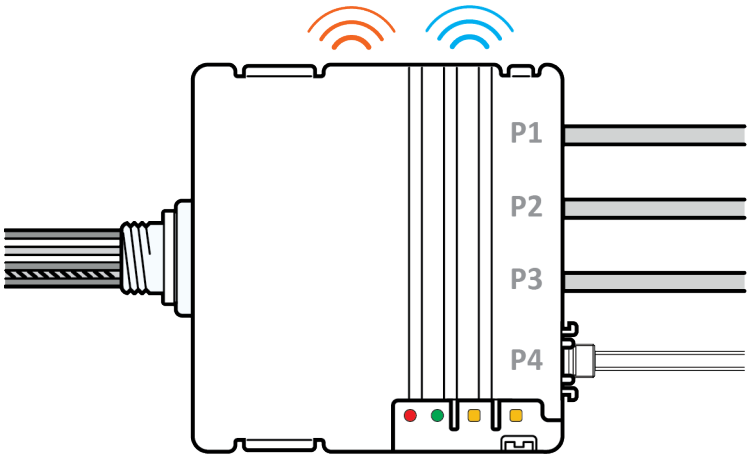
DOC #: 80291, REV: 01

User Manual

WRC - Wireless Relay Controller



EnergyCenter BY AUTANI

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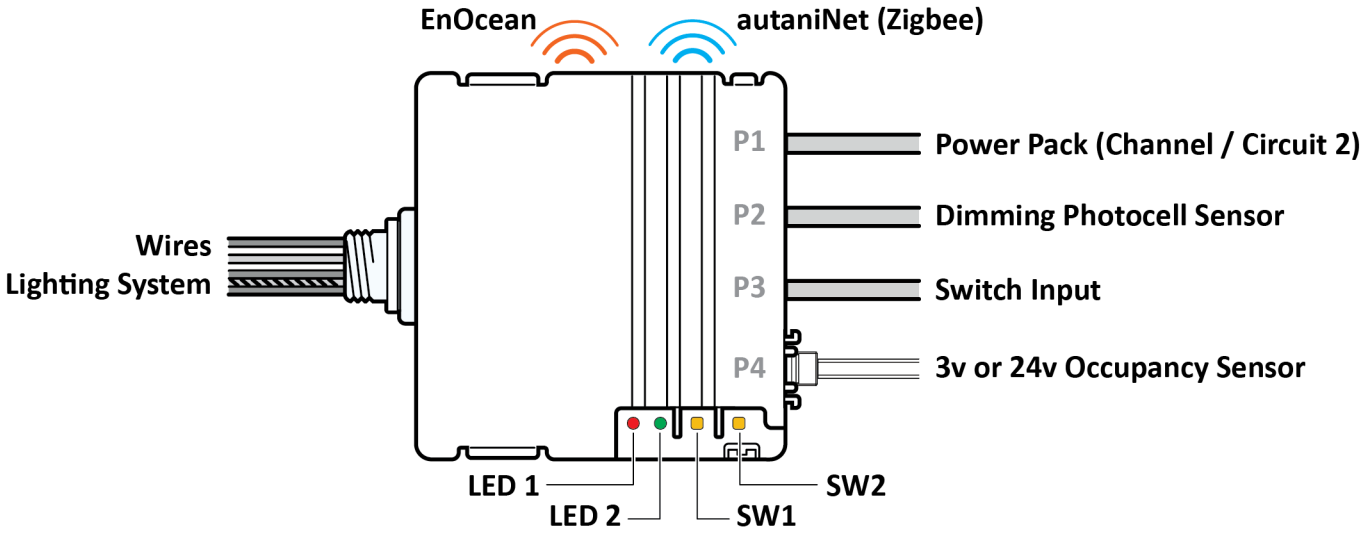
1. WRC Overview

The **WRC (Wireless Relay Controller)** is a wirelessly managed area controller for lighting applications. The WRC can be operated in stand-alone mode, or as part of an EnergyCenter® integrated Lighting Management System using the autaniNet wireless mesh network. The primary differentiator of the WRC is its ability to interface with wireless or wired accessories. This manual only covers configuring the WRC through EnergyCenter® software. For configuring a WRC in standalone mode, refer to the WRC QIS document available in the Autani website.

Following are the major features of WRC in controlling the lighting applications.

- ❑ Switching (ON / OFF)
- ❑ Dimming (0-10V) and Daylight Harvesting
- ❑ Occupancy Sensing
- ❑ Scheduling
- ❑ Multiple Circuit configurations
- ❑ Supports EnOcean and third party devices.
- ❑ Energy Estimation
- ❑ Load Shedding.... etc.,

In general, the **WRC** will receive inputs from multiple sensors and then trigger the lighting system as required. The **WRC** also allows lighting devices to connect to the Autani Manager's EnergyCenter® software, via autaniNet wireless network. The EnergyCenter® software can configure the devices connected and generate reports for the same.



1.1. Specifications

ELECTRICAL
- ❑ Operating Voltage: 100 to 277VAC
- ❑ Operating Current: 15mA typ. / 75mA max. @ 120VAC
- ❑ DC Output (25°C): 24VDC typ., 100mA (Class 2)
- ❑ Switching Capacity: 20A max. (resistive load)

INTERNAL RELAY (25°C)
- ❑ Max. Switching Power: 8310VA
- ❑ Max. Switching Voltage: 277VAC
- ❑ Max. Switching Current: 30A

EXTERNAL RELAY
- ❑ See third party manufacturers' documentation

I/O PORTS
- ❑ Total power budget for all I/O ports is 120mA
- ❑ Power Pack
- ❑ DC Output: 24VDC typ., 100mA
- ❑ Contact: 24VDC typ., 100mA
- ❑ Sensor: 3.0VDC for Autani MINI Wired Sensor, 24VDC for 3rd party sensors
- ❑ 0-10V input channel for photocell
- ❑ (2) 0-10V output channels: Up to 20mA source current

LOCAL CONTROL INPUTS
- ❑ Wall Switch: (2) dry contact closures
- ❑ Sensor: Up to (10) Autani MINI Wired Sensors

RADIO NETWORK (autaniNet)
- ❑ IEEE 802.15.4-2003 2.4GHz ISM
- ❑ Range: Approx. 600' LOS transmit/ receive

REGULATORY APPROVALS
- ❑ UL 916
- ❑ CSA C22.2 No. 205
- ❑ UL 2043 Plenum Rated
- ❑ Contains FCC Module FCC ID: V8NWAT1000153; IC: 7737A-WAT1000153

ENVIRONMENTAL

Test condition of all ratings 25°C
- ❑ Operating Temperature: 0° to 60°C
- ❑ Storage Temperature: -25° to 80°C
- ❑ Rated for indoor use only

PHYSICAL
- ❑ Dimensions (HxWxD): 3.75 x 3.93 x 1.19in
- ❑ Color: White
- ❑ Weight/ Shipping Weight: <10oz / <1lb

1.2. Safety Information

- **Risk of Electrical Shock. Turn power off at the circuit breaker before installing or servicing the sensor.**
- **Sensor must be installed and used in accordance with appropriate electrical codes and regulations.**
- **Installation by a qualified electrician is recommended.**
- **If you are not sure about any part of these instructions, consult an electrician.**
- **Indoor use only.**

1.3. Ordering Information

SKU	Description
A02-01-1160-01	WRC, 2 Wall Switch
A02-01-1160-02	WRC, 2 Wall Switch, Conformal Coated
A02-01-1160-03	WRC, 2 Wall Switch, w/902MHz Module
A02-01-1160-04	WRC, 2 Wall Switch, w/902MHz Module, Conformal Coated

Contact Information

Phone: 443.320.2233

Address: 7001 Columbia Gateway Drive, Suite 210, Columbia, MD 21046 USA

General Inquiries: information@autani.com

Support: support@autani.com

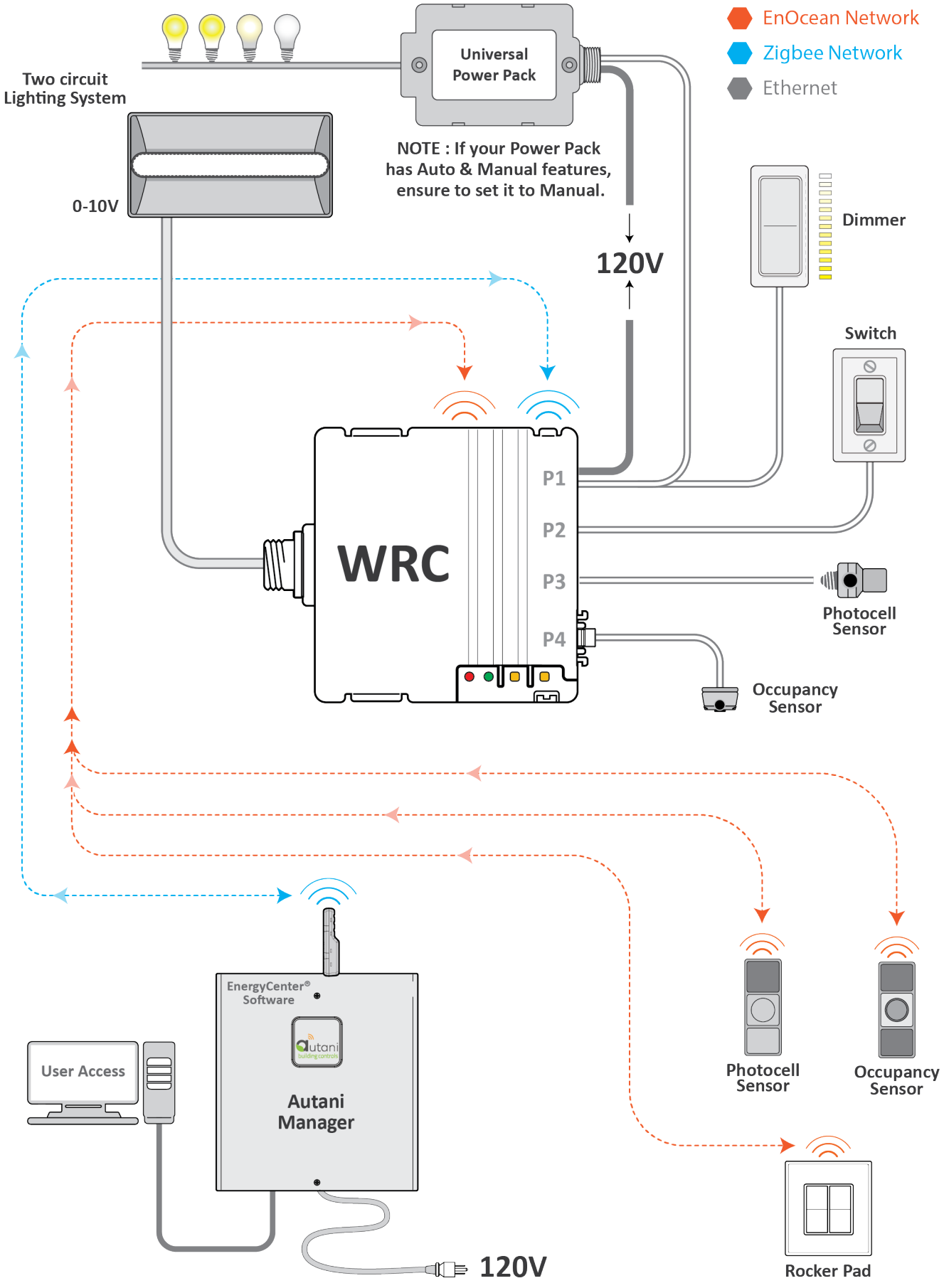
Sales/Quotations: sales@autani.com, quotes@autani.com

Working Hours: Monday to Friday, 9am to 5pm, Eastern Standard Time.

1.4. Product Warranty

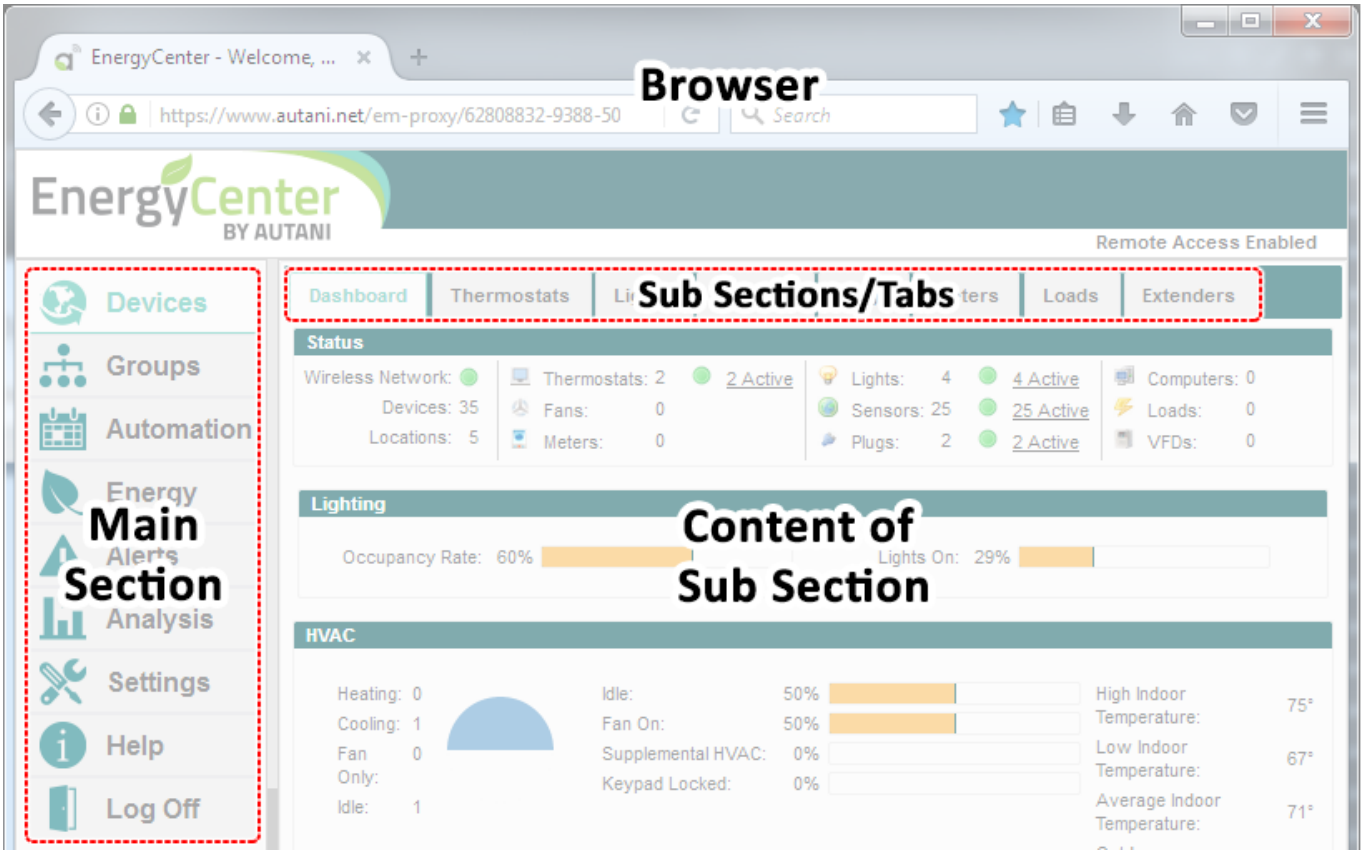
Three years limited warranty from Autani. For further information please refer to terms and condition on www.autani.com.

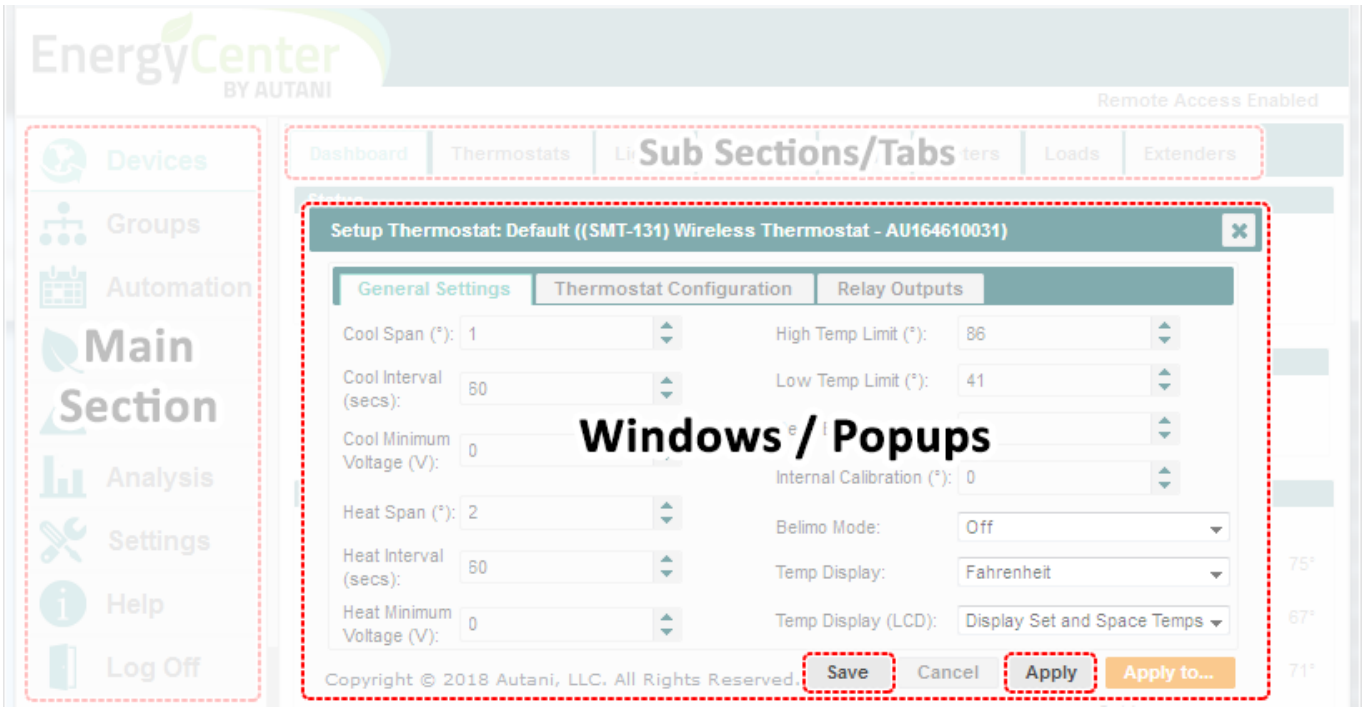
2. System Overview



3. Basic Interface - EnergyCenter® Software

EnergyCenter® is a software application that manages the WRC along with other Autani devices. The software is web based and accessed using a web browser, preferably Chrome/Firefox. The main interface of the software is shown below.





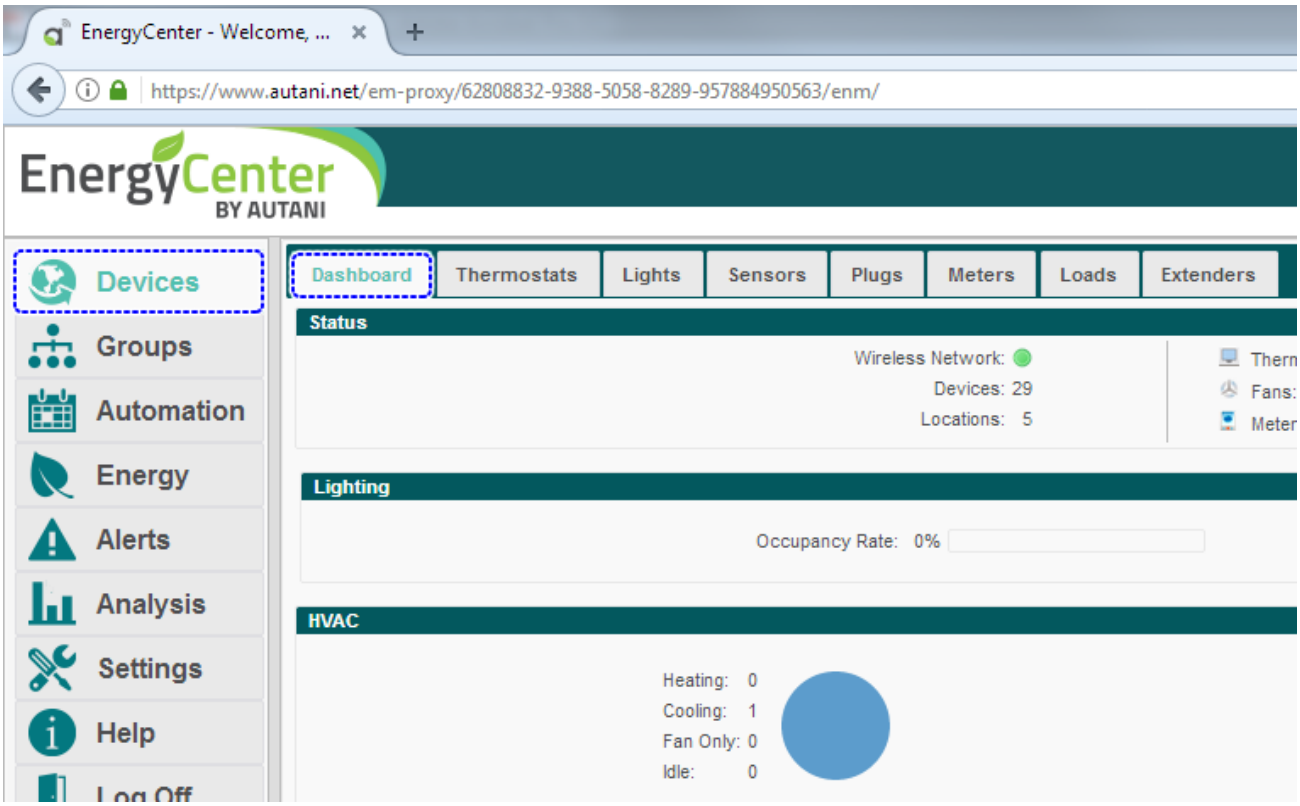
NOTE: The **Save** button will save and close the window, whereas the **Apply** button will save, but keep the window open for further configurations.

For more information on the user interface refer to the documents available in the **Help** section of EnergyCenter® software.

4. Adding WRC to EnergyCenter®

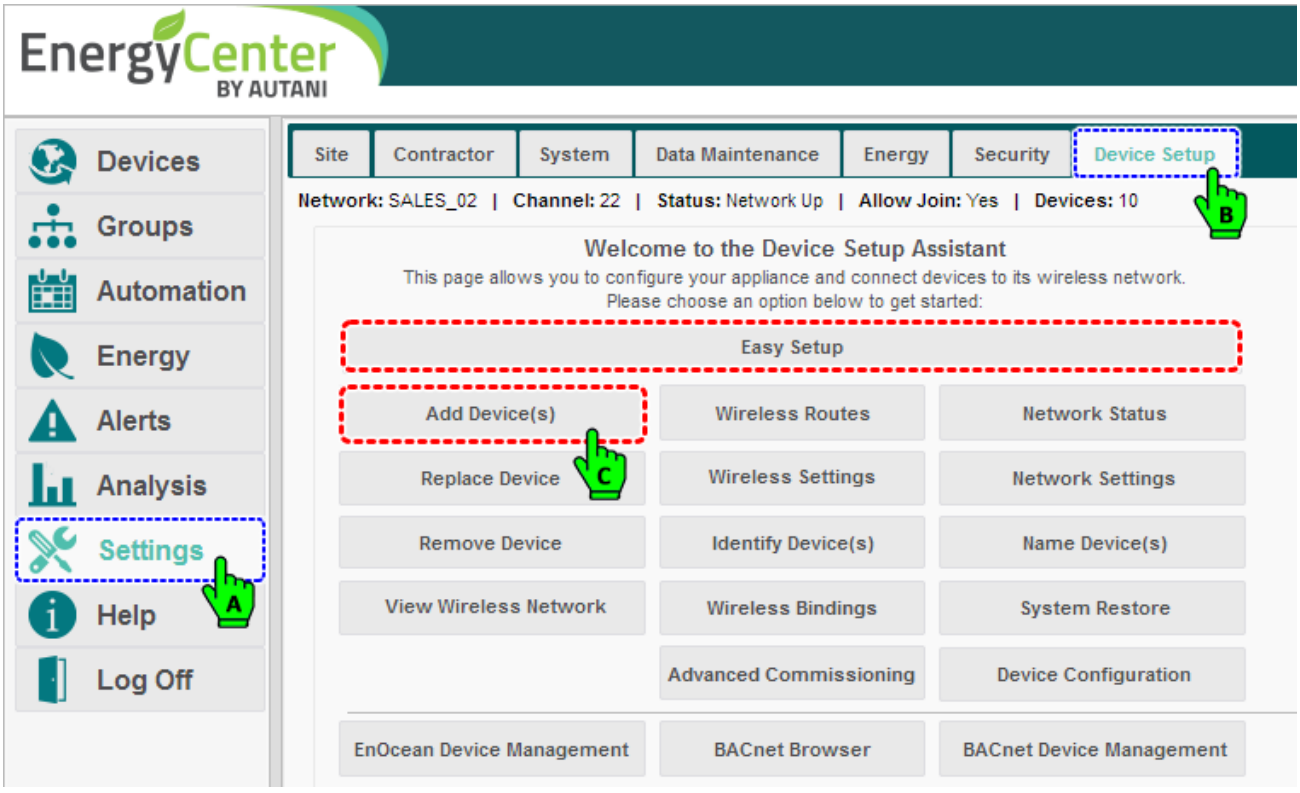
To add a **WRC** to the Autani Manager and configure it through **EnergyCenter®** software, proceed as follows:

1. Log on to **EnergyCenter®** using the credentials provided.
2. By default, the browser will load the **Device** page with the **Dashboard** data.

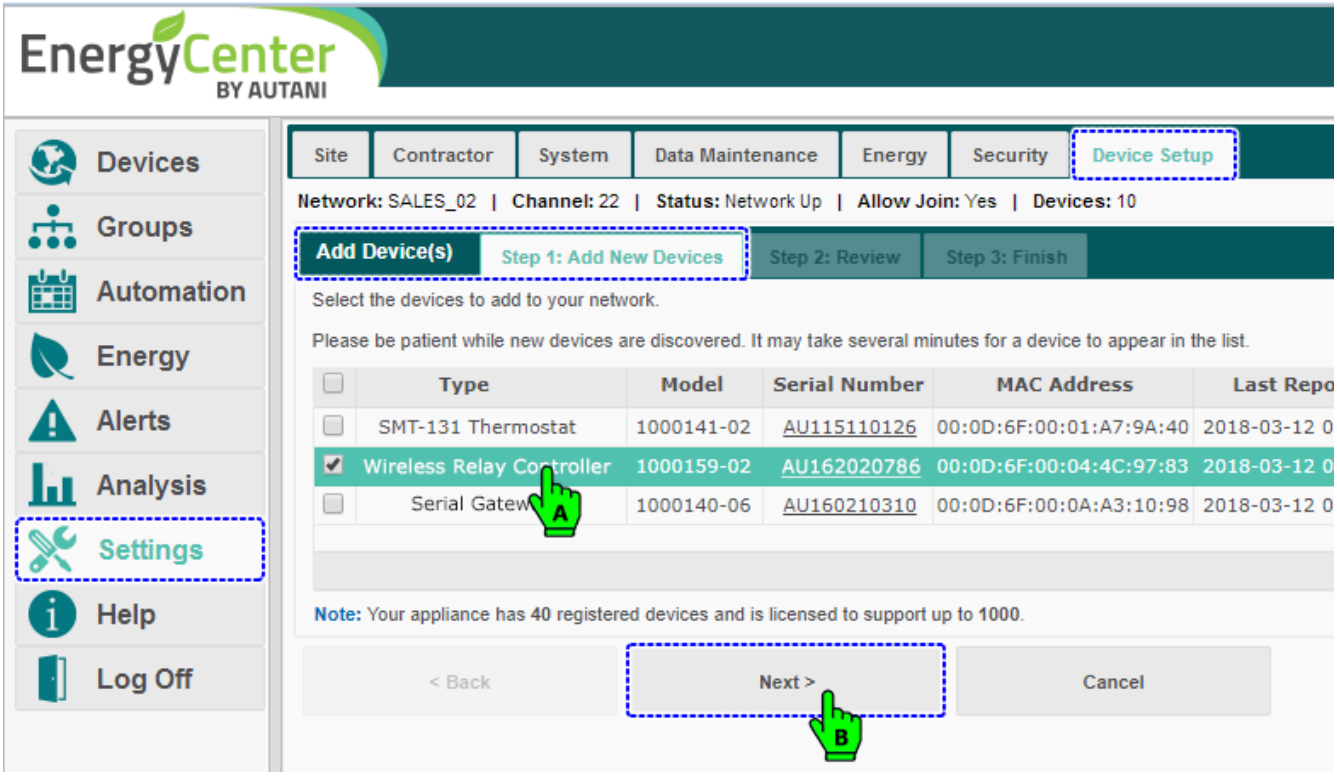


3. Click **Settings** > **Device Setup** > **Add Device(s)**.

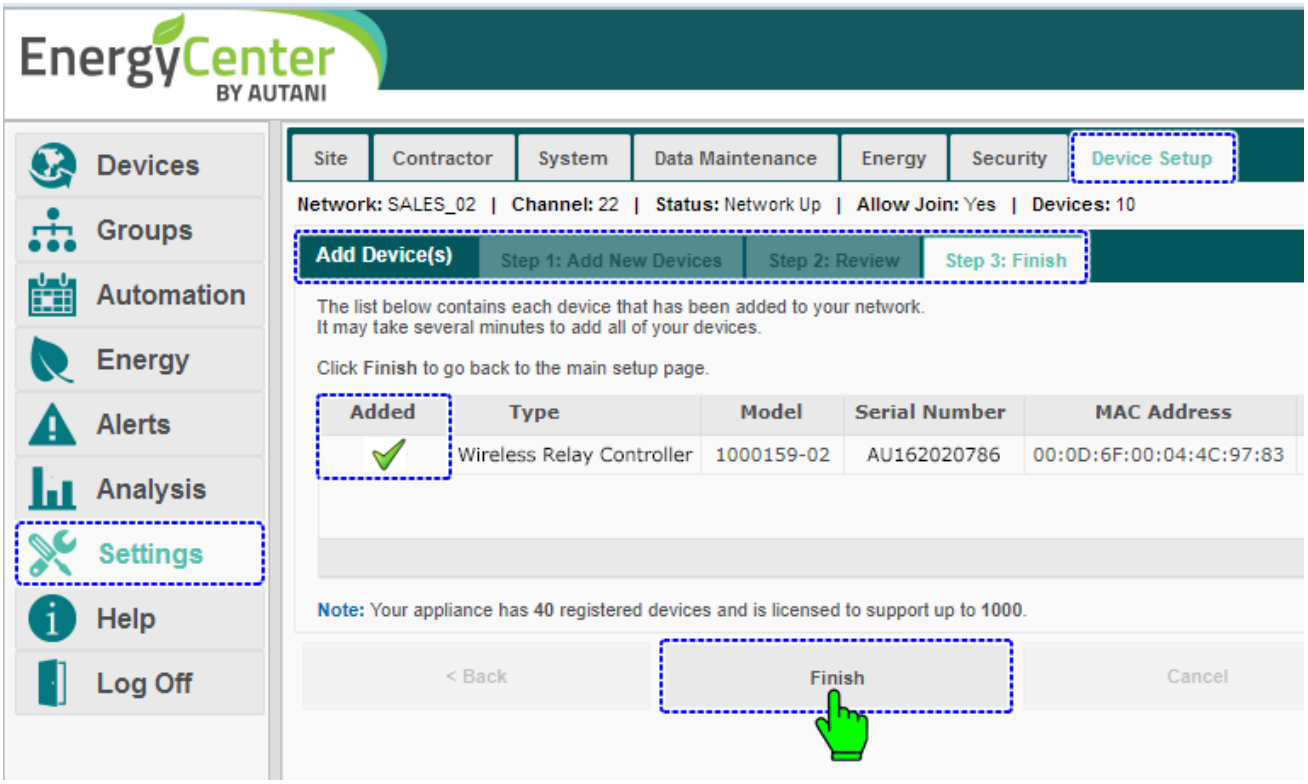
   NOTE: If the **Add Device(s)** button is not available, proceed with the **Easy Setup** wizard.



4. The **Add Device(s)** page loads with a list of nearby devices available. Select your **WRC** from the list and click **Next**.
   NOTE: The system may need a few seconds to discover the nearby devices.



5. The next screen allows the user to **Review** the selected device. Review the selection and click **Next** to proceed.
6. The last screen confirms the addition of the WRC to the system. Click the **Finish** button to complete the process.



5. Configuring Lights

This document will describe how to use the WRC to control two-circuit lighting. This is the most common application of the WRC and can be configured to use accessories like occupancy sensors, photocell sensors, switches, dimmers, etc., along with software features such as scheduling.

