

User manual

AUTOLIGHT SMART DALI



AUTOLIGHT SMART ON/OFF



MICAS App



Contents

AUTOLIGHT SMART DALI: Introduction	4
Function Description.....	4
Installation Instructions.....	5
Schematic Diagram	6
Technical Data Sheet	6
AUTOLIGHT SMART ON / OFF: Introduction.....	8
Function Description.....	8
Installation Instructions.....	8
Schematic Diagram	9
Technical Data Sheet.....	9
Micas App: Installation and Mesh Setup	11
App Download	11
Info.....	11
Setting up a Network.....	12
Network Set-Up: Options for Encrypting the Network.....	12
Network Set-Up: Your Own Network Key	12
Network Set-Up: The Manufacturer's Network Key	13
Searching for Available Sensors.....	14
Programming Sensors	14
Settings.....	16
Sensor settings	16
Definition of Groups.....	18
Grouping lights	18
Group Settings.....	18
Changing Group Settings.....	19
Group Functions.....	19
Deletion of Groups.....	20
Definition of Profiles.....	21

Creating a Profile	21
Using Profiles on Individual Sensors.....	22
Using Profiles on Groups	23
Backup.....	24
Exporting a Network.....	24
Exporting a Network with a Password	24
Importing a Network.....	25
Removal.....	26
Removing Sensors	26
Deleting a Network	27
.....	27
Problem Solving.....	28
The app and/or sensor are not responding.....	28
The sensor cannot be found.....	28
Transfer errors and file extension.....	28
The sensor has not confirmed uninstall.....	28
Uncertainty whether a specific sensor is located in a network.....	29
Which network is the sensor in?.....	29
Is the sensor missing from the device view?	29
No Mesh access?.....	29
Several sensors responding at the same time?	29
Representation in the app varies with that described in the instructions.....	29
Legal information.....	29

AUTOLIGHT SMART DALI: Introduction

The AUTOLIGHT SMART DALI a compact 5.8 GHz HF [high-frequency] motion sensor for switching, dimming and connecting individual lights and complex light installations. Settings can be easily communicated using the app via point-to-point Bluetooth or in a "mesh" network. It's possible to make configurations of individual luminaires, entire groups or profiles. Inside buildings the distance between the sensor units can be up to 20 m. The AUTOLIGHT SMART DALI is equipped with a DALI-compatible interface which enables up to four DALI "slaves" to be controlled in broadcast mode. As the sensor has no mechanical switching element, it controls the lights without wear.

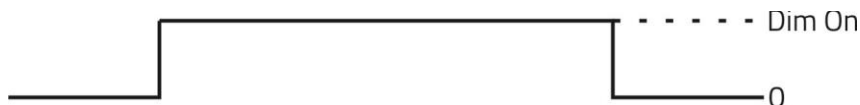
Function Description

The AUTOLIGHT SMART DALI detects motion in the detection field with the help of a 5.8 GHz radar signal.

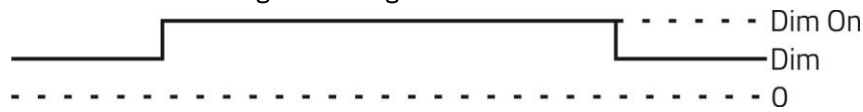
It should be noted that radar signals can penetrate thin walls, doors and pieces of furniture. Consequently, movements in neighbouring rooms may also possibly detected. The detection field can be appropriately adjusted using the app.

When the sensor is programmed via the app on a smart end device, different sensor adjustments can be made. These include:

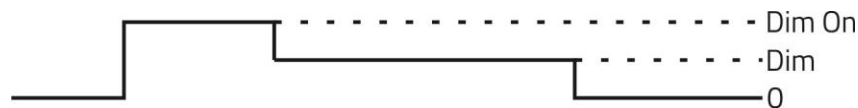
- **Sensitivity:** Sensor range setting,
- **Hold time:** The time period which the sensor remains switched on after activation respectively after last detected motion
- **Lux:** Activation is possible by a movement below the configured brightness threshold value.
- **Current brightness:** Here, the current measured brightness can be programmed as a threshold for the lux value.
- **Dim:** Percental brightness of the luminaire is dimmed following the hold time (according to the program mode).
- **Dim On:** Percental brightness of the luminaire in an activated state.
- **Program mode:**
 - o On / Off: Sensors switch on (Dim-On-Level) and off again following the configured hold time.



- Permanent: Sensors switch on (Dim-On-Level) and switch to a dimmed state (Dim-Level) following the configured hold time.



- Corridor: Sensors switch on (Dim-On-Level) and in the dimmed state (Dim-Level) following the chosen hold times. Finally, they switch off following the doubled hold time.



- **Soft Dim:** Smooth control of the brightness of luminaires with a transition period of 2 s.



Furthermore, quick configuration of luminaire connection settings, the simultaneous switching of luminaire groups and the creation of sensor profiles are possible. These are described in more detail in the chapter Micas App: Installation and Mesh Setup.

Installation Instructions

The sensor in the luminaire can be screwed on with two mounting brackets.

When mounting it should be noted that the sensor surroundings can affect the detection performance and the detection field. The module must be fitted flat against the base plate of the luminaire to enable a detection field that runs perpendicular to the base plate.

Any metal components in front of or to the side of the sensor can alter the size and shape of the detection field.

Vibrations during operation should be avoided in order to prevent unwanted activation.

So as not to hamper the brightness measurement, the daylight sensor must not be directly covered.

The HF [high-frequency] motion sensor is powered by connections L and N with a supply voltage of 230 V~ and 50 Hz and has a standby power consumption of less than 1 W.

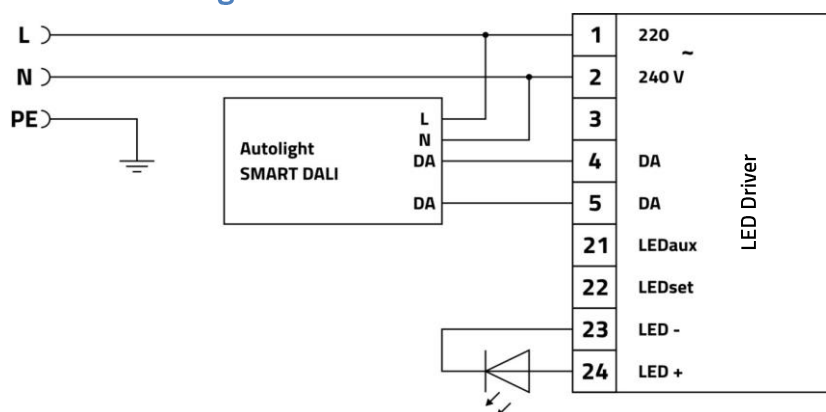
Furthermore, two DALI compatible connection terminals are present as a bus master which can drive up to 4 DALI drivers (DALI slaves) in parallel.

For the installation of the AUTOLIGHT SMART DALI, the total length of all DALI cables must amount to a maximum of 15 m.

Additional bus power supplies must not be used and would damage the sensor.

