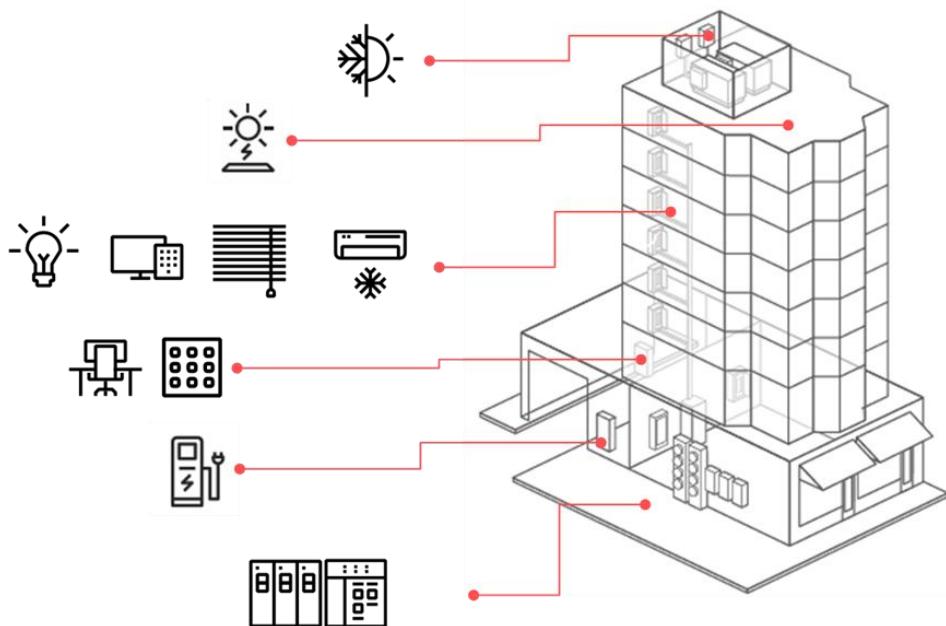




Chameleon+ HaaS
SYSTEM TECHNICAL MANUAL v.1.0.6





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INTRODUCTION

1. Chameleon+ HaaS

The **Chameleon+ HaaS** is a game changing tool to harness and unleash the full power and flexibility of Siemens LOGO! in GRMS (Guest Room Management System) automation. LOGO! is not underutilized as a standalone Smart Relay or with a limited connectivity with Modbus compatible devices. Instead, it taps in the vast potential of the KNX ecosystem. A **Modbus only mode** is also available for basic implementation of GRMS functions in lower end hotels.

Chameleon+ HaaS is a **no code platform** that will allow the user to easily and intuitively design and configure a hotel room and incorporate with no restrictions or limitations any required KNX device (sensor or actuator). **Chameleon+ HaaS** does not require any expertise or prior experience in hospitality applications as all hotel room functions (occupancy detection, MUR,DND, etc) are embedded in the programming. In the heart of the system a Siemens LOGO! unit allows for a powerful and cost-effective solution that on average is on average 40% less expensive than dedicated KNX hotel room controllers that also utilize CWA (Conventional Wiring Accessories).

The solution at the room level does not have the classic and unreliable card holder and is based on a sophisticated presence detection algorithm that uses a magnetic contact on the door and a conventional presence detector in each room. [Card Holders nevertheless are supported, even with two relay outputs to differentiate for Guest and Staff entry.]

Opening the door initiates the presence detection algorithm, for a certain period. If movement is detected within this interval, the system sets the room in "Occupied" state and stops the detection, thus avoiding any mistake during the guest's presence in the room. When the door closes the algorithm will check again for presence. If no presence is detected within the period, the room enters the "Vacant" state and initiates the energy saving scenarios. The presence control algorithm also has a failsafe for the case of wrongly estimating the absence of a guest from the room. If motion is detected in a "Vacant" room, the algorithm will set the room to "Occupied", but without changing the state of the lighting in the room.

In hotel rooms with automation and presence detection, it is a classic requirement that certain actions are performed automatically when the occupant enters and exits.

Entrance

- When the tenant enters the room, the automation system will activate the "Welcome Guest" scene, which turns on specific lighting points at a specified light level, will send a "comfort" climate scenario and activate the socket circuits
- If the room is occupied, **no** scene should be activated upon entry to avoid discomfort to the occupants (guest entry while someone is sleeping)

Exit

- When the tenant leaves the room in the "Guest Out" scene, all the lighting points in the room will be switched off, the air conditioning will switch to "standby" mode after a certain period of time and certain power outlet circuits will be switched off

Connection to PMS

- **Chameleon+ HaaS** has the embedded capacity to connect with over 130 different PMS, receiving a rented or unrented information. This allows setting an extra "Guest Away" scene upon customer egress from an unrented room. "Guest Away" scene is also activated upon receiving an unrented signal from the PMS.

At reception level, **Chameleon+** exposes all bidirectional objects to KNX and Modbus protocols, ready to be incorporated into a visualization. In a full implementation where KNX protocol is implemented, Modbus protocol can be implemented as a hot redundancy in case of KNX failure (device or network).

2. GRMS configurations:

Complete LOGO! option:

GRMS implementation with LOGO! base module and expansions, conventional sensors and push buttons

LOGO! with I/O extension and pilot relays:



GRMS implementation with LOGO! base module and KNX I/O expansion, pilot relays to control lighting loads and shutters, conventional sensors and push buttons

LOGO! with KNX MDRC devices:

GRMS implementation with LOGO! base module and expansions, KNX devices to control lighting loads and shutters, conventional sensors and push buttons

LOGO! with KNX MDRC and KNX sensors:

GRMS implementation with LOGO! base module for complicated functions, KNX devices to control lighting loads and shutters and KNX sensors

3. Room configuration:

In every room there is a LOGO! base unit and optionally an expansion unit combining up to a total of 16 inputs and 12 outputs, complemented by any KNX device required for the GRMS implementation. Possible LOGO! I/O configurations are 8/4, 12/8 or 16/12 I/O.

The GRMS configuration can be complemented by any required KNX sensor or actuator device. The possible configurations and KNX communication objects are displayed below.

Type of Room	Free inputs	Commands from KNX		Free outputs	Send scenes	Commands to KNX					
		Call input from KNX	Scenes from KNX			Dimming 1f	Dimming 2f	Shutter 1f	Shutter 2f	Send bits	Send bytes
DND	12	12	up to 16	10	up to 34	up to 12	up to 6	up to 4	up to 4	up to 20	up to 20
DND, EC	11	11	up to 15	10	up to 34	up to 11	up to 5	up to 4	up to 4	up to 20	up to 20
EC	12	12	up to 16	11	up to 34	up to 12	up to 6	up to 4	up to 4	up to 20	up to 20
MUR	12	12	up to 16	10	up to 34	up to 12	up to 6	up to 4	up to 4	up to 20	up to 20
MUR, DND	11	11	up to 15	9	up to 34	up to 11	up to 5	up to 4	up to 4	up to 20	up to 20
MUR, DND, EC	10	10	up to 14	9	up to 34	up to 10	up to 5	up to 4	up to 4	up to 20	up to 20
MUR, EC	11	11	up to 15	10	up to 34	up to 11	up to 5	up to 4	up to 4	up to 20	up to 20
-	13	13	up to 17	11	up to 34	up to 13	up to 6	up to 4	up to 4	up to 20	up to 20

Type of Room	Free inputs	Commands from KNX		Free outputs	Send scenes	Commands to KNX					
		Call input from KNX	Scenes from KNX			Dimming 1f	Dimming 2f	Shutter 1f	Shutter 2f	Send bits	Send bytes
DND	8	8	up to 16	6	up to 34	up to 8	up to 3	up to 4	up to 4	up to 20	up to 20
DND, EC	7	7	up to 15	6	up to 34	up to 7	up to 3	up to 4	up to 4	up to 20	up to 20
EC	8	8	up to 16	7	up to 34	up to 8	up to 4	up to 4	up to 4	up to 20	up to 20
MUR	8	8	up to 16	6	up to 34	up to 8	up to 4	up to 4	up to 4	up to 20	up to 20
MUR, DND	7	7	up to 15	5	up to 34	up to 7	up to 3	up to 4	up to 4	up to 20	up to 20
MUR, DND, EC	6	6	up to 14	5	up to 34	up to 6	up to 3	up to 4	up to 4	up to 20	up to 20
MUR, EC	7	7	up to 15	6	up to 34	up to 7	up to 3	up to 4	up to 4	up to 20	up to 20
-	9	9	up to 17	7	up to 34	up to 9	up to 3	up to 4	up to 4	up to 20	up to 20

8/4 I/O

Type of Room	Free inputs	Commands from KNX		Commands to KNX							
		Call input from KNX	Scenes from KNX	Free outputs	Send scenes	Dimming 1f	Dimming 2f	Shutter 1f	Shutter 2f	Send bits	Send bytes
DND	4	4	up to 16	2	up to 34	up to 4	up to 2	up to 4	up to 2	up to 20	up to 20
DND, EC	3	3	up to 15	2	up to 34	up to 3	up to 1	up to 3	up to 1	up to 20	up to 20
EC	4	4	up to 16	3	up to 34	up to 4	up to 2	up to 4	up to 2	up to 20	up to 20
MUR	4	4	up to 16	2	up to 34	up to 4	up to 2	up to 4	up to 2	up to 20	up to 20
MUR, DND	3	3	up to 15	1	up to 34	up to 3	up to 1	up to 3	up to 1	up to 20	up to 20
MUR, DND, EC	2	2	up to 14	1	up to 34	up to 2	up to 1	up to 2	up to 1	up to 20	up to 20
MUR, EC	3	3	up to 15	2	up to 34	up to 3	up to 1	up to 3	up to 1	up to 20	up to 20
-	5	5	up to 17	3	up to 34	up to 5	up to 2	up to 4	up to 2	up to 20	up to 20

*Aux stands for Auxiliary contact. In the default setting it is configured as an Emergency cord. It can also be configured as a Fire Alarm or connected to a push button to indicate technical issue in the room. Reset can only be carried out remotely.

4. Devices / System Parts:

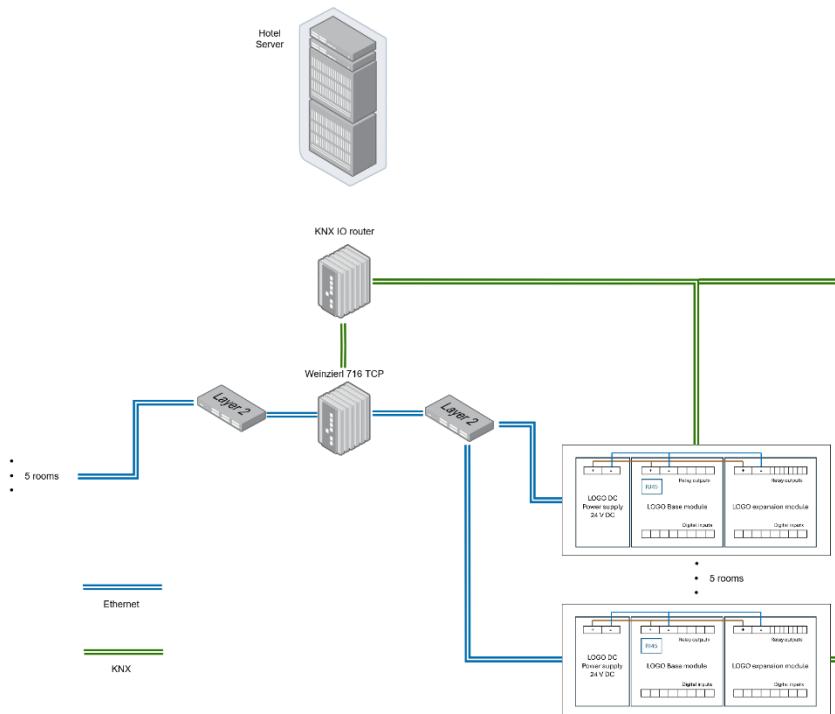
The system is divided into four categories of devices

- LOGO! devices (base unit, expansion unit if needed and an optional power supply). All LOGO! Devices are placed inside the room
- KNX devices. In each room, we can freely add any KNX device, and on the corridor consumer unit, a Weinzierl KNX Modbus TCP Gateway 716 secure device (for every five rooms) will be installed as a gateway between the LOGO! and the KNX fieldbus. In a Modbus only implementation the KNX Modbus TCP Gateway 716 secure device is not required.
- A Finder Opta controller. This device is one per 224 rooms (LOGO! devices) and it activates the operating license of the hotel for the number of rooms we have purchased. The hotel cannot operate without Opta and in case of failure it must be replaced within 30 days (for the reactivation of the hotel license). The license is included in **Chameleon+ HaaS** price and does not require renewal. It can be placed on any consumer unit in the hotel common spaces.
- A basic, non-active element are also the conventional presence detectors. **Their output must be set to 10 sec, and the brightness setting to max (test mode).**

5. Cabling / topology:

Full KNX implementation

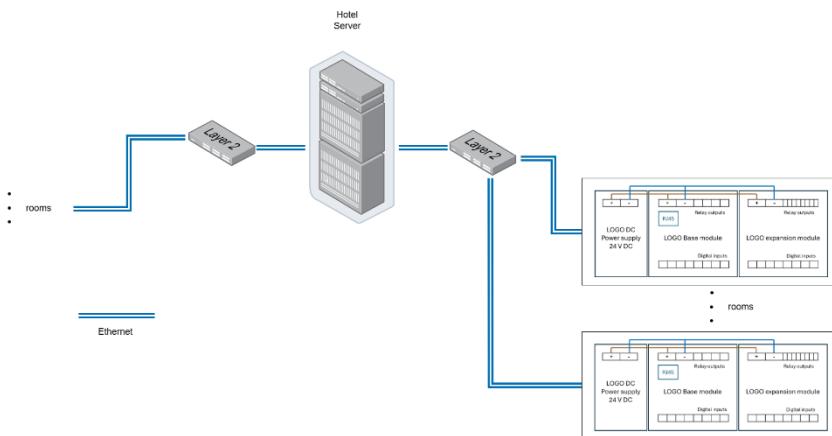
The following figure shows the topology and general wiring of the system. From each room we have a KNX TP cable and an ethernet cable from LOGO!. For every five rooms in the corridor consumer unit, there will be a Weinzierl KNX Modbus TCP Gateway 716 secure with KNX TP and ethernet connection. The ethernet cables will end up in the switches / structured cabling of the hotel where the KNX network will also be connected, since the KNX TP cable will in turn end up in one or more KNX IP routers.



Modbus only mode

Deselecting the KNX option will allow for a Modbus only implementation. The Weinzierl KNX Modbus TCP Gateway 716 secure is no longer part of the system.

Cabling is reduced to an ethernet cable from each room. The ethernet cables will end up in the switches/structured cabling of the hotel where a KNX network can also be connected.



6. Active items / program changes:

As described above we have three parts/types of devices in the system.

- LOGO! devices
- KNX devices
- A Finder Opta controller

For each of the above categories there are ready files and changes to be made

7. LOGO! devices

LOGO! instructions file will guide us through all the actions that need to be done to have an updated program for the LOGO! modules.

8. KNX devices

During the export operation in the Configurator tool a Weinzierl 716 TCP import.wz716 is dynamically created each time for your specific design. This file in essence is the configuration for the bidirectional KNX Modbus communication. Load the file into your ETS project and finish configuring any KNX devices included in the GRMS

9. Finder Opta Controller

We will receive and install a program in the Opta device (Chameleon software license).

10. Easily adaptable solution with premium functionality

Chameleon+ utilizes the LOGO! KNX Configurator software to allow for easy and intuitive room design. The presence detection algorithm of your choice (Presence Detectors or Cardholders) is already programmed, and you can opt for the required housekeeping functions (MUR, DND and Emergency cord). Upon configuring the room, the software will produce the following files.

11. Configurator (Files):

Name	Status	Date modified	Type	Size
Cables.pdf	○	■■■■■	Adobe Acrobat D...	105 KB
Circuits.pdf	○	■■■■■	Adobe Acrobat D...	101 KB
Connections.pdf	○		Adobe Acrobat D...	153 KB
ETS_GroupAddresses.xml	○	■■■■■	XML file	2 KB
IO Setting.pdf	○	■■■■■	Adobe Acrobat D...	138 KB
KNX.pdf	○	■■■■■	Adobe Acrobat D...	107 KB
LOGO! import.csv	○	■■■■■	Microsoft Excel C...	4 KB
LOGO! instructions.txt	○		Text Document	7 KB
Modbus.pdf	○	■■■■■	Adobe Acrobat D...	111 KB
Scenes.pdf	○	■■■■■	Adobe Acrobat D...	108 KB
Sensors.pdf	○	■■■■■	Adobe Acrobat D...	146 KB
Weinzierl 716 TCP import.wz716	○	■■■■■	WZ716 File	8 KB

IO setting: Main page, displaying the room configuration.

Cables: Buying and color-coded wiring guide for control cables

Connections: The LOGO ! connections (for wiring a test unit or to be placed as quick reference in the room's consumer unit)

Circuits: Graphical archive of LOGO! and KNX implemented programming to be used as an aid to simulating and live testing your design

Scenes: The configured scenes

ETS_GroupAddresses.xml: XML file with created Group Addresses

Sensors: Our sensors (with or without schematic, at our option)

Modbus: File with the used Modbus address space for configuring Modbus communication in a visualization.

LOGO! import.csv: File that we will import into the diagrams of LOGO ! to update the LOGO ! Soft Comfort with the new name of the inputs and outputs (see "LOGO! Diagram program" guide).

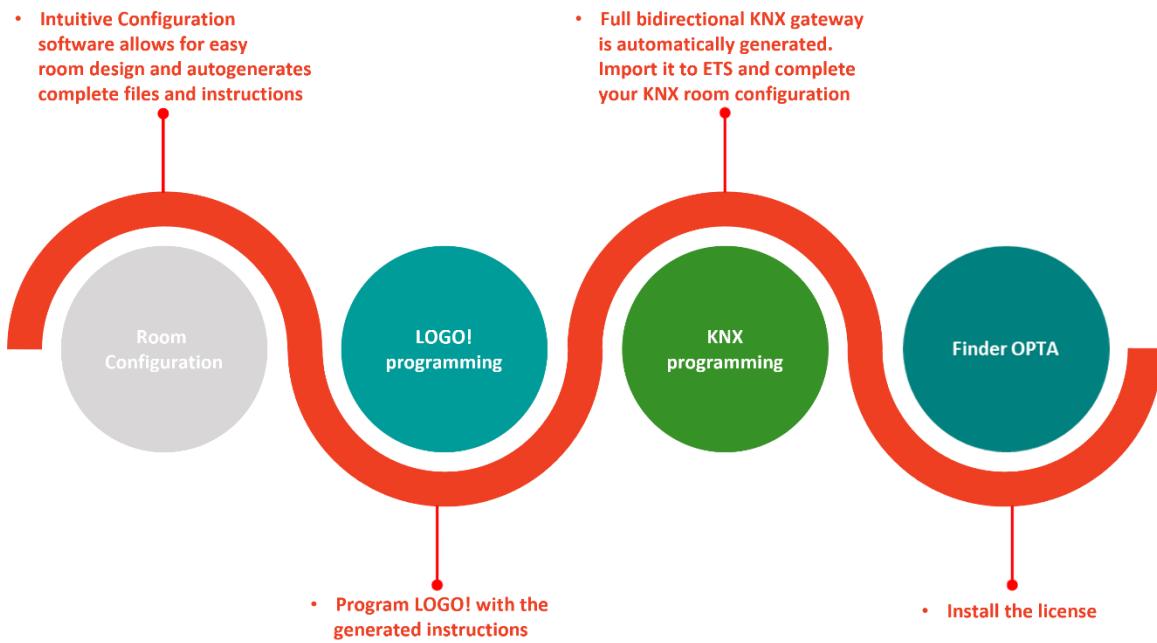
Weinzierl 716 TCP import: This file, in JSON format will contain the configuration of the device, handling the bidirectional communication between Modbus and KNX and it is ready to be loaded and imported into your ETS project (through the weinzierl-716-knx-modbus-tcp-gateway-5425-config-tool-dca app). The file is not static. It is dynamically generated and reflects the parameters you have set in your given design.

LOGO! instructions: The file will guide us on the Diagram (.lsc) and Network (.snp) files we need to use to reprogram LOGO!. In the same file we will find step-by-step detailed instructions for reprogramming the LOGO! unit.

KNX: Detailed KNX object table along with internal communication object connections that need to be configured



The Configurator allows for easy and intuitive design of a room, turning LOGO! into a powerful KNX RCU (Room Control Unit), ready to serve you on your next hotel project.





Basic Concepts

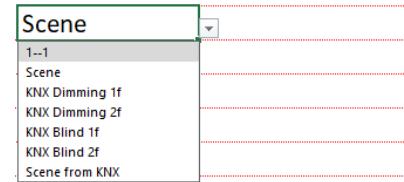
In every room there is a LOGO! base unit and optionally a expansion unit combining up to a total of 16 inputs and 12 outputs and any KNX device required for the GRMS implementation. Possible LOGO! I/O configurations are 8/4, 12/8 or 16/12 I/O.

1. Inputs:

Inputs can be configured as follows:

Aux (Auxiliary): These inputs are auxiliary, i.e. they are inputs which should exist but are not operated by the tenant through a push button.

Three of them are already used and cannot be changed manually by the user (I1 , I2 , I3). The program will autoconfigure inputs I1 an I2 upon your choice of presence detection method. Input I3, by default designated as Window reed contact (can be changed), can be programmed to control a LOGO! output directly, by selecting the output at the **Controlled output** column. Input I6 is free to configure as Aux or any other type. In the default setting it is configured as an Emergency cord. It can also be configured as a Fire Alarm or connected to a push button to indicate technical issue in the room. Reset can only be carried out remotely. **Only inputs 1, 2, 3 and 6 can be set as Aux.**



Load/Scene name	Type of scene	Type	Controlled output
		Aux (NC)	
		Aux	
		Aux (NC)	
Foyer		1-1	Q5
Bathroom		1-1	Q6

1--1(Direct control): When we choose 1--1 (one to one control) as input type, then this input controls directly only one LOGO! output(Lighting circuit).

We will choose 1--1 input type for the lighting loads where the tenant should be able to control them individually. Typical 1--1 loads are bedside lamps, desk and balcony lights. It is recommended that if there is only one line of lighting in the hall and the toilet, these should be configured as a 1--1 control.

Scene: A scene is used when there is a requirement to control more than one lighting circuits upon pressing a button, or send additional commands to KNX or Modbus protocol.

Scenarios	7		Welcome Guest	Guest Out	Master On	Romantic
			Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)
Q5	Foyer		+	-		-
Q6	Bathroom		+	-	+	
Q7	Balcony			-		-
Q8	Bedside Right			-		-
Q9	Bedside Leftt			-		-
Q10	Desk			-		-
Q11	Bedroom ceiling			-	+	-
Q12	Bedroom concealed lighting			-	+	+

A lighting circuit has three possible states; we want it to be set to an on state (+), set it to an off state (-), or we want its state to remain unchanged so it doesn't participate in the scene (leave blank or delete).

Automatic scenes will be created according to the choice of the occupancy detection and are not controlled by buttons.

1.1. Types of Scene:

A scene can be configured as three types

Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Leftt	Bedside Leftt		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On	Default	Scene
I14 Button scene Romantic	Romantic	Bright,Dark	Scene
I15 Button scene Night	Night	Toggle	Scene
I16 Button scene TV	TV	Default	Scene

1.1.1. Default Scene (one scene):

This type of scene is the classic one we know from KNX.

Activating the scene will set loads to a preconfigured state (on/off). Activating the scene again will have the same outcome.

1.1.2. Bright/Dark Scene (two scenes):

In this configuration we have two scenes at our disposal as the button press will be evaluated with the brightness of the room. For example, in the TV scene we would typically want to turn off the lights that can cause glare on the TV screen and turn on the hidden lighting or desk light. Selecting Bright/Dark, if the room is dark will turn the configured lights on, but in a bright room they will not turn on. So we will have to select our (+) and (-) twice for two different scenes.

1.1.3. Toggle Scene (two scenes):

In this configuration we have again two scenes at our disposal. The first time we press the button the first scene will be executed. The second time we press it, the second (**Toggle**) scene will be executed. A typical use would be in the Night scene. On the first button press the tenant will turn off all the lights. The second time he presses the button (assuming he wants to visit the toilet during the night) the toilet light will turn on. Pressing the button a third time will turn off all the lights again, and so on.

Scenarios	7	Night	Night (Toggle)
Circuits		I15 (Out)	I15 (Toggle)
Q5	Foyer	-	+
Q6	Bathroom	-	-
Q7	Balcony	-	-
Q8	Bedside Right	-	-
Q9	Bedside Leftt	-	-
Q10	Desk	-	-
Q11	Bedroom ceiling	-	-
Q12	Bedroom concealed lighting	-	-

So, like in the previous type we will have to select our (+) and (-) twice for two different scenes.

Scene from KNX:

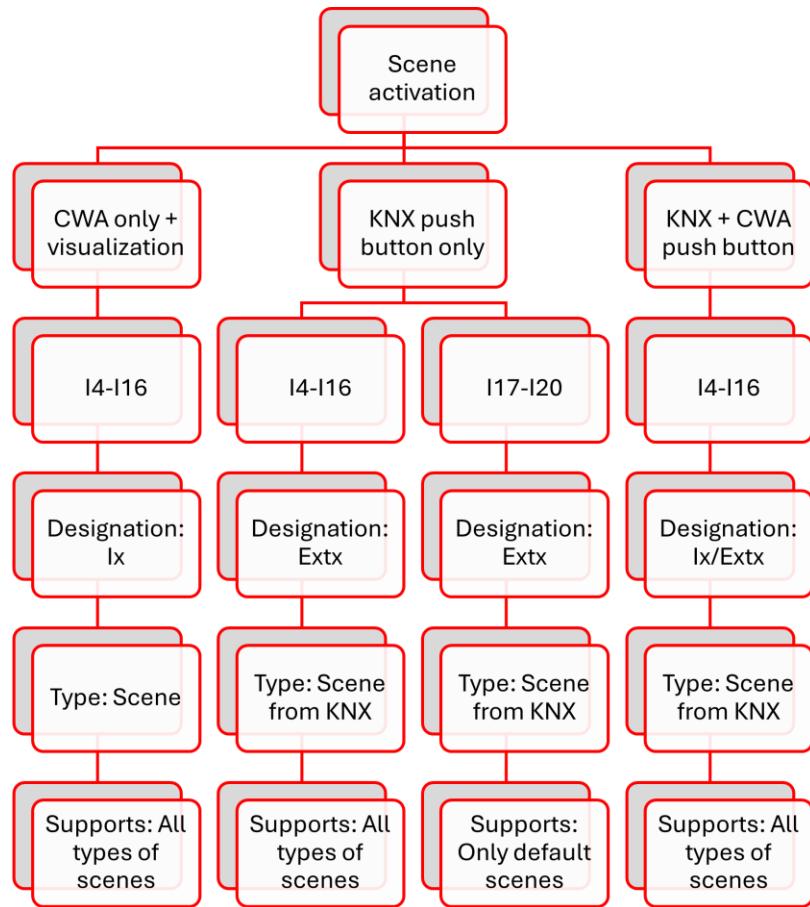
A scene can be called from KNX in the following ways:

- A conventional push button is hardwired to the LOGO! unit. The type of input is set as Scene and is designated as Ix. Scene can be activated by input Ix and from KNX by sending the number of the input as a scene (or byte). So, for example if we have set input I13 to activate scene Master on in LOGO!, we can set KNX to send the command 13 to LOGO! and thus activate (call) the internal scene (can be used for the project visualization).
- A KNX push button sends the command only and we do not need to call this scene from a conventional push button. Two options are available. In the first configuration we can use Input

blocks I4 to I16 and configure them as Scene from KNX. Using block I4 for instance means that we cannot hardwire anything to the input I4 of the LOGO! unit anymore. Activation from KNX can again be carried out by sending the number of the input. All types of scenes are available in this configuration. The input in this case is not designated as I, but as Ext (External). This functionality should be typically used if a scene is only activated from a KNX push button and there is a requirement to use a Toggle or Bright/Dark type of scene.

As a second configuration (if only a default scene is required) we can use virtual inputs I17 to I20. The input in this case is designated as Ext. This functionality should be typically used if a scene is only activated from a KNX push button and there is a requirement to use only a default type scene.

- A KNX and a conventional push button need to activate the same scene. In this case we can use Input blocks I4 to I16 and configure them as Scene from KNX, but we declare that this input should also remain available to hardwire in LOGO!. The input now is designated as I and as Ext (External). Activation from KNX can again be carried out by sending the number of the input. All types of scenes are available in this configuration. This functionality should be typically used if a scene is both activated from a KNX push button and a conventional button.



Send scenes to KNX:

Each time we configure an input as Scene / Scene from KNX, we can set an additional scene to be sent to KNX.

Type of scene	Type	Controlled output	Room	+	Send Scene (1)	Send Scene (2)
	1--1	Q7	Balcony			
	1--1	Q8	Bed R			
	1--1	Q9	Bed L			
	1--1	Q10	Desk			
Default	Scene		Bed L/R	3		
Default	Scene		Bed L/R	4		
Toggle	Scene		Bed L/R	5	6	
Default	Scene		Bed L/R	7		

We can set one additional scene per LOGO! scene, so if the scene is set as Default we can set one KNX scene, and in the case of Toggle or Bright/Dark scene two KNX scenes can be set. Configuration of the KNX scenes is freely carried out in ETS. We can send up to 34 scenes in total.

Send bits to KNX:*

Each time we configure an input as Scene / Scene from KNX, we can set an additional bit command to be sent to KNX.

Type	Controlled output	Room	+	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)
1--1	Q7	Balcony						
1--1	Q8	Bed R						
1--1	Q9	Bed L						
1--1	Q10	Desk						
Scene		Bed L/R				0		
Scene		Bed L/R				1		
Scene		Bed L/R				0	1	
Scene		Bed L/R				0		
Lighting Circuit								

Like before, if the scene is set as Default we can set one bit, and in the case of Toggle or Bright/Dark scene two bits can be set. We can send up to 20 bits in total.

Send bytes to KNX:*

Each time we configure an input as Scene / Scene from KNX, we can set an additional byte to be sent to KNX.

Type	Controlled output	Room	+	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
1--1	Q7	Balcony								
1--1	Q8	Bed R								
1--1	Q9	Bed L								
1--1	Q10	Desk								
Scene		Bed L/R					11			
Scene		Bed L/R					90			
Scene		Bed L/R					125	200		
Scene		Bed L/R					34			

Like before, if the scene is set as Default we can set one byte, and in the case of Toggle or Bright/Dark scene two bytes can be set. We can send up to 20 bytes in total.

*We cannot send more than 20 bits/bytes in total.

KNX Dimming 1f (one button toggle operation):

In this configuration we can control directly a KNX Dimming actuator with 4 bit step control. The behavior is dimming while pressed. Releasing the button will send a stop command. First operation is dim up, and on a second press the operation toggles to a dim down.

KNX Dimming 2f (two button operation):

In this configuration we can control directly a KNX Dimming actuator with 4 bit step control. The behavior is dimming while pressed. Releasing the button will send a stop command. First channel set as 2f will dim up/stop, and the second will dim down/stop.

KNX Blind 1f (one button toggle operation):

In this configuration we can control directly a KNX Shutter actuator with travel/stop control. The behavior is travel while pressed. Releasing the button will send a stop command. First operation is travel up, and on a second press the operation toggles to a travel down.

KNX Blind 2f (two button operation):

In this configuration we can control directly a KNX Shutter actuator with travel/stop control. The behavior is travel while pressed. Releasing the button will send a stop command. First channel set as 2f will travel up/stop, and the second will travel down/stop.

2. Additional commands from KNX:

Though, not visible and available to configure, every LOGO! input that does not have an Aux setting can be called from KNX. To activate the function of the input we just send from KNX the number of the input as a scene (or byte). So, for example if we have set input I13 to activate scene Master on in LOGO!, we can have a KNX button send the command 13 to LOGO! and thus activate (call) the internal scene (can be used for the project visualization). This number can be edited and altered by the user.

3. Outputs:

An output can either be configured as a General Load or as a Lighting Circuit.

General load: The concept of the General load is auxiliary, and like the Aux inputs they are necessary but cannot be controlled by the tenant through a push button. If an output is set as General load it will automatically turn on as part of a Welcome scene and turn off at a Guest out/away scene. If motion is detected in a "Vacant" room, the algorithm will set the room to "Occupied", and the General load will be reactivated even though a Welcome scene is not triggered. Classic use scenario is an AC on-off contact on a split unit or VRV/VRF. A General Load can be set to activate/deactivate from I3 input or by a 1–1 control. General loads cannot participate in scenes.

Lighting Circuit: The output has one or more lighting loads in common control, forming a lighting circuit. It can be, for example, a ceiling light in the bathroom or a ceiling light and the sconces of the vanity.

Each output that we will define as a lighting circuit can be controlled by 1–1 input but also by scenes at the same time, for example the Foyer and the Bathroom lighting circuit in the following images.

Load/Scene name	Type of scene	Type	Controlled output
		Aux (NC)	
		Aux	
		Aux (NC)	
Foyer		1–1	Q5
Bathroom		1–1	Q6



Scenarios	7	Night	Night (Toggle)
Circuits		I15 (Out)	I15 (Toggle)
Q5	Foyer	-	+
Q6	Bathroom	-	-
Q7	Balcony	-	-
Q8	Bedside Right	-	-
Q9	Bedside Leftt	-	-
Q10	Desk	-	-
Q11	Bedroom ceiling	-	-
Q12	Bedroom concealed lighting	-	-

4. Special cases:

The input/output combinations of MUR / DND are special cases.

The MUR button (call to clean the room) and the DND button (do not disturb) are already programmed (but also freely configurable). Inputs are configured as 1--1 and outputs although they are Lighting Circuits cannot participate in scenarios. The outputs will supply voltage to a 230 V indicator light on the button so that the tenant understands that he has activated them and if desired, to a second indicator light in the corridor so that the cleaning staff can see them without contacting the reception.

Finally, for the MUR button there is a preprogrammed hidden function in the long press with which the maid turns off the indicator and automatically informs the visualization that the room is cleaned (Ready).

Description	Load/Scene name	Type of scene	Type	Controlled output
I7 Button MUR	MUR		1--1	Q3
I8 Button DND	DND		1--1	Q4
Q3 Lighting Circuit MUR	MUR		Lighting Circuit	
Q4 Lighting Circuit DND	DND		Lighting Circuit	



LOGO! KNX Configurator

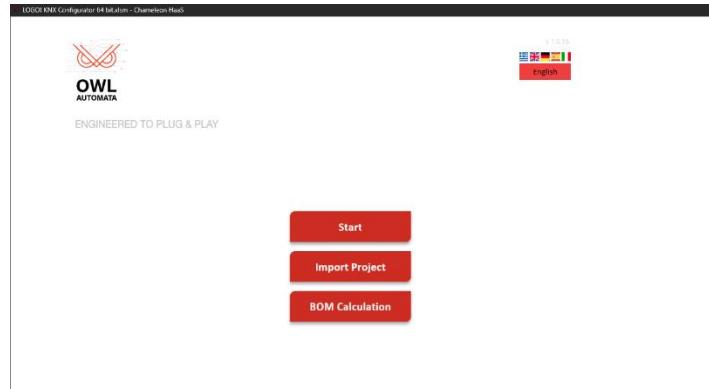
The LOGO! KNX Configurator is the tool for room design. It allows for easy configuration of the sensors and the lighting circuits and upon completion it will autogenerate files both for programming and demonstrating the design to the end customer.

Configurator software will also calculate a Bill of Materials along with the type and cost of the license.

Before reading the guide below, you should have read the “Basic Concepts” chapter

1. Intro screen:

In the intro page of the Configurator we can start a new design by pressing the **Start** button



In the following popup screen we can set the type of Occupancy detection in the Room and if we wish to do a full KNX or Modbus only implementation. Hovering over the check boxes will give a description of the given choice and in the field on the bottom of the screen a detailed analysis of the configuration will be shown. We can also change the name of the Input I3 designated by default as “Window Reed contact”. If you accidentally delete the name or leave the field empty the name of the input will revert to the default “Window Reed contact”.

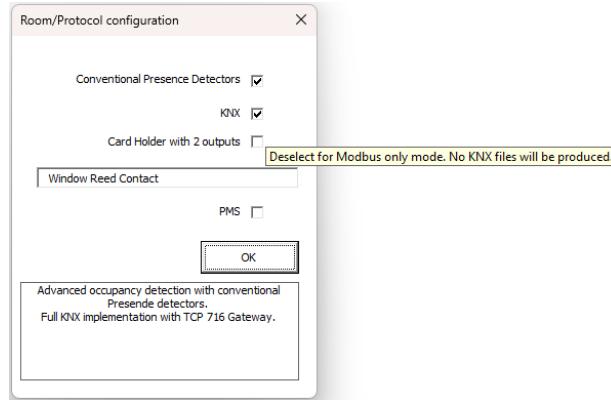
PMS stands for Property Management System and is the software that hotels use to manage various aspects of their business operations, including reservations, guest management (check in/Check out), room inventory, invoicing etc.

If PMS is left unchecked only a **Welcome Guest** and **Guest Out** scene is created. These scenes are triggered by the occupancy detection algorithm.

Checking the PMS option, will create a Check in/Check out KNX object (input) that we can connect to the PMS (through a software bridge). An additional **Guest Away** scene is created. These scenes are again triggered by the occupancy detection algorithm. Customer egress now is evaluated against the rented/unrented status of the room. Egress from a rented room will trigger a **Guest Out** scene.

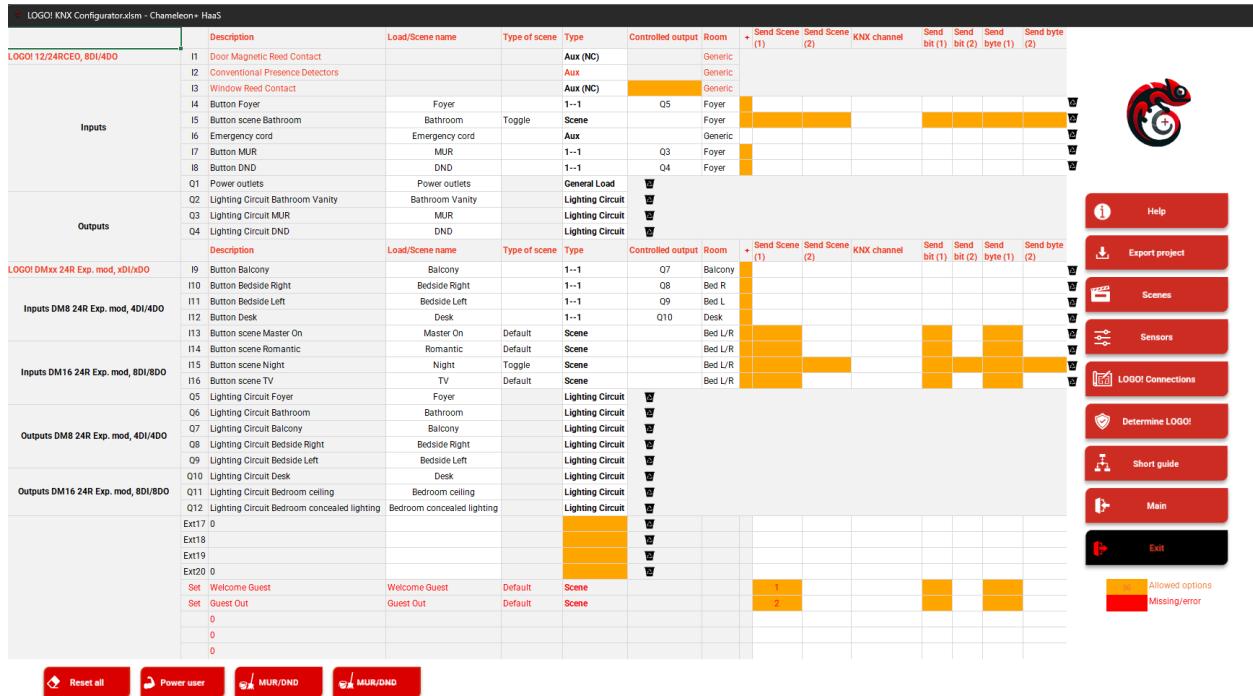
The **Guest Away** scene will be triggered upon egress from an unrented room and upon receiving a Check out signal.

Press **OK** to start designing.



2. Parameterization of inputs and outputs:

We are guided to the basic input/output configuration page (IO settings)



LOGO! KNX Configurator.xlsx - Chameleon+ Has5

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)	
Inputs	I1	Door Magnetic Reed Contact		Aux (NC)		Generic								
	I2	Conventional Presence Detectors		Aux		Generic								
	I3	Window Reed Contact		Aux (NC)		Generic								
	I4	Button Foyer	Foyer	Toggle	Scene	Q5	Foyer							
	I5	Button scene Bathroom	Bathroom	Emergency cord	Aux		Foyer							
	I6	Emergency cord			Generic									
	I7	Button MUR	MUR		1-1	Q3	Foyer							
	I8	Button DND	DND		1-1	Q4	Foyer							
	O1	Power outlets	Power outlets		General Load									
Outputs	O2	Lighting Circuit Bathroom Vanity	Bathroom Vanity	Lighting Circuit										
	O3	Lighting Circuit MUR	MUR	Lighting Circuit										
	O4	Lighting Circuit DND	DND	Lighting Circuit										
	Inputs DMxx 24R Exp. mod. xDI/xDO	I9	Button Balcony	Balcony	Default	Scene	Q7	Balcony						
I10		Button Bedside Right	Bedside Right	Default	Scene	Q8	Bed R							
I11		Button Bedside Left	Bedside Left	Default	Scene	Q9	Bed L							
I12		Button Desk	Desk	Default	Scene	Q10	Desk							
I13		Button scene Master On	Master On	Default	Scene		Bed L/R							
I14		Button scene Romantic	Romantic	Default	Scene		Bed L/R							
I15		Button scene Night	Night	Default	Scene		Bed L/R							
I16		Button scene TV	TV	Default	Scene		Bed L/R							
Outputs DMx 24R Exp. mod. 4DI/4DO		O5	Lighting Circuit Foyer	Foyer	Lighting Circuit									
		O6	Lighting Circuit Bathroom	Bathroom	Lighting Circuit									
		O7	Lighting Circuit Balcony	Balcony	Lighting Circuit									
		O8	Lighting Circuit Bedside Right	Bedside Right	Lighting Circuit									
	O9	Lighting Circuit Bedside Left	Bedside Left	Lighting Circuit										
	O10	Lighting Circuit Desk	Desk	Lighting Circuit										
Outputs DM16 24R Exp. mod. 8DI/8DO	O11	Lighting Circuit Bedroom ceiling	Bedroom ceiling	Lighting Circuit										
	O12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting	Lighting Circuit										
	Ext17 0													
	Ext18													
	Ext19													
	Ext20 0													
Set: Welcome Guest	Welcome Guest	Default	Scene			1								
Set: Guest Out	Guest Out	Default	Scene			2								
0														
0														
0														

Buttons at the bottom:

- Reset all
- Power user
- MUR/DND
- MUR/DND

Icons and Help:

- Help
- Export project
- Scenes
- Sensors
- LOGO! Connections
- Determine LOGO!
- Short guide
- Main
- Exit

Legend:

- Yellow box: Allowed options
- Red box: Missing/error

2.1. LOGO!

In the first two columns we can find LOGO! units (base module and expansion module) and our inputs and outputs. These fields are not editable.

LOGO! KNX Configurator.xsm - Chameleon+ Haa5

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer		1-1	Q5	Foyer							
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer							
	I6 Emergency cord			Aux		Generic							
	I7 Button MUR	MUR		1-1	Q3	Foyer							
	I8 Button DND	DND		1-1	Q4								
	I9 Power outlets	Power outlets		General Load									
Outputs	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	O3 Lighting Circuit MUR	MUR		Lighting Circuit									
	O4 Lighting Circuit DND	DND		Lighting Circuit									
Inputs DMxx 24R Exp. mod., xDI/xDO	I9 Button Balcony	Balcony		Scene									
	I10 Button Bedside Right	Bedside Right		Scene									
	I11 Button Bedside Left	Bedside Left		Scene									
	I12 Button Desk	Desk		Scene									
Inputs DM16 24R Exp. mod., 8DI/8DO	I13 Button scene Master On	Master On	Default	Scene									
	I14 Button scene Romantic	Romantic	Default	Scene									
	I15 Button scene Night	Night		Scene									
	I16 Button scene TV	TV	Default	Scene									
Outputs DM8 24R Exp. mod., 4DI/4DO	O5 Lighting Circuit Foyer	Foyer		Lighting Circuit									
	O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit									
	O7 Lighting Circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit									
	O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit									
Outputs DM16 24R Exp. mod., 8DI/8DO	O10 Lighting Circuit Desk	Desk		Lighting Circuit									
	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
Ext1	0												
Ext1													
Ext1													
Ext2	0												
Set1	Welcome Guest	Welcome Guest		Scene			1						
Set2	Guest Out	Guest Out		Scene			2						
0													
0													
0													



- Help
- Export project
- Scenes
- Sensors
- LOGO! Connections
- Determine LOGO!
- short guide
- Main
- Exit

Allowed options
Missing/error

2.2. Description

In the third column we will find the names of the inputs and outputs that the program will generate automatically whenever changes are made. This field is not editable.

LOGO! KNX Configurator.xltm - Chameleon+ Haas

		Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)		
LOGO! 12/24RECO, 8DI/4DO		Door Magnetic Reed Contact			Aux (NC)		Generic									
		Conventional Presence Detectors			Aux		Generic									
		Window Reed Contact			Aux (NC)		Generic									
Inputs		Button Foyer		1-1	Q5	Foyer										
			Bathroom	Toggle	Scene		Foyer									
			Emergency cord		Aux		Generic									
			MUR		1-1	Q3	Foyer									
			DND		1-1	Q4	Foyer									
			Power outlets		General Load											
			Bathroom Vanity		Lighting Circuit											
			MUR		Lighting Circuit											
Outputs		Q4 Lighting Circuit DND			Lighting Circuit											
LOGO! DMxx 24R Exp. mod., 8DI/8DO		Button Balcony			Balcony	1-1	Q7	Balcony								
		Button Bedside Right			Bedside Right	1-1	Q8	Bed R								
Inputs DM8 24R Exp. mod., 4DI/4DO		Button Bedside Left			Bedside Left	1-1	Q9	Bed L								
			Button Desk			Desk	1-1	Q10	Desk							
			Button scene Master On			Master On	Default	Scene		Bed L/R						
			Button scene Romantic			Romantic	Default	Scene		Bed U/R						
			Button scene Night			Night	Toggle	Scene		Bed U/R						
			Button scene TV			TV	Default	Scene		Bed U/R						
			Lighting Circuit Foyer			Foyer		Lighting Circuit								
			Lighting Circuit Bathroom			Bathroom		Lighting Circuit								
Outputs DM8 24R Exp. mod., 4DI/4DO		Lighting Circuit Balcony			Balcony		Lighting Circuit									
		Lighting Circuit Bedside Right			Bedside Right		Lighting Circuit									
Inputs DM16 24R Exp. mod., 8DI/8DO		Lighting Circuit Bedside Left			Bedside Left		Lighting Circuit									
			Lighting Circuit Desk			Desk		Lighting Circuit								
			Lighting Circuit Bedroom ceiling			Bedroom ceiling		Lighting Circuit								
			Lighting Circuit Bedroom concealed lighting			Bedroom concealed lighting		Lighting Circuit								
			Ext1	0												
			Ext1	0												
			Ext1	0												
			Ext2	0												
		Welcome Guest			Welcome Guest	Default	Scene		1							
		Guest Out			Guest Out	Default	Scene		2							
		0														
		0														
		0														



! Help

! Export project

! Scenes

! Sensors

! LOGO! Connections

! Determine LOGO!

