

Lunatone

DALI Daylight

Manual control module



DALI Bluetooth interface for control
and partial configuration of DALI
systems with mobile devices

Art. Nr. 89453863 (DALI Daylight)

DALI Daylight Manual Control Module

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1. General

1.1. Function

The DALI-Daylight module is an interface module between mobile device (iOS/Android - Bluetooth low energy capable) and a DALI lighting system. An app is available for iOS and Android.

The addressing, grouping and further functions of the control units and their effective ranges can be set with the software tool DALI-Cockpit.

Device parameters of the connected DALI System (daylight curve, timer, schedules, brightness, color temperature, etc.) can be set with the app. Following devices are supported:

- DALI CDC (Circadian daily schedule) - Art. Nr.: 89453853
- DALI RTC (Timer Module) - Art. Nr.: 86459531
- DALI CS (light and presence sensor) - Art. Nr.: 86458621 and Versions
- DALI LS (light sensor) - Art. Nr.: 86458674

Only one mobile device can be connected to the interface module at any time.

1.2. Configuration

To integrate the DALI-Daylight module into a DALI system and then operate it, a certain configuration procedure is recommended. The DALI Cockpit software is used to address and configure the DALI system.

a. Addressing of the entire DALI system including the DALI Daylight module.

b. Configuration of the DALI system.

c. Configuration of the DALI-Daylight module -> see chapter 2. Configuration with DALI Cockpit

- Assign devices that can be set via the DALI-Daylight module and which luminaires / lighting groups can be controlled with it.
- The automatic light control can be activated and deactivated (DALI CS) via the DALI cockpit as well as via the DALI Daylight app.
- The CDCs, RTCs and CS can be activated and deactivated via the DALI cockpit as well as in the app.

d. Operation and configuration via the app -> see chapter 3. Operation with mobile device

2. Configuration with DALI Cockpit

DALI Cockpit is the DALI configuration tool from Lunatone, it is available for free download from the Lunatone website (<http://www.lumatone.com/en/product/dali-cockpit/>). Make sure you always use the latest version to ensure all devices are recognised and all features are supported.

The Software can be used to address and configure DALI operating devices and Lunatone control units. All components found on the DALI bus are listed in the component tree after addressing (figure 1).

By clicking on the component, you will be taken to the device's configuration page.

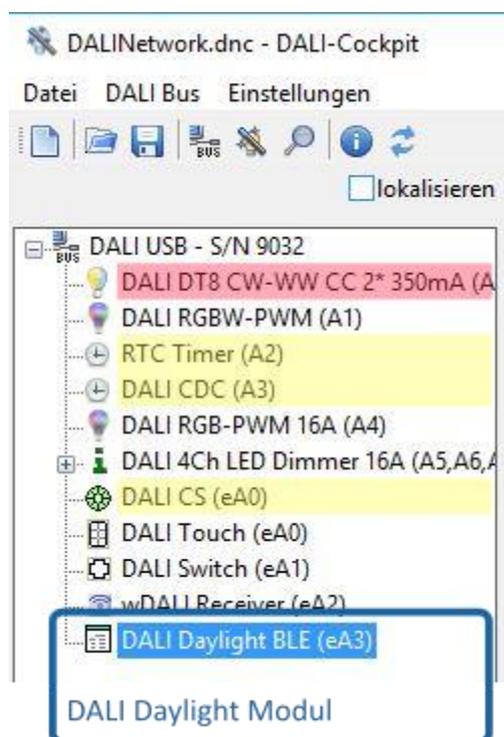


figure 1: component tree

The marked control units (yellow: figure 1) are supported by the DALI Daylight module. Furthermore: Tuneable White DT8 dimmers (red: figure 1) are required for color temperature control.

