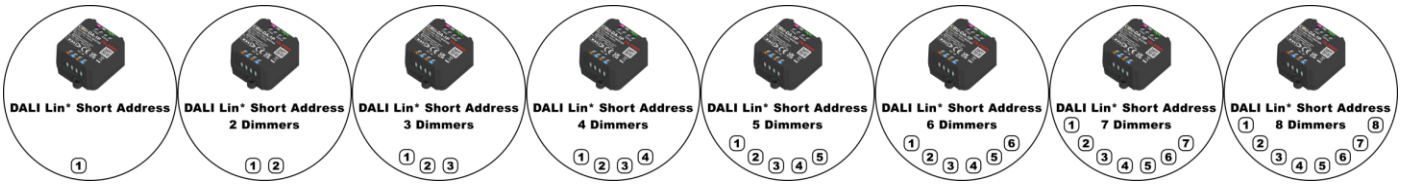
INTRODUCTION

This guide details the procedure to control the largest number of DALI devices and get the most out of the CBU-DA-1P by controlling **DALI groups** using the Casambi group fixture profiles.

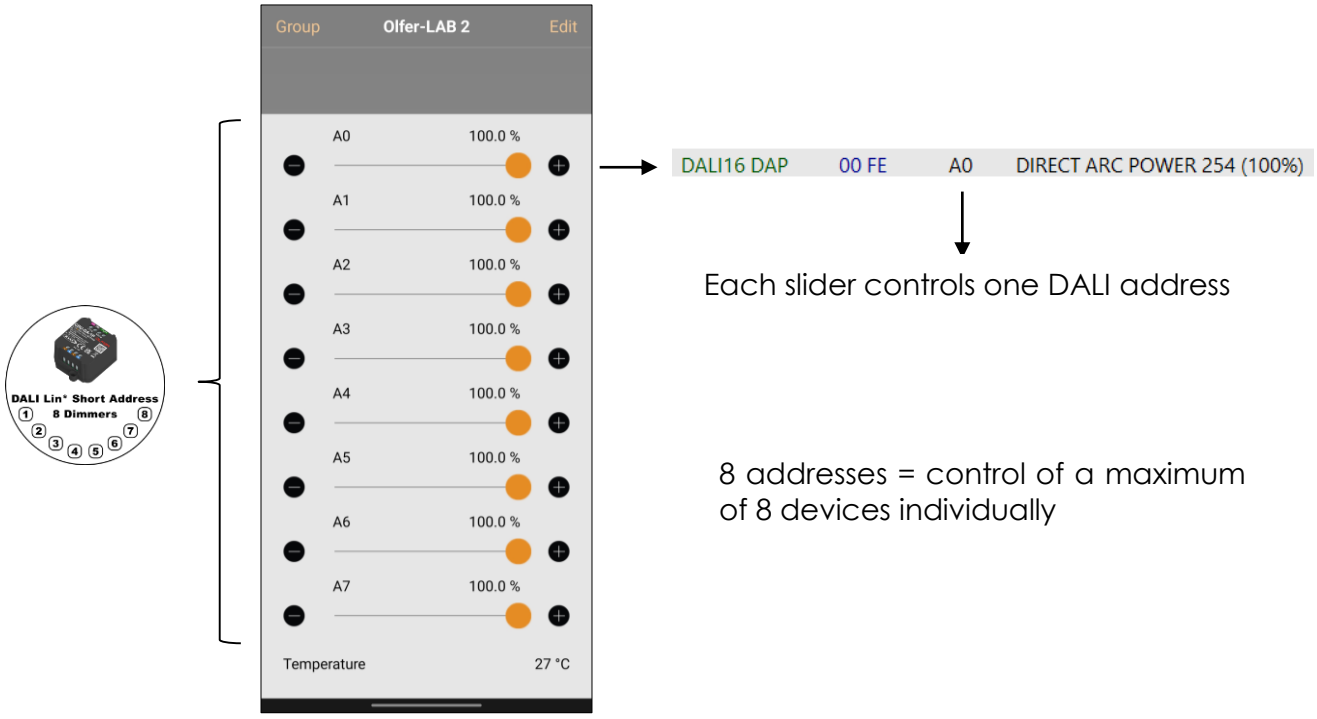
First of all, let's remember that CBU-DA-1P has a DALI guaranteed current of **100 mA**, this means that a maximum of **50 LED drivers** can be connected to the DALI bus generated by CBU-DA-1P.

However, through the Casambi app the maximum number of devices that can be individually controlled is 8. This is due to 8 is the maximum number of sliders that Casambi allows to have on screen.

Due to this reason, CBU-DA-1P has 8 profiles of the type *"DALI Lin* _xDIM SA"* in order to control up to 8 devices individually:



These fixture profiles control the devices via DALI addresses (short address), the first fixture profile has one slider that controls A0, the second profile has two sliders which control A0 and A1 and so on up to the profile "DALI Lin* 8xDIM SA" which has 8 sliders that control 8 DALI addresses, from A0 to A7.

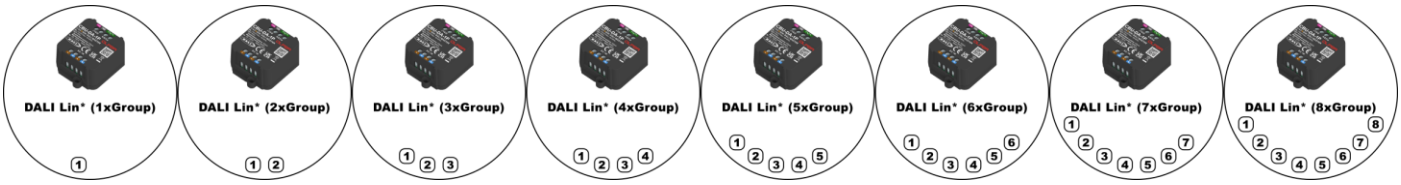


Therefore, **it is not possible to control more than 8 devices individually** using Casambi app.

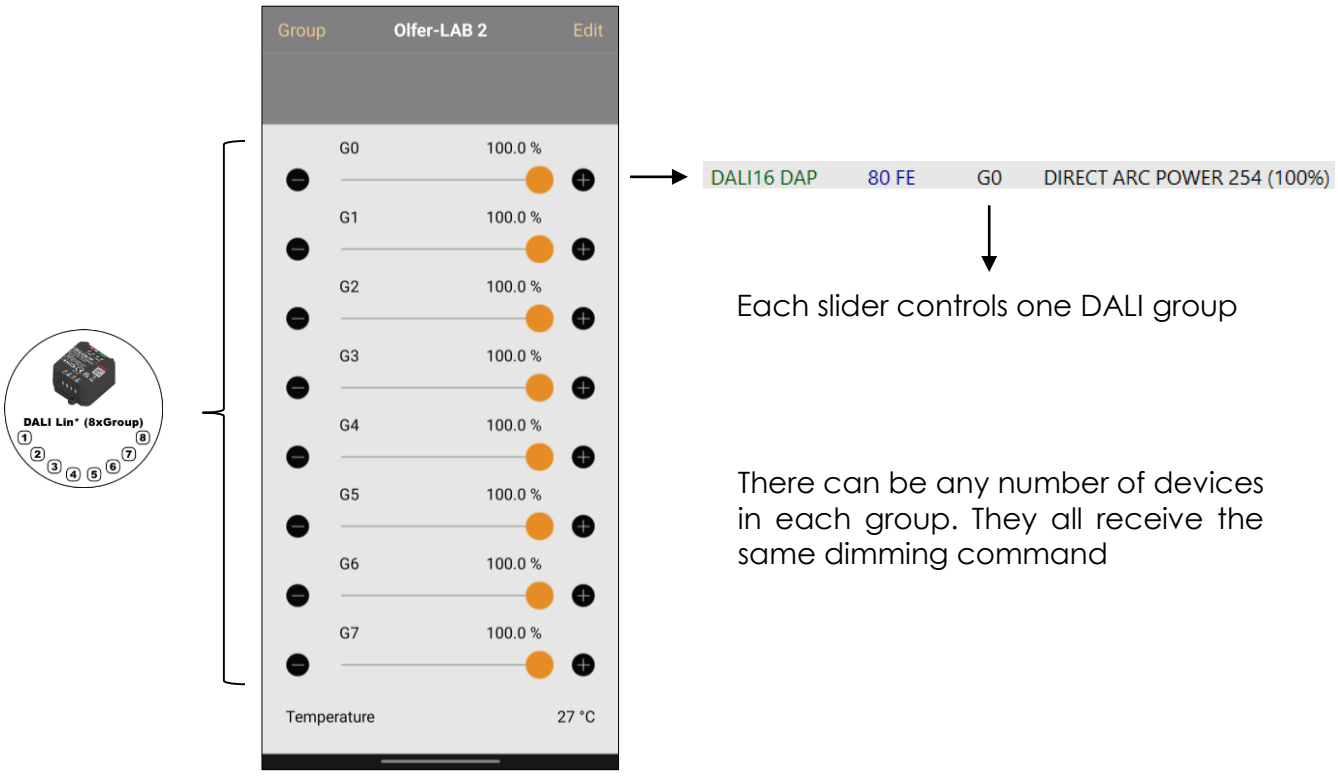
When we have an installation in which we want to control more than 8 DALI drivers divided by areas, we have to use **GROUP** control.

