



DALI-Gateway KNX

Software Description for Software-Tool

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1 General

The DALI-Software-Tool (DALI-Tool) have been specially developed for KNX-DALI devices. These functions are only available in conjunction with these devices and facilitate simple set-up of these devices. No particular KNX or DALI knowledge is necessary for operation.

Processing of conventional DALI systems or light control systems e.g. via a USB/DALI port, is not possible with the tool.

1.1 Usage

The DALI Tool is mandatory for setting up the KNX DALI devices. Using this tool, the DALI devices, e.g. ballasts, dimmers, etc. are addressed and compiled to DALI groups, if required.

1.2 DALI-Software-Tool (DALI-Tool)

The DALI-Tool is a utility for the KNX-DALI devices. The following functions are integrated into the DALI-Tool:

- Test (switch ON/OFF, setting values, start auxiliary function) of the individual DALI groups
- Readdressing of individual DALI devices (DALI addresses)
- Assignment of the DALI devices in DALI groups
- Display of all lamp and ballast faults (per DALI device and DALI group)
- Display of the monitored DALI device
- Triggering of the function *Detect ballasts*, to ensure correct monitoring of the DALI device
- Display of a conflict, should the DALI group assignments saved in the KNX-DALI Gateway not correspond with the system. Otherwise the system values or the values in the KNX-DALI Gateway can be adopted.
- Triggering of emergency lighting tests and display of the results (Test mode)
- The assignment of the DALI devices to a DALI group can be saved in a *.txt file

1.3 Languages

The DALI-Tool supports several languages during operation. This is implemented using *.lng files in the sub-folder *language*. All the available languages there are listed in the DALI-Tool in *Menu item Settings>Language/Sprache* and can be selected accordingly. Should a language file not be available, the English language texts of the DALI-Tool are integrated as default solution.

1.4 Operating system

The DALI-Tool requires an IBM or IBM compatible PC with Microsoft Windows operating systems Windows XP, 2000, Windows Vista or Windows 7 (32 or 64 bit).

1.5 Graphics

The display window of the DALI-Tool is a minimum of 640 (width) x 700 (height) pixels in size. If the monitor has a lower resolution, the complete image is not shown.

1.6 KNX bus access

The connection between KNX and PC is implemented with an RS232, USB or IP port. ETS is not absolutely necessary.

It is recommended that you install the KNX interface in the same line as the KNX-DALI device in order to establish stable communication between PC and the KNX-DALI device. It can positively affect the connection stability.

1.6.1 Falcon

The preconditions for a possible connection to the KNX is that the current version of Falcon Runtime (version V1.6 or higher and version 1.8 or higher for Windows 7) is installed on the PC.

If you have installed ETS3 or higher on your PC, the Falcon driver is also automatically installed. If Falcon Runtime is already installed, it must not be reinstalled.

Should Falcon Runtime not be installed, this will be indicated when the DALI-Tool is started. The DALI-Tool can be used independently of the Falcon Runtime in Demo mode, see [Demo mode](#), page 9.

To check whether Falcon Runtime is already installed as well as the installed version on your PC, simply open the Control Panel of your PC, select Software and just search through the list for *KNX eteC Falcon Runtime*.

Otherwise Falcon Runtime uses the supplied *.msi file of your DALI-Tool. If Falcon Runtime is not installed or an older version is installed, install the most current version. The version V1.8 of Falcon Runtime (version June 2010) can be found as an *.msi file in the ZIP file of the DALI-Tool, e.g. FalconRuntime_V18.msi. The Falcon driver is installed by simply running this *.msi file, e.g. with a double click. You must have administrator rights for your PC for installation. If necessary, contact your system administrator or integrator.

The current Falcon driver can be downloaded on the KNX Internet web page, at www.knx.org/de/knx-tools/falcon/downloads. With current Falcon driver it is possible to use the current Microsoft Windows operating systems.

2 Installation

The DALI does not require an explicit installation. The required files and sub-folders can be copied to any desired position, but must be in the same folder as the EXE file (Dali-Tool.exe). If necessary, an EXE file link can be created on the Desktop or copied to any other location.

Important

The Falcon Runtime must be installed on the PC.

2.1 Which files are required

The program folder of the DALI-Tool contains a number of files and folders required to run the program. An explicit installation of the DALI-Tool is not necessary.

DALI-Tool	*.exe	Program file	The DALI-Tool is started by running this file.
CCF	.dll	Dynamic Link Libraries	Necessary for running the program
FalconAccess			
SupportLibrary			
config	Folder	Contains the *.cfg file	Files for setting various operating parameters of the DALI-Tool
device		Contains the *.dsc files	Descriptive files for the supported devices
help		Contains *.pdf files	The software manuals
language		Contains the *.lng files	Files with the text for different language variants of the DALI-Tool

2.2 Missing files

If the folder *config* or a file contained within it is not available at the program start, the folder or the missing file are created by the DALI-Tool basic settings. In this way, the password for the configuration mode is reset to 123.

The folder *device* is mandatory in order to run the program. The *.dsc files contained within it enable operation with various Gateway types. If no *.dsc files are available, the DALI-Tool can only be operated in Demo mode.

If the folder *help* is not available, an attempt to access the function ? of the DALI-Tool will fail. Otherwise the full range of the DALI-Tool can be used.

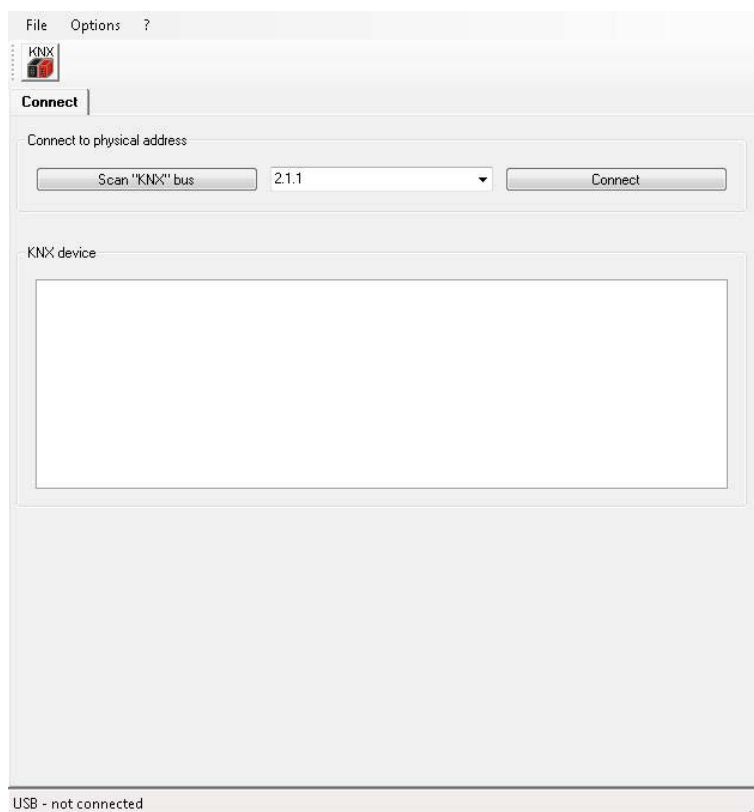
If the folder *language* is not available, please use the default English language text of the DALI-Tool.