2.1. General settings

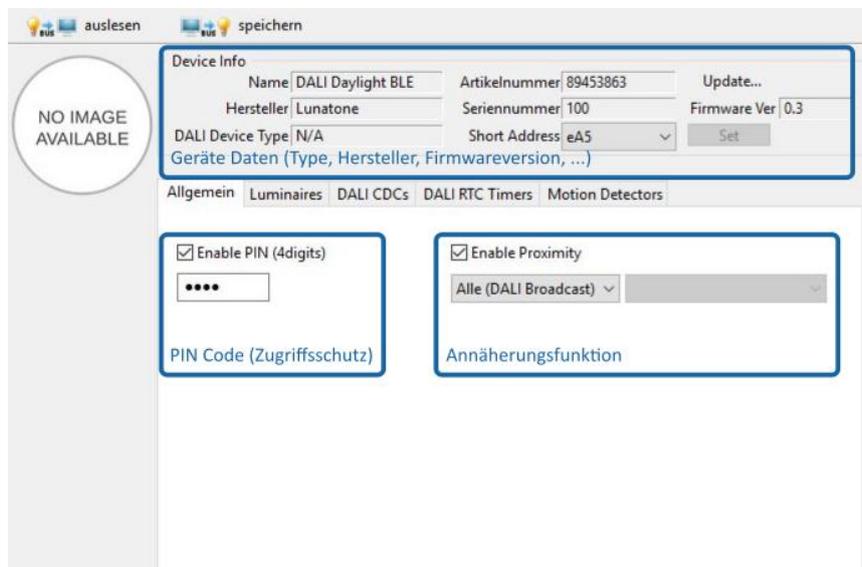


figure 2: Configuration tab "General"

The configuration page of the DALI Daylight module is divided into tabs, one for each functionality.

The header of the page contains general information about the device (manufacturer, article name, article number, serial number and firmware version).

“Enable PIN”: Activate the access protection with a 4-digit pin code. If this is activated, you will be asked to enter this PIN the first time you use the app on a mobile device.

“Enable Proximity”: function has to be enabled in the DALI Daylight module (DALI cockpit settings) as well as in the App on a mobile device: in the event the mobile device enters the Bluetooth reception area, the light can be automatically switched on and off after a certain hold time.

Note: The proximity feature is only supported on mobile devices with iOS operating system.

2.2. Device settings

In each tab (Luminaries, DALI CDCs, DALI RTC Timers, Motion Detectors) 5 devices can be added, these devices can be operated/partially configured in the app. The numbers 1-5 correlate with the app.

Each tab also has a Sync button, which will read the settings from the specified devices and display them in the app. If no sync is performed, default values will be displayed the first time the app is opened.

If device settings are changed via DALI Cockpit (for example DALI CDC settings), a new sync for the DALI Daylight module may be necessary to refresh the device status in the app.

2.2.1. "Luminaires" settings

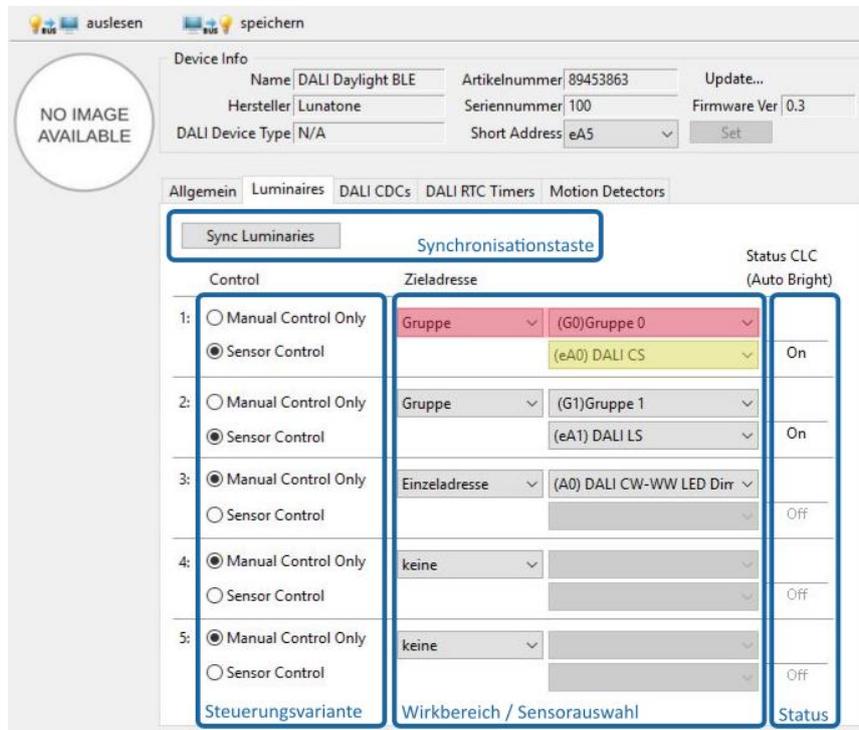


figure 3: Configuration tab "Luminaires"

