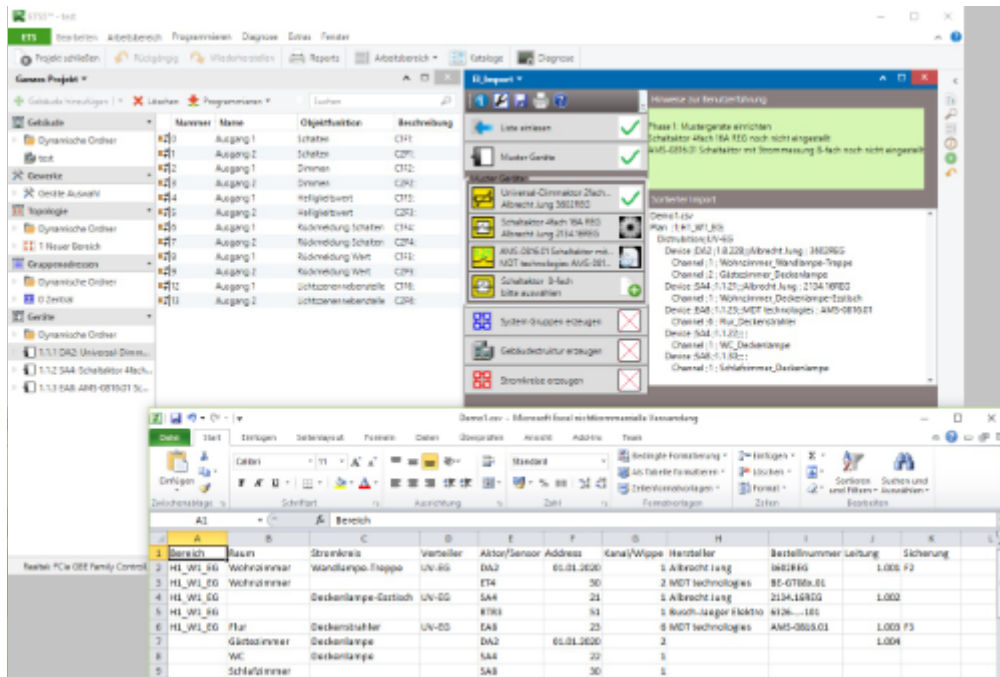**Technical Documentation**

EI_Import_en

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www.nautibus.de

1. Introduction

Electrical installation Import EI_Import generates a ETS5 project from a cable list, as used by the electrician when laying the cables. They can be easily created as a CSV file using Excel or a text editor.

In the first phase the required device types are determined. A Device wizard helps in the selection and parameterization of KNX devices.

In the second phase the ETS project will be created automatically.

A configurable group addressing scheme controls this process.

The project produced contains all the necessary group addresses, the building structure and the KNX devices. It can be further processed with the ETS5 or EIplan5.

2. structure of the list

The list is similar to Excel CSV format a table.

The first row contains the column headings.

These are set by EI_Import according to the set language and may not be changed. As a separator between the columns, the semicolon (;) is used.

It starts with a list of headlines and a pattern line in the display. These can be stored and then processed with Excel.

Alternatively, you can use a text editor, such as Notepad or edit the list in EI_Import.
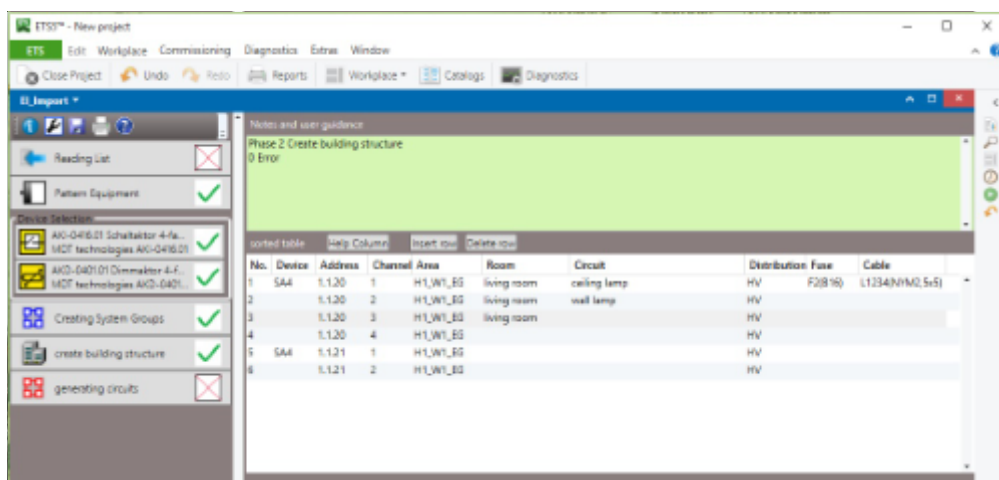
Each row of the list describes a circuit. The group addresses required are generated automatically later by EI-Import.

