Zennio DALI Tool

ETS APP

USER MANUAL

DCA version: [2.1.2]
User manual edition: [2.1]_a

www.zennio.com

CONTENTS

1 INTRODUCTION

Zennio DALI Tool is an ETS application which offers an advanced system to set a DALI installation managed by a **KNX-DALI Interface.** This app is compatible with the following Zennio devices:

- **inBOX DALI 16**
- **DALI BOX Interface v3**
- **DALI BOX Interface 64 X2**

Hereinafter referred to as **KNX-DALI Interface.**

In summary, the following functionality is included:

- Initialisation and search for ballasts for the DALI installation.
- Location of the ballast in the installation.
- Assigning and changing addresses on detected ballasts.
- Group assignment.
- Importing the current device configuration.
- Resetting of the installation or a specific ballast for new configuration.
- Dimming control.
- Execution and saving scenes.
- Execution and monitoring of test results for emergency ballasts.

2 INSTALLATION OF DCA

The installer file can be obtained for free at my.knx.org, in the *ETS Apps* shop section. After the purchase process, the download file will be available in the **My Account** area, in the **Products** section.

To install the application in **ETS 5**, follow next steps:

1. In the ETS main window, at the right bottom, select the "Apps" checkbox. A pop-up like the following will appear:

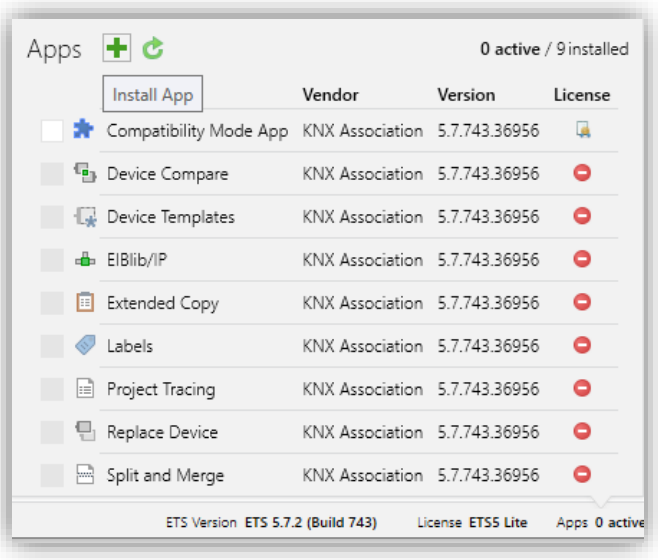

Figure 1. Installation ETS 5

2. Click on the button:  ("Install App") and select the file "***Zennio_DALI_Tool.etsapp***".

To install the application in **ETS 6**, follow next steps:

1. In the ETS initial window, press “Settings” and select the "ETS Apps" checkbox. A pop-up similar to the following will appear:

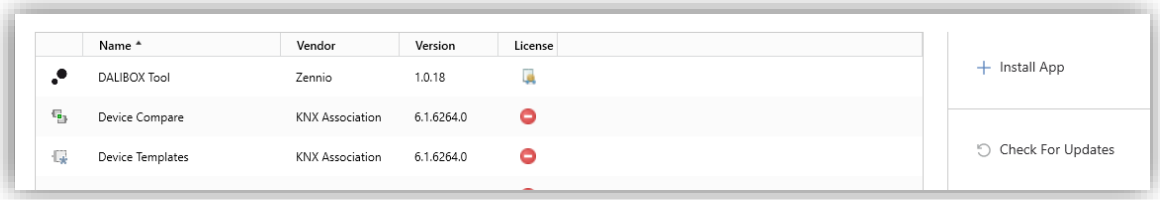

Figure 2. Installation in ETS 6

2. Click on the button: "+ Install App" and select the file "***Zennio_DALI_Tool.etsapp***".

Once the application is installed, it will appear in the list of applications as shown in Figure 3, and will be available in the **Apps** tab of the toolbar of any project on ETS 5 and in the **ETS Apps** section of the configuration menu on ETS 6.

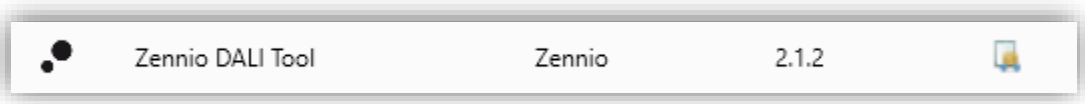

Figure 3. Complete installation

3 FUNCTIONALITY

Once the application is installed, it is accessed from an additional tab called DCA. This tab appears when DALI BOX Interface device is selected: ***Devices → KNX-DALI Interface → DCA.***

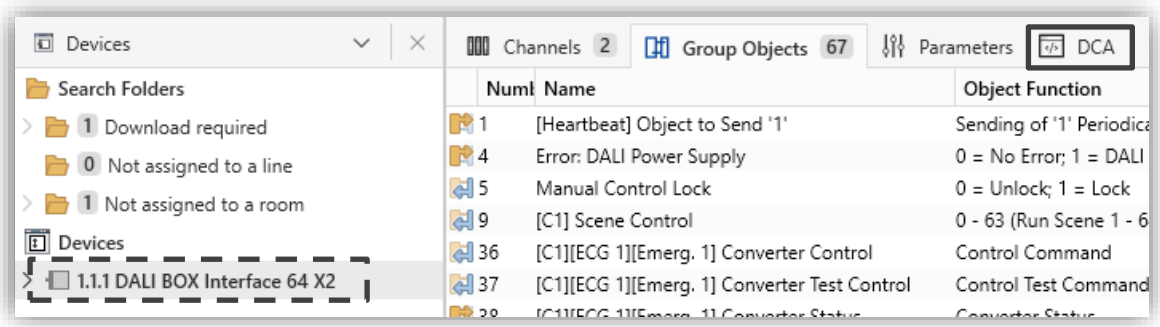

Figure 4. Project >> Device >> KNX-DALI Interface >> DCA Access

When clicking on DCA tab, the **Zennio DALI Tool** application opens:

