



HC3-KNX / HC3L-KNX

Getting started



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Introduction

1.1 About this document

This document is a quick guide to help you get started with the Iddero HC3-KNX and HC3L-KNX touch panels. Detailed, step-by-step instructions are provided on how to create and configure a simple installation project, and to upload it to the touch panel.

This guide assumes basic knowledge and familiarity with KNX® technology and with the ETS® configuration software.

1.2 Product overview

The Iddero HC3-KNX and HC3L-KNX “all-in-one” touch panels are complete solutions for KNX visualisation and control. The intuitive, user-friendly visualisation is combined with a wide array of advanced functions and features, IP connectivity for remote access from smartphones, tablets, and PCs, and seamless integration with door phone systems.

Both models integrate a multitouch-enabled capacitive touch screen. The HC3-KNX model features a 7" TFT display, while the HC3L-KNX model features a 10,1" display with IPS technology.

GLASS (full glass front) and CLASSIC (interchangeable front frames) finishes are available.

Product highlights:

- Simple, user-friendly navigation through floorplans and zones
- Up to 512 configurable pages, with up to 8 control functions per page (more than 4000 functions)
- Custom background images in all pages
- Touch gestures: 4 swipe gestures + multitouch gesture
- User-editable scenes
- Weekly time schedules
- Alarm monitoring with event log
- Presence simulation with day and night schedules

- Event notifications by e-mail and GSM ¹
- Logic and arithmetic functions
- Four independent thermostats
- Video door phone function, with full duplex audio and echo cancellation
- IP camera monitoring
- Remote control from smartphones, tablets, and PCs
- Integrated stereo loudspeakers and digital microphone
- Four multi-function inputs, individually configurable as binary or temperature probe inputs
- Real-time clock (RTC) with backup battery
- Integrated KNX bus coupling unit (TP1)
- Very low power consumption

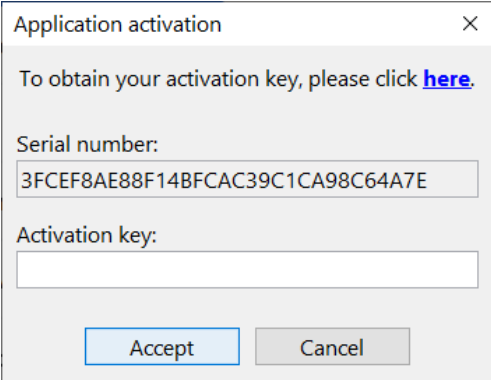
¹ Requires DW-GSM expansion module

The iddero-config configuration software

2.1 Installation and first steps

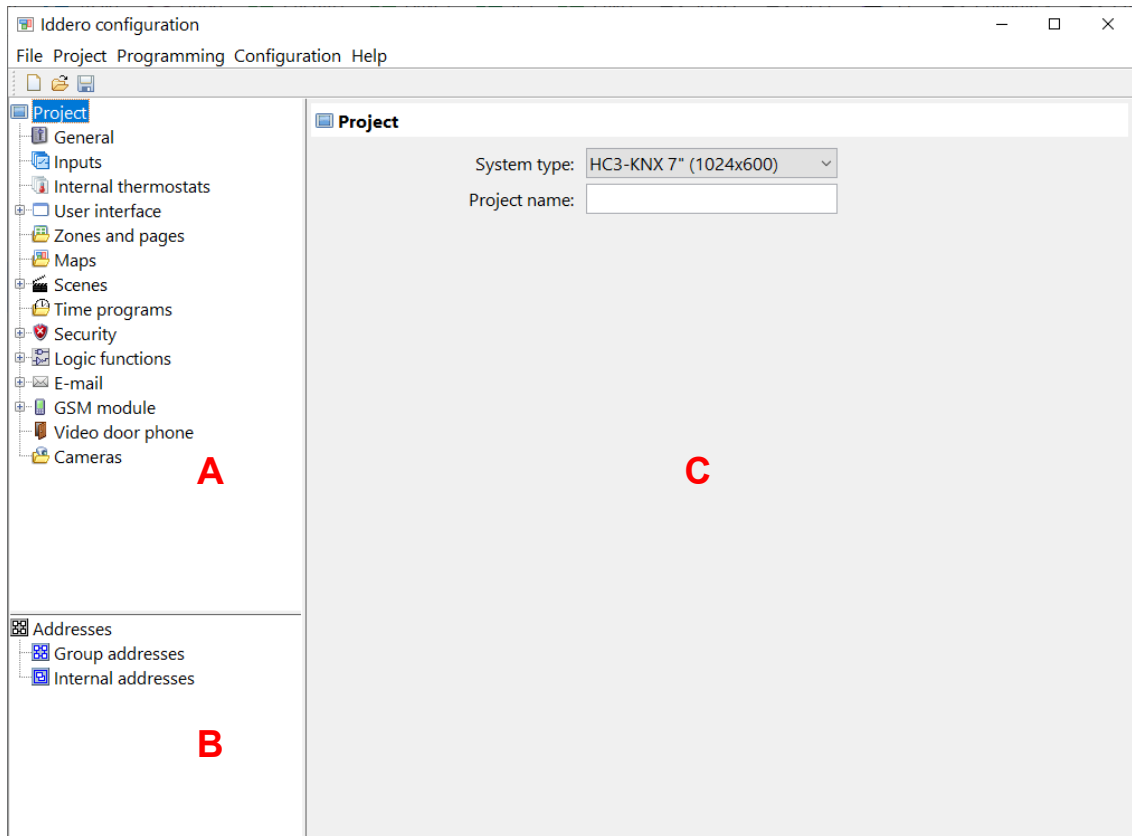
The Iddero HC3-KNX and HC3L-KNX touch panels can be configured using the **iddero-config** software, which is available free of charge from www.iddero.com. We recommend to always use the latest version available.

The first time you run the software, it will request an activation key. In order to obtain the activation key, please click on the link shown in the dialog box. This will open a web page with a request form. Fill in the form and you will receive an activation key by e-mail.