A list need not be sorted. Columns and rows can be in any order. EI_Import then sorts the list by device address and channel.

2.1 columns of the list

No.	Device	Address	Channel	Area	Room	Circuit	Distribution	Fuse	Cable
1	SA4	1.1.20	1	H1_W1_EG	living room	ceiling lamp	HV	F2(B16)	L1234(NYM2,5x5)
2		1.1.20	2	H1_W1_EG	living room	wall lamp	HV		
3		1.1.20	3	H1_W1_EG	living room		HV		
4		1.1.20	4	H1_W1_EG			HV		
5	SA4	1.1.21	1	H1_W1_EG			HV		
6		1.1.21	2	H1_W1_EG			HV		

No

No is an automatically generated line number in the display (not available in the file).

device

Unit describes the KNX device (actuator or sensor) with an abbreviation. This consists of 2 letters for the type of device and a number for the number of channels.

DA4 is therefore a dimming actuator with 4 channels (dimming actuator 4-fold).

The following device types are defined:

Table	
Kind	**designation**
SA	Switch actuator
DA	dimming actuator
EA	Energy Actuator (switching and power measurement)
HA	Heating actuator
JA	Shutter
TS	Touch sensor (KNX push button)
RT	Room temperature controller with additional pushbutton rockers
FK	window contact
PM	presence detector

address

The device address is in KNX notation, for example, 1.1.10. In the Excel file, only one number available, then the line 1.1. is assigned.

A line with address 0 is treated as a non-switched circuit, it is produced only one group address in the middle group. 5 This is for the KNX system irrelevant and serves only the documentation of the entire electrical installation.

channel

That is the channel number to which it is connected. Range 1 ... Channel Number.

When touch sensor that is the number of the rocker or button.

range

The range consists of 3 parts, which correspond to the ETS building structure:

-> Building_Area_Floor

The parts are separated by underscores as B1_A1_F1 The area is practically the plan name of the plan.

room

Here is, for example, the room name Living room or a room number with name example E005

(living room) see KNX project guidelines.

circuit

Is the name of the consumer, for example, Ceiling lamp or socket-3X TV. From space and circuit of the group address name is formed, for example, livingroom_mainlampe. If desired, the chart name can include B1_A1_F1_ livingroom_mainlampe.

distributor

The name of the distributor, in which the actuator is installed can be chosen freely as UV. With an underscore "_", the concept of space is where the distributor attached is. The room name can be made up of area and space. Example: "UV_H1_W1_EG_ art space" or simplified "UV_ art room" when he is in the same area.The name of the distributor, in which the actuator is installed can be chosen freely as UV EC.

line

Here, a name or number to be chosen freely (but without the underscore) as 1.0023 or L1025 (NYM2,5x5).

Fuse

Here the number of the fuse as a pure number or an F at the beginning, for example, F7 It is recommended to number fuses in the distributor continuously. The first number is the RCD, the fuses follow this RCDs.

3. operation of EI_Import

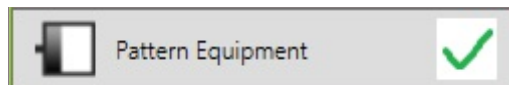You can create the list outside the ETS with Excel or write directly to the EI_Import table.

If you make entries in the EI-import table or make changes there, forget about saving not!

3.1 reading

With the Import button you read a list. Caution the EI_Import table is overwritten!

