



REAL SMART HOME

REAL SMART HOME GmbH

APPMODULE

HUE:CONTROL App

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1 INTRODUCTION

Thank you for your trust, and the purchase of the **HUE:CONTROL** -app for the BAB **APP**MODULE. With the **HUE:CONTROL** - app you get one of the simplest integrations of your Philips® HUE lights into building automation. This documentation will help you get started with the app and aims to improve your setup experience.

»Note: Some features of this app are only available with a Philips® hue Bridge V2. «

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IMPORTANT INFORMATION ON THE OPERATING INSTRUCTIONS

We reserve the right continually improve the product. This entails the possibility that parts of this documentation might be out-of-date. You will find the latest information at:

www.bab-appmarket.de

This app is an independent product, with no legal ties to Philips®. Neither **BAB APP MARKET** GmbH nor the developer of this app take any claim in the trademarks owned by Philips®.

2 HUE:CONTROL – FUNCTIONAL OVERVIEW

This app connects your Philips® hue Bridge with KNX® so that you have access to all connected Philips hue lights through the building automation. The simple authorization process makes connection particularly easy. The 50 freely definable " Notifications" which the hue lights use to inform themselves about the desired conditions (e.g. light red if the doorbell rings) are a particular feature.

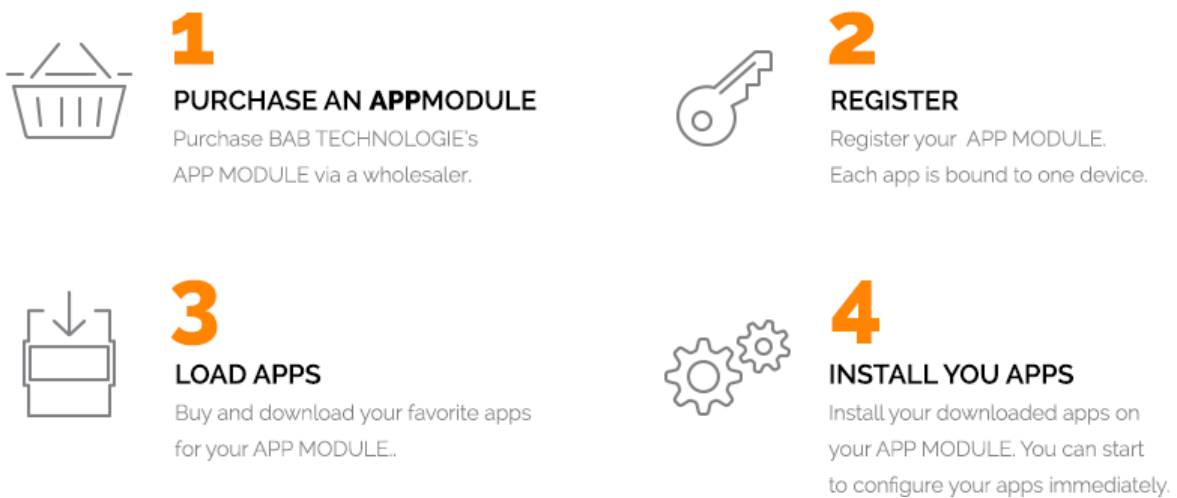
2.1 HIGHLIGHTS

- Simple authorization process (single touch on the Bridge)
- Control lights or groups
- Adjustable dimming duration (large or small steps)
- Duration of status transitions (color, brightness) dynamically adjustable via KNX®
- Control brightness absolutely or relatively (dimming)
- RGB color control through 3 group addresses, or through a (DPT232.600)
- Alternative color temperature control for white tones
- 50 freely definable " Notifications" (e.g.: RGB color x for y seconds when group address s = 1)

3 THE INNOVATIVE, MODULAR APP-CONCEPT FOR THE BUILDING AUTOMATION

The innovative, modular app concept for building automation. The **APPMODULE** brings the innovative, modular app concept into building automation. You can mix and match any of the diverse applications that are available to integrate third-party solutions. With these apps from the dedicated **BAB APP MARKET**, the **APPMODULE** becomes a tailor-made integration unit for your building automation.

HOW IT WORKS



Manufacturer of the **APPMODULE** [BAB TECHNOLOGIE GmbH](#)

Distribution of all apps for the **APPMODULE** [BAB APP MARKET GmbH](#)

App developer [REAL SMART HOME GmbH](#)

3.1 INFORMATION ABOUT THE APPMODULE

Please refer to the separate product documentation of the **APPMODULE** for a detailed product description and setup instructions.

http://www.bab-tec.de/index.php/download_de.html

Product variants:

The **APPMODULE** is available in three variants:

- **APPMODULE KNX/TP** – for stand-alone use on KNX/TP Bus
- **APPMODULE EnOcean** – for stand-alone use in the EnOcean wireless network
- **APPMODULE Extension** – for use in an IP-based KNX installation (KNXnet/IP) or as extension for an **EIBPORT**

4 APP INSTALLATION

Please proceed as follows to install an App.

