

# User Manual

Revision 1.000  
English

## KNX / DALI - Converter

(Order Code: HD67822-KNX-B2-Y, HD67822-KNX-B2-N)

for Website information:

[www.adfweb.com?Product=HD67822](http://www.adfweb.com?Product=HD67822)

for Price information:

[www.adfweb.com?Price=HD67822-KNX-B2](http://www.adfweb.com?Price=HD67822-KNX-B2)

### Benefits and Main Features:

- ⊕ Very easy to configure
- ⊕ Electrical isolation
- ⊕ Temperature range: -40°C/85°C (-40°F/185°F)



User Manual

For others DALI products, see also the following links:

#### Converter DALI to

[www.adfweb.com?Product=HD67832](http://www.adfweb.com?Product=HD67832)  
[www.adfweb.com?Product=HD67833](http://www.adfweb.com?Product=HD67833)  
[www.adfweb.com?Product=HD67839](http://www.adfweb.com?Product=HD67839)  
[www.adfweb.com?Product=HD67840](http://www.adfweb.com?Product=HD67840)  
[www.adfweb.com?Product=HD67844](http://www.adfweb.com?Product=HD67844)  
[www.adfweb.com?Product=HD67845](http://www.adfweb.com?Product=HD67845)  
[www.adfweb.com?Product=HD67848](http://www.adfweb.com?Product=HD67848)  
[www.adfweb.com?Product=HD67849](http://www.adfweb.com?Product=HD67849)  
[www.adfweb.com?Product=HD67850](http://www.adfweb.com?Product=HD67850)

(BACnet/IP Master)  
 (BACnet/IP Slave)  
 (Ethernet)  
 (EtherNet/IP)  
 (Modbus TCP Master)  
 (Modbus TCP Slave)  
 (PROFINET)  
 (SNMP Manager)  
 (SNMP Agent)

Do you have an your customer protocol?

[www.adfweb.com?Product=HD67003](http://www.adfweb.com?Product=HD67003)

Do you need to choose a device? do you want help?

[www.adfweb.com?Cmd=helpme](http://www.adfweb.com?Cmd=helpme)

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## UPDATED DOCUMENTATION:

Dear customer, we thank you for your attention and we remind you that you need to check that the following document is:

- ✚ Updated
- ✚ Related to the product you own

To obtain the most recently updated document, note the “document code” that appears at the top right-hand corner of each page of this document.

With this “Document Code” go to web page [www.adfweb.com/download/](http://www.adfweb.com/download/) and search for the corresponding code on the page. Click on the proper “Document Code” and download the updates.

## REVISION LIST:

Revision	Date	Author	Chapter	Description
1.000	15/06/2016	Ff	All	First Release

## WARNING:

ADFweb.com reserves the right to change information in this manual about our product without warning.

ADFweb.com is not responsible for any error this manual may contain.

## TRADEMARKS:

All trademarks mentioned in this document belong to their respective owners.

**SECURITY ALERT:****GENERAL INFORMATION**

To ensure safe operation, the device must be operated according to the instructions in the manual. When using the device, legal and safety regulation are required for each individual application. The same applies also when using accessories.

**INTENDED USE**

Machines and systems must be designed so the faulty conditions do not lead to a dangerous situation for the operator (i.e. independent limit switches, mechanical interlocks, etc.).

**QUALIFIED PERSONNEL**

The device can be used only by qualified personnel, strictly in accordance with the specifications. Qualified personnel are persons who are familiar with the installation, assembly, commissioning and operation of this equipment and who have appropriate qualifications for their job.

**RESIDUAL RISKS**

The device is state-of-the-art and is safe. The instruments can represent a potential hazard if they are inappropriately installed and operated by untrained personnel. These instructions refer to residual risks with the following symbol:

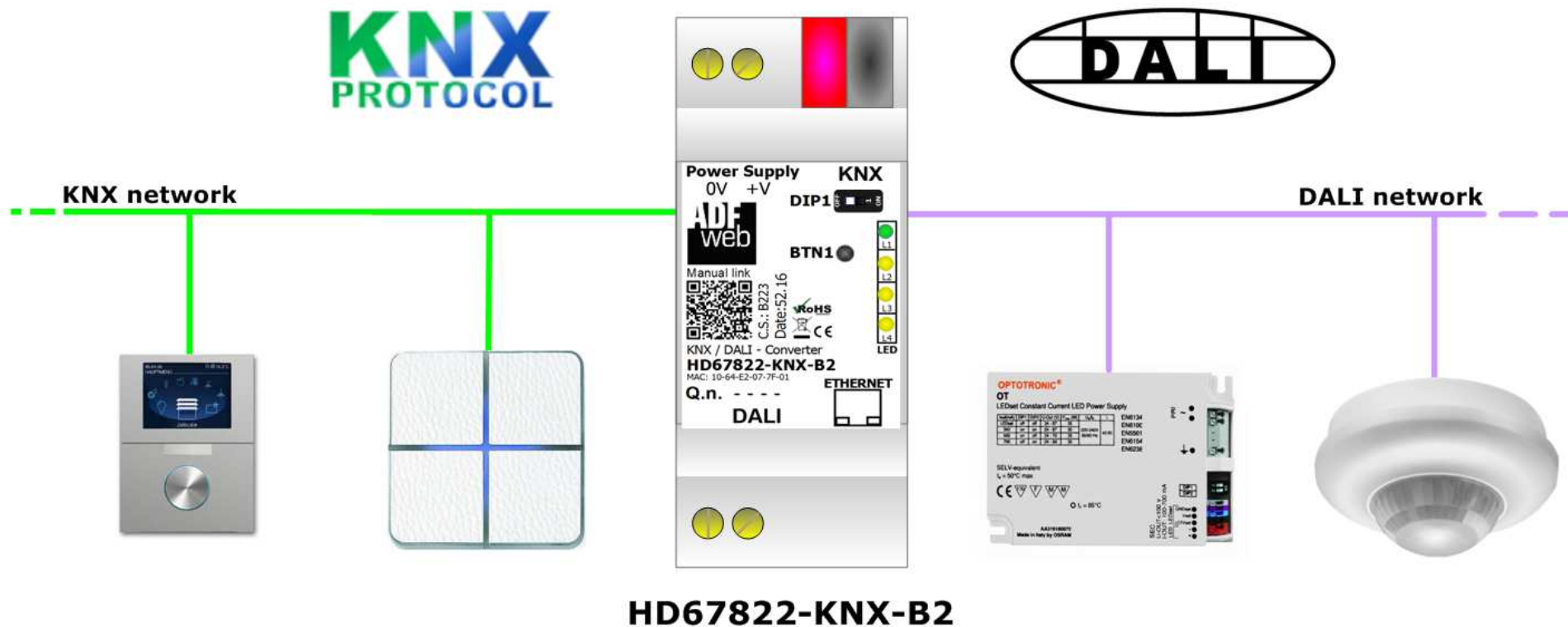


This symbol indicates that non-observance of the safety instructions is a danger for people that could lead to serious injury or death and / or the possibility of damage.

**CE CONFORMITY**

The declaration is made by our company. You can send an email to [support@adfweb.com](mailto:support@adfweb.com) or give us a call if you need it.

## EXAMPLE OF CONNECTION:



**ADFweb.com srl**  
tel. +39 - 0438.30.91.31  
[www.adfweb.com](http://www.adfweb.com)  
[info@adfweb.com](mailto:info@adfweb.com)

## CONNECTION SCHEME:

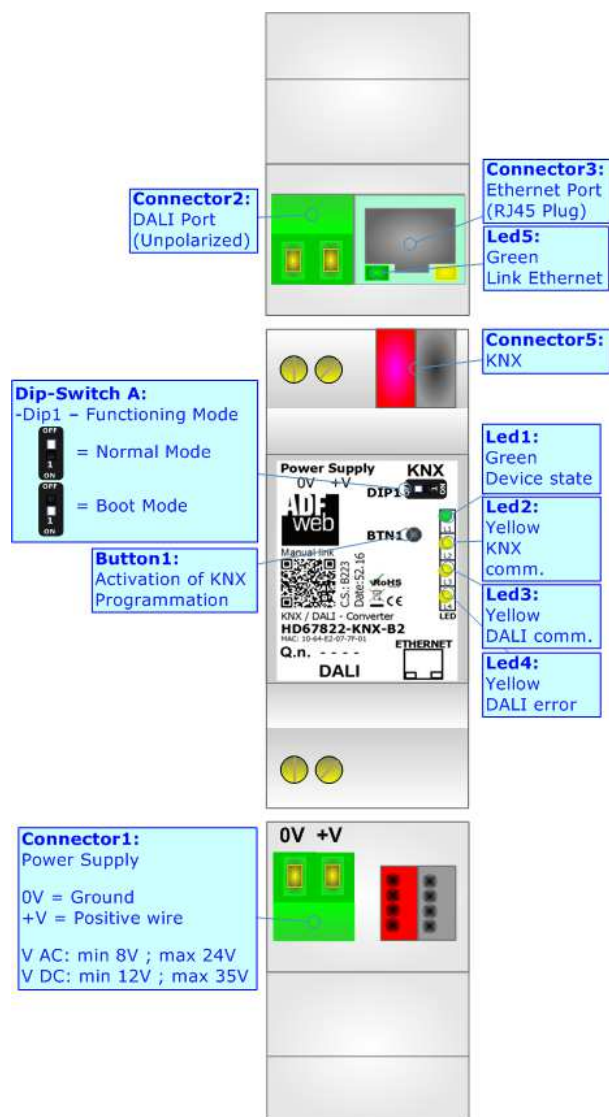


Figure 1: Connection scheme for HD67822-KNX-B2

**CHARACTERISTICS:**

The HD67822 is a KNX / DALI - Converter.

It has the following characteristics:

- Up to 64 devices on DALI bus;
- Configurator for DALI network/devices;
- Isolation between DALI – KNX, Power Supply - KNX. Additional isolation Power Supply – DALI for HD67822-KNX-B2-N version;
- Two-directional information between DALI bus and KNX bus;
- Mountable on 35mm Rail DIN;
- Wide power supply input range: 8...24V AC or 12...35V DC;
- Wide temperature range: -40°C / 85°C [-40°F / +185°F].