### 3.2 Finde sample components

With this key, the first phase of the project starts generating. The list is searched for device types. a new button in the sample devices will be created for each device type. In the ETS the Trade of device selection is generated.
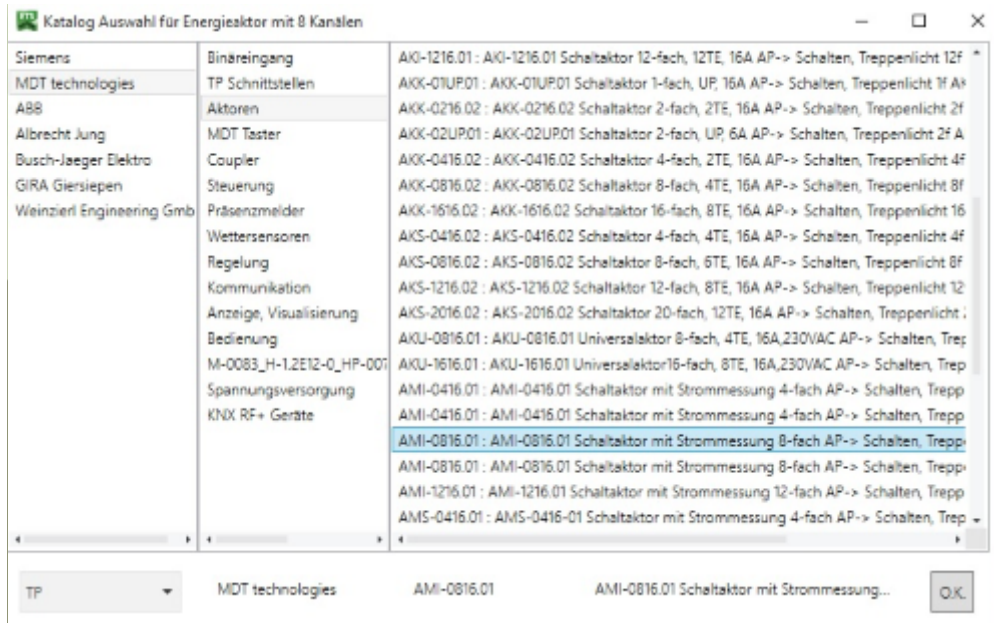
-> Tip:

You can start with a project that already contains pattern devices or import them with the App "My Product Templates".
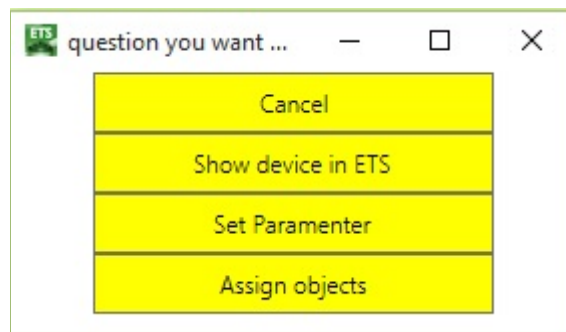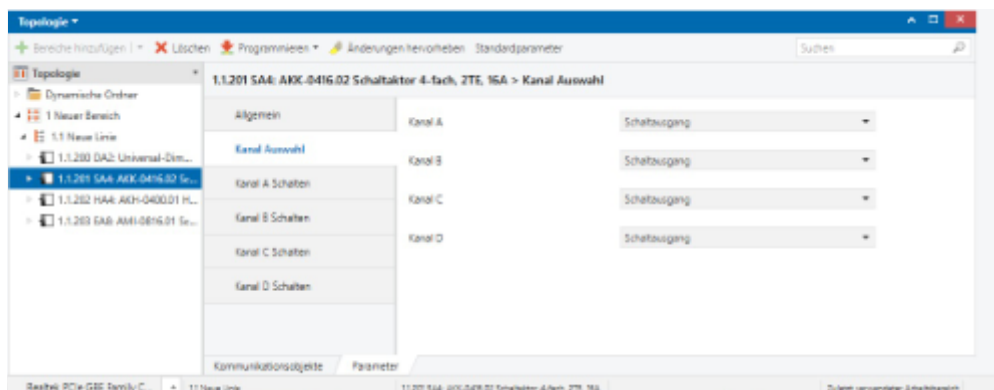
3.3 Set sample components
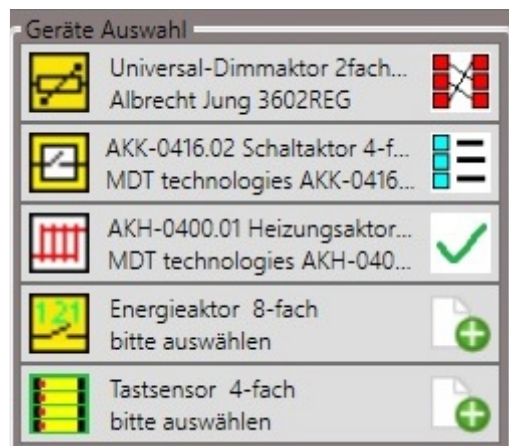
If you press a pattern device, first is the device selection from the ETS catalog.