1. Open the APPMODULE web page: Enter <IP Address of APPMODULE> into your browser's address bar and press Enter. The APPMODULE web interface will appear.
2. Log in with your user credentials. Please refer to the APPMODULE documentation for login details.
3. Click on the menu entry "App Manager"
4. You are now on the page where already installed Apps are listed. The list will be empty if no apps have been installed. Click "Install App" in order to install a new app.
5. Now click on "Select App"; a file selector window will appear. Choose the app »HUE:CONTROL« and click "OK". The Smart Home App "HUE:CONTROL" must first be downloaded from the BAB APP MARKET (www.bab-appmarket.de).
6. After the message "Installation successful" appears, click "OK". You are ready to configure the App.
7. To update an already installed app, click on the App icon in the "App Manager".
8. The detail view of the App appears. Click on "Update App" to select the app package and start the update. The update version must be downloaded from the BAB APP MARKET.

After the message "Installation successful" appears, click "OK". The app has been updated. Your instance configurations will remain unchanged.

Information

To configurate the App please use Google Chrome.

5 APP SETTINGS

This app connects your Philips® hue Bridge with KNX® so that you have access to all connected Philips® hue lights through the building automation. The simple authorization process makes connection particularly easy. The 50 freely definable »Alerts« which the hue lights use to inform themselves about the desired conditions (e.g. light red if the doorbell rings) are a particular feature.

5.1 INSTANCE

Information

The browser-session expires after a period of 60 minutes due to inactivity. Unsaved changes to the configuration will be lost.

As soon as the App is installed, you can create so called "Instance". An Instance is one of several objects of the same class.

In order to create an instance, click on the following symbol "Create Instance".

Instance Name:

Choose a name for this new instance.

Comment:

Insert a description what this instance does.

5.1.1 HUE BRIDGE

IP and Authentication Status:

Your bridge must have a static IP for the app to work reliably. The IP address of your hue bridge should have been pre-filled automatically, as long as your bridge is reachable in your network right now, and you are connected to the Internet (including functional DNS). In case this field is empty, you can specify manually which IP your bridge has. In this case, the authentication status check will start once you exit the input field with your mouse or keyboard.

5.1.2 GENERAL PARAMETERS

Control with this Instance:

If your hue Bridge is connected, and you already have lights set up, a list of your lights or groups will appear here. Choose the item which this instance should control.

Bulb Type:

In control mode 'light bulb' this value is ignored, because the bulb transmits its type automatically. In group mode, the type of bulb is unknown however. Set it here to ensure the most accurate color reproduction. Hue bulbs have a different color range than Living Color and the conversion from RGB produces slightly different outputs (see 'RGB Submit' for further information).

- Hue
- Living Colors Bloom, Aura, Iris, and Hue Light Strips

Connection Status:

Insert the group address of the connection status indicator. A "1" indicates that the selected light or group can be reached by this app instance. If not a "0" will be sent to this group address.

Polling Interval:

Philips Hue lights need to be polled for remote state changes. This is necessary to receive changes made to your lights by means other than KNX, for instance with the Philips smartphone apps. Insert an interval in seconds in which your item will be polled.

Static Transition Time:

Insert the transition time for state changes (in multiples of 100ms).

Default for hue bulbs is 4, i.e. 400ms.

Note: This app has a hard-coded value of 1, i.e. 100ms, for changes to and from special notifications, as well dimming (see Dimming Time).

Variable Transition Time (EIS6):

Insert the group address for transition time (see comment on field Static Transition Time for more information).

5.1.3 BASIC GROUP ADDRESSES

On/Off:

Insert the group address for the on/off switch-

On/Off Feedback:

Insert the group address on which to receive the actual switch state of the hue bulb

Item Name:

Insert the group address on which the name of your current bulb or group will be sent.

5.1.4 BRIGHTNESS

Absolute Brightness (EIS6):

Insert the group address to set absolute brightness (0 - 100%).

Note: Value 0 will turn off the hue bulb.)

Relative Brightness (Dimming) (EIS2):

Insert the group address for relative brightness (start/stop dimming)

Absolute Brightness Feedback:

Insert the feedback address for the actual absolute brightness of the hue (1 - 100%).

Dimming Time for Start-Stop-Dimming:

Insert the time (in multiples of 100ms) a full dimming process should take.

Note: hue bulbs accept 10 commands per second, for groups the suggested rate is only 1 command per second. Each brightness has to be sent individually (there is no 'start dimming' command). This app will internally calculate how to set the individual increment in order to reach the desired value whilst contacting the hue every 110ms, or when in group mode every 1100ms.

