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Product Manual

ise smart connect KNX Hue

Order No. 1-0002-003
Valid for application software version 2.0

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1 Product description

1.1 Functions

- Operation of Philips Hue[1] via KNX.
- The ise smart connect KNX Hue establishes a connection between the Philips Hue Bridge and the KNX.
- Up to 25 Philips Hue lights can be controlled with a ise smart connect KNX Hue using the Philips Hue Bridge.
- Control with the usual KNX operating devices, regardless of the app.
- Separate control of up to 25 Philips Hue lights through switching and dimming.
- Individual control of the RGB colour values is possible.
- Convenient toggling between entire light scenarios or separate control with the KNX operating elements.
- Implementation of light effects with the scene and time functions.
- Easy connection of visualisation systems and facility management systems.
- Changes made using an app or computer are reported on the KNX (on/off, dim, light colour).
- An integrated data network switch (two RJ45 connections) simplifies the connection of multiple IP devices. This enables multiple ise smart connect KNX Hues or other IP devices in the distribution to be connected without the aid of other active components.
- Supports accelerated transmission from the ETS to the ise smart connect KNX Hue via a direct IP connection.
- The best way to configure the ise smart connect KNX Hue is using the ETS4 version 4.2 or later or ETS5 version 5.0.2 or later. The application access ETS functions not supported by earlier ETS versions. This is why previous versions of ETS cannot be used for configuration.

[1] Philips and Hue are registered trademarks of Koninklijke Philips N.V.

1.2 A bright moment: Philips Hue meets KNX!

Take a summer mood captured at the sea with a smartphone and recreate it at home, program your own sunrise or set the right stage for your house party. Using the Hue wireless illumination system from Philips, you can individualize lighting and thereby increase the quality of your life. The only downside for all KNX users was the lack of perfect integration into the KNX system. All settings had to be made using a special app in a laborious fashion.

The new ise smart connect KNX Hue now provides the solution. Thanks to the innovative KNX adapter, up to 25 Hue lights can be controlled by each dimmer or switch via KNX. The LED technology in the light sources opens up a broad spectrum of light tones, from warm to vibrant. Individualized RBG values can be specified for each individual light. You can conveniently choose between entire light scenarios or separate operation using the KNX operating element. Using the scene and time functions, you can implement user-specific light effects and sequences.

The connection of KNX and Philips Hue creates new possibilities.

- Door contacts control room lighting.
- If you select the "Fireplace mood" light scenario, the lighting is adjusted appropriately and the shutters are lowered.
- The doorbell is signalled by a Hue light and can be made silent.
- Situation-dependent RGB values of the outside lighting upon pressing the doorbell (e.g. on Halloween).
- Light intensity control depending on the sunlight level: bright on cloudy days and off in case of bright sunshine so that pleasant brightness always fills the room.
- The light follows you where you go. By combining Philips Hue and ise smart connect KNX Hue, you can have have plenty of brightness as you go through the house thanks to the use of motion/presence detectors. After getting up in the morning, the light will follow you to the bathroom and into the living room, where you can begin your day with a cup of coffee.

1.3 Definitions and explanation of terms

- **Bridge**
  Philips base station for connection of LED lights to the WLAN router. The connection is wireless (ZigBee). The ise smart connect KNX Hue controls the Hue lights through the Philips Hue Bridge.

- **Hue light**
  All the LED light sources of the Hue series, including the LightStripes, the Hue Lux and the Friends of hue.

- **RGB colours**
  A description of a colour as a mixture of a quantity of red, green and blue light which is based on the three-colour theory (any desired colour is created by mixing the three primary colours). The red portion R, green portion G and blue portion B of the colour are described by a number value here.

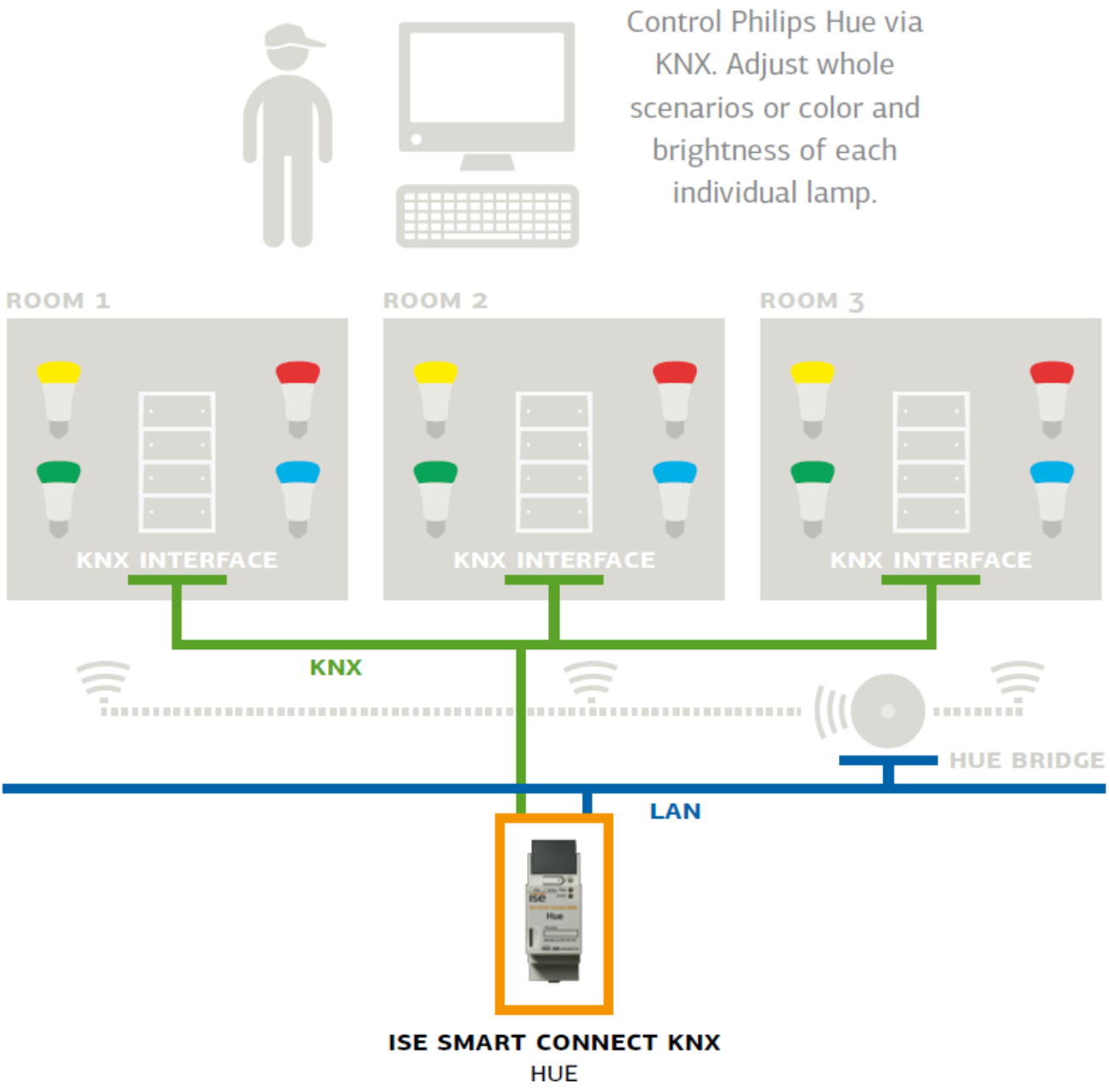
- **Light scene**
  A combination of light colour and brightness for one ore more Hue lights saved for repeated use. In the following, each state of a Hue light (including simply "off") is designated as a light scene.

- **Alarm effect**
  The alarm effect is a timed state change of a light. The standard example is uniform changing of the brightness. From the original state to brighter to darker and then back to the original state. The colour of the light does not change here.

- **Dynamic effect**
  With a dynamic effect, the light runs through a state change until it is ended by the user.
  An example of this would be the colour change sequence. Here, the entire RGB colour space is run through in an endless loop.

2 Application example Comfort solution in the living environment

2.1 Function schematic



2.2 Comfort solution in the living environment

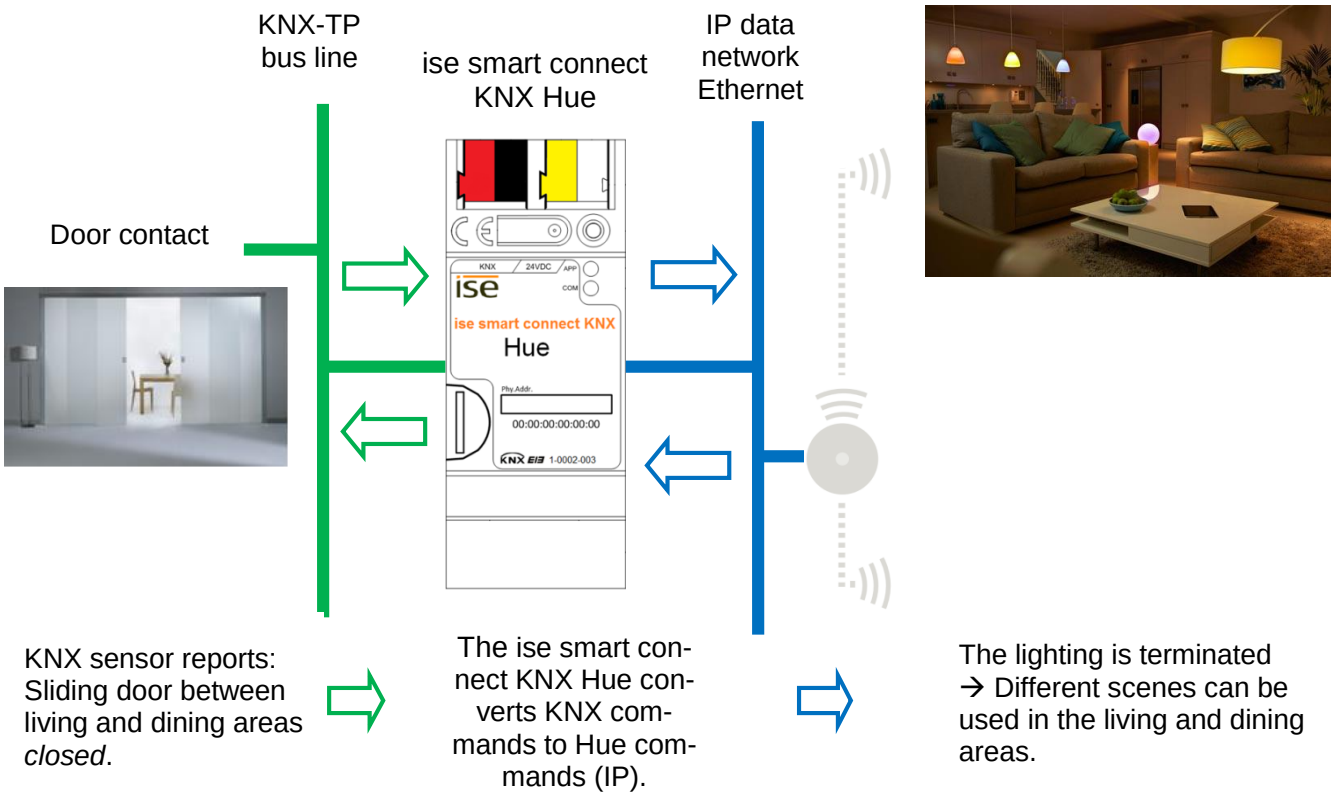
With Philips Hue, you get wireless digital home lighting. It enables you to quickly and flexibly supplement or complement your existing room lighting.

All you need is an E27 or GU 10 base for replacing a common light bulb or halogen lamp. The Light Strips require even less (just a socket outlet). This enables you to implement the following Comfort solutions with minimal installation effort.

2.2.1 Door contacts control room lighting

In this application, a door contact influences the light scene in the appropriate rooms via KNX.
If the door is opened, the rooms become a visual unit. The ise smart connect KNX Hue enables the use of the same light scene in both rooms.

If the door is closed, the ise smart connect KNX Hue cancels this connection. Both rooms can be lit independently of one another again.



