RAPIX COMMISSIONING 1

USING RAPIX ADDRESSING

18 MAY 2022

COURSE PURPOSE

Introduction to RAPIX Commissioning.

This will help you to understand:

- The benefits of commissioning with RAPIX
- The RAPIX Addressing Software:
  - Addressing devices
    - Mobile
  - Configuring DALI Properties
    - Groups and Scenes
    - Colour Scenes
  - Configuring RAPIX Devices
    - Sensor
    - Universal Input
    - eHub
    - Templates
      - Zones
      - Scenes
    - Advanced features
  - Tools
  - Options

COURSE PURPOSE

Pre-requisites.

It is recommended that you have already completed:

- DALI Basics;
- RAPIX Introduction.

INTRODUCTION

WHY RAPIX ADDRESSING IS NEEDED

TRADITIONAL DALI COMMISSIONING

- Each DALI Line and device is configured separately
  - Not done as a complete system;
  - Very time consuming, difficult and error-prone.
- Tools are quite basic
  - Sometimes multiple tools are required.
- Control mainly using DALI Groups and Scenes.
- Special devices are required to join lines together
  - Mapping between the DALI Lines is time consuming and difficult.

RAPIX COMMISSIONING

- With RAPIX Addressing
  - The system is commissioned as a whole.
- With **RAPIX Integrator**, multiple DALI Lines can be worked on at once
  - Working across multiple DALI Lines is simple.
- The software has been carefully designed to make commissioning
  - Intuitive;
  - Simple;
  - Fast;
  - Flexible.

RAPIX COMMISSIONING

- To set the addresses of 64 devices on a DALI Line:
  - Traditional approach, 1 person: 2 – 2.5 hours
  - Traditional approach, 2 people: 1.5 – 2 hours
  - RAPIX, 1 person: 45 minutes or less.

- If you have a large building with dozens of DALI Lines, this shortened time saves money!

OVERVIEW

HOW SITES ARE COMMISSIONED

OVERVIEW

How sites are commissioned

- There are many work-flows:
  - Ad-hoc;
  - Pre-programmed devices;
  - Off-site Commissioning;
  - Combinations of these techniques.
- It is mostly personal preference.
- RAPIX supports all work-flows.

HOW SITES ARE COMMISSIONED

Ad-hoc

1. DALI Devices are given random addresses.
2. User configures devices as they are installed
   - Usually groups of devices
   - Details of how things were configured are written down (hopefully).

This approach is “make up the address as you go”.

Needs good record-keeping as the work is performed.

HOW SITES ARE COMMISSIONED

Pre-programmed Devices

1. A site plan shows the DALI devices and their addresses.
2. DALI Devices are configured off-site and labelled
   - This can be done before the site is available.
3. DALI Devices are installed in the correct location as each area becomes available
   - Can be done with relatively unskilled labour.

This is a good approach if there is not much time for commissioning.

This approach needs a lot of planning, unbox product to configure, and careful labelling.

HOW SITES ARE COMMISSIONED

Off-line Commissioning

1. A site plan shows the DALI devices and their addresses.
2. All devices are configured in the database to match the plan
   - No physical devices required
   - This can be done before the site is available.
3. DALI Devices are installed in the site
   - Can be done with relatively unskilled labour.
4. Configuration is transferred from the database to the physical devices
   - Only takes a few minutes for a whole site.

This is a good approach if there is not much time for commissioning.

RUNNING THE SOFTWARE

RUNNING THE SOFTWARE

- Minimum recommended requirements:
  - Processor: Intel Core i5 or higher
  - Memory: 4 GB
  - Hard Disk: 1 GB free
  - Ports: 1 x USB 2.0 port
  - Operating System: Microsoft Windows 7 or higher
  - Microsoft .NET Framework: Version 4.0 or above (bundled with RAPIX Addressing)

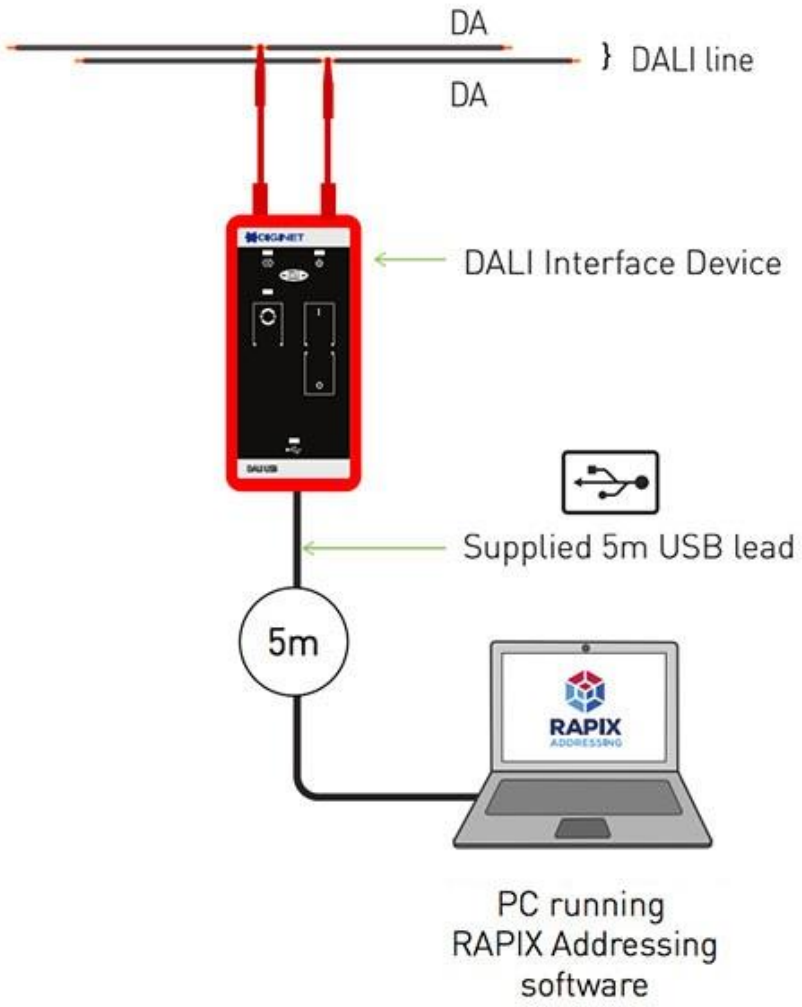
Download from https://www.diginet.net.au/rapix-addressing/

CONNECTING TO DALI

CONNECTING TO DALI

Connecting with USB Interface

- Connect to each DALI Line in turn.
- Does not need infrastructure installed:
  - **Not Required:** Zone Controllers.
  - **Not Required:** Ethernet switches.



CREATING A PROJECT

CREATING A PROJECT

- What is a “Project”?
  - A RAPIX Project is a database which stores:
    - Project details;
    - Device details;
    - Names.
  - Saving the project is optional.
- Why is a Project needed?
  - Allows off-site commissioning;
  - Names make commissioning much easier;
  - Allows review of site configuration off-site.

CREATING A PROJECT

1. Connect computer to a DALI Line.
2. Run RAPIX Addressing.
3. Click **New** button.
4. The DALI Line will be automatically scanned.

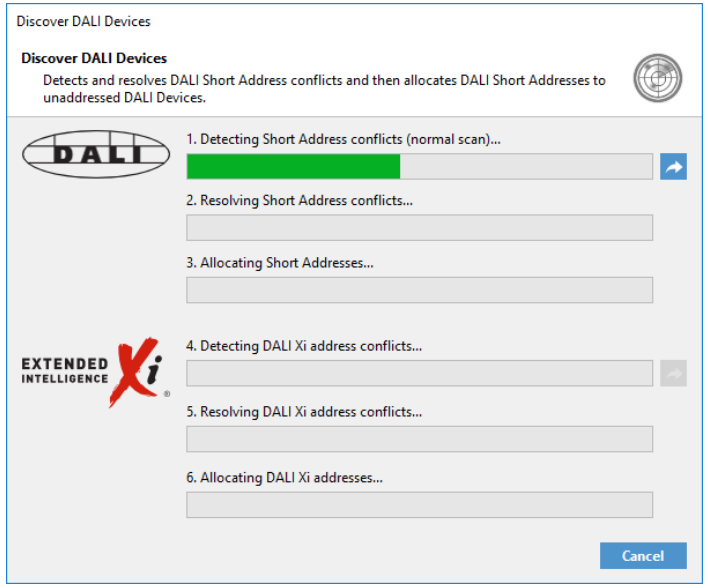
INITIAL SCAN

WHAT IS RAPIX DOING?

INITIAL SCAN

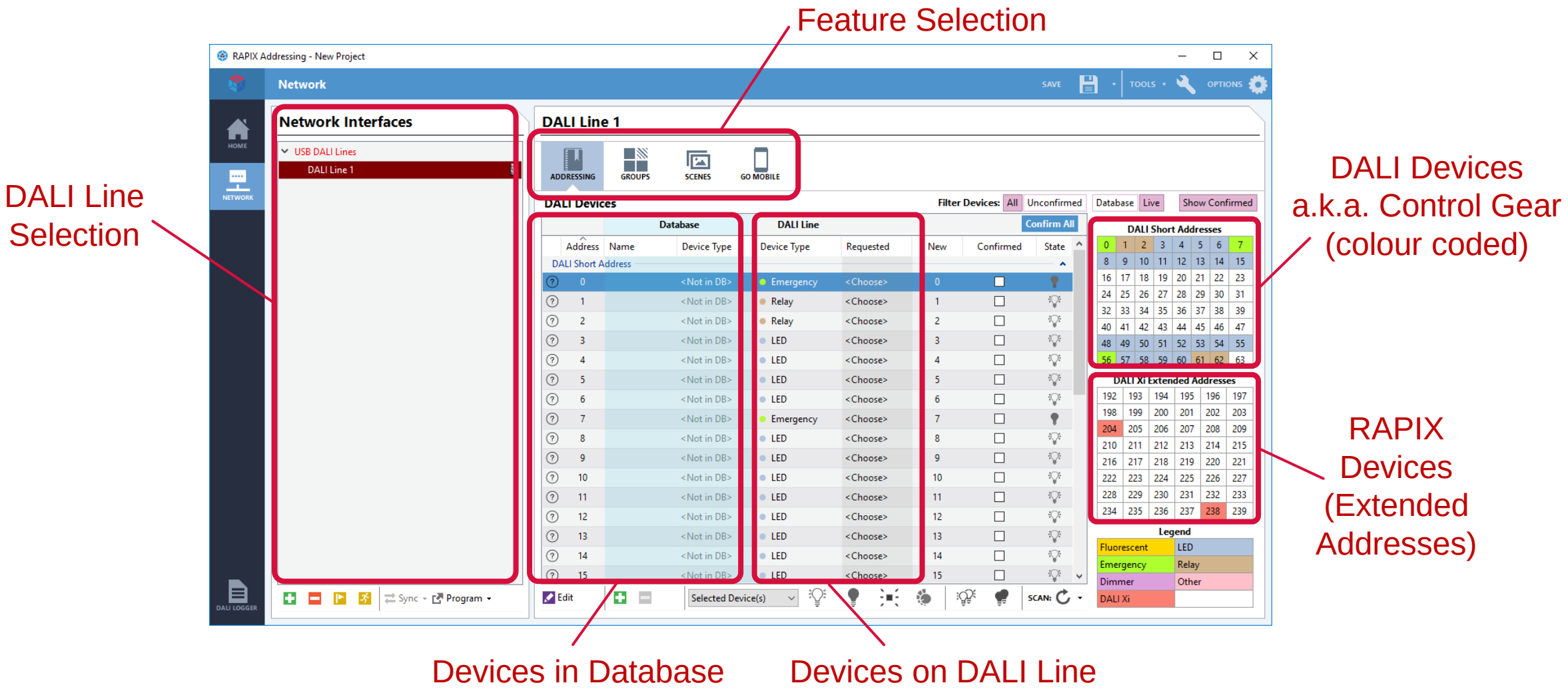
When RAPIX Addressing is connected to a DALI Line:

1. Finds all devices on the DALI Line.
2. Checks to see if any have no Short Address
   - Gives a random address to any device without one.
3. Checks to see if there are devices with the same Short Address
   - If necessary, changes the addresses to remove the conflict.
4. Reads device properties.



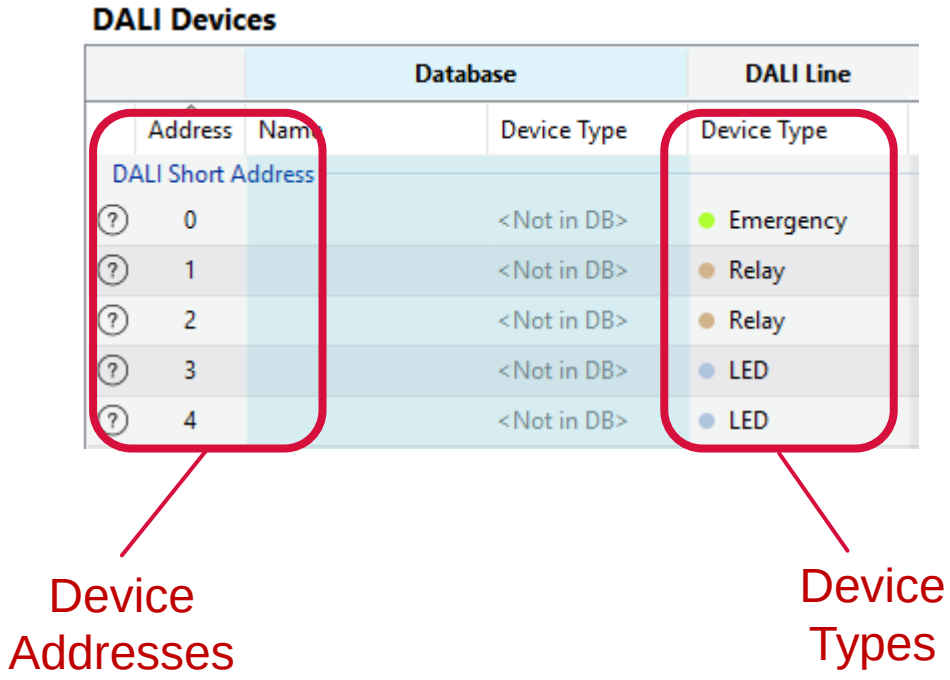
THE USER INTERFACE

USER INTERFACE



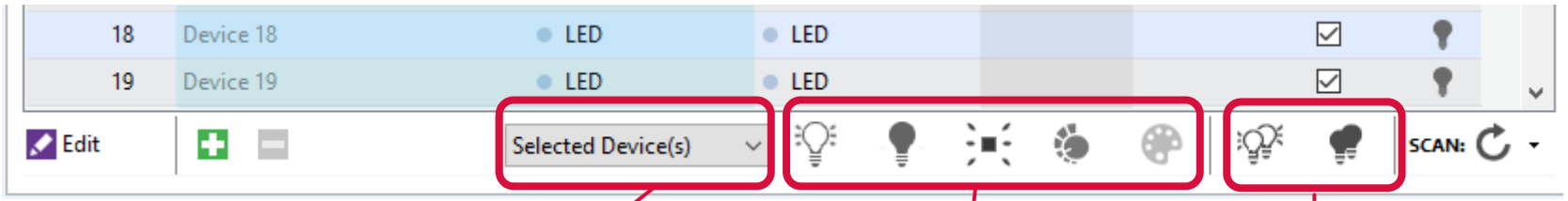
USER INTERFACE

- What is on the DALI Line?



USER INTERFACE

- What is on the DALI Line?



Can also select
- DALI Group
- DALI Scene
- Broadcast

Control
- On
- Off
- Flash
- Set Level
- Set Colour

DALI Line
- On
- Off

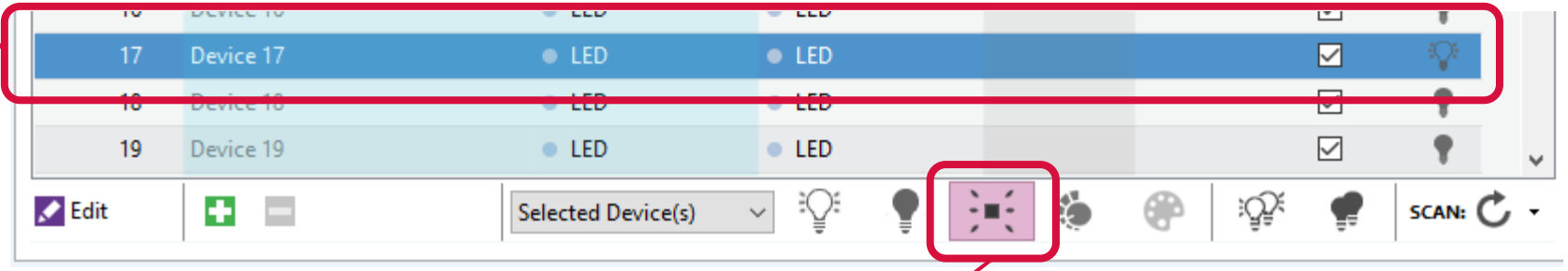
ADDRESSING DEVICES

ADDRESSING DEVICES

- DALI Devices (Control Gear) initially have a random Short Address.
- Options:
  1. Give each DALI device a known Short Address
     - Usually to match a floor plan.
     - Allows devices to be addressed in a logical order.
  2. Find the random address of each DALI Device
     - Write the address somewhere for later reference.
     - Saves a few seconds of work allocating an address.
     - Makes testing and debugging more difficult because the device addresses have no pattern.

ADDRESSING DEVICES

Finding which devices are at which address – manual approach



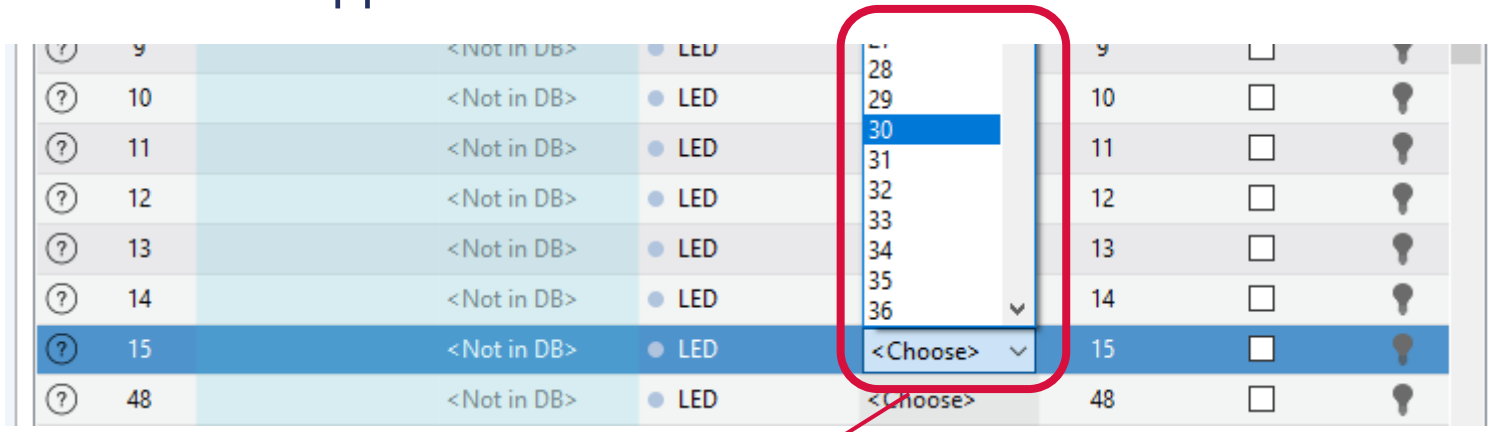
1. Select Device

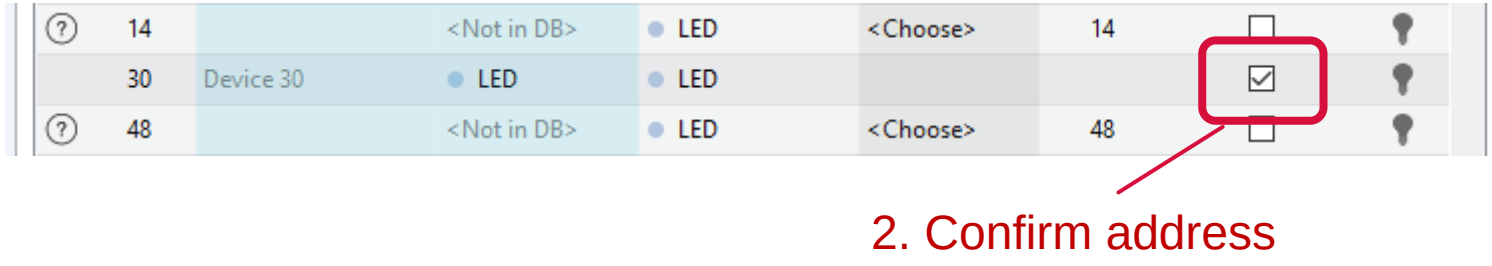
2. Flash Device

3. Change Device
Can use mouse or arrow keys

ADDRESSING DEVICES

Assigning address – manual approach





ADDRESSING DEVICES

Why confirm a device?

- Shows which devices YOU have checked.
- Tells the RAPIX software that the device is at the correct address
  - Allows further commissioning to proceed;
  - Prevents them from accidentally being re-addressed.

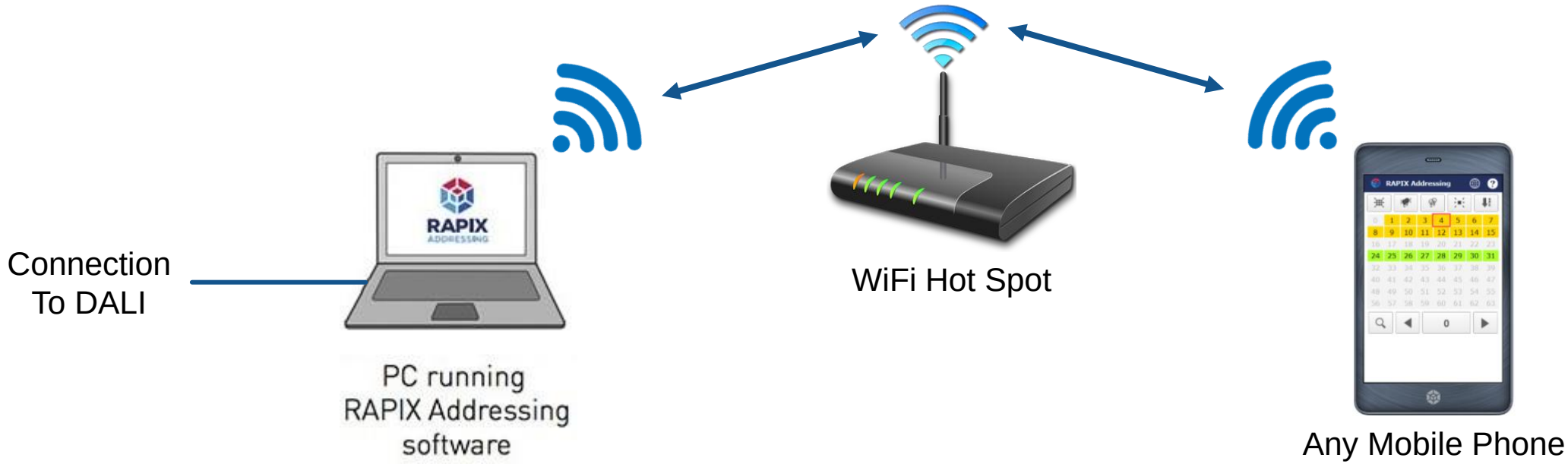
Confirmed devices are shown as black in the grid.