There are three major profiles for configuring and controlling applications using a WRC:

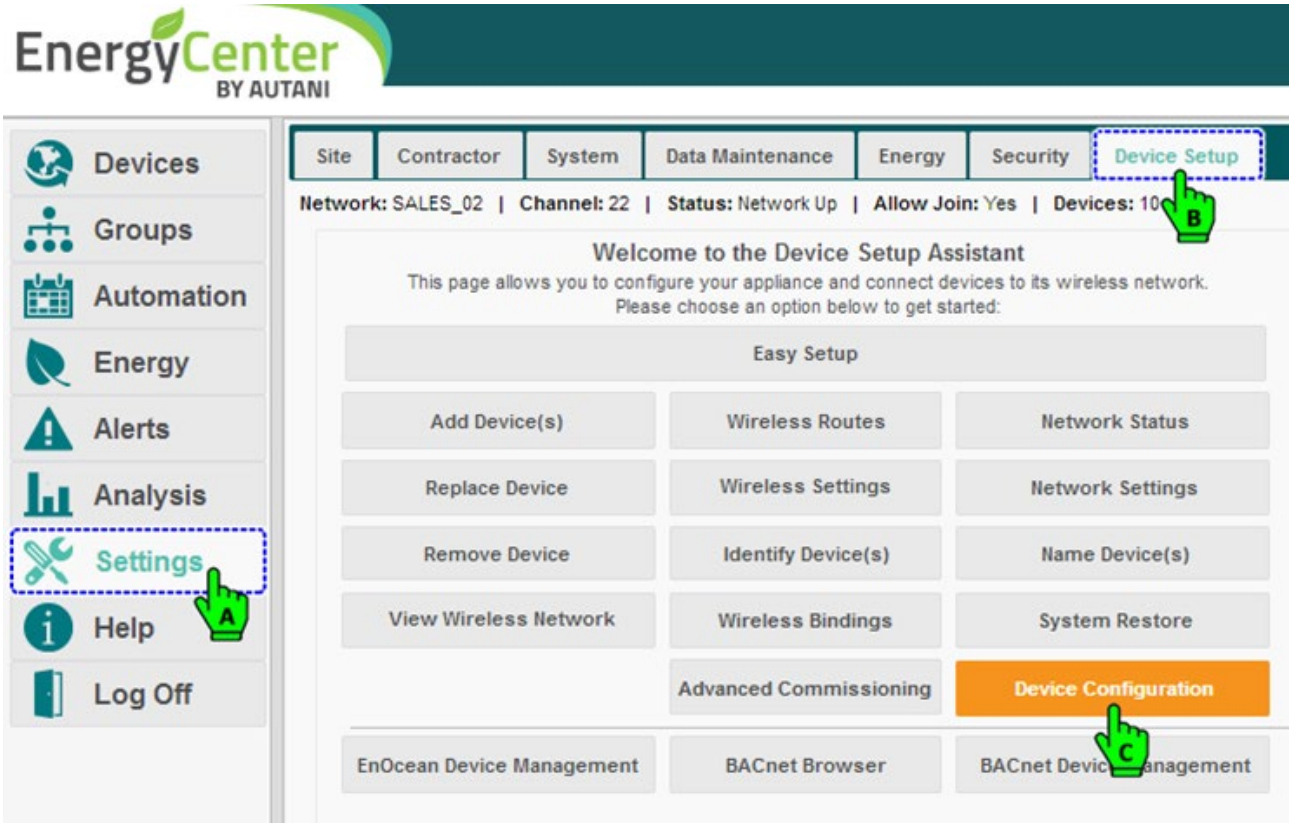
- Level Control (Dimming)
- ON/OFF
- Load Control
- Mixed profiles of the above three

5.1. Using "Device Configuration" to setup WRC

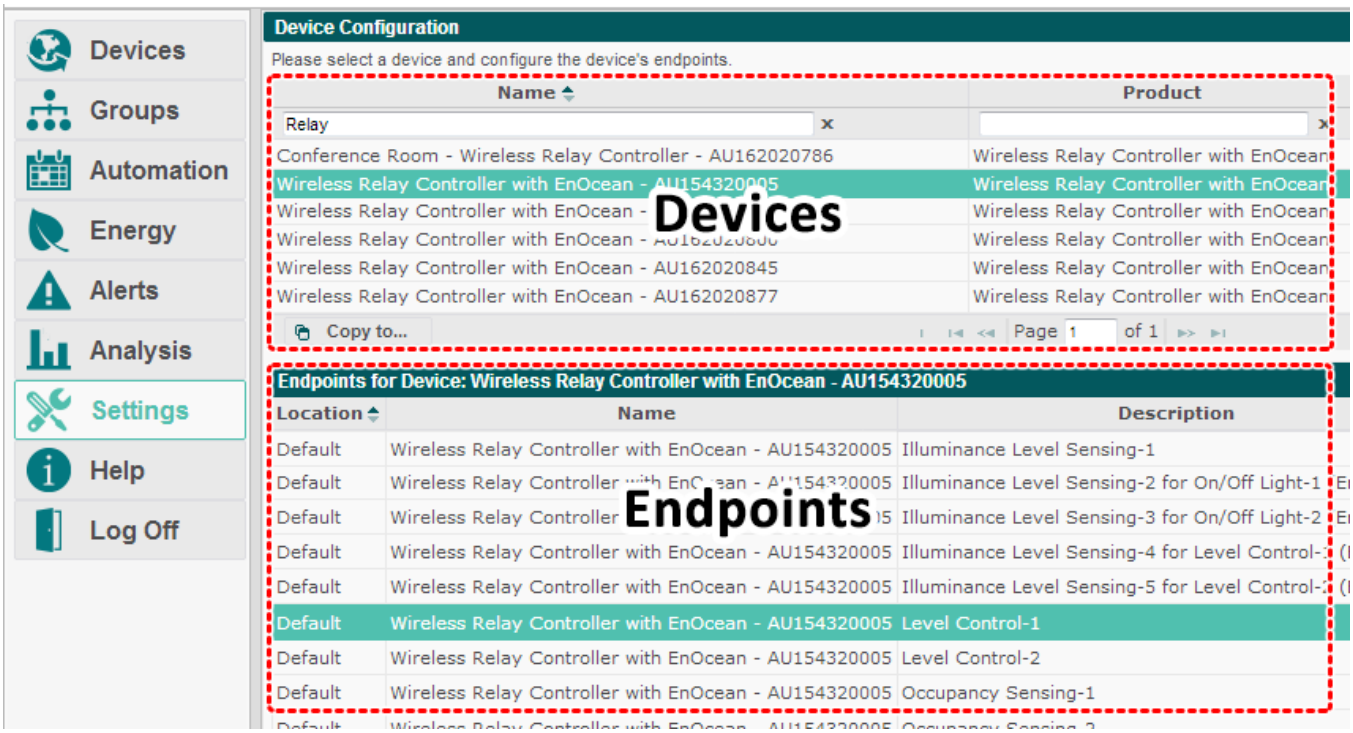
The **Device Configuration's** page will allow you to configure the **endpoints** for the WRC. The following sub-sections will explain the basic instructions needed to configure lights.

5.1.1. Searching a Device in "Device Configuration"

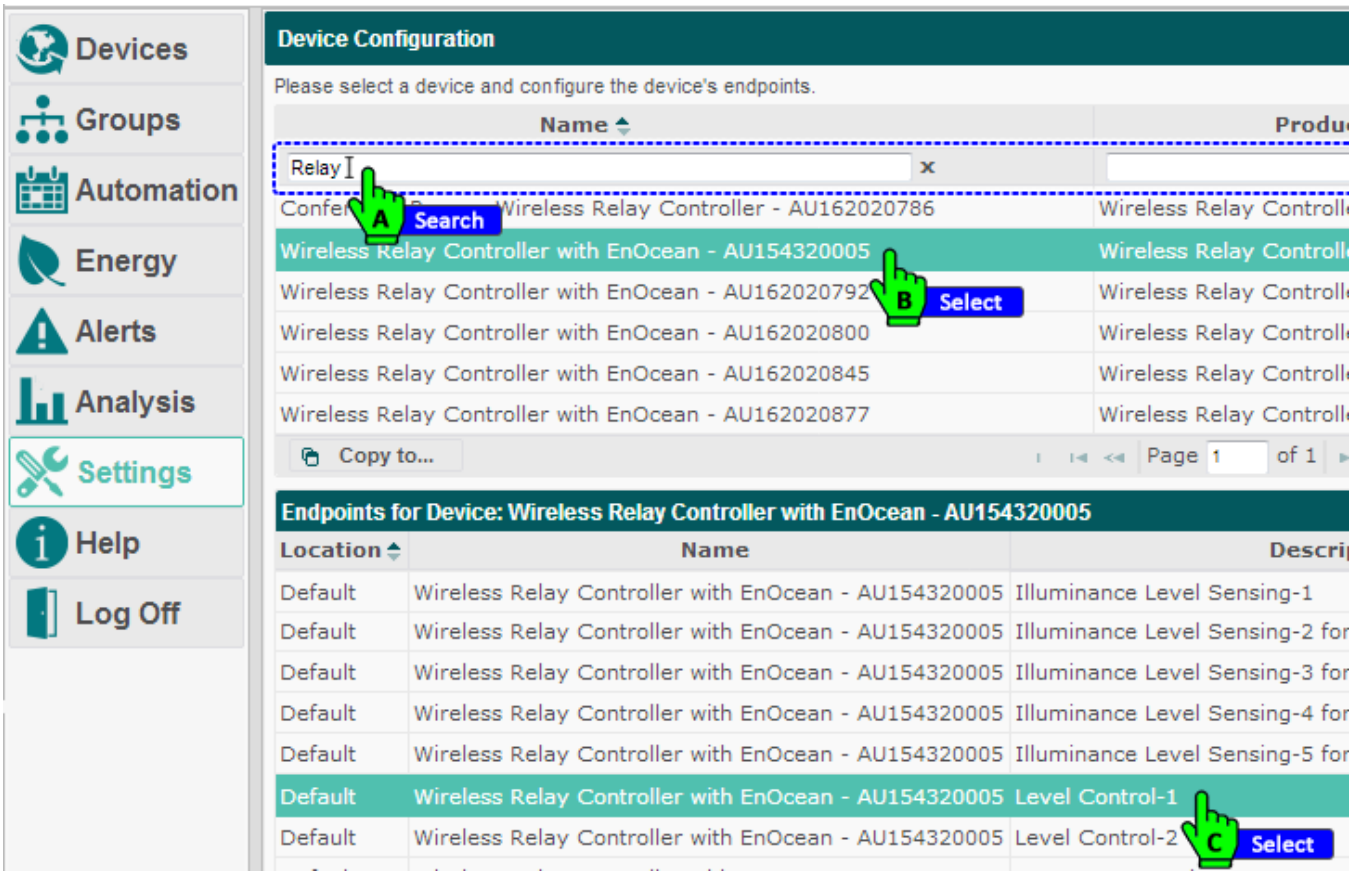
1. Select **Settings** > **Device Setup** > **Device Configuration**.



2. The **Device Configuration** page appears. The top section shows the list of Devices available, and the bottom section shows the list of endpoints for the selected device.

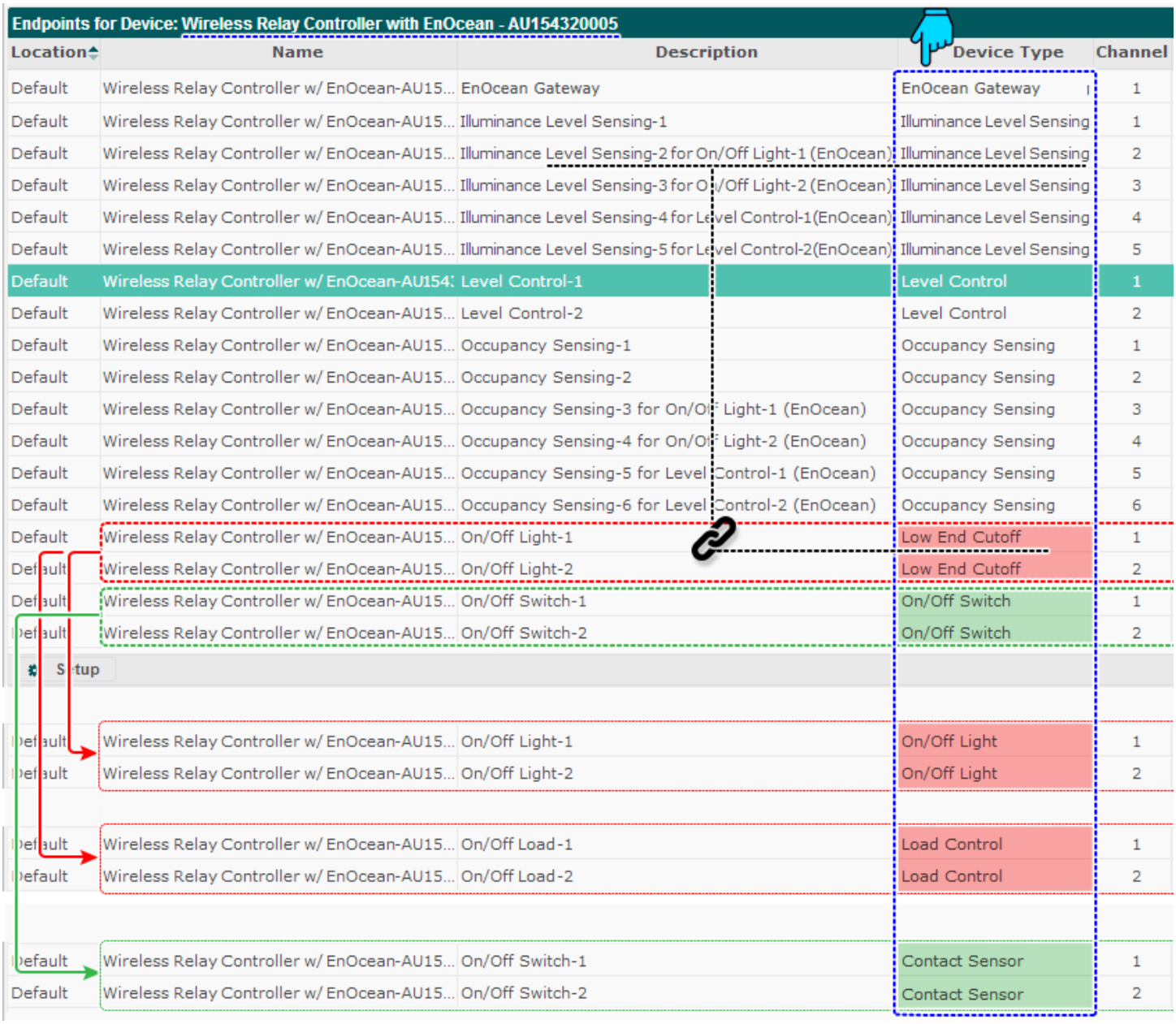


3. Search for the applicable **WRC** by name or serial number, and select it from the search results. The endpoints for the selected WRC will be displayed in the lower section.



5.1.2. Available Endpoints for a WRC

1. Following are the list of endpoints available for a **WRC**. There are both wired and wireless endpoints available, to configure (Level) Dimming and ON/OFF for a circuit.



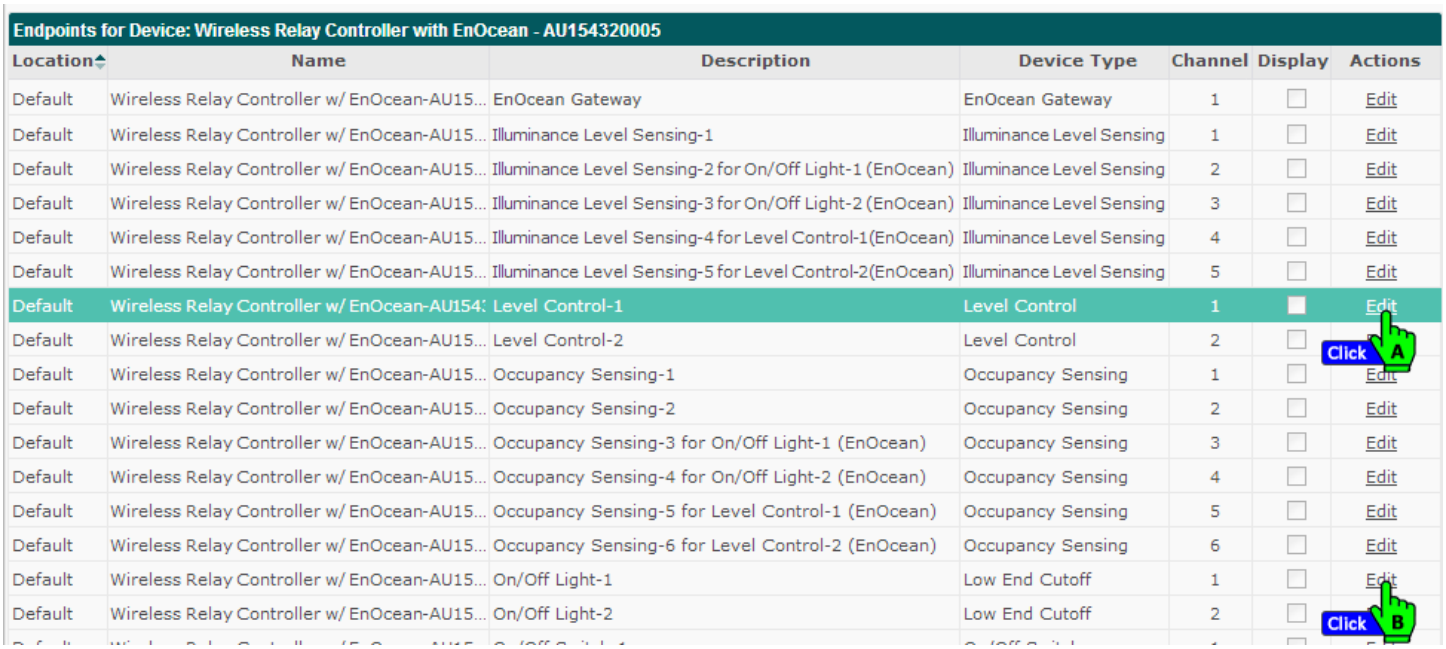
Endpoints for Device: Wireless Relay Controller with EnOcean - AU154320005

Location	Name	Description	Device Type	Channel
Default	Wireless Relay Controller w/ EnOcean-AU15...	EnOcean Gateway	EnOcean Gateway	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	Illuminance Level Sensing-1	Illuminance Level Sensing	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	Illuminance Level Sensing-2 for On/Off Light-1 (EnOcean)	Illuminance Level Sensing	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	Illuminance Level Sensing-3 for On/Off Light-2 (EnOcean)	Illuminance Level Sensing	3
Default	Wireless Relay Controller w/ EnOcean-AU15...	Illuminance Level Sensing-4 for Level Control-1(EnOcean)	Illuminance Level Sensing	4
Default	Wireless Relay Controller w/ EnOcean-AU15...	Illuminance Level Sensing-5 for Level Control-2(EnOcean)	Illuminance Level Sensing	5
Default	Wireless Relay Controller w/ EnOcean-AU154	Level Control-1	Level Control	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	Level Control-2	Level Control	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-1	Occupancy Sensing	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-2	Occupancy Sensing	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-3 for On/Off Light-1 (EnOcean)	Occupancy Sensing	3
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-4 for On/Off Light-2 (EnOcean)	Occupancy Sensing	4
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-5 for Level Control-1 (EnOcean)	Occupancy Sensing	5
Default	Wireless Relay Controller w/ EnOcean-AU15...	Occupancy Sensing-6 for Level Control-2 (EnOcean)	Occupancy Sensing	6
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Light-1	Low End Cutoff	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Light-2	Low End Cutoff	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Switch-1	On/Off Switch	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Switch-2	On/Off Switch	2
Setup				
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Light-1	On/Off Light	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Light-2	On/Off Light	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Load-1	Load Control	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Load-2	Load Control	2
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Switch-1	Contact Sensor	1
Default	Wireless Relay Controller w/ EnOcean-AU15...	On/Off Switch-2	Contact Sensor	2

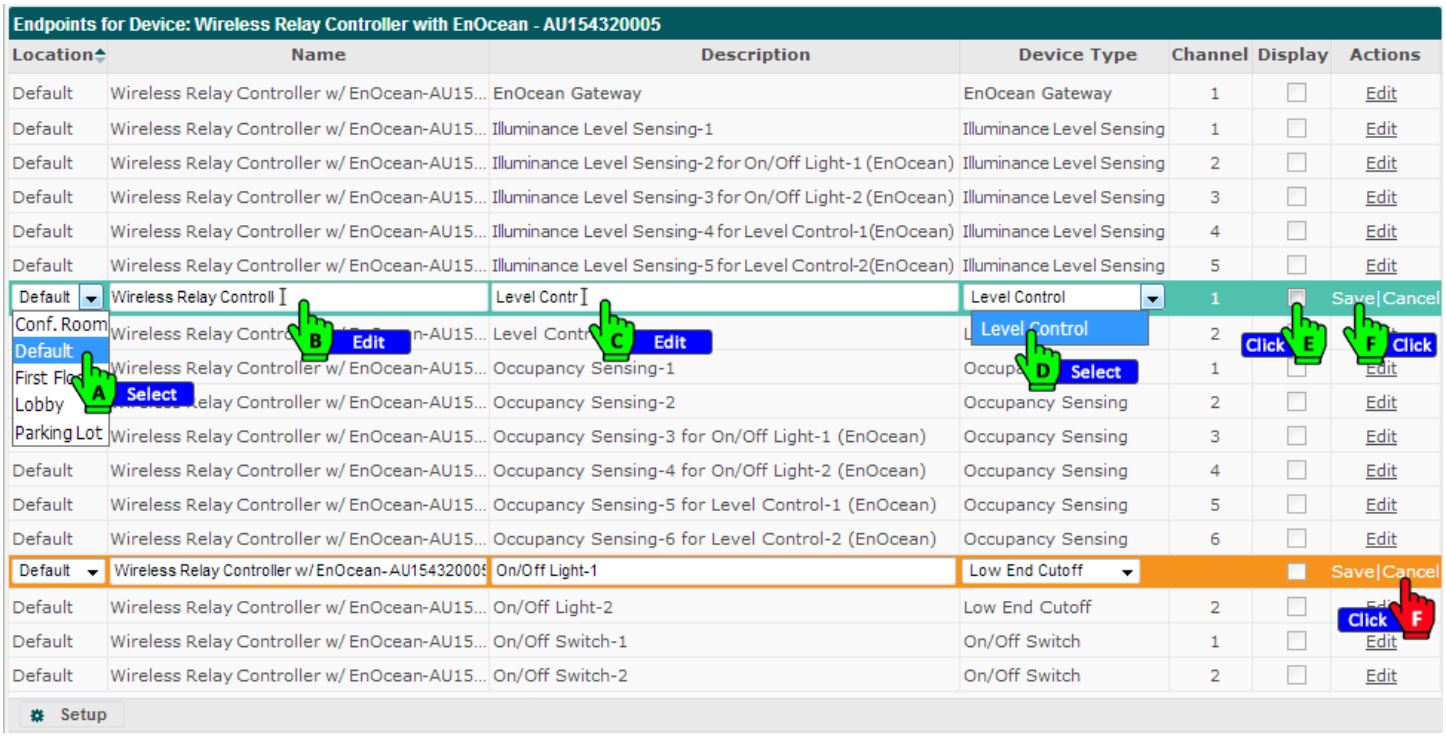
- There are endpoints mapped within other endpoints. For example, the endpoint **Level Sensing-2 for ON/OFF Light-1** has a mapped endpoint **ON/OFF Light-1** to configure a relay for Low End Cutoff.
- The channel set with **Low End Cutoff** endpoint, can be set to any of the following types (marked in red):
  - Low End Cutoff
  - ON/OFF Light
  - ON/OFF Load
- The channel set with **ON/OFF Swtich** endpoint, can be set to any of the following types (marked in green):
  - ON/OFF Switch
  - Contact Sensor (typically used for door or window contact applications)

5.1.3. Show, Hide or Edit Endpoints for a WRC

1. Search for and select a **WRC** in the Device Configuration page (select **Settings** > **Device Setup** > **Device Configuration** to reach the search page). The **endpoints** related to the selected device are displayed in the **Endpoints** section.
   - In the **Actions** column, click **Edit** to modify an endpoint to be modified. You can edit multiple endpoints together.



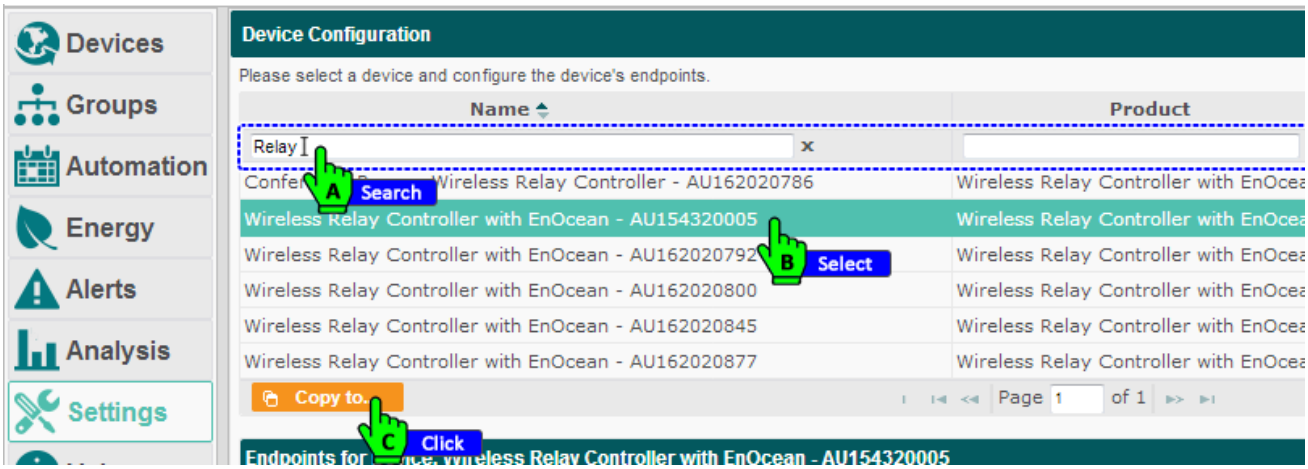
2. Note that all the fields (except for the **Channel** column) will now be in editable mode for the selected endpoint.



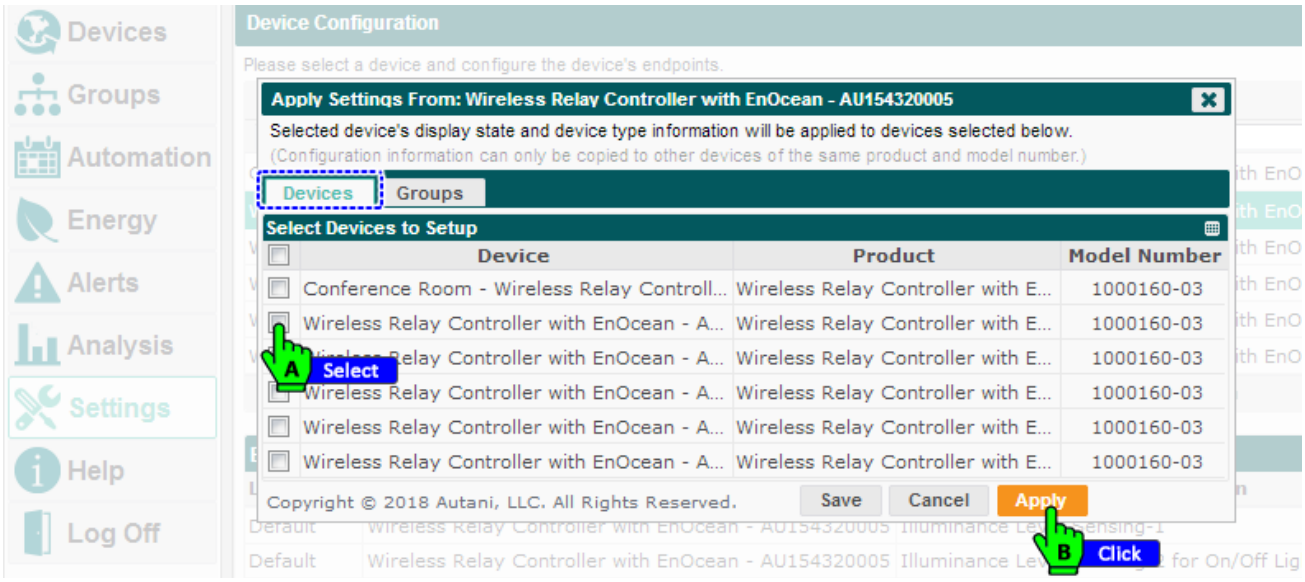
- Choose a location for the **endpoint** in the **Location** column.
- To edit the name or description of an endpoint, edit the fields in **Name** and **Description** columns respectively**.**
- There are endpoints to which a device type can be defined using **Device Type** column.
- To Hide or Show an **endpoint** to a WRC, check or uncheck the **Checkbox** in the **Display** column.
- In the **Actions** column, click **Save** to accept the changes or click **Cancel** to undo the changes.

5.1.4. Copy a Device Configuration to Another Device

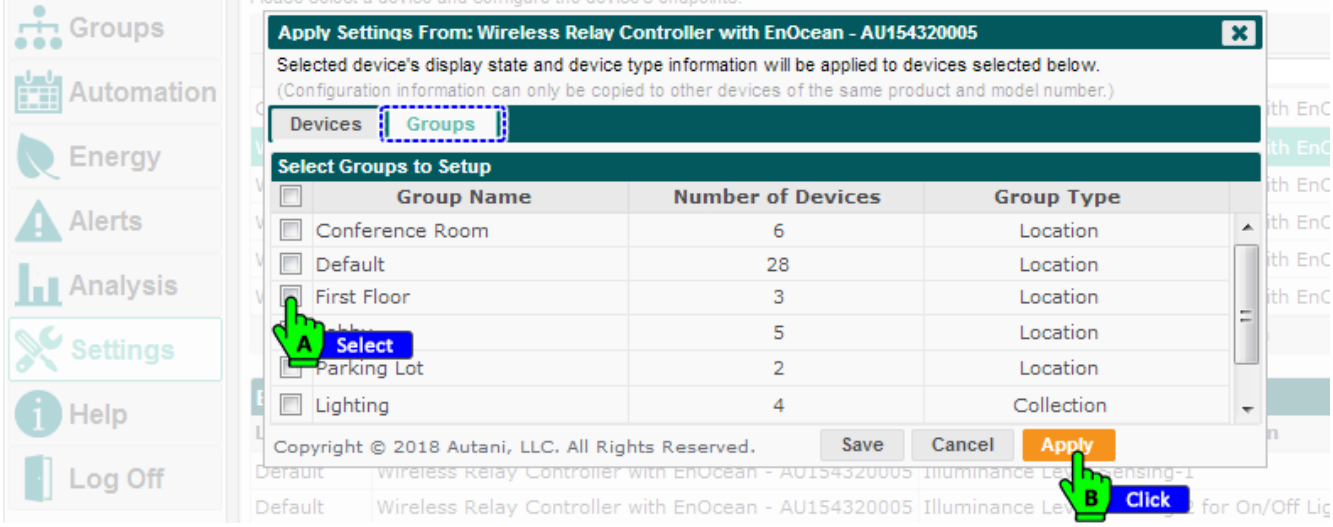
1. Search for and select a **WRC** in the Device Configuration page (select **Settings** > **Device Setup** > **Device Configuration** to reach the search page) and click **Copy to...** to copy the configuration of the selected device to another device.



2. The **Apply Settings From** window appears, with the **Devices** tab selected by default. Select one or more devices to apply the copied settings to and click **Apply**.

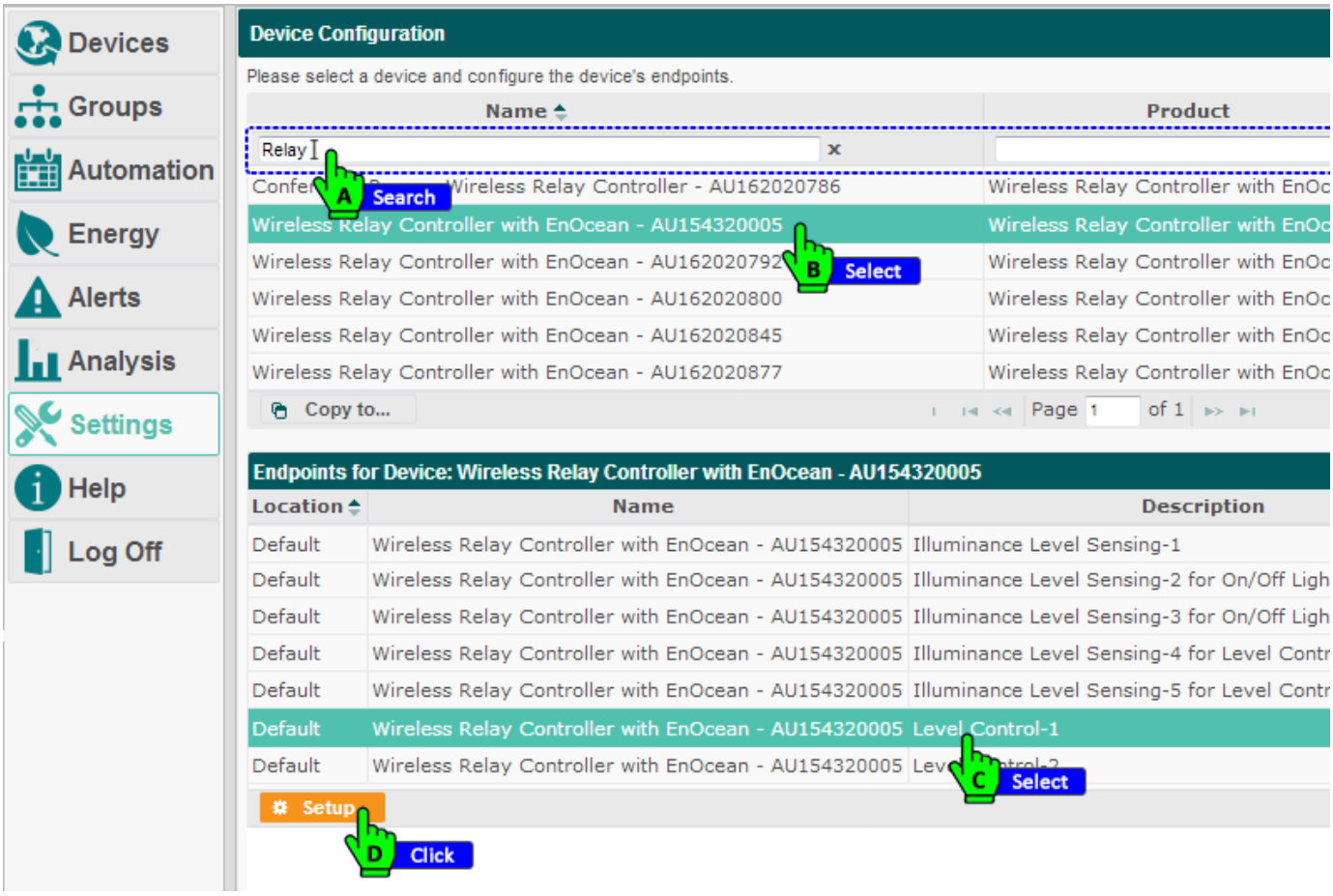


3. Click on the **Groups** tab and select one or more groups from the list to apply the copied settings. The settings will affect the same type of devices only (e.g., changes made to a WRC will not affect a thermostat in the same group). Click **Apply**.