! Short guide

! Main

! Exit

! Allowed options

! Missing/error



2.3. Load/Scene name

In the fourth column we can modify the names of the inputs and outputs. The first three fields and the entries in red are not editable. MUR and DND entries are a special case and will be visited in greater detail in a following paragraph.

The screenshot shows the LOGO! KNX Configurator interface with the title "LOGO! KNX Configurator.xlsm - Chameleon+ Haas". The main area displays a table of device configurations across multiple pages. The columns include:

- Description:** A list of device identifiers (e.g., I1, I2, O1, O2).
- Load/Scene name:** A dropdown menu for selecting scene names.
- Type of scene:** A dropdown menu for selecting scene types (e.g., Aux (NC), Scene, Toggle).
- Controlled output:** A dropdown menu for selecting controlled outputs (e.g., Foyer, Bed R, Bed L).
- Room:** A dropdown menu for selecting rooms (e.g., Generic, Foyer, Bed R, Bed L).
- Send Scene (1):** A checkbox for sending scene 1.
- Send Scene (2):** A checkbox for sending scene 2.
- KNX channel:** A dropdown menu for selecting KNX channels.
- Send bit (1):** A checkbox for sending bit 1.
- Send bit (2):** A checkbox for sending bit 2.
- Send byte (1):** A checkbox for sending byte 1.
- Send byte (2):** A checkbox for sending byte 2.

On the right side of the interface, there is a vertical toolbar with various icons and buttons, including:

- Help
- Export project
- Scenes
- Sensors
- LOGO! Connections
- Determine LOGO!
- Short guide
- Main
- Exit

Below the toolbar, there are two status indicators: "Allowed options" (green) and "Missing/error" (red).

2.4. Type of Scene

In the fifth column the type of scene can selected (if applicable) form a dropdown list.

This screenshot is identical to the one above, showing the same table of device configurations and the same vertical toolbar on the right. The key difference is that the "Type of scene" dropdown menu is now populated with valid options like "Aux (NC)", "Scene", and "Toggle", instead of being empty or showing red text.

The available types of scenes are Default, Bright/Dark and Toggle. This column can be populated only if the input type is set to Scene or KNX Scene.

Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Leftt	Bedside Leftt		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On	Default	Scene
I14 Button scene Romantic	Romantic	Default Bright/Dark Toggle	Scene
I15 Button scene Night	Night	Toggle	Scene

If the input is set to Scene and no Scene type is selected, the field will turn red until a selection is made.

Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Leftt	Bedside Leftt		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On		Scene
I14 Button scene Romantic	Romantic	Default	Scene
I15 Button scene Night	Night	Toggle	Scene
I16 Button scene TV	TV	Default	Scene

For virtual inputs Ext17 to Ext20 and Set Scenes, the dropdown is not applicable and the type of scene is set as Default by the program.

2.5.Type

In the sixth column we will select the type of input and output.

If we do not wish to utilize an input or output we can select the field and press Delete on our keyboard, or press the recycle bin icon in the same line.

The available options for inputs are 1--1, Aux, Scene, KNX Dimming 1f, KNX Dimming 2f, KNX Blind 1f, KNX Blind 2f and KNX Scene ("Basic concepts" chapter).

Scene
1--1
Scene
KNX Dimming 1f
KNX Dimming 2f
KNX Blind 1f
KNX Blind 2f
Scene from KNX

Upon selecting Scene from KNX for inputs I4 to I16, a pop up window will ask if we wish to hardwire this input to LOGO! as well (the same command should be available to trigger by a KNX push button and a conventional pushbutton through LOGO!).

Input Wiring

Will this input be hardwired to LOGO! as well?

Choosing No will convert the input designation to Extx

Ext5	Bathroom	Bathroom	Toggle	Scene from KNX
I6	Emergency cord	Emergency cord	Aux	

Choosing Yes will convert the input designation to Extx/Ix

Ext5/I5	Bathroom	Bathroom	Toggle	Scene from KNX
I6	Emergency cord	Emergency cord	Aux	

The available options for outputs are General Load and Lighting Circuit (“Basic concepts” chapter).

Description	Load/Scene name	Type of scene	Type	Controlled output
I9 Button Balcony	Balcony		1--1	Q7
I10 Button Bedside Right	Bedside Right		1--1	Q8
I11 Button Bedside Leftt	Bedside Leftt		1--1	Q9
I12 Button Desk	Desk		1--1	Q10
I13 Button scene Master On	Master On	Default	Scene	
I14 Button scene Romantic	Romantic	Default	Scene	
I15 Button scene Night	Night	Toggle	Scene	
I16 Button scene TV	TV	Default	Scene	
Q5 Lighting Circuit Foyer	Foyer		Lighting Circuit	
Q6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit	

We can also configure the Door and Window magnetic contacts as normally closed or open (NC/NO).

Description	Load/Scene name	Type of scene	Type	C
I1 Door Magnetic Reed Contact			Aux (NC)	
I2 Conventional Presence Detectors			Aux	
I3 Window Mangnetic Reed Contact			Aux (NC)	
I4 Button Foyer	Foyer		Aux (NC) Aux (NO)	

2.6. Controlled output

In the seventh column, the controlled output can be selected ("Basic concepts" chapter). This column can be populated only for 1–1 inputs and for I3 input.

The screenshot shows the LOGO! KNX Configurator interface. On the left, there are two tables: 'Inputs' and 'Outputs'. The 'Inputs' table lists various sensors like door contacts, presence detectors, and emergency cords. The 'Outputs' table lists lighting circuits and scenes. In the center, there is a large grid titled 'Controlled output' which maps inputs to outputs. The columns in this grid are: Room, Description, Type of scene, Type, Send Scene (1), Send Scene (2), KNX channel, Send bit (1), Send bit (2), Send byte (1), and Send byte (2). A legend on the right explains the colors: orange for allowed options and red for missing or errors. Buttons at the bottom include 'Reset all', 'Power user', 'MUR/DND', and 'MUR/DND'.

If an input is 1–1 type and no controlled input is selected, the field will turn red until a selection is made.

	Description	Load/Scene name	Type of scene	Type	Controlled output
I1	Door Magnetic Reed Contact			Aux (NC)	
I2	Conventional Presence Detectors			Aux	
I3	Window Mangnetic Reed Contact			Aux (NC)	
I4	Button Foyer	Foyer	1-1		Q5
I5	Button Bathroom	Bathroom	1-1		
I6	Emergency cord	Emergency cord		Aux	

The dropdown list of available outputs is dynamic and will only be populated by unused outputs. **Inputs and paired Controlled outputs must have the same name**, otherwise the program will return an error.

	Description	Load/Scene name	Type of scene	Type	Controlled output
I1	Door Magnetic Reed Contact			Aux (NC)	
I2	Conventional Presence Detectors			Aux	
I3	Window Mangnetic Reed Contact			Aux (NC)	
I4	Button Foyer	Foyer	1-1		Q5
I5	Button Bathroom	Bathroom	1-1		
I6	Emergency cord	Emergency cord		Aux	Q6 Q11 Q12
I7	Button MUR	MUR	1-1		Q5

2.7. Room

In the eighth column, the placement of sensor can be configured. This setting is relevant to all types of inputs except Aux.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer		1--1		Q5	Foyer						
	I5 Button scene Bathroom	Bathroom	Toggle	Scene			Foyer						
	I6 Emergency cord	Emergency cord		Aux			Foyer						
	I7 Button MUR	MUR		1--1		Q3	Foyer						
	I8 Button DND	DND		1--1		Q4	Foyer						
Outputs	O1 Power outlets	General Load				General							
	O2 Lighting circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	O3 Lighting circuit MUR	MUR		Lighting Circuit									
	O4 Lighting circuit DND	DND		Lighting Circuit									
	O9 Button Balcony	Balcony					Balcony						
	O10 Button Bedside Right	Bedside Right					Bed R						
	O11 Button Bedside Left	Bedside Left					Bed L						
	O12 Button Desk	Desk					Bed L/R						
Outputs	O13 Button scene Master On	Master On	Default	Scene		Bed L/R							
	O14 Button scene Romantic	Romantic	Default	Scene		Bed L/R							
	O15 Button scene Night	Night	Toggle	Scene		Bed L/R							
	O16 Button scene TV	TV	Default	Scene		Bed L/R							
	O5 Lighting circuit Foyer	Foyer		Lighting Circuit									
	O6 Lighting circuit Bathroom	Bathroom		Lighting Circuit									
	O7 Lighting circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting circuit Bedside Right	Bedside Right		Lighting Circuit									
Outputs	O9 Lighting circuit Bedside Left	Bedside Left		Lighting Circuit									
	O10 Lighting circuit Desk	Desk		Lighting Circuit									
	O11 Lighting circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
	Ext17 0												
	Ext18												
	Ext19												
	Ext20 0												
Set Welcome Guest	Welcome Guest	Default	Scene				1						
Set Guest Out	Guest Out	Default	Scene				2						
0													
0													
0													

Buttons at the bottom:

- Reset all
- Power user
- MUR/DND
- MUR/DND

The available options are:

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1		Foyer
I5 Button Bathroom	Bathroom		1--1		WC
I6 Emergency cord	Emergency cord		Aux		Desk
I7 Button MUR	MUR		1--1		Bed L
I8 Button DND	DND		1--1		Bed R

Foyer

WC

Desk

Bed L: Left bedside

Bed R: Right bedside

Bed L/R: Bedside left and right (wired in parallel to one LOGO! input)

Balcony

Bedroom: Additional placement option

Generic: Input is not a sensor, but an Aux

If the input type is Aux , the program will choose Generic Room and will not allow us to make another choice.

If an input is converted from type Aux to 1--1, the room field will turn red until a placement is selected (other than Generic).

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Foyer
I5 Button Bathroom	Bathroom		1--1	Q6	Foyer
I6 Button Emergency cord	Emergency cord		1--1		Generic

Similarly, If an input is converted from type Aux to Scene, the room field will turn red until a placement is selected (other than Generic). Same applies to all other types of KNX input configurations.

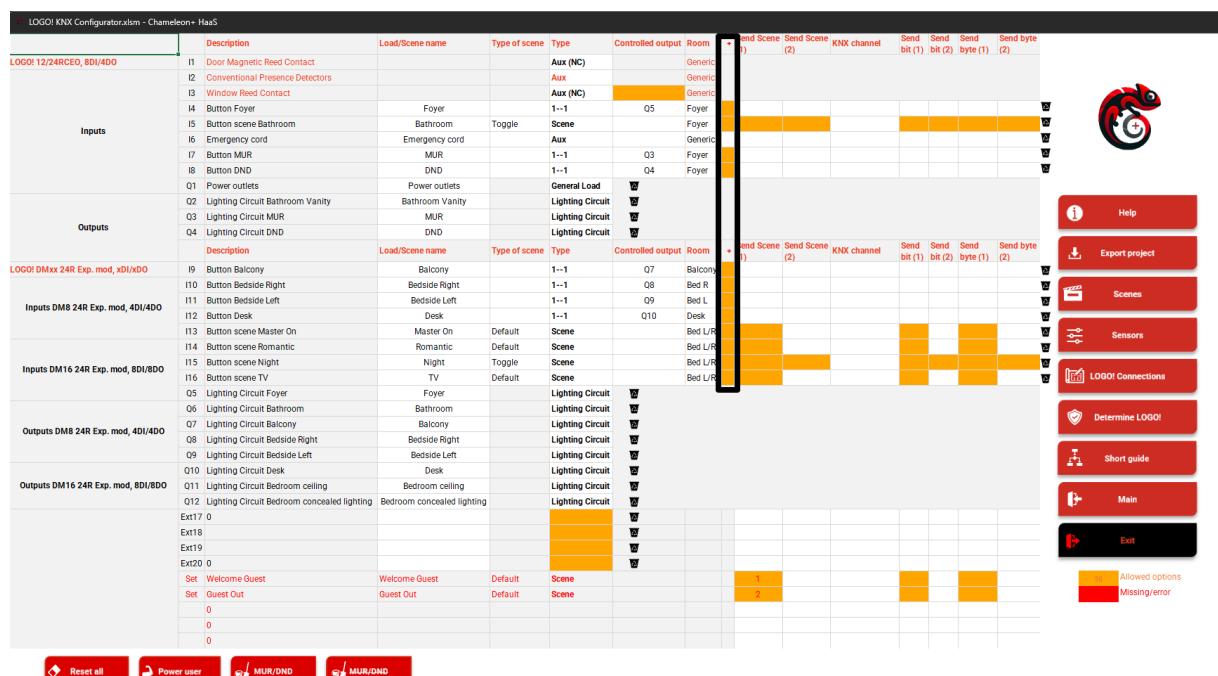
Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Foyer
I5 Button Bathroom	Bathroom		1--1	Q6	Foyer
I6 Button scene Emergency cord	Emergency cord		Scene		Generic

Finally, for an input of types other than Aux if the Room field is empty, the Room field will turn red until a placement is selected.

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Generic

2.8.+

In the ninth column, an additional sensor placement can be selected for 1--1 control or a Scene for activation from another location with a **parallel cable connection**.



LOGO! KNX Configurator.alsm - Chameleon+ Has5						
	Description	Load/Scene name	Type of scene	Type	Controlled output Room	
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)	Generic	
	I2 Conventional Presence Detectors			Aux	Generic	
	I3 Window Reed Contact			Aux (NC)	Generic	
	I4 Button Foyer	Foyer		1--1	Q5 Foyer	Generic
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		
	I6 Emergency cord	Emergency cord		Aux		Generic
	I7 Button MUR	MUR		1--1	Q3 Foyer	Generic
	I8 Button DND	DND		1--1	Q4 Foyer	Generic
	I9 Power outlets	Power outlets		General Load		
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		
Outputs	O1 Power outlets					
	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		
	O3 Lighting Circuit MUR	MUR		Lighting Circuit		
	O4 Lighting Circuit DND	DND		Lighting Circuit		
	O5 Lighting Circuit Foyer	Foyer		Lighting Circuit		
	O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit		
	O7 Lighting Circuit Balcony	Balcony		Lighting Circuit		
	O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit		
	O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit		
	O10 Lighting Circuit Desk	Desk		Lighting Circuit		
Outputs DM8 24R Exp. mod, 4DI/4DO	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit		
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit		
	Ex17 0					
	Ex18					
	Ex19					
	Ex20 0					
	Set Welcome Guest	Welcome Guest	Default	Scene		
	Set Guest Out	Guest Out	Default	Scene		
	0					
	0					
0						

Available options are:

Foyer

WC

Desk

Balcony

Bedroom: Additional placement option

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+
I1	Door Magnetic Reed Contact		Aux (NC)		Generic	
I2	Conventional Presence Detectors		Aux		Generic	
I3	Window Mangnetic Reed Contact		Aux (NC)		Generic	
I4	Button Foyer	Foyer	1-1	Q5	Foyer	
I5	Button Bathroom	Bathroom	1-1	Q6	Foyer	
I6	Emergency cord	Emergency cord	Aux		Generic	
I7	Button MUR	MUR	1-1	Q3	Foyer	

The program will not allow to select the same sensor placement with the preceding adjacent cell, or a sensor placement that does not exist in the previous column (**Room**) as a primary placement. Finally, if the **Room field** is empty, the program will delete any entries in +.

2.9. Send Scene (1)*

In the tenth column, a Send scene (1) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable.

LOGO! KNX Configurator.xlsx - Chameleon+ Haas



Inputs

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
I1 Door Magnetic Reed Contact			Aux (NC)									
I2 Conventional Presence Detectors			Aux									
I3 Window Reed Contact			Aux (NC)									
I4 Button Foyer	Foyer		1-1	Q5	Foyer							
I5 Button scene Bathroom	Bathroom	Toggle	Scene									
I6 Emergency cord	Emergency cord		Aux									
I7 Button MUR	MUR		1-1	Q3								
I8 Button DND	DND		1-1	Q4	Foyer							
I9 Power outlets	Power outlets		General Load									

Outputs

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
O3 Lighting Circuit MUR	MUR		Lighting Circuit									
O4 Lighting Circuit DND	DND		Lighting Circuit									

Inputs DMxx 24R Exp. mod., xDI/xDO

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
I9 Button Balcony	Balcony		1-1	Q7	Balcony							
I10 Button Bedside Right	Bedside Right		1-1	Q8	Bed R							
I11 Button Bedside Left	Bedside Left		1-1	Q9	Bed L							
I12 Button Desk	Desk		1-1	Q10	Desk							

Inputs DM8 24R Exp. mod., 4DI/4DO

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
I13 Button scene Master On	Master On	Default	Scene		Bed L/R							
I14 Button scene Romantic	Romantic	Default	Scene		Bed L/R							
I15 Button scene Night	Night	Toggle	Scene		Bed L/R							
I16 Button scene TV	TV	Default	Scene		Bed L/R							

Outputs DM8 24R Exp. mod., 4DI/4DO

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
O5 Lighting Circuit Foyer	Foyer		Lighting Circuit									
O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit									
O7 Lighting Circuit Balcony	Balcony		Lighting Circuit									
O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit									
O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit									
O10 Lighting Circuit Desk	Desk		Lighting Circuit									

Outputs DM16 24R Exp. mod., 8DI/8DO

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									

Ext17 0

Ext18

Ext19

Ext20 0

Set	Welcome Guest	Welcome Guest	Default	Scene		Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Set	Welcome Guest	Welcome Guest	Default	Scene								
Set	Guest Out	Guest Out	Default	Scene								
0												
0												
0												

 Help
 Export project
 Scenes
 Sensors
 LOGO! Connections
 Determine LOGO!
 Short guide
 Main
 Exit
Allowed options
Missing/error

2.10. Send Scene (2)*

In the eleventh column, a Send scene (2) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene of type Toggle or Bright/Dark. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable.

The screenshot shows the LOGO! KNX Configurator interface with a table of device configurations. The columns include: Description, Load/Scene name, Type of scene, Type, Controlled output, Room, + Send Scene (1), + Send Scene (2), KNX channel, Send bit (1), Send bit (2), Send byte (1), and Send byte (2). The 'Send Scene (2)' column is highlighted with a thick black border. A legend on the right side of the interface defines colors: orange for allowed options and red for missing/error.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	+ Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
LOGO! 12/24RCEO_8DI/4DO	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
Inputs	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer		1--1	Q5	Foyer							
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer							
	I6 Emergency cord			Aux		Generic							
	I7 Button MUR	MUR		1--1	Q3	Foyer							
	I8 Button DND	DND		1--1	Q4	Foyer							
	I9 Power outlets	Power outlets		General Load									
Outputs	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	O3 Lighting Circuit MUR	MUR		Lighting Circuit									
	O4 Lighting Circuit DND	DND		Lighting Circuit									
LOGO! DMxx 24R Exp. mod., xDI/xDO	I9 Button Balcony	Balcony		1--1	Q7	Balcony							
Inputs DM8 24R Exp. mod., 4DI/4DO	I10 Button Bedside Right	Bedside Right		1--1	Q8	Bed R							
	I11 Button Bedside Left	Bedside Left		1--1	Q9	Bed L							
	I12 Button Desk	Desk		1--1	Q10	Desk							
Inputs DM16 24R Exp. mod., 8DI/8DO	I13 Button scene Master On	Master On	Default	Scene		Bed L/R							
	I14 Button scene Romantic	Romantic	Default	Scene		Bed L/R							
	I15 Button scene Night	Night	Toggle	Scene		Bed L/R							
	I16 Button scene TV	TV	Default	Scene		Bed L/R							
Outputs DM8 24R Exp. mod., 4DI/4DO	O5 Lighting Circuit Foyer	Foyer		Lighting Circuit									
	O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit									
	O7 Lighting Circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit									
	O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit									
Outputs DM16 24R Exp. mod., 8DI/8DO	O10 Lighting Circuit Desk	Desk		Lighting Circuit									
	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
	Ext17 0												
	Ext18												
	Ext19												
	Ext20 0												
	Set Welcome Guest	Welcome Guest	Default	Scene			1						
	Set Guest Out	Guest Out	Default	Scene			2						
	0												
	0												
	0												

Buttons at the bottom:

- Reset all
- Power user
- MUR/DND
- MUR/DND

2.11. KNX channel

In the twelfth column we can select the KNX channel to be directly controlled. This setting is relevant in the case that the input is configured as a KNX direct control (KNX Dimming (1f/12f) and KNX Blind (1f/2f)).

The screenshot shows the LOGO! KNX Configurator interface with a table of device configurations. The columns include: Description, Load/Scene name, Type of scene, Type, Controlled output, Room, + Send Scene (1), + Send Scene (2), KNX channel, Send bit (1), Send bit (2), Send byte (1), and Send byte (2). The 'KNX channel' column is highlighted with a thick black border. A legend on the right side of the interface defines colors: orange for allowed options and red for missing/error.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	+ Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
LOGO! 12/24RCEO_8DI/4DO	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
Inputs	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer		1--1	Q5	Foyer							
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer							
	I6 Emergency cord			Aux		Generic							
	I7 Button MUR	MUR		1--1	Q3	Foyer							
	I8 Button DND	DND		1--1	Q4	Foyer							
	I9 Power outlets	Power outlets		General Load									
Outputs	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	O3 Lighting Circuit MUR	MUR		Lighting Circuit									
	O4 Lighting Circuit DND	DND		Lighting Circuit									
LOGO! DMxx 24R Exp. mod., xDI/xDO	I9 Button Balcony	Balcony		1--1	Q7	Balcony							
Inputs DM8 24R Exp. mod., 4DI/4DO	I10 Button Bedside Right	Bedside Right		1--1	Q8	Bed R							
	I11 Button Bedside Left	Bedside Left		1--1	Q9	Bed L							
	I12 Button Desk	Desk		1--1	Q10	Desk							
Inputs DM16 24R Exp. mod., 8DI/8DO	I13 Button scene Master On	Master On	Default	Scene		Bed L/R							
	I14 Button scene Romantic	Romantic	Default	Scene		Bed L/R							
	I15 Button scene Night	Night	Toggle	Scene		Bed L/R							
	I16 Button scene TV	TV	Default	Scene		Bed L/R							
Outputs DM8 24R Exp. mod., 4DI/4DO	O5 Lighting Circuit Foyer	Foyer		Lighting Circuit									
	O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit									
	O7 Lighting Circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit									
	O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit									
Outputs DM16 24R Exp. mod., 8DI/8DO	O10 Lighting Circuit Desk	Desk		Lighting Circuit									
	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
	Ext17 0												
	Ext18												
	Ext19												
	Ext20 0												
	Set Welcome Guest	Welcome Guest	Default	Scene			1						
	Set Guest Out	Guest Out	Default	Scene			2						
	0												
	0												
	0												

Buttons at the bottom:

- Reset all
- Power user
- MUR/DND
- MUR/DND

If an input is of the KNX direct control type and no KNX channel is selected, the field will turn red until a selection is made.

Type	Controlled output	Room	+ KNX Scene 1	KNX Scene 2	KNX channel
KNX Blind 1f		Balcony			

This field is populated by a dropdown list.

Type	Controlled output	Room	+ KNX Scene 1	KNX Scene 2	KNX channel
KNX Blind 1f		Balcony			
1-1	Q8	Bed R			Shutter A
1-1	Q9	Bed L			Shutter B
					Shutter C
					Shutter D

Four shutters and eight dimming channels are available.

The dropdown list is dynamic (like in the case of the outputs) and will only be populated by unused shutters, channels.

It should be noted that the list is updated separately for used 1f and 2f shutters, channels. In the example that follows Shutter A is controlled by a 1f and 2f button combination. This is useful if, for example, we want a 2 fold operation from the sensor near the curtain and a 1 fold operation from the bed.

Type	Controlled output	Room	+ KNX Scene 1	KNX Scene 2	KNX channel
KNX Blind 2f		Balcony			Shutter A
KNX Blind 2f		Balcony			Shutter A
KNX Blind 1f		Bed L/R			Shutter A
KNX Blind 1f		Desk			
Scene		Bed L/R			Shutter B
Scene		Bed L/R			Shutter C
					Shutter D

If we wish the same control for the same shutter, channel from an additional location, we just select a secondary placement in the **+ column**.

Type	Controlled output	Room	+	KNX Scene 1	KNX Scene 2	KNX channel
1-1	Q7	Balcony				
1-1	Q8	Balcony				
1-1	Q9	Bed L/R				
1-1	Q10	Desk				
KNX Dimming 2f		Bed L/R	Balcony			Channel A
KNX Dimming 2f		Bed L/R	Balcony			Channel A



2.12.Send bit (1)*

In the thirteenth column, a Send bit (1) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable.

The screenshot shows the LOGO! KNX Configurator interface with the title "LOGO! KNX Configurator.ais - Chameleon+ HasS". The main area displays a table of components and their configurations. The columns include: Description, Load/Scene name, Type of scene, Type, Controlled output, Room, + Send Scene (1), Send Scene (2), KNX channel, and send bit (1), send bit (2), send byte (1), send byte (2). A legend on the right indicates that yellow boxes represent "Allowed options" and red boxes represent "Missing/error".

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	send bit (1)	send bit (2)	send byte (1)	send byte (2)
Inputs	I1	Door Magnetic Reed Contact		Aux (NC)		Generic							
	I2	Conventional Presence Detectors		Aux		Generic							
	I3	Window Reed Contact		Aux (NC)		Generic							
	I4	Button Foyer	Foyer		1-1	05	Foyer	■	■				
	I5	Button scene Bathroom	Bathroom	Toggle	Scene		Foyer	■	■				
	I6	Emergency cord	Emergency cord		Aux		Generic						
	I7	Button MUR	MUR		1-1	03	Foyer						
	I8	Button DND	DND		1-1	04	Foyer	■					
	Q1	Power outlets	Power outlets		General Load								
Outputs	Q2	Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		■						
	Q3	Lighting Circuit MUR	MUR		Lighting Circuit		■						
	Q4	Lighting Circuit DND	DND		Lighting Circuit		■						
Inputs DMxx 24R Exp. mod., xDI/xDO	I9	Button Balcony	Balcony	1-1	07	Balcony							
	I10	Button Bedside Right	Bedside Right	1-1	08	Bed R							
	I11	Button Bedside Left	Bedside Left	1-1	09	Bed L							
	I12	Button Desk	Desk	1-1	010	Desk	■						
	I13	Button scene Master On	Master On	Default	Scene		Bed L/R	■	■				
	I14	Button scene Romantic	Romantic	Default	Scene		Bed L/R	■	■				
	I15	Button scene Night	Night	Toggle	Scene		Bed L/R	■	■				
	I16	Button scene TV	TV	Default	Scene		Bed L/R	■	■				
	I17	Lighting Circuit Foyer	Foyer		Lighting Circuit								
	I18	Lighting Circuit Bathroom	Bathroom		Lighting Circuit								
Outputs DM8 24R Exp. mod., 4DI/4DO	O7	Lighting Circuit Balcony	Balcony		Lighting Circuit		■						
	O8	Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit		■						
	O9	Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit		■						
	O10	Lighting Circuit Desk	Desk		Lighting Circuit		■						
	O11	Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit		■						
	O12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit		■						
Ext17 0													
Ext18													
Ext19													
Ext20 0													
	Set Welcome Guest	Welcome Guest	Default	Scene			■						
	Set Guest Out	Guest Out	Default	Scene			■						
	0												
	0												
	0												

Buttons at the bottom: Reset all, Power user, MUR/DND, MUR/DND.

2.13.Send bit (2)*

In the fourteenth column, a Send bit (2) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene of type Toggle or Bright/Dark. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable.

The screenshot shows the LOGO! KNX Configurator interface with the title "LOGO! KNX Configurator.ais - Chameleon+ HasS". The main area displays a table of components and their configurations. The columns include: Description, Load/Scene name, Type of scene, Type, Controlled output, Room, + Send Scene (1), Send Scene (2), KNX channel, and send bit (1), send bit (2), send byte (1), send byte (2). A legend on the right indicates that yellow boxes represent "Allowed options" and red boxes represent "Missing/error".

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	send bit (1)	send bit (2)	send byte (1)	send byte (2)
Inputs	I1	Door Magnetic Reed Contact		Aux (NC)		Generic							
	I2	Conventional Presence Detectors		Aux		Generic							
	I3	Window Reed Contact		Aux (NC)		Generic							
	I4	Button Foyer	Foyer		1-1	05	Foyer						
	I5	Button scene Bathroom	Bathroom	Toggle	Scene		Foyer	■	■				
	I6	Emergency cord	Emergency cord		Aux		Generic						
	I7	Button MUR	MUR		1-1	03	Foyer	■					
	I8	Button DND	DND		1-1	04	Foyer	■					
	Q1	Power outlets	Power outlets		General Load								
Outputs	Q2	Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		■						
	Q3	Lighting Circuit MUR	MUR		Lighting Circuit		■						
	Q4	Lighting Circuit DND	DND		Lighting Circuit		■						
Inputs DMxx 24R Exp. mod., xDI/xDO	I9	Button Balcony	Balcony	1-1	07	Balcony							
	I10	Button Bedside Right	Bedside Right	1-1	08	Bed R							
	I11	Button Bedside Left	Bedside Left	1-1	09	Bed L							
	I12	Button Desk	Desk	1-1	010	Desk	■						
	I13	Button scene Master On	Master On	Default	Scene		Bed L/R	■	■				
	I14	Button scene Romantic	Romantic	Default	Scene		Bed L/R	■	■				
	I15	Button scene Night	Night	Toggle	Scene		Bed L/R	■	■				
	I16	Button scene TV	TV	Default	Scene		Bed L/R	■	■				
	I17	Lighting Circuit Foyer	Foyer		Lighting Circuit								
	I18	Lighting Circuit Bathroom	Bathroom		Lighting Circuit								
Outputs DM8 24R Exp. mod., 4DI/4DO	O7	Lighting Circuit Balcony	Balcony		Lighting Circuit		■						
	O8	Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit		■						
	O9	Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit		■						
	O10	Lighting Circuit Desk	Desk		Lighting Circuit		■						
	O11	Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit		■						
	O12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit		■						
Ext17 0													
Ext18													
Ext19													
Ext20 0													
	Set Welcome Guest	Welcome Guest	Default	Scene			■						
	Set Guest Out	Guest Out	Default	Scene			■						
	0												
	0												
	0												

Buttons at the bottom: Reset all, Power user, MUR/DND, MUR/DND.

2.14.Send byte (1)*

In the fifteenth column, a Send byte (2) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene of type Toggle or Bright/Dark. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable. Only twenty entries are allowed.

LOGO! KNX Configurator.alom - Chameleon+ Haas															
	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)	Send byt	
Inputs	I1 Door Magnetic Reed Contact		Aux (NC)			Generic									
	I2 Conventional Presence Detectors		Aux			Generic									
	I3 Window Reed Contact		Aux (NC)			Generic									
	I4 Button Foyer	Foyer		1--1		Q5	Foyer								
	I5 Button scene Bathroom	Bathroom	Toggle				Foyer								
	I6 Emergency cord		Emergency cord				Scene								
	I7 Button MUR	MUR					Aux								
	I8 Button DND	DND					1--1								
	I9 Power outlets		Power outlets				General Load								
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity					Lighting Circuit								
Outputs	O2 Lighting Circuit Bathroom Vanity														
	O3 Lighting Circuit MUR	MUR													
	O4 Lighting Circuit DND	DND													
	O1 Power outlets						Lighting Circuit								
	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity													
	O3 Lighting Circuit MUR	MUR													
	O4 Lighting Circuit DND	DND													
	O5 Lighting Circuit Foyer	Foyer													
	O6 Lighting Circuit Bathroom	Bathroom													
	O7 Lighting Circuit Bedside Right	Bedside Right													
O8 Lighting Circuit Bedside Left	Bedside Left														
O10 Lighting Circuit Desk	Desk														
O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling														
O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting														
Ext17 0															
Ext18															
Ext19															
Set Welcome Guest	Welcome Guest		Default	Scene				1							
Set Guest Out	Guest Out		Default	Scene				2							
0															
0															
0															

2.15.Send byte (2)*

In the final column, a Send byte (2) can be placed. The setting is only relevant if the input is configured as Scene/KNX Scene of type Toggle or Bright/Dark. The field will not turn red if left empty since it is not mandatory to configure a KNX scene, but will be automatically erased if not applicable. Only twenty entries are allowed.

LOGO! KNX Configurator.alom - Chameleon+ Haas															
	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)	Send byt	
Inputs	I1 Door Magnetic Reed Contact		Aux (NC)			Generic									
	I2 Conventional Presence Detectors		Aux			Generic									
	I3 Window Reed Contact		Aux (NC)			Generic									
	I4 Button Foyer	Foyer		1--1		Q5	Foyer								
	I5 Button scene Bathroom	Bathroom	Toggle				Scene								
	I6 Emergency cord		Emergency cord				Aux								
	I7 Button MUR	MUR					1--1								
	I8 Button DND	DND					1--1								
	I9 Power outlets		Power outlets				General Load								
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity					Lighting Circuit								
Outputs	O2 Lighting Circuit Bathroom Vanity														
	O3 Lighting Circuit MUR	MUR													
	O4 Lighting Circuit DND	DND													
	O5 Lighting Circuit Foyer	Foyer													
	O6 Lighting Circuit Bathroom	Bathroom													
	O7 Lighting Circuit Bedside Right	Bedside Right													
	O8 Lighting Circuit Bedside Left	Bedside Left													
	O10 Lighting Circuit Desk	Desk													
	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling													
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting													
Ext17 0															
Ext18															
Ext19															
Set Welcome Guest	Welcome Guest		Default	Scene				1							
Set Guest Out	Guest Out		Default	Scene				2							
0															
0															
0															

*Send Scene, Send bit and Send byte can be sent concurrently per input.

3. Sequence of tasks:

LOGO! KNX Configurator.xls - Chameleon+ HaaS

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
	I2 Conventional Presence Detectors			Aux (NC)		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer		Aux (NC)		Generic							
	I5 Button scene Bathroom	Bathroom		Scene									
	I6 Emergency cord	Emergency cord		Aux									
	I7 Button MUR	MUR		Scene									
	I8 Button DND	DND		Aux									
	I9 Power outlets	Power outlets		General Load									
	I10 Lighting circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
Outputs	O2 Lighting circuit MUR	MUR		Lighting Circuit									
	O3 Lighting circuit DND	DND		Lighting Circuit									
	O4 Lighting circuit DND			Lighting Circuit									
	O5 Lighting circuit Foyer			Lighting Circuit									
Inputs DMxx 24R Exp. mod. xDI/xDO	I9 Button Balcony	Balcony		1-1									
	I10 Button Bedside Right	Bedside Right		1-1									
	I11 Button Bedside Left	Bedside Left		1-1									
	I12 Button Desk	Desk		1-1									
	I13 Button scene Master On	Master On	Default	Scene									
	I14 Button scene Romantic	Romantic	Default	Scene									
	I15 Button scene Night	Night	Toggle	Scene									
	I16 Button scene TV	TV	Default	Scene									
	I17 Lighting circuit Foyer	Foyer		Lighting Circuit									
	I18 Lighting circuit Bathroom	Bathroom		Lighting Circuit									
Outputs DM8 24R Exp. mod. 4DI/4DO	O7 Lighting circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting circuit Bedside Right	Bedside Right		Lighting Circuit									
	O9 Lighting circuit Bedside Left	Bedside Left		Lighting Circuit									
	O10 Lighting circuit Desk	Desk		Lighting Circuit									
	O11 Lighting circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
	Ext17 0												
	Ext18												
	Ext19												
	Ext20 0												
Set Welcome Guest	Welcome Guest	Default	Scene				1						
Set Guest Out	Guest Out	Default	Scene				2						
0													
0													
0													

Reset all
 Power user
 MUR/DND
 MUR/DND

Help
 Export project
 Scenes
 Sensors
 LOGO! Connections
 Determine LOGO!
 Short guide
 Main
 Exit

Allowed options
 Missing/error

When designing a room, it is a good practice to start with auxiliary signals (Emergency cord) and special hotel functions (MUR, DND). **Not editable fields are greyed out.**

Steps:

- 1. Change of input/output → Type.** Each time the Type is changed not applicable entries will be erased and missing entries will be highlighted in red. **Fill in or change red fields.**
- 2. Change the Load/Scene name.**
3. Allowed optional entries will be dynamically highlighted in orange. **Fill in orange fields as per your design.**
Your design is ready!

4. Error checking:

4.1. Visual inspection

After design completion no red fields should exist. Confirm that sensor placement (**Room**, **+**) and KNX Scenes are configured per your preference.

4.2. Automatic fault detection

Press the **Determine LOGO!** button

The screenshot shows the LOGO! KNX Configurator software interface. On the left, there's a tree view of project files: LOGO! 12/24RCEO, 8DI/4DO; LOGO! DMxx 24R Exp. mod, xDI/xDO; Inputs DM8 24R Exp. mod, 4DI/4DO; Inputs DM16 24R Exp. mod, 8DI/8DO; Outputs DM8 24R Exp. mod, 4DI/4DO; and Outputs DM16 24R Exp. mod, 8DI/8DO. The main area is a table for configuration, with columns for Description, Load/Scene name, Type of scene, Type, Controlled output, Room, +, Send Scene (1), Send Scene (2), KNX channel, Send bit (1), Send bit (2), Send byte (1), and Send byte (2). A large orange arrow points from the 'Determine LOGO!' button in the sidebar to the 'Send Scene (1)' column in the table. The sidebar also includes buttons for Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, and Exit. At the bottom, there are buttons for Reset all, Power user, MUR/DND, and MUR/DND.

The program will cross-check all inputs of type '1--1' to ensure that the corresponding controlled output matches the input name. In the following example it will check and confirm, for example, that the I4 input and the Q5 Controlled output have the same name (Foyer).

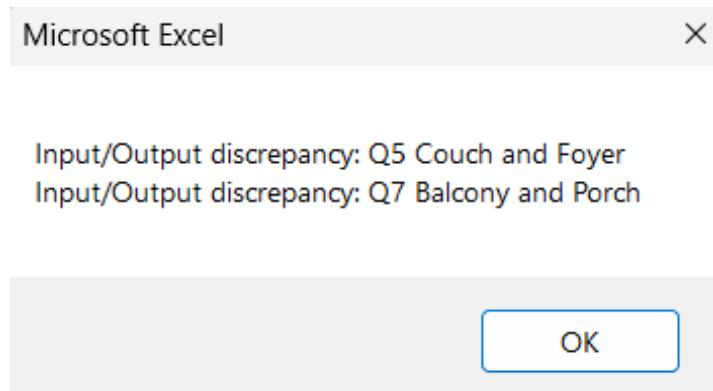
This screenshot shows the results of the error check. The table now highlights specific rows with green checkmarks and orange boxes. The highlighted rows are: Input I4 (Button Foyer) and Output Q5 (Foyer). This indicates that the configuration is correct for these specific components. The rest of the table remains in its original state with no red fields.

If no relevant error is detected the following popup will appear. Press OK to exit.



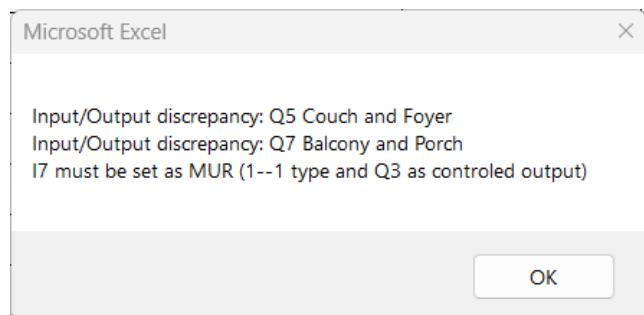


On error, the message will give us the output (Qx) and the mismatched names. In the example below, the Q5 has the names Couch and Foyer and the Q7 the names Balcony and Porch.

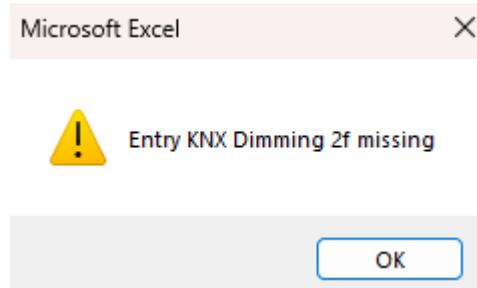


Press OK and correct either the name of the input or the output. Run the **Determine LOGO !** diagnostic again to confirm.

The automatic fault detection, apart from the 1--1 type crosscheck, will also check for errors in the configuration of the MUR/DND functions, giving precise instructions for restoring the functionality.



Lastly the program will check if any 2 fold input is missing.

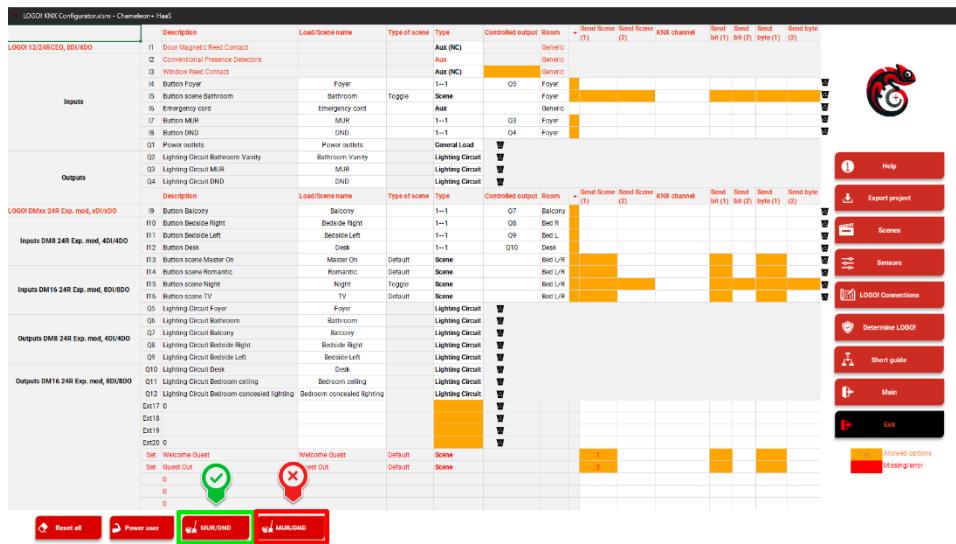


Correct all errors per instructions before proceeding to configuring Sensors and Scenes.

Both Visual inspection and Automatic fault detection will be either way be **carried out by the program upon pressing the **Scenes** or **Sensors** buttons, to prevent generating errors**. If errors are detected, you will not be allowed to access the two aforementioned pages.

5. MUR/DND:

MUR / DND (input/output) functions are a special case and the program will not allow to place them in other inputs (I7,I8) or outputs (Q3, Q4) (The same applies to Emergency cord (I6)). The corresponding buttons at the bottom of the page allow us to remove and restore both at the same time



If we wish to delete only one of the two, we select the two corresponding fields and press Delete.

Description	Load/Scene name	Type of scene	Type	Controlled output
I7 Button MUR	MUR		1-1	Q3
I8 Button			1-1	Q4
Q1 Power outlets	Power outlets		General Load	
Q2 AC on/off	AC on/off		General Load	
Q3 Lighting Circuit MUR	MUR		Lighting Circuit	
Q4 Lighting Circuit			Lighting Circuit	

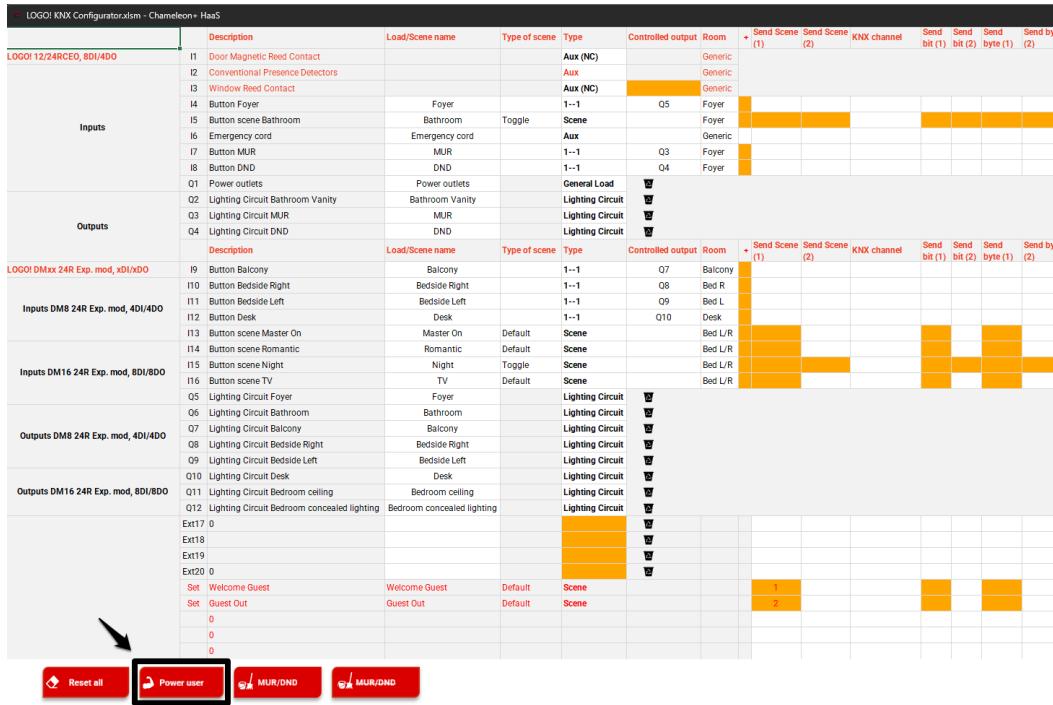
6. Reset Loads:

If we wish to start the design again from the beginning, we press the **Reset all** button and everything is initialized to its default settings.



7. New design from scratch:

If we wish to make extensive changes, we press the **Power User** button at the bottom and all descriptions are deleted.





- i Help
- d Export project
- s Scenes
- s Sensors
- c LOGO! Connections
- d Determine LOGO!
- g Short guide
- m Main
- e Exit

Allowed options
Missing/error

Erase or retain MUR/DND, Emergency cord functionality and follow again the steps as described **Sequence of Tasks** paragraph. **Not editable fields are greyed out.**

Steps:

1. **Change of input/output → Type.** Each time the Type is changed not applicable entries will be erased and missing entries will be highlighted in red. **Fill in or change red fields.**
2. **Change the Load/Scene name.**
3. Allowed optional entries will be dynamically highlighted in orange. **Fill in orange fields as per your design.**
Your design is ready!

It is good practice to run **Determine LOGO!** each time a change is applied, so that the design is validated step by step and errors are not accumulated.



8. LOGO! Connections (Optional):

After completing the new design of the room without **errors**, we can proceed to the next steps. At this point, if we wish, we can see the connections of the LOGO! units by pressing the **LOGO! Connections** button. This page will autogenerate and print even if we do not navigate to it.