A dialog box titled "Application activation" with a close button (X) in the top right corner. The text inside reads: "To obtain your activation key, please click [here](#)." Below this, there are two input fields. The first is labeled "Serial number:" and contains the text "3FCEF8AE88F14BFCAC39C1CA98C64A7E". The second is labeled "Activation key:" and is currently empty. At the bottom of the dialog, there are two buttons: "Accept" and "Cancel".

Once the activation process is complete, the main application window will be shown.



At the top, the main menu is shown (File, Project, Programming, Configuration, and Help) along with a toolbar with quick access buttons.

The main window is split in three different areas:

- *Project tree* (A): Shows the project structure, including sections for general parameters, zones and pages, maps, scenes, time programs, security, logic functions, and more.
- *Address tree* (B): Shows group addresses for this project, including both regular group addresses and internal group addresses.
- *Parameter area* (C): When an item is selected in the project or address trees, this area will show any configurable parameters that are available for this item.

Touch panel configuration

3.1 The configuration process

This section walks through the basic configuration process in order to create a sample project where the Iddero touch panel will be used to control a single lamp, through a KNX-based dimmer actuator.

We will assume that the KNX dimmer actuator in question implements at least the following communication objects:

- One 1-bit communication object for switching the lamp on and off (address 1/1/1)
- One 1-byte communication object for setting the brightness value (1/1/2)
- One 1-byte communication object that holds the current brightness value (feedback) (1/1/3)

3.2 Select the product model

The first thing you need to do is select the specific model of touch panel that will be used in the project. For this, first select the “Project” section in the project tree, then choose the proper model (HC3-KNX, HC3L-KNX) in the “System type” field in the parameter area.

The selected touch panel model determines the screen resolution for maps and background images, as well as resource limits. Available resources can be checked at any time in the Project > Resource monitor menu option.

3.3 Create or import group addresses

Although it is possible to define group addresses directly in iddero-config, it is common to initially import addresses from an existing ETS project.

You can import group addresses directly from the .knxproj files generated by ETS. For this, select Project > Import ETS addresses (.knxproj)... in iddero-config, then select the .knxproj file.

Note

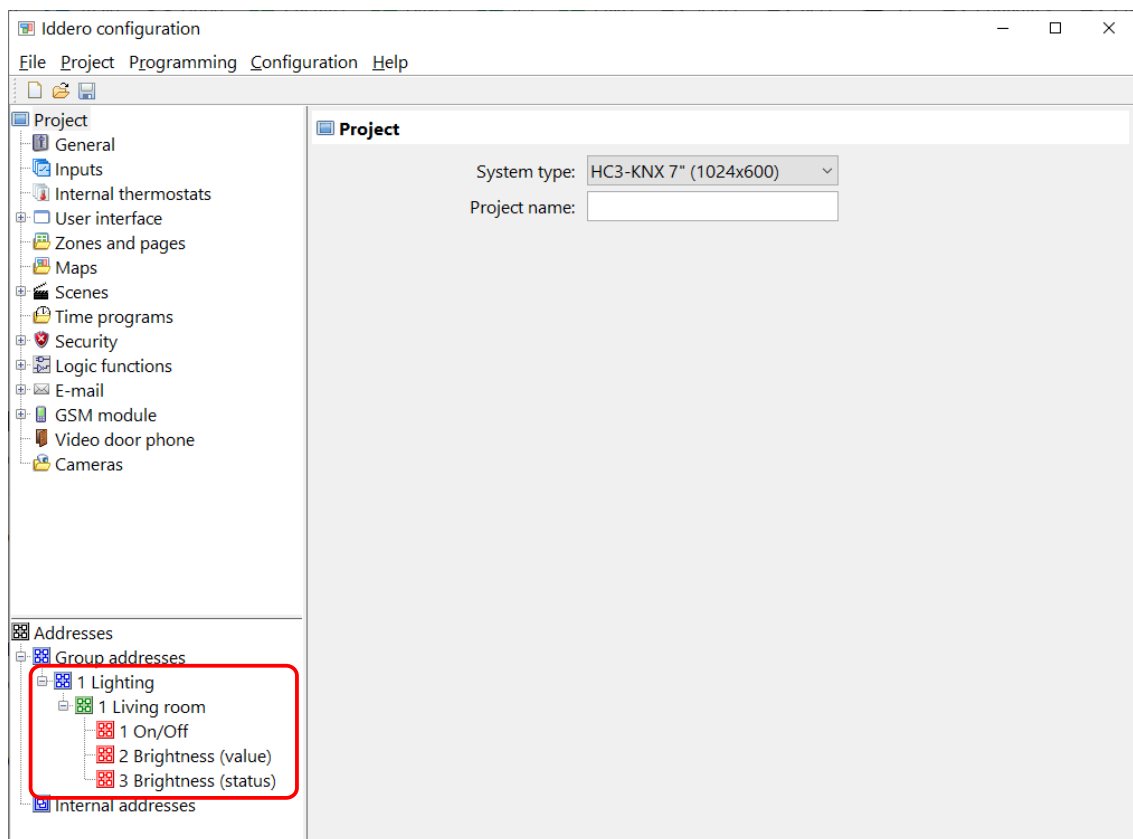
Make sure the selected .knxproj file is not password protected.

The software will then show all group addresses found in the .knxproj file. Click on “Import” to complete the import.

Note

If you try to import group addresses from a .knxproj file into a project that already contains group addresses, you will be given two options: “Add new addresses to the existing address tree” or “Discard existing addresses”.

Once the group addresses have been imported, they will be shown in the address tree.