The basic idea is that, if we are looking to control more devices without resorting to broadcast control, **we can group the drivers** we have on the DALI bus and use fixture profiles that send DALI commands to **DALI groups** rather than to specific addresses and therefore have a wider control with a single CBU-DA-1P.

The CBU-DA-1P has 8 **GROUP** fixture profiles:



Similar to the "DALI Lin* _xDIM SA" fixture profiles, each of these fixture profiles has a specific number of sliders which control DALI groups. The first fixture profile has one slider controlling G0, the second fixture profile has two sliders controlling G0 and G1 and so on up to the fixture profile "DALI Lin* (8xGroup)" which has 8 sliders and controls 8 groups from G0, up to G7.



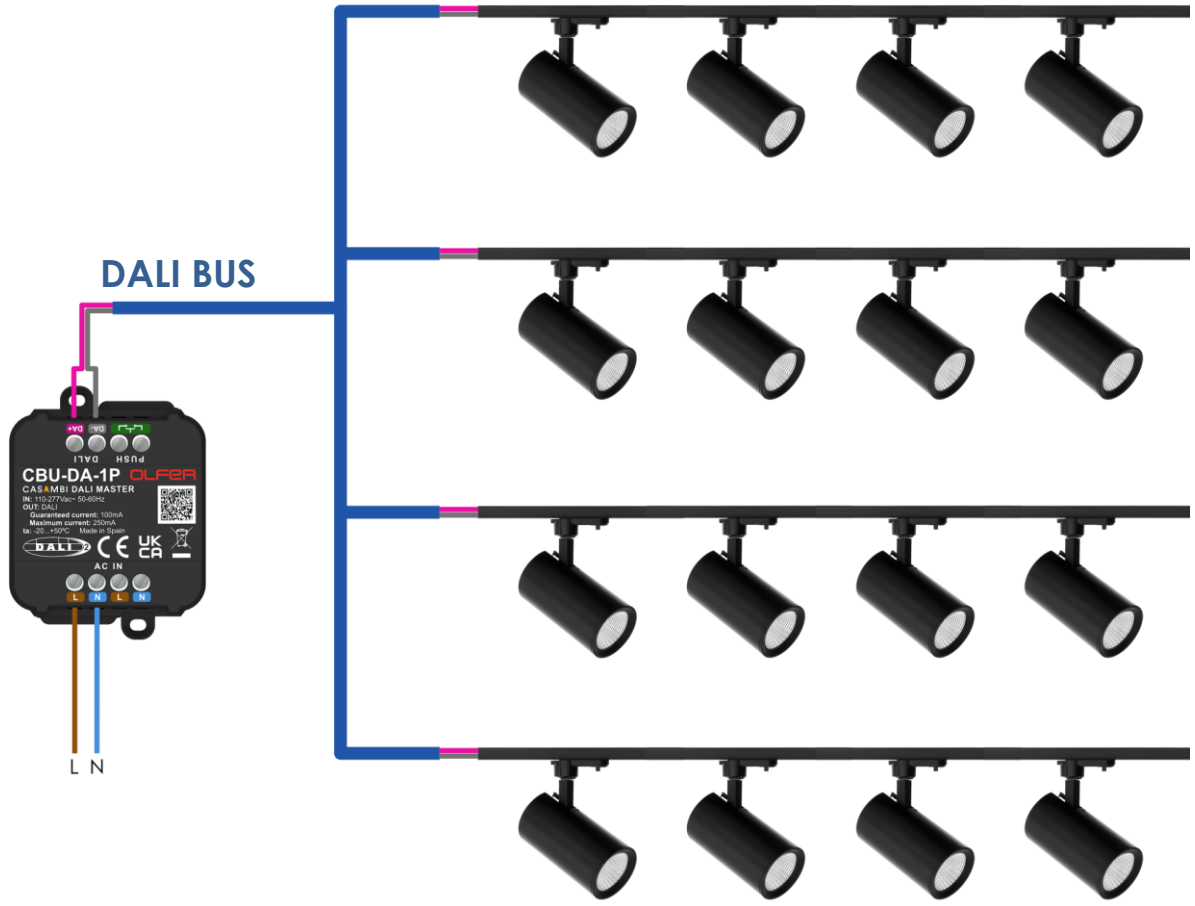
If, for example, we have 5 devices in the first group (G0), when we change the brightness level through this slider, these 5 devices in G0 will receive the same dimming command.

We will never have individual control of a single device (unless there is only one driver in a group), but this way we go from being able to control 8 individual devices to being able to control up to 50 devices per group.

Taking all this information into account, in the following section we will explain the process of how to assign groups to the different drivers directly from the Casambi app (without the need to use a DALI programmer or other external tools). Remember that you must be within CBU-DA-1P Bluetooth range in order to access DALI configuration menus.

APPLICATION EXAMPLE:

Let's suppose we have the following installation: 16 tracklights divided into 4 rows of 4 devices and we want to control each row of tracklights independently with a single CBU-DA-1P.



The steps to achieve this goal are as follows:

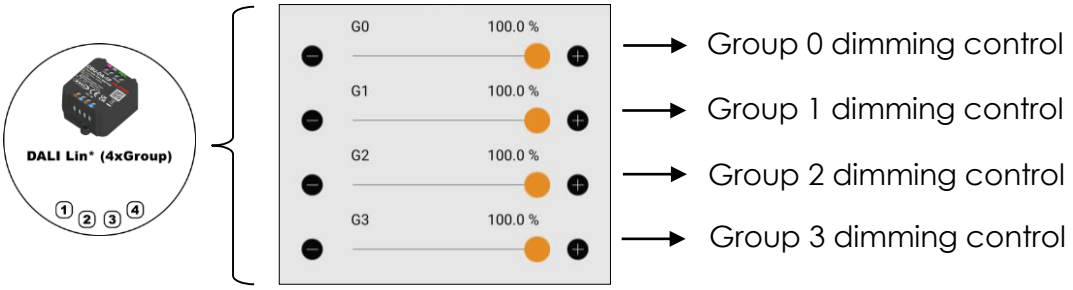
- Choose and load the appropriate fixture profile.
- Address all devices connected to the DALI BUS.
- Assign these addresses to groups to be able to control by areas.

CHOOSE AND LOAD THE APPROPRIATE FIXTURE PROFILE.

