



ATOUGH



## **KNX-K4**

Multitouch Glass Keypad with Optional Display - 13 Keys

Manual Version: 1.1



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# 1. Introduction

## 1.1 KNX-K4

The KNX-K4 is a glass touch keypad with integrated temperature sensor, designed and developed according to the KNX standard.

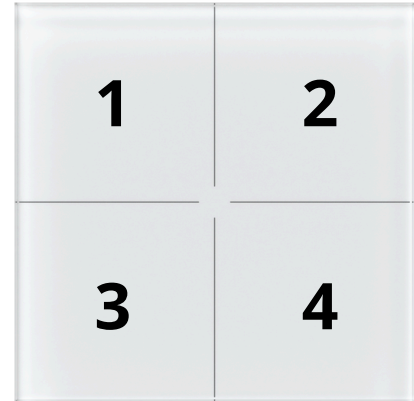
This wall device is capable of controlling lights, shutters, blinds, and many other KNX functions. It offers a wide range of functional flexibility up to 13 different user interactions with visual and sound feedback. Additionally, the device is available with an optional **OLED display**, providing visual feedback on the status of objects and options to display temperature and time.

The most prominent features of the KNX-K4 are:

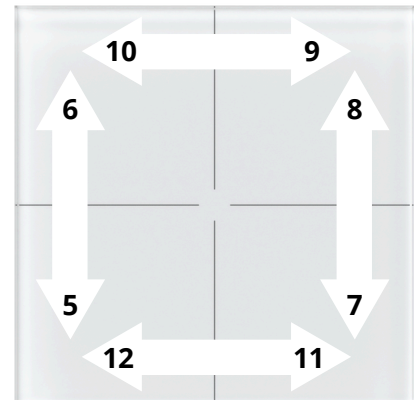
- Configured with ETS5/ETS6;
- 4 independent touch buttons;
- 1 All4Touch button;
- 4 vertical sliders + 4 horizontal sliders;
- Integrated temperature sensor;
- 4 independent LEDs:
  - Indication of pressed of buttons;
  - Following objects status.
- Buzzer for audible indication of user actions;
- Night mode:
  - Inhibit following objects status;
  - Buzzer disabled;
  - 1 middle presence LED (not available in the version with OLED display);
  - turn off the OLED display (available in the version with OLED display);
- Heartbeat or periodical “keep alive” notification.
- OLED display:
  - Internal temperature;
  - External temperature;
  - Time;
  - Personalized messages.

## 1.2 Button Definition

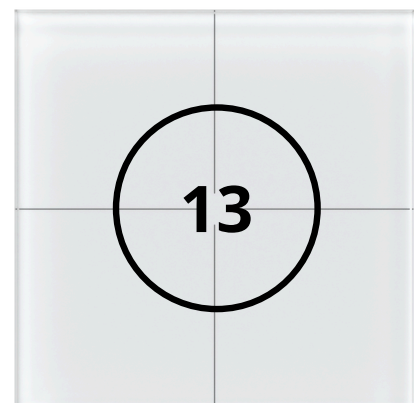
Button	Function
1	Touch button
2	Touch button
3	Touch button
4	Touch button



Button	Function
5	Left vertical slider down
6	Left vertical slider up
7	Right vertical slider down
8	Right vertical slider up
9	Top horizontal slider right
10	Top horizontal slider left
11	Bottom horizontal slider right
12	Bottom horizontal slider left



Button	Function
13	All4Touch





### 1.3 Dimensions

The KNX-K4 is composed by:

- Multitouch glass keypad;
- W-KNX BCU (Standard European mounting box);
- Connecting JST 6 wire cable.

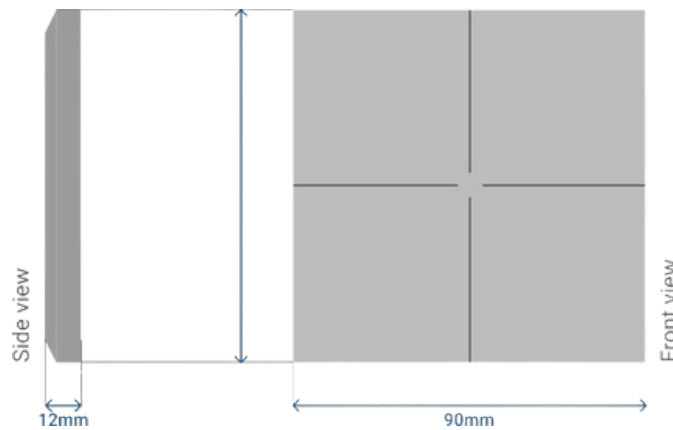


Image 1 - Multitouch glass keypad dimensions

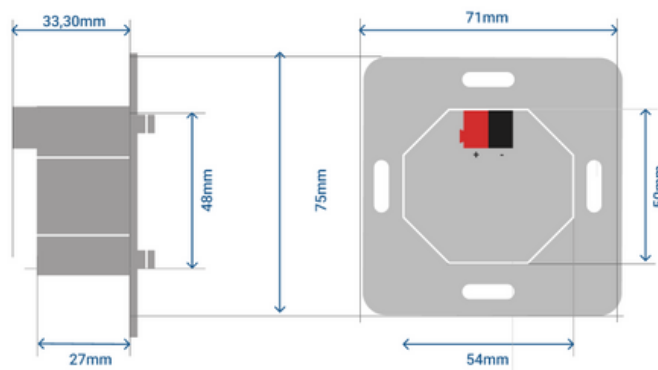


Image 2 - W-KNX BCU dimensions

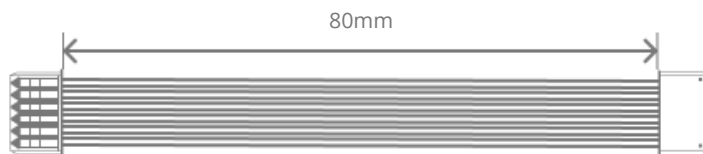


Image 3 - Connecting JST 6 wire cable dimensions



## 1.4 Commissioning

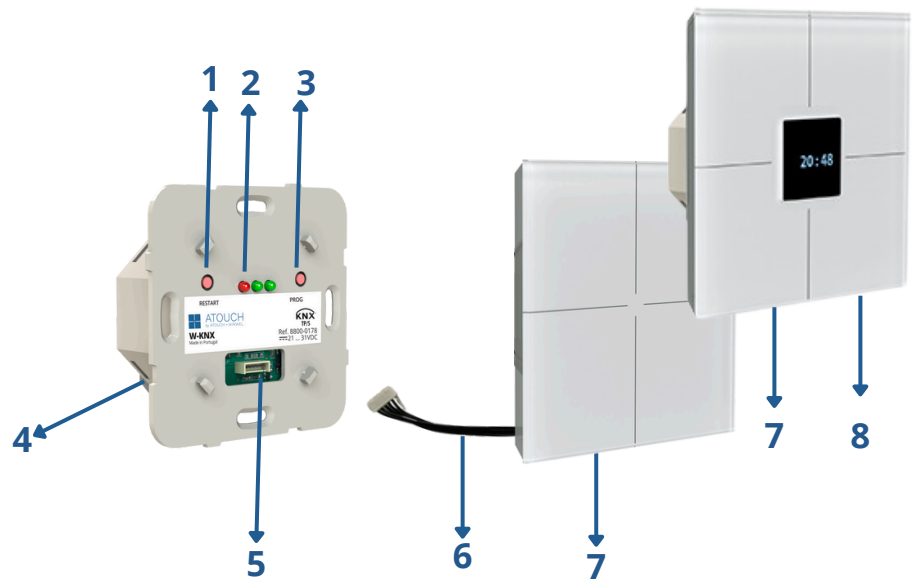


Image 4 - Connection diagram

- 1.RESTART button
- 2.PROG LED
- 3.PROG button
- 4.KNX connector
- 5.JST connector
- 6.Connection cable
- 7.Keypad PROG button
- 8.OLED keypad RESTART button

- To begin commissioning use:
  - a) W-KNX Prog button (3) ;
  - b) Keypad PROG button (7)\*.