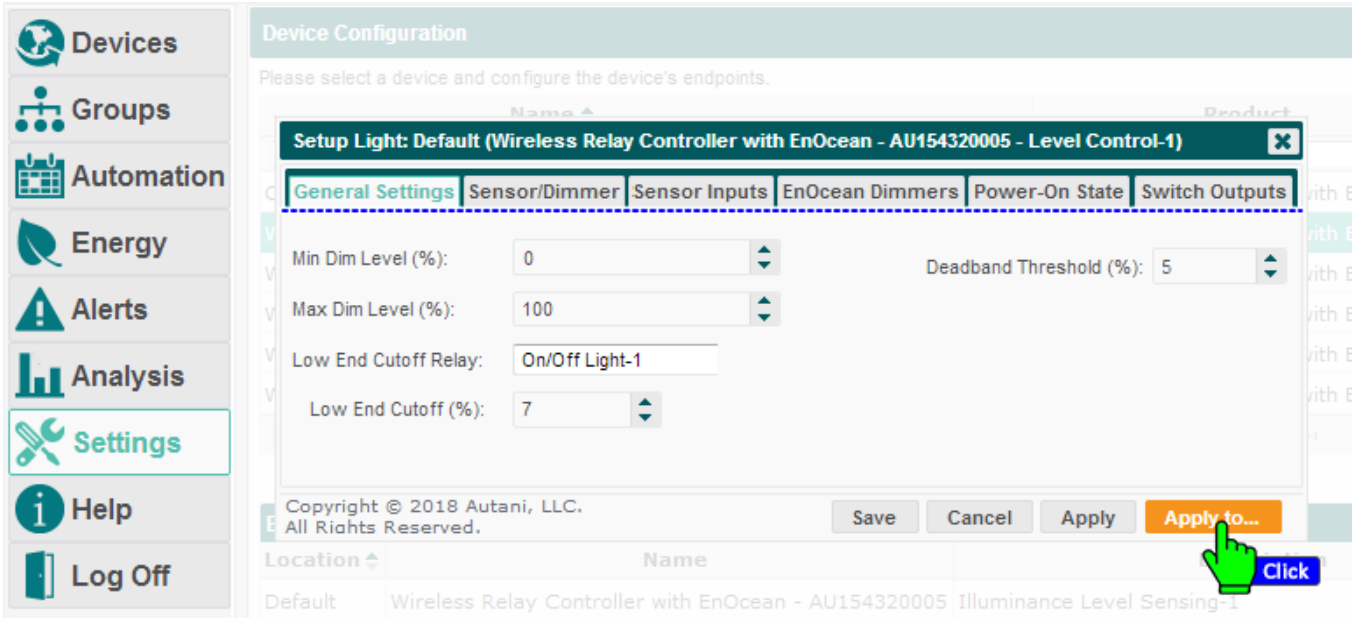


5.1.5. Copy Endpoint Configuration to other Devices

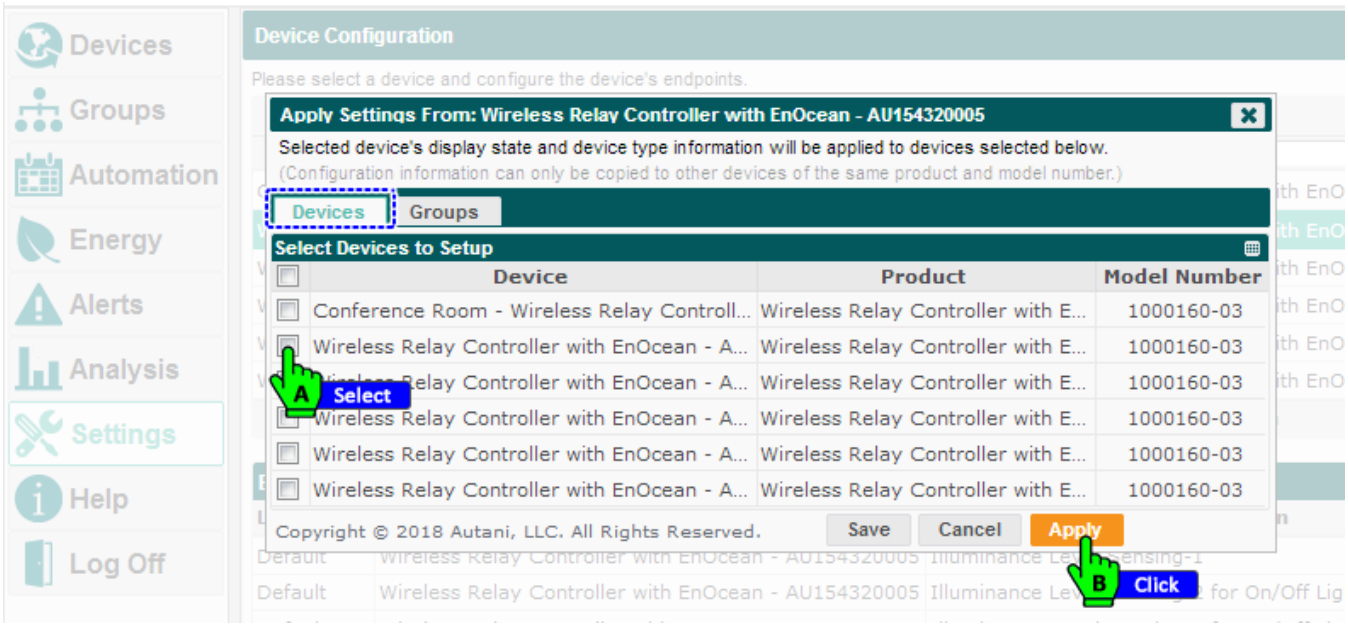
1. Search for and select a **WRC** in the Device Configuration page (select **Settings** > **Device Setup** > **Device Configuration** to reach the search page). Select an endpoint (**Level Control-1**) from the list in endpoints section. Click **Setup**.



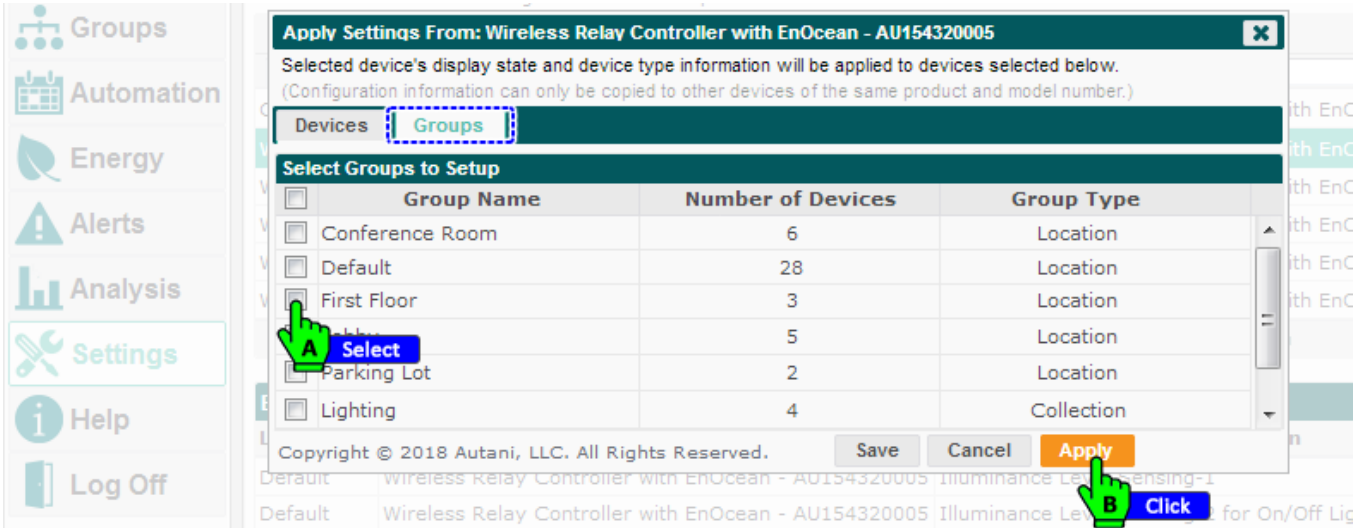
2. The **Setup** window appears. Make changes as necessary across the tabs, and click **Apply to...**



3. The **Apply Settings From** window appears, with the **Devices** tab selected by default. Select one or more devices to copy the settings to and click **Apply**.



4. Click on the **Groups** tab and select one or more groups from the list to apply the copied setting. Click **Apply**.



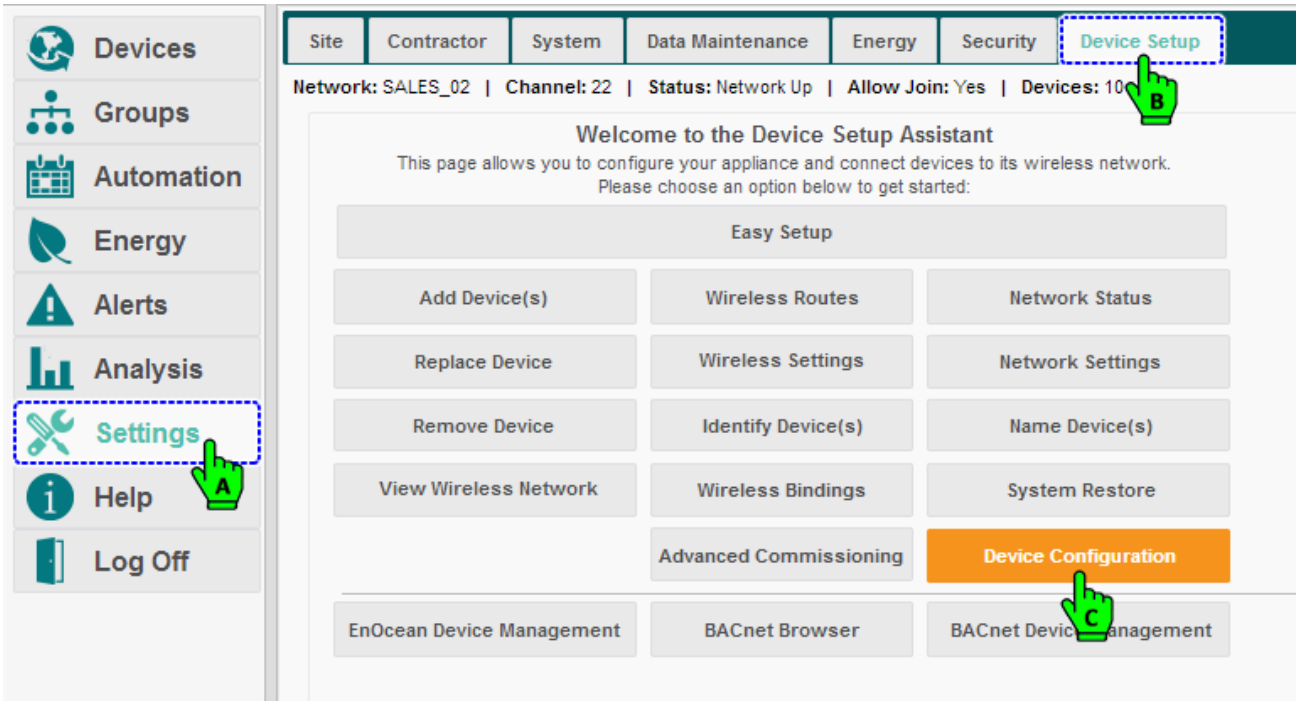
5.2. Level Control (Dimming Configuration)

5.2.1. Light Setup Configuration

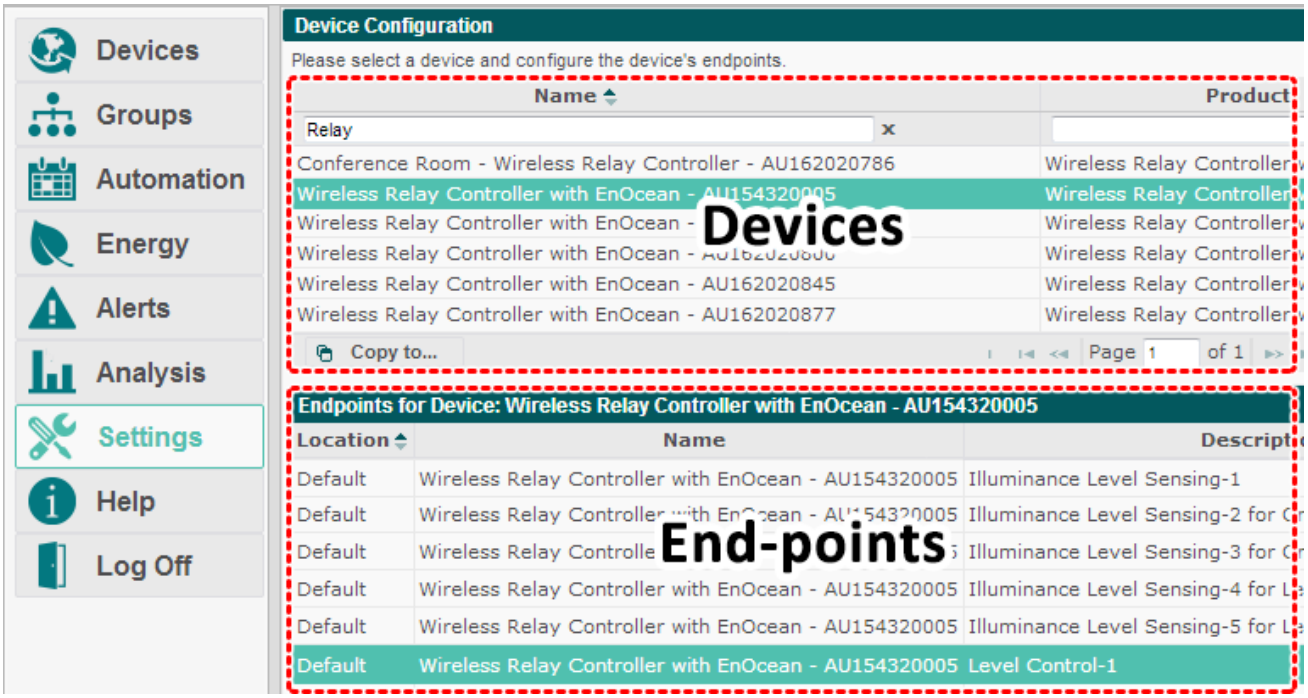
The following procedures are common for both **Level Control-1** and **2** channels (two channels to control two line of circuits of light system). The **Light Setup** can be performed through either of the following sections using **EnergyCenter®** software. The **setup** screen will be the same in both sections.

- **Settings** > **Device Setup** > **Device Configuration**
- **Devices** > **Lights**

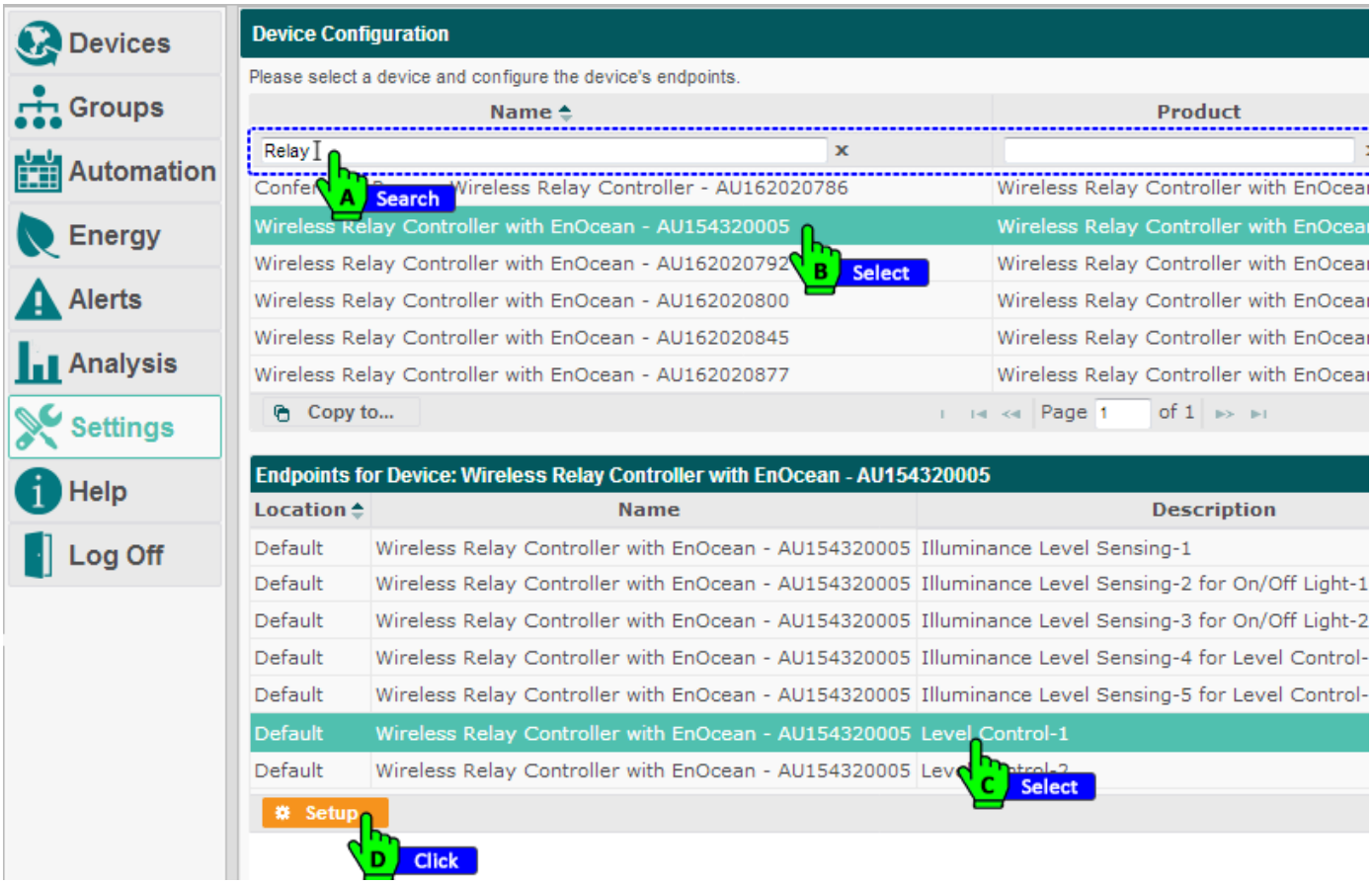
1. Select **Settings** > **Device Setup** > **Device Configuration**.



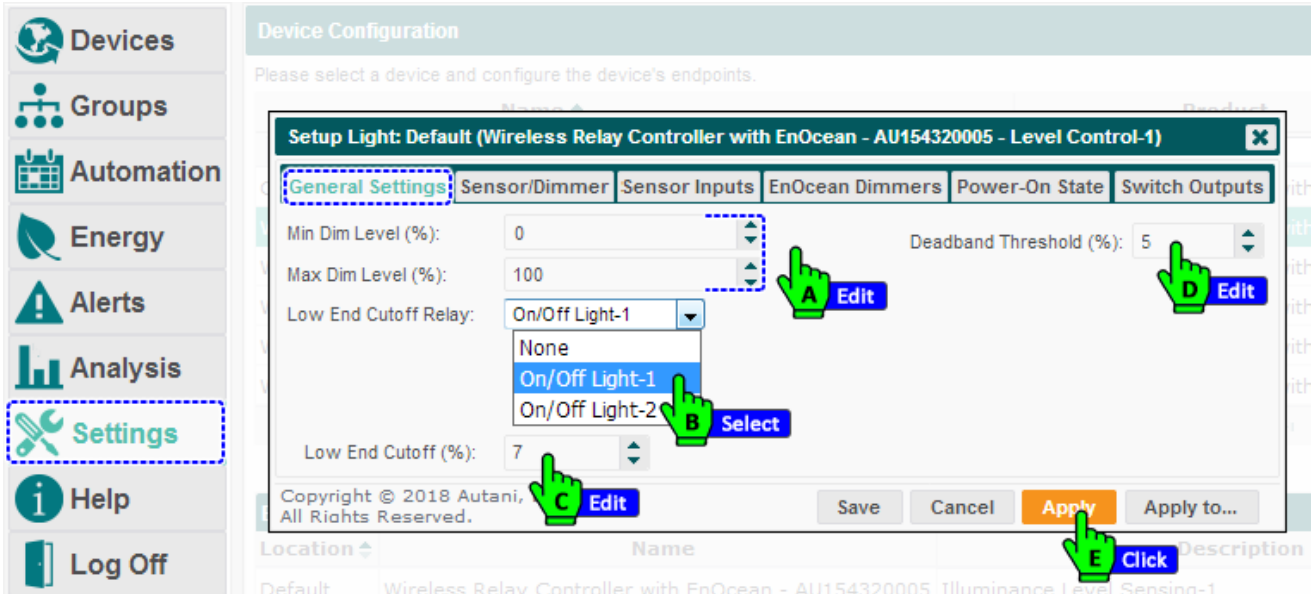
2. The **Device Configuration** page appears with the list of devices in the top section and a list of endpoints for the selected device (WRC) in the lower section.



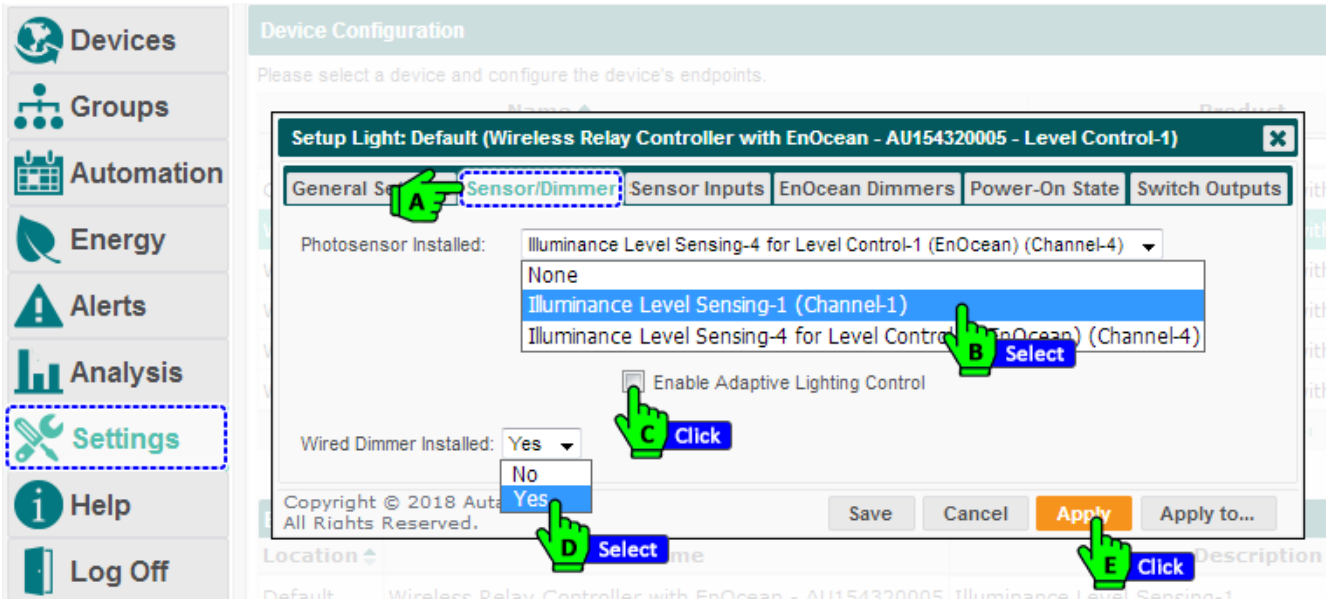
3. Search for the applicable **WRC** by name or serial number, and select it from the search results. Select the endpoint **Level Control-1** from the list in the endpoints section. Click **Setup**.



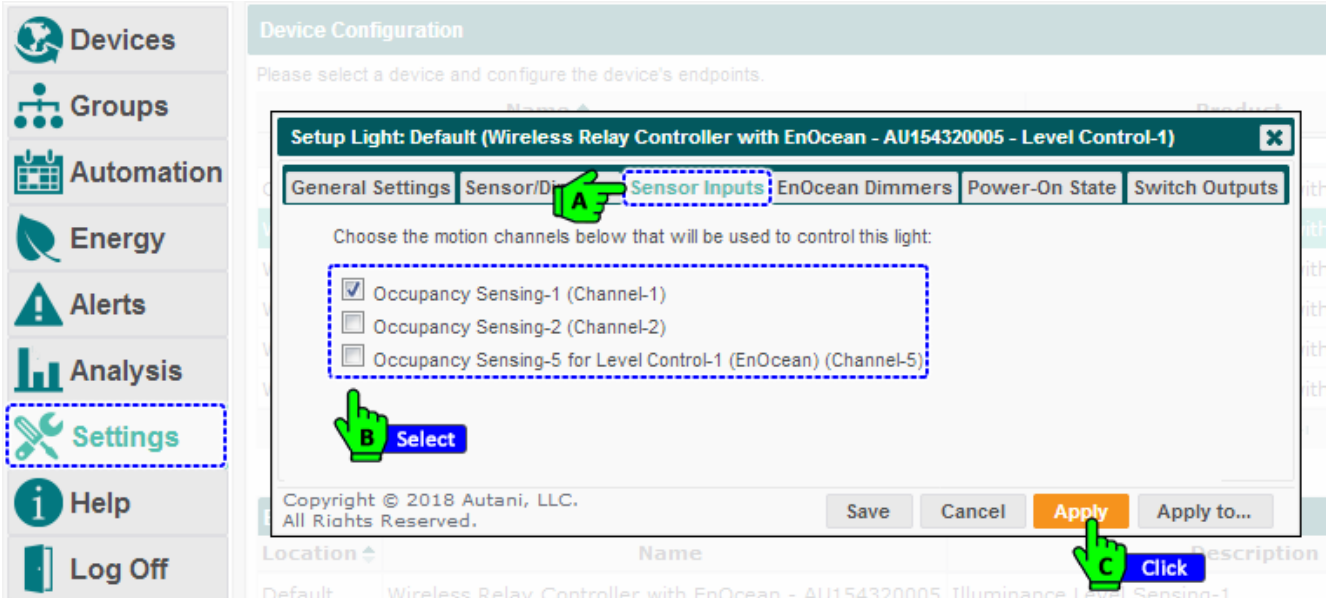
4. The **Setup Light** window appears with the tab **General Settings** selected by default. Here you can configure the Dimming Level for the chosen **Level Control-1**.
   - Set the Min & Max Dim Levels (%) to declare the range for Dimming Level, usually 0-100%.
   - Even though the Min value for Dimming Level is set to 0%, the lights will be still ON at 1% with less luminance. To overcome this, choose a Low End Cutoff Relay and set the Low End Cutoff (%) to the required %. (Example: if the Low End Cutoff (%) is set to 7%, the selected relay will switch OFF the lights when Dim Level crosses below 7%. If your fixtures can "dim to off" then the Low End Cutoff is not required.)
   - Set the Deadband Threshold (%) for the photocell sensors used for daylight harvesting, usually 5%.



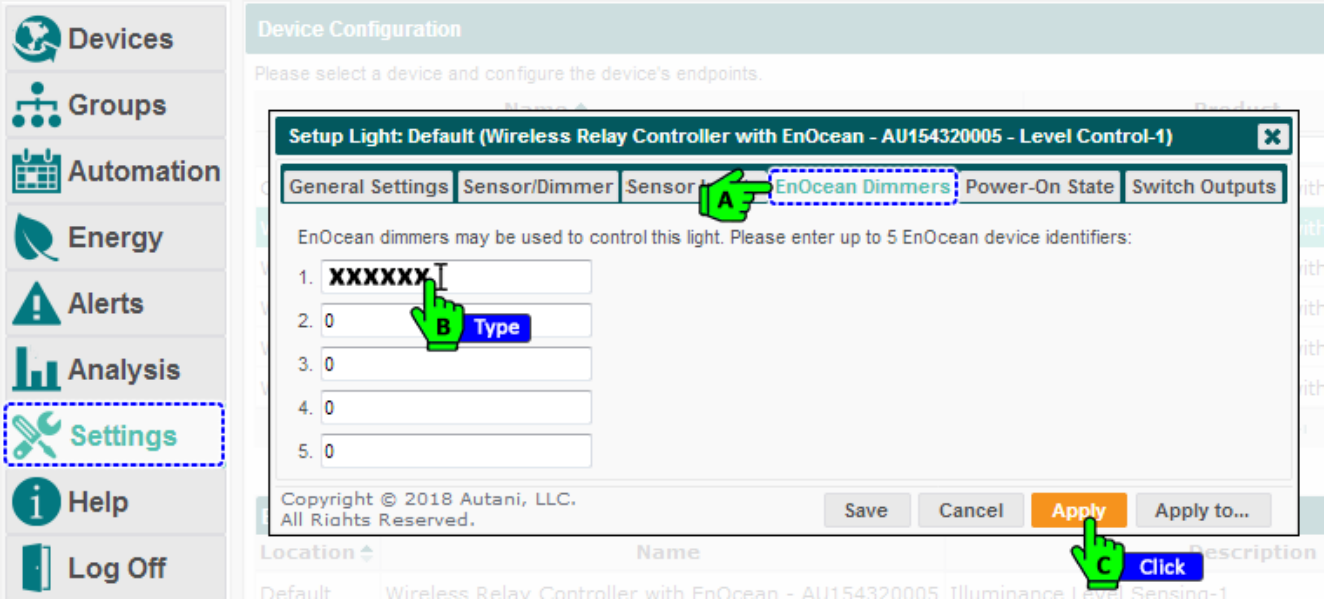
5. Select the next tab **Sensor/Dimmer** to configure the sensors and dimmers for Level Control-1.
   - Select a **Photosensor** from the dropdown; there may be both wired and wireless sensors installed. Select the sensor based on the profile chosen. Select the wired **Illuminance Level Sensing-1** for Level Control-1, or select **None** if no sensors are installed. (**NOTE**: Wireless sensors will show up only if they are already mapped.)
   - If you have a photosensor installed, click on **Enable Adaptive Lighting Control**. The photocell sensors will read the light level from ambient and outside light to maintain the desired light level. (Example: if your physical dimmer is at 70% and it is really bright outside, lights will be dimmed to maintain an ambient light level of 70%.)
   - On the **Wired Dimmer Installed** dropdown, select **Yes** if one is installed or **No** if one is not installed.



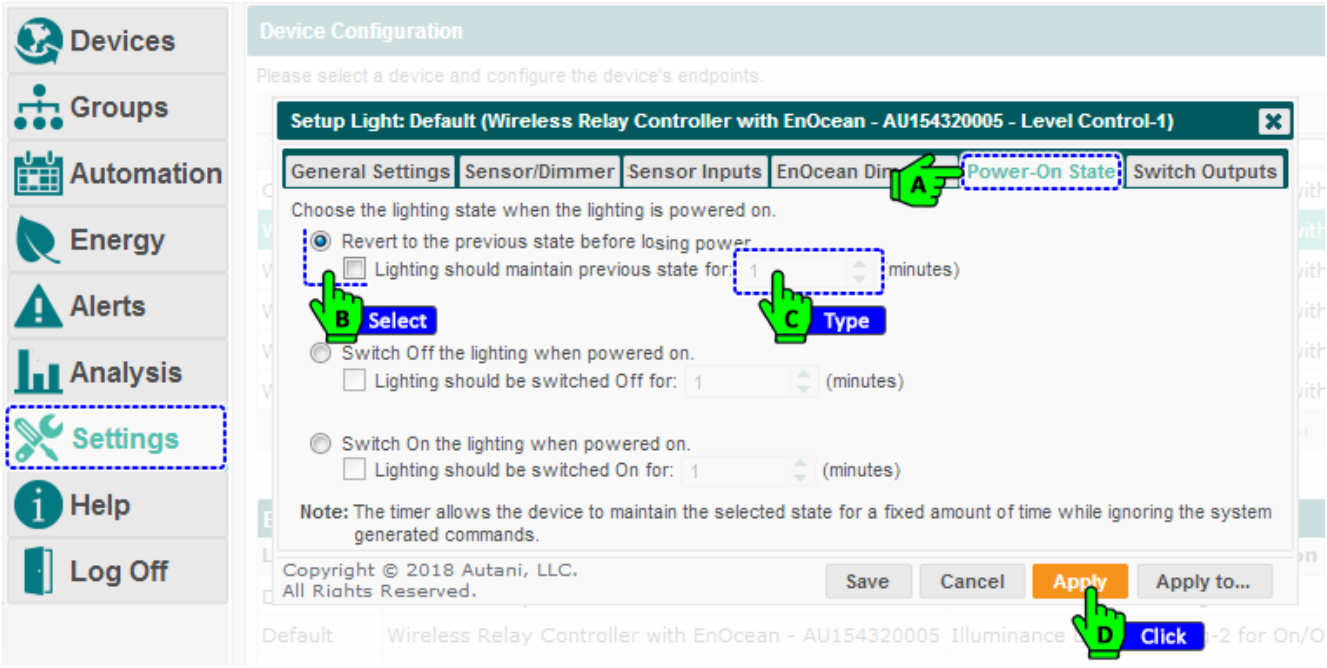
6. Select the next tab **Sensor Inputs** to choose which occupancy sensors to control the lights. There are three channels available; you can choose single or multiple channels.
   - The first channel **Occupancy Sensing-1 (Channel-1)** is aligned with 3V RJ11 Connector.
   - The second channel **Occupancy Sensing-2 (Channel-2)** is aligned with 24V RJ11 Connector.
   - The third channel **Occupancy Sensing-5 for Level Control-1 (EnOcean) (Channel-5)** is the wireless EnOcean sensor. It should already be configured before enabling it here. (Refer to section *8.3 Configuring Wireless Motion Sensors*).