The first step would be to choose the appropriate fixture profile according to our control needs, in this case it would be the *"DALI Lin* (4xGroup)"*. This fixture profile has 4 sliders and each one controls a different group. With this fixture profile we will be able to control the tracklights divided into 4 areas/groups.

To load this fixture profile we have to, from the Casambi main screen, go to the "More -> Nearby devices" tab, find our CBU-DA-1P device, tap on it, then tap on the "Change profile" option and look for the fixture profile with the name *"DALI Lin* (4xGroup)"*. The device must be unpaired.

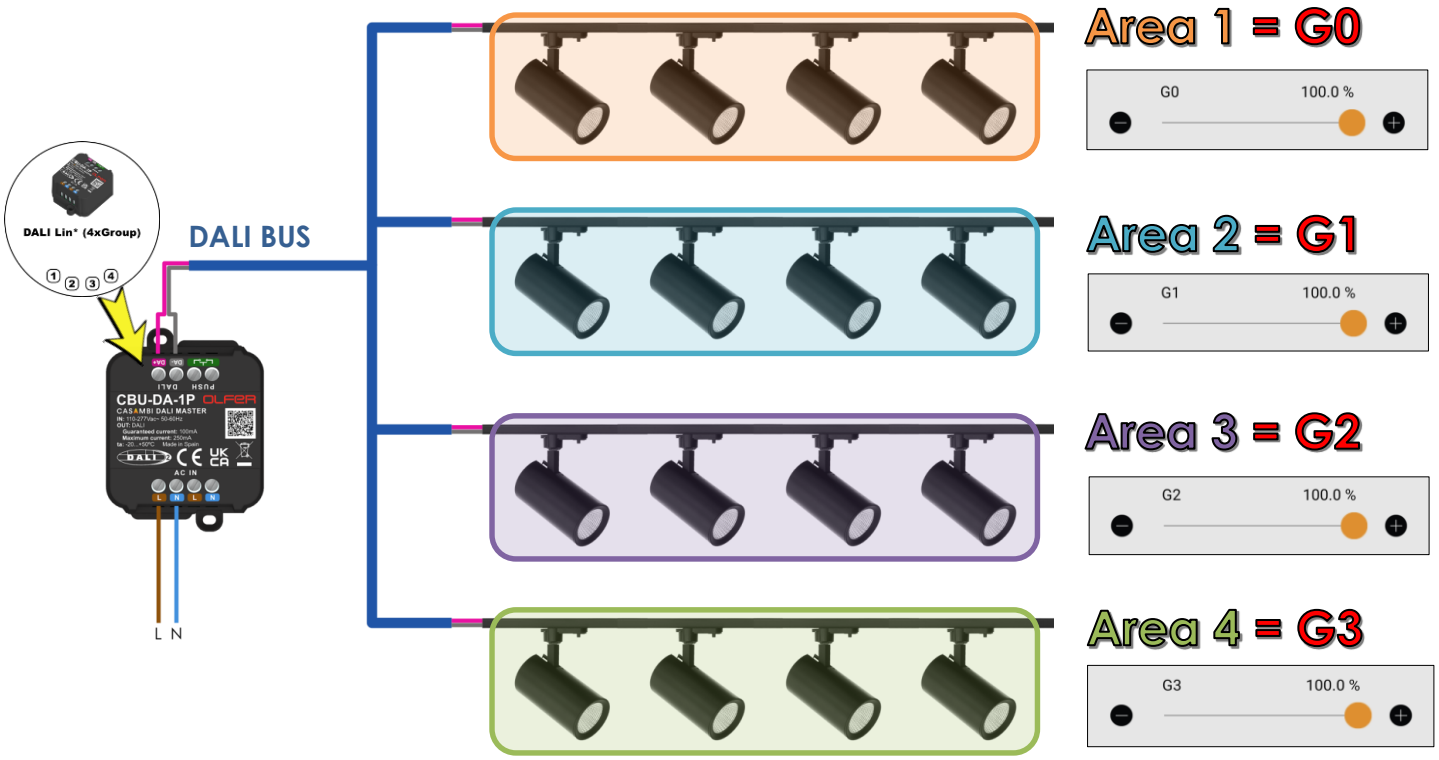
Once the fixture profile has been changed, we will pair it to our network, here we will see that if we press and hold the CBU-DA-1P icon, the 4 group sliders will appear.



These sliders, for the moment, would not control any lamps because there is no address assigned to any device and, even if they were addressed, they would not be assigned to any DALI group.

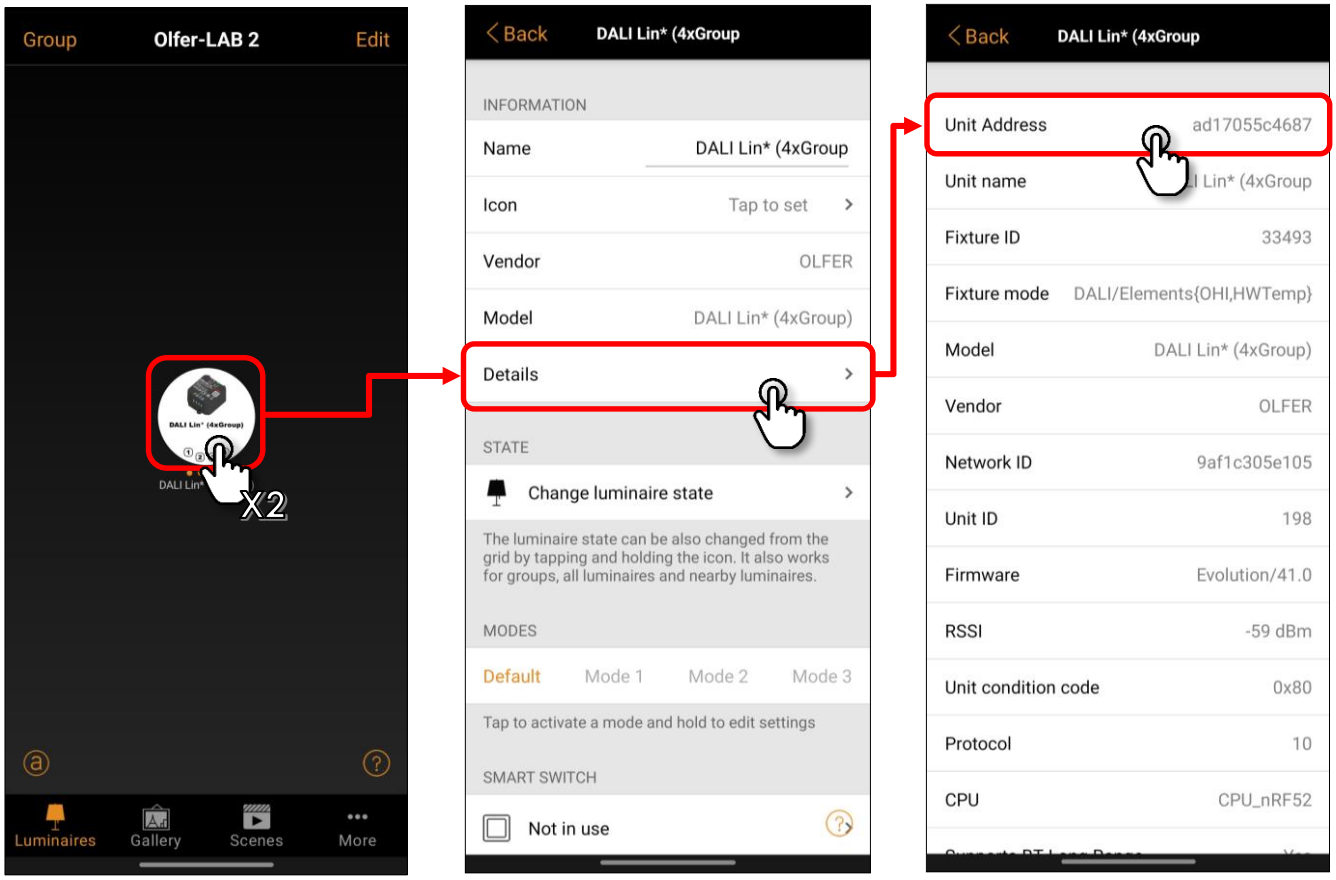
However, we could control them all at the same time if we slide our finger over the device icon, as in this case we would be sending Broadcast dimming commands.

