Honeywell

Light Touch App Manual

May 2020

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1 About This Manual

This manual applies to Light Touch, it is designed to help you use Light Touch to configure a DLS-DALI system. It is assumed that the engineer has a good understanding of lighting control. It is divided into several sections:

- About Light Touch
- Installing Light Touch
- Configure a DLS-DALI System

1.1 Revision History

Revision	Supported Release	Date	Description
D	1	29-May-2020	First issue

1.2 Contacting Honeywell

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2 About Light Touch

Light Touch is an Android app that enables the configuration of a DLS-DALI lighting control system. The app's screen is divided into 4 areas:

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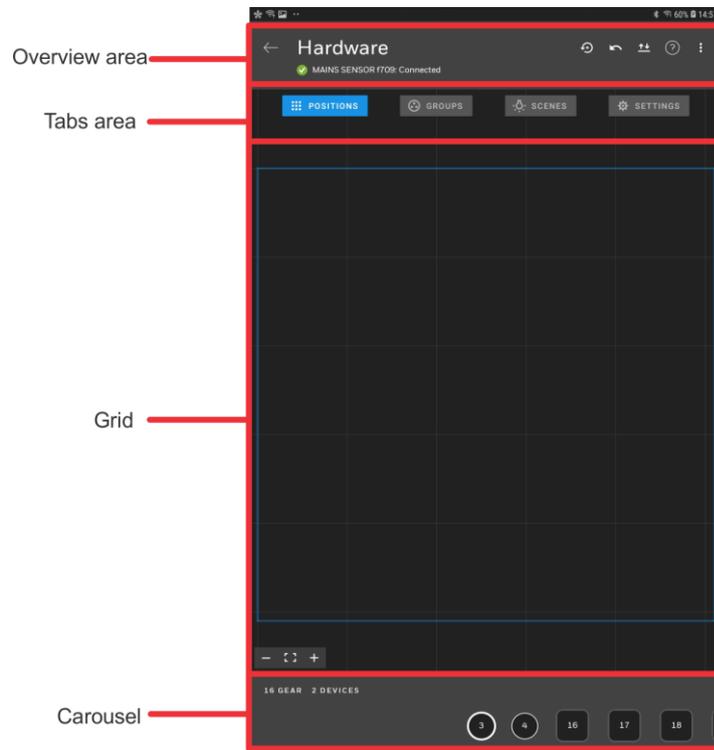
3 About a DLS-DALI System

A DLS-DALI system consists of DALI64 controllers, DALINET sensors, DALI control gears (ballasts or drivers), DALI control devices, input modules, scene plates, etc. connected using a DALI bus, and configured to control the lighting as required.

Configuration of the system is performed using Light Touch, which organises the system into a hierarchy, e.g. building, floors, areas, room, and devices stored as a project. The app considers the buildings, floors, areas, and rooms to be locations. Each location must have 1 DALI64 controller, which is used by the app to access the DALI Bus,

Devices on the DALI bus can be grouped so that they can be controlled together, e.g. the lights by a projection screen can be grouped together so that they can be turned off from a single switch when the screen is in use, leaving other lights unaffected.

Note: There is a maximum of 16 groups on a single DALI bus regardless of how many locations that DALI bus spans.

Scenes can be used to define the way lights operate e.g. a scene could be used to specify how the lights operate, e.g. when a room is vacant the scene could specify all light off except one by the door on at 50%. Scene plates or switches can be used to activate a scene or group.

The DALI64 controllers and DALINET sensors can detect occupancy and control the lighting appropriately by selecting the required group/scene or specific action e.g. all lights on.

DALINET sensors cannot control the lights directly but can provide occupancy or light level status to a DALI64 controller which will use that information to control the lights. DALINETs can be used for example in a larger room where a single DALI64 controller is not enough to cover the entire area.

Because the app enables the devices in a location to be specified if the DALI bus spans more than one location, only the devices in that location are allocated to that location. Other devices on that DALI bus can be in a different location, but a location can only have one DALI bus, and a maximum of 1 DALI64 PSU variants are allowed a DALI bus.

Locations can be used to organise a project into a hierarchy which makes it easier to navigate and commission larger project.

```
▾ Ex-Or
    Foundry Lane
  ▾ St Mark's Court
     ▾ Ground Floor
          NOC
          G1
          G2
          Marketing
     ▾ Lower Ground Floor
          R&D
          Test Lab
          Hardware
          LG1
          LG2
```
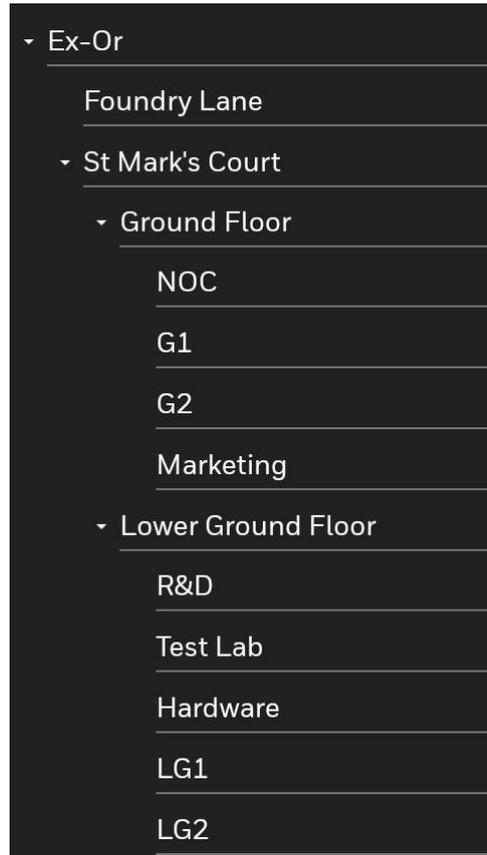
In the example above the Ex-Or project contains 2 buildings Foundry Lane and St Mark's Court. St Mark's Court has several locations, 2 floors (Ground Floor and Lower Ground Floor).

Each floor has several locations (areas and rooms) these locations must have a DALI64 controller and a number of DALINET sensors, DALI control gears etc.

The DALI64SYLK variants enable connection to a Trend BMS system over SYLK/Wall bus via a Trend IQECO or IQ4 controller.

4 Install Light Touch

System Requirements:
- Android version7 or later
- Recommended 9-inch screen

Install Light Touch:
1. Light Touch is available in the Google Play Store. Simply search the store for Light Touch and install in the same way as any app.

5 Configure a DLS-DALI System

Configuration of the DLS-DALI system is performed using Light Touch via the DALI64 controller for the required location.

*Note: **<u>DO NOT</u>** use more than one instance of the app to connect to multiple DALI64s on the same DALI Bus.*

When configuring a DLS-DALI system there are three scenarios:

Configuring a brand new installation
Editing an existing installation

5.1.1 Configure a Brand-new Installation

This configuration procedure assumes that the devices (controllers, sensors, switches etc.) that are to be included in the system have already been installed as described in the supplied instructions, and that the DALI64 controller has not previously been connected to.

To configure brand-new installation:

1. Unlock your device and select ![Light Touch]. The **Projects** screen is displayed.
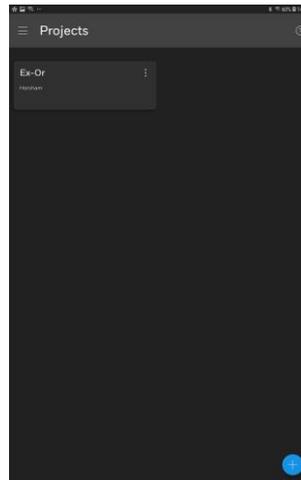
2. Create a project.
3. Add locations to create the site hierarchy.
4. Connect to an unconfigured DALI64 controller.
5. Add devices to the location.
6. Configure Groups.
7. Configure Scenes.
8. Configure System Settings.
9. Configure Device Settings.
10. Perform a Walk Test.
11. Select to exit the configuration process and return to the **Projects** screen.

5.1.2 Edit an Existing Installation

This configuration procedure assumes that the DLS-DALI system has previously been configured, and that the DALI64 controller has not previously been connected to.

To edit an existing installation:

1. Unlock your device and select . The **Projects** screen is displayed.
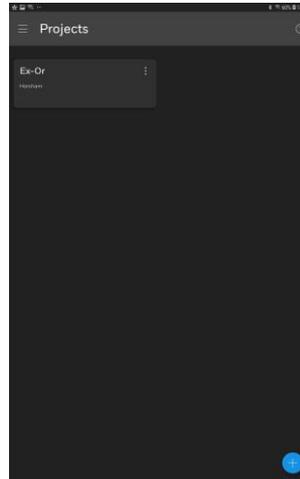
2. [Connect to an unconfigured DALI64 controller](#).
3. [Add devices to the location](#).
4. [Configure Groups](#).
5. [Configure Scenes](#).
6. [Configure System Settings](#).
7. [Configure Device Settings](#).
8. Select ⟵ to exit the configuration process and return to the **Projects** screen.
9. [Perform a Walk Test](#).

5.2 Configuration Tasks

5.2.1 Create a Project

A project is required to store the configuration for a DLS-DALI system. Different projects can be created for different configurations.

To create a project:

1. [Goto the **Projects** screen](#).
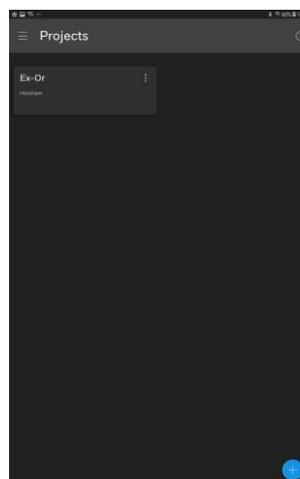
2. Select . The **New Project** screen is displayed.
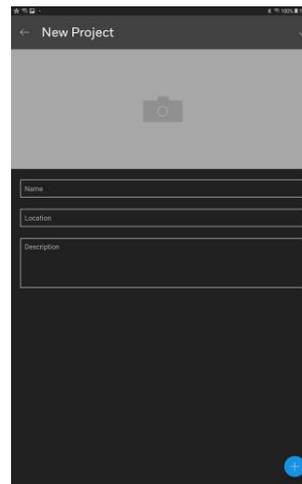
3. Specify the details of the project in the appropriate boxes.

   Name
   Location
   Description

4. To add a picture representing the project select the camera icon at the top of the screen, navigate to the required image, and select it. The picture can be removed by selecting **X**.

5. If you want to add locations to the project, select to create the location and go to adding locations. Alternatively select to create the project and return to the **Projects** screen.

5.2.2 Add Locations

Locations must be created to form the site hierarchy. An individual location can be a building, floor, area in the building (space), or room.

To add a location:

1. Goto the **Projects** screen, select the project to which location is to be added, if adding a location in to an existing location e.g. a room to a floor

   navigate to that location, select .

   If you have come directly from creating a project go to (2).

2. Select **Location**. The **New Location** screen is displayed.
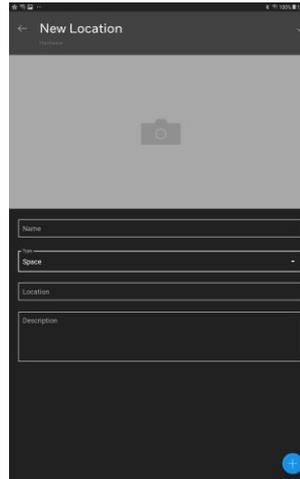
3. Specify the details of the location.

   > Name
   > Type – Building, Floor, Space, Room
   > Location
   > Description

4. To add a picture representing the location select the camera icon at the top of the screen, and navigate to the required image, and select it. The picture can be removed by selecting **X.**

5. If another nested location is to be added select and repeat steps (5) to (8).

6. Select to create the location and add another location or add devices. Alternatively select to just add the location.

7. Repeat steps (2) to (7) to set up other the other locations to create the site hierarchy.

5.2.3   Connect to a DALI64 Controller

A single DALI64 controller must be added to each location. This must be the device that Light Touch is directly connected to. It will act as the controller for the current location and can be further configured based on application needs. To add a device, you must be within wireless range of the DALI64.

When adding a DALI64 controller there are two scenarios:

Connecting to an unconfigured DALI64 controller (factory defaults)
Connecting to a configured DALI64 controller

5.2.3.1 Add an Unconfigured DALI64 Controller

To connect to an unconfigured DALI64 controller:

1. Goto the **Projects** screen, select the required project, navigate to the location from which the connection is to be made and select .

   If you have come directly from adding a location, go to (2).

2. Select **Device**. The **Available sensors** screen is displayed. Light Touch will scan the area for DALI64 controllers.

   Select STOP SCAN to stop the scan. To restart the scan select **START SCAN**.

   Whilst in this page a list of nearby DALI64 controllers will be displayed in order of signal strength.
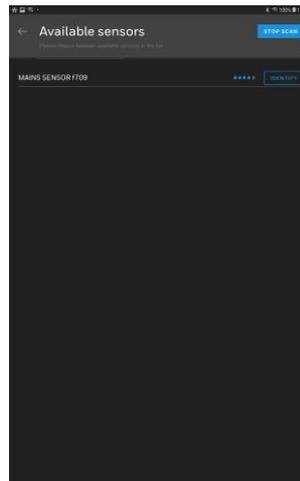
3. Select the required DALI64 controller. A dotted bar on the right indicates the signal strength for each DALI64 controller, enabling you to identify the DALI64 controller you require. Selecting **IDENTIFY** will cause the DALI64 controller to sequentially flash its red, green and blue LEDs until the identify is toggled off or identify is pressed on another sensor or you navigate away from the screen.