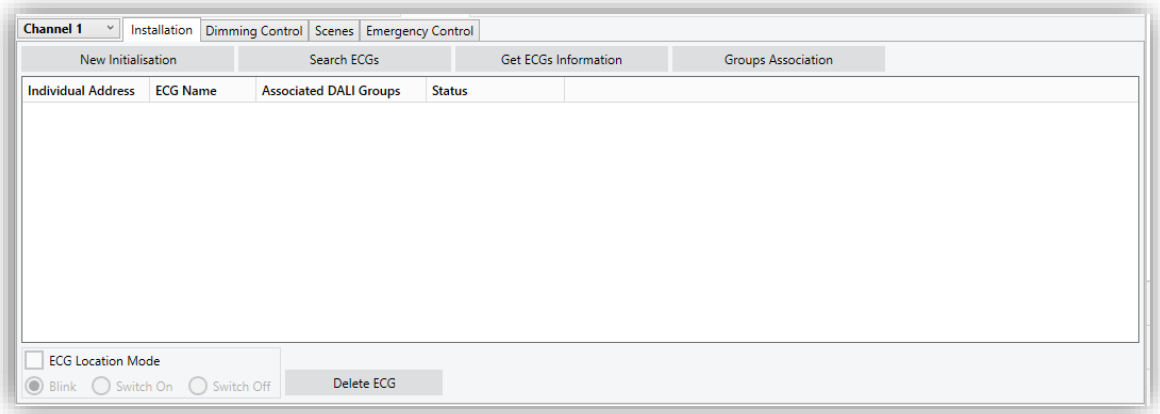

Figure 5. Zennio DALI Tool

Since the DCA offers a large amount of functionality, for ease of understanding, the explanation is divided into four sections, which correspond to the top tabs of the DCA:

- Installation
- Dimming control
- Scenes
- Emergency control.

Only in the case of a KNX-DALI interface with multiple channels, the drop-down menu in the upper left corner of the figure above will appear.

Note: *if in any of the process, the communication of the DCA with the KNX-DALI Interface device cannot take place (device non-connected, there is a bus failure…), a pop-up will be displayed which indicates that the selected device could not be detected (See section 4). It is recommended to select the interface that connects to the device, to avoid connection failures, instead of the 'Automatic' mode.*

3.1 INSTALLATION

This tab enables the complete configuration of the DALI installation of the device, including the detection of the ballasts, as well as the assignment of individual and group addresses for each detected ballast.

In this tab, the ballasts configured in ETS will be displayed, as well as the associated name and group and the status of the ballasts.

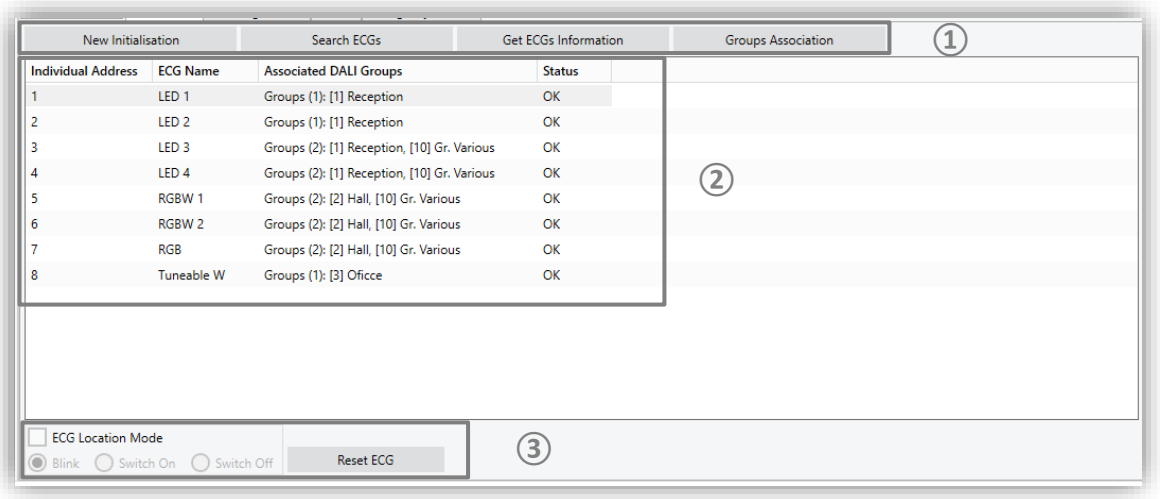

Figure 6. Installation Tab. New Initialisation Button

The area marked with number ① are displayed four buttons:

- **New initialisation:** When the button is pressed, a pop-up window appears, allowing a selection between two options.

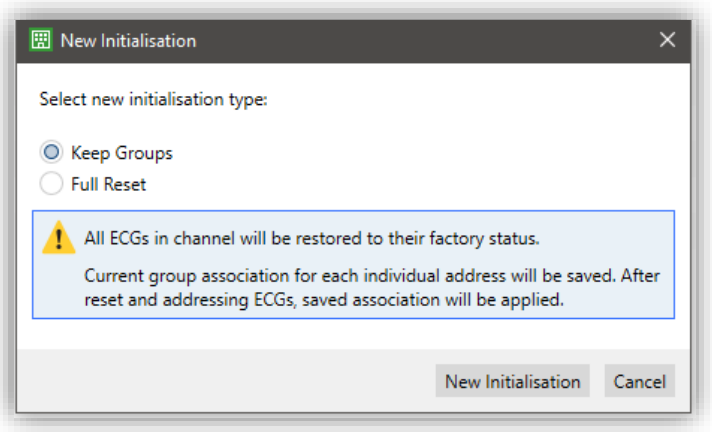

Figure 7. Pop-up window “New initialisation"

- **Keep groups**: The individual addresses of all ballasts are reset, and the associated groups are saved for each individual address. After this reset, new individual addresses are assigned to each ballast.