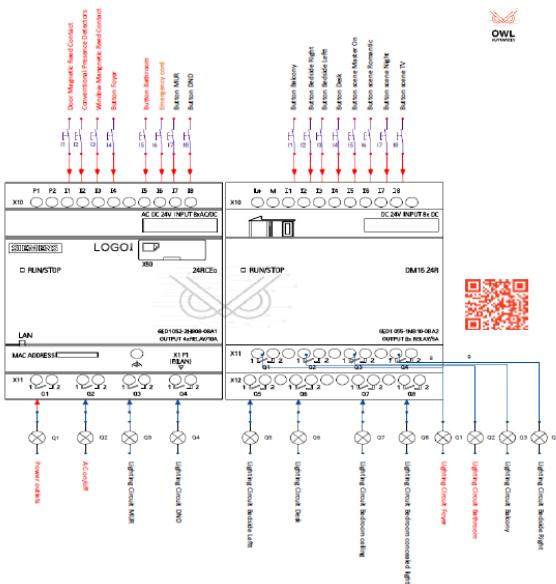
LOGO! KNX Configurator.xlsm - Chameleon+ Has

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
	I4 Button Foyer	Foyer	Bathroom	Toggle	1-1	Q5	Foyer						
	I5 Button scene Bathroom	Bathroom											
	I6 Emergency cord		Emergency cord										
	I7 Button MUR	MUR			1-1	Q3	Foyer						
	I8 Button DND	DND			1-1	Q4	Foyer						
Outputs	Q1 Power outlets	Power outlets		General Load									
	Q2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	Q3 Lighting Circuit MUR	MUR		Lighting Circuit									
	Q4 Lighting Circuit DND	DND		Lighting Circuit									
		Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1) <td>Send Scene (2) <td>KNX channel</td> <td>Send bit (1) <td>Send bit (2) <td>Send byte (1) <td>Send byte (2) </td></td></td></td></td>	Send Scene (2) <td>KNX channel</td> <td>Send bit (1) <td>Send bit (2) <td>Send byte (1) <td>Send byte (2) </td></td></td></td>	KNX channel	Send bit (1) <td>Send bit (2) <td>Send byte (1) <td>Send byte (2) </td></td></td>	Send bit (2) <td>Send byte (1) <td>Send byte (2) </td></td>	Send byte (1) <td>Send byte (2) </td>
Inputs DMxx 24R Exp. mod., 4DI/4DO	I9 Button Balcony	Balcony		1-1	Q7	Balcony							
	I10 Button Beside Right	Beside Right		1-1	Q8	Bed R							
	I11 Button Beside Left	Beside Left		1-1	Q9	Bed L							
	I12 Button Desk	Desk		1-1	Q10	Desk							
	I13 Button scene Master On	Master On	Default	Scene			Bed L/R						
	I14 Button scene Romantic	Romantic	Default	Scene			Bed L/R						
	I15 Button scene Night	Night	Toggle	Scene			Bed L/R						
	I16 Button scene TV	TV	Default	Scene			Bed L/R						
Outputs DM8 24R Exp. mod., 4DI/4DO	Q5 Lighting Circuit Foyer	Foyer		Lighting Circuit									
	Q6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit									
	Q7 Lighting Circuit Balcony	Balcony		Lighting Circuit									
	Q8 Lighting Circuit Beside Right	Beside Right		Lighting Circuit									
	Q9 Lighting Circuit Beside Left	Beside Left		Lighting Circuit									
	Q10 Lighting Circuit Desk	Desk		Lighting Circuit									
	Q11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	Q12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
Ext17 0													
Ext18 0													
Ext19 0													
Ext20 0													
Set Welcome Guest	Welcome Guest		Scene				1						
Set Guest Out	Guest Out	Default	Scene				2						
0													
0													
0													

Buttons: Reset all, Power user, MUR/DND, MUR/DND

Help: Help, Export project, Scenes, Sensors, LOGO! Connections (highlighted), Determine LOGO!, Short guide, Main, Exit

Legend: Allowed options (yellow), Missing/error (red)



9. Sensors:

Press the **Sensors** button

and navigate to the Sensors page where a table has formed with the sensor names and their corresponding placement.

LOGO! KNX Configurator.xlsx - Chameleon + HasD

		Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ (1)	Send Scene (2)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)	
LOGO! 12/24RECO, 8DI/4DO		I1	Door Magnetic Reed Contact		Aux (NC)			Generic								
		I2	Conventional Presence Detectors		Aux			Generic								
		I3	Window Reed Contact		Aux (NC)			Generic								
Inputs		I4	Button Foyer	Foyer	1--1	Q5	Foyer									
		I5	Button scene Bathroom	Bathroom	Toggle											
		I6	Emergency cord	Emergency cord				Scene	Foyer							
		I7	Button MUR	MUR				Aux								
		I8	Button DND	DND				1--1	Q3	Foyer						
		I9	Power outlets	Power outlets				1--1	Q4	Foyer						
		I10	Lighting Circuit Bathroom Vanity	Bathroom Vanity				General Load								
Outputs		O2	Lighting Circuit MUR	MUR												
		O3	Lighting Circuit DND	DND												
		O4	Lighting Circuit DND	DND												
LOGO! DMxx 24R Exp. mod., xDI/xDO		I9	Button Balcony	Balcony	Default	Scene	1--1	Q7								
		I10	Button Bedside Right	Bedsite Right	Default	Scene	1--1	Q8	Bed R							
Inputs DM8 24R Exp. mod., 4DI/4DO		I11	Button Bedside Left	Bedsite Left	Default	Scene	1--1	Q9	Bed L							
		I12	Button Desk	Desk	Default	Scene	1--1	Q10	Desk							
Inputs DM16 24R Exp. mod., 8DI/8DO		I13	Button scene Master On	Master On	Default	Scene			Bed L/R							
		I14	Button scene Romantic	Romantic	Default	Scene			Bed L/R							
		I15	Button scene Night	Night	Toggle	Scene			Bed L/R							
		I16	Button scene TV	TV	Default	Scene			Bed L/R							
		I17	Lighting Circuit Foyer	Foyer												
Outputs DM8 24R Exp. mod., 4DI/4DO		O5	Lighting Circuit Bathroom	Bathroom												
		O6	Lighting Circuit Balcony	Balcony												
		O7	Lighting Circuit Bedside Right	Bedsite Right												
		O8	Lighting Circuit Bedside Left	Bedsite Left												
Outputs DM16 24R Exp. mod., 8DI/8DO		O10	Lighting Circuit Desk	Desk	Default	Scene										
		O11	Lighting Circuit Bedroom ceiling	Bedroom ceiling												
		O12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting												
		Ext17 0														
		Ext18														
		Ext19														
		Ext20 0														
		Set Welcome Guest	Welcome Guest	Default	Scene				1							
		Set Guest Out	Guest Out	Default	Scene				2							
		0														
		0														
		0														



Help
Export project
Scenes
Sensors
LOGO! Connections
Determine LOGO!
Short guide
Main
Exit

Allowed options
Missing/error

Inputs that are not designated as Ix or Extx/Ix will not be shown here as they are KNX pushbuttons exclusively.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night Porch
Bed L	Bedside Leftt	Romantic	Master On	Night Porch
Desk	Couch			

Visualize

Reset

Back

Press the **Visualize** button, a schematic is created with the sensor placement in red boxes and the sensor buttons in grey to help to end customer to form an understanding of the design.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night Porch
Bed L	Bedside Left	Romantic	Master On	Night Porch
Book	Small			

Visualize

Reset

Back



Press the **Reset** button, to delete the schematic, in case we do not want to print it.



Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night
Bed L	Bedside Leftt	Romantic	Master On	Night

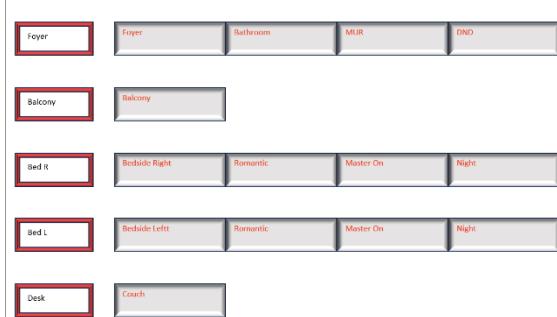
Visualize Reset Back

In addition, other passive elements can be added (not LOGO inputs !) to the sensor buttons such as sockets, USB , RJ45, HDMI etc. , simply by writing in the adjacent fields.

Press again the **Visualize** button, to generate again the sensor schematic. The added passive elements will now also appear.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night
Bed L	Bedside Leftt	Romantic	Master On	Night

Visualize Reset Back



After completing sensor design press the **Back** button to return to the main.

10. Cables

In the Sensors page by pressing the **Cables** button, we can navigate to the Cables screen.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Master On	Romantic	Night
Bed L	Bedside Leftt	Master On	Romantic	Night

Visualize Reset Back
Cables Help





In the Cables screen, we can see that the program based on the design has grouped inputs per sensor location.

Location	LOGO!	Nr of cores	Core 1	Core 2	Core 3	Core 4	Core 5
Foyer	I4	Core	1 white	WH			
Bathroom	I5	Core	2 brown	BN			
MUR	I7	Core	3 green	GN			
DND	I8	Core	4 yellow	YE			
Common		Common	5 grey	GY			
Balcony	LOGO!	Nr of cores	2				
Balcony	I9	Core	1 white	WH			
Common	Common	Core	2 brown	BN			
Bed R	LOGO!	Nr of cores	6				
Bedside Right	I10	Core	1 white	WH			
Master On	I13	Core	2 brown	BN			
Romantic	I14	Core	3 green	GN			
Night	I15	Core	4 yellow	YE			
TV	I16	Core	5 grey	GY			
Common	Common	Core	6 pink	PK			
Bed L	LOGO!	Nr of cores	6				
Bedside Left	I11	Core	1 white	WH			
Master On	I13	Core	2 brown	BN			
Romantic	I14	Core	3 green	GN			
Night	I15	Core	4 yellow	YE			
TV	I16	Core	5 grey	GY			
Common	Common	Core	6 pink	PK			
Desk	LOGO!	Nr of cores	2				
Desk	I12	Core	1 white	WH			
Common	Common	Core	2 brown	BN			
Door	LOGO!	Nr of cores	2				
Door Magnetic Reed Contact	I1	Core	1 white	WH			
Common	Common	Core	2 brown	BN			
Window	LOGO!	Nr of cores	2				
Window Magnetic Reed Contact	I3	Core	1 white	WH			
Common	Common	Core	2 brown	BN			

For instance, in Foyer sensor position, Foyer, Bathroom, MUR and DND have been grouped together (see black frame). So, a five-core (Common has been added) cable from Foyer sensor to LOGO! has been calculated. Connection points in LOGO! and sensor assembly are also illustrated (see red frame). Core cables are numbered (see orange frame) and color coded as per DIN 47100 in this example (see yellow frame).

By pressing the **Color coding** button, we can choose from all possible color codings.

Available options are DIN 47100, European OB, European JB, VDE 0293-308 with ground cable, VDE 0293-308 without ground cable and UL-CSA.

Select the color coding you want and press Apply (or Cancel to abort operation).



The cables are now given with the chosen color scheme.

The screenshot shows a table of components and their core colors. To the right of each row is a color strip and a numbered diagram indicating the core arrangement. The components listed include Foyer, Bathroom, MUR, DND, Common, Balcony, Bed R, Master On, Romantic, Night, TV, Common, Bed L, Bedside Left, Master On, Romantic, Night, TV, Common, Desk, Door, and Window. The color strips show combinations of green, yellow, grey, brown, blue, and black. The numbered diagrams show the internal core structure for each component.

	LOGO!	Nr of cores	
Foyer	14	Core	1 green GN yellow YE
Bathroom	15	Core	2 grey GY
MUR	17	Core	3 black BK
DND	18	Core	4 brown BN
Common		Common Core	5 blue BU
Balcony	19	Core	1 brown BN
Common		Common Core	2 blue BU
Bed R	LOGO!	Nr of cores	6
Bedside Right	I10	Core	1 green GN yellow YE
Master On	I13	Core	2 black BK
Romantic	I14	Core	3 black BK
Night	I15	Core	4 black BK
TV	I16	Core	5 black BK
Common		Common Core	6 black BK
Bed L	LOGO!	Nr of cores	6
Bedside Left	I11	Core	1 green GN yellow YE
Master On	I13	Core	2 black BK
Romantic	I14	Core	3 black BK
Night	I15	Core	4 black BK
TV	I16	Core	5 black BK
Common		Common Core	6 black BK
Desk	LOGO!	Nr of cores	2
Desk	I12	Core	1 brown BN
Common		Common Core	2 blue BU
Door	LOGO!	Nr of cores	2
Door Magnetic Reed Contact	I1	Core	1 brown BN
Common		Common Core	2 blue BU
Window	LOGO!	Nr of cores	2
Window Magnetic Reed Contact	I3	Core	1 brown BN
Common		Common Core	2 blue BU

In this example we can see that for a six core cable we have a green/yellow core and five black cables with numbers (which can be seen next to the color strip). Configuring this page will allow to get a quick calculation of all control cables and provide with a color coded guide for wiring.

11. Scenes:

Having completed the sensor design, press the **Scenes** button.

On the following popup screen press the **Skip** button

The screenshot shows a table of scenes and their parameters. To the right of the table is a sidebar with various buttons and a legend. The table includes columns for Description, Load/Scene name, Type of scene, Type, Controlled output, Room, and several send and send byte options. The sidebar includes buttons for Help, Export project, Scenes (which is highlighted), Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, and Exit. A legend at the bottom right indicates that orange icons represent allowed options and red icons represent missing or errors.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	Send Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
LOGO! 12/24RCEO, 8DI/4DO	I1 Door Magnetic Reed Contact			Aux (NC)		Generic							
	I2 Conventional Presence Detectors			Aux		Generic							
	I3 Window Reed Contact			Aux (NC)		Generic							
Inputs	I4 Button Foyer	Foyer		1-1	Q5	Foyer							
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer							
	I6 Emergency cord	Emergency cord		Aux		Generic							
	I7 Button MUR	MUR		1-1	Q3	Foyer							
	I8 Button DND	DND		1-1	Q4	Foyer							
	I9 Power outlets	Power outlets		General Load									
Outputs	O2 Lighting circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit									
	O3 Lighting circuit MUR	MUR		Lighting Circuit									
	O4 Lighting circuit DND	DND		Lighting Circuit									
LOGO! DMxx 24R Exp. mod., xDI/xDO	I9 Button Balcony	Balcony		1-1	Q7	Balcony							
	I10 Button Bedside Right	Bedside Right		1-1	Q8	Bed R							
	I11 Button Bedside Left	Bedside Left		1-1	Q9	Bed L							
	I12 Button Desk	Desk		1-1	Q10	Desk							
Inputs DM8 24R Exp. mod., 4DI/4DO	I13 Button scene Master On	Master On	Default	Scene		Bed L/R							
	I14 Button scene Romantic	Romantic	Default	Scene		Bed L/R							
	I15 Button scene Night	Night	Toggle	Scene		Bed L/R							
	I16 Button scene TV	TV	Default	Scene		Bed L/R							
Outputs DM8 24R Exp. mod., 4DI/4DO	O5 Lighting circuit Foyer	Foyer		Lighting Circuit									
	O6 Lighting circuit Bathroom	Bathroom		Lighting Circuit									
	O7 Lighting circuit Balcony	Balcony		Lighting Circuit									
	O8 Lighting circuit Bedside Right	Bedside Right		Lighting Circuit									
	O9 Lighting circuit Bedside Left	Bedside Left		Lighting Circuit									
Outputs DM16 24R Exp. mod., 8DI/8DO	O10 Lighting circuit Desk	Desk		Lighting Circuit									
	O11 Lighting circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit									
	O12 Lighting circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit									
	Ext17 0												
	Ext18												
	Ext19												
	Ext20 0												
	Set Welcome Guest	Welcome Guest		Default	Scene		1						
	Set Guest Out	Guest Out		Default	Scene		2						
	0												
	0												
	0												

Scenes' Values

Circuits with changed name will be highlighted in grey. If you check them, they will retain the scene values and will only be renamed. If you uncheck a circuit with no name change, scene values will be deleted. Press apply to enforce changes, or Skip to get the default behavior, where a changed name does not retain scene values.

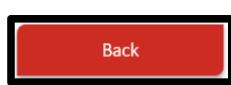
Previous circuit	New circuit	Retain scenes
Foyer	Foyer	<input checked="" type="checkbox"/>
Bathroom	Bathroom	<input checked="" type="checkbox"/>
Balcony	Balcony	<input checked="" type="checkbox"/>
Bedside Right	Bedside Right	<input checked="" type="checkbox"/>
Bedside Left	Bedside Left	<input checked="" type="checkbox"/>
Desk	Couch	<input type="checkbox"/>
Bedroom ceiling	Bedroom ceiling	<input checked="" type="checkbox"/>
Bedroom concealed lighting	Bedroom concealed lighting	<input checked="" type="checkbox"/>



and navigate to Scenes page.

LOGO Hotel Configurator 64 bit.xlsx - Chameleon HaaS

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-		-	-	+	-
Q6	Bathroom	+	-	+		-	-	
Q7	Balcony		-		-	-	-	
Q8	Bedside Right		-		-	-	-	
Q9	Bedside Leftt		-		-	-	-	
Q10	Desk		-		-	-	-	+
Q11	Bedroom ceiling		-	+	-	-	-	
Q12	Bedroom concealed lighting		-	+	+	-	-	+



Fill in the table with +, – or blanks (press Delete on the keyboard, to leave a field empty) ("Basic concepts" chapter). We have the choice either to fill in the fields, or print the blank Scenes Template page. In this case the prints can be filled by the end customer without using the software.

Entering the page, for any unchanged inputs/outputs the fields will be filled with their presets.

It is worth noting that the Scenes page is dynamic. So we can navigate back to the main page and change the design of the room. Returning to the Scenes page, the program has kept in its memory the values we have entered (+, -) and will restore them, leaving any fields affected by the changes we have made, empty to fill in.

In the following example Scenes **Romantic** and **Master On** were swapped in inputs I13 and I14, **TV** scene has been renamed to **Porch** and finally the **Desk** sensor and circuit were renamed to **Couch**.



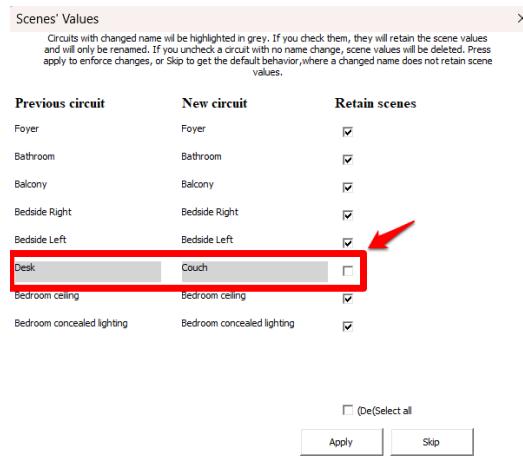
LOGO! 12/24RCEO, 8DI/4DO		Description	Load/Scene name	Type of scene	Type	Controlled output	Room
Inputs	I1	Door Magnetic Reed Contact			Aux (NC)		Generic
	I2	Conventional Presence Detectors			Aux		Generic
	I3	Window Magnetic Reed Contact			Aux (NC)		Generic
	I4	Button Foyer	Foyer		1-1	Q5	Foyer
	I5	Button scene Bathroom	Bathroom	Toggle	Scene		Foyer
	I6	Emergency cord	Emergency cord		Aux		Generic
	I7	Button MUR	MUR		1-1	Q3	Foyer
	I8	Button DND	DND		1-1		Foyer
	Q1	Power outlets	Power outlets		General Load		
Outputs	Q2	Bathroom Vanity	Bathroom Vanity		General Load		
	Q3	Lighting Circuit MUR	MUR		Lighting Circuit		
	Q4	Lighting Circuit DND	DND		Lighting Circuit		
	Description		Load/Scene name	Type of scene	Type	Controlled output	Room
LOGO! DMxx 24R Exp. mod, xDI/xDO		I9	Button Balcony	Balcony	1-1	Q7	Balcony
Inputs DM8 24R Exp. mod, 4DI/4DO		I10	Button Bedside Right	Bedside Right	1-1	Q8	Bed R
Inputs DM16 24R Exp. mod, 8DI/8DO		I11	Button Bedside Left	Bedside Left	1-1	Q9	Bed L
Outputs DM8 24R Exp. mod, 4DI/4DO		I12	Button Couch	Couch	1-1	Q10	Desk
Inputs DM16 24R Exp. mod, 8DI/8DO		I13	Button scene Romantic	Romantic	Default	Scene	Bed L/R
Outputs DM16 24R Exp. mod, 8DI/8DO		I14	Button scene Romantic	Romantic	Default	Scene	Bed L/R
		I15	Button scene Night	Night	Toggle	Scene	Bed L/R
		I16	Button scene Porch	Porch	Default	Scene	Bed L/R
		Q5	Lighting Circuit Foyer	Foyer		Lighting Circuit	
		Q6	Lighting Circuit Bathroom	Bathroom		Lighting Circuit	
		Q7	Lighting Circuit Balcony	Balcony		Lighting Circuit	
		Q8	Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit	
		Q9	Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit	
		Q10	Lighting Circuit Couch	Couch		Lighting Circuit	
		Q11	Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit	
		Q12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit	

Romantic and Master On scenes have retained their values, even though we have transposed inputs. The Porch scene and Couch circuit though, which didn't exist before, are left blank to fill.

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-		-	-	+	-
Q6	Bathroom	+	-	+		-	-	
Q7	Balcony		-		-	-	-	
Q8	Bedside Right		-		-	-	-	
Q9	Bedside Leftt		-		-	-	-	
Q10	Desk		-		-	-	-	+
Q11	Bedroom ceiling		-	+	-	-	-	
Q12	Bedroom concealed lighting		-	+	+	-	-	+
Scenarios	7	Welcome Guest	Guest Out	Romantic	Master On	Night	Night (Toggle)	Porch
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-	-		-	+	
Q6	Bathroom	+	-		+	-	-	
Q7	Balcony		-	-		-	-	
Q8	Bedside Right		-	-		-	-	
Q9	Bedside Leftt		-	-		-	-	
Q10	Couch							
Q11	Bedroom ceiling		-	-	+	-	-	
Q12	Bedroom concealed lighting		-	+	+	-	-	

11.1 Advanced Scenes' configuration (Scene Values)

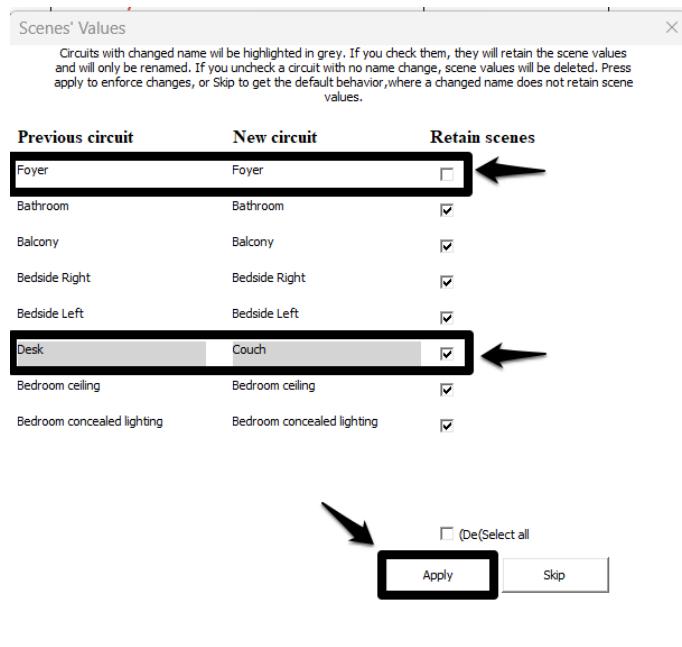
Alternatively, instead of pressing **Skip** on the Scenes' Values popup window we could perform some more advanced functions.



All circuits with a changed name will be highlighted in grey (in this case we can see the Couch circuit which used to be the Desk circuit). The first column (marked Previous circuit) contains all the circuits we had before we did any changes. In the second column (marked New circuit) we can see the new circuit names after our changes. In the third column we can see a Retain scenes option. If this option is checked, the new load will retain the scene values from the Desk circuit.

By default circuits with no name change will be already checked and circuits with a changed name will be unchecked. If we want the default scene functionality described above we can either press **Skip** or **Apply**, without changing the checkboxes' presets.

However, you can opt to tweak the checkboxes. For example, we want the Couch circuit to retain the scene values from the Desk circuit but want to do a new scene setting to Foyer. We can configure the popup as follows and press **Apply**.





As we can see below Foyer in now a blank scene to fill. In the same time, Couch has retained its scene values from the Desk circuit.

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	Reading
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer							
Q6	Bathroom	+	-	+	-	-	-	-
Q7	Balcony		-		-	-	-	-
Q8	Bedside Right		-		-	-	-	-
Q9	Bedside Left		-		-	-	-	-
Q10	Couch		-		-	-	-	-
Q11	Bedroom ceiling		-	+	-	-	-	-
Q12	Bedroom concealed lighting		-	+	+	-	-	-

After completing scenes design press the Back button to navigate to the main screen.

LOGO Hotel Configurator 64 bit.xlsx - Chameleon Haas								
Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-	-	-	+	-	-
Q6	Bathroom	+	-	+	-	-	-	-
Q7	Balcony	-	-	-	-	-	-	-
Q8	Bedside Right	-	-	-	-	-	-	-
Q9	Bedside Left	-	-	-	-	-	-	-
Q10	Desk	-	-	-	-	-	+	-
Q11	Bedroom ceiling	-	-	+	-	-	-	-
Q12	Bedroom concealed lighting	-	-	+	+	-	-	+

Back

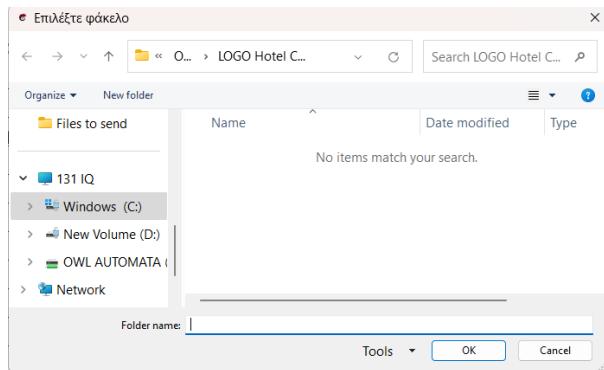
12. Export Project:

Press the **Export Project** button

The screenshot shows the LOGO! KNX Configurator software interface. The main area displays a configuration table for various scenes and circuits. The 'Inputs' section includes items like 'Door Magnetic Reed Contact', 'Conventional Presence Detectors', and 'Window Reed Contact'. The 'Outputs' section includes items like 'Lighting Circuit Bathroom Vanity', 'MUR', and 'DND'. A legend at the bottom indicates that orange squares represent 'Allowed options' and red squares represent 'Missing/error'. A red box highlights the 'Export project' button in the bottom right corner of the interface.

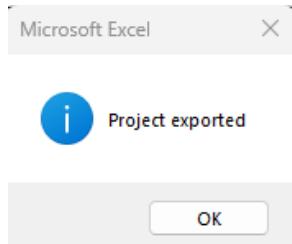


A popup window will allow to select a save location for the generated files.



If no file location is selected, the procedure will be aborted.

When the export process is finished, press OK on the popup window



Press the **Exit** button if you wish to terminate the program

The screenshot shows the LOGO! KNX Configurator interface with a configuration table. The table has columns for Description, Load/Scene name, Type of scene, Type, Controlled output, Room, and several send and KNX channel columns. The sidebar on the right includes icons for Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, and Exit. The 'Exit' button is highlighted with a red box and arrow.

In the chosen save location we can find the files that were generated upon pressing the **Export Project** button

Name	Status	Date modified	Type	Size
Cables.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	105 KB
Circuits.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	101 KB
Connections.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	153 KB
ETS_GroupAddresses.xml	○	2023-09-11 14:45:23	XML File	2 KB
IO Setting.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	138 KB
KNX.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	107 KB
LOGO! import.csv	○	2023-09-11 14:45:23	Microsoft Excel C...	4 KB
LOGO! instructions.txt	○	2023-09-11 14:45:23	Text Document	7 KB
Modbus.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	111 KB
Scenes.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	108 KB
Sensors.pdf	○	2023-09-11 14:45:23	Adobe Acrobat D...	146 KB
Weinzierl 716 TCP import.wz716	○	2023-09-11 14:45:23	WZ716 File	8 KB

The following files have been produced in pdf files

IO setting: Main page, displaying the room configuration.

Cables: Buying and color-coded wiring guide for control cables

Connections: The LOGO ! connections (for wiring a test unit or to be placed as quick reference in the room's consumer unit)

Circuits: Graphical archive of LOGO! and KNX implemented programming to be used as an aid to simulating and live testing your design

Scenes: The configured scenes

Sensors: Our sensors (with or without schematic, at our option)

Modbus: File with the used Modbus address space for configuring Modbus communication in a visualization.

LOGO! import.csv: File that we will import into the diagrams of LOGO ! to update the LOGO ! Soft Comfort with the new name of the inputs and outputs (see "LOGO! Diagram program" guide).

Weinzierl 716 TCP import: This file, in JSON format will contain the configuration of the device, handling the bidirectional communication between Modbus and KNX and it is ready to be loaded and imported into your ETS project (through the weinzierl-716-knx-modbus-tcp-gateway-5425-config-tool-dca app). The file is not static. It is dynamically generated and reflects the parameters you have set in your given design.

KNX: Detailed KNX object table along with internal communication object connections that need to be configured

ETS_GroupAddresses.xml: XML file with created Group Addresses

LOGO! instructions: The file will guide us on the Diagram (. lsc) and Network (..snp) files we need to use to reprogram LOGO!. In the same file we will find step-by-step detailed instructions, as in the example below:
In the same file we will find step-by-step detailed instructions, as in the example below:

Select UDF Oc

Select pin Guest In

Right click (Connect with input connector...) on the pin and write *Q5

Select Set

Right click (Connect with input connector...) on the pin and write *Q6

Select Set

Select UDF Oc

Select pin Guest Out

Right click (Connect with input connector...) on the pin and write *Q5

Select Unset

Right click (Connect with input connector...) on the pin and write *Q6

Select Unset

Right click (Connect with input connector...) on the pin and write *Q7

Select Unset

Right click (Connect with input connector...) on the pin and write *Q8

Select Unset

Right click (Connect with input connector...) on the pin and write *Q9



Select Unset

Right click (Connect with input connector...) on the pin and write *Q10

Select Unset

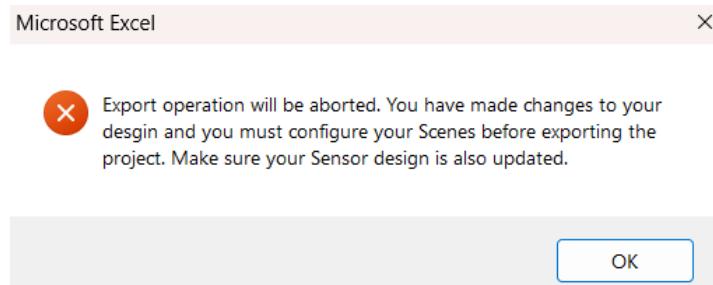
Right click (Connect with input connector...) on the pin and write *Q11

Select Unset

Right click (Connect with input connector...) on the pin and write *Q12

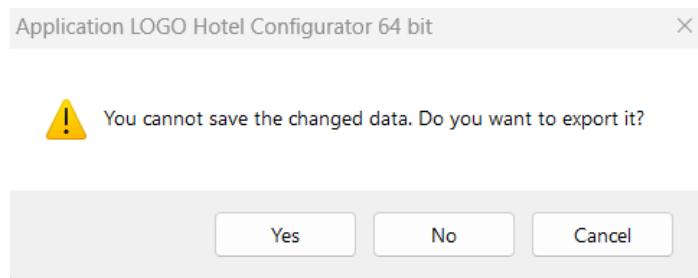
Select Unset

If we have made changes in the IO Setting page and we have not configured the Scenes, we will receive an error message (seen below) and the operation will be aborted.



13. Project export

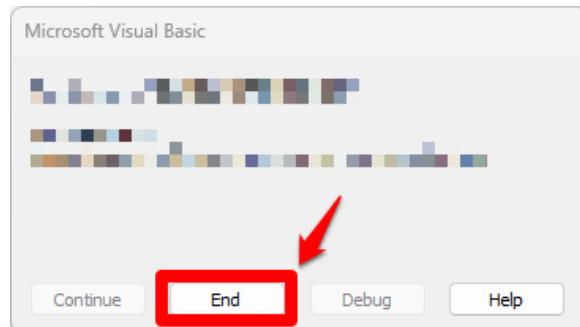
Upon pressing the **Export Project** or the **Exit** button there is the option to save the project. Selecting **Yes** will export the project configuration and **No** will discard any changes made. The software produces a .dat file with the user configuration. This file can later be imported to make further changes.



Upon pressing **Yes** a save file dialog will pop up for the .dat file.

14. Errors:

If an error occurs press the **End** button at the popup window

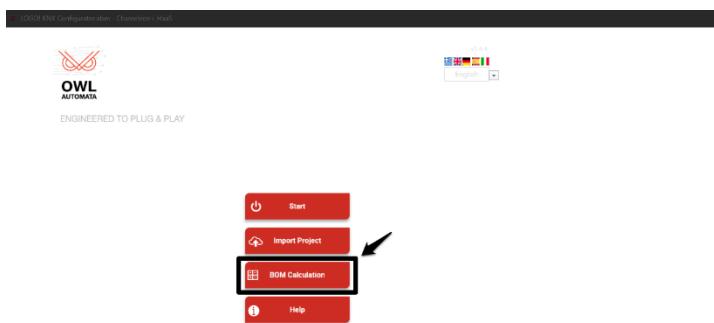


Exit the Configurator from the **X** control in top right corner



15. BOM Calculation

In the intro page there is a **Calculate BOM** button



Press the button and in the popup form fill all fields as follows:

BOM Calculation

Total number of hotel rooms:	<input type="text"/>
Number of hotel rooms with 16/12 I/O:	<input type="text"/>
Number of hotel rooms with 12/8 I/O:	<input type="text"/>
Number of hotel rooms with 8/4 I/O:	<input type="text"/>
KNX	<input checked="" type="checkbox"/>
OK	

- A) The total number of hotel rooms.
- B) The number of rooms with a 16/12 I/O configuration.
- C) The number of rooms with a 16/12 I/O configuration.
- D) The number of rooms with a 16/12 I/O configuration.
- E) If we wish a full KNX implementation or Modbus only mode.



Press **OK** to navigate to the relevant page to see the bill of materials and the **Chameleon+** license code (indicative type HCP.0.PLUS.100) along with its price.



There is an option to print the page, navigate back to the intro page, exit the program or request for quotation. Pressing the Request for Quotation button will launch a pop-up form where we must input our contact details. The code for the license will be automatically filled out from the BOM calculation.

Request for Quotation X

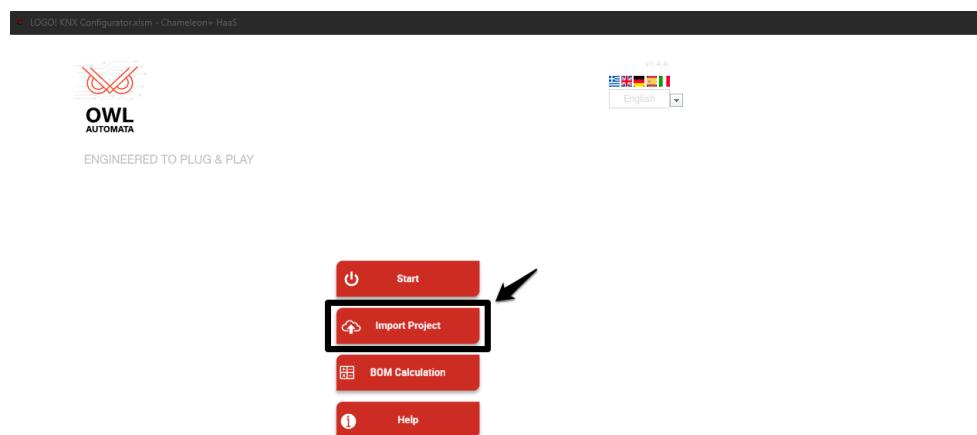
Name:	<input type="text" value="John Smith"/>
Company:	<input type="text" value="OWL Automata"/>
Chameleon+ Code	<input type="text" value="HCP.0.PLUS.100"/>
Phone number:	<input type="text" value=""/>

Pressing send will create a mail in our default client. All fields are already populated. Press send to receive a quotation.

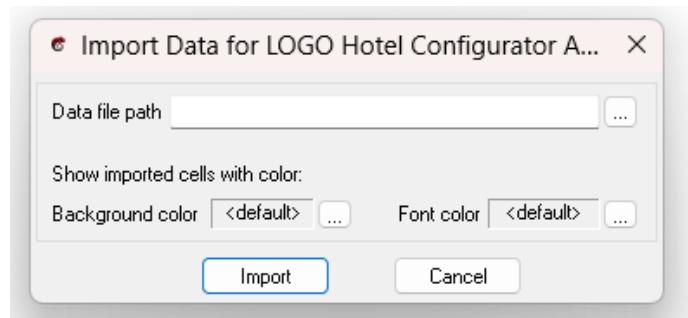


16. Import project function

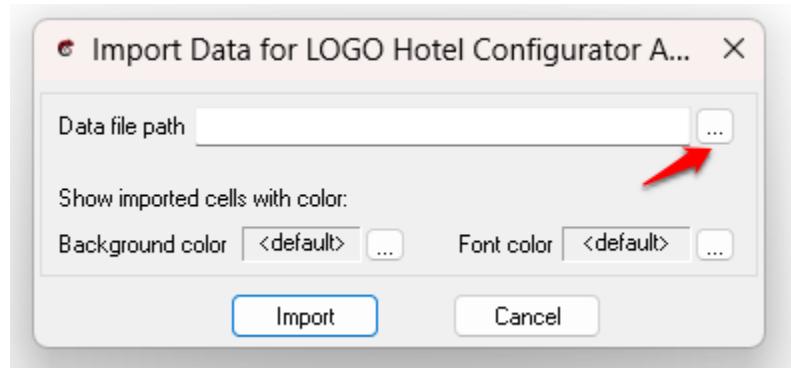
In the intro page, pressing the **Import project** button



will open the following popup:



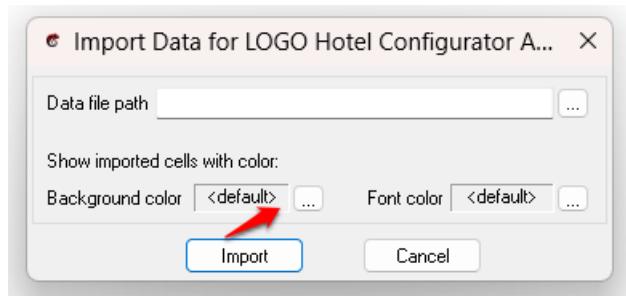
Pressing the three dots in the first field, a previous exported project file can be selected (.dat file).



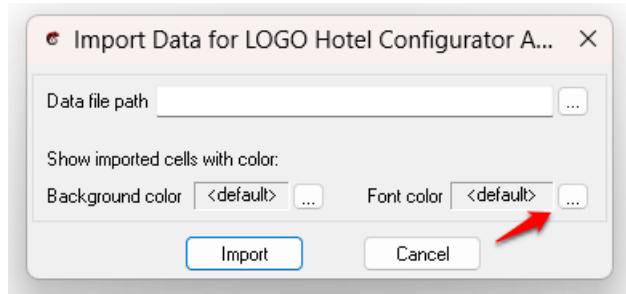
In the two fields below, we can opt to highlight any changes made when compared to the default design.



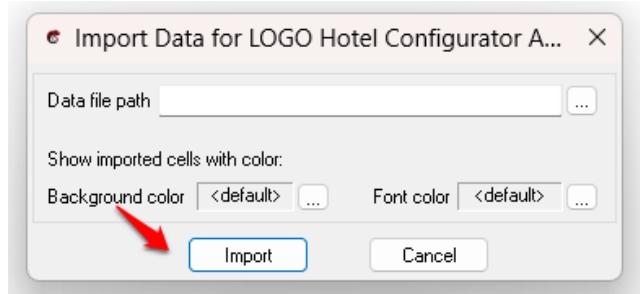
More specifically, by pressing the first three dots



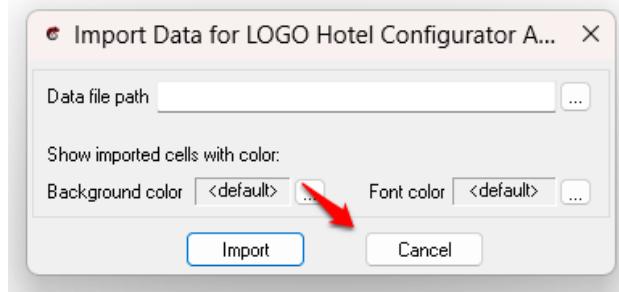
We can change the background color of the changed fields, or by pressing the second three dots we can change the font color



Afterwards by pressing the **Import** button the project will be imported

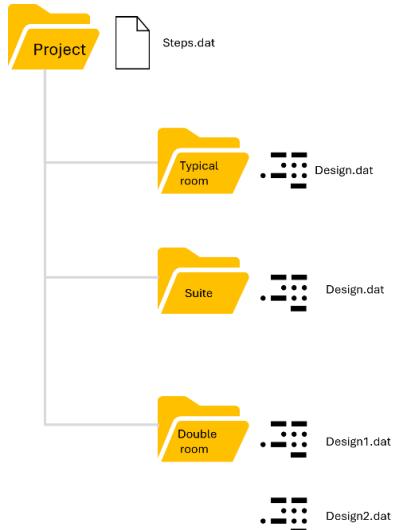


or by pressing the **Cancel** button the process is aborted.



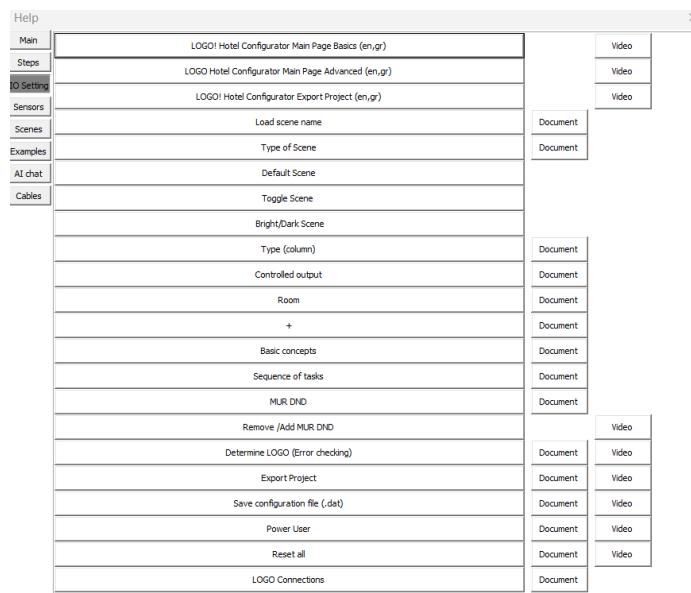
17. Keeping project records

In the simple case that there is only one typical room in the project, it is sufficient to have a folder with the name of the project. Starting to work with the Configurator we save every time the .dat file with our progress and import it again to continue the design. In the event that the project has more than one room types or multiple alternative designs for a room type it is good practice to make separate folders to store the different .dat files.



18. Help

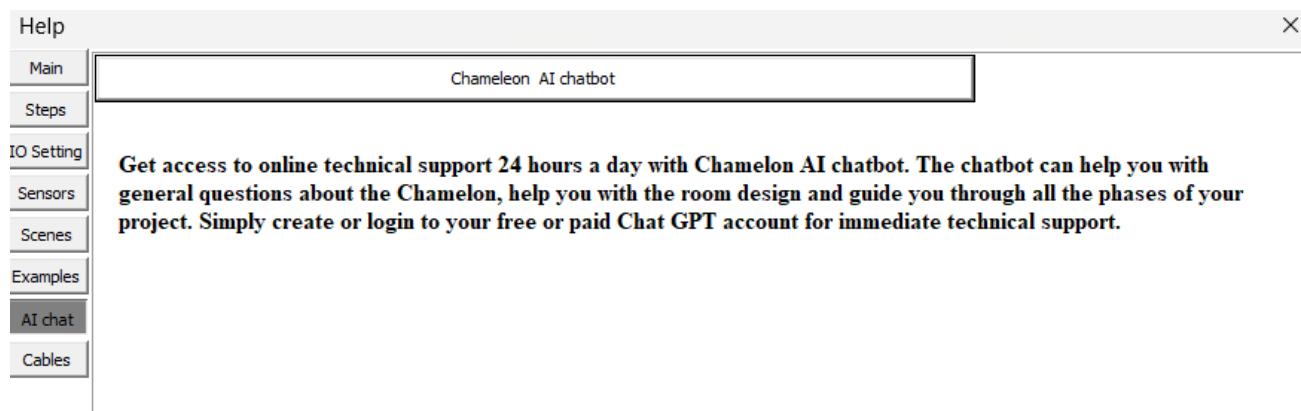
The Configurator comes with a full interactive help feature, with more than 80 short videos and extracts from the manual (accessed by pressing the Video and Document buttons respectively). For critical items information is also displayed in a field upon hovering over the help topic.



In this configuration we have again two scenes at our disposal. The first time we press the button the first scene will be executed. The second time we press it, the second (Toggle) scene will be executed. A typical use would be in the Night scene. On the first button press the tenant will turn off all the lights. The second time he presses the button (assuming he wants to visit the toilet during the night) the toilet light will turn on. Pressing the button a third time will turn off all the lights again, and so on.

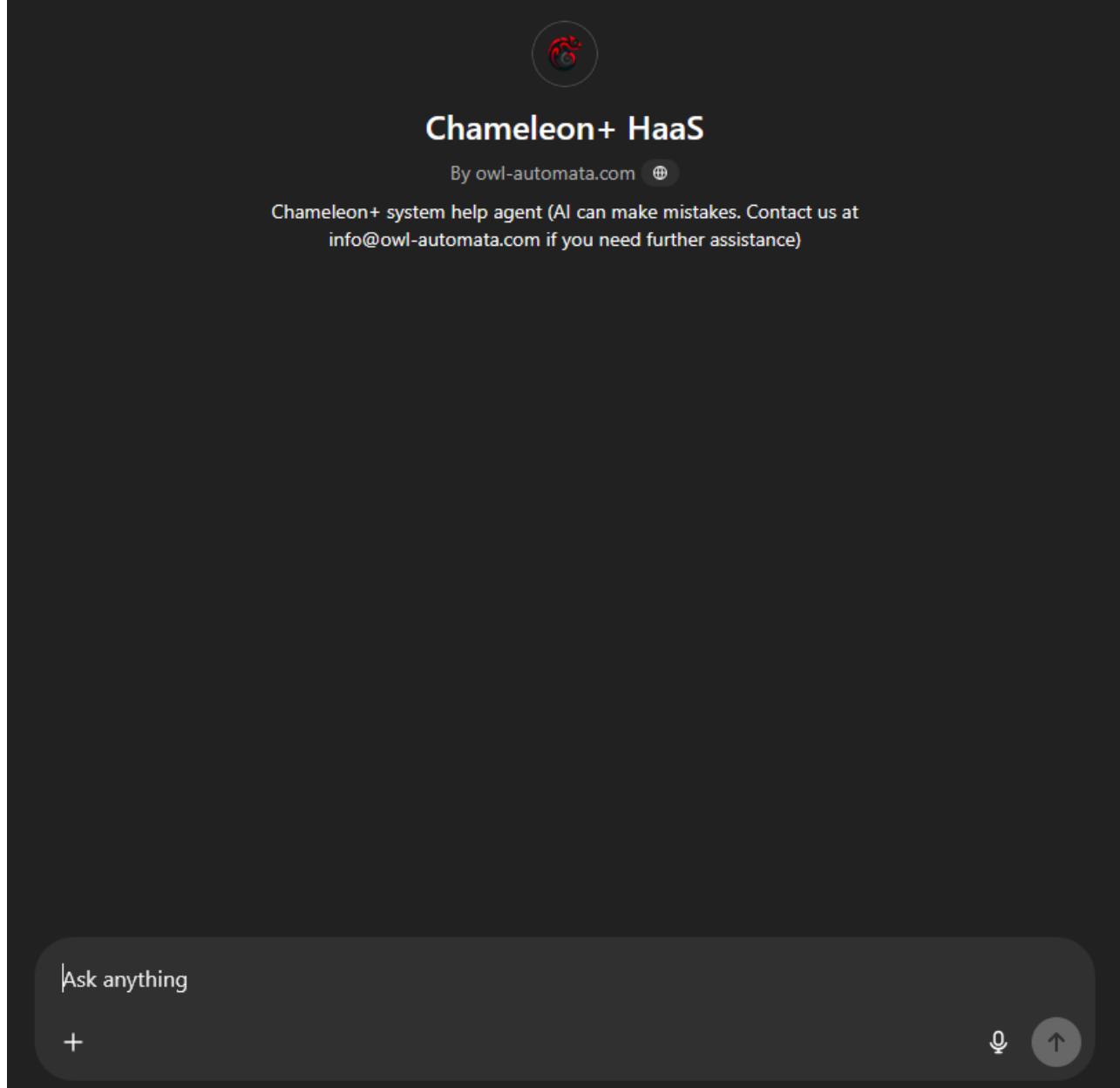
Help can be accessed by the **Help** button in each page and opens in the relevant page. So, if you access Help from the IO Setting page, the help will open in the IO Setting and display the relevant entries. The window is floating, you can keep it open with free placement and keep working on the Configurator. In some Help articles that are pertinent to various pages, upon hovering over the topic you will see below a “Click to view entry” notification. Upon pressing on the topic, you will be redirected to the page and the topic will flash three times so that you can locate it easily.