   Note: The DALI64 controller will flash its blue LED when communicating.

   The **Password Setup** is displayed.
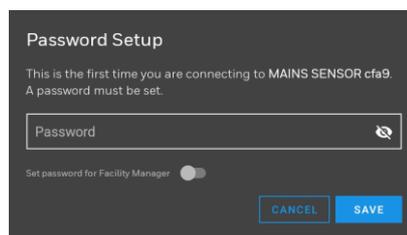
4. In the **Password** box enter the password for the Commissioning Engineer.

   ▪ If the Facility Manager's password is to be setup, select **Set password for Facility Manager**, and enter the password for the Facility Manager in the **New Facility Manager Password** box.

   Passwords must be 8 to 32 characters in length and include upper and lower case characters and numbers.

   Note: The facility manager only allows access to basic settings.

5. Select **SAVE**. The app will scan the DALI bus for gear and devices.
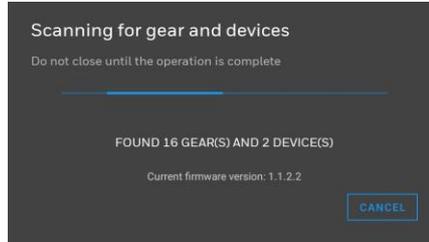
   Once the scan is complete a message is displayed listing the number of devices found.
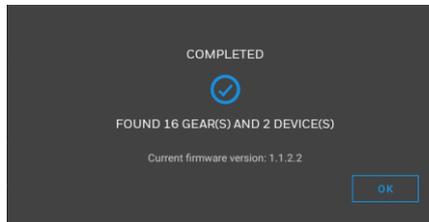
6. Select **OK**. The **POSITIONS** grid is displayed. The carousel (grey bar at the bottom of the screen) will contain all the devices on the DALI Bus that have not already been added to a location. The DALI64 controller to which you are connected is indicated with a green dot.
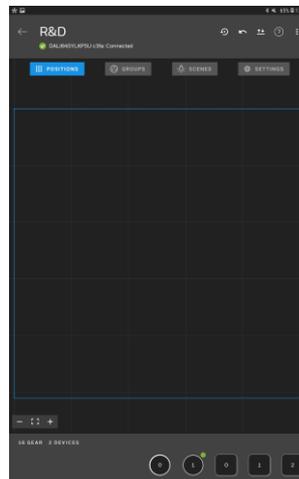
   Note: If some, or all, of the devices are missing from the carousel it may be because they are being used in another location.

5.2.3.2 Connect to a Configured DALI64 Controller

To connect to a configured DALI64 controller:

1. Goto the **Projects** screen, select the required project, navigate to the location from which the connection is to be made.

   If you have come directly from adding a location, go to (2).

2. Select the DALI64 controller:
   - If there is a DALI64 controller under **Devices** select the device.

   - If there is a not a DALI64 controller under **Devices** select , select **Device**. The **Available sensors** screen is displayed. Light Touch will scan the area for DALI64 controllers. Once the scan is complete a list of available DALI64 controllers will be displayed in order of signal strength. Select the required DALI64 controller. A dotted bar on the right indicates the signal strength for each DALI64 controller, enabling you to identify the DALI64 controller you require. Selecting **IDENTIFY** will cause the DALI64 controller to sequentially flash its red, green and blue LEDs.

   Note: The DALI64 controller will flash its blue LED when communicating.

   The **Sensor Login** is displayed.
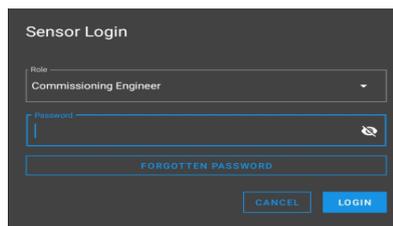
   There are two login levels, commissioning engineer and facility manager. The facility manager only allows access to basic settings.

3. Select the required role in the **Role** box., and In the **Password** box enter the password.

   Note: The Facility Manager does not have full access and should be used for users who only require to make minor changes to the configuration – see User Types.

4. Select **LOGIN**. The app will scan the DALI bus for gear and devices.

   Once the scan is complete a message is displayed.

If there is no configuration information in Light Touch and the DALI64 controller has been configured the following dialogue box is displayed.
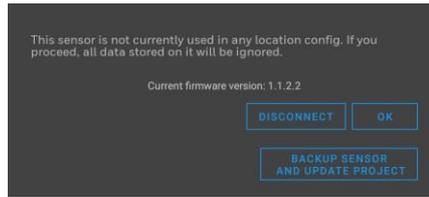
- To overwrite any configuration in the DALI64 controller select **OK**. The **POSITIONS** grid is displayed.

- To update the project in Light Touch with the configuration from the DALI64 controller select **BACKUP SENSOR AND UPDATE PROJECT**. Once the backup has completed the **POSITIONS** grid is displayed.

- To stop the configuration and return to the **Projects** screen select **DISCONNECT**.

If there is configuration information in Light Touch, the DALI64 controller has been configured and there is a difference between the two configurations the following dialogue box is displayed.
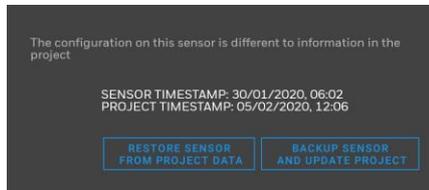
- To update the project in Light Touch with the configuration from the DALI64 controller select **BACKUP SENSOR AND UPDATE PROJECT**. Once the backup has completed the **POSITIONS** grid is displayed.

- To update the DALI64 controller with the configuration from the project in Light Touch select **RESTORE SENSOR FROM PROJECT DATA**. Once the restore has completed the **POSITIONS** grid is displayed.

If there is configuration information in Light Touch, the DALI64 controller has been configured and the two configurations are the same the following dialogue box is displayed.
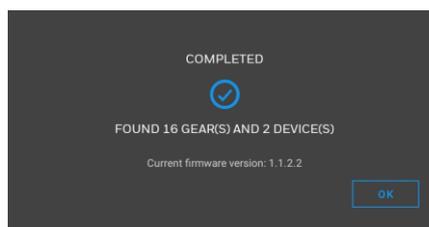

- Select **OK**. The **POSITIONS** grid is displayed.

5.2.4   Add Devices to the Location

The devices (controllers, sensors, switches etc.) for the location must be added to the **POSITIONS** grid. A location must include 1 DALI64 controller which is the one used to connect to the system. A device can only be in one location.

To add devices to the location:
1. Goto the **POSITIONS** grid.
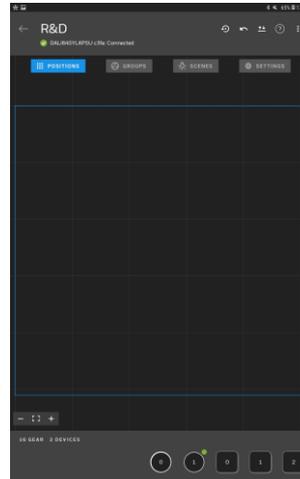
2. The carousel (grey bar at the bottom of the screen) will contain all the devices on the DALI Bus that have not already been added to a location. The DALI64 controller to which you are connected is indicated with a green dot.

    Note: If some, or all, of the devices are missing from the carousel it may be because they are being used in another location.

    Rectangle - Gear/Light
    Rectangle with orange bar - Emergency Gear/Light
    Circle - Other devices e.g. sensors or switches

    If a Gear/Light supports colour or colour temperature (DALI Device Type 8), this will also be indicated by a bar.

    To identify a DALI64 controller select a device in the carousel. If it is a DALI64 the device's LEDs will flash.

    To add a device to the grid:
    ▪ In the carousel select the device that is to be added to the grid. You can swipe left/right in the carousel to locate other devices.
    ▪ Either touch and hold the required location on the grid or hold your finger on the screen and drag the device from the carousel onto the grid and release your finger. The device will be added to the grid. Guidelines will appear when the device is aligned with other devices on the grid.

    To remove a single device from the grid:
    ▪ Select the device that is to be removed from the grid.
    ▪ Hold your finger on the screen and drag the device to onto the carousel and release your finger. The device will be added to the carousel.

    To remove all devices from the grid:
    ▪ Select ⟳.

3. To make it easier to identify devices during the configuration it is good practice to position each device on the grid so that its grid position represents it physical location.

   ▪ Select the required device. Selected devices will be highlighted on the grid, and the physical light turned ON. To identify switches on the grid with the physical switch use the identify switch feature – see <u>Identify Switches</u>. To identify emergency lights on the grid with the physical light use the identify emergency lights feature – see <u>Identify Emergency Lights</u>.

     Note: Some emergency lights will not be turned on when selected on the grid. Some other emergency lights cannot be dimmed and will remain on whilst the other lights are dimmed.

   ▪ Hold your finger on the screen and drag the device to the required position and release your finger. Guidelines will appear when the device is aligned with other devices on the grid.

4. Select ⇐ and then **Yes** to return to the location. The DALI64 controller will appear as a device. Alternatively, select **GROUPS**, **SCENES** or **SETTINGS** and **Yes** to save changes and go to the **GROUPS** grid and <u>configure groups</u>.

5.2.5   Configure Groups

Devices on the same DALI bus can be grouped together enabling them to be controlled together. For example, all the lights around the edge of a room can be grouped together as perimeter lights.

A default group is automatically created containing all the devices added to the **POSITIONS** grid for this location. This will be the lowest unused group on the DALI bus. Devices cannot be added or removed from the group, but it will automatically be updated when devices are added/removed on the **POSITIONS** grid.

The default group is used by the DALI64 controller, when in the DALI64's settings the value of a parameter that specifies a group is set to automatic. If accessed over BMS, the location is represented by the default group for that location.

If emergency lights are being used that only come on when the power is removed (non-maintained emergency lights) it may be necessary to create a group for normal lights that excludes those emergency lights that use configurations such as for occupancy or switches instead of the default group which will contain all devices.

Note: There is a maximum of 16 groups available (including the default groups) on a single DALI bus regardless of how many locations that DALI bus spans.

To configure groups:
1.   Goto the **GROUPS** grid.
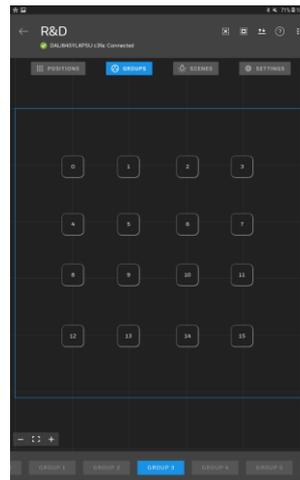
2.   Swipe left/right in the carousel and select the group that is to be configured.
3.   Touch the devices that are to be added to the group to select them. ▦ will select all devices. ▩ will deselect all devices. Selected devices will be highlighted.
4.   Repeat the previous steps for each group that is required.
5.   Select ⬅ and **Yes**. To return to the location. Alternatively, select **SCENES** and **Yes** to go to the **SCENES** grid and configure scenes.

Note: Groups that are already used in another location on the same DALI bus will be hidden and are not available. In some applications, it might be necessary to have a group which spans across multiple locations, for example you might want to put all emergency lights on a bus in a single group. If this is required, select [3dots] and then select Show All Groups.

Note that adding any of the lights directly controlled by a DALI64 to groups in different rooms will have an undeterministic behaviour and should be avoided.

5.2.6   Configure Scenes

Scenes enable devices to be controlled together to achieve a particular lighting effect. They can be recalled automatically by events such as walk-in or by user overrides. They are most useful when lights are required to act together but settle at a different light level. There can be up to 16 scenes (0 to 15) per location.

Note: Scene 0 is used by transitions. If transitions are being used scene 0 must not be used.

To configure scenes:

1. Goto the **SCENES** grid.
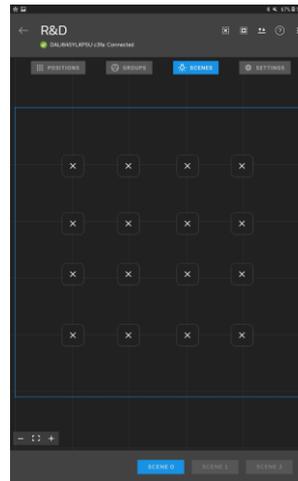
2. Swipe left/right in the carousel and select the scene that is to be set up.
3. Touch the devices that are to be added to the scene to select them. ▦ will select all devices. ▨ will deselect all devices. Selected devices will be highlighted, alternatively touch any empty area on the grid to deselect all devices.
4. Adjust the **Light level** slider to set the light level for the selected devices.
5. Adjust the **Temperature** slider to set the colour temperature for the selected devices.

Note: If either Light level or Temperature is set to X on the slider, the light level or colour temperature of the selected lights will not be affected when changing to that scene and the lights will remain unchanged, retaining their previous state.