3.4 Configure the visualization components

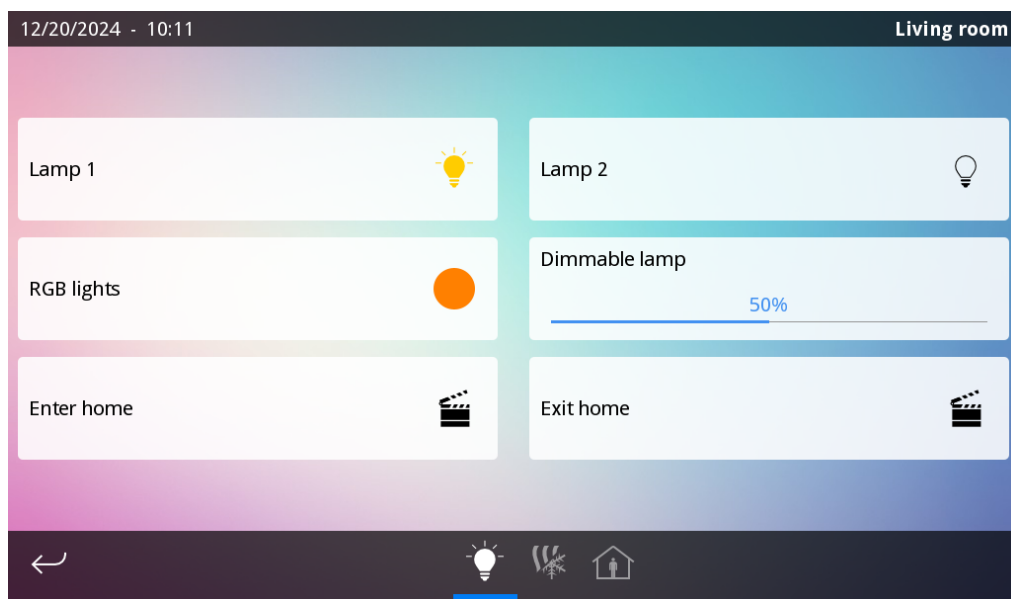
3.4.1 General concepts

Navigation in Iddero touch panels is based on the concept of “zones” and “pages”.

Zones are groups of devices (“components”) within the installation. A zone can represent a room in a house, an office, a department in a services building, or just a group of devices that do not necessarily share a physical location.

Devices associated to each zone are in turn organized in one or more **pages**. Each page can show up to eight devices. The grouping of devices in pages can be done based on arbitrary criteria: Devices can be grouped by function, by type, by frequency of use, etc.

The following screenshot shows the structure of a typical page with six devices. The status bar at the top of the screen shows that this page belongs to the “Living room” zone. The navigation bar at the bottom shows that the zone includes another two pages besides the one shown.



In our sample project we will initially create one single zone with one single page, since we only need to control one device.

In a real-world project, though, the navigation structure should be carefully planned so that navigation is as easy and comfortable as possible for the end user.

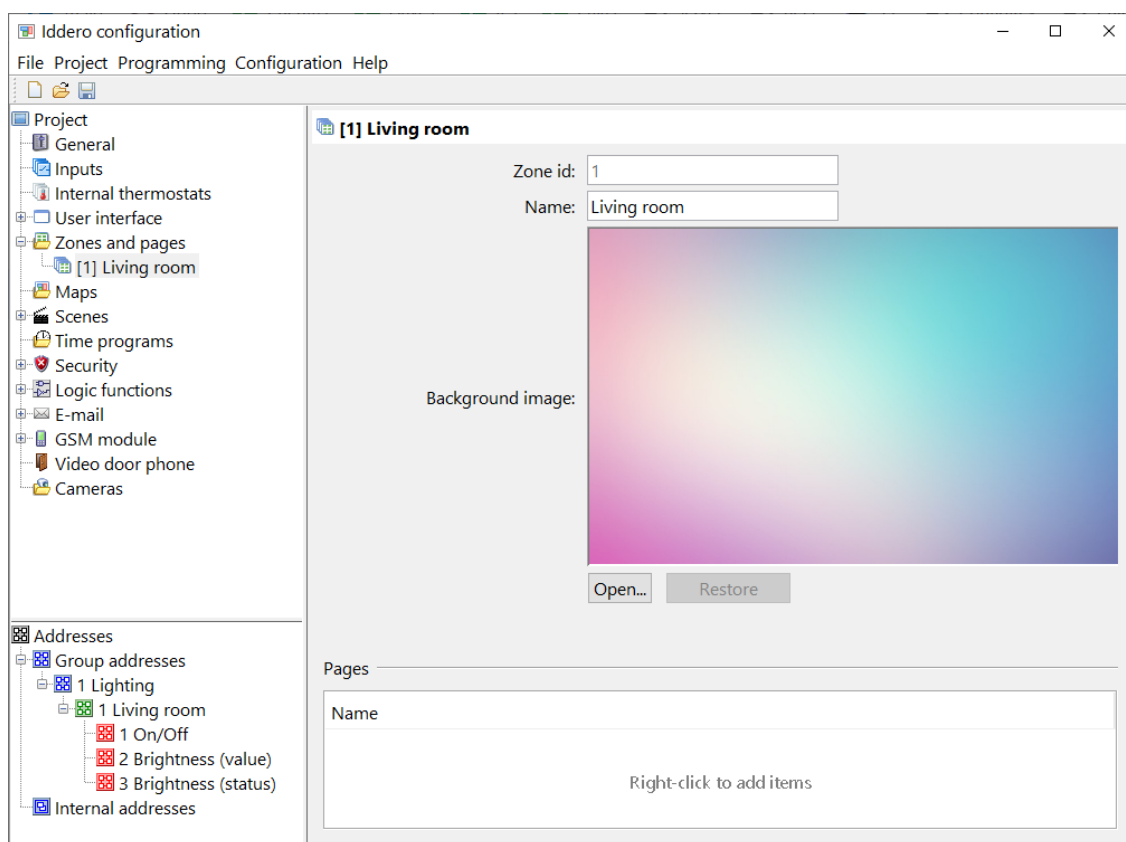
3.4.2 Definition of zones

In order to add a zone to the project, right-click on the “Zones and pages” section in the project tree, and select “Insert zone” from the pop-up menu.

By selecting the newly created zone (left-click on the new zone in the project tree, or double-click on the zone name in the table shown in the parameter area) the configurable parameters will be shown:

- *Name*: A descriptive name for this zone.
- *Background image*: A background image for all pages in this zone.

Let’s configure the name for this zone, and set it to “Living room”.