3 Operation and Function

The DALI-Tool creates a direct connection between the DALI and KNX worlds. This connection displays the presence of DALI devices, e.g. ballasts, dimmers and converters. The DALI address or the DALI lighting group assignment can also be displayed and changed if required.

3.1 Software start

The DALI-Tool is started by running the exe file (DALI-Tool.exe). You can start, for example, by a double click with the left mouse button. Previous installation of the software is unnecessary and will not be undertaken. However, the Falcon driver must be available on the PC, see [Falcon](#), page 4.



After the software is started, the tab *Connect* becomes visible, see [Tab Connect](#), page 14. The physical address of the KNX-DALI device can be entered and a connection can be established via a corresponding interface (RS232, USB or IP). Please press button *KNX* to select and configure the interface, see [Button KNX](#), page 15.

Important

A permanent connection of the DALI-Tool to the KNX is not advisable.

Continuous updating of the display increases the KNX load, which can lead directly to impairment of the operating speeds. The scanning cycle can be reduced, see [Adjustable scanning cycle](#), page 14.

3.2 Display mode

The DALI-Tool can operate in two different modes:

- Display mode (the DALI-Tool always starts automatically in this mode).
- Configuration mode

In display mode, no changes or actions in a KNX-DALI device or a DALI device can be undertaken. It is only used to indicate and display the state of the lighting system relative to malfunctions (lamp and ballast faults), monitoring (for detection of ballast faults) as well as DALI addressing and DALI group assignments.

Also displayed are any existing conflicts, i.e. if there are differences between the DALI group and scene assignment information stored in the KNX device and in the DALI devices. This can be the case if the KNX-DALI device has been exchanged or a pre-programmed DALI device with DALI group assignment has been installed.

All this is possible without allowing the system to mistakenly modify itself or to influence the system. Modification of the DALI system is only possible in configuration mode. For this reason, the lighting system remains fully functional in display mode (observation).

The DALI-Tool in display mode is an ideal tool for a facility manager, who has no KNX or DALI knowledge and who requires immediate information on the state of the lighting system.

How to switch to configuration mode and the additional functions that are available is described in section *Configuration mode*.

3.2.1 Configuration mode

In configuration mode, the commissioning engineer or system specialist can access the DALI system and modify it.

Note
If changes are made to an existing operating system, they should be made carefully, as they will have a direct effect on the system.

The primary task of the configuration mode is in commissioning the system. The required DALI group assignments are to be simply undertaken for later control via the KNX. Furthermore, the individual DALI address of every individual DALI device can be changed.

Activation of the configuration mode can be undertaken in menu *Settings > Enable configuration mode*. Deactivation of the configuration mode can be undertaken in the menu by again selecting *Settings > Disable configuration mode*. The program returns to the display mode when the configuration mode is deactivated.

The configuration mode is protected by a password (preset 123) to avoid unwanted readdressing or re-grouping of the connected DALI devices on the KNX-DALI device.

Enter the password in the Password dialog window and acknowledge with OK. Please note that capital and small lettering are differentiated when the password is entered. The password can be changed under the menu *Settings > Change password*. A window appears, where the new password can be determined. For this purpose, the old and the new password as well a password repetition are required.

Note

Should you forget the password, the password is reset to the original setting (123) by deleting the file *tool.cfg*. The file *tool.cfg* can be found in the sub-folder *config* of the DALI-Tool. The next time the DALI-Tool is started, the file *tool.cfg* is automatically generated with the default values.

Note

When you switch to the configuration mode and access the page *Addresses / groups*, the functions *Slave*, *Lightcontrol*, *Staircase* and *Scene recalls* are interrupted. The lamps assume the brightness value for the deselected DALI device. This value can be set in the configuration mode on the tab *Device*. When the DALI-Tool is ended, the functions are not re-assumed, rather all DALI devices are set to the brightness value for the deselected DALI devices.

3.2.2

Colour scheme

The DALI-Tool uses colour schemes for the different tabs, depending on the settings made for the corresponding tabs in the mode currently selected.



- *Green*: No entries are possible here that can influence the system in any way, whether they are temporary or permanent.
- *Yellow*: The entries have a temporary and, if appropriate, a visible influence on the system. However, these settings are not stored permanently. Test functions are a typical example.
- *Red*: Changes on the tab concerned or in the corresponding entry field have a permanent influence on the system. The settings are permanently stored.

3.2.3

Demo mode

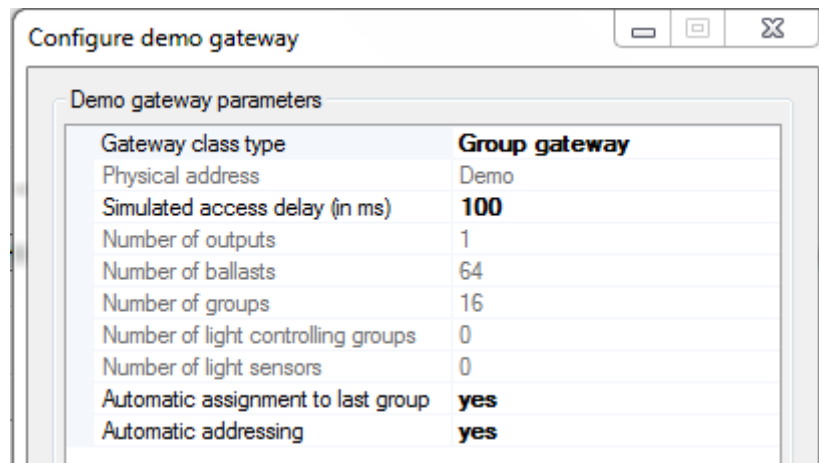
The DALI-Tool has a so-called Demo mode. This is a method for operating almost all functions of the DALI-Tool even without a KNX system and without a real KNX device. The DALI-Tool simulates all internal functions of the KNX device and the connected DALI devices.