\*To use the Keypad PROG button (7) connect the keypad to the W-KNX using the cable (6);

- Connect to the KNX BUS using the KNX connector (4) on the back of the W-KNX. If the PROG LED (2) is blinking, it means there is no application.
- Press (1), (7) or use the serial number with ETS, success will be indicated by the red PROG LED (2) turning on.
- Set and program the individual address in the ETS, success will be confirmed when the red PROG LED (2) turns off.
- Configure and program the settings in the ETS application.

## 2. Configuration

### 2.1 General

After adding the device from catalog to your ETS project see the general settings using the "General" tab.

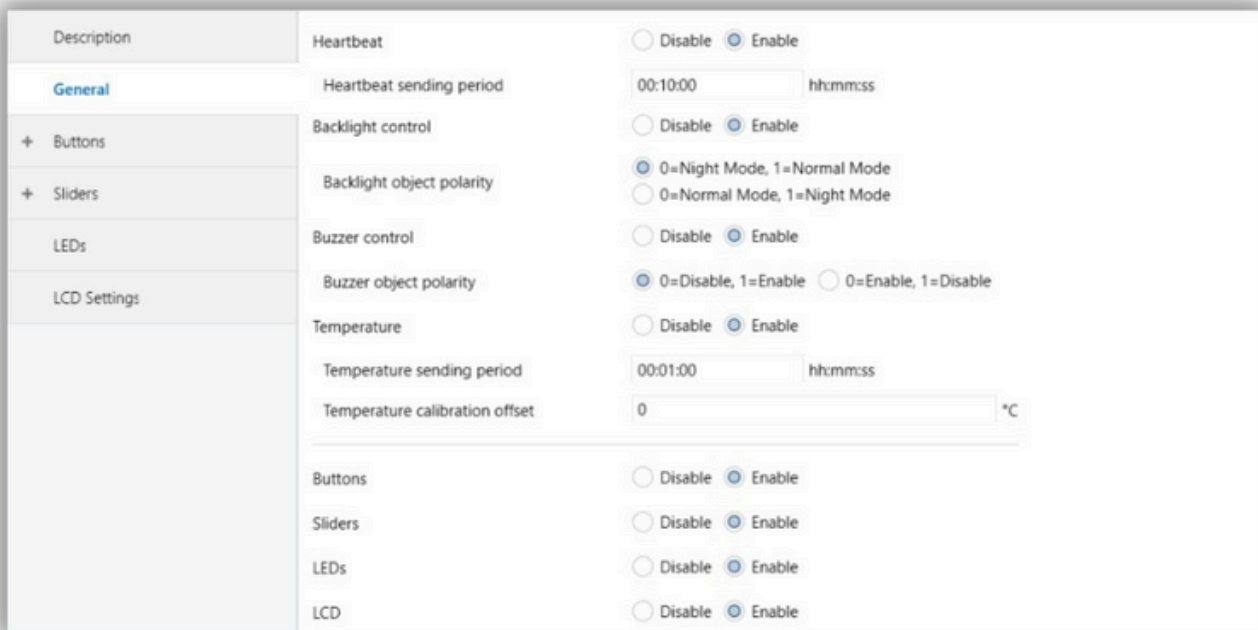



Image 5 - General

 Heartbeat [disabled/enabled]: if enabled integrates a one-bit object *Heartbeat* into your project that will be sent periodically with the value "1", to notify that the device remains operational.

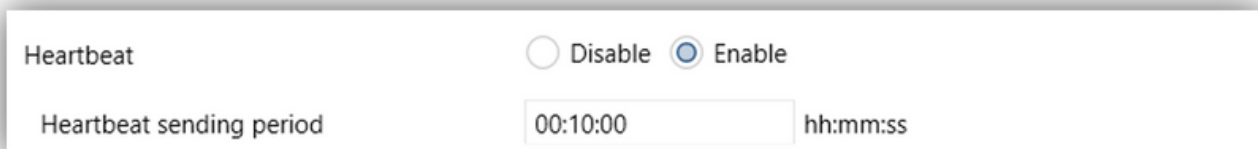


Image 6 - Heartbeat

- Backlight control [disabled/enabled]: if enabled integrates a one-bit object *Backlight* and allows you to define two operation modes via DPT *Day/Night*: Normal mode or Night mode .
  - Normal mode is used to enable the diffuse presence light created by all four corners LEDs at about 25% of lumen capacity;
  - Night mode is used to mute the buzzer, inhibit LED Indication of pressed buttons, turn on middle led, turn off the OLED display (available in the version with OLED display) by default;

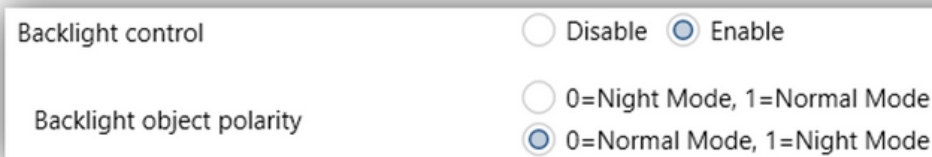


Image 7 - Backlight Control

- Buzzer control [disabled/enabled]: enable or disable the buzzer for audible indication of user actions when touching buttons.  
If enabled, it allows activating and disactivating the buzzer function by writing to a specific one-bit object Buzzer and through the parameter "Buzzer object polarity", select which value should trigger which action when received through the indicated object.

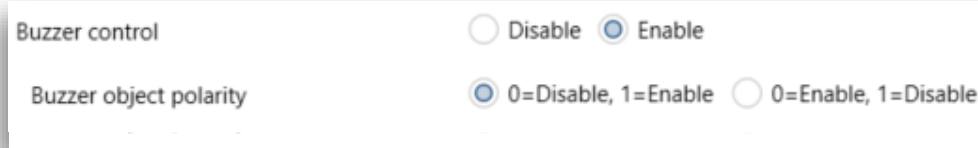
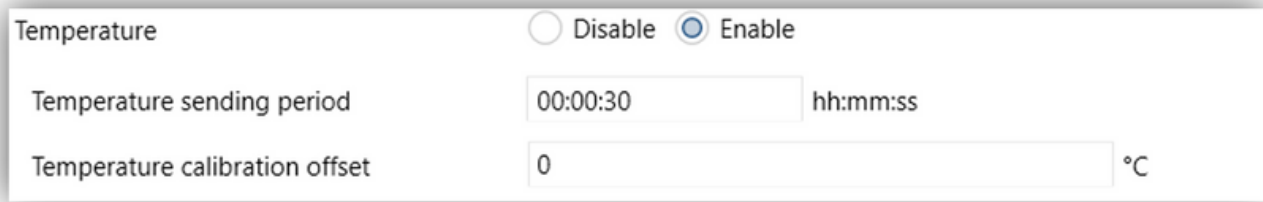


Image 8 - Buzzer control

- Temperature [disabled/enabled]: if enabled integrates a two-bytes object *Temperature*.
  - The KNX-K4 contains an internal temperature sensor, able to measure temperatures from -55 °C to 125 °C. When enabled, the temperature value can be periodically sent to the bus. By using the parameter "Temperature calibration offset", it's possible to correct the measured value when needed.
  - Possible usage:
    - In IOs/Android KNX APPs display local room temperature;
    - Trigger events and logical operations;
    - Use for climate control.





Temperature	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Temperature sending period	<input type="text" value="00:00:30"/> hh:mm:ss
Temperature calibration offset	<input type="text" value="0"/> °C

Image 9 - Temperature

- Buttons [disabled/enabled]: enable or disable the buttons on the left navigation tab of your ETS. See section 2.2 for details.
- Sliders [disabled/enabled]: enable or disable the sliders on the left navigation tab of your ETS. See section 2.3 for details.
- LEDs [disabled/enabled]: enable or disable the LEDs on the left navigation tab of your ETS. See section 2.4 for details.
- LCD [disabled/enabled]: enable or disable the LCD text on the left navigation tab of your ETS. This tab only work within the KNX-OLEDGx-xx version. See section 2.5 for details.

**Note:** The Enable/Disable object is available in the group of objects and can be remotely controlled by other devices in the KNX system. This object can be configured to temporarily disable the functions of the buttons and the buzzer, which is especially useful during the maintenance or cleaning of the keypads.