In the tab "Luminaires" you can choose between two control options:

- "Manual Control Only": This option is suited for manual control of brightness and color temperature, without automatic control. A destination address is set for the DALI Daylight module as an effective range that can be controlled via the app.
- "Sensor Control": If this mode is selected, DALI LS / CS¹ can be selected for automatic light control (marked yellow in figure 3). The effective range of the selected sensor is automatically taken over in the upper dropdown (marked red in figure 3). In this dropdown you may select which of the 4 possible target addresses of the DALI CS can be manually controlled with the app. If only one target address has been selected on the DALI CS/LS setting page, only this single address will be shown in the dropdown. The app can be used to activate and deactivate the automatic light control of the sensor. The status is displayed on the right.

¹ DALI CS has to be operated in one of the two master modes:
"Motion-controlled and manually activated constant light control" or "constant light control"

2.2.2. "DALI CDCs" settings

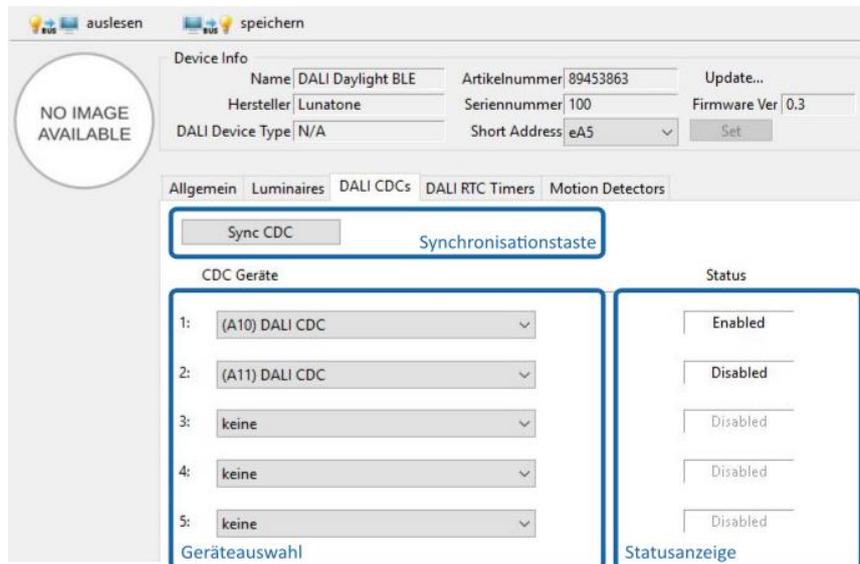


figure 4: Configuration tab "CDCs"

In this tab DALI CDC modules can be added to the DALI Daylight app. The status display indicates whether the respective device is activated or deactivated in the app (see chapter 3.3).

Please note that only devices connected to the DALI installation, hence displayed in the DALI Cockpit component tree, can be selected.