In Demo mode, you can get familiar with the functions without a KNX system using just your PC.

The Demo mode is started by entering the word *demo* as the physical address and acknowledging it with return.

3.2.3.1 Sub-window *Configure Demo Gateway*

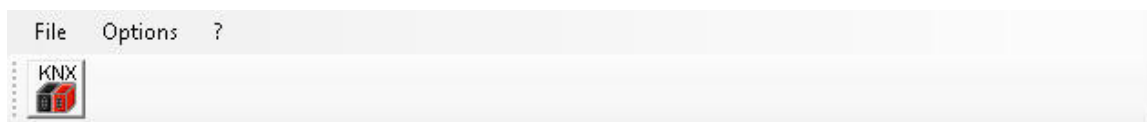
Connect to the Demo mode, see [Demo mode](#), page 9, and the sub-window *Configure demo gateway* opens. You can make all configurations for Demo mode here. Acknowledge it with button *OK* and continue in Demo mode. Using button *Cancel*, you disregard the settings and return without the Demo mode to the tab *Connect*.



Your settings in the sub-window *Configure demo gateway* are as follows:

- *Gateway class type*: Select the Group Gateway
- *Physical address*: No entry is necessary and possible here. The physical address in Demo mode is *demo*.
- *Simulated access delay (in ms)*: Here you set the simulated bus access time, at which the DALI-Tool should assume Demo mode. Should you wish to become familiar with the functions, select a small value here (e.g. 1). If you want a realistic time response (delays) of the DALI-Tool in Demo mode, you can enter typical times here, e.g. 100-200 ms.
- *Number of outputs*: The value defines the number of DALI outputs available on the selected device. Up to 64 DALI devices can be theoretically connected to each DALI output.
- *Number of ballasts*: This value defines the number of simulated DALI devices per output for the selected device.
- *Number of groups*: This value defines the number of possible DALI groups per output.
- *Automatic assignment to last group*: The corresponding parameter from the ETS can be created with this setting. With the option *Yes*, only 15 groups are available for assignment by the user. All devices without the DALI group assignment stipulated by the user are automatically assigned by the KNX device to DALI group 16. In this way, a simple operation without further configuration is possible. The setting *Yes* or *No* determines the response of the KNX device for the Demo mode.

4 Main menu



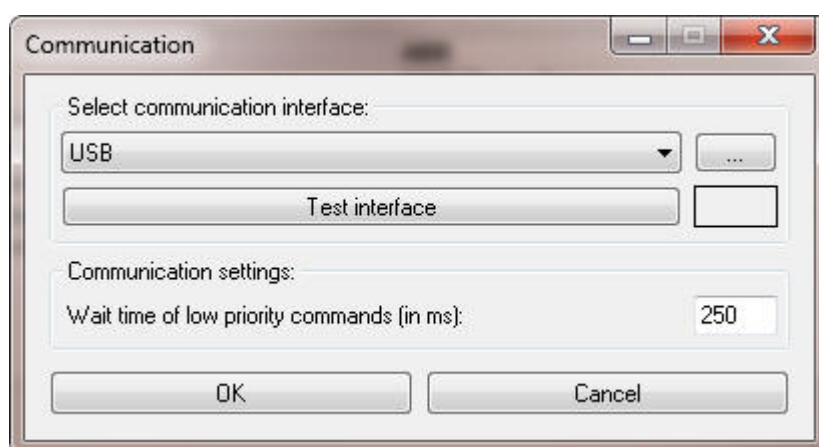
The main menu is located in the upper edge of the DALI-Tool window. The functions available here are described individually in the following.

4.1 File > Communication

The sub-window *Communication* opens. You can acknowledge your settings with *OK* or disregard them with *Cancel* and leave the window.

They are the same settings that you can access the button *KNX* from the toolbar of tab *Connect*, see [Tab Connect](#), page 14.

A more detailed description of the settings can be found under [Button KNX](#), page 15.



4.2 File > Export

Using this function, a file can be created with a listing of the group and DALI device assignments. The storage location and the file name can be freely selected.

In this ASCII file (*.txt), all the DALI devices and their DALI group assignments are listed and vice versa. This information can be used both for project documentation as well as for analysis of the system state.

Note

This function is only available after a successful connection to a KNX-DALI device without conflicts, see [Tab Connect](#), page 14.

4.3 File > Exit

Exit the DALI-Tool here.

If the DALI-Tool is exited during active configuration mode, all DALI devices remain in the state, which was applied to them by the DALI-Tool. The additional functions *Staircase* and *Sequence* remain stopped and must be restarted if necessary. The additional function *Operational state* remains deactivated and must be reactivated if required.

The DALI-Tool can also be exited by clicking on the end symbol (the X in the red box) in the header.

4.4 Settings > Configuration mode

Use this menu item to change to the *Configuration mode*. The configuration mode is protected by a password (preset 123) to avoid unwanted readdressing or regrouping of the connected DALI devices on the KNX-DALI device.

If the DALI-Tool is in configuration mode, the menu item changes from *Enable configuration mode* to *Disable configuration mode*.

4.5 Settings > Change password

You can set a new password here. For this purpose, the old and the new password as well a password repetition are required.

Note
Please note that capital and small lettering are differentiated when the password is entered.
Note
Should you forget the password, the password is reset to the original setting (123) by deleting the file <i>tool.cfg</i> . The file <i>tool.cfg</i> can be found in the sub-folder <i>config</i> of the DALI-Tool. The next time the DALI-Tool is started, the file <i>tool.cfg</i> is automatically generated with the default values.

