Touch screen

Smart Touch

v1.1

PROGRAMMING MANUAL

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1 GENERAL DESCRIPTION

The Smart Touch is a full colour capacitive 4.3” touch screen to control and monitor any KNX installation, using 3D plans, photographs, friendly-icons, etc.

It allows to program up to 4 pages with 8 icons in each page with which to control lights, shutters, thermostats, RGB leds, executing scenes and control any other KNX installation devices being ideal to work as a room controller.

It incorporates two user levels (normal user and administrator) and the appearance of the pictures, menus and icons shown is completely customizable by the programmer with the programming software SIDEKNX that allows creating different themes. The appearance theme can be also changed manually by the user or automatically by programmed hours.

General characteristics:

- Admits up to 4 control pages (background: 3D plans, photographs, etc.).
- 8 control icons per plan.
- Scenes, on/off, dimming, shutter, thermostats, RGB Leds control.
- Fully customizable themes (icons, background and menus appearance).
- Wi-Fi connectivity for programming and wireless local control via Android/iOS applications.
- Programmable automatic theme change by hour.
- Two user level modes: administrator and standard user.

2 TECHNICAL INFORMATION

Power supply	18 - 30 Vdc from auxiliary power supply.
Current consumption	250 mA from auxiliary power supply 18 - 30 Vdc. 1 mA from KNX BUS.
Mounting	Surface. Flush mounting with box (included). On universal distribution box, screwed on wall. Easily mounting on plasterboard wall.
Size	129 x 88 x 4 mm (13 mm depth).
Connections	Quick micro-connector T. BUS and Supply connection terminal KNX.
Programming	Via Wi-Fi connectivity (FTP upload).
Software	SIDEKNX v1.1 (build 260914).
Control pages	Up to 4.
Icons per page	Up to 8.
Environment temperature range	Operation: -10ºC/55ºC Storage: -30ºC/60ºC Transportation: -30ºC/60ºC
Regulation	According to the directives of electromagnetic compatibility and low voltage: EN 50090-2-2 / UNE-EN 61000-6-3:2007 / UNE-EN 61000-6-1:2007 / UNE-EN 61010-1.

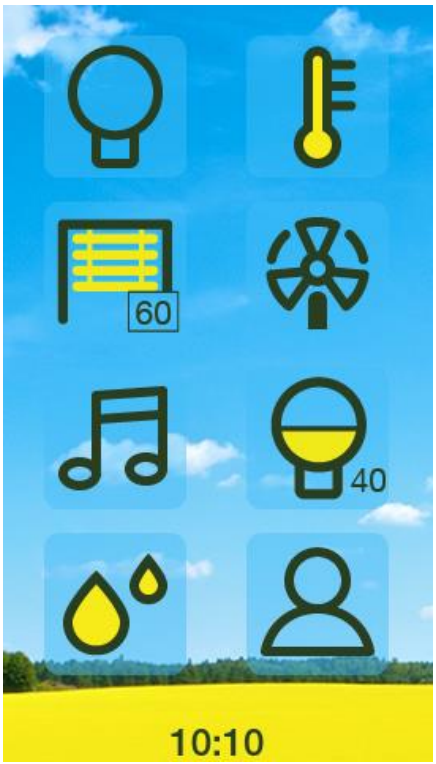
3 WORKING MODE

3.1 INTRODUCTION

The Smart Touch interface is divided in three zones:

- A central zone where the user find the icons with which to control all the elements of the installation (lights, shutters, thermostats, etc.). It is possible to have up to 4 pages with 8 icons in each page.
- The internal thermostat control interface that it is shown by sliding upwards the main screen (if the Smart Touch has an internal thermostat incorporated).
- An options menu that it is shown by sliding downwards the main screen. In this menu can be configured the visual theme, brightness, Wi-Fi, language, password, etc. Only an Administrator user can have access to the options menu.

You will find below a detailed explanation of each of the zones of this user interface.



3.2 CONTROL ICONS

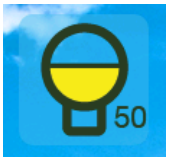
In the following section is explained each of the control functions that can be programmed in the Smart Touch. The available functions could be different depending on the user's needs and the programming done. Ask the programmer / integrator of the home automation system for further information about the possibilities.

3.2.1 LIGHTS

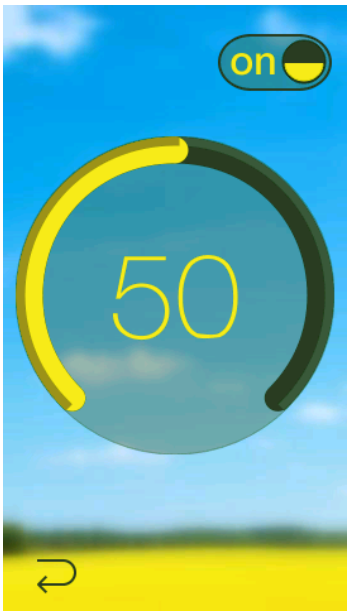
Switch on/off lighting: this icon allows controlling the light of the corresponding room or zone simply by clicking on it. The status of the light is permanently updated and the bulb will be either on or off according to it.

3.2.2 DIMMERS

Lightning regulation: this icon represents the current brightness level of a dimmering light.



By clicking on the icon, a control dialogue appears and allows to switch on/off the light or setting a new brightness value by sliding the finger (the command is sent when release). It is also indicated graphically as well as numerically the value (in percentage) of the light intensity.



Press the arrow at the bottom left to go back to the main window.

3.2.3 RGB LEDS

RGB lights control: this icon represents the current colour of an RGB led light.

By clicking on the icon, a control dialogue appears and allows selecting a colour from the palette and setting a brightness value by sliding the finger. It is also indicated graphically as well as numerically the value (from 0 to 255) of the brightness and colour intensities.

Press the ok button on the right to send a new colour and brightness setting.

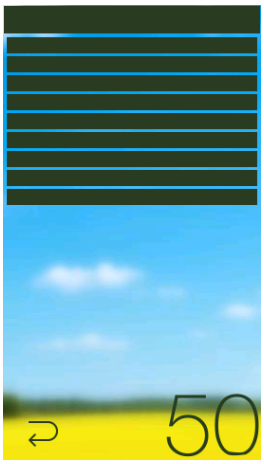
Press the arrow at the bottom left to go back to the main window.

3.2.4 SHUTTERS/BLINDS

Shutter/Blind control: this icon represents the current position of a shutter or blind.

3.2.4.1 Shutter

By clicking on the icon, a control dialogue appears and allows setting a new position value by sliding the finger. It is also indicated graphically as well as numerically the value (in percentage) of the current position.

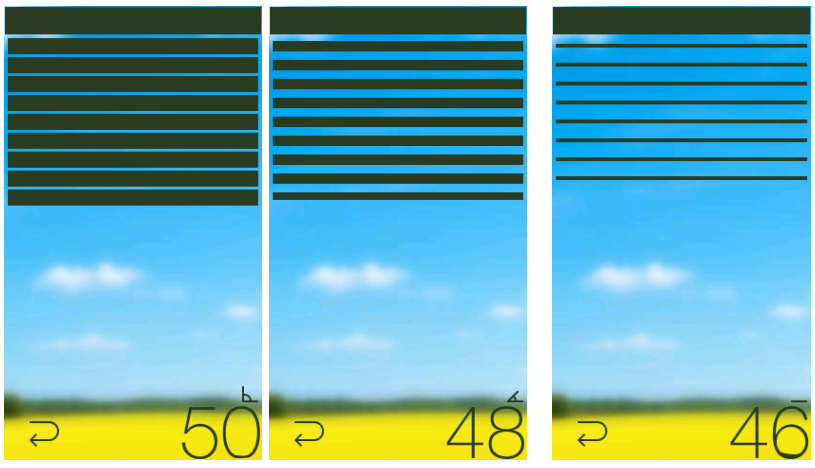


Press the arrow at the bottom left to go back to the main window.

3.2.4.2 Blinds (with lamellas)

When controlling blinds an angle icon appears above the position indicator to show the lamella function and opening/close status.