3.4.3 Definition of pages

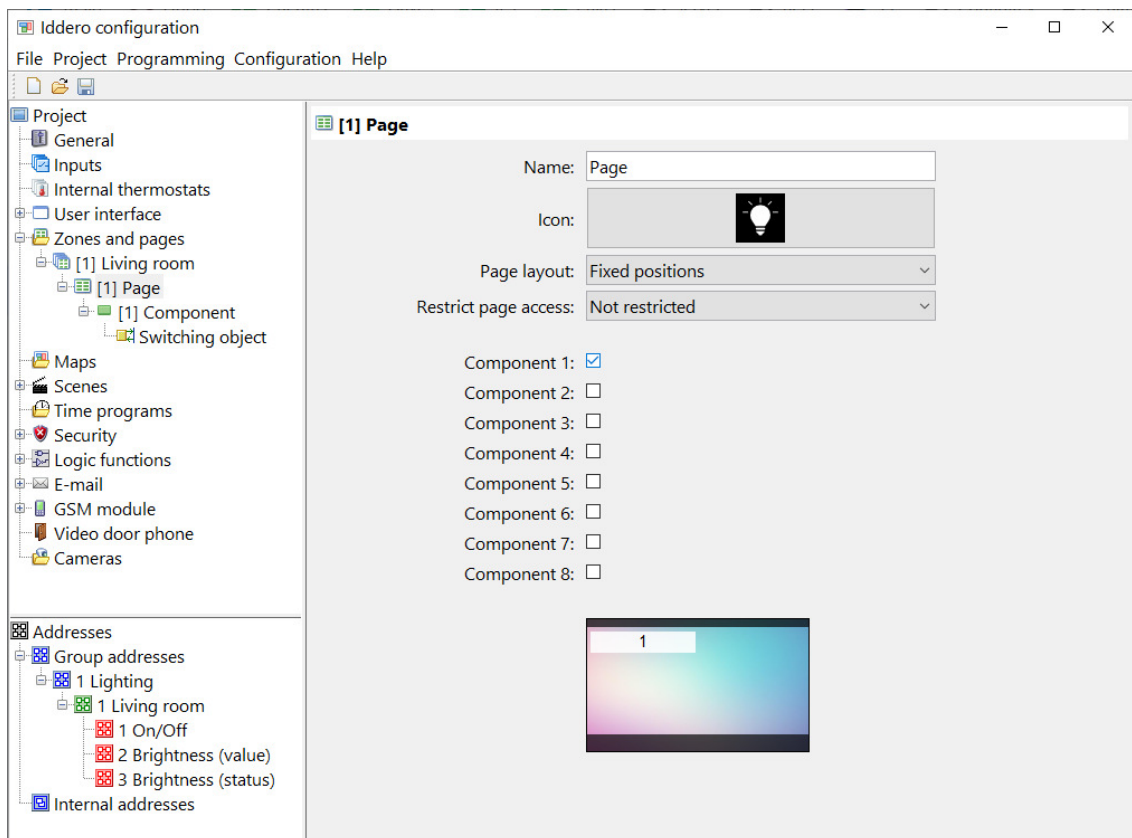
In order to add a page to a zone, right-click on the zone in the project tree, and select “Insert page” from the pop-up menu.

By selecting the newly created page, the configurable parameters will be shown in the parameter area:

- *Name*: A descriptive name for this page.
- *Icon*: The icon that will be shown for this page in the navigation bar.
- *Page layout*: Determines how components are arranged in the page.
- *Restrict page access*: The minimum access level that is required in order to access this page.
- *Component 1 ... 8*: Check these checkboxes to enable the corresponding components.

Since our page will be used for lighting control, you can just leave the default icon (a light bulb).

There will be one single device in this page. Thus, check the “Component 1” checkbox: a component will automatically be added beneath the current page in the project tree.



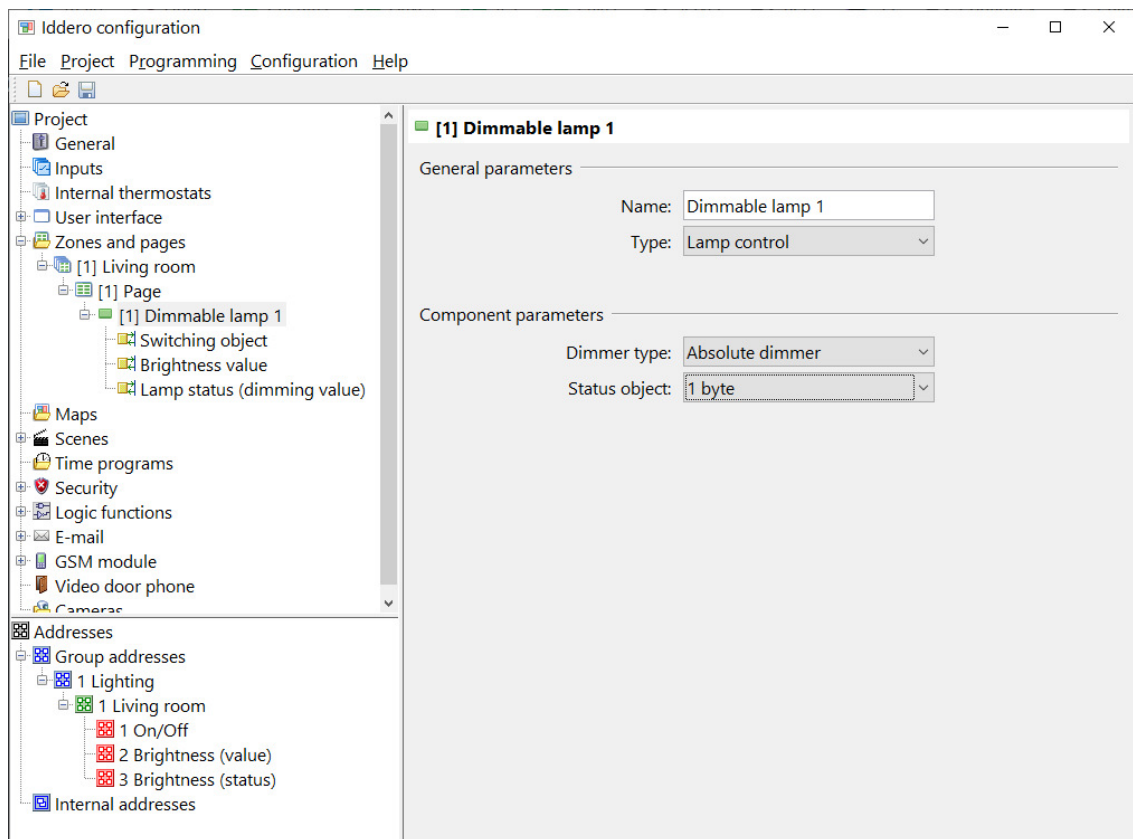
3.4.4 Configure components and link group addresses

We will now configure the visual component that will be used to control the lamp from the touch panel. As described earlier, we will actually be controlling this lamp through a KNX-based dimmer actuator.