2.2.3. "DALI RTC Timers" settings

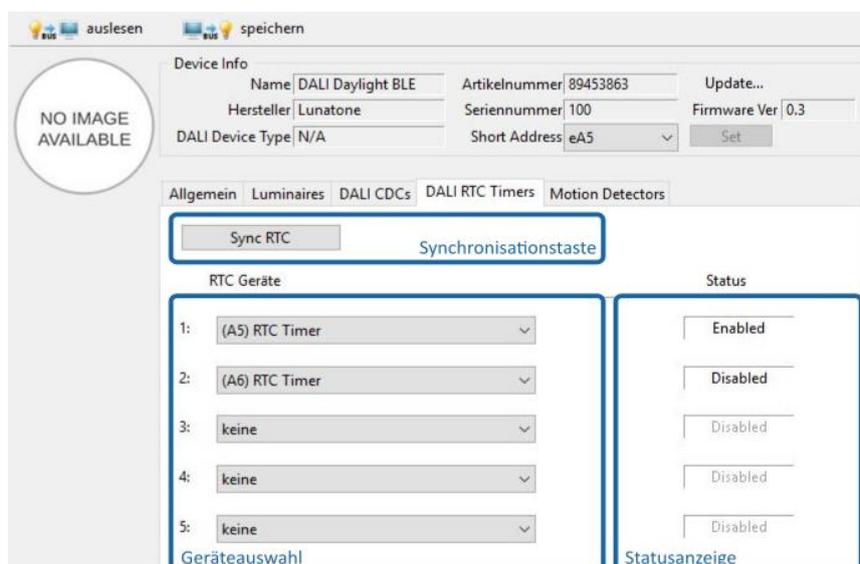


figure 5: Configuration tab "DALI RTC Timers"

In this tab DALI RTC Timer modules can be added to the DALI Daylight app. The status display indicates whether the respective device is activated or deactivated in the app (see chapter 3.4).

Please note that only devices connected to the DALI installation, hence displayed in the DALI Cockpit component tree, can be selected.

2.2.4. "Motion Detector" DALI CS settings

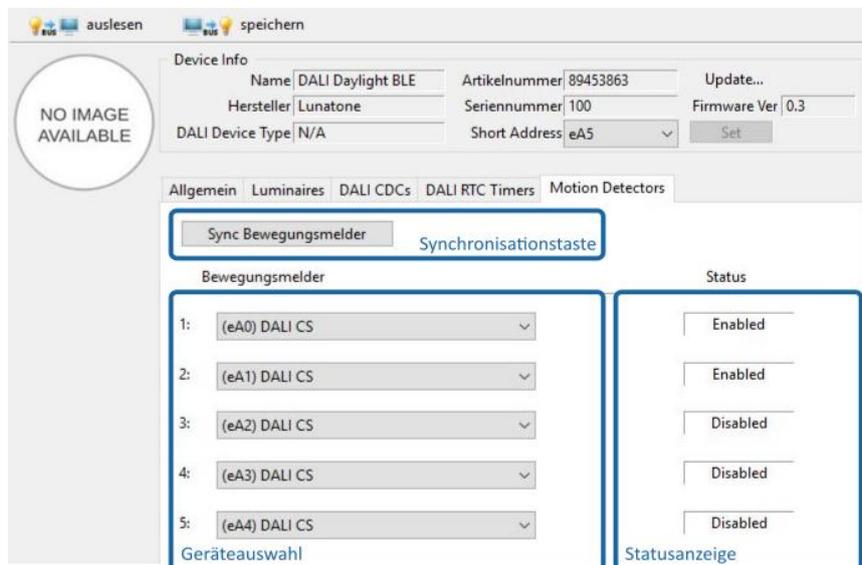


figure 6: Configuration tab "Motion Detector"

In this tab DALI CS modules can be added to the DALI Daylight app. The status display indicates whether the respective device is activated or deactivated in the app (see chapter 3.5).

Please note that DALI CS can only be added if operated in one of the master modes supporting motion detection -> to change DALI CS master mode go to DALI CS product page in DALI Cockpit

Please note that only devices connected to the DALI installation, hence displayed in the DALI Cockpit component tree, can be selected

3. Operation with mobile device

3.1. Installation and connection

The "DALI Daylight" app for mobile devices can be downloaded via:

AppStore: <https://itunes.apple.com/us/app/dalidaylight/id1097883849?mt=8>

Google Play: <https://play.google.com/store/apps/details?id=com.lunatone.dalidaylight>

After the app has been installed and the DALI Daylight module has been connected to the DALI circuit (installation see chapter 4), the app will be able to connect to the module.

In the "App overview", all DALI Daylight modules found are displayed with the corresponding device name (default setting: serial number) (see figure 7).