Connection is established according to the following wiring scheme:

Schematic Diagram



Technical Data Sheet

Brief description SMART DALI	HF [High-frequency] motion sensor for installing in luminaires. Enables the connection of up to 4 DALI drivers and wireless networking with other sensors.
Operating voltage	230 V~ ± 10 %, 50 Hz
Standby power consumption	< 1 W
Connection terminals	2 double-poled spring terminals <ul style="list-style-type: none"> L, N (230 V~ supply voltage) DA+, DA- (DALI compatible master interface) Solid wire: 0.518 ... 1.5 mm ² (20 ... 16 AWG) Stripping length: 8.5 mm
Interfaces/Switching capacity	<ul style="list-style-type: none"> DALI compatible MASTER interface in broadcast mode: <ul style="list-style-type: none"> 0 ... 4 DALI loads with a total of max. 8 mA Total length of the DALI cables max. 15 m Bluetooth interface (BLE [Bluetooth Low Energy] 4.1) with a range of up to 20 m in buildings
Sensor principle	HF [High-frequency] motion detection
Frequency range	5,8 GHz ± 75 MHz
Emitted power	< 5 mW (<14 dBm EIRP)
Detection range	<ul style="list-style-type: none"> Up to 15 m (frontal in case of wall mounting) Up to 10 m (Ø in case of ceiling mounting in a height of 2,6 m)

Detection angle	Approx. 120° (dependant on luminaire)
Speed detection	0.3 ... 3 m/s (1 ... 10 km/h)
Adjustable functions	Via app on a smart end device
Sensitivities	0 ... 100% in 10% increments
Hold times	5, 10, 20, 30, 45 seconds 1, 2, 5, 10, 15, 30, 45, 60 minutes.
Daylight levels	1, 50, 150, 300, 350 Lux, ∞, teach
Dim Level	0 ... 100% in 1% increments
Program modes	On /Off, Permanent, Corridor Soft Dim: active / inactive
Factory settings	<ul style="list-style-type: none"> • Sensitivity: 70% • Hold time: 30 s • Lux: ∞ • Dim: 30% • Program mode: On/Off , Soft Dim: off
Mounting height	<ul style="list-style-type: none"> • Max. 2.7 m (wall mounting) • Max. 4 m (ceiling installation)
Operating Temperature	-20 ... +60 °C Cooling not required
IP protection class	IP20 (mounting inside luminaires)
Glow-wire test	650 °C
Isolation/Overload	<ul style="list-style-type: none"> • Protection class 0, built-in device • Contamination degree 2 • Overload category II • Withstand voltage 2500 V • CTI 175 V
Protective device	Non-exchangeable protection device.
Cooling	Cooling not required.
Dimensions	<ul style="list-style-type: none"> • 84 x 30 x 21 mm (L x W x H, incl. mounting brackets) • 70 x 30 x 21 mm (L x W x H, without mounting brackets) • 80 mm bores arrangement
Certifications	CE (Additional certifications available upon request)

AUTOLIGHT SMART ON / OFF: Introduction

AUTOLIGHT SMART ON/OFF a compact 5.8 GHz HF [high frequency] motion sensor for switching and connecting individual luminaires and complex light installations. Settings can be easily communicated using the app via point-to-point Bluetooth or in a Mesh network. It is possible to make configurations for individual luminaires, groups or profiles. Inside buildings the distance between the sensor units can be up to 20 m.

Function Description

The AUTOLIGHT SMART ON/OFF detects motion in the detection field with the help of a 5.8 GHz radar signal.

It should be noted that radar signals can penetrate thin walls, doors and pieces of furniture. Consequently, motion in neighbouring rooms may also possibly detected. The detection field can be appropriately adjusted using the app.

When the sensor is programmed via the app on a smart end device, different sensor adjustments can be made. These include:

- **Sensitivity:**
Sensor range setting.
- **Hold time:**
The time period during which the sensor remains switched on after activation respectively after last detected motion
- **Lux:**
Activation is possible by a movement below the configured brightness threshold value.
- **Current brightness:**
Here, the current measured brightness can be programmed as a threshold for the lux value.

Furthermore, settings for connecting the luminaires, the simultaneous switching of luminaire groups or also the creation of sensor profiles for quick configuration are possible. These are described in more detail in the chapter Micas App: Installation and Mesh Setup.

Installation Instructions

The sensor can be screwed on the base plate of a luminaire with two mounting brackets.

Its shape also enables the AUTOLIGHT SMART ON/OFF to be mounted behind a LED panel, just the small sensor part is put through the panel.

When mounting it should be noted that the sensor surroundings can affect the detection performance and the detection field. The module must be fitted flat against the base plate of the luminaire to enable a detection field that runs perpendicular to the base plate.

Any metal components in front of or to the side of the sensor can alter the size and shape of the detection field.

Vibrations during operation should be avoided in order to prevent unwanted activation.

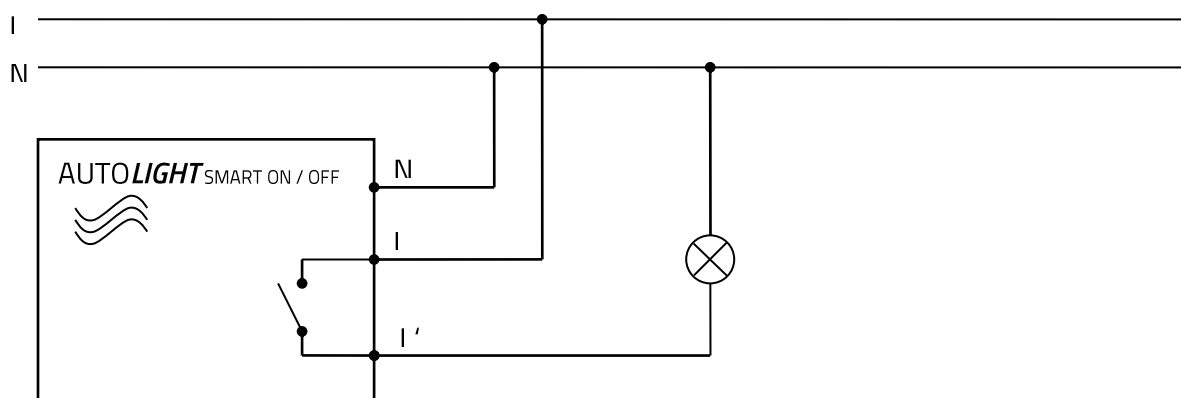
So as not to hamper the brightness measurement, the daylight sensor must not be directly covered.

The HF [high-frequency] motion sensor is powered by connections L and N with a supply voltage of 230 V~ $\pm 10\%$ and 50 Hz and has a Standby output of less than 1 W.

The light source can be powered via the output L' with 230 V~ $\pm 10\%$ and 50 Hz.

Connection is established according to the following wiring scheme:

Schematic Diagram



Technical Data Sheet

Brief description SMART ON/OFF	HF [High-frequency] motion sensor with a relay interface for switching up to 3 drivers (depending on inrush current).
Operating voltage	230 V~ $\pm 10\%$, 50 Hz
Standby output	< 1 W
Connection terminals	3 poled spring terminal L, N, L' (switched output) <ul style="list-style-type: none"> Solid wire: 0.5...1.5 mm² (28...16 AWG) Flexible wire: 0.5...1.5 mm² (28...16 AWG) Stripping length: 8.5 mm
Switching capacity	<ul style="list-style-type: none"> max. 250 W (incandescent lamps), max. 250 VA (LED or a combination of resistance load and capacitive load with $\cos \varphi \geq 0.9$) Recommendation based on MICAS experiences: <ul style="list-style-type: none"> max. inrush current 60 A / 200 μs or max. 3 drivers
Interfaces	<ul style="list-style-type: none"> Bluetooth interface (BLE [Bluetooth Low Energy] 4.1) with a range of up to 20 m in buildings
Sensor principle	HF [High-frequency] motion detection
Frequency range	5,8 GHz \pm 75 MHz
Emitted power	< 5 mW (<14 dBm EIRP)
Detection range	<ul style="list-style-type: none"> Up to 15 m (frontal in case of wall mounting) Up to 10 m (\emptyset in case of ceiling mounting in a height of 2,6 m)