Select the component beneath the first page of the “Living room” zone. Set a descriptive name, for example “Dimmable lamp 1”, and choose “Lamp control” from the “Type” combo box.

The dimmer actuator in our sample project implements a 1-byte communication object that can be used to set the brightness (light intensity) value. This is often referred to as *absolute dimming*. In the “Dimmer type” field, select “Absolute dimmer”.

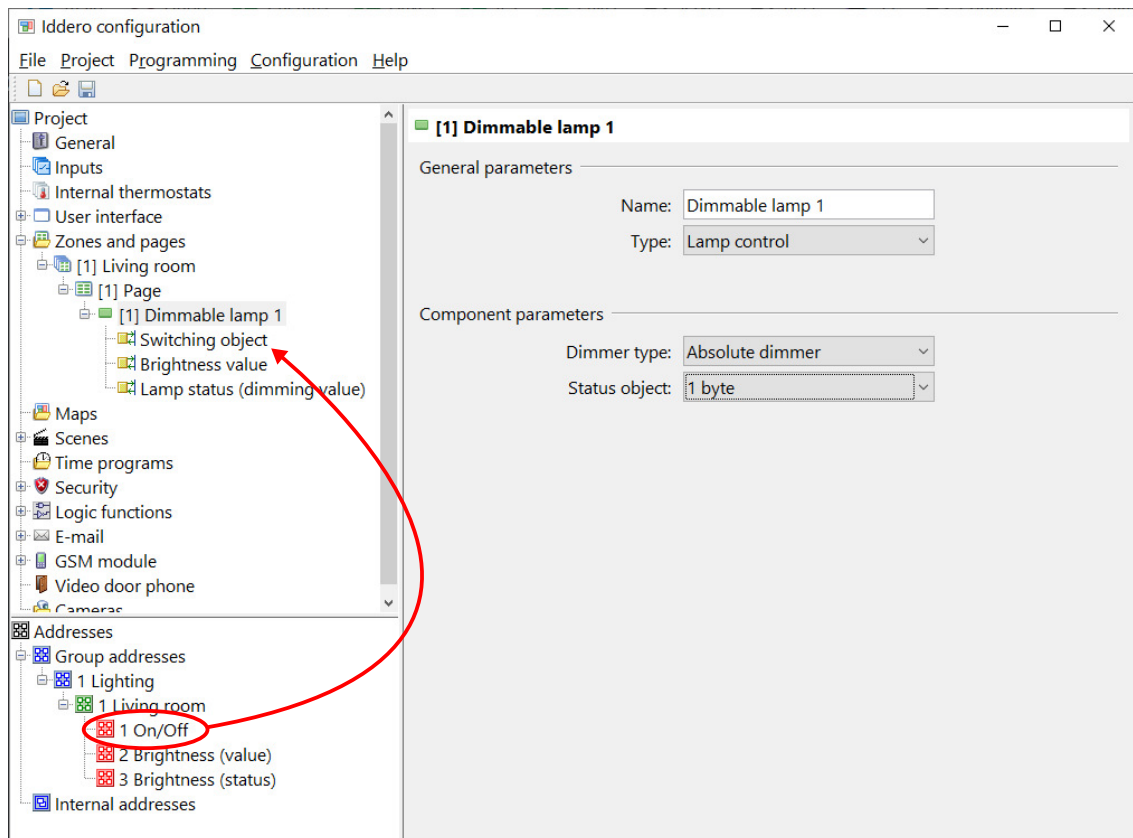
Finally, in the “Status objects” combo box, select “1 byte” since our dimmer actuator provides a 1-byte communication object that indicates the current brightness status.



If you look at the project tree, you will see that several communication objects have automatically been added under the “Dimmable lamp 1” component: One 1-bit communication object (“Switching object”) and two 1-byte communication objects (“Brightness value” and “Lamp status (dimming value)”).

The Iddero touch panel will send On and Off telegrams to the first of these communication objects, absolute brightness values to the second one, and will use the value of the third object in order to update the graphical representation of the lamp's status.

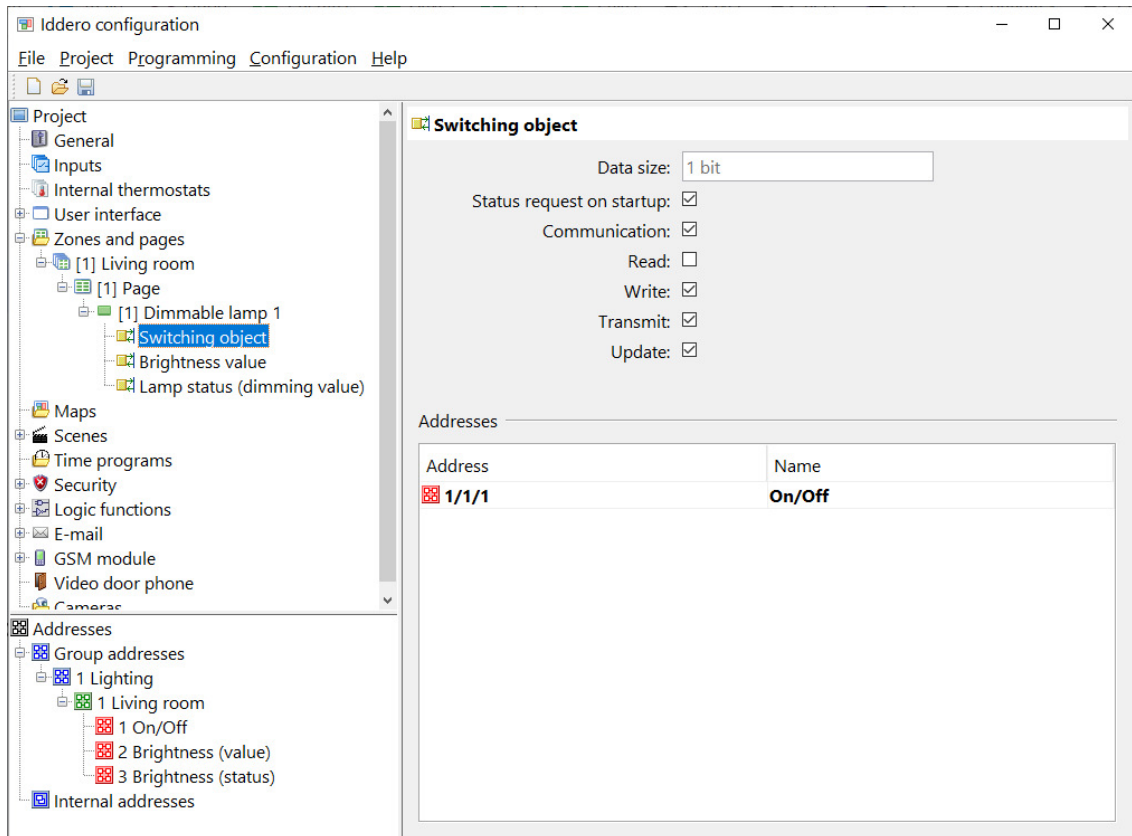
Group addresses must now be linked to communication objects. First, link group address 1/1/1 ("On/Off") to the lamp's Switching object. This is done through a drag & drop operation: Click and hold the left mouse button over the "On/Off" address node in the address tree; then, without releasing the mouse button, drag the address onto the communication object in the project tree; finally, release the mouse button.