If one of the existing modules is selected from the "App overview", the user interface shown in Figure 8 appears. The DALI circuit can be controlled via the functions stored in the module. In addition, it can also be used to adjust certain settings.

Note: Destination addresses or effective ranges cannot be changed via the Daylight app; these must be set via the DALI Cockpit (the module's settings page).

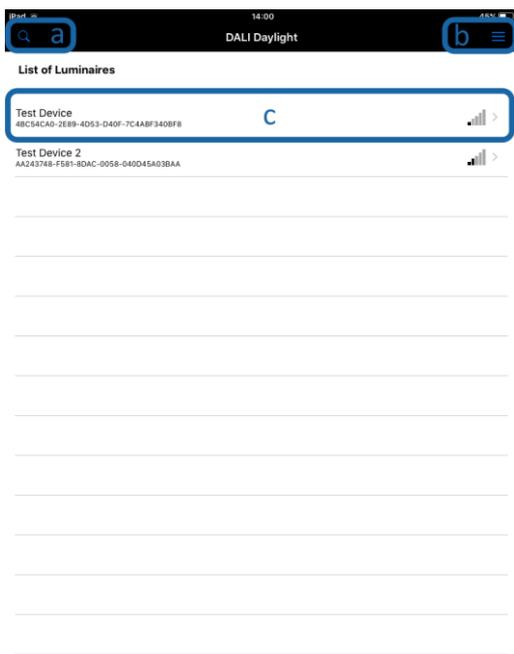
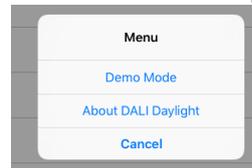


figure 7: "App overview" found modules

a) The magnifying glass symbol (left top) is used to search for DALI Daylight modules within range. The devices found are displayed in the list below.

b) The menu symbol (right top) gives access to the demo mode and app information.



c) List of Luminaries: For each device name, serial number and reception quality will be displayed.

To connect to a DALI Daylight module click on the corresponding device, you will be forwarded to the control page "manual", as shown in figure 8.

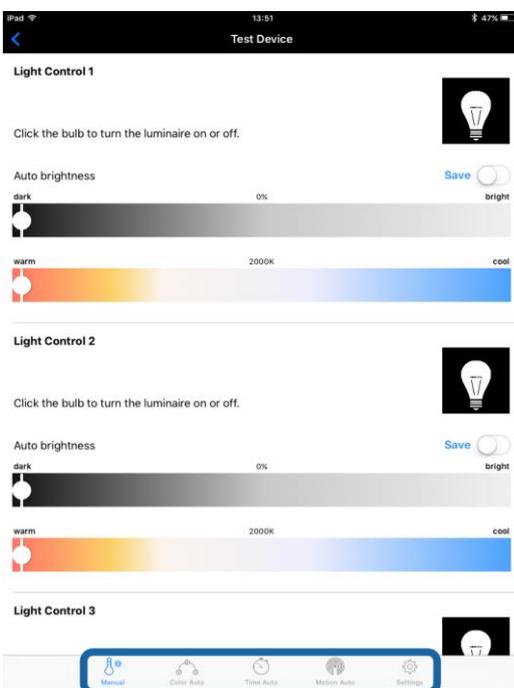


figure 8: control page "Manual"

In the bottom area you can switch between the control pages.

3.2. Manual Control

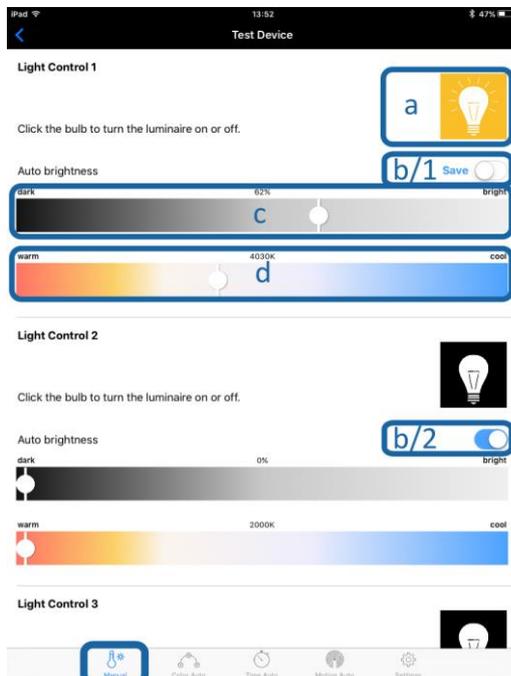


figure 9: control page "Manual"