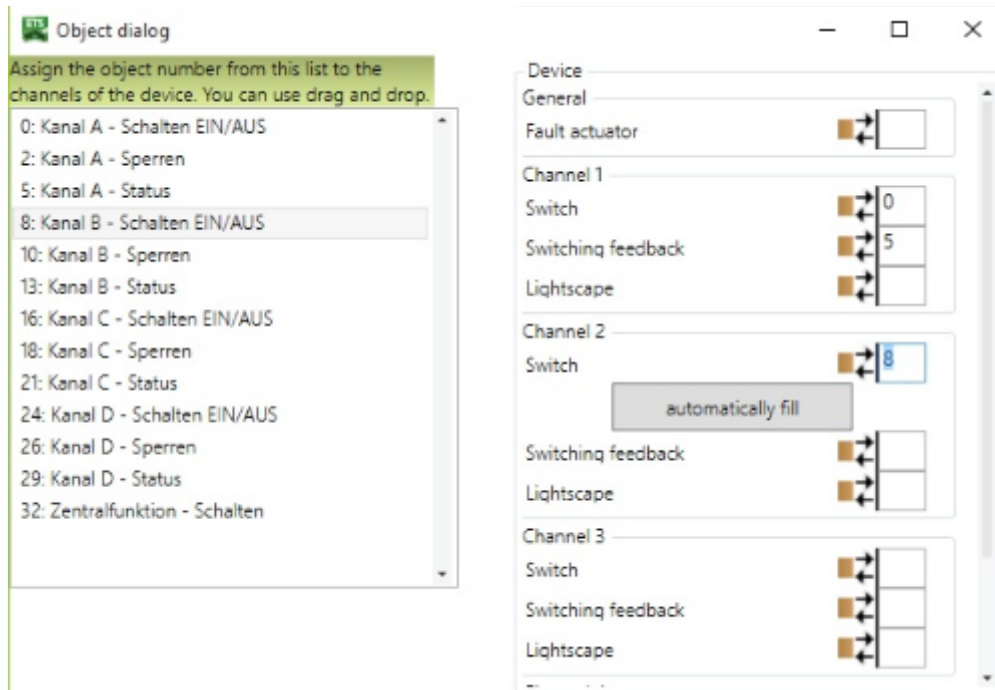The next time you click to select the settings appears.

Ask first the parameters. To this end, we the ETS parameter dialogue started.

Be sure to enable all channels of the device.

Next step is to select the object assignment.

Left you see the communication objects as they are specified by the manufacturer.

You now need to sort the object numbers to the right in the device tree. This is done (press left mouse button left and hold, then drag to the right and release the device tree) by drag and drop.

If you have made the first object of channel 2, you can automatically fill the rest.

This setting allows you to translate the language and vendor-dependent description of the objects in a unique code, which is entered in the Description column of the objects when you exit the dialog object. This code allows later the automatic assignment of group addresses.
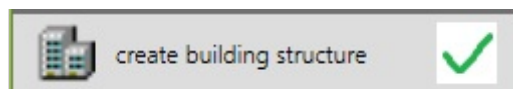
4. generate the ETS project

When all of the samples are set, we can produce the ETS project.
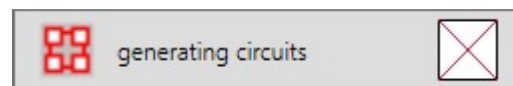
4.1 system groups
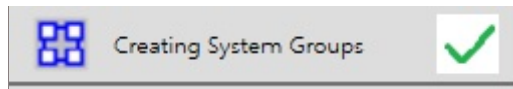
This key generates group addresses for centralized groups, such as are required in conventional projects. Among other groups for the weather station, further readings, setpoint values and fault messages are present.

4.2 Create structure

This button makes the list is searched and building parts filtered out. In the ETS from the building structure is created with house, apartment, floor and room.

4.3 generation of group addresses and actuators

This button makes the main work of the project generation. Initially, the project is cleaned. KNX devices that do not belong to the sample devices will be deleted. Groups that do not belong to the system group, as well. The deletion ensures that after several tests after corrections in the list a clean project arises.

Now all actuators and group addresses are created and connected. Actuators are created by copying the pattern device and take over all settings of this.

For each actuator type in the setup of EI_Import a feature set of required groups defined. Not only does the circuit group (switching function), but also all other functions, such as feedback, dimming and brightness values is generated.

The created groups are directly connected to the corresponding communication objects in the actuator.

4.4 button and thermostat

Generating no own group addresses, but are connected to the groups of actuators.

Therefore, you must stand behind the actuators in the list. This is easy to achieve if one assigns higher addresses.