Is the door open?	The same light scene is used in both rooms.
Is the door closed?	Each room can be lit differently (again).

Note: To use light scenes and room groups, you need optional logic modules which ensure the same light scene and restore the previous light scene after termination.

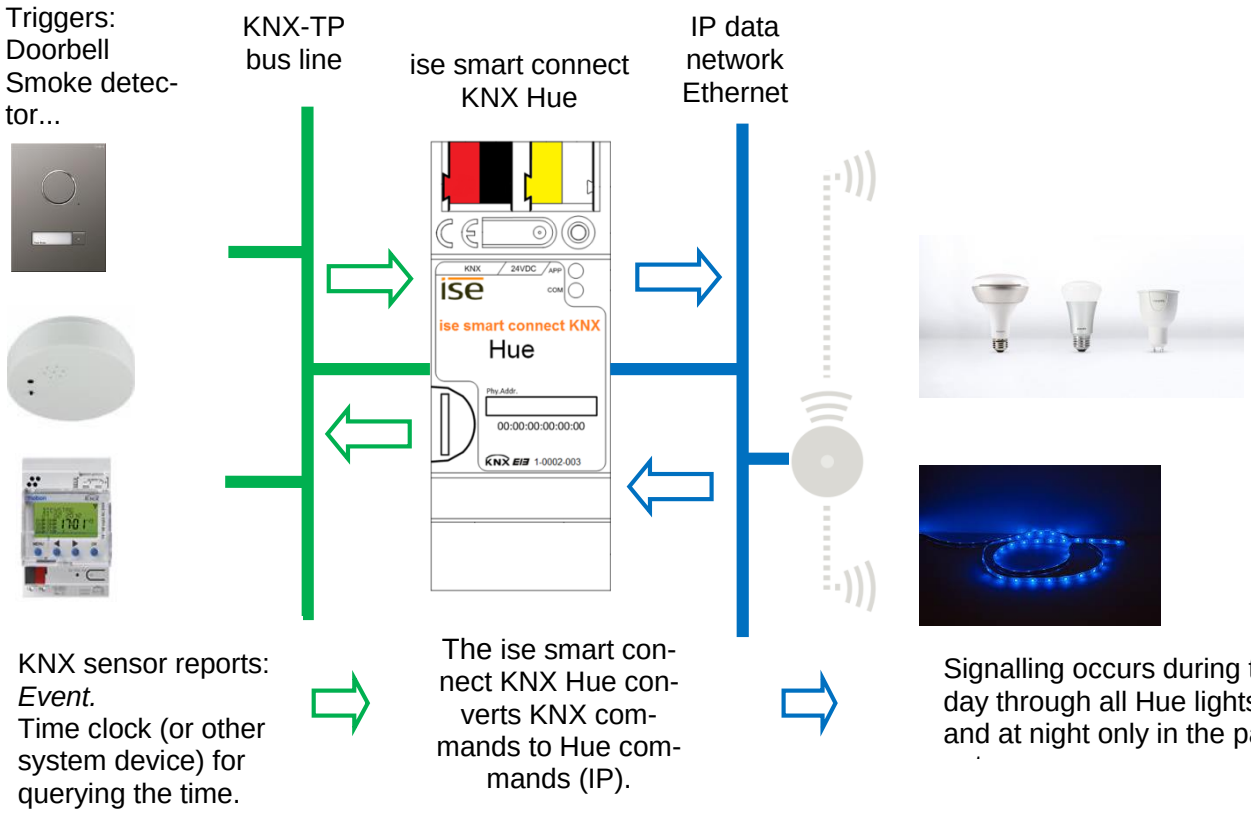
2.2.2 Philips Hue signals important events visually

By coupling it with KNX, the Philips Hue becomes an optical signal transmitter for many applications. Define the respective event (doorbell, smoke detector, motion detector, door or window contact etc.) and the location and type of signalling. Thanks to the easy installation of the Philips Hue (you only need a socket outlet or E27 socket), you can set up and use the lights anywhere as an additional signalling option at any time.

Naturally, different results can be signalled visually with the same light. Differentiate the trigger through the type of signalling (colour, flashing etc.) and thus supplement an acoustic signal or replace it completely.

Two versions are possible:

- Visual signalling (e.g. as an alarm effect) always occurs using the defined lights and an acoustic signal.
- Visual signalling (e.g. as an alarm effect for a fire) replaces the acoustic signal. If necessary, this can occur only in the "parent zone" depending on the time and the event. This prevents children being disturbed by the doorbell.



2.2.3 ise smart connect KNX Hue makes operation more convenient

Operating Philips Hue with the light switch

By combining the Philips Hue and ise smart connect KNX Hue, you can control your lighting comfortably as you pass by. It's quick, and there no need to look for a remote control. Never be annoyed again because of a flat battery in your smartphone or tablet PC.

- Scenario selection and brightness control are given their fixed places in the KNX light switch (which means you'll no longer "lose" the lighting mood while switching).
- Operate the Philips Hue even without glasses, e.g. after a shower.

Naturally, that's not all you can do with the light switch. At the same time, operation can be carried out from all KNX-compatible visualisation panels.

Operating convenience

The light follows you where you go

By combining Philips Hue and ise smart connect KNX Hue, you can have have plenty of light as you go through the house thanks to the use of motion/presence detectors.

After getting up in the morning, the light will follow you to the bathroom and into the living room, where you can begin your day with a cup of coffee.
The light is switched off in rooms which you have left.

Party at the push of button

The ise smart connect KNX Hue switches to party mode upon reception of a signal from the building bus. The same light scene is created in all rooms by pushing the "Party" button. Outside lighting, e.g. on the terrace, is also controlled accordingly. Naturally, individual Hue lights can be excluded from this for effect lighting if the whole house is used as a party zone.

Wake up your loved ones with your own sunrise
Put children to sleep with decreasing brightness

Sleeping comfort

The *Wake up* scene selects the *Sunrise* scene and gently increases the brightness. For this purpose, you can use all of the room lighting or just a single light.
The *Go to sleep* scene does the opposite: Select a scene and lower the brightness by and by.

Scenes like this are called up at the push of the light switch, using the house visualisation, wirelessly from a smartphone or automatically through a time program.
If you wish, you can even link scenes to the real sunrise and sunset!

2.2.4 The ise smart connect KNX Hue controls home technology

The HueApp controls home technology

The opposite also holds true: Controlling home technology using the Hue App

Do you operate your Hue system using the smartphone app? How would you like it if, when you call up the *Fireplace mood* scene, the shutters are lowered, heating is regulated to the comfort temperature and the front doorbell is switched off at the same time? The *House party* scene can provide bright lighting and a changeover to cooling mode. Select scenes which operate your home technology using the ise smart connect KNX Hue.

2.2.5 The ise smart connect KNX Hue increases security

Hue lights and ise smart connect KNX Hue make your home more secure. Automated light control offers a wide variety of possibilities.

On holiday

Light in the house keeps uninvited guests away (occupied-home simulation)

Why just switch lights on and off to simulate an occupied house? Integrate individual light scenes and shutter control into the occupied-home simulation.

Prevention

The Philips Hue notifies you of unclosed doors and windows

Leave your house without a care. Intelligent door and window sensors let you know whether your windows and doors are closed. The Philips Hue enables you to use a red light to signal "Attention, windows are still open" before you even leave the house. ise smart connect KNX Hue makes it possible.

The Philips Hue reminds you to "deactivate" the alarm system system

You enter your house. The Philips Hue reminds you to not forget to deactivate your alarm system. For example, a light in the entrance area can be dimmed up as long as the alarm system is activated.

The Philips Hue warns of/reports unexpected visits

(Literal motion detection):
When it's dark, the Philips Hue can notify you in good time of movement outdoors with an alarm effect in every room before the doorbell is even pressed.

At home alone?

The Philips Hue will scare them away

Hear suspicious noises outdoors?
Pressing the light switch (e.g. in the bedroom) switches on the lighting on the house. The lighting in different rooms inside the house is then switched on in succession. Several people in the house will then respond to the noises.

The Philips Hue signals the need for assistance

In conjunction with a motion detector (e.g. under the bed), you can signal that a person with special needs has gotten up. You can then go provide assistance if necessary.

