



REAL SMART HOME

REAL SMART HOME GmbH

**APPMODULE**

# **PJLink App** Documentation

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# 1

## INTRODUCTION

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Thank you for your trust, and the purchase of the **PJLink** - app for the BAB **APPMODULE**. With **PJLINK** you obtain an app that allows you to easily integrate the most popular video beamers. This documentation will help you get started with the app and aims to improve your setup experience.

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### IMPORTANT INFORMATION ON THE OPERATING INSTRUCTIONS

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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 This entails the possibility that parts of this documentation might be out-of-date.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](http://www.bab-appmarket.de)

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

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## 2 PJLINK – FUNCTIONAL OVERVIEW

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You can use this app to control PJLink-supported devices – for example from Sony®, Sharp® or Hitachi® via KNX®. Projectors can be connected very easily in this manner. Alongside the usual control commands, the range of functions also includes reporting regarding troubleshooting. The manufacturer-independent protocol ensures a steadily growing number of compatible devices.

### 2.1 HIGHLIGHTS

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- On/off
- Switch input
- Mute
- Read out status from the 3 above
- Read out troubleshooting (coverage, fan, lamp, temperature, filter, case, other)

### 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

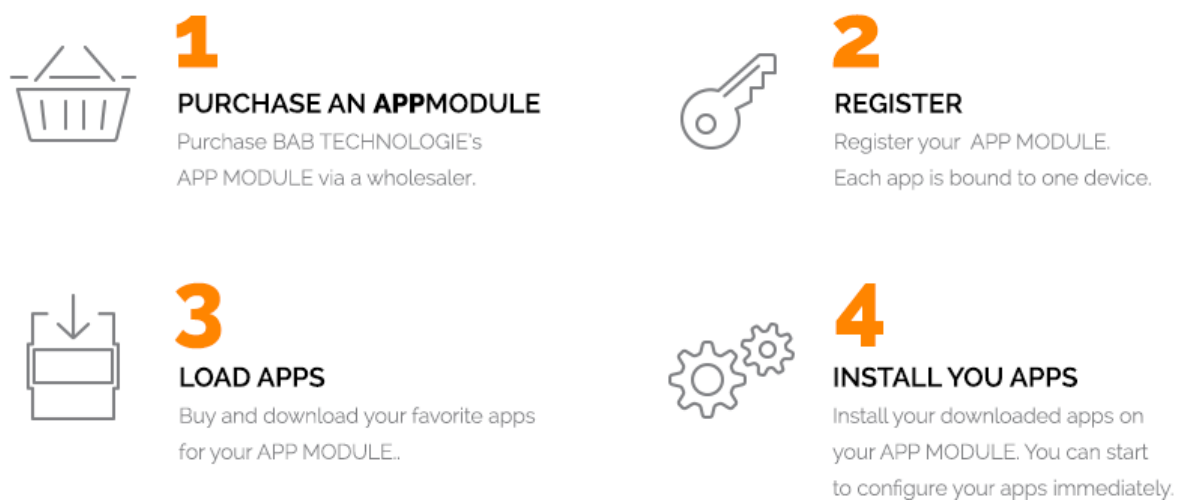


Figure 1: APPMODULE - How it works

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](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

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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 »PJLink« and click "OK". The Smart Home App "PJLink" must first be downloaded from the BAB APP MARKET ([www.bab-appmarket.de](http://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 uses Google Chrome.

## 5 APP SETTINGS

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You can use this app to control PJLink-supported devices – for example from Sony®, Sharp® or Hitachi® via KNX®. Projectors can be connected very easily in this manner. Alongside the usual control commands, the range of functions also includes reporting regarding troubleshooting. The manufacturer-independent protocol ensures a steadily growing number of compatible devices.

### 5.1 INSTANCE

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#### **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 CONNECTION PARAMETERS

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##### **PJLink Device IP:**

Insert the IP address of the PJLink device (it must have a static IP for the app to work reliably).

##### **Dest. Port:**

The port number of the PJLink device (default is 10000, Epson EP4950-WU: 43052 Panasonic PT-MZ770 Port: 4352).

##### **Password:**

The password for controlling the PJLink device (for Panasonic PT-MZ770, use the administrator user).

## 5.1.2 COMMANDS

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### **Power On/Off (EIS 1):**

Insert the group address for switching the PJLink device on and off.

### **Input (EIS 14):**

Insert the group address for selecting the PJLink input.

Panasonic PT-RZ330E:

- 11: Computer
- 12: DVI-I IN (Analog)
- 21: Video
- 31: HDMI
- 32: DVI-I IN (Digital)
- 33: Digital LinkEpson

EP4950-WU:

- 32: HDMI

### **Mute (EIS 1):**

Insert the group address for muting the device.

## 5.1.3 STATUS

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### **Status Query Interval:**

The app will query the PJLink device for the status in this interval (seconds).

### **Status Power (EIS 1):**

Insert the group address for power on / off status.

### **Status Input (EIS 14):**

Insert the group address for input status. For the PT-RZ330E this means:

- 11: Computer
- 12: DVI-I IN (Analog)
- 21: Video
- 31: HDMI
- 32: DVI-I IN (Digital)
- 33: Digital Link

### **Status Mute (EIS 1):**

Insert the group address for mute status.