Finally, in the AI Chat page by pressing on the topic you can access the Chameleon+ AI system help agent.





Simply login to a free or paid Chat GPT account and get instant technical help in your language. The AI agent is trained with Chameleon specific knowledge and can help you with the design process and with general or more specific queries about Chameleon+.



A screenshot of a dark-themed AI interface. At the top center is a circular profile picture of a red owl. Below it, the text "Chameleon+ HaaS" is displayed in white. Underneath that, it says "By owl-automata.com" followed by a small globe icon. A message at the bottom reads "Chameleon+ system help agent (AI can make mistakes. Contact us at info@owl-automata.com if you need further assistance)". At the bottom of the screen is a large, dark input field containing the placeholder text "Ask anything". To the left of the input field is a small "+" button. To the right are two circular icons: one with a microphone symbol and another with an upward arrow.



Chameleon

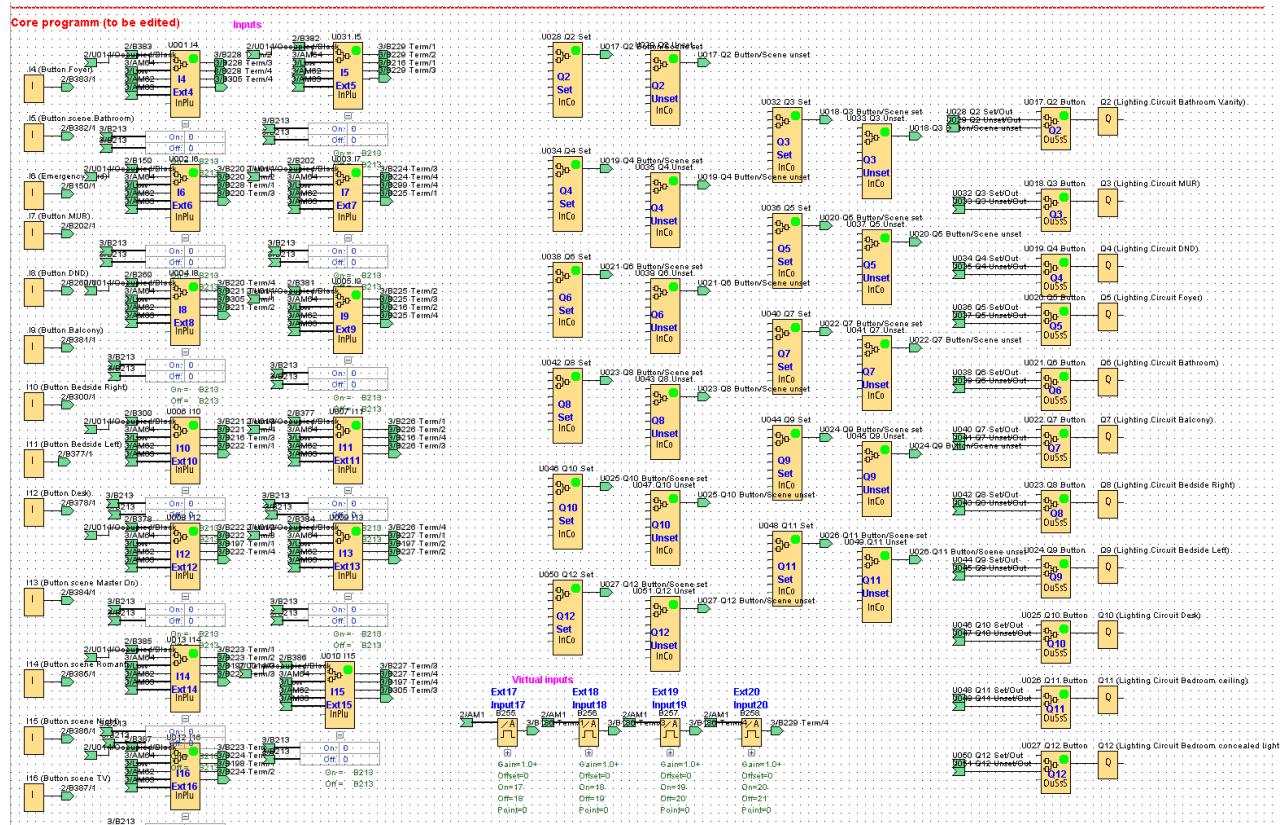
LOGO! Diagram

1. Structure:

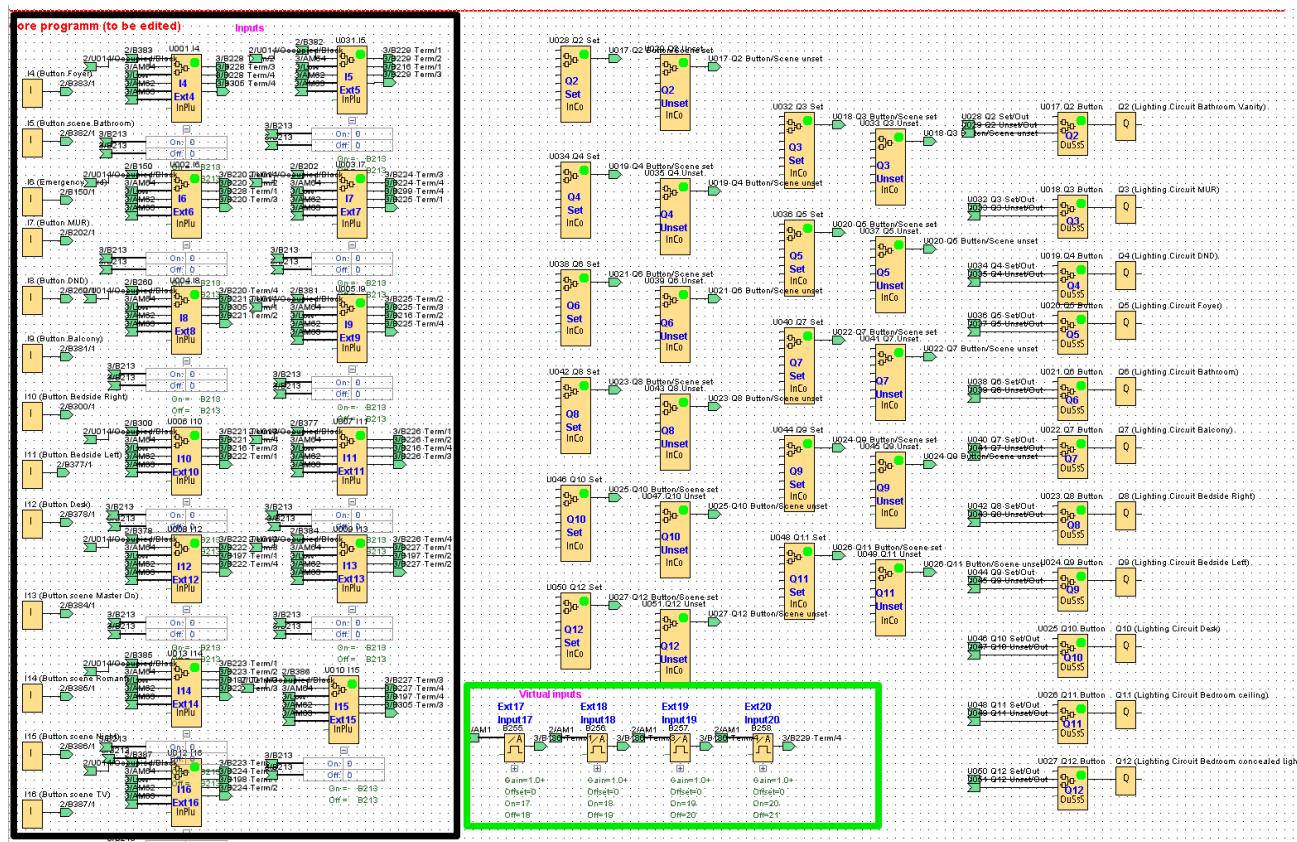
There is a total of 8 Template and 8 CardHolder programs to make changes. In every case, we can find the same 3 page structure as follows

1.1. First Page

The 1st page is titled Core Program, and this is where all the input modules (except Oc module for occupancy detection) are gathered.



The actual area we will have to interact with, is in the left side of the circuit.

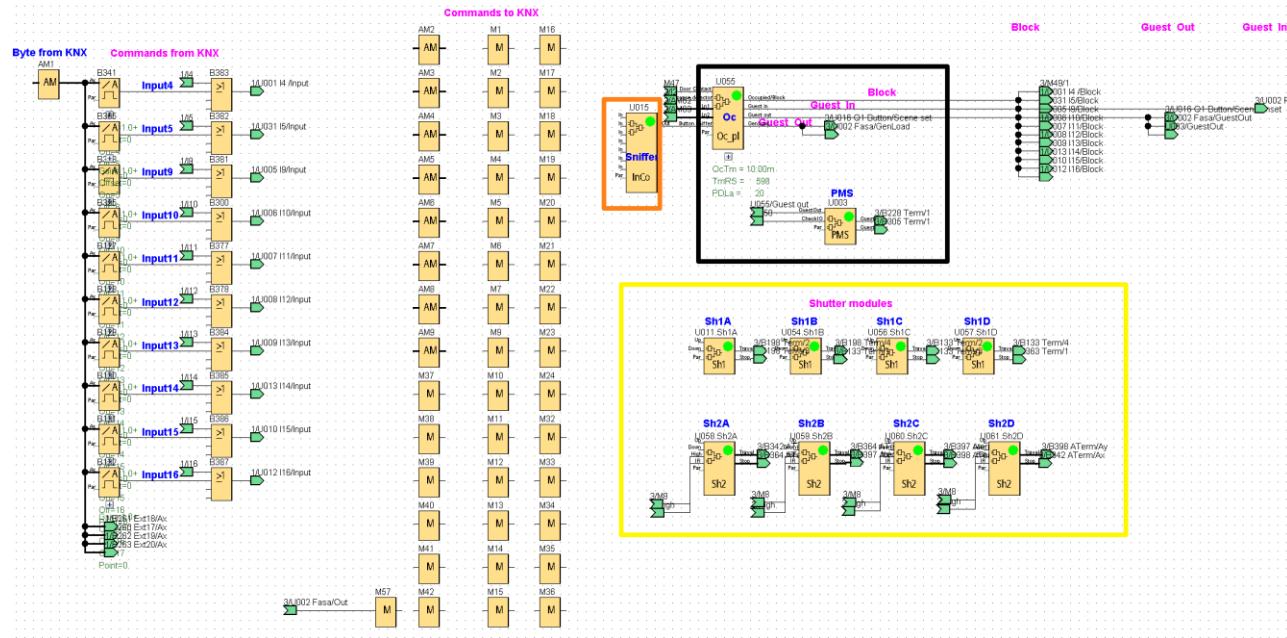


Marked with the back outline are the input modules 4-16, which in the LOGO instructions files will be designated as Ix, Extx or Extx/Ix varying in designation per our design.

Marked with the green outline are the Virtual inputs 17 to 20 which will always be designated as Extx.

1.2. Second page

On the 2nd page we will find two different sections. The first section is the second part of the Core Program, where all the parts we will have to interact are located on the right section.



The Occupancy module Oc, CC and PMS module, are marked with the black outline and we will be instructed to connect make connections in the Guest In, Guest Out and Guest Away output pins.

The shutter modules are marked with a yellow outline and will be instructed to make connections on the output pins Travel and Stop.

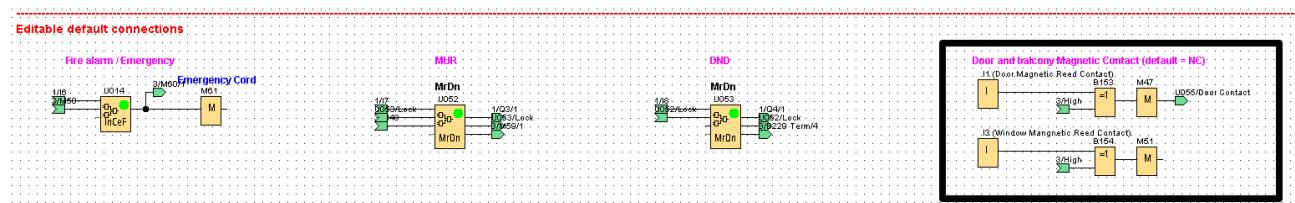
Lastly, we must make special mention to the Sniffer module, marked with the orange outline. In this module we can manually connect any push button input (KNX or LOGO!) that we wish to act as a failsafe in case of failure of the occupancy detection algorithm (typically the push buttons located on the bedside). If any button connected to the sniffer is pressed, the room returns to an “Occupied state” immediately. We must take care to disconnect the block object of the KNX and LOGO! input.

Sniffer and CC modules are not present concurrently.

More specifically, for inputs I4 to I16 we must delete the block object connection to the input module (and connect it to Low) and if the input is designated as Extx/Ix or Extx, we must also disconnect the block object in ETS.

In the case of the virtual inputs Ext17 to Ext20, we must simply disconnect the block object in ETS.

In the second part we will find the Editable default connections section. We will be instructed to make changes in the right side, if we made changes to the aux contacts of Door and the Window reed contacts, or if we paired a controlled output to the Window reed contact.



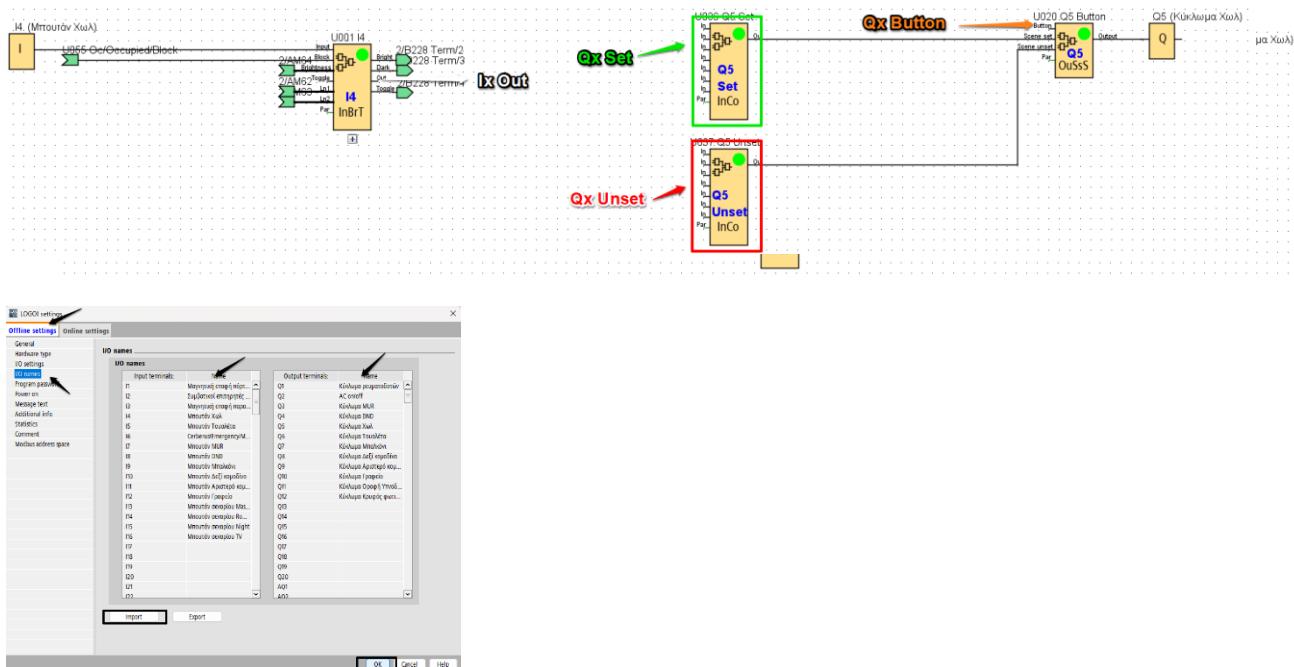
1.3.Third page

In the last page titled Default connections there no parts requiring editing or interactions.

2. Inputs / Outputs

On the 1st page as we said we can make the changes to our connections. The basic UDFs are shown in the image below. We notice that the changes we have made to the names of the inputs and outputs have been parsed to the program by importing the .csv file from the configurator. The inputs are already connected to the corresponding UDF (InBrToLo) and the outputs to the UDF (OuSsSu) and we also observe the corresponding markings I4, Q5 in the example image.

The possible connections between I4 and Q5 are shown in the following image.



Import names from .csv file

If circuit changes are required, instructions on what connections to make have already been autogenerated by the Configurator software in the LOGO! instructions file.

Instructions will be of the type in the example that follows (**Example 1**)

You have chosen a room with , Do Not Distrub, Emergency cord. Choose from Diagram Projects folder, the file TemplateDNDEC.lsc. Import the created .csv file and programm LOGO! with the instructions that follow below. Paste the new TemplateDNDEC.lsc into the Network projects located in Network projects without diagrams folder. The files (Network_project_final_Roomsxtoxx.snp) are ready for download to LOGO!. Make sure that you have a proper visualization and room drawings.

Select UDF Oc

Select pin Guest In

Right click (Connect with input connector...) on the pin and write *Q5

Select Set

Right click (Connect with input connector...) on the pin and write *Q6

Select Set

Select UDF Oc

Select pin Guest Out



Right click (Connect with input connector...) on the pin and write *Q5
Select Unset
Right click (Connect with input connector...) on the pin and write *Q6
Select Unset
Right click (Connect with input connector...) on the pin and write *Q7
Select Unset
Right click (Connect with input connector...) on the pin and write *Q8
Select Unset
Right click (Connect with input connector...) on the pin and write *Q9
Select Unset
Right click (Connect with input connector...) on the pin and write *Q10
Select Unset
Right click (Connect with input connector...) on the pin and write *Q11
Select Unset
Right click (Connect with input connector...) on the pin and write *Q12
Select Unset

Select UDF I7

Select pin (Out) Delete the termination of the Out pin

Select UDF I13

Select pin (Out) Delete the termination of the Out pin
Right click (Connect with input connector...) on the pin and write *Q6
Select Set
Right click (Connect with input connector...) on the pin and write *Q11
Select Set
Right click (Connect with input connector...) on the pin and write *Q12
Select Set

Select UDF I14

Select pin (Out) Delete the termination of the Out pin
Right click (Connect with input connector...) on the pin and write *Q5
Select Unset
Right click (Connect with input connector...) on the pin and write *Q7
Select Unset
Right click (Connect with input connector...) on the pin and write *Q8
Select Unset
Right click (Connect with input connector...) on the pin and write *Q9
Select Unset
Right click (Connect with input connector...) on the pin and write *Q10
Select Unset
Right click (Connect with input connector...) on the pin and write *Q11
Select Unset
Right click (Connect with input connector...) on the pin and write *Q12
Select Set

Select UDF I15

Select pin (Out) Delete the termination of the Out pin
Right click (Connect with input connector...) on the pin and write *Q5
Select Unset
Right click (Connect with input connector...) on the pin and write *Q6



Select Unset

Right click (Connect with input connector...) on the pin and write *Q7

Select Unset

Right click (Connect with input connector...) on the pin and write *Q8

Select Unset

Right click (Connect with input connector...) on the pin and write *Q9

Select Unset

Right click (Connect with input connector...) on the pin and write *Q10

Select Unset

Right click (Connect with input connector...) on the pin and write *Q11

Select Unset

Right click (Connect with input connector...) on the pin and write *Q12

Select Unset

Select UDF I16

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q5

Select Unset

Right click (Connect with input connector...) on the pin and write *Q8

Select Unset

Right click (Connect with input connector...) on the pin and write *Q9

Select Unset

Right click (Connect with input connector...) on the pin and write *Q10

Select Set

Right click (Connect with input connector...) on the pin and write *Q11

Select Unset

Right click (Connect with input connector...) on the pin and write *Q12

Select Set

Select UDF I4

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q5

Select (Button)

Select UDF I5

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q6

Select (Button)

Select UDF I9

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q7

Select (Button)

Select UDF I10

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q8

Select (Button)

Select UDF I11

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q9
 Select (Button)

Select UDF I12

Select pin (Out) Delete the termination of the Out pin

Right click (Connect with input connector...) on the pin and write *Q10

Select (Button)

*In Editable Default Connections (right side), locate XOR gate B153 and erase connection to High. Input I1 is now Normally Open (NO).

Example 1

Select UDF Oc

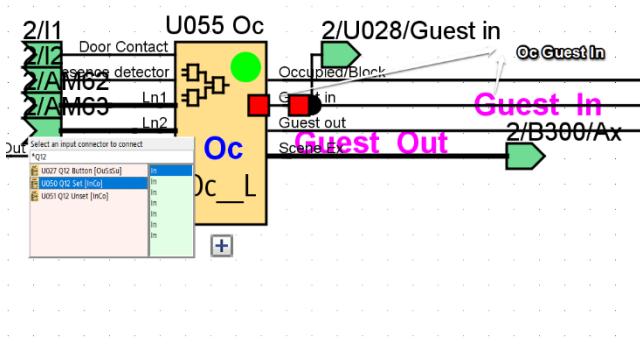
Select pin Guest In

Right click (Connect with input connector...) on the pin and write *Q5

Select Set

We locate the Guest In pin of UDF Oc in the bottom of the first page and we start connecting by following the instructions.

All input UDFs are also located on the first page.



If no instructions can be found for an input like for UDF I7 in Example 1,

Select UDF I7

Select pin (Out) Delete the termination of the Out pin

it means that we have left the Scene executed by this input (in our case I7) blank and we should run the Configurator again on the Scenes page and press export project again to generate new instructions.

In case at the end of the instructions we have an instruction with an asterisk, like in Example 1,

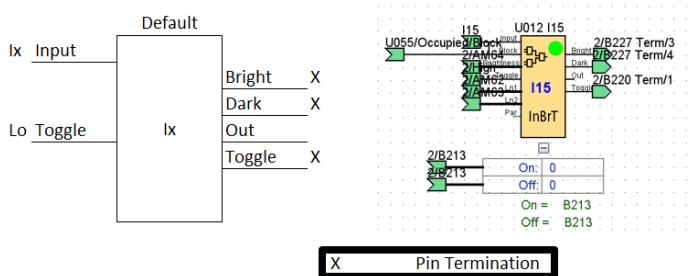
*In Editable Default Connections (right side), locate XOR gate B153 and erase connection to High. Input I1 is now Normally Open (NO).

we will find the gates (B153 and B154) in the upper right part of the 2nd page (Editable default connections)

The instructions will have already guided us which Diagram file to open and which network file to paste into.

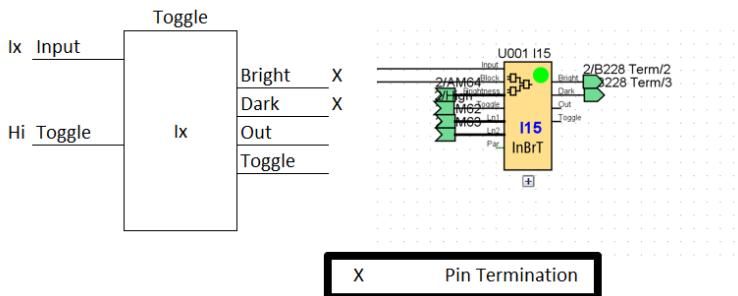
2.1.Typical connections for Inputs

If an input is 1-1 type or a Default Scene, then the input UDF must be connected as follows



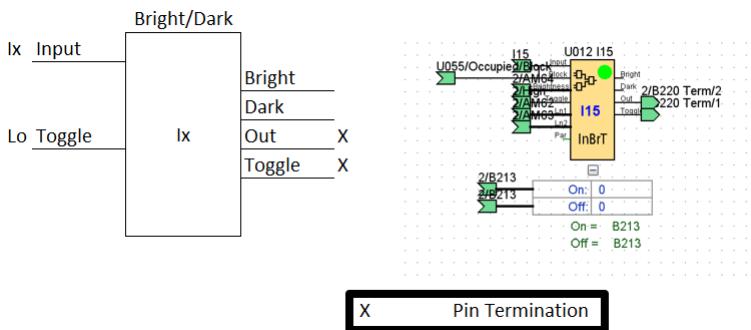
2.2.Typical connections for Toggle Scenes

If an input is a Toggle Scene, then the input UDF must be connected as follows



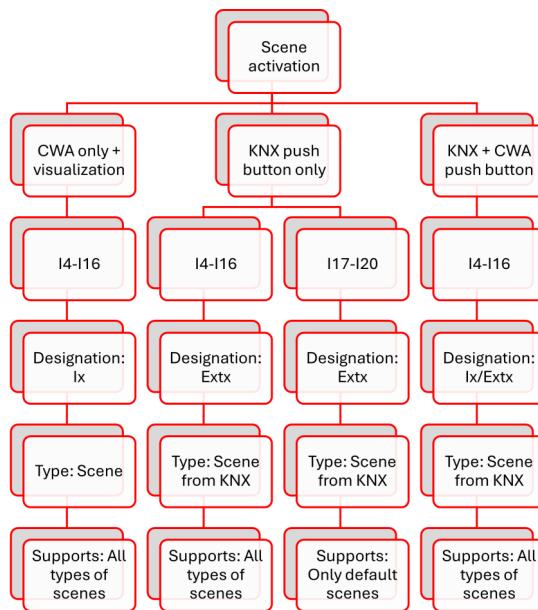
1.1.Typical connections for Bright/Dark Scenes

If an input is a Bright/Dark Scene, then the input UDF must be connected as follows



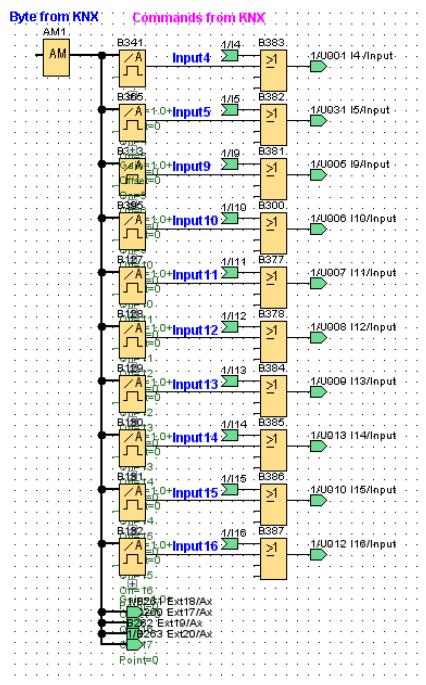
3. Change scenes from KNX

As described before a KNX scene number can be sent to LOGO! to activate physical inputs I4 to I16 and virtual inputs Ext17 to Ext20. The Template LOGO! diagrams (.lsc) are preprogrammed to activate an input by sending the corresponding input number as a scene number or value.

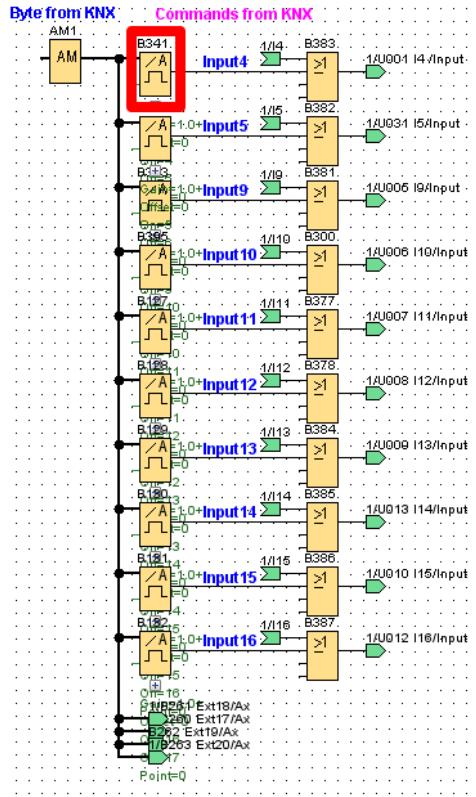


If it is required to alter the number you are sending, to fit your room design you can do it by editing the blocks marked as Inputx.

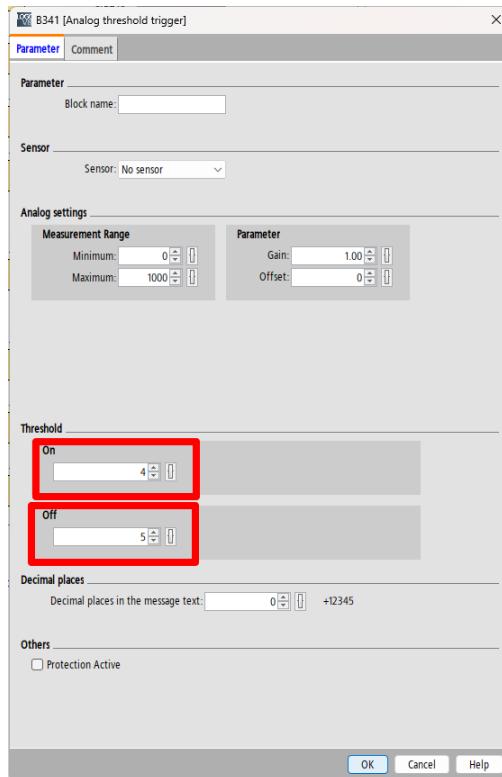
The input modules for the physical inputs are located on the right side of the 2nd page.



Let's say that we want to change the activation number for input I4. We double click (left click) on the relevant module.

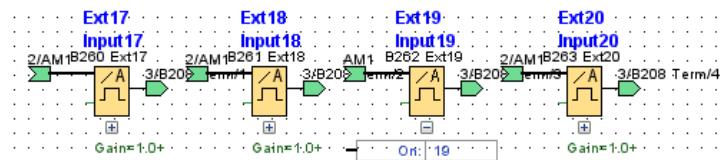


On the popup window we can see that there is a Threshold setting with an On and Off value. Input 4 as we can see has a 4 as on value and a 4 + 1 off value.



So if we wish to change the activation number to x , our new setting should be On : x and Off : $x+1$.
The setting for changing the activation number to 36 would be On : 36 and Off : 37.

The input modules for the virtual inputs are located on the bottom side of the 1st page.



The procedure and the logic are again the same.



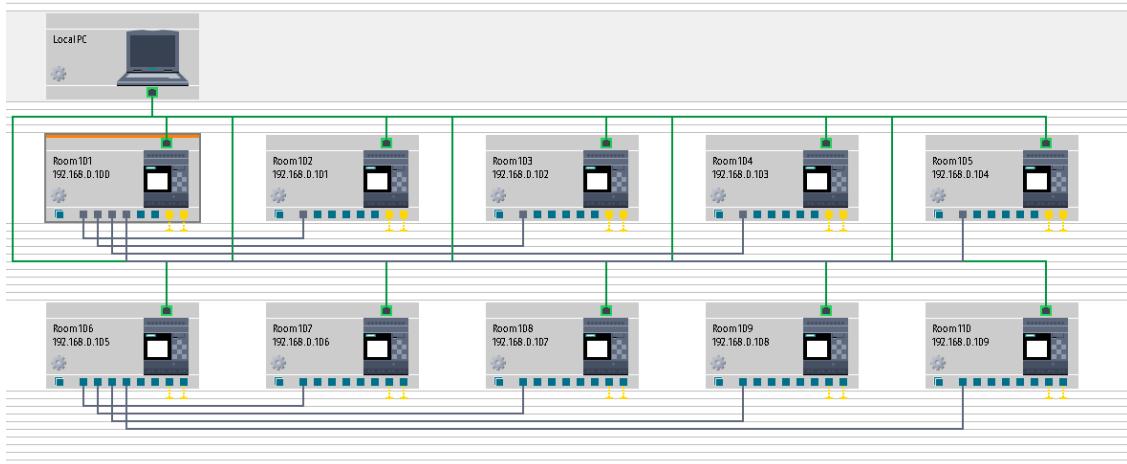
Chameleon

LOGO! Programming

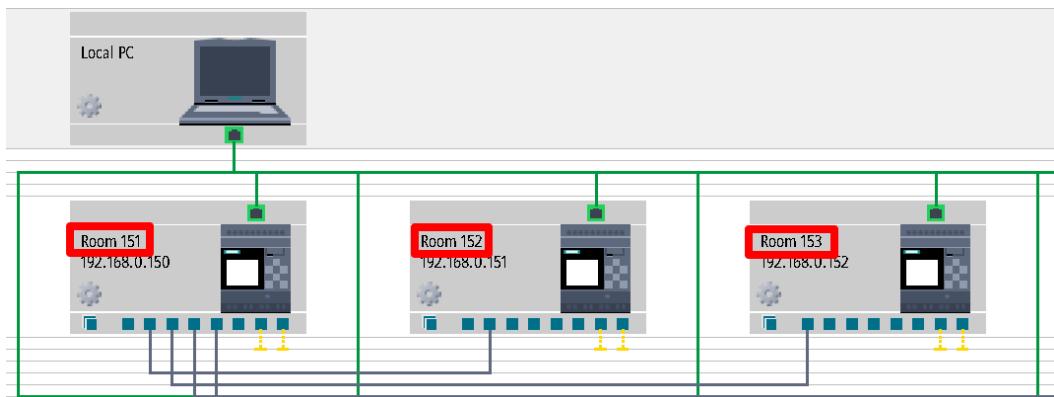
1. LOGO! base module programming

A complete network project is needed for the programming of LOGO! devices of our hotel installation. A network project will be available to us with pre allocated IPs and the necessary network connections and permissions.

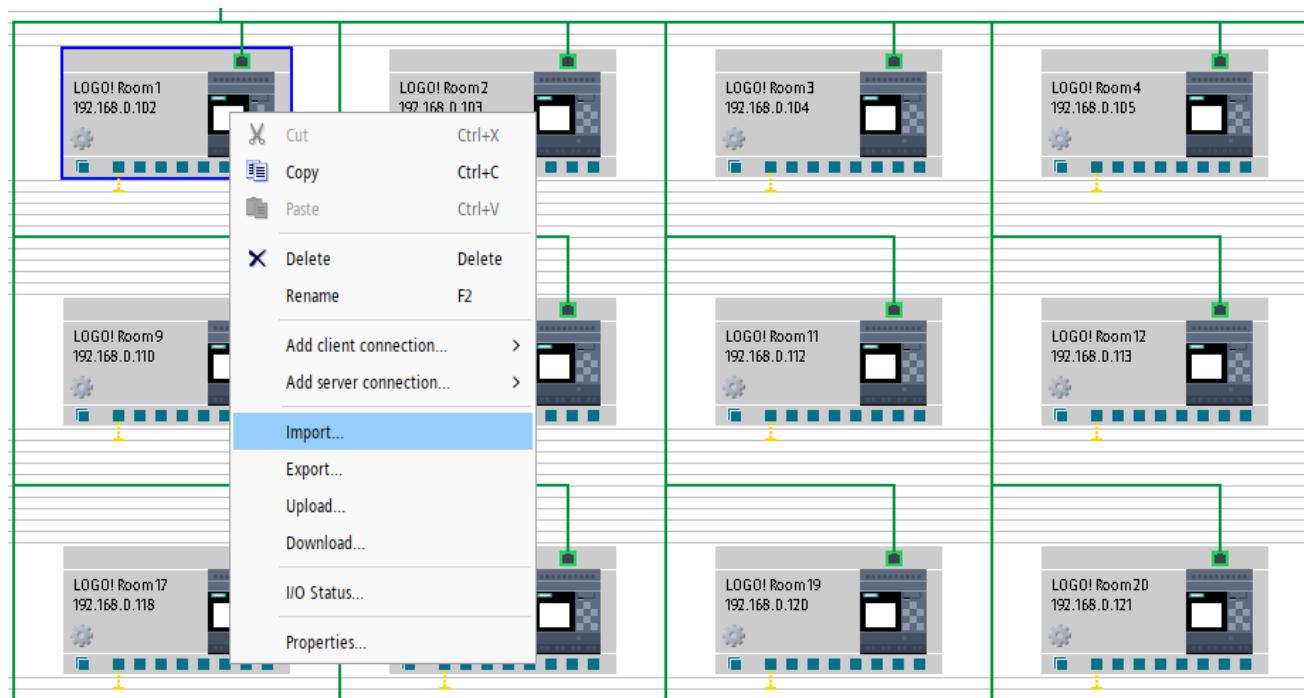
The network project contains 32 LOGO! base module units which correspond to 32 hotel guest rooms.



We will use a number of network files depending on the number of hotel guest rooms. As an example, if we have 53 rooms then we will use 2 network projects. We will only download the program on 21 out of 32 rooms of the second network project file (copy of the first with new IP and room designation). Each LOGO! base module has a name stating the room number and can be easily identified.



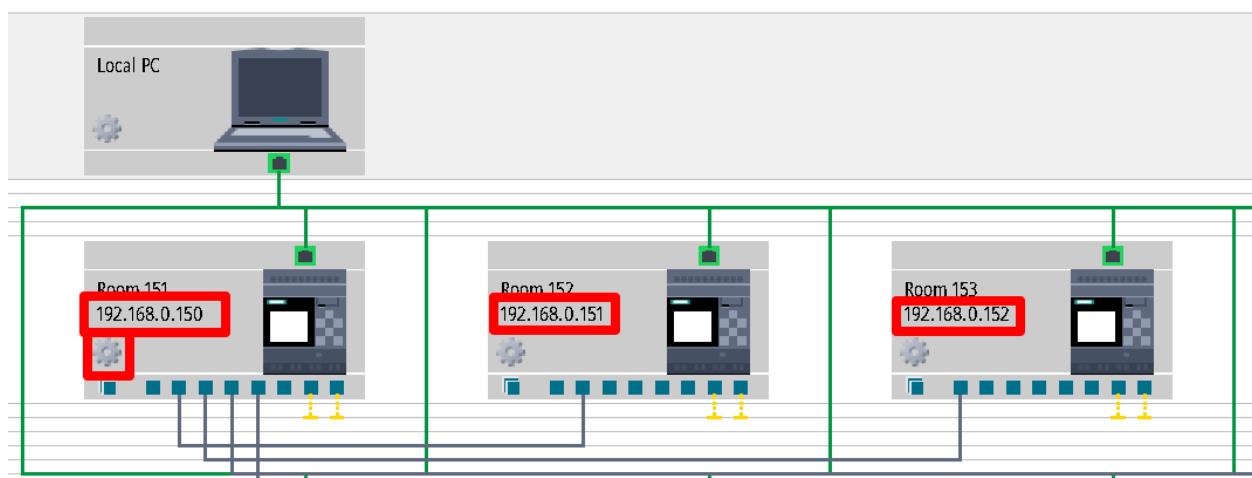
The network project files do not contain any program. To load each LOGO! unit, select and right-click on it. Select **Import...** and choose your Diagram file (.lsc) that you have already programmed.



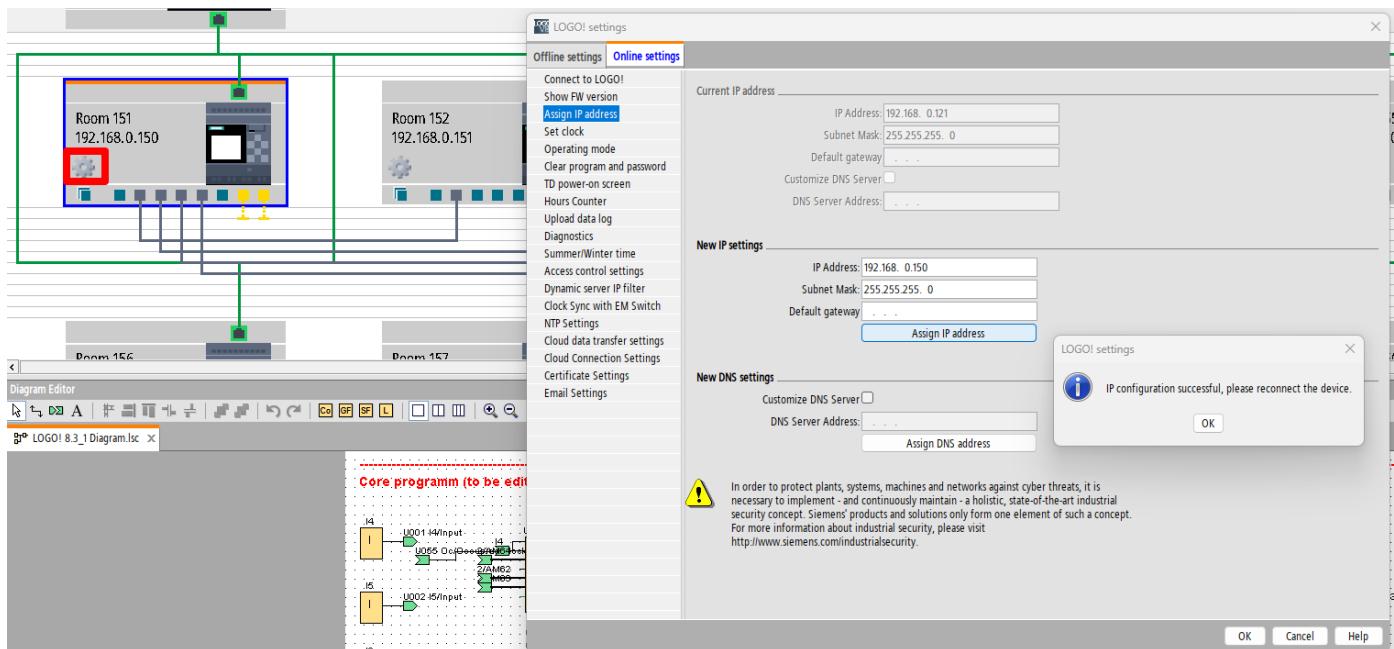
2. Download program to LOGO!

It is recommended that we program the LOGO! base modules off site (e.g. in the office) for easier system commissioning. We can either download the full program to LOGO! or only the IP address settings.

To download only the IP settings in each LOGO! unit of our network project, we click on the gear icon and a window will open with the IP address fields.

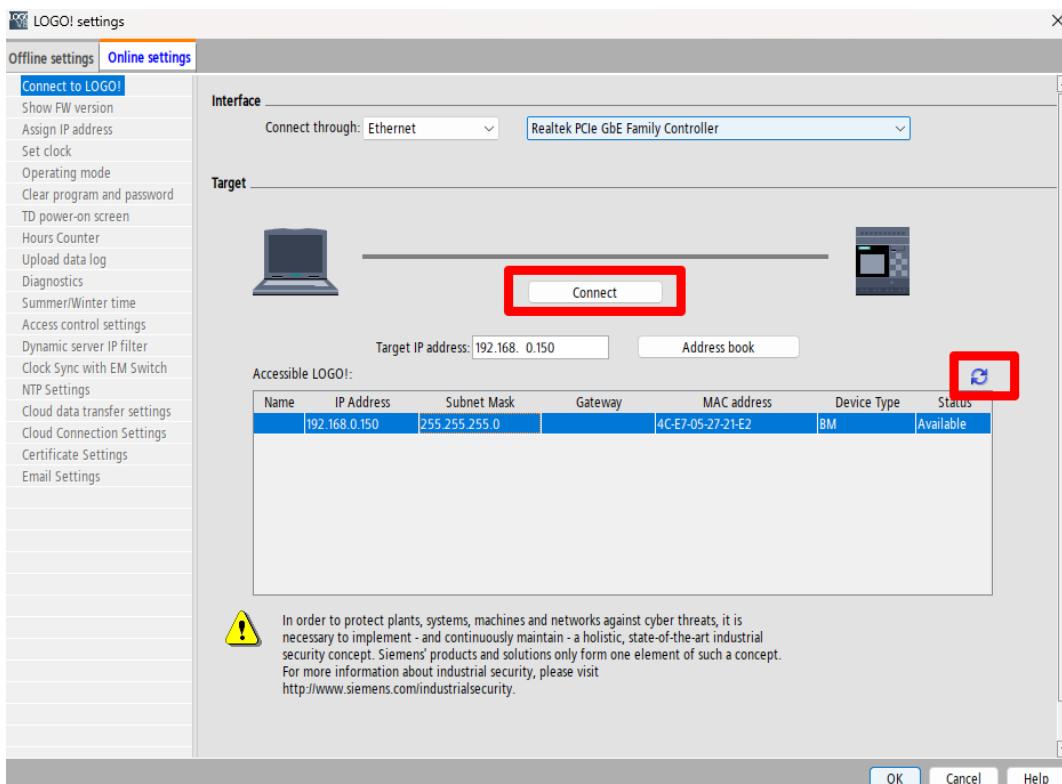


Navigate to Online Settings-> Assign IP address and set the IP address we see on the network project.



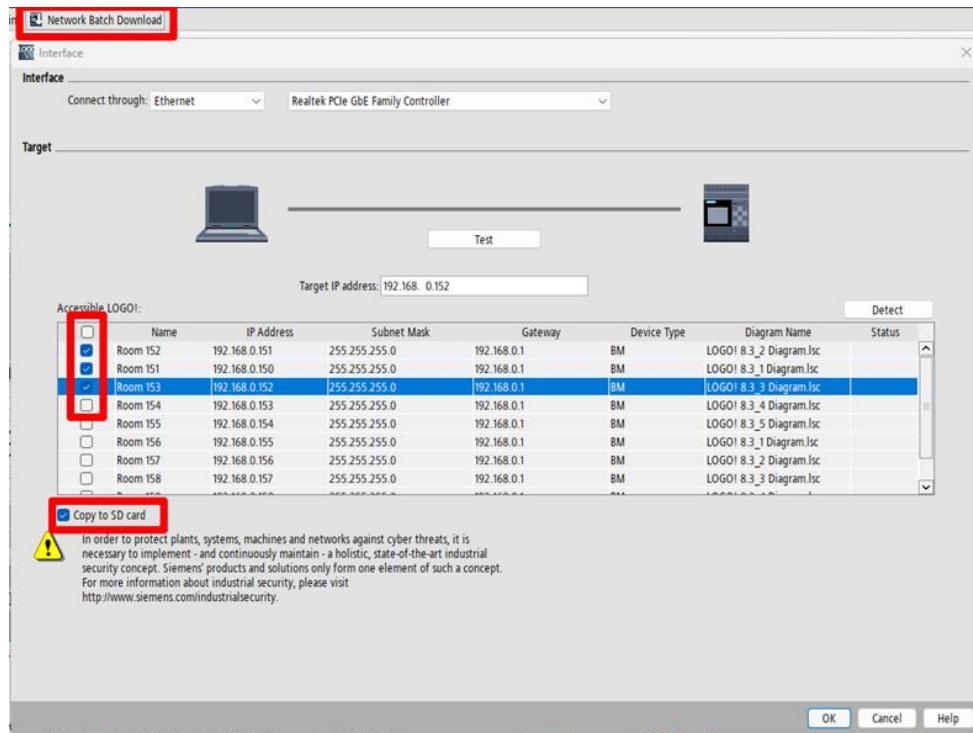
It is highly recommended to place a label with the room number on each LOGO! device after programming the IP address, to facilitate the installation of the devices.