Detection angle	Approx. 120° (depending on luminaire)
Speed detection	0.3 ... 3 m/s (1 ... 10 km/h)
Adjustable functions	Via app on a smart end device
Sensitivity	0 ... 100% in 10% increments
Hold time	5, 10, 20, 30, 45 seconds 1, 2, 5, 10, 15, 30, 45, 60 minutes.
Daylight level	1, 50, 150, 300, 350 Lux, ∞, teach
Program modes	On /Off
Factory settings	<ul style="list-style-type: none"> • Sensitivity: 70% • Hold time: 30 s • Lux: ∞
Mounting height:	<ul style="list-style-type: none"> • Max. 2.7 m (wall mounting) • Max. 4 m (ceiling installation)
Operating Temperature	-20 ... +60 °C Cooling not required
IP protection class	IP20 (mounting inside luminaires)
Glow-wire test	650°C
Isolation/Overload	<ul style="list-style-type: none"> • Protection class 0, built-in device • Contamination degree 2 • Overload category II • Withstand voltage 2500 V • CTI 175 V
Protective device	Non-exchangeable protection device
Cooling	Cooling not required
Dimensions	<ul style="list-style-type: none"> • 65 x 38 x 27 mm (L x W x H, incl. mounting brackets) • 51 x 38 x 27 mm (L x W x H, without mounting brackets) • 61 mm bores arrangement
Certifications	CE (Additional certifications available upon request)

Micas App: Installation and Mesh Setup

App Download

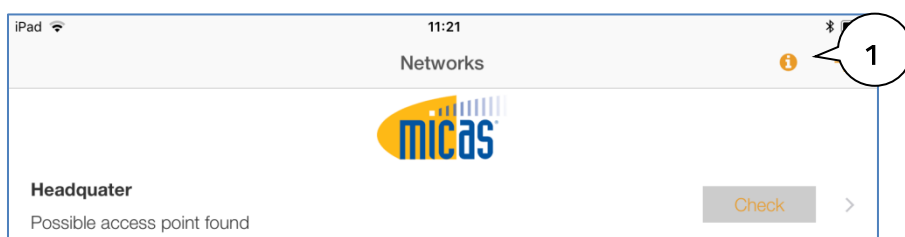
Download the "MICAS AUTOLIGHT" app.

Requires iOS 10.0 or later. Compatible with iPhone, iPad and iPod Touch.



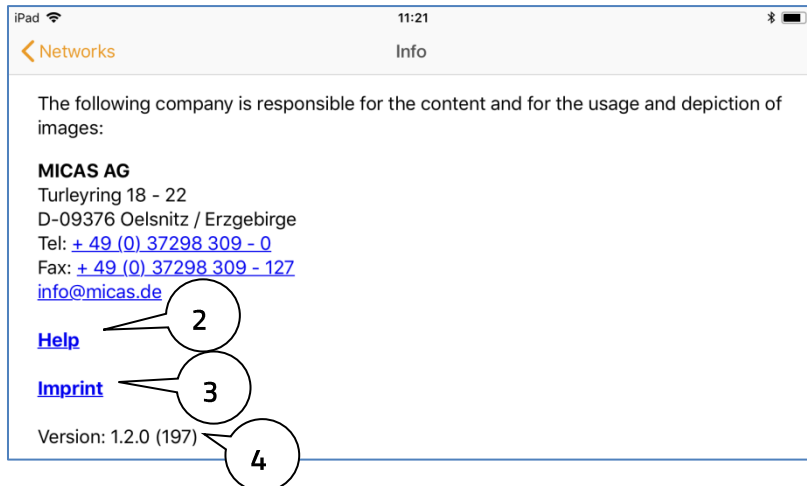
Info

1. With the **i** you can access information in each sub-menu of the app.



This includes the following information:

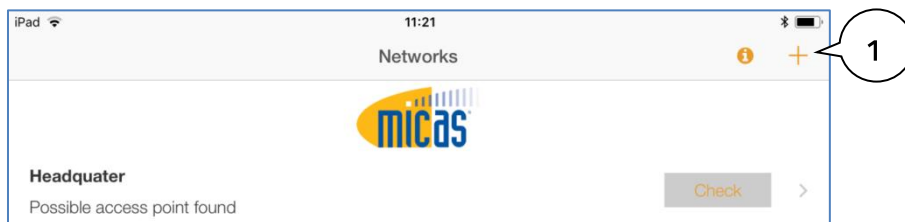
2. Operating Instructions
3. Legal information
4. App version



Setting up a Network

Before you can program your sensors, you must create a network. The sensors are assigned to this network. Sensors cannot be assigned to two networks at the same time.

1. Press "+" to create a new network.



Note: If Bluetooth isn't activated on your smart device, you will be notified in the network overview.

Network Set-Up: Options for Encrypting the Network

IMPORTANT: If you create a new network, you have two options for securing the network with a network key (Password):

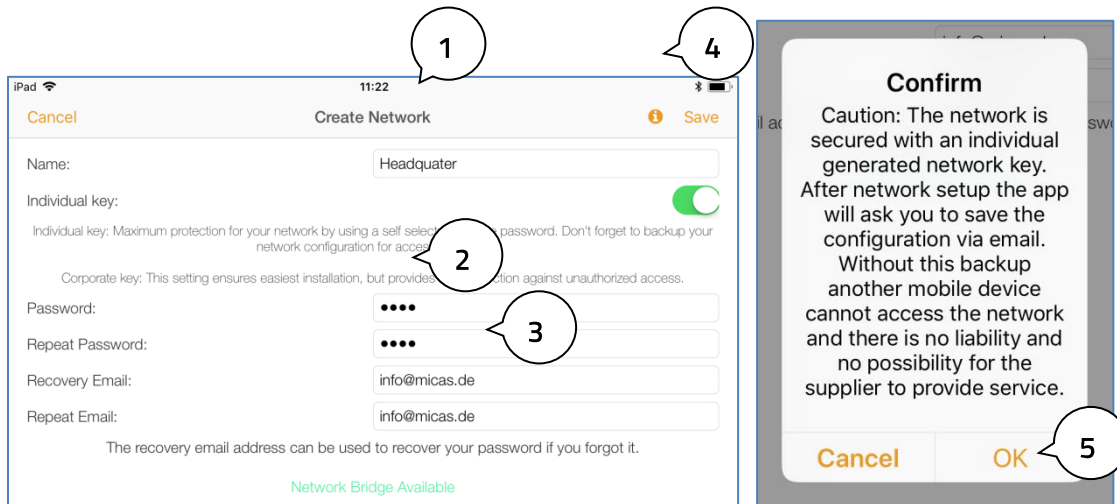
1. **Individual key**
2. **Corporate key**

Network Set-Up: Individual Key

By assigning your own secure password you will maximally protect your network. Following the network setup, the app prompts you to backup the configuration via email. Without this backup another mobile device cannot access the network and there is no claim to or possibility of a manufacturer's service. In this case, loss of the password or mobile device means that access to the network sensor configuration is no longer possible.

1. Enter your chosen name for the network.
2. Enter the password you have chosen.
3. Enter your e-Mail address (used to recover your password if you forgot it).

4. Confirm with "Save".
5. Read the following notification and confirm with "OK". The network is then stored.

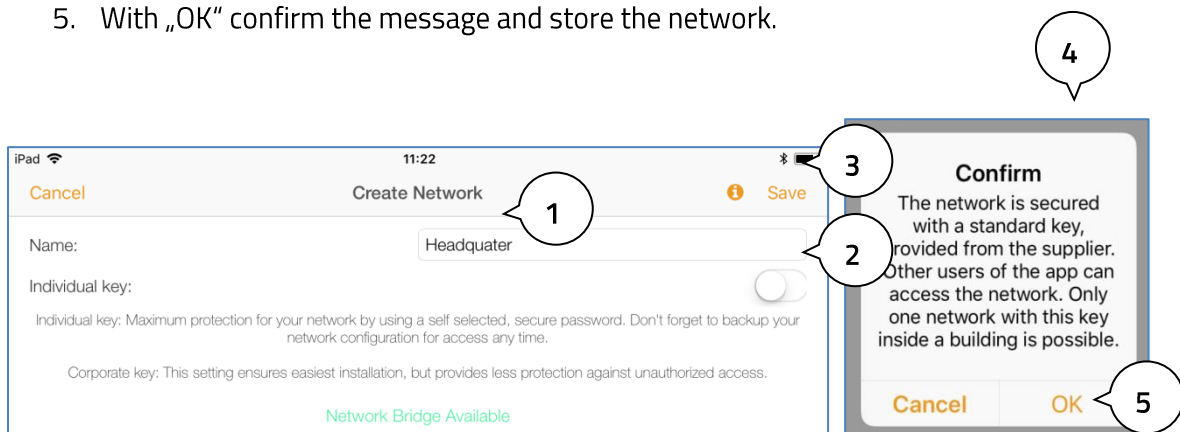


Network Set-Up: Corporate Key

Use of corporate key is the simplest way to setup a network. The network is secured with a manufacturer's standard key. Access to the network is possible via other app users.

