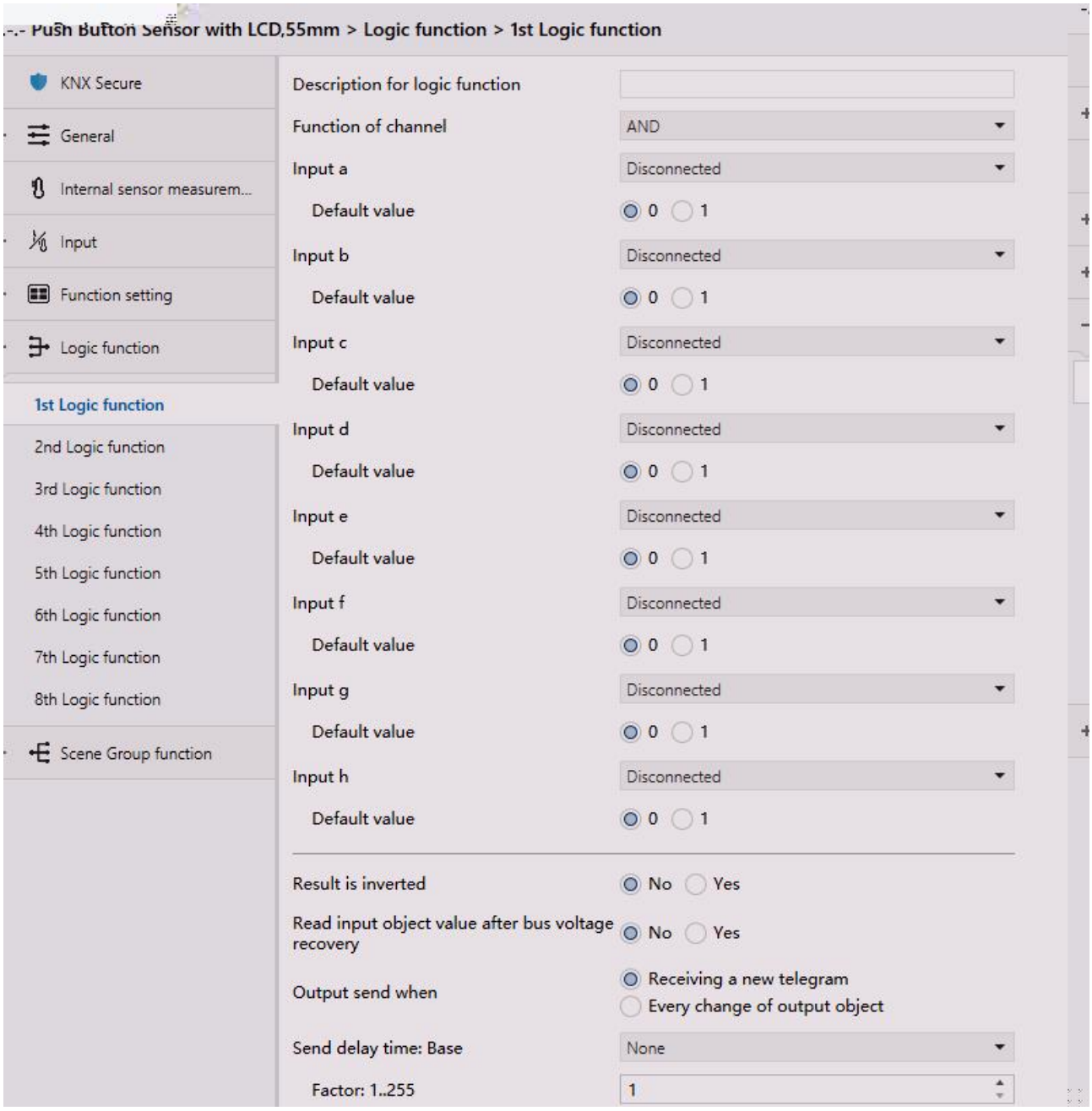
Gate function

Delay function

Staircase lighting

AND/OR/XOR k

5.7.1.“AND/OR/XOR”



5.7.1 “AND/OR/XOR”

“Input a/b/c/d/e/f/g//h”

input x k

Disconnected

Normal

Inverted

Disconnected

Normal

Inverted k k

“Default value”

input x k

0

1

“Result is inverted”

k

No

Yes

No

Yes k

“Read input object value after voltage recovery”

k

No

Yes

“Output send when”

k

Receiving a new telegram

Every change of output object

Receiving a new telegram

Every change of output object k

k

"Send delay time"

Base: **None**

0.1s

1s

...

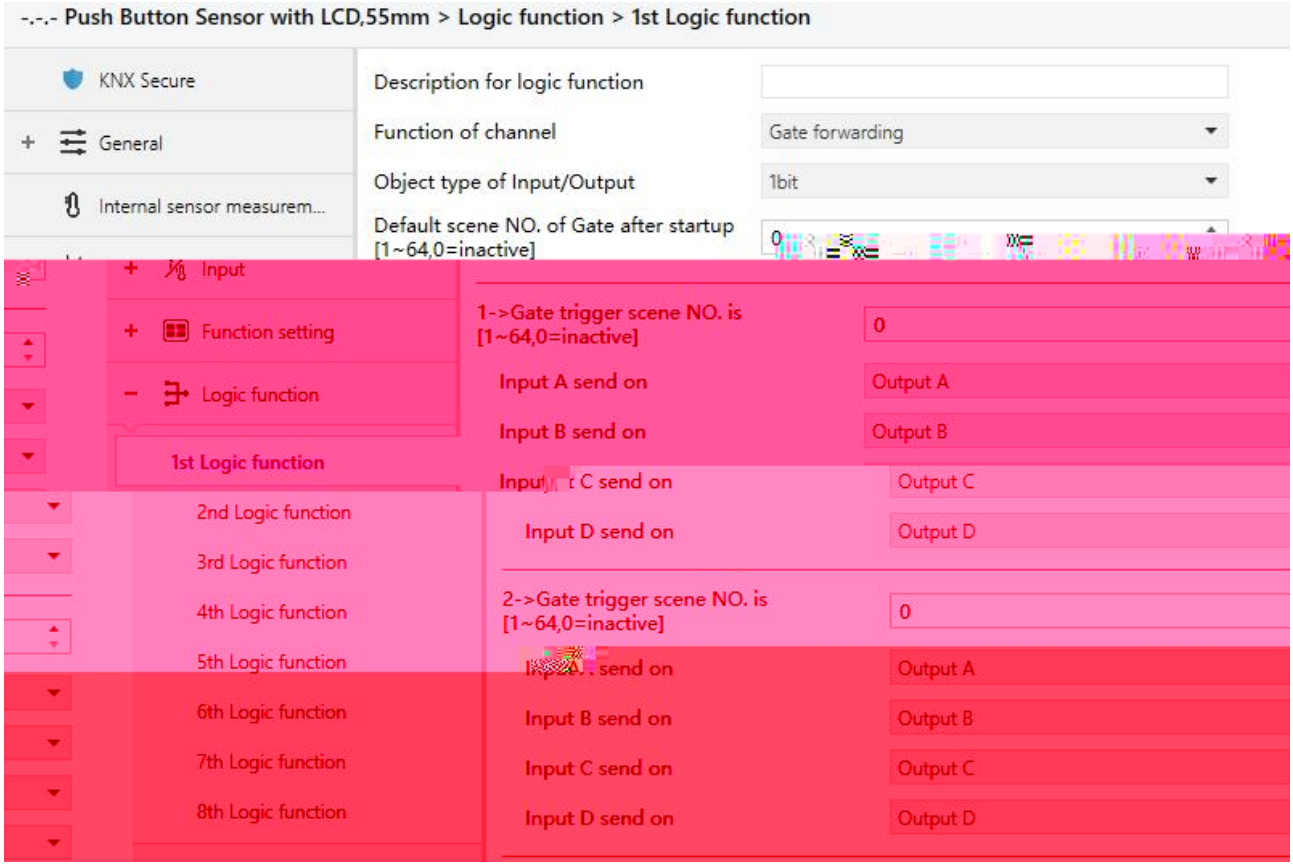
10s

25s

Factor: **1..255**

k Base × Factor Base "None" k

5.7.2."Gate forwarding"



5.7.2 "Gate forwarding"

"Object type of Input/Output"

/ k

1bit

4bit

1byte

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

k

0..64 0=

k

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

k 8 k

0..64 0=

" " "Input A/B/C/D send on"

X (X=A/B/C/D) k

Disable

Output A

Output B

...

Output B,C,D

k k

5.7.3.“Threshold comparator”

5.7.3 “Threshold comparator”

“Threshold value data type”

k

4bit

1byte

2byte

4byte

“Threshold value ”

k

4bit 0..15 / 1byte 0..255 / 2byte 0..65535 / 4byte 0..4294967295

“If Object value<Threshold value”

“If Object value=Threshold value”

“If Object value!=Threshold value”

“If Object value>Threshold value”

“If Object value<=Threshold value”

“If Object value>=Threshold value”

! ! ! !

k

Do not send telegram

Send value "0"

Send value "1"

Do not send telegram

Send value “0”/“1” 0 1 k

k **If Object value=Threshold value** **Send value 0** **If Object value<=Threshold value** **Send value 1** **1** k

"Output send when"

k

Receiving a new telegram

Every change of output object

Receiving a new telegram

Every change of output object k

k

"Send delay time"

Base: **None**

0.1s

1s

...

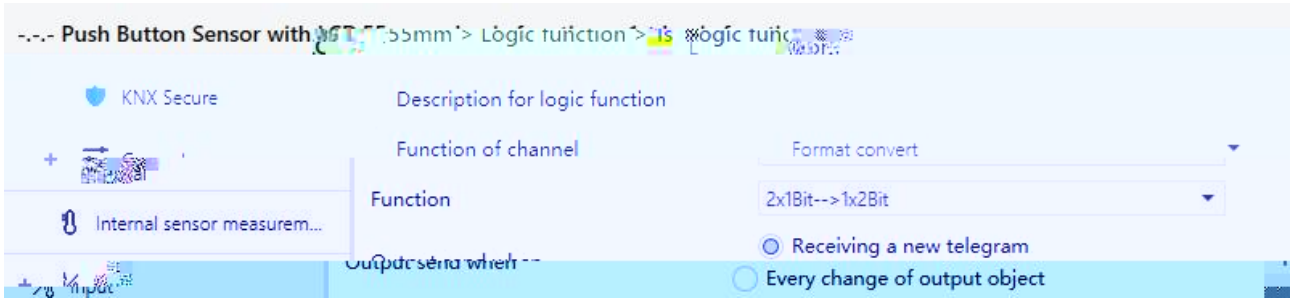
10s

25s

Factor: **1..255**

k Base × Factor Base "None" k

5.7.4."Format convert"



5.7.4 "Format convert"

"Function"

k

2x1bit-->1x2bit

8x1bit-->1x1byte

1x1byte-->1x2byte

2x1byte-->1x2byte

2x2byte-->1x4byte

1x1byte-->8x1bit

1x2byte-->2x1byte

1x4byte-->2x2byte

1x3byte-->3x1byte

3x1byte-->1x3byte

"Output send when"

k

Receiving a new telegram

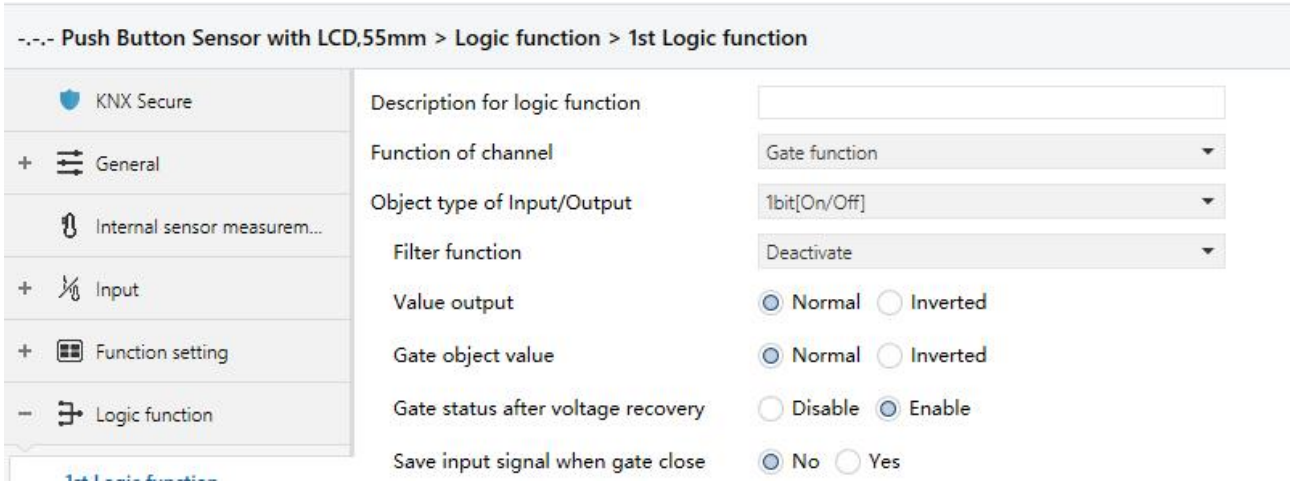
Every change of output object

Receiving a new telegram

Every change of output object k

k

5.7.5."Gate function"