DALI Short Addresses

0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

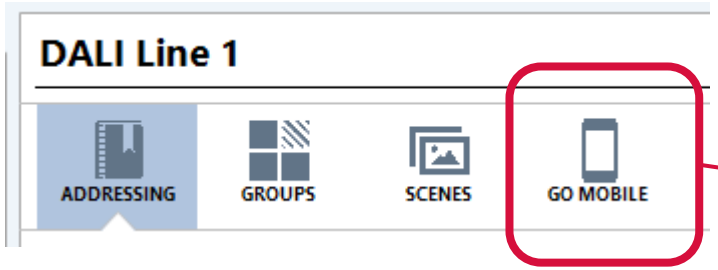
ADDRESSING DEVICES

Set-up for using RAPID Find™

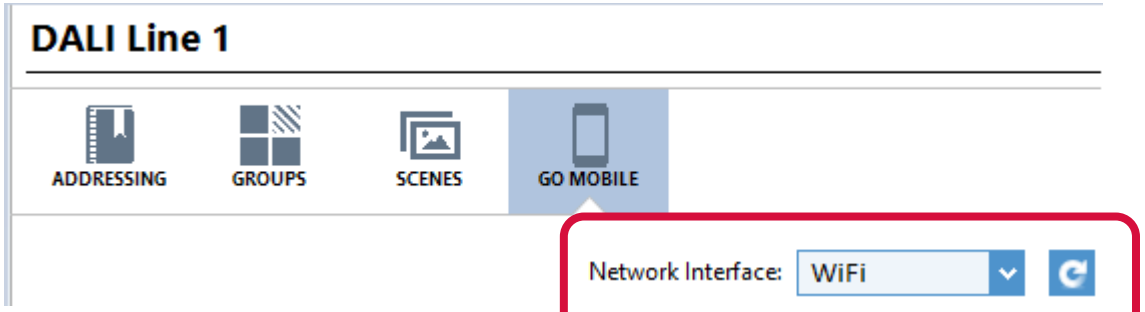


ADDRESSING DEVICES

Connecting mobile phone



1. Select Go Mobile



2. Change Network (if required)

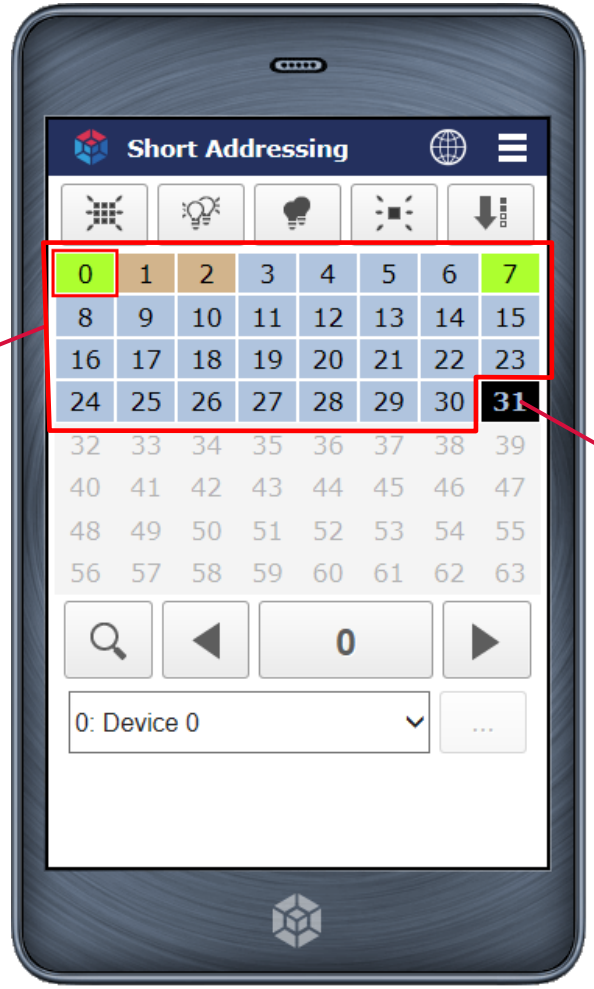
ADDRESSING DEVICES

Connecting mobile phone

3. Scan QR Code with mobile phone

ADDRESSING DEVICES

Using phone - manual

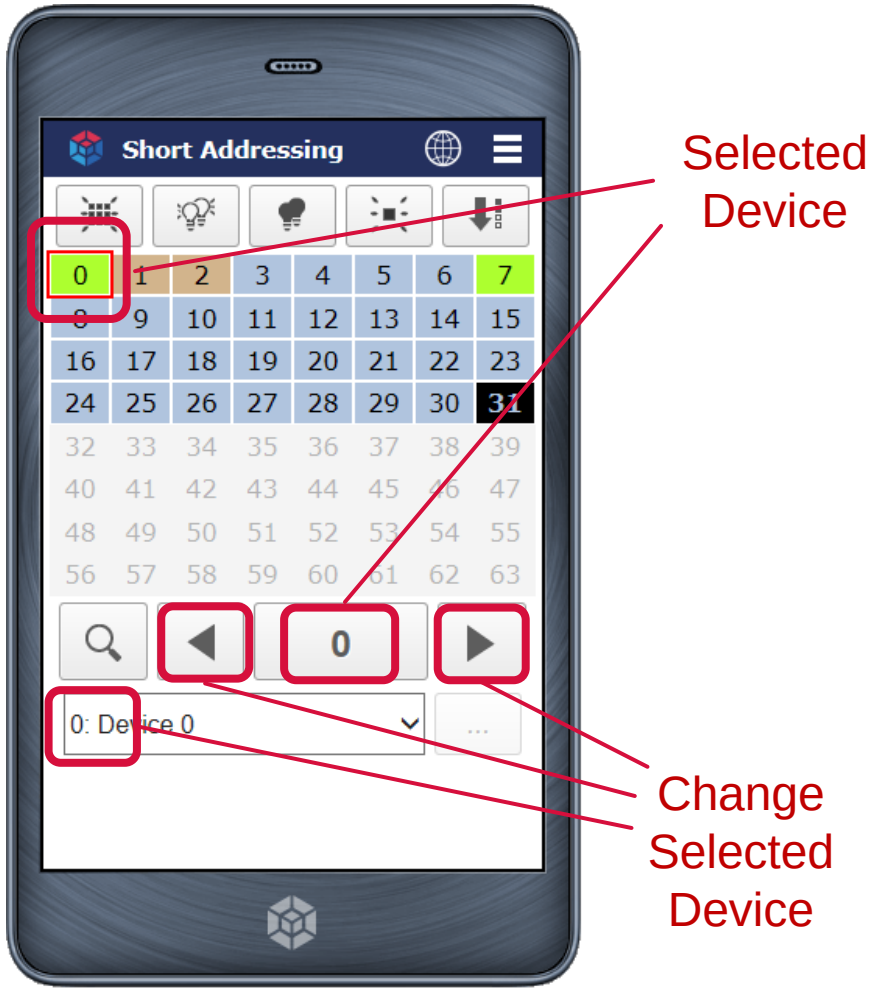


Un-confirmed Devices

Confirmed Device

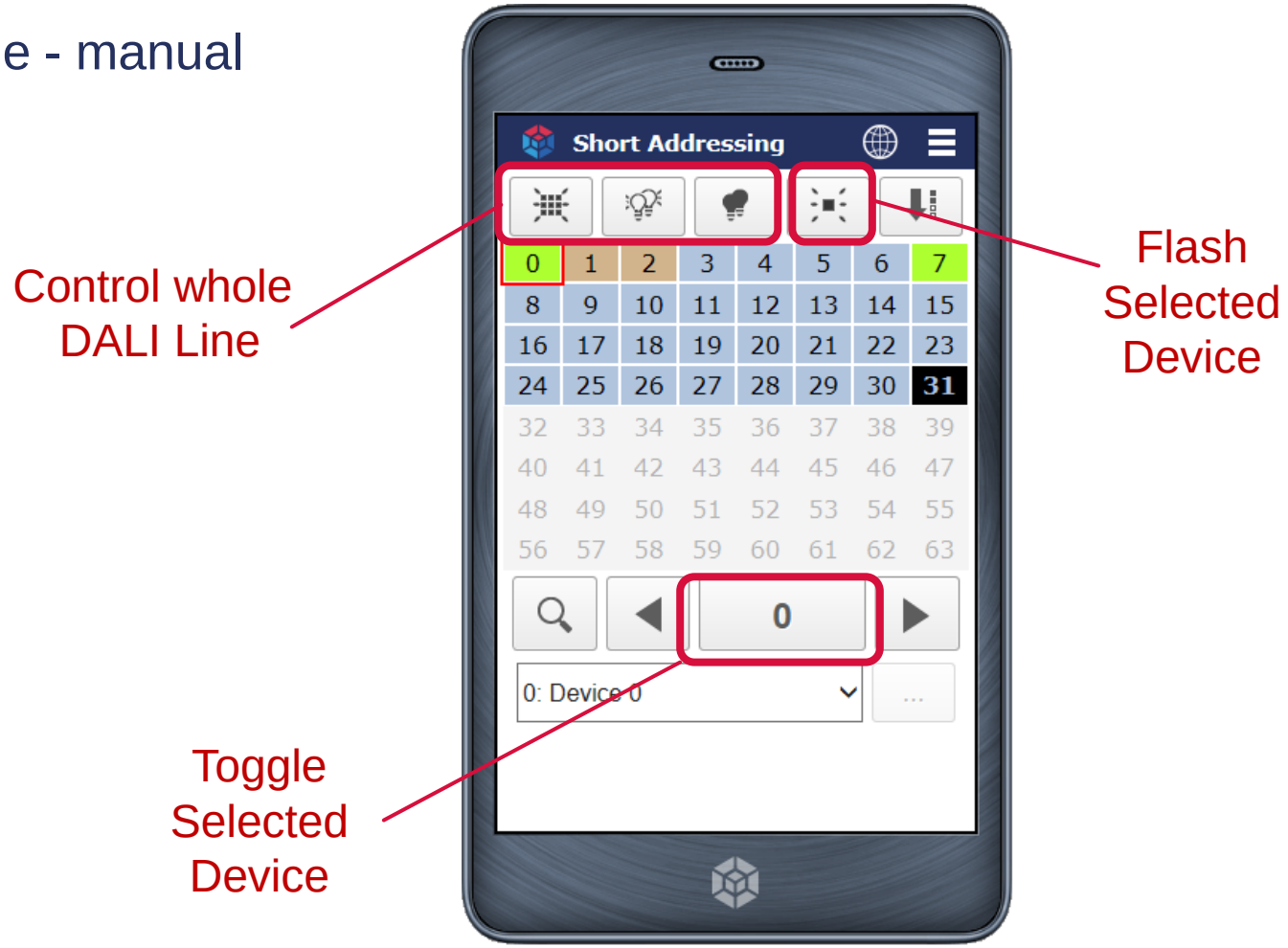
ADDRESSING DEVICES

Using phone - manual



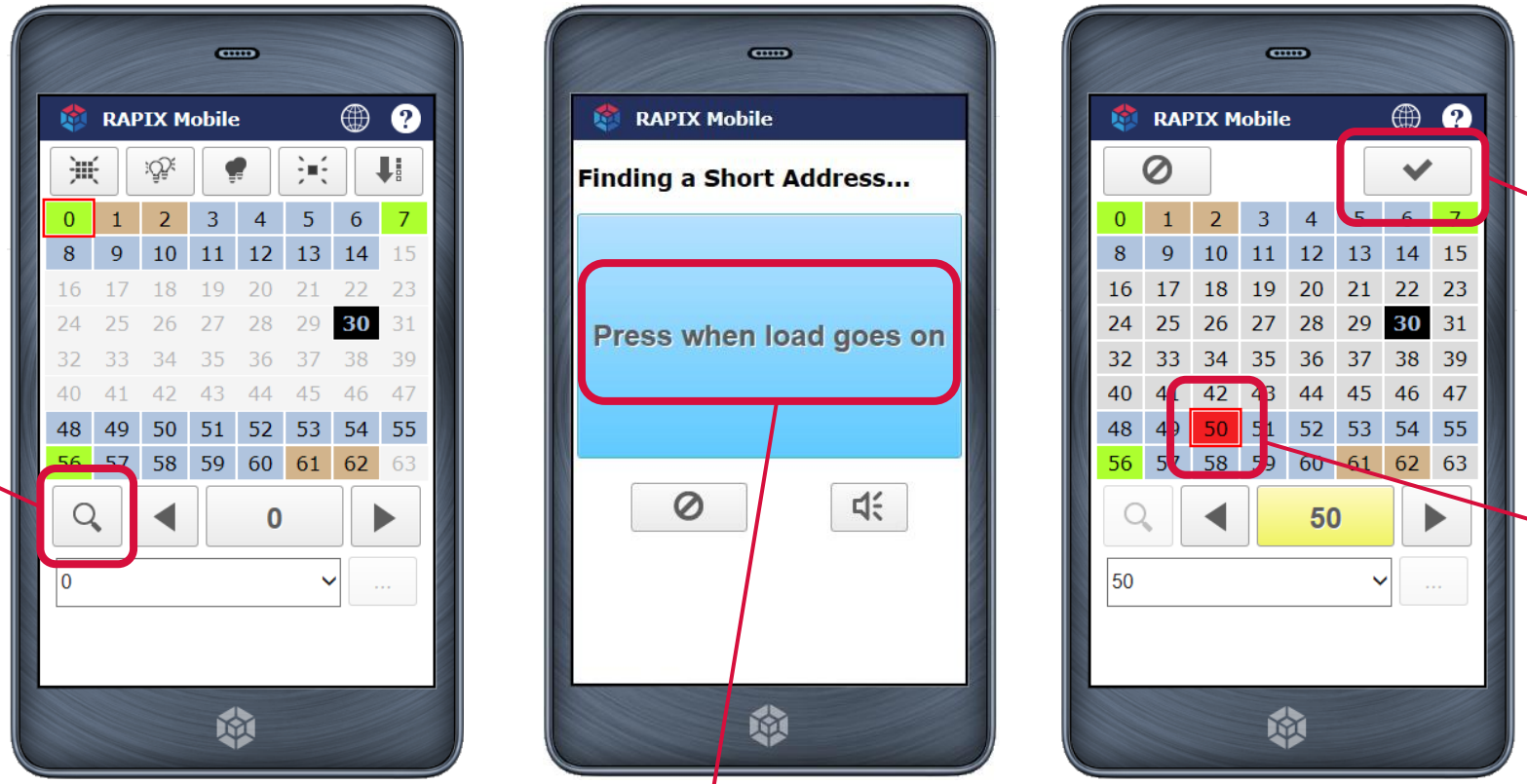
ADDRESSING DEVICES

Using phone - manual



ADDRESSING DEVICES

Using RAPID Find™ to find the address of a light you are viewing



ADDRESSING DEVICES

Changing a device Short Address

1. Select Device

2. Click change address

3. Select new address

4. Click to confirm the change

ADDRESSING DEVICES

TIPS

Consider leaving Short Address 0 unused.

When a new DALI Device is added to the DALI Line, it will be automatically given the first spare Short Address (in this case, 0) so you know immediately which device is the new one.

Also, if you come back to work on the DALI Line and there is a device at address 0, then you know that someone else has added a device to the DALI Line.

Avoid using more than about 50 DALI Devices on a Line. That will leave some spare Short Addresses if additional devices are ever required.

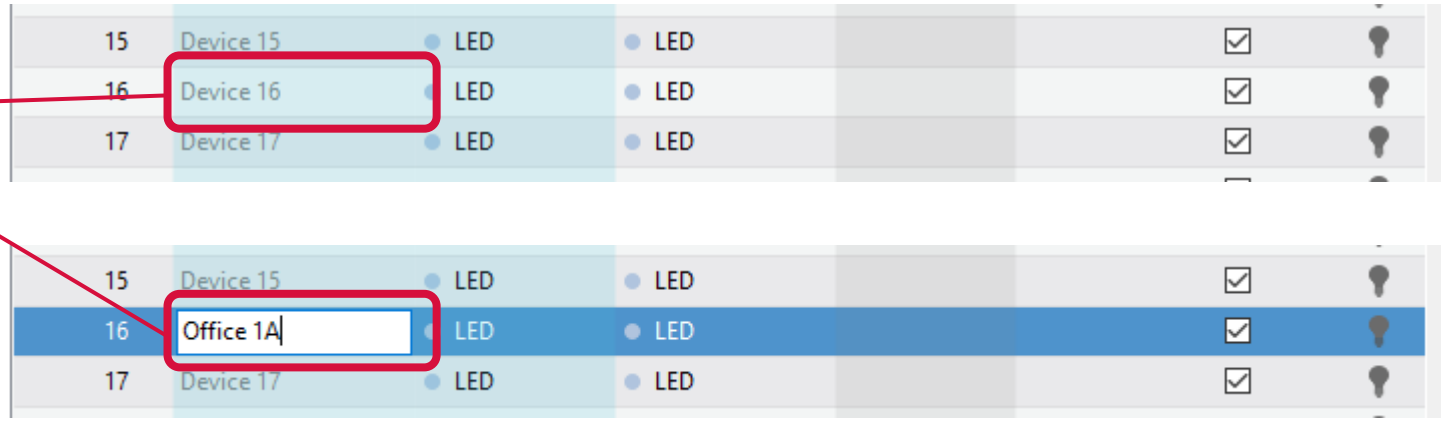
EXERCISE 1

SCAN DALI LINE AND SET SHORT ADDRESSES

NAMING DEVICES

NAMING DEVICES

- Why?
  - It is easier to configure and maintain a site when everything is named.
- How?
  - Click on the name
  - Type in the new name.



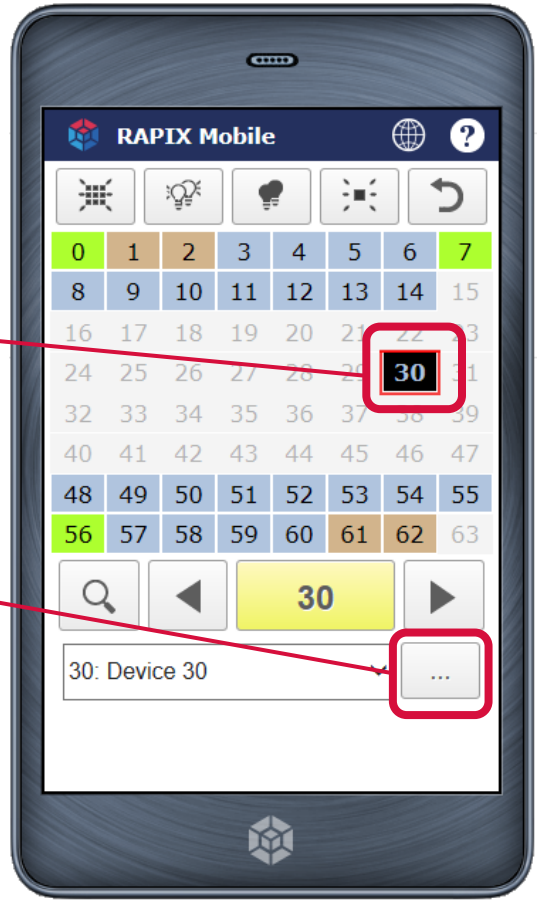
If it already has a name, press F2 to edit

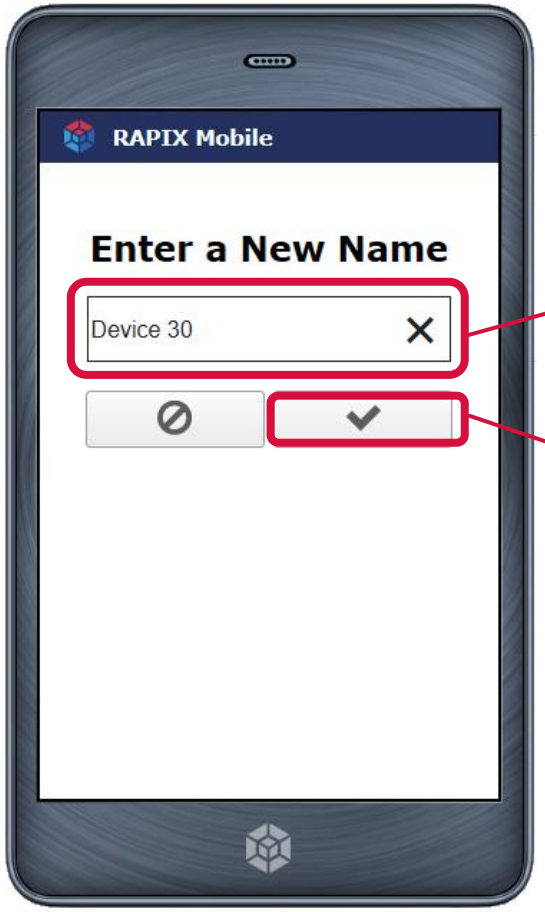
NAMING DEVICES

Using a Phone

1. Select a Confirmed Device

2. Click





3. Type in name

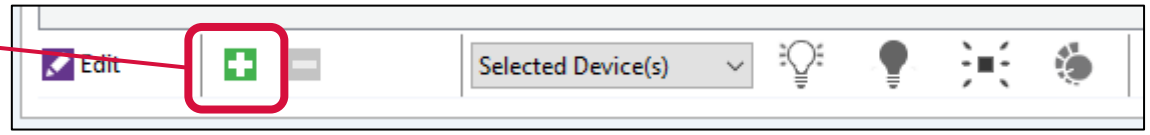
4. Click

MANUALLY ADDING DEVICES

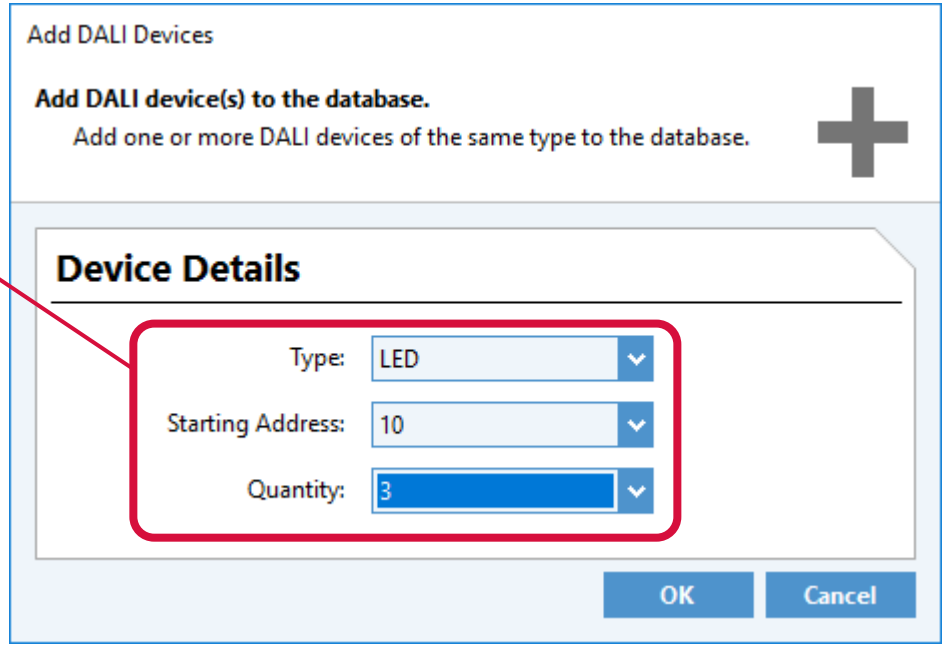
MANUALLY ADDING DEVICES

To add a device to the database (when there is no actual device on the DALI Line)

- 1. Click the Add button



- 2. Select the device type, address and quantity



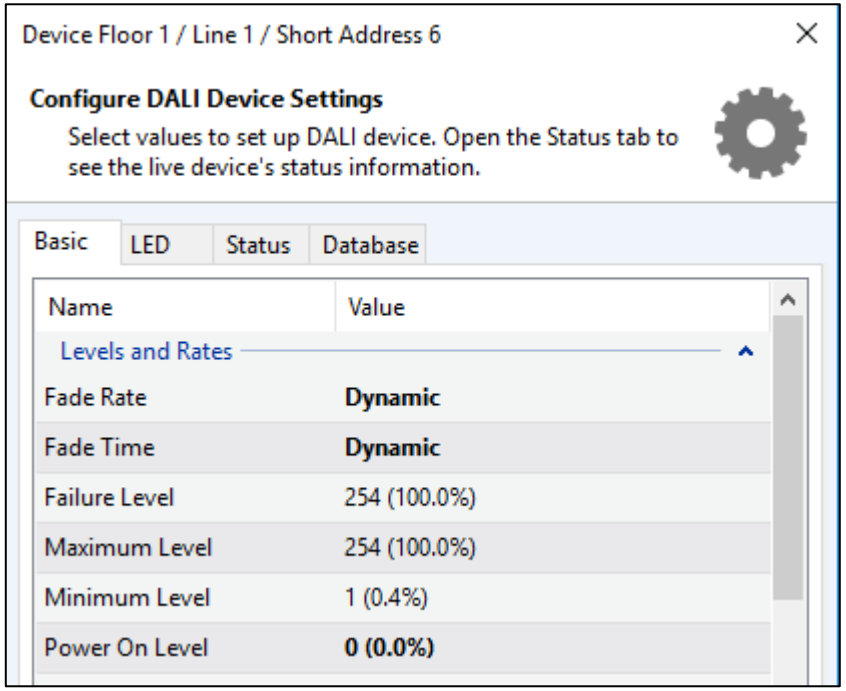
- 3. The new devices can be named and configured as required.