The control page "Manual" is used to control up to 5 lights or light groups that are set via the DALI Cockpit. Only devices specified with DALI Cockpit are displayed in this list.

Control Options:

- a) ON / OFF (ON -> switches to the value set on the slider)
- b) Toggle between "manual control" and "automatic light control":

toggle in position b/1: manual control on -> automatic light control is turned off



clicking "save" -> automatic light control will be activated and the currently measured light value will be used as reference value to set DALI CS / LS.

toggle in position b/2: automatic light control is activated (without saving light values).



- c) Slider to manually adjust the brightness
- d) Slider to manually adjust the color temperature

Note: automatic color curves, created with the "Color Auto" function (see next chapter), will not be influenced.

Please note, if "automatic light control" is turned on and the brightness control (slider c)

is used the "automatic light control" will be automatically turned off to enable manual control. If you want to switch from the manual control back to the automatic light control, set the toggle to position b/2 and the brightness control (c) jumps back to the previously stored value.

3.3. Color Auto



figure 10: control page "Color Auto"

The control page "Color Auto" is used to control the color curve of up to 5 DALI CDC modules. The color gradient is defined in the app by 3 parameters each with color temperature and the associated time. Using these 3 parameters a daylight curve is being calculated and executed accordingly. After the color temperature has run through to the "end time", the final color temperature is maintained until the "start time" has been reached again.

Using the toggle switch on the right top of each section, the color curves can be activated and deactivated.

Note:

By changing the color curve in the Daylight app the parameters in the respective CDC are adjusted and existing color curves are overwritten.

3.4. Time Auto

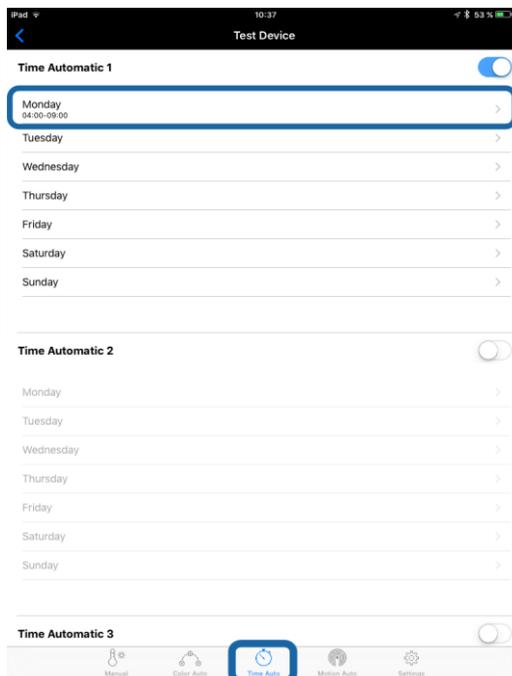


figure 11: control page "Time Auto"

The control page "Time Auto" is used to control up to 5 DALI RTC modules.

For each of the DALI RTC modules, two intervals can be set for each of the 7 days of the week.

By clicking on the day (figure 10) you can activate or deactivate the intervals, set start time, end time and brightness value. At "start time" the defined brightness is automatically set and held until the "end time" (DALI command: DAP 0%).