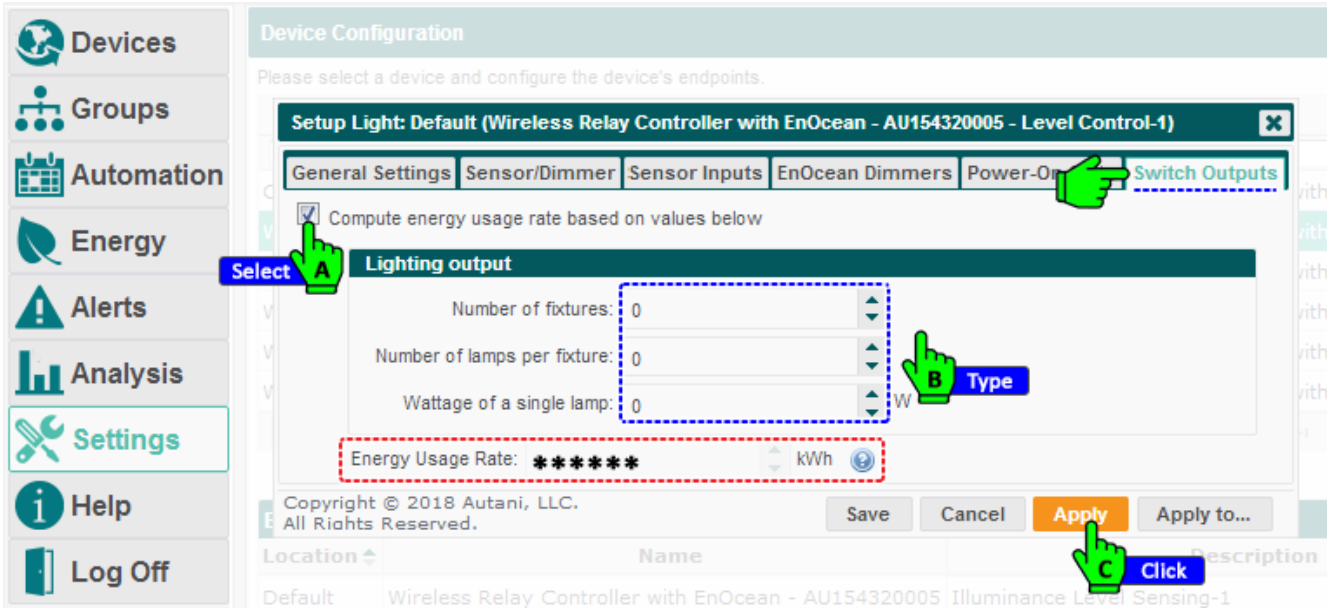
7. Select the next tab **EnOcean Dimmers** to configure the EnOcean Rocker Pads for Level Control-1. Double and single Rocker pads are supported.
   - Enter the Rocker Pad ID in the fields provided. You can configure up to five IDs (identifiers). When configuring a double Rocker Pad enter the ID of one side into a field, and in the next empty field enter '10' + ID for the other side of the Rocker Pad.



8. Select the next tab **Power-On State** to choose how lights behave when they are switched ON and specify the duration for the chosen state.
   - There are three states available. Choose a state, enable the duration checkbox, and enter the duration for the state.



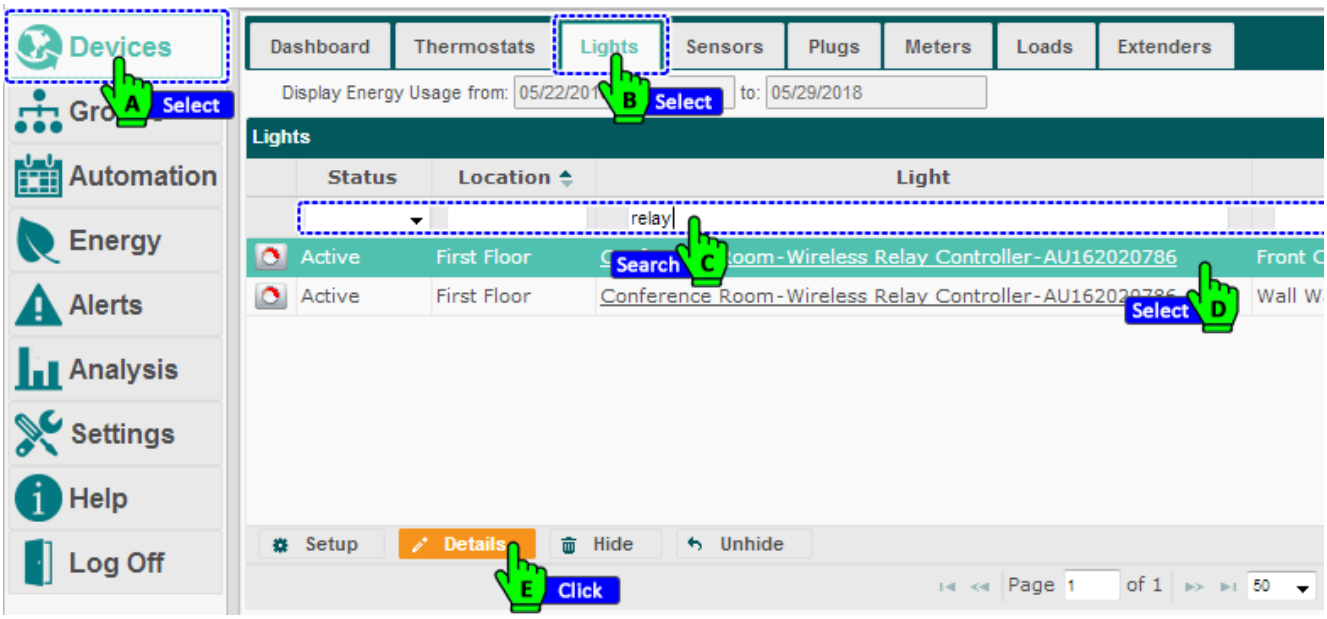
9. Select the next tab **Switch Outputs** to calculate energy estimation for the lighting system.
   - Start by enabling the feature **Compute energy usage...** and enter the values in the **Lighting output** fields to calculate the energy consumption. The **Energy Usage Rate** will be displayed.
   - For more information on this topic refer to section *12 Energy Estimation*.



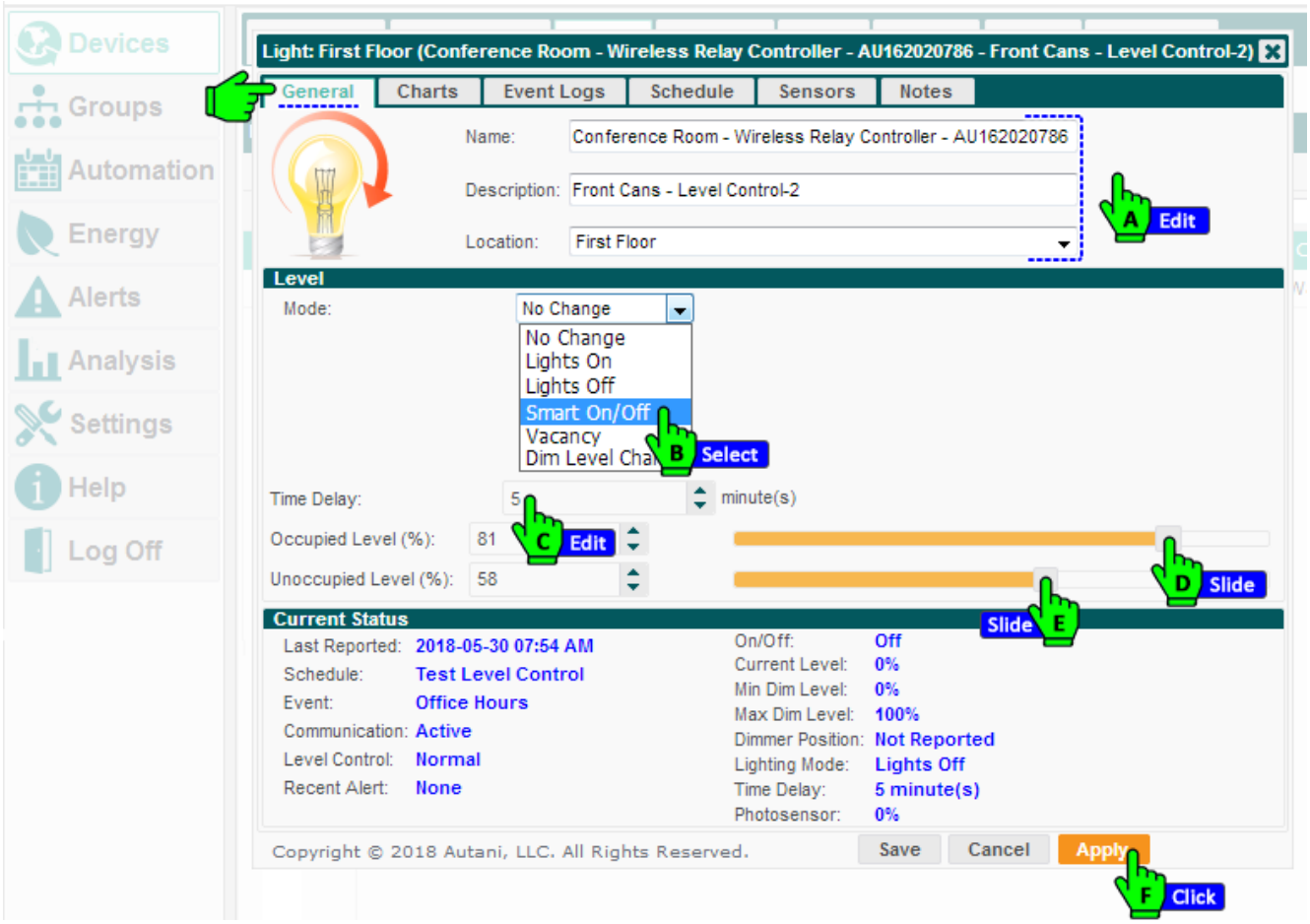
5.2.2. Light Detail Configuration

The following procedures are for both **Level Control-1** and **2** profiles.

1. Select **Devices** > **Lights** and search for a **WRC** by name or serial number. Select a WRC from the search results, and click on **Details**. The icon for the Level Control is .



2. The **Light** window appears with the **General** tab selected by default. Here users can make on-demand changes to the attributes of a light.
    - The top section of the window allows users to edit the Name, Description, and Location of the lights.
    - The **Level** section allows the users to choose a **Mode** and set the **Time Delay** and **Occupancy Level**.
    - **NOTE**: The occupancy based modes (**Smart On/Off** and **Vacancy**) will only be available if they are already associated with the WRC.



- The lower section of the window has details on the **Current Status** of a light's attributes.

  Last Reported: Time and Date information of last communication made by device with the Autani Manager.

  Schedule: Name of the schedule currently assigned to the light from the **Schedule** tab.

  Event: Name of the currently running event within a **Schedule** chosen.

  Communication: The status of the communication between the device and network. (Active/Error)

  Level Control: Displays the current status of Level Control. (Normal/Unknown)

  Recent Alert: Description of the recent alert (None / Error / Warning).

  ON/OFF: Displays current status of the light. (ON/OFF)

  Current Level: The Current Level of the Light in percentage (0-100%).

  Min Dim Level: Displays Minimum Dim Level value. (Dim Level is set through Lights>Setup>General Settings.)

  Max Dim Level: Displays Maximum Dim Level value. (Dim Level is set through Lights>Setup>General Settings.)

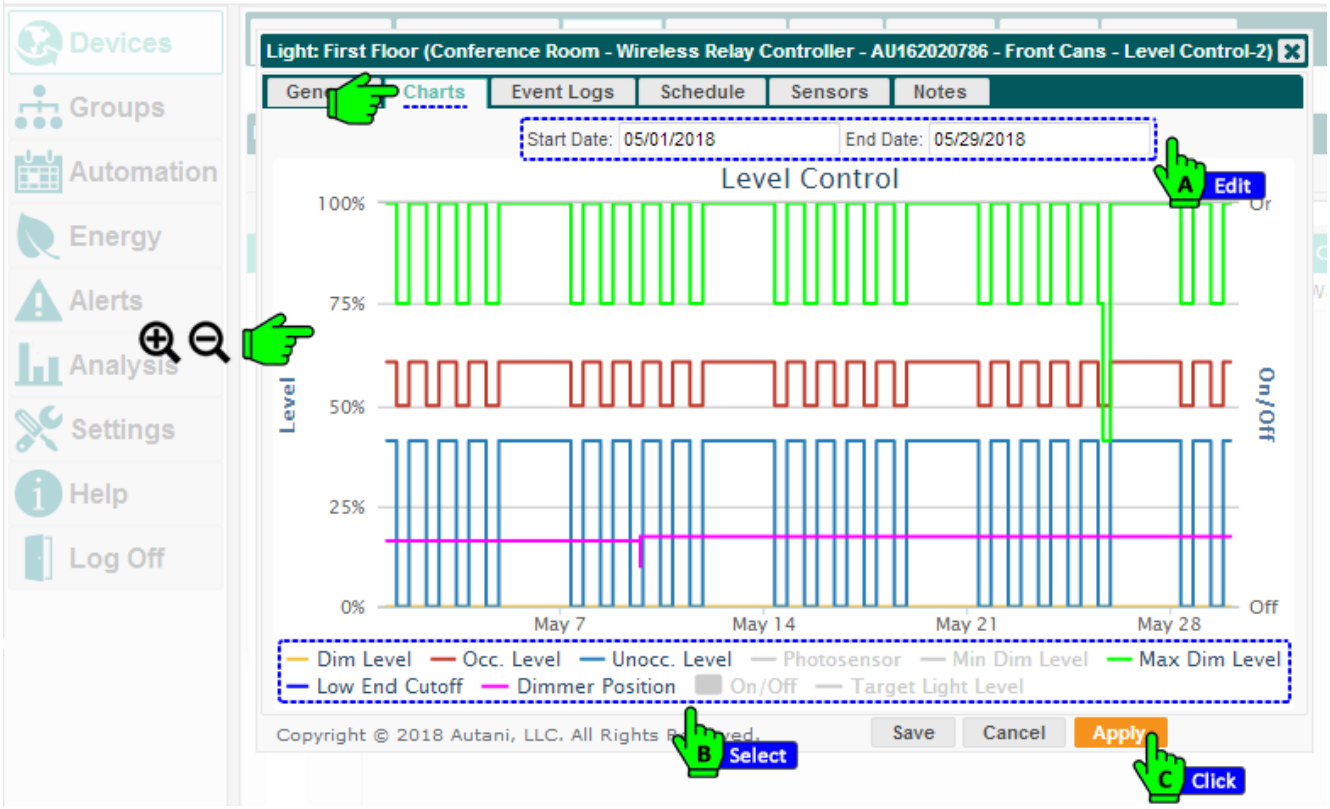
  Dimmer Position: The dimmer position is shown here if a physical dimmer is connected.

  Lighting Mode: Displays the Mode set in **Level** section.

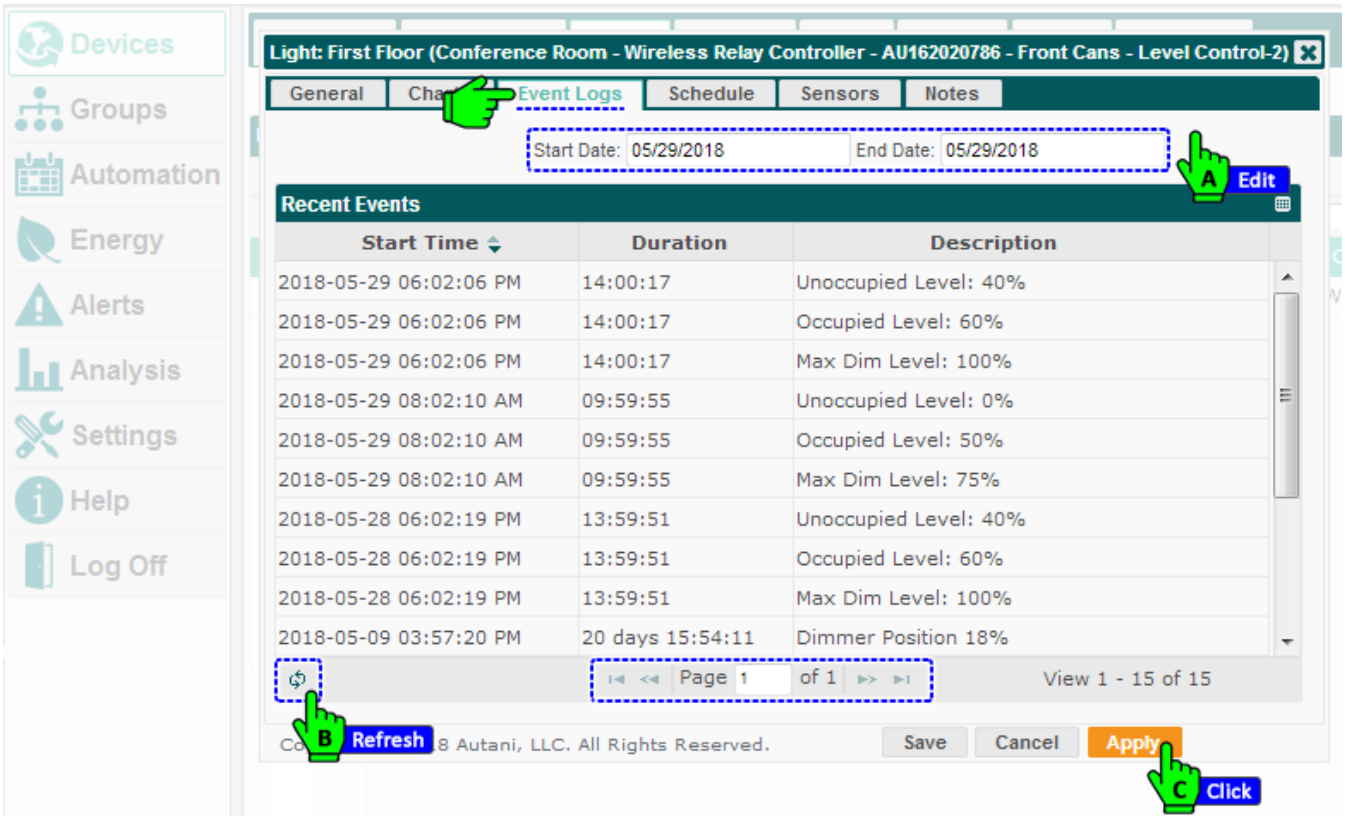
  Time Delay: Displays the Time Delay for a Mode, set in **Level** section.

  Photosensor: Photosensor readings are displayed here if photosensor is connected and configured.

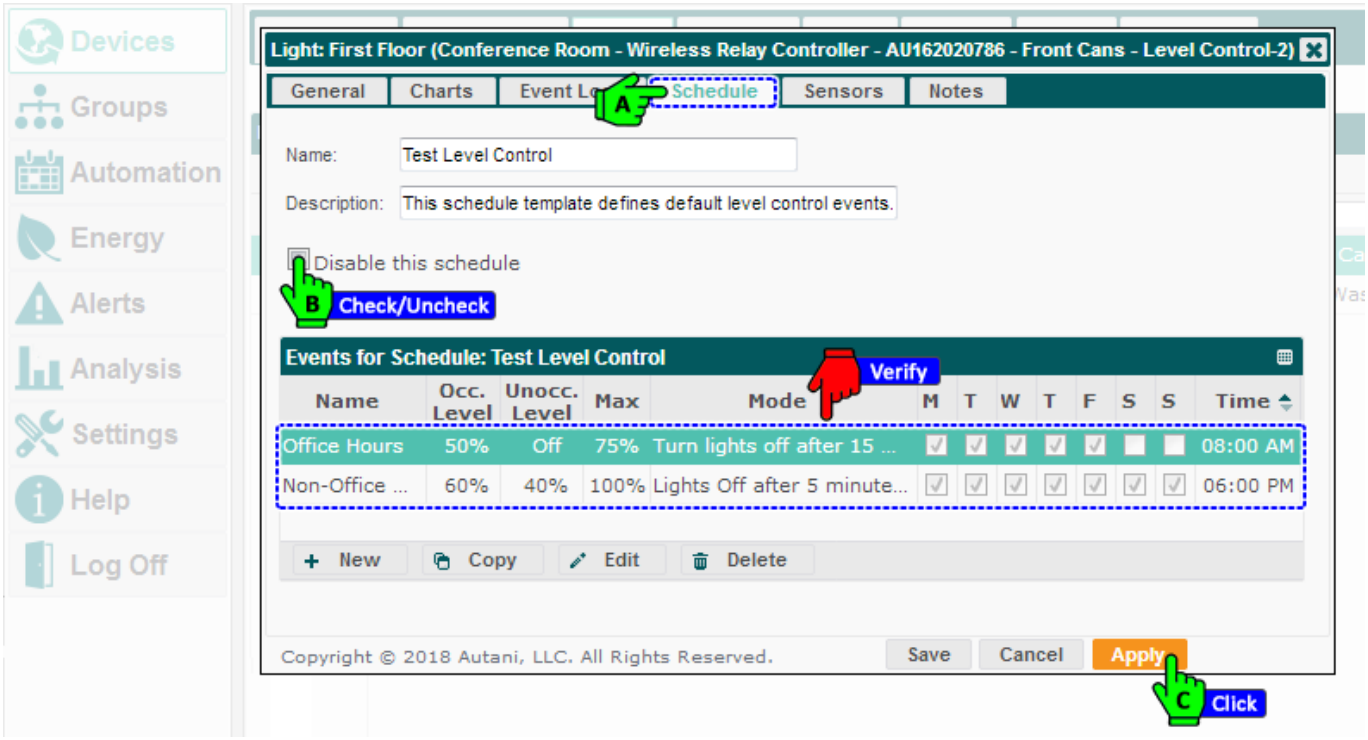
3. Select the next tab **Charts** to see the **Level Control** performances for the light attributes.
   - Choose a date range and click on any attribute to see the performance chart.
     NOTE: You can select multiple attributes; each will be displayed in different color. The chart also has a feature to zoom IN and OUT.



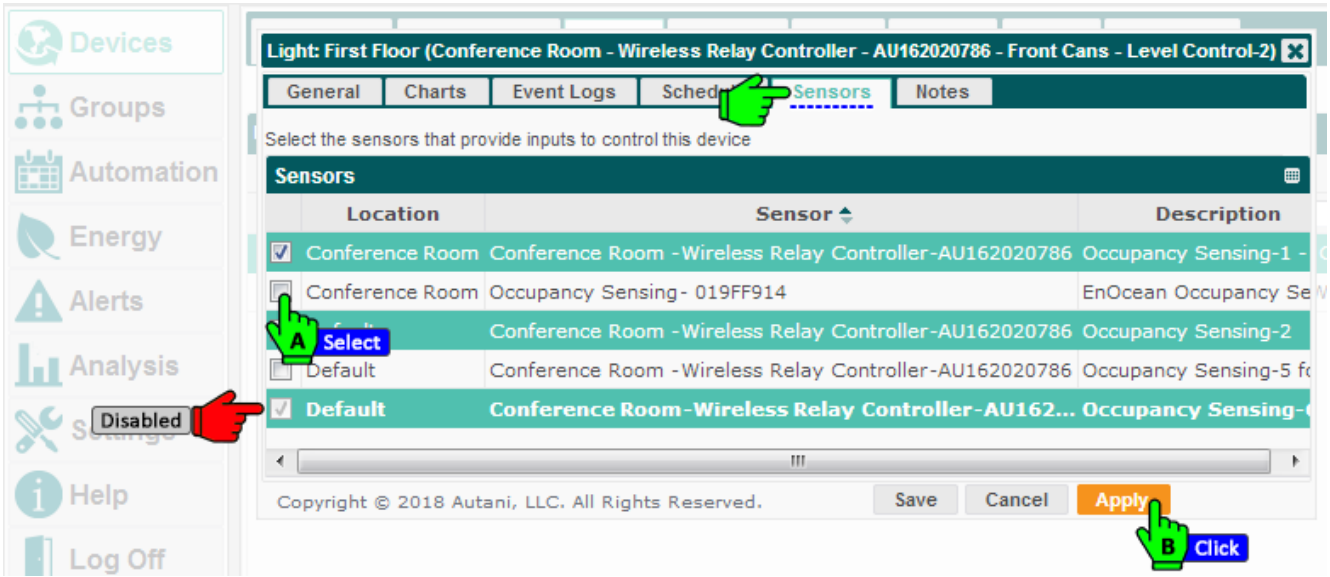
4. Select the next tab **Event Logs** to see all logged information about the attributes of a light. The log information can be seen for a specific date range. The list can be refreshed, and users can navigate between pages as needed.



5. Select the next tab **Schedule** to view or disable a schedule for the light and to verify the assigned events associated with this light.
   NOTE: It is not recommended to create or edit schedules here. Any changes made here will be overridden by schedules created through the **Automation** section. (Refer to section *10 Configuring Schedules*.)



6. Select the next tab **Sensors** to virtually associate a standalone sensor or a sensor from other device(s) to the selected light and affect the behavior of the light. (Considering both wired and wireless sensors are already configured through Light Setup.)
   - Select a standalone sensor or a sensor from other device(s) in the system and click **Apply**.

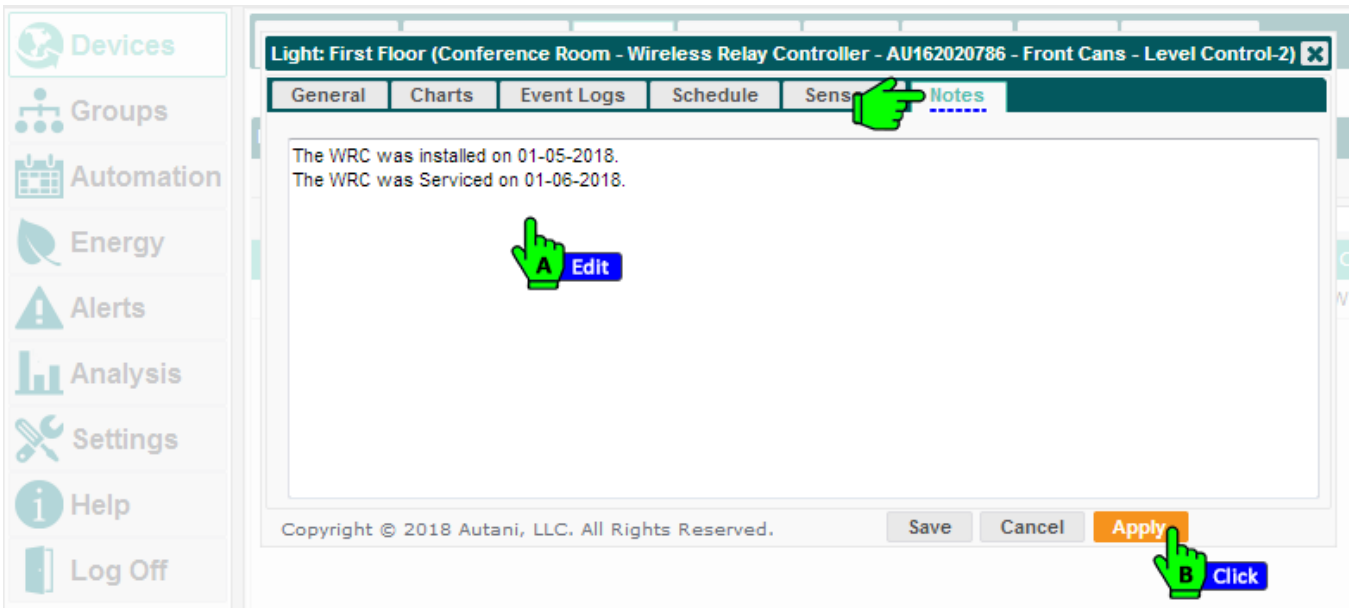


   NOTE: The physically wired sensors are selected and grayed out if they have already mapped from within the setup screen.

   NOTE: There is NO limit on the number of sensors that can be virtually associated with the current device.

   NOTE: The virtual association will not work if the software and the Manager are not functioning.

7. Select the next tab **Notes** to leave a note for other users to refer. (Example: The WRC was installed on XX.XX.XXXX date, and the last service was done on XX.XX.XXXX date, etc.) Click within the text box to create a note, and click **Apply** to save the note.



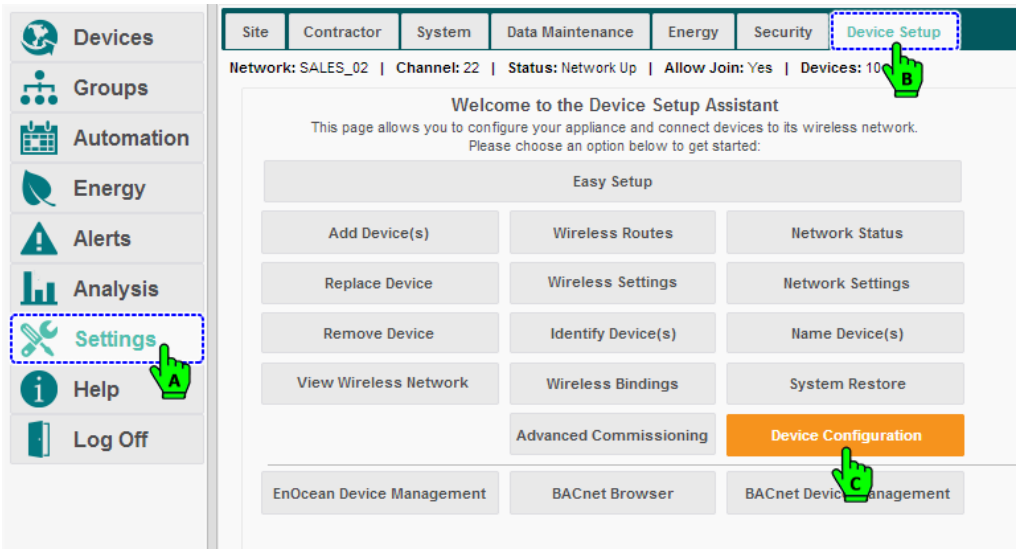
5.3. ON/OFF Light Configuration

5.3.1. Light Setup

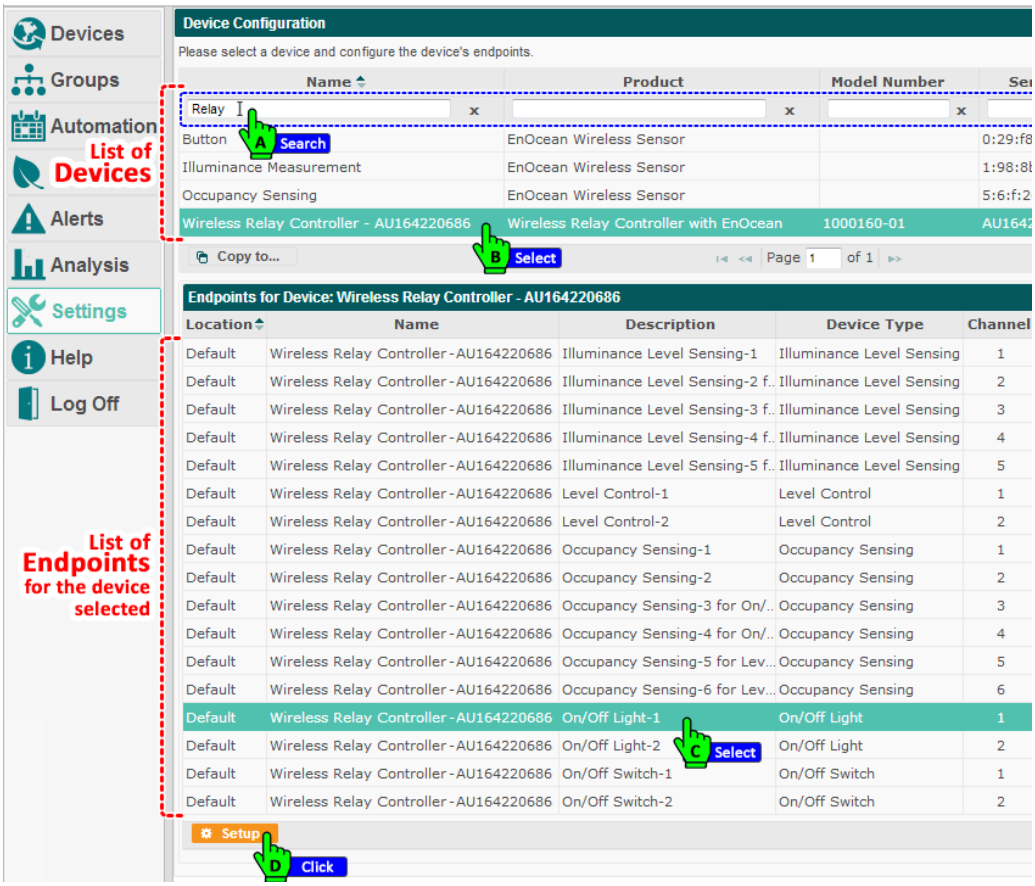
The following procedures are the same for both **ON/OFF-1** and **2** configurations. **Light Setup** can be carried out through either of the following sections within **EnergyCenter®** software. The **setup** screen will be the same in both sections.