## 5.1.4 FAILURES

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### **Device Available (EIS 1):**

A telegram with the value 1 will be sent on this group address if the projector is available on the network.

A 0 indicates that the projector is not available on the network.

**Fan Status (EIS 14):**

The projector's fan status will be sent on this group address:

- 0: OK
- 1: Warning
- 2: Failure

**Lamp Status (EIS 14):**

The projector's lamp status will be sent on this group address:

- 0: OK
- 1: Warning
- 2: Failure

**Temperature Status (EIS 14):**

The projector's temperature status will be sent on this group address:

- 0: OK
- 1: Warning
- 2: Failure

**Cover Status (EIS 14):**

The projector's cover status will be sent on this group address:

- 0: Closed
- 2: Opened

**Filter Status (EIS 14):**

The projector's filter status will be sent on this group address:

- 0: Closed
- 2: Opened This feature is not available for the Panasonic PT-RZ330E

**Other Errors (EIS 14):**

Other projector errors will be sent on this group address:

- 0: OK
- 1: Warning
- 2: Failure

**Command Error Number (EIS 14):**

The following error numbers will be sent:

- 0: Command Successful
- 1: Undefined command
- 2: Parameter error
- 3: Unavailable Time. The processor is busy and cannot execute the command at the moment.
- 4: Projector failure.

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### **Command Error Text (EIS 15):**

If a command cannot be executed successfully, a error text will be sent on this object:

- "": Command Successful
- "Undef. Command": Undefined command
- "Param. Error": Parameter error
- "Unavailable": Unavailable Time. The processor is busy and cannot execute the command at the moment.
- "Proj. Failure": Projector failure.

## 6 ATTACHMENT

| function           | EIS type | DPT     | typical function         | typical values                                                | data                 | identifier            |
|--------------------|----------|---------|--------------------------|---------------------------------------------------------------|----------------------|-----------------------|
| PriorityPosition   | EIS1     | DPT 1*  | Wind alarm               | 1=high and inhibit                                            | 1 Bit                | 1-bit                 |
| Switch             | EIS1     | DPT 1*  | Light switching          | 0=Off; 1=On                                                   | 1 Bit                | 1-bit                 |
| DimControl         | EIS2     | DPT 3*  | Dimming                  | 0=Off; 1=On<br>xxx=relative dimming<br>0-255=absolute dimming | 1Bit<br>4Bit<br>8Bit | 3-bit controlled      |
| Time               | EIS3     | DPT 10* | Time                     | Hhh:mm:ss                                                     | 3 Byte               | Time                  |
| Date               | EIS4     | DPT 11* | Date                     | dd:mm:yyyy                                                    | 3 Byte               | Date                  |
| Value              | EIS5     | DPT 9*  | Value                    | [-671088.64 ... 670760.96]                                    | 1Byte                | 2-byte float value    |
| DimValue           | EIS6     | DPT 5*  | Percent                  | 0-100%                                                        | 1Byte                | 8-bit unsigned value  |
| DriveBlade Value   | EIS6     | DPT 5*  | Position value           | 0-100%; 0-255                                                 | 1Byte                | 8-bit unsigned value  |
| DriveShutter Value | EIS6     | DPT 5*  | Position value           | 0-100%; 0-255                                                 | 1Byte                | 8-bit unsigned value  |
| Position           | EIS6     | DPT 5*  | Control value Heating    | 0-100%; 0-255                                                 | 1Byte                | 8-bit unsigned value  |
| DriveMove          | EIS7     | DPT 1*  | Move shutter             | 0=up 1=down                                                   | 1Bit                 | 1-bit                 |
| DriveStep          | EIS7     | DPT 1*  | Adjusting the slat blind | 0=up; 1= down; 0 or 1 during movement=stop                    | 1Bit                 | 1-bit                 |
| PriorityControl    | EIS8     | DPT 2*  | Priority                 | 0,1 switch; 3=forced off; 4=forced on                         | 2Bit                 | 1-bit controlled      |
| FloatValue         | EIS9     | DPT 14* | IEEE                     | Floating-point value                                          | 4 Byte               | 4-byte float value    |
| Counter 16bit      | EIS10    | DPT 7*  | Counter 16 bit           | 0 - 65.535                                                    | 2Byte                | 2-byte unsigned value |
| Counter 16bit      | EIS10    | DPT 8*  | Counter 16 bit with sign | -32.768 - 32.767                                              | 2Byte                | 2-byte signed value   |
| Counter 32bit      | EIS11    | DPT 12* | Counter 32 bit           | 0 - 4.294.967.295                                             | 4Byte                | 4-byte unsigned value |
| Counter 32bit      | EIS11    | DPT 13* | Counter 32 bit with sign | 0 - 4.294.967.295                                             | 4Byte                | 4-byte signed value   |
| Access Control     | EIS12    | DPT 15* | Access control           | Card number                                                   | 4Byte                | Entrance access       |
| Char               | EIS13    | DPT 4*  | ASCII characters         | Character                                                     | 1Byte                | Character             |
| Counter 8bit       | EIS14    | DPT 5*  | Value                    | 0 - 255                                                       | 1Byte                | 8-bit unsigned value  |
| Counter 8bit       | EIS14    | DPT 6*  | Value with sign          | -128 - 127                                                    | 1Byte                | 8-bit signed value    |
| String             | EIS15    | DPT 16* | 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)