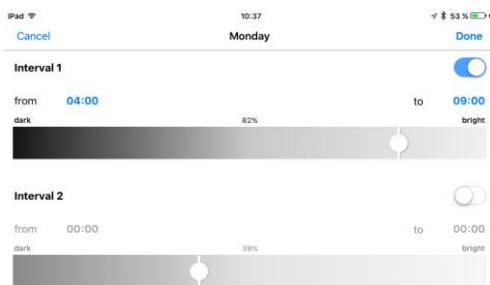


figure 12: control page "Time Auto" - "Monday"

Note: The entries added via the app overwrite existing entries in the DALI RTC module. The app occupies the 28 entries as follows:

- 1-4: Su
- 5-8: Mo
- 9-12: Tu
- 13-16: We
- 17-20: Th
- 21-24: Fr
- 25-28: Sa

3.5. Motion Auto

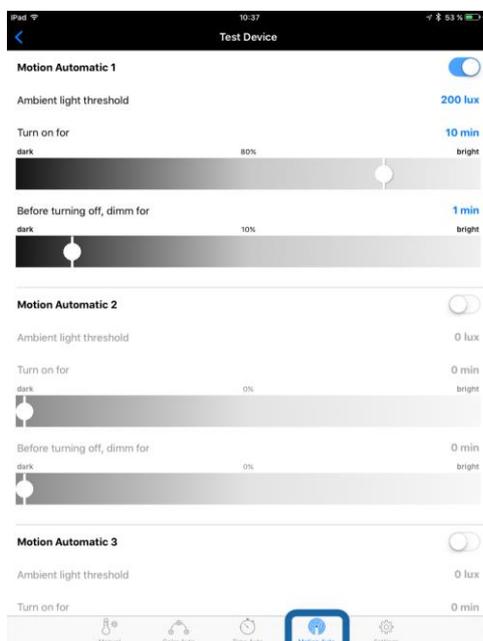


figure 13: control page "Motion Auto"

The control page "Motion Auto" is used to control up to 5 DALI CS modules.

The individual sensors can be activated / deactivated, a light threshold can be set and also the switch-off behavior can be configured.

Motion detection process

The motion detection process follows these parameters:

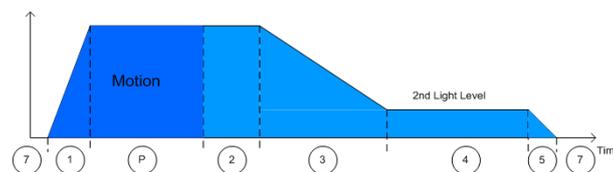


figure 14: Motion detection process

States:

- 1: Fade In Time
- P: Presence detected
- 2: Hold On Time -> set with "Turn on for ...min" + slider for brightness level
- 3: Fade Time
- 4: Hold on Time (2nd Light Level) -> set with "before turning off dim for ...min" + slider for brightness level
- 5: Fade Out Time

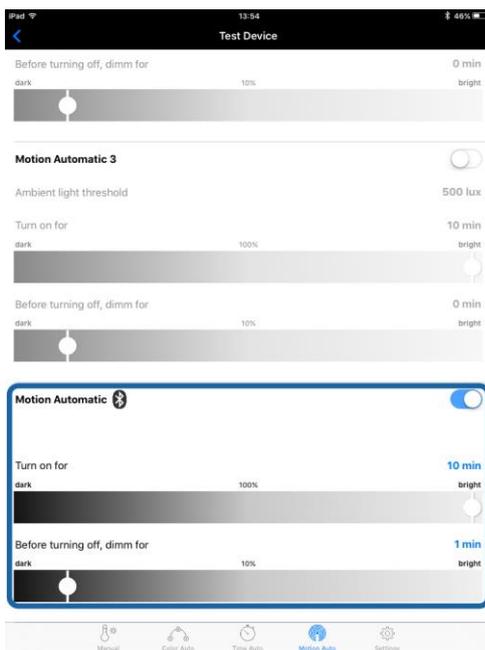


figure 15: "Motion Automatic" - Bluetooth

In addition to the motion detection area (DALI CS), the DALI Daylight module offers the option to use Bluetooth to detect movement. Please note, the Bluetooth option does not support "Ambient light threshold".

When "Motion Automatic" is triggered by approach, the sequence is run through, as displayed in figure 14. Manual control stops the process.

Note:

This feature is only supported on mobile devices with iOS operating system.