*Note: The ability to change the colour temperature only applies to certain types of DALI lights.*

6. Repeat the previous steps for all lights that are to be controlled by the scene, and for each scene that is required.
7. Select ⬅ and **Yes**. To return to the location. Alternatively, select **SETTINGS** and **Yes** to go to the **SETTINGS** grid and configure system settings or configure device settings.

5.2.7   Configure System Settings

System settings enable the settings that apply to all the gear on the DALI bus to be configured.

To configure system settings:

1. Goto the **SETTINGS** grid.
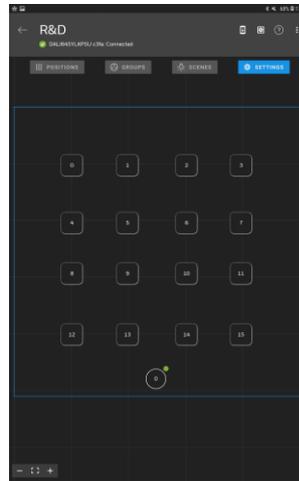
2. Select ⬚. The **System Settings** screen is displayed.
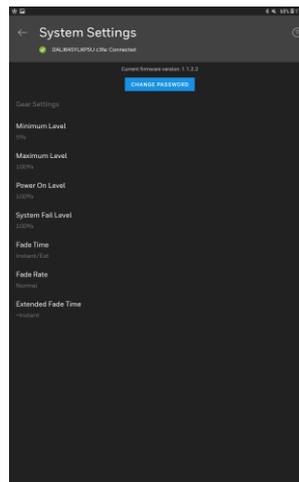
The information shown displays the most common configured value across all gear in the current location for each parameter.

3. Select the setting that is to be configured, select the required value, and select **OK**.

4. Once all the settings are configured select ⬅ and **Yes** to save the changes and return to the **SETTINGS** grid.

5.2.8   Configure Device Settings

Each device has a number of settings that can be configured to control how it works.

Note: While gear have settings that can be configured it is important to configure the settings in the DALI64 and DALINET sensors so that the lighting is controlled as required.

To configure device settings:
1. Goto the **SETTINGS** grid.
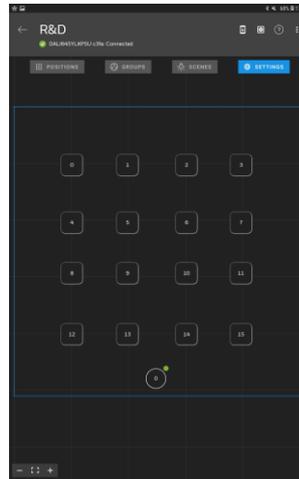
2. On the **SETTINGS** grid select the device for which settings are to be configured. The **Device Settings** screen is displayed.
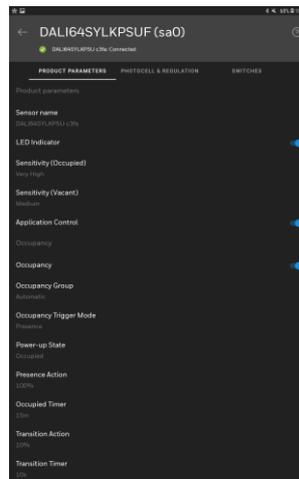
3. Select the setting that is to be configured, select the required value, and select **OK**.
4. Once all the settings are configured select and **Yes** to save the changes and return to the **SETTINGS** grid.

   See DALI64 and DALINET Parameters for details of the parameters available for different devices, and how they should be configured.

5.2.9 Perform a Walk Test

A walk test allows you to verify that the sensor is detecting movement in the required areas, and the correct action is taken.

To perform a walk test:
1. <u>Goto the **SETTINGS** grid</u>.
2. Select ⋮ and then select **Walk Test**. The **Walk Test Mode** screen is displayed.
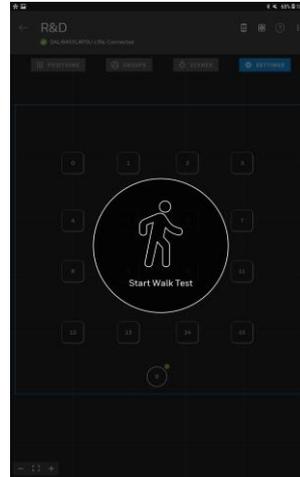

Note: The walk test follows the normal operation mode as configured in settings. Therefore if the photocell mode is set to Passive or Active when the walk test is started a warning is displayed and the Photocell Turn On level and time delay will be used.

Similarly, normal operation mode is to be expected during the walk test if the corridor linking or joined rooms feature is configured for the area.

3. Stand out of the sensor's viewable footprint or remain motionless within the viewable footprint.
4. Select **Start Walk Test** the lights will go out.
5. Wait a further 2 seconds for the sensor to stabilise then make a movement in the required area. If the lights adopt the status specified by the sensor's 'Occupied Action' parameter the detection is working correctly, if the lights stay off the sensor's sensitivity should be adjusted, and the walk test repeated until the desired detection is achieved.

   To repeat the test, select **Start Walk Test** and then repeat steps 3 to 5 for different locations in the room, and ensure that the detection/non-detection is as expected.

6. Select anywhere on the screen to exit the **Walk Test Mode** screen.

5.3 General Operations

5.3.1 Auto Number Devices

The auto-renumber process updates the address on the DALI bus all the devices on the grid based on their gird position starting with the top left most device and then moving from left to right and top to bottom, so ensure the devices are positioned as required.

Caution: Devices not on the grid will also be renumbered with addresses following the bottom right most device on the grid, which may affect other configurations. Re-numbering devices after rooms have been configured can cause nondeterministic behaviour. Ensure this step is done at the beginning of the commissioning of each room and not after rooms are already configured.

To auto number devices:
1. Goto the **POSITIONS** grid.
2. Ensure that only the devices to be renumbered are on the grid and they are in the required position.
3. Select ⁞ and then select **Auto-renumber**. If the positions of the devices have not been saved a message is displayed.

Saving changes
In order to perform auto-renumbering, current positions need to be saved
NO   YES
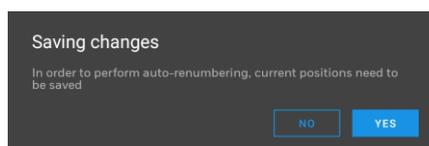
4. Select **YES**. A warning is displayed indicating that the operation cannot be undone.

Warning!
This operation will lead to modifications that can't be undone!
Please refer the User Manual.
CANCEL   OK
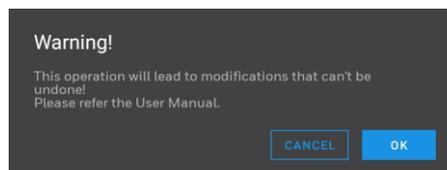
5. Select **OK**. A message is displayed to indicate the progress of the re-numbering process.

Renumbering gears and devices
Do not close until the operation is complete
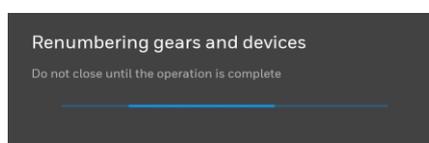
6. When the process is complete a message is displayed.
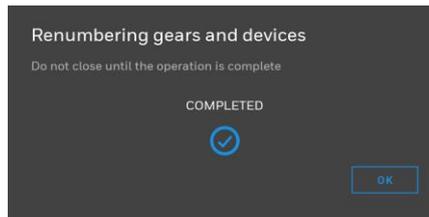
7. Select **OK**.

5.3.2 Change the Selected and Unselected Light Levels

By default the lights are set to the minimum level when unselected and maximum when they are selected. This may not be desirable when there is a low ambient light level e.g. at night. It may also cause problems when identifying certain types of emergency lights that cannot be dimmed. The default behaviour can be changed temporally as described below:

To change the selected and unselected light levels:
1. [Goto the positions grid](#).
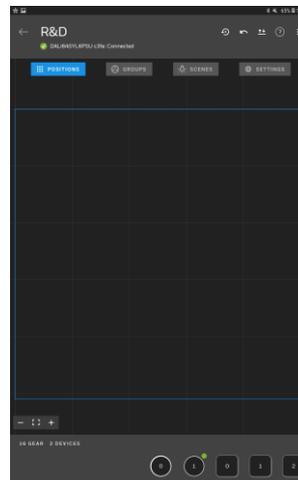
2. Select ⋮ and then toggle between **Unselected Lights Off** and **Unselected Lights Minimum**.

5.3.3 Configure Light Touch

There are a number of settings for Light Touch that can be configured to suit your requirements.

To configure Light Touch:
1. Select ☰. The menu is displayed.

2. Select **App Settings**. The **Apps Settings** screen is displayed.
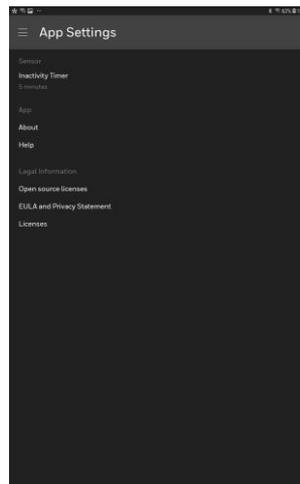
3. Edit the settings as required.

   Inactivity Timer – The length of time the for which the app is not used before the user is timed out.

5.3.4 Create a Report

A CSV file listing all the locations and devices in a project can be created. This can be used as a handover document e.g. between the lighting commissioning engineer and the BMS engineer. The report can either be saved to the tablet's internal memory or shared.

To create a report:
1. <u>Goto the **Projects** screen</u>.
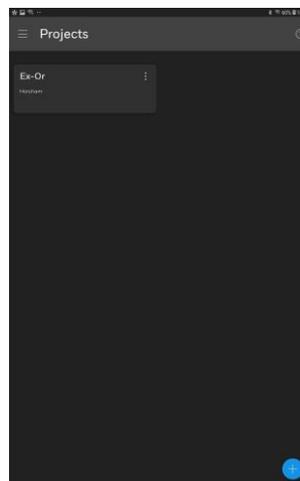
2. Select ⁝ and then select **Save Report** or **Share report**.

- If **Save Report** was selected the report will be saved to the tablet's internal storage in the 'dali > reports' folder.

  Note: This location is device dependant.

- If **Share report** was selected the report will be created and you will be prompted to specify how the report is to be shared. The options available will depend on those available to the tablet e.g email, cloud storage etc.

5.3.5   Delete a Project

To delete a project:
1. Goto the **Projects** screen.
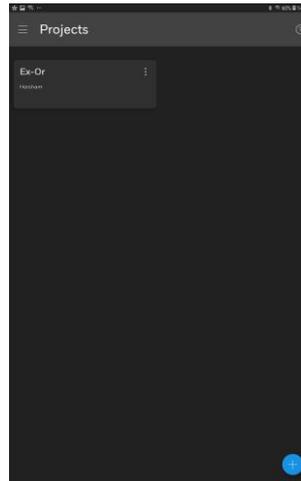
2. Select ⁝ and then select **Delete**.

5.3.6   Display Device Information

To display device information:
1. Goto the **Projects** screen.
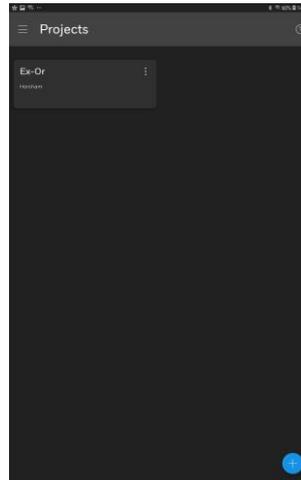
2. Select the project.
3. Navigate to the location containing the device.
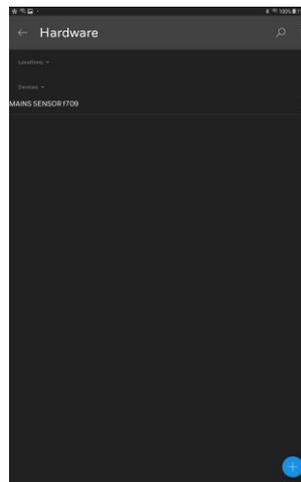
4. Select ⋮ for the device and select **Information**. The **Information** screen is displayed.
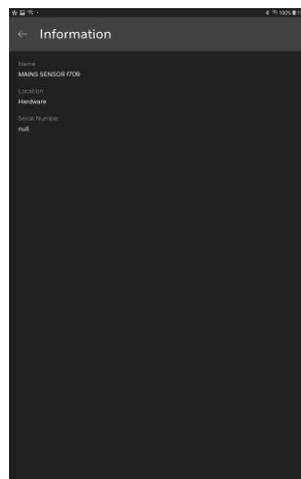
5.3.7   Edit Project Details

To edit projects details:
1. Goto the **Projects** screen.
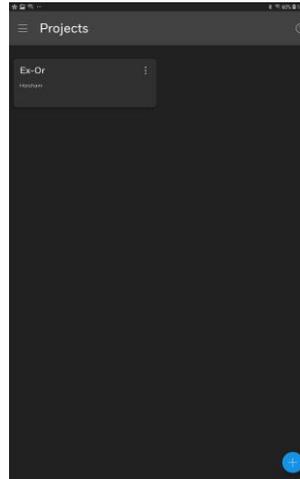
2. Select ⁞ and then select **Edit**.
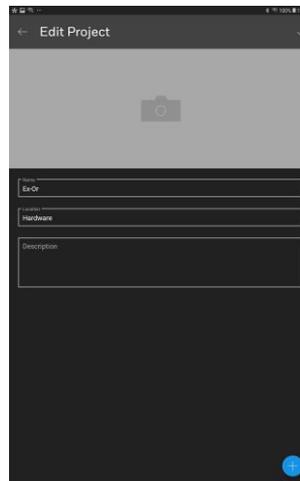
3. Edit the details as required.
4. Select ✓.