If you wanted the smoothest possible dimming for a bulb, that is an increment of 1 sent every 110ms, you would have to set this to 280 (28s).

5.1.5 COLOR MODE

Colour Output Type:

Choose whether the output of your colour visualisation element consists of separate values for RGB or HSB or a combined 3-byte RGB value. Please fill out the related address fields below for either the 3 byte RGB, 4 byte RGB or HSB depending on your choice.

- 4 separate byte values (R, G, B, Send)
- combined 3-byte value
- 4 separate HSB values (Hue, Saturation, Brightness, Send)

Color Temperature:

Insert the group address for color temperature. This is an alternative color control mode to RGB which focuses on whites. Hue bulbs support 2000K (warm) to 6500K (cold). This is an EIS6 value that gets mapped into the correct value range (0% = 6500K, 100% = 2000K).

Color Temperature Feedback:

Insert the group address to receive the actual color temperature of your hue bulb.

Absolute Color Temperature (Kelvin):

Insert the group address for the absolute color temperature input for Kelvin values. This is an alternative color control mode to RGB which focuses on whites. Hue bulbs support values ranging from 2000K (warm) to 6500K (cold), albeit not all. In some cases, you may receive a value that differs slightly from the desired value.

Absolute Color Temperature Feedback:

Insert the group address to receive the actual absolute color temperature Kelvin of your hue bulb.

5.1.6 HSB

Hue (EIS 10 0...65535):

Insert the group address for HSB hue value.

Hue Feedback (EIS 10 0...65535):

Insert the group address to receive the actual hue value of your hue bulb.

Saturation (EIS 14 0...255):

Insert the group address for HSB saturation value.

Saturation Feedback (EIS 14 0...255):

Insert the group address to receive the actual saturation value of your hue bulb.

Brightness (EIS 14 0...255):

Insert the group address for HSB brightness value. Please note that bulbs will not be turned off when the brightness value is set to 0 via this address.

Brightness Feedback Brightness Feedback (EIS 14 0...255):

Insert the group address to receive the actual brightness value of your hue bulb. Please note that the value of this address also changes if the brightness value is set by the group address for "Absolute Brightness" or "Relative Brightness".

HSB Submit (EIS 1):

Insert the group address for the HSB submit trigger. The color wheel visu element will send this after the HSB values and only then will the device receive a new color update.

Please note that setting hue and saturation values may result in different colors depending on the device type which means that sending the same value to multiple lights may not result in the same colour.

5.1.7 3-BYTE RGB

RGB Submit (DPT 232.600):

Insert the group address for the RGB color (DPT 232.600)

RGB Feedback (DPT 232.600):

Insert the group address to receive the actual RGB color of your hue bulb (DPT 232.600).

Note: Philips Hue lights have special color spaces. Internally, your RGB values are converted to that space and checked against the limitations of your hue. This will often lead to your color picker 'jumping' after you set a new color because the RGB color value you tried to set can be different from the closest value your device supports, and once the bulb reports back its actual current color, the visualization element gets updated.

5.1.8 3 X 1-BYTE RGB

Red (EIS 14 0...255):

Insert the group address for RGB red value.

Red Feedback (EIS 14 0...255):

Insert the group address to receive the actual red value of your hue bulb.

Note: Philips Hue lights have special color spaces. Internally, your RGB values are converted to that space and checked against the limitations of your hue. This will often lead to your color picker 'jumping' after you set a new color because the RGB color value you tried to set can be different from the closest value your device supports, and once the bulb reports back its actual current color, the visualization element gets updated.

Green (EIS 14 0...255):

Insert the group address for RGB green value.

Green Feedback (EIS 14 0...255):

Insert the group address to receive the actual red value of your hue bulb.

Note: Philips Hue lights have special color spaces. Internally, your RGB values are converted to that space and checked against the limitations of your hue. This will often lead to your color picker 'jumping' after you set a new color because the RGB color value you tried to set can be different from the closest value your device supports, and once the bulb reports back its actual current color, the visualization element gets updated.

Blue (EIS 14 0...255):

Insert the group address for RGB blue value.

Blue Feedback (EIS 14 0...255):

Insert the group address to receive the actual red value of your hue bulb.

Note: Philips Hue lights have special color spaces. Internally, your RGB values are converted to that space and checked against the limitations of your hue. This will often lead to your color picker 'jumping' after you set a new color because the RGB color value you tried to set can be different from the closest value your device supports, and once the bulb reports back its actual current color, the visualization element gets updated.

RGB Submit (EIS 1):

Insert the group address for the RGB submit trigger. The color wheel visualization element will send this after the RGB values and only then will the device receive a new color update.