## 2.2 Buttons

An independent tab for button parameterization is showed in ETS by default, containing the 4 touch buttons and the All4Touch button, allowing to configure the functionalities of each button.

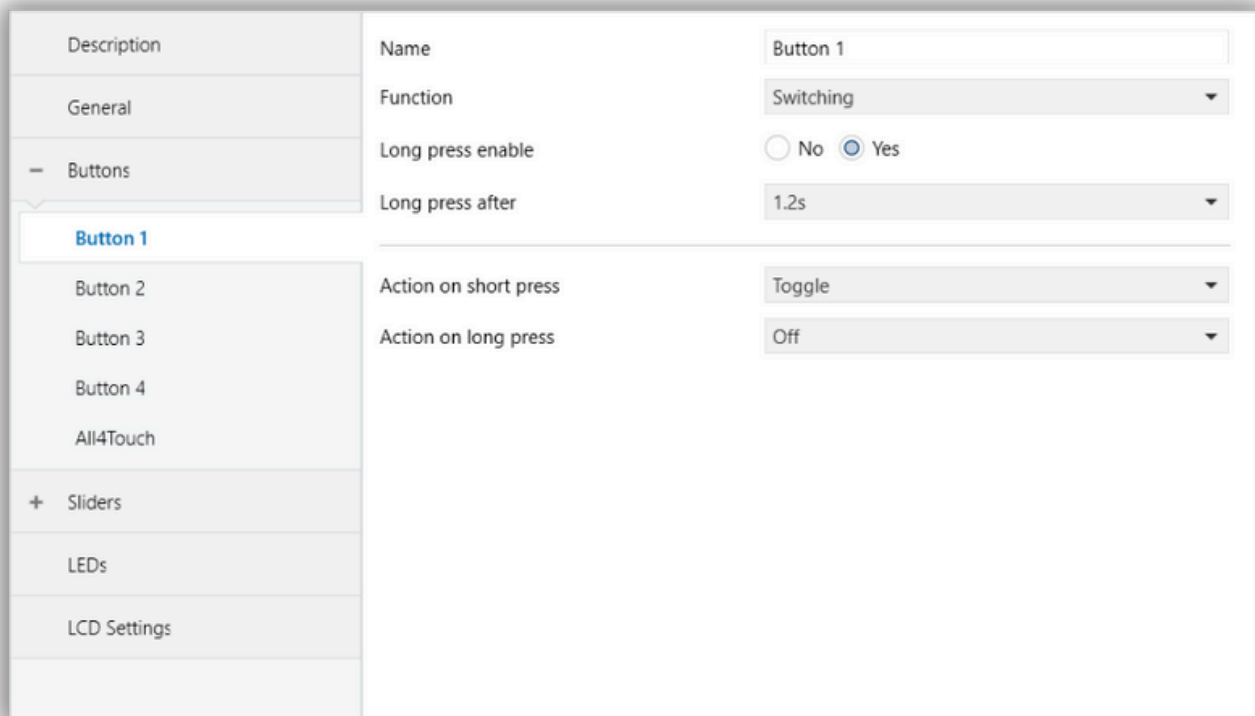


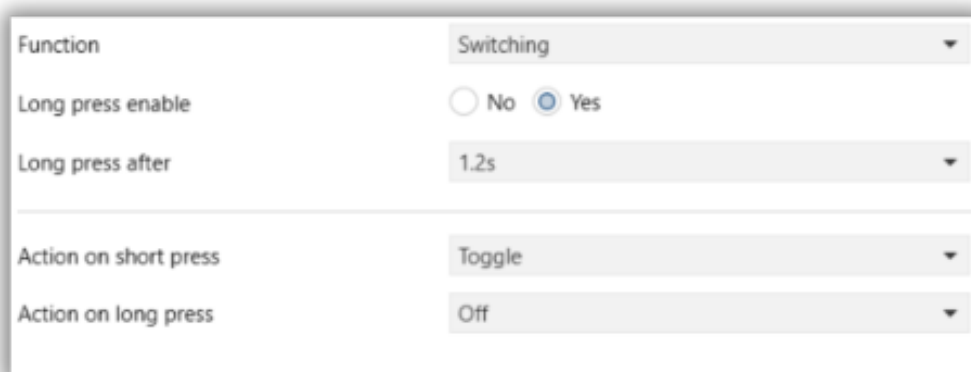
Image 10 - Buttons Configuration

Each button can be programmed independently for a different function. The following is a list of possible functions:

- Disable;
- Switching;
- Dimming;
- Shutter;
- Value;
- Color;
- Scene.

## 2.2.1 Switching

Selecting “Switching” function will define the Object Function as Switch allowing telegrams to set or reset the 1-bit On(1)/Off(0) to the group address that is linked to the respective communication object. Short or long press can be assigned to different commands (On, Off or Toggle). See the best practices in section 2.6 for details.



Function	Switching
Long press enable	<input type="radio"/> No <input checked="" type="radio"/> Yes
Long press after	1.2s
Action on short press	Toggle
Action on long press	Off

Image 11 - Individual Button – Switching Function

## 2.2.2 Dimming

Selecting "Dimming" function, the buttons can be configured for short or long press, enabling the transmission of telegrams via the Switch object (1-bit) to control ON/OFF operations or via the Dimming object (4-bit) to adjust the light intensity (increase, decrease or stop dimming).

The parameters for this function are:

- Action on short press: this parameter sets the switching telegram (On, Off or Toggle) or sets the dimming telegram (Dim brighter, Dim darker or Toggle brighter/darker) for the short press action;
- Action on long press: this parameter sets the switching telegram (On, Off or Toggle) or sets the dimming telegram (Dim brighter, Dim darker or Toggle brighter/darker) for the long press action;
- Dimming step: this parameter defines the dimming step (in per cent) to be sent in each dimming telegram (1%, 3%, 6%, 12%, 25%, 50% or 100%).
- Dimming time: this parameter defines a dimming time 0-255 seconds where if 0 is selected it means it won't stop until reached lighting level. If a button is pressed again or released (long press) during this period, the dimming stops. In this way, it is possible to configure a button as push dimming.



The screenshot shows a configuration window for the Dimming function. The 'Function' is set to 'Dimming'. The 'Long press enable' option is set to 'Yes'. The 'Long press after' duration is set to '1.2s'. The 'Action on short press' is set to 'Dim brighter', and the 'Action on long press' is set to 'Dim darker'. The 'Dimming step' is set to '1%'. The 'Dimming time' is set to '10' seconds, with a note that '0=no stop'.

Image 12 - Individual Button – Dimming Function

## 2.2.3 Shutter

Selecting “Shutter” function enables the control of shutters, blinds, curtains and others with short or long press. Both can be configured as 4 different functions: Down, Up, Stop or Toggle. See the best practices in section 2.6 for details.

The short press function is best suited for controlling motors. Touching the button the first time will start the motor command up or down via DPT *up/down*.

Touching the button a second time stops the motor via DPT *step*.



Name	Button 1
Function	Shutter
Long press enable	<input type="radio"/> No <input checked="" type="radio"/> Yes
Long press after	1.0s
Action on short press	Down
Action on long press	Up

Image 13 - Individual Button – Shutter Function

Note: For more intuitive control of the shutters we recommend using vertical sliders. See section 2.3 for details.

## 2.2.4 Value

Selecting “Value” function will define the Object Function as Value and each button can be configured to send predefined values of different Data Types. Also, long or short press actions can be selected for each transmitted value individually.

Below is the list of available Data Types:

- 1-bit DPT.1001 *Switch (0-1)*;
- 1-byte DPT.5001 *Percent (0-100%)*;
- 1-byte DPT.5010 *Counter Pulse (0-255)*;
- 1-byte DPT.6010 *Counter Pulse (-128-127)*;
- 1-byte DPT.5001 *Percent (0-100%)*;
- 2-byte DPT.7001 *Pulse (0-65535)*;
- 2-byte DPT.8001 *Pulse Difference (-32768-32767)*;
- 2-byte DPT.9001 *Temperature (-273-6707760)*.