SETTING DALI PROPERTIES

SETTING DALI PROPERTIES

Basic DALI Properties

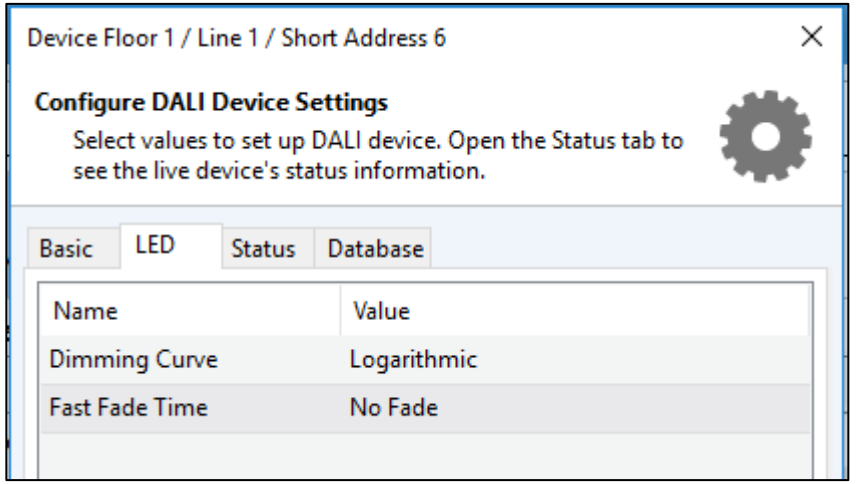
- Double Click on a device in the list
  - Or select the device and click the **Edit** button
- Edit property values as required.



SETTING DALI PROPERTIES

Device Specific Properties

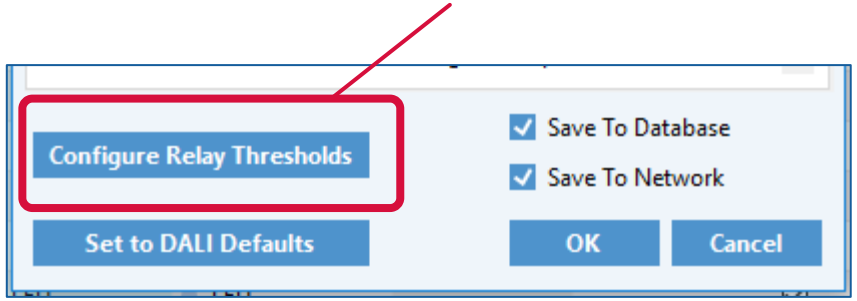
- Select Device Type tab (e.g. LED)
- Edit property values as required.



SETTING DALI PROPERTIES

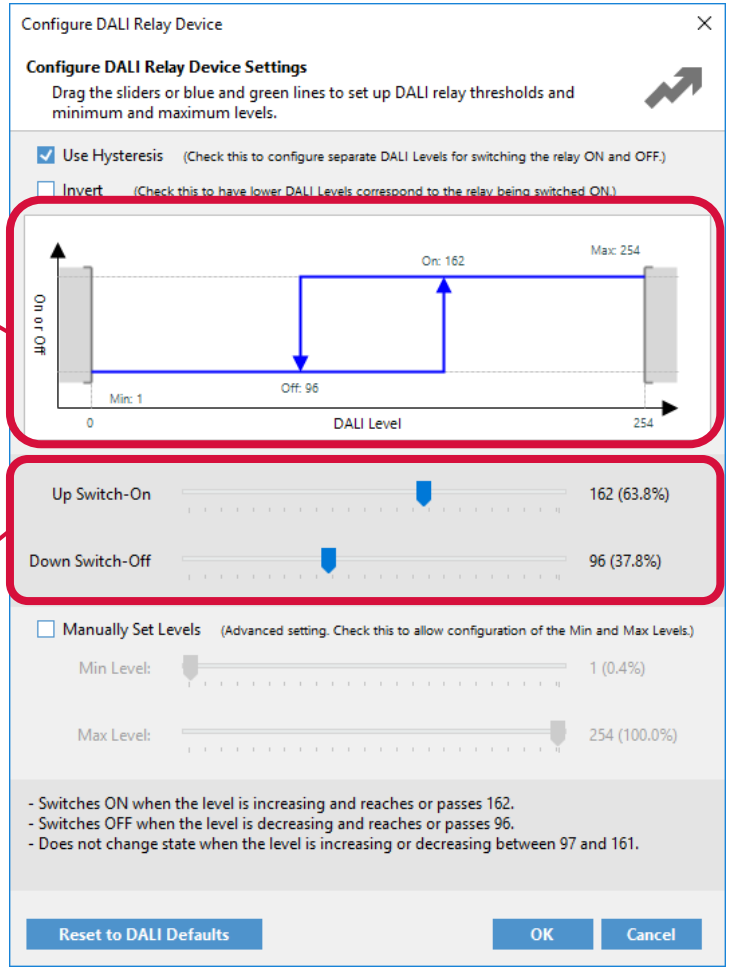
Device Specific Properties

- Relays
  - Click on **Configure Relay Thresholds**



2. See how it will operate

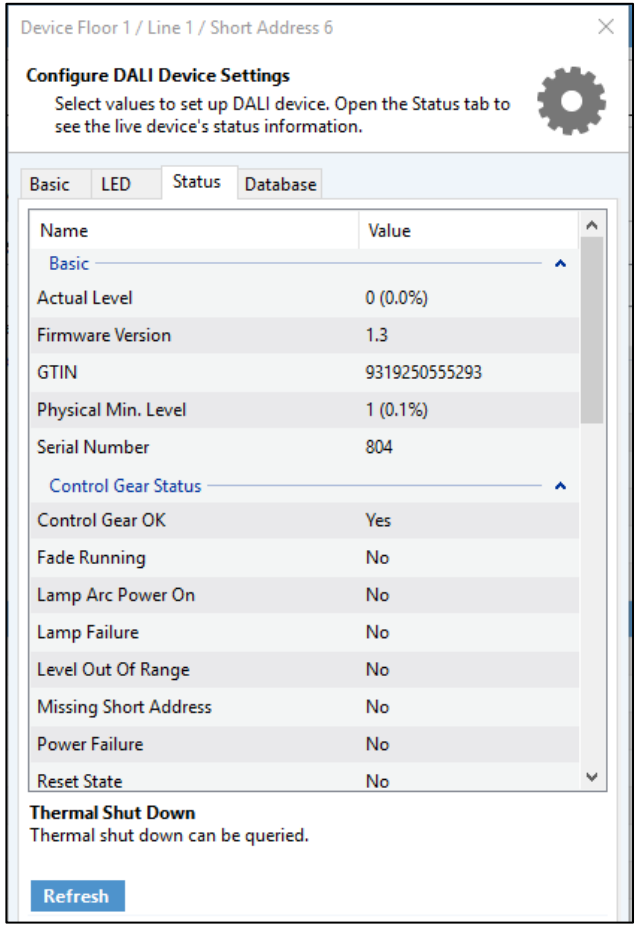
1. Use sliders to set thresholds



SETTING DALI PROPERTIES

Status

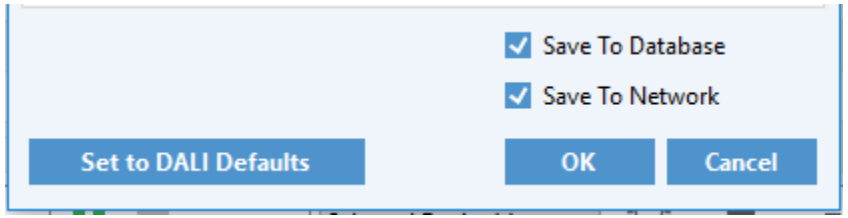
- Select Status tab
  - Shows all device status information.



SETTING DALI PROPERTIES

Save

- Select what to save
  - Save changes to database
  - Save changes to the live device (on the Network)
- Click **OK.**



SETTING DALI PROPERTIES

DALI Groups

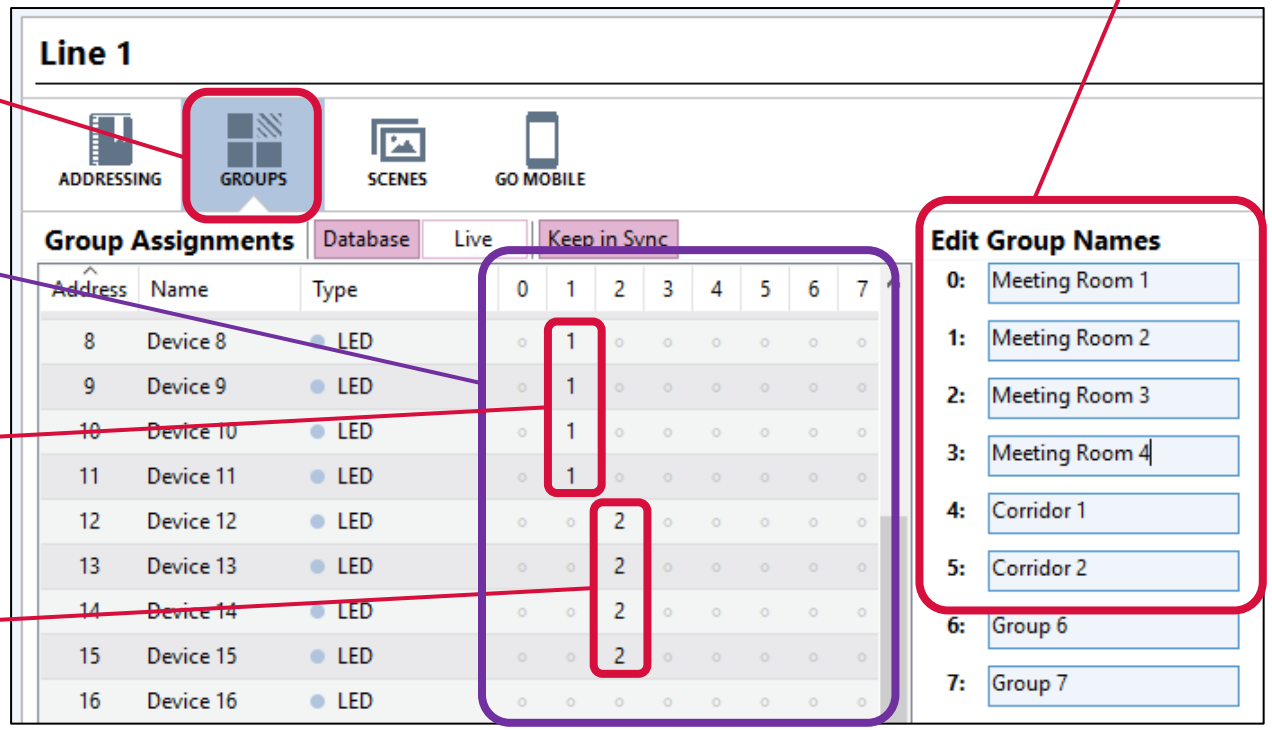
- Can be edited with the DALI basic properties
- Easier to use the Groups editor.

Group Names

Click anywhere to “toggle” group membership

DALI Group 1 (contains devices 8 – 11)

DALI Group 2 (contains devices 12 – 15)



SETTING DALI PROPERTIES

DALI Scenes

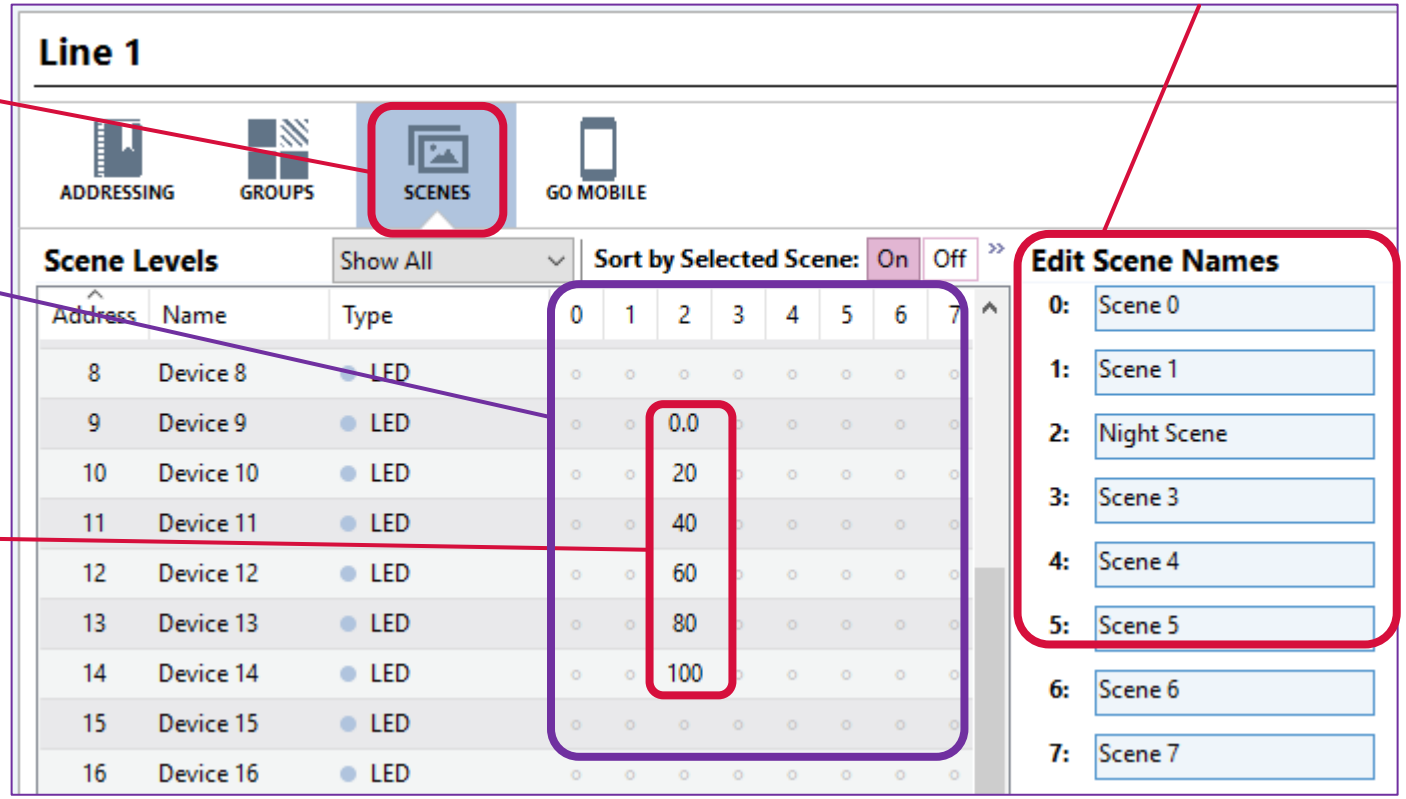
- Can be edited with the DALI basic properties
- Easier to use the Scenes editor.

Scene Names

Click anywhere to set scene level (or MASK)

DALI Scene 2

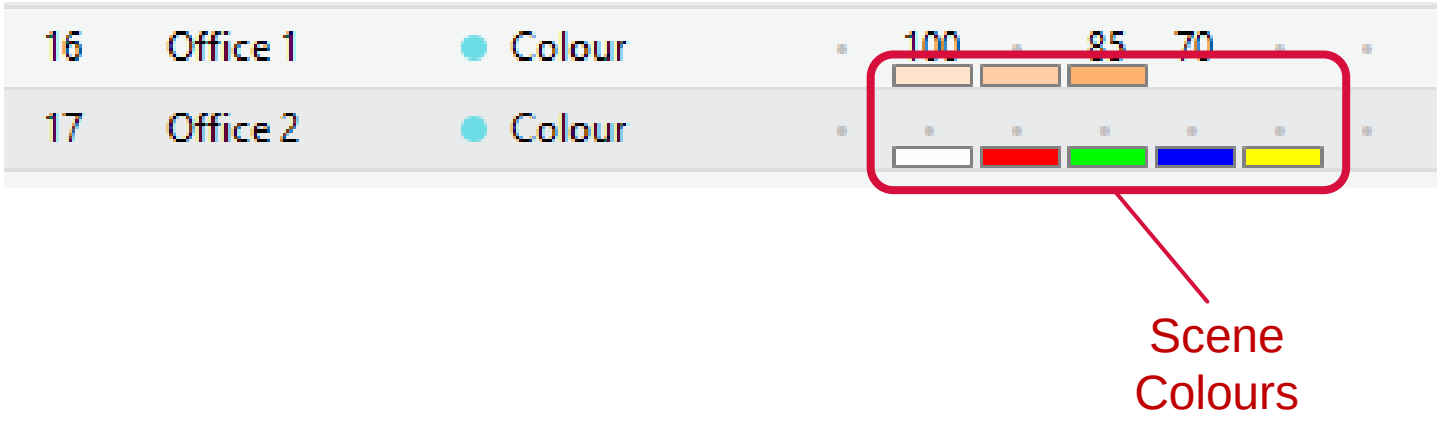
- Device 9: Off
- Device 10: 20%
- Device 11: 40%
- Device 12: 60%
- Device 13: 80%
- Device 14: 100%



SETTING DALI PROPERTIES

DALI Colour Scenes

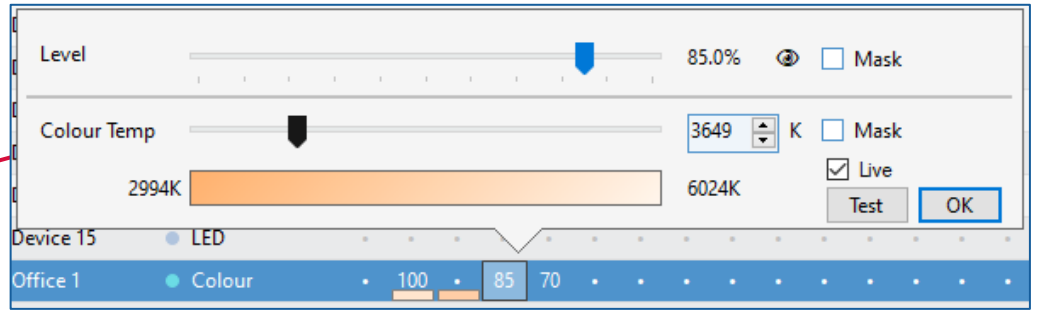
- Can be edited with the DALI advanced properties
- Easier to use the Scenes editor.

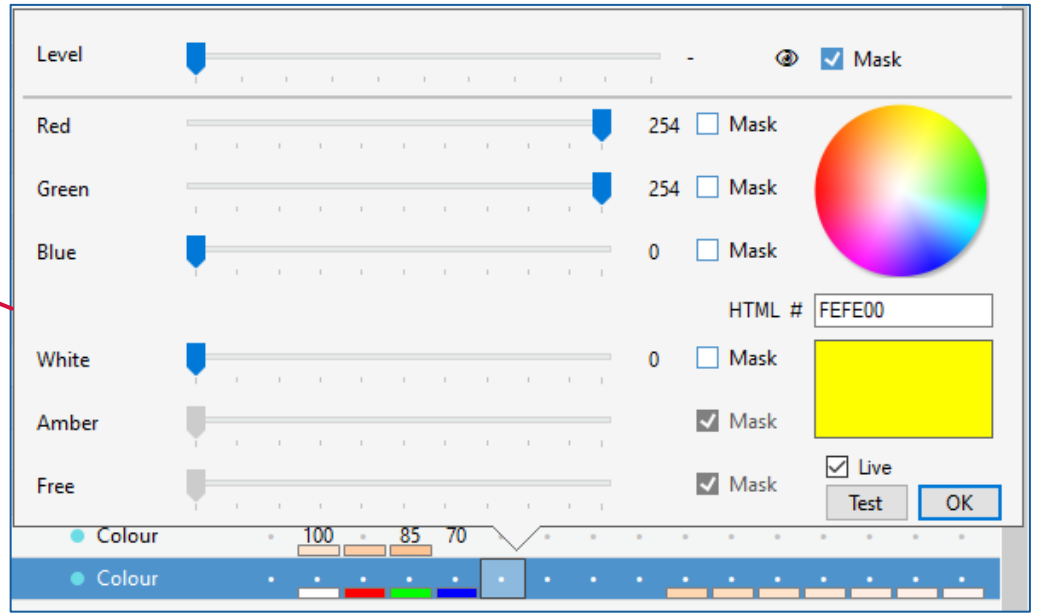


SETTING DALI PROPERTIES

DALI Colour Scenes

- Click on the Scene to open the editor
- Editor depends on device type
  - Colour Temperature
  - RGB/RGBW

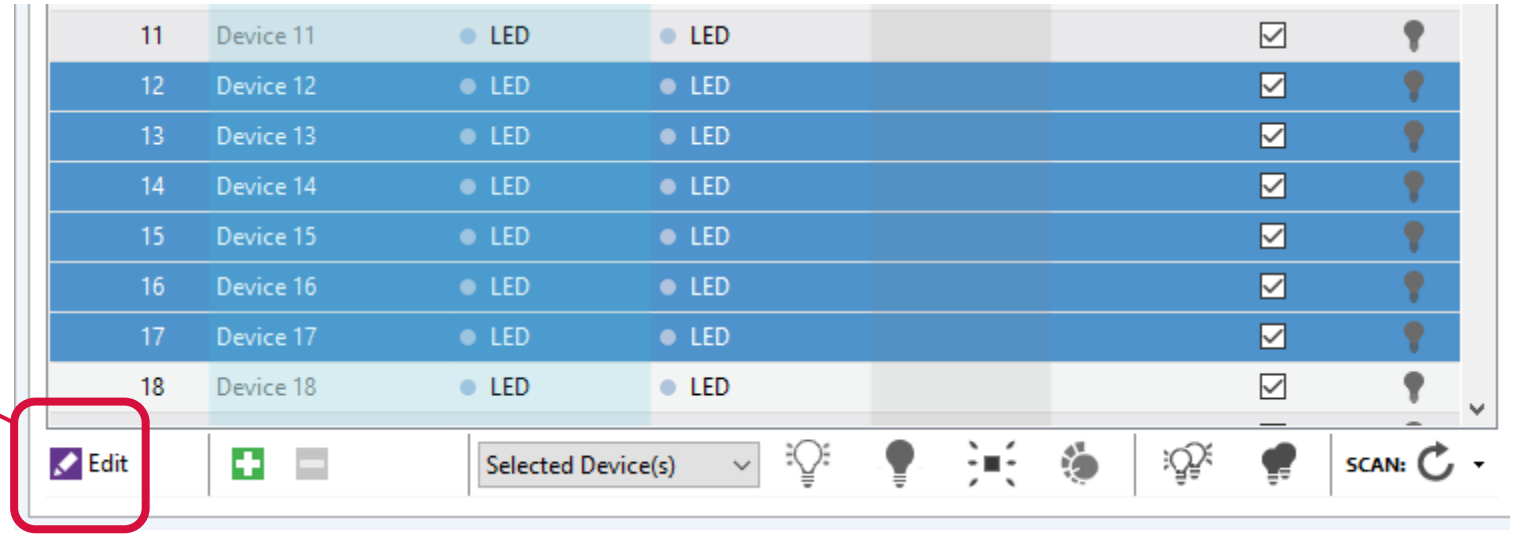




SETTING DALI PROPERTIES

Editing Multiple Devices at Once

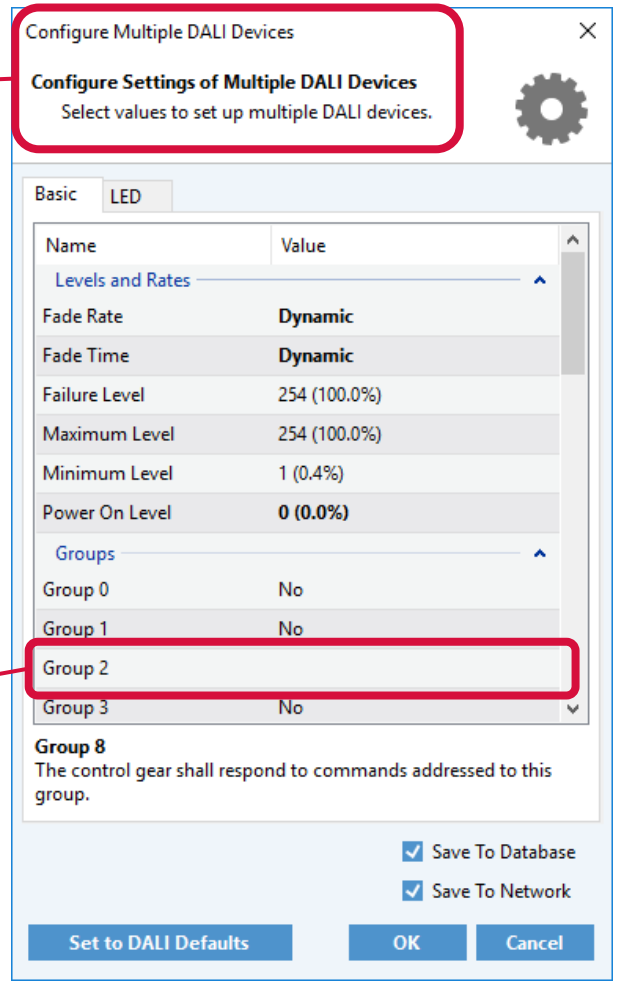
- Multi-select
  - CRTL + Click; OR
  - SHIFT + Click
- Click on the Edit button



SETTING DALI PROPERTIES

Editing Multiple Devices at Once

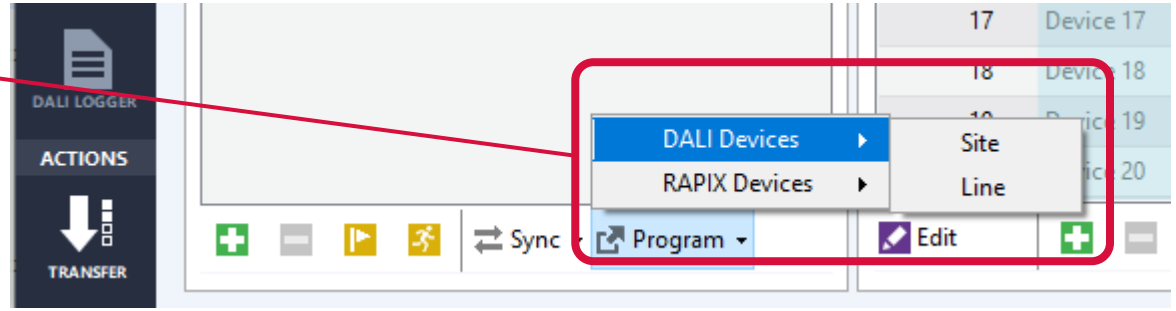
This is blank because some devices have different settings



SETTING DALI PROPERTIES

Editing Multiple DALI Devices at Once

- Global programming
  - Whole Site; OR
  - Single Line
- Click on the **Program** button
- Continue as for multi-select.