4.6 Settings > Language/Sprache

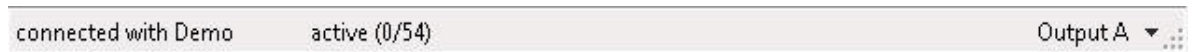
If this function is selected, an additional selection list appears beside the menu item with the languages currently supported by the DALI-Tool. The language currently selected is marked accordingly.

The selection of the available languages is directed to the *.lng files in the sub-folder *language*, see [Languages](#), page 3.

4.7 Help (?)

This menu item calls up the software description for the DALI-TOOL as a PDF file. The file that suits the current language setting is called from the sub-folder. A prerequisite is that a software application capable of displaying PDF files has been installed, e.g. Acrobat Reader.

4.8 Info line



Information concerning the status and activity of the DALI-Tool is displayed in this Info line. It is always visible irrespective of the tab page that has been selected.

4.8.1 Connected

The current connection status to the KNX device is indicated on the left border. A differentiation is made between *connected with* and *not connected*. In addition to the connection status, the type of connection to the KNX (RS232, USB or IP) as well as the physical address of the connected KNX device is displayed.

The display of the interface is unnecessary in Demo mode.

4.8.2 Conflicts

If the DALI group assignments do not correspond with the settings in the DALI devices saved in the KNX-DALI devices, a corresponding message with a red marking is displayed.

4.8.3 Active (x/y)

Due to the limited transmission speed on the KNX, it is possible that the actions triggered by the DALI-Tool are subject to a certain processing time. As soon as the queued telegrams arrive, it is indicated in the Info line as *active* followed by two values.

The first value indicates the number of queued configuration telegrams. As soon as this is the case, the display *active* is marked in red. At this time, the behaviour of the system may diverge from the expected behaviour, as not all configuration telegrams have been implemented. If there are no longer queued configuration telegrams, the colour changes to grey and a 0 is displayed.

The second value indicates the number of queued scanning telegrams. They are necessary to refresh various DALI-Tool displays. The *active* display is not highlighted in colour for queued scanning telegrams.

Should there not be queued configuration or scanning telegrams, the display *active* is not shown.

Should you break the connection to the KNX device or exit the DALI-Tool when telegrams are still in the queue for processing, the connection is not immediately disconnected or the DALI-Tool is not immediately exited. Instead, a progress bar appears, in which processing of the telegram queue is represented.

Processing of the telegrams in the queue when breaking the connection or exiting the DALI-Tool can be discontinued prematurely by pressing the *X* button on the top right hand edge of the progress bar. In this case, a further warning indication that existing telegrams in the queue will be lost is displayed.

Note

Should the telegrams be configuration telegrams, premature exiting and disregarding of the telegram queue can lead to inconsistencies and undesired configuration of the system. We strongly recommend that you do not do this.

4.8.4 Adjustable scanning cycle

The DALI-Tool features an automatic update cycle for the displayed status values. These can be observed in the display *active*. In corresponding intervals, a group of scanning telegrams occurs, which can be processed sequentially. Hereby, the corresponding displays are updated in the DALI-Tool by the new scanned status values.

The scanning interval can be set in the file *tool.cfg* in the sub-folder *config*. For this purpose, select *Edit* from the Windows context menu (right mouse button on the file name).

The following entry can be found in the file: *update status interval=1000*. The figure value defines the interval between two scanning intervals in ms. Set a value of 1000 for a repetition of the scan after 1 s. Set the value 30,000 for scanning every 30 s.

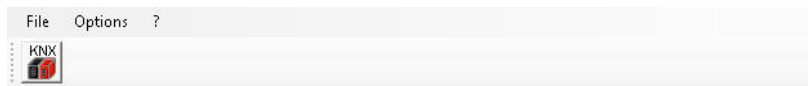
The higher the value, the lower the average KNX bus load by the DALI-Tool. Otherwise the relevance of the displayed value in the DALI-Tool is reduced. An optimum average value should be set here to suit the application.

4.9 Tab Connect

On this tab, all the functions and settings related to establishing a connection with a KNX device can be found. The tab also provides an overview of the device currently connected.

4.9.1 Toolbar

In this toolbar, buttons that offer functions for connection with the gateway are shown. The content of the toolbar is independent of the selected tab.



4.9.2 Button KNX

When this button is selected, the sub-window *Communication* opens. You can acknowledge your settings with *OK* or disregard them with *Cancel* and leave the window.

In the area *Select communication interface*: you select the interface set-up beforehand. You can create a new interface or edit an existing one by pressing button ... on the right of the selection list. This will open the interface configuration window that you know from ETS.

Here you set the individual interface parameters. Acknowledge the entry with the *OK* button.

Note

Using an RS232 interface, the connection to the KNX can only be established via a COM port. Should the ETS already use the COM port, the ETS must be exited, before the DALI-Tool is closed and the COM port is thus re-enabled.

The button *Test interface* underneath the interface selection offers the opportunity to test access by the currently selected interface to the KNX. The result of the test is displayed on the right beside the button (OK or error).

In the area *Communication settings* you can set the rate of telegrams between the DALI-Tool and the KNX device. This only concerns the cyclic scanning telegrams used to continually update the displays in the DALI-Tool. A waiting time between the individual telegrams [ms] can be set. The scanning telegrams are sent every second, for example, when the value 1000 has been selected. This facilitates reduction of the KNX bus load even with a permanently connected DALI-Tool.

Interrelated telegram sequences for configuration are exchanged with the maximum possible speed with the KNX device and are not influenced by this setting.

4.9.3 Area *Connect to physical address*

In this area, you will find three elements, with which a connection with a KNX device can be initiated.

If a connection to the KNX has been established, the DALI-Tool will be initially in display mode. The system cannot be influenced or changed in this mode. The system continues to operate without interruption and with the full range of functions.

4.9.3.1 Physical address input field

Here you can enter the physical address of the KNX-DALI device, to which you want to connect. By pressing the Return key, the automatic establishment of the connection is initialised.

Furthermore, the field offers a selection of the physical addresses, with which a successful connection was established beforehand. Press the arrow button on the right hand edge of the entry field (drop down functionality) for this purpose.

The DALI-Tool has a so-called Demo mode, see [Demo mode](#) page 9. Enter *demo* in the entry field for the physical address (a differentiation is not made between capital and small letters). If you start the Demo mode, the sub-window *Configure demo gateway* opens.