- **Settings > Device Setup > Device Configuration** (Here you will directly select the **endpoint** ON/OFF-1 of WRC.)
- **Devices > Lights** (Here you will select a **profile** of WRC with ON/OFF feature. The ON/OFF endpoint is enabled through Device Configuration for a WRC. Refer to **Show, Hide or Edit Endpoints for a WRC**.)

1. Select **Settings** > **Device Setup** > **Device Configuration**.



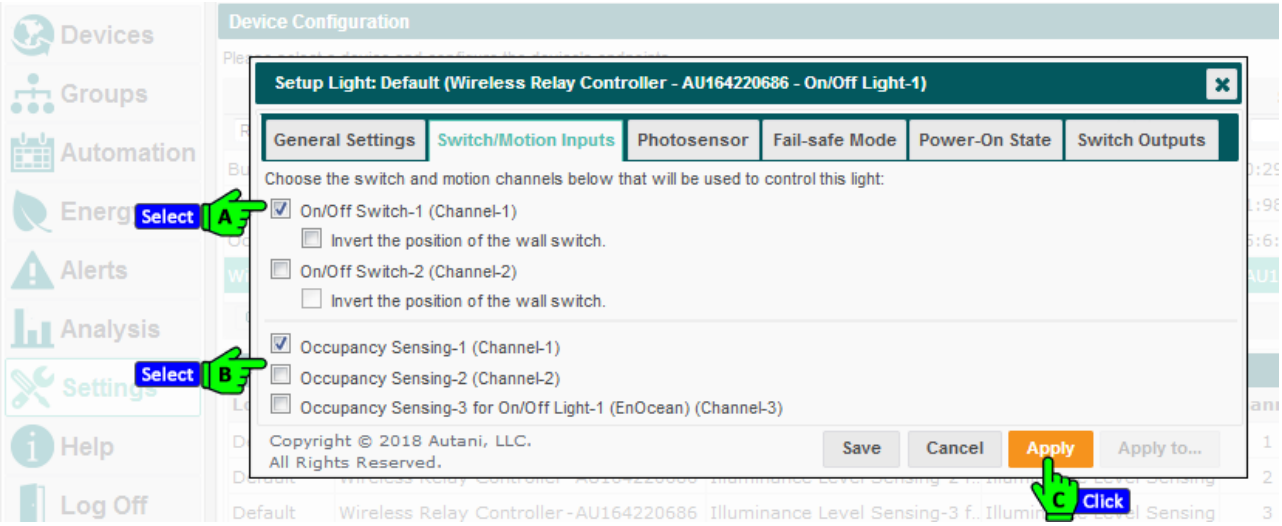
2. The **Device Configuration** page displays the list of available **devices** in top section and **endpoints** for the selected device in the lower section. Search for the applicable WRC by name or serial number, and select it from the search results. Next, select the endpoint **On/Off Light-1** from the list of endpoints. Click **Setup**.



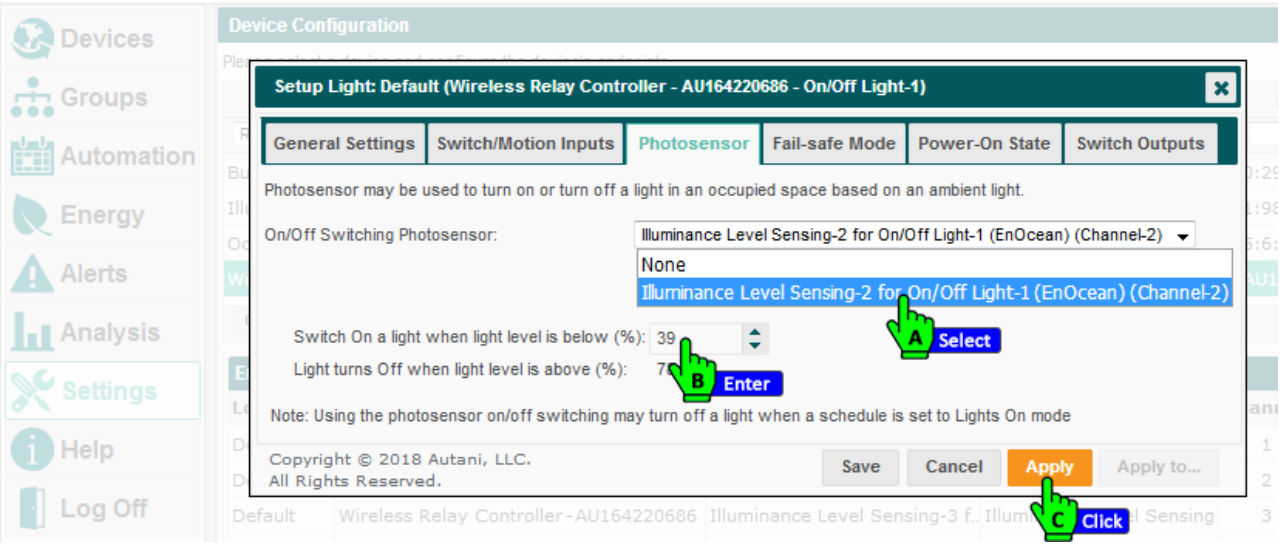
3. The **Setup Light** window appears with the **General Settings** tab selected by default. This tab contains three available modes for light switch behavior. Choose a mode and click **Apply**.

- **Switch** mode: This is the default mode in which the switch works as a maintain switch, where UP is ON and DOWN is OFF.
  - In this mode, if the switch is in the ON position, EnergyCenter® can turn ON/OFF the lighting.
  - If the switch is in the OFF position, EnergyCenter® and the occupancy sensor will not have control to turn ON the lighting until the motion matter bit resets (motion is detected) or the user puts back the switch back to the ON position.
- **Toggle** mode: The switch also works as a maintain switch with a small difference compared to Switch mode.
  - **NOTE:** The main reason to consider this mode is for a three-way switch configuration, where two maintain switches are being used to control the same circuit.
  - In this mode, if the switch is in the ON position, the EnergyCenter® can turn ON/OFF the lighting.
  - If a switch is in the OFF position, EnergyCenter® can turn ON/OFF the lighting, but the occupancy sensor will not have control to turn ON the lighting until the motion matter bit (motion is detected) resets or the user puts the switch back to the ON position.
- **Momentary** mode: The switch works like a push button. One push will turn ON lights, and a second push will to turn OFF lights.
  - The light can always be turned ON/OFF by EnergyCenter®.
  - The first push will turn ON the light if it was previously OFF (press and release).
  - The second push will turn the light OFF if it was previously ON (press and release).

4. Select the next tab **Switch/Motion Inputs** and to choose the **Switch** and **Motion** channels to control the light.
   NOTE: You can choose both switch channels and multiple sensors to control the light, and this change will also be reflected if dimmable/level configuration is used.

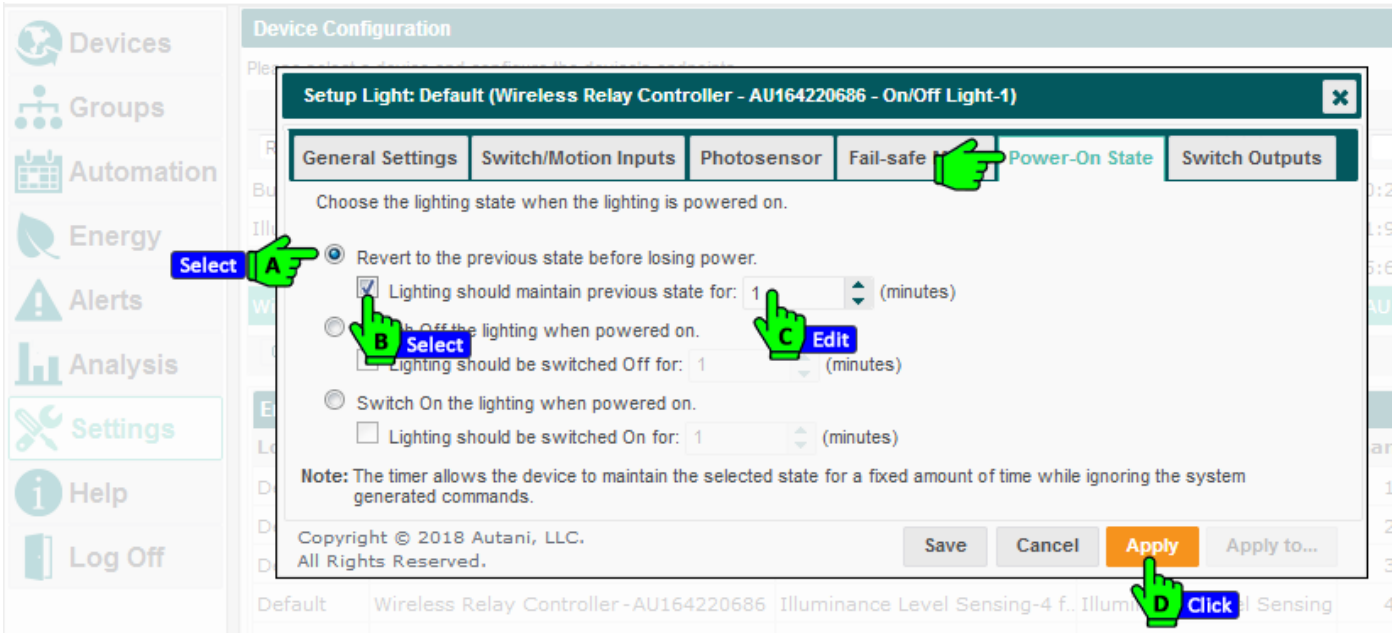


5. Select the next tab **Photosensor**. Choose the **photosensor** from the dropdown menu. Set the low luminance level for the light to turn ON, or choose **None** if you do not want to use a photosensor for ON/OFF switching.
   NOTE: The high luminance level cannot be edited here.
   NOTE: Using the Photosensor ON/OFF switching may turn OFF a light when a schedule is set to lights ON mode.

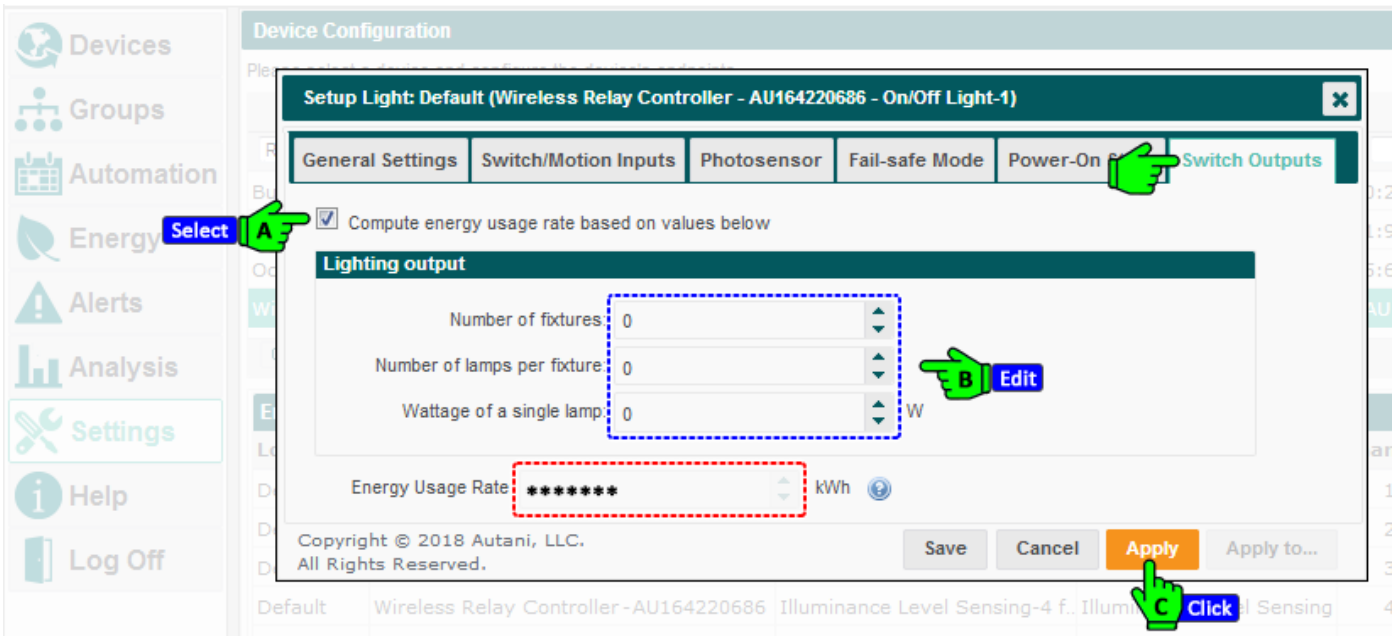


6. Select the tab **Fail-safe Mode** to set the time delay for light behavior, if communication with the Manager is lost.

7. Select the next tab **Power-On State** to choose a state for lights when they are switched ON. There are three states available. Choose a state and enable the checkbox to enter the duration the light remains in that state.



8. Select the next tab **Switch Outputs** to estimate energy use for the lighting system.
   - Start by enabling the feature **Compute energy usage...** and enter the values in the **Lighting output** fields to calculate the energy consumption. The **Energy Usage Rate** will be displayed.
   - For more information on this topic refer to section *12. Energy Estimation*.

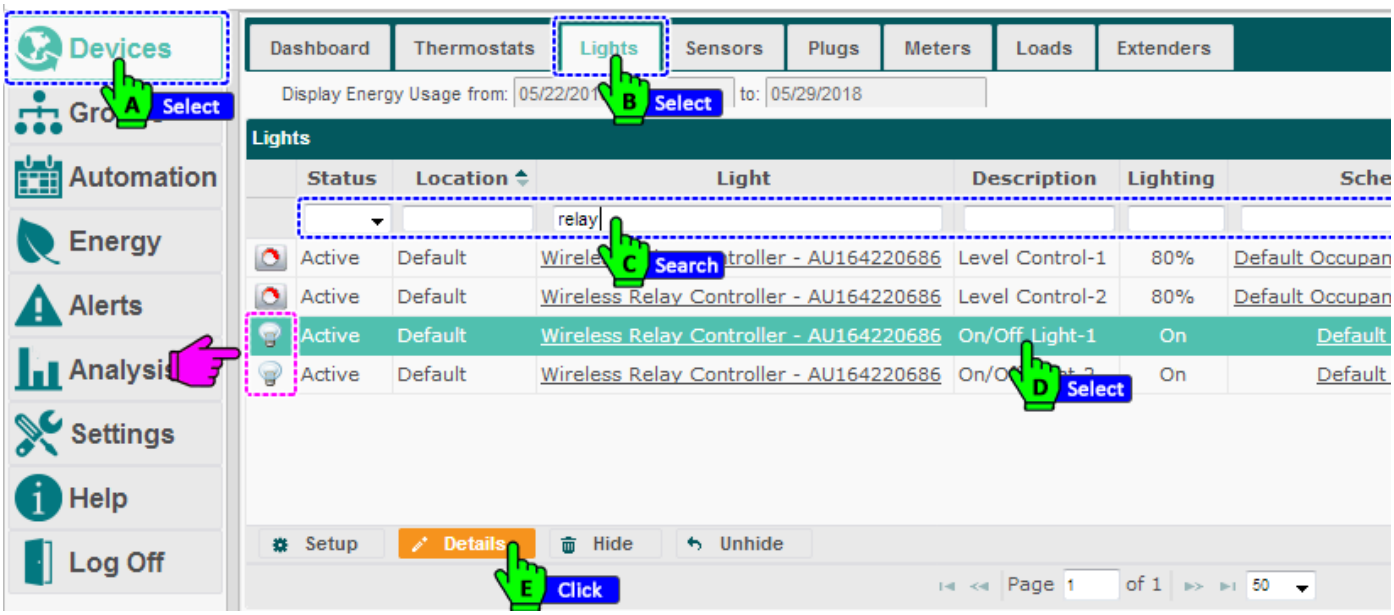


5.3.2. Light Detail

The following procedures are the same for both **On/Off Light-1** and **2** profiles.

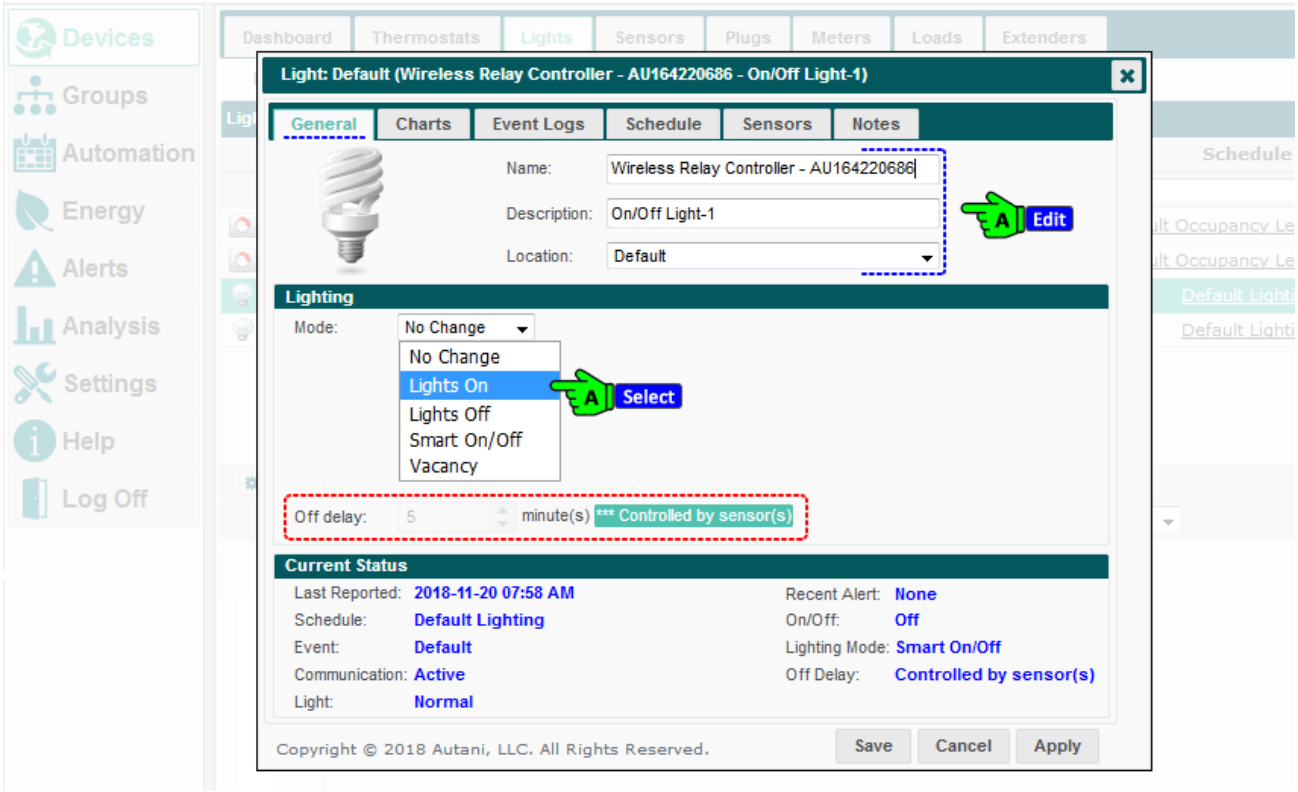
1. Select **Devices** > **Lights**. Within the header fields, search for a **WRC** by name or serial number and select an ON/OFF light from the search results. With the device still selected, click on the **Details** button.

   NOTE: The icons for the ON/Off lights are displayed as a bulb.



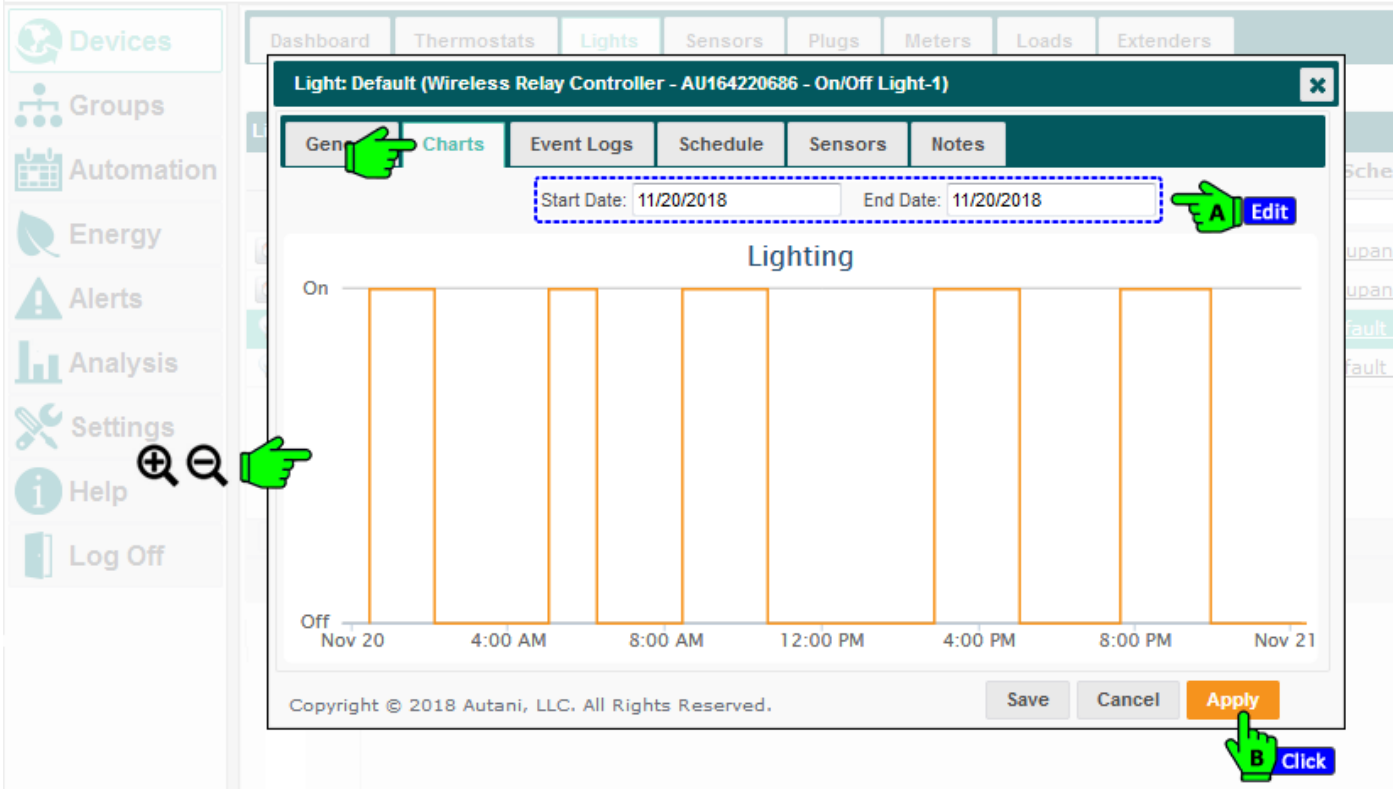
2. The **Light** window appears with the **General** tab selected by default. Here the user can make on-demand changes to the attributes of the light.
   - The top section of the window will allow the user to edit the **Name**, **Description** and **Location** of the lights.
   - The **Lighting** section will allow the user to choose a lighting **Mode**.

     NOTE: The occupancy-based modes (**Smart On/Off** and **Vacancy**) will only be available if they are already associated with the WRC. Refer to section *8. Configuring Motion Sensors*.
   - Set the **OFF delay** timing for the lights to go OFF. This feature is available for all modes except for Lights ON.

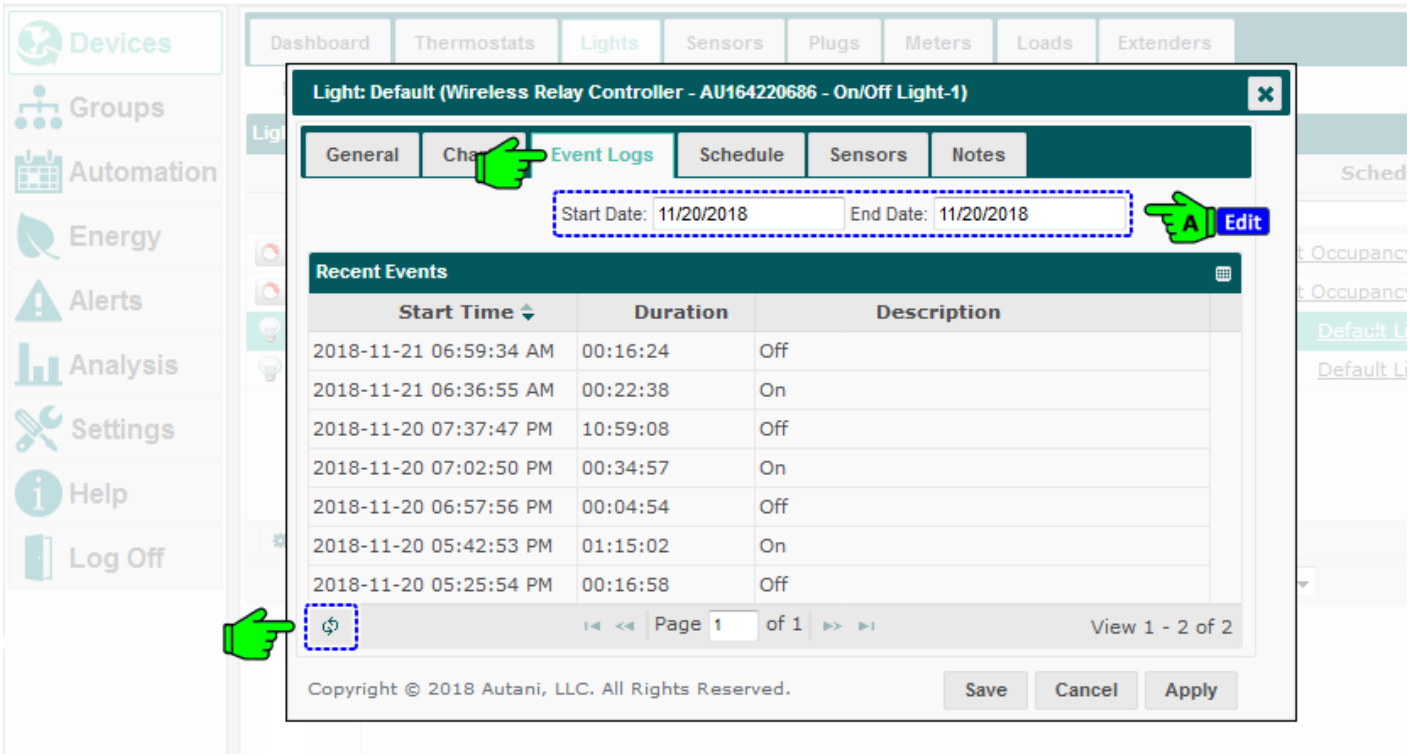


- The lower section of the window has details on the **Current Status** of the attributes of an endpoint:
  Last Reported: Time and date information of last communication made by the device with the Autani Manager.
  Schedule: Name of the schedule currently assigned to the device from the **Schedule** tab.
  Event: Name of the currently running event out of the events in the **Schedule** chosen.
  Communication: The status of the communication between the device and network (Active/Error).
  Light: Normal / Unknown
  Recent Alert: Description of the recent alert (None / Error / Warning)
  On/Off: Current status of the device (WRC)
  Lighting Mode: Displays the mode set in the **Level** section.
  Off Delay: Displays the time delay for a mode, set in the **Lighting** section.

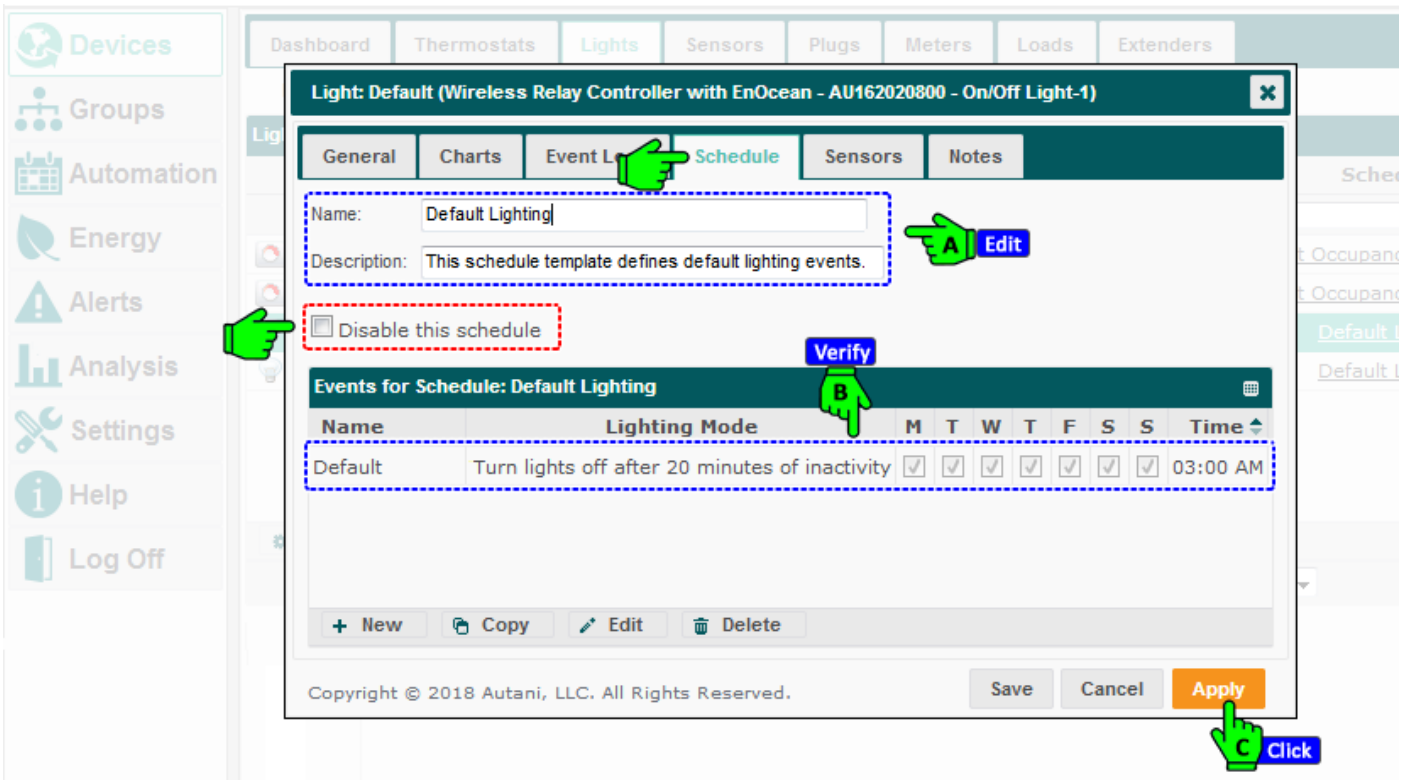
3. Select the next tab **Charts** to see the ON/OFF performance within a chosen date range.
   - Choose a date range to see the performance chart.
     NOTE: The chart also has a feature to zoom IN and OUT.



4. Select the next tab **Event Logs** to see all logged information about the attributes of a light. The log information can be seen for a specific date range. The list can be refreshed, and users can navigate between pages as needed.



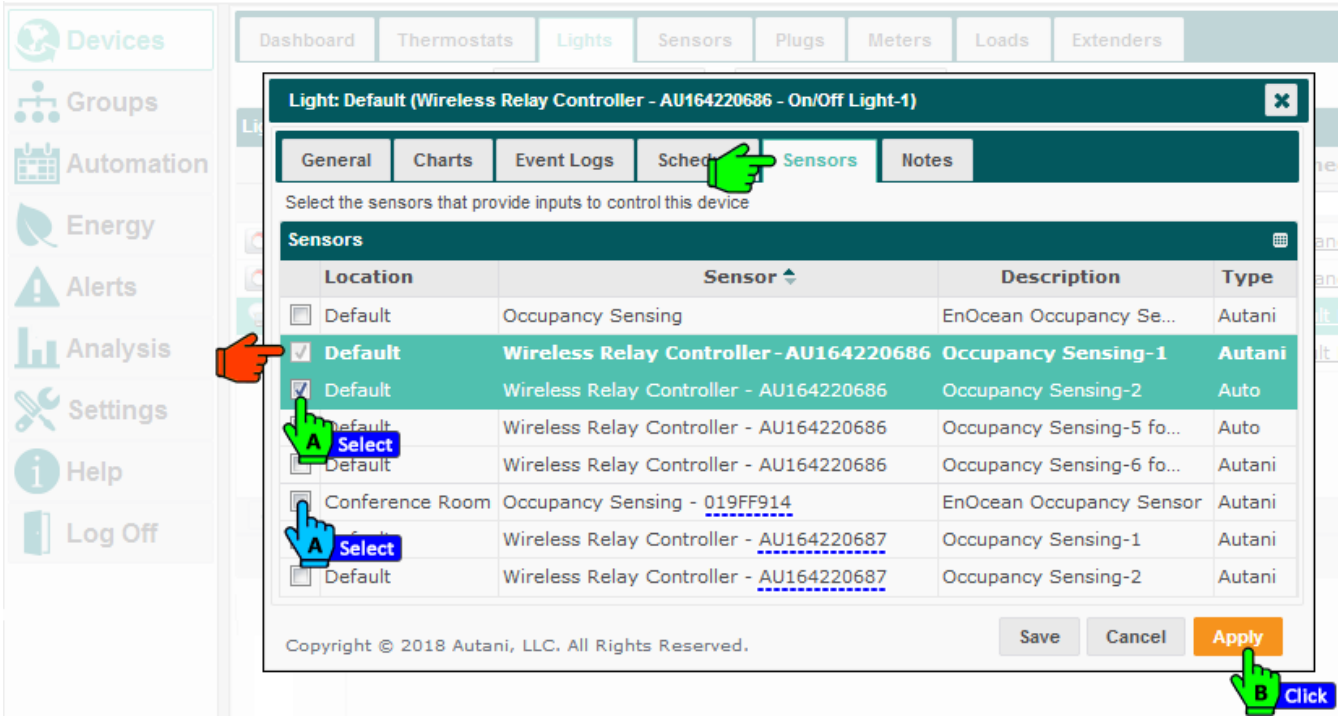
5. Select the next tab **Schedule** to view, verify and disable a schedule for the light.
NOTE: It is not recommended to create or edit schedules in this screen. Any changes made here will be overridden by the schedules created through the **Automation** section. (Refer to section *10 Configuring Schedules*.)