Note: Philips Hue lights have a special color space. Internally, your RGB values are converted to that space and checked against the limitations of your hue. This will often lead to your color picker 'jumping' after you set a new color because the RGB color value you tried to set can be different from the closest value your device supports, and once the bulb reports back its actual current color, the visualization element gets updated.

5.1.9 SCENES

Scenes:

Up to 256 scenes, which have to be stored in the hue Bridge, can be set by telegrams. Please note: the scenes that come pre-installed in Philips hue Apps, and those that you create within Philips hue Apps, are not automatically also stored inside the bridge! This only happens once you actually set a scene via your Philips hue Smartphone App. Also, a bridge can store up to 100 scenes. If you create 101 scenes in your smartphone app, the bridge will delete the scene that has not been used for the longest period from its internal memory. In such a case, this app can of course not trigger that scene anymore.

Comment:

Insert a comment to describe the scene.

Scene to be started:

Select the scene which is to be started by the trigger value on the trigger address. Please also read the tooltip of »Scenes« in the app configuration!

Trigger Address (EIS 14 0...255):

Set the address that triggers this notification.

Trigger Value:

Set the value that triggers this notification.

5.1.10 SPECIAL NOTIFICATIONS

Special Notifications:

Up to 50 special color notifications can be triggered by telegrams. Notification means that your hue will blink for the desired amount of time in the desired color. When a notification is stopped, this app will revert your hue it's the previous color.

Comment:

Insert a comment to describe the notification.

RGB value to set:

Set an RGB value (0-255 each, comma-separated as R, G, and B) for the notification.

Trigger Address (EIS 1):

Set the address that triggers this notification.

Notifications timeout in seconds:

Set a timeout after which the light should stop the notification and revert to the old color (the notification will stop earlier if you send a 0 on the trigger group address).

6 ATTACHMENT

function	EIS type	DPT	typical function	typical values	data	identifier
PriorityPosition	EIS1	DPT1	Wind alarm	1=high and inhibit	1 Bit	1-bit
Switch	EIS1	DPT1	Light switching	0=Off; 1=On	1 Bit	1-bit
DimControl	EIS2	DPT3	Dimming	0=Off; 1=On xxxx=relative dimming 0-255=absolute dimming	1Bit 4Bit 8Bit	3-bit controlled
Time	EIS3	DPT1 0	Time	Hhh:mm:ss	3 Byte	Time
Date	EIS4	DPT1 1	Date	dd:mm:yyyy	3 Byte	Date
Value	EIS5	DPT9	Value	0-255	1Byte	2-byte float value
DimValue	EIS6	DPT5	Percent	0-100%	1Byte	8-bit unsigned value
DriveBlade Value	EIS6	DPT5	Position value	0-100%; 0-255	1Byte	8-bit unsigned value
DriveShutter Value	EIS6	DPT5	Position value	0-100%; 0-255	1Byte	8-bit unsigned value
Position	EIS6	DPT5	Control value Heating	0-100%; 0-255	1Byte	8-bit unsigned value
DriveMove	EIS7	DPT1	Move shutter	0=up 1=down	1Bit	1-bit
DriveStep	EIS7	DPT1	Adjusting the slat blind	0=up; 1= down; 0 or 1 during movement=stop	1Bit	1-bit
PriorityControl	EIS8	DPT2	Priority	0,1 switch; 3=forced off; 4=forced on	2Bit	1-bit controlled
FloatValue	EIS9	DPT1 4	IEEE	Floating-point value	4 Byte	4-byte float value
Counter 16bit	EIS10	DPT7	Counter 16 bit	0 - 65.535	2Byte	2-byte unsigned value
Counter 16bit	EIS10	DPT8	Counter 16 bit with sign	-32.768 - 32.767	2Byte	2-byte signed value
Counter 32bit	EIS11	DPT1 2	Counter 32 bit	0 - 4.294.967.295	4Byte	4-byte unsigned value
Counter 32bit	EIS11	DPT1 3	Counter 32 bit with sign	0 - 4.294.967.295	4Byte	4-byte signed value
Access Control	EIS12	DPT1 5	Access control	Card number	4Byte	Entrance access
Char	EIS13	DPT4	ASCII characters	Character	1Byte	Character
Counter 8bit	EIS14	DPT5	Value	0 - 255	1Byte	8-bit unsigned value

Counter 8bit	EIS14	DPT6	Value with sign	-128 - 127	1Byte	8-bit signed value
String	EIS15	DPT16	String	max. 14 characters	14 Byte	Character string

EIB/KNX devices exchange fixed prescribed data formats with each other. These are defined in types. The old designations of the types are EIS (EIB Interworking Standard)
The new designations are DPT (Data Point Type)