3.6. Settings

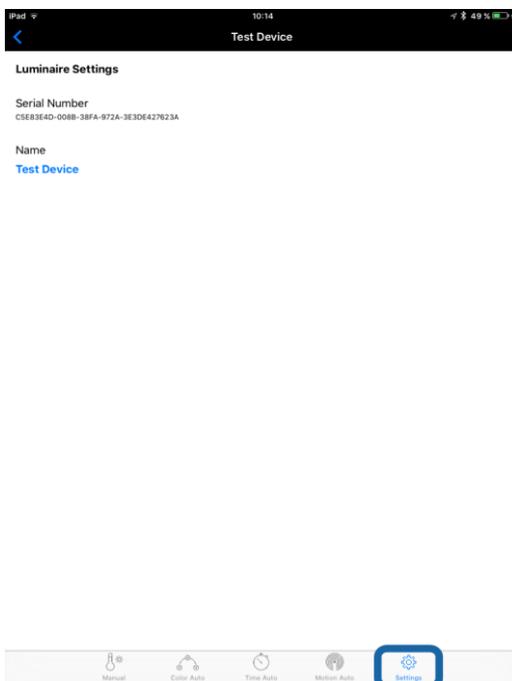


figure 16: page "Settings"

On the page "Settings" the serial number can be viewed and the display name for the device can be changed.

3.7. Additional notes

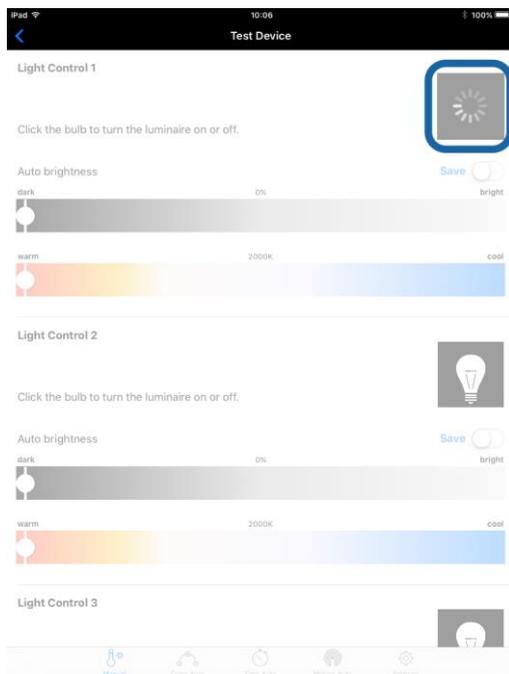


figure 17: Bluetooth connection in progress

This Symbol (figure 17) indicates that the Bluetooth connection is being established or the connection has been interrupted.

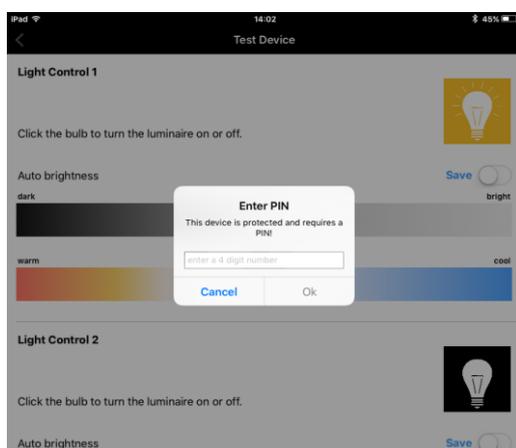


figure 18: Enter PIN

If a PIN has been assigned via the DALI Cockpit, the PIN has to be entered when clicking on the corresponding DALI Daylight module in the app (only first time).

4. Installation

The DALI Daylight module is connected directly to the DALI line and supplied by the DALI line. The connection to the DALI line can be made without regard to the polarity.

The DALI Daylight module is designed to fit a flush-mounted installation box.

For wiring, solid or fine wire with cross-section of 0.5mm² to 1.5mm² can be used.

The DALI Daylight module is multi-master capable, which means that several control modules can be installed parallel in a DALI system.

The DALI Daylight module does not occupy any of the 64 DALI addresses, these are all available for ballasts.