Repeat this operation with the Brightness value and Lamp status objects, and link them with group addresses 1/1/2 "Brightness (value)" and 1/1/3 "Brightness (status)", respectively.

If you select any communication object in the project tree, the parameter area will show any linked group addresses, along with the current configuration of the communication object's flags (please refer to the KNX standard for the detailed meaning of each flag).

Likewise, if you select any group address in the address tree, the parameter area will show any linked communication objects.



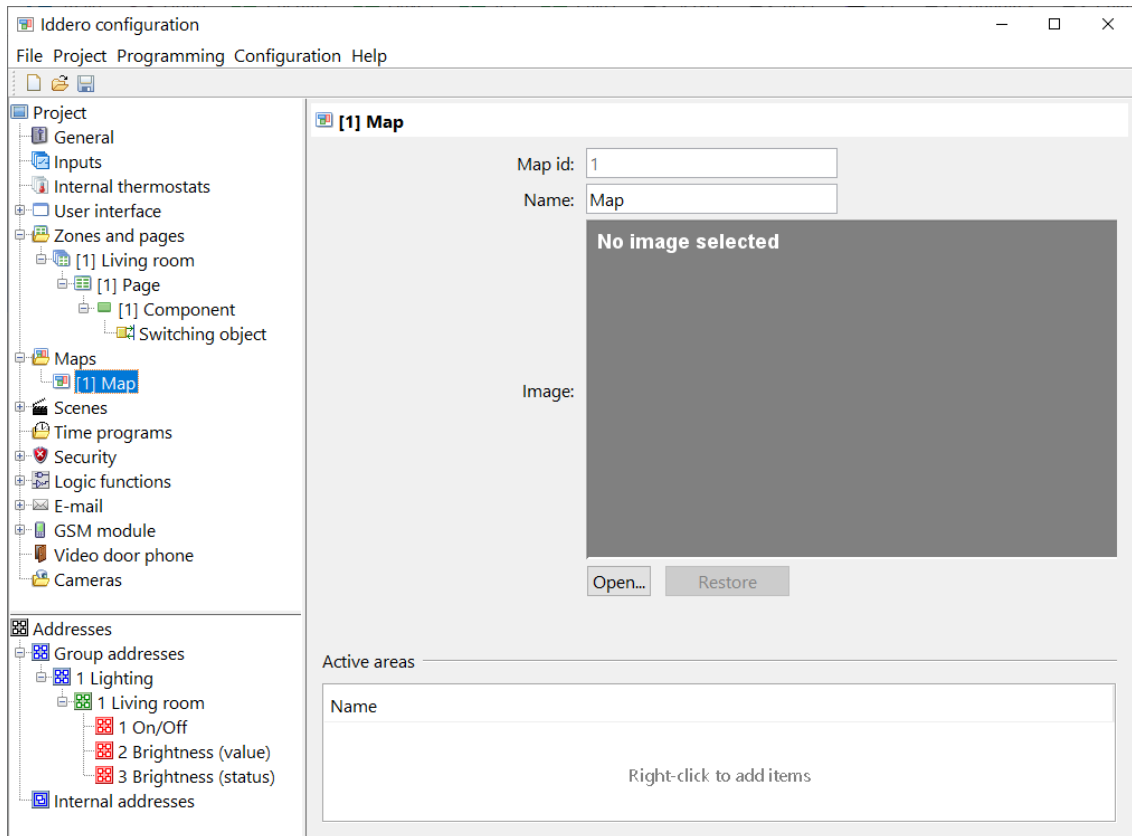
3.4.5 Graphical navigation through maps (optional)

In order to make it easier for the end user to navigate through available zones, you can define image-based **maps** as well as active (touchable) areas within the map that can be linked to zones or to other maps.

Note

Map definition is optional. If no maps are defined, the system will just present a list of available zones to the end user.