EXERCISE 2

SET DALI DEVICE PROPERTIES

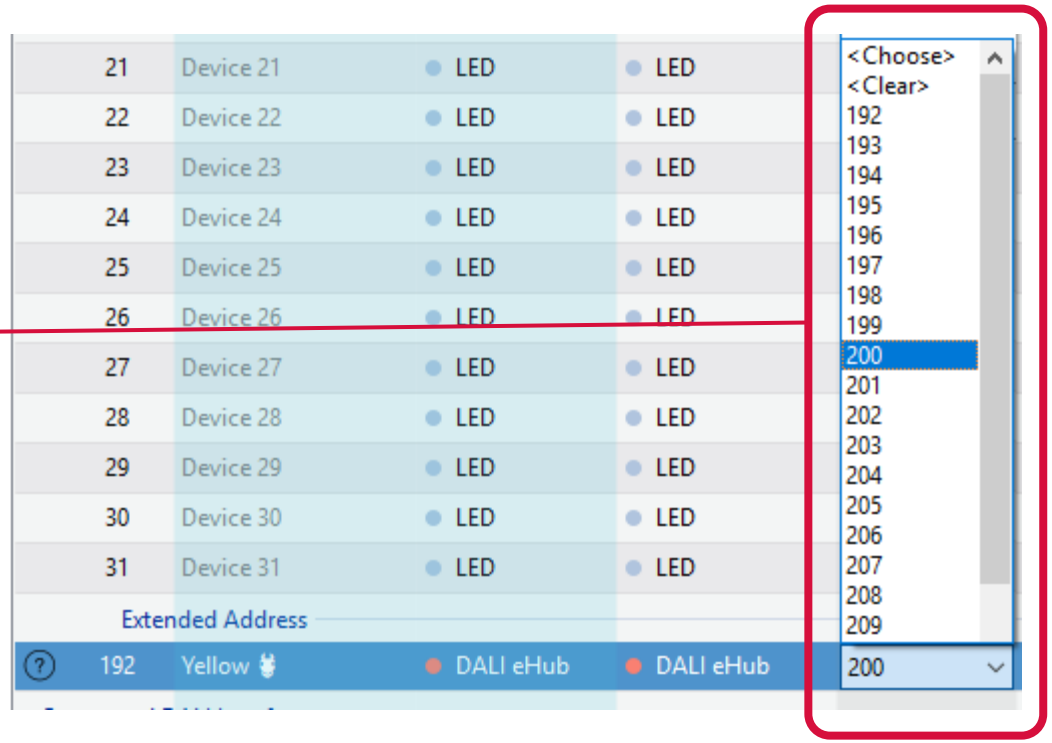
COMMISSIONING RAPIX DEVICES

BASIC FEATURES

ADDRESSING RAPIX DEVICES

Extended Addresses

- Used by RAPIX Sensors, Universal Inputs and eHubs
- Extended Address range
  - 192 – 239
  - Separate from the DALI Short Addresses (0 – 63).
- Setting Address
  - Same as for DALI Devices



ADDRESSING RAPIX DEVICES

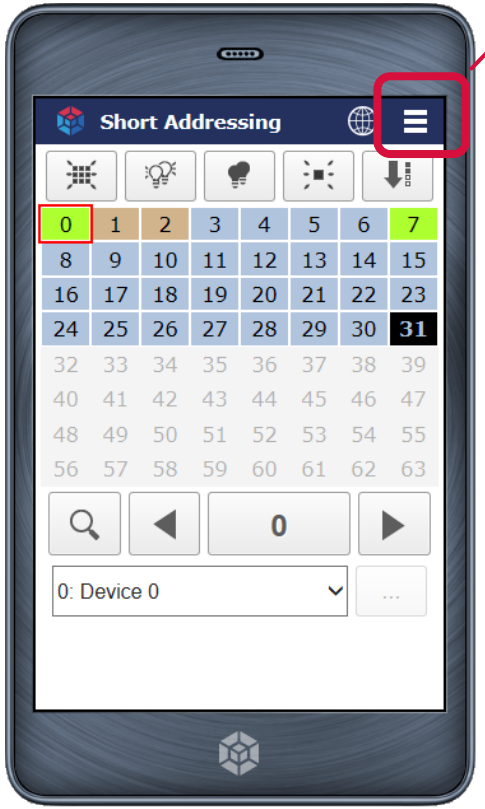
Identifying a RAPIX device

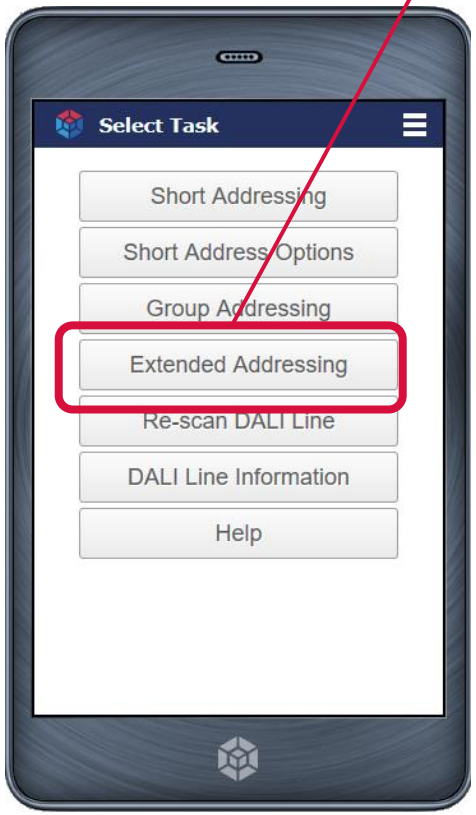
1. Click menu

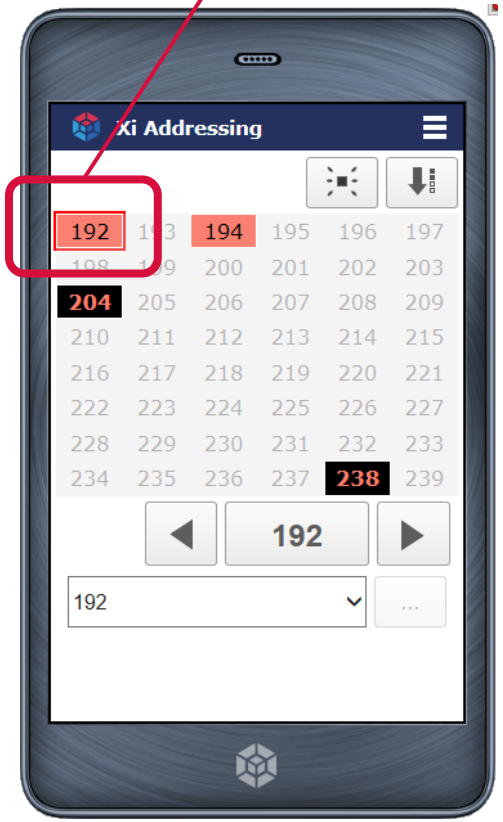
2. Select Extended Addressing

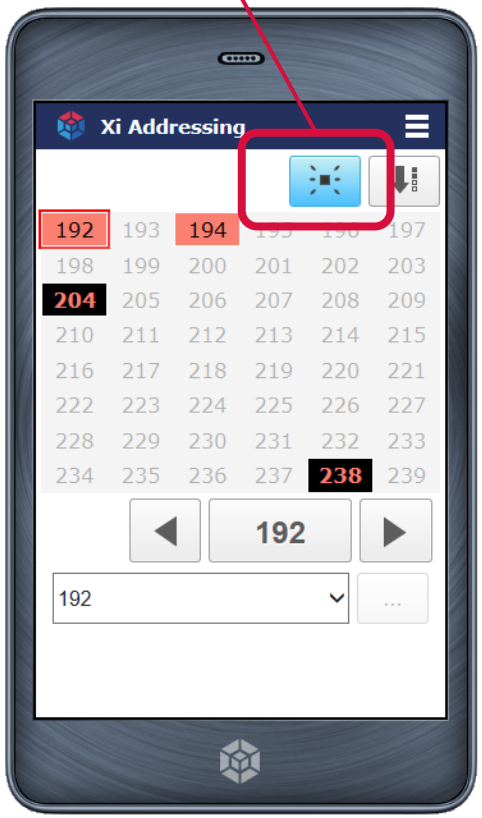
3. Select device

4. Click Identify









ADDRESSING RAPIX DEVICES

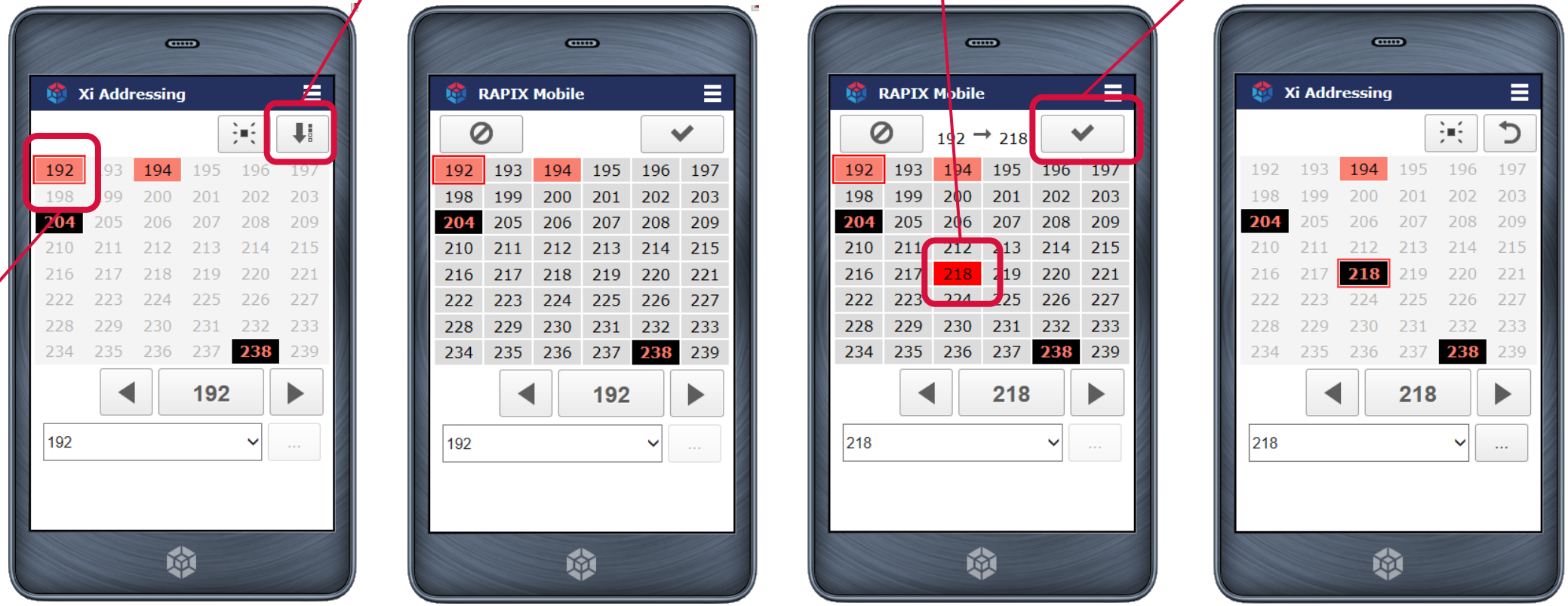
Changing a device Extended Address

1. Select Device

2. Click change address

3. Select new address

4. Click to confirm the change



COMMISSIONING RAPIX SENSORS

BASIC FEATURES

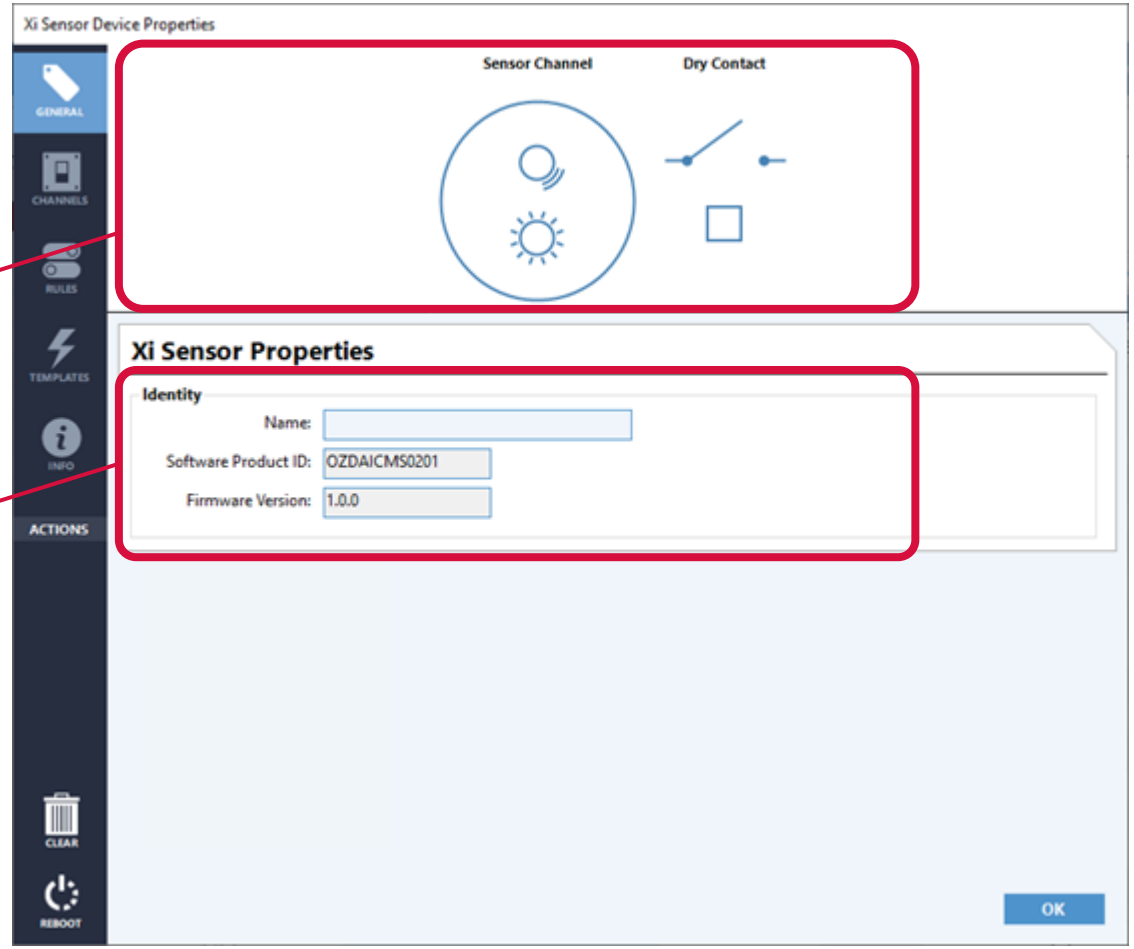
COMMISSIONING RAPIX SENSORS

Editing RAPIX Sensor

- Confirm device first
- Double-click on device in list
- Editor form is displayed

Inputs

Basic Details



COMMISSIONING RAPIX SENSORS

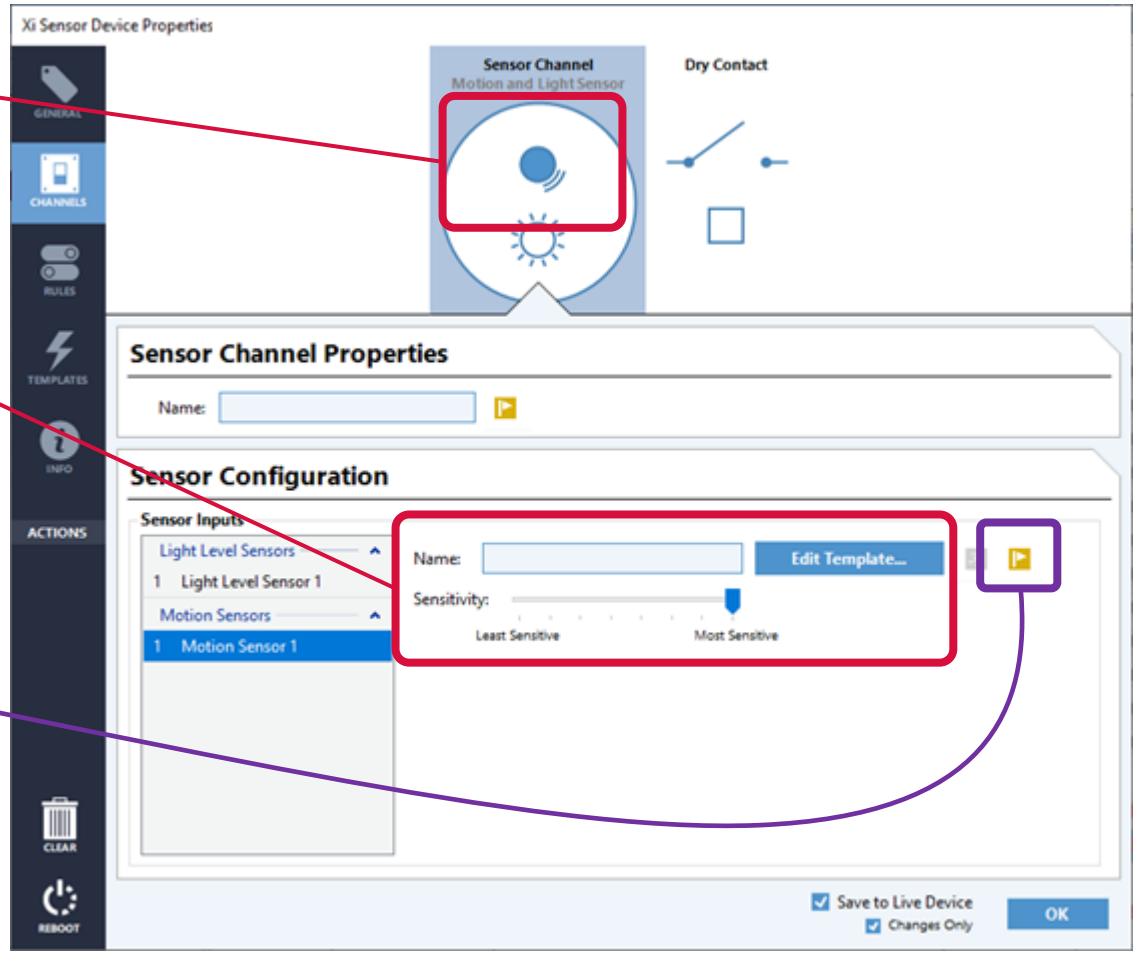
- Editing motion sensor

1. Select the motion sensor
2. Enter a name
3. Set the sensitivity
4. Edit the template

(refer to later section)

- Identifying motion sensor

1. Select the motion sensor
2. Click the identify button
3. The sensor will start to flash
4. Click the identify button again when finished

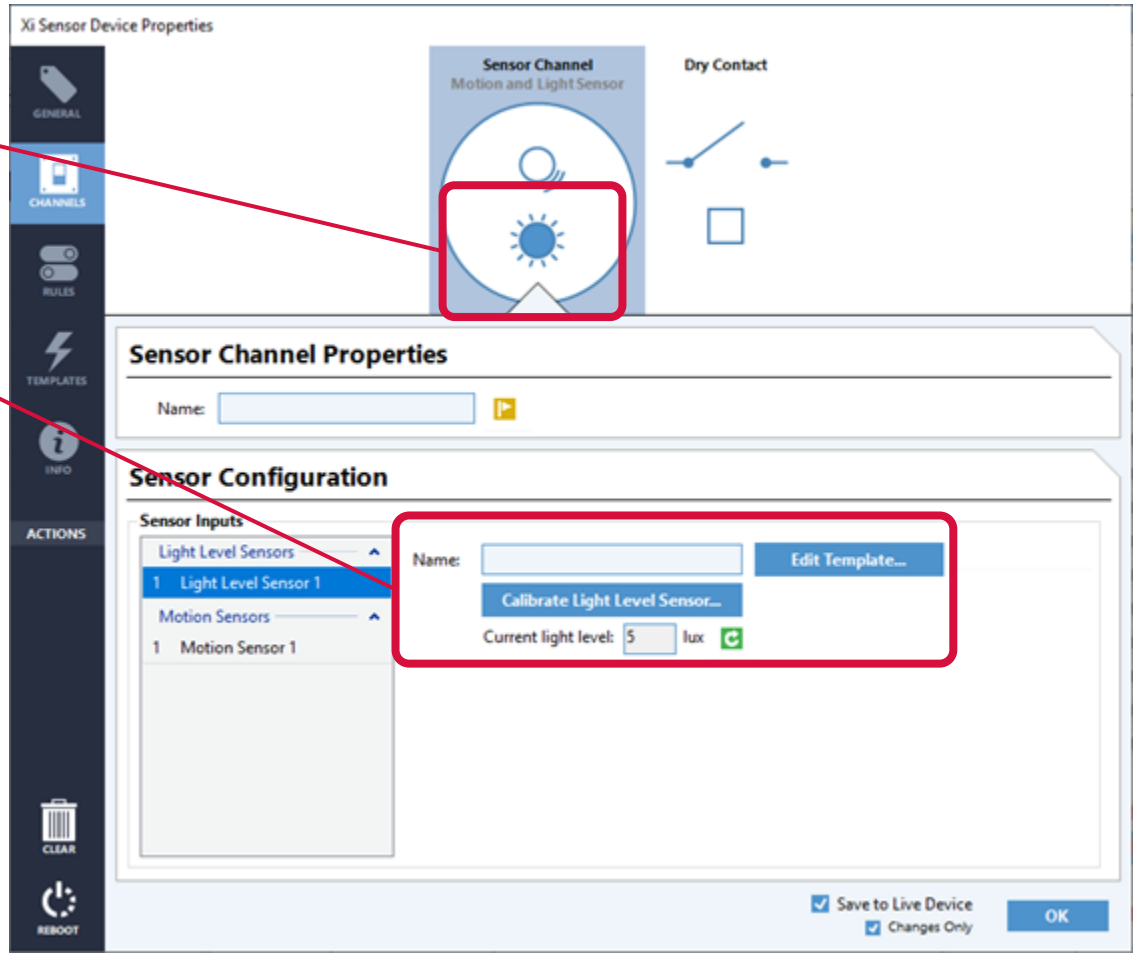


COMMISSIONING RAPIX SENSORS

- Editing light sensor

1. Select the light sensor
2. Enter a name
3. Calibrate if required
4. Edit the template

(refer to later section)