Remember that in this example we wanted to be able to control each row of tracklights independently, so what we need to do next is to assign the 16 tracklights to groups as follows:



ADDRESS ALL DEVICES CONNECTED TO THE DALI BUS.

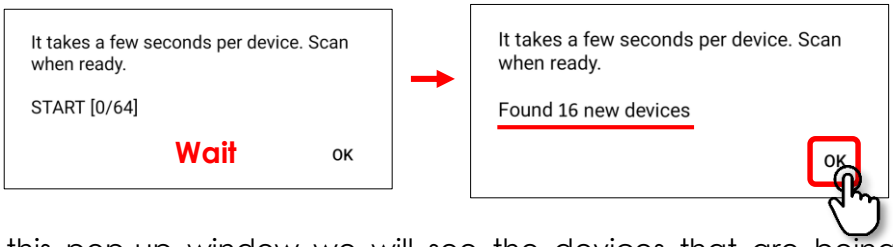
Following the mentioned goal in the previous section, we are going to start addressing the devices, to do this, in the "Luminaires" tab, we will have to quickly double tap on the CBU-DA-1P icon and in the following menu we will go to "Details", then select "Unit Address":



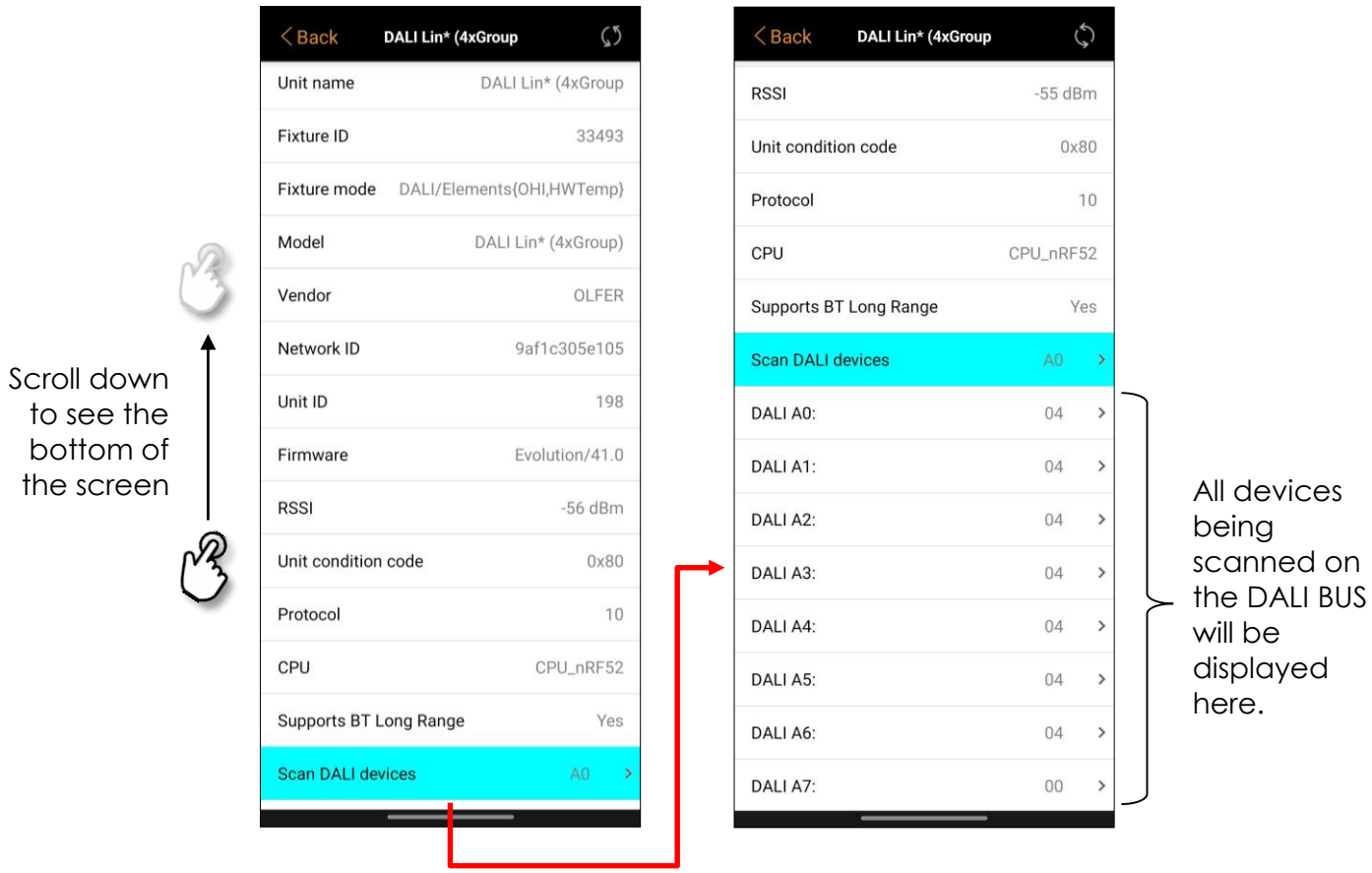
After selecting this new tab, the DALI action menu will appear, then we will select the action "Re-address DALI devices".

This action will make the CBU-DA-1P readdress all the devices connected to the DALI bus.

The following pop-up window will appear, warning us that this process will take some time.

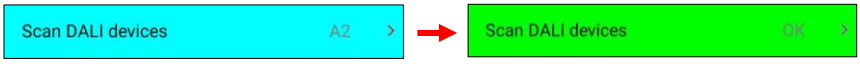


In this pop-up window we will see the devices that are being discovered and addressed, we will wait until it finishes discovering all the devices and we will press "OK". When the pop-up window disappears, scroll down the screen and you will see that the "Scan DALI devices" bar has turned blue.

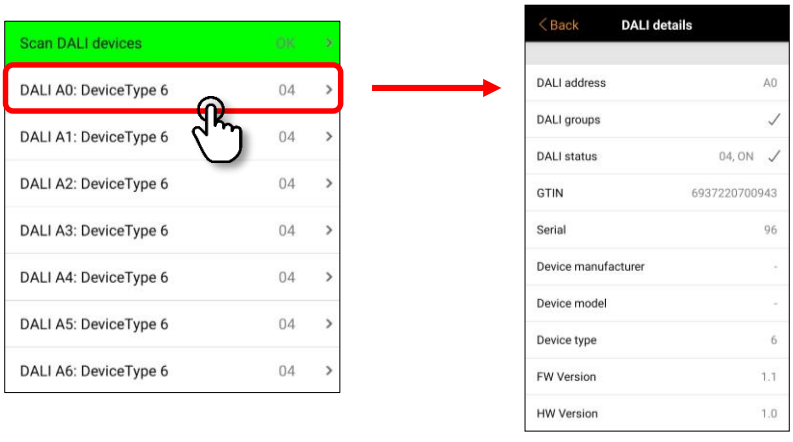


As long as the "Scan DALI devices" bar is blue and this icon: appears at the top of the screen, all the devices on the DALI BUS are being scanned. We can see which DALI address is being scanned if we look at the right side of the blue bar, if we have 16 devices on the DALI BUS, we will know that it has finished when it has finished scanning A15.

Once finished, the "Scan DALI devices" bar will turn from blue to green.