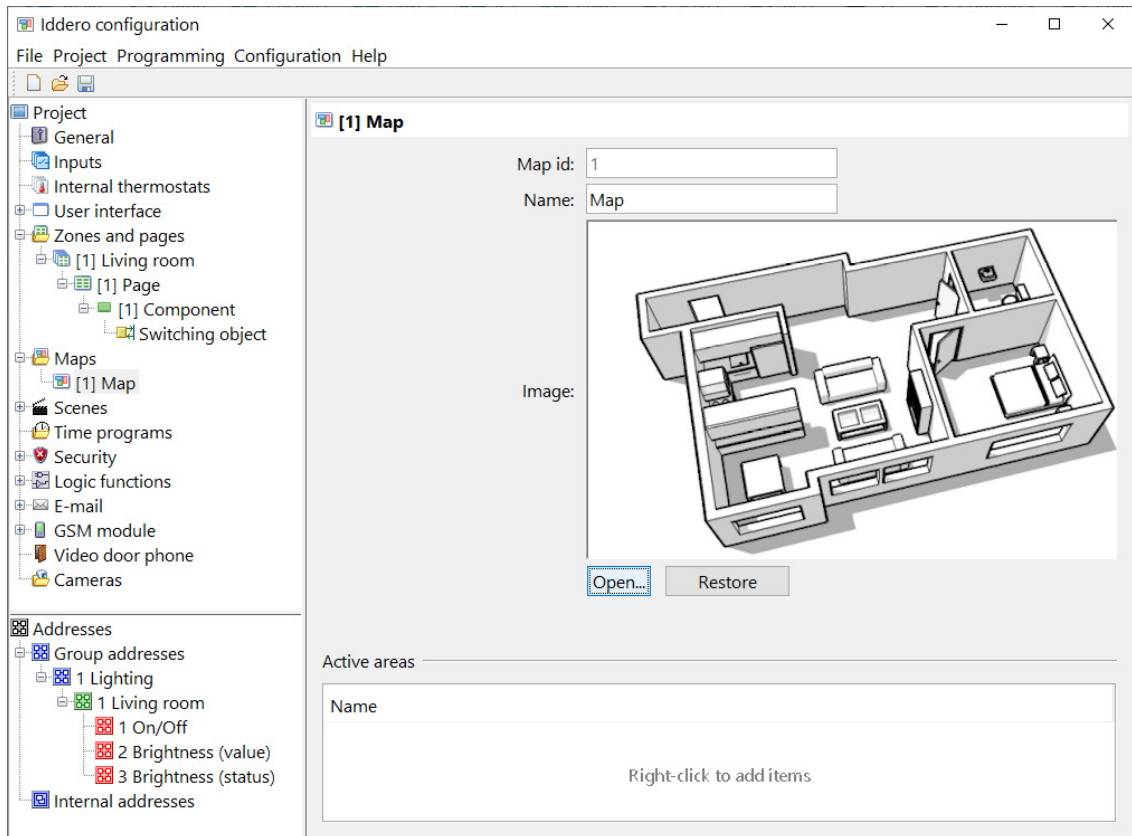
In order to insert a new map, right-click on the “Maps” section in the project tree and select “Insert map” in the pop-up menu. Then, just select the newly added map and the configurable map parameters will be shown in the parameter area.



Next step is to pick a background image for the map.

Background images can be created using any drawing or picture editing software, or with specialized CAD and 3D design packages.

Once you have your background image ready, click on the “Open...” button in the map configuration section, and select the image file. GIF, JPEG, and PNG file formats are supported. If the image size is larger than the maximum allowed size, the image will be adapted (trimmed) automatically.



Now we will define one active area on top of the image.

Right-click on the map in the project tree, and select “Insert area” from the pop-up menu. Then, select the newly created area in the project tree.

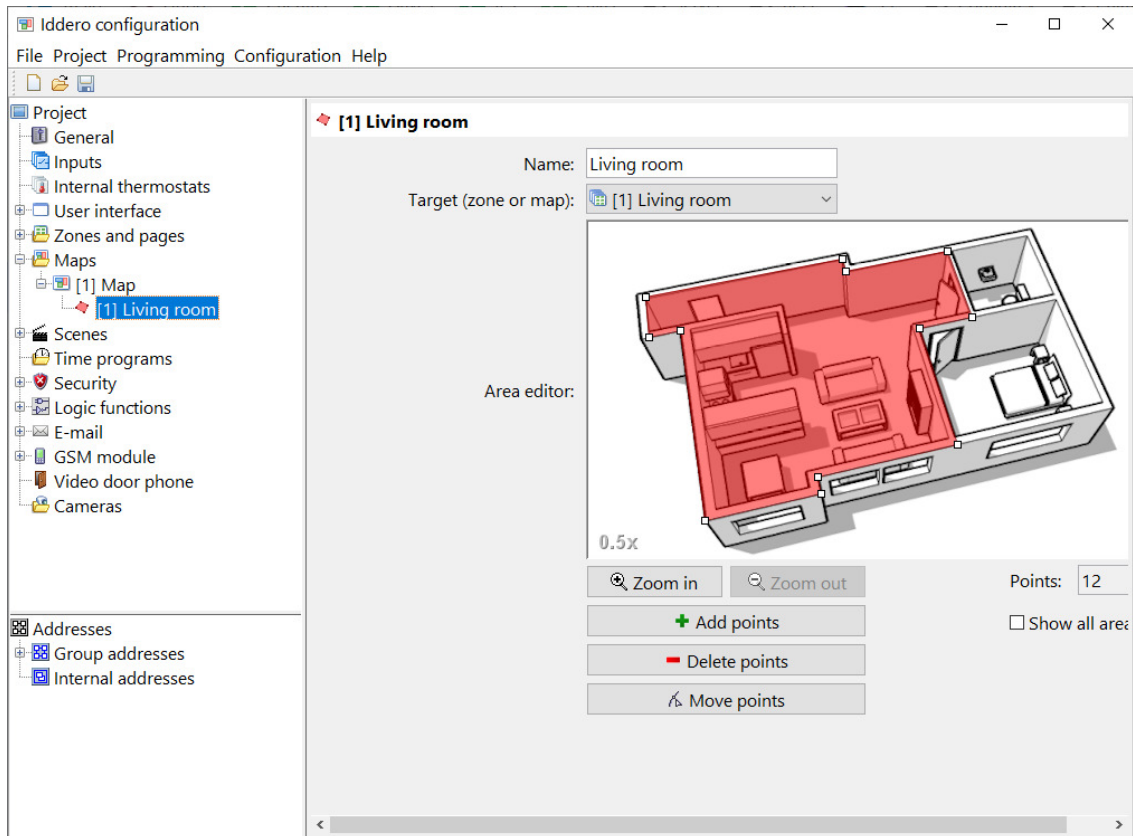
Assign a descriptive name for the area (for example, “Living room”). Then, in the “Target” combo box, select the “Living room” zone. By doing this, we are specifying the zone that should be opened when we touch this area on the map.