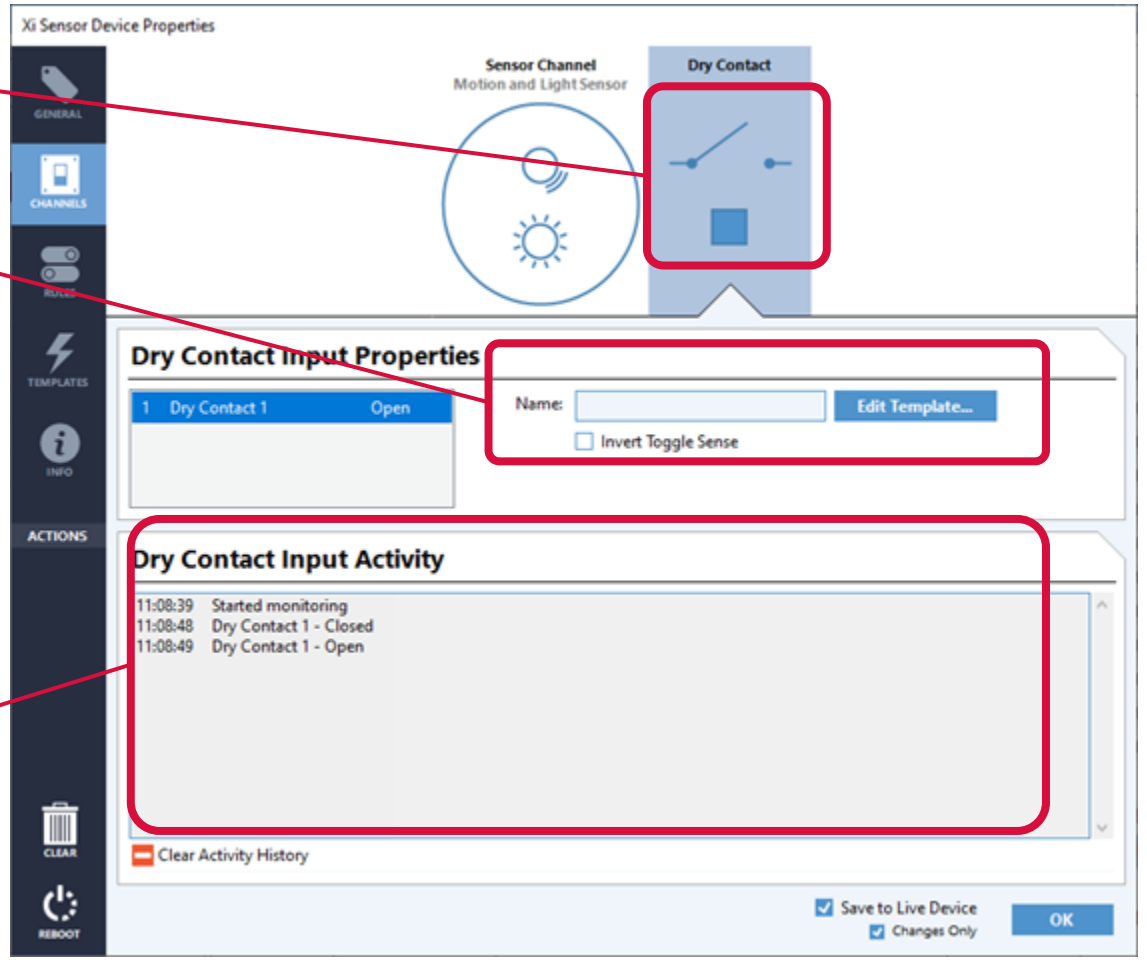


COMMISSIONING RAPIX SENSORS

- Editing dry contact input

1. Select the dry contact input
2. Enter a name
3. Edit the template
   (refer to later section)

Open/Close Events



COMMISSIONING UNIVERSAL INPUTS

BASIC FEATURES

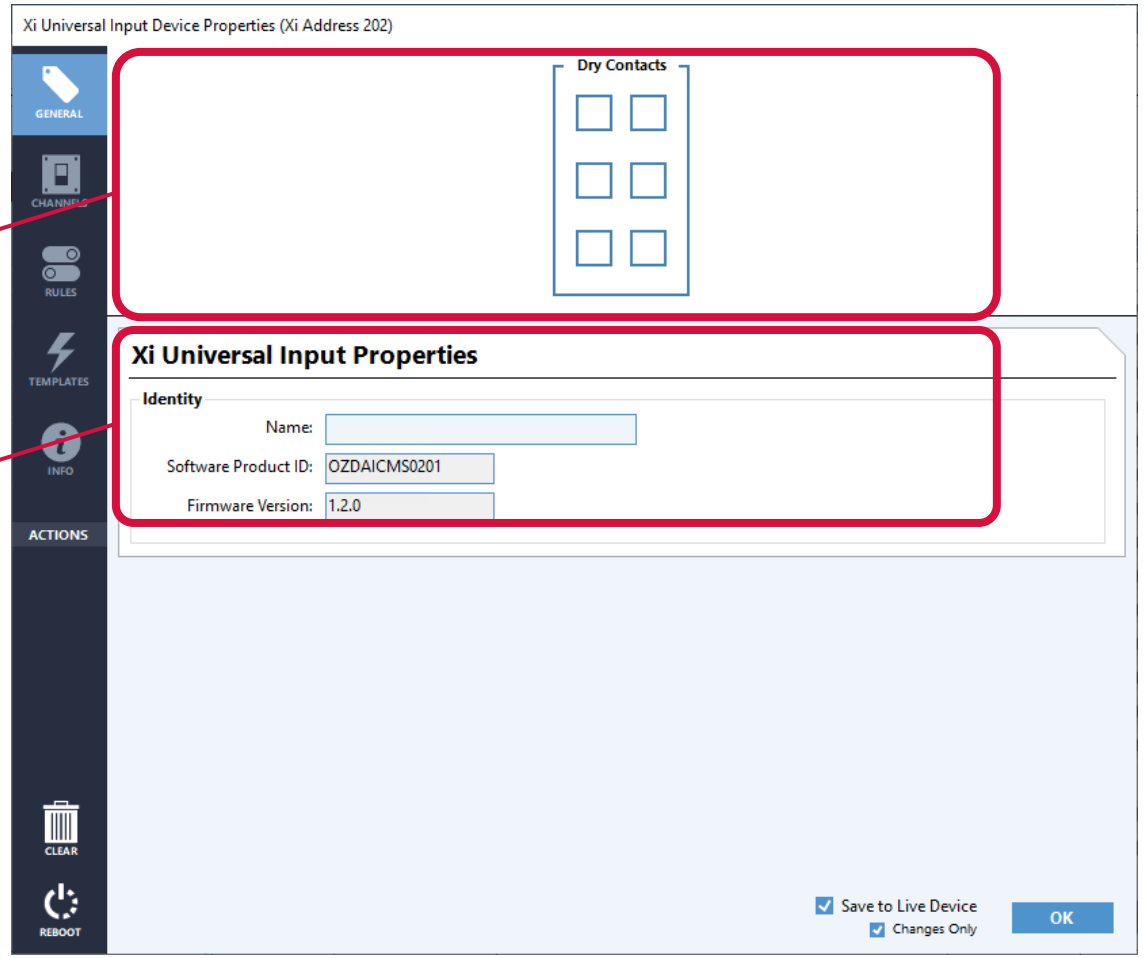
COMMISSIONING UNIVERSAL INPUTS

Editing Universal Inputs

- Confirm device first
- Double-click on device in list
- Editor form is displayed

Inputs

Basic Details



COMMISSIONING UNIVERSAL INPUTS

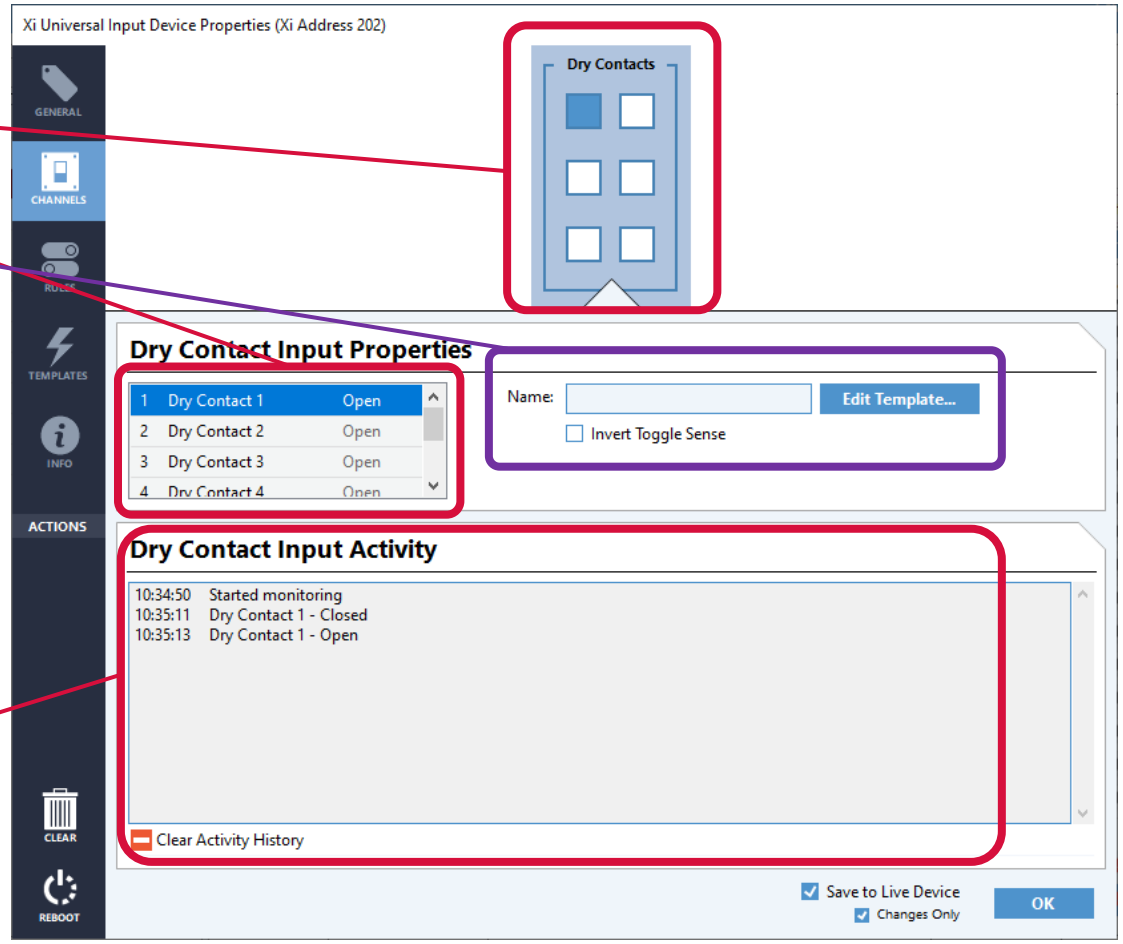
- Editing inputs

1. Select an input
2. Enter a name
3. Edit the template

   (refer to later section)

OR

Open/Close Events



COMMISSIONING EHUBS

BASIC FEATURES

COMMISSIONING EHUBS

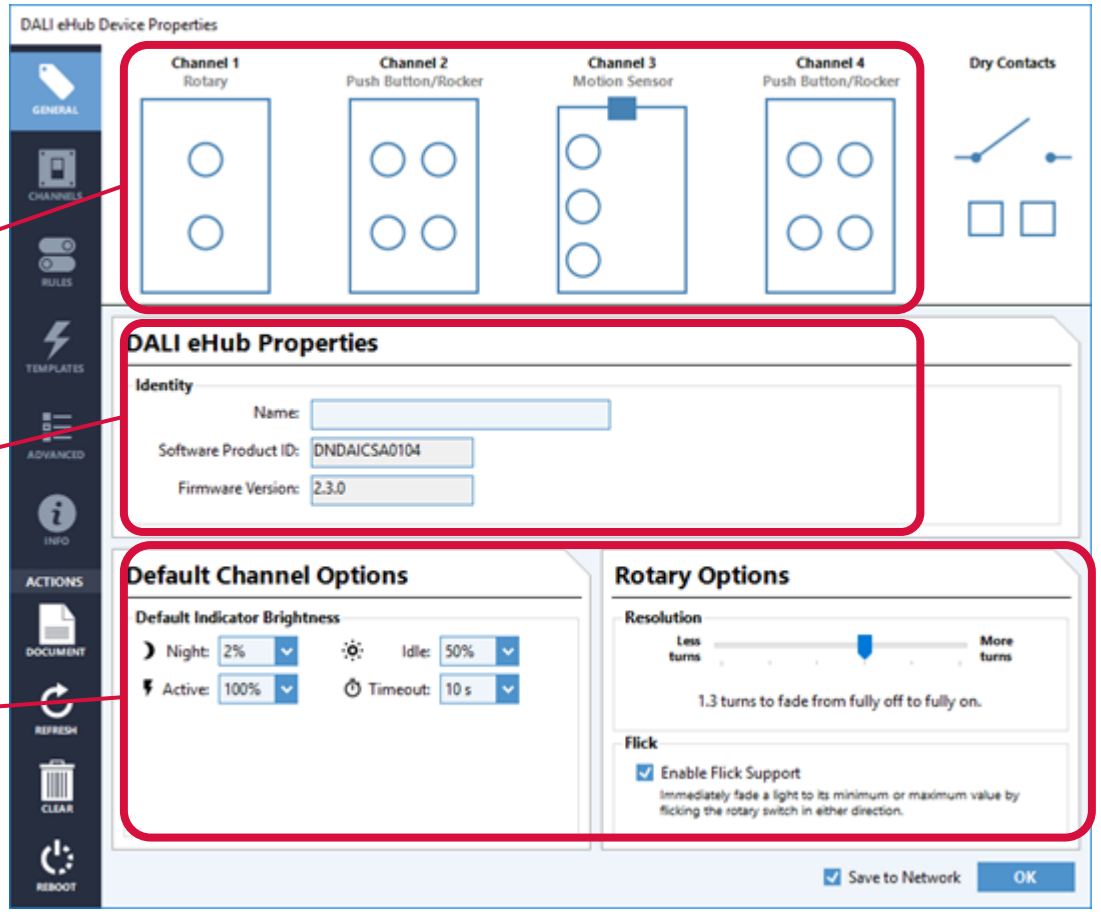
Editing eHub

- Confirm device first
- Double-click on device in list
- Editor form is displayed

Connected Peripherals

Basic Details

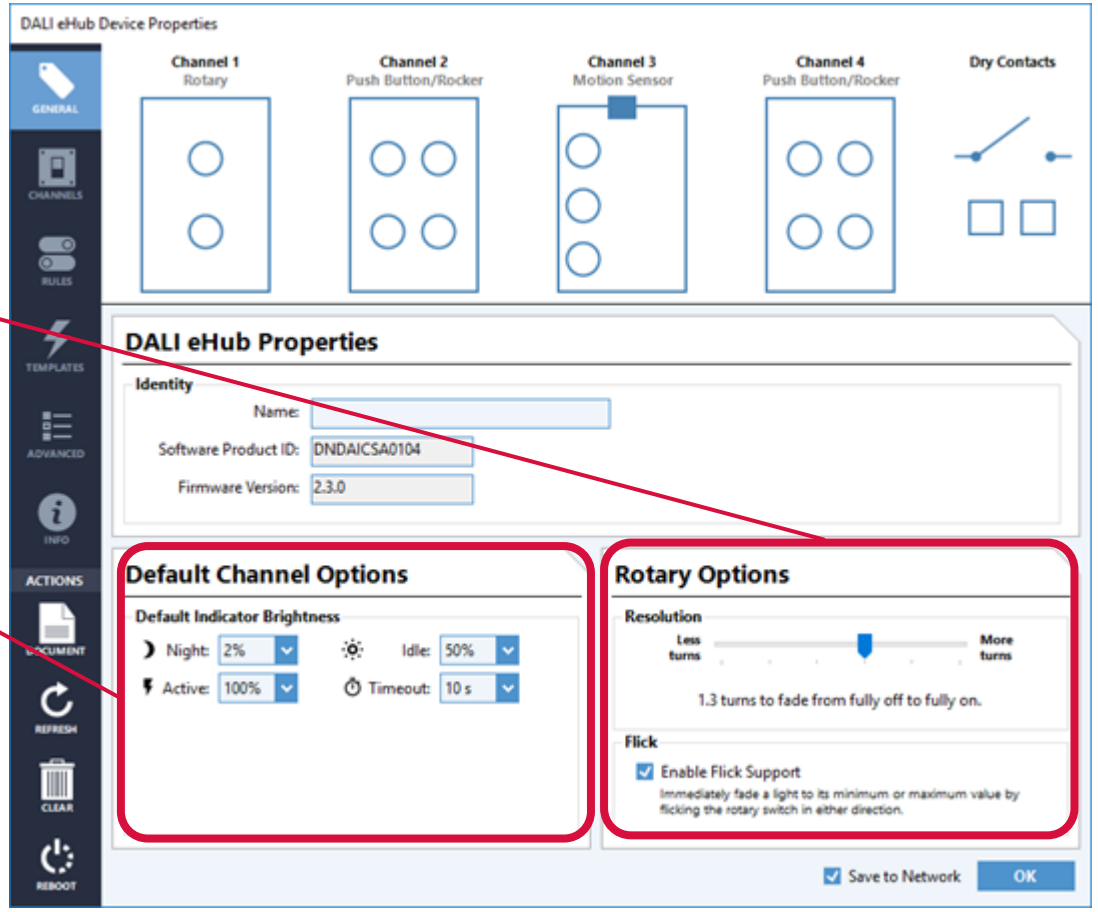
Basic Options



COMMISSIONING EHUBS

Configuring Global Properties

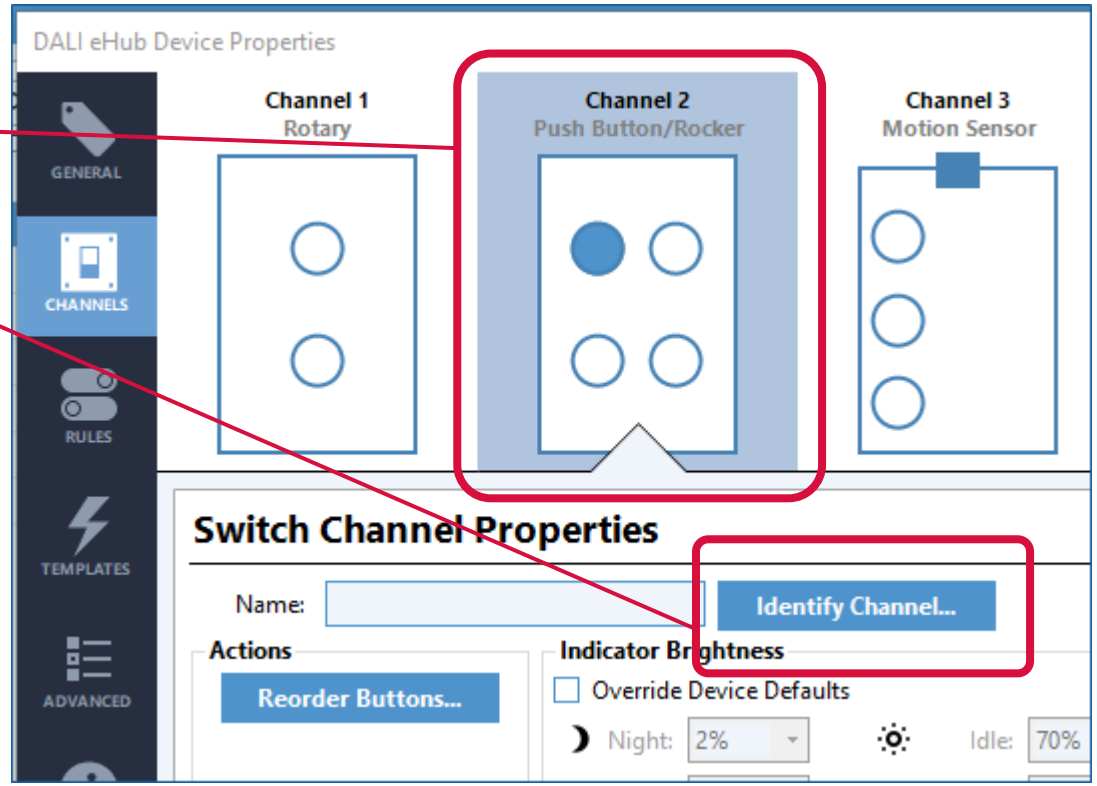
- Dial Properties
  - Resolution
  - Flick option
- Switch Properties
  - Indicator brightness & timeout.



COMMISSIONING EHUBS - SWITCHES

Identifying switch channels

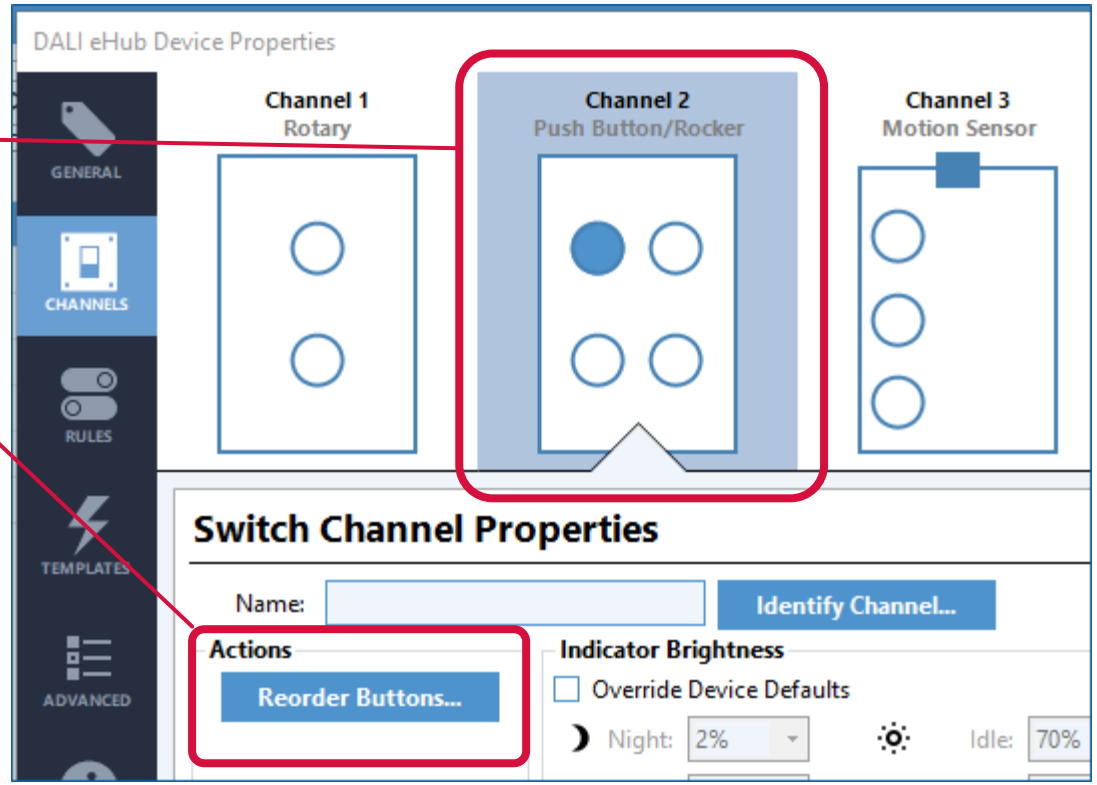
- 1. Select Channel
- 2. Click Identify Channel
- 3. All Channel LEDs will flash.



