

# **DALIBOX Tool**

**ETS APP** 

Application program version: [1.0] User manual edition: [1.0]\_a

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## **1 INTRODUCTION**

**DALIBOX Tool** is an ETS application which offers an advanced system to set a DALI installation managed for a **DALIBOX Interface v2**.

Its main features are:

- Ballast commissioning for a DALI line.
- Assigning and exchanging addresses on detected ballasts.
- Group assignment (both DALI type and individual).
- Importing the current device configuration.
- Reset the line to make a new configuration.
- Enabling/Disabling ECG automatic detection.
- Dimming control.
- Execution and saving scenes.
- Execution and display of results for emergency ballasts.

## **2** INSTALLATION

The installer file can be obtained for free at my.knx.org, in the Shop, in the <u>ETS Apps</u> section, <u>All ETS Apps</u>.

After the purchase process, the download file will be available in the **My Account** area, in the **Products** section.

Next step is to install the application in ETS:

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

Apps	+ C		0 active	/ 9 installed
	Install App	Vendor	Version	License
*	Compatibility Mode App	KNX Association	5.7.743.36956	
9	Device Compare	KNX Association	5.7.743.36956	•
- Q	Device Templates	KNX Association	5.7.743.36956	•
÷	EIBlib/IP	KNX Association	5.7.743.36956	•
	Extended Copy	KNX Association	5.7.743.36956	•
<b></b>	Labels	KNX Association	5.7.743.36956	•
	Project Tracing	KNX Association	5.7.743.36956	•
	Replace Device	KNX Association	5.7.743.36956	•
	Split and Merge	KNX Association	5.7.743.36956	•
	ETS Version ETS 5.7.	2 (Build 743) Li	cense ETS5 Lite	Apps 0 activ

Figure 1. Installation

2. Click on the button: + ("Install App") and select the file "DALIBOX Tool.etsapp".

Once the application is installed, it will appear in the list of applications as shown in Figure 2, and will be available in the **Apps** tab of the toolbar of any project.



Figure 2. Complete installation

## **3 FUNCTIONALITY**

Once the application is installed, it is accessed from an additional tab called DCA. This tab appears when DALIBOX Interface v2 device is selected: **Device**  $\rightarrow$  **DALIBOX Interface** v2  $\rightarrow$  **DCA**.

Devices	1.0.245 DALIBOX Interface v2 > 0	GENERAL		
I.0.245 DALIBOX Interface v2	GENERAL	DIMMING TIMES		
$\mathbf{X}$	ENABLE ECGS	Dimming Time 1	5	*
$\langle \rangle$			◎ s ○ min	
	ENABLE GROUPS	Dimming Time 2	10	* *
$\setminus$			◎ s ○ min	
		Dimming Time 3	15	*
	$\mathbf{X}$		◎ s ○ min	
		Dimming Time Objects		
		INDEPENDENT FUNCTIONS		
		Scenes		
		Sequences		
		Standby		
		GENERAL FUNCTIONS		
		Dimming Value During KNX Bus Failure	No Change	•
		Error Objects		
	Group Objects Parameters	DCA /		

Figure 3. Project >> Device >> DALIBOX Interface v2 >> DCA Access

When clicking on DCA tab, the DALIBOX Tool application opens:

 Commissioning	Regulation Control	Emergency Control				
Get Co	figuration Commit			Reset All		
No group		Individual Adress	Name	Group	Name	Status



Since the DCA offers a great deal of functionality, for ease of understanding, it is divided into 4 main groups explained in the following sections.

**Note:** *if in any of the process, the communication of the DCA with the DALIBOX Interface* v2 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.

#### 3.1 COMMISSIONING

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

When this tab is open, the ballasts and the groups of each one will be displayed.