5.7.5 "Gate function"

"Object type of Input/Output"

/ k

1bit[On/Off]

1byte[0..100%]

1byte[0..255]

2byte[Float]

2byte[0..65535]

"Filter function"

"1bit[On/Off]" k On Off

k

Deactiva)i

"Save input signal when gate close"

k

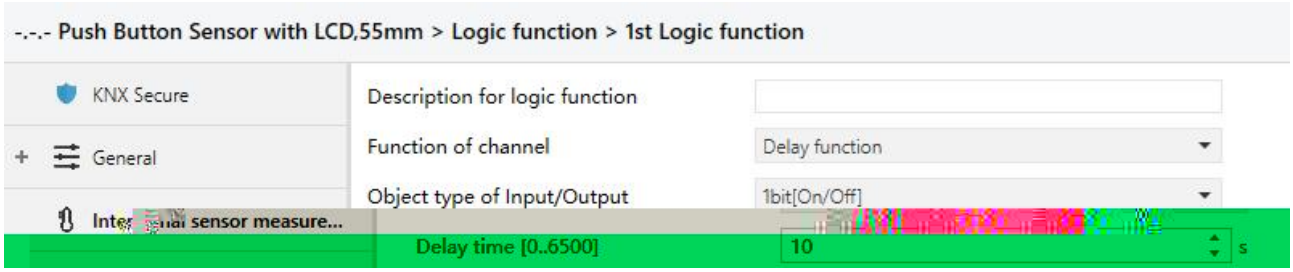
No

Yes

No

Yes k

5.7.6."Delay function"



5.7.6 "Delay function"

"Object type of Input/Output"

/ k

1bit[On/Off]

1byte[0..100%]

1byte[0..255]

2byte[Float]

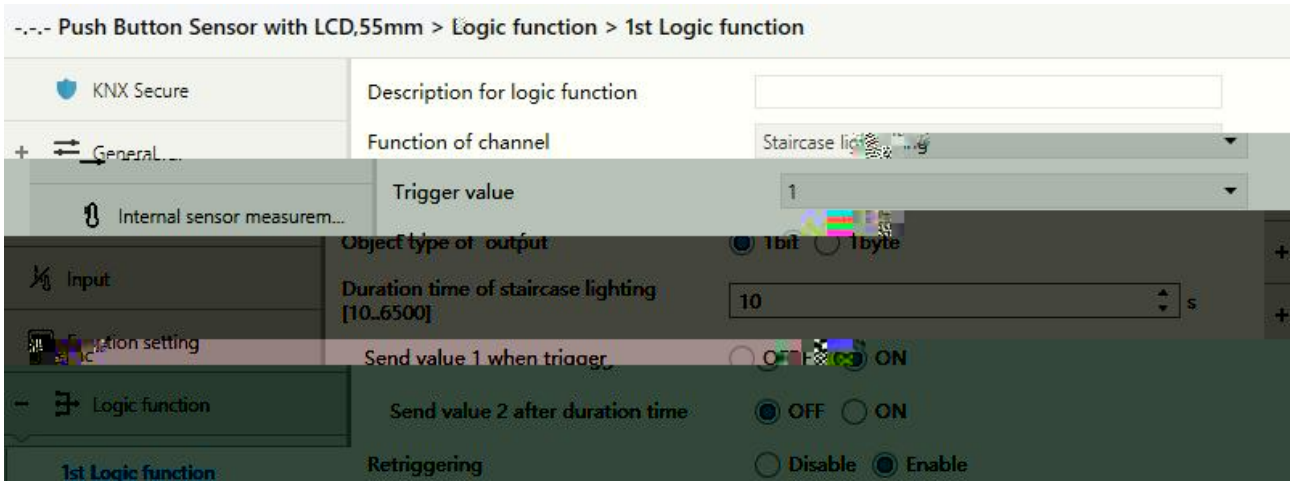
2byte[0..65535]

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

k **0..6500**

k

5.7.7.“Staircase lighting”



5.7.7 “Staircase lighting”

“Trigger value”

“Trigger value” k

0

1

0 or 1

“Object type of output”

k

1bit

1byte

“Duration time of staircase lighting[10..6500]s”

k **10..6500**

“Send value 1 when trigger”

“Send value 2 after duration time”

k 1 2 k

k

1bit

OFF

ON

1byte **0..255**

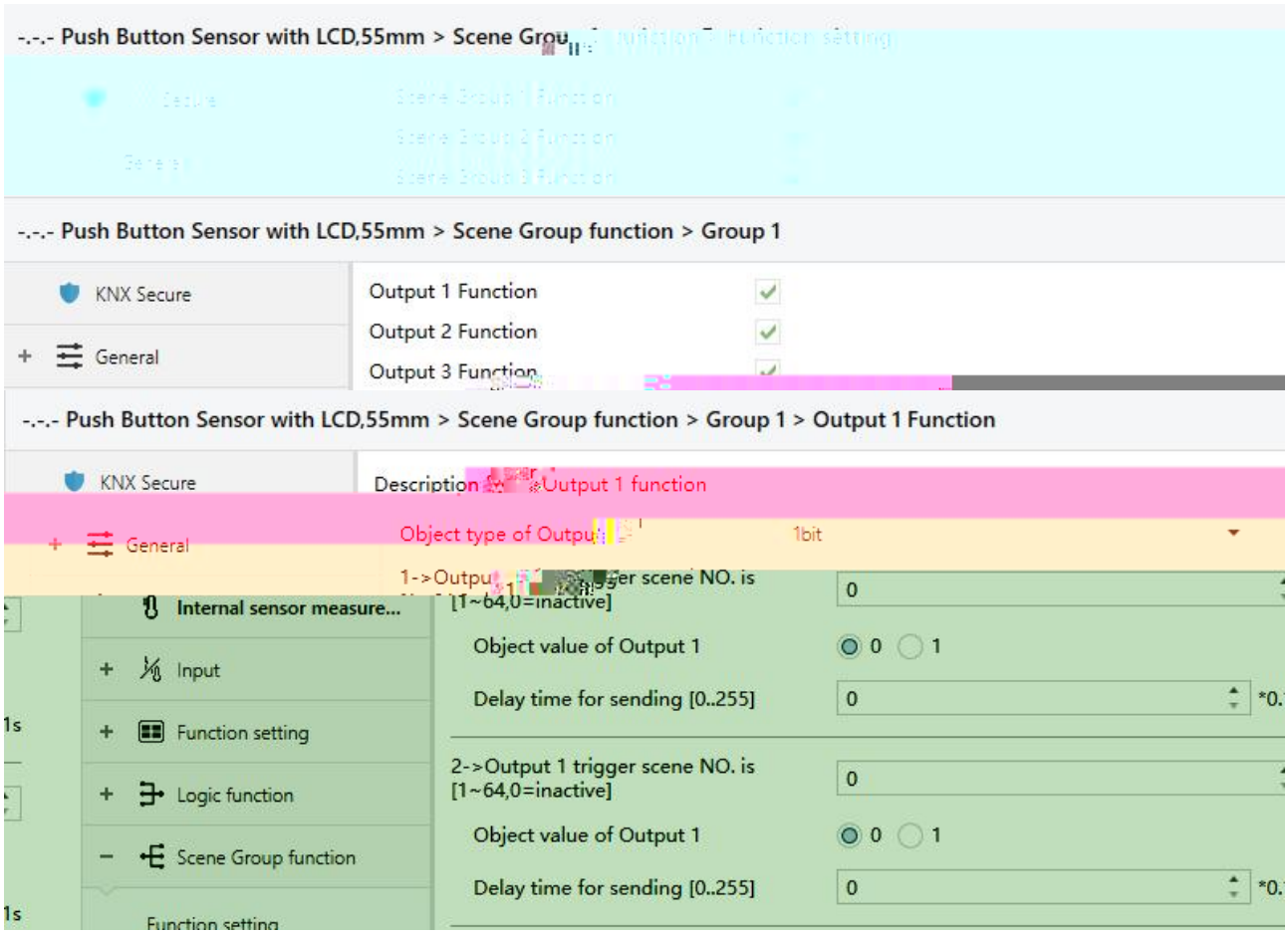
"Retriggering"

k

Disable

Enable

5.8. “Scene Group”



5.8 “Scene Group”

“Scene Group x Function”(x=1~8)

x 8 k

“Output y Function”(y=1~8)

x y 8 k

8 8

“Description for Output y function”(y=1~8)

x y k 30 k

"Object type of Output y"(y=1~8)

x y k

1bit

1byte

2byte

RGB

RGBW

"Object datatype"

1byte 2byte k

1byte

1byte unsigned value

HVAC mode

2byte

2byte unsigned value

Temperature value

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

x y k 8 k

0..64 0=

" " "Object value of Output y"

y

1bit **0..1**

1byte-1byte unsigned value **0..255**

1byte-HVAC mode

Comfort mode

Standby mode

Economy mode

Frost/heat protection

2byte-2byte unsigned value **0..65535**

2byte-Temperature value

-5°C

-4°C

...

45°C

- **"RGB value of Output y"**

RGB RGBW RGB **#000000..#FFFFFF**

- **"White value of Output y"**

RGBW **0..255**

- **"Delay time for sending [0....255]*0.1s"**

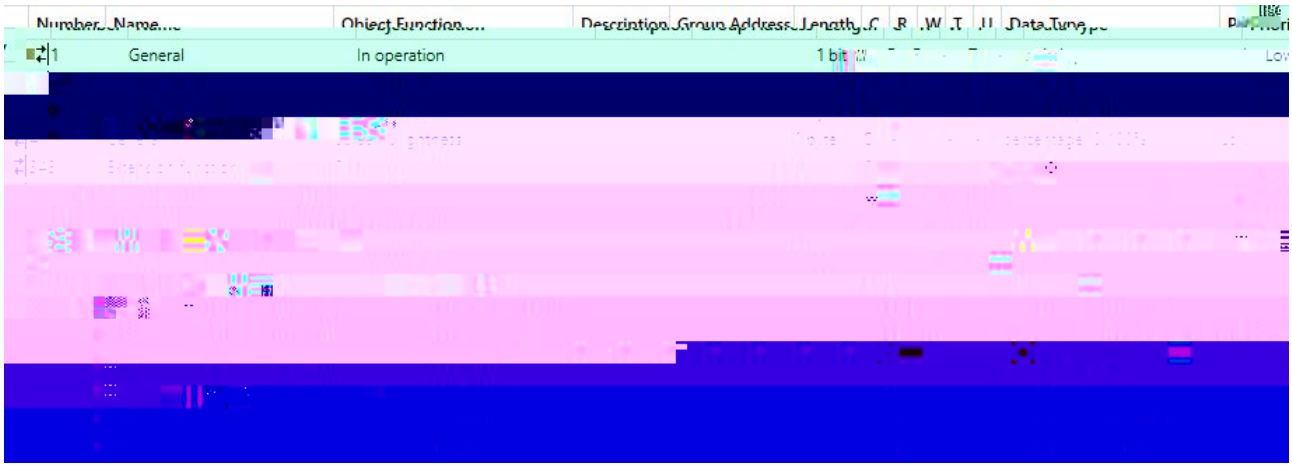
k **0..255**

k

“C” **“W”** **“R”**

“T” **“U”** k

6.1.“General”



6.1 “General”

					DPT
1	**In operation**	**General**	**1bit**	**C,R,T**	**1.001 switch**
“1” k k					
2	**Date**	**General**	**3byte**	**C,W**	**11.001 date**
k					
3	**Time**	**General**	**3byte**	**C,W**	**10.001 time of day**
k					
4	**Screen brightness**	**General**	**1byte**	**C,W**	**5.001 percentage(0..100%)**
k k k					

	20~100% 20% 20% k				
345	**Panel locking**	**Extension function**	**1bit**	**C,W**	**1.003 enable**
	k k				
346	**Screen on/off**	**Extension function**	**1bit**	**C,W**	**1.001 switch**
	/ k 0 ˚ ˚ 1 ˚ ˚				
347	**Night mode**	**Extension function**	**1bit**	**C,R,T** **C,W,T,U**	**1.024 day/night**
	/ k 0 ˚ ˚ 1 ˚ ˚ C,R,T / C,W,T,U k General k				
348	**Summer time status**	**Extension function**	**1bit**	**C,R,T**	**1.003 enable**
	k 1 ˚ ˚ 0 ˚ ˚				
349	**Dis/En Proximity function**	**Extension function**	**1bit**	**C,W**	**1.003 enable**
	/ k				
350	**Proximity input**	**Extension function**	**1bit**	**C,W**	**1.001 switch**

k

1 ˚

0 ˚

					1.001 switch
			1bit		**5.010 counter pulses**
351	**Proximity output**	**Extension function**	**1byte**	**C,T**	**17.001 scene number**
			2byte		**5.001 percentage**
					7.001 pulses

“Object type of output value”

1byte/2byte ON(1bit) k k

352	**Alarm acknowledge**	**Extension function**	**1bit**	**C,T**	**1.016 acknowledge**