5.3.8   Edit the Hierarchy

If the hierarchy is not correct it can be edited by:

> Moving Locations in the hierarchy
> Deleting a Location
> Deleting a Device
> Ungrouping Locations
> Grouping Locations

To move an item in the hierarchy:
1.   Goto the **Projects** screen.
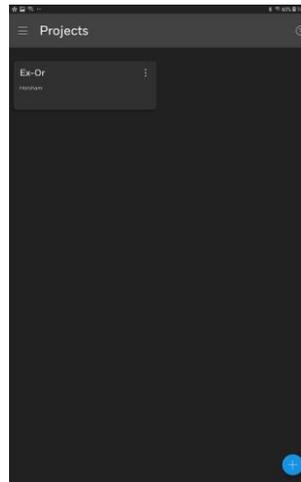
2.   Select the project.
3.   Navigate to the location containing the location(s) to be moved.
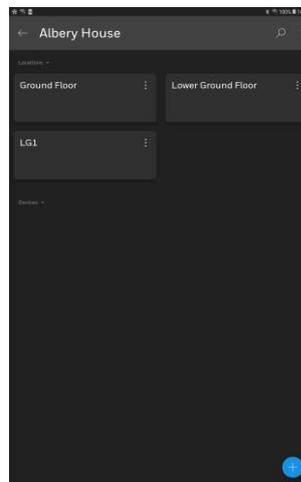
4. Select 🛠 for the location containing the location(s) to be moved and then select **Move**. The **Select item to move** screen is displayed.
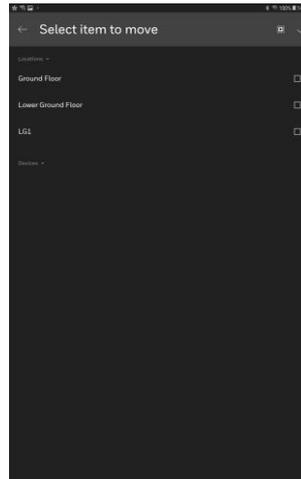
5. Select the location(s) to be moved. ▦ will select all.
6. Select ✓. The **Select destination** screen is displayed.
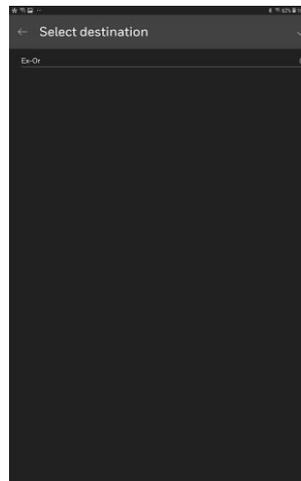
7. Select the required destination.
8. Select ✓.

To delete a location:
1. Goto the **Projects** screen.
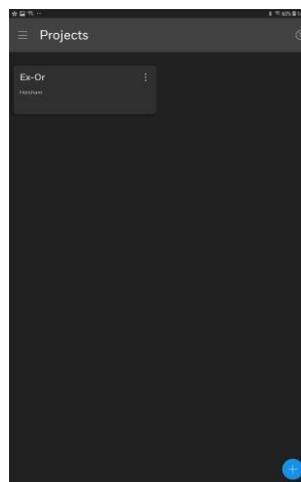
2. Select the project.

3. Navigate to the location that is to be deleted.
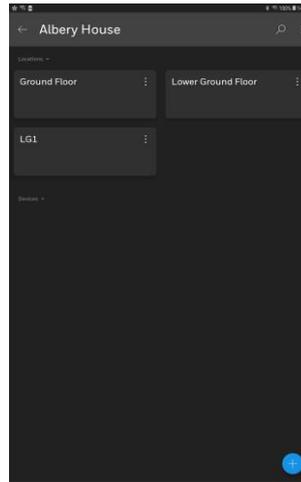
4. Select ⋮ on the location's tile then select **Delete**. The location will be deleted without a confirmation.

To delete a device:
1. Goto the **Projects** screen.
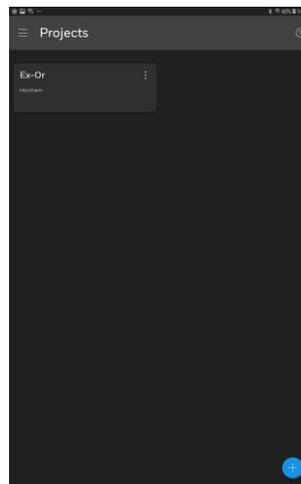
2. Select the project.
3. Navigate to the location containing the device to be deleted.
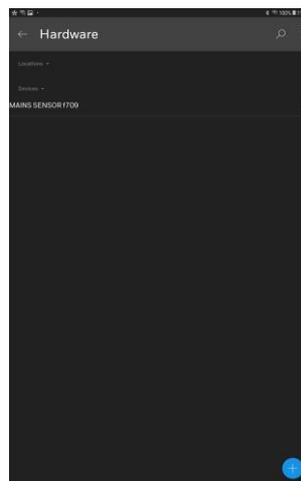
4. Select ⋮ for the device that is to be deleted and select **Delete**.

To ungroup Locations

Ungrouping a location (parent location) moves the locations directly below it in the hierarchy (child locations) up to the same level, and removes the parent location.

1. Goto the **Projects** screen.
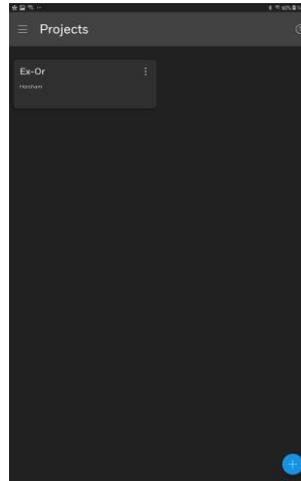
2. Select the project.
3. Navigate to the parent location that is to be ungrouped.
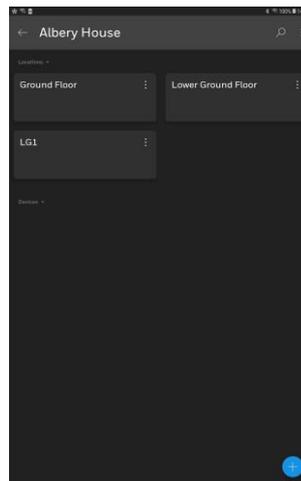
4. Select ⋮ for the parent location and select **Ungroup**.

To group locations:

Grouping locations creates a new parent location, and groups the selected locations into the new parent location as child locations.

1. Goto the **Projects** screen.
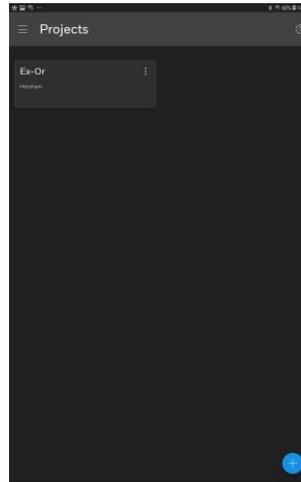
2. Select the project.
3. Navigate to the parent location containing the locations to be grouped.
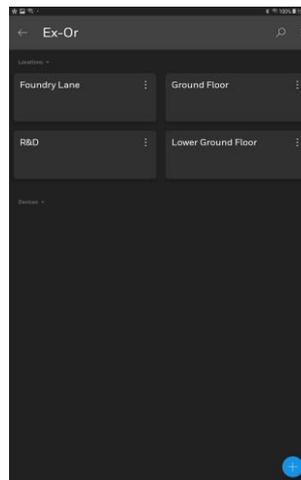
4. Select ⁝ for the parent location and then select **Group**.
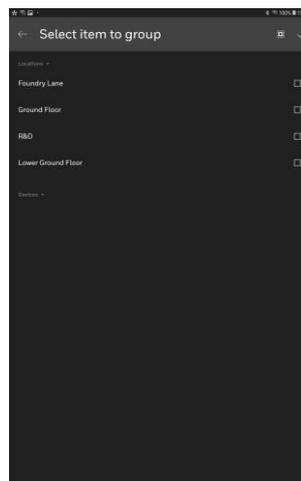
5. Select the location(s) to be grouped. ▣ will select all.

6. Select the tick. The **New Location** screen is displayed.
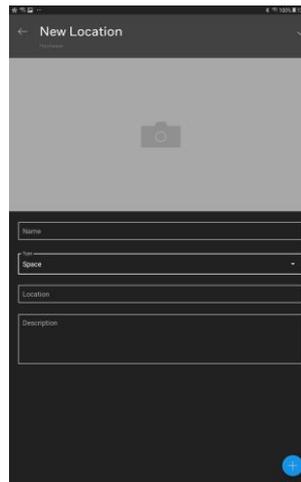
7. Specify the details of the location into which the selected locations are to be grouped.

> Name
> Type - building, Floor, Space, Room.
> Location
> Description

8. To add a picture representing the location select the camera, and navigate to the required image, and select it. The picture can be removed by selecting **X.**
9. Select ✓.

5.3.8.1 Edit Location Details

To edit location details:
1.
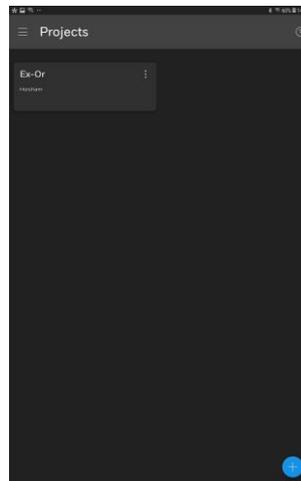
2. Select the required project.

3. Navigate to the required location.
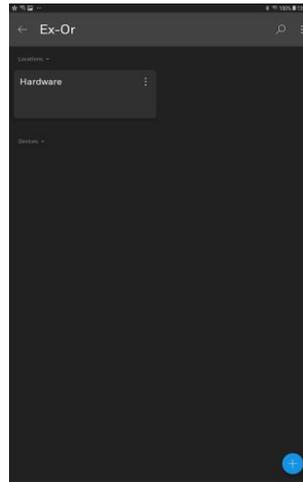
4. Select ⁞ and then select **Edit**.
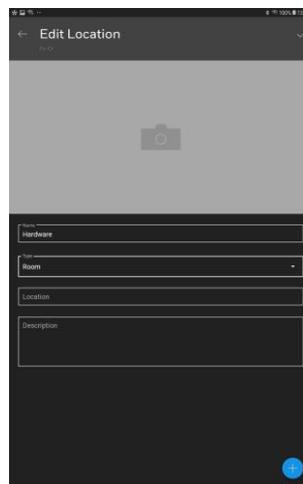
5. Edit the details as required.
6. Select ✓.

5.3.9   Grid Operations

Add Devices to the Grid
1. In the carousel <u>select the device</u> that is to be added to the grid. Swipe left/right in the carousel to find locate other devices.
2. Either touch and hold the required location or hold your finger on the screen and drag the device from the carousel onto the grid and release your finger, the device will be added to the grid. Guidelines will appear when the device is aligned with other devices on the grid.

Position Devices
To make it easier to identify devices during the configuration it is necessary to position each device on the grid so that its grid position represents its physical position.

To position devices:
1. <u>Select the required device</u>.
2. Hold your finger on the screen and drag the device to the required position and release your finger. Guidelines will appear when the device is aligned with other devices on the grid.

Move a Device:
1. <u>Select the device</u>.
2. Hold your finger on the screen and drag the device to the required position and release your finger. Guidelines will appear when the device is aligned with other devices on the grid.

Remove a Single Device from the Grid:
1. <u>Select the device</u>.
2. Hold your finger on the screen and drag the device to onto the grey bar at the bottom to the screen (carousel) and release your finger. The device will be added to the bar.

Remove all Devices from the Grid
1. Select ⟳.

Select Devices
To select a single device:
1. Touch the required device.

To select all devices:
1. Select ▦.

To select multiple devices:
1. Starting on a deselected device drag you finger across the screen from one device to another. Unselected devices you touch will be selected.

To deselect a single device:
1. Touch the required device.

To deselect all devices:
1. Select ▨.

To deselect multiple devices:
1. Starting on a selected device drag you finger across the screen from one device to another. Selected devices you touch will be deselected.

Zoom In/Out:
1. Select **+** or **–**.

Zoom to Normal Size:
1. Select ◼.

5.3.10 Identify a DALI64 Controller

When the DALI bus is scanned more than one DALI64 controller may be found, and it may be necessary to identify the DALI64 controller to ensure you are connecting to the correct one.