6. Select the next tab **Sensors** to view occupancy sensors that are mapped to the selected ON/OFF light channel. Select the required occupancy sensors and click **Apply**.

   NOTE: The physically wired sensors are selected and grayed out if they have already been mapped from within the setup screen.

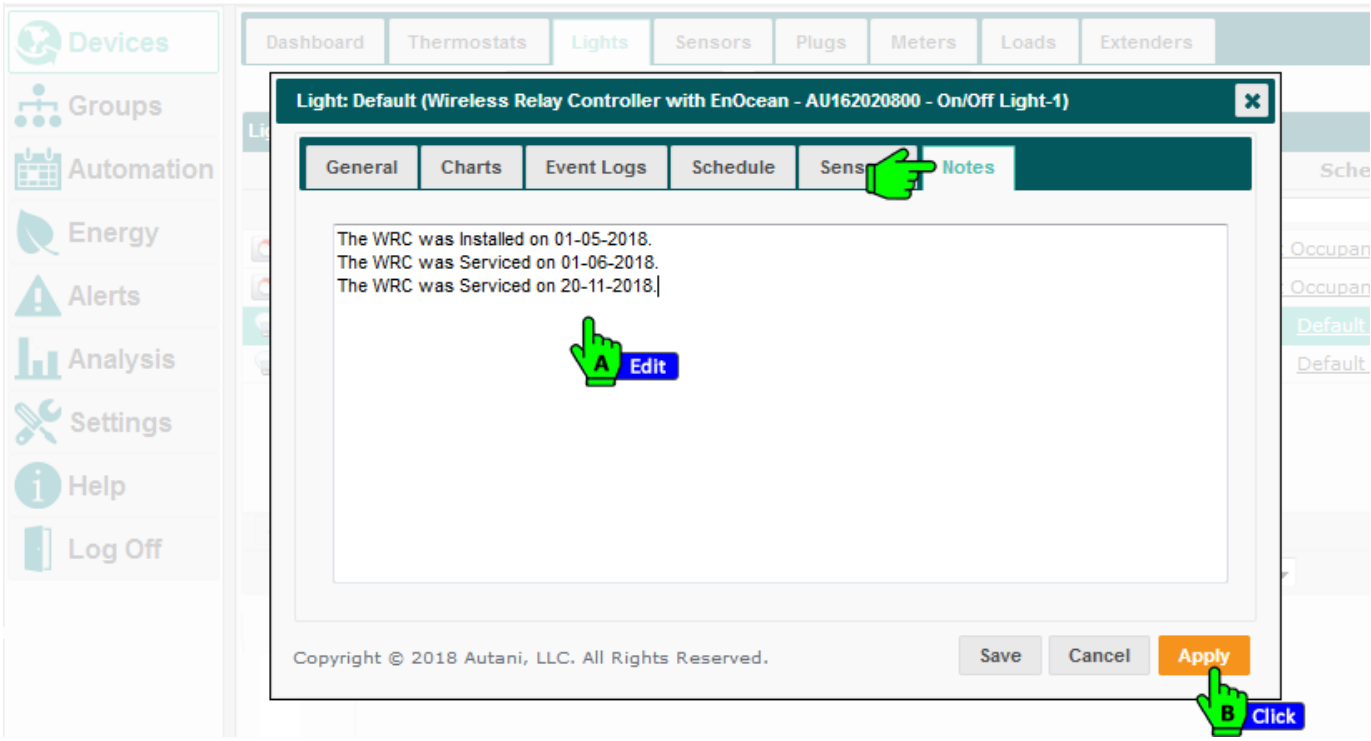
   - The list contains sensors from the currently selected WRC, sensors from other WRCs, and sensors from other devices. The occupancy sensors from different devices can also be mapped to the light via virtual association.



   NOTE: There is NO limit on the number of sensors that can be virtually associated with the light.

   NOTE: The virtual association will not work if the software and the Manager are not functioning.

7. Select the next tab **Notes** to leave a Note for other users to refer. (Example: The WRC was installed on XX.XX.XXXX date, and the last service was done on XX.XX.XXXX date, etc.) Click within the text box to create a note, and click **Apply** to save the note.



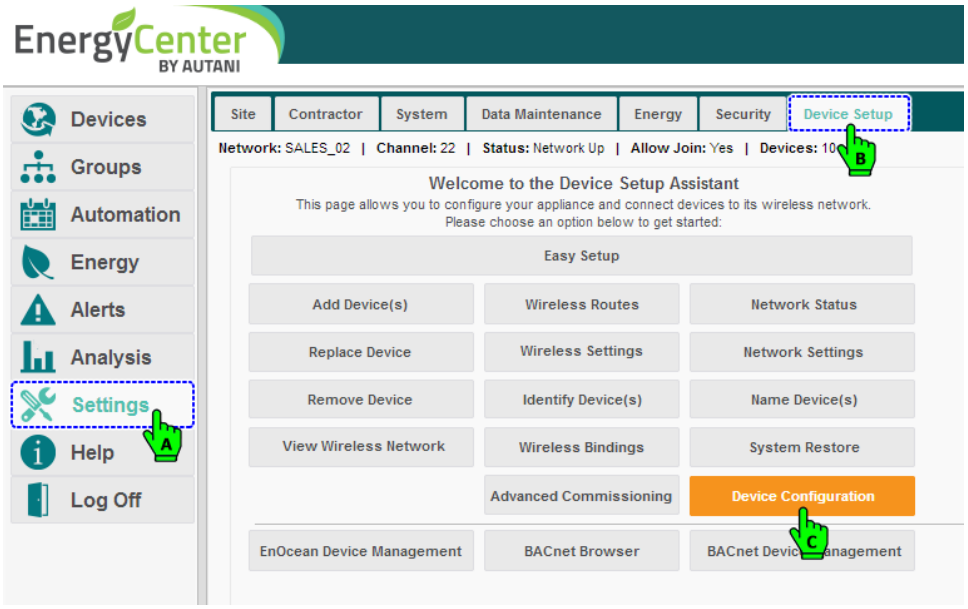
5.4. ON/OFF Load Configuration

5.4.1. ON/OFF Load Setup

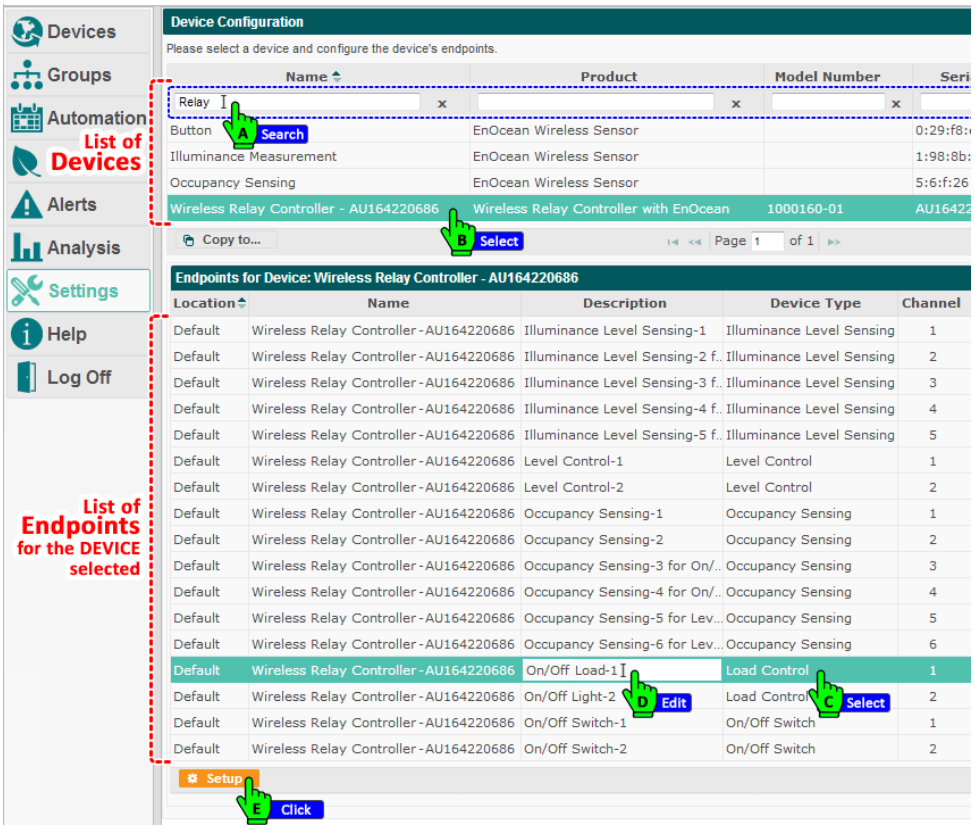
The following procedures are the same for both **Load ON/OFF-1** and **2** configurations. The **Load Setup** can be done through either of the following sections in **EnergyCenter®** software. The **setup** screen will be the same in both sections.

- **Settings > Device Setup > Device Configuration** (Here you will directly select the endpoint Load of WRC.)
- **Devices > Lights** (Here you will select a profile of WRC with ON/OFF feature. The ON/OFF endpoint is enabled through Device Configuration for a WRC. Refer to **Show, Hide or Edit Endpoints for a WRC**.)

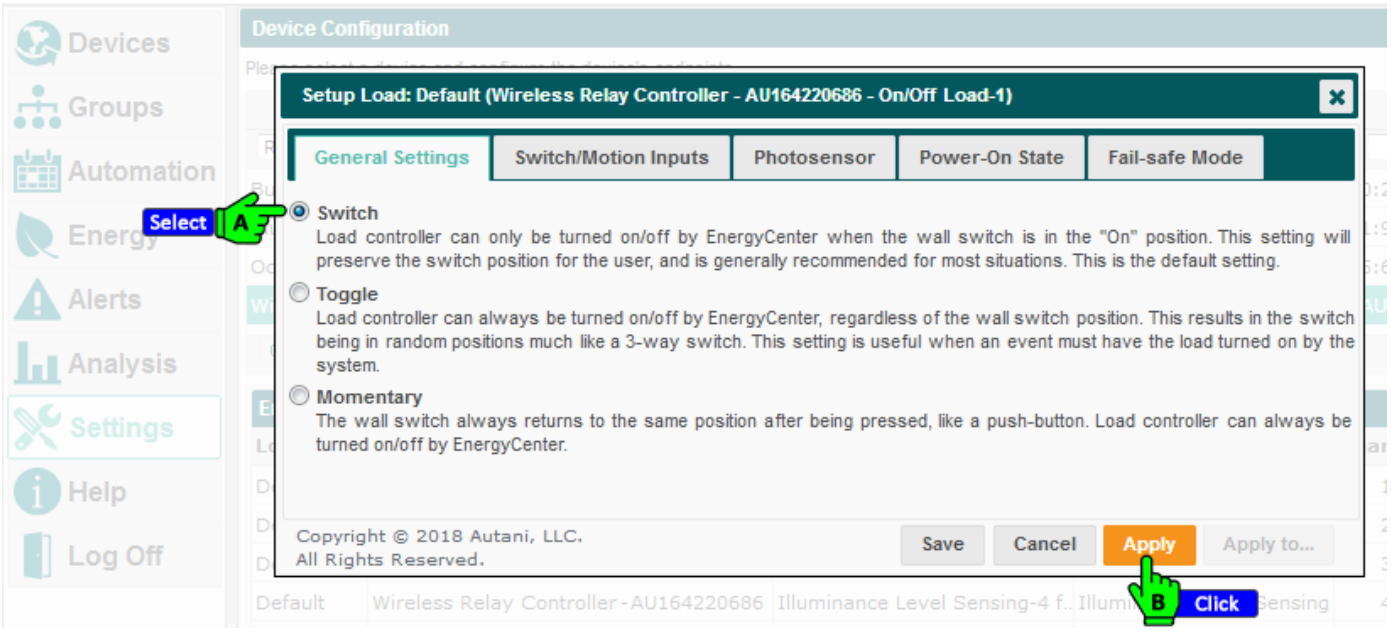
1. Select **Settings** > **Device Setup** > **Device Configuration**.



2. The **Device Configuration** page displays the list of available **Devices** on the top section and **Endpoints** for the selected device in the lower section. Search for the applicable **WRC** by name or serial number, and select it from search results. Next select the endpoint **Load Control** from the list of endpoints. Click **Setup**.

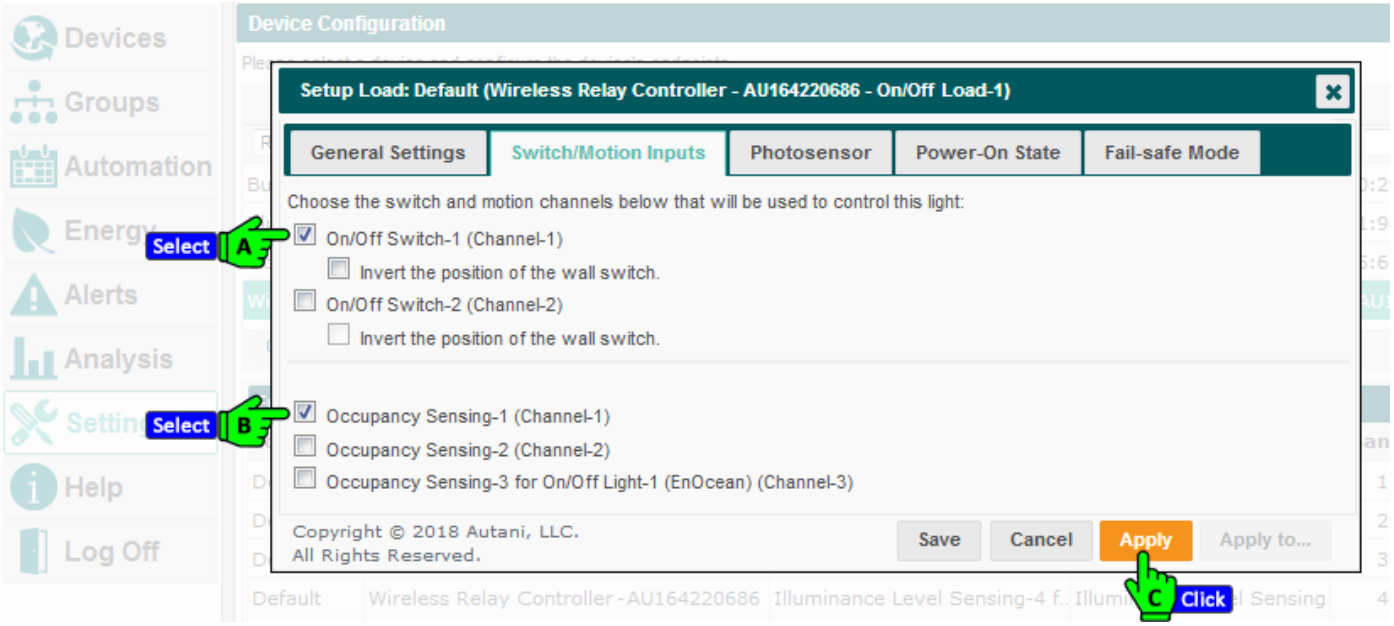


3. The **Setup Load** window appears with the **General Settings** tab selected by default. This tab contains three modes for a switch behavior. Choose a mode and click **Apply**.

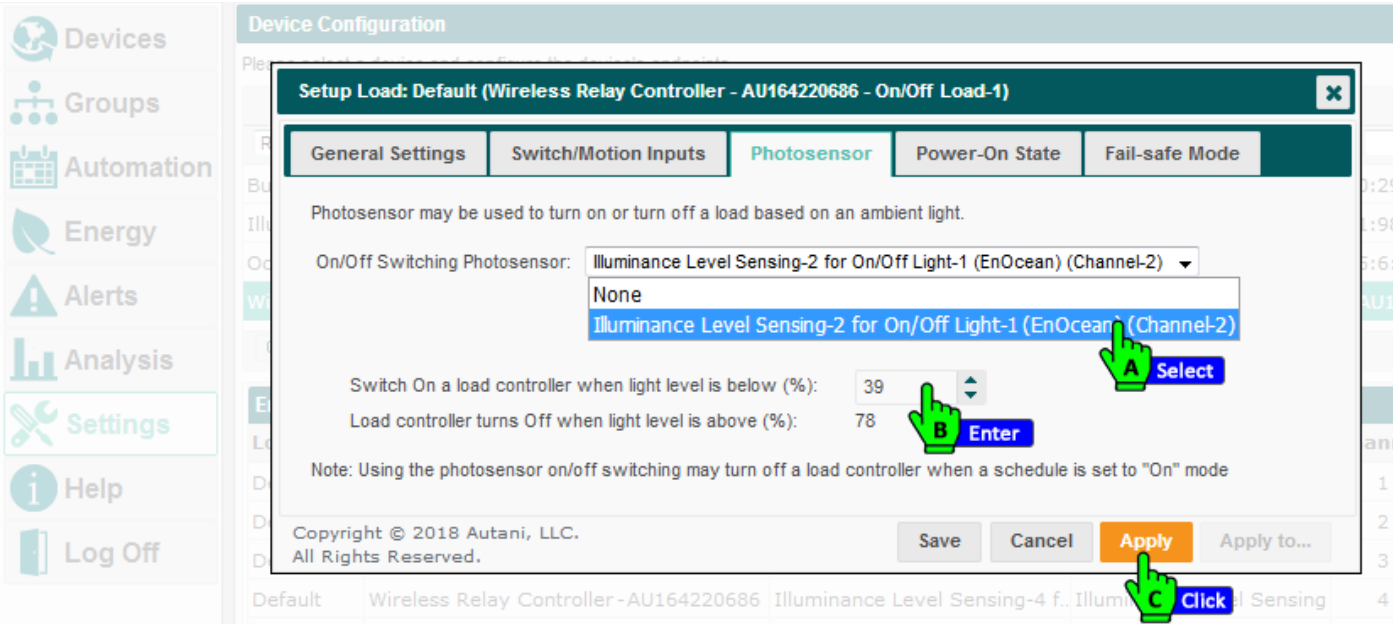


- **Switch** mode: This is the default mode which works as a maintain switch, where UP is ON and DOWN is OFF.
  - In this mode, if the switch is in the ON position, the EnergyCenter® can turn ON/OFF the Load.
  - If the switch is in the OFF position, EnergyCenter® and the occupancy sensor will not have control to turn ON the Load until the motion matter bit resets (motion is detected) or the user puts the switch back to the ON position.
- **Toggle** mode: The switch works as a maintain switch with a small difference compared to Switch mode.
  - **NOTE:** The main reason to consider this mode is for a three-way switch configuration, where two maintain switches are being used to control the same circuit.
  - In this mode, if the switch is in the ON position, EnergyCenter® can turn ON/OFF the Load.
  - If the switch is in the OFF position, EnergyCenter® can turn ON/OFF the Load, but the occupancy sensor will not have control to turn ON the Load until the motion matter bit resets or the user puts the switch back to the ON position.
- **Momentary** mode: The switch works like a push button. One push will turn ON Load, and a second push will turn OFF Load.
  - The Load can always be turned ON/OFF by EnergyCenter®.
  - The first push will turn ON the Load if it was previously OFF (press and release).
  - The second push will turn the Load OFF if it was previously ON (press and release).

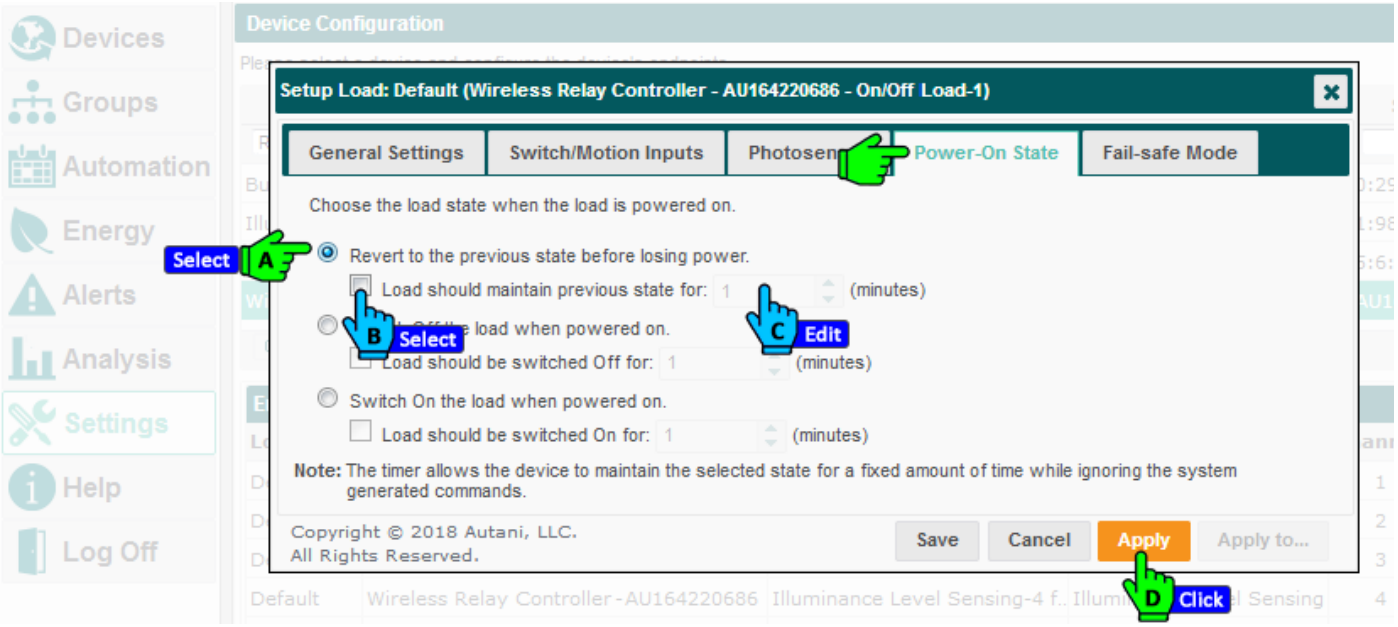
4. Select the next tab **Switch/Motion Inputs** and choose the **switch** and **motion** channels to control the load.
   NOTE: You can choose both switch channels and multiple sensors to control the load.



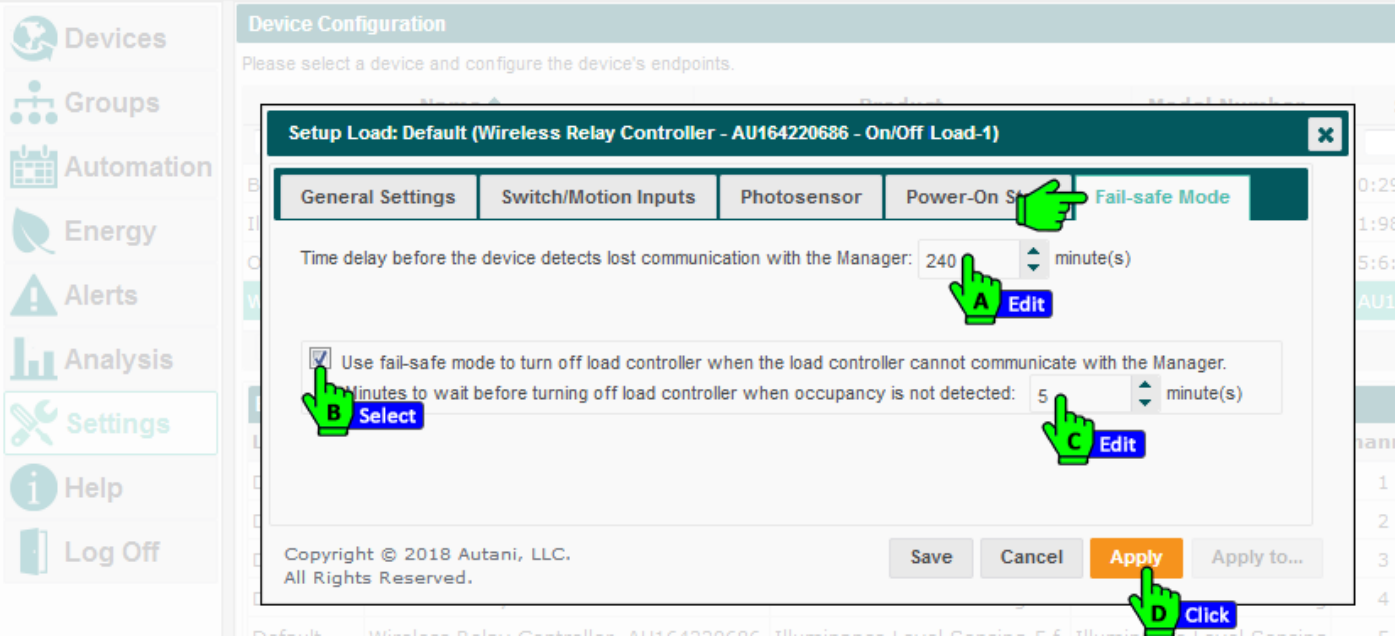
5. Select the next tab **Photosensor**. Choose a **photosensor** from the drop-down menu. Set the low luminance level for the light to turn ON, or choose **None** if you do not want to use a photosensor for ON/OFF switching.
   NOTE: The high luminance level cannot be edited here.
   NOTE: Using the Photosensor ON/OFF switching may turn OFF a load controller when a schedule is sent to ON mode.



6. Select the next tab **Power-On State** to choose how the load behaves when powered ON and set the duration for the chosen state. There are three states available. Choose a state and enable the checkbox (for previous state duration) to enter the duration the load remains in that state.



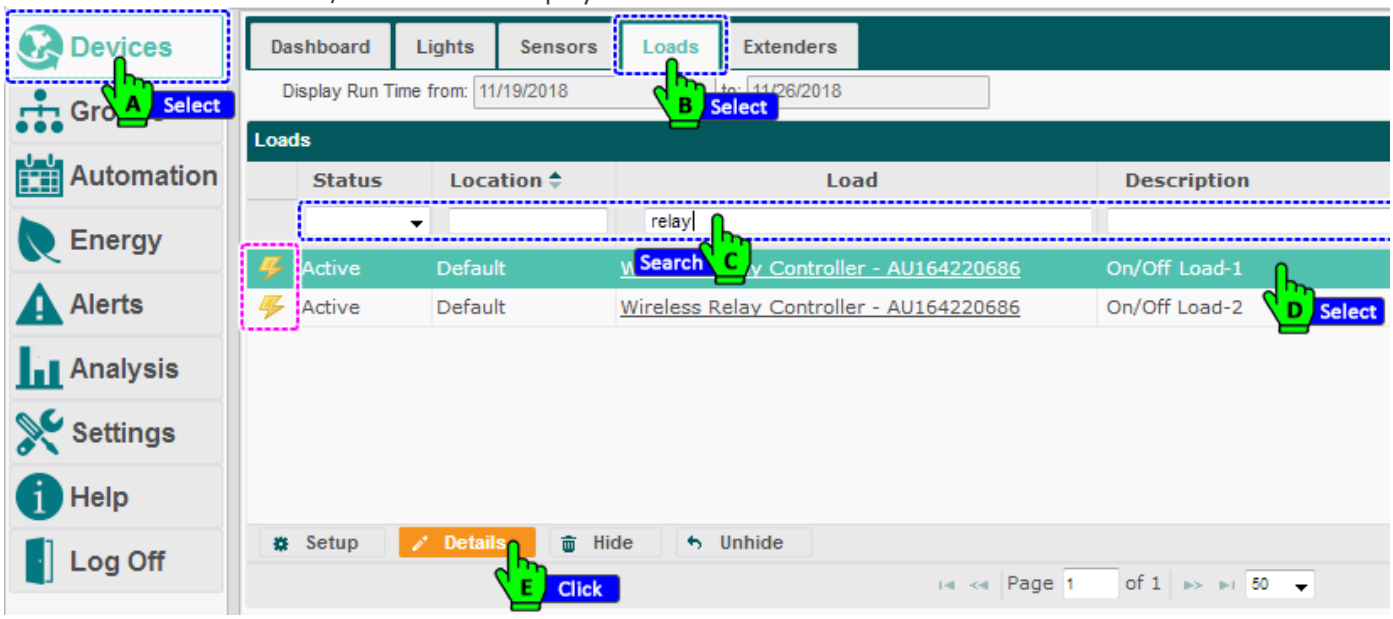
7. Select the next tab **Fail-safe Mode** to set the time delay for the load, if communication with the Manager is lost.



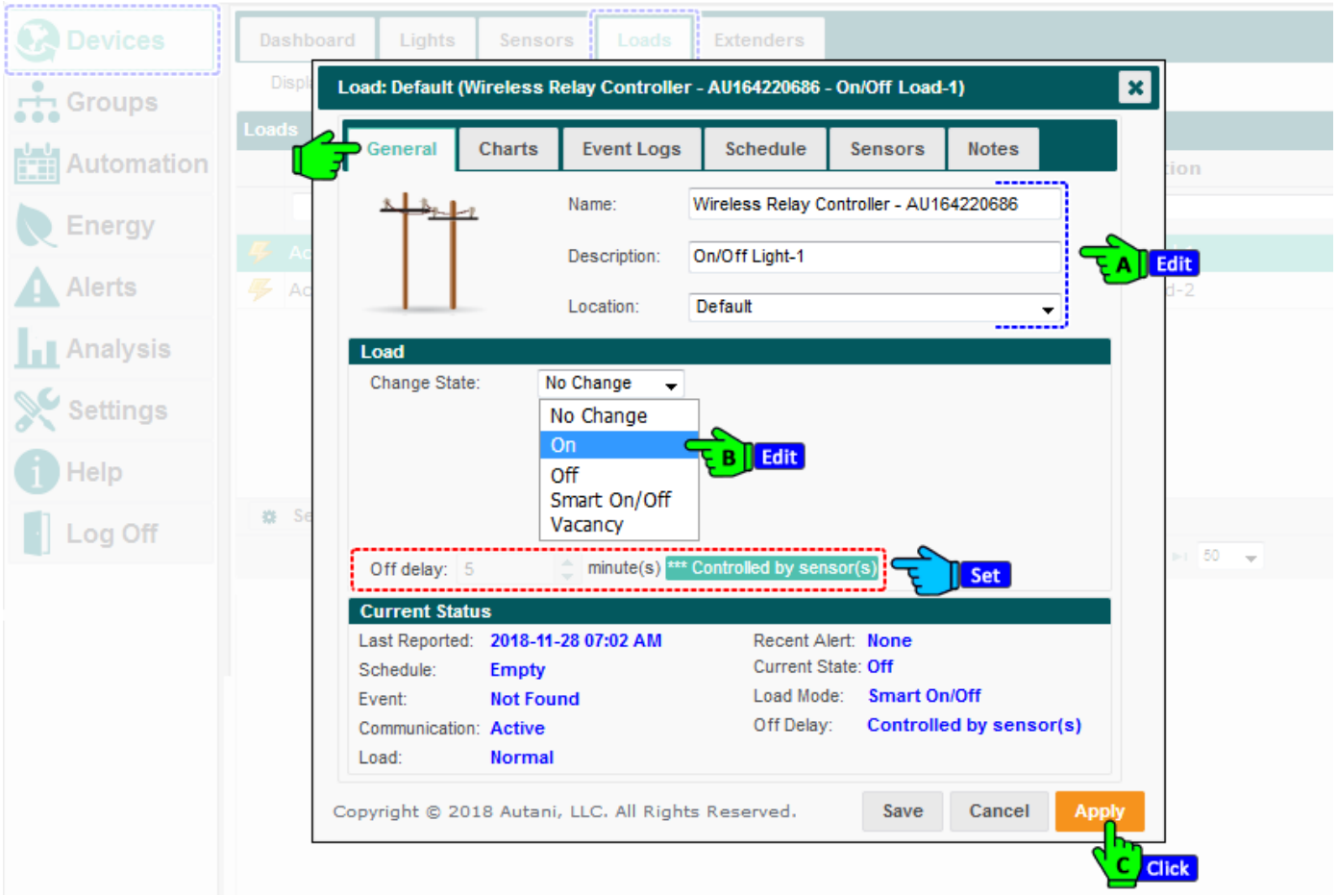
5.4.2. ON/OFF Load Detail

The following procedures are the same for both **ON/OFF Load-1** and **2**.

1. Select **Devices** > **Loads.** Within the header fields, search for a device (**WRC**) by name or serial number. Select **ON/OFF Load-1** from the search result. With the device still selected, click on **Details** button.
   NOTE: The **Loads** tab will not be visible in **Devices** section until an endpoint is set for Load Control within the Device Configuration section. (Refer to section *5.1.2 Available Endpoints for a WRC*.)
   NOTE: The icons for the ON/OFF loads are displayed as a .



2. The **Load** window appears with the **General** tab selected by default. Here the user can make on-demand changes to the attributes of a load.