COMMISSIONING EHUBS - SWITCHES

Checking/changing button order

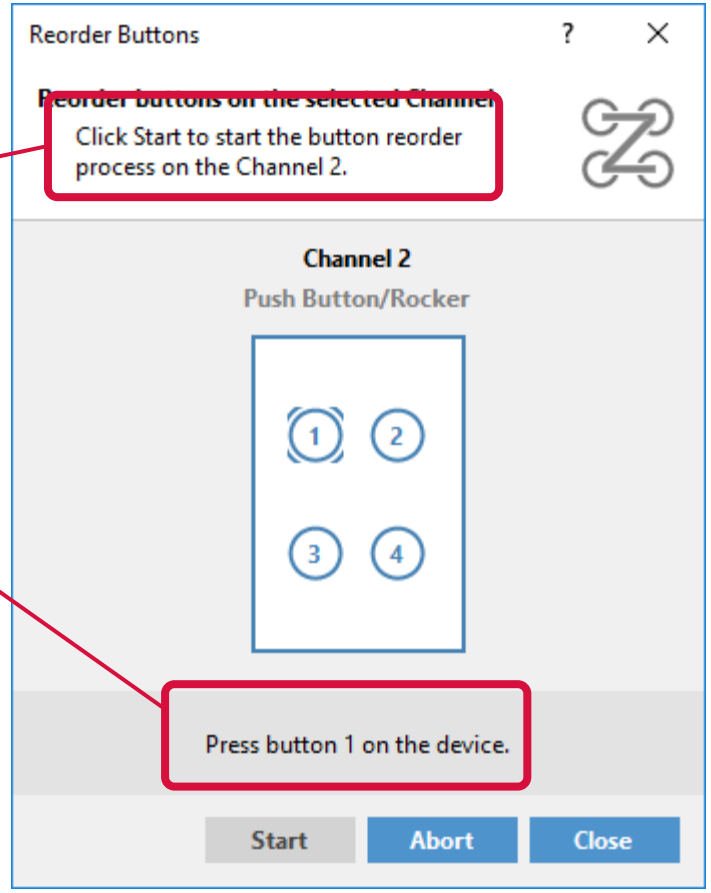
- 1. Select Channel
- 2. Click Reorder Buttons.



COMMISSIONING EHUBS - SWITCHES

Checking/changing button order

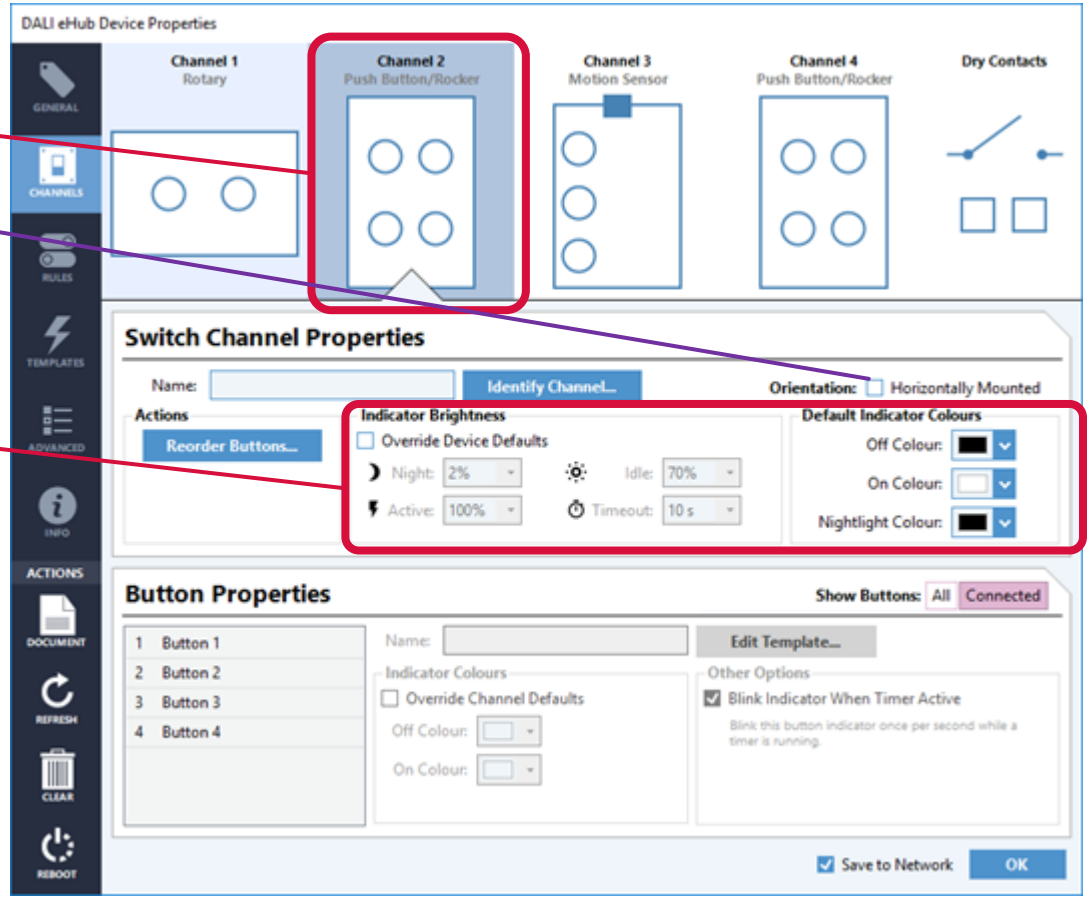
- 1. Select Channel
- 2. Click Reorder Buttons
- 3. Follow the instructions.



COMMISSIONING EHUBS - SWITCHES

Switch Properties

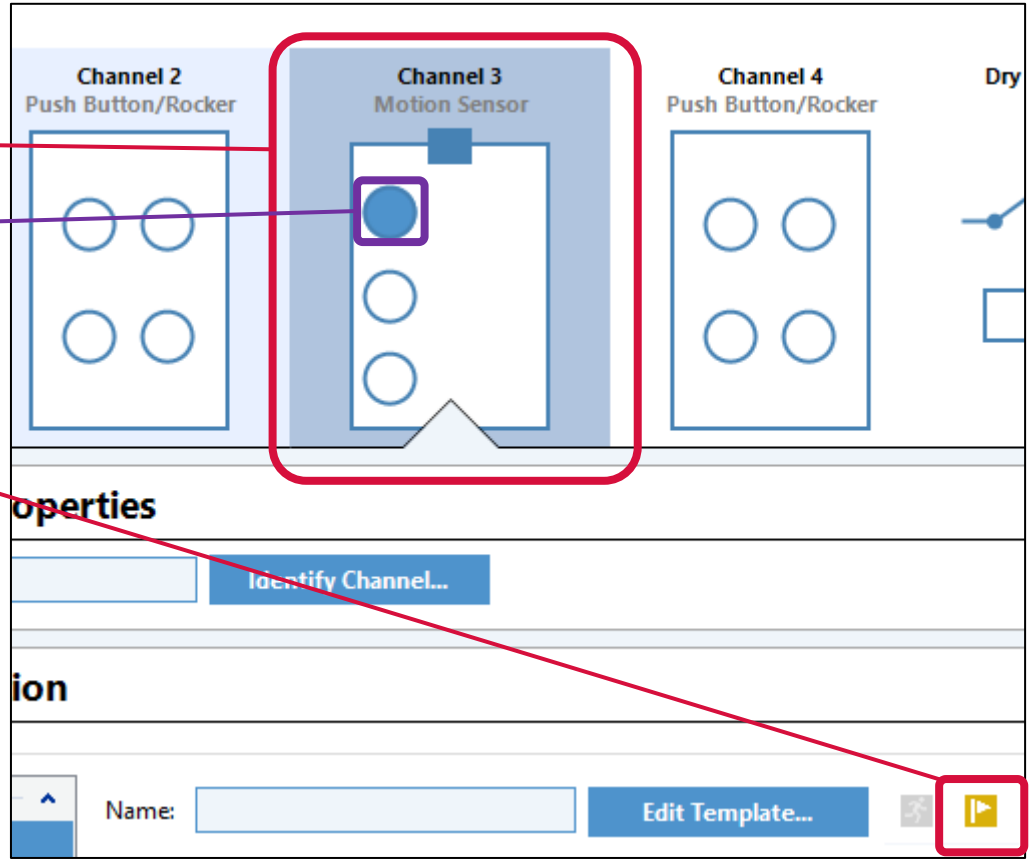
- 1. Select Channel
- 2. Select orientation
- 3. Change properties (if required)
  - Brightness & timeout
  - Colour.



COMMISSIONING EHUBS – MOVEMENT SENSORS

Identifying sensors (option 1)

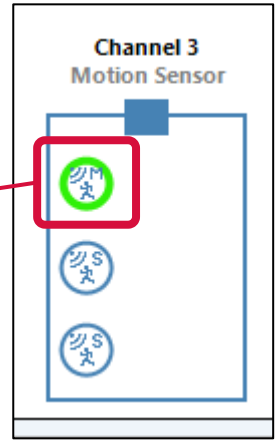
- 1. Select Channel
- 2. Select Sensor
- 3. Click Identify button
- 4. Sensor LED will flash.



COMMISSIONING EHUBS – MOVEMENT SENSORS

Identifying sensors (option 2)

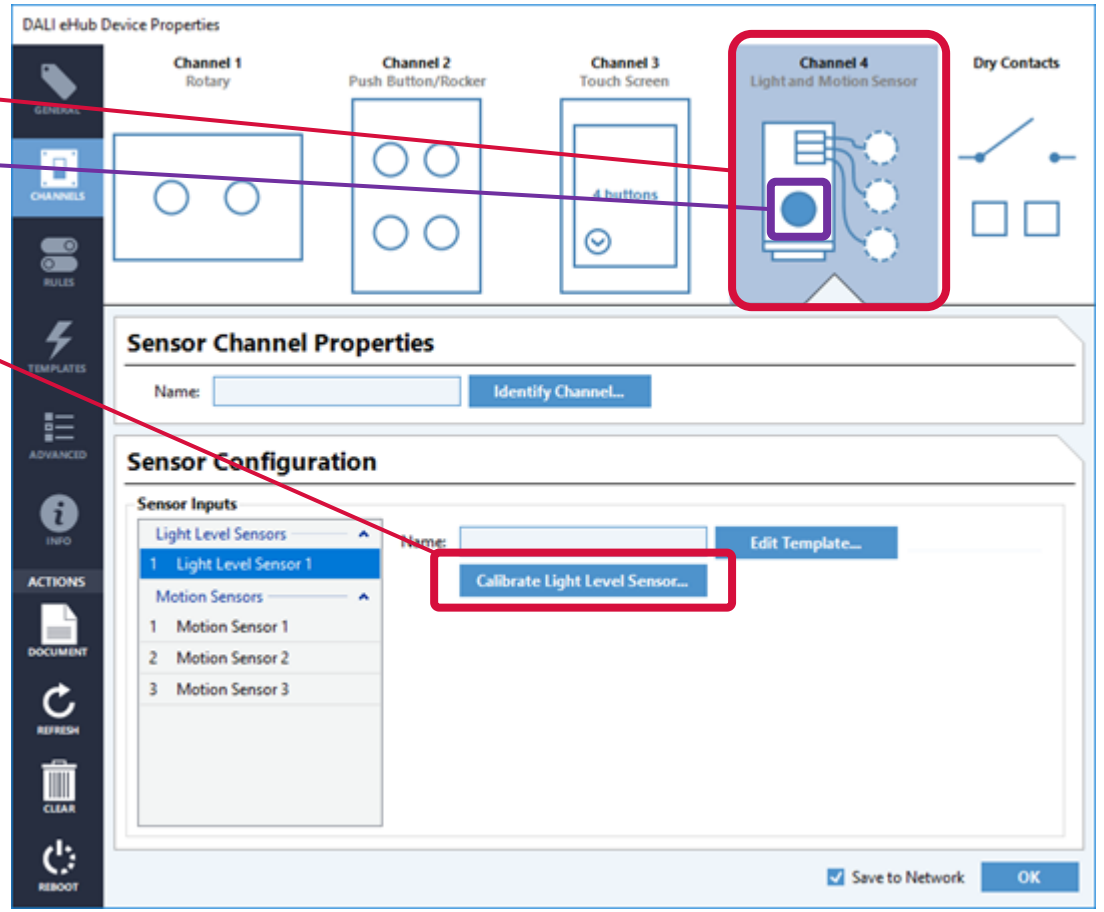
- 1. Configure eHub (see later section)
- 2. Walk past a sensor
- 3. Sensor will be shown in green.

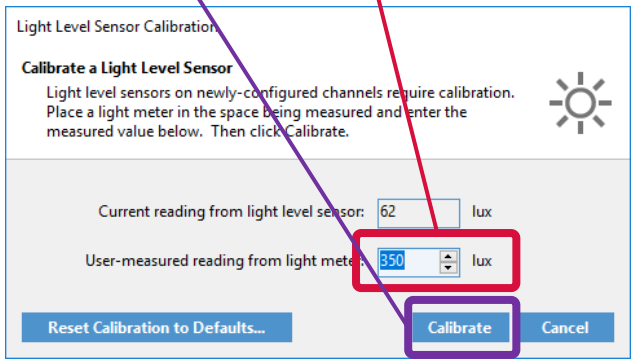


COMMISSIONING EHUBS – LIGHT LEVEL SENSOR

Sensor Properties

- 1. Select Channel
- 2. Select Sensor
- 3. Calibrate (if required)
  - Click **Calibrate Light Level Sensor**
  - Enter **actual light level**
  - Click **Calibrate**.

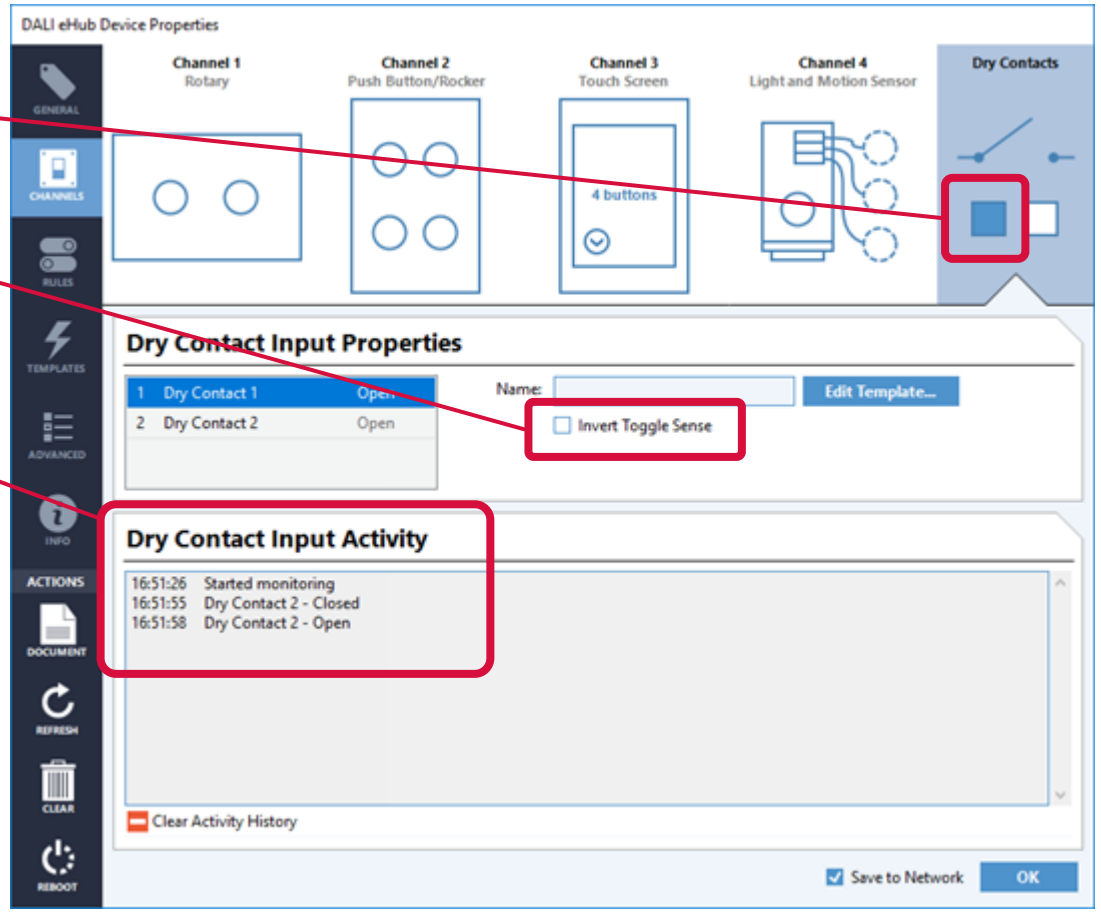




COMMISSIONING EHUBS – DRY CONTACT INPUTS

Dry Contact Properties

- 1. Select Dry Contact Input
- 2. Invert (if required)
- 3. Use Activity Window to observe dry contact state.



COMMISSIONING EHUBS – TOUCH SCREENS

Touch Screen Properties

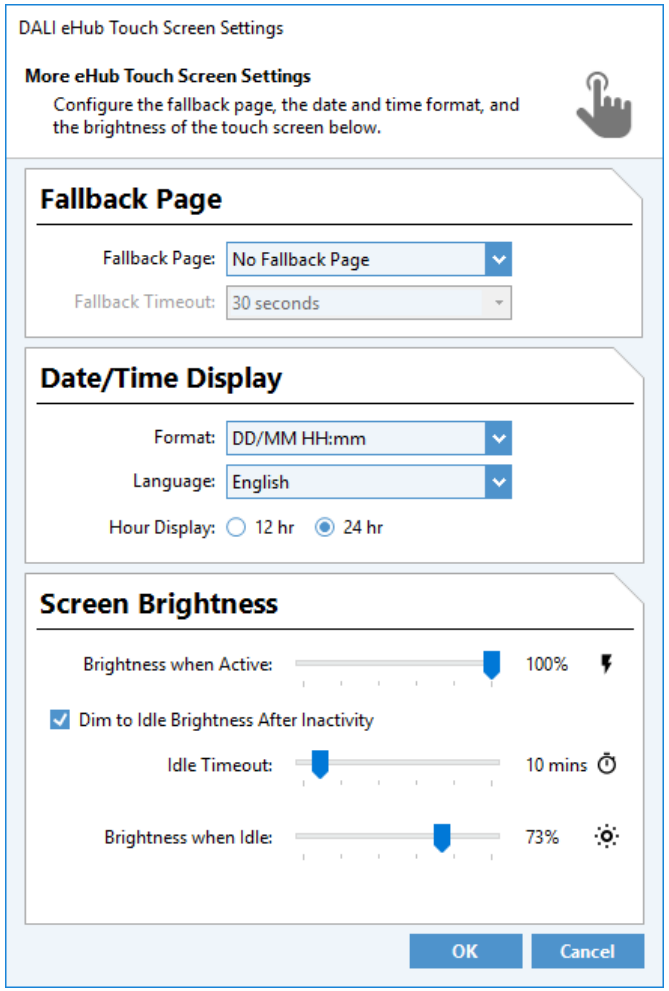
- 1. Select Channel
- 2. Select number of buttons
  - 1 – 24
- 3. Select Colour Theme.

More options

COMMISSIONING EHUBS – TOUCH SCREENS

Touch Screen Properties

- 4. More options
  - Fall-back (time-out) page
  - Date/Time
  - Brightness.



COMMISSIONING RAPIX DEVICES

TEMPLATES

COMMISSIONING RAPIX DEVICES - TEMPLATES

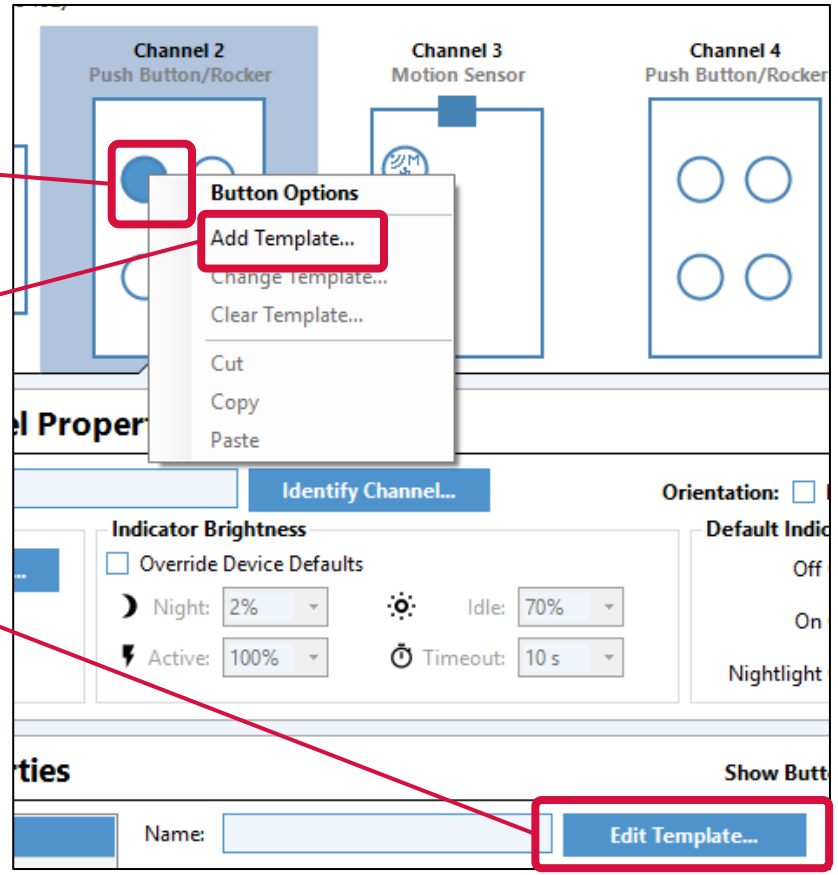
Templates

- A Template is a set of functions for one or more RAPIX Device inputs.
- Templates provide the system intelligence:
  - Simple configuration of functionality
    - All configuration for the function is together.
  - Can be customised.
- There are Templates for many requirements:
    - Switching;
    - Dimming;
    - Timing;
    - Motion sensing;
    - Light level control;
    - Etc.