To identify a DALI64 controller:
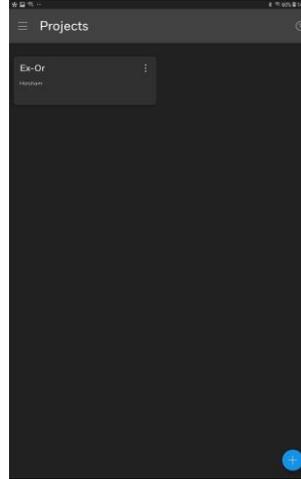
1. Goto the **Projects** screen.

2. Select the required project.
3. Navigate to the location.
4. Select and add a device or select an existing device. The **Available sensors** screen is displayed. Light Touch will scan the area for DALI64 controllers. **STOP SCAN** will stop the scan process, **START SCAN** will restart the scan. During the scan a list of available DALI64 controllers will be displayed in order of signal strength.
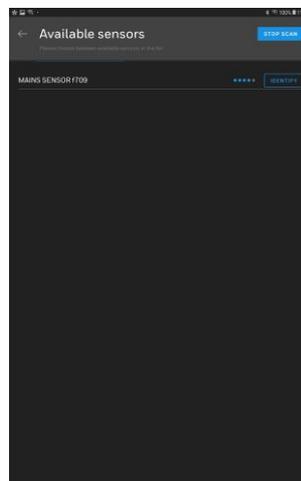
5. Select **IDENTIFY** next to the required DALI64 controllers. This will cause the DALI64 controllers to flash its LEDs.

5.3.11 Identify Switches

Switches can be identified to match the physical switch with one on the grid.

To identify a switch:
1. [Goto the positions grid](#).
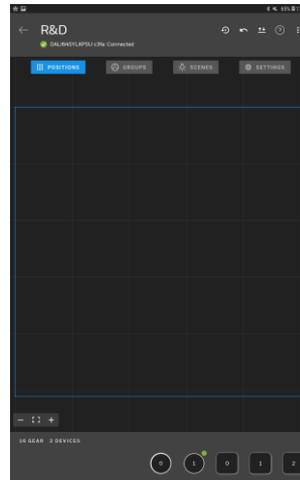
2. Select ⋮ and then select **Run Identify Switches**.
3. Operate the physical switch that is to be identified. The switch will be indicated on the grid/carousel.
4. Select ⋮ and then select **Stop Identify Switches**.

5.3.12 Identify Emergency Lights

There are different types of Emergency Lights and as such there are different approaches to identify them.

- Dimmable emergency lights can be turned on or off and dimmed similar to standard lights. These can be identified in the same way as any standard light.
- Switched emergency lights which can be commanded by DALI lights. These lights can be switched by DALI but cannot be dimmed. To identify these lights, select Unselected Lights: Off from overflow menu - 3 dots so that all unselected lights are off instead of being dimmed. Once you have identified Emergency Lights, you can switch this back to Unselected Lights: Minimum to have unselected lights at the dimmed level.
- Some Emergency Lights do not take any DALI light level command. These are typically non-maintained lights for example for Exit signs. To identify these, select an Emergency Light first, then select Identify Emergency Lights.

Emergency lights can be identified to match the physical light with one on the grid.

To identify emergency lights:

1. <u>Goto the positions grid</u>.
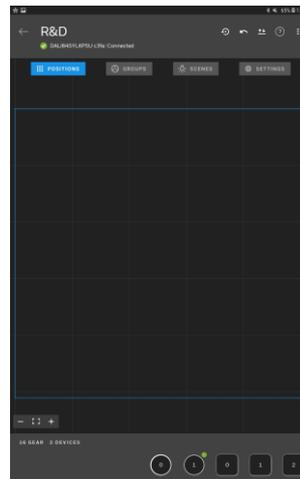
2. Select the emergency lights to be identified.
3. Select ⋮ and then select **Identify Emergency Lights**.

    The selected lights will identify themselves. The method used is dependent on the specific type light. Examples of identification methods are flashing LED or sound.

5.3.13 Navigate Light Touch

Goto the Projects screen:
1. Run Light Touch
2. Select ▤. The menu is displayed.

3. Select **Projects**. The **Projects** screen is displayed.
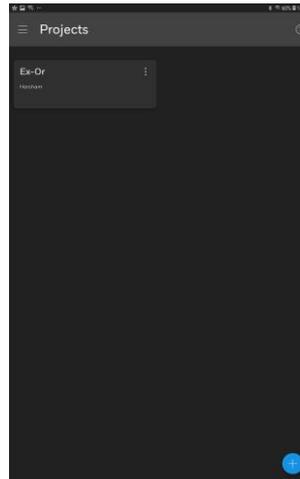
Goto the POSITIONS grid:
1. Edit a Project Configuration.
2. Select **POSITIONS**. The **POSITIONS** grid is displayed.
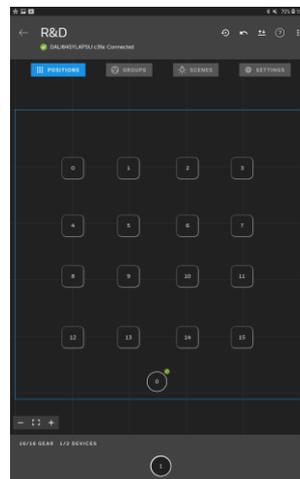
Goto the GROUPS grid:
1. Edit a Project Configuration.

2. Select **GROUPS**. The **GROUPS** grid is displayed.
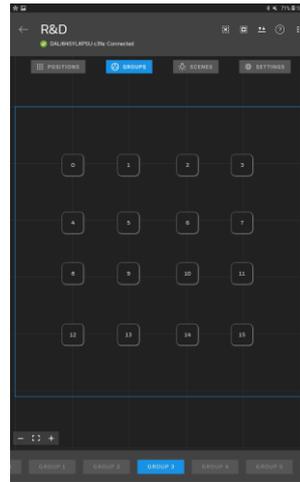
Goto the SCENES grid:
1. [Edit a Project Configuration](#).
2. Select **SCENES**. The **SCENES** grid is displayed.
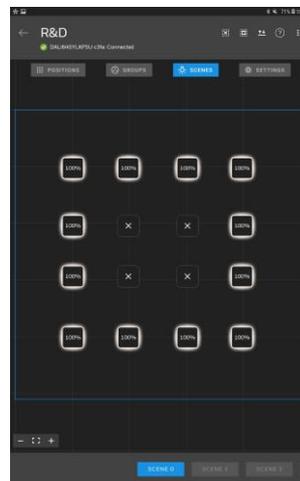
Goto the SETTINGS grid:
1. [Edit a Project Configuration](#).
2. Select **SETTINGS**. The **SETTINGS** grid is displayed.
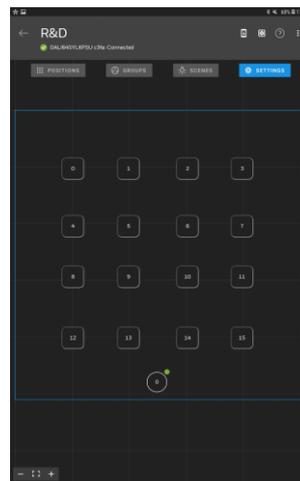
5.3.14 Reset the DALI Bus

Resetting the DALI Bus resets all the devices on the DALI bus to factory defaults.

Note: This operation is not reversible.

To reset the DALI Bus:
1. Goto any one of the **POSITIONS**, **GROUPS**, **SCENES** or **SETTINGS** grids.
2. Select ⁝ and then select **Reset DALI Bus**. A dialogue box is displayed.
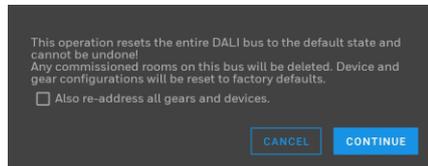
3. If the gears and devices are also to be readdressed select **Also re-address all gears and devices**.
4. Select **CONTINUE**. The action will be performed without any confirmation and you will be returned to the location.

5.3.15 Run Light Touch

To run Light Touch:

1. Unlock your device and select Light Touch. The **Projects** screen is displayed.
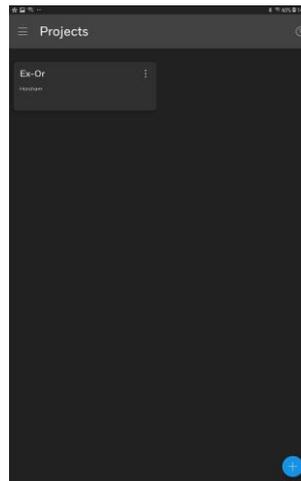
5.3.16 Set up Passwords

When you first connect to a DALI64 controller you are required to set up a password for the Commissioning Engineer. At this point you can also set up the password for the Facility Manager. If the Facility Manager password is not set up, it can be set up later – see Change the DALI64 controller's Password.

If you forget your password the sensor's password can be reset – see Reset the DALI64 controller's Password.

5.3.16.1 Change the DALI64 Controller's Password

The password for the DALI64 controller to which you are currently connected can be changed.

To change the DALI64 controller's password:
1. Goto the **SETTINGS** grid.
2. Select ▣. The **System Settings** screen is displayed.
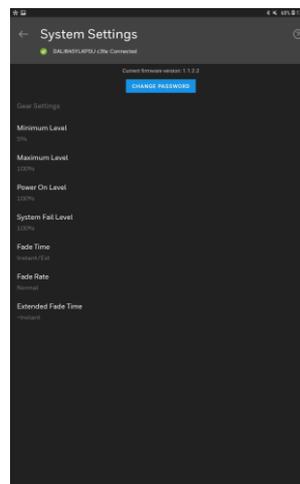
3. Select **CHANGE PASSWORD**. The **Change Sensor Password** screen is displayed.
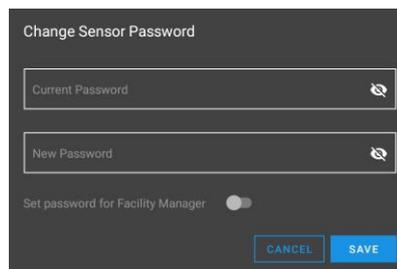
4. In the **Current Password** box enter the current password for the Commissioning Engineer.
5. In the **New Password** box enter the new password for the Commissioning Engineer.
6. If the Facility Manager's password is to be changed/setup, select **Set password for Facility Manage**r, and enter the password for the Facility Manager in the **New Facility Manager Password** box.

    *Note: If you are only setting up the Facility manager password, it is still necessary to enter the current password for the Commissioning Engineer in the **Current Password** box.*

    The password must be 8 to 32 characters long with upper and lower case characters and numbers.

7. Select **SAVE**.

5.3.16.2 Reset the DALI64 Controller's Password

To reset the DALI64 controller's password:

1. Goto the **Projects** screen.
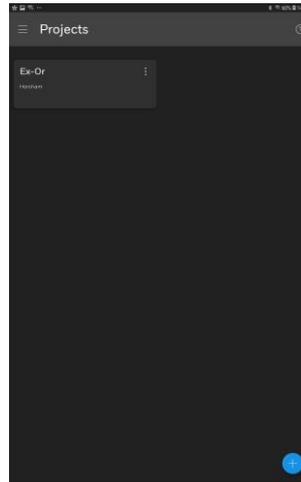
2. Select the required project.
3. Navigate to the location.
4. Select and add a device or select an existing device. The **Available sensors** screen is displayed. Light Touch will scan the area for DALI64 sensors. **STOP SCAN** will stop the scan process, **START SCAN** will restart the scan. Once the scan is complete a list of available DALI64 controllers will be displayed in order of signal strength.
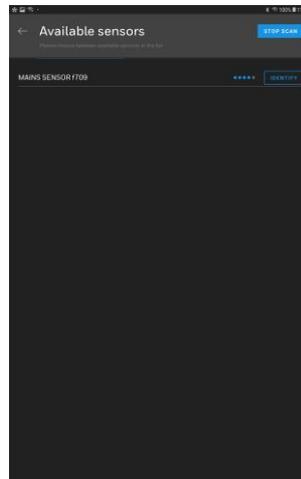

5. Select the required DALI64 controllers. The **Sensor Login** is displayed.
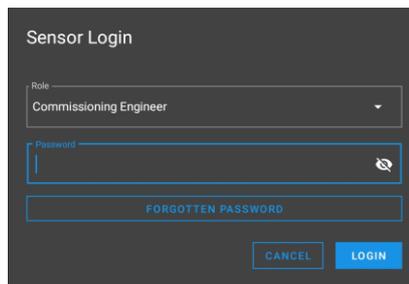
6. Select **FORGOTTEN PASSWORD.**
7. Select **PASSWORD RESET**.
8. Select **CONTINUE**. The **Available sensors** screen is displayed.

9. Within 5 minutes switch the DALI64 controller off and back on again. This can be done by breaking the supply to the DALI64 controller, for example using the circuit breaker. Observe all safety regulations when working with mains supply or DALI bus.

10. Between 30 seconds and 5 minutes after the DALI64 controller is powered on, repeat steps (5) to (8).

    Note: For security reasons, the sensor will check for movements in the area before the password is reset. If LED indication is on, ensure the green LED is flashing during this operation.

    Once the password reset is performed the **Available sensors** screen is displayed.