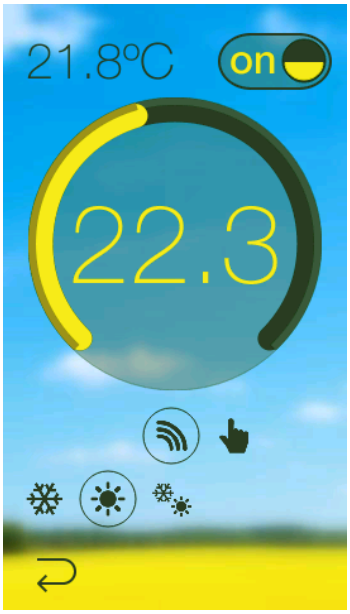
The position of the lamellas is also represented by the width of the slats and can be changed by sliding the finger from left to right (closing) or right to left (opening).



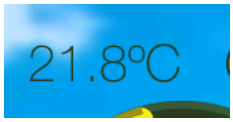
When the position of the lamellas change, the vertical position of the blind may change too according to received values.

3.2.5 THERMOSTATS

External thermostat control: this icon allows controlling an external thermostat of the home automation installation.



By clicking on this icon, a control dialogue appears and allows to switch on/off the thermostat or setting a new set point temperature by sliding the finger over the circular scroll bar (the command is sent when release). The current measured temperature is also indicated at upper left corner (from 0 to 51 °C).



Use the icons below the set point scroll bar to set the working mode of the thermostat.

Working mode (from left to right):

- Summer mode: when the set point temperature is lower than the measured one, the thermostat will switch on the cooling system.
- Winter mode: when the set point temperature is higher than the measured one, the thermostat will switch on the heating system.
- Mix mode: Summer and winter mode simultaneously.

Operation mode (from left to right):

- Remote operation mode: In this mode, the user cannot change the set point temperature, the working mode of the thermostat or switch it on/off.
- Local operation mode: In this mode, the user has complete control over all thermostat functions.

Press the arrow at the bottom left to go back to the main window.

3.2.6 SCENES

Scene execution: Scene icons allow executing programmed scenarios or moods, this means a group of actions that are executed simultaneously, for example, switch off all the lights, raise up all the shutters, etc.

3.2.7 LIST OF AVAILABLE ICONS

The available functions could be different depending on the user's needs and the programming done. Ask the programmer / integrator of the home automation system for further information about the possibilities.

Icons in page

1	2
3	4
5	6
7	8

Page 1			
Position	Icon	Name	Function
1			
2			
3			
4			
5			
6			
7			
8			

Page 2			
Position	Icon	Name	Function
1			
2			
3			
4			
5			
6			
7			
8			

Page 3			
Position	Icon	Name	Function
1			
2			
3			
4			
5			
6			
7			
8			

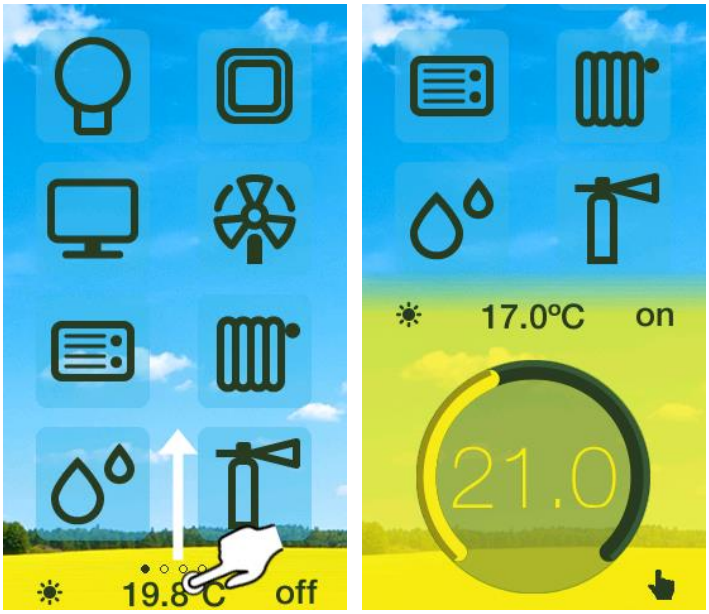
Page 4			
Position	Icon	Name	Function
1			
2			
3			
4			
5			
6			
7			
8			

3.3 INTERNAL THERMOSTAT

The Smart Touch can incorporate an internal thermostat to measure and control the temperature of the room where it is installed. If an internal thermostat is installed, its current status is shown at a bottom bar of the main window and it is alternately displayed with the current time.

3.3.1 SET POINT AND ROOM TEMPERATURE

Do click on the bottom bar or slide upwards to show the control dialogue of the internal thermostat.



From left to right side it is shown the working mode, the measured temperature and the actual status (on/off) of the internal thermostat.

A new set point temperature can be stablished by sliding the finger over the circular scroll bar (the command is sent when release).

3.3.2 SWITCH ON/OFF

The thermostat can be switched on and off by clicking over the following icon on the right:

When clicking the off button, the switch-off actions are executed: the heating or cooling is switched off depending on the current status.

3.3.3 WORKING MODE

The working mode is changed just by clicking over the icon:

- Summer mode: when the set point temperature is lower than the measured one, the thermostat will switch on the cooling system.
- Winter mode: when the set point temperature is higher than the measured one, the thermostat will switch on the heating system.
- Mix mode: Summer and winter mode simultaneously.

3.3.4 OPERATION MODE

The current operation mode is indicated with the following icons at the bottom right corner:

- Remote operation mode: In this mode, the user cannot change the set point temperature, the working mode of the thermostat or switch it on/off.

- Local operation mode: In this mode, the user has complete control over all thermostat functions.

The operation mode of the Smart Touch internal thermostat is stablished by other devices of the home automation system and cannot be changed by clicking on the icon.

3.4 OPTIONS MENU

The options menu allows configuring the appearance, brightness or language of the Smart Touch among other things. If the menu is unblocked (administrator mode disabled) any type of user will be able to change any configuration. In this case, use the bar at the top of the main window to slide down the menu.

It is possible to block this menu depending on the programming of the device, so it can be only available for administrators. If the menu is blocked (administrator mode is enabled) press in the centre of the main window for 5 seconds approximately and use the keyboard to enter the access password.

The options menu shows the following 6 submenus that are explained next:

3.4.1 TIME

The Smart Touch can work as date and time slave in the KNX bus by receiving the corresponding data by telegrams from any other KNX clock (see programming 4.9.1 Date and time pag.34)

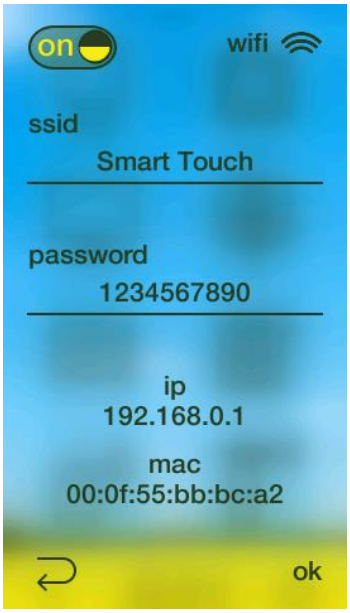
The current date and time can also be configured manually with this option of the menu. Set the desired values using the left and right arrows for every field as shown next:

Press the arrow on the left to go back to the main window without saving the date and time changes.

Press ok on the right to accept the new configuration. By doing this, the Smart Touch will send the date and time to the other devices of the home automation system.

3.4.2 WI-FI

The Smart Touch incorporates Wi-Fi connectivity which allows the user to control the home automation system locally through any wireless device such as smartphones or tablets and also for the programmer to download the project. It works as an access point creating a Wi-Fi network that any PC, smartphone or tablet can connect to, and operate it with the Ingenium Android and iOS available applications.



The Wi-Fi network is generated by the Smart Touch with the name (SSID) and password configured in this menu. This network has no internet access, so it is not possible to navigate through the web or control the home automation system from outside the house or installation.

The type of security of the network generated is WPA and the password must have at least 8 characters.

The Wi-Fi access point creation can be disabled by pressing the on/off button. Press ok at the bottom right corner to accept every configuration setting and create a network. Below the Wi-Fi settings there is information about the IP of the Smart Touch and MAC address.