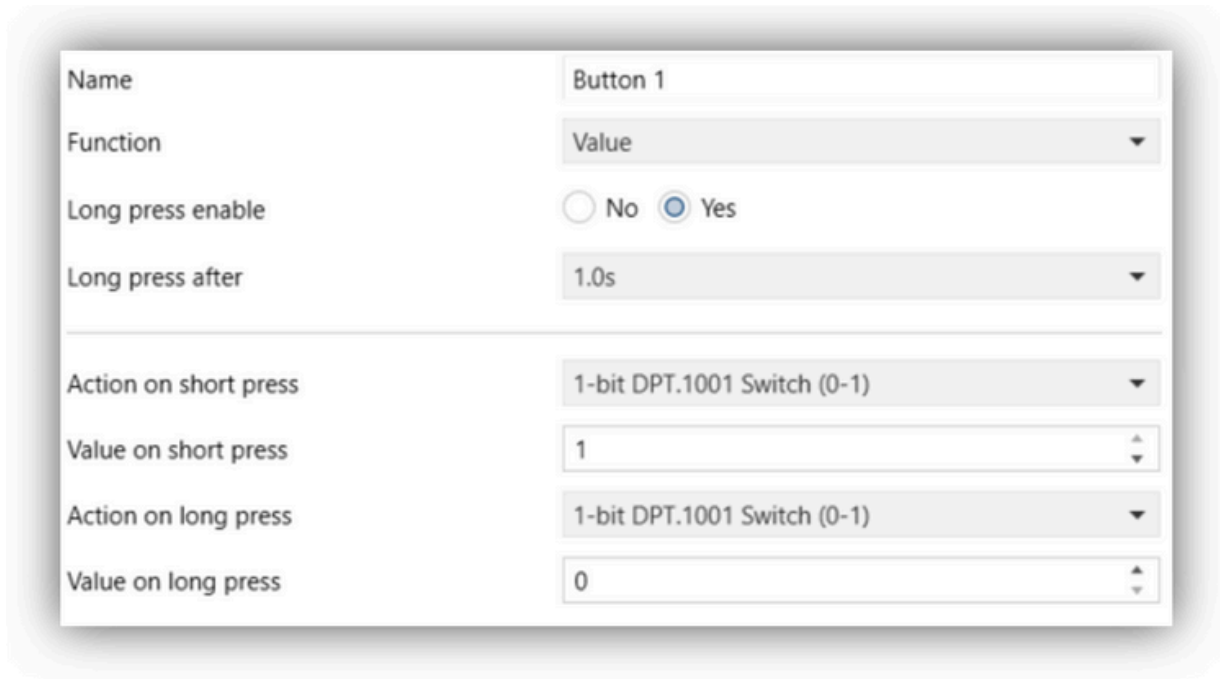


Image 14 - Individual Button – Value Function

## 2.2.5 Color

Selecting “Color” function will define Three Single Colour Objects (*Red, Green, Blue*) or One *RGB* Object. Each button can be configured to control an RGB LED device.

Below, detailed information is provided on the settings of relevant parameters:

### ■ Long press enable:

- Choose the condition “Reset color position” or “Send color value” on long press;
- Any condition for long press, short press does the opposite.

### ■ Object type - this parameter is used to determine the RGB color object value:

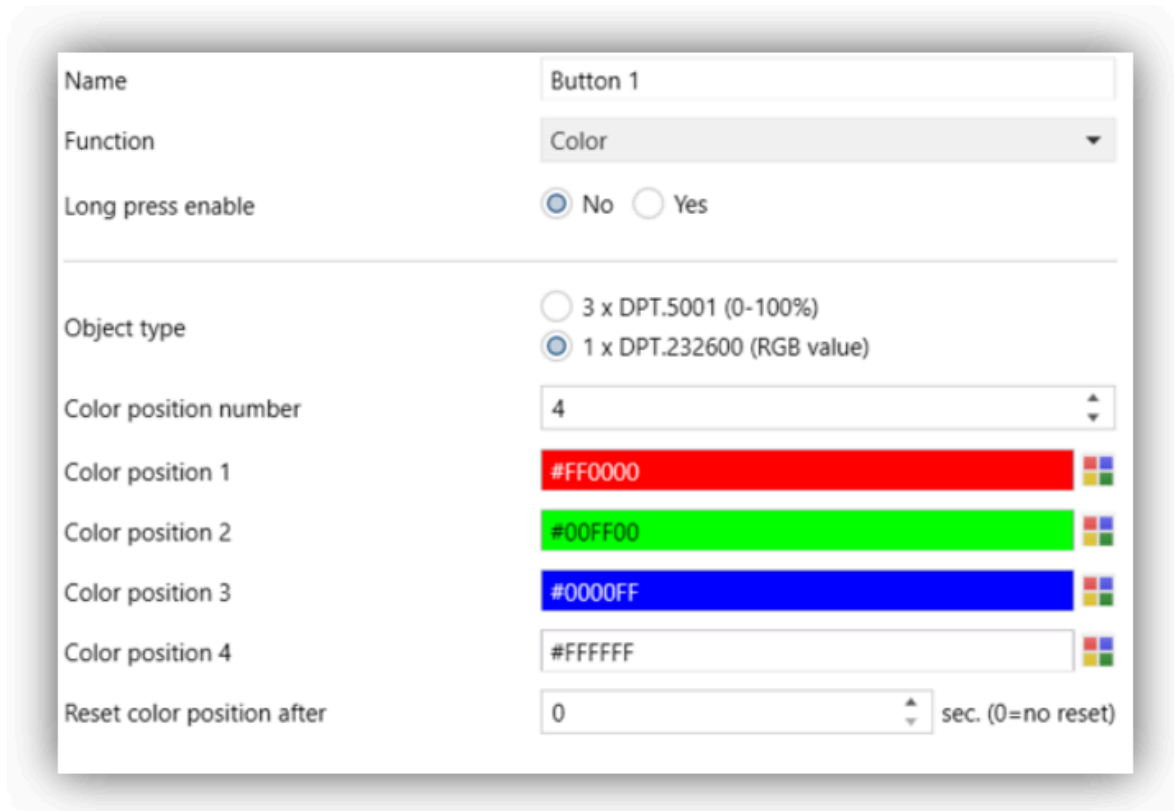
- Selecting the Data Type “3 x DPT.5001 (0-100%)” it is possible to send telegrams with 3 objects of 1-byte to control dimming via red, green or blue independently;

- If the Data Type “1 x DPT.23600 (RGB value)” is selected the telegram is sent with a single 3-byte object to control via RGB.

### ■ Color position number: it is possible to choose up to 8 color positions. Pressing the palette on the right it is possible to choose the color.

- Reset color position after: This parameter determines the behavior and transmission of the color position allowing a reset of the color position after 0-255 seconds where 0 = no reset.

After the delay time expires, the list starts again at the first color position on the next short button press.



The screenshot shows a configuration window for a button named "Button 1". The function is set to "Color". The "Long press enable" option is set to "No". The "Object type" is set to "1 x DPT.232600 (RGB value)". The "Color position number" is set to 4. The color positions are defined as follows:

Color position	Color value
Color position 1	#FF0000
Color position 2	#00FF00
Color position 3	#0000FF
Color position 4	#FFFFFF

The "Reset color position after" parameter is set to 0 seconds, indicating no reset.

Image 15 - Individual Button – Color Function

## 2.2.6 Scene

This function is intended to be used in conjunction with several KNX actuators that support the scene function to store and recall a communication object value in an actuator.

The device's role is to send the "Recall/Store Scene mode" telegram to the actuators in a short press.

If the long press is enabled, the short press will be for Recall Scene and long press will be for Store Scene function.

For each button, scene 1 – 64 can be activated.

Name	Button 1
Function	Scene
Long press enable	<input checked="" type="radio"/> No <input type="radio"/> Yes
Scene number	1
Scene mode	<input checked="" type="radio"/> Recall <input type="radio"/> Store

Image 16 - Individual Button – Scene Function

## 2.3 Sliders

If the Sliders are enabled in General tab, an independent tab for slider parameterization is showed in the ETS, containing 4 groups of sliders (2 vertical sliders + 2 horizontal sliders), which will make possible to configure the functionalities of each movement (Up, Down, Right and Left).