Connect the LOGO! base module with your computer with an ethernet cable and click on refresh to discover connected LOGO! devices. Choose the device from the list and connect:



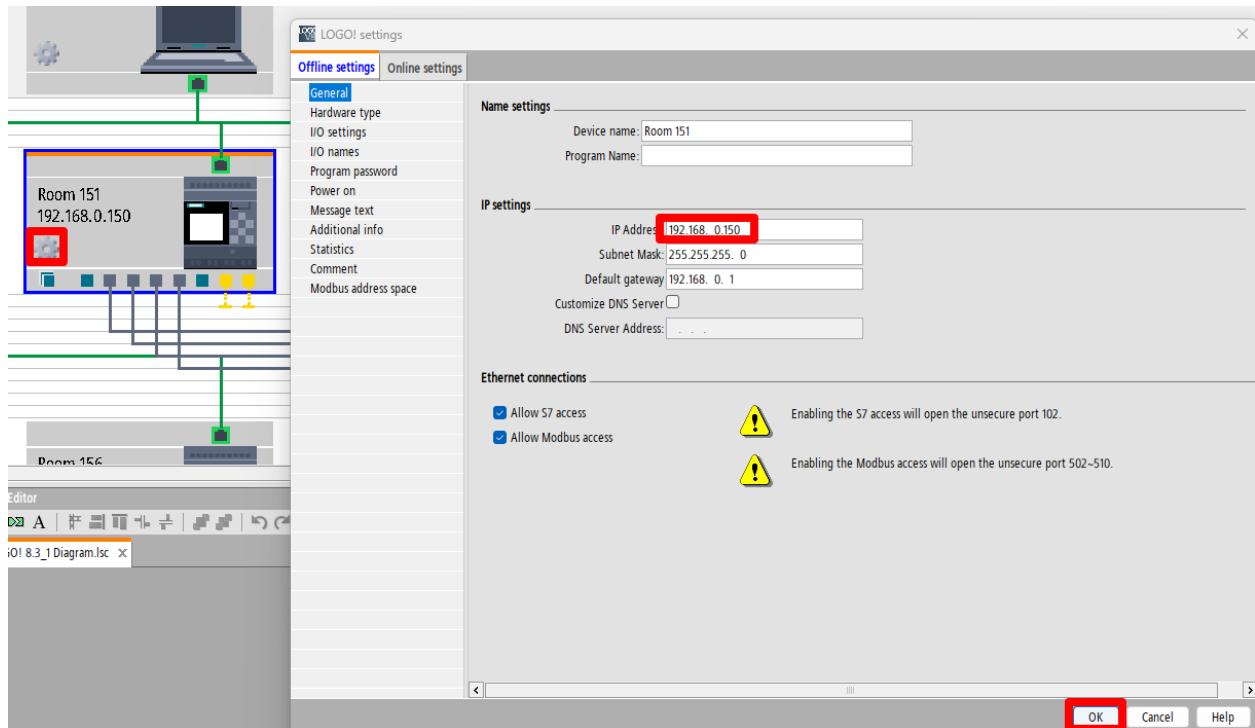
3. Batch Download

From version 8.4.0 of LOGO! Soft Comfort a Network Batch Download function is available

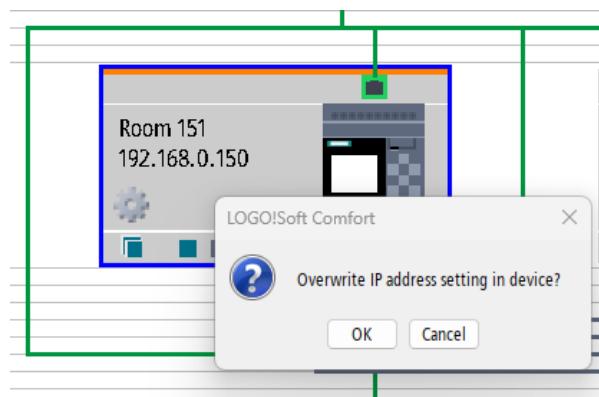


4. Change LOGO! IP address

If we are requested to change the IP address, press the gear icon to set the new IP in the Network Project file and download.

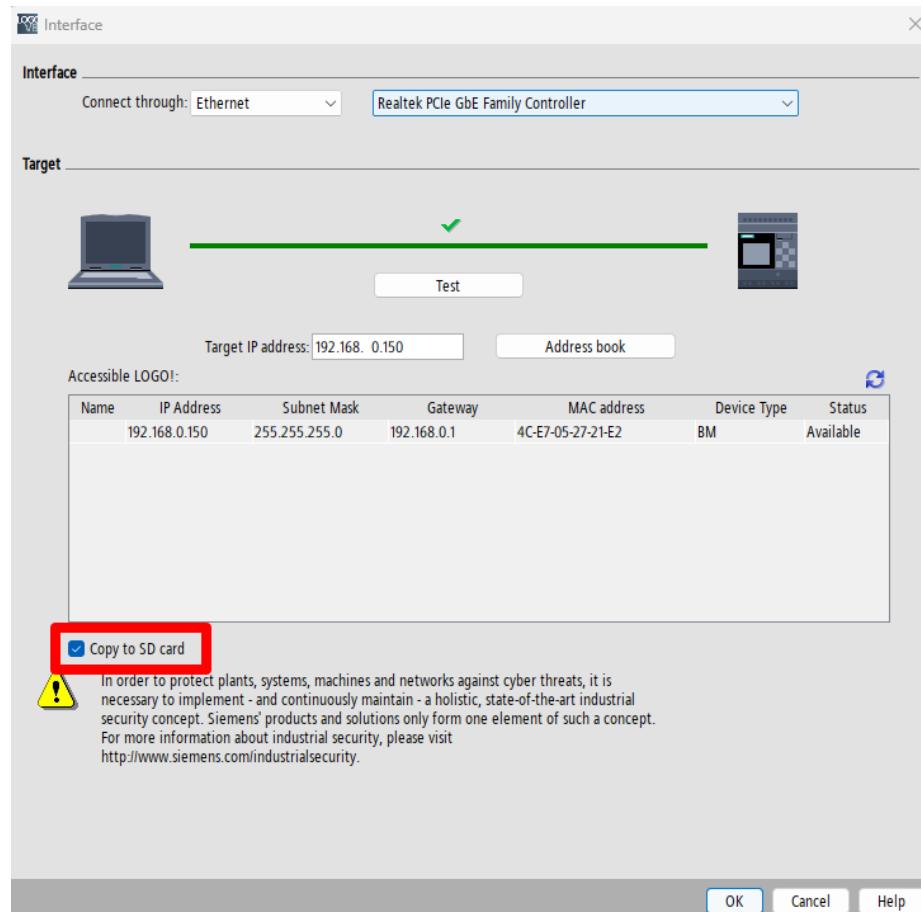


Confirm when asked to overwrite the IP.



5. Copy to SD card

There is a strong recommendation to use an SD card in LOGO!. Checking the Copy to SD card option, the program will be stored in the card (.bin file).



The specific feature of LOGO! constitutes a **significant technical advantage of the solution**, since in the event of a failure the time to repair the failure (MTTR) is almost zero and does not require the intervention of the specialized programmer.

The hotel maintenance personnel can wire a new LOGO! unit and by inserting the SD card, the room works again.



Chameleon

KNX



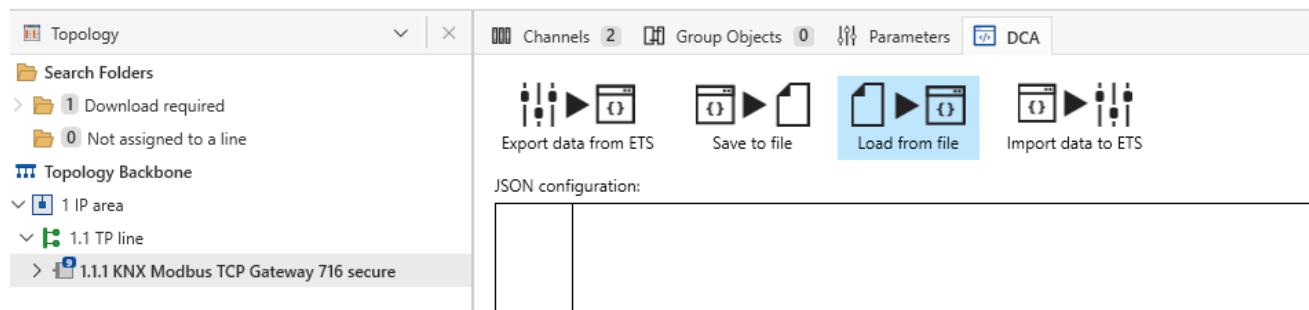
The software ETS 5 or ETS 6 is required to be able to download the KNX project to the devices. You have to make sure that you have ETS installed on your computer, along with a valid Professional license, before you move forward with this guide's steps.

1. Install Modbus TCP Gateway 716 ConfigTool

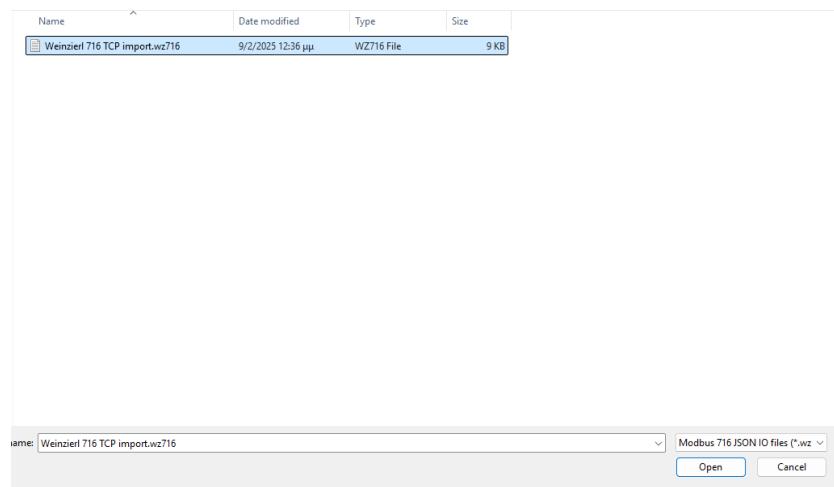
Follow the instructions in the [link](#) to install the DCA app for Modbus TCP Gateway 716. The app can be downloaded [here](#).

During the export operation in the Configurator tool a Weinzierl 716 TCP import.wz716 is dynamically created each time for your specific design. This file in essence is the configuration for the bidirectional KNX Modbus communication.

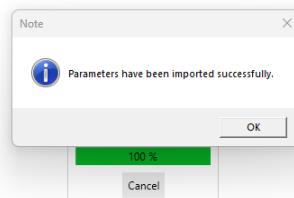
Insert the component into your ETS project, select it and navigate to the DCA tab. Press Load from file.



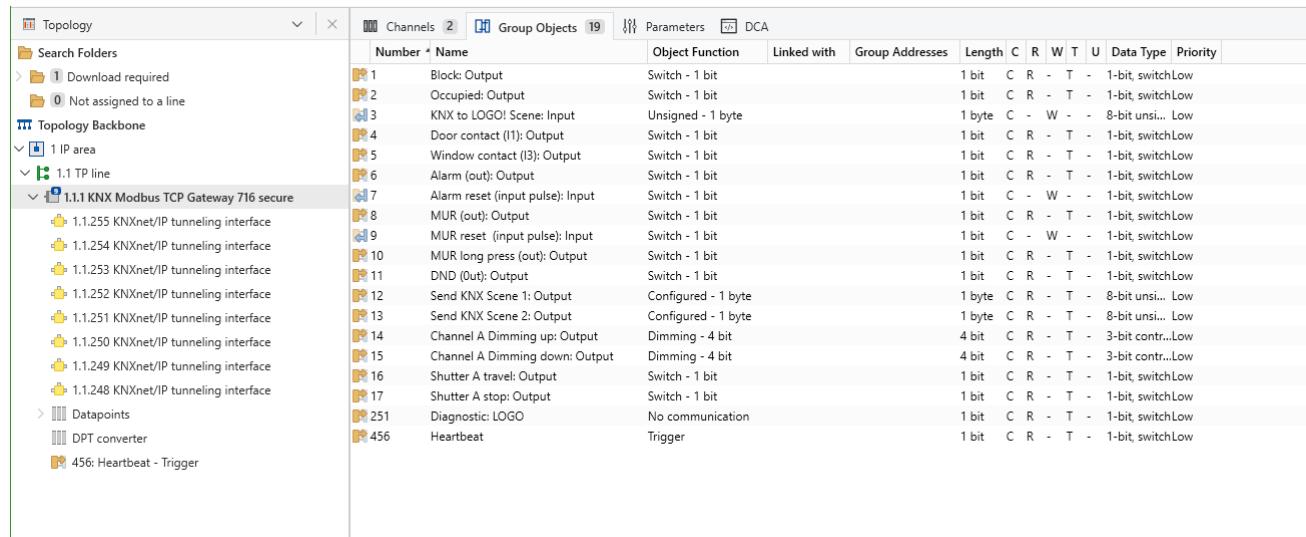
On the popup window, navigate to the location you exported the files and select the import file.



Wait for the file to be successfully imported.



If you navigate to the Group Objects tab, you will see that all the objects used for the first slave (LOGO! Unit) are already available. You can manually copy the configuration to 4 more slaves coming to a total of 5 LOGO! units per 716 gateway.



Number	Name	Object Function	Linked with	Group Addresses	Length	C	R	W	T	U	Data Type	Priority
1	Block: Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
2	Occupied: Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
3	KNX to LOGO! Scene: Input	Unsigned - 1 byte			1 byte	C	-	W	-	-	8-bit unsi... Low	
4	Door contact (I1): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
5	Window contact (I3): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
6	Alarm (out): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
7	Alarm reset (input pulse): Input	Switch - 1 bit			1 bit	C	-	W	-	-	1-bit, switchLow	
8	MUR (out): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
9	MUR reset (input pulse): Input	Switch - 1 bit			1 bit	C	-	W	-	-	1-bit, switchLow	
10	MUR long press (out): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
11	DND (out): Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
12	Send KNX Scene 1: Output	Configured - 1 byte			1 byte	C	R	-	T	-	8-bit unsi... Low	
13	Send KNX Scene 2: Output	Configured - 1 byte			1 byte	C	R	-	T	-	8-bit unsi... Low	
14	Channel A Dimming up: Output	Dimming - 4 bit			4 bit	C	R	-	T	-	3-bit contr...Low	
15	Channel A Dimming down: Output	Dimming - 4 bit			4 bit	C	R	-	T	-	3-bit contr...Low	
16	Shutter A travel: Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
17	Shutter A stop: Output	Switch - 1 bit			1 bit	C	R	-	T	-	1-bit, switchLow	
251	Diagnostic: LOGO	No communication			1 bit	C	R	-	T	-	1-bit, switchLow	
456	Heartbeat	Trigger			1 bit	C	R	-	T	-	1-bit, switchLow	

Objects 1 to 5 are generated regardless of the particular design.

2. Group objects

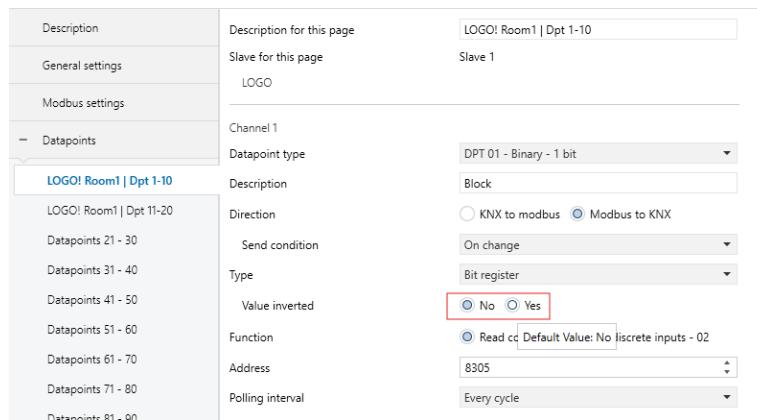
Block object (output)

Usage: When a room is vacant, the push buttons are blocked for operation (can be applied to thermostats as well). In an Occupied room all sensors are active and free to operate.

This object can be used if we have utilized any KNX pushbuttons, binary inputs or thermostats.

Value: Block is active on 1.

If a Block on 0 is requested, you can navigate to Channel 1 in the Parameters tab and select Yes in the Value inverted field.



Description	Description for this page	LOGO! Room1 Dpt 1-10
General settings	Slave for this page	Slave 1
Modbus settings	LOGO	
Datapoints		
LOGO! Room1 Dpt 1-10		
LOGO! Room1 Dpt 11-20	Direction	<input type="radio"/> KNX to modbus <input checked="" type="radio"/> Modbus to KNX
Datapoints 21 - 30	Send condition	On change
Datapoints 31 - 40	Type	Bit register
Datapoints 41 - 50	Value inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
Datapoints 51 - 60	Function	<input type="radio"/> Read cc Default Value: No <input checked="" type="radio"/> Discrete inputs - 02
Datapoints 61 - 70	Address	8305
Datapoints 71 - 80	Polling interval	Every cycle
Datapoints 81 - 90		

Direction: Modbus to KNX

Occupied object (output)

Usage: In an Occupied room the Occupied object is 1.

This object can be used in a visualization for monitoring the room status.

Value: Occupied is active on 1.

If a Occupied on 0 is requested, you can navigate to Channel 2 in the Parameters tab and select Yes in the Value inverted field.

Channel 2	Datapoint type	DPT 01 - Binary - 1 bit
	Description	Occupied
	Direction	<input type="radio"/> KNX to modbus <input checked="" type="radio"/> Modbus to KNX
	Send condition	On change
	Type	Bit register
	Value inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
	Function	<input checked="" type="radio"/> Read coils - 01 <input type="radio"/> Read discrete inputs - 02
	Address	8320
	Polling interval	Every cycle

Direction: Modbus to KNX

KNX to LOGO! Scene object (input)

Usage: As described both in LOGO! Diagram chapter (paragraph 3) and in Basic concepts chapter, a KNX scene number can be sent to LOGO! to activate physical inputs I4 to I16 and virtual inputs Ext17 to Ext20. The Template LOGO! diagrams (.lsc) are preprogrammed to activate an input by sending the corresponding input number as a scene number or value.

Activation: Whether the scene is activated from a KNX push button, binary input or a visualization, the control must be configured as a 2 value sender. These two values will be activated either on the rising and falling edge, or on press and release respectively. The first value (rising edge/on press) is set to the corresponding input number and the second value (falling edge/on release) is set to number 65 which effectively releases the scene command.

Example configurations for activating input 4

- Siemens binary input (type UP220/21)

1.1.2 Push button interface UP 220/21 > A + B		
A + B	Function of channels A + B	Inputs, separately configurable
Operation of Input <input type="radio"/> 8-bit value edge Send value on rising edge <input type="radio"/> No <input checked="" type="radio"/> Yes Value on rising edge 4 Send value on falling edge <input type="radio"/> No <input checked="" type="radio"/> Yes Value on falling edge 65 Add blocking object <input type="radio"/> No <input checked="" type="radio"/> Yes		
Operation of Input <input type="radio"/> 1-bit scene control Scene number 1 <input type="radio"/> 2 Scene save enabled <input type="radio"/> No <input checked="" type="radio"/> Yes Long push button action min. 3.0 seconds Contact type <input type="radio"/> Normally open contact <input checked="" type="radio"/> Normally closed contact Add blocking object <input type="radio"/> No <input checked="" type="radio"/> Yes		

- Schneider Push button, Unica KNX, 2 key, black (typeNP16161_01BK_E1)

1.1.4 KNX push-btn.2key > Extended settings > Function 1

General settings	Function of Channel Value output
General	Distinction between short and long operation <input checked="" type="radio"/> No <input type="radio"/> Yes
LED modes	Reaction on press the button 1byte value[0..255]
Proximity function	Output value [0..255] 4
Express settings	Reaction on release the button 1byte value[0..255]
Function settings	Output value [0..255] 65
Locking function	
Extended settings	

Function 1

- ABB Universal interface, 4 fold (type US/U 4.3)

1.1.5 US/U4.3 Universal Interface, 4-fold, FM > Templates > Send value/multiple operation

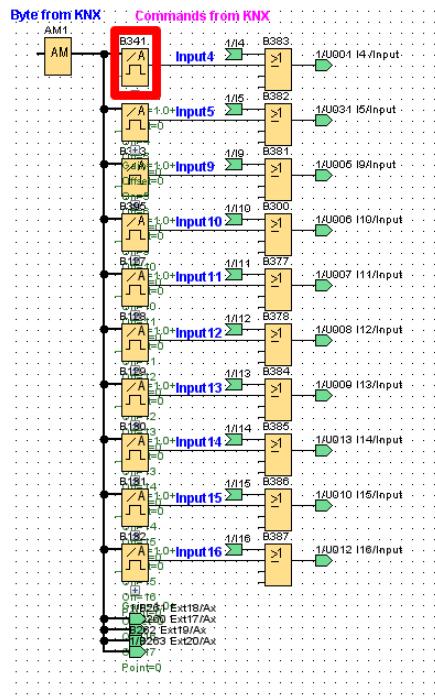
Configuration	Send value/multiple operation												
Device settings	Send value on 1-fold operation												
Device settings	Toggle value												
Logic	Send input status after ETS download or KNX voltage recovery												
Templates	<table border="1"> <thead> <tr> <th></th> <th>Send on</th> <th>Data Type</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Value 1</td> <td><input type="radio"/> Open <input checked="" type="radio"/> Close</td> <td>1 byte unsigned [DPT 5.010]</td> <td>4</td> </tr> <tr> <td>Value 2</td> <td><input type="radio"/> No reaction <input checked="" type="radio"/> Open</td> <td></td> <td>65</td> </tr> </tbody> </table>		Send on	Data Type	Value	Value 1	<input type="radio"/> Open <input checked="" type="radio"/> Close	1 byte unsigned [DPT 5.010]	4	Value 2	<input type="radio"/> No reaction <input checked="" type="radio"/> Open		65
	Send on	Data Type	Value										
Value 1	<input type="radio"/> Open <input checked="" type="radio"/> Close	1 byte unsigned [DPT 5.010]	4										
Value 2	<input type="radio"/> No reaction <input checked="" type="radio"/> Open		65										
Switch	Extended settings <input checked="" type="checkbox"/>												
Switch (2-button)	Activate minimum signal duration												
Blind/shutter	Interference suppression filter 30 ms												
Blind/shutter (2-button)													
Switch/dim	Block input On value 1												
Switch/dim (2-button)	State after ETS download or KNX voltage recovery Last state												
Scenes													
Send value/multiple operation													

- Weinzierl KNX TP Push Button Interface 420

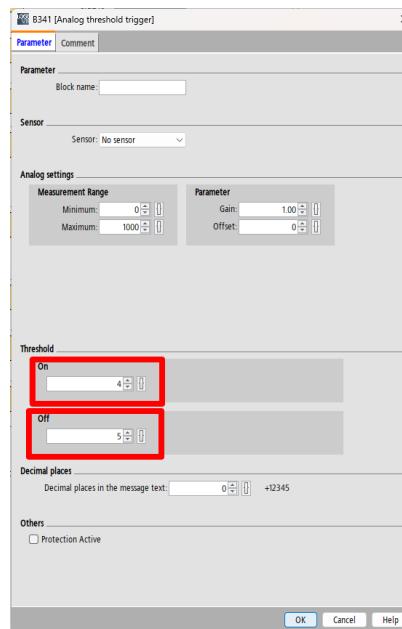
1.1.6 KNX TP Push Button Insert 420 secure > Button A0

Description	Name A0
General settings	Button function Generic
Button A0	Button - Pressed
A0: General	Function Send value
Button A1	Value 4 / 0x04 / 1.6%
A1: General	Button - Released
+ Button B0	Function Send value
	Value 65 / 0x41 / 25.5%

Value change: Default activation is by sending the value of the input.
 Let's say that we want to change the activation number for input I4. We double click (left click) on the relevant module.



On the popup window we can see that there is a Threshold setting with an On and Off value. Input 4 as we can see has a 4 as on value and a 4 + 1 as off value.



So if we wish to change the activation number to x, our new setting should be On : x and Off : x+1.
 The setting for changing the activation number to 36 would be On : 36 and Off : 37.
Direction: KNX to Modbus



Door contact I1 (output)

Usage: The status of the Door magnetic reed contact can be used in a visualization or to send a command to HVAC.

Value: The choice of a NO or NC contact is carried out in the configurator and the LOGO! instructions will carry over the setting into the actual LOGO! programming, so no inversion is required in order to acquire the actual value of the contact.

If an inversion is required, you can navigate to Channel 4 in the Parameters tab and select Yes in the Value inverted field.

Channel 4	
Datapoint type	DPT 01 - Binary - 1 bit
Description	Door contact (I1)
Direction	<input type="radio"/> KNX to modbus <input checked="" type="radio"/> Modbus to KNX
Send condition	On change
Type	Bit register
Value inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
Function	<input checked="" type="radio"/> Read coils - 01 <input type="radio"/> Read discrete inputs - 02
Address	8303
Polling interval	Every cycle

Direction: Modbus to KNX

Door contact I3 (output)

Usage: The status of the Window magnetic reed contact can be used in a visualization or to send a command to HVAC.

Value: The choice of a NO or NC contact is carried out in the configurator and the LOGO! instructions will carry over the setting into the actual LOGO! programming, so no inversion is required in order to acquire the actual value of the contact.

If an inversion is required, you can navigate to Channel 5 in the Parameters tab and select Yes in the Value inverted field.

Channel 5	
Datapoint type	DPT 01 - Binary - 1 bit
Description	Window contact (I3)
Direction	<input type="radio"/> KNX to modbus <input checked="" type="radio"/> Modbus to KNX
Send condition	On change
Type	Bit register
Value inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
Function	<input checked="" type="radio"/> Read coils - 01 <input type="radio"/> Read discrete inputs - 02
Address	8307
Polling interval	Every cycle

Direction: Modbus to KNX

Door contact I3 (output)

Usage: The status of the Window magnetic reed contact can be used in a visualization or to send a command to HVAC.

Value: The choice of a NO or NC contact is carried out in the configurator and the LOGO! instructions will carry over the setting into the actual LOGO! programming, so no inversion is required in order to acquire the actual value of the contact.

If an inversion is required, you can navigate to Channel 5 in the Parameters tab and select Yes in the Value inverted field.

Channel 5	
Datapoint type	DPT 01 - Binary - 1 bit
Description	Window contact (I3)
Direction	<input type="radio"/> KNX to modbus <input checked="" type="radio"/> Modbus to KNX
Send condition	On change
Type	Bit register
Value inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
Function	<input checked="" type="radio"/> Read coils - 01 <input type="radio"/> Read discrete inputs - 02
Address	8307
Polling interval	Every cycle

Direction: Modbus to KNX

Alarm(out) (output)

Usage: This entry will be generated if an alarm function is configured during design.

Value: The Alarm is active on 1. Again the value can be inverted in the Parameters tab in the Value inverted field.

Direction: Modbus to KNX

Alarm reset (input pulse) (input)

Usage: This entry will be generated if an alarm function is configured during design. It can be used for a remote reset of the alarm from a visualization.

Value: The Alarm Reset is active on 1. Again, the value can be inverted in the Parameters tab in the Value inverted field.

Activation: Activation is with a pulse (a 0 must be sent as a second value)

Direction: KNX to Modbus

MUR(out) (output)

Usage: This entry will be generated if a MUR button is configured during design.

Value: MUR is active on 1. Again, the value can be inverted in the Parameters tab in the Value inverted field.

Direction: Modbus to KNX

MUR reset (input pulse) (input)

Usage: This entry will be generated if an MUR button is configured during design. It can be used for a remote reset of MUR function from a visualization.

Value: The MUR Reset is active on 1. Again, the value can be inverted in the Parameters tab in the Value inverted field.

Activation: Activation is with a pulse (a 0 must be sent as a second value)

Direction: KNX to Modbus

MUR long press (out) (output)

Usage: This entry will be generated if a MUR button is configured during design. The MUR button there is a preprogrammed hidden function (short/long operation) in the long press with which the maid turns off the indicator, resets the MUR, and automatically informs the visualization that the room is cleaned (Ready). Long operation is set to 5 sec and cannot be altered. A flashing alerts the user that the signal is sent.

Value: MUR long press is active on 1. Again, the value can be inverted in the Parameters tab in the Value inverted field.

Direction: Modbus to KNX

DND(out) (output)

Usage: This entry will be generated if a DND button is configured during design.

Value: DND is active on 1. Again, the value can be inverted in the Parameters tab in the Value inverted field.

Direction: Modbus to KNX

Send Scene x (output)

Usage: This entry will be generated for every Scene configured during design to be sent to KNX. Scene 1 (Welcome guest), Scene 2 (Guest Out) and Scene 64 (Occupancy failsafe, motion is detected in a "Vacant" room) are automatically created by the configurator. Scene 64 can be used for instance to restore HVAC operation after an erroneous Guest Out.

Scene 63 (Guest Away) will also be created if PMS option is checked. It can be used to send scene commands to any KNX actuator we want to incorporate in our room design. Scene 62 (Welcome Staff) will be available when using a cardholder with two outputs. See table below in **Value** section for the dynamic list of occupancy scenes that will be created for different cases.

Value: The value of the scene is set during design, in the configurator. Available values for free configuration is Scene no 3 to Scene no 61.

Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send KNX Scene (1)	Send KNX Scene (2)
		Aux (NC)		Generic		
		Aux		Generic		
		Aux (NC)		Generic		
Foyer		1-1		Q5	Foyer	
Bathroom	Toggle	Scene			Foyer	4

The name of the scene can be quickly cross-referenced in the Circuits file. **KNX Scene 64 does not appear in Circuits, but the KNX object is created.**

Welcome Guest	Guest Out
Oc Guest In	Oc Guest Out
Q2 Set	Q2 Unset
Q5 Set	Q5 Unset
Q6 Set	Q6 Unset
Send KNX Scene 1 M5	Q7 Unset
	Q8 Unset
	Q9 Unset
	Q10 Unset
	Q11 Unset
	Q12 Unset
	Send KNX Scene 2 M6

				Scene/Description
Presence Detectors	PMS	Cardholder	Cardholder 2 outputs	
PD		Welcome Guest	Guest Out	Occupancy failsafe
		Scene when guest enters vacant room	Scene when room becomes vacant	Motion is detected in a vacant room
		Scene 1	Scene 2	Scene 64

PD	PMS		Welcome Guest	Guest Out	Guest Away	Occupancy failsafe
PD			Scene when guest enters vacant room	Scene when room becomes vacant	Scene when unrented room becomes vacant/room becomes unrented	Motion is detected in a vacant room
			Scene 1	Scene 2	Scene 63	Scene 64

			Welcome Guest	Guest Out		
CH			Scene when guest enters vacant room	Scene when room becomes vacant		
			Scene 1	Scene 2		

	PMS	CH		Welcome Guest	Guest Out	Guest Away	
				Scene when guest enters vacant room	Scene when room becomes vacant	Scene when unrented room becomes vacant/room becomes unrented	
				Scene 1	Scene 2	Scene 63	

				Welcome Guest	Welcome Staff	Guest Out	
CH 2out				Scene when guest enters vacant room	Scene when staff enters vacant room	Scene when room becomes vacant	
				Scene 1	Scene 62	Scene 2	

	PMS	CH 2out		Welcome Guest	Welcome Staff	Guest Out	Guest Away
				Scene when guest enters vacant room	Scene when staff enters vacant room	Scene when room becomes vacant	Scene when unrented room becomes vacant/room becomes unrented
				Scene 1	Scene 62	Scene 2	Scene 63

Direction: Modbus to KNX

Channel x Dimming up (output)

Usage: This entry will be generated for every KNX Dimming (1f and 2f) input we have configured. In this configuration we can control directly a KNX Dimming actuator with 4 bit step control.

Operation: The behavior is dimming up while pressed. Releasing the button will send a stop command.*

Value: 4 bit step control for dim up and dim stop

Direction: Modbus to KNX



Channel x Dimming down (output)

Usage: This entry will be generated for every KNX Dimming (1f and 2f) input we have configured. In this configuration we can control directly a KNX Dimming actuator with 4 bit step control.

Operation: The behavior is dimming down while pressed. Releasing the button will send a stop command.*

Value: 4 bit step control for dim down and dim stop

Direction: Modbus to KNX

*Combined operation for Channel x Dimming up/down

KNX Dimming 1f (one button toggle operation):

First operation is dim up, and on a second press the operation toggles to a dim down.

KNX Dimming 2f (two button operation):

First channel set as 2f will dim up/stop, and the second will dim down/stop.

Shutter x travel (output)

Usage: This entry will be generated for every KNX Blind (1f and 2f) input we have configured. In this configuration we can control directly a KNX Shutter actuator with travel/stop control.

Operation: The behavior is travel while pressed. Releasing the button will send a stop command.*

Value: travel command

Direction: Modbus to KNX

Shutter x stop (output)

Usage: This entry will be generated for every KNX Blind (1f and 2f) input we have configured. In this configuration we can control directly a KNX Shutter actuator with travel/stop control.

Operation: The behavior is travel while pressed. Releasing the button will send a stop command.*

Value: stop command

Direction: Modbus to KNX

*Combined operation for Shutter x travel/stop

KNX Blind 1f (one button toggle operation):

First operation is travel up, and on a second press the operation toggles to a travel down.

KNX Blind 2f (two button operation):

First channel set as 2f will travel up/stop, and the second will travel down/stop.

Send bit x (output)

Usage: This entry will be generated for every byte configured during design to be sent to KNX. Every time three KNX objects are created; two Input/Output bit objects and a one byte output object. See the example below for IO Send KNX bit M3

14	Send KNX Scene 2 M2: Output	Configured - 1 byte	1 byte	C	R	-	T	-	8-bit unsi... Low
15	IO Send KNX bit 0 M3: Output	Configured - 1 byte	1 byte	C	R	-	T	-	8-bit unsi... Low
16	IO Send KNX bit 1 M4: Output	Configured - 1 byte	1 byte	C	R	-	T	-	8-bit unsi... Low
251	Diagnostic: LOGO	No communication	1 bit	C	R	-	T	-	1-bit, switchLow
256	IO Send KNX bit 0 M3: Input	Unsigned - 1 byte	1 byte	C	-	W	-	-	8-bit unsi... Low
257	IO Send KNX bit 0 M3: Output	Binary - 1 bit	1 bit	C	R	-	T	-	1-bit, switchLow
258	IO Send KNX bit 1 M4: Input	Unsigned - 1 byte	1 byte	C	-	W	-	-	8-bit unsi... Low
259	IO Send KNX bit 1 M4: Output	Binary - 1 bit	1 bit	C	R	-	T	-	1-bit, switchLow
456	Heartbeat	Trigger	1 bit	C	R	-	T	-	1-bit, switchLow

An **internal** Group Address must be configured to link the 1 byte objects (0/0/1 GA in the red outline below) and the 1 bit output object can be used to send the actual command (0/0/2 GA in the green outline below)

14	Send KNX Scene 2 M2: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
15	IO Send KNX bit 0 M3: Output	Configured - 1 byte Internal IO Send KNX bit 0 M3 0/0/1	1 byte C R - T - 8-bit unsi... Low
16	IO Send KNX bit 1 M4: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
251	Diagnostic: LOGO	No communication	1 bit C R - T - 1-bit, switchLow
256	IO Send KNX bit 0 M3: Input	Unsigned - 1 byte Internal IO Send KNX bit 0 M3 0/0/1	1 byte C - W - 8-bit unsi... Low
257	IO Send KNX bit 0 M3: Output	Binary - 1 bit IO Send KNX bit 0 M3 0/0/2	1 bit C R - T - 1-bit, switchLow
258	IO Send KNX bit 1 M4: Input	Unsigned - 1 byte	1 byte C - W - 8-bit unsi... Low
259	IO Send KNX bit 1 M4: Output	Binary - 1 bit	1 bit C R - T - 1-bit, switchLow
456	Heartbeat	Trigger	1 bit C R - T - 1-bit, switchLow

Value: The value can be set in the configurator as a 0 or 1.

Direction: Modbus to KNX

Send byte x (output)

Usage: This entry will be generated for every byte configured during design to be sent to KNX. Every time three KNX objects are created; two Input/Output bit objects and a one byte output object. See the example below for IO Send KNX byte 11 M3

13	Send KNX Scene 1 M1: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
14	Send KNX Scene 2 M2: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
15	IO Send KNX byte 11 M3: Output	Switch - 1 bit Internal IO Send KNX byte 11 M3 0/0/1	1 bit C R - T - 1-bit, switchLow
16	IO Send KNX byte 111 M4: Output	Switch - 1 bit	1 bit C R - T - 1-bit, switchLow
251	Diagnostic: LOGO	No communication	1 bit C R - T - 1-bit, switchLow
256	IO Send KNX byte 11 M3: Input	Binary - 1 bit Internal IO Send KNX byte 11 M3 0/0/1	1 bit C - W - 1-bit, switchLow
257	IO Send KNX byte 11 M3: Output	Unsigned - 1 byte IO Send KNX byte 11 M3 0/0/2	1 byte C R - T - 8-bit unsi... Low
258	IO Send KNX byte 111 M4: Input	Binary - 1 bit	1 bit C - W - 1-bit, switchLow
259	IO Send KNX byte 111 M4: Output	Unsigned - 1 byte	1 byte C R - T - 8-bit unsi... Low
456	Heartbeat	Trigger	1 bit C R - T - 1-bit, switchLow

An **internal** Group Address must be configured to link the 1 bit objects (0/0/1 GA in the red outline below) and the 1 byte output object can be used to send the actual command (0/0/2 GA in the green outline below)

13	Send KNX Scene 1 M1: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
14	Send KNX Scene 2 M2: Output	Configured - 1 byte	1 byte C R - T - 8-bit unsi... Low
15	IO Send KNX byte 11 M3: Output	Switch - 1 bit Internal IO Send KNX byte 11 M3 0/0/1	1 bit C R - T - 1-bit, switchLow
16	IO Send KNX byte 111 M4: Output	Switch - 1 bit	1 bit C R - T - 1-bit, switchLow
251	Diagnostic: LOGO	No communication	1 bit C R - T - 1-bit, switchLow
256	IO Send KNX byte 11 M3: Input	Binary - 1 bit Internal IO Send KNX byte 11 M3 0/0/1	1 bit C - W - 1-bit, switchLow
257	IO Send KNX byte 11 M3: Output	Unsigned - 1 byte IO Send KNX byte 11 M3 0/0/2	1 byte C R - T - 8-bit unsi... Low
258	IO Send KNX byte 111 M4: Input	Binary - 1 bit	1 bit C - W - 1-bit, switchLow
259	IO Send KNX byte 111 M4: Output	Unsigned - 1 byte	1 byte C R - T - 8-bit unsi... Low
456	Heartbeat	Trigger	1 bit C R - T - 1-bit, switchLow

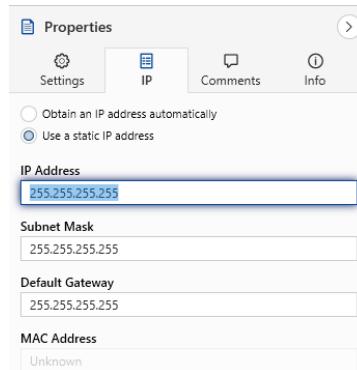
Value: The value of the scene is set during design, in the configurator. Available values for free configuration are ranging from 0 to 255.

Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send KNX Scene (1)	Send KNX Scene (2)	KNX channel	Send bit (1)	Send bit (2)	Send byte (1)	Send byte (2)
Balcony		1--1	Q7	Balcony							
Bedside Right		1--1	Q8	Bed R							
Bedside Left		1--1	Q9	Bed L							
Desk		1--1	Q10	Desk							
Master On	Default	Scene		Bed L/R							
Romantic	Default	Scene		Bed L/R							
Night	Toggle	Scene		Bed L/R							
TV	Default	Scene		Bed L/R				0	255		

Direction: Modbus to KNX

3. Set IP address of Modbus TCP Gateway 716

The IP address of the Modbus TCP Gateway 716 cannot be imported and has to be set manually. Navigate on the Properties pane (on the right) and in the IP tab set the desired static IP.



4. ETS_GroupAddresses.xml

An XML file is automatically created for the created Weinzierl 716 TCP object

5. KNX object table

Apart from the Weinzierl 716 TCP import.wz716 table, a KNX object table is generated as well (see example in the next page). This table is a quick reference guide for the created design.

Available information are:

Object: Number of object in ETS

Object name: Name of object in ETS

Direction: Possible values are modbus_to_KNX, KNX_to_Modbus and Internal connection (valid for bits and bytes)

Usage: Details the use and function/purpose of the object, example for the Block object the Usage is “When a room is vacant, the push buttons are blocked for operation (can be applied to thermostats as well). In an Occupied room all sensors are active and free to operate”

Value: Describes default, permissible or set values for every object. As an example of a default value for instance Block object is “Active on 1”. A permissible value can be set in KNX to LOGO! scene where value is “1 to 20”. Set values can be found in objects like scenes, bits and bytes.

Activation: Value for triggering a KNX_to_Modbus object

Internal connections: In case a bit or a byte is sent to KNX an internal group address is required. In the example that follows an internal group address with objects “17 <-> 256” for Send KNX byte 11

Using the KNX object table allows for overall easy planning and configuration of any given additional KNX devices in the GRMS.

Object	Object name	Scene name	Direction	Usage	Value	Activation	Internal connections
1	Block		modbus_to_knx	When a room is vacant, the push buttons are blocked for operation (can be applied to thermostats as well). In an Occupied room all sensors are active and free to operate	Active on 1		
2	Occupied		modbus_to_knx	In an Occupied room the Occupied object is 1	Active on 1		
3	KNX to LOGO! Scene		knx_to_modbus	Activate physical inputs I4 to I16 and virtual inputs Ext17 to Ext20	1 to 20	Number of input	
4	Door contact (I1)		modbus_to_knx	The status of the Door magnetic reed contact	Set in Configurator		
6	Window contact (I3)		modbus_to_knx	The status of the Window magnetic reed contact	Set in Configurator		
7	Send KNX Scene 64	Failed Occupancy scene	modbus_to_knx	Scene sent after a failed Guest Out	64		
7	Alarm (out)		modbus_to_knx	Alarm function	Active on 1		
8	Alarm reset (input pulse)		knx_to_modbus		Active on 1		
9	MUR (out)		modbus_to_knx	MUR button short press	Active on 1		
10	MUR reset (input pulse)		knx_to_modbus	MUR reset button	Active on 1	Activation is with a pulse (a 0 must be sent as a second value)	
11	MUR long press (out)		modbus_to_knx	MUR button long press	Active on 1		
12	DND (Out)		modbus_to_knx	DND button short press	Active on 1		
13	Check in/Check out (input)		knx_to_modbus				
14	Send KNX Scene 1 M1	Welcome Guest	modbus_to_knx	Send scene to KNX	1		
15	Send KNX Scene 2 M2	Guest Out	modbus_to_knx	Send scene to KNX	2		
16	Send KNX Scene 63 M3	Guest Away	modbus_to_knx	Send scene to KNX	63		
17	IO Send KNX byte 11 M4		modbus_to_knx	Send byte to KNX	Internal group address with Converter		17 <> 256
18	IO Send KNX byte 90 M5		modbus_to_knx	Send byte to KNX	Internal group address with Converter		18 <> 258
19	IO Send KNX byte 125 M6		modbus_to_knx	Send byte to KNX	Internal group address with Converter		19 <> 260
20	IO Send KNX byte 200 M7		modbus_to_knx	Send byte to KNX	Internal group address with Converter		20 <> 262
21	IO Send KNX byte 34 M9		modbus_to_knx	Send byte to KNX	Internal group address with Converter		21 <> 264
251	Diagnostic:LOGO			LOGO! Slave 1 Heartbeat	Alive on 1		
256	Send KNX byte 11 M4	Internal connection		Send byte to KNX	Internal group address with Datapoint		17 <> 256
257	Send KNX byte 11 M4			Send byte to KNX	11		
258	Send KNX byte 90 M5	Internal connection		Send byte to KNX	Internal group address with Datapoint		18 <> 258
259	Send KNX byte 90 M5			Send byte to KNX	90		
260	Send KNX byte 125 M6	Internal connection		Send byte to KNX	Internal group address with Datapoint		19 <> 260
261	Send KNX byte 125 M6			Send byte to KNX	125		
262	Send KNX byte 200 M7	Internal connection		Send byte to KNX	Internal group address with Datapoint		20 <> 262
263	Send KNX byte 200 M7			Send byte to KNX	200		
264	Send KNX byte 34 M9	Internal connection		Send byte to KNX	Internal group address with Datapoint		21 <> 264
265	Send KNX byte 34 M9			Send byte to KNX	34		
456	Heartbeat			TCP 716 Heartbet	Alive on 1		

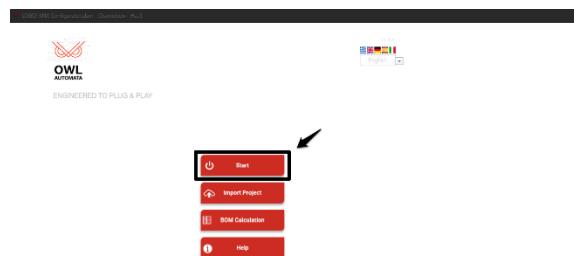


Chameleon

Modbus only mode

Modbus only mode

In the intro page of the Configurator we can start a new design by pressing the **Start** button



In the following popup screen we can set the type of Occupancy detection in the Room and if we wish to do a full KNX or Modbus only implementation. Hovering over the check boxes will give a description of the given choice and in the field on the bottom of the screen a detailed analysis of the configuration will be shown. We can also change the name of the Input I3 designated by default as "Window Reed contact". If you accidentally delete the name or leave the field empty the name of the input will revert to the default "Window Reed contact".

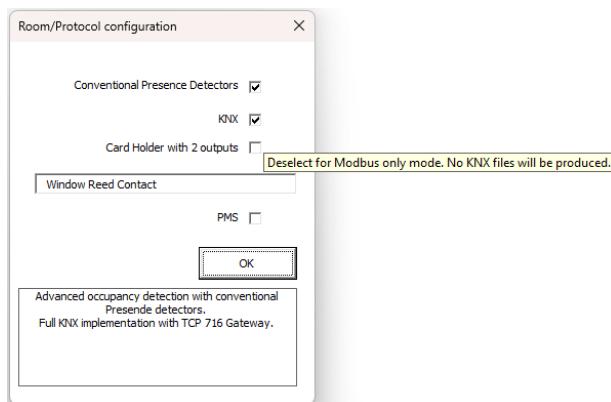
PMS stands for Property Management System and is the software that hotels use to manage various aspects of their business operations, including reservations, guest management (check in/Check out), room inventory, invoicing etc.

If PMS is left unchecked only a **Welcome Guest** and **Guest Out** scene is created. These scenes are triggered by the occupancy detection algorithm.

Checking the PMS option, will create a Check in/Check out object (input) that we can connect to the PMS (through a software bridge). An additional **Guest Away** scene is created. These scenes are again triggered by the occupancy detection algorithm. Customer egress now is evaluated against the rented/unrented status of the room. Egress from a rented room will trigger a **Guest Out** scene.