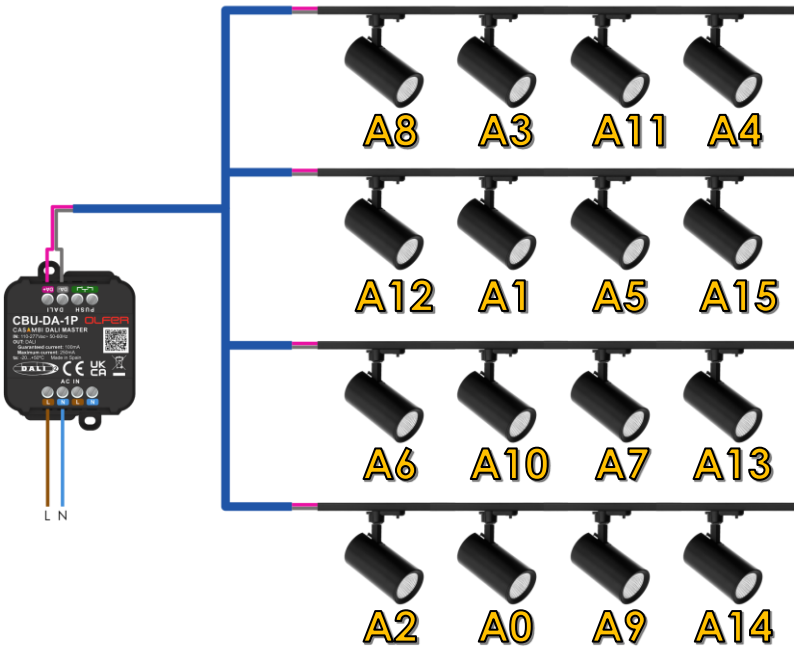
Below the green bar we will see all the scanned devices. If we press in any of them we will be able to access the information provided by the device, the amount of information shown here will depend on the device type and manufacturer.



ASSIGN ADDRESSES TO GROUPS FOR AREA CONTROL.

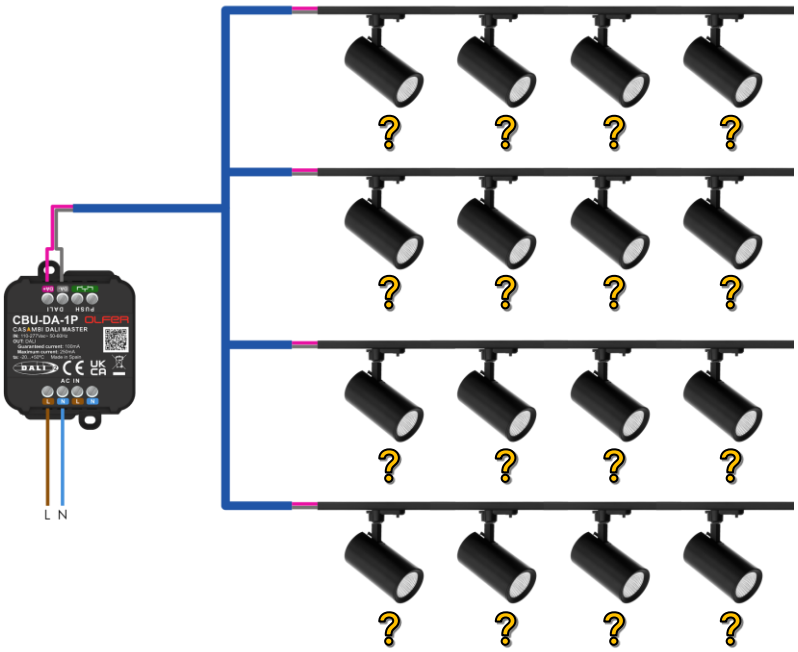
Following the example proposed in this document, once the 16 tracklights have been addressed, we will have to assign them to DALI groups in order to control them by areas.

DALI devices are always addressed in a completely random way, there is no specific order, so we could get something like this in our installation:

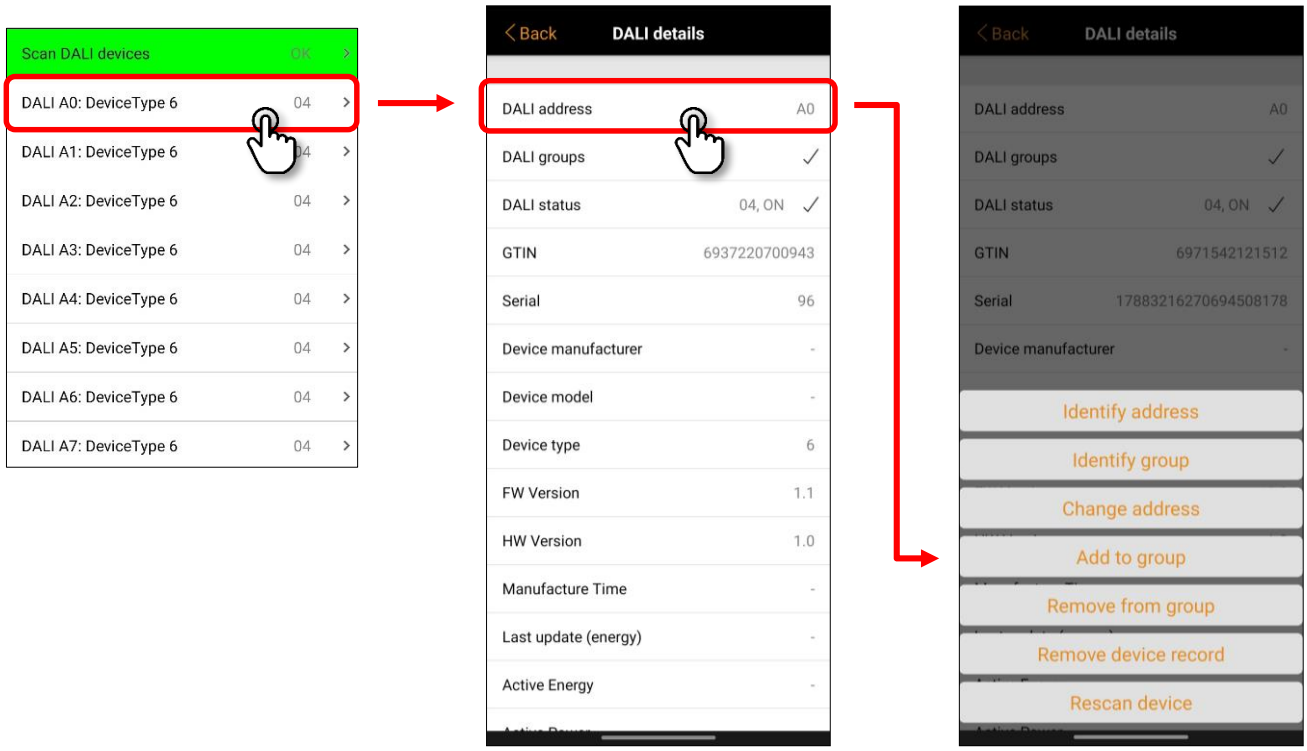


Once the tracklights have been addressed in this way, we would now have to assign the addresses of each row to a group in order to achieve this control by areas, for example, we would have to assign Group 0 to the addresses of the devices A8, A3, A11 and A4 (the first row).

But there is a problem, **we do not know which address each device has**, so we have to identify each one of the devices that appear on the screen we were in and then assign the corresponding DALI group to each one.