**CONFIGURATION:**

You need “DALI Console” software on your PC in order to perform the following:



- Configure the DALI network;
- Setup the DALI devices (groups, scenes, IDs, ...);
- Test DALI communication.

You need Compositor SW67822 software on your PC in order to perform the following:

- Define the parameter of KNX line;
- Define the parameter of DALI line;
- Update the device.

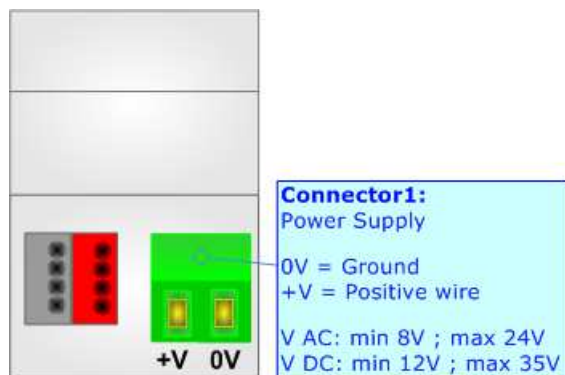
## POWER SUPPLY:

The devices can be powered at 8...24V AC and 12...35V DC. For more details see the two tables below.

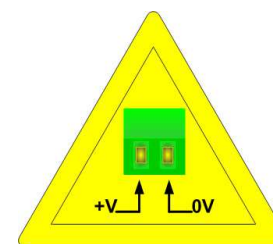
VAC 		VDC 	
Vmin	Vmax	Vmin	Vmax
8V	24V	12V	35V

Consumption at 24V DC:

Device	Consumption [W/VA]
HD67822-KNX-B2	3.5



**Caution: Not reverse the polarity power**



HD67822-KNX-B2

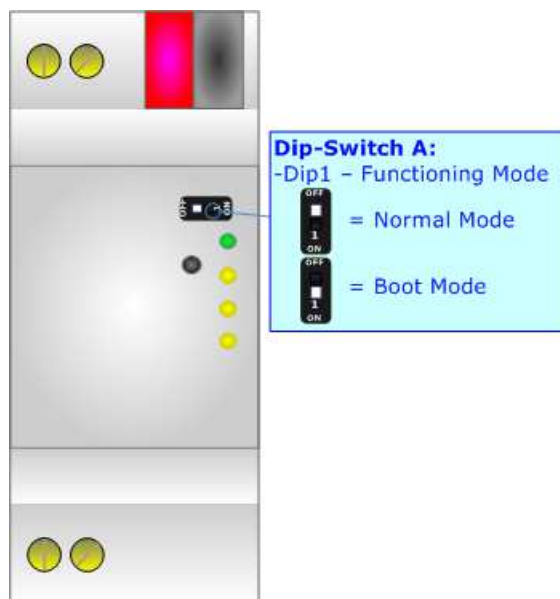
**FUNCTION MODES:**

The device has got two functions mode depending of the position of the 'Dip1 of Dip-Switch A':

- The first, with 'Dip1 of Dip-Switch A' at "OFF" position, is used for the normal working of the device.
- The second, with 'Dip1 of Dip-Switch A' at "ON" position, is used for upload the Project and/or Firmware.

For the operations to follow for the updating, see 'UPDATE DEVICE' section.

According to the functioning mode, the LEDs will have specifics functions, see 'LEDS' section.

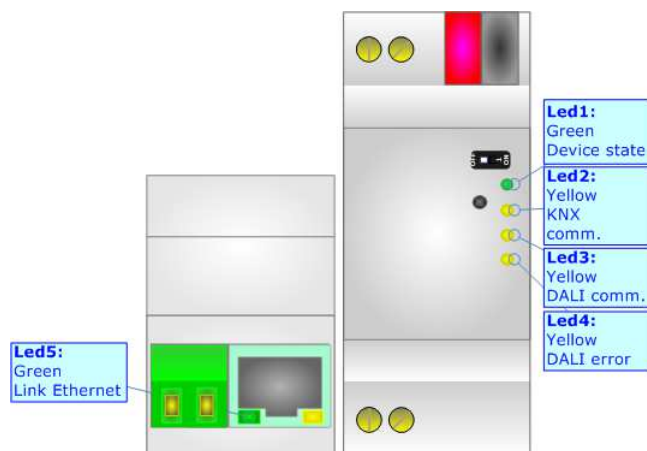




## LEDS:

The device has got five LEDs that are used to give information of the functioning status.  
The various meanings of the LEDs are described in the table below.

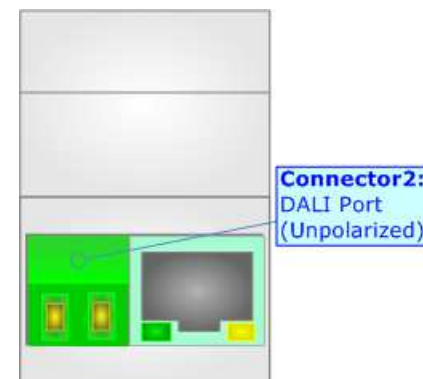
LED	Normal Mode	Boot Mode
1: Device State (green)	Blinks slowly ( $\sim 1\text{Hz}$ )	<b>Blinks quickly:</b> Boot state <b>Blinks very slowly (<math>\sim 0.5\text{Hz}</math>):</b> update in progress
2: KNX communication (yellow)	Blinks when KNX communication is running	<b>Blinks quickly:</b> Boot state <b>Blinks very slowly (<math>\sim 0.5\text{Hz}</math>):</b> update in progress
3: DALI communication (yellow)	Blinks when DALI communication is running	<b>Blinks quickly:</b> Boot state <b>Blinks very slowly (<math>\sim 0.5\text{Hz}</math>):</b> update in progress
4: DALI error (yellow)	Turns ON when the DALI device is not present	<b>Blinks quickly:</b> Boot state <b>Blinks very slowly (<math>\sim 0.5\text{Hz}</math>):</b> update in progress
5: Ethernet Link (green)	<b>ON:</b> Ethernet cable connected <b>OFF:</b> Ethernet cable disconnected	<b>ON:</b> Ethernet cable connected <b>OFF:</b> Ethernet cable disconnected



**DALI:**

DALI stands for “Digital Adressable Lighting Interface” and it is an interface protocol for digital communication between electronic lighting equipment (electronic ballasts, transformers, etc.).

With the right choice of individual DALI components an extremely wide range of requirements can be met, from operating the lighting system from a simple light switch to lighting management systems for entire office complexes with thousands of light sources. Using ADFweb.com’s DALI converters, any light source, including incandescent lamps, fluorescent lamps, high-intensity discharge lamps and even LEDs, can be controlled irrespective of whether they are installed in an office, a restaurant or a street light.

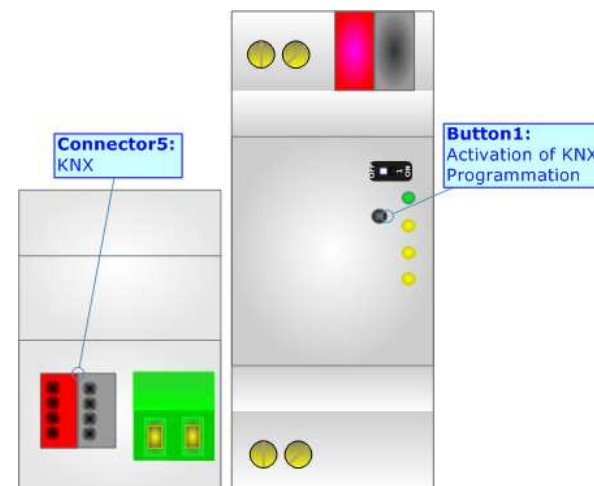


Characteristics	Description
Medium	Shielded Twisted Pair
Topology	Linear, Star or mixed
Device power consumption	Max 250 mA
DALI voltage	9.5 V – 22.5 V (typical 16 V)
Maximum cable length	300 m (1.5 mm <sup>2</sup> wire)
Maximum number of DALI devices	64
Baud rate	1200 bps
Maximum number of DALI groups	16
Maximum number of DALI scenes	16

## KNX:

KNX is the standard that allows the automated and decentralized management of the technologic plans of a big typology of structures: commercial buildings, factories, houses, public locals, schools and so on.

KNX can be used in all the applications and functions for the building automations: from lighting to control dampers, to the security, to the heating monitoring, to the conditioning, to the hydric control and alarms, to energy management and so on.



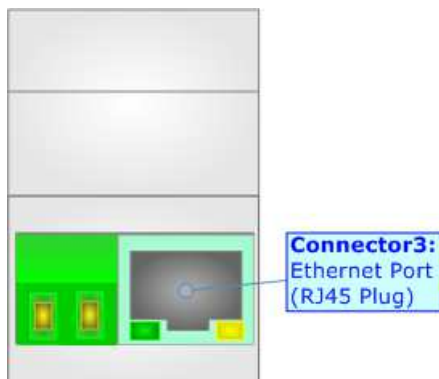
Characteristics	Description TP1-256
Medium	Shielded Twisted Pair
Topology	Linear, Star, Tree or mixed
Baudrate	9600 bps
Device supplying	Normal: bus powered devices Optional: remote powered devices
Device power consumption	3 mA- 12 mA
Power Supply Unit (PSU)	DC 30 V
Number of PSU's per physical Segment	Max. 2
Number of connectable devices per physical Segment	Max. 256
Number of addressable devices per physical Segment	Max. 255
Total cable length per physical Segment	Max. 1000 m
Distance between two devices	Max. 700 m

(\*) Taken from KNX specifications

**ETHERNET:**

The Ethernet port is used for programming DALI network and for programming the device.

The Ethernet connection must be made using Connector2 of HD67822-KNX-B2 with at least a Category 5E cable. The maximum length of the cable should not exceed 100m. The cable has to conform to the T568 norms relative to connections in cat.5 up to 100 Mbps. To connect the device to an Hub/Switch is recommended the use of a straight cable, to connect the device to a PC is recommended the use of a cross cable.