1 k

353	**Alarm message**	**Extension function**	**14byte**	**C,W**	**16.001 character string (ISO 8859-1)**

k k

354	**Alarm input**	**Extension function**	**1bit**	**C,W,T,U**	**1.005 alarm**

k

0 ˚ ˚

1 ˚ ˚

General k

355	**Locking scene**	**Extension function**	**1byte**	**C,T**	**17.001 scene number**

k k

356	

PM2.5/PM10/VOC

ug/m3 k 0~999ug/m3 k

General k

k

356	**Temperature value**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**9.001 temperature**
k -40...40℃					
356	**Humidity value**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**9.007 humidity**
k 0~100%					
356	**CO2 value**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**7.001 pulse** **9.008 parts/million(ppm)**
CO2 ppm k 0~4000ppm k					
356	**Brightness value**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**7.013 brightness(lux)** **9.004 lux**
lux k 0~65535lux k					
356	**Wind speed**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**9.005 speed** **9.028 wind speed**
k m/s km/h k					

355	**AQI value**	**Screensaver-Items 1**	**2byte**	**C,W,T,U**	**7.001 pulse**
	AQI			k	0~500

6.1 “General”

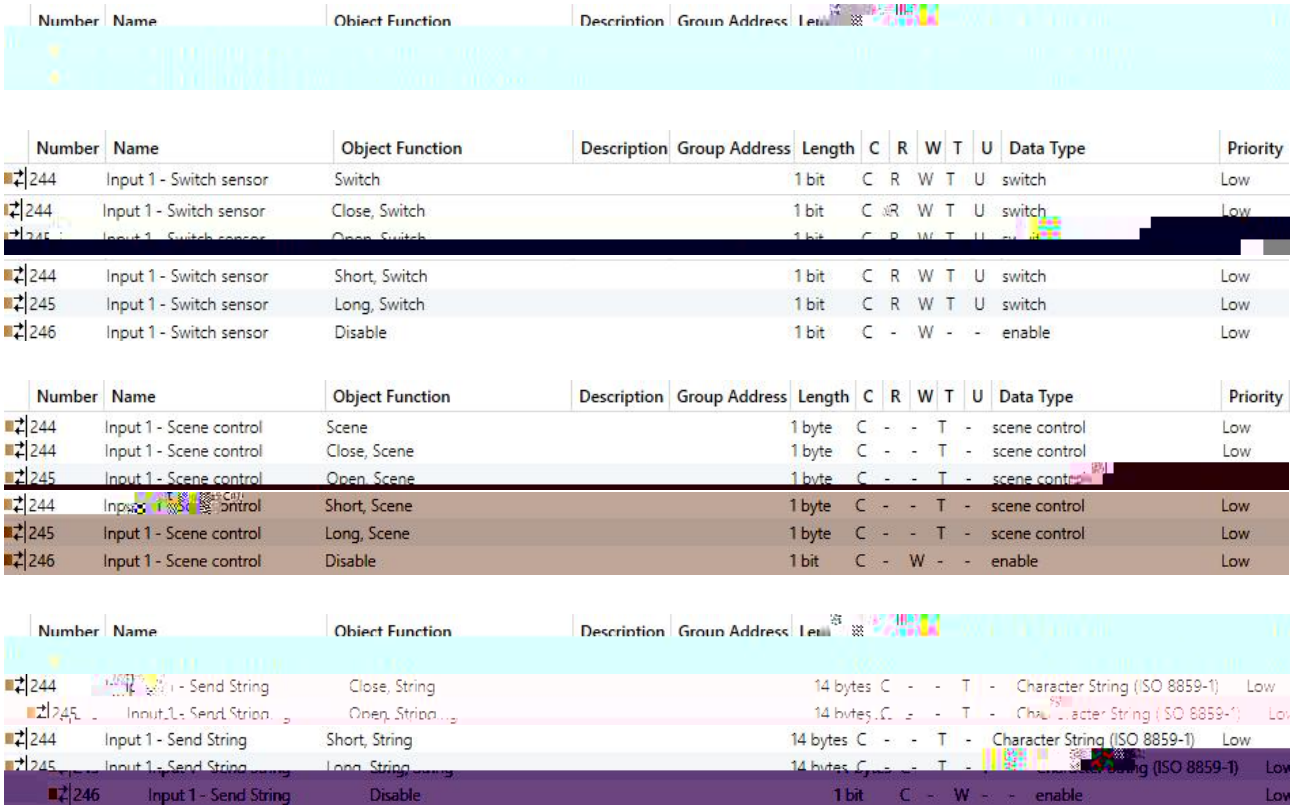
6.2.“Internal sensor measurement”

6.2 “Internal sensor measurement”

					DPT
5	**Temperature value**	**Internal sensor**	**2byte**	**C,R,T**	**9.001 temperature**
				k	-50~99.8℃
6	**Low temperature alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
					k
7	**High temperature alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
					k
8	**Humidity value**	**Internal sensor**	**2byte**	**C,R,T**	**9.007 humidity**
				k	0~100%
9	**Low humidity alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
					k
10	**High humidity alarm**	**Internal sensor**	**1bit**	**C,R,T**	**1.005 alarm**
					k

6.2 “Internal sensor measurement”

6.3.“Input”



Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
244	Input 1 - Switch sensor	Switch			1 bit	C	R	W	T	U	switch	Low
244	Input 1 - Switch sensor	Close, Switch			1 bit	C	R	W	T	U	switch	Low
244	Input 1 - Switch sensor	Short, Switch			1 bit	C	R	W	T	U	switch	Low
245	Input 1 - Switch sensor	Long, Switch			1 bit	C	R	W	T	U	switch	Low
246	Input 1 - Switch sensor	Disable			1 bit	C	-	W	-	-	enable	Low

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
244	Input 1 - Scene control	Scene			1 byte	C	-	-	T	-	scene control	Low
244	Input 1 - Scene control	Close, Scene			1 byte	C	-	-	T	-	scene control	Low
244	Input 1 - Scene control	Short, Scene			1 byte	C	-	-	T	-	scene control	Low
245	Input 1 - Scene control	Long, Scene			1 byte	C	-	-	T	-	scene control	Low
246	Input 1 - Send String	Disable			1 bit	C	-	W	-	-	enable	Low

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
244	Input 1 - Send String	Close, String			14 bytes	C	-	-	T	-	Character String (ISO 8859-1)	Low
244	Input 1 - Send String	Short, String			14 bytes	C	-	-	T	-	Character String (ISO 8859-1)	Low
246	Input 1 - Send String	Disable			1 bit	C	-	W	-	-	enable	Low

6.3 “Input”

					DPT
244	**Actual temperature, Sensor**	**Input 1 - {{Temperature probe}}**	**2byte**	**C,R,T**	**9.001 temperature**
k -50~99.8℃ “Description (max 30char.)” “Input x - ...” k k					
245	**Temperature error report, Sensor**	**Input 1 - {{Temperature probe}}**	**1bit**	**C,R,T**	**1.005 alarm**
k					
244	**Switch**	**Input 1 - {{Switch sensor}}**	**1bit**	**C,R,W,T,U**	**1.001 switch**
244	**Close/Short, Switch**	**Input 1 - {{Switch sensor}}**	**1bit**	**C,R,W,T,U**	**1.001 switch**
245	**Open/Long, Switch**	**Input 1 - {{Switch sensor}}**	**1bit**	**C,R,W,T,U**	**1.001 switch**

k / 1 2 k

1 “Switch” k 2 “Close/Open”

“Short/Long” k

0

1

244	**Scene**	**Input 1 - {{Scene control}}**	**1byte**	**C,T**	**18.001 scene control**
244	**Close/Short, Scene**	**Input 1 - {{Scene control}}**	**1byte**	**C,T**	**18.001 scene control**
245	**Open/Long, Scene**				

0 1 2 ... 63	1 2 3 ... 64
128 129 130 ... 191	1 2 3 ... 64

1~64 0~63 k 1

0 k

244	**String**	**Input 1 - {{Send String}}**	**14byte**	**C,T**	**16.001 character string (ISO 8859-1)**
244	**Close/Short, String**	**Input 1 - {{Send String}}**	**14byte**	**C,T**	**16.001 character string (ISO 8859-1)**
245	**Open/Long, String**	**Input 1 - {{Send String}}**	**14byte**	**C,T**	**16.001 character string (ISO 8859-1)**

k / 1 2

k

1 “String” k 2 “Close/Open”

“Short/Long” k

246	**Disable**	**Input 1 - {{...}}**	**1bit**	**C,W**	**1.003 enable**

/ ! k

6.3 “Input”

6.4.“Room temperature controller”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
358	Room temperature controller	Power on/off			1 bit	C	R	W	-	-	switch	Low
359	Room temperature controller	External temperature sensor			2 bytes	C	-	W	T	U	temperature (°C)	Low
360	Room temperature controller	Base setpoint adjustment			2 bytes	C	-	W	-	-	temperature (°C)	Low
361	Room temperature controller	Setpoint offset			1 bit	C	-	W	-	-	step	Low
362	Room temperature controller	Float offset value			2 bytes	C	-	W	-	-	temperature difference (K)	Low
363	Room temperature controller	Setpoint offset reset			1 bit	C	-	W	-	-		Low
364	Room temperature controller	Heating/Cooling mode			1 bit	C	-	W	-	-	cooling/heating	Low
365	Room temperature controller	Operation mode			1 byte	C	-	W	-	-	HVAC mode	Low
366	Room temperature controller	Comfort mode			1 bit	C	-	W	-	-	enable	Low
367	Room temperature controller	Economy mode			1 bit	C	-	W	-	-	enable	

6.4 “Room temperature controller”

DPT

358 Power on/off Room temperature controller 1bit C,W,R 1.001 switch

“Current setpoint adjustment” k k “Base setpoint adjustment” k k					
361	**Setpoint offset**	**Room temperature controller**	**1bit**	**C,W**	**1.007 step**
k k 1 ˚ 0 ˚					
362	**Float offset value**	**Room temperature controller**	**2byte**	**C,W**	**9.002 temperature difference**
k 2byte k					
363	**Setpoint offset reset**	**Room temperature controller**	**1bit**	**C,W**	**1.015 reset**
k 1 k					
364	**Heating/Cooling mode**	**Room temperature controller**	**1bit**	**C,W**	**1.100 cooling/heating**
k 1 ˚ 0 ˚					
365	**Operation mode**	**Room temperature controller**	**1byte**	**C,W**	**20.102 HVAC mode**
366	**Comfort mode**	**Room temperature controller**	**1bit**	**C,W**	**1.003 enable**

367	**Economy mode**	**Room temperature controller**	**1bit**	**C,W**	**1.003 enable**
368	**Frost/Heat protection mode**	**Room temperature controller**	**1bit**	**C,W**	**1.003 enable**
369	**Standby mode**	**Room temperature controller**	**1bit**	**C,W**	**1.003 enable**

k

1byte 24 1- 2- 3- 4- k

1bit

25 ˚

26 ˚

27 ˚

28 ˚

“1” k 1bit ! 0

k 1bit “1” 0 k

370	**Extended comfort mode**	**Room temperature controller**	**1bit**	**C,W**	**1.016 acknowledge**

k

1 ˚

0 ˚

1 1

k k

/ k

371	**Fan automatic operation**	**Room temperature controller**	**1bit**	**C,W**	**1.003 enable**

k 1 ˚ 0 ˚					
372	**Window contact**	**Room temperature controller**	**1bit**	**C,W,U**	**1.019 Window/door**
k 1 ˚ 0 ˚					
373	**Presence detector**	**Room temperature controller**	**1bit**	**C,W,U**	**1.018 occupancy**
k 1 ˚ 0 ˚					
374	**Actual temperature, status**	**Room temperature controller**	**2byte**	**C,R,T**	**9.001 temperature**
k k					
375	**Base temperature setpoint, status**	**Room temperature controller**	**2byte**	**C,R,T**	**9.001 temperature**
k = 19 +				k	
376	**Setpoint offset, status**	**Room temperature controller**	**2byte**	**C,R,T**	**9.002 temperature difference**
k k					

377	Current temperature setpoint, status	Room temperature setpoint	

385	**Cooling control value**	**Room temperature controller**	**1bit** **1byte**	**C,R,T**	**1.001 Switch** **5.001 percentage**
k k					
386	**Fan speed**	**Room temperature controller**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
387	**Fan speed low**	**Room temperature controller**	**1bit**	**C,T**	**1.001 switch**
388	**Fan speed medium**	**Room temperature controller**	**1bit**	**C,T**	**1.001 switch**
389	**Fan speed high**	**Room temperature controller**	**1bit**	**C,T**	**1.001 switch**
390	**Fan speed off**	**Room temperature controller**	**1bit**	**C,T**	**1.001 switch**

k

1bit

46

47

48

49

“1” k 1bit-off

“0” GVS

1bit-off “1”

k

1byte k 45

k

6.4 “Room temperature controller”

6.5. “Push button sensor”

k

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Switching	Press, Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Switching	Release, Switch			1 bit	C	-	-	T	-	switch	Low
152	Button 1 - Switching	Press, switch status			1 bit	C	-	W	T	U	switch	Low
153	Button 1 - Switching	Release, switch status			1 bit	C	-	W	T	U	switch	Low
148	Button 1 - Switching	Short, Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Switching	Long, Switch			1 bit	C	-	-	T	-	switch	Low
152	Button 1 - Switching	Short, switch status			1 bit	C	-	W	T	U	switch	Low
153	Button 1 - Switching	Long, switch status			1 bit	C	-	W	T	U	switch	Low
151	Button 1 - Switching	Flashing function			1 bit	C	-	W	-	U	enable	Low
154	Button 1 - Switching	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - Switching	Status indication			1 bit	C	-	W	T	U	switch	Low