11. Select the required DALI64 controller. The **Password Setup** is displayed.
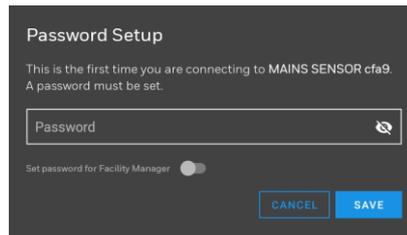
12. In the **Password** box enter the password for the Commissioning Engineer.
13. If the Facility Manager's password is to be setup, select **Set password for Facility Manage**r, and enter the password for the Facility Manager in the **New Facility Manager Password** box.

    The password must be 8 to 32 characters long with upper and lower case characters and numbers.

14. Select **SAVE**.

5.3.17 Update a DALI64 Controller's Firmware

The firmware of the DALI64 controller to which the app is connected can be upgraded to provide additional features as they become available.

To update the firmware:

1. Following the manufacturer's instructions of the device running Light Touch copy the new firmware file on to the device running the app.
2. Goto the **SETTINGS** grid.
3. Select ⬇. The **File Selection** screen is displayed.

4. Select the upgrade file. The **Firmware update** dialogue box is displayed.
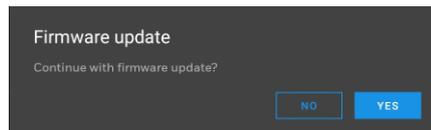
5. Select **YES**. The upgrade will start, progress is indicated by the **Updating firmware** screen.
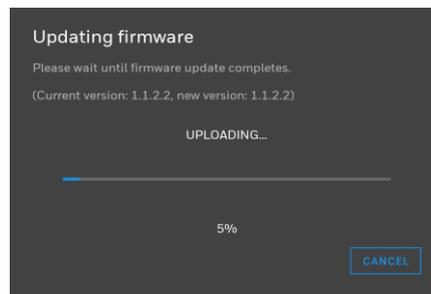
When the upgrade is complete the following screen is displayed.
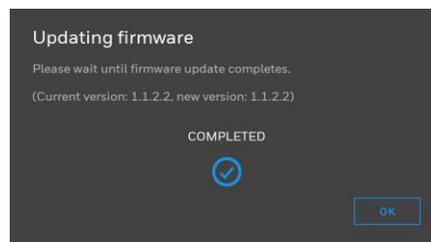
6. Select **OK**.

After a firmware update, the app is disconnected from the DALI64 controller. The DALI64 controller will restart and there should be a series of blue LED blinks followed by a rapid blinking of the green LED to indicate successful firmware update. You should log in to the DALI64 controller again if further configuration is required.

APPENDICES

A1   USER TYPES

DALI64 controllers can have 2 different users:

- Commissioning Engineer
- Facility Manager

The Commissioning Engineer has access to everything, and the Facility Manger has restricted access as described below:

POSITION Grid
The Facility Manger can only drag a gear (not a device) from the carousel onto the grid to replace a missing gear.

GROUP Grid
The Facility Manger does not have access to the **GROUP** Grid.

SETTINGS Grid
The Facility Manger does not have access to Gear and System settings, and only has access to the following settings:

- LED indication
- Sensitivity Occupied & Vacant
- Occupancy timeout
- Occupancy trigger mode
- No Photocell settings
- Regulation setpoint; but nothing else in regulation
- No switch settings

Miscellaneous
The Facility Manger can only change their own password.

The Facility Manger cannot change room relationships (partition/join or corridor linking).

The Facility Manger cannot do a firmware upgrade.

The Facility Manger cannot change the project hierarchy.

A2   OCCUPANCY LIFECYCLE

This section describes the occupancy lifecycle and how the Light Level and Occupied State are affected.

A2.1 ABSENCE MODE
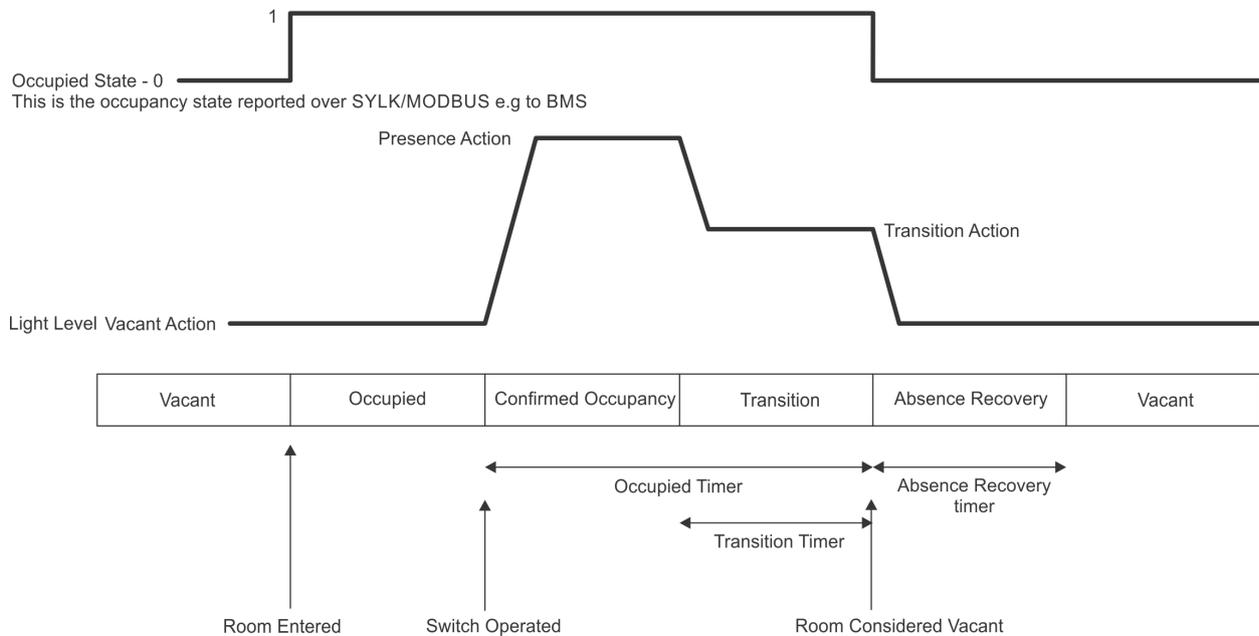
When operating in Absence Mode the DALI64 follows the Occupancy Lifecycle shown above, starting in the Vacant state and moving through the various states (Occupied, Confirmed Occupancy, Transition, Absence Recovery) until it returns to Vacant.

Vacant State

The DALI64 will be in the Vacant state until someone enters the room and triggers the occupancy sensor. At this point the DALI64 moves to the Occupied state.

On entering the Vacant state the Light level is set to the Vacant Action.

Occupied State

The DALI 64 will enter the Occupied state when the occupancy sensor detects movement. It will remain in this state until an event confirms occupancy (e.g. light switch operated) when it will move to the Confirmed Occupancy state, or the room is considered vacant and it will return to the Vacant state.

On entering the Occupied state the light level will remain unchanged i.e. defined by the Vacant Action.

Confirmed Occupancy State

The DALI 64 will enter the Confirmed Occupancy state when the occupancy sensor detects movement and an event, such as the operation of a light switch, confirms occupancy. It will remain in this state for a minimum time determined by the Occupied Timer – Transition Timer before moving to the Transition state. For example. if the Occupied Timer is set to 10 minutes and Transition timer is set to 2 minutes the DALI64 will remain in Confirmed Occupancy for a minimum of 8 minutes. If movement is detected during this period, the Occupied Timer is restarted.

On entering the Confirmed Occupancy state, the light level set to what is specified by the Presence Action, and the Occupied Timer started.

Transition State

The DALI 64 will enter the Transition state when the occupancy sensor has not detected movement for the period determined by the Occupied Timer – Transition Timer. It will remain in the Transition state for the period determined by the Transition Timer after which it will move to the Absence Recovery state. In order to achieve this, DALI64 uses Scene 0 to store the state of the lights before entering the Transition State. Therefore Scene 0 should not be used for scene configuration if Transition feature is enabled.

If movement is detected while in this state the DALI64 will return to the Confirmed Occupancy state, retaining any changes to the light level, e.g. dimming the light, made during the Confirmed Occupancy state.

On entering the Transition state, the light level set to what is specified by the Vacant Action and the Transition Timer started.

Absence Recovery State

The DALI 64 will enter the Absence Recovery state when the occupancy sensor has not detected movement for the period determined by the Occupied Timer. It will remain in the Absence Recovery state for the period determined by the Absence Recovery Timer after which it will move to the Vacant state,

If movement is detected while in this state the DALI64 will return to the Confirmed Occupancy state, with the light level set to what is specified by the Presence Action.

On entering the Absence Recovery state, the light level is set to what is specified by the Vacant Action and the Absence Recovery Timer started.

A2.2 PRESENCE MODE
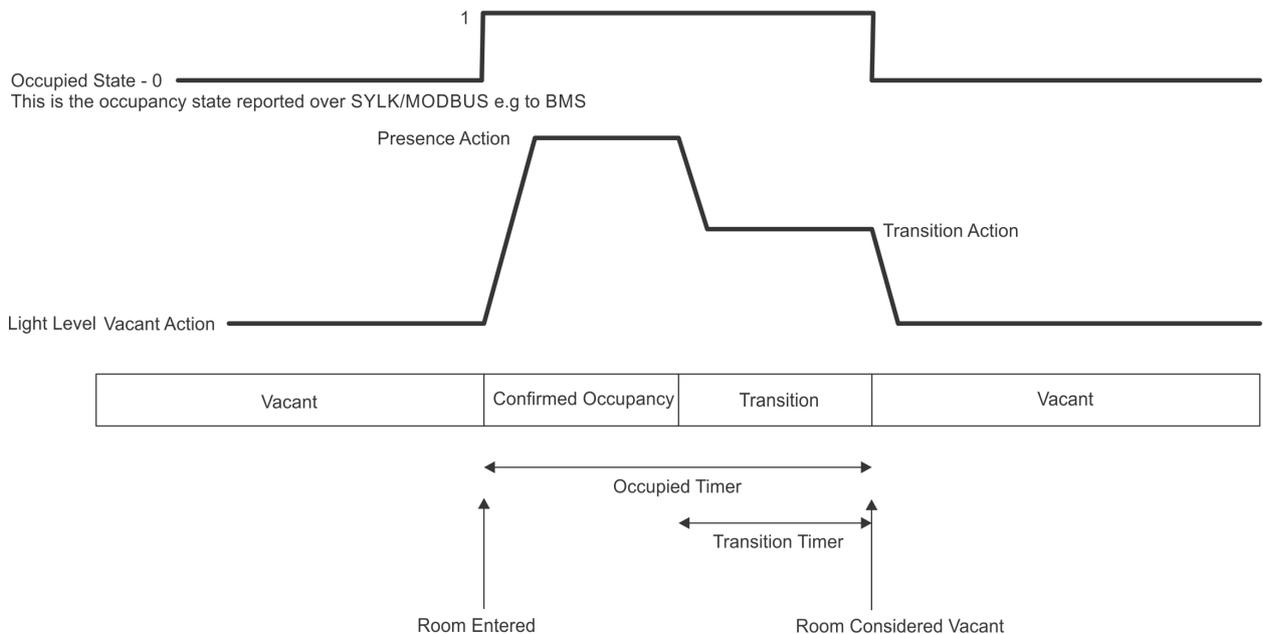
When operating in Presence Mode the DALI64 follows the Occupancy Lifecycle shown above, starting in the Vacant state and moving through the various states (Confirmed Occupancy, Transition) until it returns to Vacant.

Vacant State

The DALI64 will be in the Vacant state until someone enters the room and triggers the occupancy sensor. At this point the DALI64 moves to the Confirmed Occupancy state.

On entering the Vacant state the Light level is specified by the Vacant Action.

Confirmed Occupancy State

The DALI 64 will enter the Confirmed Occupancy state when the occupancy sensor detects movement. It will remain in this state for a minimum time determined by the Occupied Timer – Transition Timer before moving to the Transition state. For example. if the Occupied Timer is set to 10 minutes and Transition timer is set to 2 minutes the DALI64 will remain in Confirmed Occupancy for a minimum of 8 minutes. If movement is detected during this period, the Occupied Timer is restarted.

On entering the Confirmed Occupancy state, the light level set to what is specified by the Presence Action, and the Occupied Timer started.

Transition State

The DALI 64 will enter the Transition state when the occupancy sensor has not detected movement for the period determined by the Occupied Timer – Transition Timer. It will remain in the Transition state for the period determined by the Transition Timer after which it will move to the Vacant state.

If movement is detected while in this state the DALI64 will return to the Confirmed Occupancy state, retaining any changes to the light level, e.g. dimming the light, made during the Confirmed Occupancy state.

On entering the Transition state, the light level set to what is specified by the Vacant Action and the Transition Timer started.

A3

A3   DALI64 AND DALINET PARAMETERS

The tables below list the parameters available for DALI64 controller and DALINET sensors.

Note: Not all parameters are available in DALINET sensors.

A3.1 PRODUCT PARAMETERS

The product parameters enable basic configuration parameters to be specified.