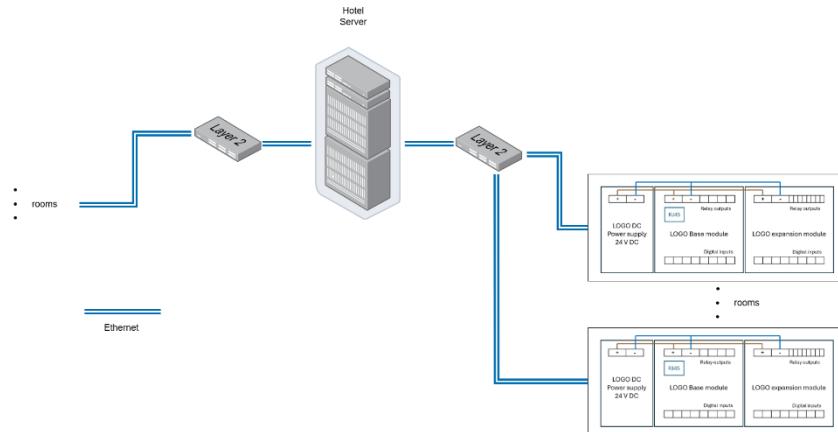
The **Guest Away** scene will be triggered upon egress from an unrented room and upon receiving a Check out signal.

Press **OK** to start designing.



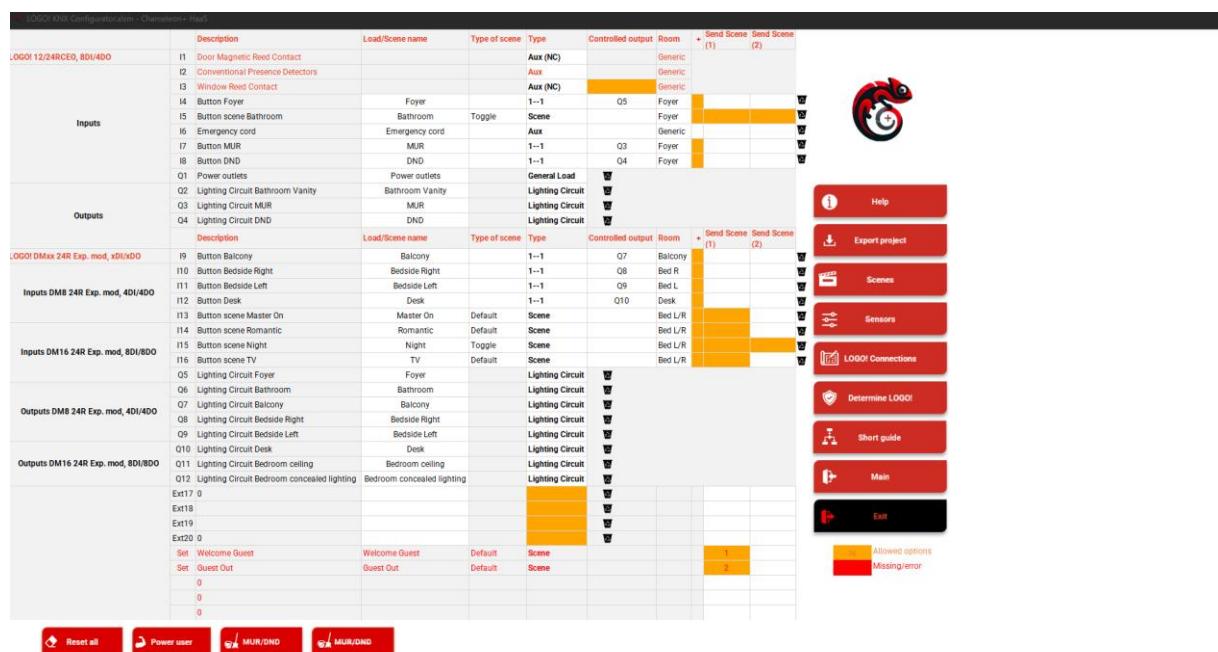
Deselecting the KNX option will allow for a Modbus only implementation. The Weinzierl KNX Modbus TCP Gateway 716 secure is no longer part of the system and no KNX files will be produced.

Cabling is reduced to an ethernet cable from each room. The ethernet cables will end up in the switches / structured cabling of the hotel where a KNX network can also be connected.



1. Parameterization of inputs and outputs:

We are guided to the basic **input/output configuration page** (IO settings)



This screenshot shows the 'LOGO! Input/Output Configuration' page. The interface is divided into several sections:

- Inputs:** A table listing various input types (Door Magnetic Reed Contact, Conventional Presence Detectors, Window Reed Contact, etc.) with their corresponding load/scene names and controlled output types (Aux (NC), Aux, Aux (NO)).
- Outputs:** A table listing various output types (Emergency cord, MUR, DND, Power outlets) with their corresponding load/scene names and controlled output types (Scene, Aux, Generic).
- LOGO! DM8 24R Exp. mod, 8DI/8DO:** A table listing inputs (I9-I12) and outputs (Q7-Q10) for a specific module.
- LOGO! DM16 24R Exp. mod, 8DI/8DO:** A table listing inputs (I13-I16) and outputs (Q11-Q14) for another module.
- LOGO! DM8 24R Exp. mod, 4DI/4DO:** A table listing inputs (I17-I20) and outputs (Q15-Q18) for a third module.
- Buttons:** At the bottom are buttons for 'Reset all', 'Power user', 'MUR/DND', and 'MUR/DND'.
- Right sidebar:** Contains links for Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, and Exit. It also includes status indicators for Allowed options (green) and Missing/Error (red).



1.1. LOGO!

In the first two columns we can find LOGO! units (base module and expansion module) and our inputs and outputs. These fields are not editable.

The screenshot shows the LOGO! KNX Configurator software interface. On the left, there are two large black boxes containing lists of components: 'Inputs' and 'Outputs'. The 'Inputs' box contains items like 'Door Magnetic Reed Contact', 'Conventional Presence Detectors', 'Window Reed Contact', 'Button Foyer', 'Button scene Bathroom', 'Emergency cord', 'Button MUR', 'Button DND', and 'Power outlets'. The 'Outputs' box contains items like 'Button Balcony', 'Button Bedside Right', 'Button Bedside Left', 'Button Desk', 'Button scene Master On', 'Button scene Romantic', 'Button scene Night', 'Button scene TV', 'Lighting Circuit Foyer', 'Lighting Circuit Bathroom', 'Lighting Circuit Bedside Right', 'Lighting Circuit Bedside Left', 'Lighting Circuit Desk', 'Lighting Circuit Bedroom ceiling', 'Lighting Circuit Bedroom concealed lighting', 'Ext1', 'Ext2', 'Ext3', 'Ext4', 'Set Welcome Guest', and 'Set Guest Out'. To the right of these boxes is a main configuration grid. The grid has columns for 'Description', 'Load/Scene name', 'Type of scene', 'Type', 'Controlled output', 'Room', and 'Send Scene (1)' and 'Send Scene (2)'. The 'Controlled output' column contains various addresses like Q5, Q6, Q7, Q8, Q9, Q10, etc. The 'Room' column lists rooms like 'Foyer', 'Bathroom', 'Bed R', 'Bed L', 'Balcony', 'Bed L/R', and 'Bed U/R'. The 'Send Scene' columns have orange highlights indicating active connections. A legend on the right explains the colors: yellow for 'Allowed options' and red for 'Missing/error'. At the bottom are buttons for 'Reset all', 'Power user', 'MUR/DND', 'Main', and 'Exit'.

1.2. Description

In the third column we will find the names of the inputs and outputs that the program will generate automatically whenever changes are made. This field is not editable.

This screenshot shows the same LOGO! KNX Configurator software interface as the previous one, but with a different layout. The 'Inputs' and 'Outputs' sections are now part of a single large black box at the top. Below this is a second large black box containing the component lists. The main configuration grid is identical to the one in the first screenshot. The legend and bottom buttons are also present. The overall layout is more compact than the first screenshot.



1.3. Load/Scene name

In the fourth column we can modify the names of the inputs and outputs. The first three fields and the entries in red are not editable. MUR and DND entries are a special case and will be visited in greater detail in a following paragraph.

	Description	Load/Scene name	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)
Inputs	I1 Door Magnetic Reed Contact I2 Conventional Presence Detectors I3 Window Reed Contact I4 Button Foyer I5 Button scene Bathroom I6 Emergency cord I7 Button MUR I8 Button DND I9 Power outlets		Aux (NC) Aux Aux (NC)	Q5 Foyer	Generic Foyer		
	Bathroom Emergency cord MUR DND		Toggle	Q1-1 Scene Aux I-1-1	Foyer Generic Foyer		
	Power outlets Bathroom outlets			Q4	Foyer		
Outputs	O2 Lighting Circuit Bathroom Vanity O3 Lighting Circuit MUR O4 Lighting Circuit DND						
	O5 Lighting Circuit Foyer O6 Lighting Circuit Bathroom O7 Lighting Circuit Balcony O8 Lighting Circuit Bedside Right O9 Lighting Circuit Bedside Left O10 Lighting Circuit Desk O11 Lighting Circuit Bedroom ceiling O12 Lighting Circuit Bedroom concealed lighting						
	Ext17 0 Ext18 Ext19 Ext20 0 Set Welcome Guest Set Guest Out 0 0 0						
	Welcome Guest Guest Out					1	2

Buttons: Reset all, Power user, MUR/DND, MUR/DND

1.4. Type of Scene

In the fifth column the type of scene can selected (if applicable) form a dropdown list.

	Description	Load/Scene name	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)
Inputs	I1 Door Magnetic Reed Contact I2 Conventional Presence Detectors I3 Window Reed Contact I4 Button Foyer I5 Button scene Bathroom I6 Emergency cord I7 Button MUR I8 Button DND I9 Power outlets		Aux (NC) Aux Aux (NC)	Q5 Foyer	Generic Foyer		
	Bathroom Emergency cord MUR DND		Toggle	Q1-1 Scene Aux I-1-1	Foyer Generic Foyer		
	Power outlets Bathroom outlets			Q4	Foyer		
Outputs	O2 Lighting Circuit Bathroom Vanity O3 Lighting Circuit MUR O4 Lighting Circuit DND						
	O5 Lighting Circuit Foyer O6 Lighting Circuit Bathroom O7 Lighting Circuit Balcony O8 Lighting Circuit Bedside Right O9 Lighting Circuit Bedside Left O10 Lighting Circuit Desk O11 Lighting Circuit Bedroom ceiling O12 Lighting Circuit Bedroom concealed lighting						
	Ext17 0 Ext18 Ext19 Ext20 0 Set Welcome Guest Set Guest Out 0 0 0						
	Welcome Guest Guest Out					1	2

Buttons: Reset all, Power user, MUR/DND, MUR/DND

The available types of scenes are Default, Bright/Dark and Toggle. This column can be populated only if the input type is set to Scene or KNX Scene.

Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Leftt	Bedside Leftt		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On	Default	Scene
I14 Button scene Romantic	Romantic	Default Bright/Dark Toggle	Scene
I15 Button scene Night	Night	Toggle	Scene

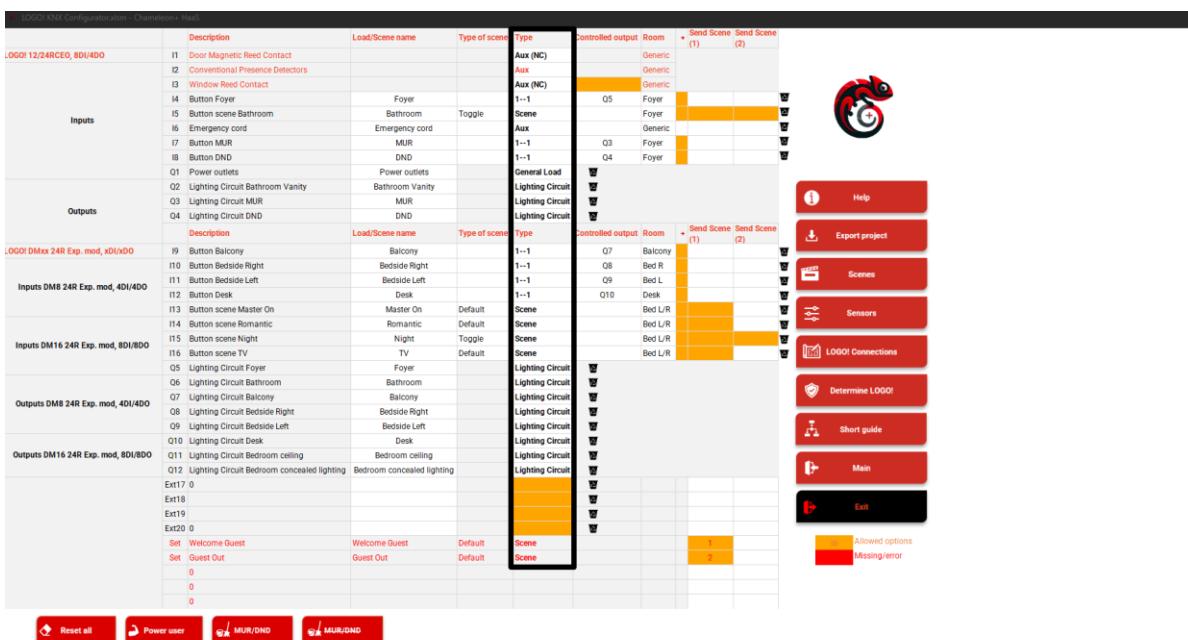
If the input is set to Scene and no Scene type is selected, the field will turn red until a selection is made.

Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Leftt	Bedside Leftt		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On		Scene
I14 Button scene Romantic	Romantic	Default	Scene
I15 Button scene Night	Night	Toggle	Scene
I16 Button scene TV	TV	Default	Scene

For virtual inputs Ext17 to Ext20, the dropdown is not applicable and the type of scene is set as Default by the program.

1.5. Type

In the sixth column we will select the type of input and output.



Inputs			
Description	Load/Scene name	Type of scene	Type
I1 Door Magnetic Reed Contact			Aux (NC)
I2 Conventional Presence Detectors			Aux
I3 Window Reed Contact			Aux (NC)
I4 Button Foyer	Foyer		1--1
I5 Button scene Bathroom	Bathroom	Toggle	Scene
I6 Emergency cord	Emergency cord		Aux
I7 Button MUR	MUR		1--1
I8 Button DND	DND		1--1
I9 Power outlets	Power outlets		General Load
I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit
I11 Lighting Circuit MUR	MUR		Lighting Circuit
I12 Lighting Circuit DND	DND		Lighting Circuit

Outputs			
Description	Load/Scene name	Type of scene	Type
I9 Button Balcony	Balcony		1--1
I10 Button Bedside Right	Bedside Right		1--1
I11 Button Bedside Left	Bedside Left		1--1
I12 Button Desk	Desk		1--1
I13 Button scene Master On	Master On	Default	Scene
I14 Button scene Romantic	Romantic	Default	Scene
I15 Button scene Night	Night	Toggle	Scene
I16 Button scene TV	TV	Default	Scene

If we do not wish to utilize an input or output we can select the field and press Delete on our keyboard, or press the recycle bin icon in the same line.

The available options for inputs are 1--1, Aux, Scene. KNX related objs KNX Dimming 1f, KNX Dimming 2f, KNX Blind 1f, KNX Blind 2f and KNX Scene are not available in Modbus only mode ("Basic concepts" chapter).

Type	Controlled output
1-1	Q7
Aux	Q8
1-1	Q9
Scene	Q10
1-1	Q10

The available options for outputs are General Load and Lighting Circuit (“Basic concepts” chapter).

Description	Load/Scene name	Type of scene	Type	Controlled output
I9 Button Balcony	Balcony		1-1	Q7
I10 Button Bedside Right	Bedside Right		1-1	Q8
I11 Button Bedside Leftt	Bedside Leftt		1-1	Q9
I12 Button Desk	Desk		1-1	Q10
I13 Button scene Master On	Master On	Default	Scene	
I14 Button scene Romantic	Romantic	Default	Scene	
I15 Button scene Night	Night	Toggle	Scene	
I16 Button scene TV	TV	Default	Scene	
Q5 Lighting Circuit Foyer	Foyer			Lighting Circuit
Q6 Lighting Circuit Bathroom	Bathroom			General Load Lighting Circuit

We can also configure the Door and Window magnetic contacts as normally closed or open (NC/NO).

Description	Load/Scene name	Type of scene	Type	C
I1 Door Magnetic Reed Contact				Aux (NC)
I2 Conventional Presence Detectors				Aux
I3 Window Mangnetic Reed Contact				Aux (NC)
I4 Button Foyer	Foyer			Aux (NC) Aux (NO)

1.6. Controlled output

In the seventh column, the controlled output can be selected (“Basic concepts” chapter). This column can be populated only for 1—1 inputs **and for I3 input.**

The screenshot shows the LOGO! KNX Configuration software interface. It displays a hierarchical tree structure of configuration sections, including inputs and outputs for various devices like door magnetic reed contacts, conventional presence detectors, window magnetic reed contacts, and various button and lighting circuit configurations. The interface includes a toolbar at the bottom with buttons for 'Reset all', 'Power user', 'MUR/DND', and 'MUR/DND' (disabled). A sidebar on the right provides quick access to help, export, scenes, sensors, connections, determine LOGO!, short guide, main, and exit functions. A legend at the bottom right indicates that yellow boxes represent 'Allowed options' and red boxes represent 'Missing/error'.

If an input is 1—1 type and no controlled input is selected, the field will turn red until a selection is made.



Description	Load/Scene name	Type of scene	Type	Controlled output
I1 Door Magnetic Reed Contact			Aux (NC)	
I2 Conventional Presence Detectors			Aux	
I3 Window Mangnetic Reed Contact			Aux (NC)	
I4 Button Foyer	Foyer		1--1	Q5
I5 Button Bathroom	Bathroom		1--1	
I6 Emergency cord	Emergency cord		Aux	

The dropdown list of available outputs is dynamic and will only be populated by unused outputs. **Inputs and paired Controlled outputs must have the same name**, otherwise the program will return an error.

Description	Load/Scene name	Type of scene	Type	Controlled output
I1 Door Magnetic Reed Contact			Aux (NC)	
I2 Conventional Presence Detectors			Aux	
I3 Window Mangnetic Reed Contact			Aux (NC)	
I4 Button Foyer	Foyer		1--1	Q5
I5 Button Bathroom	Bathroom		1--1	
I6 Emergency cord	Emergency cord		Aux	Q6 Q11 Q12
I7 Button MUR	MUR		1--1	Q5

1.7. Room

In the eighth column, the placement of sensor can be configured. This setting is relevant to all types of inputs except Aux.

The screenshot shows the LOGO! KNA Configuration software interface. On the left, there are two main sections: 'Inputs' and 'Outputs'. The 'Inputs' section lists items like I1 through I17, each with a description, load/scene name, type of scene, type, and controlled output. The 'Outputs' section lists items like O1 through O12, also with their respective details. A large central area displays a hierarchical room configuration. On the right side, there is a vertical sidebar with various buttons and links for help, export, scenes, sensors, connections, determine LOGO!, short guide, main, and exit. At the bottom, there are several small buttons for reset, power user, MUR/DND, and MUR/DNO.

The available options are:

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Foyer
I5 Button Bathroom	Bathroom		1--1	Q6	WC D.Bsk Bed L Bed R Balcony Bedroom
I6 Emergency cord	Emergency cord		Aux		Generic
I7 Button MUR	MUR		1--1	Q3	
I8 Button DND	DND		1--1	Q4	

Foyer

WC



Desk

Bed L: Left bedside

Bed R: Right bedside

Bed L/R: Bedside left and right (wired in parallel to one LOGO! input)

Balcony

Bedroom: Additional placement option

Generic: Input is not a sensor, but an Aux

If the input type is Aux , the program will choose Generic Room and will not allow us to make another choice.

If an input is converted from type Aux to 1--1, the room field will turn red until a placement is selected (other than Generic).

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Foyer
I5 Button Bathroom	Bathroom		1--1	Q6	Foyer
I6 Button Emergency cord	Emergency cord		1--1		Generic

Similarly, If an input is converted from type Aux to Scene, the room field will turn red until a placement is selected (other than Generic). Same applies to all other types of KNX input configurations.

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Foyer
I5 Button Bathroom	Bathroom		1--1	Q6	Foyer
I6 Button scene Emergency cord	Emergency cord		Scene		Generic

Finally, for an input of types other than Aux if the Room field is empty, the Room field will turn red until a placement is selected.

Description	Load/Scene name	Type of scene	Type	Controlled output	Room
I1 Door Magnetic Reed Contact			Aux (NC)		Generic
I2 Conventional Presence Detectors			Aux		Generic
I3 Window Mangnetic Reed Contact			Aux (NC)		Generic
I4 Button Foyer	Foyer		1--1	Q5	Generic



1.8. +

In the ninth column, an additional sensor placement can be selected for 1--1 control or a Scene for activation from another location with a parallel cable connection.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	+ Send Scene (2)
I1	Door Magnetic Reed Contact			Aux (NC)		Generic		
I2	Conventional Presence Detectors			Aux		Generic		
I3	Window Reed Contact			Aux (NC)		Generic		
I4	Button Foyer	Foyer		1-1	Q5	Foyer		
I5	Button scene Bathroom	Bathroom	Toggle	Scene				
I6	Emergency cord	Emergency cord		Aux		Generic		
I7	Button MUR	MUR	1-1	Q3	Foyer			
I8	Button DND	DND	1-1	Q4	Foyer			
O1	Power outlets	Power outlets		General Load				
O2	Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit				
O3	Lighting Circuit MUR	MUR		Lighting Circuit				
O4	Lighting Circuit DND	DND		Lighting Circuit				
I9	Button Balcony	Balcony		1-1	Q7	Balcony		
I10	Button Bedside Right	Bedside Right		1-1	Q8	Bed R		
I11	Button Bedside Left	Bedside Left		1-1	Q9	Bed L		
I12	Button Desk	Desk		1-1	Q10	Desk		
I13	Button scene Master On	Master On	Default	Scene		Bed L/R		
I14	Button scene Romantic	Romantic	Default	Scene		Bed L/R		
I15	Button scene Night	Night	Toggle	Scene		Bed L/R		
I16	Button scene TV	TV	Default	Scene		Bed L/R		
O5	Lighting Circuit Foyer	Foyer		Lighting Circuit				
O6	Lighting Circuit Bathroom	Bathroom		Lighting Circuit				
O7	Lighting Circuit Balcony	Balcony		Lighting Circuit				
O8	Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit				
O9	Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit				
O10	Lighting Circuit Desk	Desk		Lighting Circuit				
O11	Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit				
O12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit				
Ext17 0								
Ext18								
Ext19								
Ext20 0								
Set Welcome Guest	Welcome Guest	Default	Scene				1	?
Set Guest Out	Guest Out	Default	Scene				1	?
0								
0								
0								

Available options are:

Foyer

WC

Desk

Balcony

Bedroom: Additional placement option

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+
I1	Door Magnetic Reed Contact			Aux (NC)		Generic	
I2	Conventional Presence Detectors			Aux		Generic	
I3	Window Mangnetic Reed Contact			Aux (NC)		Generic	
I4	Button Foyer	Foyer		1-1	Q5	Foyer	
I5	Button Bathroom	Bathroom		1-1	Q6	Foyer	
I6	Emergency cord	Emergency cord		Aux		Generic	
I7	Button MUR	MUR		1-1	Q3	Foyer	

The program will not allow to select the same sensor placement with the preceding adjacent cell, or a sensor placement that does not exist in the previous column (Room) as a primary placement. Finally, if the Room field is empty, the program will delete any entries in +.



1.9. Send Scene (1)*

In the tenth column, a Send scene (1) can be placed. The setting is only relevant if the input is configured as Scene. The field will not turn red if left empty since it is not mandatory to configure a scene, but will be automatically erased if not applicable.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)
Inputs	I14 Button Foyer	Foyer	Toggle	Aux (NC)	1--1	Q5	Foyer	
Outputs	I9 Button Balcony	Balcony	Scene	Aux	1--1	Q7	Balcony	
Inputs DM8 24R Exp. mod, 4DI/4DO	I10 Button Bedside Right	Bedside Right	Scene	MUR	1--1	Q8	Bed R	
Inputs DM16 24R Exp. mod, 8DI/8DO	I11 Button Bedside Left	Bedside Left	Scene	DND	1--1	Q9	Bed L	
Outputs DM8 24R Exp. mod, 4DI/4DO	I12 Button Desk	Desk	Scene	General Load	1--1	Q10	Desk	
Outputs DM16 24R Exp. mod, 8DI/8DO	I13 Button scene Master On	Master On	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I14 Button scene Romantic	Romantic	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I15 Button scene Night	Night	Toggle	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I16 Button scene TV	TV	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I17 Lighting Circuit Foyer	Foyer	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I18 Lighting Circuit Bathroom	Bathroom	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I19 Lighting Circuit Balcony	Balcony	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I20 Lighting Circuit Bedside Right	Bedside Right	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I21 Lighting Circuit Bedside Left	Bedside Left	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I22 Lighting Circuit Desk	Desk	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I23 Lighting Circuit Bedroom ceiling	Bedroom ceiling	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I24 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting	Lighting Circuit					
Ext17 0								
Ext18								
Ext19								
Ext20 0								
Set Welcome Guest	Welcome Guest	Default	Scene				1	
Set Guest Out	Guest Out	Default	Scene				2	
0								
0								
0								

- ! Help
- ! Export project
- ! Scenes
- ! Sensors
- ! LOGO! Connections
- ! Determine LOGO!
- ! Short guide
- ! Main
- ! Exit

Allowed options

Missing/error

1.10. Send Scene (2)*

In the eleventh column, a Send scene (2) can be placed. The setting is only relevant if the input is configured as Scene of type Toggle or Bright/Dark. The field will not turn red if left empty since it is not mandatory to configure a scene, but will be automatically erased if not applicable.

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)
Inputs	I14 Button Foyer	Foyer	Toggle	Aux (NC)	1--1	Q5	Foyer	
Outputs	I9 Button Balcony	Balcony	Scene	Aux	1--1	Q7	Balcony	
Inputs DM8 24R Exp. mod, 4DI/4DO	I10 Button Bedside Right	Bedside Right	Scene	MUR	1--1	Q8	Bed R	
Inputs DM16 24R Exp. mod, 8DI/8DO	I11 Button Bedside Left	Bedside Left	Scene	DND	1--1	Q9	Bed L	
Outputs DM8 24R Exp. mod, 4DI/4DO	I12 Button Desk	Desk	Scene	General Load	1--1	Q10	Desk	
Outputs DM16 24R Exp. mod, 8DI/8DO	I13 Button scene Master On	Master On	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I14 Button scene Romantic	Romantic	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I15 Button scene Night	Night	Toggle	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I16 Button scene TV	TV	Default	Lighting Circuit				
Outputs DM16 24R Exp. mod, 8DI/8DO	I17 Lighting Circuit Foyer	Foyer	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I18 Lighting Circuit Bathroom	Bathroom	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I19 Lighting Circuit Balcony	Balcony	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I20 Lighting Circuit Bedside Right	Bedside Right	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I21 Lighting Circuit Bedside Left	Bedside Left	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I22 Lighting Circuit Desk	Desk	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I23 Lighting Circuit Bedroom ceiling	Bedroom ceiling	Lighting Circuit					
Outputs DM16 24R Exp. mod, 8DI/8DO	I24 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting	Lighting Circuit					
Ext17 0								
Ext18								
Ext19								
Ext20 0								
Set Welcome Guest	Welcome Guest	Default	Scene				1	
Set Guest Out	Guest Out	Default	Scene				2	
0								
0								
0								

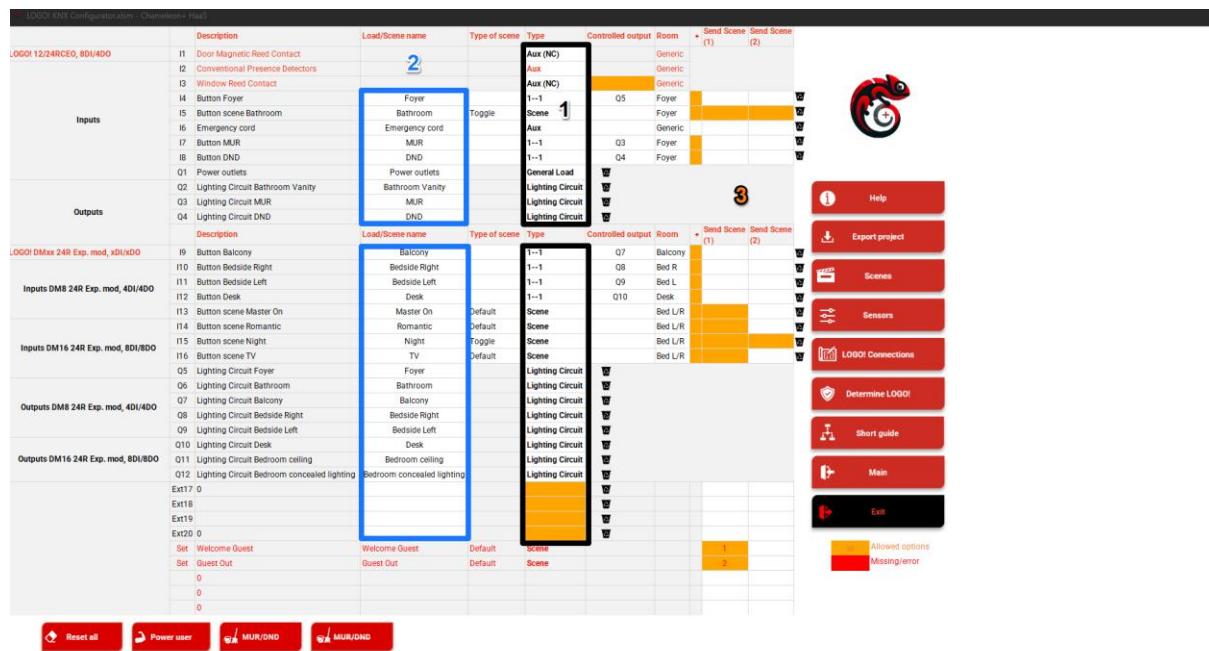
- ! Help
- ! Export project
- ! Scenes
- ! Sensors
- ! LOGO! Connections
- ! Determine LOGO!
- ! Short guide
- ! Main
- ! Exit

Allowed options

Missing/error

2. Sequence of tasks:

When designing a room, it is a good practice to start with auxiliary signals (Emergency cord) and special hotel functions (MUR, DND). Not editable fields are greyed out.



Steps:

1. **Change of input/output → Type.** Each time the Type is changed not applicable entries will be erased and missing entries will be highlighted in red. **Fill in or change red fields.**
 2. **Change the Load/Scene name.**
 3. Allowed optional entries will be dynamically highlighted in orange. **Fill in orange fields as per your design.**
Your design is ready!

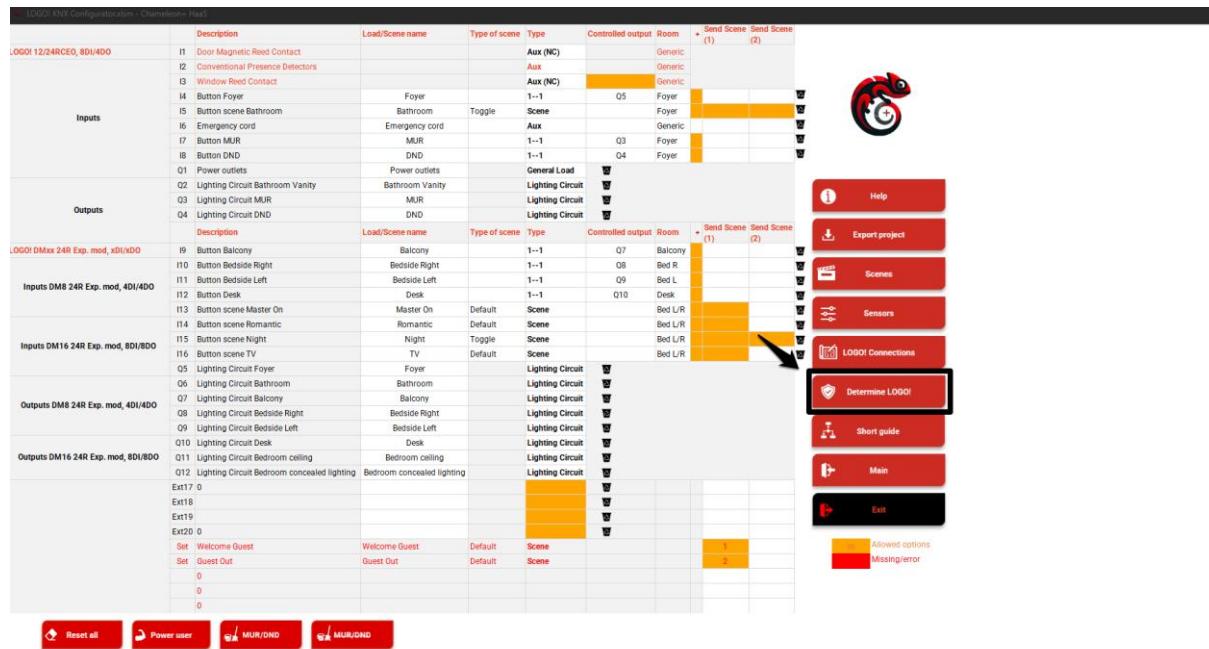
3. Error checking:

a. Visual inspection

After design completion no red fields should exist. Confirm that sensor placement (**Room**, **+**) and KNX Scenes are configured per your preference.

b. Automatic fault detection

Press the **Determine LOGO!** button



The screenshot shows the LOGO! KNX Configurator software interface. On the right side, there is a vertical toolbar with several buttons: Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO! (which is highlighted with a yellow arrow), Short guide, Man, and Exit. Below the toolbar, there are two status indicators: 'Allowed options' (yellow) and 'Missing/error' (red). At the bottom of the interface, there are three buttons: Reset all, Power user, and MUR/DND.

The program will crosscheck for all 1-1 type inputs, if the Controlled output bears the same name with the input. In the following example it will check and confirm, for example, that the I4 input and the Q5 Controlled output have the same name (Foyer).

LOGO! KNX Configurator 64 bit.xlsx - Chameleon HaaS						
	Description	Load/Scene name	Type of scene	Type	Controlled output	Room +
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic
	I2 Conventional Presence Detectors			Aux		Generic
	I3 Window Reed Contact			Aux (NC)		Generic
	I4 Button Foyer	Foyer		1-1	Q5	Foyer
	I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer
	I6 Emergency cord	Emergency cord		Aux		Generic
	I7 Button MUR	MUR		1-1	Q3	Foyer
	I8 Button DND	DND		1-1	Q4	Foyer
	I9 Power outlets	Power outlets		General Load		
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		
Outputs	Q1 Power outlets	Power outlets		Lighting Circuit		
	Q2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit		
	Q3 Lighting Circuit MUR	MUR		Lighting Circuit		
	Q4 Lighting Circuit DND	DND		Lighting Circuit		
	Q5 Lighting Circuit Foyer	Foyer		Lighting Circuit		
	Q6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit		
	Q7 Lighting Circuit Balcony	Balcony		Lighting Circuit		
	Q8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit		
	Q9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit		
	Q10 Lighting Circuit Desk	Desk		Lighting Circuit		
Outputs DM8 24R Exp. mod, 4DI/4DO	Q11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit		
	Q12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit		
	Ext17 0					
	Ext18					
	Ext19					
	Ext20 0					
	Set Welcome Guest	Welcome Guest	Default	Scene		
	Set Guest Out	Guest Out	Default	Scene		
	0				1	
	0				2	
	0				3	



If no relevant error is detected the following popup will appear. Press OK to exit.

Microsoft Excel X

i Ok!!!

OK

On error, the message will give us the output (Qx) and the mismatched names. In the example below, the Q5 has the names Couch and Foyer and the Q7 the names Balcony and Porch.

Microsoft Excel X

Input/Output discrepancy: Q5 Couch and Foyer

Input/Output discrepancy: Q7 Balcony and Porch

OK

Press OK and correct either the name of the input or the output. Run the **Determine LOGO !** diagnostic again to confirm.

The automatic fault detection, apart from the 1--1 type crosscheck, will also check for errors in the configuration of the MUR/DND functions, giving precise instructions for restoring the functionality.

Microsoft Excel X

Input/Output discrepancy: Q5 Couch and Foyer
Input/Output discrepancy: Q7 Balcony and Porch
I7 must be set as MUR (1--1 type and Q3 as controlled output)

OK

Correct all errors per instructions before proceeding to configuring Sensors and Scenes.

Both Visual inspection and Automatic fault detection will be either way be **carried out by the program upon pressing the **Scenes** or **Sensors** buttons, to prevent generating errors**. If errors are detected, you will not be allowed to access the two aforementioned pages.



4. MUR/DND:

MUR / DND (input/output) functions are a special case and the program will not allow to place them in other inputs (I7,I8) or outputs (Q3, Q4) (The same applies to Emergency cord (I6)). The corresponding buttons at the bottom of the page allow us to remove and restore both at the same time

If we wish to delete only one of the two, we select the two corresponding fields and press Delete.

Description	Load/Scene name	Type of scene	Type	Controlled output
I7 Button MUR	MUR		1--1	Q3
I8 Button			1--1	Q4
Q1 Power outlets	Power outlets		General Load	
Q2 AC on/off	AC on/off		General Load	
Q3 Lighting Circuit MUR	MUR		Lighting Circuit	
Q4 Lighting Circuit			Lighting Circuit	

5. Reset Loads:

If we wish to start the design again from the beginning, we press the **Reset all** button and everything is initialized to its default settings.





6. New design from scratch:

The screenshot shows the LOGO! Designer software interface. On the left, there's a sidebar with options like Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, and Exit. The main workspace is divided into sections for Inputs, Outputs, and Scenes. Inputs include various sensors like door contacts, window contacts, and emergency cords. Outputs include lighting circuits and scenes like 'Balcony' and 'Bedside Right'. Scenes are defined by room and type (e.g., Aux NC, Aux, Generic). The bottom toolbar has several buttons: 'Reset all', 'Power user' (which is highlighted with a red box and a red arrow pointing to it), 'MUR/DND', and 'MUR/DND'.

If we wish to make extensive changes, we press the **Power User** button at the bottom and all descriptions are deleted.

Erase or retain MUR/DND, Emergency cord functionality and follow again the steps as described **Sequence of Tasks** paragraph. **Not editible fields are greyed out.**

Steps:

- Change of input/output → Type.** Each time the Type is changed not applicable entries will be erased and missing entries will be highlighted in red. **Fill in or change red fields.**
- Change the Load/Scene name.**
- Allowed optional entries will be dynamically highlighted in orange. **Fill in orange fields as per your design.** Your design is ready!

It is good practice to run **Determine LOGO!** each time a change is applied, so that the design is validated step by step and errors are not accumulated.

7. LOGO! Connections (Optional):

After completing the new design of the room without **errors**, we can proceed to the next steps. At this point, if we wish, we can see the connections of the LOGO! units by pressing the **LOGO! Connections** button. This page will autogenerate and print even if we do not navigate to it.

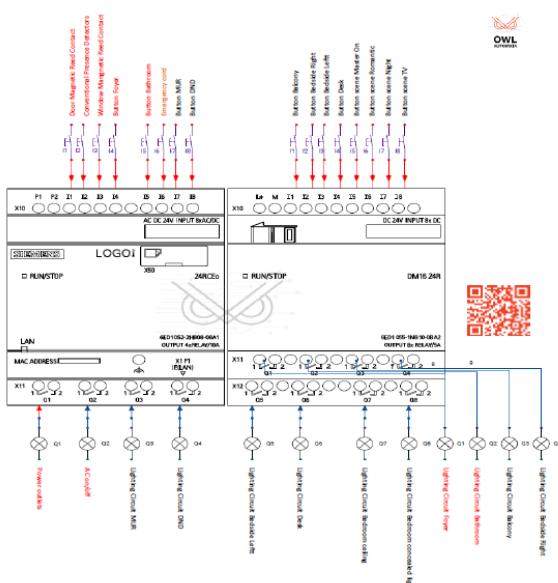
LOGO! KNX Configuration - Elements - Room

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic			
	I2 Conventional Presence Detectors			Aux		Generic			
	I3 Window Reed Contact			Aux (NC)		Generic			
	I4 Button Foyer	Foyer		Toggle	1-1	Q5	Foyer		
	I5 Button scene Bathroom	Bathroom		Emergency cord	Scene		Foyer		
	I6 Emergency cord				Aux		Foyer		
	I7 Button MUR				1-1	Q3	Foyer		
	I8 Button DND				1-1	Q4	Foyer		
	I9 Power outlets				General Load				
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity			Lighting Circuit				
Outputs	O2 Lighting Circuit MUR	MUR		Lighting Circuit					
	O3 Lighting Circuit DND	DND		Lighting Circuit					
	O4 Lighting Circuit DNO			Lighting Circuit					
	O5 Lighting Circuit Foyer	Foyer							
Inputs DMxx 24R Exp. mod., 8DI/8DO	I9 Button Balcony	Balcony		1-1	Q7	Balcony			
	I10 Button Bedside Right	Bedside Right		1-1	Q8	Bed R			
	I11 Button Bedside Left	Bedside Left		1-1	Q9	Bed L			
	I12 Button Desk	Desk		Default	Scene		Q10	Desk	
	I13 Button scene Master On	Master On		Default	Scene		Bed L/R		
	I14 Button scene Romantic	Romantic		Default	Scene		Bed L/R		
	I15 Button scene Night	Night		Toggle	Scene		Bed L/R		
	I16 Button scene TV	TV		Default	Scene		Bed L/R		
	I17 Lighting Circuit Bathroom	Bathroom			Lighting Circuit				
	I18 Lighting Circuit Balcony	Balcony			Lighting Circuit				
Outputs DM8 24R Exp. mod., 4DI/4DO	O7 Lighting Circuit Bedside Right	Bedside Right			Lighting Circuit				
	O8 Lighting Circuit Bedside Left	Bedside Left			Lighting Circuit				
	O9 Lighting Circuit Desk	Desk			Lighting Circuit				
	O10 Lighting Circuit Bed	Bed			Lighting Circuit				
	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling			Lighting Circuit				
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting			Lighting Circuit				
	O13								
	O14								
	O15								
	O16								
Ext17 0									
Ext18 0									
Ext19 0									
Ext20 0									
Set Welcome Guest	Welcome Guest	Default	Scene			1			
Set Guest Out	Guest Out	Default	Scene			2			
0									
0									
0									

LOGO! Connections

Allowed options (Yellow) **Missing/error** (Red)

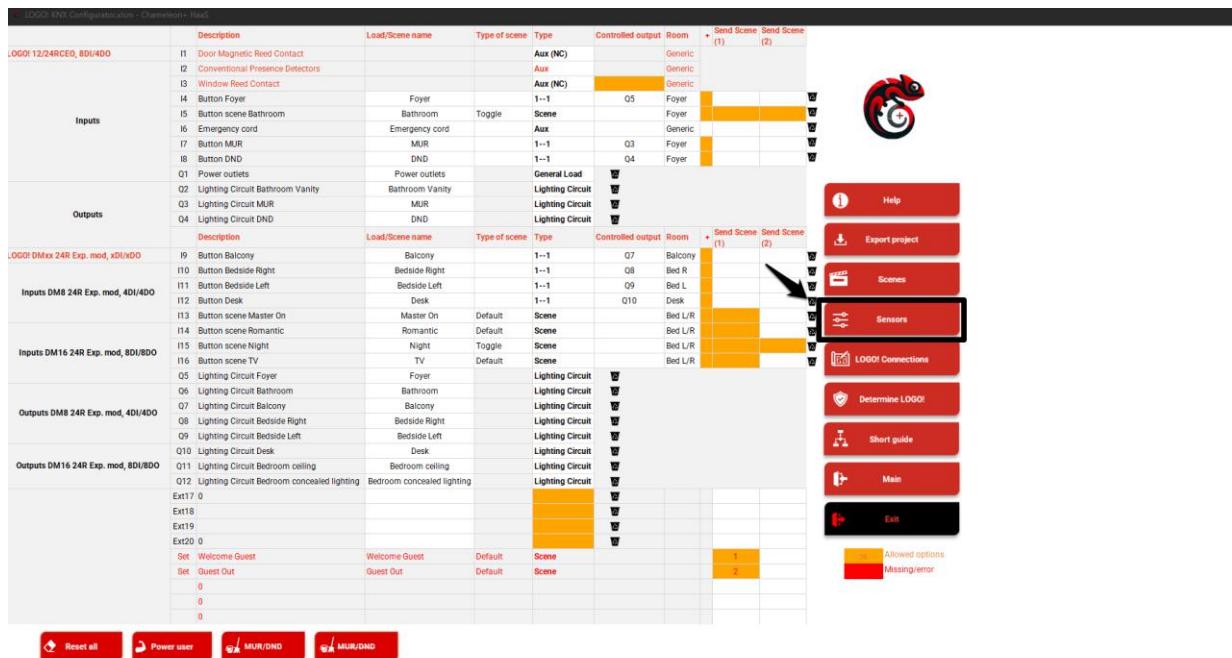
Buttons: Reset all, Power user, MUR/DND, MUR/DNO



8. Sensors:

Press the **Sensors** button

and navigate to the Sensors page where a table has formed with the sensor names and their corresponding placement.



	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	+ Send Scene (1)	+ Send Scene (2)
Inputs	I1 Door Magnetic Reed Contact			Aux (NC)		Generic		
	I2 Conventional Presence Detectors			Aux		Generic		
	I3 Window Reed Contact			Aux (NC)		Generic		
	I4 Button Foyer	Foyer		Toggle	1-1	Q5	Foyer	
	I5 Button scene Bathroom	Bathroom						
	I6 Emergency cord	Emergency cord						
	I7 Button MUR	MUR						
	I8 Button DND	DND						
	I9 Power cutlets	Power cutlets						
	I10 Lighting Circuit Bathroom Vanity	Bathroom Vanity						
Outputs	O1 Button Balcony	Balcony						
	O2 Button Bedside Right	Bedside Right						
	O3 Button Bedside Left	Bedside Left						
	O4 Button Desk	Desk						
Inputs DM8 24R Exp. mod, 4DI/4DO	I11 Button scene Master On	Master On		Default	Scene			
	I12 Button Romantic	Romantic		Default	Scene			
	I13 Button scene Night	Night		Toggle	Scene			
	I14 Button scene TV	TV		Default	Scene			
	I15 Lighting Circuit Foyer	Foyer						
	I16 Lighting Circuit Bathroom	Bathroom						
	I17 Lighting Circuit Balcony	Balcony						
	I18 Lighting Circuit Bedside Right	Bedside Right						
	I19 Lighting Circuit Bedside Left	Bedside Left						
	I20 Lighting Circuit Desk	Desk						
Outputs DM8 24R Exp. mod, 4DI/4DO	O1 Bedroom ceiling	Bedroom ceiling						
	O2 Bedroom concealed lighting	Bedroom concealed lighting						
	O3 Ext17 0							
	O4 Ext18							
	O5 Ext19							
	O6 Ext20 0							
	Set Welcome Guest	Welcome Guest		Default	Scene			
	Set Guest Out	Guest Out		Default	Scene			
	0							
	0							
	0							

Buttons at the bottom:

- Reset all
- Power user
- MUR/DND
- MUR/DND

Sidebar Buttons:

- Help
- Export project
- Scenes
- Sensors** (highlighted with a red box)
- LOGO! Connections
- Determine LOGO!
- Short guide
- Main
- Exit

Legend:

- Yellow box: Allowed options
- Red box: Missing/error

Inputs that are not designated as Ix or Extx/Ix will not be shown here as they are KNX pushbuttons exclusively.