No group [1] Normal_1 [2] Normal_2 [3] Normal_3 [4] Normal_4  Individual Address  Name  Group 1  Status    11  Normal_1  1  Group 1  OK  Image: Compage: Compag	Get Configuration		Commit				Reset A	JI	Disable ECG Detection	n	(1)	
11    Normal_1    1    • Group 1    OK      [2] Normal_2    2    Normal_2    1    • Group 1    OK      [3] Normal_3    3    Normal_3    1    • Group 1    OK    (2)      [4] Normal_4    3    Normal_4    1    • Group 1    OK    (2)      [5] RGB    5    RGB    2    • Group 2    Presence Error    (6)      [6] RGB_W    6    RGB_W    3    • Group 3    OK    (4)      [7] Temp_1    (3)    Temp_2    4    • Group 4    Presence Error    (7)      [8] Temp_2    (3)    Temp_2    4    • Group 4    OK    (7)      [9] Temp_1    (3)    Temp_2    (4)    • Group 4    OK    (7)      [9] Temp_2    (3)    Temp_2    (4)    • Group 4    (7)    (7)    (7)      [9] Temp_2    (4)    • Group 4    (7)    (7)    (7)    (7)    (7)      [9] Temp_2    (7)    • Group 4    (7)    (7)    (7)    (7)    (7)      [9] Temp_1	No group	Indivi	dual Address	Name	Group	р	Name	Status				
[2] Normal_2    2    Normal_2    1    Group 1    OK      [3] Normal_3    1    Group 1    OK    2      [2] Group 2    4    Normal_4    1    Group 1    OK      [5] RGB    5    RGB    2    Group 1    OK      [6] RGB_W    3    Group 3    OK    Group 4      [7] Temp_1    4    Group 4    Group 4    Presence Error      [8] Temp_2    4    Group 4    OK    C	[1] Normal_1	1		Normal_1	1	•	Group 1	OK				
[3] Normal_3    3    Normal_3    1    Group 1    OK      [3] Rorup 2    4    Normal_4    1    Group 1    OK      [5] RGB    2    Group 2    Presence Error    GROB_W      [6] RGB_W    6    RGB_W    3    Group 3    OK      [7] Temp_1    3    Temp_2    4    Group 4    Presence Error      [8] Temp_2    3    Temp_2    4    Group 4    OK	[2] Normal_2	2		Normal_2	1	•	Group 1	OK	0			
[2] Group 2 [5] RGB    4    Normal.4    1    Group 1    OK      [5] RGB    2    Group 2    Presence Error    Group 3    OK      [6] RGB,W    3    Group 4    Group 4    Oreson 4    Presence Error      [7] Temp_1    4    Group 4    OK    Group 4    Presence Error      [8] Temp_2    4    Group 4    OK    Group 4    OK	[4] Normal_4	3		Normal_3	1	•	Group 1	OK				
S      RGB      2      Group 2      Presence Error        [6] RGB_W      6      RGB_W      3      Group 3      OK        [7] Temp_1      3      7      Temp_1      4      Group 4      Presence Error        [8] Temp_2      4      Group 4      Presence Error      8      Temp_2      4      Group 4      OK	[2] Group 2	4		Normal_4	1	•	Group 1	OK				
[6] RGB_W    6    RGB_W    3    Group 3    OK      [7] Temp_1    4    Group 4    Presence Error    8      [8] Temp_2    4    Group 4    OK	[3] Group 3	5		RGB	2	•	Group 2	Presence Error				
(1)  (1) <td>[6] RGB_W</td> <td>6</td> <td></td> <td>RGB_W</td> <td>3</td> <td>•</td> <td>Group 3</td> <td>OK</td> <td></td> <td></td> <td></td> <td></td>	[6] RGB_W	6		RGB_W	3	•	Group 3	OK				
[8] Temp_2 4 • Group 4 OK	[7] Temp_1	3 7		Temp_1	4	•	Group 4	Presence Error				
	[8] Temp_2	8		Temp_2	4	•	Group 4	OK				

Figure 5. Commissioning

The area marked with number (1) displayed four buttons:

Get Configuration: gets the information regarding the connected ballasts and the groups with which it is associated. In order for the operation to be as desired, waiting for the initial ballast detection and commissioning time is necessary.

**<u>Note</u>**: once the configuration of the ballasts is received, the relative ETS parameters will be updated: all the ballasts detected will be enabled in order to be configured later and the option overwriting groups assignment when downloading will be deactivated.

- Commit: after completing the desired configuration (see explanation of zone
  (2)), the commit enables the new configuration of individual addresses and associated groups to be sent for application on the line.
- Reset All: carries out a resetting process of all the ballasts in the line. This action also removes all the ballasts displayed in the table.

After the reset, and once the new commissioning and individual address assignment time has elapsed, the new configuration must be received via the **Get Configuration** button.

**Note:** after a reset, there will be one minute where DALIBOX Interface v2 does not send frames over the DALI bus, allowing the integrator to interact with the ballasts if desired. Because of this, error detection of other ballasts may be delayed by up to 2 minutes.