Description	Name	Slider Left
General	Function	Dimming
+ Buttons	Action on swipe up	Dim brighter
- Sliders	Action on swipe down	Dim darker
Slider Left 5-6	Dimming step	1%
Slider Right 7-8	Dimming time	0 sec. (0=no stop)
Slider Top 9-10		
Slider Bottom 11-12		
LEDs		
LCD Settings		

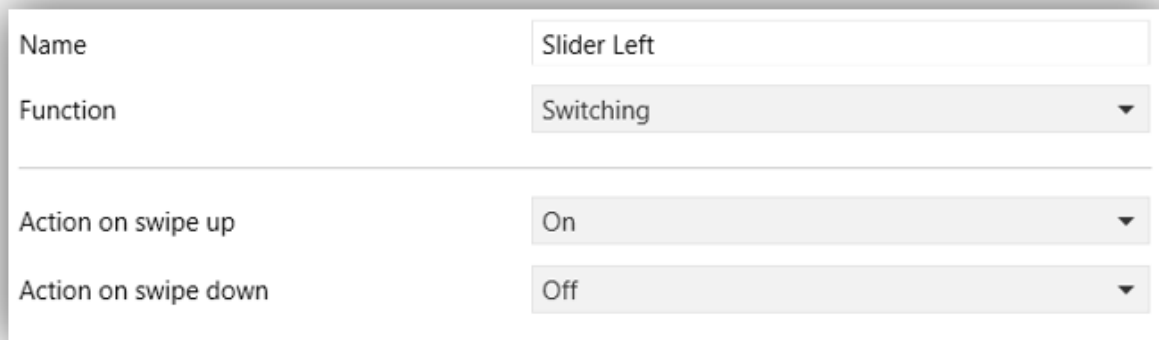
Image 17 - Sliders Configuration



## 2.3.1 Switching

Selecting “Switching” function will define the Object Function as Switch allowing telegrams to set or reset the 1-bit On(1)/Off(0) to the group address that is linked to the respective communication object.

Action on each swipe can be assigned to different commands (On, Off or Toggle). See the best practices in section 2.6 for details.



Name	Slider Left
Function	Switching
Action on swipe up	On
Action on swipe down	Off

Image 18 - Individual Slider - Switching Function

## 2.3.2 Dimming

Selecting “Dimming” function will define the Object Function as Dimming allowing telegrams to dimming control with just a group object (4-bit) in slider operation.

The parameters for this function are:

- Action on swipe up, down, right or left: this parameter sets the dimming telegram (Dim brighter, Dim darker or Toggle brighter/darker) for each swipe action;
- Dimming step: this parameter defines the dimming step (in per cent) to be sent in each dimming telegram (1%, 3%, 6%, 12%, 25%, 50% or 100%).
- Dimming time: this parameter defines a dimming time 0-255 seconds where if 0 is selected it means it won't stop until reached lighting level. If the same movement is swiped or an opposite movement is performed during this period, the dimming is stopped.

Name	Slider Left
Function	Dimming
Action on swipe up	Dim brighter
Action on swipe down	Dim darker
Dimming step	1%
Dimming time	0 sec. (0=no stop)

Image 19 - Individual Slider - Dimming Function

### 2.3.3 Shutter

Selecting “Shutter” function enables the control of shutters, blinds, curtains and others with swipes. Each swipe can be configured as 4 different functions: Down, Up, Stop or Toggle. See the best practices in section 2.6 for details.

- Movement time: this parameter defines a movement time 0-255 seconds where if 0 is selected it means it won't stop. If the same movement is swiped or an opposite movement is performed during this period, the shutter is stopped.









Name	Slider Left
Function	Shutter
Action on swipe up	Up
Action on swipe down	Down
Movement time	0 sec. (0=no stop)

Image 20 - Individual Slider - Shutter Function

## 2.3.4 Value

Selecting “Value” function will define the Object Function as Value and each slider can be configured to send predefined values of different Data Types. Each swipe actions can be selected for each transmitted value individually.

Below is the list of available Data Types:

-  1-bit DPT.1001 *Switch (0-1)*;
-  1-byte DPT.5001 *Percent (0-100%)*;
-  1-byte DPT.5010 *Counter Pulse (0-255)*;
-  1-byte DPT.6010 *Counter Pulse (-128-127)*;
-  1-byte DPT.5001 *Percent (0-100%)*;
-  2-byte DPT.7001 *Pulse (0-65535)*;
-  2-byte DPT.8001 *Pulse Difference (-32768-32767)*;
-  2-byte DPT.9001 *Temperature (-273-6707760)*.


Name	Slider Left
Function	Value
Action on swipe up	1-bit DPT.1001 Switch (0-1)
Value on swipe up	0
Action on swipe down	1-bit DPT.1001 Switch (0-1)
Value on swipe down	0

Image 21 - Individual Slider - Value Function

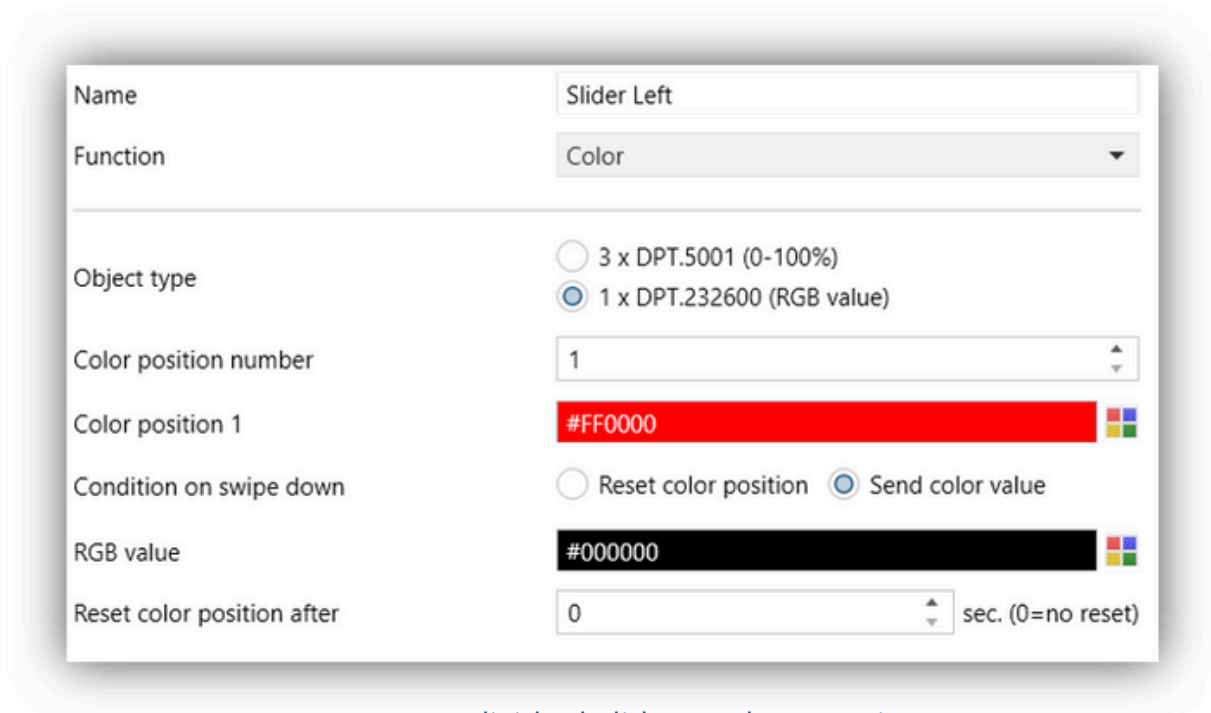
## 2.3.5 Color

Selecting “Color” function will define Three Single Colour Objects (*Red, Green, Blue*) or One *RGB* Object. Each slider can be configured to control an RGB LED device.

Settings of relevant parameters:

- Object type - determine the RGB colour object value:
  - Selecting the Data Type “3 x DPT.5001 (0-100%)” sends telegrams with 3 objects of 1-byte to control dimming via red, green or blue independently;
  - If the Data Type “1 x DPT.23600 (*RGB value*)” is selected the telegram is sent with a single 3-byte object to control via RGB.
- Color position number: chooses up to 8 color positions. Pressing the palette on the right it  is possible to choose the color;
- Condition on swipe left or down: chooses the condition on swipe: Reset color position or Send color value. In this condition, swipe right or up does the opposite;
- Reset color position after: Parameter that determines the behavior and transmission of the color position allowing a reset of the color position after 1-255 seconds where 0 will not reset the color position.