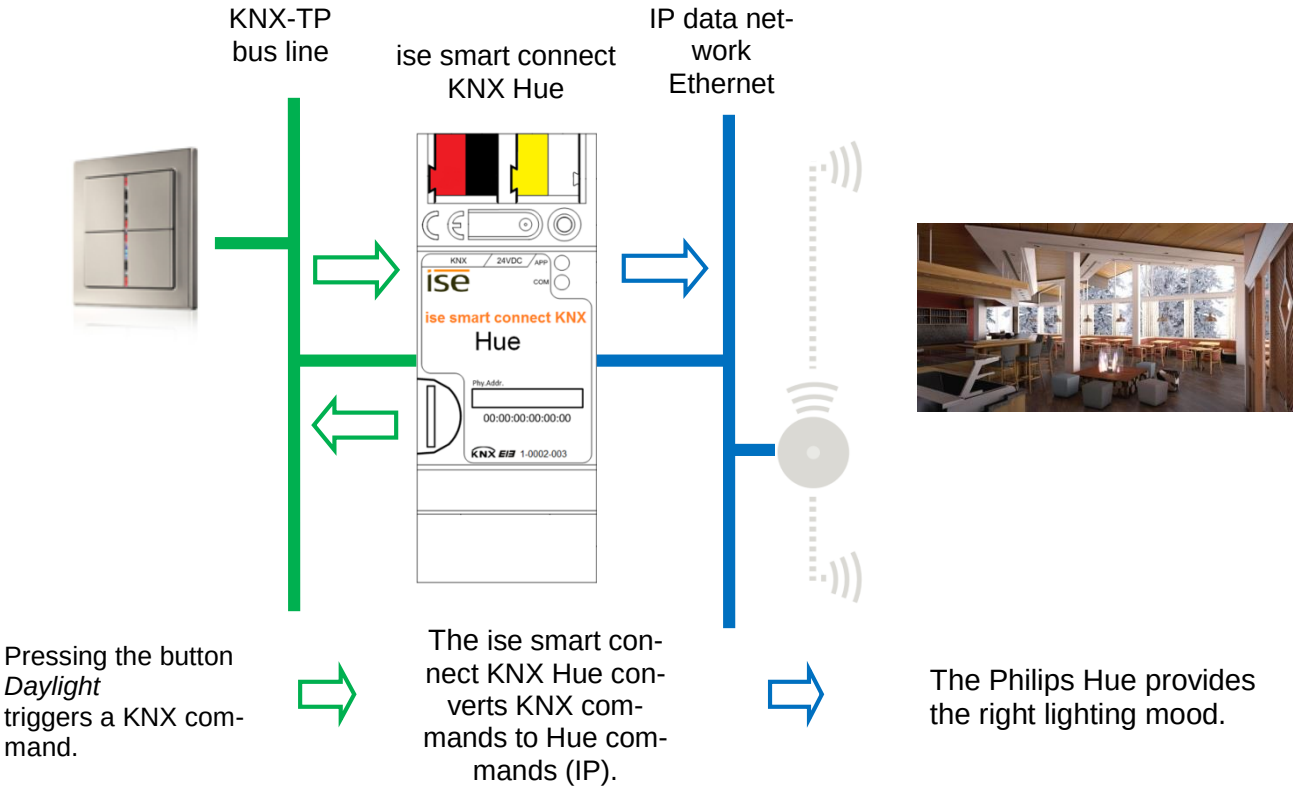
Assistance

3 Commercial application scenarios

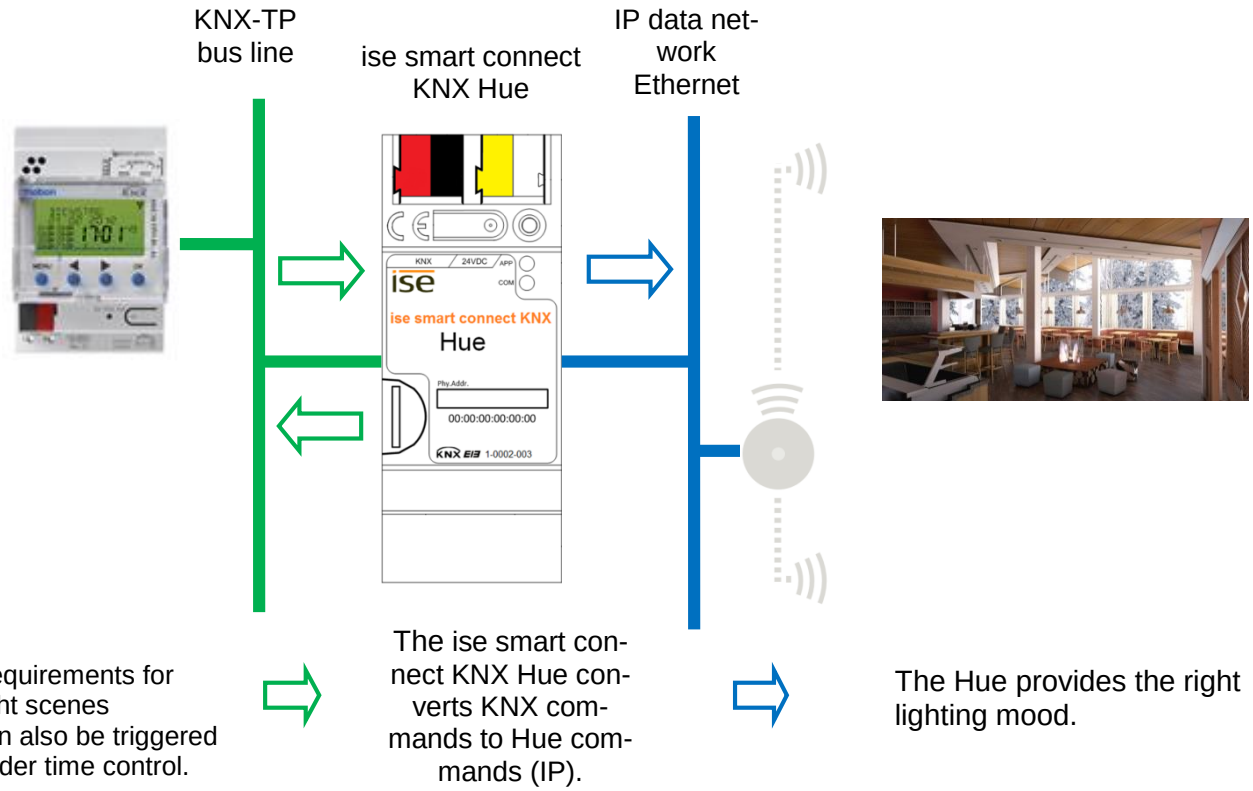
3.1 Lighting mood suitable for daylight

The ise smart connect KNX Hue can present lighting moods at the push of a button or at set times. With this application, you can illuminate your rooms just the right way.

3.1.1 Example configuration with a push button

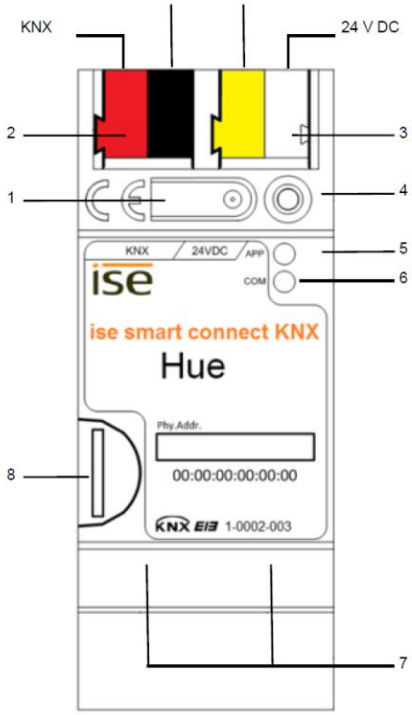


3.1.2 Example configuration with time switching



4 Installation, electrical connection and operation

4.1 Device design



Dimensions:
Width (W):
36 mm (2 HP)
Height (H):
90 mm
Depth (D):
74 mm

Figure 1: ise smart connect KNX Hue.

1	Programming button for KNX	Switches the device to the ETS programming mode or vice versa.
2	KNX connection (twisted pair)	On left: (+ / red) On right: (– / black)
3	Connection for power supply	DC 24–30 V, 2 W (at 24 V) On left: (+ / yellow) On right: (– / white)
4	KNX programming LED (red)	Red: Device is in ETS programming mode
5	LED *APP* (green)	Green: Normal operation Off/ Flashing: For start or diagnosis code, see 6.3.1 / 6.3.2
6	LED *COM* (yellow)	Yellow: Normal operation (brief dark phases indicate KNX telegram traffic) Off/ Flashing: For start or diagnosis codes, see 6.3.1 / 6.3.2
7	Ethernet connection	LED 10/100 speed (green) On: 100 Mbit/s Off: 10 Mbit/s LED link/ACT (orange) On: Connection to IP network Off: No connection Flashing: Data reception on IP
8	MicroSD card holder	No function.

4.2 Safety notes

Electrical devices may only be installed and mounted by a qualified electrician. In doing so, the applicable accident prevention regulations must be observed. Failure to observe the installation instructions can result in damage to the device, fire or other dangers.

DANGER!
Electric shock if live parts are touched. Electric shock may lead to death.
Isolate connection cables before working on the device. Cover up live parts in the vicinity!

Please see the operating instructions enclosed with the device for more information.

4.3 Mounting and electrical connection

Mounting the device

- Snap it on to the top-hat rail as per DIN EN 60715, vertical mounting;
  network connections must face downward.

ⓘ A KNX data rail is not required; the connection to KNX-TP is established using the accompanying bus connection terminal.

ⓘ Observe temperature range (0 °C to +45 °C); do not install over heat-emitting devices and ensure sufficient ventilation/cooling if necessary.

Connecting the device

- Connect the KNX-TP bus line to the KNX connection of the device using the included KNX bus connection terminal. The bus line must be led to near the device terminal with the sheathing in tact! Bus line leads without sheathing (SELV) must be installed isolated in such a way that they are securely protected from all non-safety-low-voltage lines (SELV/PELV) (comply with ≥ 4 mm spacing or use cover; see also VDE regulations on SELV (DIN VDE 0100-410/"Secure isolation", KNX installation specifications)!
- Connecting the external power supply to the power supply connection (3) of the device using a KNX device connection terminal, preferably yellow/white.
  Polarity: left/yellow: (+), white/right: (–).

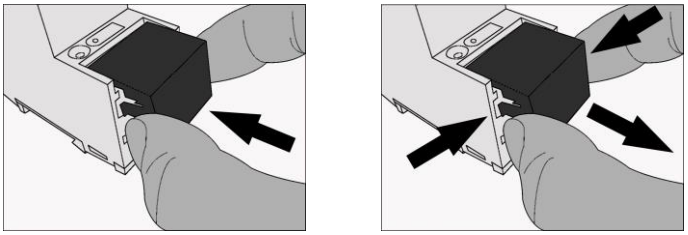
  Note: If the "non-choked" auxiliary power output of a KNX power supply is used as an auxiliary energy source, you must ensure that the overall current consumption (including all KNX-TP devices) on the line segment does not exceed the rated voltage of the power supply.
- Connection of one or two IP network lines to the network connection of the device (7).

Mounting/removing a cover cap

A cover cap can be mounted for protection of the KNX bus and power supply connections from dangerous voltage, particularly in the connection area.

The cap is mounted with an attached bus and power supply terminal and a connected bus and power supply line to the rear.

- Mounting the cover cap: The cover cap is pushed over the bus terminal until it audibly engages (comp. Figure 2A).
- Removing the cover cap: The cover cap is removed by pressing it in slightly on the side and pulling it off to the front (comp Figure 2B).



A B

Figure 2: Mounting/removing a cover cap.

5 Configuration

Configuration of the ise smart connect KNX Hue is divided into the following steps:

	Preparations:	**For explanations, see**
1	Mount device, connect it to KNX bus connection and auxiliary voltage.	→ Chapter 4
2	Set up the Hue lights using the Philips Hue software.	→ Philips Hue documentation
3	Install the ise smart connect KNX Hue on the same IP network as the Philips Hue Bridge and make settings in the router of the IP network if necessary.	

Configuration via ETS:

After installing the device and connecting the bus, power supply and Ethernet, the device can be commissioned. The preparatory configuration is carried out using the Engineering Tool Software, ETS, available from the KNX Association, see www.knx.org.

1	Create the ise smart connect KNX Hue as a device in the ETS.	→ Section 5.1
2	Assign physical address as usual corresponding to the KNX topology.	
3	Set IP address, IP subnet mask and standard gateway address of the ise smart connect KNX Hue or select *Obtain an IP address automatically (from a DHCP server)*.	→ Section 5.3
4	General parameters for setting the ise smart connect KNX Hue.	→ Section 5.4.1
5	Setting *IP addresses* parameter: In this step, you inform the ise smart connect KNX Hue of the IP addresses of the Philips Hue Bridge or select the *Find Hue Bridge automatically – Yes* setting.	→ Section 5.4.1
6	Connect group addresses to group objects as usual.	→ Section 5.4.2 → Section 5.4.3
7	The ise smart connect KNX Hue is now ready for commissioning via *Program ETS* and for testing of the functions.	

5.1 Configuration step 1 − Create ise smart connect KNX Hue as device in the ETS

If it has not yet been done, import the ETS device application to the ise smart connect KNX Hue once in the device catalogue of the ETS, for example using the *Import Products* function on the start page of the ETS.

You can download the ETS application from our website under www.ise.de free of charge.

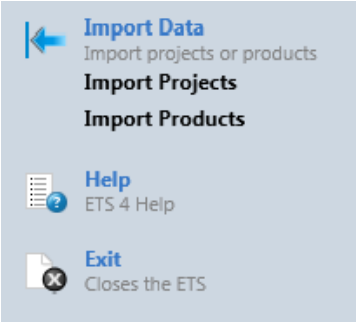


Figure 3: Product import via the ETS start page.

The other explanations in this document refer to

Hardware		Application software	
Device:	**ise smart connect KNX Hue**	Application:	ise smart connect KNX Hue
Manufacturer:	**ise GmbH**	Version:	**V2.0**
Order No.	**1-0002-003**		
Version:	**V1.0**		
Design:	**DRA (series installation)**		

5.2 Configuration step 2 – Assigning a physical address

In the ETS, assign the device a physical address as usual corresponding to the KNX topology.

5.3 Configuration step 3 – Setting the IP address, subnet mask and address of the standard gateway

In addition to the physical address on the KNX network, the ise smart connect KNX Hue must also be assigned an address on the IP data network. This includes the following information:

- IP address
- Subnet mask
- Address of the standard gateway

This can occur in two ways, either

- automatically by obtaining the data from a DHCP server (e.g. integrated in the router of the data network) or
- via manual setting in the ETS.

Proceed as follows for this purpose:

1. Select the device in the ETS.

2. Display the properties of the device in the sidebar of the ETS as shown in Figure 4.

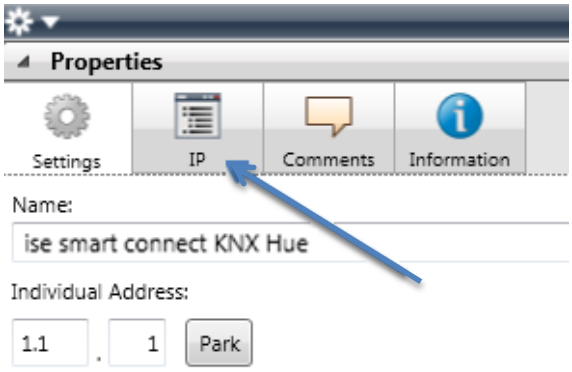


Figure 4: Device properties dialogue of the ETS.

3. Select the *IP* tab as per Figure 5. Then select either

   ⊙*Obtain an IP address automatically (default)*

   The address data are obtained automatically from a DHCP server on the data network.

   or

   ⊙ *Use the following IP address*

   Here, you enter the data manually.
   You can usually obtain the permissible IP address range and the subnet mask and standard gateway from the router configuration interface.