- The top section of the window will allow the user to edit the Name, Description and Location of the load.
- The **Load** section will allow the user to choose a load control **Mode**.
- Set the **Off delay** time for the load to go OFF. **NOTE**: This feature is available for all modes except for ON mode.
- **NOTE**: The occupancy-based modes (**Smart On/Off** and **Vacancy**) will only be available if they are already associated with the WRC. (Refer to section *8. Configuring Motion Sensors*).
- The lower section of the window has details on the **Current Status** of the attributes of an endpoint.

  Last Reported: Time and date information of last communication made by device with the Autani Manager.

  Schedule: Name of the schedule currently assigned to the device from the **Schedule** tab.

  Event: Name of the currently running event from the events in the **Schedule** chosen.

  Communication: The status of the communication between the Device and network (Active/Error).

  Load: Normal/Unknown

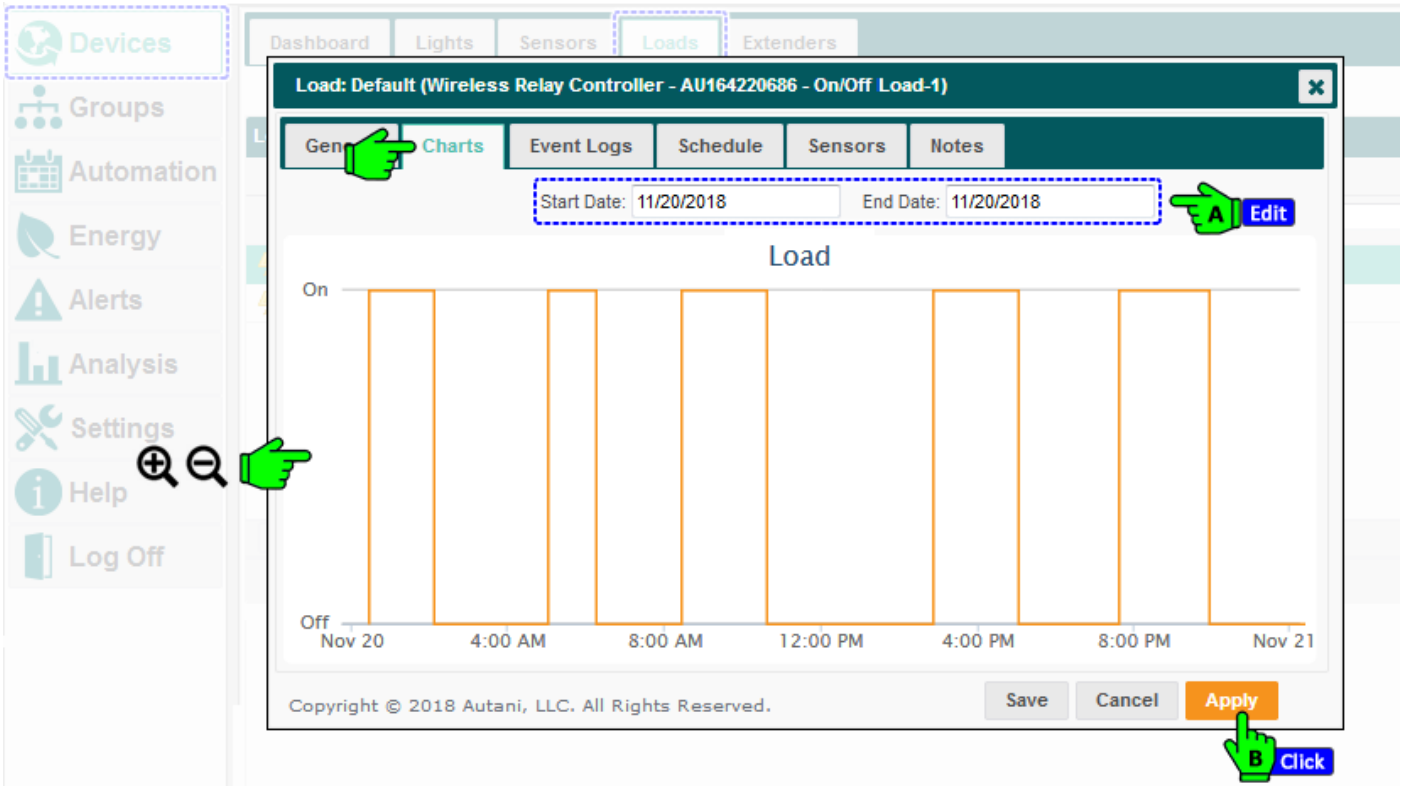
  Recent Alert: Description of the recent alert (None/Error/Warning)

  Current State: Current state of the load (ON/OFF).

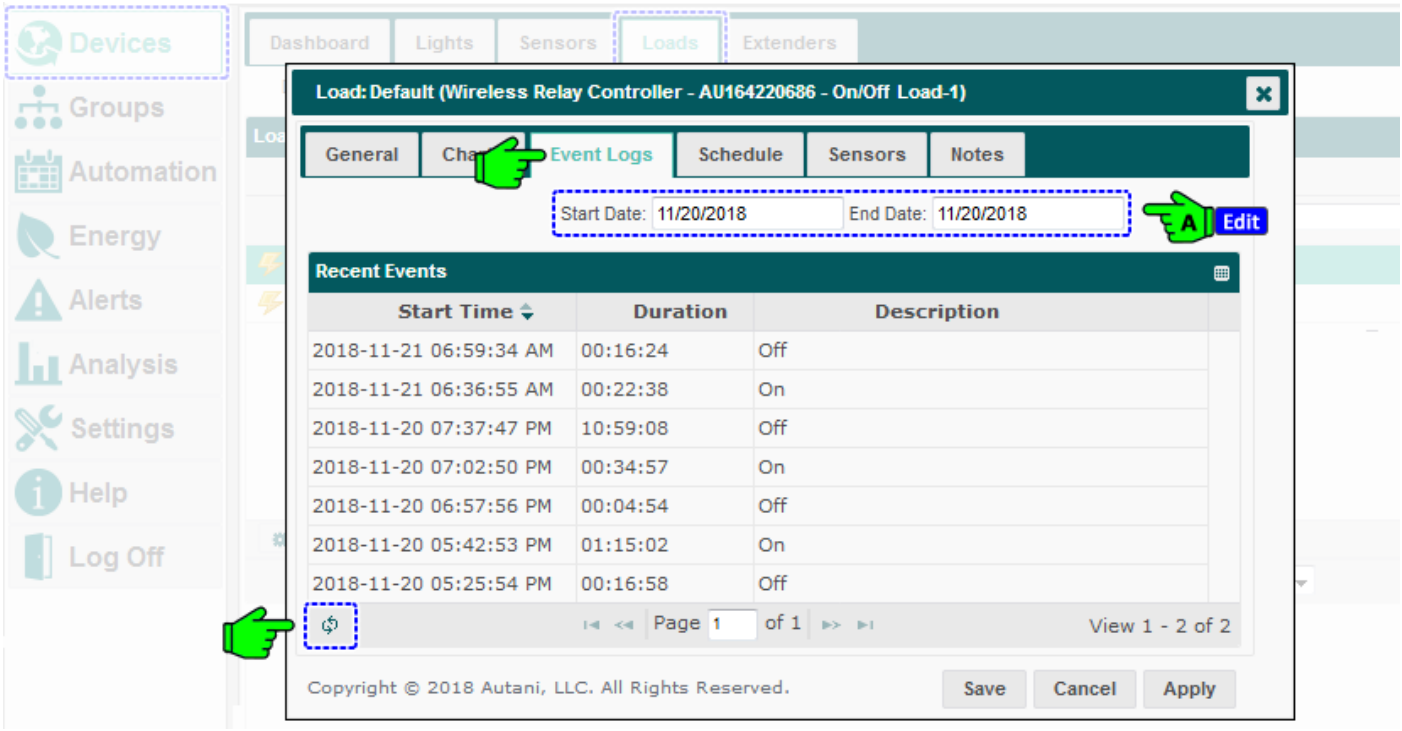
  Load Mode: Displays the Mode selected in the **Load** section.

  Off Delay: Displays the time delay for a load mode selected in the **Load** section.

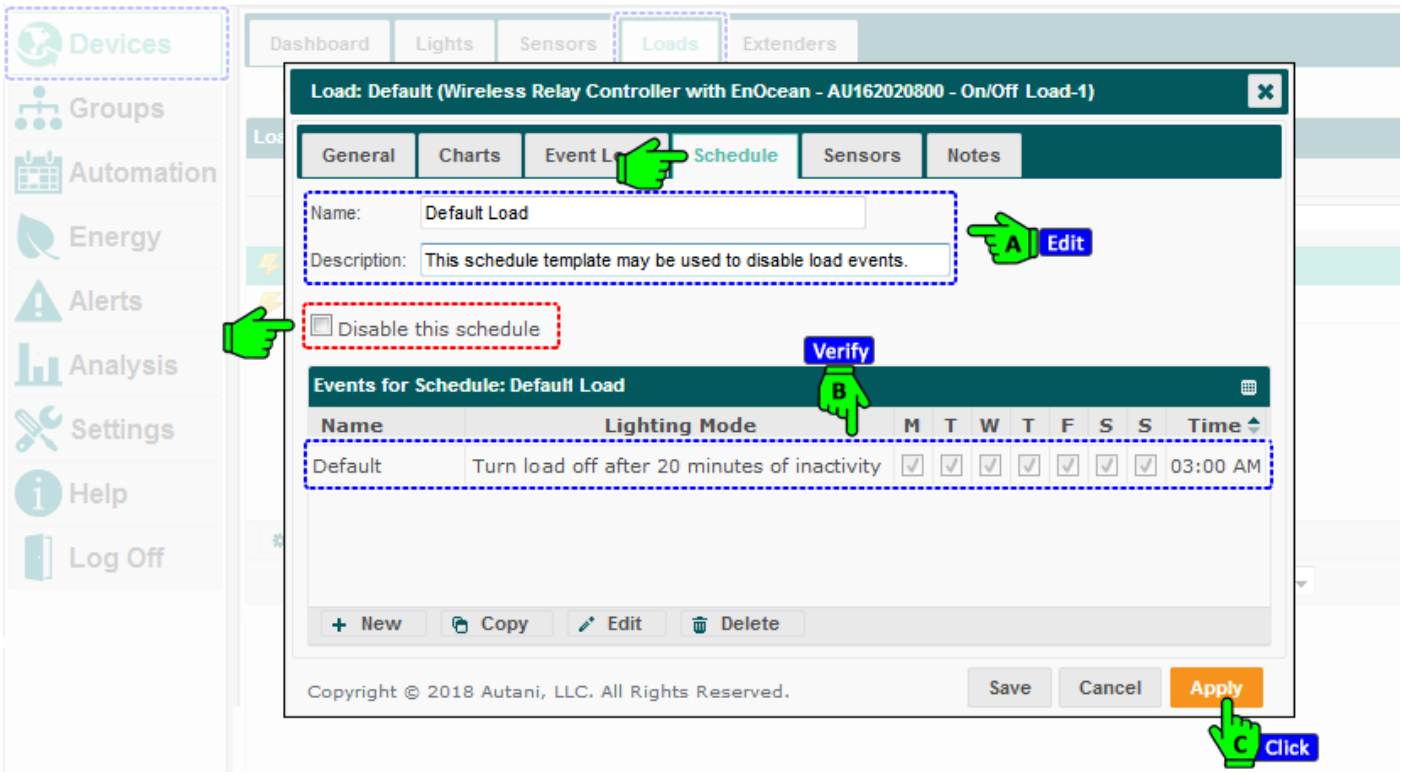
3. Select the next tab **Charts** to see the ON/OFF performance of a load. Choose a date range to see the performance chart for that period. The chart has a feature to zoom IN and OUT.



4. Select the next tab **Event Logs** to see all logged information about the attributes of a load. The log information can be seen for a specific date range. The list can be refreshed, and users can navigate between pages as needed.



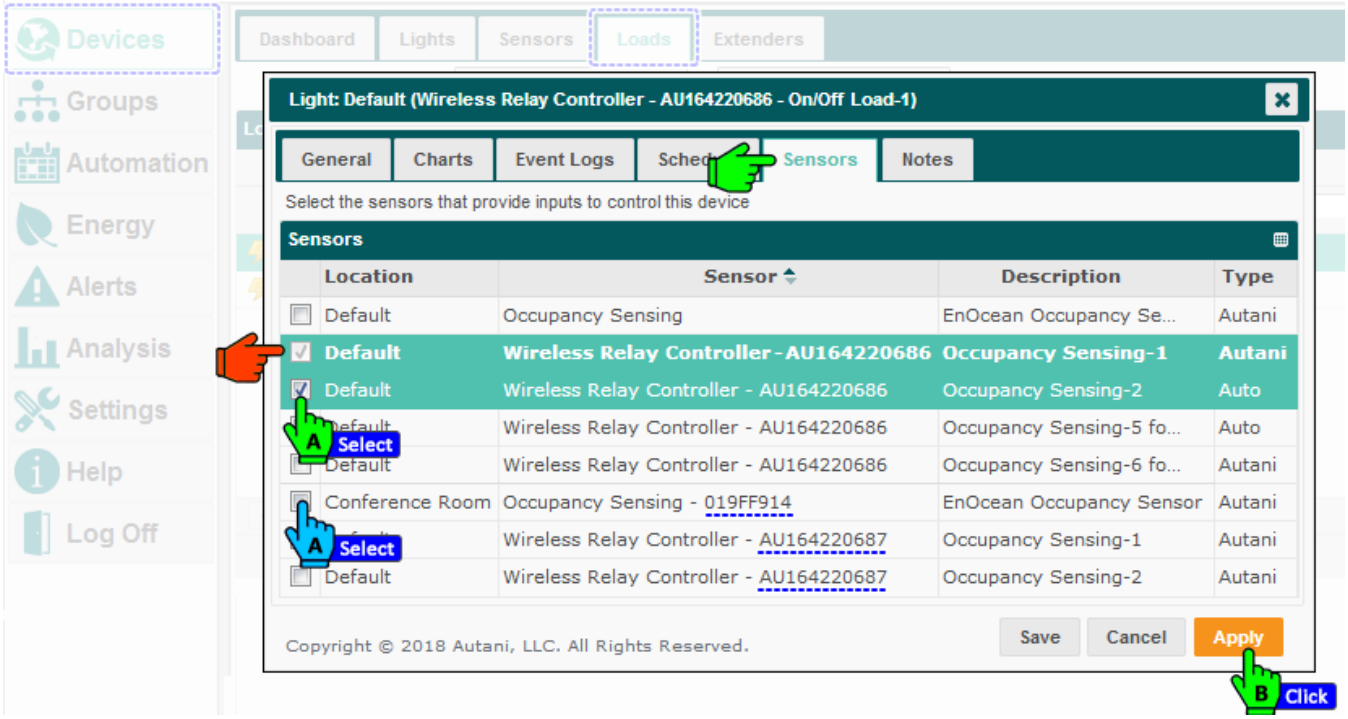
5. Select the next tab **Schedule** to view, verify and disable a schedule for the load.
NOTE: It is not recommended to create or edit schedules in this screen. Any changes made here will be overridden by the schedules created through the **Automation** section. (Refer to section *10. Configuring Schedules*).



6. Select the next tab **Sensors** to view a list of occupancy sensors that can be mapped to a selected ON/OFF load channel.

   NOTE: The physically wired sensors are selected and grayed out if they are already been mapped from within the setup screen.

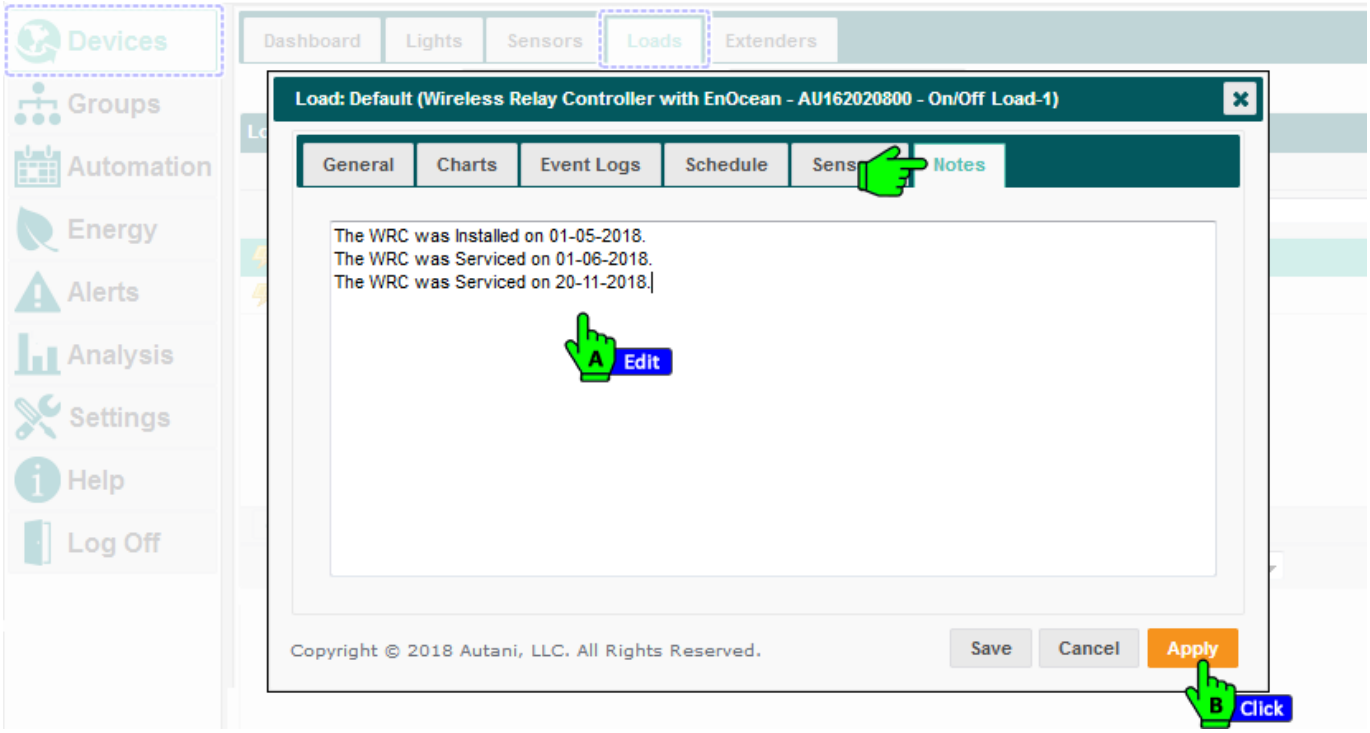
   - The list contains sensors from the currently selected WRC, sensors from other WRCs, and sensors from other devices. These occupancy sensors from different devices can also be mapped to the load via virtual association.
   - Select the required occupancy sensors and click **Apply**.



NOTE: There is NO limit on the number of sensors that can be virtually associated with the load.

NOTE: The virtual association will not work if the software and the Manager are not functioning.

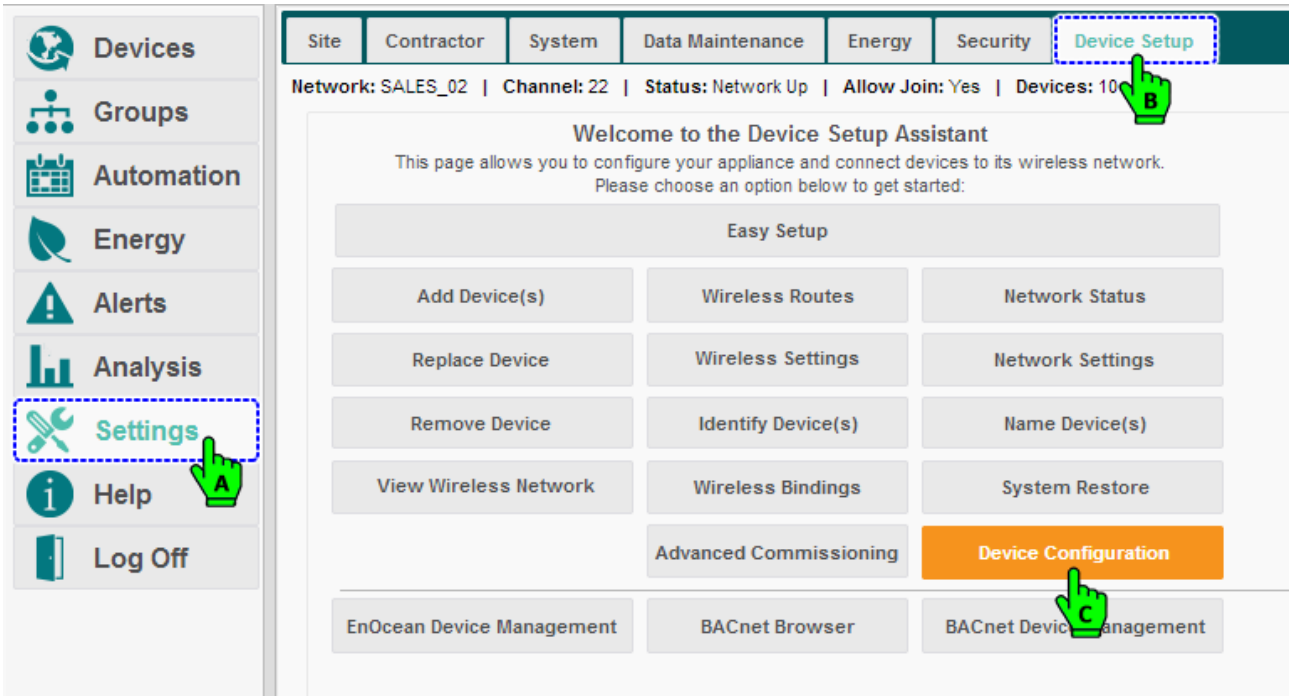
7. Select the next tab **Notes** to leave a note for other users to refer. Click within the text box to create a note, and click **Apply** to save the note.



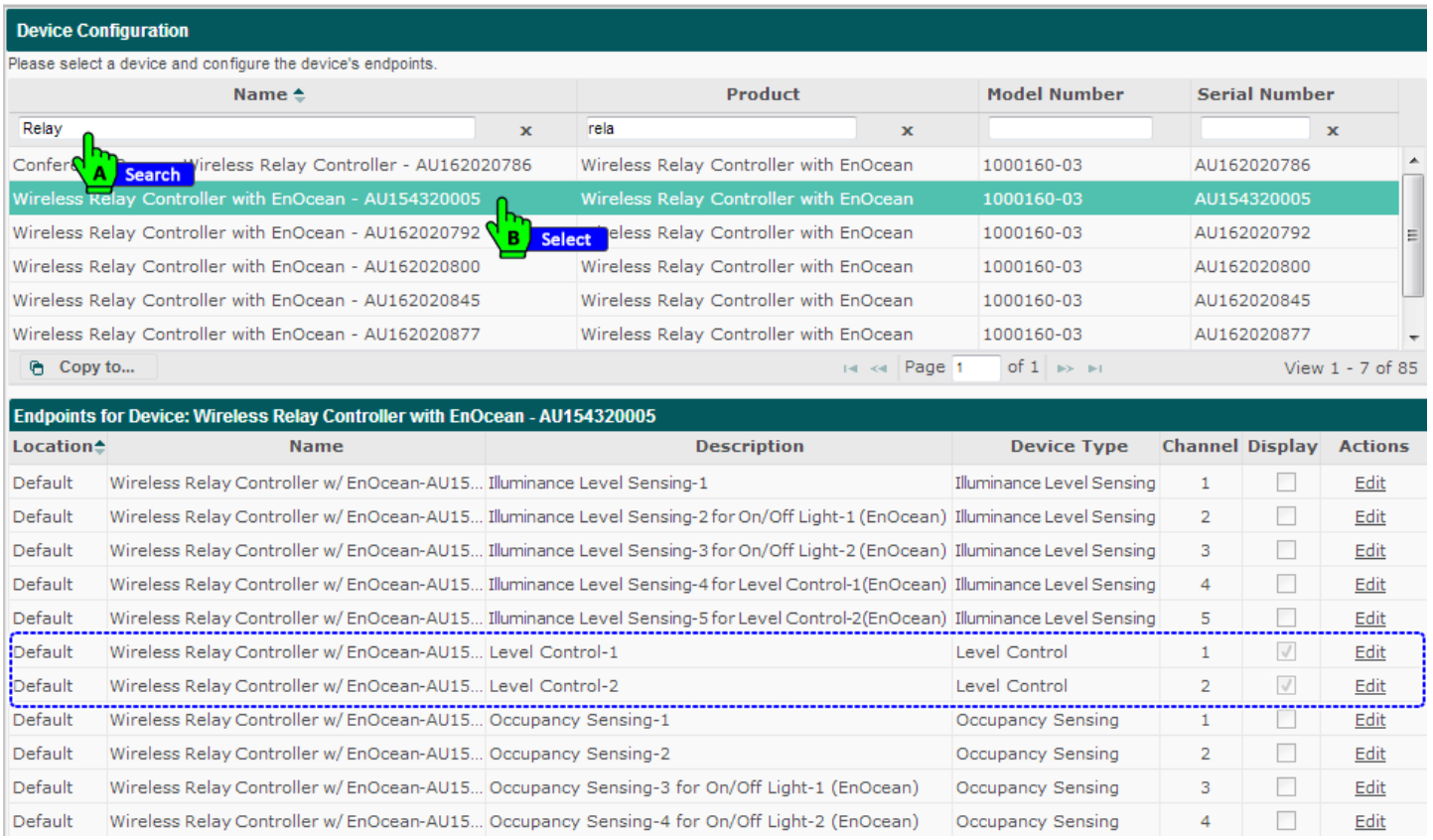
5.5. Mixed Profile Configuration

The WRC can support mixed profile configurations. This section will show an example of a mixed profile using two different channels of the WRC: **Level Control-1** and **On/Off Light-2**. As this document is covering two-circuit configurations, we will keep Level Control-1 as is for Dimmable Control and replace the Level Control-2 with On/Off Light-2.

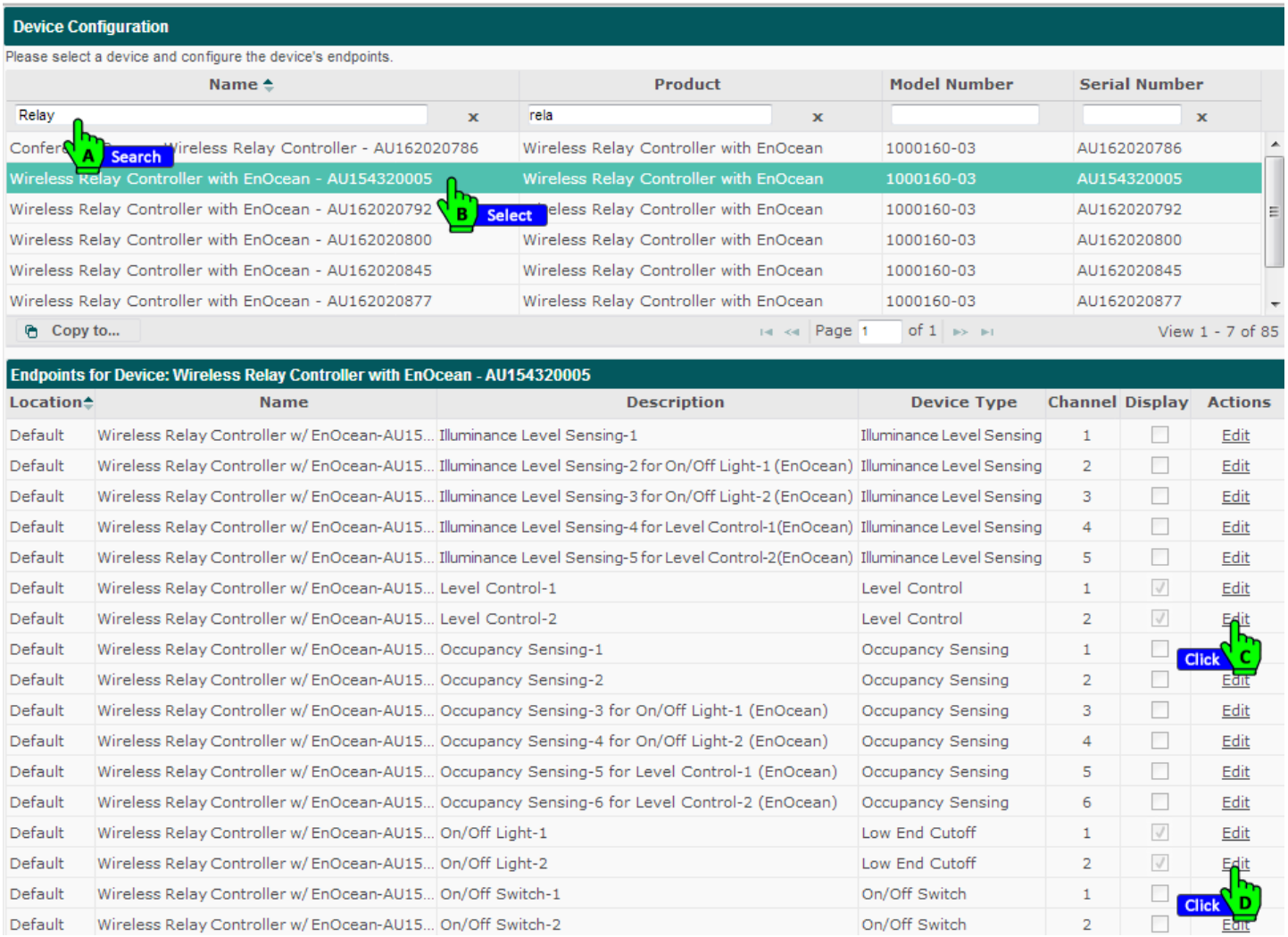
1. To define the Level Control and ON/OFF Light channels, select **Settings** > **Device Setup** > **Device Configuration**.



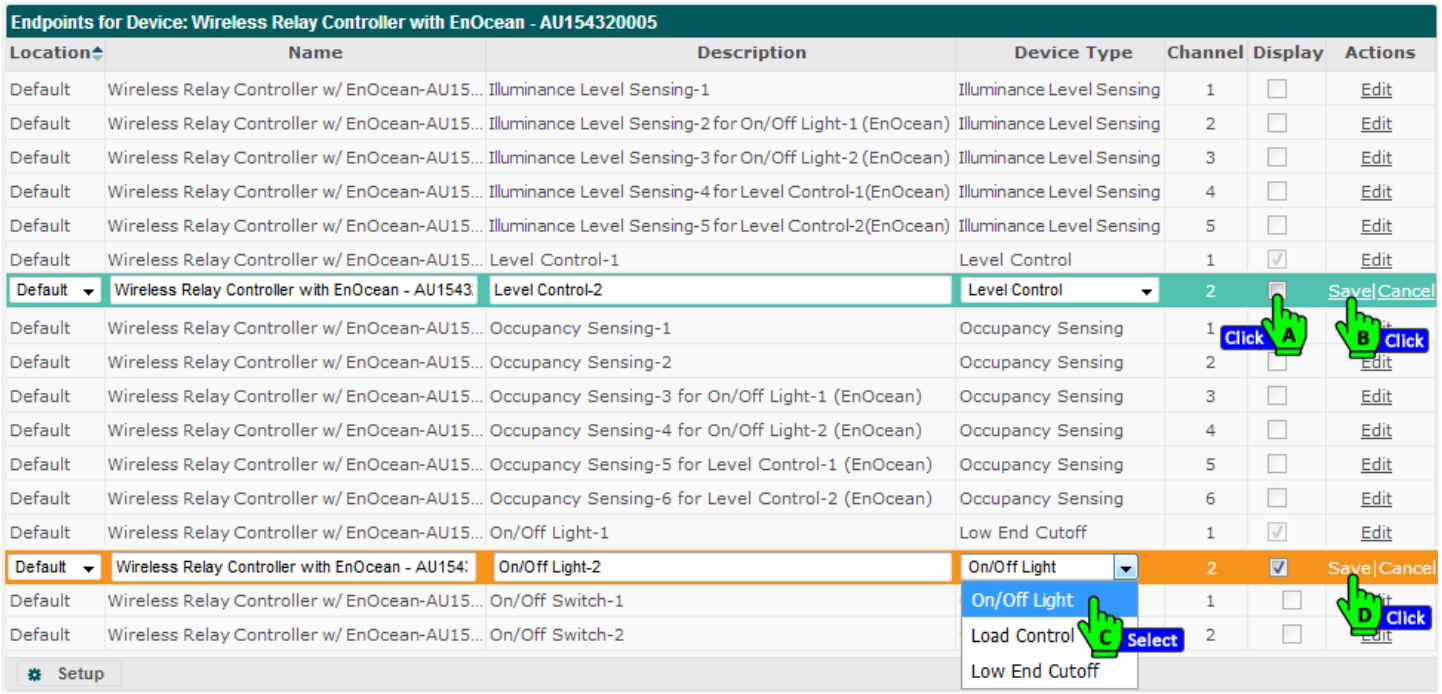
2. The **Device Configuration** page displays the list of available devices on the top section and endpoints for the selected device in the bottom section. Search for the applicable WRC by name or serial number, and select it from the search results. At present we have two circuits of control, assigned to Level Control-1 and Level Control-2.