- **Full Reset**: A complete reset process is carried out, both for individual addresses and associated groups. After this reset, new individual addresses are assigned to each ballast. The status of each ballast is also updated, indicating whether it is connected to the bus or whether it has a presence error. In order to receive the installation information, the ballasts must be recognised and configured after a download.

  Note: *when performing any of these actions, in order to lock the device during initialisation, a pop-up window shall be displayed preventing the use of the DCA and the Display (if available).*

Figure 8. Search ECGs lock

Note: *It must be noted that during these processes the ETS parameters are adjusted to correspond to the received configuration. For example, if new ballasts are detected, they will be enabled in the parameterisation.*

- **Search ECGs:** When the button is clicked, a pop-up window appears, allowing a selection between two options.

  - **Addressed**: A search is performed only for ballasts in the installation that have an individual address previously assigned to them.

  - **All**: A search is carried out both for ballasts that have an individual address previously assigned to them and for ballasts that have no individual address associated with them.

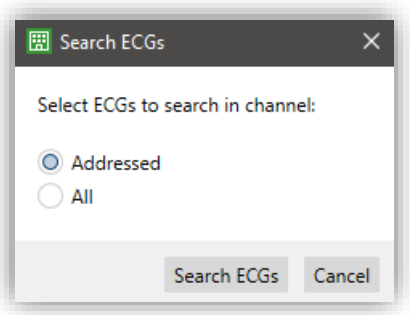

Figure 9. Pop-up window "Search ECGs"

If two ballasts share the same individual address, a pop-up message will appear to provide options to either redirect or ignore the address conflict.

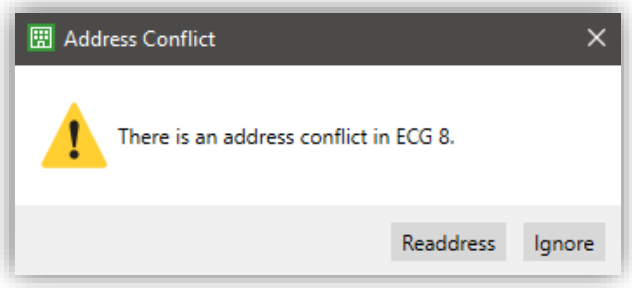

Figure 10. Pop-up window address conflict

Note: *These conflicts must not be ignored to allow to control several ballasts having the same address. The Ignore option allows to progress with the search without readdressing the conflictive ballast.*

- **Get ECGs Information:** a communication is carried out with the device to receive the information related to the connected ballasts and the groups to which these ballasts belong. When the button is clicked, a pop-up window will appear to warn that the ETS parameterisation will be updated according to the information received, so that future downloads will be consistent with the current status of the installation. The parameters to be updated will be the following:

- Detected ballasts are enabled and undetected ballasts in the installation are disabled.
- The group association received by the ballasts is updated.
- If a ballast associated to a non-parameterised DALI group is detected, it will be enabled so that it can be completely parameterised.

- **Groups Association:** Upon clicking this button, a table displaying the 16 possible groups, and the ECGs enabled in ETS will appear, where each ECG can be associated with the desired groups. By clicking "send," a communication is established with the device to transmit the associated group configuration from the table, which will then be applied to the installation. When the button is clicked, a pop-up window will appear to confirm the transmission.

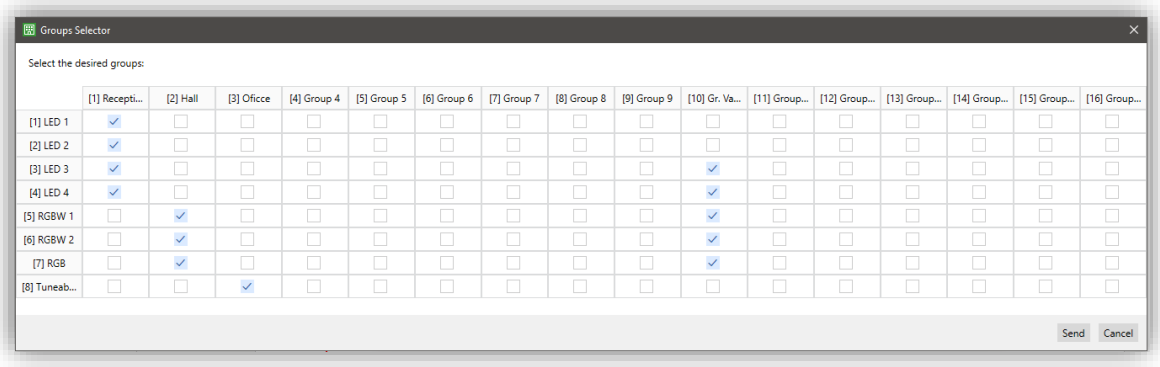

Figure 11. Groups Association

In case of associating one or more ECGs to a group not parameterised in ETS, a warning will appear so that the parameters can be revised.