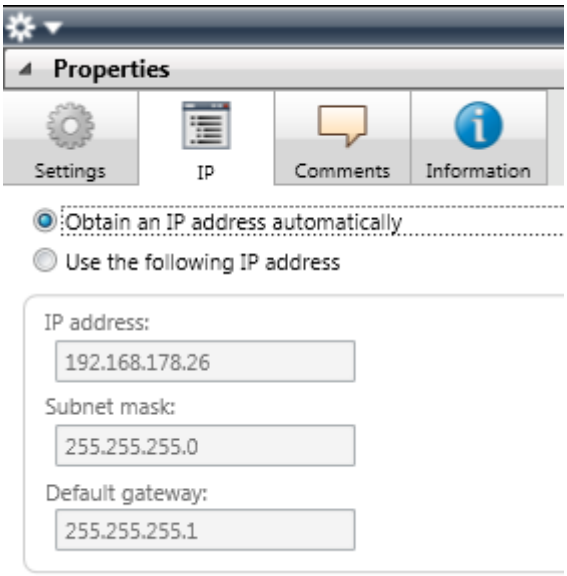


Figure 5: Setting of the IP address data of the device on the "IP" tab in the sidebar of the ETS.

If the ⊙ *Obtain an IP address automatically* setting is used, a DHCP server must issue the ise smart connect KNX Hue a valid IP address.

If a DHCP server is not available for this setting, the device starts up after a waiting time with an AutoIP address (address range from 169.254.1.0 to 169.254.254.255).

As soon as a DHCP server is available, the device is automatically assigned a new IP address.

5.4 Setting general parameters.

5.4.1 Parameter page *General*

The default value of each parameter is marked in **bold**.

Parameter	Entry/Selection	Remarks
Auto-discover Hue Bridge	**YES**	Any available Philips Hue Bridge is automatically selected from the local network and used. Do not use this mode if multiple Philips Hue Bridges are available on the local network. The selection can change at any time if another Philips Hue Bridge is detected.
	NO	The IP address input field of the Philips Hue Bridge appears so that the IP address for the Philips Hue Bridge to be used can be configured.
IP address of the Philips Hue Bridge	The IP address of a Philips Hue Bridge	A connection is established with the Philips Hue Bridge with this IP address.
	0.0.0.0	Special case: Corresponds to the selection *Find Hue Bridge automatically: YES*.
Dimming speed	Slow **Normal** Fast	Determines the speed at which the brightness changes with the relative brightness change ("Dim"). With "Fast", the brightness reaches the target value especially early, and with "Slow", it takes somewhat longer. This option has no effect on absolute brightness changes.
Number of lights	**3**	Enables the configuration of the number of lights which can be controlled through ise smart connect KNX Hue. The communication objects are made visible accordingly. 1 to 25 lights can be selected.

5.4.2 Communication objects for controlling the Philips Hue Bridge

The following communication objects are available for the connection of group addresses at the ise smart connect KNX Hue:

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
1	Bridge connection state	Read	1 bit	1.002	CR-T-
Rubric:	Connections	Data type:		Boolean	
Function:	Indicates whether a connection to the Philips Hue Bridge is established				
Description:	1 = Connected, 0 = Not connected.				

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
2	All lights control	Write	1 bit	1.001	C-W--
Rubric:	Switching	Data type:		On/Off	
Function:	Switches all connected lights on or off				
Description:	1 = On, 0 = Off 1-bit object for switching all connected Hue lights on/off (max. 25).				

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
3	Last error	Read	1 byte	20.*	CR-T-
Rubric:	Error diagnosis	Data type:			
Function:	The last error in Hue Bridge communication				
Description:	Shows the error number of the last error during communication with the Philips Hue Bridge: 0 = OK no error 1 = Bridge not reachable 2 = No bridge found (automatic detection) 3 = More than one bridge found during automatic detection 4 = HueApp not registered in the Hue Bridge 5 = One or more Hue lights are not reachable 6 = Hue Bridge firmware is too old, please perform an update 7 = Hue Bridge communication error				

5.4.3 Communication objects for control of the Hue lights

Up to 25 LED lights can be controlled. By default, the communication objects for three lights are created (see 5.4.1 Parameter *page General*)
The object number is generated in the formula (f) by using the respective light number (n).
The numbers 1 through 25 are permissible for the light number (n) based on the maximum number of lights to be controlled.

Example for light "6" and the function *Set colour*:

Object
n*20+5 Object number is thus: 6*20+5 = 125

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n = 20 2 20*n = 40 3 20*n = 60 4 20*n = 80 5 20*n = 100 6 20*n = 120 7 20*n = 140 8 20*n = 160 9 20*n = 180 10 20*n = 200 11 20*n = 220 12 20*n = 240 13 20*n = 260 14 20*n = 280 15 20*n = 300 16 20*n = 320 17 20*n = 340 18 20*n = 360 19 20*n = 380 20 20*n = 400 21 20*n = 420 22 20*n = 440 23 20*n = 460 24 20*n = 480 25 20*n = 500	Switch light – Light "n"	Write	1 bit	1.001	C-W--
Rubric:	Switching	Data type:	Switching		
Function:	Switches light "n" on or off.				
Description:	1 = On, 0 = Off 1-bit object for switching light "n" on/off.				

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
	Light state – Light "n"	Read	1 bit	1.001	CR-T-

n	f(n)		Obj
1	20*n+1	=	21
2	20*n+1	=	41
3	20*n+1	=	61
4	20*n+1	=	81
5	20*n+1	=	101
6	20*n+1	=	121
7	20*n+1	=	141
8	20*n+1	=	161
9	20*n+1	=	181
10	20*n+1	=	201
11	20*n+1	=	221
12	20*n+1	=	241
13	20*n+1	=	261
14	20*n+1	=	281
15	20*n+1	=	301
16	20*n+1	=	321
17	20*n+1	=	341
18	20*n+1	=	361
19	20*n+1	=	381
20	20*n+1	=	401
21	20*n+1	=	421
22	20*n+1	=	441
23	20*n+1	=	461
24	20*n+1	=	481
25	20*n+1	=	501

Rubric: Switching

Data type: Switching

Function: Indicates whether light "n" is currently on or off.

Description: 1-bit object for display of the switching condition of light "n". If a "1" is assigned to the object, light "n" is on. If a "0" is assigned to the object, light "n" is off.

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
	Relative brightness – Light "n"	Write	4 bit	3.007	C-W--

n	f(n)		Obj
1	20*n+2	=	22
2	20*n+2	=	42
3	20*n+2	=	62
4	20*n+2	=	82
5	20*n+2	=	102
6	20*n+2	=	122
7	20*n+2	=	142
8	20*n+2	=	162
9	20*n+2	=	182
10	20*n+2	=	202
11	20*n+2	=	222
12	20*n+2	=	242
13	20*n+2	=	262
14	20*n+2	=	282
15	20*n+2	=	302
16	20*n+2	=	322
17	20*n+2	=	342
18	20*n+2	=	362
19	20*n+2	=	382
20	20*n+2	=	402
21	20*n+2	=	422
22	20*n+2	=	442
23	20*n+2	=	462
24	20*n+2	=	482
25	20*n+2	=	502

Rubric: Dimming

Data type: Dimmer step

Function: Dims the brightness of light "n" up or down

Description: 4-bit object for relative brightness change between 0.4 and 100% of light "n". It is not possible to dim to 0% (off).

Note: The dimming speed is specified with a corresponding parameter (Section 5.4.1 - Parameter *page General*).

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) Obj 1 20*n+3 = 23 2 20*n+3 = 43 3 20*n+3 = 63 4 20*n+3 = 83 5 20*n+3 = 103 6 20*n+3 = 123 7 20*n+3 = 143 8 20*n+3 = 163 9 20*n+3 = 183 10 20*n+3 = 203 11 20*n+3 = 223 12 20*n+3 = 243 13 20*n+3 = 263 14 20*n+3 = 283 15 20*n+3 = 303 16 20*n+3 = 323 17 20*n+3 = 343 18 20*n+3 = 363 19 20*n+3 = 383 20 20*n+3 = 403 21 20*n+3 = 423 22 20*n+3 = 443 23 20*n+3 = 463 24 20*n+3 = 483 25 20*n+3 = 503	Set brightness – Light "n"	Write	1 byte	5.001	C-W--

Rubric:	Dimming	Data type:	Percent (0 to 100%)
Function:	Sets the absolute brightness of light "n".		
Description:	8-bit object for specification of a brightness of light "n". The light can be issued a value in the range of 0% (0) = switched off to 100% (255) = full brightness.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) Obj 1 20*n+4 = 24 2 20*n+4 = 44 3 20*n+4 = 64 4 20*n+4 = 84 5 20*n+4 = 104 6 20*n+4 = 124 7 20*n+4 = 144 8 20*n+4 = 164 9 20*n+4 = 184 10 20*n+4 = 204 11 20*n+4 = 224 12 20*n+4 = 244 13 20*n+4 = 264 14 20*n+4 = 284 15 20*n+4 = 304 16 20*n+4 = 324 17 20*n+4 = 344 18 20*n+4 = 364 19 20*n+4 = 384 20 20*n+4 = 404 21 20*n+4 = 424 22 20*n+4 = 444 23 20*n+4 = 464 24 20*n+4 = 484 25 20*n+4 = 504	Brightness state – Light "n"	Read	1 byte	5.001	CR-T-

Rubric:	Dimming	Data type:	Percent (0 to 100%)
Function:	Displays the current brightness value of the light		
Description:	8-bit object for displaying the brightness of light "n". A value in the range of 0% (0) = switched off to 100% (255) = full brightness is displayed.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+5 = 25 2 20*n+5 = 45 3 20*n+5 = 65 4 20*n+5 = 85 5 20*n+5 = 105 6 20*n+5 = 125 7 20*n+5 = 145 8 20*n+5 = 165 9 20*n+5 = 185 10 20*n+5 = 205 11 20*n+5 = 225 12 20*n+5 = 245 13 20*n+5 = 265 14 20*n+5 = 285 15 20*n+5 = 305 16 20*n+5 = 325 17 20*n+5 = 345 18 20*n+5 = 365 19 20*n+5 = 385 20 20*n+5 = 405 21 20*n+5 = 425 22 20*n+5 = 445 23 20*n+5 = 465 24 20*n+5 = 485 25 20*n+5 = 505	Set colour – Light "n"	Write	3 byte	232.600	C-W--
Rubric:	Colour	Data type:	232.600 RGB value 3x(0…255)		
Function:	Sets the RGB colour value of the light.				
Description:	3-byte object for specification of a colour of light "n". The light can be assigned a value from the RGB colour space.				

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+6 = 26 2 20*n+6 = 46 3 20*n+6 = 66 4 20*n+6 = 86 5 20*n+6 = 106 6 20*n+6 = 126 7 20*n+6 = 146 8 20*n+6 = 166 9 20*n+6 = 186 10 20*n+6 = 206 11 20*n+6 = 226 12 20*n+6 = 246 13 20*n+6 = 266 14 20*n+6 = 286 15 20*n+6 = 306 16 20*n+6 = 326 17 20*n+6 = 346 18 20*n+6 = 366 19 20*n+6 = 386 20 20*n+6 = 406 21 20*n+6 = 426 22 20*n+6 = 446 23 20*n+6 = 466 24 20*n+6 = 486 25 20*n+6 = 506	Colour state – Light "n"	Read	3 byte	232.600	CR-T-
Rubric:	Colour	Data type:	232.600 RGB value 3x(0…255)		
Function:	Displays the current RGB value of the light.				
Description:	3-byte object for display of a colour of light "n". The colour value of the light from the RGB colour space is displayed.				