**USE OF COMPOSITOR SW67822:**

To configure the Converter, use the available software that runs with Windows called SW67822. It is downloadable on the site [www.adfweb.com](http://www.adfweb.com) and its operation is described in this document. *(This manual is referenced to the last version of the software present on our web site)*. The software works with MSWindows (XP, Vista, Seven, 8, 10; 32/64bit).

When launching the SW67822, the window below appears (Fig. 2).

**Note:**

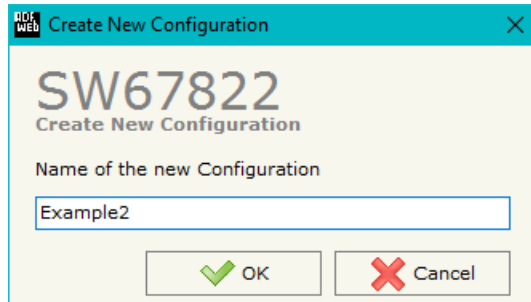
It is necessary to have installed .Net Framework 4.



Figure 2: Main window for SW67822

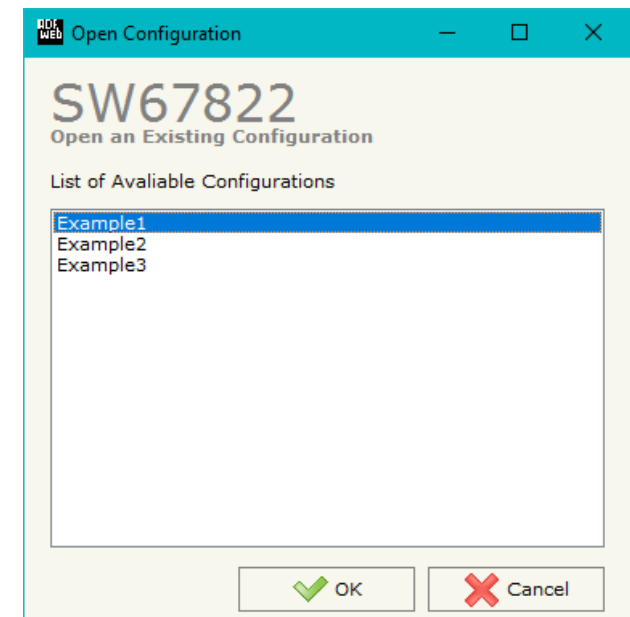
**NEW CONFIGURATION / OPEN CONFIGURATION:**

The “**New Configuration**” button creates the folder which contains the entire device’s configuration.




A device’s configuration can also be imported or exported:

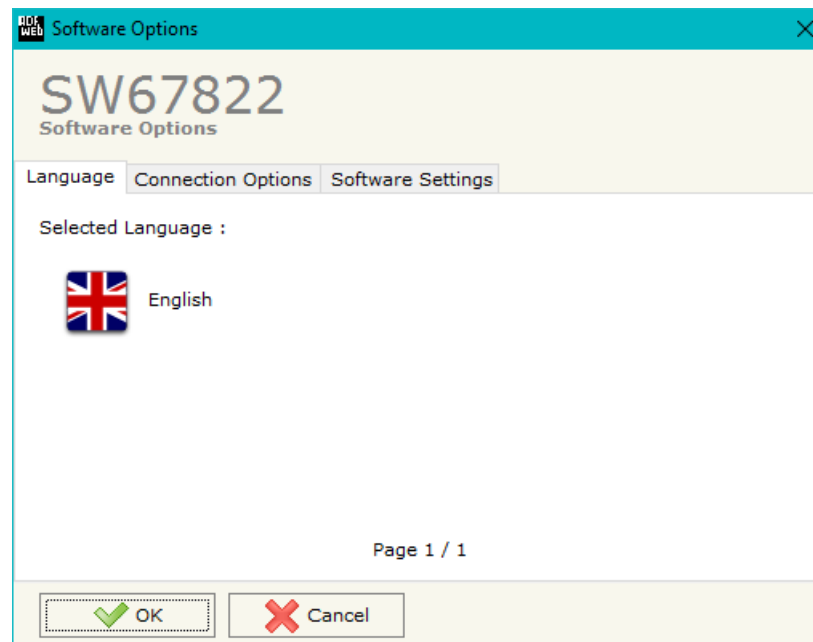
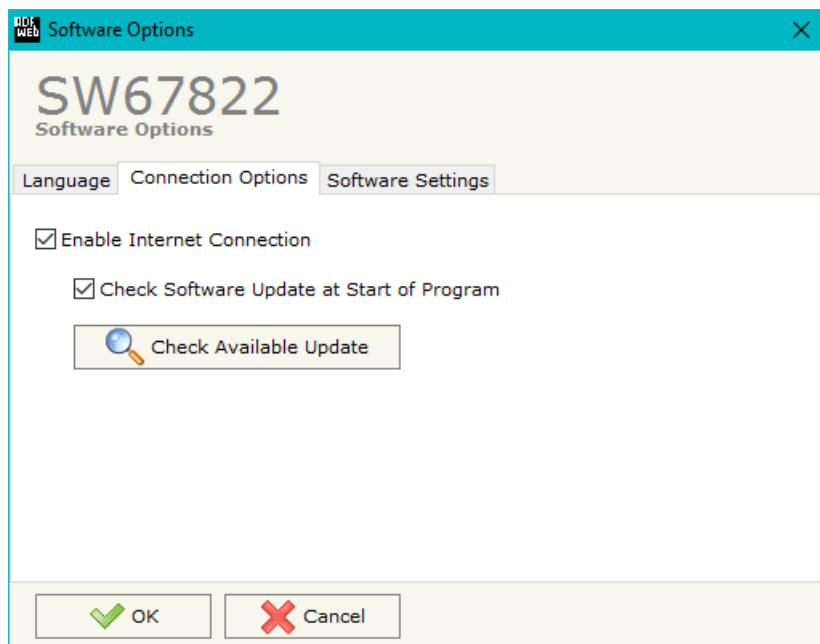
- To clone the configurations of a Programmable “KNX / DALI - Converter” in order to configure another device in the same manner, it is necessary to maintain the folder and all its contents;
- To clone a project in order to obtain a different version of the project, it is sufficient to duplicate the project folder with another name and open the new folder with the button “**Open Configuration**”.



## SOFTWARE OPTIONS:

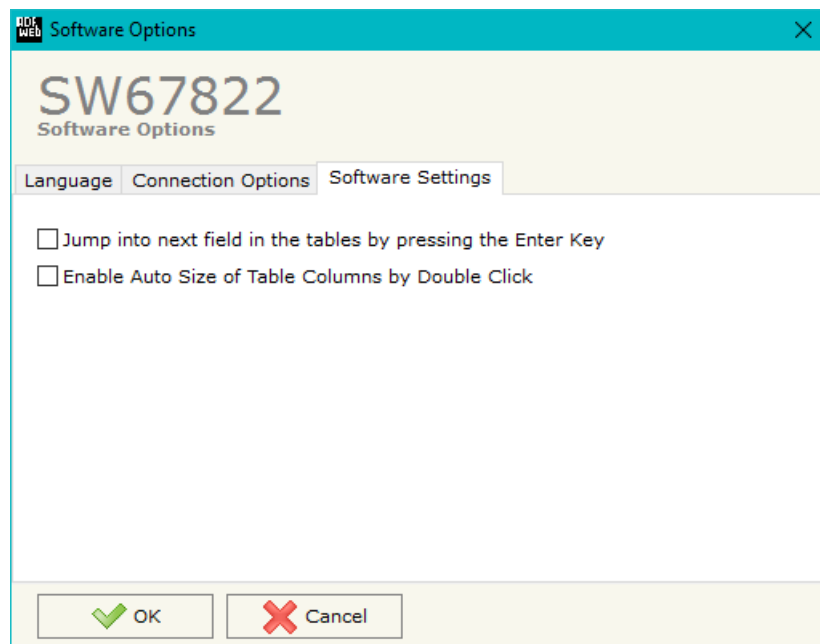
By pressing the “**Settings**” () button there is the possibility to change the language of the software and check the updatings for the compositor.

In the section “Language” it is possible to change the language of the software.



In the section “Connection Options”, it is possible to check if there are some updatings of the software compositor in ADFweb.com website.

Checking the option “**Check Software Update at Start of Program**”, the SW67822 check automatically if there are updatings when it is launched.



In the section "Software Settings", it is possible to enable/disable some keyboard's commands for an easier navigation inside the tables contained in the different sections of the software.



**SET COMMUNICATION:**

This section define the fundamental communication parameters of KNX and DALI bus.

By Pressing the "**Set Communication**" button from the main window for SW67822 (Fig. 2) the window "Set Communication" appears (Fig. 3).

The means of the fields for the "KNX" section are:

- In the field "**Type**" the type of KNX is defined (fixed to 'KNX TP');
- In the field "**ID Device**" the ID of the KNX side of the converter is defined;
- In the field "**ID Tunnel**" the ID for the tunneling is defined;
- In the field "**ID Management**" the ID for the Management is defined;
- In the field "**Control Port**" the port for the control is defined;
- In the field "**Tunnel Port**" the port for the tunneling is defined;
- In the field "**Management Port**" the port for the management is defined.

The means of the fields for the "DALI" section are:

- In the field "**DALI Console Port**" the port for the Ethernet communication with the DALI Console software is defined;
- In the field "**DALI Data Point**" the starting Data Point of KNX side where mapping the data from DALI is defined (see page xx for more info).

The means of the fields for the "Ethernet" section are:

- In the field "**IP ADDRESS**" the IP address of the converter is defined;
- In the field "**SUBNET Mask**" the SubNet Mask is defined;
- In the field "**GATEWAY**" the default gateway of the Ethernet network is defined. This feature can be enabled or disabled pressing the Check Box field. This feature is used for going out of the net.