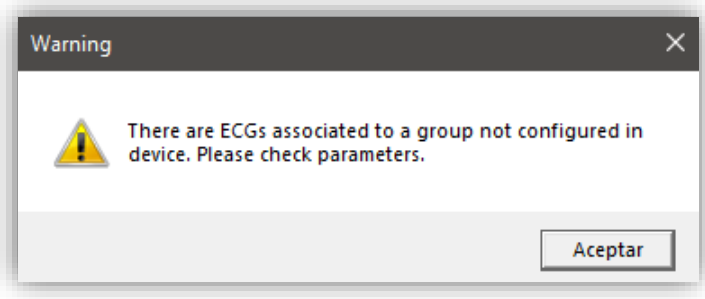

Figure 12. Pop-up window ballast associated with a non-parameterised group.

Note: *If we have a KNX-DALI interface with display, there may be conflicting cases between display and DCA. The DCA will always check if an ECG search or new initialisation is active before performing any other option on the same channel. If so, different error pop-up windows will appear when trying to perform any other option (see section 4).*

The area marked with the number ② is the main area, displaying all necessary information for managing the DALI installation. The information is organized in the following columns:

- **Individual Address** [*1…64*]**:** shows the individual address assigned to the ballast after it has been detected by the KNX-DALI Interface. From the DCA, these addresses can be changed by entering a numerical value between 1 and 64. If the new address is occupied, a pop-up window will be displayed to confirm or reject the address exchange. After confirmation, the addresses will be automatically in the ballasts.

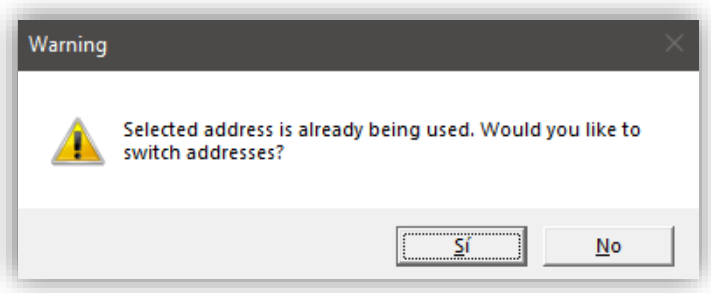

Figure 13. Pop up window. Individual address change confirmation

In the case of KNX-DALI interfaces that already have the maximum possible number of ballasts addressed (64), if all addresses are occupied, **the exchange will not be possible.** An error pop-up window will be displayed informing about the impossibility of changed individual addresses.

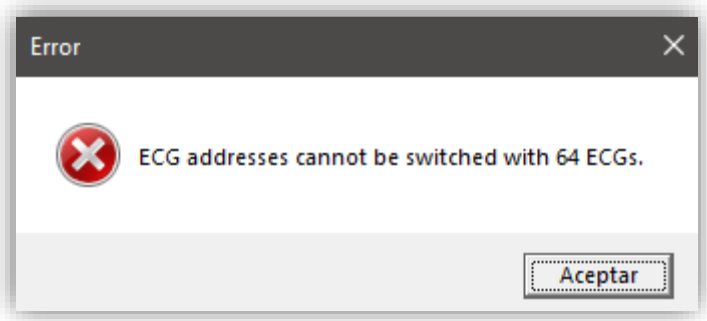

Figure 14. Pop up window. Maximum ballasts pop-up window

When attempting to change the individual address of a ballast whose status is presence error or the target address also has presence error status, an error pop-up window will appear warning that the action cannot be executed.

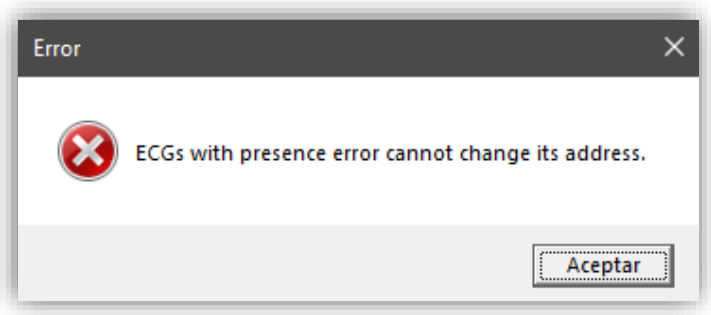

Figure 15. Pop up window. Change of address with presence error pop-up window

- **ECG Name:** it shows the name assigned by parameter for each ballast, which can be renamed from the DCA. This change updates the parameterised text in the application program, but to be shown in the *Manage Detected ECGs* sub-menu of the display (only for KNX-DALI interfaces with display), a new download will be necessary.

  - **Associated DALI Group** [*Groups (x): [x] group name*]**:** Enables verification of the groups associated with the particular ECG. *Groups (0)* is displayed if that ECG has no groups associated with it, otherwise *Group(x):* is displayed *x* being the number of total groups to which the ECG is assigned. In the latter case, after the colon, all groups are also displayed with their corresponding names.

  - **Status** [*Ok / Presence Error / Not Detected*]**:** shows the current status of the ballast after clicking on *Get ECGs Information*. This is an information field that cannot be interacted with:

    - "OK" → The ballast works properly.
    - "Presence Error" → The ballast has stopped responding.
    - "Not Detected" → The ballast is parameterised in ETS but has not been detected on the installation.

In the area ③ the "location mode" can be enabled by using a checkbox. When the checkbox is activated, the device enters the "location mode" and the following buttons are enabled:

- **Blink:** Blinks the selected ballast. Only one ballast can blink at a time. If a ballast is flashing and another ballast is selected, the first ballast will stop flashing and the next ballast will start flashing.

- **Switch On:** The selected ballast is switched on permanently. If a ballast is switched on and another ballast is selected, the first ballast will be switched off to switch on the next ballast.

- **Switch Off:** The selected ballast is switched off permanently. If a ballast is switched off and another ballast is selected, the first ballast will be switched on to switch off the next ballast.