Press the arrow on the left to go back to the main window without saving changes.

Press ok on the right to accept the new configuration.

The control applications are free and can be found in the corresponding markets (the Android app is called aSC and it is available in Google Play; the iOS app is called iSC and it is available in the App Store). See their corresponding manuals for further information.

3.4.3 APPEARANCE

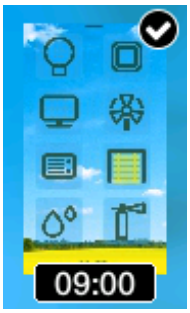
In this option menu, the appearance of the screen icons and colours can be changed by selecting different themes according to the customer likes.

The Smart Touch incorporates 3 default themes (predefined) to change the appearance of the screen with different colours and icon styles, but it can also incorporate another 3 themes that can be customized by programming (ask the administrator of your home automation system).

3.4.3.1 Change automatically

The device can show a fixed theme or a list of themes that will change automatically by programmed hours, to do so, change the appearance mode to auto and select the time of the day to change. The Smart Touch will show the programmed themes every day at the configured times for each one.

To select a theme to be included in the auto change sequence do click on the upper right corner of it.



Then write the desired hour of change with the keyboard by clicking over the clock at the bottom of each theme.

Click ok at the bottom right corner of the keyboard to accept the settings and go back to the main window saving changes with the arrow button.

3.4.3.2 Change by bus telegram

The appearance can also be changed by bus telegrams from any other device of the home automation system (see 4.9.2 Appearance change pag.35).

3.4.4 BRIGHTNESS

This option of the menu allows configuring the brightness behaviour of the screen backlight. There are three parameters to configure that are explained next:

Active [3 - 15]: Is the brightness level when the screen is being used.

Standby [0 - 15]: Is the brightness level that it is set after a period of idle time. Set this value to 0 to switch off the brightness completely when the Smart Touch is not being used.

Time [5 - 60 seconds]: Is the time that the screen waits to set the standby brightness level since the last pulsation.

Press the arrow on the left to go back to the main window without saving changes. Press ok on the right to accept the new configuration.

Press the arrow on the left to go back to the main window without saving changes.

Press ok on the right to accept the new configuration.

3.4.5 SECURITY

The Smart Touch can be locked with a 4 digits password to avoid its use. Do click on the corresponding button to enable or disable the lock of the screen (the password is required for any change of this function).

The default password is 1234 and it can be changed by clicking on the corresponding button in the centre of the window.

If the lock mode is enabled, the screen will ask for the password every time that changes from standby to active mode. If the lock mode is disabled, the Smart Touch can be activated and therefore used by anyone just by clicking on the screen.

3.4.6 LANGUAGE

Use this menu to change the presentation language of the Smart Touch. Choose between English, Spanish and French by clicking on the left and right arrows.

Press the arrow on the left to go back to the main window and accept changes.

3.5 DEFAULT ACTIONS

3.5.1 GESTURE CONTROL

The Smart Touch allows executing some programmed actions by gesture control. When the screen is off or locked it is possible to execute some actions without needing to unlock it, just sliding the finger upwards or downwards.

The available functions could be different depending on the user's needs and the programming done. Ask the programmer / integrator of the home automation system for further information about the possibilities.

3.5.2 LIST OF AVAILABLE DEFAULT ACTIONS

The available functions could be different depending on the user's needs and the programming done. Ask the programmer / integrator of the home automation system for further information about the possibilities.

Control gesture	Function(s)
Slide upwards	
Slide downwards	

4 PROGRAMMING

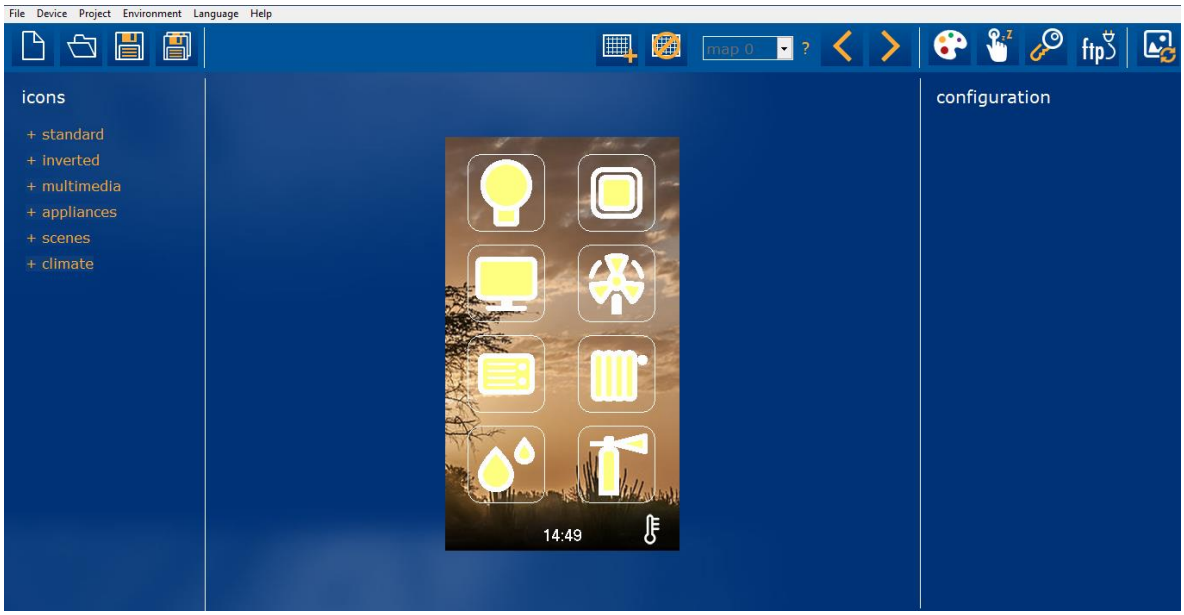
4.1 INTRODUCTION

The "Development System KNX®" (SIDE KNX) is the software for programming Ingenium KNX web servers and touchscreens (ETHBUSKNX, PPKL-7, PPKL-4, Smart Touch, etc.)

SIDE KNX general characteristics are the following:

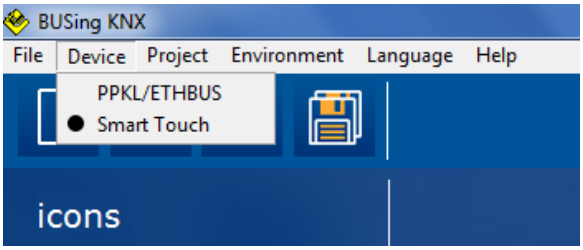
- **Quick and easy programming:** All the controlled devices that have been added to the project are shown intuitively over the plans. Every icon can be set according to your needs and control preferences.
- **Importing**: The ETS group addresses can be imported in *.xml to make the programming easiest.
- **FTP downloading**: Fastest programming method to download all the data to the devices.
- **Images processing**: The 3D Drawings, photographs, etc. used and set by the designer / programmer are processed to obtain a good visualization without losing quality.
- **Personalization**: The software allows to use any picture or icon created by the programmer

With this program the programmer can place plans (usually pictures or 3D drawings of the rooms of a house or zones of the installation) and over them the icons of the controlled objects. Every icon object is linked to the KNX devices to control. When everything is programmed, the project must be transferred to the touchscreens or web server, to do so it is necessary to be connected to the device by a TCP/IP connection. The device will self-reset and when it finishes it will be ready to operate with it.

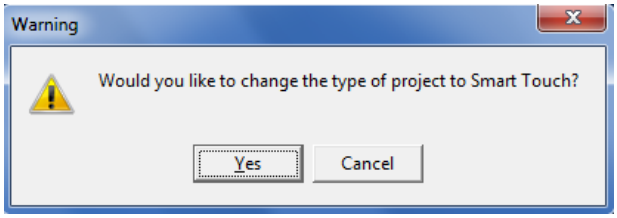


4.2 DEVICE SELECTION

The first thing to do when starting a programming project with the SIDEKNX is selecting the type of device that will be the target of the project. The software can be used for programming Ingenium KNX web servers (Ethbus) and different types of touchscreens (PPKL-x, Smart Touch, etc.).