Parameter	Description	Range
Sensor name	The sensor's name	Text
LED Indicator	Enables/disables routine LED indications for the sensor. Even when disabled, LEDs still operate in 'Walk Test Mode' and to indicate faults.	**Disabled**, Enabled
Sensitivity Occupied	Sets the sensitivity detection during occupancy. The recommended setting is 'Maximum' but in some environments, it may be necessary to reduce the sensitivity to prevent false triggering.	Low, Medium, High, **Very High**, Maximum
Sensitivity Vacant	Sets the sensitivity detection outside of occupancy. It enables the sensitivity to movement to be reduced in unoccupied areas to reduce the likelihood of false triggering. It is expressed as a percentage of regular movement sensitivity. For example, setting this parameter to medium means that there will be a 20% reduction in sensitivity when the area becomes unoccupied. Setting high sensitivity as an area becomes unoccupied means that there will be no change in sensitivity.	Low/**Medium**/High
Sylk Address	SYLK variants only. The sensor's address on the SYLK/Wall bus	2, **3** to 15
Sylk Destination	SYLK variants only. The controller's address on the Sylk/Wall bus where change of value updates will be sent. It should be set to 2 if connected to an IQ controller.	**2** to 15
Application Control	Determines whether lights are actively controlled by the sensor's application controller.	Disabled, **Enabled**
Occupancy	Enables/disables the sensor's occupancy detection.	Disabled, **Enabled**
Occupancy Group	The target group used during occupancy. The sensor default group will be used if set to Automatic.	**Automatic**, Group 0 to 15

Parameter	*Description*	*Range*
Occupancy Trigger Mode	Allows the selection of Presence Mode (Auto on, Auto Off) or Absence Mode (Manual On, Auto Off). Additionally, the sensor may be set to automatically select Absence Mode or Presence Mode according to the background light level. In this case, the sensor would operate in Presence Mode only when the ambient light level is very low.	**Presence**, Absence, Auto Absence
Power-up State	Defines the behaviour at power-up. If set to Occupied, the sensor will launch into the Occupied state at power-up. If set to Vacant, the sensor will not look for occupancy and remain in the Unoccupied state for 30 seconds following a power-interruption while the sensing electronics stabilises. 'Occupied' is recommended for safety critical applications where it is undesirable to lose light output following a power interruption.	**Occupied**, Vacant
Presence Action	The action taken when presence is detected.	Instant ON, Scene 1 to 15/Off, 1%, 2%, 5%, 10%, 15%, 25%, 35%, 50%, 70%, **100%**
Occupied Timer	Sets the period which, in conjunction with the occupancy sensor, defines whether the area is considered to be occupied or not.	**15 minutes** (10s, 20s, 30s, 40s, 50s, 1m, 5m, 10m, 15m, 20m, 30m, 40m)
Transition Action	The action taken when the transition timer is running. Normally a lower light level (than the occupied) would be configured.	Scene 1 to 15/Level 0, **10**, 25, 50, 100%
Transition Timer	Following the expiry of the Occupied state, it may still be uncertain as to whether the area really is unoccupied. The Transition timer determines the length of a period during which re-affirmed occupancy will quickly return the sensor to its Occupied state without requiring any manual intervention (e.g. if Absence Mode is enabled.)	5s, 10s, 20s, 30s, 40s, 50s, 1m, 5m, 10m, 15m, 20m, 30m, 40m
Hold Action	The action taken when a corridor is vacant but at least one of its linked areas is occupied.	Instant ON, Scene 1 to 15/Off, 1%, 2%, 5%, 10%, 15%, 25%, 35%, 50%, 70%, **100%**
Absence Recovery Timer	Period of time immediately following a vacancy event when sensor will actively switch back to occupied state when movement is detected in absence mode.	5s, **10s**, 20s, 30s, 40s, 50s, 1m, 2m, 3m, 4m
Vacant Action	The action taken when the location is vacant.	Instant OFF, Scene 1 to 15/1%, 2%, 5%, 10%, 15%, 25%, 35%, 50%, 70%, 100%
Ir Support	Specifies what the sensor does with any infrared commands received from a remote control. Generally, the commands are used to control all the lights in the room. However, this parameter also allows control to be limited to an individual DALI group or to even	**Automatic**, Group 0 to 15 , Disabled

Parameter	Description	Range
	be completely disabled. Automatic - Controls the whole room associated with the sensor Group 0 to Group 15 - Directed to a specific group only Disabled - IR commands are ignored	
Address	MOD variants only. The address of the controller Modbus.	**1** to 247
Baud Rate (bits/s)	MOD variants only. The baud rate of the Modbus.	1200, 2400, 4800, **9600**, 19200, 38400, 57600, 115200
Termination	MOD variants only. Specifics whether the DALI64's built in termination is enabled.	**Enabled**, Disabled
Parity	MOD variants only. Parity setting for the Modbus interface.	None, **Even**

A3.2 PHOTOCELL PARAMETERS

The photocell measures the light level in the area and depending on the result the sensor can take actions such as turning the lights on when the light level goes below a certain amount. It is important that the light level measured by the photocell is representative of the light level in the location. For example, the photocell is part of the DALI64 sensor which may be mounted on the ceiling and the required light level on desks in the room will be different. to allow for this the photocell can be calibrated – see Set up the Photocell.

The photocell parameters enable this type of operation to be configured.

Parameter	Description	Range
Photocell	The Master enable/disable for all photocell operation.	**Disabled**, Enabled
Photocell Mode	When set to Ignore all on/off thresholds and regulation set-point is ignored by the switching logic section and the light is on if required. When set to Passive only the on threshold is considered; if the light level within the room exceeds this threshold when the light is required, the strategy may block the light turning on. Should the light level fall below the threshold the light will be permitted to turn on. When set to Active both thresholds are considered. Similar to passive mode, the strategy can block the light turning on when ambient light is above the on threshold. Additionally, the strategy may force the light off when ambient light level exceeds the off threshold (normally for a few minutes).	Active, Passive, **Ignore**
Photocell Turn On	The darkest point at which the photocell allows the output(s) to turn on.	**350** lux (10 to 100 lux in steps of 5)
Photocell Turn Off	The brightest point at which the photocell turns the lights off if Photocell Model mode is set to Active.	**800** lux (10 to 100 lux in steps of 5)
Auto Absence Threshold	The Light level below which the sensor would automatically switch from absence to presence mode. This would normally be a low 'twilight' level. Applicable only if Occupancy Trigger Mode is configured for Auto absence.	**30** lux (10 to 150 lux in steps of 10)
Turn On Delay	Enables delayed start of up to 1 minute. This may be useful if another load would ordinarily start up the same time as this one, but once the other load has had a little time to establish a light level, this controller's photocell may be satisfied and it would be unnecessary to turn on.	1s, 5s, 10s, 20s, 60s

Parameter	Description	Range
Bright out Timer	Only applies when active photocell mode is enabled. It is the length of time the sensedlight level must exceeded the 'turn off threshold' before the light is turned off. *Note: Care should be taken to ensure that the difference between turn on and off thresholds is sufficient to ensure that the drop in ambient light resulting from the light being turned off is not enough to immediately make the light turn back on.*	10s, 1m, 2m, 4m

A3.3 REGULATION PARAMETERS

Lighting control systems are often required to perform some sort of light regulation. This is primarily to reduce the power consumption of the lighting whilst maintaining the required amount of illumination. This may be used in situations where there may be natural light available at times of the day and it would therefore be acceptable to reduce the level of the artificial lighting (sometimes referred to as daylight harvesting). It may also be used when there is no natural light but luminaires are over specified to ensure that they are still capable of providing the required light towards their end of life.

Light regulation is typically achieved by placing a light sensor in the ceiling (integrated with DALI64 sensors) and raising or dimming the artificial lights to maintain a given set-point at the light sensor. However, normal expectation is that system should regulate light level at floor or desk level rather than the ceiling. Because most systems are in fact regulating the light level at the ceiling they tend to over dim when ambient light levels are high and not dim enough when ambient light levels are low. Workarounds involve blocking the regulation from dimming the light below some threshold. The problems are illustrated in the figure below:
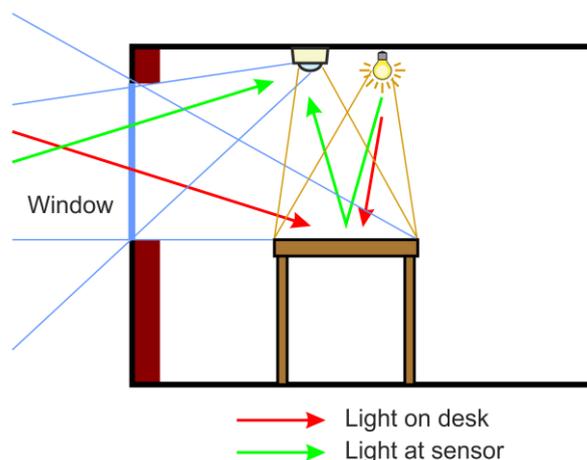
The image above illustrates how the sensor mounted on the ceiling measures a lesser proportion of light from the artificial lighting than natural light through the window compared to that measured at the desk.

DALI64 compensates for this problem by characterising all the controlled artificial lighting to understand the resultant light at both ceiling and desk. After this calibration process is performed the system is better able to estimate the light level at the desk given the light level sensed at the ceiling together with a knowledge of the artificial light level in the room.

Regulation Offset

Regulation Offset enables the light level of up to two groups of lights to be calculated based on the light level of a reference group. All the groups then work together to achieve the configured light regulation setpoint whilst preserving the offsets between them. This enables the light level in the room to be regulated to provide a uniform light level at desk height throughtout the room despite external ambient light.

In the diagram below Group A is by a window and its light level is lower than Groups B and C. Group C is furthest away from the window, and therefore has the highest light level. The light level of group B is between that of Group A and group C.

The difference between the light levels of the groups is determined by two parameters, Regulation Offset B-A, and Regulation Offset C-A. Regulation Offset B-A is used to calculate the light level of Group B, and Regulation Offset C-A is used to calculate the light level of Group C. The values should be set to provide an acceptable even light level over the entire room for varying levels of ambient light.
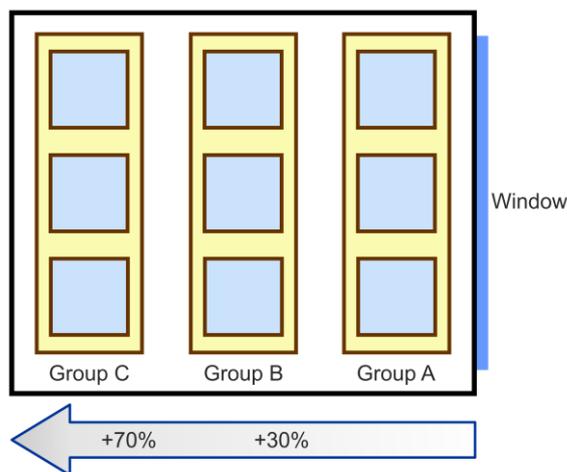
The parameters below enable light Regulation to be set up in the DALI64.

Parameter	Description	Range
Regulation	Enables/disables regulation	**Disabled**, Enabled
Regulation Setpoint	The regulation setpoint	**500** lux (10 to 1000 lux in steps of 10)
Deadband	A band centered around the light level regulating set point within which the light output will remain unchanged. Used for reducing the amount of dither that may be seen in the controlled lights.	Small, Medium, Large
Daylight Dim Limit	The minimum light level that the regulating lights might dim to whilst regulating. *Note that it does not stop the lights from manually being dimmed lower.*	No limit, 1%, 2%, 5%, 10%, 15%, 25%, 35%, 50%, 70%, 100%
Regulation Group A	The group used for group A in the regulation. The sensor default group will be used if set to Automatic.	**Automatic**, Group 0 to 15
Regulation Group B	The group used for group B in the regulation	**None**, Group 0 to 15

Parameter	Description	Range
Regulation Group C	The group used for group C in the regulation	**None**, Group 0 to15
Regulation Offset B-A	The regulation offset used to calculate the light level of group B based on the light level of group A.	% (**None**, +/- 100 in steps of 10)
Regulation Offset C-A	The regulation offset used to calculate the light level of group C based on the light level of group A.	% (**None**, +/- 100 in steps of 10)

A3.4 SWITCH PARAMETERS

Up to 8 switches can be configured on each DALI64 sensor to perform different actions based on application needs. Each switch can be mapped to any physical switch connected to the DALI bus using DLS2IM or similar switch input modules. A variety of different functions and the target DALI group can then be assigned to that switch.

Parameter	Description	Range
Switch 1		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones.
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 2		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones
Group	The group to which the function is applied.	**Automatic, Group** 0 to 15. The sensor default group will be used if set to Automatic.
Switch 3		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones

Parameter	*Description*	*Range*
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 4		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 5		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 6		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group,
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 7		
Input	The input that activates the switch	Any, If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones

| Parameter	Description	Range
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.
Switch 8		
Input	The input that activates the switch	Any. If switches are pressed while in this screen, they will appear in a list in the order they were last pressed. The correct switch from this list can then be selected and assigned to the desired function and group.
Function	The action taken when the switch input is activated	**Ignore**, On/raise, Off/Lower, On/Lower, Off/Raise, Force On/Raise, Scene 0 to 15, Instant On, Instant Min, Instant OFF, One Switch, Cooler, Warmer, Join Zones, Partition Zone, Join Partition Zones
Group	The group to which the function is applied.	**Automatic**, Group 0 to 15. The sensor default group will be used if set to Automatic.