IMPORTANT: In a building, only one network can use this standard key.

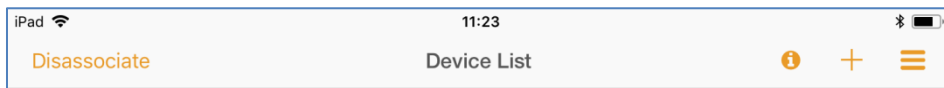
1. Enter your chosen name for the network.
2. Deactivate the "Individual Key" option.
3. Press "Save" to store the network.
4. Read the following notification.
5. With „OK“ confirm the message and store the network.



Searching for Available Sensors

You are now in the device list of your newly created network.

1. Press "+" to search for available sensors.



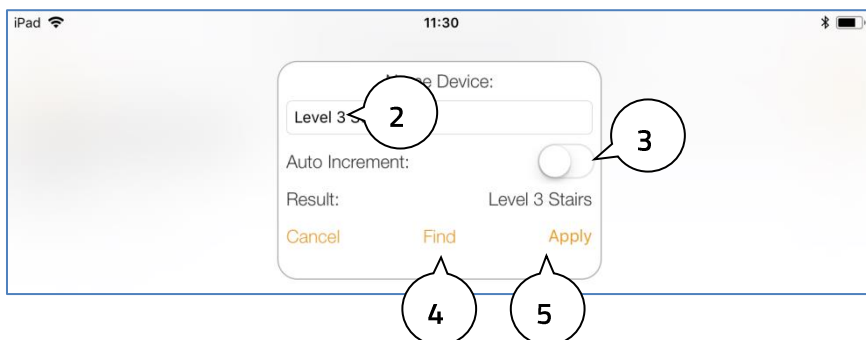
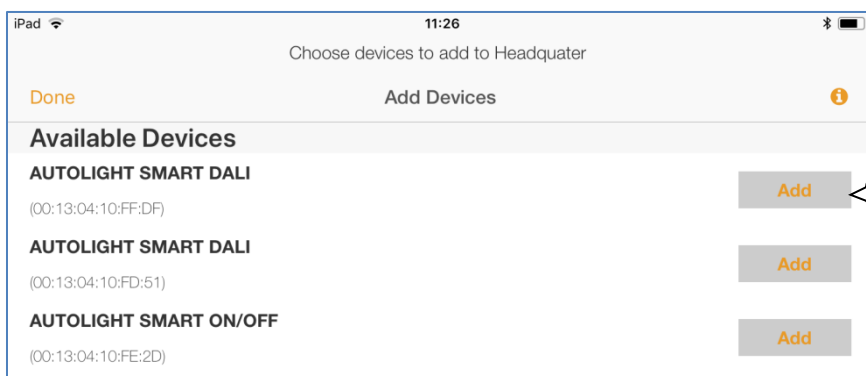
Adding sensors to the network

The listed devices are accessible via Bluetooth-Mesh, are available for the network and are not integrated into any other network.

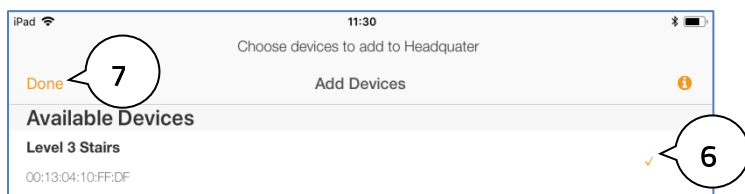
NOTES:

- Searching for devices can take a few seconds.
- All sensors should now be installed at their destination.
- For networks with more than one sensor, each sensor must be within Bluetooth range of at least one other sensor.
- During device association the sensor must direct connect to the app so make sure the device is in Bluetooth-range

1. Press "Add" to be able to locate and add the sensor.
The selected luminaire responds by flashing.
2. Enter a name for the sensor (max. 14 consecutive characters)
3. In case "Auto Increment" is activated, the sensors are automatically numbered according to their programming order.
4. Press "Find" to locate the luminaire. This operation is confirmed with a flash.
5. Press "Apply" to add the sensor to your network.

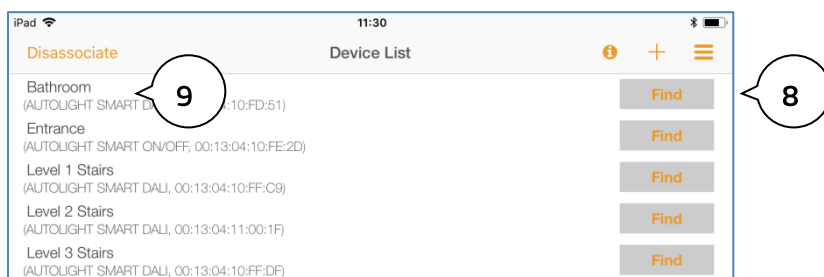


6. Successfully added sensors are indicated with a tick.
7. Once you have added all the desired sensors to the network, press "Done" and return to the device overview.



The device list shows an overview of all the sensors which you have added to your network.

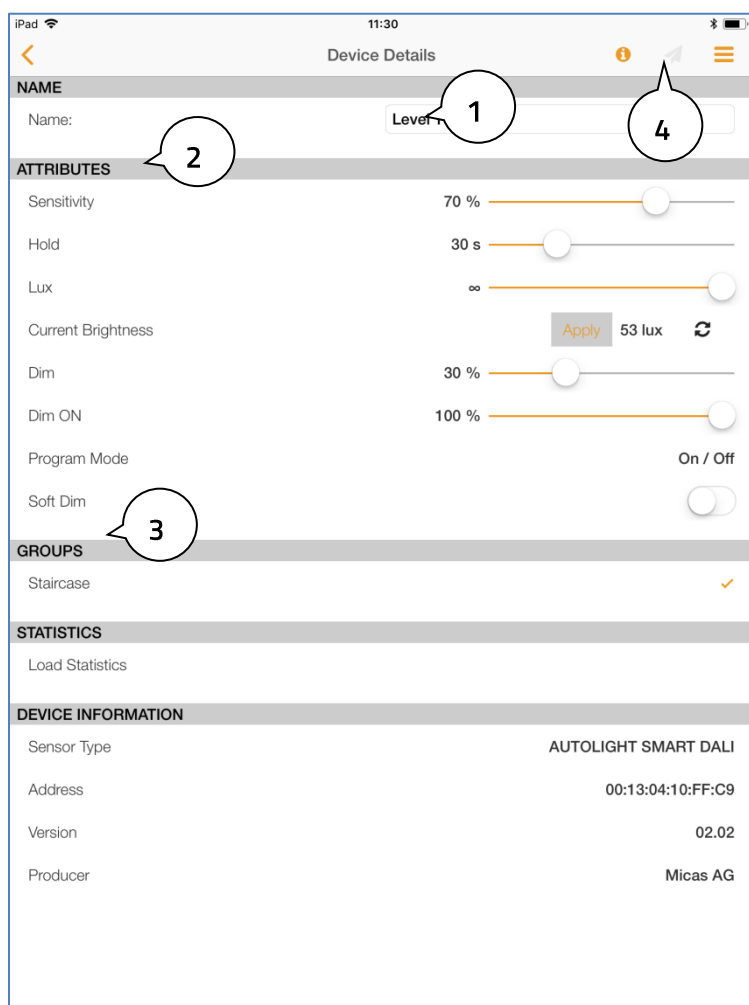
8. Press "Find" to locate a luminaire. The luminaire responds by flashing.
9. To adjust the devices, press on the relevant sensor (e.g. Dali 1).