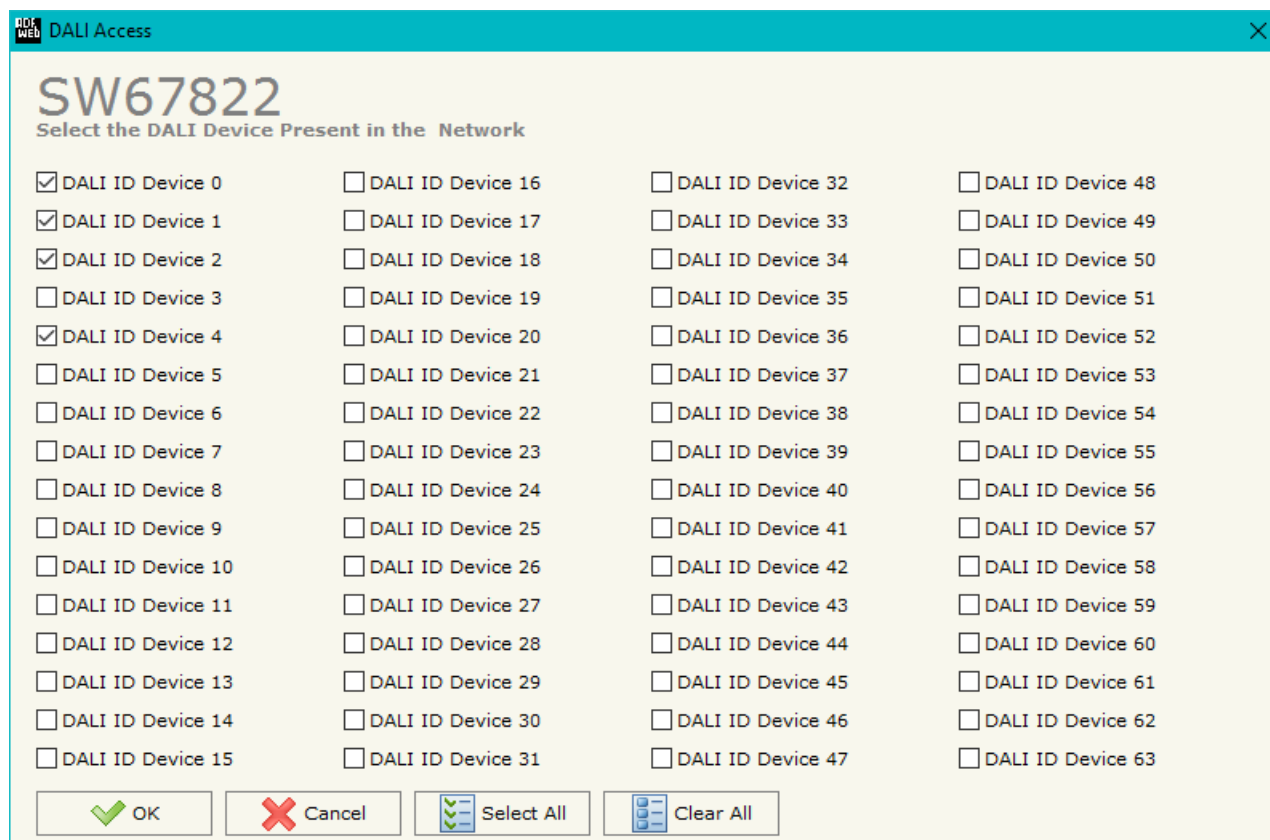
The screenshot shows the 'Set Communication' window for the SW67822 device. The window is divided into three main sections: KNX, DALI, and Ethernet. Each section has a close button (X) in the top right corner. The KNX section includes fields for Type (set to KNX TP), ID Device (1.1.200), ID Tunnel (1.1.201), ID Management (1.1.202), Control Port (50000), Tunnel Port (50001), and Management Port (50002). The DALI section includes fields for DALI Console Port (10001) and DALI Data Point (3/3/0). The Ethernet section includes fields for IP ADDRESS (192.168.0.10), SUBNET Mask (255.255.255.0), and a GATEWAY checkbox (unchecked) with IP ADDRESS (192.168.0.1). At the bottom, there are OK and Cancel buttons.

Figure 3: "Set Communication" window

**DALI ACCESS:**

By pressing the “**DALI Access**” button from the main window for SW67822 (Fig. 2) the window “Select the DALI Device Present in the Network” appears (Fig. 4).

This section is used to define the DALI devices connected to the converter. It is enough to check/uncheck the connected/unconnected DALI devices.



**DALI Access** [X]

**SW67822**  
Select the DALI Device Present in the Network

<input checked="" type="checkbox"/> DALI ID Device 0	<input type="checkbox"/> DALI ID Device 16	<input type="checkbox"/> DALI ID Device 32	<input type="checkbox"/> DALI ID Device 48
<input checked="" type="checkbox"/> DALI ID Device 1	<input type="checkbox"/> DALI ID Device 17	<input type="checkbox"/> DALI ID Device 33	<input type="checkbox"/> DALI ID Device 49
<input checked="" type="checkbox"/> DALI ID Device 2	<input type="checkbox"/> DALI ID Device 18	<input type="checkbox"/> DALI ID Device 34	<input type="checkbox"/> DALI ID Device 50
<input type="checkbox"/> DALI ID Device 3	<input type="checkbox"/> DALI ID Device 19	<input type="checkbox"/> DALI ID Device 35	<input type="checkbox"/> DALI ID Device 51
<input checked="" type="checkbox"/> DALI ID Device 4	<input type="checkbox"/> DALI ID Device 20	<input type="checkbox"/> DALI ID Device 36	<input type="checkbox"/> DALI ID Device 52
<input type="checkbox"/> DALI ID Device 5	<input type="checkbox"/> DALI ID Device 21	<input type="checkbox"/> DALI ID Device 37	<input type="checkbox"/> DALI ID Device 53
<input type="checkbox"/> DALI ID Device 6	<input type="checkbox"/> DALI ID Device 22	<input type="checkbox"/> DALI ID Device 38	<input type="checkbox"/> DALI ID Device 54
<input type="checkbox"/> DALI ID Device 7	<input type="checkbox"/> DALI ID Device 23	<input type="checkbox"/> DALI ID Device 39	<input type="checkbox"/> DALI ID Device 55
<input type="checkbox"/> DALI ID Device 8	<input type="checkbox"/> DALI ID Device 24	<input type="checkbox"/> DALI ID Device 40	<input type="checkbox"/> DALI ID Device 56
<input type="checkbox"/> DALI ID Device 9	<input type="checkbox"/> DALI ID Device 25	<input type="checkbox"/> DALI ID Device 41	<input type="checkbox"/> DALI ID Device 57
<input type="checkbox"/> DALI ID Device 10	<input type="checkbox"/> DALI ID Device 26	<input type="checkbox"/> DALI ID Device 42	<input type="checkbox"/> DALI ID Device 58
<input type="checkbox"/> DALI ID Device 11	<input type="checkbox"/> DALI ID Device 27	<input type="checkbox"/> DALI ID Device 43	<input type="checkbox"/> DALI ID Device 59
<input type="checkbox"/> DALI ID Device 12	<input type="checkbox"/> DALI ID Device 28	<input type="checkbox"/> DALI ID Device 44	<input type="checkbox"/> DALI ID Device 60
<input type="checkbox"/> DALI ID Device 13	<input type="checkbox"/> DALI ID Device 29	<input type="checkbox"/> DALI ID Device 45	<input type="checkbox"/> DALI ID Device 61
<input type="checkbox"/> DALI ID Device 14	<input type="checkbox"/> DALI ID Device 30	<input type="checkbox"/> DALI ID Device 46	<input type="checkbox"/> DALI ID Device 62
<input type="checkbox"/> DALI ID Device 15	<input type="checkbox"/> DALI ID Device 31	<input type="checkbox"/> DALI ID Device 47	<input type="checkbox"/> DALI ID Device 63

Figure 4: “DALI Access” window

## UPDATE DEVICE:

By pressing the **"Update Device"** button, it is possible to load the created Configuration into the device; and also the Firmware, if necessary.

If you don't know the actual IP address of the device you have to use this procedure:

- Turn OFF the Device;
- Put Dip1 of 'Dip-Switch A' in ON position;
- Turn ON the device
- Connect the Ethernet cable;
- Insert the IP **"192.168.2.205"**;
- Select which operations you want to do;
- Press the **"Execute update firmware"** button to start the upload;
- When all the operations are "OK" turn OFF the Device;
- Put Dip1 of 'Dip-Switch A' at OFF position;
- Turn ON the device.

If you know the actual IP address of the device, you have to use this procedure:

- Turn on the Device with the Ethernet cable inserted;
- Insert the actual IP of the Converter;
- Select which operations you want to do;
- Press the **"Execute update firmware"** button to start the upload;
- When all the operations are "OK" the device automatically goes at Normal Mode.

At this point the configuration/firmware on the device is correctly update.

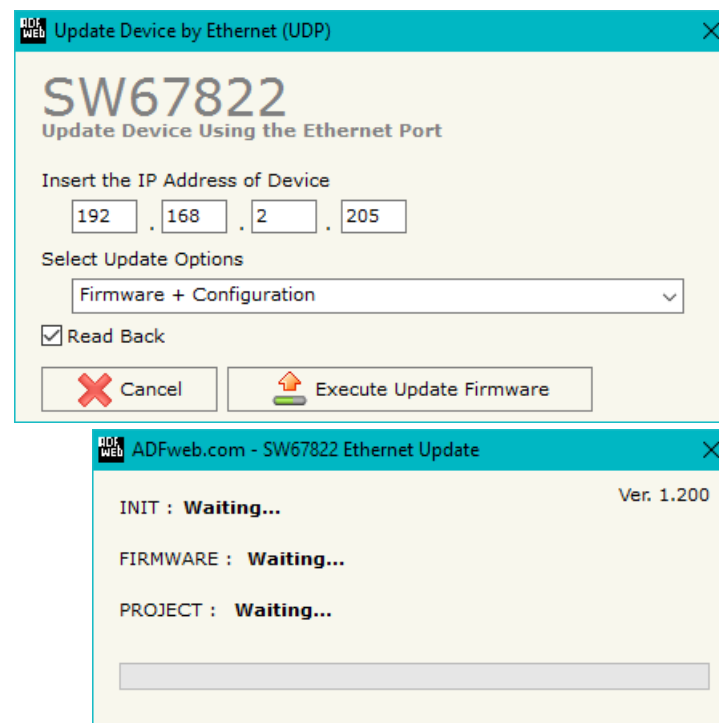


Figure 5: "Update device" windows


**Note:**

When you install a new version of the software, if it is the first time it is better you do the update of the Firmware in the HD67822 device.