Depending on the state of the ballast is selected in the zone ② a button is shown at the right part of the area ③

- "OK" status:

  - **Reset ECG:** Reset the selected ballast. A confirmation message will appear when pressing the button.

- "Presence Error" or "Not Detected" status:

  - **Delete ECG:** removes the ballast from the DCA ballast table, from the ETS parameterisation and the KNX-DALI interface.

For KNX-DALI interfaces supporting less the 64 ballasts per DALI channel, if the quantity of detected ballasts overpasses the number of supported, it is indicated by the area ③ with a warning message: "Number of allowed ECGs exceeded (Maximum: 16)".

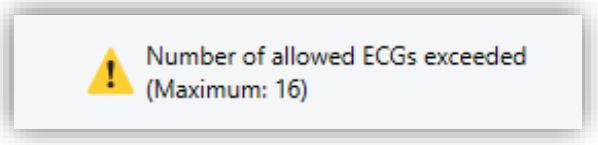

Figure 16. Maximum number of ballasts message

3.2 DIMMING CONTROL

This tab displays all the groups set in the device *Parameters* tab in ETS.

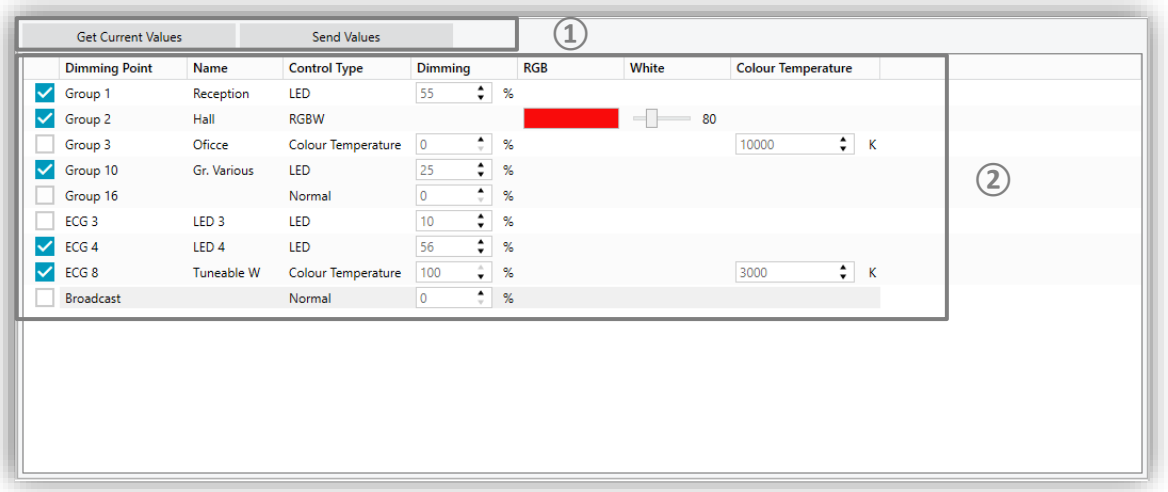

Figure 17. Dimming Control

In the area marked with the number ① there are 2 buttons:

- **Get Current Values:** gets the current dimming values in the DALI installation and updates the entire table.
- **Send Values:** sends to the device the configured dimming values of all dimming point for which the checkbox is enabled.

When doing any of these actions in case the control type is not correct or the dimming points is not active, a warning will be displayed.

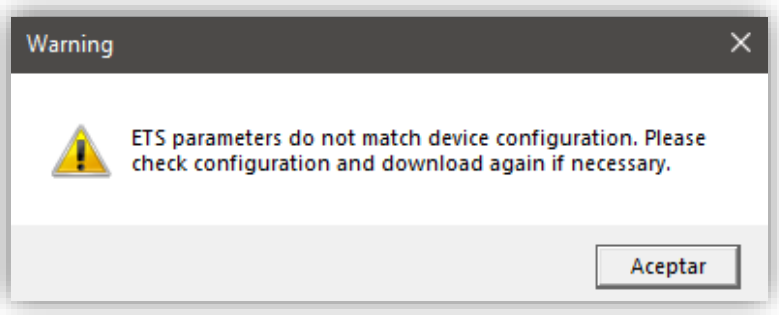

Figure 18. Pop up window. Incorrect control type or setpoint not active pop-up window

In the area marked with number ② the following columns are distinguished:

- **Checkbox** [*enabled / disabled*]: indicates whether to receive/send the configured value for that dimming point.

- **Dimming point:** indicates the number of the dimming point. This field is for information only and cannot be changed. The table will be ordered first by the groups, ordered from lowest to highest, then the individual dimming points, also ordered from lowest to highest, and finally the Broadcast dimming point.

- **Name:** shows the name associated with the corresponding dimming point. As in the "Installation" tab (see section 3.1), the name associated to the dimming point by parameter can be modified from here, although a download will be necessary for the device to receive this name correctly (only in the case of a KNX-DALI interface with display).

- **Control Type** [*Normal / LED / RGBW / Color Temperature*]: shows the type of dimming point selected for each group. Changing the type of dimming point from this field will not be allowed in order to avoid configuration and parameterisation problems.

- **Dimming:** different columns to configure the regulation according to the parameterised control type.

  - **Dimming** [*0…100*][*%*]**:** selects a dimming value for the parameterised dimming points without RGB/RGBW control.

  - **RGB:** shows a preview of the selected colour, enabling its modification by clicking on that preview. At this point a tab will be displayed to select the new colour. This column will only appear in dimming points with RGB/RGBW control.