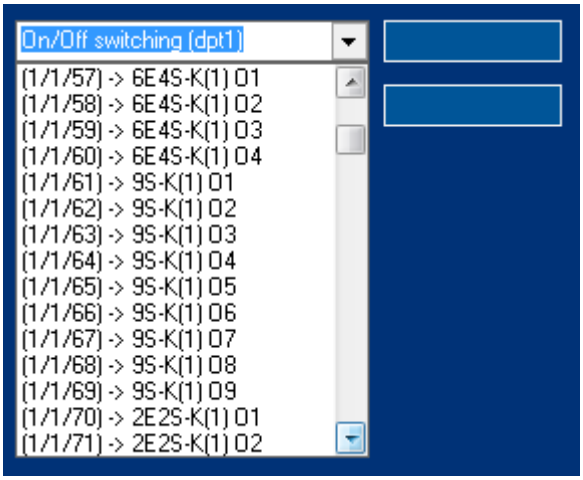
When the target of the project is a Smart Touch, it must be selected in the corresponding menu: Device -> Smart Touch.



4.3 GROUP ADDRESSES IMPORT

The SIDEKNX allows importing the group addresses created in any ETS project by clicking on the environment menu and import group addresses. The file to import must be in XML format.

Once the group addresses have been imported they can be selected for each object when programming the type of icons.

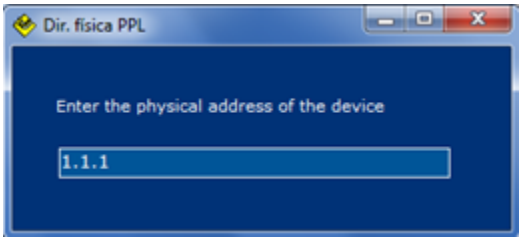


Do click on delete group addresses option in the environment menu to remove them from the SIDEKNX project. It is recommended to do so before importing new xml files.

4.4 INDIVIDUAL ADDRESS ASSIGNMENT

The Smart Touch individual address it is not assigned by the ETS as other KNX devices. This touchscreen is completely programmed by the SIDEKNX software, including the individual address and group associations.

Do click on *Project* > *Individual address* from menu bar to show the individual address configuration window.



Here it is set the KNX individual address that the device takes when it is programmed. Write it down manually in the standard individual address format: *x.x.x*.

4.5 THEME CREATION

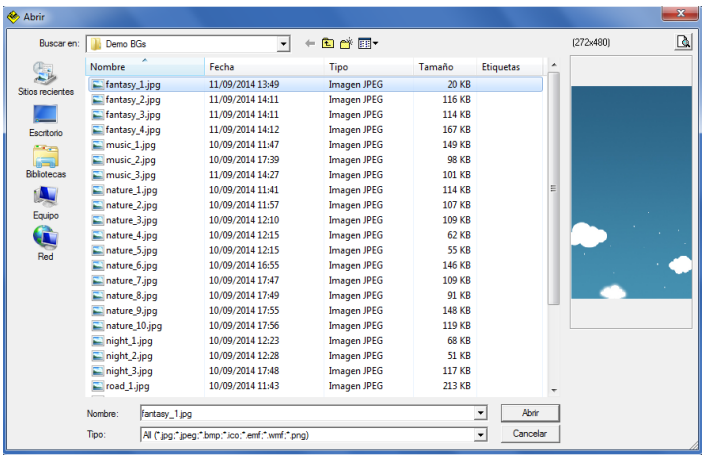
The appearance of the screen icons and menus can be changed by selecting different themes according to the customer likes, in the configuration menu of the Smart Touch. It can be selected a fixed theme or a list of themes that will change automatically by programmed hours (see 3.4.3 Appearance pag.17)

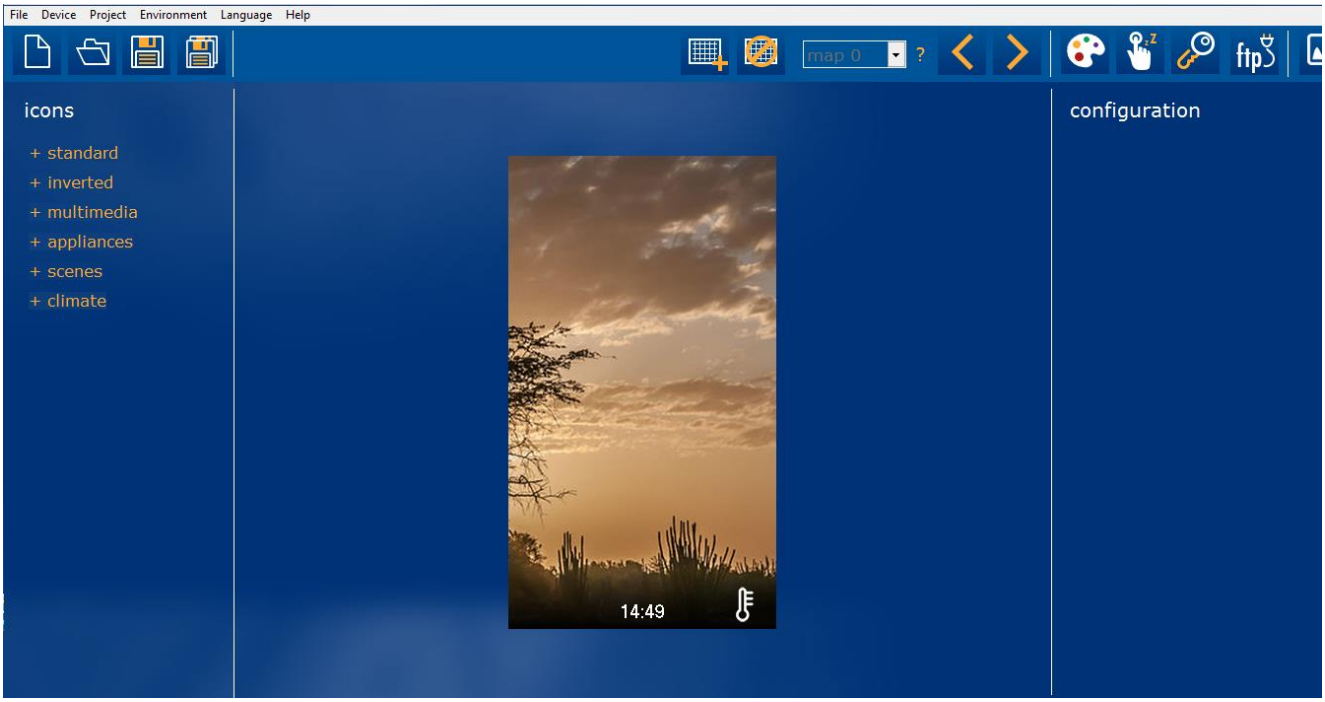
The Smart Touch incorporates 3 default themes to change the appearance of the screen with different colours and icon styles, but it can also incorporate another 3 themes that can be customized by the programmer/integrator by using the SIDEKNX theme creator tools.

4.5.1 BACKGROUND PICTURES

Each theme must have a background picture that it is loaded with the following button:

In the installation directory of the SIDEKNX there are some different pictures available, use the window that appears to select which one to be loaded in the current theme.

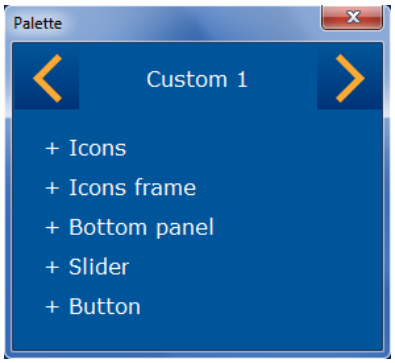




4.5.2 STYLE EDITION PALETTE

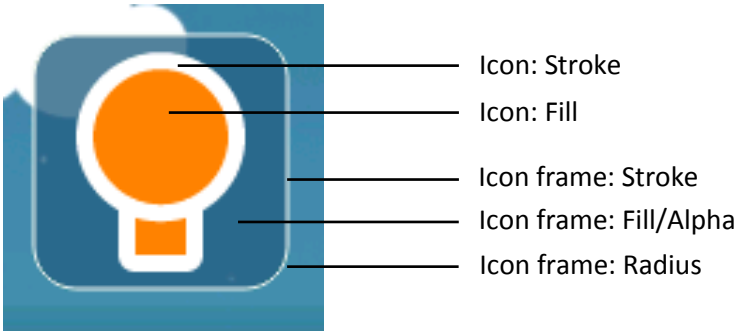
The style of the icons and menus of the Smart Touch can be edited by clicking on the palette icon.