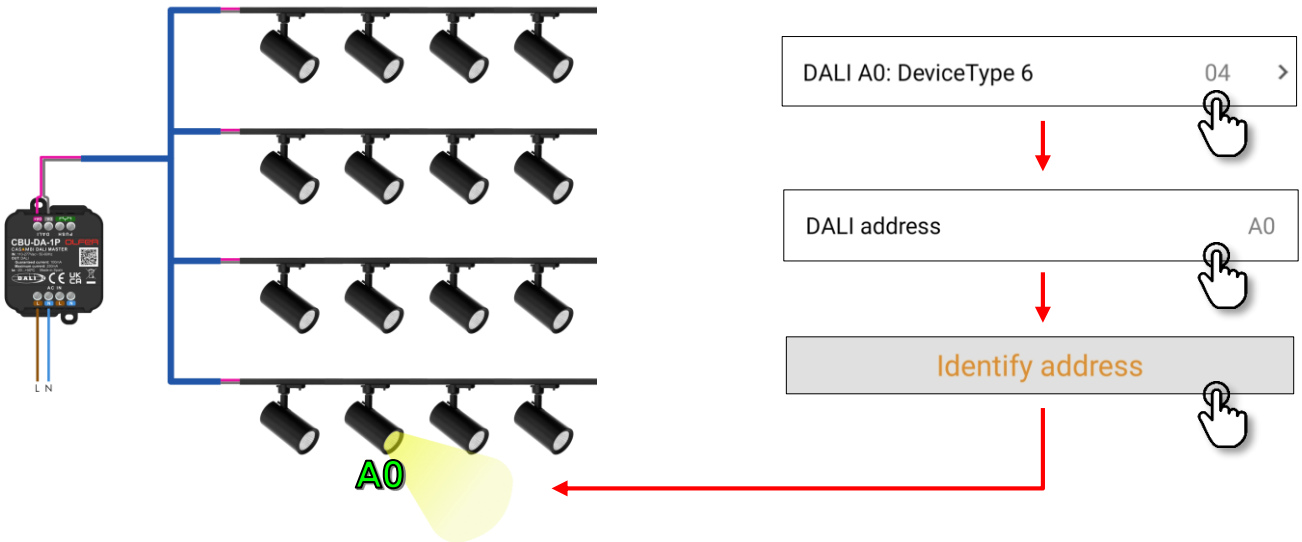
With the scanned devices on the screen, we have seen that we can access the information for each one of them. However, on the DALI details screen, if we select the first bar "DALI address A_" a new series of settings will appear, which can be executed individually for each lamp.



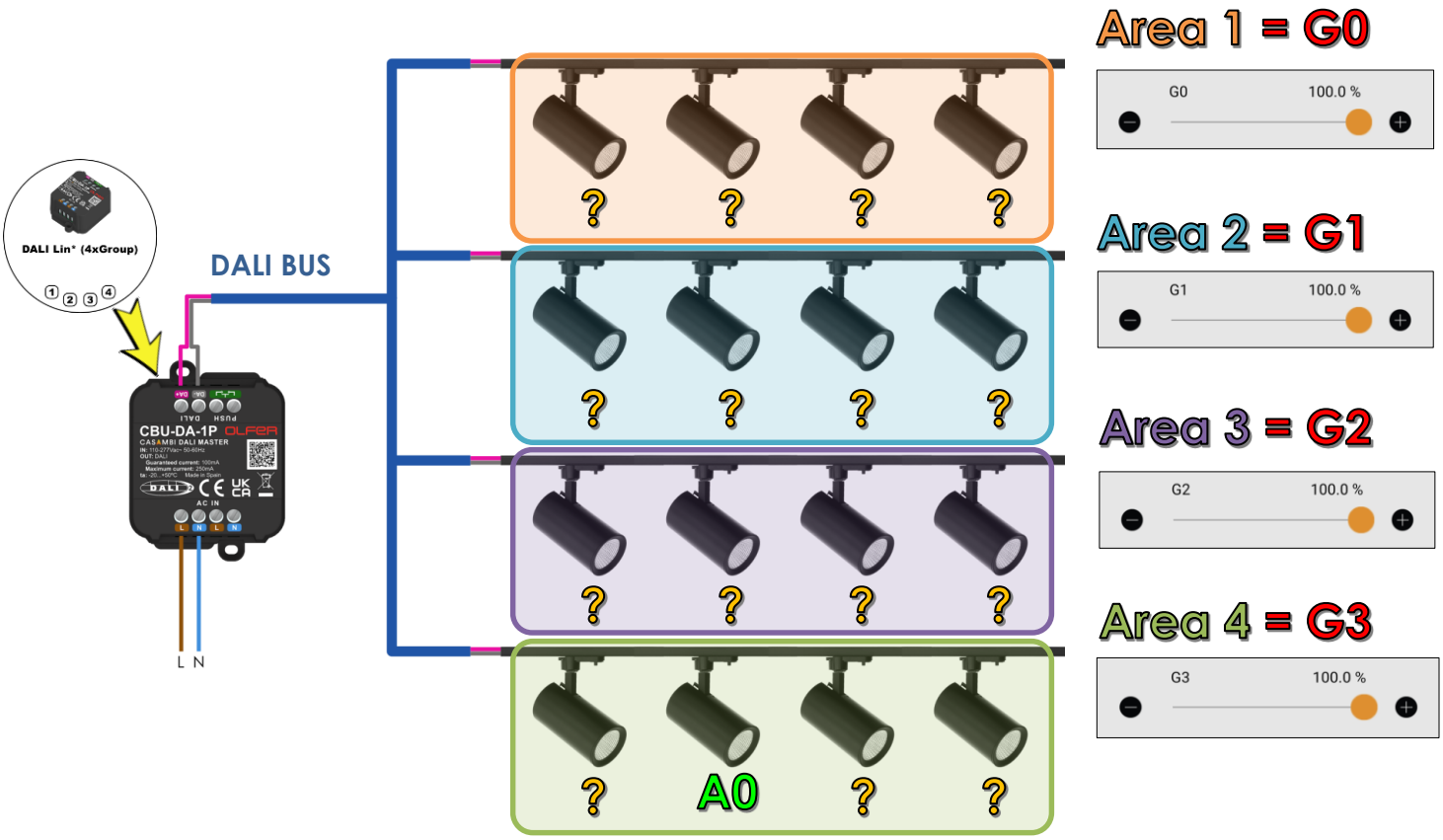
Of all these options, only two are of interest to us; "Identify address" and "Add to group".

- **Identify address:** identifies the device by flashing the lamp repeatedly for 10 seconds.
- **Add to group:** assigns the address of the selected device to the DALI group that we set.

If we have accessed to the A0 menu, tapping on "Identify address" will turn on and off the lamp with the A0 address, this will help us to identify it immediately and know to which group we have to assign it.

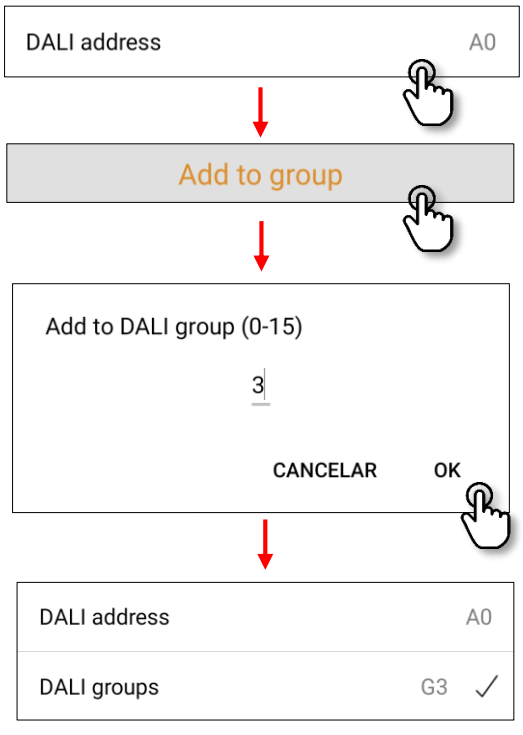


We now know that the tracklight which address is A0 belongs to the last row in the installation and that we want it to belong to group 3.



In order to add address A0 to group 3, without leaving the A0 menu screen, tap again on the first option "DALI address A0" so that the settings menu will appear again and then tap on the option "Add to group".