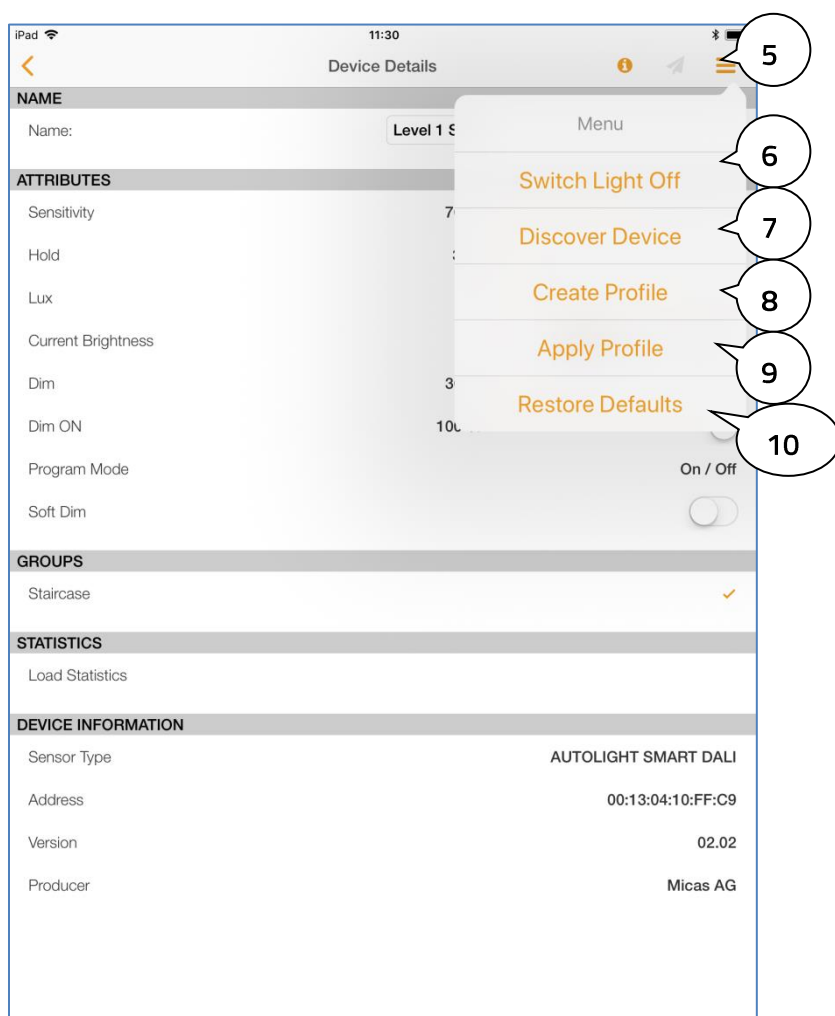
Settings

Sensor settings

1. Changing the name (maximum length 14 characters)
2. General setting changes.
These parameters vary among sensor types. Only parameters which are supported by the current sensor are shown.
3. Display and change group assignment
4. Press on the paper plane symbol to transfer altered settings to the sensor. As confirmation, the luminaire flashes.



5. By pressing the menu symbol, the menu opens with the following functions:
6. Switch luminaire on/off.
7. Locate the luminaire (Luminaire flashes three times).
8. Create a profile with current settings.
9. Use existing profile.
10. Restore factory settings – network and group settings remain unchanged.

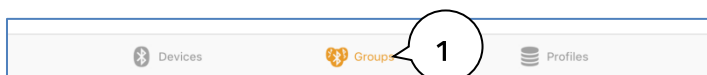


Definition of Groups

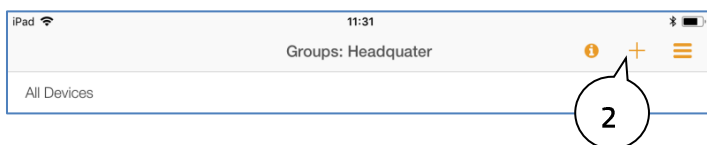
Groups enable the switching of several luminaires simultaneously, as well as identical parameters inside these groups.

Grouping luminaires

1. Press the button with the groups symbol to access the groups menu.



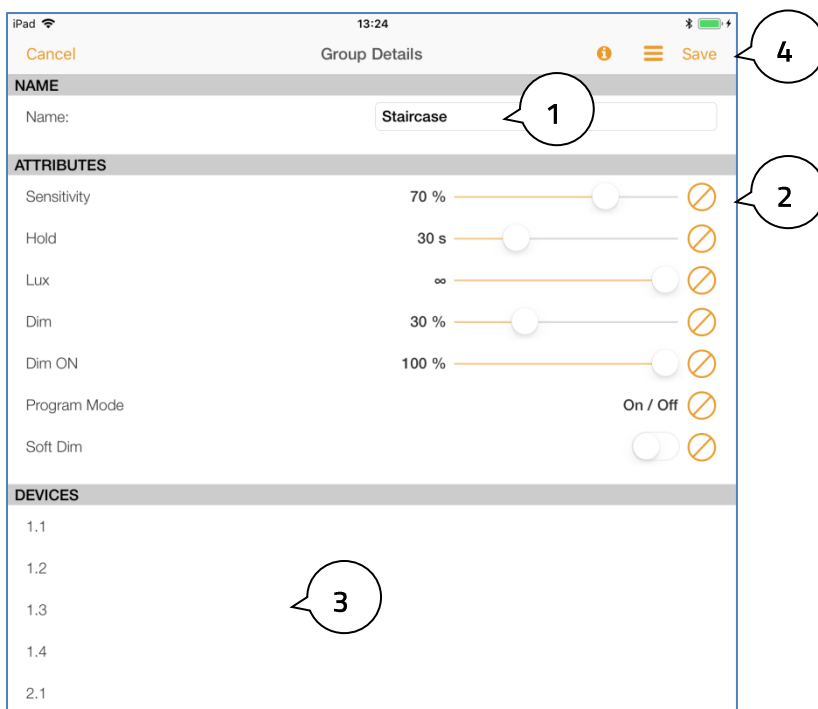
2. Press "+" to create a new group.



Group Settings



1. Ability to change the group name.
2. General settings. Each setting must be activated if an alteration should be made.
3. A sensor is added to or removed from the group by tapping on it (a tick appears as confirmation if it is added).
4. Press "Save" to send altered settings. All affected luminaires flash three times as confirmation.