**Note:**

When you receive the device, for the first time, you also have to update the Firmware in the HD67822 device.


**Warning:**

If Fig. 6 appears when you try to do the Update try these points before seeking assistance:

- Try to repeat the operations for the updating;
- Try with another PC;
- Try to restart the PC;
- Check the LAN settings;
- Check the Wi-Fi settings;
- If you are using the program inside a Virtual Machine, try to use in the main Operating System;
- If you are using Windows Seven, Vista, 8 or 10 make sure that you have the administrator privileges;
- In case you have to program more than one device, using the "UDP Update", you have to cancel the ARP table every time you connect a new device on Ethernet. For do this you have to launch the "Command Prompt" and write the command "arp -d". Pay attention that with Windows Vista, Seven, 8, 10 you have to launch the "Command Prompt" with Administrator Rights;
- Pay attention at Firewall lock.

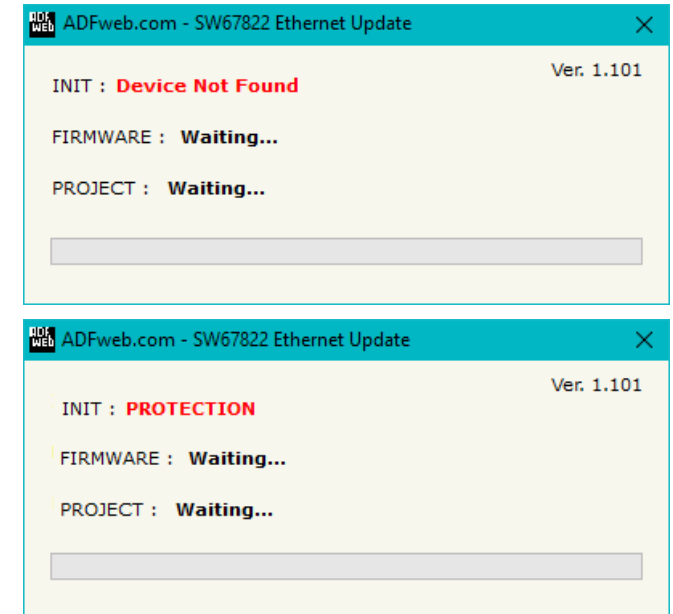


Figure 6: "Protection" window



In the case of HD67822 you have to use the software "SW67822": [www.adfweb.com/download/filefold/SW67822.zip](http://www.adfweb.com/download/filefold/SW67822.zip).

## USE OF DALI CONSOLE SOFTWARE:

To configure DALI network and test the communication, it is possible to use the available software that runs with Windows called "DALI Console". It is downloadable on the site [www.adfweb.com](http://www.adfweb.com) and its operation is described in this document. *(This manual is referenced to the last version of the software present on our web site).* The software works with MSWindows (XP, Vista, Seven, 8, 10; 32/64bit).

When launching the DALI Console, the window below appears (Fig. 7).

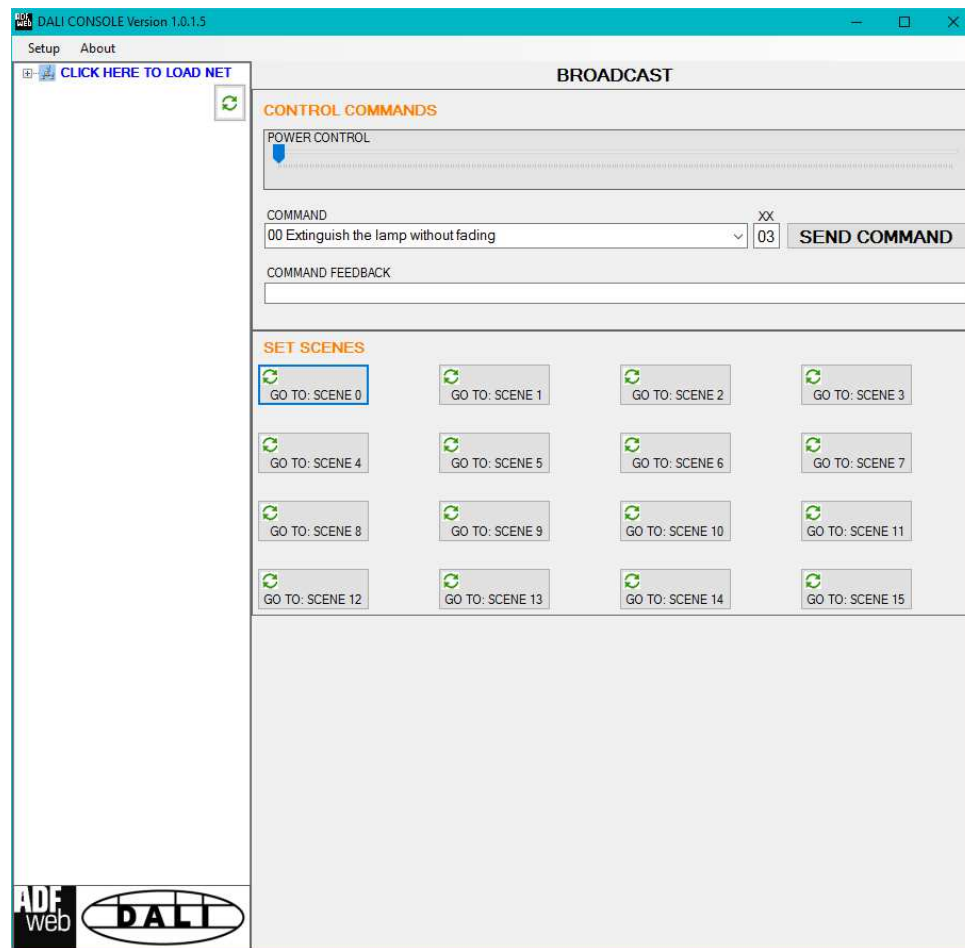
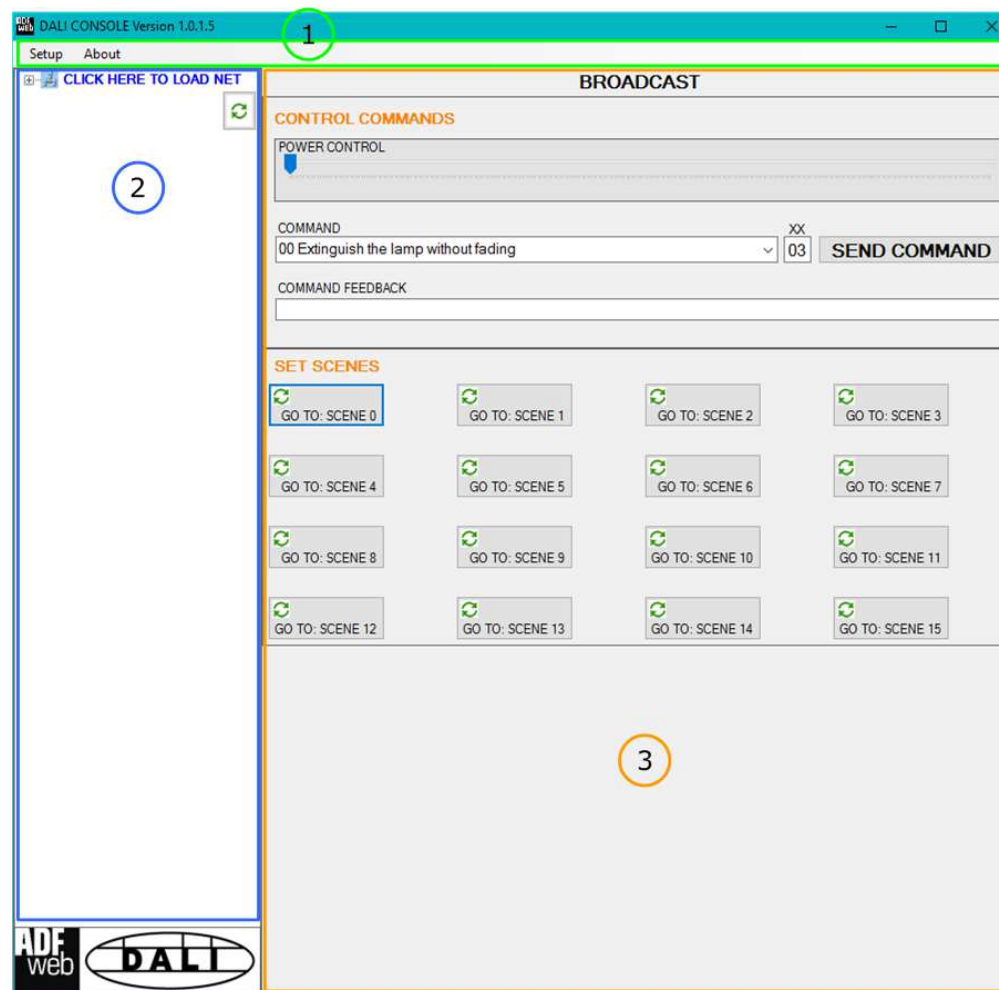


Figure 7: Main window for DALI Console

## STRUCTURE OF THE SOFTWARE:

The software layout is very simple and it is structured in this way:

- **"Menu bar"** (Fig. 8, Point 1): it is possible to open the setup window and see the informations about the DALI Console software;
- **"Network view"** (Fig. 8, Point 2): it is possible to see all the DALI devices connected to the HD67822 converter, the groups and the scenes set;
- **"Settings / commands view"** (Fig. 8, Point 3): it is possible to set and manage the parameters to the single DALI device, to the groups or for the full network.