4.9.3.2 Button Scan KNX bus

Should the physical address of the KNX device be unknown, you can determine this by using the DALI-Tool by actuation of the button and then connect directly.

The DALI-Tool requests that you press the button *Programming* on the required KNX device, to put it into programming mode. Following the search process, the physical addresses of all devices can be listed in programming mode.

You can now simply connect with the required device.

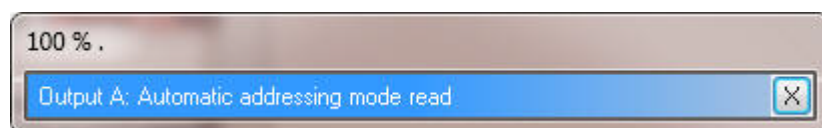
Note

The programming mode of the KNX devices must be manually reset, e.g. by pressing the KNX programming button on the KNX device.

4.9.3.3 Button Connect/Disconnect

By pressing this button, the connection with the KNX device is initialised in accordance with the selected physical address.

For this purpose, the Falcon driver is accessed by the DALI-Tool. This must have been correctly installed beforehand, see [Falcon](#), page 4. If communication is not possible with the KNX bus, the DALI-Tool automatically closes the Falcon driver and restarts it. This process is repeated up to 5 times.



If establishment of a connection is not possible, a corresponding error message is issued.

Note

If it is not possible to establish contact regardless of the attempts made, close the DALI-Tool and the ETS if required, and restart the PC or the Falcon driver. It may be necessary to manually terminate it using the *Task Manager > Applications*. The *Task Manager* can be started with the key combination *Ctrl + Alt + Del*.

If a successful connection to the KNX device is established, the button *Connect* automatically changes to the button *Disconnect*. Actuating this button ends the connection to a KNX device.

It can occur that the reason for the limited bandwidth of the KNX bus and the interface could be that telegrams sent to the KNX device are still in a queue. A corresponding message appears with a progress display and a counter for the telegrams in the queue.

You can end the process prematurely by pressing the *X* on the right edge of the progress display. Telegrams not yet sent are lost. Should they only be cyclic scanning telegrams, this will not be a factor and you can end the DALI-Tool more quickly.

4.9.4 Area *KNX device*

KNX device	
Manufacturer	theben
Device	DALI Gateway KNX 907 0 722, REG
Number of outputs	1
Number of ballasts	64
Number of groups	16
Application program	Schalten Dimmen Szenen 1f DALI/1.3
Application version	v1.3
ECU version	ECU1.0 v14.0
DALI firmware version	V0008

4.9.4.1 List of the device attributes

In this area, all the properties of the currently connected KNX-DALI device are listed.

- Manufacturer
- Device
- Number of outputs
- Number of ballasts
- Number of groups
- Application program
- Application version
- ECU version

4.10 Tab *Device*

This tab appears if a connection exists to a KNX device.

4.10.1 Area *Ballast overview*

Ballast overview			
	Total	Monitored	Conflict
▶ Output A	10	8	0
<div> <input type="button" value="Detect ballasts"/> <input type="button" value="Use gateway values"/> <input type="button" value="Use ballast values"/> </div>			

This area is used for a brief summary of all the DALI devices connect to the KNX-DALI device. Conflicts are solved and monitoring functions are adjusted here.

4.10.1.1 List of all outputs

In this list, the following parameters are displayed in table format for all DALI outputs of the KNX-DALI device:

- *Total*: The total of all the recognized DALI devices connected to the DALI output.
- *Monitored*: Number of DALI devices monitored by the KNX-DALI device. If all DALI addresses are monitored, a message of ballast faults is possible. The DALI short addresses are determined by the function DALI device *Detect ballasts*, see [Button Detect ballasts](#), page 18.
- *Conflict*: Number of conflicts of DALI devices. A conflict exists when the stored DALI group membership in the DALI devices deviates from the KNX-DALI device.

Note

In configuration mode, it is possible to solve a conflict, where the groupings of the KNX-DALI device are written into the DALI devices, see [Button Accept Gateway values](#), page 19, or the values from the DALI devices are accepted in the KNX-DALI device, see [Button Use ballast values](#), page 19.

4.10.1.2 Button *Detect ballasts*

This function determines the DALI short addresses to be monitored. No new addressing or readdressing of the DALI devices is undertaken.

The function can also be undertaken with the DALI-KNX device by the communication object *Detect ballasts*.

4.10.1.3 Button *Accept Gateway values*

Using this function, the group information from the KNX-DALI device can be accepted into the DALI device.

The button is only activated if there is a conflict and the DALI-Tool is in configuration mode.

4.10.1.4 Button *Use ballast values*

Using this function, the group information from the DALI device is accepted into the KNX-DALI device.

The button is only activated if there is a conflict and the DALI-Tool is in configuration mode.

4.10.2 Area *Device properties*

Device properties

Brightness level (selected)	255 (100 %)
Brightness level (unselected)	1 (1 %)
Behaviour of selected ballast	Blinking
Dimming speed	16.0 s
Automatic addressing	yes
Automatic assignment to last group	not capable

Start new addressing

The following list elements can only be modified in the configuration mode. Otherwise they are only used to display the current configuration.

- *Brightness level (selected)*: Brightness value of the selected DALI device or DALI group. The value can only be modified in configuration mode. Values between 0 and 255 or 0 % and 100 % can be entered.
- *Brightness level (unselected)*: Brightness value of all unselected DALI devices or DALI groups. The value can only be modified in configuration mode. Values between 0 and 255 or 0 % and 100 % can be entered.
- *Behaviour of selected ballast*: Dynamic behaviour with a selection. In addition to direct switch over between both brightnesses (selected and unselected), a continuous transition (dimming) or the function flashing can be selected for the selected state.