Switch

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Dimming	Short, Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Dimming	Long, Dimming			4 bit	C	-	W	T	-	dimming control	Low
153	Button 1 - Dimming	Switch status			1 bit	C	-	W	T	U	switch	Low
154	Button 1 - Dimming	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - Dimming	Status indication			1 bit	C	-	W	T	U	switch	Low
151	Button 1 - Dimming	Fl										

Dimming

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - RGB	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - RGB	RGB dimming value			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low
149	Button 1 - RGB	Red dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
150	Button 1 - RGB	Green dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
151	Button 1 - RGB	Blue dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
153												

RGB switching/send value

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - RGBW	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - RGBW	RGBW dimming value			6 bytes	C	-	-	T		RGBW value 4x(0..100%)	Low
149	Button 1 - RGBW	Red dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
150	Button 1 - RGBW	Green dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
151	Button 1 - RGBW	Blue dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
152	Button 1 - RGBW	White dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
153	Button 1 - RGBW	Switch status			1 bit	C	-	W	T	U	switch	Low
154	Button 1 - RGBW	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - RGBW	Status indication			1 bit	C	-	W	T	U	switch	Low

RGBW switching/send value

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Prior
ity 148	Button 1 - Colour Temp.	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Colour Temp.	Brig										

Colour temperature switching/send value

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Value sender	Short, 1bit value			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Value sender	Long, 1bit value			1 bit	C	-	-	T	-	switch	Low
148	Button 1 - Value sender	Short, 2bit value			2 bit	C	-	-	T	-	switch control	Low
149	Button 1 - Value sender	Long, 2bit value			2 bit	C	-	-	T	-	switch control	Low
148	Button 1 - Value sender	Short, 4bit value			4 bit	C	-	-	T	-	dimming control	Low
[illegible]	Button 1 - Value sender	Long, 4bit value			4 bit	C	-	-	T	-	dimming control	Low
154	Button 1 - Value sender	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - Value sender	Status indication			1 byte	C	-	W	T	U	percentage (0..100%)	Low

Value sender

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Scene	Scene			1 byte	C	-	-	T	-	scene control	Low
148	Button 1 - Scene	Short, Scene			1 byte	C	-	-	T	-	scene control	Low
149	Button 1 - Scene	Long, Scene			1 byte	C	-	-	T	-	scene control	Low
154	Button 1 - Scene	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - Scene	Status indication			1 byte	C	-	W	T	U	percentage (0..100%)	Low

Scene control

Number	Name	Obje[illegible]
151	Button 1 - Blind	Flashing function			1 bit	C	-	W	-	U	enable	Low

Blind

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
[illegible]												

Shift register

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	[illegible]											
[illegible]												percentage (0..100%)
Low	154	Button 1 - Multiple operation	Disable		1 bit			W				
[illegible]												
148	Button 1 - Multiple operation	Object1-String			14 bytes	C	-	-	T	-	Character String (ISO 8859-1)	Low

Multiple operation

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Delay mode	Short, Delay mode			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Delay mode	Long, Delay mode			4 bit	C	-	-	T	-	dimming control	Low
154	Button 1 - Delay mode	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - Delay mode	Status indication			1 byte	C	-	W	T	U	percentage (0..100%)	Low

Delay mode

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - RTC mode	Comfort mode			1 bit	C	-	-	T	-	enable	Low
149	Button 1 - RTC mode	Economy mode			1 bit	C	-	-	T	-	enable	Low
150	Button 1 - RTC mode	Frost/Heat protection mode			1 bit	C	-	-	T	-	enable	Low
151	Button 1 - RTC mode	Standby mode			1 bit	C	-	-	T	-	enable	Low
148	Button 1 - RTC mode	Operation mode			1 byte	C	-	-	T	-	HVAC mode	Low
154	Button 1 - RTC mode	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - RTC mode	Status indication			1 byte	C	-	W	T	U	percentage (0..100%)	Low

RTC operation mode

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - String	String			14 bytes	C	-	-	T	-	Character String (ISO 8859-1)	Low
154	Button 1 - String	Disable			1 bit	C	-	W	-	-	enable	Low

String(14bytes)

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Display	Status display(2byte temperature)			2 bytes	C	-	W	T	U	temperature (°C)	Low
148	Button 1 - Display	Status display(2byte humidity)			2 bytes	C	-	W	T	U	humidity (%)	Low
148	Button 1 - Display	Status display(1byte percentage)			1 byte	C	-	W	T	U	percentage (0..100%)	Low
148	Button 1 - Display	Status display(1byte unsigned)			1 byte	C	-	W	T	U	counter pulses (0..255)	Low
148	Button 1 - Display	Status display(2byte unsigned)			2 bytes	C	-	W	T	U	pulses	Low
148	Button 1 - Display	Status display(2byte lux)			2 bytes	C	-	W	T	U	lux (Lux)	Low
148	Button 1 - Display	Status display(2byte float)			2 bytes	C	-	W	T	U	2-byte float	Low
148	Button 1 - Display	Status display(4byte unsigned)			4 bytes	C	-	W	T	U	counter pulses (unsigned)	Low
148	Button 1 - Display	Status display(4byte float)			4 bytes	C	-	W	T	U	4-byte float value	Low
148	Button 1 - Display	Status display(14byte)			14 bytes	C	-	W	-	-	Character String (ISO 8859-1)	Low

Status display

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Rocker 1 - Setpoint	Current setpoint adjustment			2 bytes	C	-	-	T	-	temperature (°C)	Low
149	Rocker 1 - Setpoint	Current temperature setpoint			2 bytes	C	-	W	T	U	temperature (°C)	Low
148	Rocker 1 - Setpoint	Setpoint offset			1 bit	C	-	-	T	-	step	Low
148	Rocker 1 - Setpoint	Offset setpoint adjustment			2 bytes	C	-	-	T	-	temperature difference (K)	Low
149	Rocker 1 - Setpoint	Current Setpoint offset			2 bytes	C	-	W	T	U	temperature difference (K)	Low
154	Rocker 1 - Setpoint	Disable			1 bit	C	-	W	-	-	enable	Low
155	Rocker 1 - Setpoint	Status indication			2 bytes	C	-	W	T	U	temperature (°C)	Low

Setpoint adjustment

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - RGB	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - RGB	RGB dimming value			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low
151	Button 1 - RGB	RGB brightness, status			3 bytes	C	-	W	T	U	RGB value 3x(0..255)	Low
153	Button 1 - RGB	Switch status			1 bit	C	-	W	T	U	switch	Low
154	Button 1 - RGB	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - RGB	Status indication			1 byte	C	-	W	T	U	percentage (0..100%)	Low

RGB dimming

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - RGBW	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - RGBW	RGBW dimming value			6 bytes	C	-	-	T	-	RGBW value 4x	
151	Button 1 - RGBW	RGBW brightness, status			6 bytes	C	-	W	T	U	RGBW value 4x(0..100%)	Low
153	Button 1 - RGBW	Switch status			1 bit	C	-	W	T	U	switch	Low
154	Button 1 - RGBW	Disable			1 bit	C	-	W	-	-	enable	Low
155	Button 1 - RGBW	Status indication			1 bit							
149	Button 1 - RGBW	RGB dimming value			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low
150	Button 1 - RGBW	White dimming value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
151	Button 1 - RGBW	RGB brightness, status			3 bytes	C	-	W	T	U	RGB value 3x(0..255)	Low
152	Button 1 - RGBW	White brightness, status			1 byte	C	-	W	T	U	percentage (0..100%)	Low

RGBW dimming

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
148	Button 1 - Colour Temp.	Switch			1 bit	C	-	-	T	-	switch	Low
149	Button 1 - Colour Temp.	Brightness value			1 byte	C	-	-	T	-	percentage (0..100%)	Low
150	Button 1 - Colour Temp.	Absolute colour temperature			2 bytes	C	-	-	T	-	absolute colour temperature (K)	Low
151	Button 1 - Colour Temp.	Brightness value, status			1 byte	C	-	W	T	U	percentage (0..100%)	Low
152	Button 1 - Colour Temp.	Absolute colour temperature, sta...			2 bytes	C	-	W	T	U	absolute colour temperature (K)	Low
153	Button 1 - Colour Temp.	Switch										
150	Button 1 - Colour Temp.	Relative percentage colour temp...			1 byte	C	-	-	T			
152	Button 1 - Colour Temp.	Relative percentage colour temp...			1 byte	C	-	W	T	U	percentage (0..100%)	Low

Colour temperature dimming

6.5 “Push button sensor”

					DPT
148	**Switch**	**Button 1 - {{Switching}}**	**1bit**	**C,T**	**1.001 switch**
148	**Press/Short, Switch**	**Button 1 - {{Switching}}**	**1bit**	**C,T**	**1.001 switch**

149	**Release/Long, Switch**	**Button 1 - {{Switching}}**	**1bit**	**C,T**	**1.001 switch**
153	**Switch status**	**Button 1 - {{Switching}}**	**1bit**	**C,W,T,U**	**1.001 switch**
152	**Press/Short, switch status**	**Button 1 - {{Switching}}**	**1bit**	**C,W,T,U**	**1.001 switch**
153	**Release/Long, switch status**	**Button 1 - {{Switching}}**	**1bit**	**C,W,T,U**	**1.001 switch**

k / 1 2 k

1 “Switch” “Switch status” k 2

“Press/Release...” “Short/Long...” k

0 ˚

1 ˚

Obj.148/Obj.149 k

Obj.152/Obj.153 k General

k

“Description (max 30char.)” “Button 1

- ...” k k

148	**Short, Switch**	**Button 1 - {{Dimming}}**	**1bit**	**C,T**	**1.001 switch**
149	**Long, Dimming**	**Button 1 - {{Dimming}}**	**4bit**	**C,W,T**	**3.007 dimming**
153	**Switch status**	**Button 1 - {{Dimming}}**	**1bit**	**C,W,T,U**	**1.001 switch**

k

Obj.148 ! Obj.153 k

Obj.149 k

“Long, Dimming” 1~7 1 7 0 9~15 9 15 8 k					
148	**Up/Down, Blind**	**Button 1 - {{Blind}}**	**1bit**	**C,W,T**	**1.008 up/down**
149	**Stop/Adjust, Blind**	**Button 1 - {{Blind}}**	**1bit**	**C,W,T**	**1.007 step**
k Obj.148 / k 0 / 1 / Obj.149 k 1					
148	**Short, 1bit value** **Short, 2bit value** **Short, 4bit value** **Short, 1byte value** **Short, 2byte value** **Short, 2byte float value** **Short, 4byte value** **Short, 4byte float value**	**Button 1 - {{Value send}}**	**1bit** **2bit** **4bit** **1byte** **2byte** **2byte** **4byte** **4byte**	**C,T**	**1.001 switch** **2.001 switch control** **3.007 dimming** **5.010 counter pulses** **7.001 pulses** **9.x float value** **12.001 counter pulses** **14.x float value**
149	**Long, 1bit value** **Long, 2bit value** **Long, 4bit value** **Long, 1byte value** **Long, 2byte value** **Long, 2byte float value** **Long, 4byte value** **Long, 4byte float value**	**Button 1 - {{Value send}}**	**1bit** **2bit** **4bit** **1byte** **2byte** **2byte** **4byte** **4byte**	**C,T**	**1.001 switch** **2.001 switch control** **3.007 dimming** **5.010 counter pulses** **7.001 pulses** **9.x float value** **12.001 counter pulses** **14.x float value**
k k					

Obj.148 k

Obj.149 k

148	**Scene**	**Button 1 - {{Scene}}**	**1byte**	**C,T**	**18.001 scene control**
148	**Short, Scene**	**Button 1 - {{Scene}}**	**1byte**	**C,T**	**18.001 scene control**
149	**Long, Scene**	**Button 1 - {{Scene}}**	**1byte**	**C,T**	**18.001 scene control**

k 1 2 k

1 “Scene” k 2 “Short/Long...” k

8bit k

8bit ( ) FXNNNNNN

F ‘0’ ‘1’

X 0

NNNNNN 0…63 k

0 1 2 ... 63	1 2 3 ... 64
128 129 130 ... 191	1 2 3 ... 64

1~64 0~63 k 1

0 k

149	**Register value**	**Button 1 - {{Shifter}}**	**1byte**	**C,W,T,U**	**5.010 counter pulses** **17.001 scene number** **20.102 HVAC mode** **5.001 percentage(0..100%)**

k

k

148	**Switch**	**Button 1 - {{RGB}}**	**1bit**	**C,T**	**1.001 switch**
149	**RGB dimming value**	**Button 1 - {{RGB}}**	**3byte**	**C,T**	**232.600 RGB value 3x(0..255)**
151	**RGB brightness, status**	**Button 1 - {{RGB}}**	**3byte**	**C,W,T,U**	**232.600 RGB value 3x(0..255)**
153	**Switch status**	**Button 1 - {{RGB}}**	**1bit**	**C,W,T,U**	**1.001 switch**

RGB / ! RGBW k

Obj.148 ! Obj.153 k

RGB 1x3byte RGBW 3byte+1byte Obj.149 ! Obj.151

Obj.149 RGB k

Obj.151 □ !