Disable/Enable ECG Detection: disables or enables the ECG automatic detection.

<u>Note</u>: as Reset is an action manage for the user, ECG Detection will be enabled the first detection cycle in order to monitor the reset ballasts. After the first loop, ECG Detection status will return to the previous.

The area marked with the number (2) is the main area, when the needed information for commit is laid. The information is organized in the following columns:

- Individual Address [1...64]<sup>1</sup>: shows the individual address assigned to the ballast after being detected by DALIBOX Interface and received by the DCA. 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 is displayed to confirm or reject the address exchange. After confirmation, the addresses will be automatically exchanged and downloaded from the DCA. If all sixty-four addresses are occupied, the assignment will not be possible.
- Name: shows the name assigned by parameter for each ballast, which can be renamed from the DCA. This change updates the parameterised text in the

<sup>&</sup>lt;sup>1</sup> The default values of each parameter will be highlighted in blue in this document, as follows: [*default/rest of options*].

application program, but, in order for it to be shown in the *Installation* sub-menu of the display, a new download will be necessary.

- Group [-/1...64]: enables the group associated with the individual address to be changed using a drop-down menu showing the parameterised groups. The option "-" indicates that there is no group associated. In this case, the group name will show "No Group".
- Name: shows the name of the group associated with the ballast. As with the ballast name, this field can be modified, but requires a new download of the application program to be displayed on the device. Leaving the text empty will give the default name "Group x" with "x" being the group number.
- Status [Ok / Presence Error / Not Detected]: shows the current status of the ballast. This is an information field with which you cannot interact:
  - > "<u>OK</u>" → The ballast works properly.
  - > "<u>Presence Error</u>" → The ballast has stopped responding.

The zone marked with the number ③ shows the groups enabled by parameter with their corresponding name. Below each group, the list of associated ballasts can be displayed by clicking on the arrow next to the group. The group associated with a ballast can be changed by dragging the ballast in the drop-down list to the new associated group.

When one of the ballasts is selected, a series of buttons are enabled at the bottom of the DCA (area 4) depending on the status of the ballast.

- "<u>OK</u>" status:
  - Blink / Stop Blink: makes the selected ballast flash. If the ballast is blinking, the button name changes to Stop Blinking and pressing it will stop it.

You can only flash one ballast at a time. If there is one ballast flashing and another one is ordered to flash, the first one will stop its flashing and start the second one.

- Switch On / Switch Off: same operation as blinking, but executing a permanent on/off.
- Rest ECG: same behavior as the Reset All button but applied only to the selected ballast.
- "Presence Error" or "Not Detected" status:
  - > **Delete ECG:** removes the ballast from the DCA ballast table and line.

#### 3.2 REGULATION CONTROL

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

Com	missioning	Regulation Control	Scenes Emergency Contro	ol				
	Get Curi	rent Values	Download Values					
	Group	Name	Control Type	Regulation	RGB	White	Colour Temperature	•
✓	1	Group 1	Regulation	0 🗘 %			6	
☑	2	Group 2	RGB				4	9
✓	3	Group 3	RGBW			0		
☑	4	Group 4	Colour Temperature	0 🗘 %			3000 🗘	К

Figure 6. Regulation Control

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

- Get Current Values: gets the current dimming values in the DALI line and updates the entire table.
- Download Values: sends to the device the configured dimming values of all those groups that have the checkbox enabled.

**Note:** In order for the read/write the regulation values, the absolute regulation and status objects must be enabled, linked and downloaded to the device. If any object in the available groups does not meet these requirements, the DCA will display an error message, allowing progress to be continued on the other groups or the action to be cancelled.



Figure 7. Object assignment error

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

- Checkbox [<u>enabled/disabled</u>]: indicates whether the set value is to be downloaded.
- Group: indicates the group number. This field is for information only, and cannot be changed. The table will be ordered by the group number.
- Name: shows the parameterised name of the corresponding group number. As in the "Commissioning" tab (see section 3.1), the name associated to the group by parameter can be modified from here, although a download will be necessary for the device to receive this name correctly.
- Control Type [<u>Regulation / RGB / RGBW / Colour Temperature</u>]: shows the type of colour control selected for each group. Changing the colour control type from this field will not be allowed to avoid configuration and parameterisation problems.
- Dimming Values: different columns to configure the regulation according to the parameterised control type.
  - Regulation [0...100][%]: selects an dimming value for parameterised groups without color control and/or with color temperature control.
  - RGB: shows a preview of the selected color, enabling its modification by clicking on that preview. At this point a tab will be displayed to select the new color.