Note

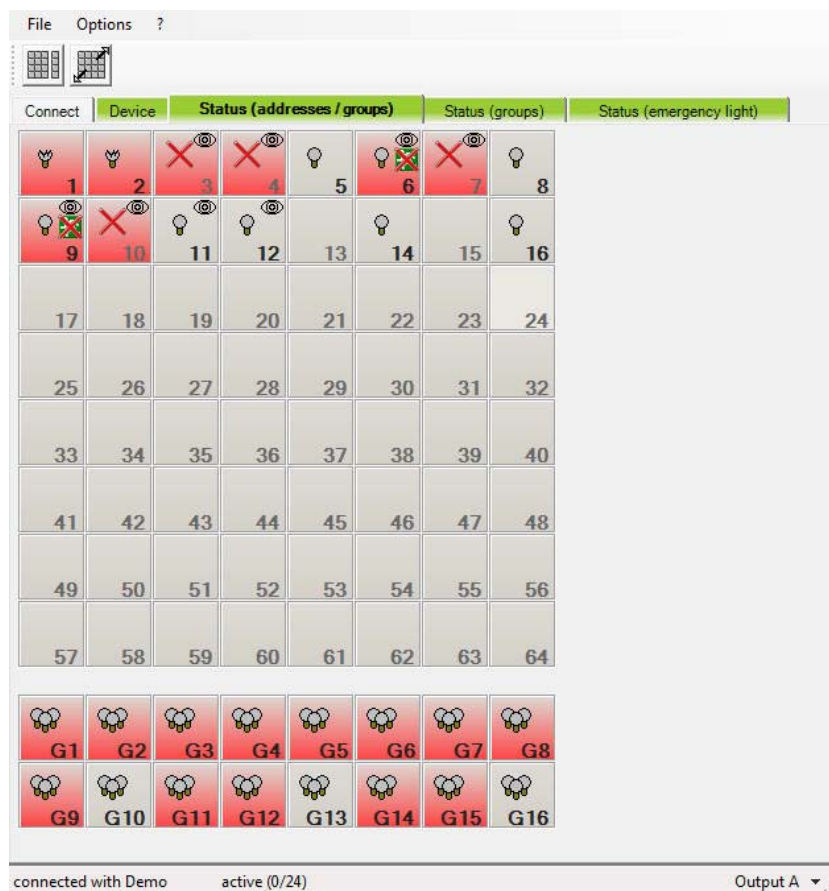
Some lamps are unsuited for flashing operation. This can mean that the lamp does not switch on or can be destroyed.
The functions dimming and flashing are not supported by all DALI Gateways. In this case, only the function *Switch* is available.

- *Dimming speed*: The time it takes for the dimming transition between both brightnesses (selected and unselected). This setting is only relevant if for the *Behaviour of selected ballast* the option *Dimming* has been selected.
- *Automatic addressing*: This field indicates whether automatic addressing for the DALI output has or has not been deactivated by ETS parameterization. With unselected address assignment, newly added DALI devices are not recognized without a short address. A DALI device without DALI short address can only be controlled via DALI broadcast telegrams. If no DALI addressing assignment is permitted (no displayed), the [Button Start new addressing](#), page **Fehler! Textmarke nicht definiert.**, is engaged.
- *Automatic assignment to last group*: Information concerning whether the automatic assignment of the DALI devices in group 16 has been activated or deactivated by the ETS parameterization. If this setting is not supported by the device currently connected, it is indicated by a *not capable*.

4.10.2.1 Button *Start new addressing*

This button is only available in configuration mode and in conjunction with a deactivated automatic address assignment. With this function, a one-off DALI address assignment is triggered. All DALI devices with the missing short address at this point are addressed. Devices with a short address are excluded from this process and retain the DALI short address they had up to now. If DALI devices with a double DALI short address are available, they will be removed. A DALI device without a DALI short address will be assigned with the first free DALI short address.

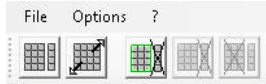
4.11 Tab *Status (addresses / groups)*



This page is only visible if a KNX-DALI device has been connected beforehand. It provides a graphic overview of all DALI short addresses and detected DALI devices as well as their state. For group-based KNX-DALI devices, an additional grouping of the DALI device is displayed.

In configuration mode, the DALI short addresses of the detected DALI devices can be changed. Furthermore, the DALI group assignments can be determined.

4.11.1 Toolbar



In the toolbar, you can find various symbols, which are dependent on the respective selection and mode, for control of the display as well as for configuration of DALI devices. The different functions are listed in the following and described in detail.

Note

If the function is not supported by a DALI Gateway variant or an older device, the button is greyed out. Grey buttons cannot be clicked.

4.11.1.1 Button *Align groups at side*



Using this button, the position of the group display for the 16 DALI groups is determined.

- *inactive*: Display underneath the 64 address fields
- *active*: Display right beside the address fields

The button is available in all modes for all group-based KNX-DALI devices.

4.11.1.2 Button *Automatic size fitting*



Using this button, automatic size adjustment of the address or group fields is activated/deactivated.

- *inactive*: The size is not adjusted automatically.
- *active*: The fields are always adapted to the current window size of the DALI-Tool. This assures that simpler readability is achieved with a correspondingly larger window setting. For size determination of the always square address and group field, the bordering side area (height or width) is used. All symbols are enlarged accordingly. The fonts used (DALI device numbers and group numbers) are not changed.

The button is available in all modes for all KNX-DALI devices.

4.11.1.3 Button *Clear all group memberships of all ballasts*



This button removes the DALI group assignments of all DALI devices.

A new security query is initiated, before the process is started. It is not possible to undo this step.

Processing of the telegram can take an extended time.

The button is only available in configuration mode for all group-based KNX-DALI devices.

4.11.1.4 Button *Clear all group memberships of a single ballast*



Using this button you remove the DALI group assignments of a selected DALI device.

- *inactive*: No individual DALI device or DALI group has been selected.
- *active*: After pressing the button, all DALI group assignments for this DALI device are removed.

A new security query is initiated, before the process is started. It is not possible to undo this step.

The button is only available in configuration mode for all group-based KNX-DALI devices.

4.11.1.5 Button *Remove all ballasts of a single group*



Using this button, you remove all DALI devices from the selected DALI group.

- *inactive*: A DALI device has been selected.
- *active*: After pressing the button, all DALI devices of this DALI group are removed.

A new security query is initiated, before the process is started. It is not possible to undo this step.

The button is only available in configuration mode for all group-based KNX-DALI devices.

4.11.1.6 Button *Reset all ballasts*



Using this button, all DALI devices are reset to their default delivery state (according to EN 62386-102).

Reset is implemented via the DALI telegram Reset. The DALI short address is subsequently removed. All DALI group assignments and other settings are removed in the process.

Processing of the telegram can take an extended time.

The button is only available in configuration mode.