151	**RGBW brightness, status**	**Button 1 - {{RGBW}}**	**6byte**	**C,W,T,U**	**251.600 DPT_Colour_RGBW**
153	**Switch status**	**Button 1 - {{RGBW}}**	**1bit**	**C,W,T,U**	**1.001 switch**

RGBW / ! k

Obj.148 ! Obj.153 k

RGBW 1x6byte Obj.149 ! Obj.151

Obj.149 RGBW k

Obj.151 RGBW k

6 RGBW U8 U8 U8 U8 R8 R4 B4

6_{MSB}	5	4	3	2	1_{LSB}
R	G	B	W		r r r r mR mG mB mW
UUUUUUUU	UUUUUUUU	UUUUUUUU	UUUUUUUU	0000000 0	0000BBBB

R: G: B: W:

mR: , 0= , 1=

mG: , 0= , 1=

mB: , 0= , 1=

mW: , 0= , 1= k

149	**Red dimming value**	**Button 1 - {{RGBW}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
150	**Green dimming value**	**Button 1 - {{RGBW}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
151	**Blue dimming value**	**Button 1 - {{RGBW}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
152	**White dimming value**	**Button 1 - {{RGBW}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**

RGB RGBW / k

Obj.149~Obj.151 RGB 3x1byte RGBW 4x1byte Obj.152

RGBW 4x1byte k

0…100%

Obj.149 R ( )

Obj.150 G( )

Obj.151 B( )

Obj.152 W( )

150	**White dimming value**	**Button 1 - {{RGBW}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
152	**White brightness, status**	**Button 1 - {{RGBW}}**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**

RGBW 3byte+1byte k

0…100%

Obj.150 W( )

Obj.152 W( )

148	**Switch**	**Button 1 -{{Colour Temp.}}**	**1bit**	**C,T**	**1.001 switch**
149	**Brightness value**	**Button 1 -{{Colour Temp.}}**	**1byte**	**C,T**	**5.001 percentage(0..100%)**
150	**Colour temperature value** **Relative percentage colour temperature** **Absolute colour temperature**	**Button 1 -{{Colour Temp.}}**	**2byte**	**C,T**	**5.001 percentage(0..100%)** **7.600 absolute colour temperature**
151	**Brightness value, status**	**Button 1 -{{Colour Temp.}}**	**1byte**	**C,W,T,U**	**5.001 percentage(0..100%)**
152	**Relative percentage colour temperature, status** **Absolute colour temperature, status**	**Button 1 -{{Colour Temp.}}**	**1byte** **2byte**	**C,W,T,U**	**5.001 percentage(0..100%)** **7.600 absolute colour temperature**
153	**Switch status**	**Button 1 -{{Colour Temp.}}**	**1bit**	**C,W,T,U**	**1.001 switch**

/ ! k

Obj.148 ! Obj.153 k

Obj.149 k 0…100%

Obj.150 / “Colour temperature value”

“Relative percentage colour temperature” “Absolute colour temperature” k

k 1byte 0…100% 2byte k

Obj.151 k

Obj.152 “Relative percentage colour temperature, status”

“Absolute colour temperature, status” k k

148	**Object1-On/Off** **Object1-Up/Down** **Object1-SceneControl** **Object1-Percentage** **Object1-Unsigned value** **Object1-String**	**Button 1 - {{Multiple operation}}**	**1bit** **1bit** **1byte** **1byte** **1byte** **14byte**	**C,W,T** **C,W,T** **C,T** **C,T** **C,T** **C,T**	**1.001 switch** **1.008 up/down** **18.001 scene control** **5.001 percentage(0..100%)** **5.010 counter pulses** **16.001 character string (ISO 8859-1)**

4 4

k k

14byte **object1** k

148	**Short, Delay mode**	**Button 1 - {{Delay mode}}**	**1bit** **4bit** **1byte**	**C,T**	**1.001 switch** **3.007 dimming** **5.010 counter pulses**
149	**Long, Delay mode**	**Button 1 - {{Delay mode}}**	**1bit** **4bit** **1byte**	**C,T**	**1.001 switch** **3.007 dimming** **5.010 counter pulses**

k k

Obj.148 k

Obj.149 k

148	**Operation mode**	**Button 1 - {{RTC mode}}**	**1byte**	**C,T**	**20.102 HVAC mode**
148	**Comfort mode**	**Button 1 - {{RTC mode}}**	**1bit**	**C,T**	**1.003 enable**
149	**Economy mode**	**Button 1 - {{RTC mode}}**	**1bit**	**C,T**	**1.003 enable**
150	**Frost/Heat protection mode**	**Button 1 - {{RTC mode}}**	**1bit**	**C,T**	**1.003 enable**
151	**Standby mode**	**Button 1 - {{RTC mode}}**	**1bit**	**C,T**	**1.003 enable**

RTC k k

1byte 148 1- 2- 3- 4- k

1bit

148 ˚

149 ˚

150 ˚

151 ˚

“1” k 1bit !

0 k 1bit 1 k

148	**String**	**Button 1 - {{String}}**	**14byte**	**C,T**	**16.001 character string (ISO 8859-1)**

k k

148	**Status display(...)**	**Button 1 - {{Display}}**	**1byte** **2byte** **4byte**	**C,W,T,U**	**5.001 percentage(0..100%)** **5.010 counter pulses** **7.001 pulses** **9.001 temperature** **9.007 humidity** **9.004 lux(lux)** **9.x float value** **12.001 counter pulses** **14.x float value**

148	**Status display(...)**	**Button 1 - {{Display}}**	**14byte**	**C,W**	**16.001 character string (ISO 8859-1)**
k k k					
148	**Current setpoint adjustment**	**Rocker 1 - {{Setpoint}}**	**2byte**	**C,T**	**9.001 temperature**
149	**Current temperature setpoint**	**Rocker 1 - {{Setpoint}}**	**2byte**	**C,W,T,U**	**9.001 temperature**
“Setpoint adjustment(absolute)” k Obj.148 k Obj.149 k General k					
148	**Setpoint offset**	**Rocker 1 - {{Setpoint}}**	**1bit**	**C,T**	**1.007 step**
“Offset Increase/Decrease(relative)” k / k 0 ˆ 1 ˆ					
148	**Offset setpoint adjustment**	**Rocker 1 - {{Setpoint}}**	**2byte**	**C,T**	**9.001 temperature**
149	**Current Setpoint offset**	**Rocker 1 - {{Setpoint}}**	**2byte**	**C,W,T,U**	**9.001 temperature**
“Offset setpoint adjustment(relative)” k Obj.148 k Obj.149 k General k					

151	**Flashing function**	**Button 1 - {{...}}**	**1bit**	**C,W,U**	**1.003 enable**
154	**Disable**	**Button 1 - {{...}}**	**1bit**	**C,W**	**1.003 enable**
155	**Status indication**	**Button 1 - {{...}}**	**1bit 1byte**	**C,W,T,U**	**1.001 switch 0.**

6.6.“Multifunction thermostat”

6.6.1.“FCU”

Master !

! ! ! !

/ ! ! ! k

Single ! !

k k

Slave ! ! !

/ ! ! ! k

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
250	FCU	Locking function			1 bit	C	-	W	-	-	enable	Low
251	FCU	Power on/off, status			1 bit	C	-	W	T	U	switch	Low
252	FCU	External temperature sensor			2 bytes	C	-	W	T	U		

6.6.1 “FCU”

					DPT
250	**Locking function**	**FCU**	**1bit**	**C,W**	**1.003 enable**
/ k 0 ˚ 1 ˚					
251	**Power on/off**	**FCU**	**1bit**	**C,W**	**1.001 switch**
251	**Power on/off, status**	**FCU**	**1bit**	**C,W,T,U**	**1.001 switch**
“Master” “Single” **C,W** “Power on/off” k “Slave” **C,W,T,U** “Power on/off, status” k 1 ˚ 0 ˚					
252	**External temperature sensor**	**FCU**	**2byte**	**C,W,T,U**	**9.001 temperature**
k					
253	**Current temperature setpoint** **Base temperature setpoint**	**FCU**	**2byte**	**C,W,U**	**9.001 temperature**
253	**Current temperature setpoint, status**	**FCU**	**2byte**	**C,W,T,U**	**9.001 temperature**
“Master” **C,W,U** “Current temperature setpoint” k k					

“Base temperature setpoint”

k

k

“Slave” **C,W,T,U** “Current temperature setpoint, status”

k

“Single” k

254	**Heating/Cooling mode**	**FCU**	**1bit**	**C,W,U**	**1.100 cooling/heating**
254	**Heating/Cooling mode, status**	**FCU**	**1bit**	**C,W,T,U**	**1.100 cooling/heating**

“Master” “Single” **C,W,U** “Heating/Cooling mode”

/ k

“Slave” **C,W,T,U** “Heating/Cooling mode, status”

/ k

1

0

255	**Operation mode**	**FCU**	**1byte**	**C,W,U**	**20.102 HVAC mode**
255	**Operation mode, status**	**FCU**	**1byte**	**C,W,T,U**	**20.102 HVAC mode**
256	**Comfort mode**	**FCU**	**1bit**	**C,W,U**	**1.003 enable**
257	**Standby mode**	**FCU**	**1bit**	**C,W,U**	**1.003 enable**
258	**Economy mode**	**FCU**	**1bit**	**C,W,U**	**1.003 enable**
259	**Frost/Heat protection mode**	**FCU**	**1bit**	**C,W,U**	**1.003 enable**

0 ˚ 1 k / k “Slave” k			1		k
263	**Window contact**	**FCU**	**1bit**	**C,W,T,U**	**1.019 Window/door**
k 1 ˚ 0 ˚ “Slave” k					
264	**Presence detector**	**FCU**	**1bit**	**C,W,T,U**	**1.018 occupancy**
k 1 ˚ 0 ˚ “Slave” k					
266	**Scene**	**FCU**	**1byte**	**C,W**	**18.001 scene control**
k / k “Slave” k					
267	**Power on/off, status**	**FCU**	**1bit**	**C,R,T**	**1.001 switch**
267	**Power on/off**	**FCU**	**1bit**	**C,T**	**1.001 switch**

“Master” “Single” **C,R,T** “Power on/off

“Master” “Single” “Heating and Cooling” “Only via object”

k k

1

0

“Slave” k

272	**Operation mode, status**	**FCU**	**1byte**	**C,R,T**	**20.102 HVAC mode**
272	**Operation mode**	**FCU**	**1byte**	**C,T**	**20.102 HVAC mode**
273	**Comfort mode, status**	**FCU**	**1bit**	**C,R,T**	**1.003 enable**
274	**Standby mode, status**	**FCU**	**1bit**	**C,R,T**	**1.003 enable**
275	**Economy mode, status**	**FCU**	**1bit**	**C,R,T**	**1.003 enable**
276	**Frost/Heat protection mode, status**	**FCU**	**1bit**	**C,R,T**	**1.003 enable**

1byte 272

“Master” “Single” **C,R,T** “Operation mode, status”

k

“Slave” **C,T** “Operation mode” k

1- 2- 3- 4- k

1bit

“1” k

“Single” “Slave” 4 1bit k

277	**Heating/cooling control value** **Heating control value**	**FCU**	**1bit** **1byte**	**C,R,T**	**1.001 Switch** **5.001 percentage**

2

6.6.2.“VRF”

! ! !

! ! k

6.6.2 “VRF”

DPT

2

285	**Control mode, status**	**VRF**	**1byte**	**C,W,T,U**	**20.105 HVAC control mode**
k 0- 1- 3- 9- 14- k					
286	**Fan speed, status**	**VRF**	**1byte**	**C,W,T,U**	**5.001 percentage** **5.100 fan stage**
k k					
287	**Vanes swing (1-swing,0-stop), status**	**VRF**	**1bit**	**C,W,T,U**	**1.010 start/stop**
k k 1 0					
289	**Scene**	**VRF**	**1byte**	**C,W**	**18.001 scene control**
k / k					
290	**Power on/off**	**VRF**	**1bit**	**C,T**	**1.001 switch**
KNX k					
291	**Current setpoint adjustment**	**VRF**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
k					
292	**Fan speed**	**VRF**	**1byte**	**C,T**	**5.001 percentage** **5.100 fan stage**
k k					
293	**Vanes swing (1-swing,0-stop)**	**VRF**	**1bit**	**C,T**	**1.010 start/stop**
k k					

	1 ˚ 0 ˚				
294	**Control mode**	**VRF**	**1byte**	**C,T**	**20.105 HVAC control mode**
		k			0-
1- 3- 9- 14-		k			

6.6.2 “VRF”

6.6.3.“Floor heating”

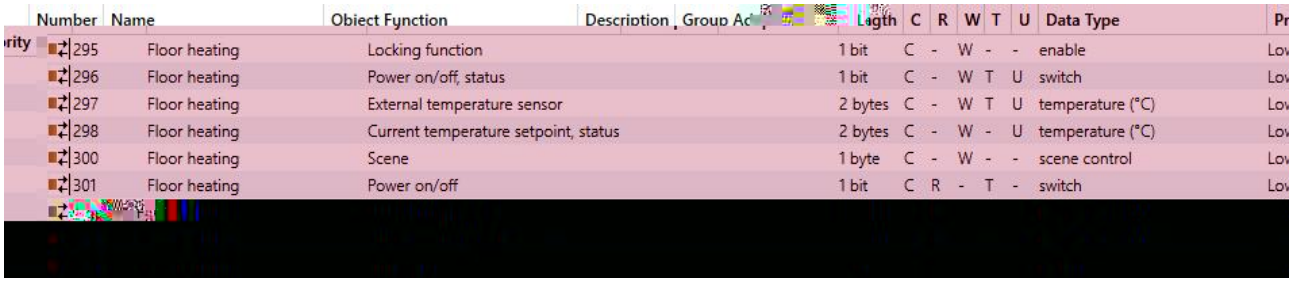
Master !