(1) Menu bar

(2) Network view

(3) Settings / commands view

Figure 8: Structure of DALI Console software

**SETUP:**

This section defines the connection's parameters to the Ethernet side of the HD67822 converter.


By Pressing the **"Setup"** button from the menu bar of the DALI Console software, the "SETUP" window appears (Fig. 9).




Figure 9: "Setup" window

The means of the fields for the "SETUP" window are:

- In the field **"DEVICE IP ADDRESS"** insert the IP address set inside the converter;
- In the field **"PRG PORT"** insert the communication port used for the Ethernet communication with the converter (the one programmed);
- By pressing **"SET ADDRESS ON DEVICE"** button, it is possible to program the ID of the DALI node connected to the converter.

 **IMPORTANT:** in order to set the ID of the DALI nodes, it is necessary to connect just one DALI node at time to the converter in order to avoid conflicts in the network.

**NETWORK SETTING:**

By pressing the  button in the Network view, it is possible to scan the full DALI network and find all the DALI devices, the groups set and the scenes configured.

By selecting the single DALI devices found, the single groups, the single scene or the entire DALI network, it is possible to manage and test the functioning of the network.

**DEVICES:**

The means of the fields for "DEVICE INFO" are:

- In the field "**Device Type**" the type of DALI device is printed;
- In the field "**Software version**" the software version of the DALI device is printed;
- In the fields "**Power Range**" the Min value, Actual Value and Max Value of the ADV of the DALI device is printed;
- In the fields "**DEVICE STATUS**" the actual status of the DALI device is printed.

**Note:**

This section is in Reading and it is used just to monitor the actual status of the selected DALI device.

Figure 10: "Device settings" window



The means of the fields for the "CONTROL COMMANDS" section are:

- In the "**POWER CONTROL**" bar it is possible to change the actual ADV of the selected DALI device;
- In the field "**COMMAND**" it is possible to select a DALI command to send to the selected DALI device. For set commands, it is possible to insert the value to set in the field "**xx**". As soon as the command to send is selected, the command is sent: in order to send the same command more times, it is possible to press the "**SEND COMMAND**" button;
- In the field "**COMMAND FEEDBACK**" the response from the DALI device is printed.



**Note:**

This section is used to test the functioning of the DALI device in the network and to set specific parameters if needed (like new Minimum or Maximum ADV value).

In the "GROUP MEMBERSHIP" section it is possible to see the Groups which the selected DALI device is in. The checked checkboxes mean that the device is in the correspondent groups, the unchecked checkboxes mean that the device is not included in the correspondent groups. It is possible to change the group settings for the selected DALI device by checking/unchecking the correspondent checkboxes.

In the "SET SCENES" section it is possible to see the programmed scenes of the selected DALI device, program new ones and activate them:

- By pressing the buttons "**GO TO: SCENE X**" it is possible to activate the correspondent scene inside the selected DALI device; the programmed ADV for the selected scene is defined in the drop-down list on the right;
- By selecting a value into the drop-down lists next to the "GO TO: SCENE x" buttons, it is possible to set the ADV associated to the correspondent scene. It is possible to select:
  - Value between 0 and 255: the scene will have the defined value of ADV;
  - ACT: the scene will take the programmed ADV value into the "POWER CONTROL" bar;
  - OFF: the scene is disabled.

**GROUPS:**

The means of the fields for the "CONTROL COMMANDS" section are:

- In the "**POWER CONTROL**" bar it is possible to change the actual ADV of the selected DALI group;
- In the field "**COMMAND**" it is possible to select a DALI command to send to the selected DALI group. For set commands, it is possible to insert the value to set in the field "**xx**". As soon as the command to send is selected, the command is sent: in order to send the same command more times, it is possible to press the "**SEND COMMAND**" button;
- In the field "**COMMAND FEEDBACK**" the response from the DALI group is printed.

**Note:**

This section is used to test the functioning of the DALI groups in the network.

In the "SET SCENES" section it is possible to activate the programmed scenes to the selected group:

- By pressing the buttons "**GO TO: SCENE X**" it is possible to activate the correspondent scene inside the selected DALI group.

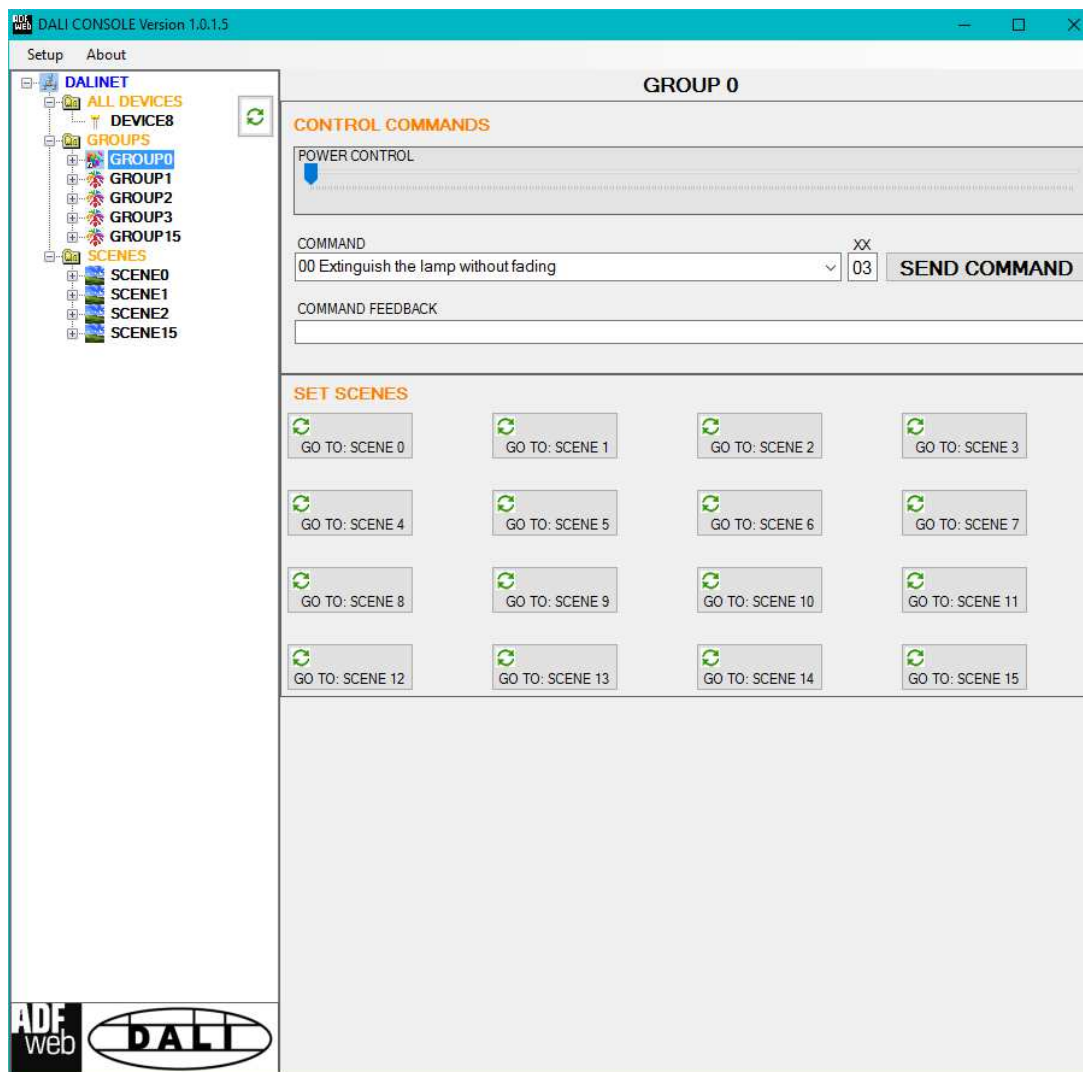


Figure 11: "Groups settings" window

### SCENES:

By selecting a DALI scene from the Network view, it is possible to see the devices that have programmed the selected scene.

It is also possible to activate it by pressing the **"ACTIVATE SCENE X"** button.