COMMISSIONING RAPIX DEVICES - TEMPLATES

Adding a template

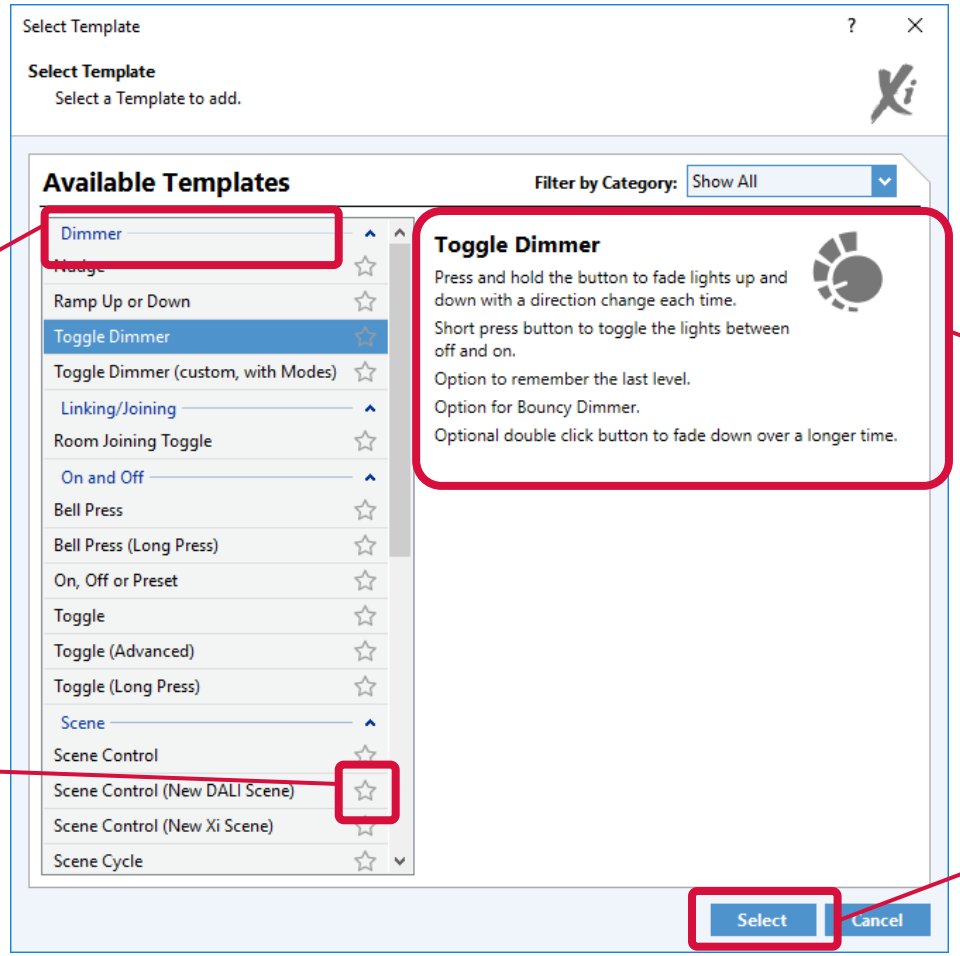
- 1. Select the input
- 2. Either:
  - Double-click; or
  - Right-click and select **Add Template**; or
  - Click **Edit Template**



COMMISSIONING RAPIX DEVICES - TEMPLATES

Adding a template

- 3. Select the template from the list



Template Category

Selected Template Description

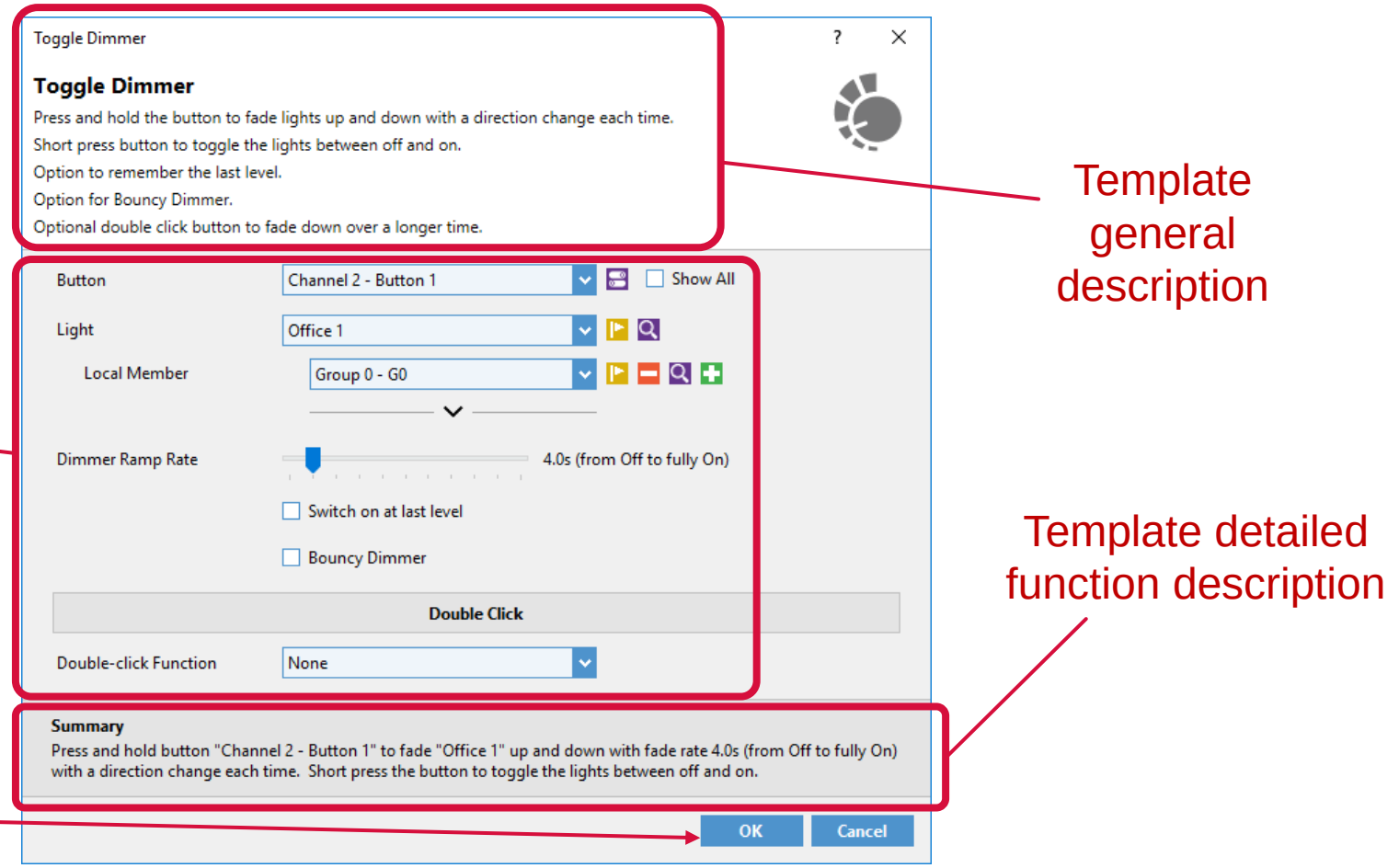
Click on the star to make template a "favourite" and show it at the top

Click to add selected template

COMMISSIONING RAPIX DEVICES - TEMPLATES

Adding a template

- 4. Edit the template properties



Template general description

Template settings and options

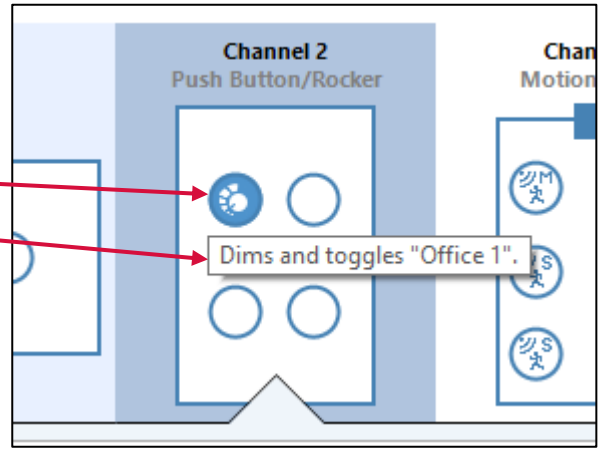
Template detailed function description

- 5. Click on OK

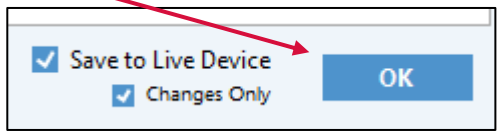
COMMISSIONING RAPIX DEVICES - TEMPLATES

Adding a template

- 6. The new function will appear
  - Icon shows function
  - Pop-up hint shows detail



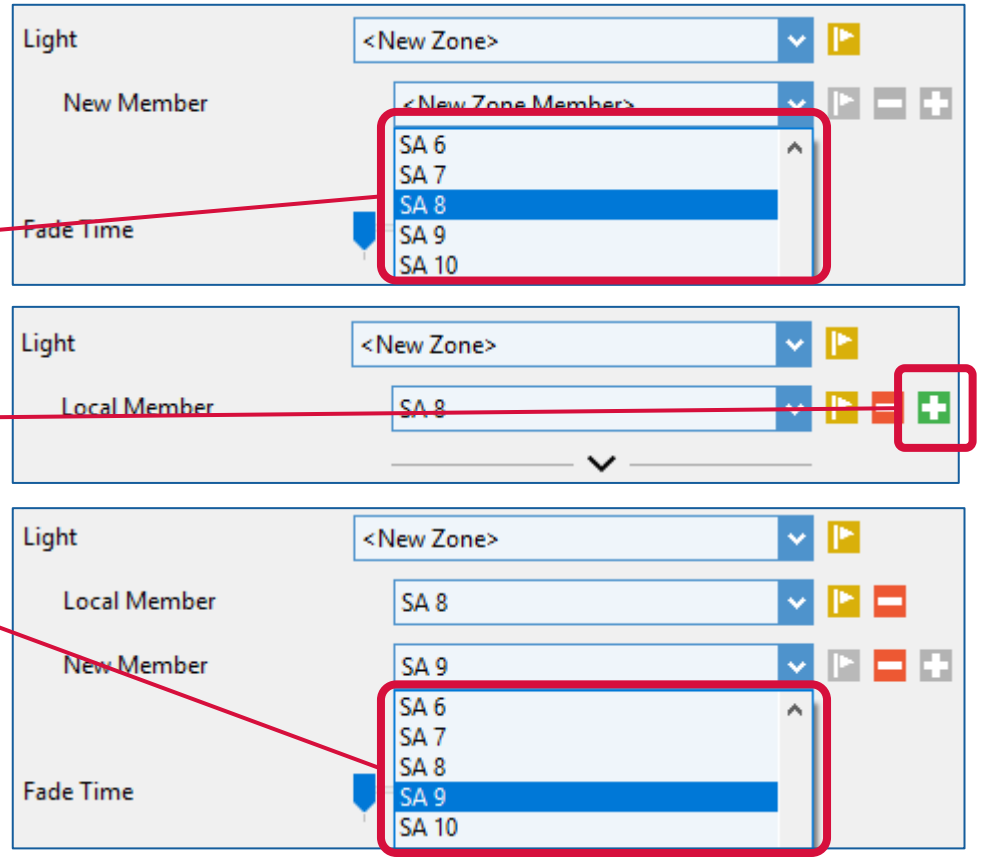
- 7. When finished, click **OK**
  - Always saves to database
  - Select **Save to Live Device** to save to device
  - Select **Changes Only** to just save what has changed (faster)



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

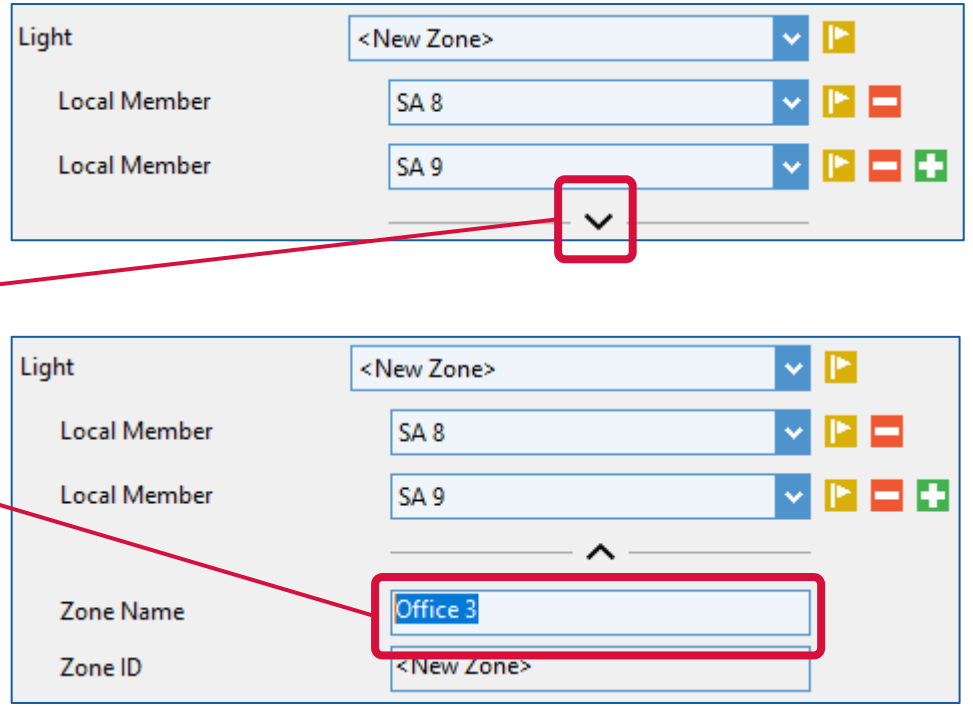
- Creating a Zone
  - Select first member
  - If there are more members:
    1. Click the Add button
    2. Select Member
    3. Repeat as required.



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

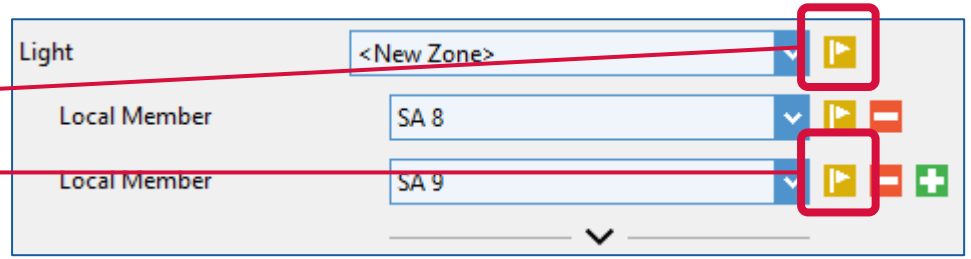
- Creating a Zone
  - Name the Zone (optional)
    1. Click the expand button
    2. Enter name.



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

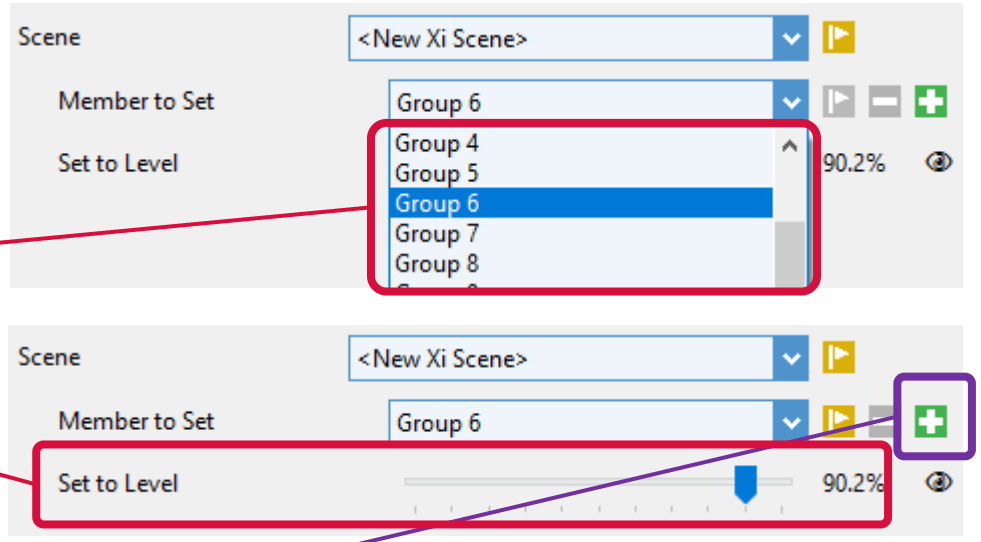
- Checking the Zone
  - Click the identify button
    - Zone identify; or
    - Zone Member identify
  - The Zone devices will flash.



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

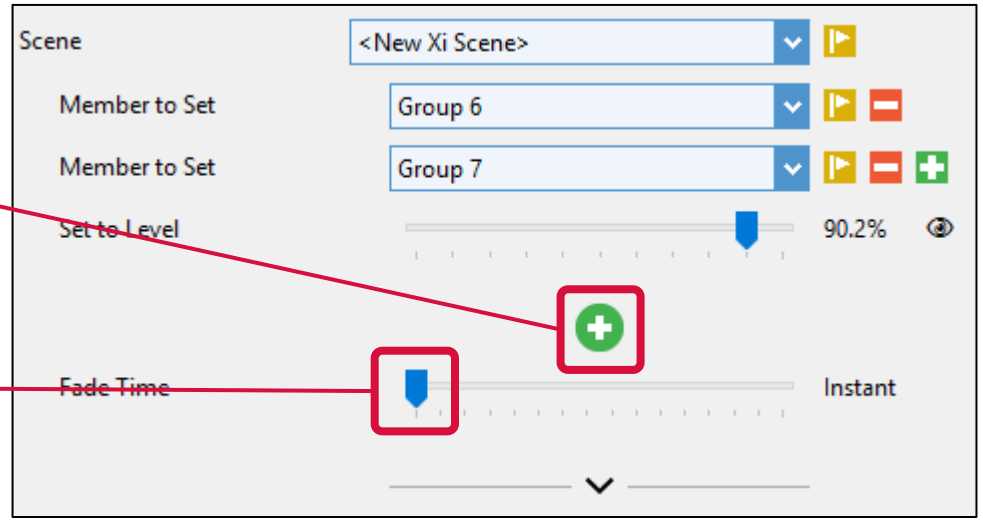
- Creating a Scene
  - 1. Select first member
  - 2. Select level
  - 3. If there are more members with the same level:
    1. Click the **Add** button
    2. Select Member
    3. Repeat as required.



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

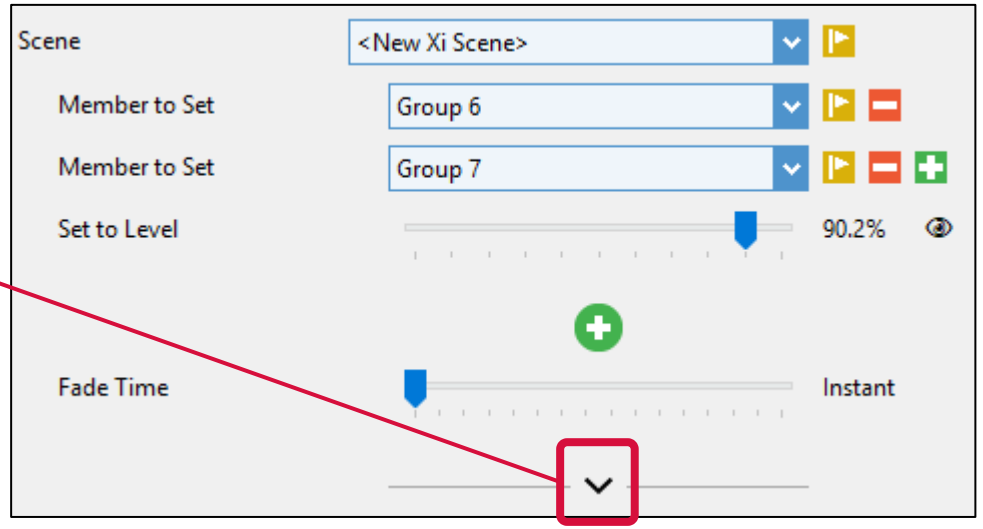
- Creating a Scene
  - 4. If there are more members with a different level:
    1. Click the **Add** button
    2. Select Member and level
    3. Repeat as required
  - 5. Select the Fade Time.



COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

- Creating a Scene
  - 6. Name the Scene (optional)
    1. Click the expand button
    2. Enter name.

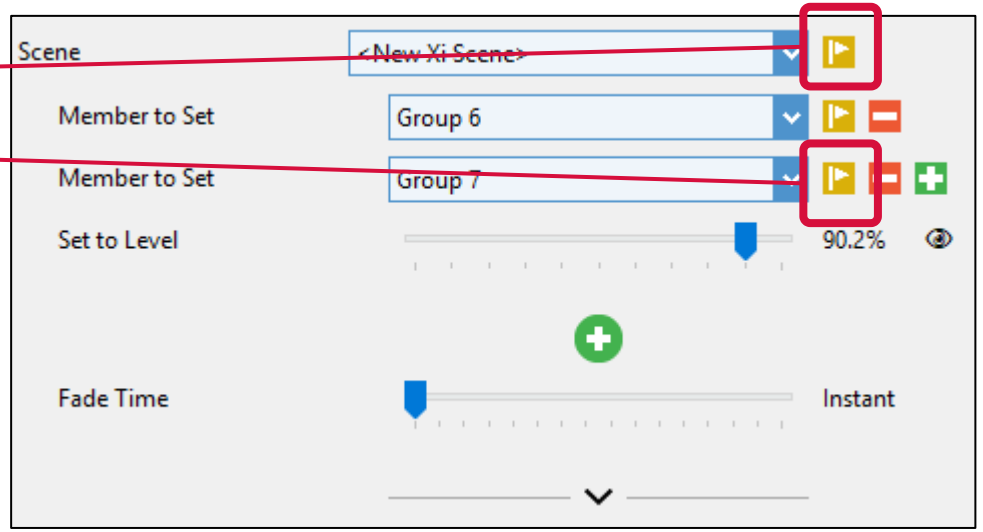


COMMISSIONING RAPIX DEVICES - TEMPLATES

Editing a Template

- Checking the Scene
  - Click the identify button
    - Scene identify; or
    - Scene Member identify
  - The Scene devices will flash
  - To check the Scene levels:
    - Click the **Visualise Scene** button:

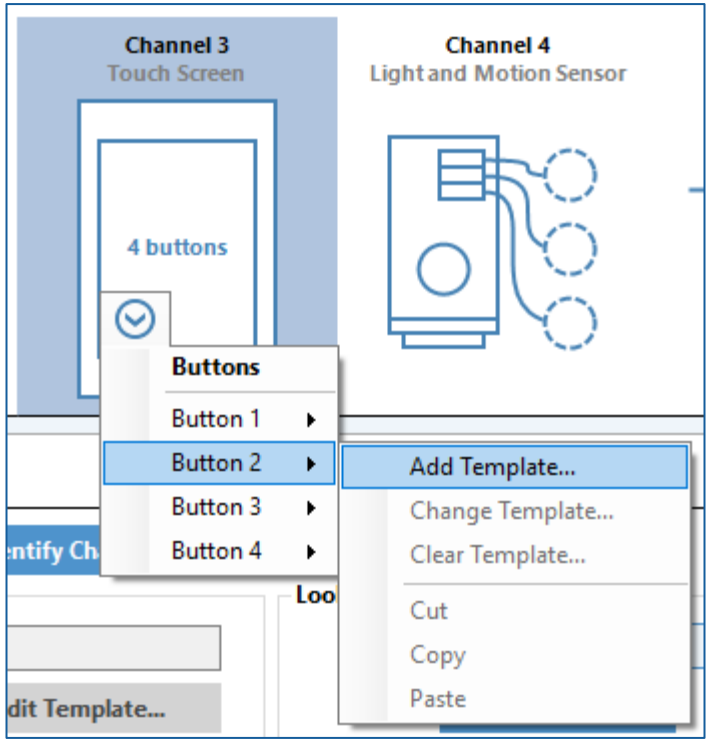
    - This will apply the scene when the button is pressed.



COMMISSIONING RAPIX DEVICES – TEMPLATES

Touch Screen Templates

- Adding Templates
  1. Click drop-down list of buttons
  2. Select button
  3. Click **Add Template.**

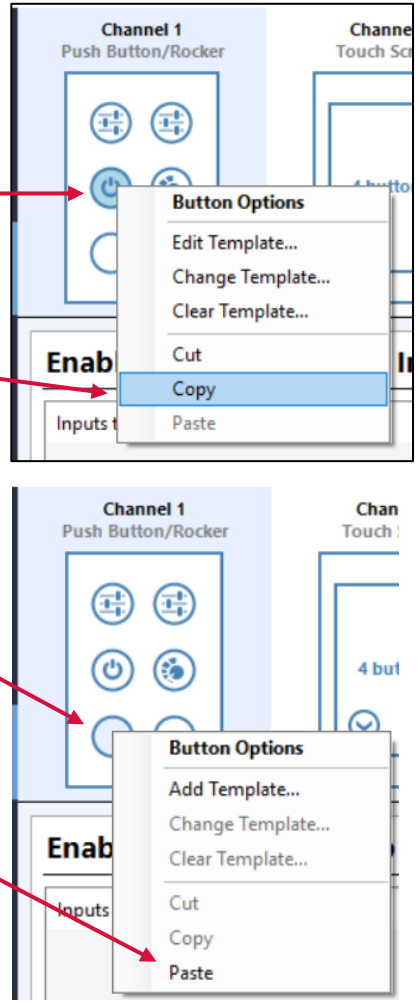


COMMISSIONING RAPIX DEVICES - TEMPLATES

Copying a template

- To copy a template from one input to another
  - 1. Right click an input
  - 2. Select **Copy**
  - 3. Right-click the second input
  - 4. Select **Paste**
  - 5. The second button will now do the same as the first one

Note that you can copy a template from one RAPIX Device to another



COMMISSIONING RAPIX DEVICES - TEMPLATES

Moving a template

- To move a template from one input to another (does not apply to RAPIX Sensor)
  - Option 1
    - 1. Right click an input
    - 2. Select **Cut**
    - 3. Right-click the second input
    - 4. Select **Paste.**
  - Option 2
    - 1. Left-click on an input
    - 2. Drag template to the second input
    - 3. Drop.