After the delay time expires, the list starts again at the first color position on the next swipe.



The screenshot shows a configuration window for a device named "Slider Left". The function is set to "Color". The object type is "1 x DPT.232600 (RGB value)". The color position number is "1". The color position 1 is set to "#FF0000" (red). The condition on swipe down is "Send color value". The RGB value is set to "#000000" (black). The reset color position after is set to "0" seconds.

Name	Slider Left
Function	Color
Object type	<input type="radio"/> 3 x DPT.5001 (0-100%) <input checked="" type="radio"/> 1 x DPT.232600 (RGB value)
Color position number	1
Color position 1	#FF0000
Condition on swipe down	<input type="radio"/> Reset color position <input checked="" type="radio"/> Send color value
RGB value	#000000
Reset color position after	0 sec. (0=no reset)

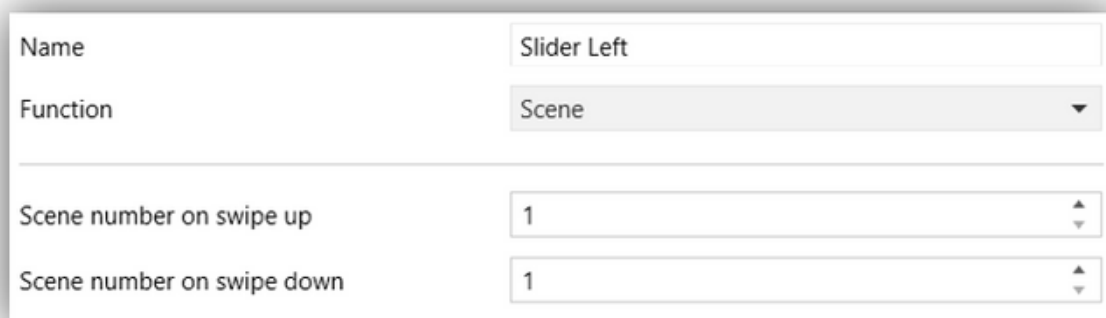
Image 21 - Individual Slider - Color Function

### 2.3.6 Scene

This function is intended to be used in conjunction with several KNX actuators that support the scene function. Stores and recalls a communication object value in an actuator.

It's the device's role is to send the "Recall/Store Scene mode" telegram to the actuators with a swipe.

For each swipe, scene 1 – 64 can be activated.



The screenshot shows a configuration window for a device named "Slider Left". The function is set to "Scene". The scene number on swipe up is "1". The scene number on swipe down is "1".

Name	Slider Left
Function	Scene
Scene number on swipe up	1
Scene number on swipe down	1

Image 23 - Individual Slider - Scene Function

## 2.4 LEDs

The integrated LEDs provide touch feedback. If in the “General” settings the LEDs are enabled, it is possible to parameterize the LEDs to indicate the status, touch feedback and follow night mode.

For each LED it is possible to choose the following parameters: Disable, Always on or Object value. See the best practices in section 2.6 for details.

In night mode, the buzzer is disabled, the middle LED is enabled and the other LEDs are disabled and can´t indicate the status and don´t provide touch feedback.

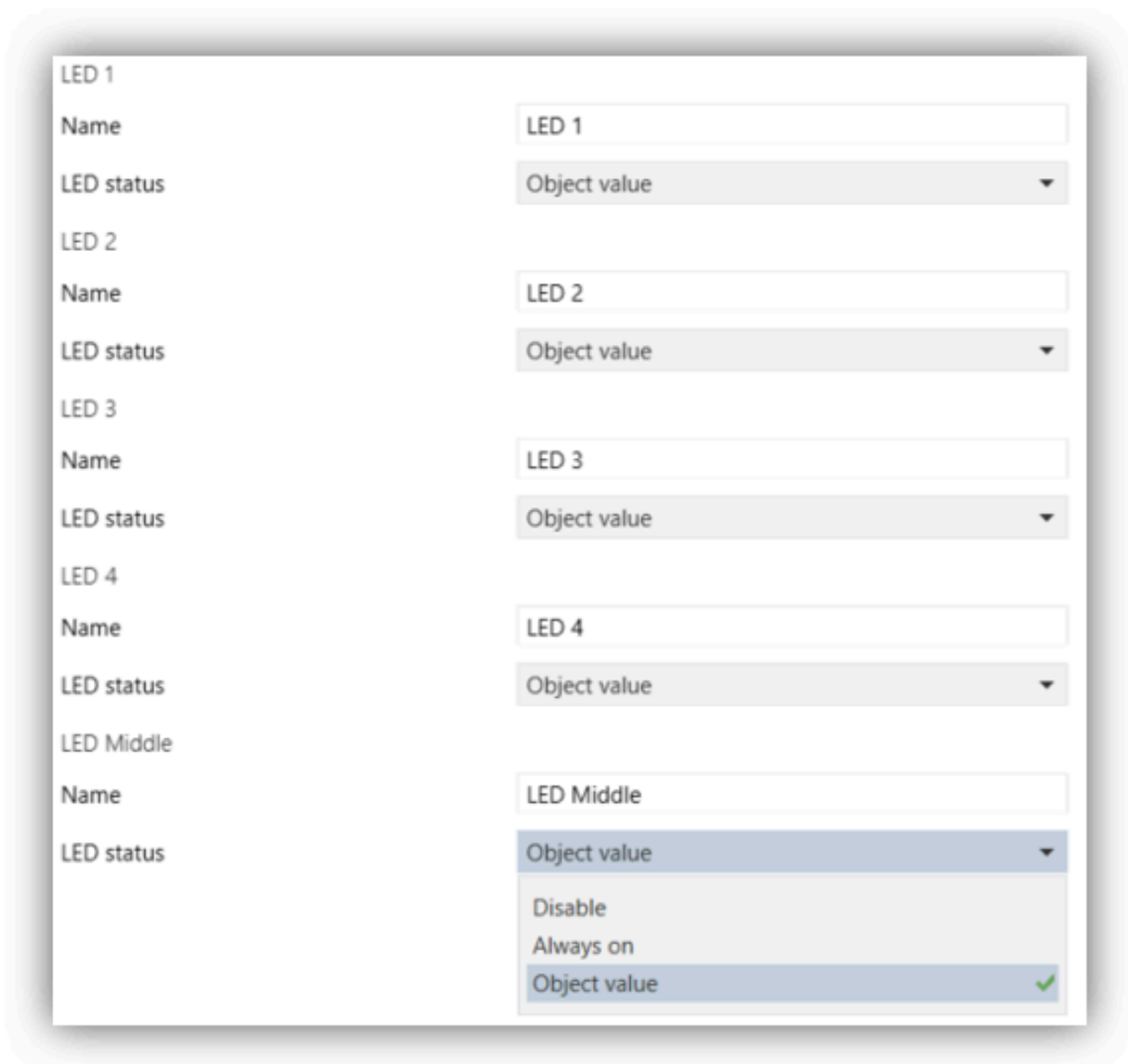


Image 24 - LEDs Configuration

## 2.5 LCD

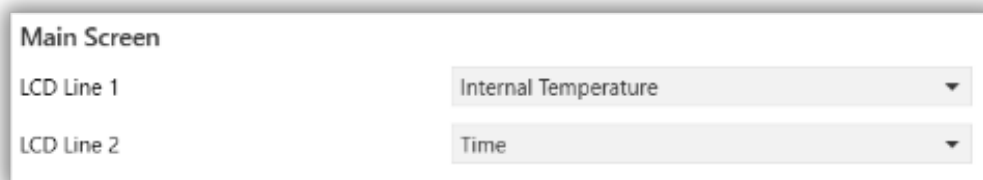
The KNX-K4OLED keypad version has an OLED display that can be configured, provided that the LCD option is enabled in the “General” settings. The OLED display has two lines of text: line 1 with 16 characters and line 2 with 8 characters available. It provides visual feedback about time (reported by external devices), internal temperature measured by the keypad, external temperature reported by external devices, and personalized messages linked with Switch type objects.