A4   SET UP THE PHOTOCELL

To accurately regulate lights level, it is necessary to set up the photocell using a calibrated light meter.

To set up the photocell:

1. Goto the **SETTINGS** grid.
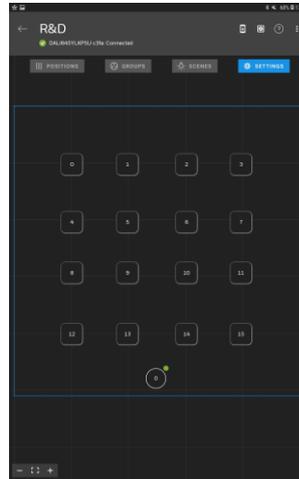
2. On the **SETTINGS** grid select the DALI64 controller. The **Device Settings** screen is displayed.
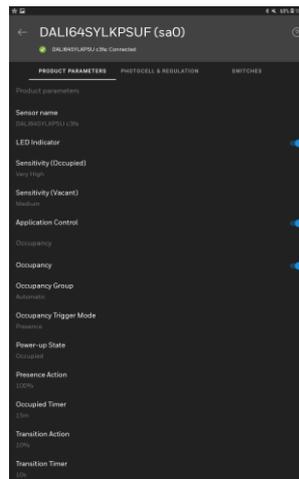
3. Select the **PHOTOCELL & REGULATION** tab.
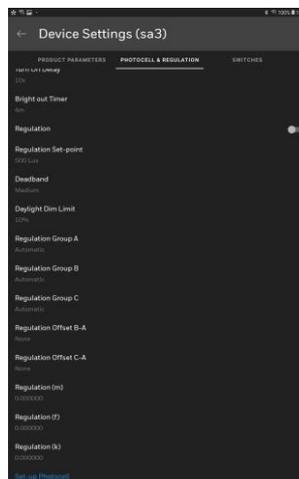
4. Set the Regulation Setpoint to the desired value - default is 500 lux. This must be set to a value that the lights in the room can achieve otherwise it will not be possible to perform step 5.
5. Scroll down to the bottom and select **Set-up Photocell**.

Set-up Photocell. Step 1
Adjust the light output to achieve 500 Lux

Output   100 %

OK
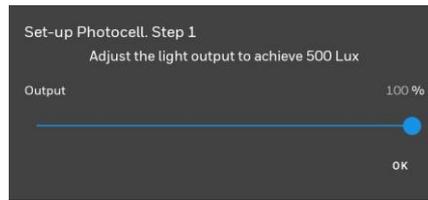
6. Place a light meter at the required location and adjust the slider until the meter reads the value set in step 4 (normally 500 Lux).
7. Select **OK**.

Set-up Photocell. Step 2
Adjust the estimated light level to approximately match what is shown on the light meter

Estimated light level   503 Lux

OK
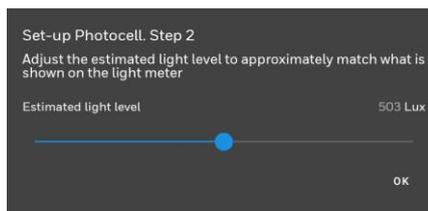
8. Adjust the slider until the reading match the reading on the light meter.
9. Select **OK**.

A5 MULTI ROOM CONFIGURATION

A5.1 CONFIGURE PARTITIONED ROOMS

It is possible to group together up to 3 rooms with 2 partitions in between them (i.e. 2 partition walls) so the rooms can operate as one entity when one or both partitions are opened, or individually when they are closed.

To configure partitioned rooms:

1. Configure all the rooms as normal – see [Configure a DLS-DALI System](#).

    Note: Devices and gears that are already a location, will not be shown, when configuring another location.

    Ensure that the value of the 'Occupied timer' is the same for all the rooms This is available on the **Product Parameters** tab on the **Device Settings** screen.
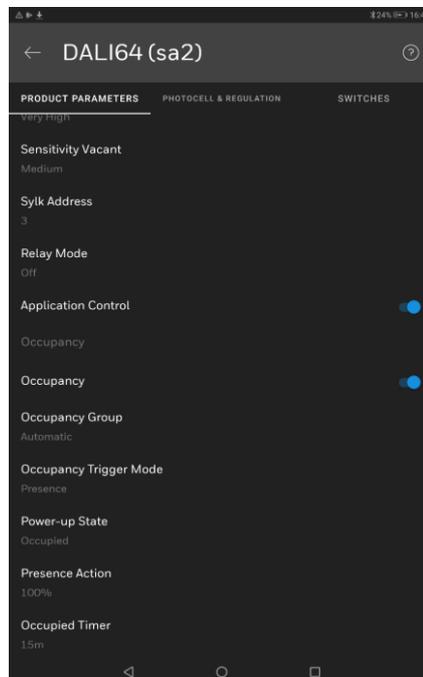
2. Connect to the DALI64 controller in either of the two rooms if configuring 2 adjoined rooms, or to the DALI64 controller in the middle of the 3 locations and [goto the **SETTINGS** grid](#).

3. Select the ⬚, and select **Adjoined rooms**. The **Adjoined Rooms** screen is displayed.
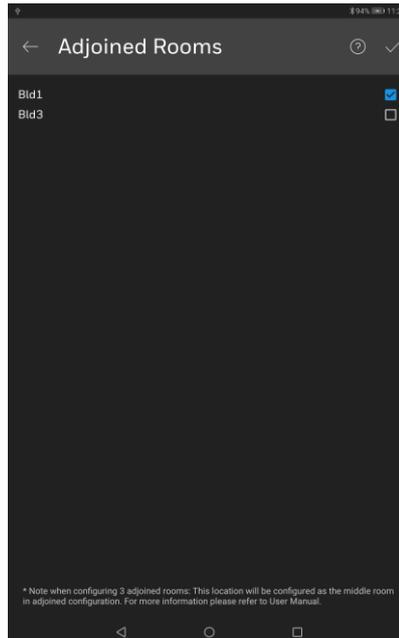
4. Select the locations that are to be adjoined with the location containing the DALI64.

    Note: Only upto two additional locations can be selected.

5. Select ✓.
6. Configure the device settings for the DALI64 so that switches enable partition functionality to be enabled/disabled.

    If two separate switches are used to separately indicate partition or join:
    ▪   Set join on the first switch, along with the groups of the joining rooms
    ▪   Set the Partition Zones option on the second switch

    If a single switch is used to indicate both partition and join:
    ▪   Set join/partition on the first switch along with the groups of the joining rooms

7. Set the target group of the switch to the group of the adjacent room which will be partitioned/joined by this partition switch.
8. Close the connection to the DALI64 controller.

A5.2 CONFIGURE CORRIDOR LINKING

Corridor linking the corridor to remain lit at any level or scene if any of the adjacent rooms are occupied. This prevents cases where a single room is occupied whilst outside areas or corridors are kept in complete darkness. Typically, there will be another sensor in the corridor which brings the light up to full brightness when corridor itself is occupied, but leaves it at a lower level when any of the adjoined rooms are occupied. It can be configured to be completely off when corridor and all rooms are vacant.

To configure corridor linking:

1. Configure all the rooms as normal - see <u>Configure a DLS-DALI System</u>.

   Note: Devices and gears that are already a location, will not be shown, when configuring another location.
   It is recommended that all rooms adjacent to a corridor have the same occupied timer. The corridor itself could be set to a lower timeout so that it is switched to hold or vacant level as soon as practicable. This is available on the **Product Parameters** tab on the **Device Settings** screen.
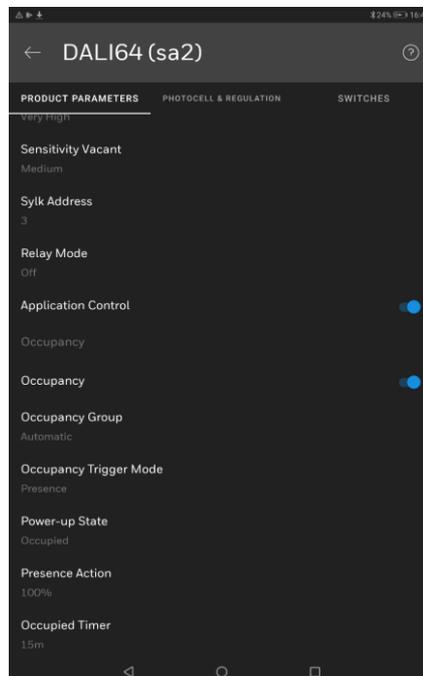
2. Connect to the DALI64 assigned to the corridor and <u>goto the **SETTINGS grid**</u>.

3. Select the ▊, and select **Corridor**. The **Corridor** screen is displayed.
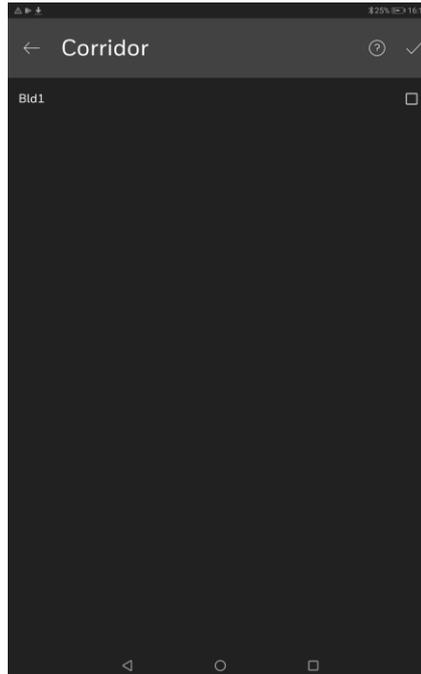
4. Select the locations that are to be linked to the corridor.
5. Select ✓.
6. Use **Hold Action** in the DALI64 settings for the DALI64 controller in corridor to configure the action to be taken when corridor itself is vacant while any of the adjacent rooms are occupied (e.g. set to 50%).
7. Close the connection to the DALI64 controller.

A6   SECURE THE SYSTEM

This section provides the information necessary to configure the DLS-DALI system to reduce the risk of unauthorised access and changes to the system.

A6.1 SECURITY CHECK LIST

☐ Latest version of Light Touch is being used
☐ Latest version of firmware being used in all devices on the DALI bus
☐ Latest version of firmware being used in all devices on the SYLK/Wall bus
☐ Physical access to DALI64 controller restricted
☐ DALI64 controller password protected
☐ Physical access to DALI bus restricted
☐ Physical access to SYLK/Wall bus restricted

A6.2 DEVELOPING A SECURITY PROGRAM

When developing a security program, you should follow industry good practice - see General Security Best Practice for Ex-Or Products Information Sheet (D6004).

A6.3 DISASTER RECOVERY PLANNING

When developing the disaster recovery plan ensure that it includes ALL data required to restore system operation.

The frequency of taking back-ups should be considered. Although the system probably won't change very often, once it has been set up you should ensure that the back-up frequency is adequate to ensure that any changes are included in a backup. A naming convention for backups should be used to ensure multiple backups can be identified.

Backups could serve at least two purposes:

- Saving the configuration to restore the system after some major event - e.g. fire destroying the system resulting in retro-fitting.
- As an insurance policy when a major update is planned.

A6.4 PHYSICAL AND ENVIRONMENTAL CONSIDERATIONS

The hardware should, where possible, be secured against unauthorised physical access.

A6.5 SECURITY UPDATES AND SERVICE PACKS

Ensure all the devices on the DALI bus are running the latest firmware/software. The latest version of Light Touch must be used and the device running Light Touch has is running the latest version of the operating system with the latest updates installed.

A6.6 VIRUS PROTECTION

Not applicable to DALI64 devices.

Ensure the device running Light Touch is running virus protection software, and the virus definitions are kept up-to-date.

A6.7 NETWORK PLANNING AND SECURITY

DALI bus
Physical access to the DALI bus must be restricted.

SYLK/Wall bus
Physical access to the SYLK/Wall bus must be restricted.

A6.8 VIRTUAL ENVIRONMENTS

Not applicable.

A6.9 SECURING WIRELESS DEVICES

Ensure that the device running Light Touch is secured according to the IT policy of the company responsible for the device and its connections.

Ensure that DALI64 controllers are password protected as soon as practicable following installation.

A6.10 SYSTEM MONITORING

Not applicable.

A6.11 WINDOWS DOMAINS

Not applicable.

A6.12 SECURING ACCESS TO THE OPERATING SYSTEM

Ensure that DALI64 controllers are password protected as soon as practicable following installation.

Ensure that the operating system of the device running Light Touch (i.e. Android) is updated with the latest version supplied by device manufacturer and all security patches are applied.

A6.13 MOBILE DEVICE SECURITY

Ensure that the device running Light Touch is secured according to the IT policy of the company responsible for the device and access to the device is restricted e.g. by-password/PIN/fingerprint recognition etc.

A7   PRIVACY CONDSIDERATIONS

A7.1 PERSONALLY–IDENTIFIABLE INFORMATION

Honeywell makes available several free-text or picture capture fields within its products. These fields are not designed for personal data to be entered (so users should refrain from adding personally–identifiable information). Instead, they are intended to enhance the user's experience (e.g. facilitate the labelling of projects and their location). Before using these fields to input personal data, customers should consider any privacy and/or personal data protection implications, including whether it should issue any specific instructions to Honeywell.

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