Recommendation:

Actuators start at 1 button and thermostat start at 100 pattern specifies the EI_Import even at 200 or greater.

When automatic sorting so there is sensible division.

4.5 control of results

Have a look at the automatically generated project in the views of the ETS. If you want, you can now make changes in the list, and rebuild the project.

4.6 works in the ETS

Change it only directly in the ETS if they are satisfied with the work of EI_Import. He has started working to create the project now completed. Spoke the last state of the list. He could be the basis for your next project. Save the sample devices with "My Product Templates", if you have this app. Connect EI_Import.

If you EI_Import use for an existing project, it will be overwritten.

5. Annex

This chapter provides general information about the concept of the project generation.

EI_Import substantially corresponds to the KNX project guidelines.

Some elements were added to allow compatibility with EiPLAN and EIdoc.

5.1 structure

The ETS supports a hierarchical building structure.

The top 3 levels of this structure are Apartment and floor. In EI_Import this will combined into a plan or area name. The words are separated by underscores.

This unit is assigned to a floor plan generally.

e.g. H1_W1_EG would the apartment 1 on the ground floor in the house. 1 Within a plan (range), the rooms and cabinets.

Rooms are identified by name (from the drawing of the architect) or with numbers and names. This name must be unique within a plan area.

5.2 group addressing scheme

The ETS supports a 3-part number for group addresses. It consists of a main section, a middle group and a current address number. The parts are written separated by / e.g. : 01/05/22.

main group
There are 32 major groups, which are designated 0 to 31 A main section is for central functions used (usually 0 adjustable in Setup).

The other main groups (mostly floors) associated with the plan areas.

Central Group
There are 8 food groups with the numbers 0 to. 7 They are used for a trade based division of functions.

We have the following groups provided:

Table

group	function
0	Central functions in the Planning Area
1	lighting dimmable
2	lighting switchable
3	heating ventilation air
4	blinds and shading
5	unswitched circuits
6	circuits connected with energy measurement
7	free for special functions

From this definition, certain actuator types are derived from:

-> 1 DA dimming actuators
-> 2 SA switch actuators
-> 3 HA Heating actuators
-> 4 JA blinds actuators
-> 6 EA Energy actuators (switch actuators with current measurement)

For the middle group 0, 5 and 7 no actuators are automatically assigned.

For each of these actuator types a set of group addresses is defined. The definition can be adjusted in the setup of EI_Import. The first group in the set is the circuit group with the main function.

Other groups in the set describe the required sub-functions.

The sets of actuators contain a different number of group addresses. The current compilation can be printed under EI_Import settings.

We recommend using the default settings.

Ongoing address
In this area, a set of group addresses is generated for each circuit. If a dimming actuator are the 5 group addresses per circuit. This is followed by the next circuit.

5.3 component labeling
We use a simple system to linguistic KNX devices and vendor-independent marked.

device types
A device name consists of 2 letters that identify the device type, followed by a number that indicates the number of channels.

The main types are:

-> DA dimming actuator
-> SA switching actuator
-> EA Energy Actuator (current measurement)
-> JA blinds actuator
-> HA heating actuator
-> TS tactile sensor (light switch)
-> RT room temperature controller (with free rockers)

DA4 is thus a 4-fold dimming actuator.

channels
Each actuator has a plurality of channels for different circuits. Each button has multiple keys or

rockers.

A room thermostat can also have free rockers or buttons that can be used just like a TS.

We contribute in the property description for the channel number a C followed by the number.

The channel numbers start at. 1 The number 0 is provided for general functions and the thermostat.

objects

Each communication object in a KNX device belongs to a particular function, for example, Switching, dimming or Confirm. Also for the description of these functions, there is no standard. We therefore indicate functions with a language and vendor-independent code.

The code consists of an F followed by a number. The fixed numbers can be printed on the setup of El_Import.

The function number is entered in the property description. This is done in the object dialog while setting the sample devices.

C1F1: for example, the switching function of channel first During automatic joining of group addresses to the actuator El_Import use this code.

5.4 languages

El_Import comes with some machine-translated languages. If you find errors in your language, you can change that.

In the project folder (C: ETSprojekte) they find a language folder. Therein you will find your language file. You can open and correct.

Each line begins with a number. After is the text that you can change.

Do not delete lines and add no.

On the next start El_Import and El_Plan already used your improved texts.

Make it a copy of the voice file for your backup.

And one more request: they send the improved file to our email:

support@nautibus.de. We put this then in the next update, so it will available to all users.

Many Thanks!