Description		
General		
+ Buttons		
+ Sliders		
LEDs		
<b>LCD Settings</b>		
	<b>Main Screen</b>	
	LCD Line 1	Internal Temperature
	LCD Line 2	Time
	<b>Secondary Screen</b>	
	LCD Status Time	5 sec. (0=no return)
	LCD Texts Number	4
	LCD Text 1	
	Name	LCD Text 1
	Status	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	LCD Text 2	
	Name	LCD Text 2
	Status	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	LCD Text 3	
	Name	LCD Text 3
	Status	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	LCD Text 4	
	Name	LCD Text 4
	Status	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Image 25 - LCD Settings

Settings of relevant parameters:

- Main Screen: for each line of text, the following options are available:
  - Disable;
  - Internal Temperature: to display the temperature measured by the keypad sensor;
  - External Temperature: to display the temperature measured by other KNX devices via DPT Temperature;
  - Time: to display the time sent cyclically by other KNX devices via DPT Time of Day (e.g., via gateway or server).



The screenshot shows a configuration window titled "Main Screen". It contains two rows of settings. The first row is labeled "LCD Line 1" and has a dropdown menu set to "Internal Temperature". The second row is labeled "LCD Line 2" and has a dropdown menu set to "Time".

Image 26 - Main Screen Configurations

## ■ Secondary Screen

- LCD Status Time: this parameter defines the time for the display to return to the Main Screen, ranging from 0-255 seconds where if 0 is selected it means it won't return automatically. However, if any of the three object groups **LCD Return**, **LCD Line 1**, or **LCD Line 2** is linked to an address group, the display can return to the Main Screen whenever it receives a related telegram;
- LCD Texts Number: this parameter defines the number of text boxes for the secondary screen, ranging from 0 to 20.



The screenshot shows a configuration window titled "Secondary Screen". It contains two rows of settings. The first row is labeled "LCD Status Time" and has a numeric input field with the value "5" and a unit label "sec. (0=no return)". The second row is labeled "LCD Texts Number" and has a numeric input field with the value "4".

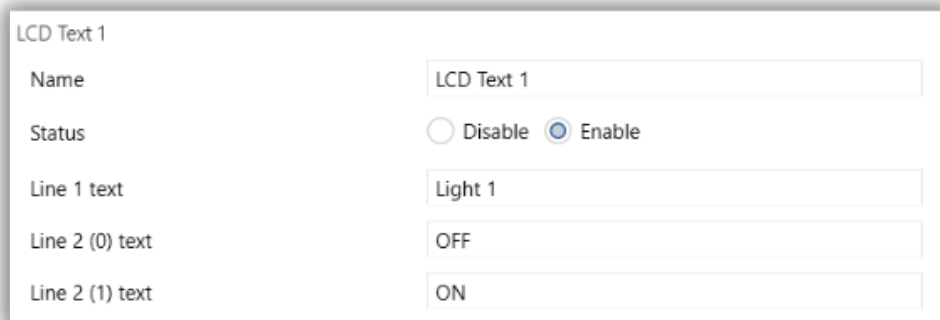
Image 27 – Secondary Screen Configurations



■ LCD Text: for each text box, it is possible to personalize the message that you want to link with the object's status via DPT Switch.

- Name: this parameter defines the name of the text box;
- Status: there are two options, "Disable" and "Enable". If the "Enable" option is activated, it means that the messages will be displayed on the LCD;
- Line 1 text: text box for writing the text for line 1 of the LCD (e.g., Light 1);
- Line 2 (0) text: text box for writing the text for line 2 of the LCD, which will be displayed in the event of receiving a telegram with value 0 (e.g., OFF);

Line 2 (1) text: text box for writing the text for line 2 of the LCD, which will be displayed in the event of receiving a telegram with value 1 (e.g., ON).



The image shows a configuration window titled "LCD Text 1". It contains the following fields and options:

Name	LCD Text 1
Status	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Line 1 text	Light 1
Line 2 (0) text	OFF
Line 2 (1) text	ON

Image 28 – Text Boxes Configurations

The Main Screen can also act as a screen saver. After 1 minute of inactivity, the LCD display automatically enters sleep mode. To reactivate it, simply touch two buttons simultaneously.



## 2.5 Best Practices

- **Toggle Buttons/Sliders:** when a button/slider is configured as toggle, it typically works by sending alternating commands (on/off). However, it's state can become out of sync if feedback isn't received (e.g., due to power failure). We recommend configuring as follows to resolve this issue.
  - Create a group address for the switch and a group address for the status. Then, link the **output group object** to the **switch group address**, and the **output's status group object** to the **status group address**. Both addresses should be linked to the **button/slider group object**.
  - Ensure the Communication (C), Read (R), Write (W) and Transmit (T) flags are enabled on the **button/slider group object** and the flags Communication (C), Read (R), Transmit (T) and Update (U) on the **Output's status group object** for proper toggle operation.
- **Shutter function:** for KNX blinds or shutter systems, proper flag configuration ensures synchronization of their state, especially after a power interruption. Enabling the Write (W) flag allows updates to the device state by other components on the KNX bus, such as a central controller or status feedback from actuators. This is particularly crucial in blind control setups where synchronization between commands and the actual position of the blinds needs to be maintained. Additionally, the Communication (C), Read (R) and Transmit (T) flags are also commonly used.
- **LED status:** to ensure synchronization of the LED status, it should be linked to the **status group** of the device it is monitoring. This means the LED should be associated with the status group to correctly reflect the current state of the device (such as a relay). Ensure the Communication (C), Write (W) and Update (U) flags are enabled on the **output's status group object** and on the **LED status group object** for proper operation.

### 3. Appendix

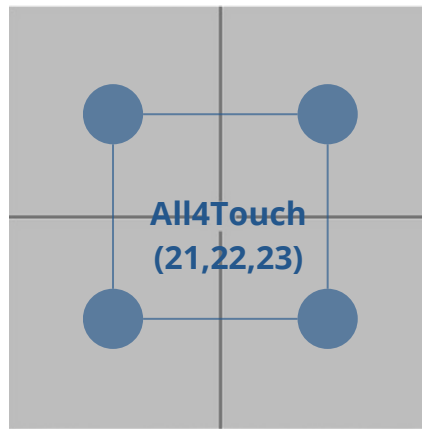
#### 3.1 Communication Objects

Below is the table of Buttons “X” objects

<b>Button 1 (5,6,7)</b>	<b>Button 2 (9,10,11)</b>
<b>Button 3 (13,14,15)</b>	<b>Button 4 (17,18,19)</b>

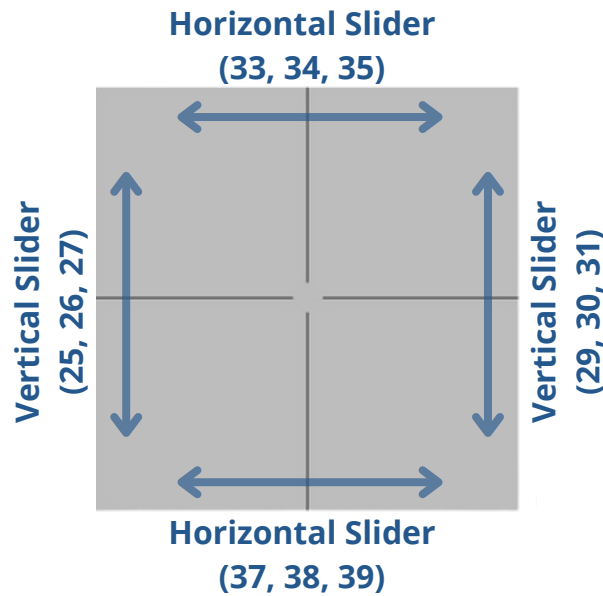
Number	Name	Object Function	Size	Flags	Data Type (DPT)
5, 9, 13, 17	Button X Output A	Switch	1 bit	C R - T -	Switch
		Shutter Up/Down	1 bit	C R - T -	Up/Down
		1-Byte	1 byte	C R - T -	Counter pulses (0..255)
		1-Byte Signed	1 byte	C R - T -	Counter pulses (-128..127)
		2-Byte	2 bytes	C R - T -	Pulses
		2-Byte Signed	2 bytes	C R - T -	Pulses difference
		Temperature	2 bytes	C R - T -	Temperature (°C)
		RGB	3 bytes	C R - T -	RGB Value 3x(0..255)
		Percentage	1 byte	C R - T -	Percentage (0..100%)
		Scene	1 byte	C R - T -	Scene Control
6, 10, 14, 18	Button X Output B	Switch	1 bit	C R - T -	Switch
		Dimming	4 bit	C R - T -	Dimming Control
		1-Byte	1 byte	C R - T -	Counter pulses (0..255)
		1-Byte Signed	1 byte	C R - T -	Counter pulses (-128..127)
		2-Byte	2 bytes	C R - T -	Pulses
		2-Byte Signed	2 bytes	C R - T -	Pulses difference
		Temperature	2 bytes	C R - T -	Temperature (°C)
		Shutter Step/Stop	1 bit	C R - T -	Step
7, 11, 15, 19	Button X Output C	Blue	1 byte	C R - T -	Percentage (0..100%)