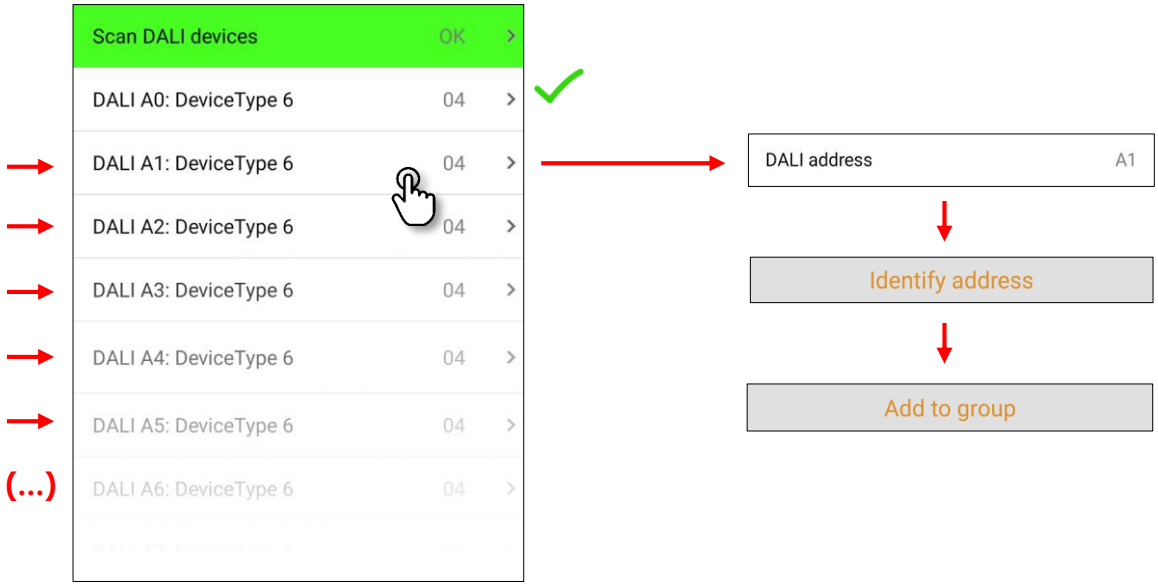
When you tap on the "Add to group" option, the following pop-up window will appear asking you to enter the number of the group to which you want this device to belong in the text box. Following this example, we are going to assign the device with address A0 to group 3.



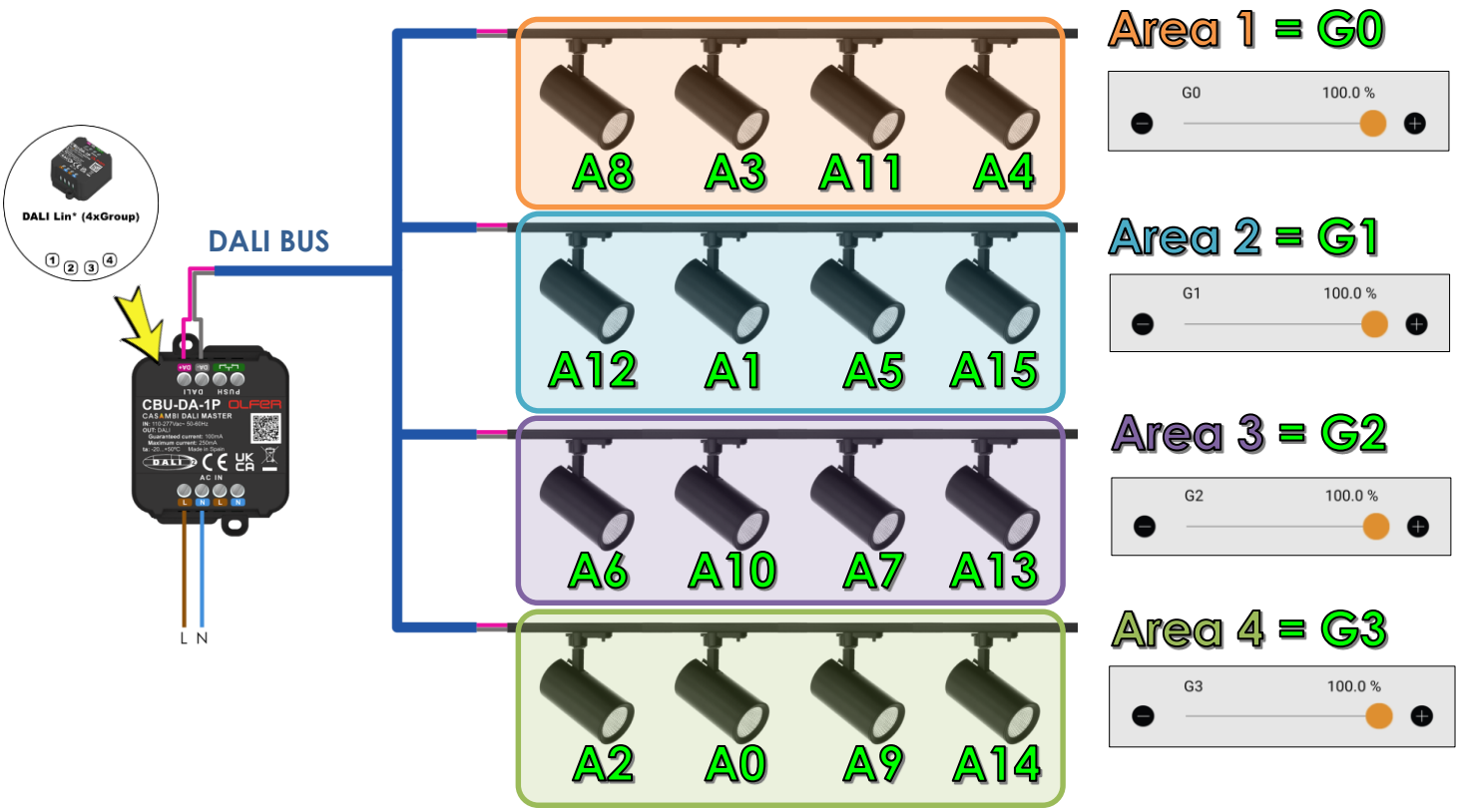
We tap on "OK" to confirm and we will see that the "DALI details" screen is immediately updated and in the "DALI groups" box, where there was nothing before, it will now shows "G3".

Since A0 is already assigned to group 3, it could be controlled by means of the G3 slider. We could check it if necessary.