Use the right and left arrows at the top of the palette window to change between the 3 themes and editing their styles.



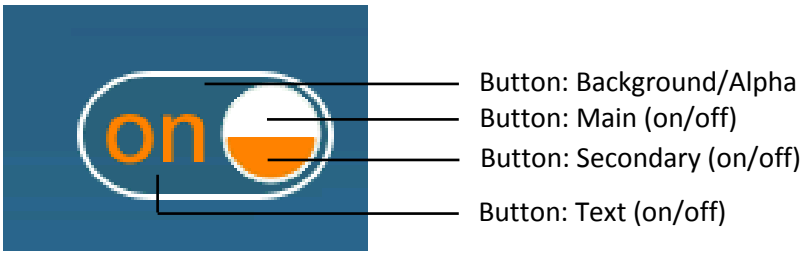
These are the part of icons, menus and control dialogues that can be edited for each theme. It can be selected any colour and in some cases a factor of transparency: alpha, which can vary from 0 to 255, being 0 the maximum transparency and 255 the maximum opacity.

Icons: Stroke, Fill and Main.
Icons frame: Stroke, Fill/Alpha, Radius.

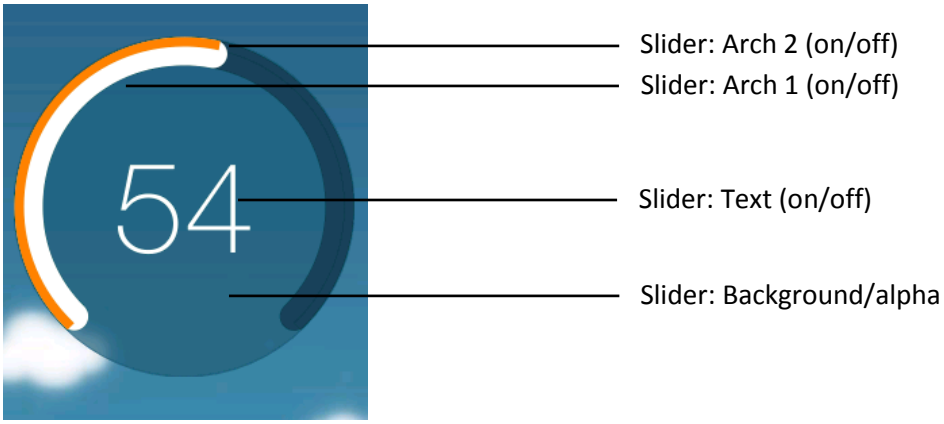


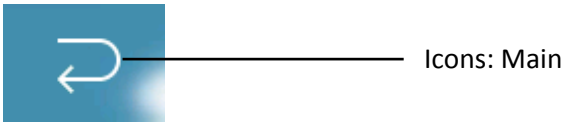
Bottom panel: Background, text.

Button: Background, Main, Secondary, Text.



Slider: Background, Arch 1, Arch 2, Text.





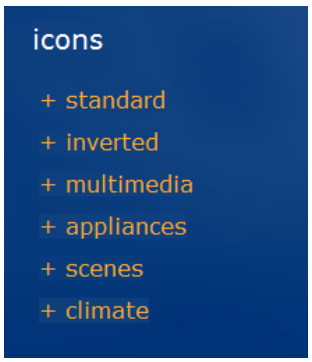
4.6 ADDING NEW PAGES

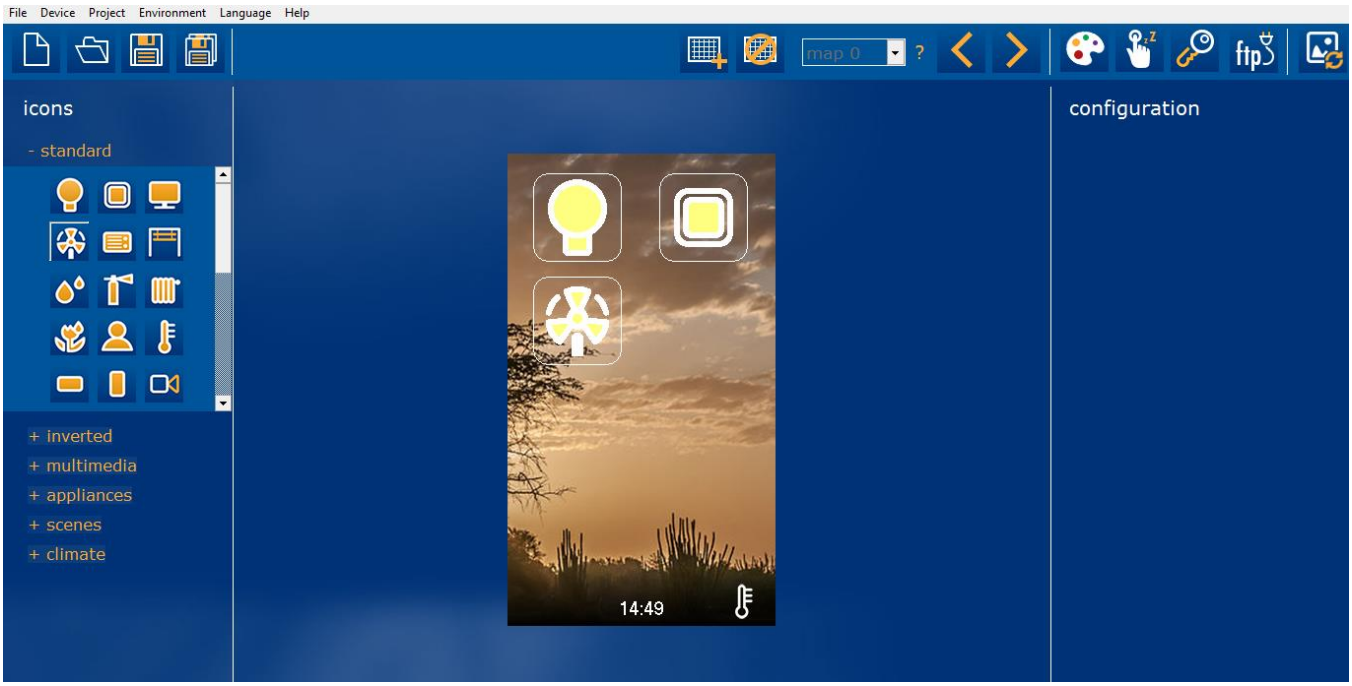
Use the left and right arrows to add new pages of icons to the Smart Touch. It can be added up to 4 pages with 8 icons each.

Do not confuse backgrounds with pages, only one background can be loaded per theme. It cannot be left empty pages in the programming project.

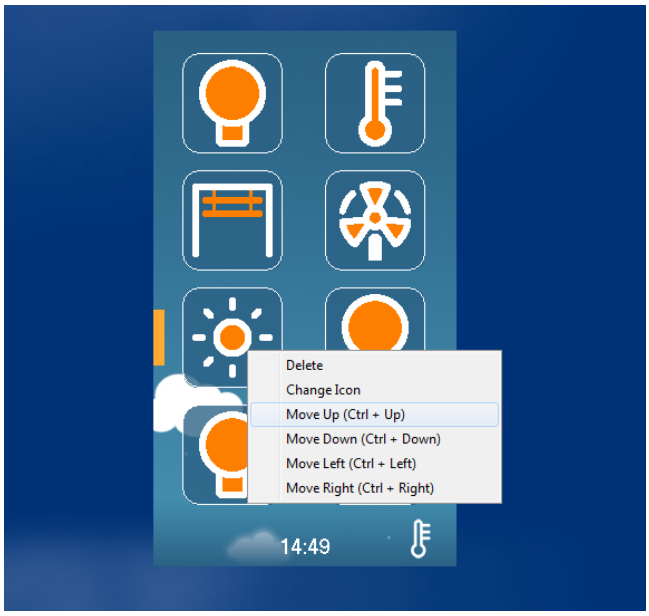
4.7 ADDING NEW ICONS

Add icons to the current page with the tree on the left. Open each category and press over the icons to include them to the project. Each icon will be added consecutively.