! k

Single

k

Slave ! k



Number	Name	Object Function	Description	Group Ad	Length	C	R	W	T	U	Data Type	Pr
295	Floor heating	Locking function			1 bit	C	-	W	-	-	enable	Lo
296	Floor heating	Power on/off, status			1 bit	C	-	W	T	U	switch	Lo
297	Floor heating	External temperature sensor			2 bytes	C	-	W	T	U	temperature (°C)	Lo
298	Floor heating	Current temperature setpoint, status			2 bytes	C	-	W	-	U	temperature (°C)	Lo
300	Floor heating	Scene			1 byte	C	-	W	-	-	scene control	Lo
301	Floor heating	Power on/off			1 bit	C	R	-	T	-	switch	Lo

6.6.3 “Floor heating”

					DPT
295	**Locking function**	**Floor heating**	**1bit**	**C,W**	**1.003 enable**
	/ k				

0 ˚					
1 ˚					
296/ 301	**Power on/off**	**Floor heating**	**1bit**	**C,W/ C,T**	**1.001 switch**
296/ 301	**Power on/off, status**	**Floor heating**	**1bit**	**C,W,T,U/ CRT**	**1.001 switch**
“Master” “Single” “Power on/off” C,W “Power on/off, status” C,R,T “Slave” “Power on/off” C,T KNX “Power on/off, status” C,W,T,U 1 ˚ 0 ˚					
297	**External temperature sensor**	**Floor heating**	**2byte**	**C,W,T,U**	**9.001 temperature**
k					
298	**Current temperature setpoint**	**Floor heating**	**2byte**	**C,W,U**	**9.001 temperature**
298	**Current temperature setpoint, status**	**Floor heating**	**2byte**	**C,W,T,U**	**9.001 temperature**
“Master” **C,W,U** “Current temperature setpoint” k “Slave” **C,W,T,U** “Current temperature setpoint, status” k					

“Single” k					
300	**Scene**	**Floor heating**	**1byte**	**C,W**	**18.001 scene control**
k / k “Slave” k					
302	**Actual temperature**	**Floor heating**	**2byte**	**C,R,T**	**9.001 temperature**
k k					
303	**Current setpoint adjustment, status**	**Floor heating**	**2byte**	**C,R,T**	**9.001 temperature**
303	**Current setpoint adjustment**	**Floor heating**	**2byte**	**C,T**	**9.001 temperature**
“Master” **C,R,T** “Current setpoint adjustment, status” k “Slave” **C,T** “Current setpoint adjustment” k “Single” k					
304	**Heating on/off** **Heating control value**	**Floor heating**	**1bit** **1byte**	**C,T**	**1.001 switch** **5.001 percentage**
k k 1bit 1 ˚ 0 ˚ 1byte 0..100% “Slave” k					

6.6.4.“Ventilation”

k

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
305	Ventilation	Locking function			1 bit	C	-	W	-	-	enable	Low
306	Ventilation	Power on/off, st										
316	Ve											
317	Ventilation	VOC value			2 bytes	C	-	W	T	U	pulses	Low
318	Ventilation	Power on/off			1 bit	C	-	-	T	-	switch	Low
319	Ventilation	Fan speed			1 byte	C	-	-	T	-	percentage (0..100%)	Low
320	Ventilation	Fan automatic operation			1 bit	C	-	-	T	-	enable	Low
32	Ventilation	Heat recovery on/off			1 bit	C	-	-	T	-	switch	Low
322	Ventilation	Filter timer counter			2 bytes	C	R	-	T	-	time (h)	Low
323	Ventilation	Filter alarm			1 bit	C	R	-	T	-	alarm	Low
324	Ventilation	Filter timer reset			1 bit	C	-	-	T	-	reset	Low

6.6.4 “Ventilation”

					DPT
305	**Locking function**	**Ventilation**	**1bit**	**C,W**	**1.003 enable**
/ k 0 ˚ 1 ˚					
306	**Power on/off, status**	**Ventilation**	**1bit**	**C,W**	**1.001 switch**
k 1 ˚ 0 ˚					
307	**Fan speed, status**	**Ventilation**	**1byte**	**C,W**	**5.001 percentage** **5.100 fan stage**
k k					
308	**Fan automatic operation, status**	**Ventilation**	**1bit**	**C,W**	**1.003 enable**
k					

1 ˚ 0 ˚					
309	**Heat recovery on/off, status**	**Ventilation**	**1bit**	**C,W**	**1.001 switch**
k 1 ˚ 0 ˚					
310	**En./Dis. Heat recovery**	**Ventilation**	**1bit**	**C,W**	**1.003 enable**
/ k					
311	**Filter timer counter change**	**Ventilation**	**2byte**	**C,W**	**7.007 time(h)**
k					
312	**Filter timer reset, status**	**Ventilation**	**1bit**	**C,W**	**1.015 reset**
k 1 ˚ k					
314	**Scene**	**Ventilation**	**1byte**	**C,W**	**18.001 scene control**
k / k					
315	**CO2 value**	**Ventilation**	**2byte**	**C,W,T,U**	**7.001 pulse** **9.008 parts/million(ppm)**
316	**PM 2.5 value**	**Ventilation**	**2byte**	**C,W,T,U**	**7.001 pulse** **9.030 concentration(ug/m3)**
317	**VOC value**	**Ventilation**	**2byte**	**C,W,T,U**	**7.001 pulse** **9.030 concentration(ug/m3)**
PM2.5/VOC/CO2 k ug/m^3 ppm k 0~999ug/m3 0~4000ppm PM2.5 PM2.5					

6.7.“Audio control”

! ! ! ! ! !

k

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
325	Audio	Locking function			1 bit	C	-	W	-	-	enable	Low
326	Audio	Power on/off status			1 bit	C	-	W	-	-	switch	Low
327	Audio	Play status			1 bit	C	-	W	T	U	enable	Low
328	Audio	Pause status			1 bit	C	-	W	T	U	enable	Low
329	Audio	Volume status			1 byte	C	-	W	T	U	percentage (0..100%)	Low
330	Audio	Mute status			1 bit	C	-	W	T	U	enable	Low
331	Audio	Play mode status			1 byte	C	-	W	T	U	counter pulses (0..255)	Low
332	Audio	Track name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
333	Audio	Album name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
334	Audio	Artist name			14 bytes	C	-	W	T	U	Character String (ISO 8859-1)	Low
335	Audio	Power on/off			1 bit	C						
341	Audio	Relative volume adjustment			4 bit	C	-	-	T	-	dimming control	Low
343	Audio	Mute			1 bit	C	-	-	T	-	enable	Low
344	Audio	Play mode			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

6.7 “Audio control”

					DPT
325	**Locking function**	**Audio**	**1bit**	**C,W**	**1.003 enable**
/ k 0 1					
326	**Power on/off, status**	**Audio**	**1bit**	**C,W**	**1.001 switch**
k k					
327	**Play=1/Pause=0, status**	**Audio**	**1bit**	**C,W,T,U**	**1.010 start/stop**
/ 1 k / k					

327	**Play, status**	**Audio**	**1bit**	**C,W,T,U**	**1.003 enable**
	/ 2		k		
	k 1 0 k				
328	**Pause, status**	**Audio**	**1bit**	**C,W,T,U**	**1.003 enable**
	/ 2		k		
	k 1 0 k				
329	**Volume, status**	**Audio**	**1byte**	**C,W,T,U**	**5.001 percentage (0..100%)** **5.004 percentage (0..255%)**
					k
	0..100 / 0..255 k				
330	**Mute, status**	**Audio**	**1bit**	**C,W,T,U**	**1.003 enable**
	k				

		k	/	KNX	k
		1 ˚			
		0 ˚			
336	**Play=1/Pause=0**	**Audio**	**1bit**	**C,T**	**1.010 start/stop**
	/ 1	k	/		k
		1 ˚			
		0 ˚			
336	**Play**	**Audio**	**1bit**	**C,T**	**1.003 enable**
	/ 2	k			k
	1 0 k				
337	**Pause**	**Audio**	**1bit**	**C,T**	**1.003 enable**
	/ 2	k			k
	1 0 k				
338	**Next track=1/Previous track=0**	**Audio**	**1bit**	**C,T**	**1.007 step**
	/ 1		k		
	/ k				
		1 ˚			
		0 ˚			
338	**Next track**	**Audio**	**1bit**	**C,T**	**1.003 enable**

/ 2 k k 1 0 k					
339	**Previous track**	**Audio**	**1bit**	**C,T**	**1.003 enable**
/ 2 k k 1 0 k					
340	**Volume+=1/Volume-=0**	**Audio**	**1bit**	**C,T**	**1.007 step**
k 1 0					
341	**Relative volume adjustment**	**Audio**	**4bit**	**C,T**	**3.007 dimming**
k k					
342	**Absolute volume adjustment**	**Audio**	**1byte**	**C,T**	**5.001 percentage (0..100%)** **5.004 percentage (0..255%)**
k k 0..100 / 0..255					
343	**Mute**	**Audio**	**1bit**	**C,T**	**1.003 enable**
k k 1 0					
344	**Play mode**	**Audio**	**1byte**	**C,T**	**5.010 counter pluses(0..255)**
k					

6.7 “Audio control”

6.8.“Logic”

6.8.1.“AND/OR/XOR”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input a			1 bit	C	-	W	T	U	boolean	Low
12	1st Logic	Input b			1 bit	C	-	W	T	U	boolean	Low
13	1st Logic	Input c			1 bit	C	-	W	T	U	boolean	Low
14	1st Logic	Input d			1 bit	C	-	W	T	U	boolean	Low
15	1st Logic	Input e			1 bit	C	-	W	T	U	boolean	Low
16	1st Logic	Input f			1 bit	C	-	W	T	U	boolean	Low
17	1st Logic	Input g			1 bit	C	-	W	T	U	boolean	Low
18	1st Logic	Input h			1 bit	C	-	W	T	U	boolean	Low
19	1st Logic	Logic result			1 bit	C	-	-	T			

6.8.1 “AND/OR/XOR”

					DPT
11/.../18	**Input x**	**{{1st Logic}}**	**1bit**	**C,W,T,U**	**1.002 boolean**
Input x k “Description for logic function” “1st Logic” k k					
19	**Logic result**	**{{1st Logic}}**	**1bit**	**C,T**	**1.002 boolean**
k					

6.8.1 “AND/OR/XOR”

6.8.2.“Gate forwarding”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Gate value select			1 byte	C	-	W	-	-	scene number	Low
12	1st Logic	Input A			1 bit	C	-	W	-	-	switch	Low
13	1st Logic	Input B			1 bit	C	-	W	-	-	switch	Low
14	1st Logic	Input C			1 bit	C	-	W	-	-	switch	Low
15	1st Logic	Input D			1 bit	C	-	W	-	-	switch	Low
16	1st Logic	Output A			1 bit	C	-	-	T	-	switch	Low
17	1st Logic	Output B			1 bit	C	-	-	T	-	switch	Low
18	1st Logic	Output C			1 bit	C	-	-	T	-	switch	Low
19	1st Logic	Output D			1 bit	C	-	-	T	-	switch	Low

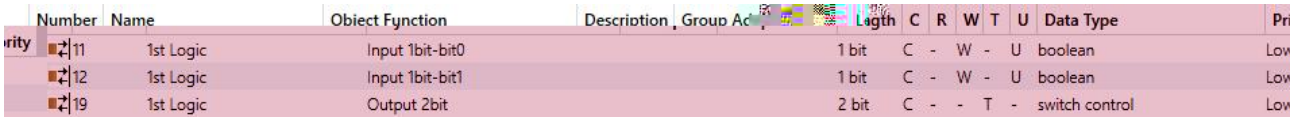
6.8.2 “Gate forwarding”

11	Gate value s	ogic}}	1byte	17.001 scene number
12/.../15	Input x	ogic}}		1.001 switch 3.007 dimming control 5.010 counter pulses(0..255)
/19	Output x	ogic}}	1bit C,T	1 switch ming control counter puls

					DPT
11	**Threshold value input**	**{{1st Logic}}**	**4bit** **1byte** **2byte** **4byte**	**C,W, U**	**3.007 dimming** **5.010 counter pulses** **7.001 pulses** **12.001 counter pulses**
k					
19	**Logic result**	**{{1st Logic}}**	**1bit**	**C,T**	**1.002 boolean**
k					k