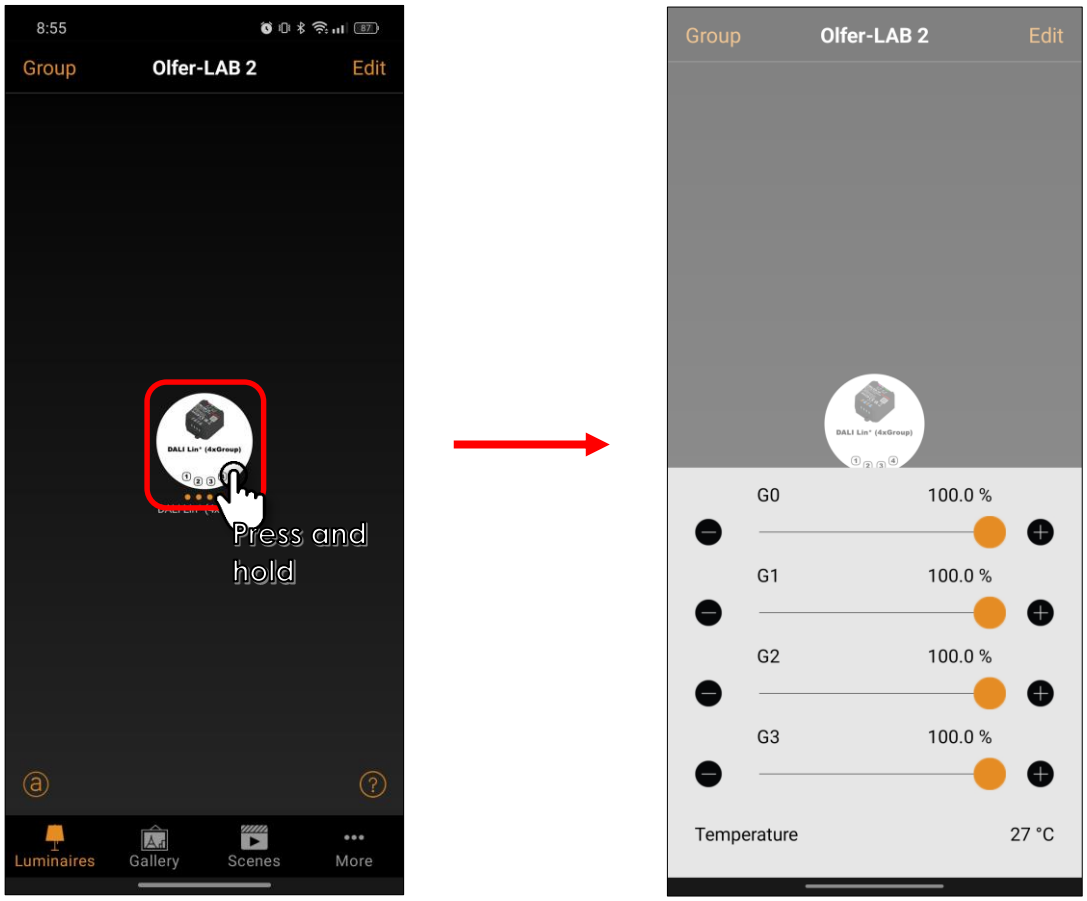
The rest of the procedure is to repeat the last two steps with the remaining devices in the DALI BUS, i.e. **identify and add** each device to its corresponding DALI group.



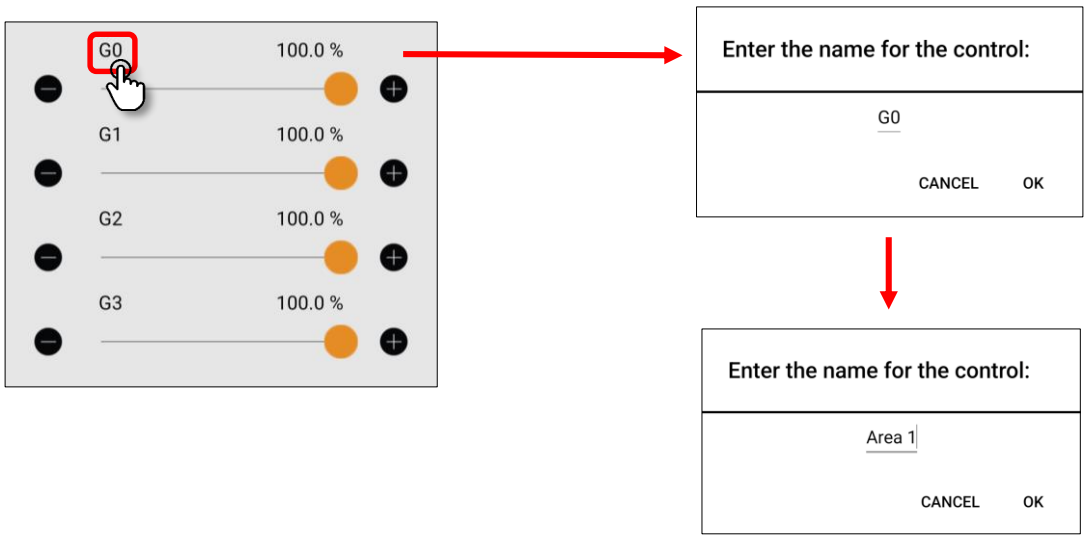
Once this process has been finished, we should be able to control all devices by areas based on our initial requirements:



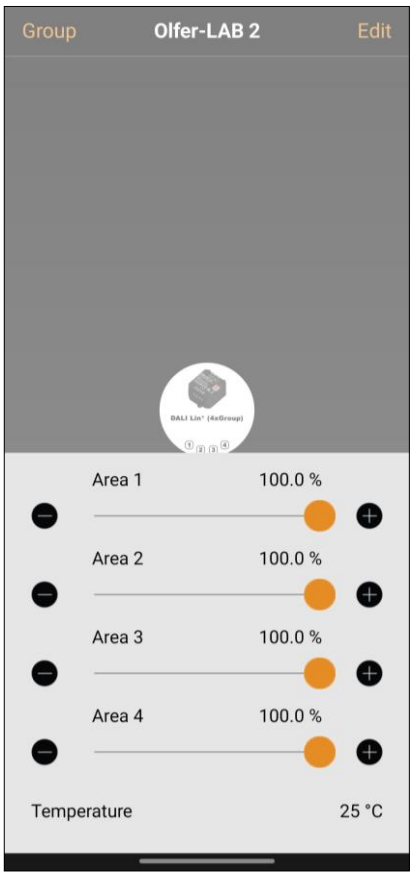
We leave the DALI menu and go back to the "Luminaires" tab in the network where CBU-DA-1P is paired. Remember that if we slide over the icon we will control all the lamps in Broadcast mode. To control by groups and access all the group sliders, press and hold on the CBU-DA-1P icon.

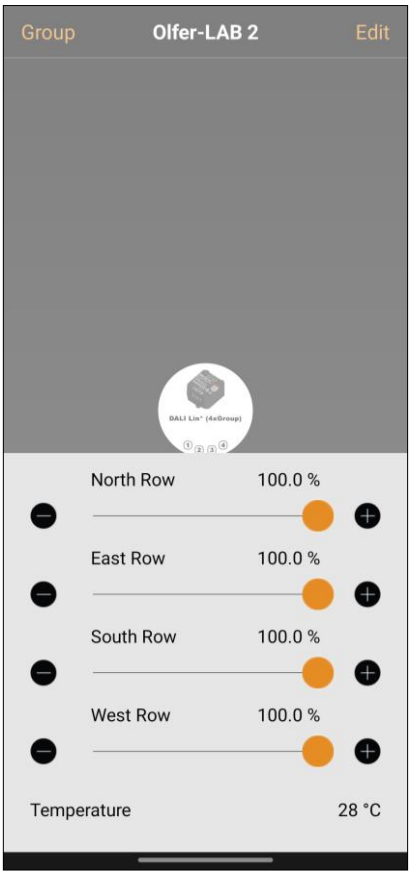


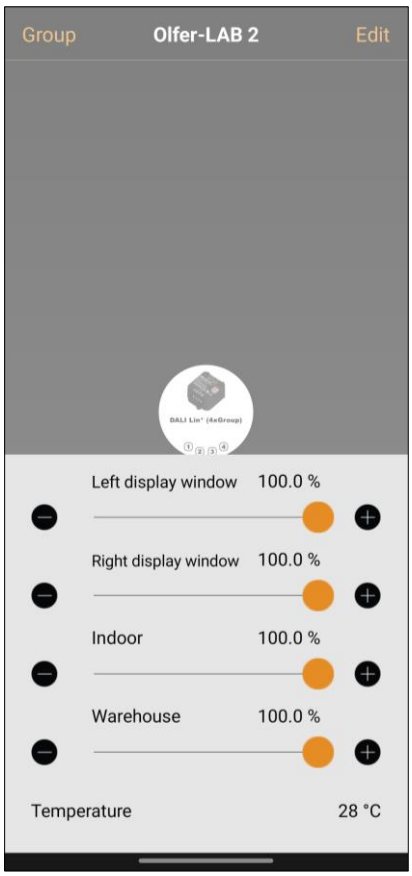
If we press on the name of each group ("G0") a pop-up window will appear where we can change the name.



This can be useful to identify which devices belong to each group. Some examples are shown below:







The name of the sliders will be saved in the network itself globally, so that if any other device accesses the network, it will get the names that we have previously established.