Below is the table of All4Touch objects



Number	Name	Object Function	Size	Flags				Data Type (DPT)
				C	R	T	-	
21	All4Touch Output A	Switch	1 bit	C	R	T	-	Switch
		Shutter Up/Down	1 bit	C	R	T	-	Up/Down
		1-Byte	1 byte	C	R	T	-	Counter pulses (0..255)
		1-Byte Signed	1 byte	C	R	T	-	Counter pulses (-128..127)
		2-Byte	2 bytes	C	R	T	-	Pulses
		2-Byte Signed	2 bytes	C	R	T	-	Pulses difference
		Temperature	2 bytes	C	R	T	-	Temperature (°C)
		RGB	3 bytes	C	R	T	-	RGB Value 3x(0..255)
		Percentage	1 byte	C	R	T	-	Percentage (0..100%)
		Scene	1 byte	C	R	T	-	Scene Control
22	All4Touch Output B	Red	1 byte	C	R	T	-	Percentage (0..100%)
		Switch	1 bit	C	R	T	-	Switch
		Dimming	4 bit	C	R	T	-	Dimming Control
		1-Byte	1 byte	C	R	T	-	Counter pulses (0..255)
		1-Byte Signed	1 byte	C	R	T	-	Counter pulses (-128..127)
		2-Byte	2 bytes	C	R	T	-	Pulses
		2-Byte Signed	2 bytes	C	R	T	-	Pulses difference
		Temperature	2 bytes	C	R	T	-	Temperature (°C)
Shutter Step/Stop	1 bit	C	R	T	-	Step		
23	All4Touch Output C	Green	1 byte	C	R	T	-	Percentage (0..100%)
		Blue	1 byte	C	R	T	-	Percentage (0..100%)

Below is the table of Sliders objects



Number	Name	Object Function	Size	Flags						Data Type (DPT)
				C	R	-	T	-	-	
25, 29, 33, 37	Slider X Output A	Switch	1 bit	C	R	-	T	-	-	Switch
		Shutter Up/Down	1 bit	C	R	-	T	-	-	Up/Down
		Switch	1 bit	C	R	-	T	-	-	Switch
		Percentage	1 byte	C	R	-	T	-	-	Percentage (0..100%)
		1-Byte	1 byte	C	R	-	T	-	-	Counter pulses (0..255)
		1-Byte Signed	1 byte	C	R	-	T	-	-	Counter pulses (-128..127)
		2-Byte	2 bytes	C	R	-	T	-	-	Pulses
		2-Byte Signed	2 bytes	C	R	-	T	-	-	Pulses difference
		RGB	3 bytes	C	R	-	T	-	-	RGB Value 3x(0..255)
		Scene	1 byte	C	R	-	T	-	-	Scene Control
		Temperature	2 bytes	C	R	-	T	-	-	Temperature (°C)
		Red	1 byte	C	R	-	T	-	-	Percentage (0..100%)
26, 30, 34, 38	Slider X Output B	Dimming	4 bit	C	R	-	T	-	-	Dimming Control
		Shutter Step/Stop	1 bit	C	R	-	T	-	-	Step
		Switch	1 bit	C	R	-	T	-	-	Switch
		Percentage	1 byte	C	R	-	T	-	-	Percentage (0..100%)
		1-Byte	1 byte	C	R	-	T	-	-	Counter pulses (0..255)
		1-Byte Signed	1 byte	C	R	-	T	-	-	Counter pulses (-128..127)
		2-Byte	2 bytes	C	R	-	T	-	-	Pulses
		2-Byte Signed	2 bytes	C	R	-	T	-	-	Pulses difference
		Temperature	2 bytes	C	R	-	T	-	-	Temperature (°C)
Green	1 byte	C	R	-	T	-	-	Percentage (0..100%)		
27, 31, 35, 39	Slider X Output C	Blue	1 byte	C	R	-	T	-	Percentage (0..100%)	



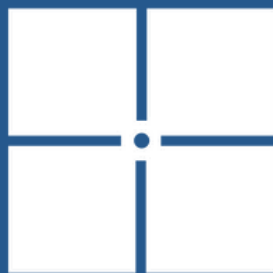
Below is the table of General objects

Number	Name	Object Function	Size	Flags					Data Type (DPT)
				C	R	W	T	-	
1	Heartbeat	Trigger	1 bit	C	-	-	T	-	Trigger
2	Enable/Disable	Enable/Disable	1 bit	C	R	W	-	-	Enable
3	Backlight	Enable/Disable	1 bit	C	R	W	-	-	Switch
4	Temperature	Value	2 bytes	C	R	-	T	-	Temperature (°C)
41	Led 1 Status	Switch	1 bit	C	-	W	-	-	Switch
42	Led 2 Status	Switch	1 bit	C	-	W	-	-	Switch
43	Led 3 Status	Switch	1 bit	C	-	W	-	-	Switch
44	Led 4 Status	Switch	1 bit	C	-	W	-	-	Switch
45	Led Middle Status	Switch	1 bit	C	-	W	-	-	Switch
69	Buzzer	Enable/Disable	1 bit	C	R	W	-	-	Switch



Below is the table of LCD objects

Number	Name	Object Function	Size	Flags	Data Type (DPT)
46	LCD Text 1 Text	Switch	1 byte	C - W - -	Switch
47	LCD Text 2 Text	Switch	1 byte	C - W - -	Switch
48	LCD Text 3 Text	Switch	1 byte	C - W - -	Switch
49	LCD Text 4 Text	Switch	1 byte	C - W - -	Switch
50	LCD Text 5 Text	Switch	1 byte	C - W - -	Switch
51	LCD Text 6 Text	Switch	1 byte	C - W - -	Switch
52	LCD Text 7 Text	Switch	1 byte	C - W - -	Switch
53	LCD Text 8 Text	Switch	1 byte	C - W - -	Switch
54	LCD Text 9 Text	Switch	1 byte	C - W - -	Switch
55	LCD Text 10 Text	Switch	1 byte	C - W - -	Switch
56	LCD Text 11 Text	Switch	1 byte	C - W - -	Switch
57	LCD Text 12 Text	Switch	1 byte	C - W - -	Switch
58	LCD Text 13 Text	Switch	1 byte	C - W - -	Switch
59	LCD Text 14 Text	Switch	1 byte	C - W - -	Switch
60	LCD Text 15 Text	Switch	1 byte	C - W - -	Switch
61	LCD Text 16 Text	Switch	1 byte	C - W - -	Switch
62	LCD Text 17 Text	Switch	1 byte	C - W - -	Switch
63	LCD Text 18 Text	Switch	1 byte	C - W - -	Switch
64	LCD Text 19 Text	Switch	1 byte	C - W - -	Switch
65	LCD Text 20 Text	Switch	1 byte	C - W - -	Switch
66	LCD Return	Return Main Screen	2 bytes	C - W - -	Enable
67	LCD Line 1	Temperature	2 bytes	C - W - -	Temperature (°C)
		Time	3 bytes	C - W - -	Time of Day
68	LCD Line 2	Temperature	2 bytes	C - W - -	Temperature (°C)
		Time	3 bytes	C - W - -	Time of Day



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