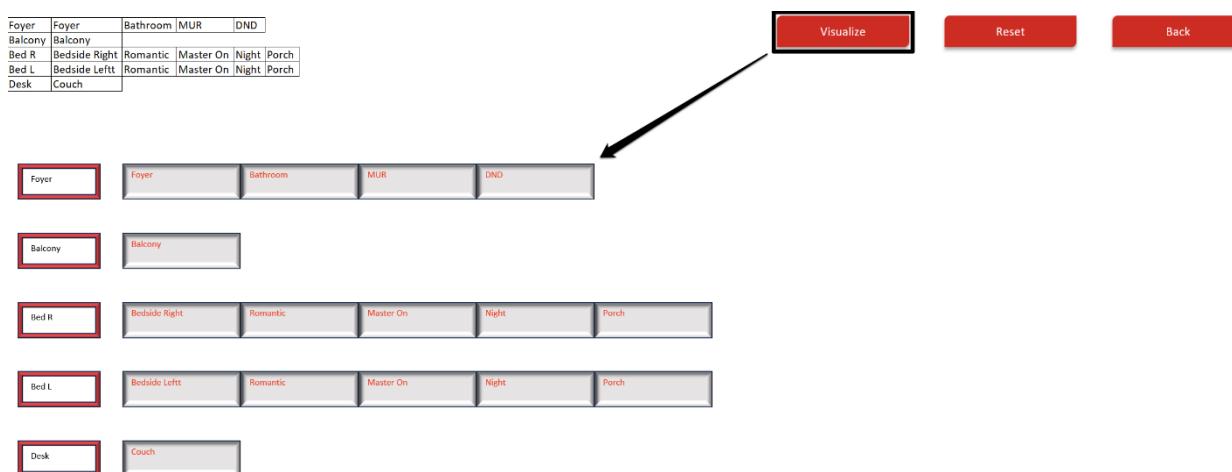


Foyer	Foyer	Bathroom	MUR	DND	
Balcony	Balcony				
Bed R	Bedside Right	Romantic	Master On	Night	Porch
Bed L	Bedside Left	Romantic	Master On	Night	Porch
Desk	Couch				

Buttons:

- Visualize
- Reset
- Back

Press the **Visualize** button, a schematic is created with the sensor placement in red boxes and the sensor buttons in grey to help to end customer to form an understanding of the design.



Buttons:

- Visualize
- Reset
- Back

Schematic Diagram:

- Foyer (red box)
- Foyer (grey box)
- Bathroom (grey box)
- MUR (grey box)
- DND (grey box)
- Balcony (red box)
- Balcony (grey box)
- Bed R (red box)
- Bedside Right (grey box)
- Romantic (grey box)
- Master On (grey box)
- Night (grey box)
- Porch (grey box)
- Bed L (red box)
- Bedside Left (grey box)
- Romantic (grey box)
- Master On (grey box)
- Night (grey box)
- Porch (grey box)
- Desk (red box)
- Couch (grey box)



Press the **Reset** button, to delete the schematic, **in case we do not want to print it.**

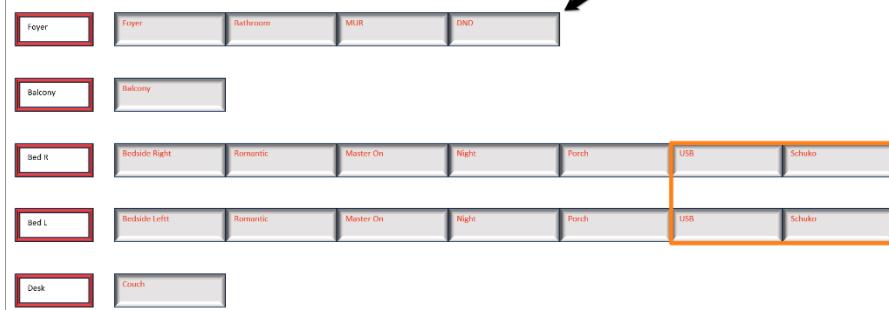
Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night
Bed L	Bedside Leftt	Romantic	Master On	Night
Desk	Couch		USB	Schuko



In addition, other passive elements can be added (not LOGO inputs !) to the sensor buttons such as sockets, USB , RJ45, HDMI etc. , simply by writing in the adjacent fields.

Press again the **Visualize** button, to generate again the sensor schematic. The added passive elements will now also appear.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Romantic	Master On	Night
Bed L	Bedside Leftt	Romantic	Master On	Night
Desk	Couch		USB	Schuko



After completing sensor design press the **Back** button to return to the main.

9. Cables

In the Sensors page by pressing the **Cables** button, we can navigate to the Cables screen.

Foyer	Foyer	Bathroom	MUR	DND
Balcony	Balcony			
Bed R	Bedside Right	Master On	Romantic	Night
Bed L	Bedside Leftt	Master On	Romantic	Night



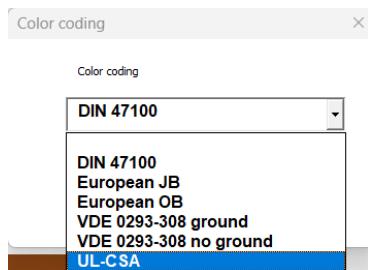


In the Cables screen, we can see that the program based on the design has grouped inputs per sensor location.

The screenshot shows the 'Cables' screen of the LOGO! Hotel Configurator software. It displays a table of sensor locations and their corresponding cable details. A yellow frame highlights the 'DIN 47100' color coding section at the top right. A black frame groups several rows of data (Foyer, Bathroom, MUR, DND) under a 'Common' entry. An orange frame highlights the core numbers (1-5) in the 'Nr of cores' column. To the right of the table are color-coded squares for each core: white, brown, green, yellow, grey, and pink. A red frame highlights the connection points in the LOGO! and sensor assembly columns. The table includes rows for Cover, Foyer, Bathroom, MUR, DND, Common, Balcony, Bed R, Bed L, Desk, Door, Window, and various sensor types like Master On, Romantic, Night, TV, and Magnetic Reed Contact.

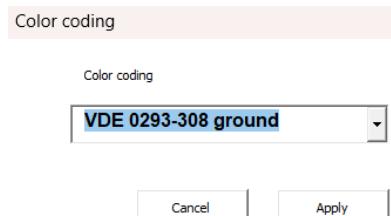
For instance, in Foyer sensor position, Foyer, Bathroom, MUR and DND have been grouped together (see black frame). So, a five-core (Common has been added) cable from Foyer sensor to LOGO! has been calculated. Connection points in LOGO! and sensor assembly are also illustrated (see red frame). Core cables are numbered (see orange frame) and color coded as per DIN 47100 in this example (see yellow frame).

By pressing the **Color coding** button, we can choose from all possible color codings.



Available options are DIN 47100, European OB, European JB, VDE 0293-308 with ground cable, VDE 0293-308 without ground cable and UL-CSA.

Select the color coding you want and press Apply (or Cancel to abort operation).





The cables are now given with the chosen color scheme.

LOGO Hotel Configurator 64 bitumen - Chameleon Haas

	LOGO!	Nr of cores	1	2	3	4	5
Foyer	I4	Core	green	GN	yellow	YE	
Bathroom	I5	Core	grey	GY			
MUR	I7	Core	black	BK			
DND	I8	Core	brown	BN			
Common	Common	Core	blue	BU			
Balcony	ILOGO!	Nr of cores	2				
Balcony	I9	Core	brown	BN			
Common	Common	Core	blue	BU			
Bed R	LOGO!	Nr of cores	6				
Bedside Right	I10	Core	green	GN	yellow	YE	
Master On	I13	Core	black	BK			
Romantic	I14	Core	black	BK			
Night	I15	Core	black	BK			
TV	I16	Core	black	BK			
Common	Common	Core	black	BK			
Bed L	LOGO!	Nr of cores	6				
Bedside Left	I11	Core	green	GN	yellow	YE	
Master On	I13	Core	black	BK			
Romantic	I14	Core	black	BK			
Night	I15	Core	black	BK			
TV	I16	Core	black	BK			
Common	Common	Core	black	BK			
Desk	LOGO!	Nr of cores	2				
Desk	I12	Core	brown	BN			
Common	Common	Core	blue	BU			
Door	LOGO!	Nr of cores	2				
Door Magnetic Reed Contact	I1	Core	brown	BN			
Common	Common	Core	blue	BU			
Window	LOGO!	Nr of cores	2				
Window Magnetic Reed Contact	I3	Core	brown	BN			
Common	Common	Core	blue	BU			

Color coding
Back
Help

In this example we can see that for a six core cable we have a green/yellow core and five black cables with numbers (which can be seen next to the color strip). Configuring this page will allow to get a quick calculation of all control cables and provide with a color coded guide for wiring.

10. Scenes:

Having completed the sensor design, press the **Scenes** button.

A popup screen will appear where a PMS option can be checked. PMS stands for Property Management

LOGO! KNX Configuration - [Document Plan]

	Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)	
LOGO! 12/24RCEO_8DI/4DO	I1 Door Magnetic Reed Contact			Aux (NC)		Generic			
	I2 Conventional Presence Detectors			Aux		Generic			
	I3 Window Reed Contact			Aux (NC)		Generic			
Inputs	I4 Button Foyer	Foyer	1-1	Q5	Foyer				
	I5 Button scene Bathroom	Bathroom	Toggle	Scene	Foyer				
	I6 Emergency cord			Aux		Generic			
	I7 Button MUR			MUR	1-1	Q3	Foyer		
	I8 Button DND			DND	1-1	Q4	Foyer		
	I9 Power cutouts	Power outlets			General Load				
Outputs	O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit					
	O3 Lighting Circuit MUR	MUR		Lighting Circuit					
	O4 Lighting Circuit DND	DND		Lighting Circuit					
	Inputs DMxx 24R Exp. mod., xDI/xDO	I9 Button Balcony	Balcony	1-1	Q7	Balcony			
I10 Button Bedside Right		Bedside Right	1-1	Q8	Bed R				
I11 Button Bedside Left		Bedside Left	1-1	Q9	Bed L				
I12 Button Desk		Desk	1-1	Q10	Desk				
I13 Button scene Master On		Master On	Default	Scene		Bed L/R			
I14 Button scene Romantic		Romantic	Default	Scene		Bed L/R			
I15 Button scene Night		Night	Toggle	Scene		Bed L/R			
I16 Button scene TV		TV	Default	Scene		Bed L/R			
Outputs DM8 24R Exp. mod., 4DI/4DO		O5 Lighting Circuit Foyer	Foyer		Lighting Circuit				
		O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit				
	O7 Lighting Circuit Balcony	Balcony		Lighting Circuit					
	O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit					
	O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit					
	O10 Lighting Circuit Desk	Desk		Lighting Circuit					
Outputs DM16 24R Exp. mod., 8DI/8DO	O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit					
	O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit					
	Ext17 0								
Ext18									
Ext19									
Ext20 0									
Set Welcome Guest	Welcome Guest		Default	Scene		1			
Set Guest Out	Guest Out		Default	Scene		2			
0									
0									
0									



- i Help
- d Export project
- s Scenes
- s Sensors
- c LOGO! Connections
- d Determine LOGO!
- g Short guide
- m Main
- e Exit

Allowed options
Missing option

✖ Reset all

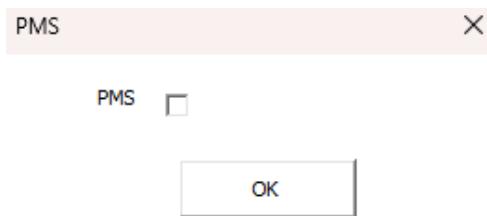
⚡ Power user

⬇️ MUR/DND

⬇️ MUR/DND



System and is the software that hotels use to manage various aspects of their business operations, including reservations, guest management (check in/Check out), room inventory, invoicing etc.



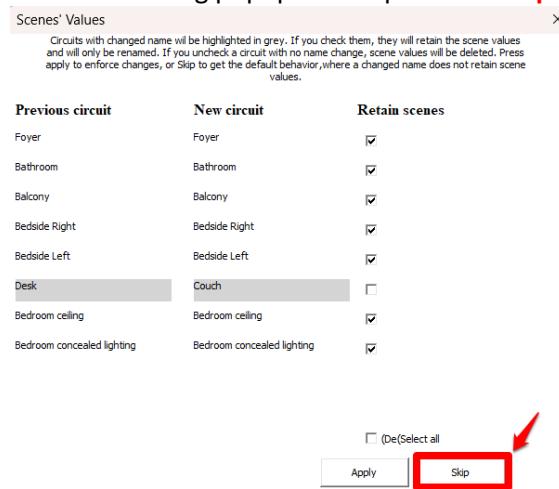
If PMS is left unchecked only a **Welcome Guest** and **Guest Out** scene is created. These scenes are triggered by the occupancy detection algorithm.

Checking the PMS option, will create a Check in/Check out object (input) that we can connect to the PMS (through a software bridge). An additional **Guest Away** scene is created. These scenes are again triggered by the occupancy detection algorithm. Customer egress now is evaluated against the rented/unrented status of the room. Egress from a rented room will trigger a **Guest Out** scene.

The **Guest Away** scene will be triggered upon egress from an unrented room and upon receiving a Check out signal.

Press ok after making your choice.

On the following popup screen press the **Skip** button



and navigate to Scenes page.

LOGO Hotel Configurator 64 bit.xlsx - Chameleon HaaS

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-		-	-	+	-
Q6	Bathroom	+	-	+		-	-	
Q7	Balcony		-		-	-	-	
Q8	Bedside Right		-		-	-	-	-
Q9	Bedside Leftt		-		-	-	-	-
Q10	Desk		-		-	-	-	+
Q11	Bedroom ceiling		-	+	-	-	-	-
Q12	Bedroom concealed lighting		-	+	+	-	-	+





Fill in the table with +, - or blanks (press Delete on the keyboard, to leave a field empty) ("Basic concepts" chapter). We have the choice either to fill in the fields, or print the blank Scenes Template page. In this case the prints can be filled by the end customer without using the software.

Entering the page, for any unchanged inputs/outputs the fields will be filled with their presets.

It is worth noting that the Scenes page is dynamic. So we can navigate back to the main page and change the design of the room. Returning to the Scenes page, the program has kept in its memory the values we have entered (_ , +, -) and will restore them, leaving any fields affected by the changes we have made, empty to fill in .

In the following example Scenes **Romantic** and **Master On** were swapped in inputs I13 and I14, **TV** scene has been renamed to **Porch** and finally the **Desk** sensor and circuit were renamed to **Couch**.

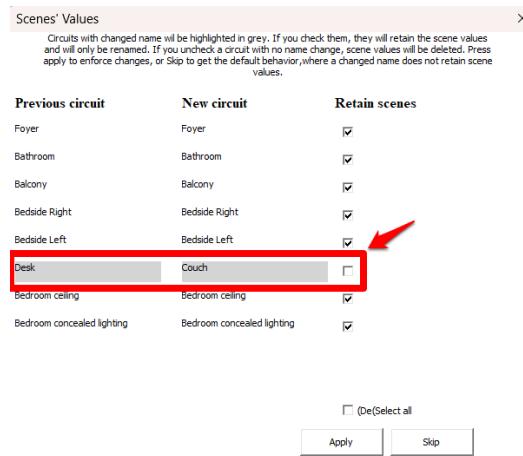
LOGO! 12/24RCEO, 8DI/4DO		Description	Load/Scene name	Type of scene	Type	Controlled output	Room
Inputs	I1	Door Magnetic Reed Contact			Aux (NC)		Generic
	I2	Conventional Presence Detectors			Aux		Generic
	I3	Window Magnetic Reed Contact			Aux (NC)		Generic
	I4	Button Foyer	Foyer		1-1	Q5	Foyer
	I5	Button scene Bathroom	Bathroom	Toggle	Scene		Foyer
	I6	Emergency cord	Emergency cord		Aux		Generic
	I7	Button MUR	MUR		1-1	Q3	Foyer
	I8	Button DND	DND		1-1	Q4	Foyer
Outputs	Q1	Power outlets	Power outlets		General Load		
	Q2	Bathroom Vanity	Bathroom Vanity		General Load		
	Q3	Lighting Circuit MUR	MUR		Lighting Circuit		
	Q4	Lighting Circuit DND	DND		Lighting Circuit		
	Description		Load/Scene name	Type of scene	Type	Controlled output	Room
	I9	Button Balcony	Balcony		1-1	Q7	Balcony
	I10	Button Bedside Right	Bedside Right		1-1	Q8	Bed R
	I11	Button Bedside Left	Bedside Left		1-1	Q9	Bed L
Inputs DM8 24R Exp. mod, 4DI/4DO	I12	Button Couch	Couch		1-1	Q10	Desk
	I13	Button scene Romantic	Romantic	Default	Scene		Bed L/R
	I14	Button scene Romantic	Romantic	Default	Scene		Bed L/R
	I15	Button scene Night	Night	Toggle	Scene		Bed L/R
	I16	Button scene Porch	Porch	Default	Scene		Bed L/R
	Q5	Lighting Circuit Foyer	Foyer		Lighting Circuit		
	Q6	Lighting Circuit Bathroom	Bathroom		Lighting Circuit		
	Q7	Lighting Circuit Balcony	Balcony		Lighting Circuit		
Outputs DM8 24R Exp. mod, 4DI/4DO	Q8	Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit		
	Q9	Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit		
	Q10	Lighting Circuit Couch	Couch		Lighting Circuit		
	Q11	Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit		
	Q12	Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit		

Romantic and Master On scenes have retained their values, even though we have transposed inputs. The Porch scene and Couch circuit though, which didn't exist before, are left blank to fill.

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-	-	-	-	+	-
Q6	Bathroom	+	-	+	-	-	-	
Q7	Balcony	-		-	-	-	-	
Q8	Bedside Right	-		-	-	-	-	
Q9	Bedside Leftt	-		-	-	-	-	
Q10	Desk	-		-	-	-	-	+
Q11	Bedroom ceiling	-		+	-	-	-	-
Q12	Bedroom concealed lighting	-		+	+	-	-	+
Scenarios	7	Welcome Guest	Guest Out	Romantic	Master On	Night	Night (Toggle)	Porch
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-	-	-	-	+	
Q6	Bathroom	+	-	-	+	-	-	
Q7	Balcony	-		-	-	-	-	
Q8	Bedside Right	-		-	-	-	-	
Q9	Bedside Leftt	-		-	-	-	-	
Q10	Couch	-		-	-	-	-	
Q11	Bedroom ceiling	-		-	+	-	-	
Q12	Bedroom concealed lighting	-		+	+	-	-	

10.1 Advanced Scenes' configuration (Scene Values)

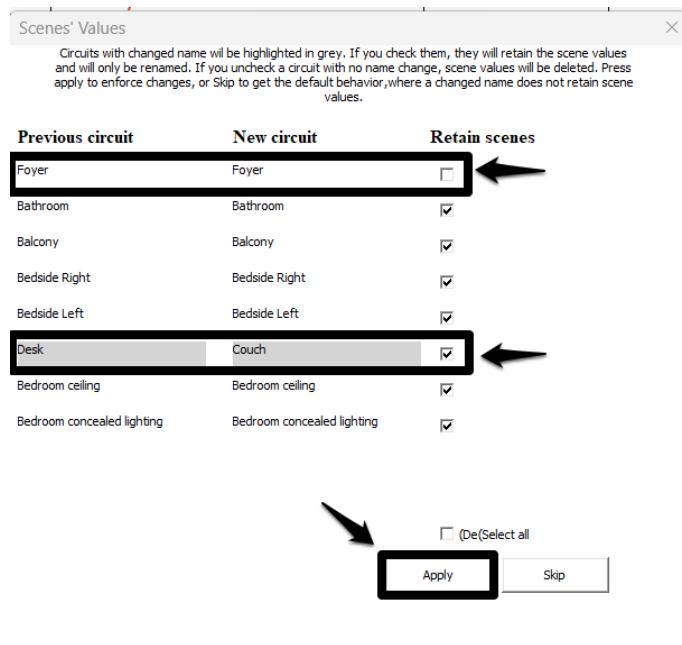
Alternatively, instead of pressing **Skip** on the Scenes' Values popup window we could perform some more advanced functions.



All circuits with a changed name will be highlighted in grey (in this case we can see the Couch circuit which used to be the Desk circuit). The first column (marked Previous circuit) contains all the circuits we had before we did any changes. In the second column (marked New circuit) we can see the new circuit names after our changes. In the third column we can see a Retain scenes option. If this option is checked, the new load will retain the scene values from the Desk circuit.

By default circuits with no name change will be already checked and circuits with a changed name will be unchecked. If we want the default scene functionality described above we can either press **Skip** or **Apply**, without changing the checkboxes' presets.

However, you can opt to tweak the checkboxes. For example, we want the Couch circuit to retain the scene values from the Desk circuit but want to do a new scene setting to Foyer. We can configure the popup as follows and press **Apply**.





As we can see below Foyer is now a blank scene to fill. In the same time, Couch has retained its scene values from the Desk circuit.

Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	Reading
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer							
Q6	Bathroom	+	-	+	-	-	-	
Q7	Balcony		-		-	-	-	
Q8	Bedside Right		-		-	-	-	
Q9	Bedside Left		-		-	-	-	
Q10	Couch		-		-	-	-	
Q11	Bedroom ceiling		-	+	-	-	-	
Q12	Bedroom concealed lighting		-	+	+	-	-	

After completing scenes design press the Back button to navigate to the main screen.

LOGO Hotel Configurator 64 bit x86 - Chameleon Haas								
Scenarios	7	Welcome Guest	Guest Out	Master On	Romantic	Night	Night (Toggle)	TV
Circuits		Oc Guest In	Oc Guest Out	I13 (Out)	I14 (Out)	I15 (Out)	I15 (Toggle)	I16 (Out)
Q5	Foyer	+	-	-	-	-	+	-
Q6	Bathroom	+	-	+	-	-	-	
Q7	Balcony	-	-	-	-	-	-	
Q8	Bedside Right	-	-	-	-	-	-	
Q9	Bedside Left	-	-	-	-	-	-	
Q10	Desk	-	-	-	-	-	-	+
Q11	Bedroom ceiling	-	-	+	-	-	-	-
Q12	Bedroom concealed lighting	-	-	+	+	-	-	+

Back

11. Export Project:

Press the **Export Project** button

The screenshot shows the LOGO! KNX Configurator interface. The main area displays a table of scenes and their configurations. A context menu is open over the 'Send Scene' column, with the 'Export project' option highlighted. To the right of the menu, there is a sidebar with various icons and links.

Description	Load/Scene name	Type of scene	Type	Controlled output	Room	Send Scene (1)	Send Scene (2)
I1 Door Magnetic Reed Contact			Aux (NC)		Generic		
I2 Conventional Presence Detectors			Aux		Generic		
I3 Window Reed Contact			Aux (NC)		Generic		
Inputs							
I4 Button Foyer	Foyer			1-1	Q5 Foyer		
I5 Button scene Bathroom	Bathroom	Toggle	Scene		Foyer	+	+
I6 Emergency cord	Emergency cord		Aux		Generic		
I7 Button MUR	MUR		Scene	1-1	Q3 Foyer		
I8 Button DND	DND		Aux	1-1	Q4 Foyer		
I9 Power outlets	Power outlets		General Load				
Outputs							
O2 Lighting Circuit Bathroom Vanity	Bathroom Vanity		Lighting Circuit				
O3 Lighting Circuit MUR	MUR		Lighting Circuit				
O4 Lighting Circuit DND	DND		Lighting Circuit				
Inputs DMxx 24R Exp. mod., xDI/xDO							
I9 Button Balcony	Balcony		1-1	07 Balcony			
I10 Button Bedside Right	Bedside Right		1-1	08 Bed R			
I11 Button Bedside Left	Bedside Left		1-1	09 Bed L			
I12 Button Desk	Desk		1-1	010 Desk			
Inputs DM8 24R Exp. mod., 4DI/4DO							
I13 Button scene Master On	Master On	Default	Scene		Bed L/R		
I14 Button scene Romantic	Romantic	Default	Scene		Bed R/L		
I15 Button scene Night	Night	Toggle	Scene		Bed L/R		
Inputs DM16 24R Exp. mod., 8DI/8DO							
I16 Button scene TV	TV	Default	Scene		Bed L/R		
Outputs DMxx 24R Exp. mod., 4DI/4DO							
O5 Lighting Circuit Foyer	Foyer		Lighting Circuit				
O6 Lighting Circuit Bathroom	Bathroom		Lighting Circuit				
O7 Lighting Circuit Balcony	Balcony		Lighting Circuit				
O8 Lighting Circuit Bedside Right	Bedside Right		Lighting Circuit				
O9 Lighting Circuit Bedside Left	Bedside Left		Lighting Circuit				
O10 Lighting Circuit Desk	Desk		Lighting Circuit				
Outputs DM16 24R Exp. mod., 8DI/8DO							
O11 Lighting Circuit Bedroom ceiling	Bedroom ceiling		Lighting Circuit				
O12 Lighting Circuit Bedroom concealed lighting	Bedroom concealed lighting		Lighting Circuit				
Ext17 0							
Ext18							
Ext19							
Ext20 0							
Set Welcome Guest	Welcome Guest	Default	Scene		1		
Set Guest Out	Guest Out	Default	Scene		2		
0							
0							
0							

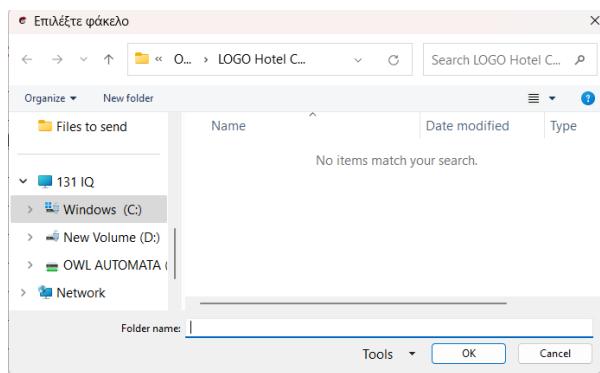
Buttons at the bottom left: Reset all, Power user, MUR/DND.

Icons in the sidebar: Help, Export project, Scenes, Sensors, LOGO! Connections, Determine LOGO!, Short guide, Main, Exit.

Legend at the bottom right: Allowed options (yellow), Missing/error (red).

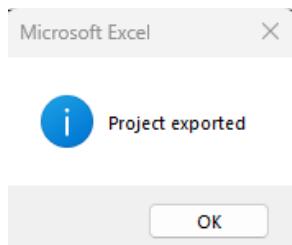


A popup window will allow to select a save location for the generated files.



If no file location is selected, the procedure will be aborted.

When the export process is finished, press OK on the popup window



Press the **Exit** button if you wish to terminate the program

The screenshot shows the configuration software's main interface with a table of device settings and a sidebar with several buttons:

- Inputs:**
 - LOGO! 12/24RCEO, 8DI/4DO:
 - I1 Door Magnetic Reed Contact
 - I2 Conventional Presence Detectors
 - I3 Window Reed Contact
 - I4 Button Foyer
 - I5 Button scene Bathroom
 - I6 Emergency cord
 - I7 Button MUR
 - I8 Button DND
 - I9 Power outlets
 - LOGO! DMxx 24R Exp. mod., xDI/xDO:
 - I10 Button Balcony
 - I11 Button Beside Right
 - I12 Button Beside Left
 - I13 Button scene Master On
 - I14 Button scene Romantic
 - I15 Button scene Night
 - I16 Button scene TV
 - Inputs DM8 24R Exp. mod., 4DI/4DO:
 - I17 Lighting Circuit Foyer
 - I18 Lighting Circuit Bathroom
 - I19 Lighting Circuit Balcony
 - I20 Lighting Circuit Beside Right
 - I21 Lighting Circuit Bedside Left
 - I22 Lighting Circuit Desk
 - Outputs DM16 24R Exp. mod., 8DI/8DO:
 - O1 Lighting Circuit Bedroom ceiling
 - O2 Lighting Circuit Bedroom concealed lighting
 - O3 Lighting Circuit Foyer
 - O4 Lighting Circuit Bathroom
 - O5 Lighting Circuit Balcony
 - O6 Lighting Circuit Beside Right
 - O7 Lighting Circuit Bedside Left
 - O8 Lighting Circuit Desk
 - Outputs DM16 24R Exp. mod., 8DI/8DO:
 - O9 Lighting Circuit Foyer
 - O10 Lighting Circuit Bathroom
 - O11 Lighting Circuit Balcony
 - O12 Lighting Circuit Beside Right
 - O13 Lighting Circuit Bedside Left
 - O14 Lighting Circuit Desk
 - O15 Lighting Circuit Bedroom ceiling
 - O16 Lighting Circuit Bedroom concealed lighting
- Outputs:**
 - LOGO! DMxx 24R Exp. mod., xDI/xDO:
 - O17 Lighting Circuit Foyer
 - O18 Lighting Circuit Bathroom
 - O19 Lighting Circuit Balcony
 - O20 Lighting Circuit Beside Right
 - O21 Lighting Circuit Bedside Left
 - O22 Lighting Circuit Desk
 - Outputs DM16 24R Exp. mod., 8DI/8DO:
 - O23 Lighting Circuit Foyer
 - O24 Lighting Circuit Bathroom
 - O25 Lighting Circuit Balcony
 - O26 Lighting Circuit Beside Right
 - O27 Lighting Circuit Bedside Left
 - O28 Lighting Circuit Desk
- Buttons:**
 - Help
 - Export project
 - Scenes
 - Sensors
 - LOGO! Connections
 - Determine LOGO!
 - Short guide
 - Main
 - Exit** (highlighted with a red arrow)
- Bottom Buttons:**
 - Reset all
 - Power user
 - MUR/DND
 - MUR/DND

In the chosen save location we can find the files that were generated upon pressing the **Export Project** button

Name	Status	Date modified	Type	Size
Cables.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	88 KB
Circuits.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	74 KB
Connections.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	153 KB
IO Setting.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	153 KB
LOGO! import.csv	○	2023-09-12 10:15:00	Microsoft Excel C...	4 KB
LOGO! instructions.txt	○	2023-09-12 10:15:00	Text Document	7 KB
Modbus.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	107 KB
Scenes.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	134 KB
Sensors.pdf	○	2023-09-12 10:15:00	Adobe Acrobat D...	123 KB

The following files have been produced in pdf files

IO setting: Main page, displaying the room configuration.

Cables: Buying and color-coded wiring guide for control cables

Connections: The LOGO ! connections (for wiring a test unit or to be placed as quick reference in the room's consumer unit)

Circuits: Graphical archive of LOGO! and KNX implemented programming to be used as an aid to simulating and live testing your design

Scenes: The configured scenes

Sensors: Our sensors (with or without schematic, at our option)

Modbus: File with the used Modbus address space for configuring Modbus communication in a visualization.

LOGO! import.csv: File that we will import into the diagrams of LOGO ! to update the LOGO ! Soft Comfort with the new name of the inputs and outputs (see "LOGO! Diagram program" guide).

LOGO! instructions: The file will guide us on the Diagram (.lsc) and Network (.snp) files we need to use to reprogram LOGO!. In the same file we will find step-by-step detailed instructions, as in the example below:

In the same file we will find step-by-step detailed instructions, as in the example below:

Select UDF Oc

Select pin Guest In

Right click (Connect with input connector...) on the pin and write *Q5

Select Set

Right click (Connect with input connector...) on the pin and write *Q6

Select Set

Select UDF Oc

Select pin Guest Out

Right click (Connect with input connector...) on the pin and write *Q5

Select Unset

Right click (Connect with input connector...) on the pin and write *Q6

Select Unset

Right click (Connect with input connector...) on the pin and write *Q7

Select Unset

Right click (Connect with input connector...) on the pin and write *Q8

Select Unset

Right click (Connect with input connector...) on the pin and write *Q9

Select Unset

Right click (Connect with input connector...) on the pin and write *Q10

Select Unset

Right click (Connect with input connector...) on the pin and write *Q11

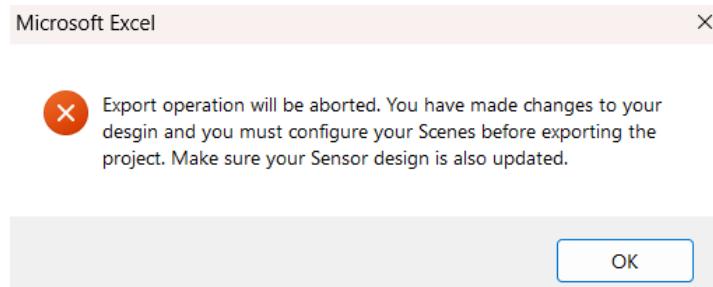
Select Unset

Right click (Connect with input connector...) on the pin and write *Q12

Select Unset

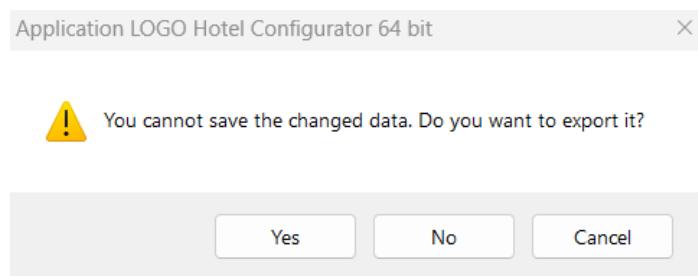


If we have made changes in the IO Setting page and we have not configured the Scenes, we will receive an error message (seen below) and the operation will be aborted.



12. Project export

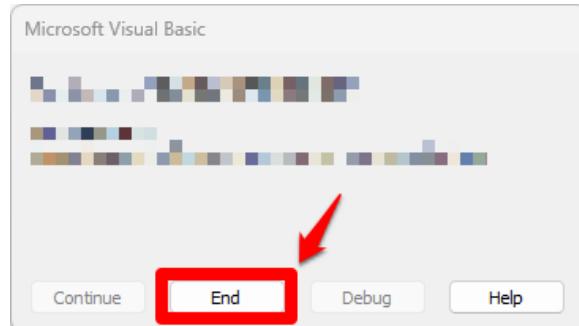
Upon pressing the **Export Project** or the **Exit** button there is the option to save the project. Selecting **Yes** will export the project configuration and **No** will discard any changes made. The software produces a .dat file with the user configuration. This file can later be imported to make further changes.



Upon pressing **Yes** a save file dialog will pop up for the .dat file.

13. Errors:

If an error occurs press the **End** button at the popup window



Exit the Configurator from the **X** control in top right corner



Chameleon

OPTA

1. CONNECTION AND TECHNICAL DATA OF FINDER OPTA LITE

Finder OPTA is a programmable logic controller (PLC), can be installed on din-rail (35mm) and requires 12...24 V DC power supply for operation. On the front side of the device, there are 4 status LEDs, a reset LED and 2 buttons that are used to activate certain functions of OPTA. An RJ45 port is available to connect to an ethernet IP network, as well as a USB-C connection port that is used to communicate with a computer for programming. Images 1 and 2 show the connection and user interface features:

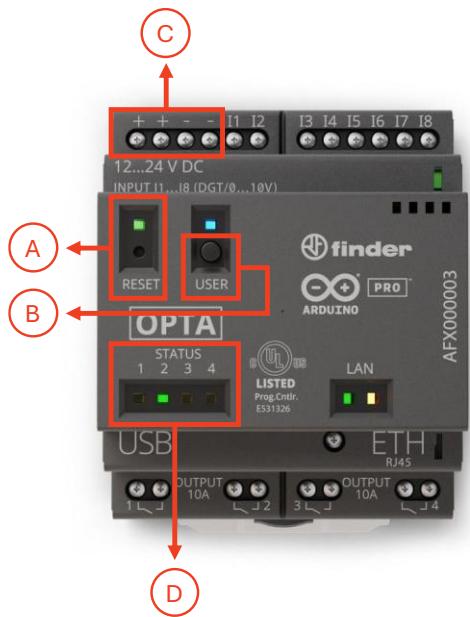


Image 1



Image 2

Point A: Reset LED reset button

Point B: User button

Point C: Power supply connection 12...24 V DC

Point D: Status LEDs 1 to 4

Point A: USB-C connection port for programming via computer

Point B: RJ45 port for ethernet network connection

You can find the device's maximum consumption on the table below, to assist you on choosing the correct power output for your DC power supply:

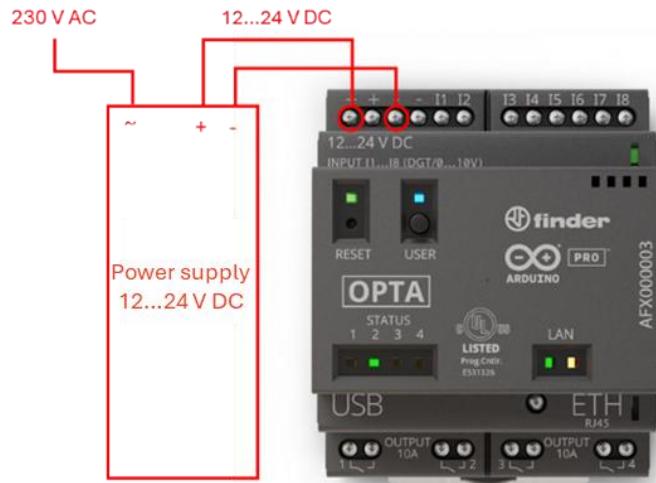
Power supply	Max consumption
12 V DC	2 Watt
24 V DC	2.2 Watt

2. DEVICE PROGRAMMING – REQUEST PROJECT LICENSE

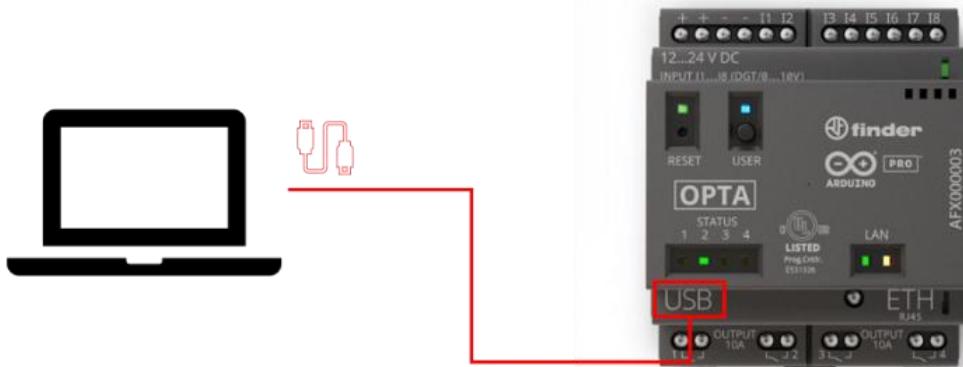
The programming of OPTA is done entirely through “**Chameleon (plus) License Loader**” software tool, located in “**License Loader**” folder (run the setup file to install the software). The following steps provide detailed instructions to program and commission the device:

2.1 Step 1 : Connect OPTA to the power supply and your computer. You need to:

- i. Connect the 12...24 V DC power supply output to the (+) and (-) terminals. There are two available (+) and (-) terminals, you only have to connect to one of them (we can choose the one that better suits our installation, it does not affect device operation)



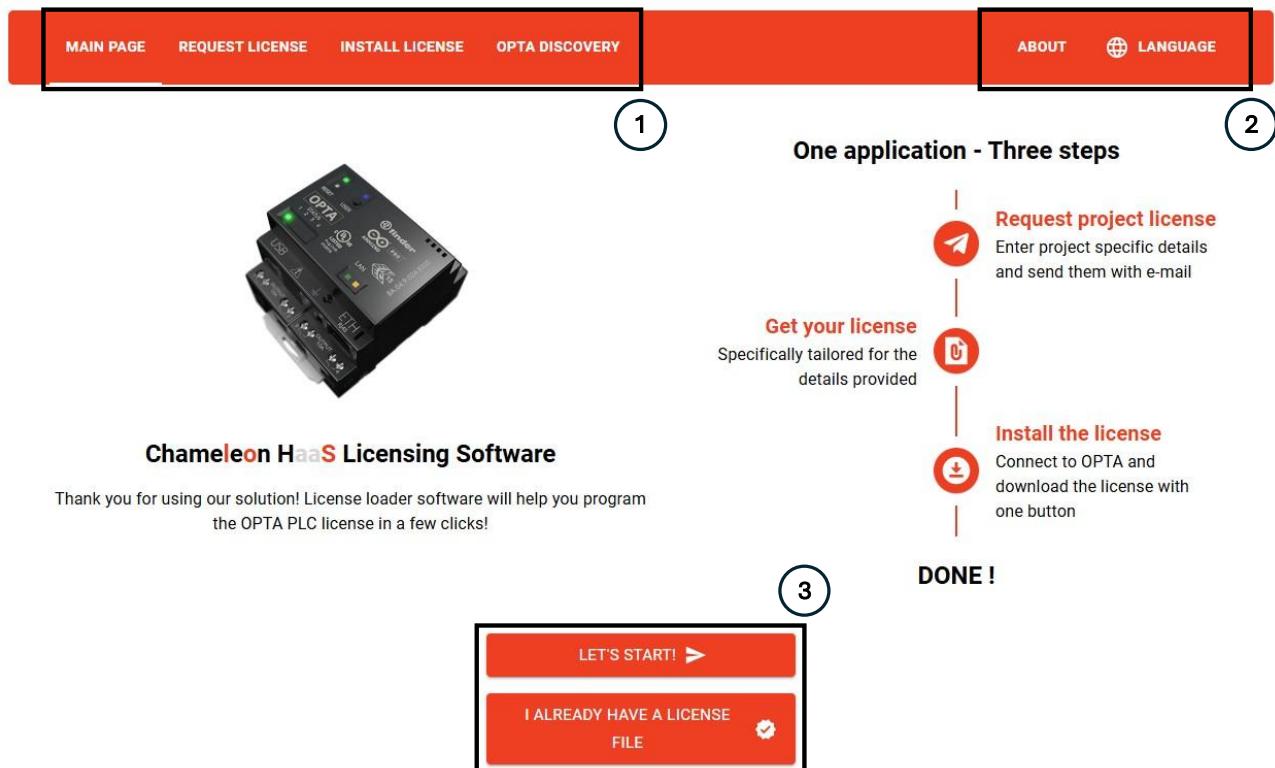
- ii. Connect our computer with a USB cable to the **USB-C** port of OPTA



1.2. Step 2 : On our computer we navigate to the “**License Loader**” folder, which is located in the files we have downloaded. Inside the folder, find “**Chameleon (plus) License Loader setup x64.exe**” file. We double click the folder to install the program and follow the instructions

If the software installation was successful, we should find a shortcut for “**Chameleon (plus) License Loader**” on our desktop (except if you chose not to create a shortcut). Use this shortcut to open the application.

1.3. Step 3 : The application opens on the introduction page (if we accepted the Terms of Service), where the following options are available:



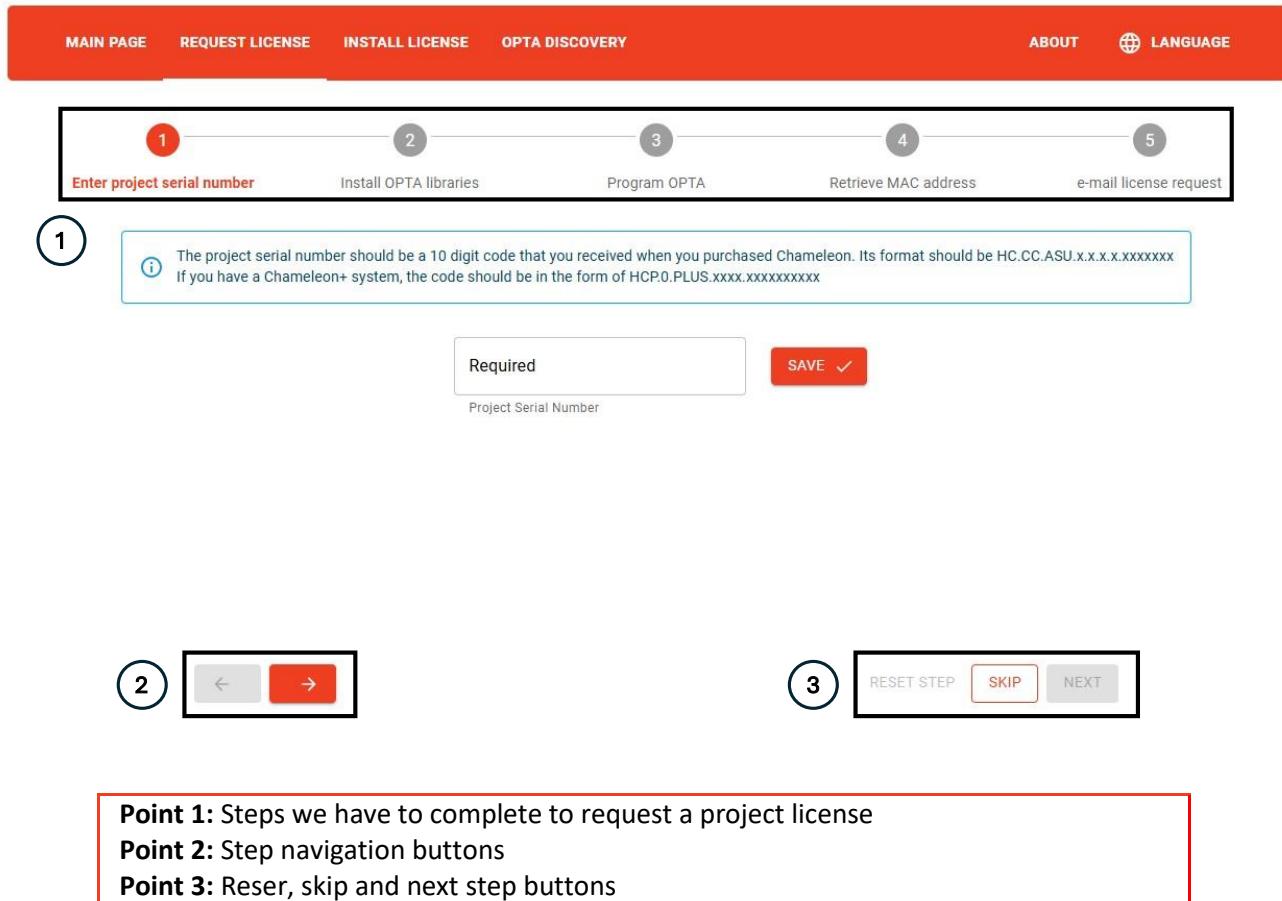
Point 1: Navigation tabs for application pages

Point 2: Change application language and about information for the software

Point 3: Start licensing procedure – go to Request license page

Install license file to OPTA – go to install license page

1.4. Step 4 : Click on “**LET’S START!**” to go to the first step for requesting a license file for our project:



MAIN PAGE REQUEST LICENSE INSTALL LICENSE OPTA DISCOVERY ABOUT LANGUAGE

1 Enter project serial number 2 Install OPTA libraries 3 Program OPTA 4 Retrieve MAC address 5 e-mail license request

1 The project serial number should be a 10 digit code that you received when you purchased Chameleon. Its format should be HC.CC.ASU.x.x.x.x.xxxxxxx. If you have a Chameleon+ system, the code should be in the form of HCP0.PLUS.xxxx.xxxxxxxxxx

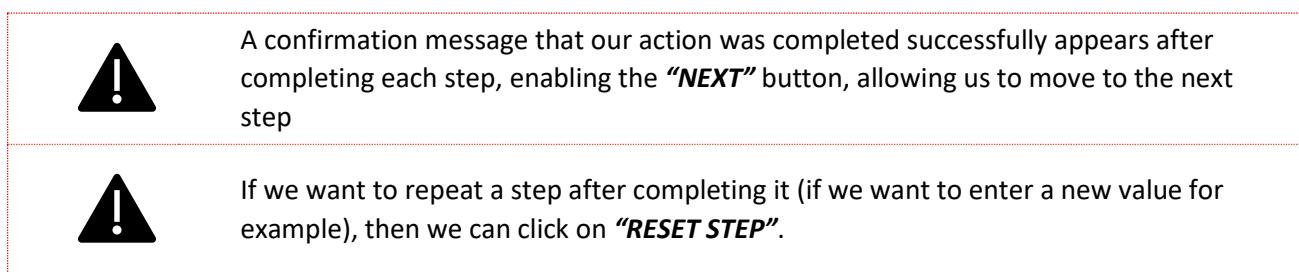
Required Project Serial Number SAVE ✓

2 ← →

3 RESET STEP SKIP NEXT

Point 1: Steps we have to complete to request a project license
Point 2: Step navigation buttons
Point 3: Reser, skip and next step buttons

To create our unique project license request, we have to complete all 5 steps in the corresponding order.
Detailed instructions on how to complete each step can be found in the following sections.