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+7 = 27 2 20*n+7 = 47 3 20*n+7 = 67 4 20*n+7 = 87 5 20*n+7 = 107 6 20*n+7 = 127 7 20*n+7 = 147 8 20*n+7 = 167 9 20*n+7 = 187 10 20*n+7 = 207 11 20*n+7 = 227 12 20*n+7 = 247 13 20*n+7 = 267 14 20*n+7 = 287 15 20*n+7 = 307 16 20*n+7 = 327 17 20*n+7 = 347 18 20*n+7 = 367 19 20*n+7 = 387 20 20*n+7 = 407 21 20*n+7 = 427 22 20*n+7 = 447 23 20*n+7 = 467 24 20*n+7 = 487 25 20*n+7 = 507	Set "red" colour value – Light "n"	Write	1 byte	5.001	C-W--

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Sets the red colour value of light "n" between 0% (0) and 100% (255).		
Description:	1-byte object for specification of the red colour value of light "n". **Important note:** If the individual communication objects for R/G/B are used for the RGB value, the entire RGB is not transferred to the light until all three individual values have been received or 200 ms have passed so as to avoid incorrect intermediate states.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+8 = 28 2 20*n+8 = 48 3 20*n+8 = 68 4 20*n+8 = 88 5 20*n+8 = 108 6 20*n+8 = 128 7 20*n+8 = 148 8 20*n+8 = 168 9 20*n+8 = 188 10 20*n+8 = 208 11 20*n+8 = 228 12 20*n+8 = 248 13 20*n+8 = 268 14 20*n+8 = 288 15 20*n+8 = 308 16 20*n+8 = 328 17 20*n+8 = 348 18 20*n+8 = 368 19 20*n+8 = 388 20 20*n+8 = 408 21 20*n+8 = 428 22 20*n+8 = 448 23 20*n+8 = 468 24 20*n+8 = 488 25 20*n+8 = 508	Colour value "red" state – Light "n"	Read	1 byte	5.001	CR---

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Displays the current red colour value of light "n" between 0% (0) and 100% (255).		
Description:	1-byte object for display of the red colour value of light "n".		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+9 = 29 2 20*n+9 = 49 3 20*n+9 = 69 4 20*n+9 = 89 5 20*n+9 = 109 6 20*n+9 = 129 7 20*n+9 = 149 8 20*n+9 = 169 9 20*n+9 = 189 10 20*n+9 = 209 11 20*n+9 = 229 12 20*n+9 = 249 13 20*n+9 = 269 14 20*n+9 = 289 15 20*n+9 = 309 16 20*n+9 = 329 17 20*n+9 = 349 18 20*n+9 = 369 19 20*n+9 = 389 20 20*n+9 = 409 21 20*n+9 = 429 22 20*n+9 = 449 23 20*n+9 = 469 24 20*n+9 = 489 25 20*n+9 = 509	Set "green" colour value – Light "n"	Write	1 byte	5.001	C-W--

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Sets the green colour value of light "n" between 0% (0) and 100% (255).		
Description:	1-byte object for specification of the green colour value of light "n". **Important note:** If the individual communication objects for R/G/B are used for the RGB value, the entire RGB is not transferred to the light until all three individual values have been received or 200 ms have passed so as to avoid incorrect intermediate states.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+10 = 30 2 20*n+10 = 50 3 20*n+10 = 70 4 20*n+10 = 90 5 20*n+10 = 110 6 20*n+10 = 130 7 20*n+10 = 150 8 20*n+10 = 170 9 20*n+10 = 190 10 20*n+10 = 210 11 20*n+10 = 230 12 20*n+10 = 250 13 20*n+10 = 270 14 20*n+10 = 290 15 20*n+10 = 310 16 20*n+10 = 330 17 20*n+10 = 350 18 20*n+10 = 370 19 20*n+10 = 390 20 20*n+10 = 410 21 20*n+10 = 430 22 20*n+10 = 450 23 20*n+10 = 470 24 20*n+10 = 490 25 20*n+10 = 510	Colour value "green" state – Light "n"	Read	1 byte	5.001	CR---

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Displays the current green colour value of light "n" between 0% (0) and 100% (255).		
Description:	1-byte object for display of the green colour value of light "n".		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+11 = 31 2 20*n+11 = 51 3 20*n+11 = 71 4 20*n+11 = 91 5 20*n+11 = 111 6 20*n+11 = 131 7 20*n+11 = 151 8 20*n+11 = 171 9 20*n+11 = 191 10 20*n+11 = 211 11 20*n+11 = 231 12 20*n+11 = 251 13 20*n+11 = 271 14 20*n+11 = 291 15 20*n+11 = 311 16 20*n+11 = 331 17 20*n+11 = 351 18 20*n+11 = 371 19 20*n+11 = 391 20 20*n+11 = 411 21 20*n+11 = 431 22 20*n+11 = 451 23 20*n+11 = 471 24 20*n+11 = 491 25 20*n+11 = 511	Set "blue" colour value – Light "n"	Write	1 byte	5.001	C-W--

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Sets the blue colour value of light "n".		
Description:	1-byte object for specification of the blue colour value of light "n" between 0% (0) and 100% (255). **Important note:** If the individual communication objects for R/G/B are used for the RGB value, the entire RGB is not transferred to the light until all three individual values have been received or 200 ms have passed so as to avoid incorrect intermediate states.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+12 = 32 2 20*n+12 = 52 3 20*n+12 = 72 4 20*n+12 = 92 5 20*n+12 = 112 6 20*n+12 = 132 7 20*n+12 = 152 8 20*n+12 = 172 9 20*n+12 = 192 10 20*n+12 = 212 11 20*n+12 = 232 12 20*n+12 = 252 13 20*n+12 = 272 14 20*n+12 = 292 15 20*n+12 = 312 16 20*n+12 = 332 17 20*n+12 = 352 18 20*n+12 = 372 19 20*n+12 = 392 20 20*n+12 = 412 21 20*n+12 = 432 22 20*n+12 = 452 23 20*n+12 = 472 24 20*n+12 = 492 25 20*n+12 = 512	Colour value "blue" state – Light "n"	Read	1 byte	5.001	CR---

Rubric:	Colour	Data type:	Percent (0 to 100%)
Function:	Displays the current blue colour value of light "n" between 0% (0) and 100% (255).		
Description:	1-byte object for display of the blue colour value of light "n".		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+13 = 33 2 20*n+13 = 53 3 20*n+13 = 73 4 20*n+13 = 93 5 20*n+13 = 113 6 20*n+13 = 133 7 20*n+13 = 153 8 20*n+13 = 173 9 20*n+13 = 193 10 20*n+13 = 213 11 20*n+13 = 233 12 20*n+13 = 253 13 20*n+13 = 273 14 20*n+13 = 293 15 20*n+13 = 313 16 20*n+13 = 333 17 20*n+13 = 353 18 20*n+13 = 373 19 20*n+13 = 393 20 20*n+13 = 413 21 20*n+13 = 433 22 20*n+13 = 453 23 20*n+13 = 473 24 20*n+13 = 493 25 20*n+13 = 513	Switch colour gradient function – Light "n"	Write	1 bit	1.001	C-W--

Rubric:	Colour	Data type:	Switching
Function:	Turns the colour gradient function of light "n" on or off		
Description:	1-bit object for switching the colour gradient function of light "n" on/off. Here, the entire RGB colour space is run through in an endless loop. Note: With this loop, the brightness is not changed from the current value.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+14 = 34 2 20*n+14 = 54 3 20*n+14 = 74 4 20*n+14 = 94 5 20*n+14 = 114 6 20*n+14 = 134 7 20*n+14 = 154 8 20*n+14 = 174 9 20*n+14 = 194 10 20*n+14 = 214 11 20*n+14 = 234 12 20*n+14 = 254 13 20*n+14 = 274 14 20*n+14 = 294 15 20*n+14 = 314 16 20*n+14 = 334 17 20*n+14 = 354 18 20*n+14 = 374 19 20*n+14 = 394 20 20*n+14 = 414 21 20*n+14 = 434 22 20*n+14 = 454 23 20*n+14 = 474 24 20*n+14 = 494 25 20*n+14 = 514	Colour gradient function state – Light "n"	Read	1 bit	1.001	CR-T-

Rubric:	Colour	Data type:	Switching
Function:	Indicates whether the colour gradient function of light "n" is active		
Description:	1-bit object for display of a colour gradient function loop of light "n". If the object is assigned a "1", light "n" is in a colour gradient function loop. If the object is assigned a "0", light "n" is not in a colour gradient function loop.		

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+15 = 35 2 20*n+15 = 55 3 20*n+15 = 75 4 20*n+15 = 95 5 20*n+15 = 115 6 20*n+15 = 135 7 20*n+15 = 155 8 20*n+15 = 175 9 20*n+15 = 195 10 20*n+15 = 215 11 20*n+15 = 235 12 20*n+15 = 255 13 20*n+15 = 275 14 20*n+15 = 295 15 20*n+15 = 315 16 20*n+15 = 335 17 20*n+15 = 355 18 20*n+15 = 375 19 20*n+15 = 395 20 20*n+15 = 415 21 20*n+15 = 435 22 20*n+15 = 455 23 20*n+15 = 475 24 20*n+15 = 495 25 20*n+15 = 515	Trigger alert light – Light "n"	Write	1 bit	1.017	C-W--

Rubric: Alarm

Data type: Trigger

Function: Triggers a single alert light flash of the light

Description:

1-bit object for triggering a one-time "alert light" by light "n". The default alert function of the light is used. Here, the light first becomes steadily brighter and then darker and then returns to the original state. The colour of the light does not change here.

The "Alarm" function can be assigned any desired events here.

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
n f(n) = Obj 1 20*n+16 = 36 2 20*n+16 = 56 3 20*n+16 = 76 4 20*n+16 = 96 5 20*n+16 = 116 6 20*n+16 = 136 7 20*n+16 = 156 8 20*n+16 = 176 9 20*n+16 = 196 10 20*n+16 = 216 11 20*n+16 = 236 12 20*n+16 = 256 13 20*n+16 = 276 14 20*n+16 = 296 15 20*n+16 = 316 16 20*n+16 = 336 17 20*n+16 = 356 18 20*n+16 = 376 19 20*n+16 = 396 20 20*n+16 = 416 21 20*n+16 = 436 22 20*n+16 = 456 23 20*n+16 = 476 24 20*n+16 = 496 25 20*n+16 = 516	Switch alert light – Light "n"	Write	1 bit	1.001	C-W--

Rubric: Alarm

Data type: Switching

Function: Turns the light's alert light function off

Description:

1-bit object for switching one "alert light" by light "n" on or off. The Hue internal colour gradient function loop of the light is used as the "alarm" here.

The "Alarm" function can be assigned any desired events here.

Object	Name	Direction	Data width	DP type	Flags (CRWTU)
	Light connection status – Light "n"	Read	1 bit	1.002	CR-T-

n	f(n)		Obj
1	20*n+19	=	39
2	20*n+19	=	59
3	20*n+19	=	79
4	20*n+19	=	99
5	20*n+19	=	119
6	20*n+19	=	139
7	20*n+19	=	159
8	20*n+19	=	179
9	20*n+19	=	199
10	20*n+19	=	219
11	20*n+19	=	239
12	20*n+19	=	259
13	20*n+19	=	279
14	20*n+19	=	299
15	20*n+19	=	319
16	20*n+19	=	339
17	20*n+19	=	359
18	20*n+19	=	379
19	20*n+19	=	399
20	20*n+19	=	419
21	20*n+19	=	439
22	20*n+19	=	459
23	20*n+19	=	479
24	20*n+19	=	499
25	20*n+19	=	519

Rubric: Connection

Data type: Boolean

Function: Indicates whether light "n" is connected to the Hue bridge

Description: If a "1" is assigned to the object, the connection is established. If a "0" is assigned to the object, the connection is broken.

6 Commissioning

6.1 Operation

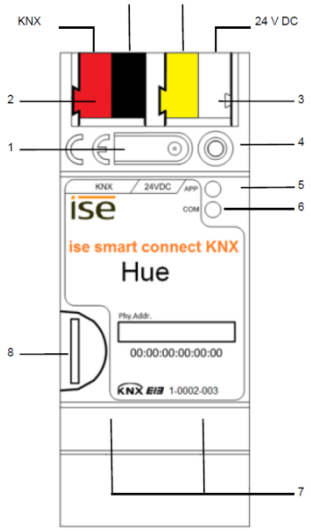


Figure 6: ise smart connect KNX Hue.