Note

With this function, all configurations in all DALI devices are lost. Renewed addressing and grouping is mandatory. The parameterized settings in the ETS are then written from the KNX-DALI device into the DALI device. All settings, which are not affected by the ETS, are lost.

4.11.1.7 Button *Reset a single ballast*



Using this button, the selected DALI devices are reset to their default delivery state (to EN 62386-102).

- *inactive*: No individual DALI device has been selected.
- *active*: After actuation of the button, the DALI devices are reset to the default delivery state. Reset is implemented via the DALI telegram Reset. The DALI short address is subsequently removed. All DALI group assignments and other settings are removed in the process.

The button is only available in configuration mode.

4.11.1.8 Button *Reset all ballasts of a single group*



Using this button, all DALI devices of the selected DALI group are reset to their default delivery state (to EN 62386-102).

- *inactive*: No DALI device or group has been selected.
- *active*: After pressing the button, all DALI devices of the selected DALI group are reset to their default delivery state. Reset is implemented via the DALI telegram Reset. The DALI short address is subsequently removed. All DALI group assignments and other settings are removed in the process.

Processing of the telegram can take an extended time.

The button is only available in configuration mode.

4.11.1.9

Address fields

All 64 DALI short addresses are shown in an 8x8 matrix. The address field numbering commences with 1. Thus the field number 1 corresponds with DALI short address 0, etc.

Note

If a DALI telegram recording is undertaken, for example, via a USB/DALI interface and a DALI monitor is carried out, please note the divergent method of counting.

The numbering of the DALI short address commences with 0 and ends with 63. In the Gateways, numbering is offset by 1 and the numbering 1...64 is used.

Each DALI device with address is represented by a bulb symbol. If a connected DALI device does not have a short address, it cannot be shown in this view. The DALI short address is normally automatically assigned by the KNX-DALI device. In the application program in the ETS, this automatic DALI addressing can be deactivated (refer to the corresponding product manual) in most DALI gateways. The status of parameterization is displayed in the *device* tab in the *automatic address assignment* device properties.

4.11.1.9.1

Symbols in the fields



If a DALI device is not found for a DALI short address, the corresponding address field remains empty.



Should a normal DALI device be reported at the respective DALI short address, the lamp symbol is displayed in the corresponding address field.



A defective lamp is indicated by a defective lamp symbol. It is also highlighted in red.



If a DALI short address is monitored, this is marked by an eye symbol in the right upper corner of the address field. When a DALI device is monitored, the failure of the device (no longer responds) is displayed as a fault.



If a DALI device fails at an unmonitored short address (no longer responds), this is indicated by a red cross. The prerequisite is that the device is monitored.



If a normal DALI device is detected as the device type at a monitored DALI short address instead of an emergency lighting converter, it is represented by a red cross instead of an emergency lighting symbol.

The address fields concerned are highlighted in red independently of the type of fault.

4.11.1.9.2 Mouseover

If a mouse moves over an address field, this will be highlighted. At the same time, the group fields that are assigned to this DALI short address or DALI device are highlighted.

If the mouse cursor is held for a short time above the field, the DALI group membership, the current brightness value as well as the fault type current present appear as additional information.

4.11.1.9.3 Selecting



A selection is only possible in configuration mode.

A DALI short address or a DALI device is selected by a simple left mouse click. Any existing selection is replaced by the new selection.

The DALI short address selected as a result is displayed as a green frame. All assigned DALI groups are identified by a blue frame.

The DALI device is also controlled with the level *selected*, see [Area Device properties](#), page 19. If a lamp defect is not present, the selection is also displayed by a lighting lamp symbol.

If a DALI short address has been selected, the buttons + or - will also additionally appear in the address fields.

4.11.1.9.4 Moving DALI device

With a pressed left mouse button, assign a new DALI short address to the detected DALI devices, by simply dragging the DALI devices into the required address field.

If another DALI device is already at this location, the DALI short addresses of both DALI devices are exchanged.

You can assign DALI devices with the desired DALI short addresses using this process.

Information such as group membership, maximum and minimum dimming value, scene value etc. can be found on the device field. If a device is moved to another field, it will receive the information of the new device.

4.11.1.9.5 Button +/- Grouping



These additional buttons within the upper left corner of the address field are only activated in configuration mode and displayed with the selected DALI group.

By pressing the button +, the corresponding DALI devices of the currently selected DALI group are added. The button subsequently changes to + or -. By renewed actuation of this button, the DALI devices can be removed from the corresponding group.

If a DALI device is not assigned to a DALI group, it can only be controlled via the DALI broadcast telegram.

In the case of a DALI-Gateway KNX where the option for an automatic assignment in group 16 exists, a DALI device, whose last DALI group assignment has been rescinded, will be automatically assigned to group 16. Inversely, a DALI device that has been assigned to group 16 by this automatism, is automatically removed as soon as it is assigned to one of the DALI groups 1...15.

4.11.1.10 Group fields

All DALI groups are represented as a 2x8 matrix under or to the right of the 8x8 group field. The DALI groups 1...16 correspond to DALI groups 0...15. The numbering of the groups commences with 1. Thus the group field with number 1 complies to DALI group address 0 etc.

Note

If a DALI telegram recording is undertaken, for example, via a USB/DALI interface and a DALI monitor is carried out, please note the divergent method of counting.

4.11.1.10.1 Field symbols



If a DALI group is not assigned with DALI short addresses, the corresponding group field remains empty.



As soon as at least one DALI device of a DALI group is assigned, it is indicated by a group symbol with three lamps. The assigned DALI group must not be connected. It is thus possible to carry out the group assignment without connected DALI devices and to just move the devices to the appropriate device fields during commissioning.



Should there be a fault, this is indicated by the symbols, and it is described in the following. A group fault is indicated when at least one DALI device of the DALI group indicates a fault.

The group symbol contains no information on the device type. Normal DALI devices and emergency lighting converters are not differentiated and not indicated on the group symbol.

4.11.1.10.2 Mouseover

If a mouse moves over a group field, this will be highlighted. At the same time, the address fields assigned to this DALI group are highlighted.

If the mouse cursor is held for a short time over the field, the group name, as parameterized in the ETS, appears as additional information as well as the number of DALI devices assigned to this group and the existing error types.

4.11.1.10.3 Selecting



A selection is only possible in configuration mode.