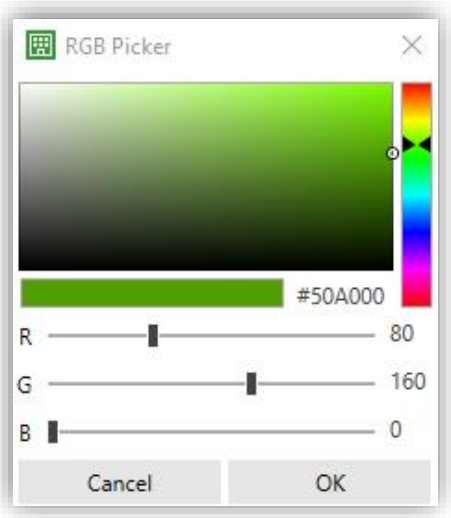

Figure 19. RGB Picker

- **White** [*0…255*]: allows the control value for the additional white channel to be selected. Column available for groups with RGBW control.

- **Color Temperature** [*1000…3000…20000*][*K*]: sets the colour temperature. If a value outside the range is entered, the value will be corrected to the nearest permitted value. Column available for groups with colour temperature control.

3.3 SCENES

This tab will enable the management of all the **scenes** set in the device. To avoid configuration problems, only scenes already configured, and with the dimming point already enabled for each scene in the parameterisation, can be modified.

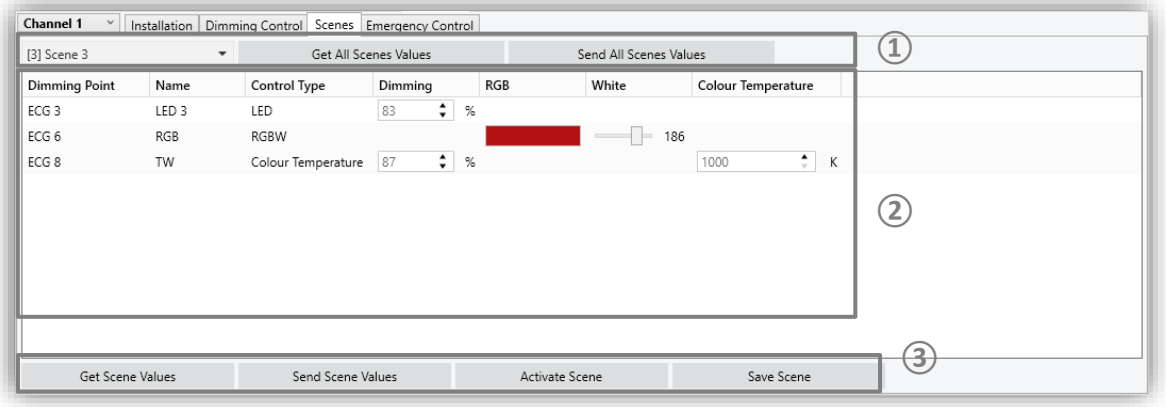

Figure 20. Scenes

It is important to note that if any scene is parameterised with a value of "0", a warning will be issued by the DCA when attempting to activate or save this scene.

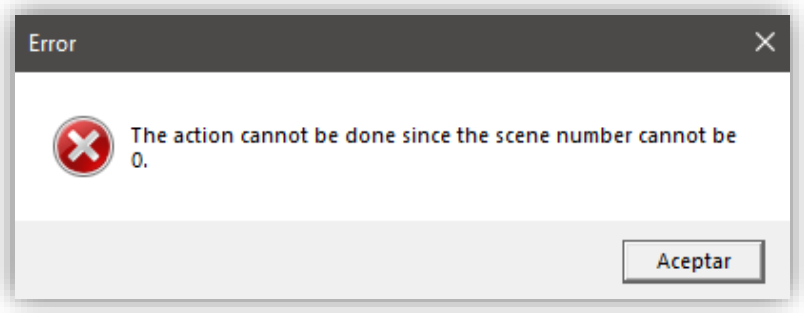

Figure 21. Pop-up window. Invalid scene number

In the area ① a scene selector and 2 general purpose buttons can be found:

- **Scene selector:** enables the scene from which to display information to be chosen. The selection is made from a drop-down menu in which only the

parameterised scenes will be shown. The name shown for each scene includes the scene number in brackets and the parameterised name.

- **Get All Scenes Values:** communication is established with the device and the current information of the values of all the scenes is received. The values received will be applied directly in the ETS parameterization.

- **Send All Scenes Values:** communication is established, and all newly configured scene values are sent to the device from the DCA.

In area marked with number ② the current configuration of the choose scene is displayed. If the currently downloaded scene information has not been received, the values already set by parameter will be displayed. The included columns are the same as those shown from the “Dimming Control” tab (see section 3.2).

At the bottom area (area ③) the following buttons enable each scene to work individually.

- **Get Scene Values:** the functionality is the same as the **Receive all scene values** button, but applying it only to the selected scene.

- **Send Scene Values:** the functionality is the same as the **Send all scene values** button, but applying it only to the selected scene.

- **Activate Scene:** runs the selected scene in the same way as the corresponding object on the device.

- **Save Scene:** saves the current status of the dimming points included as it should be done with the scene object. In this case, the DCA will automatically import the new saved scene, avoiding any differences between the scene in the device and the DCA.

3.4 EMERGENCY CONTROL

This tab is used to manage the emergency ballast functions of the device.