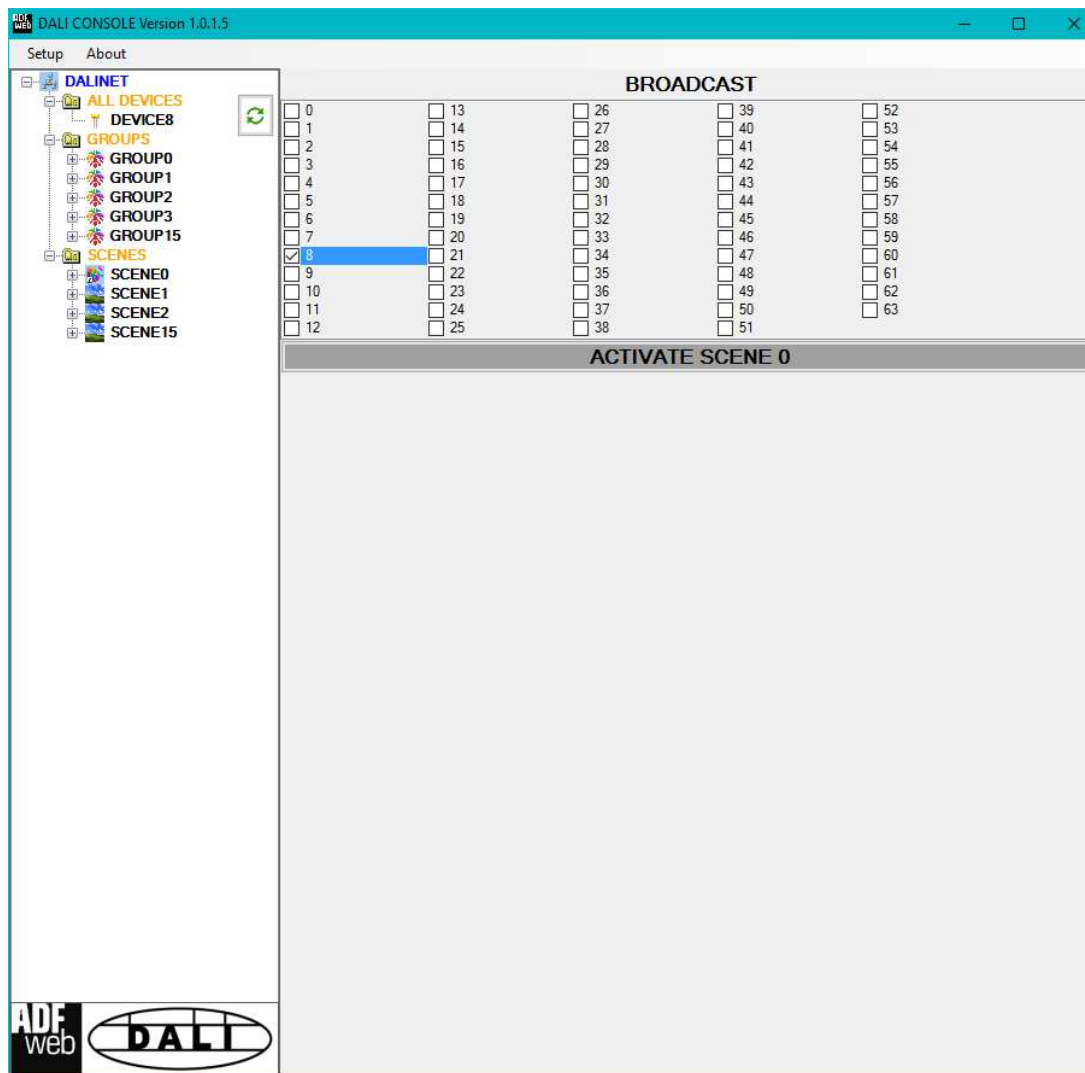


Figure 12: "Scenes settings" window

### **ALL DEVICES (BROADCAST):**

The means of the fields for the "CONTROL COMMANDS" section are:

- In the "**POWER CONTROL**" bar it is possible to change the actual ADV of the entire DALI network;
- In the field "**COMMAND**" it is possible to select a DALI command to send to the entire DALI network. For set commands, it is possible to insert the value to set in the field "**xx**". As soon as the command to send is selected, the command is sent: in order to send the same command more times, it is possible to press the "**SEND COMMAND**" button;
- In the field "**COMMAND FEEDBACK**" the response from the DALI network is printed.



#### **Note:**

This section is used to test the functioning of the DALI network.

In the "SET SCENES" section it is possible to activate the programmed scenes into all the DALI devices that have them:

- By pressing the buttons "**GO TO: SCENE X**" it is possible to activate the correspondent scene in the DALI network. Only the devices that have it will accept the command.

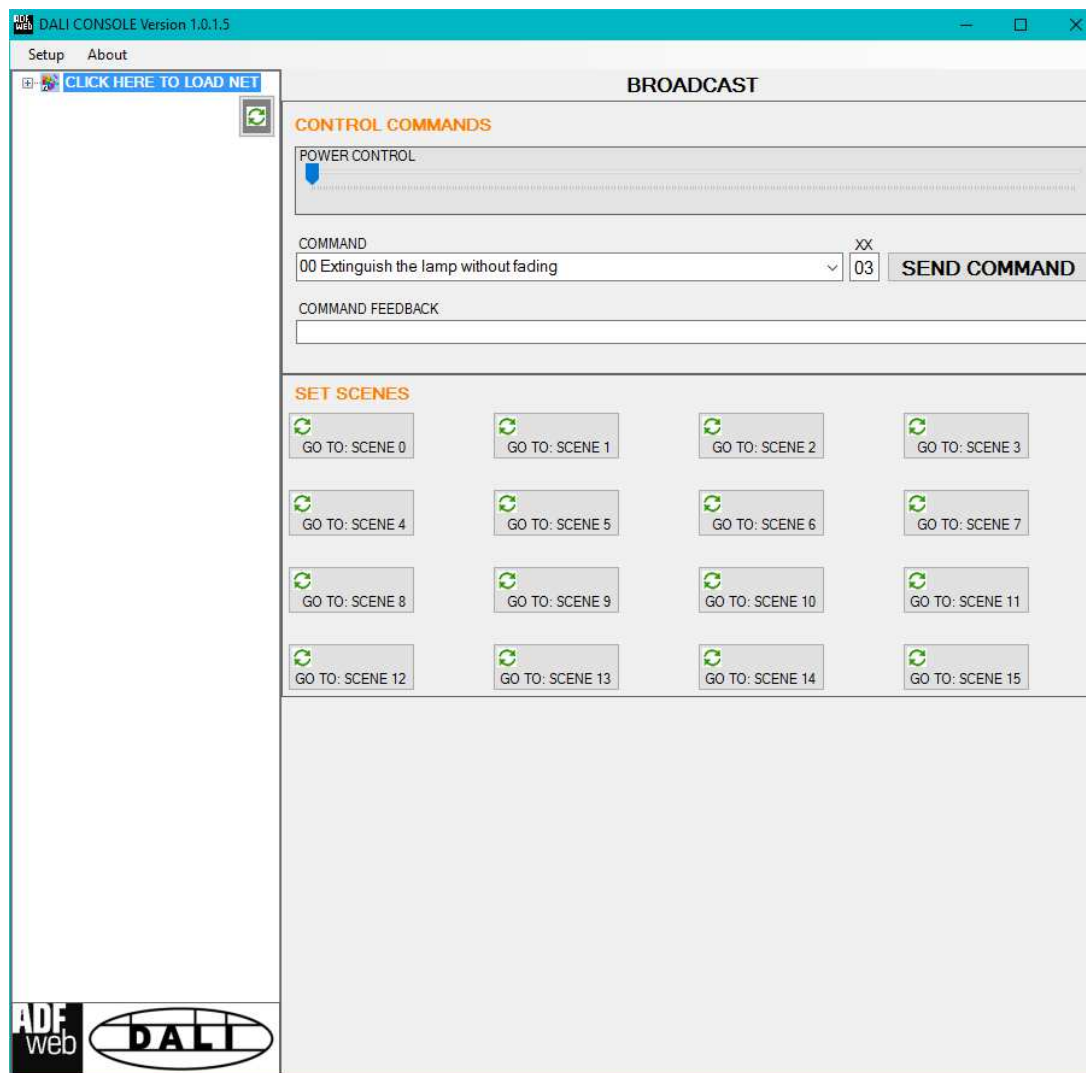


Figure 13: "Broadcast settings" window

## DATA MAPPING:

Using the field "DALI Data Point" of the section "Set Communication" of the SW67822, it is possible to define the starting KNX Group Address of the converter used to manage the DALI network.

### Structure of the KNX map in OUT (readable data from KNX side)

Starting from the first KNX Data point defined, the converter creates 64 KNX Data points that will contain the info about the last ADV set inside the DALI lamp. The value will be of 1 byte and it can have a value between 0 and 255. It is possible to read it with a KNX reading request.

ADV READING FOR SINGLE DALI NODES	
Offset	Description
0	ADV to set on DALI node 0
1	ADV to set on DALI node 1
2	ADV to set on DALI node 2
3	ADV to set on DALI node 3
4	ADV to set on DALI node 4
5	ADV to set on DALI node 5
6	ADV to set on DALI node 6
7	ADV to set on DALI node 7
8	ADV to set on DALI node 8
9	ADV to set on DALI node 9
10	ADV to set on DALI node 10
11	ADV to set on DALI node 11
12	ADV to set on DALI node 12
13	ADV to set on DALI node 13

14	ADV to set on DALI node 14
15	ADV to set on DALI node 15
16	ADV to set on DALI node 16
17	ADV to set on DALI node 17
18	ADV to set on DALI node 18
19	ADV to set on DALI node 19
20	ADV to set on DALI node 20
21	ADV to set on DALI node 21
22	ADV to set on DALI node 22
23	ADV to set on DALI node 23
24	ADV to set on DALI node 24
25	ADV to set on DALI node 25
26	ADV to set on DALI node 26
27	ADV to set on DALI node 27
28	ADV to set on DALI node 28
29	ADV to set on DALI node 29
30	ADV to set on DALI node 30
31	ADV to set on DALI node 31
32	ADV to set on DALI node 32
33	ADV to set on DALI node 33
34	ADV to set on DALI node 34
35	ADV to set on DALI node 35
36	ADV to set on DALI node 36
37	ADV to set on DALI node 37

38	ADV to set on DALI node 38
39	ADV to set on DALI node 39
40	ADV to set on DALI node 40
41	ADV to set on DALI node 41
42	ADV to set on DALI node 42
43	ADV to set on DALI node 43
44	ADV to set on DALI node 44
45	ADV to set on DALI node 45
46	ADV to set on DALI node 46
47	ADV to set on DALI node 47
48	ADV to set on DALI node 48
49	ADV to set on DALI node 49
50	ADV to set on DALI node 50
51	ADV to set on DALI node 51
52	ADV to set on DALI node 52
53	ADV to set on DALI node 53
54	ADV to set on DALI node 54
55	ADV to set on DALI node 55
56	ADV to set on DALI node 56
57	ADV to set on DALI node 57
58	ADV to set on DALI node 58
59	ADV to set on DALI node 59
60	ADV to set on DALI node 60

61	ADV to set on DALI node 61
62	ADV to set on DALI node 62
63	ADV to set on DALI node 63

For example:

Supposing that the "DALI Data Point" set is '3/3/0', in order to read the ADV of the DALI node 27, it is necessary to read the KNX Group Address 3/3/27 (DALI Data Point + Offset = 3/3/0 + 27 = 3/3/27).



### Structure of the KNX map in IN (settable data from KNX side)

Starting from the first KNX Data point defined, the converter creates 97 KNX Data points that can be used to manage the ADV setting on the DALI network for single nodes, groups, broadcast and scenes.

In order to manage the single DALI nodes, the groups and the entire network, it is possible to use two different ways:

- Writing the ADV to manage: it is possible to write the value as 1 byte value (0-255) in order to set the desired ADV;
- Dim up and Dim down: it is possible to increase or decrease the ADV value of +1 writing the same Group Address as Bit value. Writing the value '1', the light will dim up, writing the value '0', the light will dim down.