1	Programming button for KNX	Switches the device to the ETS programming mode or vice versa.	
2	KNX connection (twisted pair)	On left: (+ / red) On right: (– / black)	
3	Connection for power supply	DC 24–30 V, 2 W (at 24 V) On left: (+ / yellow) On right: (– / white)	
4	KNX programming LED (red)	Red: Device is in ETS programming mode	
5	LED *APP* (green)	Green: Normal operation Off/ Flashing: For start or diagnosis code, see 6.3.1 / 6.3.2	
6	LED *COM* (yellow)	Yellow: Normal operation (brief dark phases indicate KNX telegram traffic) Off/ Flashing: For start or diagnosis codes, see 6.3.1 / 6.3.2	
7	Ethernet connection	LED 10/100 speed (green) On: 100 Mbit/s Off: 10 Mbit/s	LED link/ACT (orange) On: Connection to IP network Off: No connection Flashing: Data reception on IP
8	MicroSD card holder	No function	

6.2 Automatic Hue Bridge detection

During automatic detection, the ise smart connect KNX Hue searches for an available Hue Bridge during the start-up procedure. If more than one Hue Bridge is found on the connected network, the status of the CO 3 "last error" changes to the value 3 (see Section 5.4.2, object number 3). In this case, the device behaviour is unspecified, as it cannot be guaranteed that the correct Hue Bridge was selected. For this application, please configure a fixed Hue Bridge IP address (see Section 5.3).

6.3 LED status displays

The devices features three status LEDs on the upper housing side and four status LEDs on the network connections.
The LED displays have **different meanings**

- while the device is starting and
- during operation.

6.3.1 LED status display upon device start-up

After the power supply (DC 24 V on the yellow-white connection terminal) is switched on or after a return in voltage occurs, the device indicates its status through the following LED combinations:

LED "*APP*" (green)	LED "*COM*" (yellow)	Meaning	
○ **Off**	○ Off	Error: No power supply! Please check connections and power supply.	✘
○ **Off**	● Yellow	Device starting up.	✓
○…● **Green Flash slowly (approx. 1 Hz)**	● Yellow	Note: The device is fully started up, but not yet configured. An ETS download is necessary.	✘
○…● **Green Flash quickly**	○ Off	Error: Please contact support. The firmware cannot be started.	✘
●…○…●…○…●… **Green** ○…●…○…●…○… **Yellow Flash slowly in an alternating fashion (approx. 1 Hz)**		Error: Please contact support. The newly loaded firmware cannot be started. The system is trying to activate the previous firmware (invalid firmware).	✘

6.3.2 LED status display in operation

Once device start-up is complete, the meaning of the LEDs is as follows:

LED "*APP*" (green)	Meaning
● Green	Normal operation
○ Off	Device in start-up procedure or out of operation: Wait until the start-up procedure is complete or check the power supply
●…○…●…○…●…○ Three slow blinks at 1 Hz, followed by a 2 s pause	Error: No Philips Hue Bridges can be reached at present or the HueApp has not yet been registered. Check whether the Philips Hue Bridge is in operation and check the web-site to determine whether the HueApp has already been registered (see Section 6.8).
●…○…●…○…●…○…●…○…● Five slow flashes at 1 Hz, followed by a 2 s pause	Note: One or more Hue lights cannot be reached at present. If devices are switched off to save power, an error is not in effect

LED "*COM*" (yellow)	Meaning
● **Yellow**	Normal operation: KNX connection is established, no KNX telegram traffic.
●…○…●…○…●…○ Rapid yellow flashing with brief dark phases	Normal operation: KNX connection is established, KNX telegram traffic.
○ **Off**	Error: Connection to KNX is interrupted. Check the bus connection

6.4 Accelerate transfer: Select transfer path *KNX-TP* or *IP*

Programming (transfer from the ETS to the device) occurs in the programming environment of the ETS. An additional KNX data interface is not required for transfer (bus connection via bus connection terminal). The ETS can reach the device from both the IP side and the KNX-TP side.

Due to considerably shorter transfer times, download over the IP side of the device is recommended.

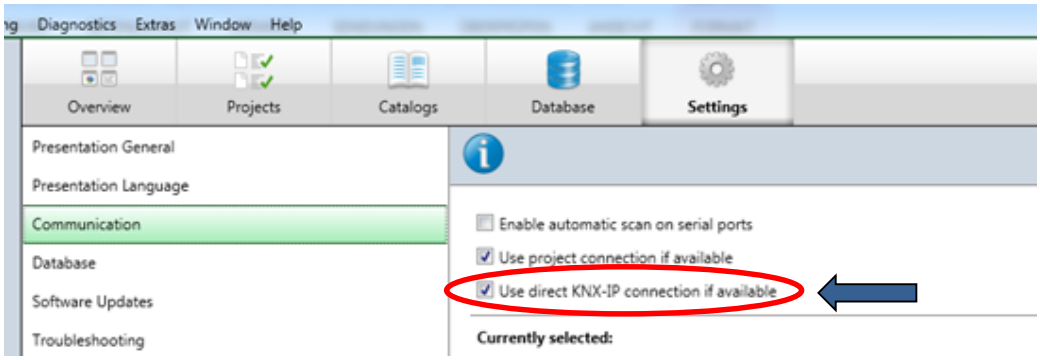


Figure 7: The *Use direct KNX-IP connection if available* setting accelerates the transfer from the ETS to the device.

For transfer of the ETS over the IP side, set the setting

☑ ***Use direct KNX-IP connection if available*.**

on the ETS start page, → *Settings* tab → *Communication* entry.

6.5 Programming the physical address of the device

- Ensure that the device and bus voltage are switched on.
- Ensure that the programming LED (4) is not illuminated.
- Press programming button (1) briefly − Programming LED (4) illuminates red briefly.
- Program physical address using the ETS.

After a successful programming procedure,

- LED (4) will go out.
- The ETS shows the completed transfer with a green marking under *History* in the sidebar (normally at the right-hand window edge).
- The ETS sets the commissioning tick on the device for "Adr" and "Cfg".

You can now note down the physical address on the device.

6.6 Transferring application programs and configuration data

After programming the physical address, the application program, parameter settings and group address connections can be transferred to the device.

A connection to the device can be further established via IP or KNX for this purpose.

- For this purpose, select *Programming application program*. The download lasts approx. 15 seconds with a direct IP connection or about 2 minutes if using TP.
- After the download, please wait approx. 15 seconds while the device copies the data and installs the application.
- Commissioning is complete.

6.7 Factory reset

The following physical KNX address is factory pre-set: 15.15.255.
Following the factory reset, the device behaves as in the state of delivery. The device is unconfigured. This can be recognized after starting up the device from the slowly flashing green APP LED (5).

6.7.1 Using the programming button on the device

The device can be reset to the factory settings through a sequence during start-up.

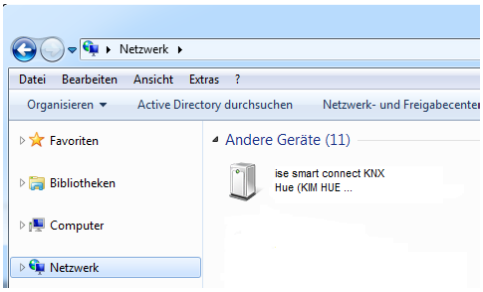
- Make sure that the device is switched off.
- Press and hold programming button (1) and switch on the device.
- Press and hold programming button (1) until the programming LED (4), the RUN LED (5) and the KNX LED (6) flash slowly simultaneously.
- Briefly release the programming button (1), then press and hold it again until the programming LED (4), the RUN LED (5) and the KNX LED (6) flash quickly simultaneously.
- The factory reset is being carried out; release programming button.
- The device need not be restarted following a factory reset.

The factory reset can be cancelled at any time by interrupting the sequence.

6.7.2 Using the website of the device

The factory reset can also be triggered from the website of the device.

- Call up the website of the device. For this purpose, double-click the icon of the device in the *Other Devices* area in the network environment.



- Alternatively, you can also enter the IP address of the device in your browser.
- Select *Device Status* in the upper menu bar on the website.
- Select *Factory Reset* in the upper menu bar on the status page.
- Confirm the factory reset when the security prompt appears.
- The next displayed page, *Factory Reset*, indicates that the factory reset is being carried out. As soon as this is complete, the start page is loaded again.

6.8 Registering the HueApp at the Philips Hue Bridge

Figure 8 shows the initial start page of the device for connected unregistered Philips Hue Bridge. In this case, three lights have been configured in the ETS so that only three fields for configuration are available on the website.

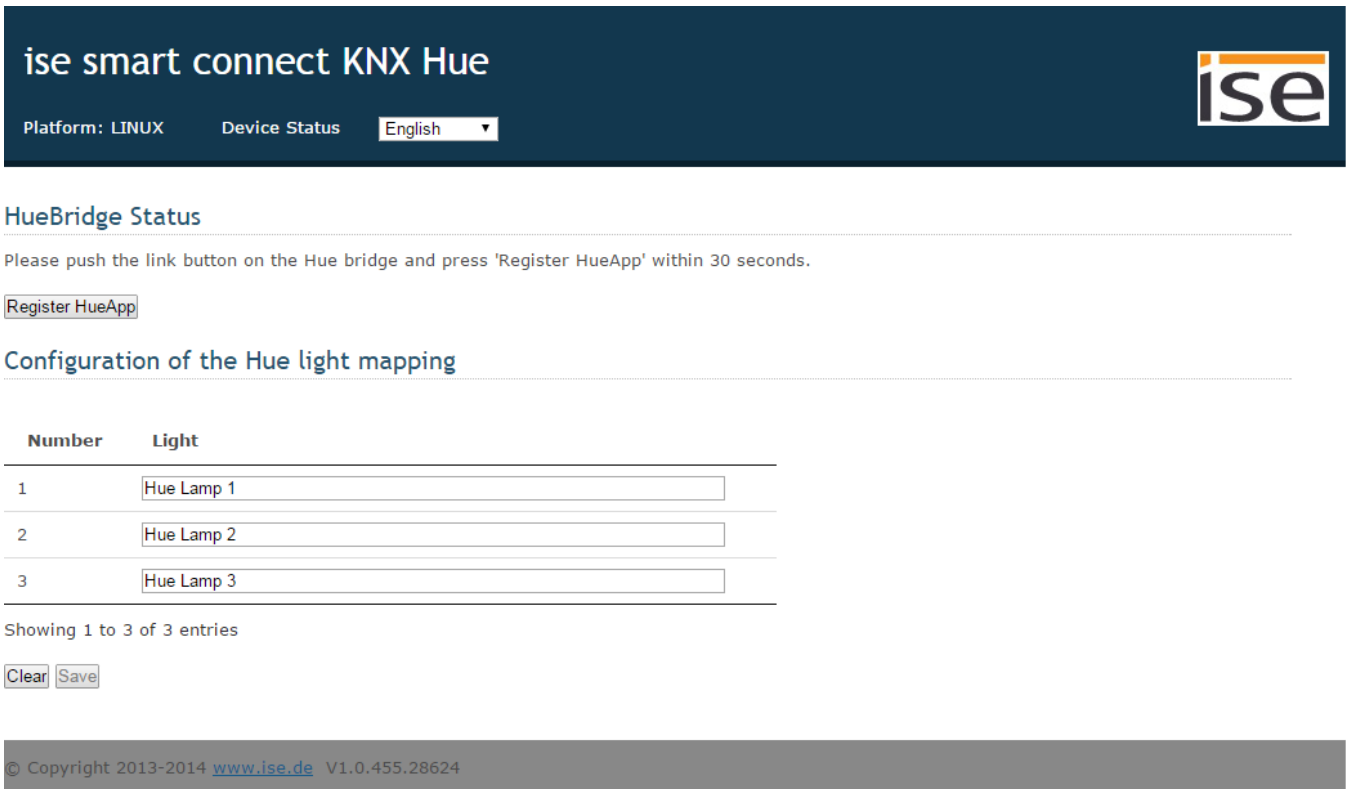


Figure 8: Device website for configuration of the Hue lights with three lights configured in the ETS and unregistered HueApp at the Philips Hue Bridge.

For proper operation, the ise smart connect KNX Hue must be registered at the Philips Hue Bridge. For this purpose, the link button of the Philips Hue Bridge must be pressed and then the *Register HueApp* button must be clicked within 30 seconds at the device website.