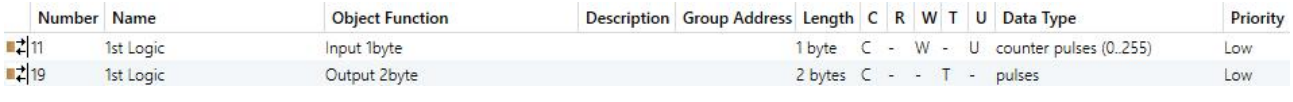
6.8.3 “Threshold comparator”

6.8.4.“Format convert”

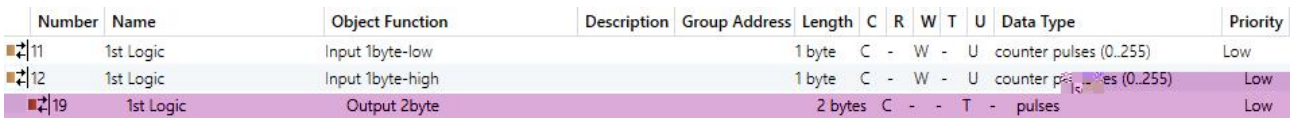


“2x1bit --> 1x2bit” 2 1bit 2bit Input bit1=1, bit0=0--> Output 2bit=2

“8x1bit --> 1x1byte” : 8 1bit 1byte Input bit2=1, bit1=1, bit0=1, 0--> Output 1byte=7

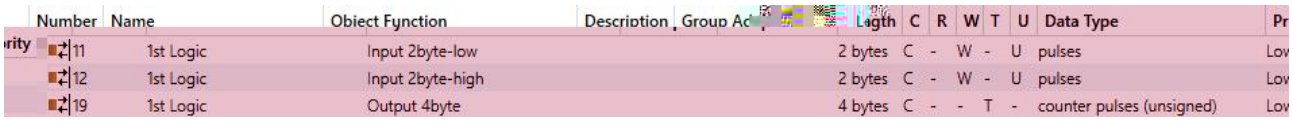


“1x1byte --> 1x2byte” 1byte 2byte Input 1byte=125--> Output 2byte=125,



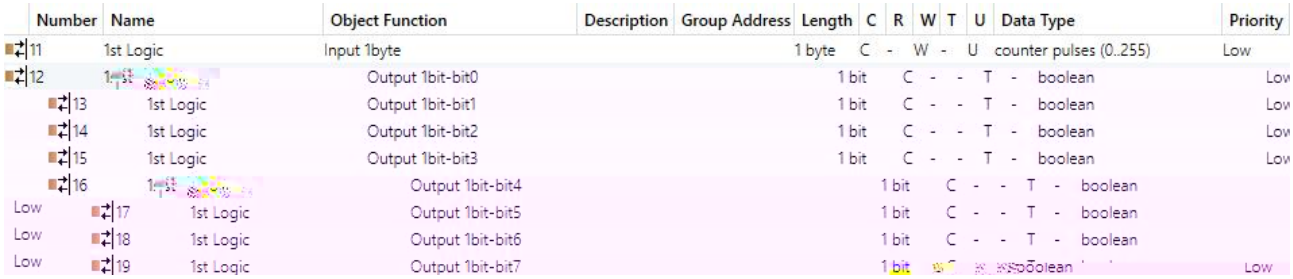
“2x1byte --> 1x2byte” 2 1byte 2byte Input 1byte-low = 255 ($FF), Input

1byte-high = 100 ($64) --> Output 2byte = 25855 ($64 FF)



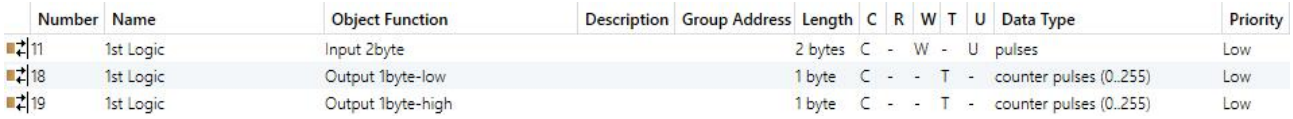
Number	Name	Object Function	Description	Group Ad	Length	C	R	W	T	U	Data Type	Pr
11	1st Logic	Input 2byte-low			2 bytes	C	-	W	-	U	pulses	Low
12	1st Logic	Input 2byte-high			2 bytes	C	-	W	-	U	pulses	Low
19	1st Logic	Output 4byte			4 bytes	C	-	-	T	-	counter pulses (unsigned)	Low

“2x2byte --> 1x4byte” 2 2byte 4byte Input 2byte-low = 65530 ($FF FA), Input 2byte-high = 32768 ($80 00)--> Output 2byte = 2147549178 ($80 00 FF FA)



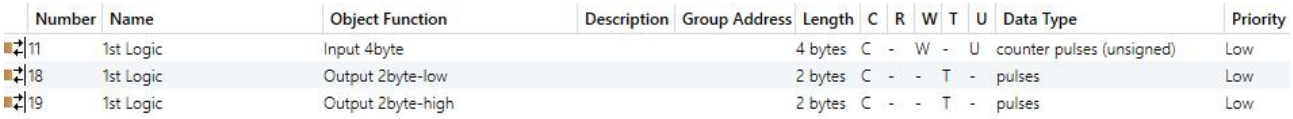
Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
12	1st Logic	Output 1bit-bit0			1 bit	C	-	-	T	-	boolean	Low
13	1st Logic	Output 1bit-bit1			1 bit	C	-	-	T	-	boolean	Low
14	1st Logic	Output 1bit-bit2			1 bit	C	-	-	T	-	boolean	Low
15	1st Logic	Output 1bit-bit3			1 bit	C	-	-	T	-	boolean	Low
16	1st Logic	Output 1bit-bit4			1 bit	C	-	-	T	-	boolean	Low
17	1st Logic	Output 1bit-bit5			1 bit	C	-	-	T	-	boolean	Low
18	1st Logic	Output 1bit-bit6			1 bit	C	-	-	T	-	boolean	Low
19	1st Logic	Output 1bit-bit7			1 bit	C	-	-	T	-	boolean	Low

“1x1byte --> 8x1bit” 1 1byte 8 1bit Input 1byte=200 --> Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1



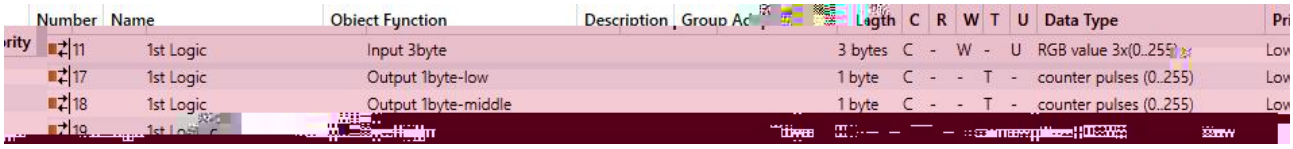
Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 2byte			2 bytes	C	-	W	-	U	pulses	Low
18	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
19	1st Logic	Output 1byte-high			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

“1x2byte --> 2x1byte” 1 2byte 2 1byte Input 2byte = 55500 ($D8 CC) --> Output 1byte-low = 204 ($CC), Output 1byte-high =216 ($D8)



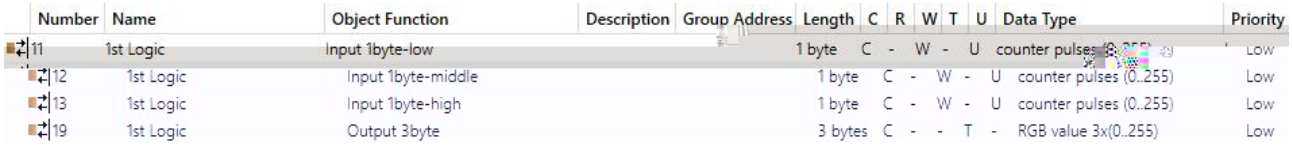
Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 4byte			4 bytes	C	-	W	-	U	counter pulses (unsigned)	Low
18	1st Logic	Output 2byte-low			2 bytes	C	-	-	T	-	pulses	Low
19	1st Logic	Output 2byte-high			2 bytes	C	-	-	T	-	pulses	Low

“1x4byte --> 2x2byte” 1 4byte 2 2byte 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 Ad	Length	C	R	W	T	U	Data Type	Pr
11	1st Logic	Input 3byte			3 bytes	C	-	W	-	U	RGB value 3x(0..255)	Low
17	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
18	1st Logic	Output 1byte-middle			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
19	1st Logic											

“1x3byte --> 3x1byte” 1 3byte 3 1byte 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	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
12	1st Logic	Input 1byte-middle			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
13	1st Logic	Input 1byte-high			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
19	1st Logic	Output 3byte			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low

“3x1byte --> 1x3byte” 3 1byte 1 3byte Input 1byte-low = 150 ($96), Input 1byte-middle = 100 ($64), Input 1byte-high = 50 ($32)--> Output 3byte = $32 64 96

6.8.4 “Format convert”

					DPT
11	**Input ...**	**{{1st Logic}}**	**1bit** **1byte** **2byte** **3byte** **4byte**	**C,W,U**	**1.001 switch** **5.010 counter pulses(0..255)** **7.001 pulses** **232.600 RGB value 3x(0..255)** **12.001 counter pulses**
k					
19	**Output ...**	**{{1st Logic}}**	**1bit** **2bit** **1byte** **2byte** **3byte** **4byte**	**C,T**	**1.001 switch** **2.001 switch control** **5.010 counter pulses(0..255)** **7.001 pulses** **232.600 RGB value 3x(0..255)** **12.001 counter pulses**
k					

6.8.4 “Format convert”

6.8.5.“Gate function”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 bit	C	-	W	-	-	switch	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low

Input/Output - 1bit[On/Off]

11	1st Logic	Input			1 byte	C	-	W	-	-	perc	

Input/Output - 1byte[0..100%]

11	1st Logic	Input			1 byte	C	-	W	-	-	counter pulses (0..255)	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

Input/Output - 1byte[0..255]

11	1st Logic	Input			2 bytes	C	-	W	-	-	temperature (°C)	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	temperature (°C)	Low

Input/Output - 2byte[Float]

11	1st Logic	Input			2 bytes	C	-	W	-	-	pulses	Low
12	1st Logic	Gate input			1 bit	C	-	W	-	-	boolean	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	pulses	Low

Input/Output - 2byte[0..65535]

6.8.5 “Gate function”

					DPT
11	**Input**	**{{1st Logic}}**	**1bit** **1byte** **2byte**	**C,W**	**1.001 switch** **5.001 percentage** **5.010 counter pulses** **9.001 temperature** **7.001 pulses**
k					
12	**Gate input**	**{{1st Logic}}**	**1bit**	**C,W**	**1.002 boolean**
k k					
19	**Output**	**{{1st Logic}}**	**bit** **1byte** **2byte**	**C,T**	**1.001 switch** **5.001 percentage** **5.010 counter pulses** **9.001 temperature** **7.001 pulses**
k					“Gate input” k

6.8.5 “Gate function”

6.8.6.“Delay function”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Input			1 bit	C	-	W	-	-	switch	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low
Input/Output - 1bit[On/Off												
11	1st Logic	Input			1 byte	C	-	W	-	-	percentage (0..100%)	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	percentage (0..100%)	Low
Input/Output - 1byte[0..100%]												
11	1st Logic	Input			1 byte	C	-	W	-	-	counter pulses (0..255)	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
Input/Output - 1byte[0..255]												
11	1st Logic	Input			2 bytes	C	-	W	-	-	temperature (°C)	Low
19	1st Logic	Output			2 bytes	C	-	-	T	-	temperature (°C)	Low
Input/Output - 2byte[Float]												
11	1st Logic	Input			2 bytes	C	-	W	-	-		

Input/Output - 2byte[0..65535]

6.8.6 “Delay function”

					DPT
11	**Input**	**{{1st Logic}}**	**1bit** **1byte** **2byte**	**C,W**	**1.001 switch** **5.001 percentage** **5.010 counter pulses** **9.001 temperature** **7.001 pulses**
k					
19	**Output**	**{{1st Logic}}**	**1bit** **1byte** **2byte**	**C,T**	**1.001 switch** **5.001 percentage** **5.010 counter pulses** **9.001 temperature** **7.001 pulses**
k					

6.8.6 “Delay function”

6.8.7.“Staircase lighting”

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
11	1st Logic	Trigger value			1 bit	C	-	W	-	-	trigger	Low
12	1st Logic	Light-on duration time			2 bytes	C	-	W	-	-	time (s)	Low
19	1st Logic	Output			1 bit	C	-	-	T	-	switch	Low
19	1st Logic	Output			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

6.8.7 “Staircase lighting”

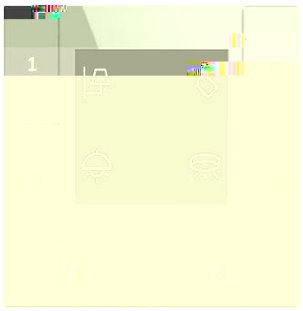
					DPT
11	**Trigger value**	**{{1st Logic}}**	**1bit**	**C,W**	**1.017 trigger**
k					
12	**Light-on duration time**	**{{1st Logic}}**	**2byte**	**C,W**	**7.005 time(s)**
k					
19	**Output**	**{{1st Logic}}**	**1bit** **1byte**	**C,T**	**1.001 switch** **5.010 counter pulses**

1	2 k	k

6.8.7 “Staircase lighting”

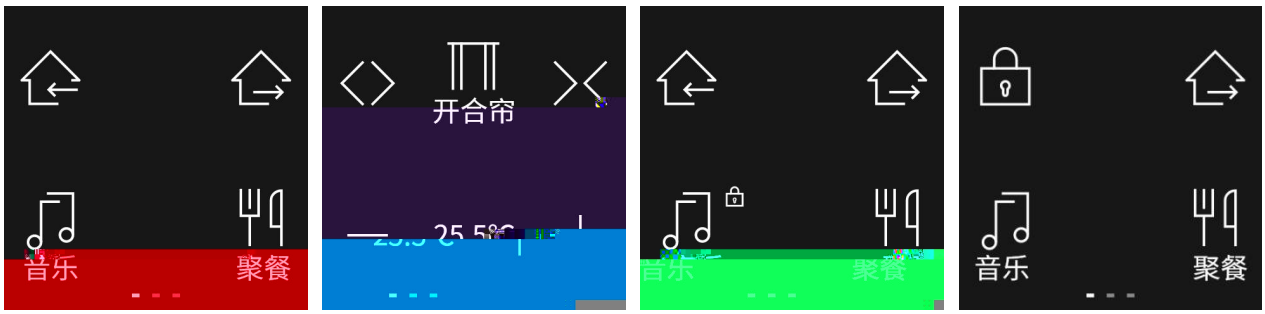
6

k ETS k



k

7.1.