RGB Picker	×
,	
	#000000
R	#000000
R	#000000 0 0
R 3 3	0 0 0

Figure 8. Selector RGB

This column will only appear in groups with RGB and RGBW control.

- White [0...255]: allows the control value for the additional white channel to be selected. Column available for groups with RGBW control.
- Colour Temperature [1000...3000...20000][K]: sets the color 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, only available when enabling the **Scenes** parameter in ETS, will enable the management of all the scenes set in the device. To avoid configuration problems, only scenes already configured, and with the groups already enabled for each scene in the parameterisation, can be modified.

Commissioning	Regulation Control	Scenes Emergency	Control			
[1] Scene 1	•	Import	All		Export All	1
Group	Name	Control Type	Regulation	RGB	White	Colour Temperature
1	Group 1	Regulation	100 🇘 %	i i		
2	Group 2	RGB				
3	Group 3	RGBW			25	5
4	Group 4	Colour Temperature	100 🌲 %			3000 🗘 K
				<u> </u>		
			(3			
Imp	ort Scene	Export Sc	ene	Ac	tivate Scene	Save Scene

Figure 9. Scenes

In zone (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.
- Import All: 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 setting.
- Export All: communication is established and all newly configured scene values are sent.

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 "Regulation Control" tab (see section 3.2).

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

- Import Scene: the functionality is the same as the Import All button, but applying it only to the selected scene.
- Export Scene: the functionality is the same as the Export All 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 groups included in the scene. In this case, the DCA will automatically receive the new saved scene, thus avoiding any differences between the scene in the device and the DCA. This button is only displayed if Scene Learning is enabled.

### 3.4 EMERGENCY CONTROL

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

commissioning   riege			
Individual Adress	Name	Mode	Unknown
9	Emergency 1	Hardwired Switch Status	Inactive
10	Emergency 2	Function Test Pending	Unknown
11	Emergency 3	Duration Test Pending	Unknown
		Partial Duration Test Pending	Unknown
(I)		Converter Failure	Unknown
		Last Function Test Execution	Unknown
		Last Duration Test Execution	Unknown
		Last Partial Duration Test Execution	Unknown
		Start Method of Last Function Test	Unknown
		Start Method of Last Duration Test	Unknown
		Start Method of Last Partial Duration Test	Unknown
		Last Duration Test Result	0 Minutes
		Last Partial Duration Test Result	Unknown
		3	
Start Function Te	st Start Duration	Test Start Partial Duration Test Stop Te	ests Get Converter Status Get Test Results

Figure 10. Emergency Control

The area (1) displays all the ballasts that have been parameterised as emergency ballasts from the ETS Parameters tab, including their individual address number and parameterised name. 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 test run for the selected ballast:

- Converter Status Information:
  - Mode: [Unknown / Normal / 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 [<u>Unknown / No / Test Pending</u>]: displays if there is any functionality test in the queue pending the ballast to perform the test.

- Duration Test Pending [Unknown / No / Test Pending]: same operation for the duration tests.
- Partial Duration Test [<u>Unknown / No / Test Pending</u>]: same operation for the partial duration tests.
- Converter failure [<u>Unknown / No / Failure Detected</u>]: displays if there are specific failures for emergency ballasts.
- 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 Object]: shows the method by which the last test was executed.
  - Start Method of Last Duration Test [<u>Unknown / Automatic / By Object</u>]: shows the method by which the last test was executed.
  - Start Method of Last Partial Duration Test [<u>Unknown / Automatic / By</u> <u>Object</u>]: shows the method by which the last test was executed.
  - Last Duration Test Result [0...510 Minutes]: displays the time that the last successful duration test was performed.
  - Last Partial Duration Test Result [<u>Unknown / 0...100%</u>]: displays the percentage of battery life remaining after the last partial duration test. If no such test has been successfully completed, the text "<u>Unknown</u>" will be displayed.

In the bottom area (zone (3)), the following buttons are displayed in addition to the selection of a ballast:

- 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 parameterisable, if it is executed, but the ETS parameter Partial Duration Test Duration has been configured with value "<u>0</u>", 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.
- 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.



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