A DALI group is selected by a simple left mouse click. Any existing selection is replaced by the new selection.

The DALI group selected as a result is displayed as a green frame. All assigned DALI devices are identified by a blue frame.



The DALI group is also controlled with the level *selected*, see [Area Device properties](#), page 19. The selection is also symbolised by the lighting lamp. A defective individual or DALI device of this DALI group is not taken into consideration.

If a DALI short address has been selected, the buttons + or - will also additionally appear in the address fields.

4.11.1.10.4

Button +/- Grouping



These additional buttons within the upper left corner of the group fields are only activated in configuration mode and displayed with the selected DALI group

By pressing the button +, the currently selected DALI devices of the corresponding DALI group are added. The button subsequently changes to + or -. By renewed actuation of this button, the DALI devices can be removed from the corresponding group.

If a DALI device is not assigned to a DALI group, it can only be controlled via the DALI broadcast telegram.

In the case of a DALI-Gateway KNX where the option for an automatic assignment in group 16 exists, a DALI device, whose last DALI group assignment has been rescinded, will be automatically assigned to group 16. Inversely, a DALI device that has been assigned to group 16 by this automatism, is automatically removed as soon as it is assigned to one of the DALI groups 1...15.

4.11.2

Hotkey

In order to facilitate quick operation for advanced users, the DALI-Tool offers a hotkey for this tab.

On the tab *Addresses/groups*, hold the key *Ctrl* pressed, and a click in an address or group field no longer leads to a selection of the DALI device or group, but rather the entire field is now used for as a button interface for grouping (+ or -). In this way, the grouping process is speeded up significantly, as an exact positioning on the + or - button within the address or group field is no longer necessary.

4.12

Tab *Status/Test (groups)*

This page is only visible if a group-based KNX-DALI device has been connected beforehand. It offers a tabular overview of various current states of the KNX-DALI device.

In configuration mode, additional device dependent test functions can be triggered. The name of the tab changes from *Status (groups)* in display mode to *Test (groups)* in configuration mode.

This tab only appears for group-based DALI Gateways with a test scope of varying sizes.

4.12.1

List groups

	Name	Level	Switching	Staircase	Slave	Sequence
► Group 1	G1	1 (1 %)	off	-	-	-
Group 2	G2	1 (1 %)	off	-	Inactive	-
Group 3	G3	1 (1 %)	off	-	-	-
Group 4	G4	1 (1 %)	off	Active	-	-
Group 5	G5	1 (1 %)	off	-	-	-
Group 6	G6	1 (1 %)	off	-	Inactive	-
Group 7	G7	1 (1 %)	off	-	-	-

In the table, all groups with at least one assigned DALI device are listed. The group number is displayed in the first column.

If the DALI Gateway supports further test functions, these are displayed in further columns.

4.12.1.1 **Name**

This column indicates the group names as they have been saved in the ETS. Changing the name at this position is not possible. A change can only be undertaken in the ETS. This field serves exclusively as a display for better orientation.

This ensures that the same name is stored in the device, in the tool and in the ETS database. They correspond 100%.

4.12.1.2 **Level**

This column defines the current brightness values as a binary number (0...255) and in brackets as a percentage value (0...100 %).

At this point, a brightness can also be entered in configuration mode. The entry is made as a binary number or as a percentage. The corresponding group of the system is set to the entered brightness value.

4.12.1.3 **Switch**

This column represents the switching options. A group that is switched off can be switched back on and a group that is switched on can be switched off. The possible switching operation is displayed on the button.

4.12.1.4 **Slave**

This column indicates the current state of the auxiliary function *Slave* (inactive, standby, active). If no auxiliary function *Slave* is parameterized in the ETS, a - is indicated in this column.

In configuration mode, the display of the state changes to a button. The state of the auxiliary function changes in this way. The buttons always indicate the states, into which the button changes after actuation. The sequence of states, into which you can change, are: inactive, standby, active.

4.12.1.5 **Staircase lighting**

This column indicates the current state of the auxiliary function *Staircase lighting* (inactive, active, standby, basis brightness). If no auxiliary function *Staircase lighting* is parameterized in the ETS, a - is indicated in this column.

In configuration mode, the display of the state changes to a button. The state of the auxiliary function changes in this way. The buttons always indicate the states, into which the button changes after actuation.

4.12.1.6 **Sequence**

This column indicates the current state of the auxiliary function *Sequence* (inactive, active). If no auxiliary function *Sequence* is parameterized in the ETS, a - is indicated in this column.

In configuration mode, the display of the state changes to a button. The state of the auxiliary function changes in this way. The buttons always indicate the states, into which the button changes after actuation.

4.13 End DALI-Tool

The DALI-Tool can also be exited by clicking on menu item *File > Exit* or on the end symbol (X in a red box) in the header.

If the DALI-Tool is exited during active configuration mode, all DALI devices remain in the state, which was applied to them by the DALI-Tool. The additional functions *Staircase* and *Sequence* remain stopped and must be restarted if necessary. The additional function *Operational state* remains deactivated and must be reactivated if required.

4.14 Exchange of DALI equipment

The DALI-Tool may also be used if more than two ballasts have failed on a DALI output of the KNX-DALI Gateways. If only one ballast has failed and the DALI addresses are assigned without any gaps for the DALI devices, a ballast without a DALI address (default state) can be exchanged without commissioning. The new DALI device (ballast) automatically receives the first free DALI address from the KNX-DALI Gateway as well as the group and scene information of the defective DALI device. The automatic DALI address assignment may not be suppressed. Should this be the case, the function must be enabled or triggered beforehand via the parameter in the application program or when the function is supported, in the DALI-Tool tab *device*.

Should several DALI devices on the output fail, or there are gaps in the DALI address assignment, it is not possible to guarantee a unique assignment of the replacement device by the KNX-DALI device. The KNX-DALI Gateway assigns the new DALI device with the first free DALI address. If the new DALI device has a DALI address, which is already used in the KNX-DALI Gateway, one of both DALI devices with the same addresses will be assigned with a new and unused DALI address. The other DALI device retains its address. It is not possible to predict which of the DALI devices will receive the new address. In this way, the fault-free KNX-DALI Gateway, which is already connected to the DALI device, can also receive a new address. A correction or exchange of the address can be implemented with the DALI-Tool.

Notes



Impressum

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