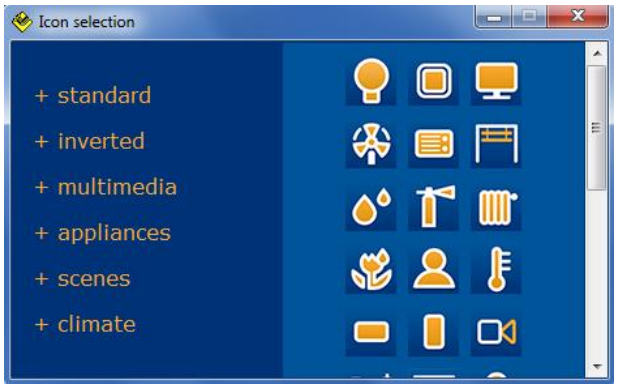




After adding every icon, they can be put in order by doing click with the right mouse button or by the keyboard shortcut (Ctrl+up/down/left/right).



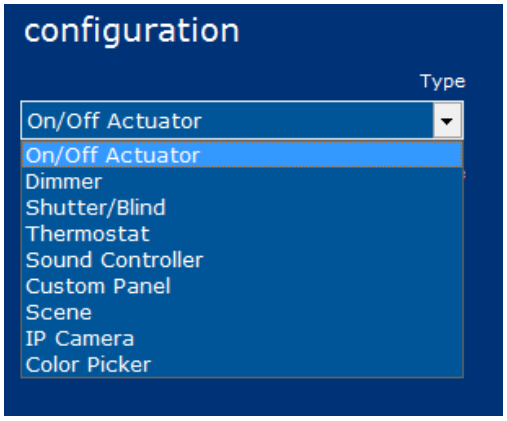
Do click on change icon and select the new one if you want to change the icon appearance without changing its properties.



4.8 TYPE OF ICONS

Do click on each icon to select it and then program the type using the combo box on the right.

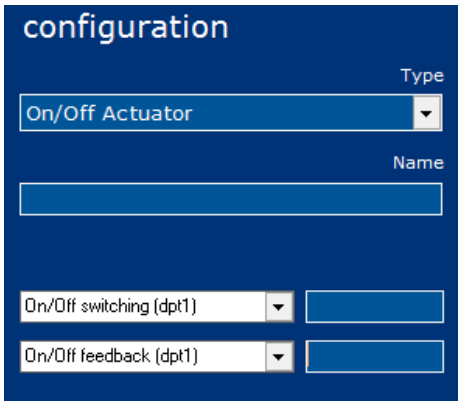
The type of icons available in the Smart Touch and their communication objects are explained next.



Use the name field to write the label that the icon will have on the screen and use write also the group addresses for each communication object.

4.8.1 ON/OFF ACTUATOR

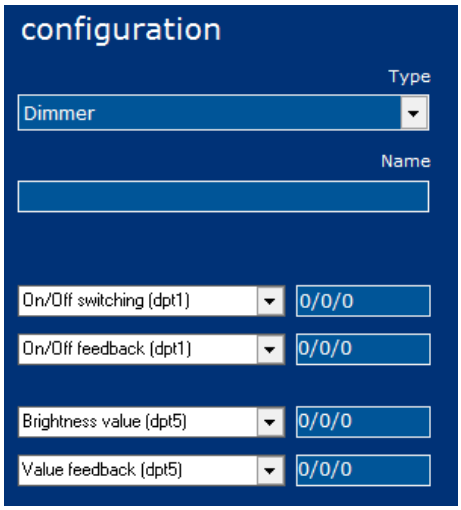
When the type *On/Off Actuator* is selected the following objects are shown:



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	On/Off switching	1 bit	1.001	●			●	
1	On/Off feedback	1 bit	1.001	●		●		●

4.8.2 DIMMER

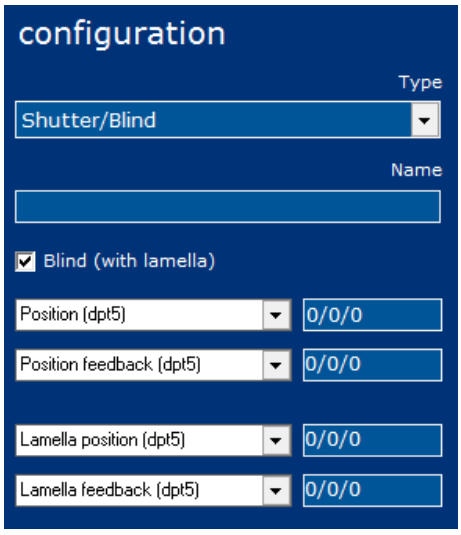
When the type *Dimmer* is selected the following objects are shown:



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	On/off switching	1 bit	1.001	●			●	
1	On/off feedback	1 bit	1.001	●		●		●
2	Brightness value	1 byte	5.001	●			●	
3	Brightness feedback	1 byte	5.001	●		●		●

4.8.3 SHUTTER/BLIND

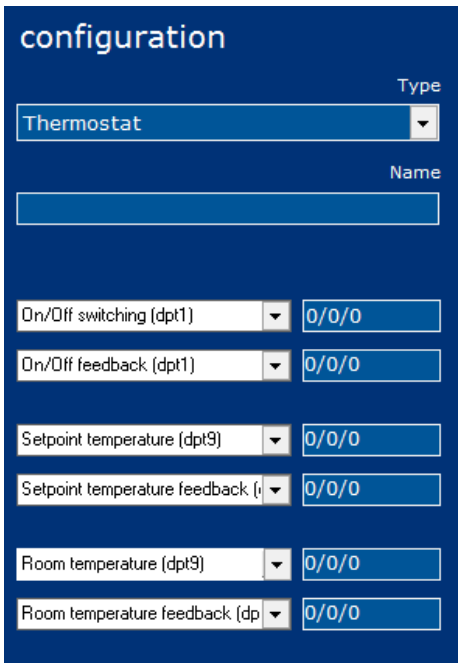
When the type *Shutter/Blind* is selected the following objects are shown:



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Position value	1 bit	1.001	●			●	
1	Position feedback	1 bit	1.001	●		●		●
2	Lamella position	1 byte	5.001	●			●	
3	Lamella feedback	1 byte	5.001	●		●		●

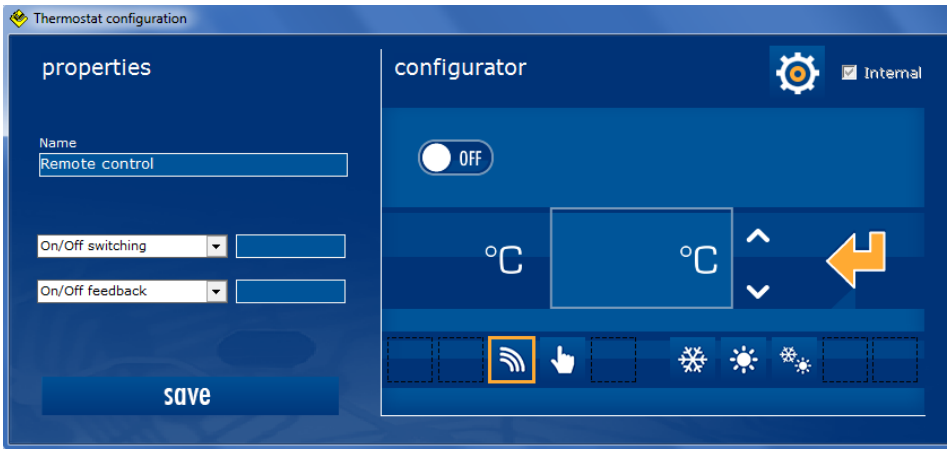
4.8.4 THERMOSTAT

When the type *Thermostat* is selected the following objects are shown:



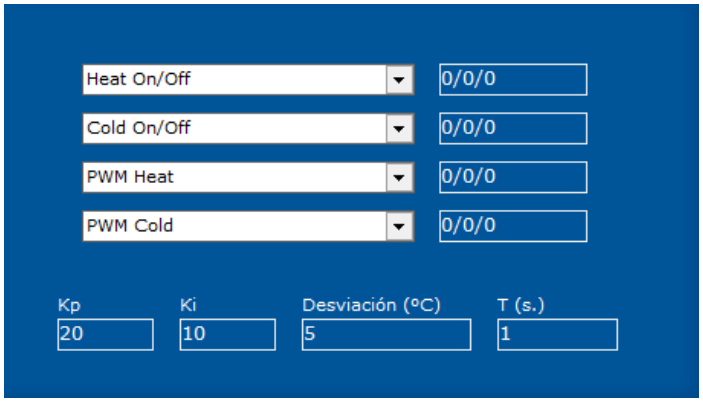
Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	On/off switching	1 bit	1.001	●			●	
1	On/off feedback	1 bit	1.001	●		●		●
2	Set point temperature value	2 bytes	9.001	●			●	
3	Set point temperature feedback	2 bytes	9.001	●		●		●
4	Room temperature	2 bytes	9.001	●			●	
5	Room temperature feedback	2 bytes	9.001	●		●		●

Do click on settings button to show the mode communication objects. There are two groups of 5 icons maximum in each.



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	On/off switching	1 bit	1.001	●			●	
1	On/off feedback	1 bit	1.001	●		●		●

When programming the internal thermostat, do click on the gear icon to set the output configuration.



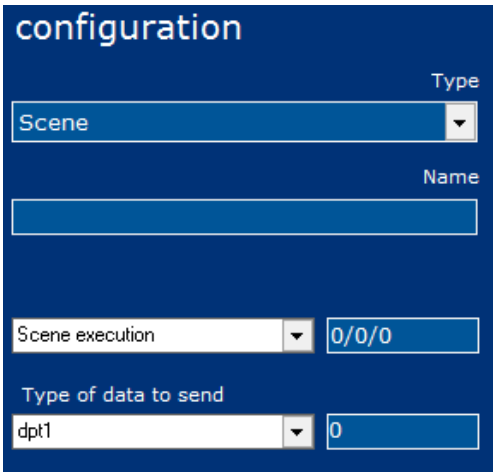
Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Heat on/off	1 bit	1.001	●			●	
1	Cold on/off	1 bit	1.001	●			●	
2	PWM Heat	1 byte	5.001	●			●	
3	PWM Cold	1 byte	5.001	●			●	

Use the Kp and Ki constants to configure the behaviour of the internal PI regulator.

Set the deviation of the thermostat to avoid the differences between the measured temperature and the real temperature.

4.8.5 SCENE

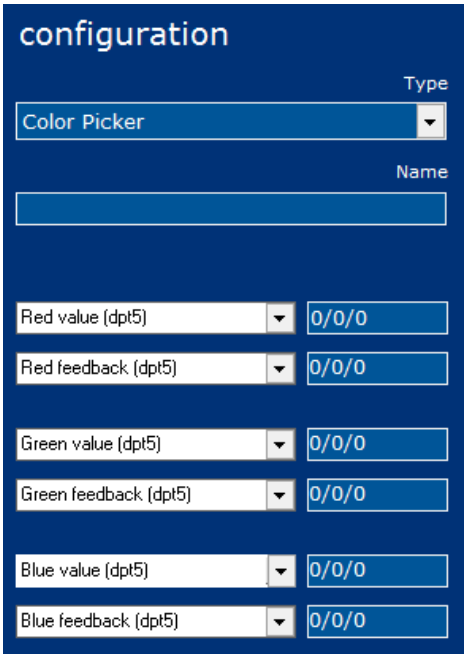
When the type *Scene* is selected the following objects are shown:



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Scene execution	1 bit	1.001	●			●	
1	Scene execution	1 byte	5.001	●			●	
2	Scene execution	2 bytes	7.001	●			●	

4.8.6 COLOUR PICKER

When the type *Colour picker* is selected the following objects are shown:

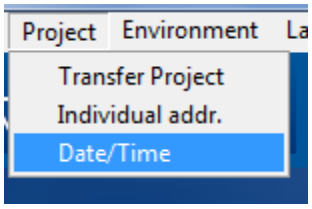


Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Red brightness value	1 byte	5.001	●			●	
1	Red brightness feedback	1 byte	5.001	●		●		●
2	Green brightness value	1 byte	5.001	●			●	
3	Green brightness feedback	1 byte	5.001	●		●		●
4	Blue brightness value	1 byte	5.001	●			●	
5	Blue brightness feedback	1 byte	5.001	●		●		●

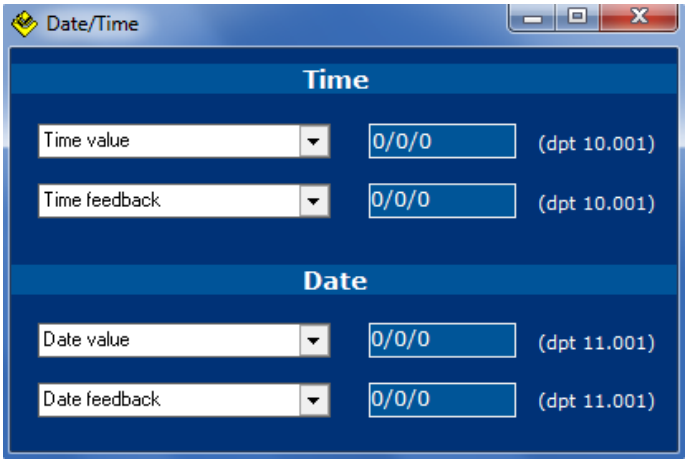
4.9 OTHER FUNCTIONS

4.9.1 DATE AND TIME

Do click on the project menu -> Date/time to show the settings window.



The Smart Touch can work as date and time master or slave in the KNX bus by sending or receiving the corresponding data by telegrams from any other KNX clock.



Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Time of day	3 bytes	10.001	●		●		
1	Time of day feedback	3 bytes	10.001	●			●	
2	Date	3 bytes	11.001	●		●		
3	Date feedback	3 bytes	11.001	●			●	

Write down the group addresses for objects 0 and 2 if the Smart Touch must be a date/time slave in the KNX bus. On the other hand, complete the group addresses for objects 1 and 3 if the Smart Touch must be a date/time master. In this case, use the time menu (options) to set the current configuration (see 3.4.1 Time pag. 15).

4.9.2 APPEARANCE CHANGE

The appearance of the screen icons and colours can be changed by selecting different themes according to the customer likes. It can change automatically by programmed hours (see 3.4.3 Appearance pag.17) or by bus telegrams from any other device of the KNX system.

Do click on the following icon at the top right of the main window of SIDEKNX to program the corresponding group address.

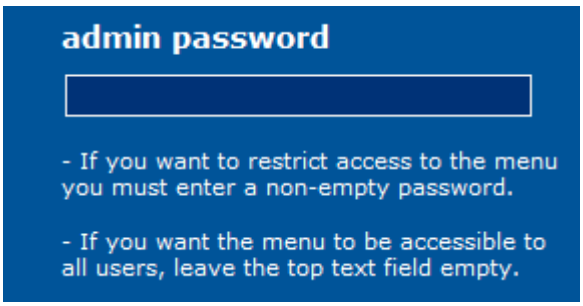
Writing a value from 1 to 6 to this communication object will change the current theme of the Smart Touch to the desired one.

Object	Name	Length	DPT	Flags				
				C	R	W	T	U
0	Theme change (appearance)	1 byte	5.001	●		●		

4.9.3 ADMINISTRATOR PASSWORD

The options menu, which allows configuring the appearance, brightness, language, etc. can be hidden only for administrators.

Do click on the following icon at the top right of the main window of SIDEKNX to program the corresponding password for enabling/disabling it.



This function is enabled just by writing a password. If the menu is blocked (administrator mode enabled), press in the centre of the Smart Touch main window for 5 seconds approximately and use the keyboard to enter the access password.