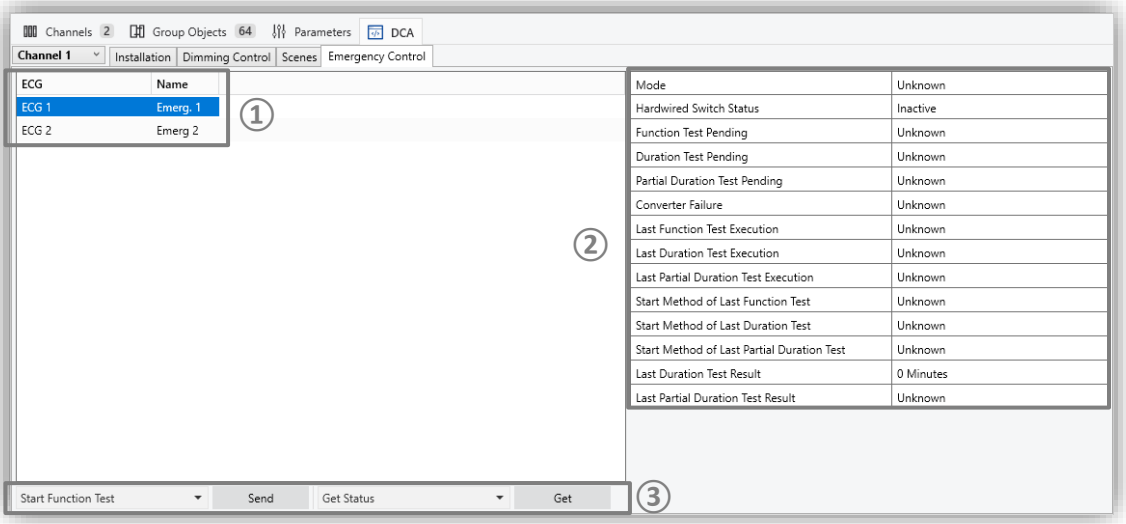

Figure 22. Emergency ballast

The area ① displays all the ballasts that have been parameterized as emergency ballasts from the ETS Parameters tab, including their individual address number in the "ECG" column and parameterized name in the “Name” column. From this tab, name can be changed, but not individual addresses.

The table on the right (area ②) shows the information on the status objects and tests run for the selected ballast:

- **Converter Status Information:**
  - **Mode:** [*Unknown / Normal / Inhibit / Hardwired Inhibit / Rest / Emergency / Extended emergency / Function Test in Progress / Duration Test in Progress / Partial Duration Test in Progress*]**:** current operating mode.
  - **Hardwired Switch Status** [*Inactive / Active*]**:** indicates the status of the external switch to turn the lamp on and off in case the lamp has that functionality.
  - **Function Test Pending** [*Unknown / No / Test Pending*]: displays if there is any functionality test pending in the queue.
  - **Duration Test Pending** [*Unknown / No / Test Pending*]: same meaning for the duration tests.

- **Partial Duration Test Pending** [*Unknown / No / Test Pending*]: same meaning for the partial duration tests.
- **Converter failure** [*Unknown / No / Failure Detected*]: displays if there are specific failures for the emergency ballast.

- **Information of test results:**
  - **Last Function Test Execution** [*Unknown / Passed in Time / Passed with delay exceeded / Failed in Time / Failed with delay exceeded / Stopped by Object*].
  - **Last Duration Test Execution** [*Unknown / Passed in Time / Passed with delay exceeded / Failed in Time / Failed with delay exceeded / Stopped by Object*].
  - **Last Partial Duration Test Execution** [*Unknown / Passed in Time / Passed with delay exceeded / Failed in Time / Failed with delay exceeded / Stopped by Object*].
  - **Start Method of Last Function Test** [*Unknown / Automatic / By gateway*]: shows the method by which the last function test was executed.
  - **Start Method of Last Duration Test** [*Unknown / Automatic / By gateway*]: shows the method by which the last duration test was executed.
  - **Start Method of Last Partial Duration Test** [*Unknown / Automatic / By gateway*]: shows the method by which the last partial duration test was executed.

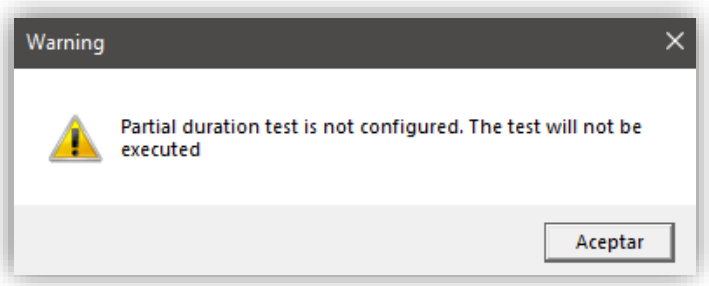

Figure 23. Pop-up window. Partial duration test not configured

  - **Last Duration Test Result** [*0…510 Minutes*]**:** displays the time resultant in the last duration test.

- **Last Partial Duration Test Result** [*Unknown / 0…100%*]**:** displays the percentage of battery life remaining after the last partial duration test. If no such test has been successfully completed, the text "Unknown" will be displayed.

In the bottom area (zone ③), in addition to selecting a ballast, two drop-down menus are displayed with their respective buttons (Send and Receive).

In the first drop-down menu, which will be used to select which action the device will send to the ballast when clicking on the Send button, the following options can be selected:

- **Start Function Test:** starts (or queues if the ballast prevents it) a functionality test.
- **Start Duration Test:** same operation as above, but for a Duration Test.
- **Start Partial Duration Test:** starts or queues a partial duration test. Due to the fact that this type of test is parameterizable, if it is executed, but the ETS parameter **Partial Duration Test Duration** has been configured with value "0", a pop-up will appear indicating that the test is disabled by parameter, and it will not be executed.
- **Stop Tests**: stops all the ballast tests in progress.
- **Rest Mode**: starts the ballast in Rest mode, which means that the ballast will switch off its lamp if it is in emergency mode.
- **Inhibit Mode**: starts Inhibit mode on the ballast if the ballast was in Normal state, which means that if the ballast is switched to emergency mode, the ballast will not switch on its lamp.
- **Re-Light / Reset Inhibit:** sending this action returns the ballast to its normal state (Normal or Emergency) if it was previously in Rest or Inhibit mode.