In order to manage the scenes, it is possible to write inside the reserved KNX Group Addresses (as 1-byte value) the DALI ID in which set the selected scene:

- ID for single nodes: 0-63;
- ID for groups: 64-79;
- ID for broadcast: 80.

<b>ADV SETTING FOR SINGLE DALI NODES</b>	
<b>Offset</b>	<b>Description</b>
0	ADV to set on DALI node 0
1	ADV to set on DALI node 1
2	ADV to set on DALI node 2
3	ADV to set on DALI node 3
4	ADV to set on DALI node 4
5	ADV to set on DALI node 5
6	ADV to set on DALI node 6
7	ADV to set on DALI node 7
8	ADV to set on DALI node 8
9	ADV to set on DALI node 9
10	ADV to set on DALI node 10
11	ADV to set on DALI node 11
12	ADV to set on DALI node 12
13	ADV to set on DALI node 13
14	ADV to set on DALI node 14
15	ADV to set on DALI node 15
16	ADV to set on DALI node 16
17	ADV to set on DALI node 17
18	ADV to set on DALI node 18
19	ADV to set on DALI node 19
20	ADV to set on DALI node 20

21	ADV to set on DALI node 21
22	ADV to set on DALI node 22
23	ADV to set on DALI node 23
24	ADV to set on DALI node 24
25	ADV to set on DALI node 25
26	ADV to set on DALI node 26
27	ADV to set on DALI node 27
28	ADV to set on DALI node 28
29	ADV to set on DALI node 29
30	ADV to set on DALI node 30
31	ADV to set on DALI node 31
32	ADV to set on DALI node 32
33	ADV to set on DALI node 33
34	ADV to set on DALI node 34
35	ADV to set on DALI node 35
36	ADV to set on DALI node 36
37	ADV to set on DALI node 37
38	ADV to set on DALI node 38
39	ADV to set on DALI node 39
40	ADV to set on DALI node 40
41	ADV to set on DALI node 41
42	ADV to set on DALI node 42
43	ADV to set on DALI node 43
44	ADV to set on DALI node 44

45	ADV to set on DALI node 45
46	ADV to set on DALI node 46
47	ADV to set on DALI node 47
48	ADV to set on DALI node 48
49	ADV to set on DALI node 49
50	ADV to set on DALI node 50
51	ADV to set on DALI node 51
52	ADV to set on DALI node 52
53	ADV to set on DALI node 53
54	ADV to set on DALI node 54
55	ADV to set on DALI node 55
56	ADV to set on DALI node 56
57	ADV to set on DALI node 57
58	ADV to set on DALI node 58
59	ADV to set on DALI node 59
60	ADV to set on DALI node 60
61	ADV to set on DALI node 61
62	ADV to set on DALI node 62
63	ADV to set on DALI node 63

<b>ADV SETTING FOR GROUPS</b>	
<b>Offset</b>	<b>Description</b>
64	ADV to set on Group 0
65	ADV to set on Group 1
66	ADV to set on Group 2
67	ADV to set on Group 3
68	ADV to set on Group 4
69	ADV to set on Group 5
70	ADV to set on Group 6
71	ADV to set on Group 7
72	ADV to set on Group 8
73	ADV to set on Group 9
74	ADV to set on Group 10
75	ADV to set on Group 11
76	ADV to set on Group 12
77	ADV to set on Group 13
78	ADV to set on Group 14
79	ADV to set on Group 15

ADV SETTING (BROADCAST)	
Offset	Description
80	ADV to set

For example:

Supposing that the "DALI Data Point" set is '3/3/0', in order to write the ADV of the DALI node 27, it is necessary to write the KNX Group Address 3/3/27 (DALI Data Point + Offset = 3/3/0 + 27 = 3/3/27).

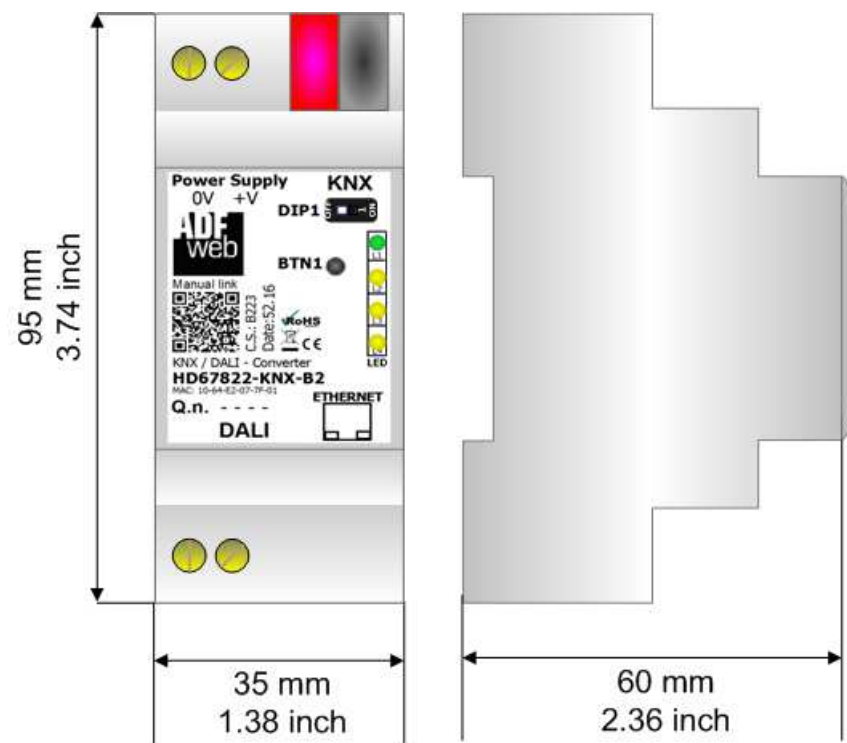
If we want to write the Group 2, it is necessary to write the KNX Groups Address 3/3/66.

<b>SCENE CONTROL</b>	
<b>Offset</b>	<b>Description</b>
81	Scene 0 management's KNX group address
82	Scene 1 management's KNX group address
83	Scene 2 management's KNX group address
84	Scene 3 management's KNX group address
85	Scene 4 management's KNX group address
86	Scene 5 management's KNX group address
87	Scene 6 management's KNX group address
88	Scene 7 management's KNX group address
89	Scene 8 management's KNX group address
90	Scene 9 management's KNX group address
91	Scene 10 management's KNX group address
92	Scene 11 management's KNX group address
93	Scene 12 management's KNX group address
94	Scene 13 management's KNX group address
95	Scene 14 management's KNX group address
96	Scene 15 management's KNX group address

For example:

Supposing that the "DALI Data Point" set is '3/3/0', in order to write the set the scene 4 in the group 5, it is necessary to write the value '68' into the KNX Group Address 3/3/85.

## MECHANICAL DIMENSIONS:



Housing: PVC  
Weight: 200g  
(Approx)

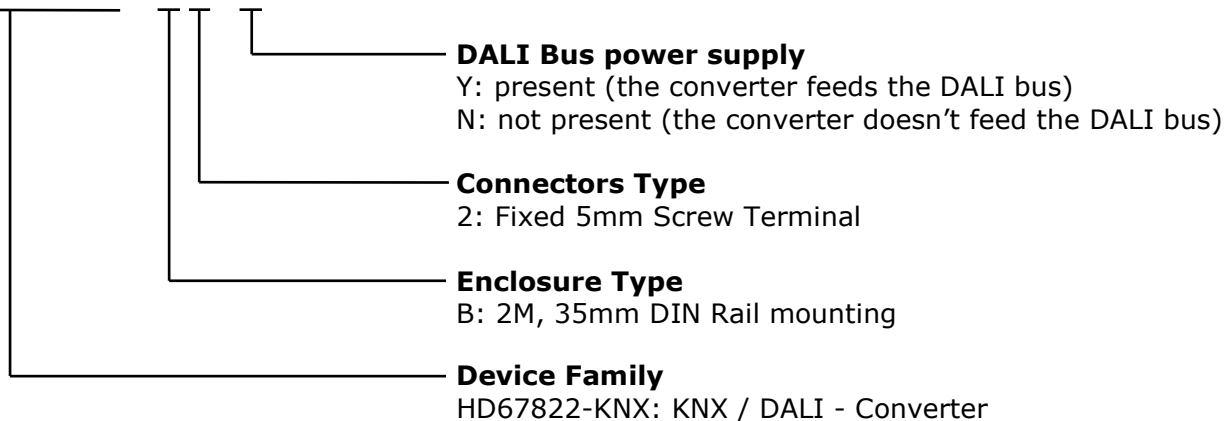
Figure 14: Mechanical dimensions scheme for HD67822-KNX-B2-x



## ORDERING INFORMATION:

The ordering part number is formed by a valid combination of the following:

**HD67822 - KNX - B 2 - x**



- Order Code: **HD67822-KNX-B2-Y** - KNX / DALI - Converter (DALI bus power supply present)
- Order Code: **HD67822-KNX-B2-N** - KNX / DALI - Converter (DALI bus power supply not present)

## ACCESSORIES:

- Order Code: **AC34001** - 35mm Rail DIN - Power Supply 220/240V AC 50/60Hz - 12 V AC
- Order Code: **AC34002** - 35mm Rail DIN - Power Supply 110V AC 50/60Hz - 12 V AC
- Order Code: **AC34-AB1TP** - KNX Power Supply - KNX out 640mA - in 240VAC
- Order Code: **AC34-AG1TP** - KNX Power Supply - KNX out 640mA + AUX out 30VDC - in 240VAC

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**CE MARKING**

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- Obtain a Product Return Number (PRN) from our internet support at [www.adfweb.com](http://www.adfweb.com). Together with the request, you need to provide detailed information about the problem.
- Send the product to the address provided with the PRN, having prepaid the shipping costs (shipment costs billed to us will not be accepted).

If the product is within the warranty of twelve months, it will be repaired or exchanged and returned within three weeks. If the product is no longer under warranty, you will receive a repair estimate.



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