Now, the polygon associated to this active area must be defined. Click on the “Add points” button, then click on the image to add the vertices for the polygon.

The “Delete points” and “Move points” buttons let you delete and move existing polygon vertices.

Note

You can use the mouse wheel to zoom in and out of the map. While zoomed in, hold down the middle or right mouse button and drag the mouse to pan the image.



3.5 Save the project

You can save the project at any time by selecting the File > Save menu option. We recommend to do this often in order to avoid losing your changes.

Installation and commissioning

4.1 Installation

Iddero touch panels are in-wall, flush mounted units. A mounting box is required (E-C557 or E-C620, depending on the touch panel model). The installation sheet bundled with the product provides detailed installation instructions.

Before fixing the touch panel to the mounting box, the following connections should be made:

- Power supply (12 VDC). Only the provided power supply should be used.
- KNX bus
- Ethernet, to the local area network (LAN)
- RS-485 bus, if an expansion module such as the DW-GSM will be used

The Ethernet connection is used both for initial commissioning and for certain functions during normal operation (remote access, e-mail and push notifications, IP camera monitoring, video door phone function).

Even if you don't plan to actually use any of these functions, it is a good idea to leave an Ethernet cable connected to the touch panel and easily accessible, for example from the main electrical panel or from a junction box, so that you can use it later as needed, in order to make adjustments in the programming or for firmware updates.

4.2 Boot in “Install Mode”

In order to upload the project data to the touch panel, you must boot in “install mode”. For this:

- Wait until the “loading progress” bar is shown on the screen (see screenshot below)
- Touch anywhere on the screen and hold until you hear a triple beep

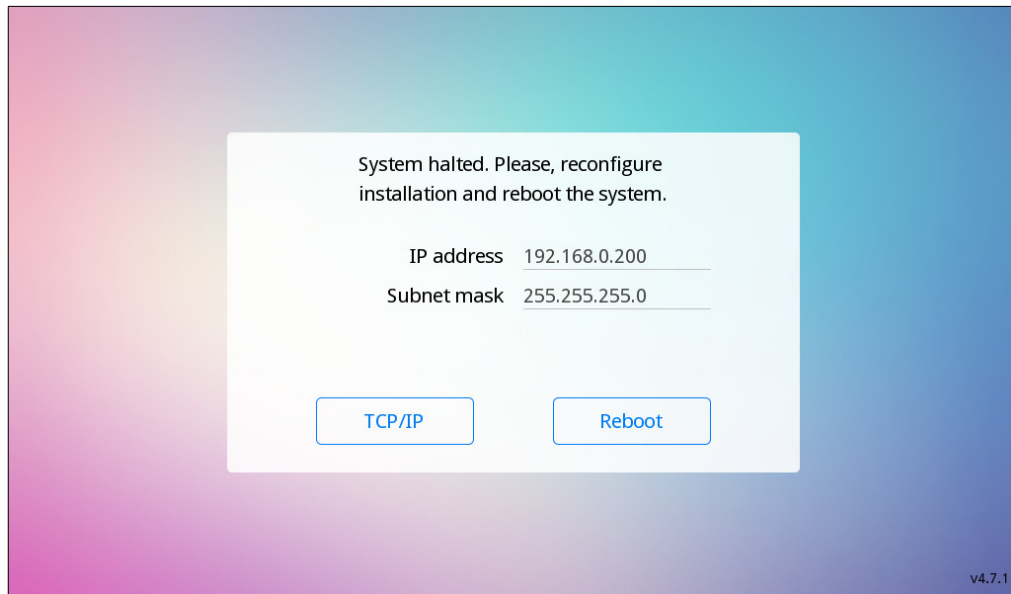
The touch panel will enter install mode (the device also enters install mode automatically the first time it boots, or when no valid project data is found).



4.3 Initial network configuration

Iddero touch panels are preconfigured to obtain an IP address automatically using the DHCP protocol. DHCP is supported by almost every Internet router, and should be available in most home and office networks. Thus in the majority of the cases, no additional configuration should be needed at this stage.

The current IP address and subnet mask of the touch panel are shown on the installation screen. If necessary, you can modify the settings from that screen too.



4.4 Commissioning

In order to upload the project data to the Iddero touch panel, select Programming > Program in the iddero-config while the device is in installation mode.

The “Connect settings” dialog will pop up. Enter the IP address of the device and the installer login and password (default values: “instalador” / “knxinstall”) and click “Accept”.

The commissioning process may take a few seconds to complete. **Do not interrupt this process or turn off the panel.** Once the process is complete, a success message will be shown onscreen. Press “Reboot” and the system will reboot with the new configuration.

4.5 Firmware updates

If you need to update the firmware of the touch panel, you can do so from iddero-config by selecting Programming > Update firmware.

The software will first ask you to select a valid firmware update file (.bin file type). The “Connection settings” dialog will then pop up. The rest of the process is identical to the commissioning process.

It is critical that you **do not interrupt the operation or turn off the touch panel** during the update process. If the firmware update process is interrupted, the touch panel could be left in a locked state and would need to be returned to factory for repair.

4.6 Static network configuration

Using DHCP for automatic IP address configuration simplifies the touch panel configuration and commissioning process, and in many cases you can just keep this network configuration during normal system operation.

However, depending on the project requirements, a static network configuration may be required. If this is the case, then there are two ways to achieve this:

1. Configure the DHCP server (typically the Internet router) so that the same IP address is always assigned to the touch panel, for example based on its MAC address. This is typically called “IP reservation” or “static IP allocation”.
2. Configure the touch panel manually to use a static IP address. You can do this by going to the Settings menu in the touch panel, then selecting System > Network settings. Disable DHCP, and enter the desired network settings. However, if the touch panel is installed in a network with a running DHCP service, you will still need to make sure that the selected IP address is **outside of the IP address range** managed by the DHCP server.

In both cases, you will need to check or modify the configuration of your DHCP server. The exact procedure depends on the device that is acting as a DHCP server; please refer to the documentation supplied by the manufacturer for additional information.

IDDERO

Av. Juan López Peñalver, 21
Parque Tecnológico de Andalucía
29590 Málaga, Spain
support@iddero.com
www.iddero.com

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