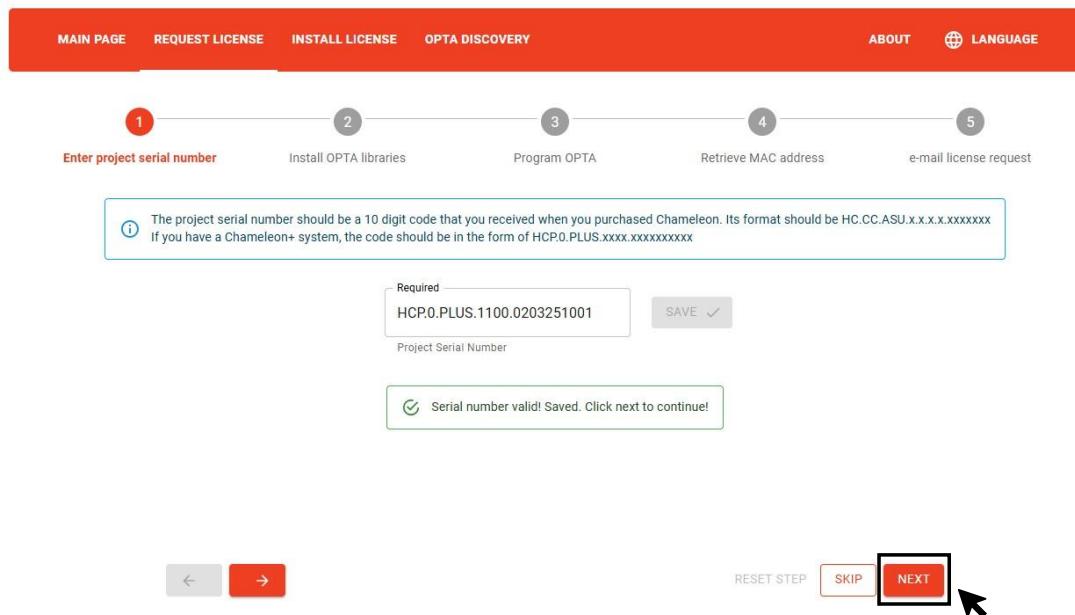
! A confirmation message that our action was completed successfully appears after completing each step, enabling the “**NEXT**” button, allowing us to move to the next step

! If we want to repeat a step after completing it (if we want to enter a new value for example), then we can click on “**RESET STEP**”.

1.5. Step 5 : “Enter project serial number”. In this step, we have to fill the form with the serial number that we received when we purchased the system. The format of the serial number should be

- (a) For Chameleon – HC.CC.ASU.x.x.x.x.xxxxxxxxxx
- (b) For Chameleon Plus – HCP.O.PLUS.xxxx.xxxxxxxxxx

Click on “**SAVE**” button and a confirmation message should appear, if the format of the serial number is correct:



MAIN PAGE REQUEST LICENSE INSTALL LICENSE OPTA DISCOVERY ABOUT LANGUAGE

1 2 3 4 5

Enter project serial number Install OPTA libraries Program OPTA Retrieve MAC address e-mail license request

The project serial number should be a 10 digit code that you received when you purchased Chameleon. Its format should be HC.CC.ASU.x.x.x.x.xxxxxxxxxx. If you have a Chameleon+ system, the code should be in the form of HCP.O.PLUS.xxxx.xxxxxxxxxx

Required
HCP.O.PLUS.1100.0203251001
Project Serial Number

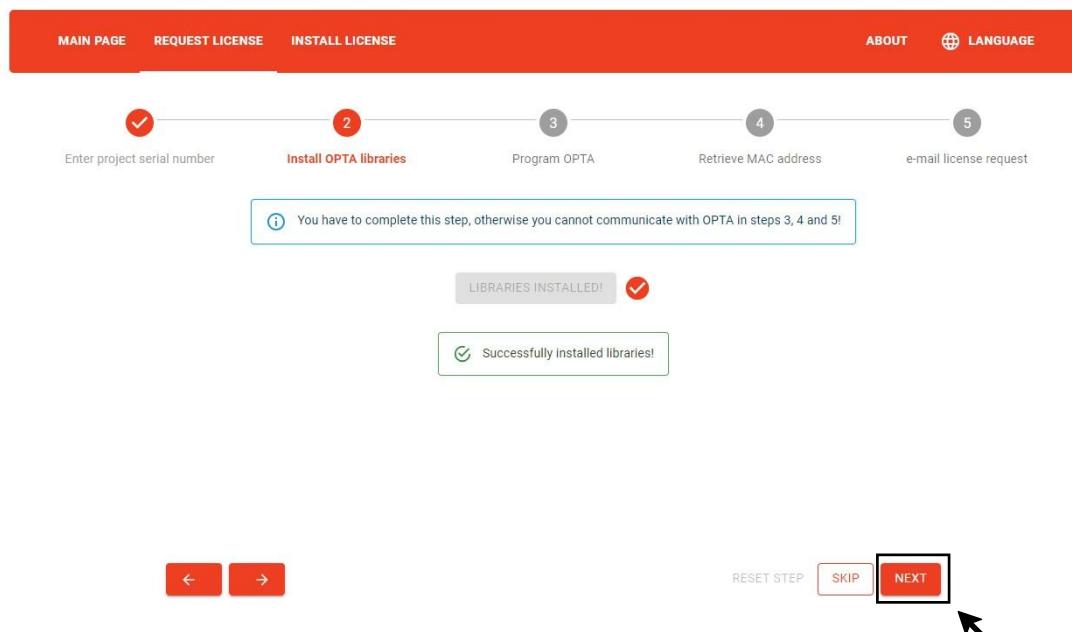
SAVE ✓

Serial number valid! Saved. Click next to continue!

← → RESET STEP SKIP NEXT

Click on “**NEXT**” to continue.

1.6. Step 6 : “Install OPTA libraries”. In this step, we simply click on “**INSTALL OPTA LIBRARIES**” and wait until the action is finished. After getting a confirmation message that our action was successful, we can click on “**NEXT**” to continue.



MAIN PAGE REQUEST LICENSE INSTALL LICENSE ABOUT LANGUAGE

1 2 3 4 5

Enter project serial number Install OPTA libraries Program OPTA Retrieve MAC address e-mail license request

You have to complete this step, otherwise you cannot communicate with OPTA in steps 3, 4 and 5!

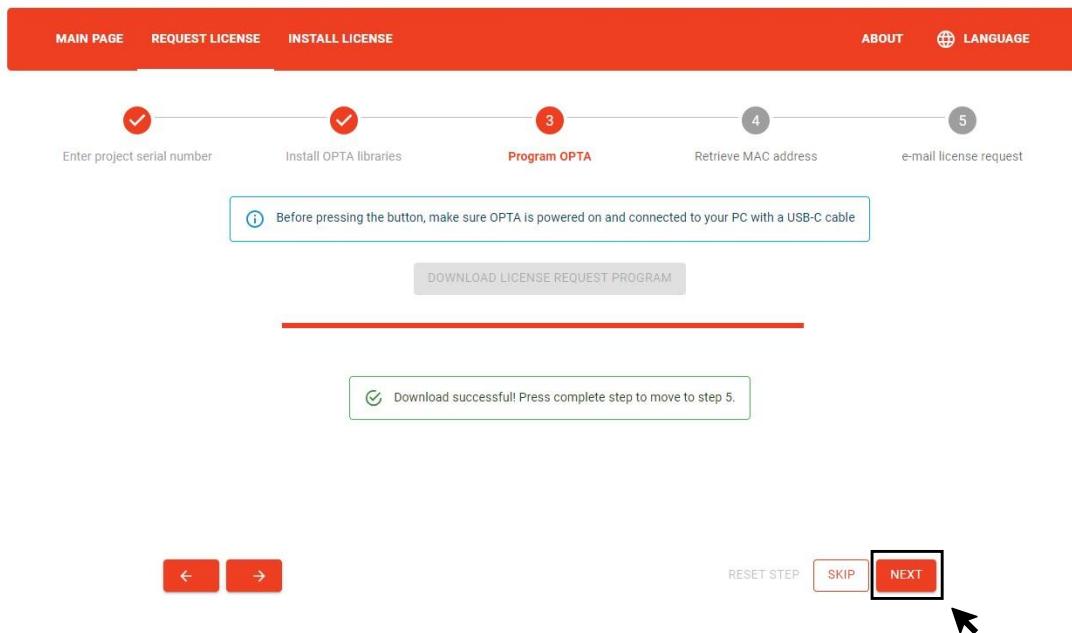
LIBRARIES INSTALLED! ✓

Successfully installed libraries!

← → RESET STEP SKIP NEXT

1.7.Step 7 : “Program OPTA”. In this step, we simply click on “**DOWNLOAD LICENSE REQUEST PROGRAM**” and wait until the action is finished. After getting a confirmation message that our action was successful, we can click on “NEXT” to continue.

ATTENTION! OPTA must be powered on and be connected to our computer via a USB-C cable to complete this step



If step “**Program OPTA** ” completes successfully, the 4 status LEDs on the front of the device should start blinking. This indicates that the step was completed correctly and the device was programmed.





1.8. Step 8 : “Retrieve MAC address”. In this step, we simply click on “**READ OPTA MAC ADDRESS**” and wait until the action is finished. After getting a confirmation message that our action was successful, we can click on “NEXT” to continue.



ATTENTION! OPTA must be powered on and be connected to our computer via a USB-C cable to complete this step

[MAIN PAGE](#)[REQUEST LICENSE](#)[INSTALL LICENSE](#)[ABOUT](#)[LANGUAGE](#)

Enter project serial number



Install OPTA libraries



Program OPTA



Retrieve MAC address



e-mail license request



Before pressing the button, make sure OPTA is powered on and connected to your PC with a USB-C cable. If you completed steps 3 and 4 then the 4 LEDs of the device should blink.

[READ OPTA MAC ADDRESS](#)

Success! Your OPTA MAC address is: XXXXXXXXXX

[RESET STEP](#)[SKIP](#)[NEXT](#)

If step “**Retrieve MAC address**” completes successfully, the confirmation message should also show the MAC address of OPTA we have in our project.

1.9. Step 9 : “e-mail license request”. This is the last step in the procedure for requesting a project license. The table shows the details of our project:

- Project serial number
- Number of hotel rooms (additional rooms if this is an expansion project)
- New project or expansion
- OPTA MAC address



ATTENTION! Carefully review the details of the table since these details will be used to create a project license! If some information is wrong, the request might be denied or the license file we receive might not work for our project!

After reviewing table information, click on “**SEND E-MAIL**”. This button opens our default e-mail client, which we will use to send the license request.



MAIN PAGE REQUEST LICENSE INSTALL LICENSE ABOUT LANGUAGE

Enter project serial number Install OPTA libraries Program OPTA Retrieve MAC address e-mail license request

5

Please review the details in the table! If everything is ok, press "send e-mail" button. **If a value is not set, you cannot send e-mail.**

Project details	Value
Project serial number	[redacted]
Number of hotel rooms	11
New project	Yes
OPTA MAC address	[redacted]

← → RESET STEP SKIP SEND E-MAIL

After clicking on “**SEND E-MAIL**”, if all steps are completed, a page informing us that the procedure was completed successfully should appear. We can either click on “**START OVER**” to repeat the procedure, or click on “**GO TO INSTALL LICENSE**” to continue to license installation:

MAIN PAGE REQUEST LICENSE INSTALL LICENSE ABOUT LANGUAGE

Enter project serial number Install OPTA libraries Program OPTA Retrieve MAC address e-mail license request

All steps completed! You will soon receive an e-mail with a license file for your project!
Make sure you sent the e-mail with your project details!

START OVER GO TO INSTALL LICENSE



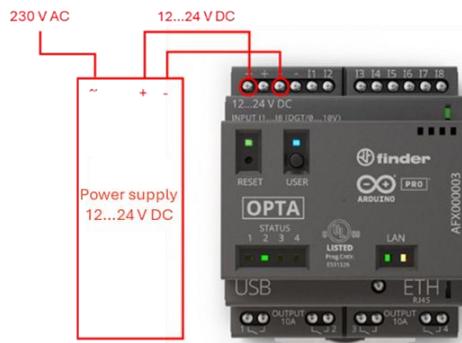
The information message lets us know that we will soon receive an e-mail with our project license file. To complete the license installation of our project, we must have this file!

2. DEVICE PROGRAMMING – ACTIVATE PROJECT LICENSE

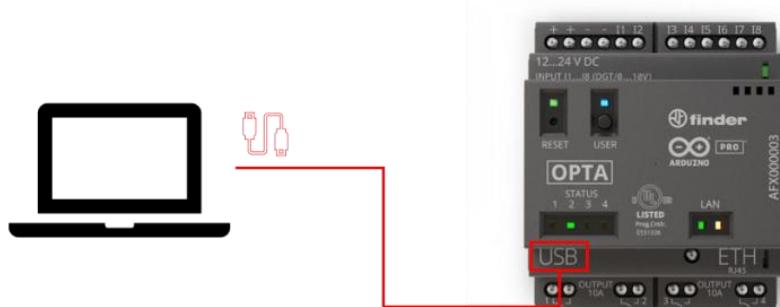
If all steps of section 2 are completed and the project details are valid, we will receive a license file named “***main.ino.bin***”. We will use that file in application “***Chameleon (plus) License Loader***” to license our project.

1.1. Step 1 : Connect OPTA to the power supply and your computer. **The device must also be connected to the IP network of the project with an ethernet cable**. You need to:

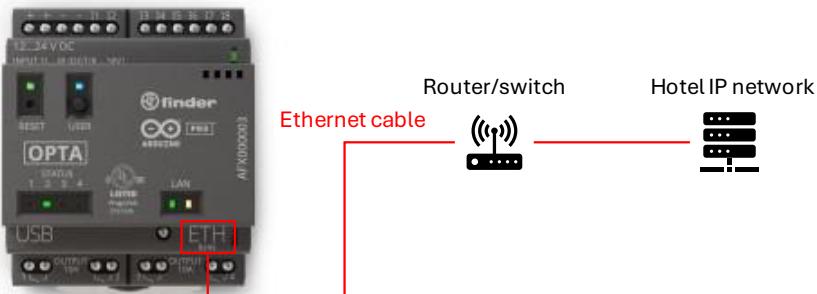
- i. Connect the 12...24 V DC power supply output to the (+) and (-) terminals. There are two available (+) and (-) terminals, you only have to connect to one of them (we can choose the one that better suits our installation, it does not affect device operation)



- ii. Connect our computer with a USB cable to the USB-C port of OPTA



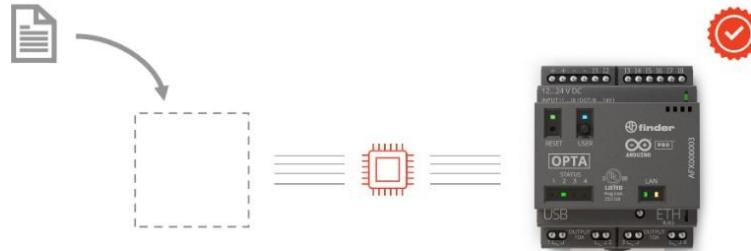
- iii. Connect the device to the IP network of the hotel with an ethernet cable via the RJ45 port





1.2. Step 2 : Open the application and navigate to page “**INSTALL LICENSE**” :

The screenshot shows the top navigation bar with four tabs: 'MAIN PAGE', 'REQUEST LICENSE', 'INSTALL LICENSE' (which is highlighted in white), and 'ABOUT'. To the right of the tabs are 'LANGUAGE' and a globe icon.



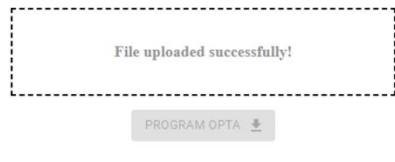
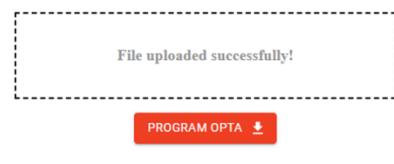
Upload the license file you received via e-mail and press program OPTA button to complete the installation!
Make sure OPTA is powered on and connected to your PC with a USB-C cable



Drag and drop the file into the dashed box or just click inside the dashed box to browse for your file in your folders and open it. As soon as the file is loaded, the button “**PROGRAM OPTA**” will be activated. We click on it and wait for the installation to complete.



ATTENTION! OPTA must be powered on and be connected to our computer via a USB-C cable to complete this step





After the programming of the device is completed, we can safely remove the USB-C cable from OPTA and close “**Chameleon (plus) License Loader**” application or navigate to “**OPTA Discovery**” page, to start monitoring service for installed license devices in your project (see section 3 – OPTA Discovery page). The device is now ready and the project license is active.



Chameleon HaaS system requires a license to operate. If no valid license is present in a project, **the system will stop functioning after 30 days**



The license file “**main.ino.bin**” is unique for the OPTA device of our project and cannot be used on any other OPTA
In case of a fault/replacement of OPTA device, you will have to repeat the procedure and get a new license file

In the next section, we will examine the operating instructions of OPTA, e.g. how to change IP address, as well as diagnostic information through the LEDs on the front of the device.

3. OPTA DISCOVERY PAGE

After successful Chameleon (plus) license installation, it is possible to monitor the status of OPTA through “**Chameleon (plus) License Loader**” software. First, navigate to “**OPTA Discovery**” page:



On this page, there is an option to scan your network for OPTA devices, to make sure that there is at least one installed in the project. Simply choose the network interface that you wish to scan, either Wi-Fi or Ethernet, and click “**SCAN NETWORK**”. The detected devices should appear on the page.

The screenshot shows the 'OPTA DISCOVERY' section of the application. At the top, there are icons for a computer monitor and server, followed by a series of dots indicating a progress bar. To the right is a small image of an OPTA device. Below this is a table with two rows:

Manufacturer	MAC Address	IP Address
ARDUINO AG	A8:61:0A:50:5A:C5	192.168.0.99

At the bottom of the table are three buttons: 'START OPTA MONITOR' (red), 'STOP OPTA MONITOR' (grey), and 'OPEN STATUS PAGE' (grey).

Point 1: Select your network interface, e.g. Ethernet, and click scan network

Point 2: The table will show discovered devices, if there are any.

The monitoring service can be started or stopped from the following two buttons on the bottom of the page:

START OPTA MONITOR **STOP OPTA MONITOR** **OPEN STATUS PAGE**

The monitoring service will run on the background and will check the network and license status of all OPTA devices in your installation.

The service can be stopped either by clicking “**STOP OPTA MONITOR**” or by closing the application.

The application minimizes to the system tray if you accidentally click on the close button of the window. To completely close the application, you have to select quit through the system tray. If you close the application, no new status updates will be received, until you restart the service.



You can check for discovered OPTA devices, their network status and their license status by clicking on the “**OPEN STATUS PAGE**” button. This will open a pop-up window that has a table with all discovered devices.



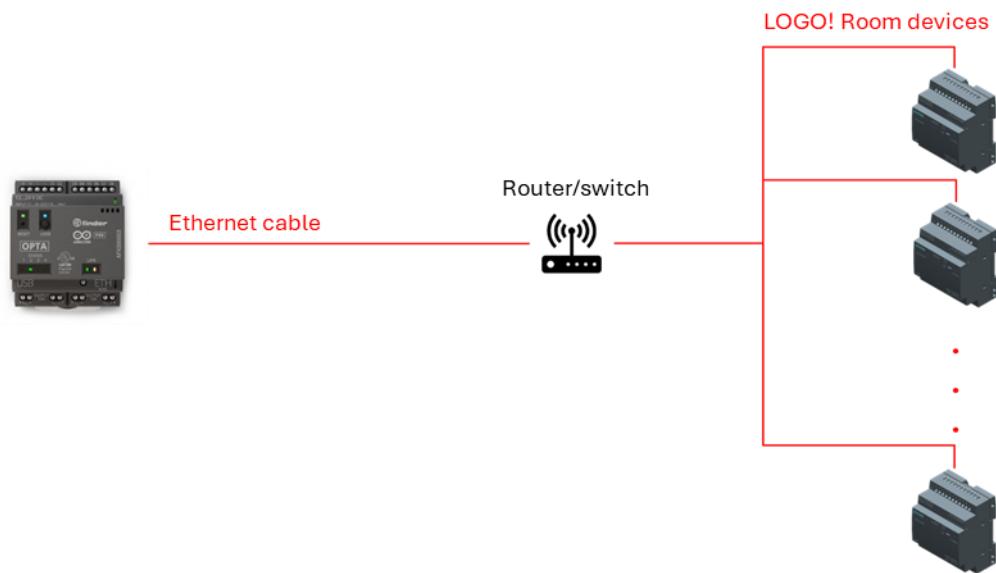
The pop-up window has information regarding whether the service is running, time of last update, license status of each device, IP and MAC address, serial number and the network status (if device is reachable through ping).



Each OPTA device sends each status every 1 hour. Therefore, the application will take a maximum of 1 hour to update the status page

4. OPERATING INSTRUCTIONS

OPTA scans the IP network range it belongs to for any LOGO! device and validates their license. We must confirm that OPTA is connected to the same IP network as LOGO! devices of the guest rooms and OPTA has an address is in the same range (e.g. 192.168.0.1 to 192.168.0.255).



We can use the USER button on the front side of the device to rescan LOGO! devices or change the IP address of OPTA. Additionally, by pressing the RESET button, we can restart the device in case of an error.

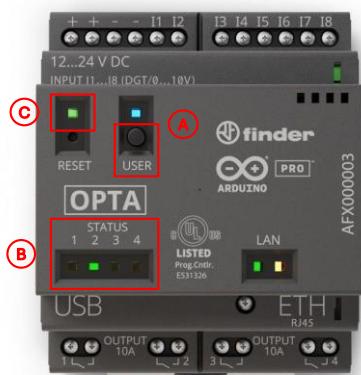
4.1. USER BUTTON

The User button allows us to set the OPTA to a state where we can perform certain functions or procedures. The available functions of the USER button are:

(1) Rescan device network, (2) Change IP address, (3) Restore default IP address and (4) Set IP address dynamically (DHCP)

4.1.1. Rescan device network

One press of the USER button initiates a scan of the IP network for connected LOGO! devices. This function can be useful when we need to replace a faulty LOGO! device or if we change the IP addresses of LOGO! devices.



- **A – Press USER button once:** Start of device network scan
- **B – STATUS LED 3 and 4 turn off:** If either of these LEDs was on, it will turn off when the scan starts. As soon as the scan is completed, one of these LEDs will turn on with green color, depending on the number of devices that were discovered
- **C – LED RESET lights on constant green:** As long as the scan is running, Reset LED will remain turned on and green

4.1.2. Change IP address

Two consecutive presses of the USER button start the embedded web server of OPTA for 5 minutes, which allows us to change the IP address of the device.



- **A – Two consecutive presses of the USER button:**
Start the embedded web server for 5 minutes
- **B – LED 1 to 4 light on constant green:** As long as the embedded web server is running, STATUS LEDs 1 to 4 will remain turned on and green

When the 4 STATUS LEDs are turned on and green, we can be sure that we pressed the USER button correctly and the web server has started. We can now choose our favorite browser application (Firefox, Chrome, Edge) and enter the IP address of OPTA on the search field. Follow the simple instructions to set a new IP address for OPTA.



The default IP address of OPTA is **192.168.0.99**

In case you changed the default IP address and forgot it, you can restore it by following the steps in section **(3) Restore default IP address**

Set the IP Address of OPTA

Enter IP Address:

- Main page of OPTA web server

Set the IP Address of OPTA

Enter IP Address:

IP address was successfully set

- Enter the IP address you want to set for OPTA in the text field, e.g. 192.168.10.99
- A message will appear to inform us that the IP changed successfully

Set the IP Address of OPTA

Enter IP Address: Invalid IP address format

- In case the IP address we entered does not have a valid format, an error message will appear

Set the IP Address of OPTA

Enter IP Address: Sent IP address 192.168.0.5 to OPTA

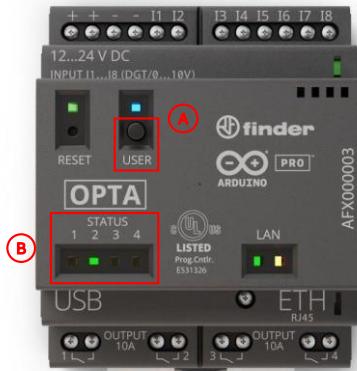
Network error occurred

- In case there is a communication error between our computer and OPTA, an error message will appear

A change in the IP address of OPTA device will initiate a device network scan, since the IP address range has changed and we have to find LOGO! devices in the new range.

4.1.3. Restore default IP address

Three or more consecutive presses of the USER button will restore the default IP address of OPTA, which is 192.168.0.99. OPTA will start a device network scan after restoring its default IP address, to locate LOGO! devices in the new address range.



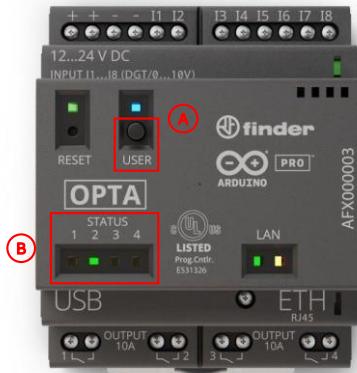
- **A – Three or more consecutive presses of the USER button:** Restore default IP address – 192.168.0.99
- **B – STATUS LED 1 and 2 light on constant green:** As long as the change of IP address is running, STATUS LED 1 and 2 remain constant on and green. After the procedure finishes, **STATUS LED 1 will be turned on and green**

4.1.4. Set IP address automatically (with DHCP)

The initial state of OPTA assumes a static IP address, which defaults to 192.168.0.99. Even when setting a new IP address through the web server, OPTA keeps the new address in memory as static and does not change it. OPTA communicates constantly with the visualization server and the LOGO! devices of the rooms, so it is absolutely necessary that we know the IP address we have set to OPTA and that this address does not change (e.g. when a router restarts).

There are some cases where we would like to perform some functional tests or during project commissioning and we require the IP address of OPTA to be set dynamically.

In those cases, during the boot process of OPTA (or after a RESET) we can press the USER button once, **when the 4 STATUS LEDs blink**, to set its IP dynamically (DHCP). OPTA waits for a press of the USER button, for 15 seconds. If no press is detected, the IP is set statically.



- **A – Press the USER button once:** OPTA will set its IP dynamically (DHCP)
- **B – STATUS LED 1 to 4 blink:** OPTA waits for a press of the USER button, for 15 seconds. If no press is detected, the IP is set statically

4.2. RESET BUTTON

The RESET button can be pressed to restart OPTA, in case of a fault or malfunction. The RESET button is located inside the recess and we must use an object like e.g. a ball pen, to press it.

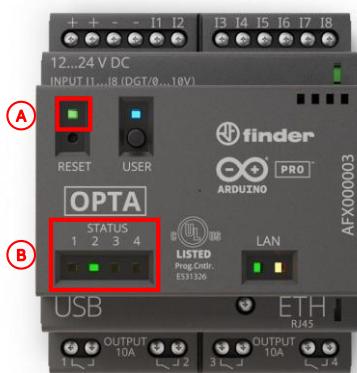


Restarting OPTA does not erase the static IP address we have set or the license program loaded in its memory.

Discovered LOGO! devices from network scan are also retained.

5. DIAGNOSTICS – TROUBLESHOOTING

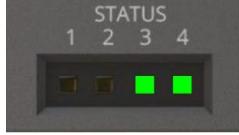
OPTA has 4 STATUS LEDs and 1 RESET LED on the front side, allowing us to quickly diagnose the state of the device with a simple visual check.



- **A – Reset LED:** It can be turned off, turned on and green or red
- **B – STATUS LED 1 to 4:** Each of them can be either turned off or on and green

The following table show every possible LED state and the diagnostic information it represents:

LED	Κατάσταση	Πληροφορία
Reset LED	 Red color – blinking	OPTA has encountered an error during boot, program loading and/or operation. Solution: Press the RESET button to restart the device. If the problem persists, it is possible you might need to replace the device and the license.
	 Green color – blinking	OPTA is in programming mode. Occurs only during license request and install license. With a press of the reset button, OPTA exits programming mode.
Reset LED	 Red color – constant on	The loaded license program is not valid. Device function has halted. Solution: Contact OWL Automata to purchase a valid license file.
	 Green color – constant on	OPTA is scanning the IP network for LOGO! devices. When the operation finishes, the LED will turn off.
STATUS LED	 LED 1 to 4 – blinking	During the boot process, OPTA waits 15 seconds for a USER button press. If we press the USER button within this time window, OPTA will set its IP address dynamically (DHCP). Otherwise, as soon as 15 seconds pass, it will continue its normal operation.
	 LED 1 and 2 – constant on <i>State of LED 3 and 4 – irrelevant</i>	OPTA is setting its IP address, either static or with DHCP. When the procedure finishes, the state of LED 1 and 2 will let us know the result.
	 LED 1 – constant on <i>State of LED 3 and 4 – irrelevant</i>	OPTA set its IP statically. If neither of LED 1 and 2 lights on, OPTA did not set its IP address, which means there is an error in our network or ethernet cable.

	 <p>LED 2 – constant on <i>State of LED 3 and 4 – irrelevant</i></p>	<p>OPTA set its IP dynamically (through DHCP, if available). If neither of LED 1 and 2 lights on, OPTA did not set its IP address, which means there is an error in our network or ethernet cable.</p>
	 <p>LED 3 and 4 – constant on <i>State of LED 1 and 2 – irrelevant</i></p>	<p>OPTA tries to connect to the internet to synchronize the internal clock. In case of success, STATUS LED 3 will remain constant on.</p>
	 <p>LED 3 – constant on <i>State of LED 1 and 2 – irrelevant</i></p>	<p>OPTA has successfully connected to internet. As long as it is connected, the LED remains on. If LED 3 is off, OPTA does not have internet connection and we have to check its IP address or our network's internet access.</p>
STATUS LED	 <p>LED 4 – constant on <i>State of LED 1 and 2 – irrelevant</i></p>	<p>OPTA has completed the network scan for LOGO! devices and the number of discovered devices was less than the number of rooms of the hotel project.</p> <p>Solution: You can repeat the network scan process by pressing the USER button once. If the installed devices are indeed fewer than the total number of hotel rooms (e.g. some rooms have not yet be delivered), then we can repeat the process as soon as we install and commission all LOGO! devices.</p>
	 <p>LED 1 to 4 – constant on</p>	<p>The embedded web server of OPTA is up and running. The web server is running for 5 minutes or until it receives a new IP address through a browser. The STATUS LEDs will turn off when the server stops.</p>



Chameleon

APPENDIX



Appendix A – General parameters

APPENDIX A

System general parameters

Appendix A describes the general parameters of Chameleon HaaS system and their default values.

It can be used as a guide to better understand the functionality and behavior of the system, as it explains parameter functionality, the device it is implemented into and the desired resulting behavior of the system.

1. Make up Room button hidden command

Software: LOGO!Soft Comfort

Device: LOGO! Base module 12/24 RCEo Room X

Files: Template/CardHolderMUR.lsc, Template/CardHolderMURDND.lsc,
Template/CardHolderMURDNDAux.lsc, Template/CardHolderMURAUX.lsc

UDF module: MrDn – U052

Initial value: **5 seconds**

This parameter default value cannot be changed!

A hidden command is present in Make Up Room button of each guest room, if we chose the option to include “MUR” during room design. This command allows the hotel cleaning staff to inform the reception visualization that a room is clean and in “Ready” state, by pressing “Make Up Room” for **5 seconds**.

The light indication of the “Make Up Room” button will turn on and off subsequently, providing visual confirmation for the staff that the command was executed correctly.

2. Time to check for occupancy detection

Software: LOGO!Soft Comfort

Device: LOGO! Base module 12/24 RCEo Room X

Files: In all Template LOGO! diagram files

UDF module: Oc

Initial value: Presence Detection time (minutes) **OcTm = 10 minutes**

Presence Detection time (seconds) **TmRS = 598 seconds**

Presence Detector deactivation time (seconds) **PDLa = 20 seconds**

The guest room automation system implements occupancy detection algorithm with a combination of conventional presence detectors and entrance door magnetic contact, to ensure accurate detection of guest presence or absence and activate energy saving scenes.

Opening and closing the room entrance door activates occupancy detection algorithm. Only then is it necessary to evaluate guest presence or absence, avoiding this way false room states due to system components errors (e.g. guest is present and a presence detector did not detect movement).

As soon as the entrance door opens and closes, the system waits for “**PDL_a**” time to pass, which is 20 seconds. This time ensures that we do not have a false detection signal by the presence detectors, since it is possible for a detector to detect a guest while opening the door to leave and activate their output. Therefore, we must wait for a short time, “**PDL_a**”, to pass to ensure that a detection signal is accurate.

When “PDL_a” time expires, occupancy detection algorithm starts monitoring for guest presence for “OcT_m” time, which is 10 minutes. If presence is detected, then the room assumes “Occupied” state, otherwise it assumes “Vacant state”.

Time parameter “TmRS” is used internally by module Oc **and should be** as many seconds as time “OcTm” – **(minus) 2 seconds**. As an example, if “OcTm” = 15 minutes, meaning 900 seconds, then time “TmRS” = 898 seconds.

3. Time to deactivate room on card removal

Software:	LOGO!Soft Comfort
Device:	LOGO! Base module 12/24 RCEo Room X
Files:	In all CardHolder LOGO! diagram files
UDF module:	Oc
Initial value:	Presence Detection time (minutes) OcTm = 10 minutes
	Presence Detection time (seconds) TmRS = 598 seconds
	Presence Detector deactivation time (seconds) PDLa = 20 seconds

The guest room automation system implements occupancy detection algorithm with a combination of conventional presence detectors and entrance door magnetic contact, to ensure accurate detection of guest presence or absence and activate energy saving scenes.

4. Brightness threshold for Bright/Dark scenes

Software: LOGO!Soft Comfort
Device: LOGO! Base module 12/24 RCEo Room X
Files: All LOGO! programming file
LOGO! gate: B215
Initial value: Brightness in LUX **V1 = 300**

Guest room automation system allows for any button (either configured as scene or simple 1–1 control) to activate different actions based on brightness.

Each input module has a “Bright” and “Dark” output. If measured brightness is below threshold “**V1**”, with **300 lux** as default value, then the output “Dark” will be activated on button press. Otherwise, output “Bright” will be activated.

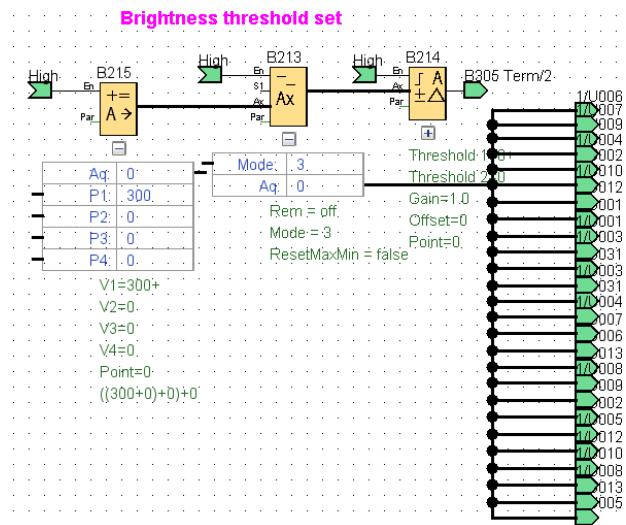
Please note that in order to activate this system functionality, you must program each LOGO! input module for brightness dependent scenes.

The threshold “V1” is compared to the actual measured brightness, which is sent through analog flag **AM64**. When connecting a brightness sensor to the system, either a KNX or Modbus device, the measurement value

must be sent to **AM64**, so the system can compare threshold “**V1**” with the measured value and activate the right action.

For a cost effective implementation you can freely use one external brightness sensor for the whole installation.

Gate B215 is located in the bottom of the last page of the program in the **Default connections** section.



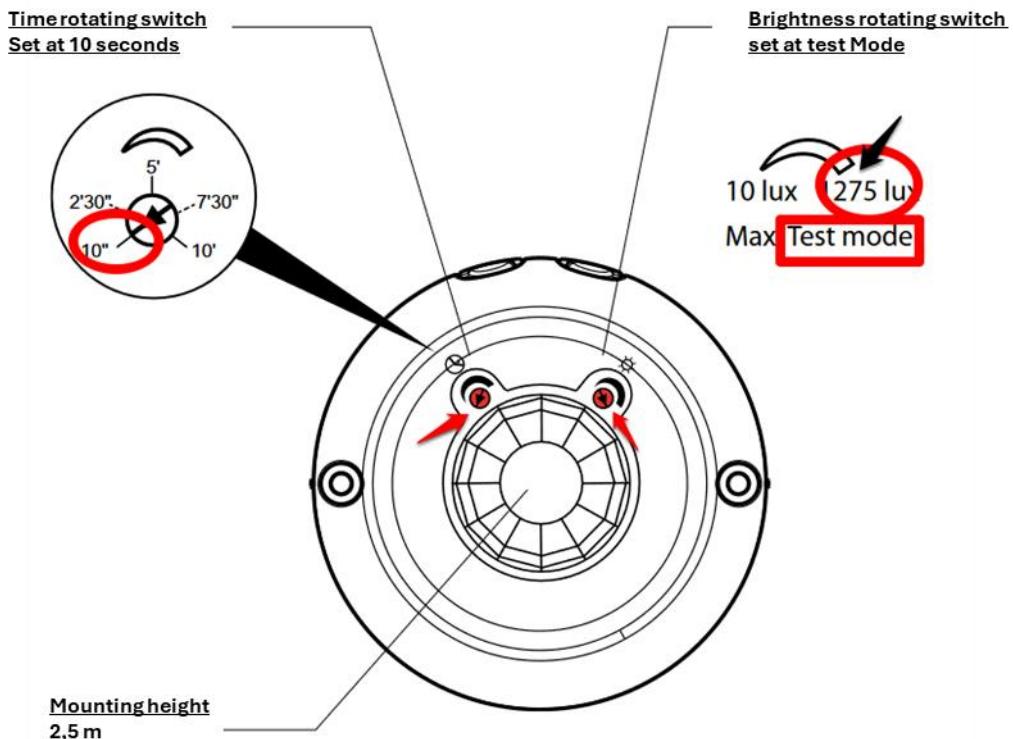
5. Conventional presence detector setup

The presence detector has 2 rotating switches for the adjustment of activation time and brightness sensitivity.

The time rotary position must be set to the minimum value of 10 seconds. If the time value is not set at 10 seconds, occupancy detection algorithm might not set the room in “Unoccupied” state when the guest leaves the room (Guest out scene), since the algorithm starts 20 seconds after the entrance door closes and the detector might still be falsely activated due to prior movement detection.

The brightness rotary position must be set to its maximum value named “test”, ensuring this way that the detector activates its output, on movement or presence detection, regardless of the measured room brightness. It should be noted that the activation of Bright and Dark scenes **is not related or affected by the brightness setting of the presence detector**.

In the image below, you can see the positions of the two rotary switches of the detector.



The presence detector covers a circular area of 8-meter diameter, if mounted at 2,5 meters above the ground. All room spaces must be covered by presence detectors, so a device is also required in the bathroom. In the main space of the room, the detector must be positioned in a place where it will provide maximum coverage of the area, **while also ensuring it monitors the entrance door of the room**. Occupancy detection algorithm expects a detection signal after opening the door, which means that no "Welcome Guest" scene will be activated if a presence detector does not detect guest movement.

If a room structural layout does not allow for a presence detector to simultaneously cover both the entrance door and the main space, more than one presence detector must be installed in this room.

6. Time Delay for Auxiliary contact I3

Software:	LOGO!Soft Comfort
Device:	LOGO! Base module 12/24 RCEo Room X
Files:	All LOGO! programming file
UDF module:	BLC
Initial value:	Time in minutes T = 5

Input I3 has a default setting as a Window reed contact with a time delay of 5 minutes. Time can be changed in BLC module or if we wish to use I3 as something else besides a Window or Balcony Door function, we can set T = 0 to cancel the delay feature.



Appendix B – Software tools

APPENDIX B

Software tools

Chameleon HaaS provides a set of software tools to facilitate the design and engineering of your project as well as change default parameters or values of the system.

The available software tools are:

1. LOGO! KNX Configurator

File name: LOGO! KNX Configurator 64(or 32) bit Installer.exe

File path: Chameleon+ HaaS /Hotel Configurator/LOGO! KNX Configurator 64(or 32) bit
Installer.exe

The core of a hotel project is the guest room and our initial design of room functionalities and requirements is of crucial importance for the quality of the delivered end system.

LOGO! KNX Configurator allows for a simple and intuitive design of the functions for a typical guest room, as well as inputs and outputs(loads) calculation. We can create a room configuration according to our project needs by filling the corresponding input and output cells.

When the design procedure is completed, the software will automatically generate programming instructions for LOGO! diagram files, and the Weinzierl 716 TCP import file.

Finally, the software will create a simple connection diagram, based on your configuration, that can be placed in each room and be used as a quick reference by the hotel maintenance staff.

2. License Loader

File name: Chameleon License Loader setup x64(à 32).exe

File path: Chameleon HaaS / License Loader/ Chameleon License Loader setup x64.exe

Chameleon HaaS requires a license to use. The licensing of the system comprises of a PLC device, FINDER OPTA, and a software file that you will receive from OWL Automata and must be loaded to OPTA.

The software “**Chameleon License Loader**” will guide you through simple steps, to request and install a license file for OPTA. No prior knowledge of PLC programming is required, simply power on and connect the OPTA device to your PC. You can install the software by running “**Chameleon License Loader setup x64.exe**”.



Chameleon

Appendix C – Default IP addresses table

APPENDIX C

Default IP addresses table

Chameleon+ HaaS uses a default IP address space for LOGO! base modules, Weinzierl 716 TCP gateways, and OPTA. In the tables below, you can find the default IP addresses.

1. LOGO! base module of each room

Index	Room number	IP address of LOGO! BM
1	101	192.168.0.100
2	102	192.168.0.101
3	103	192.168.0.102
4	104	192.168.0.103
5	105	192.168.0.104
6	106	192.168.0.105
7	107	192.168.0.106
8	108	192.168.0.107
9	109	192.168.0.108
10	110	192.168.0.109
11	111	192.168.0.110
12	112	192.168.0.111
13	113	192.168.0.112
14	114	192.168.0.113
15	115	192.168.0.114
16	116	192.168.0.115
17	117	192.168.0.116
18	118	192.168.0.117
19	119	192.168.0.118
20	120	192.168.0.119
21	121	192.168.0.120
22	122	192.168.0.121
23	123	192.168.0.122

24	124	192.168.0.123
25	125	192.168.0.124
26	126	192.168.0.125
27	127	192.168.0.126
28	128	192.168.0.127
29	129	192.168.0.128
30	130	192.168.0.129
31	131	192.168.0.130
32	132	192.168.0.131

2. Weinzierl 716 TCP gateway

Index	IP address of Weinzierl 716 TCP
1	192.168.0.190

3. OPTA licensing device

Index	IP address of OPTA
1	192.168.0.99



Chameleon

Appendix D - OPTA Software and license

APPENDIX D

OPTA Software and license

1. Libraries and board package

Licensing of Chameleon HaaS system is done through FINDER OPTA. The license file is distributed as .bin file and the following libraries are used during the build process:

Library name	Author	Version	License	Webpage
ArduinoHttpClient	Arduino	0.6.0	Apache License, version 2.0	GitHub
ArduinoModbus	Arduino	1.0.9	LGPL-2.1	Arduino site
ArduinoRS485	Arduino	1.1.0	LGPL-2.1	Arduino site
ArduinoJson	Benoit Blanchon	7.0.4	MIT License	Library site
ArduinoECCX08	Arduino	1.3.8	LGPL-2.1	GitHub
Azure SDK for C	Microsoft	1.1.6	MIT License	GitHub
ArduinoBearSSL	Arduino	1.7.3	MIT License	GitHub
ArduinoMqttClient	Arduino	0.1.8	LGPL-2.1	GitHub
NTPClient_Generic	Fabrice Weinberg	3.7.5	MIT License	GitHub
Time	Michael Margolis	1.6.1	N/A	Arduino site

The board package used for the development of the software license file, is the following:

Board package	Author	Version	License	Arduino Mbed general
Arduino Mbed OS Opta Boards	Arduino	4.1.3	Compilation of libraries	GitHub

The board package includes necessary libraries for the programming and board peripheral components communication of OPTA devices.

The software of OPTA is licensed under the terms of GNU LESSER GENERAL PUBLIC LICENSE, version 2.1 February 1999, as described in the following pages.



2. GNU LESSER GENERAL PUBLIC LICENSE, version 2.1

GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

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[This is the first released version of the Lesser GPL. It also counts
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That's all there is to it!



Appendix F – Online video guides table



APPENDIX F

Online video guides table

A series of online short video guides are uploaded on our YouTube channel, describing necessary actions and providing assistance for the programming and configuration of Chameleon HaaS system. In the table below, you can find the available video guides, their description and a YouTube link to view the video online:

1. YouTube video library

SECTION	TITLE	DESCRIPTION	YOUTUBE LINK
LOGO Hotel Configurator	LOGO Hotel Configurator Main Page Basics	Instruction about the main page of the Configurator tool – Basic functions	https://youtu.be/occi150mm0c
	LOGO Hotel Configurator Main Page Advanced	Instruction about the main page of the Configurator tool – Advanced functions	https://youtu.be/L_y17KyPu5o
	LOGO Hotel Configurator Sensors Page	Instructions about the sensor (buttons) configuration page of the Configurator tool	https://youtu.be/qxF6DTQLOo
	LOGO Hotel Configurator Scenes Page	Instructions about the scene configuration page of the Configurator tool	https://youtu.be/rewySjBdSDU
	LOGO Hotel Configurator Export Project	How to export a project after completing the design steps of the Configurator	https://youtu.be/90IYei1OHmA
LOGO!	LOGO! Import names	How to import the .csv file with input/output names in LOGO!Soft comfort software	https://youtu.be/uoRdtFnbGyw
	LOGO! Download address only	How to download the default IP addresses to the LOGO! base modules	https://youtu.be/qh0jJoXoo7c

**SECTION****TITLE****DESCRIPTION****YOUTUBE LINK**

LOGO!	LOGO! Diagram Program from instructions	How to use the instructions from Configurator software to complete the LOGO! diagram project	https://youtu.be/QPE-9EeGkpE
	LOGO! Copy Diagram to Network project	How to copy your finished diagram program to the LOGO! network project of your hotel	https://youtu.be/y4mXHM-QHyc
	LOGO! Change IP	How to change the default IP address of a LOGO! base module	https://youtu.be/ICLXYZtWuqU
	LOGO! Download (Batch and copy to SD)	How to use batch download to program all LOGO! base modules of your project simultaneously and copy the program to SD card	https://youtu.be/chUU9DXQWFs
	LOGO! Change IP	How to change the default IP address of a LOGO! base module!	https://youtu.be/ICLXYZtWuqU
OPTA	OPTA Commissioning Part 1	OPTA licensing device programming instructions – Request license file	https://youtu.be/gdhQBVnwucU
	OPTA Commissioning Part 2	OPTA licensing device programming instructions – Install license file	https://youtu.be/ogtoeNX4U3E
	OPTA Change IP	How to change the IP address of OPTA	https://youtu.be/zEGYeb-qFdQ