Should the update of the Philips Hue Bridge status or registration of the HueApp take a long time, the website shown in Figure 9 will appear.

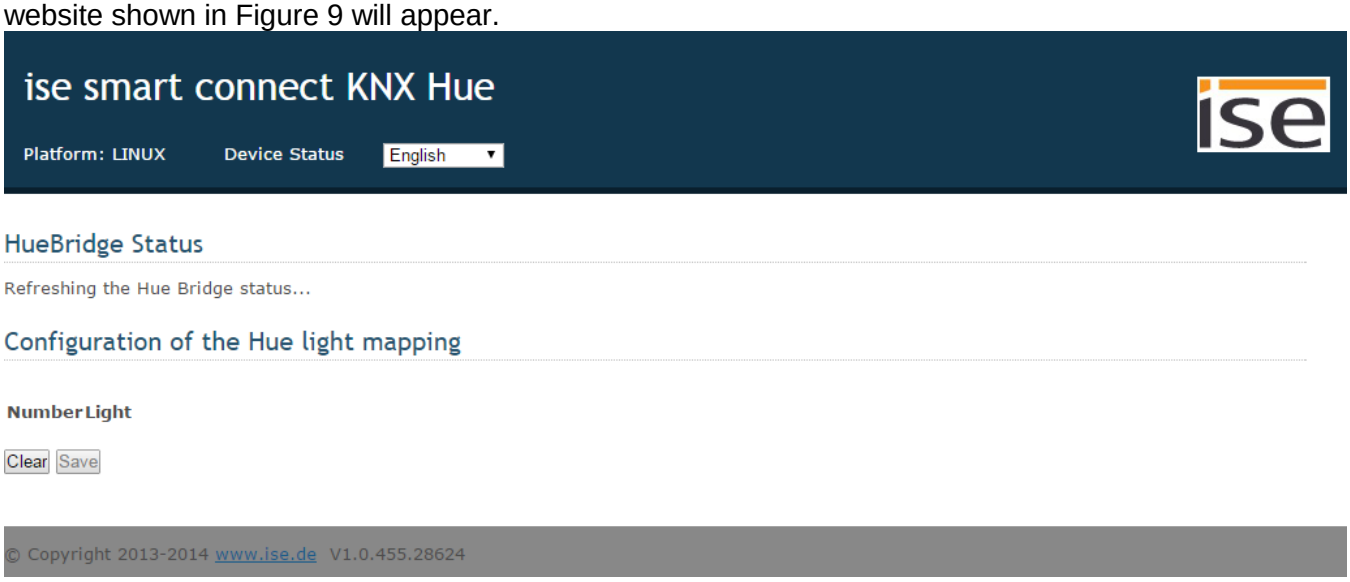


Figure 9: Device website if the device is waiting for feedback from the Philips Hue Bridge.

If the Hue Bridge cannot be reached, the website displays a message accordingly. It is possible, however, to make a configuration of the light name for the respective KNX numbers.

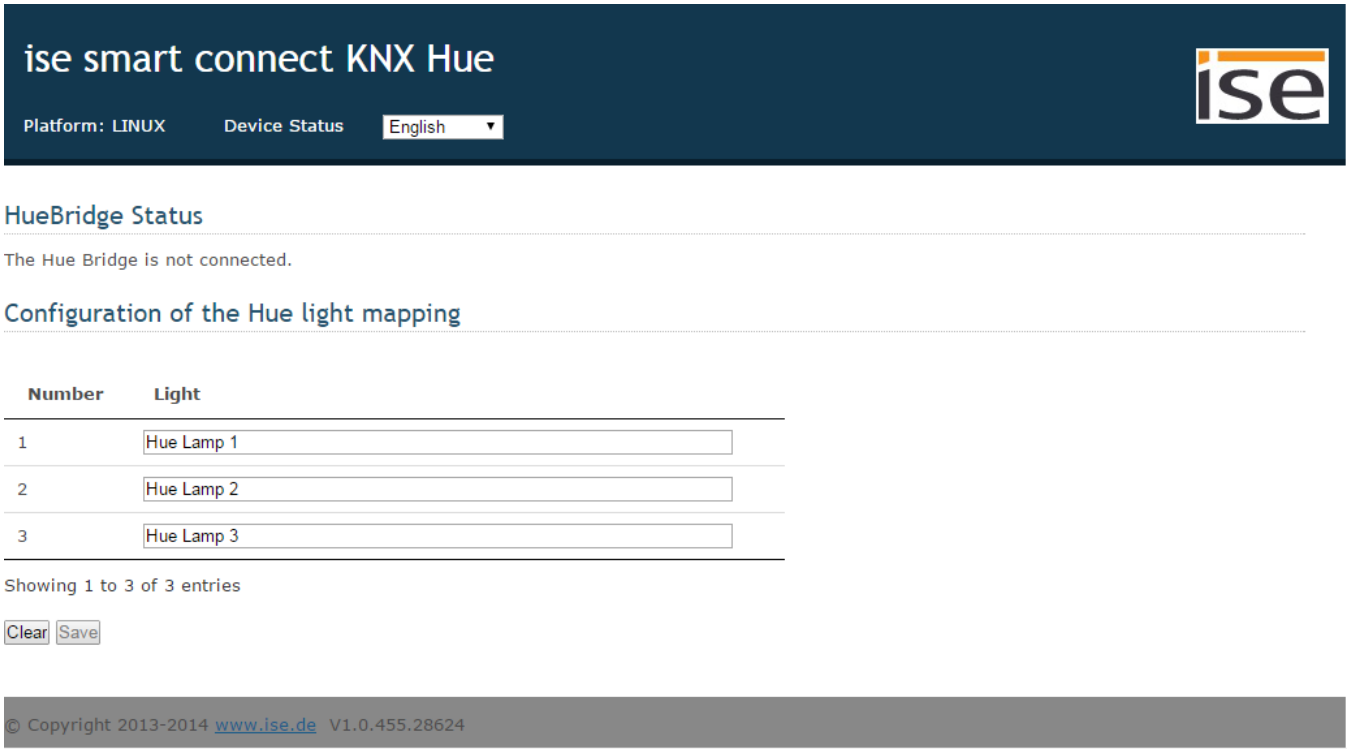


Figure 10: Device website if no Philips Hue Bridges are connected.

Figure 11 shows successful registration at the Hue Bridge. If necessary, registration can be removed from the Philips Hue Bridge by pressing the *Unregister HueApp* button.

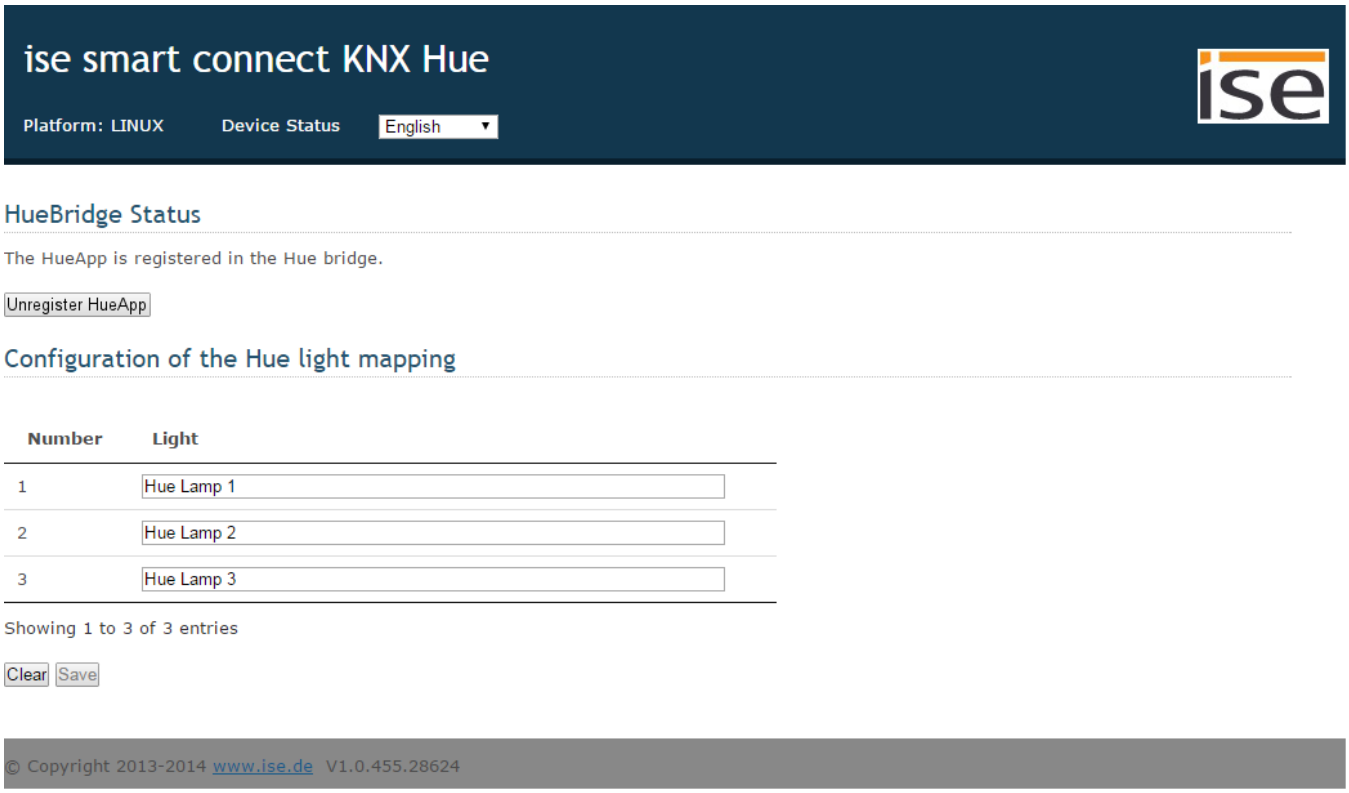


Figure 11: Default device website with the required registration at the Philips Hue Bridge.

6.9 Configuration of lights using the website

Using the ise smart connect KNX Hue, you can give up to 25 Hue lights "meaningful" names of your choice.

The selection is made using the website of the device. Calling up the website is described in Section 6.7.2 – *Using the website of the* device.

As soon as the ise smart connect KNX Hue has established a connection with the Philips Hue Bridge, the lights available in the bridge can be used for light assignment. All that is needed here is to click the respective text field; a list of the available lights then appears (see Figure 12).
Depending on the Internet browser, the display appears as a drop-down or suggestion list during entry.