7.1(1) 7.1(2) 7.1(3) 7.1(4)

k

1 4 ! 2 8 3 12 k 1 2

2/3 2 k

2 k ! + k

k 7.1(1) k

! ! 3 k ! ! + !

+ 2 /

2 0.5s 0.5s

k k 7.1(2) k

!

1s 1s +

k

/

k

k 7.1(3)

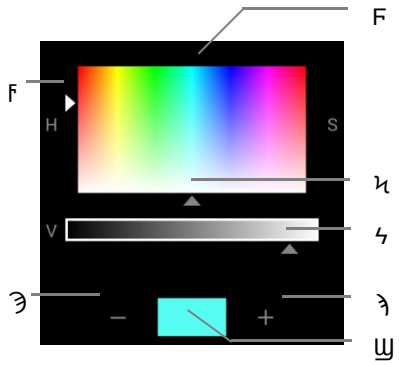
7.1(4) k

RGB ! RGBW

k 3 k

7.1.1.RGB

1		2	
3		4	
5		6	



7.1.1

F k

F S k

H k

V k

k

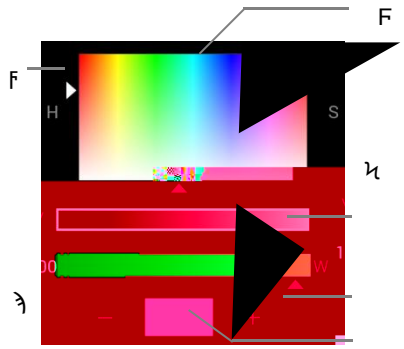
k

k

k

7.1.2.RGBW

1		2	
3		4	
5		6	



7.1.2

F k

F S k

H k

V k

W k

k

k

KNX/EIB

Э

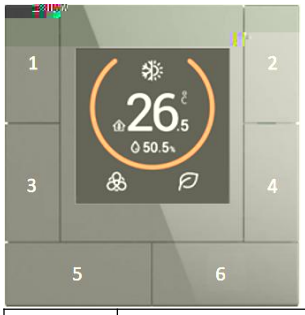
Ђ

Ш Ээ Ђ / k

k

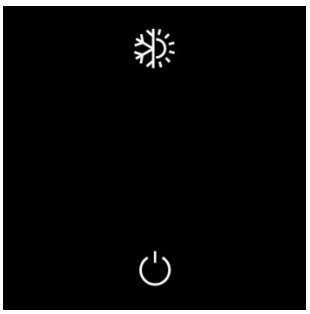
7.2.

7.2.1.FCU



1		2	
3		4	/ /
5		6	

k



7.2.1(1) 7.2.1(2) 7.2.1(3)

ETS ! ! ! k

7.2.1(3) k

F k ETS k

F 7.2.1(1) k

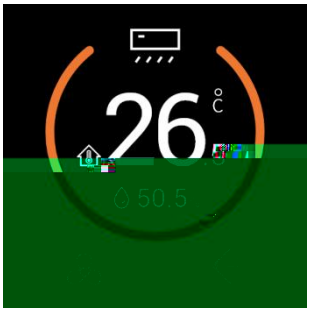
k

k k

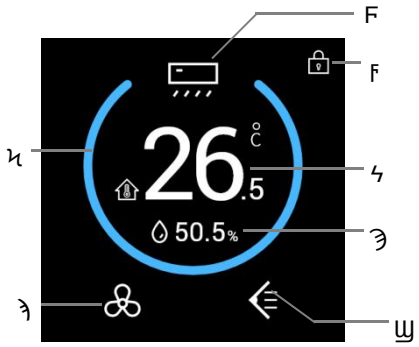
ϟ k 7.2.1(1)~7.2.1(2)

k

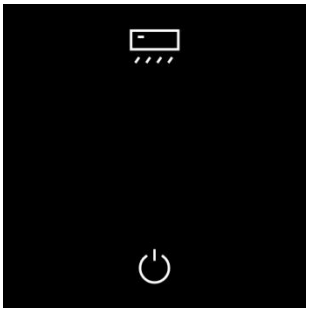
ϟ ETS k □



7.2.2(5)



7.2.2(6)



7.2.2(7)

ETS ! ! ! k

7.2.2(7) k

F k ETS k

F 7.2.2(6) k

k

k k

k 7.2.2(1)~7.2.2(6)

k

ETS k k

k

0.5K 1K ETS

k k

16 φ 32

60 φ 89 k

k

k ETS k

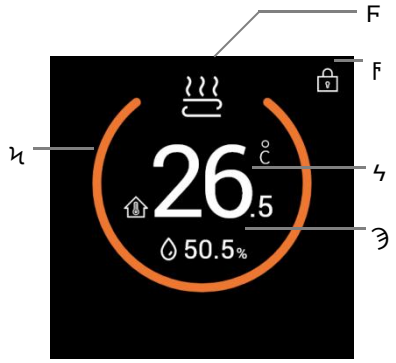
k

ETS

k

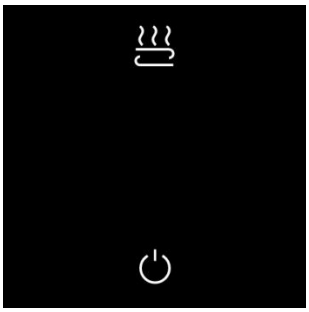
7.2.3.

1		2	
3		4	
5		6	



7.2.3(1)

7.2.3(2)



7.2.3(3)

ETS ! k 7.2.3(3)

k

F k ETS k

F 7.2.3(1) k

k

k k

ʜ k 7.2.3(1) ! Fig.7.2.3(2)

k

PI

k

ϟ ETS k k

k

0.5K 1K ETS

k k

16 φ 32

60 φ 89 k

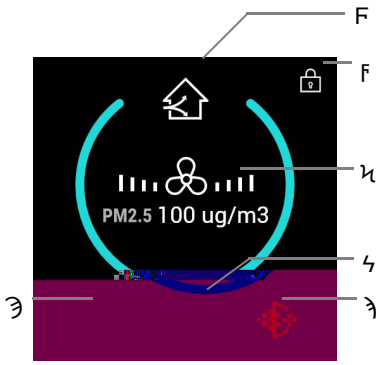
k

Ɜ k ETS k

7.2.4.

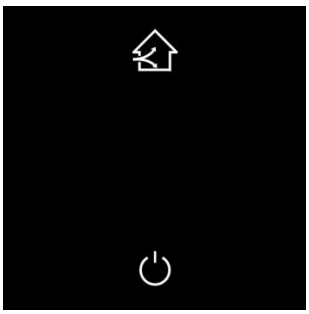
1		2	
3		4	3s
5		6	

k



7.2.4(1)

7.2.4(2)



7.2.4(3)

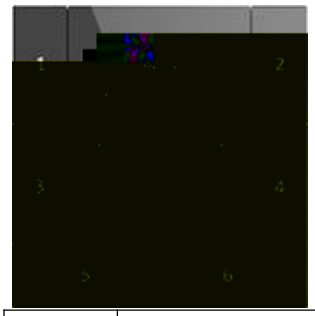
ETS ! ! k 7.2.4(3)

k

F k ETS k

F 7.2.4(1) k

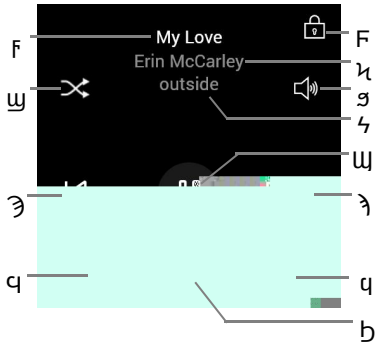
7.3.

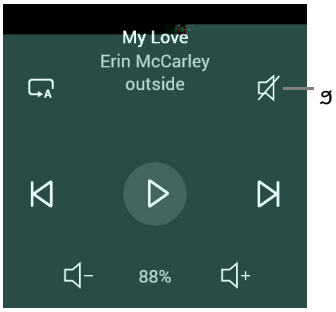


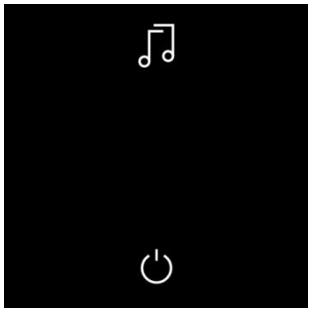
1	/	2	/
3		4	
5	/ k	6	/ k

k

k







7.3(1) 7.3(2) 7.3(3)

ETS ! ! ! ! ! !

k 7.3(3) k

F 7.3(1) k

k k

F

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k

ϟ / k 7.3(2) k

k

7.4.

7.4(1)

7.4(2)

ETS ! k

k

7.4(1) 7.4(2) 2 k

/

k

7.5.

+ 2+ 5 5 7.5(1) k

1		2	
3	/	4	
5		6	

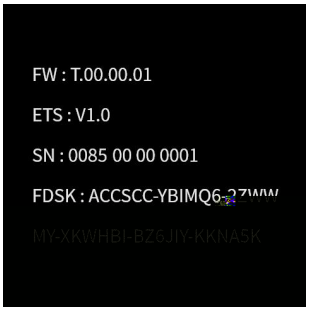
k

7.5(1)

7.5(2)

7.5(3)

7.5(4)



7.5(5)

F 7.5(2)

1~6 / k 5 6 k

F 7.5(3)

1~4 / k

ϟ 7.5(4) k

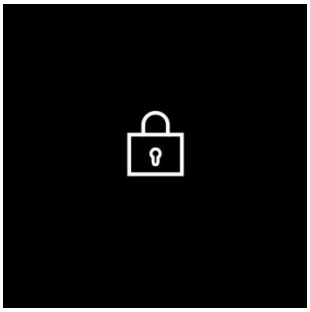
ϟ 7.5(5) ! ! SN !

FDSK

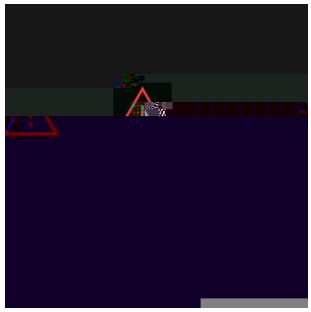
FDSK 5.1 k

7.6.

7.6(1)



7.6(2)



7.6(3)

1. ! 7.6(1)

SN k

2. 7.6(2) k

3. 7.6(2)

k

4. 7.6(3)

k k

8.1.

ETS	
Light on	
Light off	
Ceiling light	
Downlight	
Wall light	
Spotlight	
Chandelier	
Floor light	
RGB lamp	
General scene 1	
General scene 2	

ETS	
General scene 3	
Curtain	
Blind(open/close)	
Blind(up/down)	
Blind(with slat)	
Blind open	
Blind close	
Arrow up	
Arrow down	
Plus	
Minus	

ETS	
Brighter	
Darker	
Go home 1	
Leave home 1	
Go home 2	
Leave home 2	
Welcome	
Meeting(guest)	
Dinner	
Party	
Sleeping	
Reading	

ETS	
Media	
Cleaning	
Comfort	
Standby	
Economy	
Protection	
Wake up	
TV	
Socket(CHN)	
Socket(EU)	
Fan	
Door lock	

ETS	
Power supply	
Window 1	
Window 2	
Alarm	
Heating	
Cooling	
Temperature	
Colour temperature	
VOC	
CO2	
Humidity	
Brightness	

ETS	
Windspeed	
Rain	
Current	
Voltage	
Power meter	
Presence	
On	
Off	
Open	
Close	
Power on/off	
Unlock	

ETS	
Lock	
No charge	
Charge	
No mute	
Mute	
Day	
Night	

ETS	
Text	
Message	
Setting	
Room temperature	
PM2.5	
PM10	

8.2.

ETS	
Air conditioner	
Floor heating	
Water heating	
Ventilation system	

ETS	
Heating	
Cooling	
Heating/Cooling system	
Temperature	