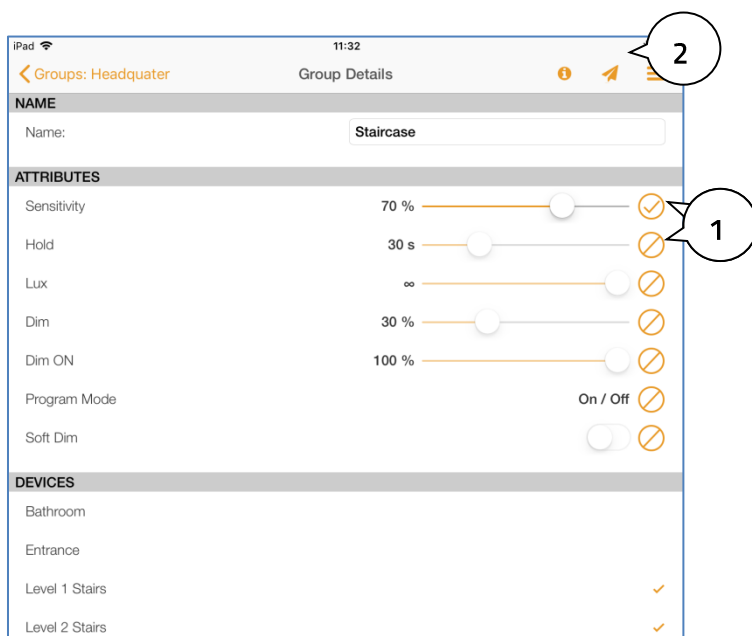
Note: Alternatively, the assignment of sensors to groups is possible in the sensor settings.



Changing Group Settings

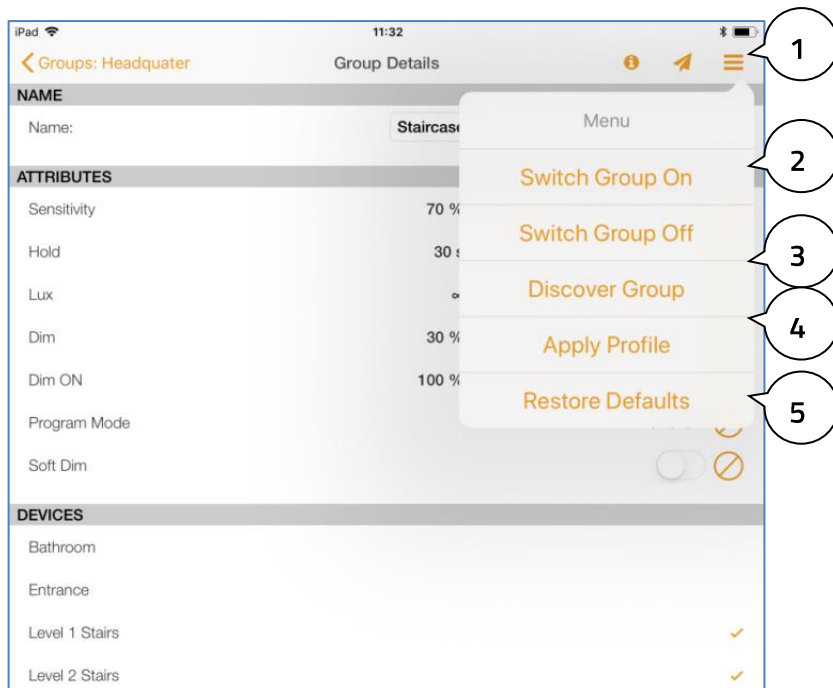
It is possible to change only selective settings for all sensors of a group ("selective group settings"). This allows for example to change the holdtime for all sensors of a group while all other settings (e.g. sensitivity and lux level) remain unchanged and individual for each single sensor. If at least one setting is changed, the paper plane symbol (2) is activated.

1. Activate the parameters which you want to change by clicking on the symbol . Finally, the tick appears .
2. Adjust the parameters to the desired value.
3. Press the paper plane symbol to send the altered settings to all sensors in your group. In the group, affected luminaires flash three times as confirmation.



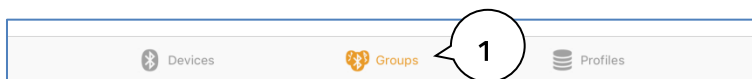
Group Functions

1. Menu symbol opens the menu
2. Turn group luminaires on/off
3. Locating group luminaires. All luminaires in this group flash three times.
4. Use of an existing profile.
5. Restore factory settings on all sensors of the group. . Network and group settings remain unchanged.

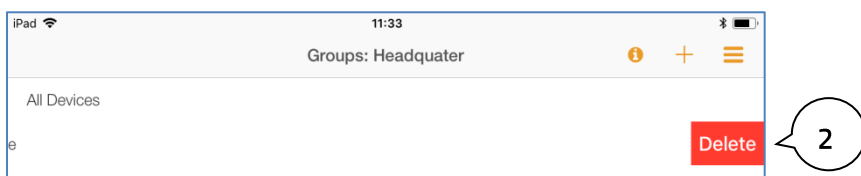


Deletion of Groups

1. Select the group view by pressing the "Groups" button.



2. To delete a group, swipe the desired group to the left [of the screen]. The "Delete" option then appears.

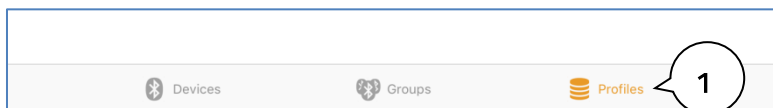


Definition of Profiles

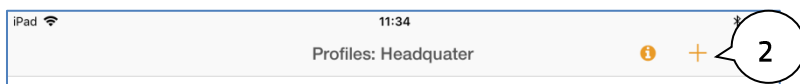
Creating a Profile

Profiles are sets of predefined settings and can be used to simplify adjustment of sensors and groups. Use of a profile can either be carried out on the sensor or on the group.

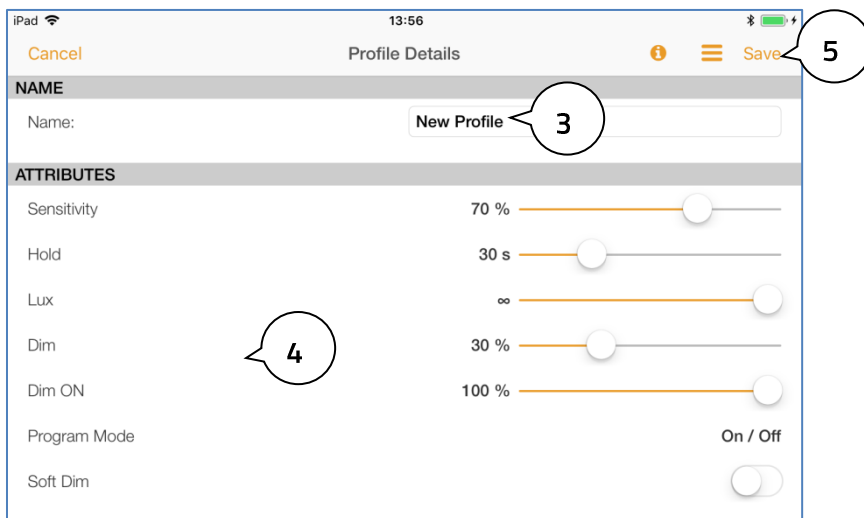
1. Press "Profile" to access the profile overview.



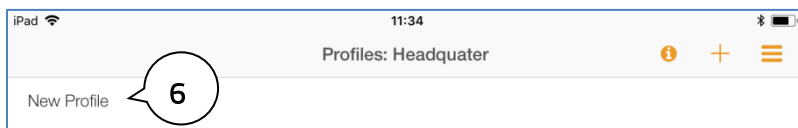
2. Press "+" to create a new profile.



3. Enter a profile name.
4. Make the required adjustments.
5. Press "Save" to store the profile.



The created profile is displayed in the profile overview and can be applied to individual sensors or groups.