In the second drop-down, which will be used to select what information to get from the device when pressing the Get button, the following options can be selected:

- **Get Converter Status:** receives the status of the converter per object and then displays it in the corresponding section of the zone ②
- **Get Test Result:** receives by object the latest test results and displays them in the corresponding section of the area ②

4 ERROR MESSAGES

There are cases in which pop-up messages may appear in the event of different types of errors, some of which are shown below:

- In case of having a problem with the communication of the DCA with the device (device not connected, KNX bus failure, etc.) the error message that will appear will be:

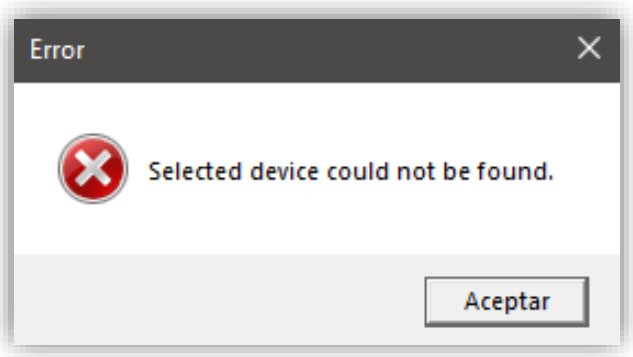

Figure 24. Pop up window. Device could not be found

If the problem is in the DALI bus power supply, the message will be different from the previous one.

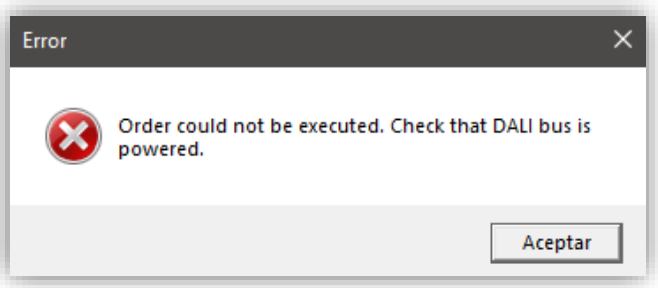

Figure 25. Pop up window. DALI bus error

- In case there is a detection on another channel, it will be indicated that the detection on the requested channel must wait for the end of the detection before the detection on the requested channel can be started.

  Note: *This can only happen for KNX-DALI interfaces with more than one channel.*

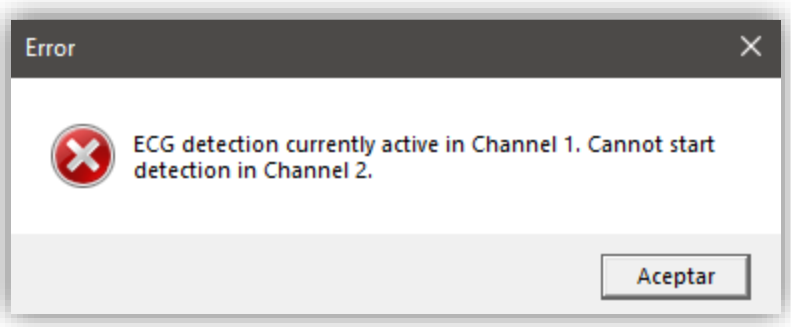

Figure 26. Pop up window. Detection on another channel

- However, if there is a detection on the requested channel, the DCA shall be attached to the current detection without carrying out the requested order.

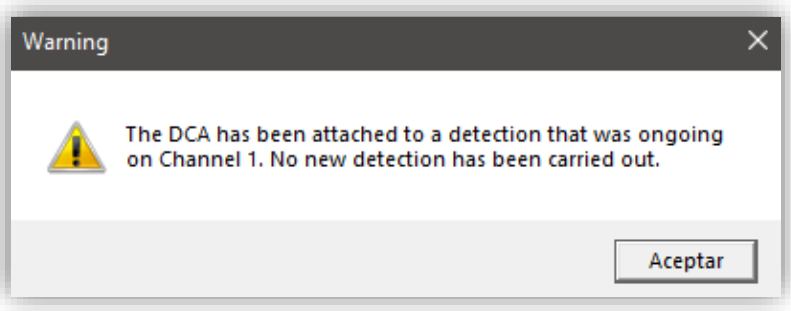

Figure 27. Pop up window. Previous detection in progress

- If the "Get ECG information", "Send group associations" or "Reset ECG" options are selected while an ECG search or initialization is in progress, a pop-up message will indicate that it is necessary to wait for the current channel detection to complete.

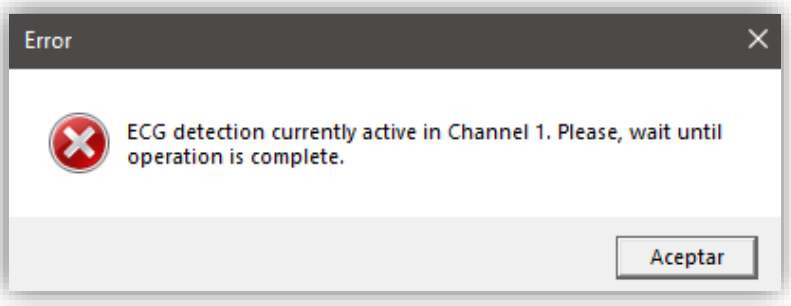

Figure 28. Pop up window. Detection in progress no further action possible

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