COMMISSIONING RAPIX DEVICES - TEMPLATES

Clearing a template

- To clear the template from an input
  1. Right click an input
  2. Select **Clear Template.**

COMMISSIONING RAPIX DEVICES - TEMPLATES

Changing a template

- Option 1
  1. Clear the template
  2. Add a new template.
- Option 2
  - It is possible to change from one template to a similar template
    - Properties that match will be copied across:
  1. Right-click the input
  2. Select **Change Template**
  3. Select the new template
  4. Check that the properties are correct
  5. Click on **OK.**

EXERCISE 3

COMMISSIONING AN EHUB

INTERNAL EVENT TEMPLATES

ADVANCED FEATURES

INTERNAL EVENT TEMPLATES

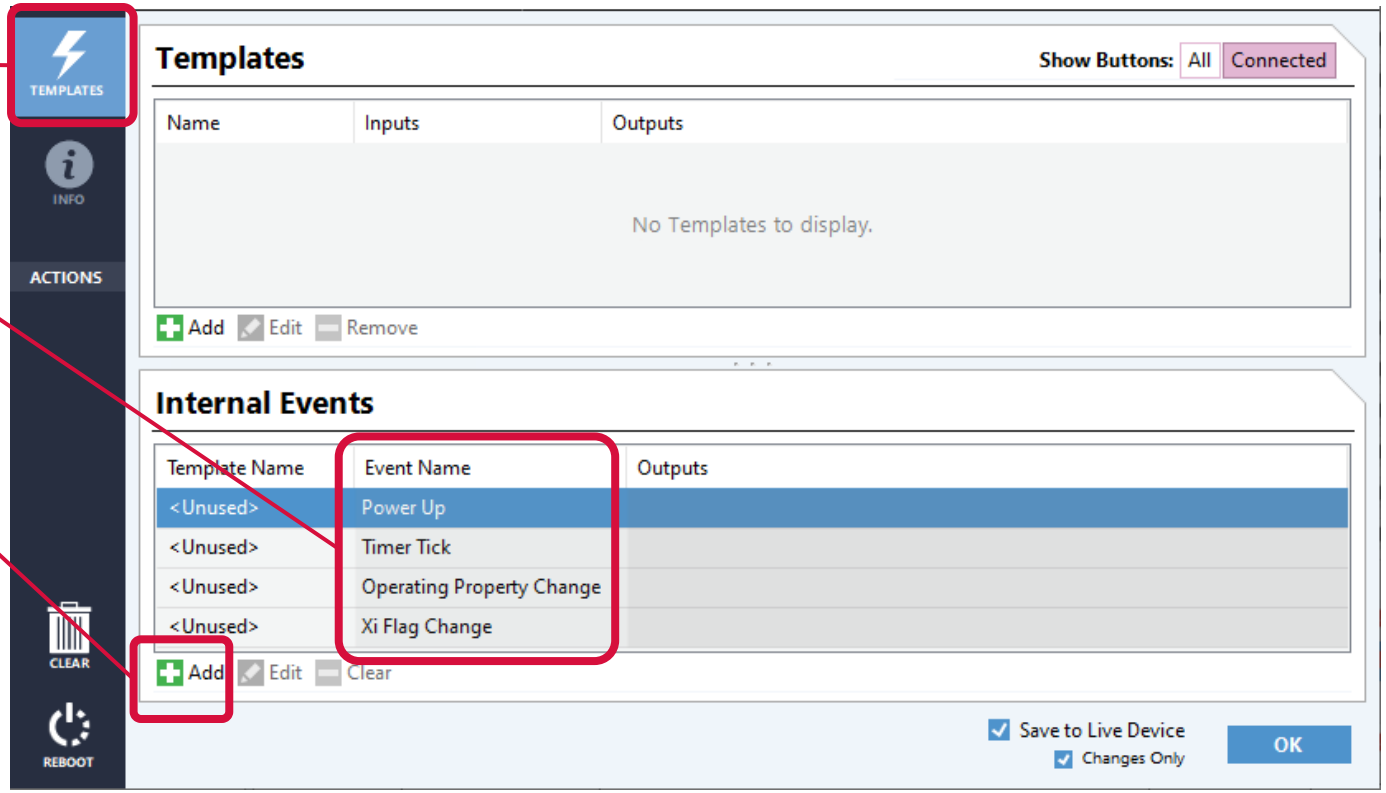
Internal Events

- Types
  1. Power-up
  2. Timer tick (4 times per second)
  3. Operating Property Change
  4. Flag Change
- Usage
  - Templates can use the internal events
  - Each internal event can only be used by one template in each RAPIX Device

INTERNAL EVENT TEMPLATES

Internal Events

- Editing Templates
  1. Select templates tab
  2. Select the internal event
  3. Click the **Add** button
  4. Edit the template as described previously



EDITING TEMPLATES

ADVANCED FEATURES

EDITING TEMPLATES

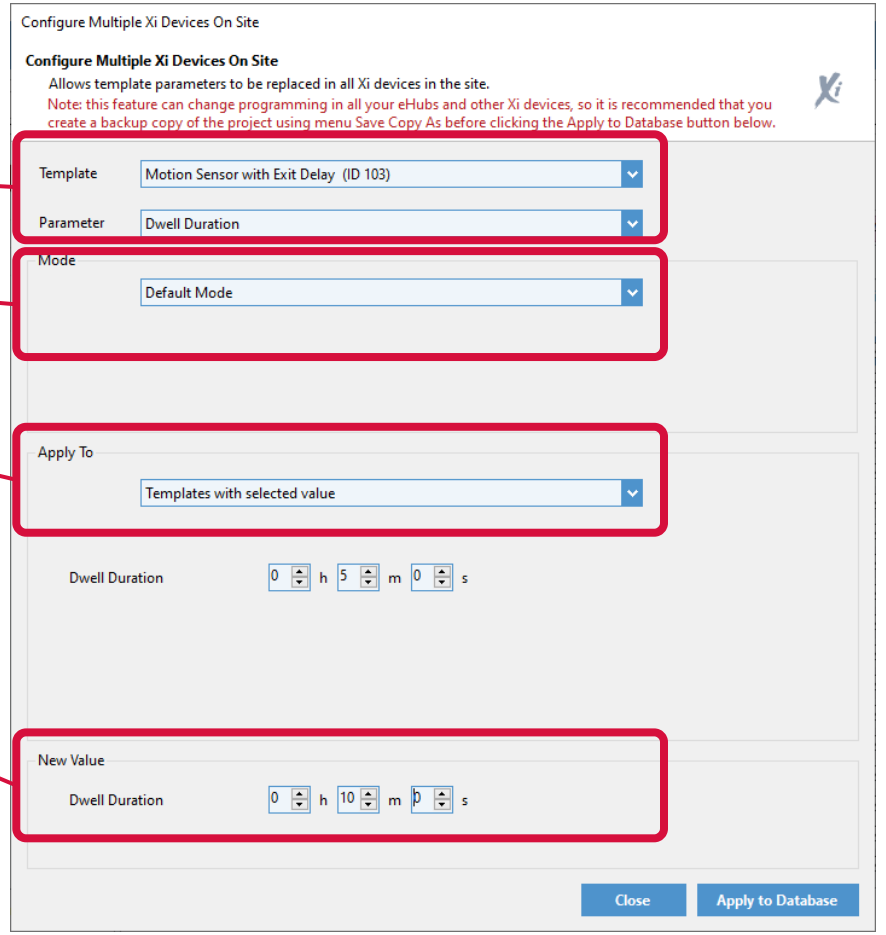
Global Edit

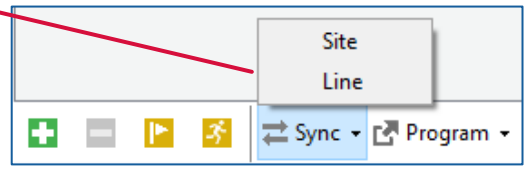
- Allows editing of a template property in:
  - All RAPIX DEVICES on a DALI Line
  - All RAPIX DEVICES in the site
- There are filtering options to enable selection of specific template instances

EDITING TEMPLATES

To Global Edit a Template Parameter:

1. Select **Program** for **RAPIX DEVICES**
2. Select the template and parameter
3. Optionally select the mode
4. Optionally select a current value
5. Select the new value
6. Click on **Apply to Database**
7. Repeat steps 1 to 6 if required
8. Click on **Close**
9. Sync to save the changes





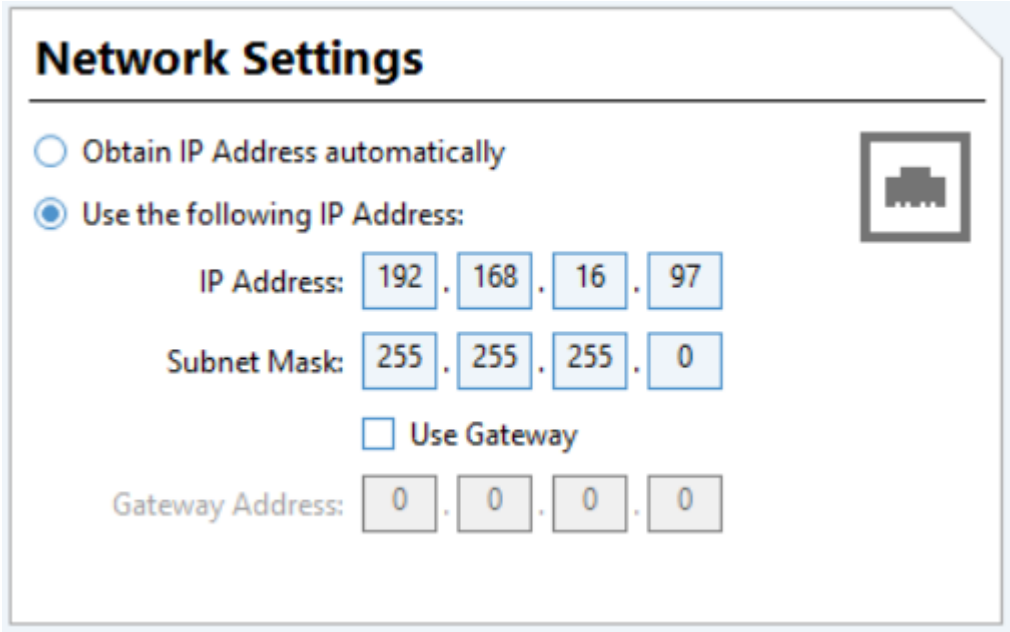
COMMISSIONING EHUBS

ADVANCED FEATURES

COMMISSIONING EHUBS – ADVANCED FEATURES

Advanced Features

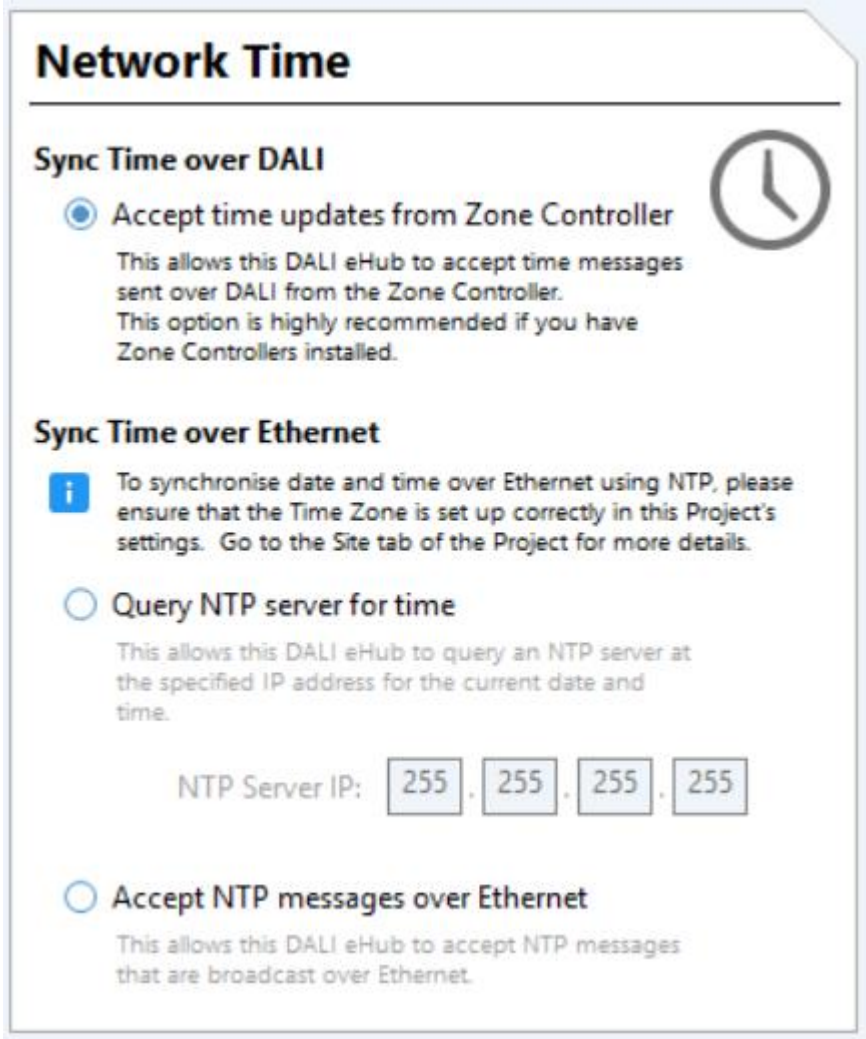
- IP Address
  - It is recommended that a static (fixed) IP Address is used.



COMMISSIONING EHUBS – ADVANCED FEATURES

Advanced Features

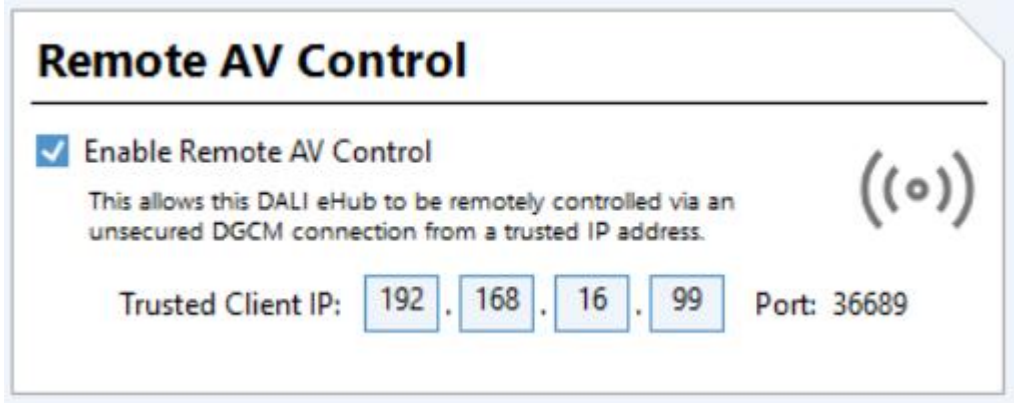
- Time
  - The eHub only needs to know the time if it has touch screens connected.
  - If the project has Zone Controllers, let them look after the time synchronization.
  - Otherwise, the eHub should use NTP to get the time.



COMMISSIONING EHUBS – ADVANCED FEATURES

Advanced Features

- Remote Control
  - An eHub can be controlled via Ethernet by a third-party system or device.
  - An eHub will only accept a connection from a single IP Address.
  - Refer to the RAPIX API presentation for details.



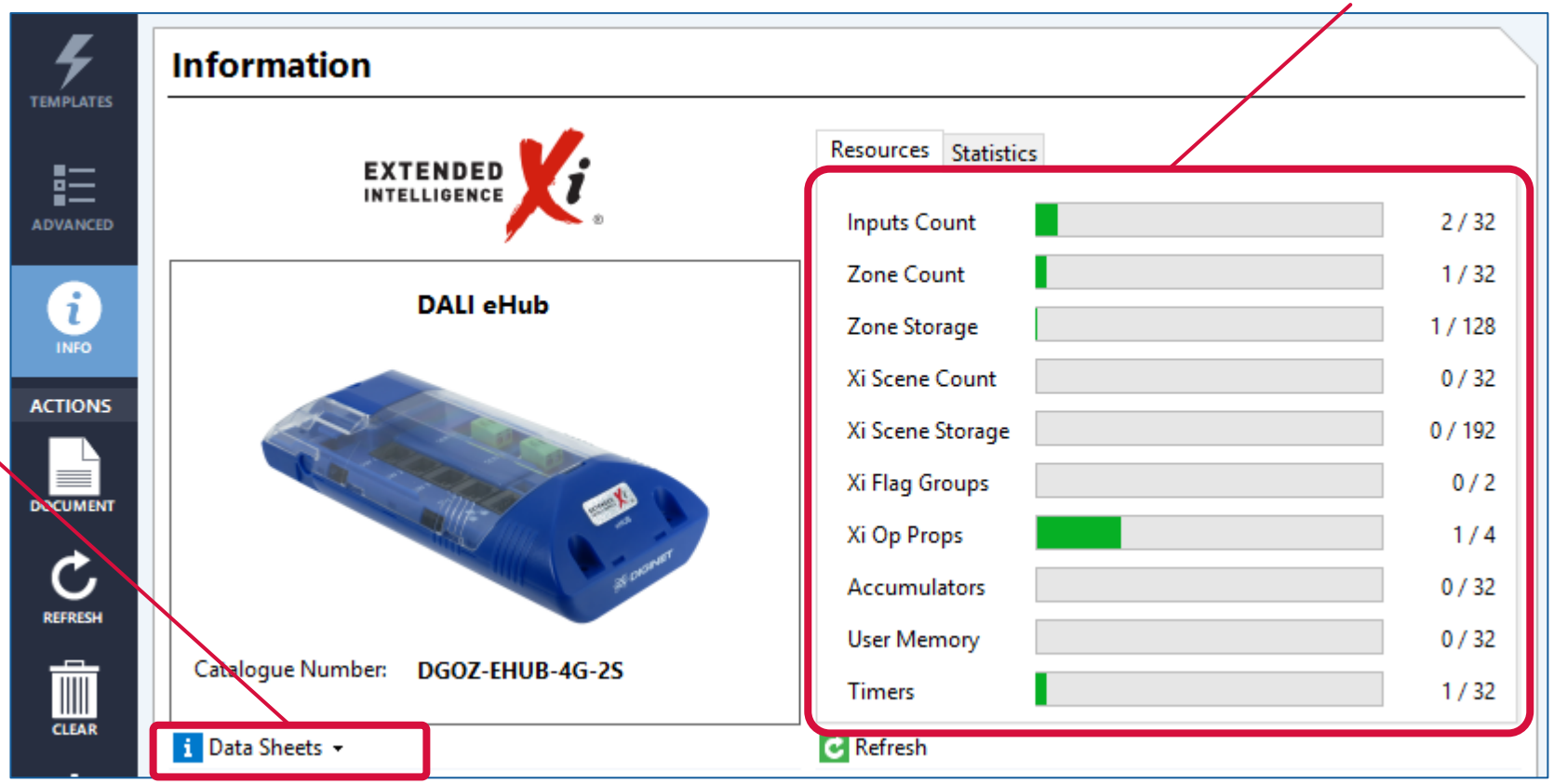
COMMISSIONING EHUBS – ADVANCED FEATURES

Advanced Features

- Device Info

How much of each "resource" has been used

Data Sheets



COMMISSIONING EHUBS – ADVANCED FEATURES

Advanced Features

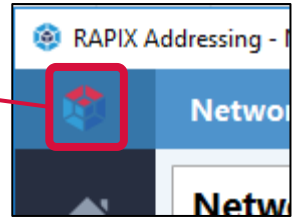
- Enable/Disable Rules
  - See RAPIX Integrator presentation.

TOOLS

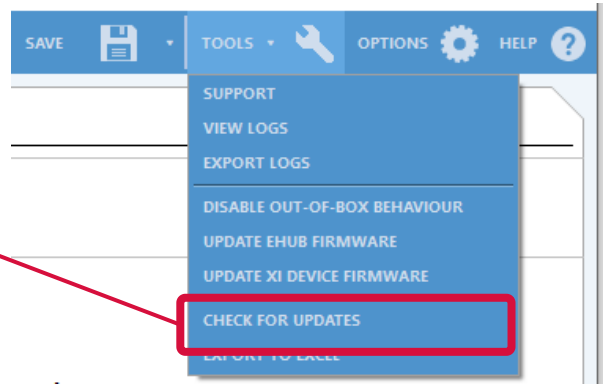
TOOLS

- Logging, testing and debugging
  - See RAPIX Testing and Debugging presentation.

- Software Details
  - Click icon.

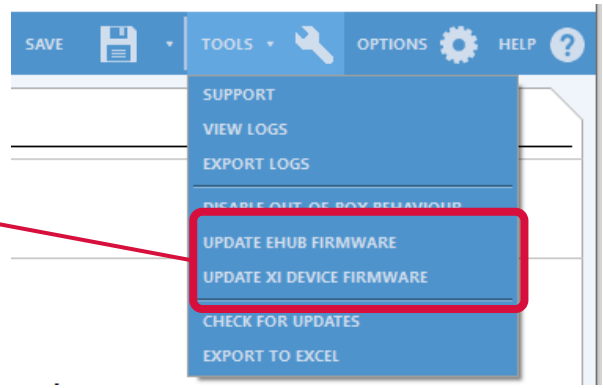


- Software Update
  - Select menu item.



TOOLS

- Device Firmware Updates
  1. Select menu item
  2. Select firmware file
  3. Follow on-screen instructions.

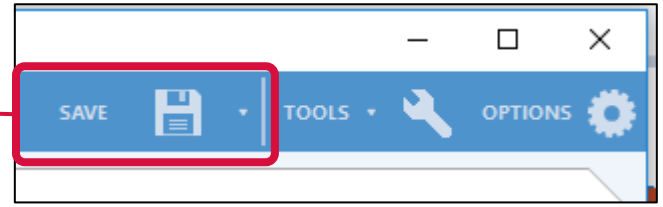


OPTIONS

OPTIONS

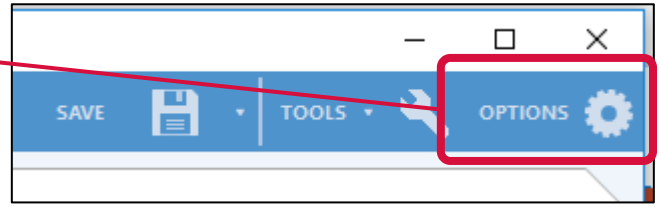
Saving the Project

1. Click Save button
2. Enter file name.



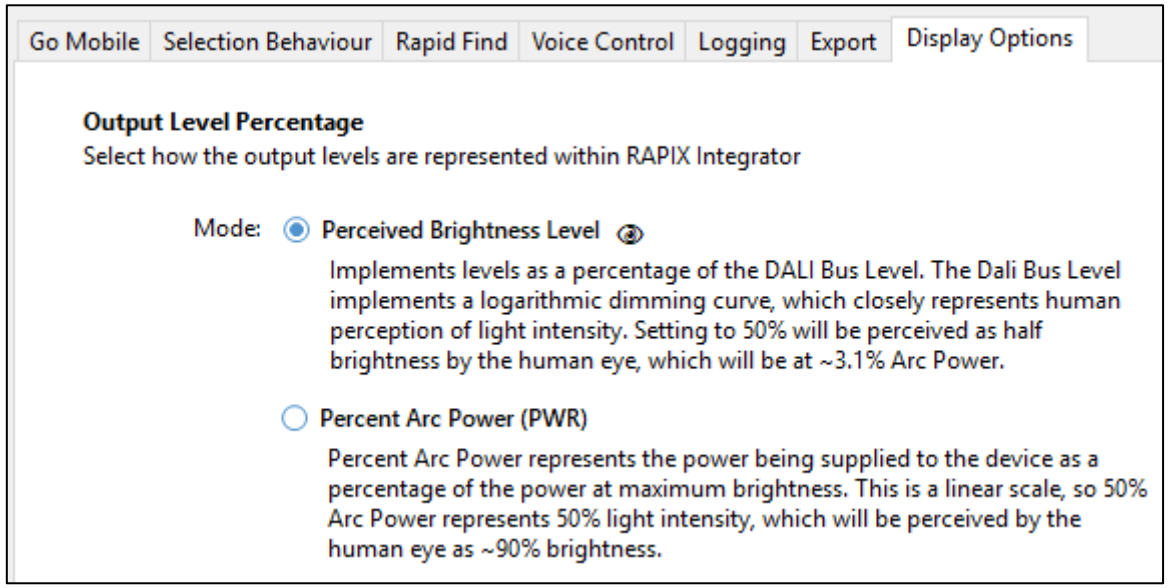
OPTIONS

Software Options



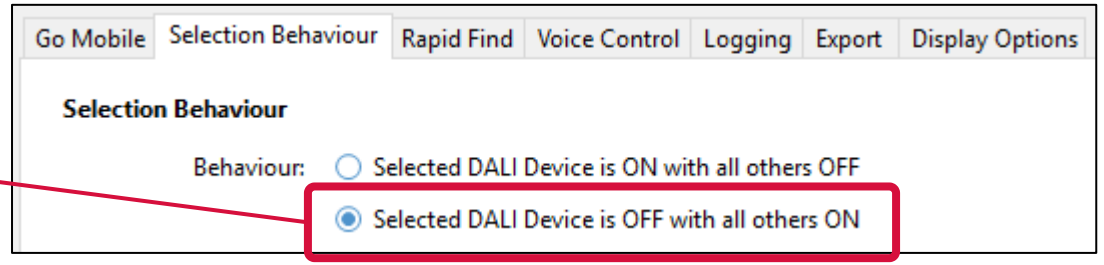
DALI Levels

- Perceived Brightness Level is generally the most useful



OPTIONS

If you are working with a site that is occupied, you will want to leave lights on as much as possible



If you are using lights that switch slowly, you may need to slow the Rapid Find