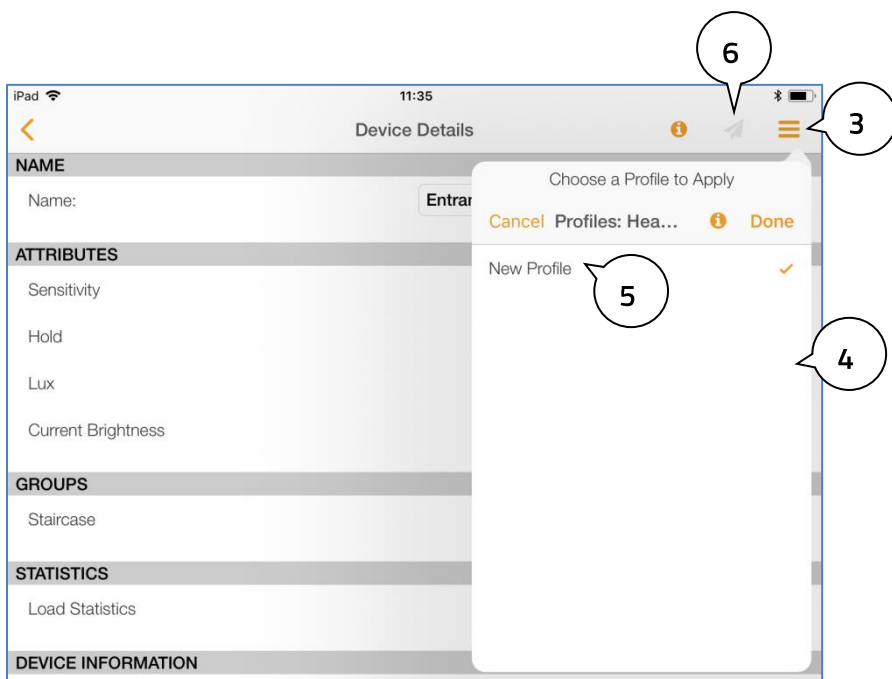


Using Profiles on Individual Sensors

1. Press Devices to access the device list.
2. Select the sensor to which the profile should be applied.



3. Select "Use Profile" in the menu.
 4. An overview of the available profiles appears.
 5. Select the desired profile and press "Done".
 6. The settings defined in the profile are applied, but not automatically saved.
- Finally, press the paper plane symbol to send the new settings to the device. As confirmation, the luminaire flashes three times.



Using Profiles on Groups

1. Press "Groups" to access the group overview.
2. Select the group on which the profile should be applied.
3. Select "Use Profile" in the menu.
4. An overview of the available profile then appears.
5. Select the desired profile and press "Done".
6. The settings defined in the profile are applied, but not automatically saved.
7. Press the paper plane symbol to send the new settings to the group. As confirmation, the affected luminaires flash three times.

Backup

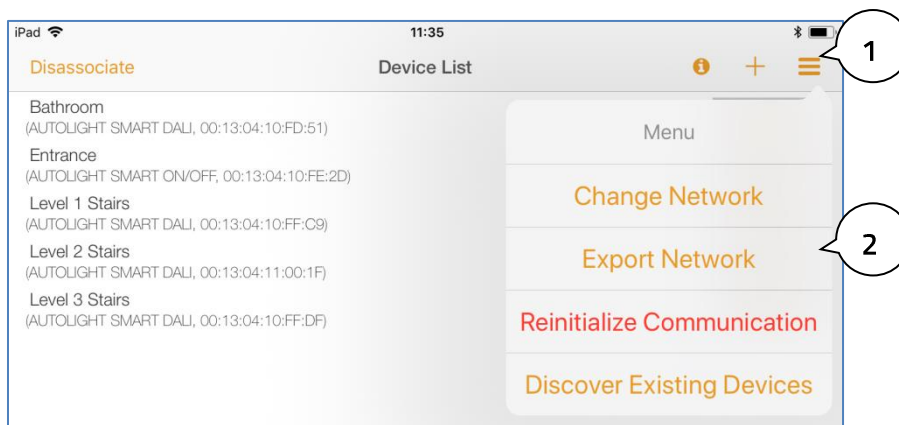
Exporting a Network

A network configuration, containing all configuration information including network key and grouping, can be exported via email or other file sharing mechanism on the smart device. This mechanism is required for two reasons:

- generate a backup of your configuration (important e.g. in case the smart device get lost)
- gain access to the network for other smart devices.

It's possible to perform an export inside the device, groups and profile sub menus.

1. Press the menu symbol to open the menu bar.
2. Select "Export Network".



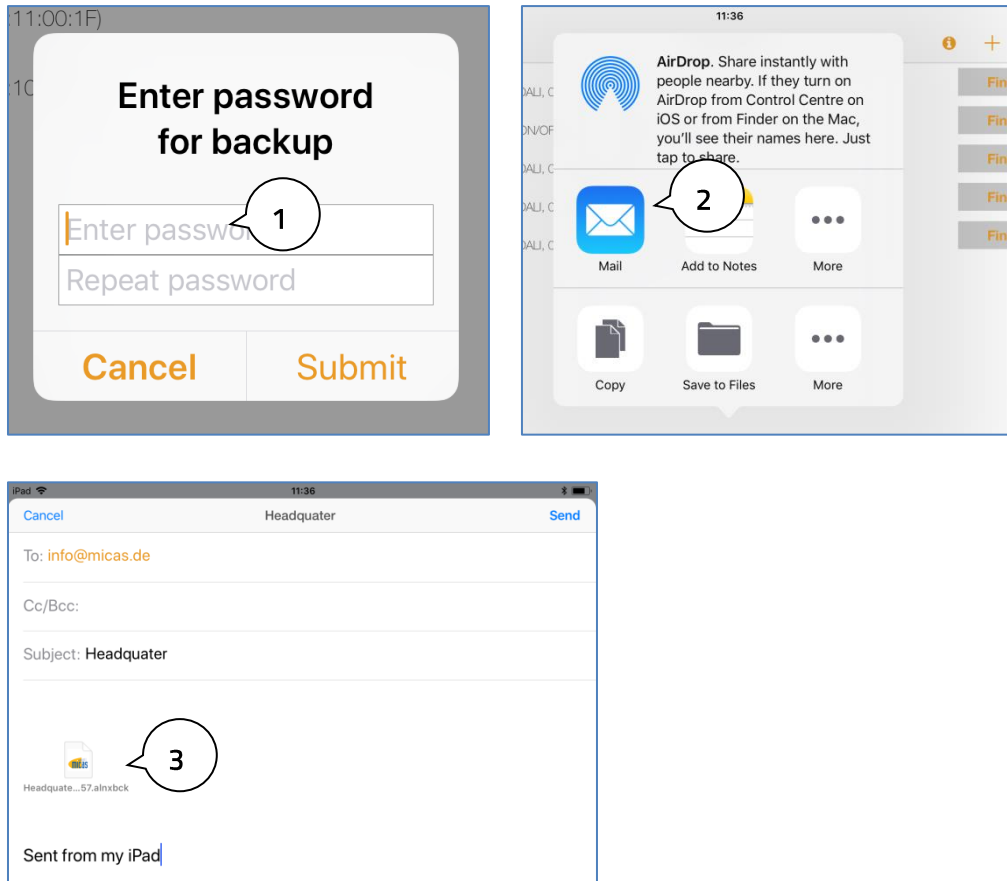
3. Select whether a backup
 - with a password,
 - without a password,
 - no backup
 should be created.

Exporting a Network with a Password

If a backup with a password should be created, a dialog to enter a password appears.

Note: The password serves to protect the backup and is entirely separate to the network password.