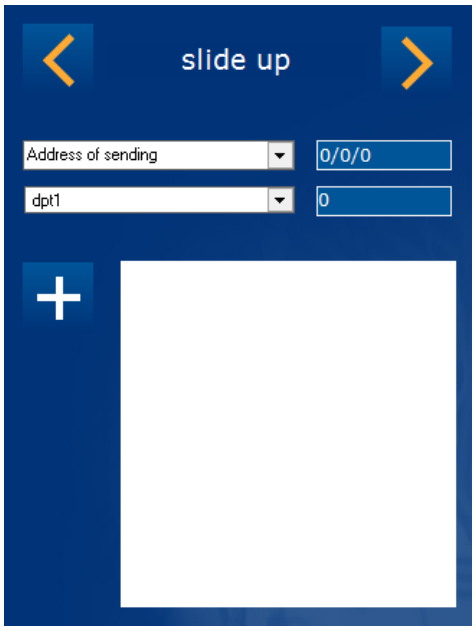
Leave the admin password empty to disable this function. If the menu is unblocked (administrator mode disabled) any type of user will be able to change any configuration. In this case, it can be used the bar at the top of the main window to slide down the menu.

4.9.4 DEFAULT ACTIONS

The Smart Touch allows executing some programmed actions by gesture control (sliding up or down) when the screen is off or locked.

Do click on the following icon at the top right of the main window of SIDEKNX to program the actions that will be executed for each gesture control.

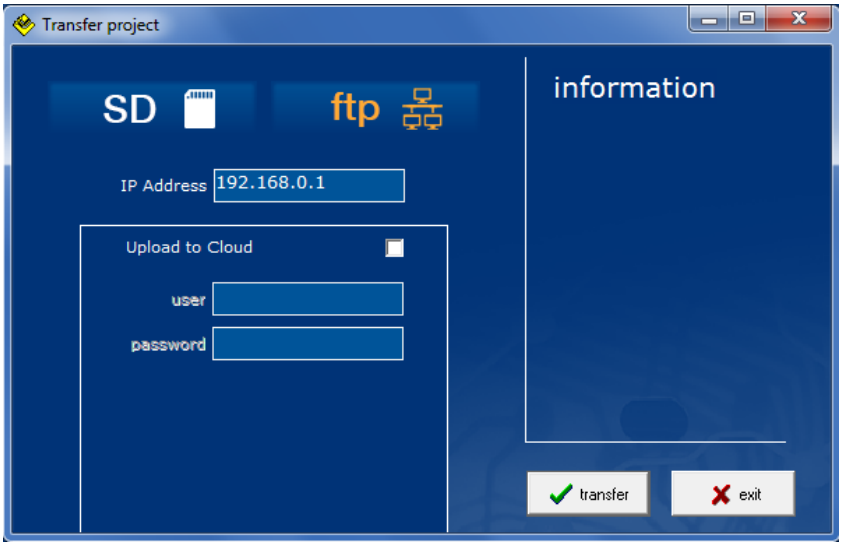
Write the sending group address, set the size of the telegram (1bit, 1byteor 2bytes) and the value sent. It is also possible to program a sleep function (in seconds) in order to wait a time between programmed actions. Finally do click on the plus button to add the command to the scenario.



4.10 DOWNLOADING THE PROJECT

The SIDE KNX allows programming Ingenium KNX web servers and touchscreens: ETHBUSKNX, PPKL7-G, PPKL4-G, Smart Touch, etc. In the case of the Smart Touch, it is programmed through the internet by connecting the computer to the same Wi-Fi network.

To program the Ingenium device, first save the project and then press the *transfer project* button from Toolbar panel or select *Project > Transfer* and the following window will be showed. Then do click on the corresponding button to select the ftp downloading method.

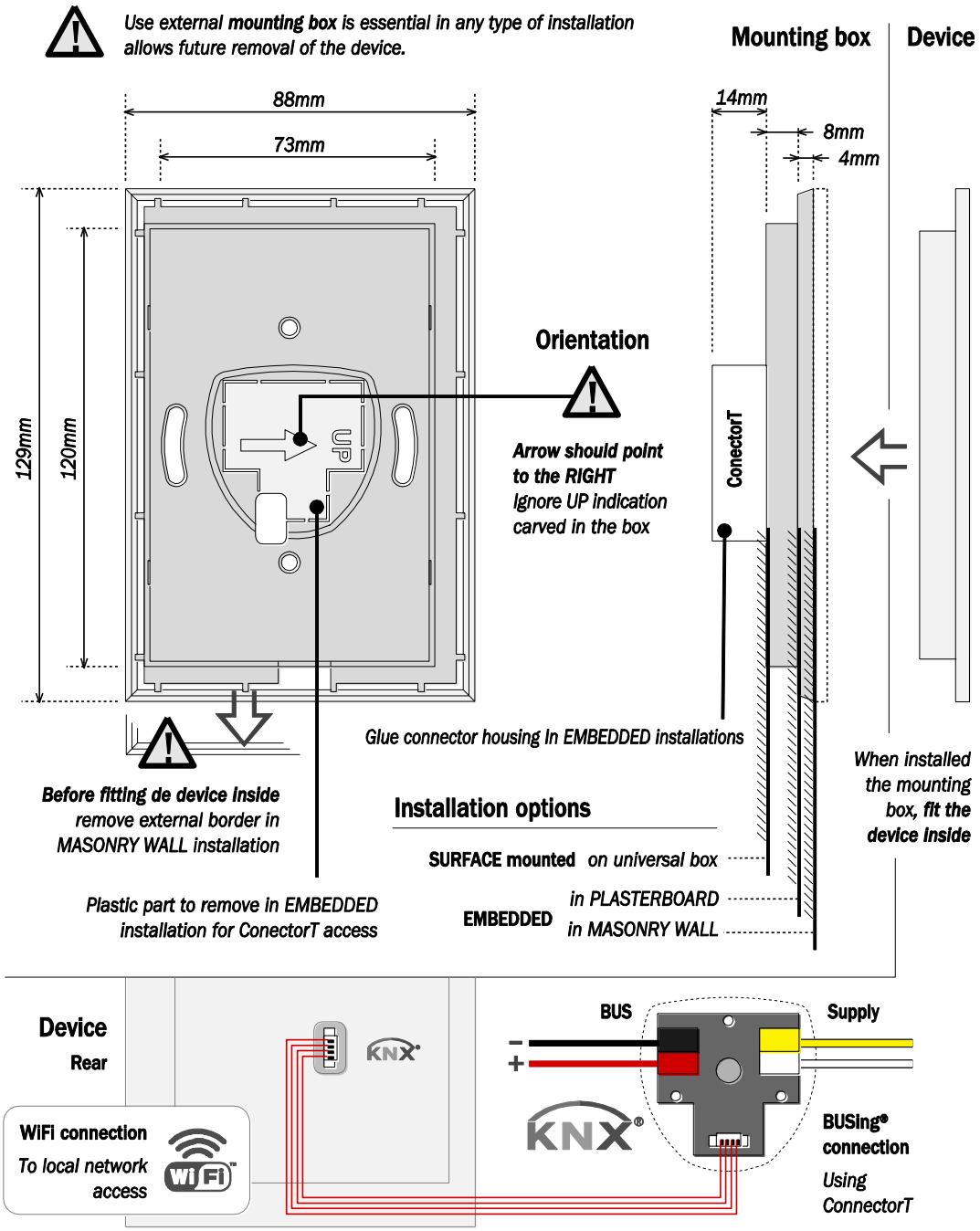


Enter the IP address of the screen (see 3.4.2 Wi-Fi pag.16). The upload to cloud function are used only when programming Ingenium webservers.

Note: The SmartTouch and the programmer computer must be connected to the same network and configured in the same subnet. Check the correct connection of the screen by using ping windows networks command before downloading.

Do click on transfer to complete the process. The status will be shown in the information window. After the downloading process the screen will reboot automatically.

5 INSTALLATION



Feed low voltage lines (BUS and inputs) in separate ducting to that of power (230V) and outputs to ensure there is enough insulation and avoid interferences.

Do not connect the main voltages (230 V) or any other external voltages to any point of the BUS or inputs.

6 NOTES

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