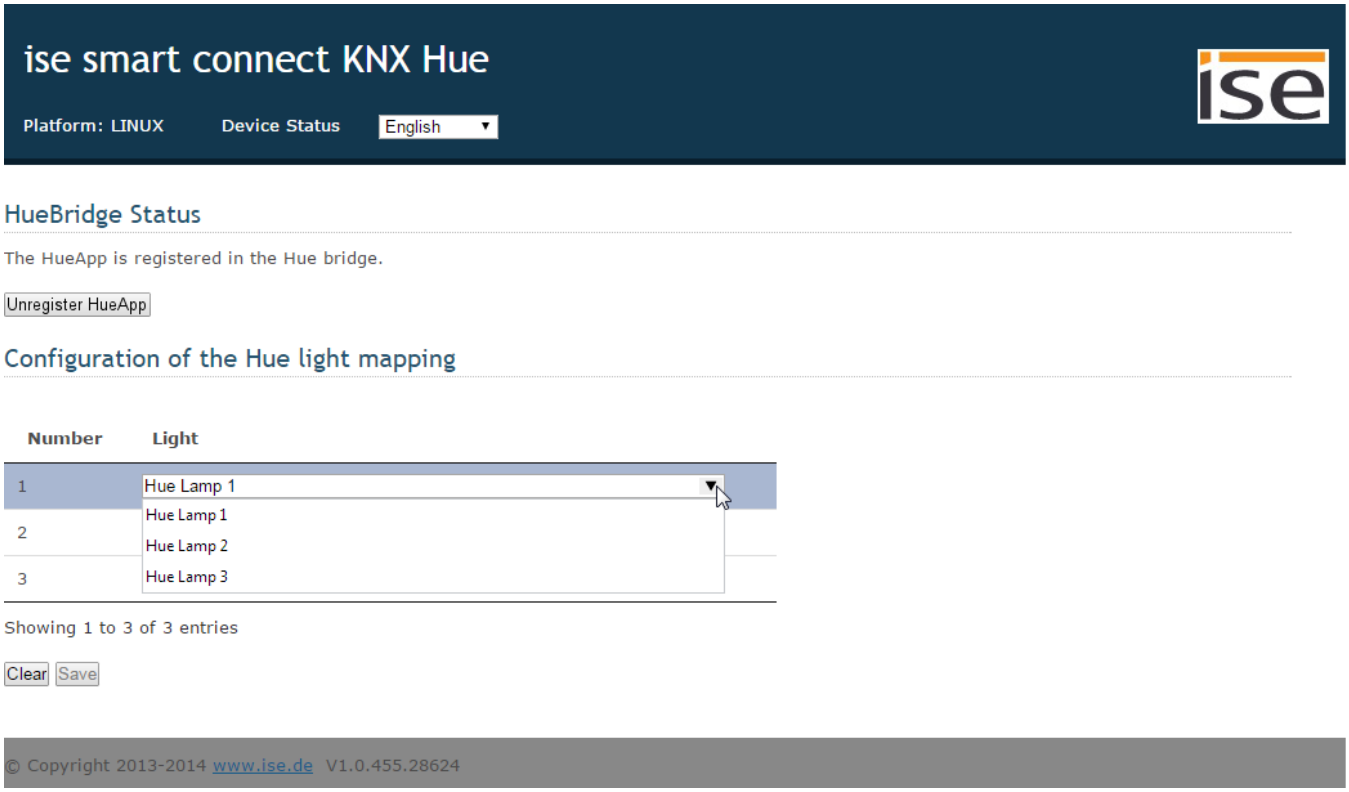


Figure 12: Selection of the available lights in the Philips Hue Bridge.

7 Technical data

KNX medium	TP
Commissioning mode	S mode (ETS)
KNX supply	DC 21 to 30 V SELV
KNX connection	Bus connection terminal
External supply	
Voltage	DC 24 to 30 V ±10%
Connection	Bus connection terminal, preferably yellow (+)/white (–)
Power consumption	Typically 2 W (at DC 24 V, two Ethernet lines connected)
IP communication	Ethernet 10/100 BaseT (10/100 Mbit/s)
IP connection	2 x RJ45
Supported protocols	ARP, ICMP, IGMP, UDP/IP, DHCP, AutoIP KNXnet/IP as per KNX system specification: Core, Device Management
microSD card	No function
Ambient temperature	0 °C to +45 °C
Storage temperature	–25 °C to +140 °C
Installation width	36 mm (2 HP)
Installation height	90 mm
Installation depth	74 mm
Protection type	IP20 (compliant with EN60529)
Protection class	III (compliant with IEC 61140)
Test marks	KNX, CE

8 Frequently asked questions (FAQ)

- **How do I find out the IP address of my ise smart connect KNX Hue?**
  Please read about this in Section 6.7.2 – *Using the website of the* device.

- **Which Hue Bridge version is supported by the ise smart connect KNX Hue?**
  The ise smart connect KNX Hue supports the Hue Bridge starting with software version 01016441 with API version 1.4.0.

- **Why is my new Hue Bridge not automatically found by my ise smart connect KNX Hue?**
  The ise smart connect KNX Hue can be set to automatic bridge detection. In this case, the device searches for a connected Hue Bridge and uses the first bridge which reports back during start-up. The IP address of the Hue Bridge is now used as a fixed setting. To detect a new Hue Bridge with a changed IP, the ise smart connect KNX Hue must be restarted.

- **Can I use multiple ise smart connect KNX Hues with a Hue Bridge?**
  Yes. In this case, each ise smart connect KNX Hue is only responsible for the lights configured at its website. It is sufficient if you register the HueApp of an ise smart connect KNX Hue in the Hue Bridge.

- **Can I still operate my Hue lights with other apps, e.g. from my iPhone?**
  Yes. Use of the ise smart connect KNX Hue does not limit the operation of your Hue lights. Changes, for example those you make using your smartphone, are forwarded to the KNX accordingly wherever possible.

- **Which actions of the Hue software cannot be simulated with KNX or are not understood by KNX?**
  The ise smart connect KNX Hue cannot switch Hue scenes or alarm functions by itself. Option logic modules or time clocks are required here.

- **Why do my KNX operating devices not generate the normal response of my Hue lights?**
  If the Hue lights can be operated without any problems using the official Hue application, please check the LED display of your ise smart connect KNX Hue on the device to rule out a fault (see Section 6.3.2 – *LED status display* in operation).

- **Why can my Hue lights no longer be operated via KNX after a period of time?**
  The ise smart connect KNX Hue uses fixed IP addresses for the Philips Hue Bridge. If you use DHCP for the assignment of the IP addresses for your Philips Hue Bridge, please couple the issued IP addresses to the MAC address of the respective Philips Hue Bridge.

- **Why is the status of a Hue light which is no longer available set incorrectly on the KNX bus at first?**
  If the Philips Hue Bridge is switched on, it first assumes that all of your known lights can be reached. Only after that does the bridge check the reachability of the lights and send the correct status to the ise smart connect KNX Hue. This can take several seconds.

- **Why can I control a Hue light via KNX, yet not receive correct status messages?**
  The Hue light may only be assigned to one KNX number on the device website. In case of multiple assignment, status changes of the Hue Bridge are only displayed for the first found KNX number.

- **Why does the dimming procedure not stop reliably if the brightness is set externally during dimming?**
  Due to the technical limitations of the Philips Hue system, external brightness changes during dimming are not always properly registered.

- **Does a microSD card have to be inserted in the ise smart connect KNX Hue?**
  No. The SD card has no function.

- **Why doesn't the website work?**
  - Is the software restarting?
    After the parametrisation is downloaded with the ETS, it can take up to 3 minutes until the website is available again. Try to reload the page after a few minutes.
  - Is Javascript activated, and are cookies allowed?
    The playlist website requires Javascript and cookies. Allow the execution of Javascript and the saving of cookies in the options of your web browser if necessary.
  - Are you using an up-to-date, supported web browser?
    The answer to the next question contains a list of browsers which will always work.

- **Which web browsers are supported ise smart connect KNX Hue?**
  The website was successfully tested with the following browsers in Windows 7:

  - Mozilla Firefox 31
  - Google Chrome 36
  - Internet Explorer 11

- **Are there software updates for my ise smart connect KNX Hue device?**
  Available software updates can be found on the firmware website. Please visit www.ise.de for more information.

- **Is the website of my ise smart connect KNX Hue accessible using an ise smart connect Secure?**
  Yes, these products from ise are compatible with one another.

  ise smart connect Secure is a remote access solution which enables access to local device websites from any location as long as an Internet connection is available.

- **Why does the ETS report the error that a protected area cannot be written to when downloading the application program?**
  Please ensure that your ETS version is up to date. The ise smart connect KNX Hue requires the ETS4 version 4.2 or later or the ETS5 version 5.0.2 or later.

9 Troubleshooting and support

If you have a problem with your ise smart connect KNX Hue and require support, please send an e-mail with a detailed error description and the log file created after the error occurred to support@ise.de. For information on how to download the log files from your ise smart connect KNX Hue, please refer to Section 9.1 – *Downloading log files if a problem* occurs.

9.1 Downloading log files if a problem occurs

If a problem occurs, the log files are required for providing support. They can be downloaded via the website of the device (see Section 6.7.2). To do so, proceed as follows:

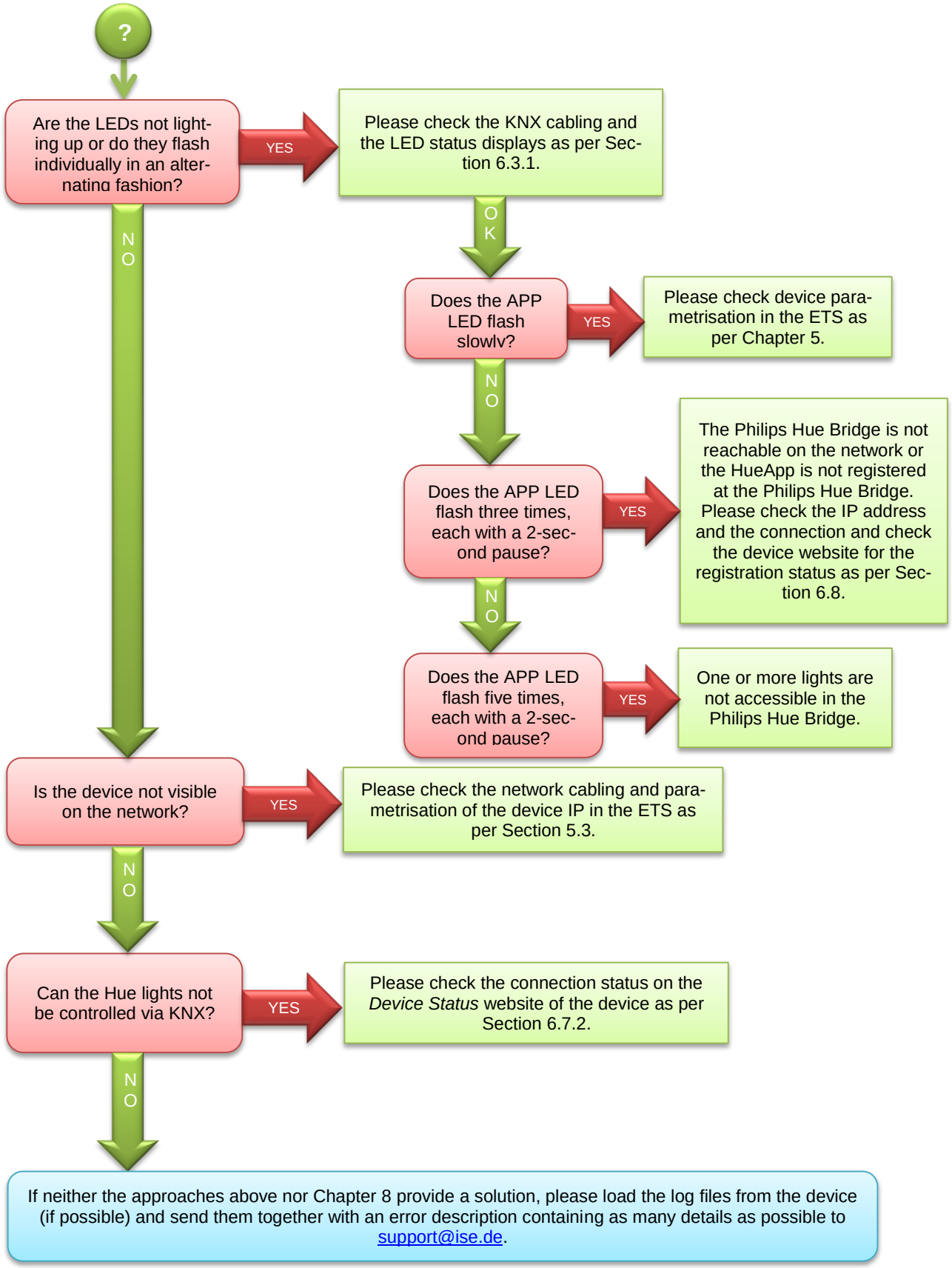
- Call up the website of the device. For this purpose, double-click the icon of the device in the *Multimedia* area in the network environment.
- Select *Device Status* in the upper menu bar on the website.
- Select *Download Log File* in the upper menu bar on the status page.
- The page which opens begins downloading the log files. If this does not occur, the provided link can be used.

9.2 Status page of the ise smart connect KNX Hue

You can call up the device status on the website of the ise smart connect KNX Hue (see Section 6.7.2). Among other things, it displays the installed software version and the configuration of the Hue lights in the ise smart connect KNX Hue. Should an error occur, please send us a screen shot of the status page.

9.3 The ise smart connect KNX Hue does not work

The following error tree is intended to solve the most common problems. Should this be unsuccessful, please contact us at support@ise.de.



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