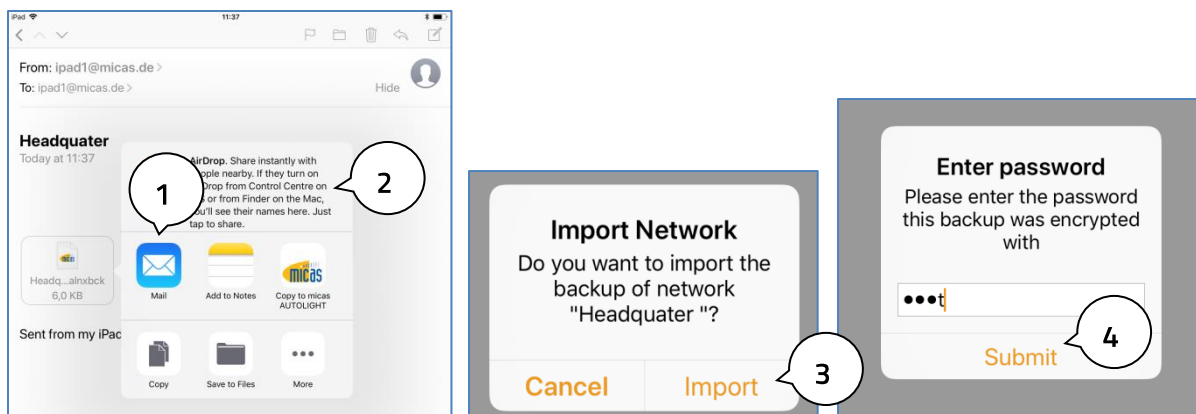
1. Enter your chosen password into the template and press "Accept".
2. Select where you would like the backup to be exported to.
3. Example: By email: the backup file is sent as an attachment to the email address entered. You can send the backup file on to other email addresses.



Importing a Network

You have received a backup file via email.

1. Click on the backup file in the email attachment and open it using the MICAS app.
2. The MICAS app raises the ability to import and network or to cancel the process.
3. Press Import to import the backup file.
4. You are requested to enter the password in case the backup file required this.
5. The network is then successfully imported.



Removal

Removing Sensors

Sensors can be removed from a network. This can be necessary e.g. in order to replace a luminaire or to add a sensor to another network. Sensors cannot be programmed in two networks at the same time.

1. Press "Find" to locate the light which should be removed from the network.
2. To remove a device from the network, swipe the unwanted sensor to the left [of the screen]. The "Disassociate" option then appears.
3. Click "Disassociate" to remove the sensor from the network.

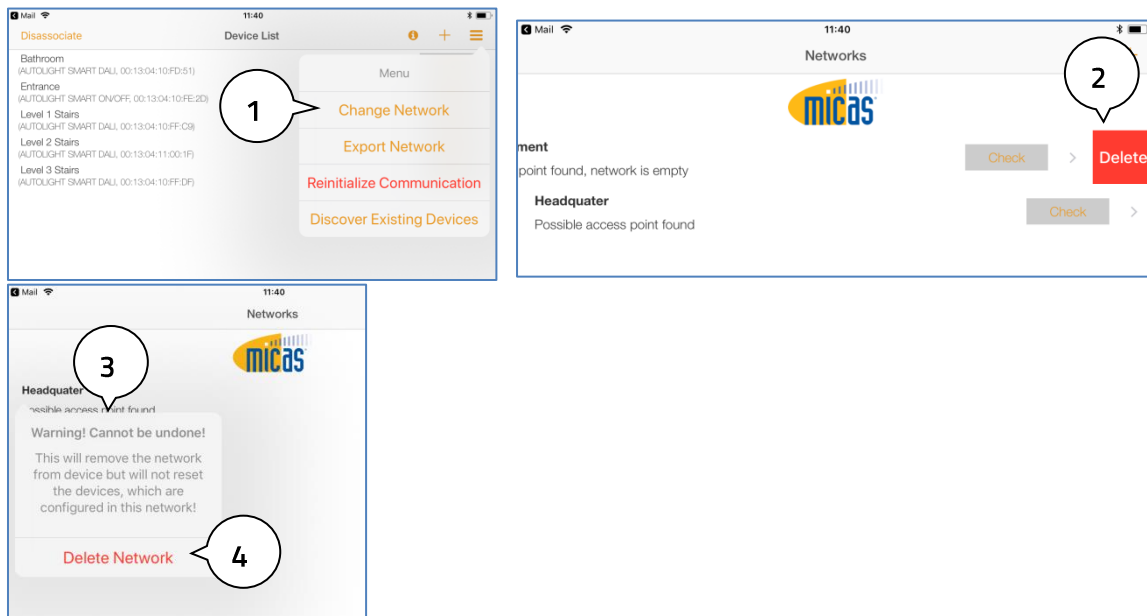


Deleting a Network

IMPORTANT: Before you delete a network, the devices linked in the network have to be removed from the network.

Otherwise these sensors cannot be controlled anymore and cannot be integrated into other networks.

1. Activate the menu and select “Change Network”. You’ll then access the network overview.
2. To delete a network, swipe the desired network to the left [of the screen], The “Delete” option then appears.
3. A warning message appears if the network isn’t empty. You have the possibility of cancelling the action and to removing the sensors. By continuing to complete the action, the sensors which have not been removed are subsequently no longer accessible.
4. Press “Delete Network” to delete the selected network.



Problem Solving

The app and/or sensor are not responding

Resolution: Close and re-open the app. Deactivate and reactivate Bluetooth on your smartphone or tablet. Should these measures have no effect, switch the light fuse off and on again at the fuse box.

The sensor cannot be found

After switching on the power, the sensor can be added to a mesh network for three hours. If the sensor in the room is not added to a mesh network, the Bluetooth connection is switched off automatically.

Resolution: To re-activate the Bluetooth connection, switch the light fuse off and on again at the fuse box. The sensor is once again available for programming for three hours.

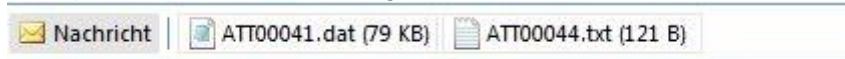
Transfer errors and file extension

In some cases, automatic renaming of the file occurs when transferring a network configuration file

Target extensions:

- .alnbck (network transferred without a password)
- .alnbck (network transferred with a password)

Example of automatic renaming:



Solution: In case the extension is .dat as in the image above, rename the files (Example: .alnbck).

The sensor has not confirmed disassociate

After removing a sensor the error message "The device did not acknowledge the disassociation request".

Solution: Note the device address. Confirm the error message with "Cancel" and open the "Add Device" dialogue. In case this device address appears as an available device, go back to the device overview and start the remove process again. After a few seconds you can now confirm the error message with "Remove". In case the address does not appear, another error is present.

Soft Dim

When changing only the soft dim for a group it may not change the setting for every sensor.

Solution: Restart the sensor

To prevent this don't change only the soft dim value in groups.

Uncertainty whether a specific sensor is located in a network

Which network is the sensor in?

Uncertainty about the association of a sensor in case of several networks (e.g. in the case of several networks in one building)

Resolution: To check whether a sensor is associated to a network: Enter the network in which the sensor uninstall process was made. Go to the group overview in the group "All Devices". If the sensor responds to a switch command sent to this group, it is assigned to this network.

Is the sensor missing from the device view?

The sensor is assigned to a network, but doesn't appear in the device overview. (E.g. with import from an outdated network backup file, multi app operation, incorrect deletion of a sensor from the device overview by the operator)

Solution: Start "Add Existing Device".

No Mesh access?

An uninstalled sensor cannot be added to a Mesh.

Solution: Check whether the sensor is correctly uninstalled. If not, uninstall the sensor as required.

Solution: After three hours the Bluetooth interface is switched off. To re-activate the Bluetooth connection, switch the light fuse off and on again at the fuse box.

Several sensors responding at the same time?

Several sensors respond even though only one was selected (visible for users e.g. with "Switch On/Off", "Find", Flashes with configuration changes)

Solution: Uninstall all the involved sensors. Following the removal of the second sensor the error message appears. "The device did not acknowledge the disassociation request". Now follow the steps "Device has not confirmed disassociate". Finally, add all sensors again to the network

Representation in the app is different from that described in the instructions

In some cases there are varying representations inside the app due to the numerous iOS versions. Please ensure that you use iOS 11.

Legal information

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