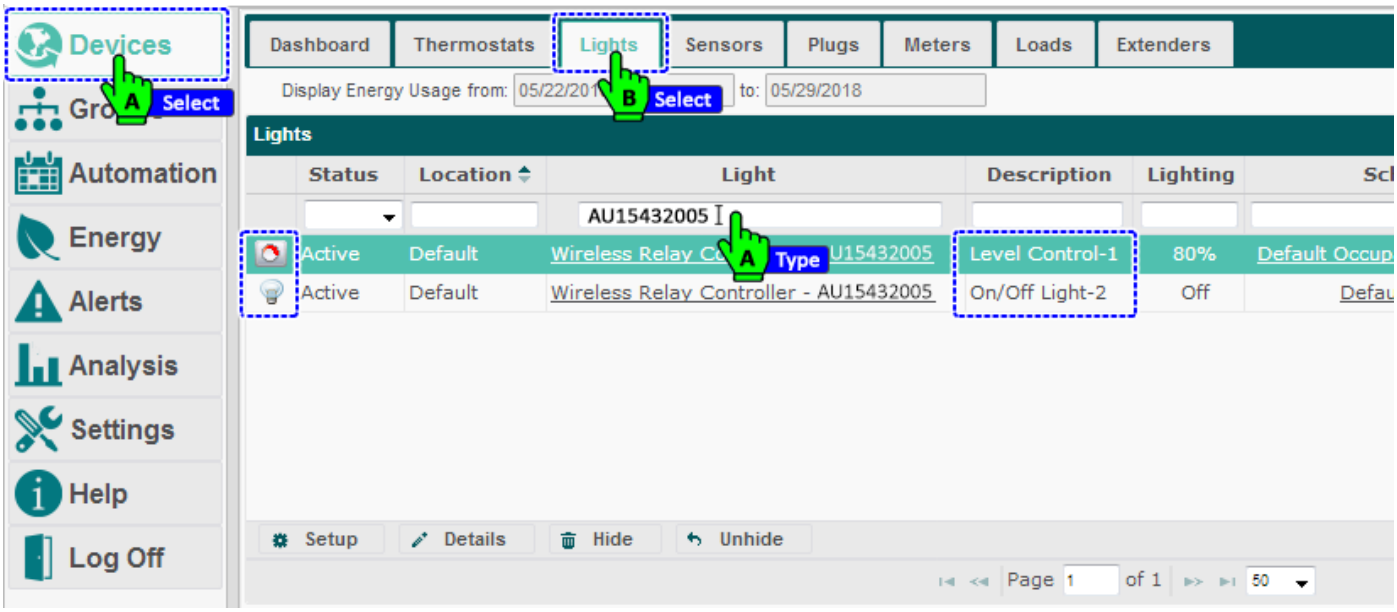
3. We will keep Level Control-1 as is for dimming and replace Level Control-2 with On/Off Light-2. With the WRC still selected, click **Edit** on the endpoints **Load Control-2** and **Low End Cutoff**.



4. Hide **Level Control-2** by un-checking the display button. Click **Save**. Change the Low End Cutoff to On/Off Light and click **Save**.



5. Select **Devices** > **Lights**. Within the header fields, search for the **WRC** with serial number (the one configured in previous steps). The two channels **Level Control-1** and **On/Off Light-2** are now listed.

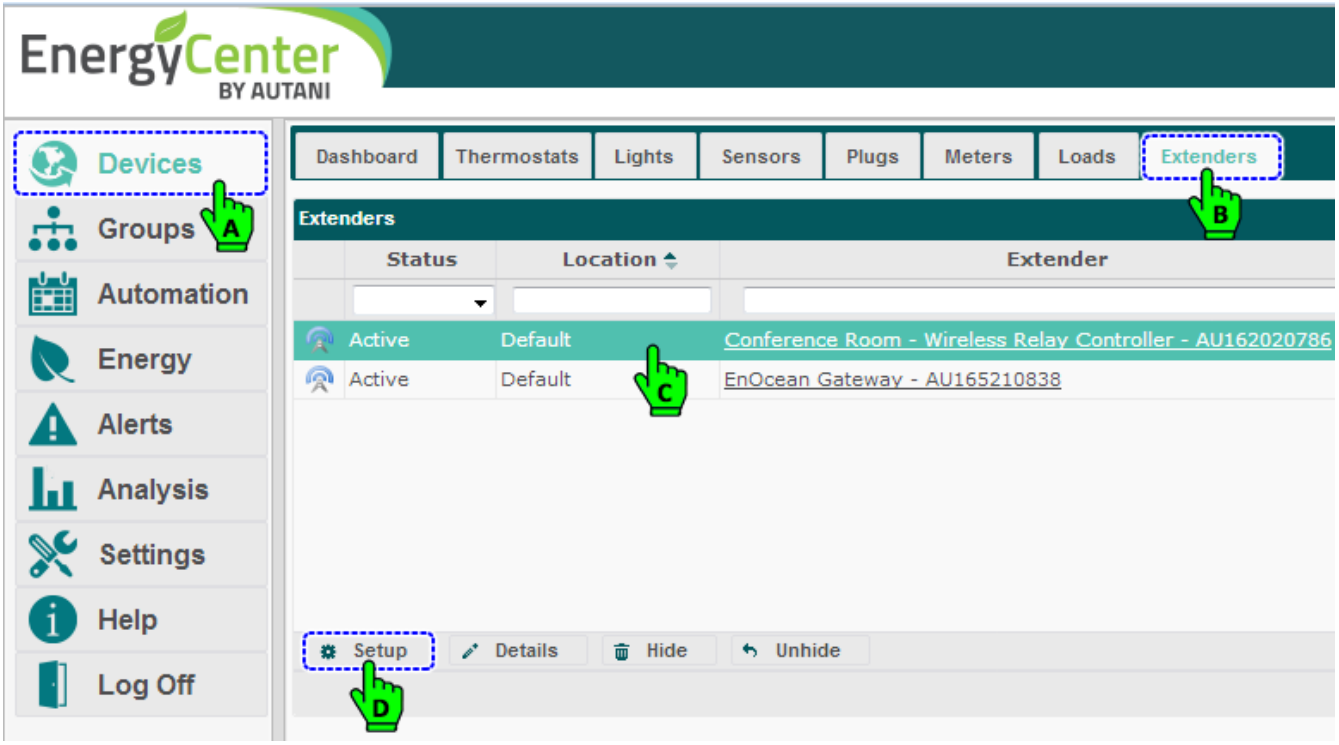


6. To configure Level Control-1, refer to **Level Control (Dimming Configuration)**
7. To configure On/Off Light-2, refer to **ON / OFF Light Configuration**

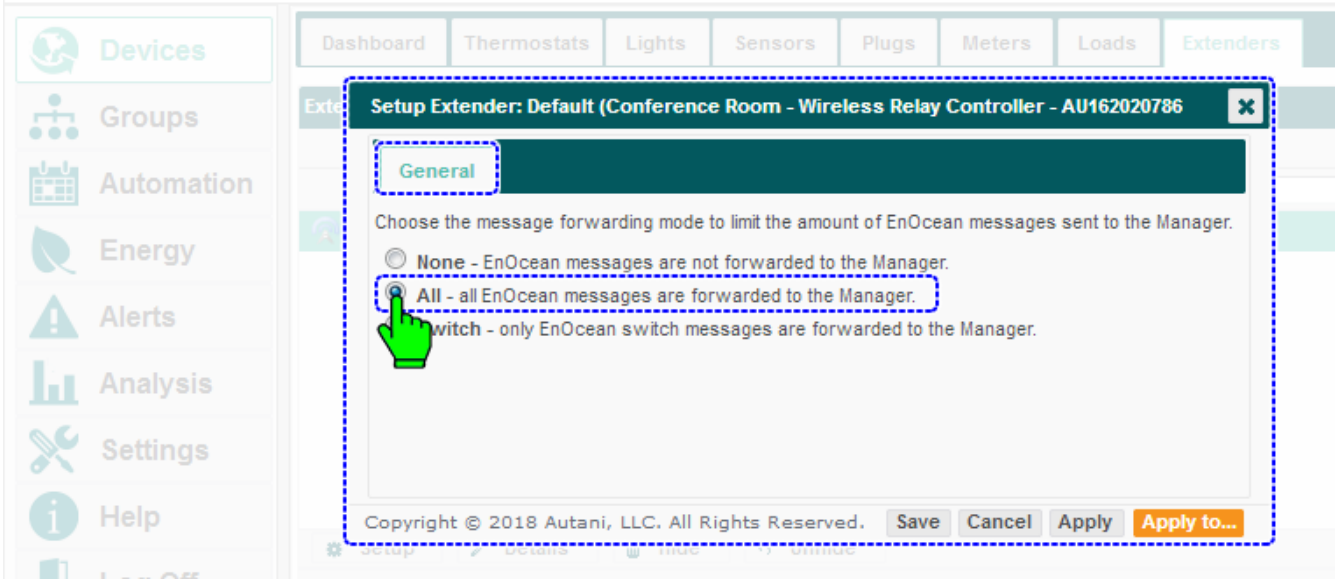
5.6. Passthrough Feature

Another major functionality of the **WRC** is the General Pass-through feature, were in the sensor readings received by the WRC are directly transmitted to the Autani Manager's EnergyCenter® Software, via the autaniNet wireless network. The pass-through application can also be used with other select EnOcean sensors that Autani has certified capability with.

1. The **WRC** is available inside the **Devices** section under the **Extenders** tab. Proceed further to commission the device.
2. Click **Devices > Extenders** tab, select your **Wireless Relay Controller** from the list, and click **Setup** to configure.



3. The **Setup Extender** pop-up menu appears with three options for the Passthrough feature. The user can choose to limit the amount of EnOcean messages sent to the Autani Manager.
   - Select the option **All - all EnOcean messages are forwarded to the Manager** to forward all the messages. **Save** & **Apply** the settings.

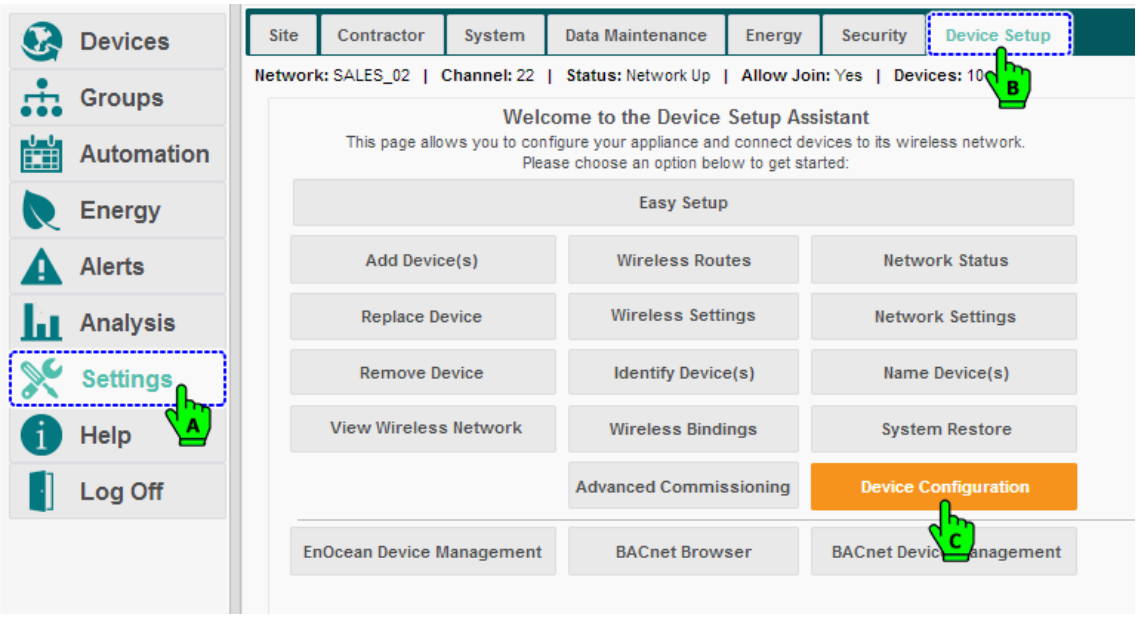


4. The user can add EnOcean accessories through **Settings > Device Setup > Add Devices** if the given EnOcean device is within 80-100 feet line of sight to the WRC.

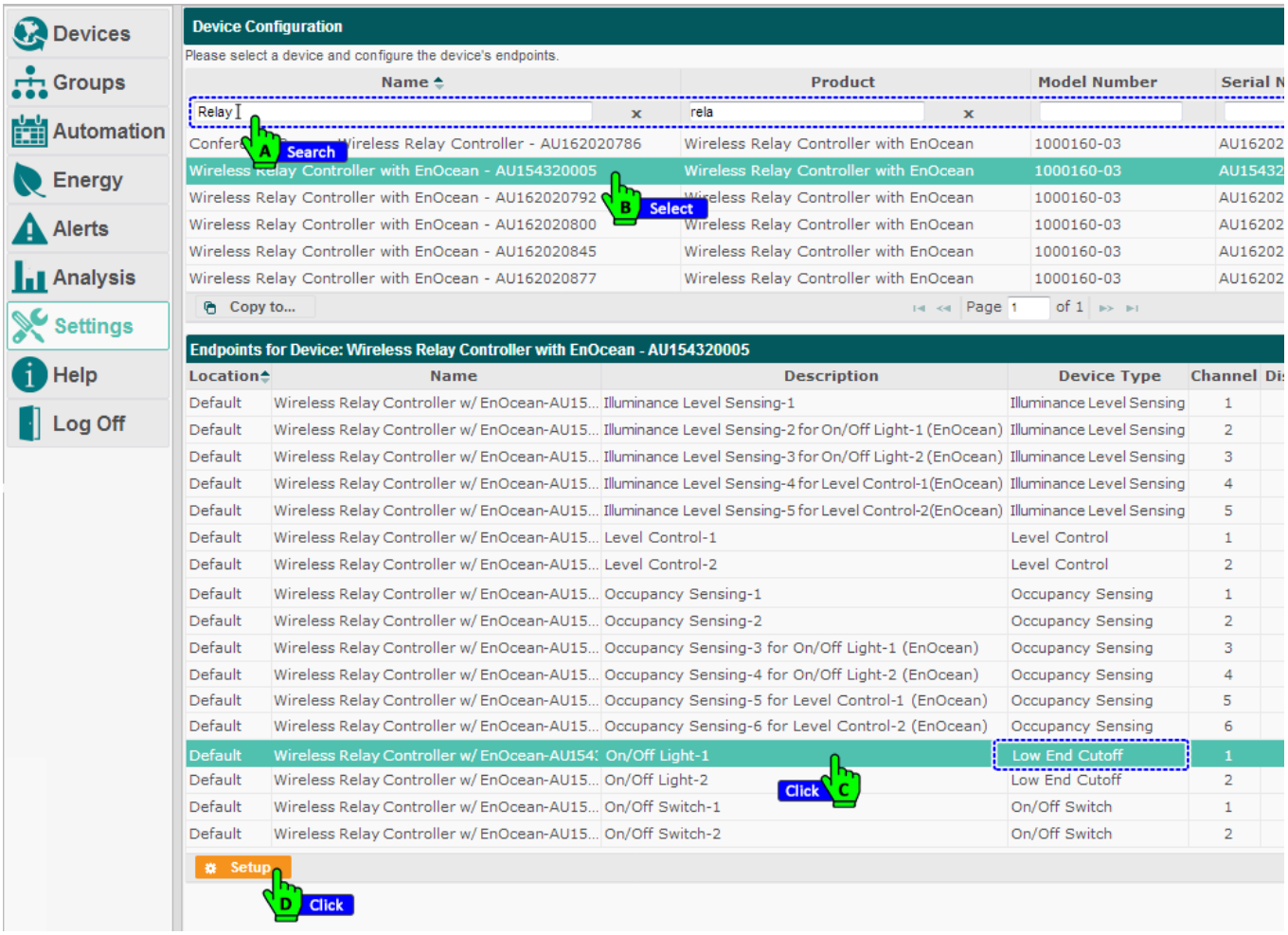
6. Configuring Switches

6.1. Configuring Wired Switches for Low End Cutoff

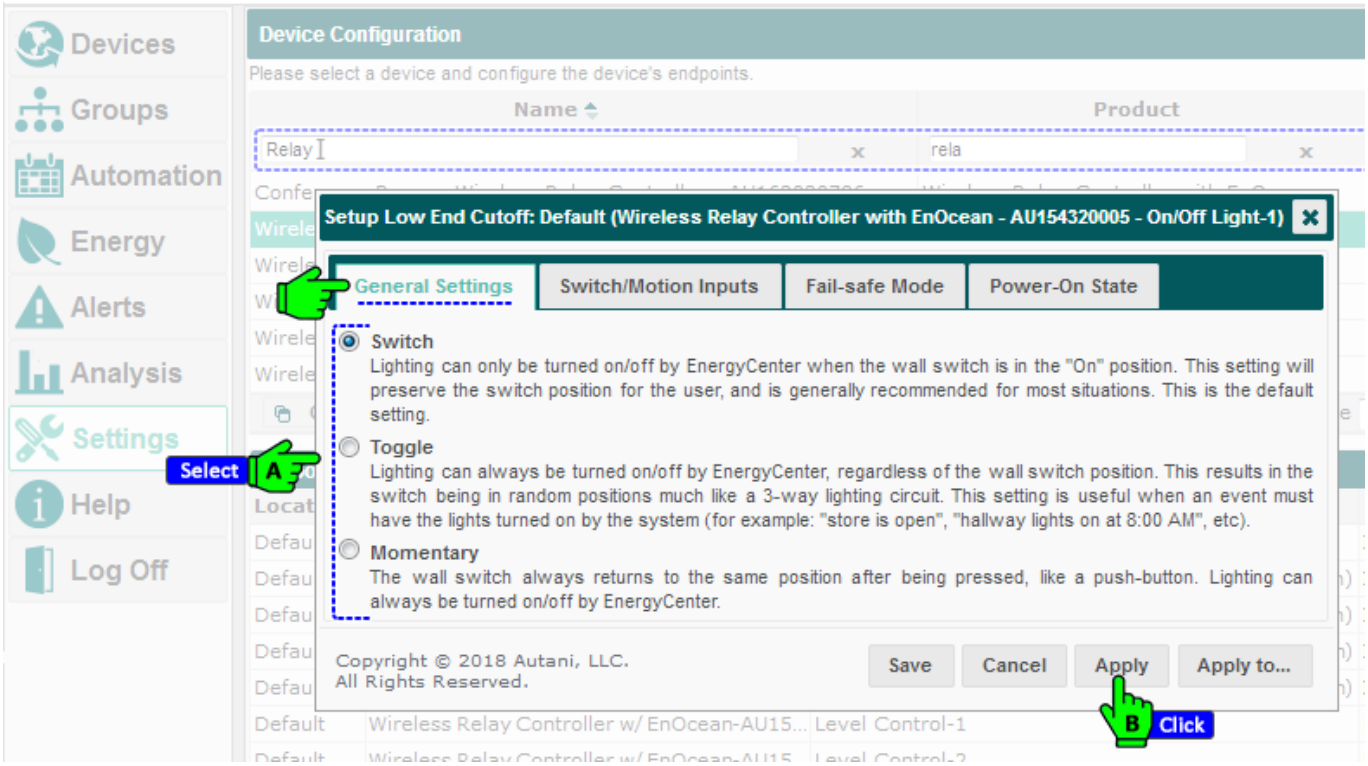
1. To configure wired switches, select **Settings** > **Device Setup** > **Device Configuration**.



2. In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search result. Select the endpoint **Low End Cutoff** in the lower section, and click **Setup**.



3. The **Setup** window appears for the **Low End Cutoff** endpoint, displaying the **General Settings** tab by default. This tab contains three modes for how a switch will behave. Choose one of the switch mode, click **Apply**.

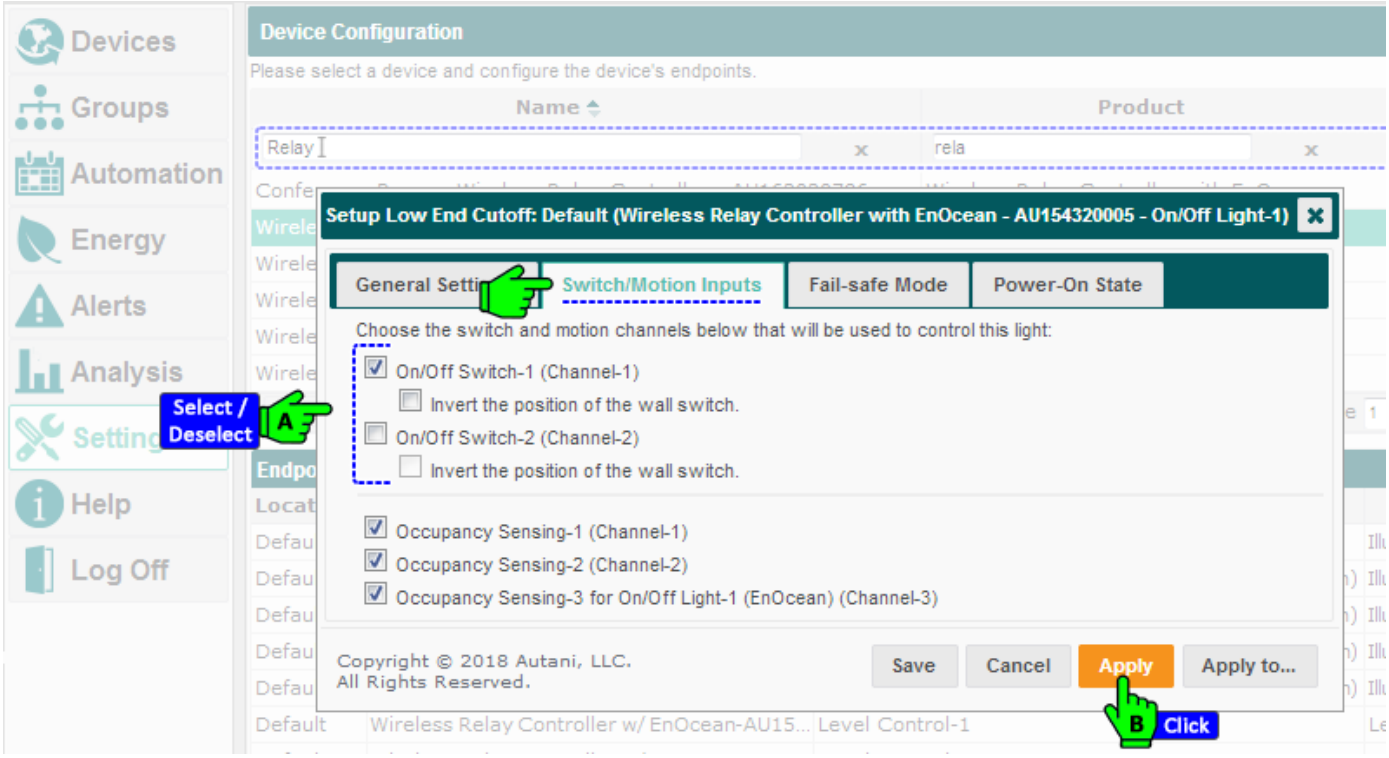


- **Switch** mode: This is the default mode in which the switch works as a maintain switch, where UP is ON and DOWN is OFF.
  - In this mode, if the switch is in the ON position, EnergyCenter® can turn ON/OFF the lighting.
  - If the switch is in the OFF position, EnergyCenter® and the Occupancy Sensor will not have control to turn ON the lighting until the motion matter bit resets (motion is detected) or the user puts the switch back to the ON position.
- **Toggle** mode: The switch works as a maintain switch with a small difference compared to Switch mode.
  - **NOTE:** The main reason to consider this mode is for a three-way switch configuration, where two maintain switches are being used to control the same circuit.
  - In this mode, if the switch is in the ON position, EnergyCenter® can turn ON/OFF the lighting.
  - If a switch is in the OFF position, EnergyCenter® can turn ON/OFF the lighting, but the occupancy sensor will not have control to turn ON the lighting until the motion matter bit (motion is detected) resets or the user puts the switch back to the ON position.
- **Momentary** mode: The switch works like a push button. One push will turn ON lights, and a second push will turn OFF lights.
  - The light can always be turned ON/OFF by EnergyCenter®.
  - The first push will turn ON the light if it was previously OFF (press and release).
  - The second push will turn the light OFF if it was previously ON (press and release).

6.2. Enable/Disable the Wired Switches

4. Select the next tab **Switch/Motion Inputs** to bind the switch and motion channels to the circuit.

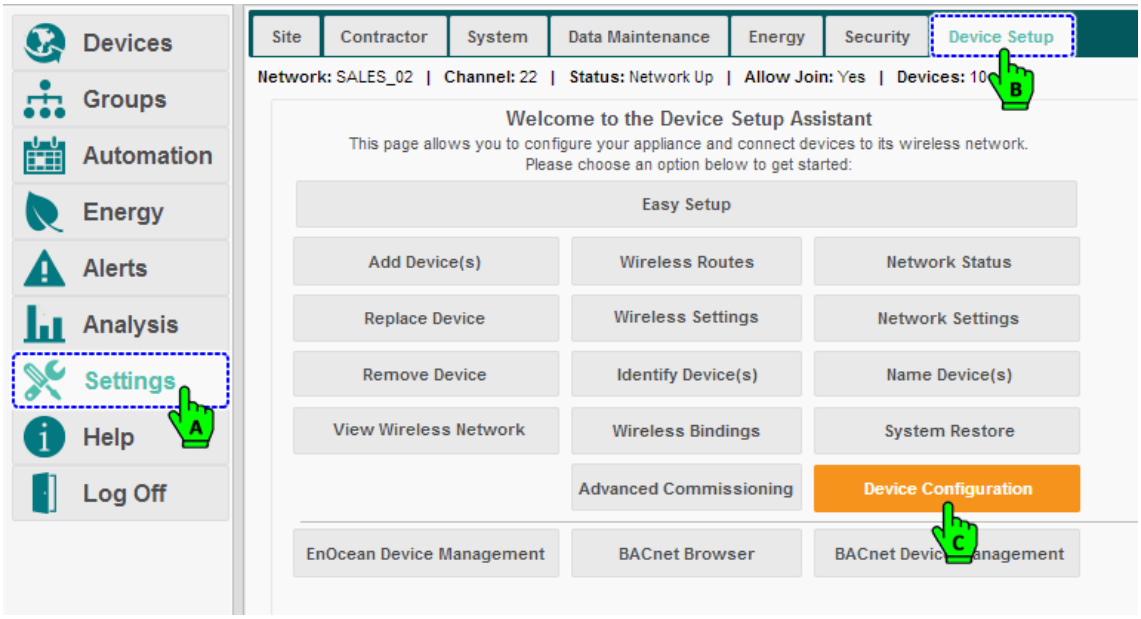
   NOTE: This is where you enable or disable the wired switches. There are two switch channels available. By default the working channel is selected. Enable or disable the relevant channel(s) for the circuit you are working with. If required, select the option **Invert the position of the wall switch** for the selected channel.



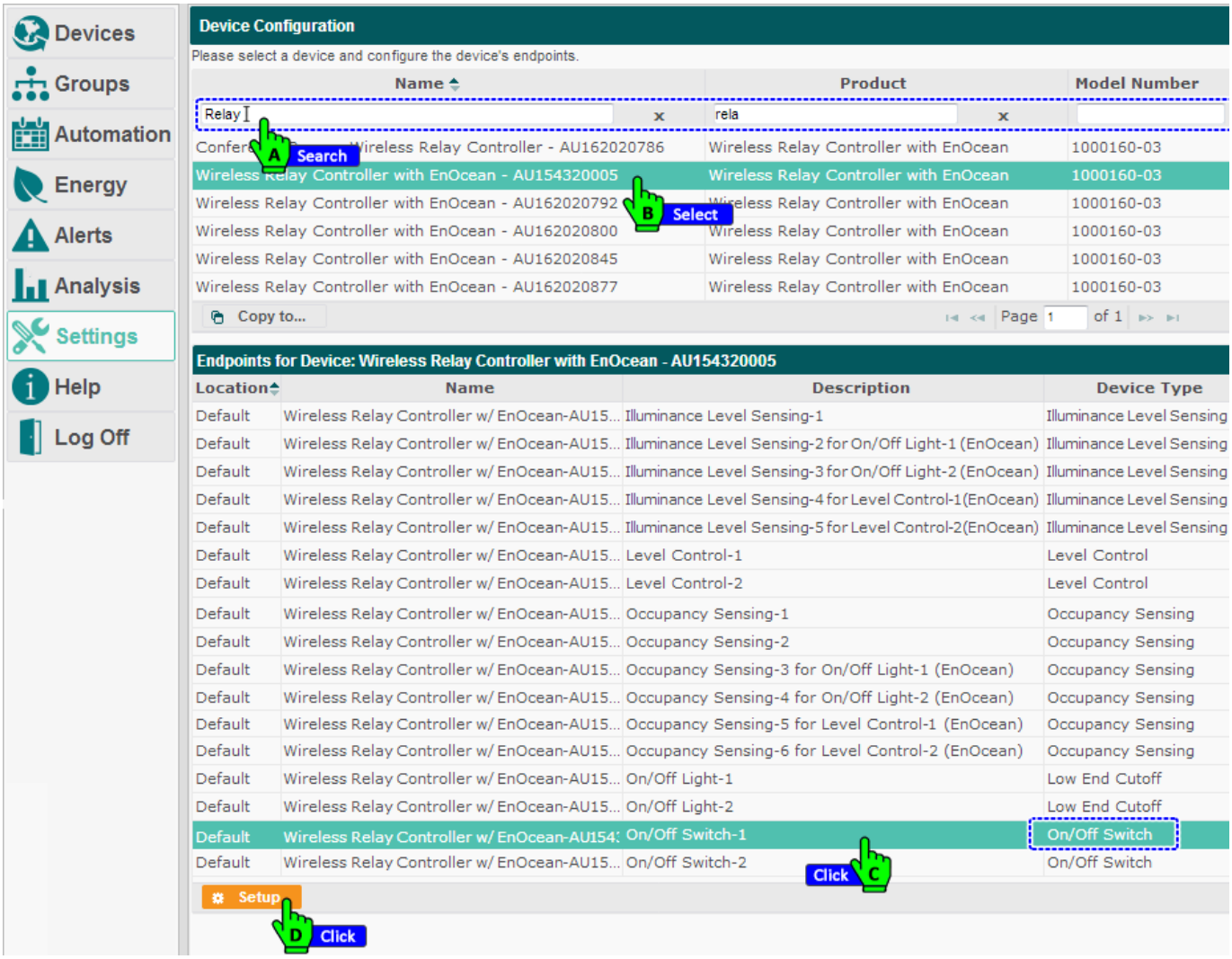
5. The next tab **Fail-Safe Mode** is not applicable for this endpoint **Low End Cutoff**. (Applicable for **On/Off** Endpoint).
6. The last tab is the **Power-On State**, which is not configured here. If this endpoint **Low End Cutoff** is being configured for Level Control endpoint, the Power-On State will be configured within Level Control configuration. (See *5.2. Level Control (Dimming Configuration).*)

6.3. Mapping Wireless Switches for On/Off Switch

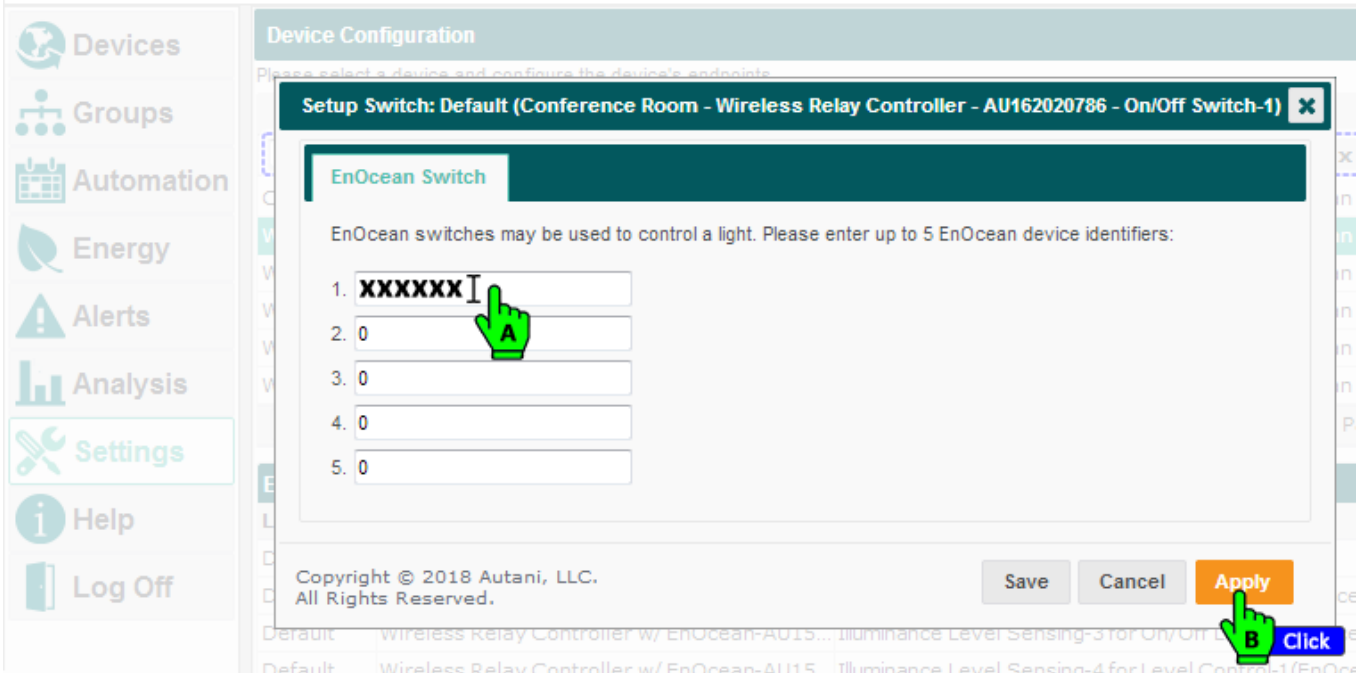
1. To configure the wireless switches, select **Settings**> **Device Setup**> **Device Configuration**.



2. In the Device Configuration page, search for a **WRC** in the header fields provided. Select the applicable WRC from the search results, and then select the endpoint **On/Off Switch** in the lower section. Click **Setup**.

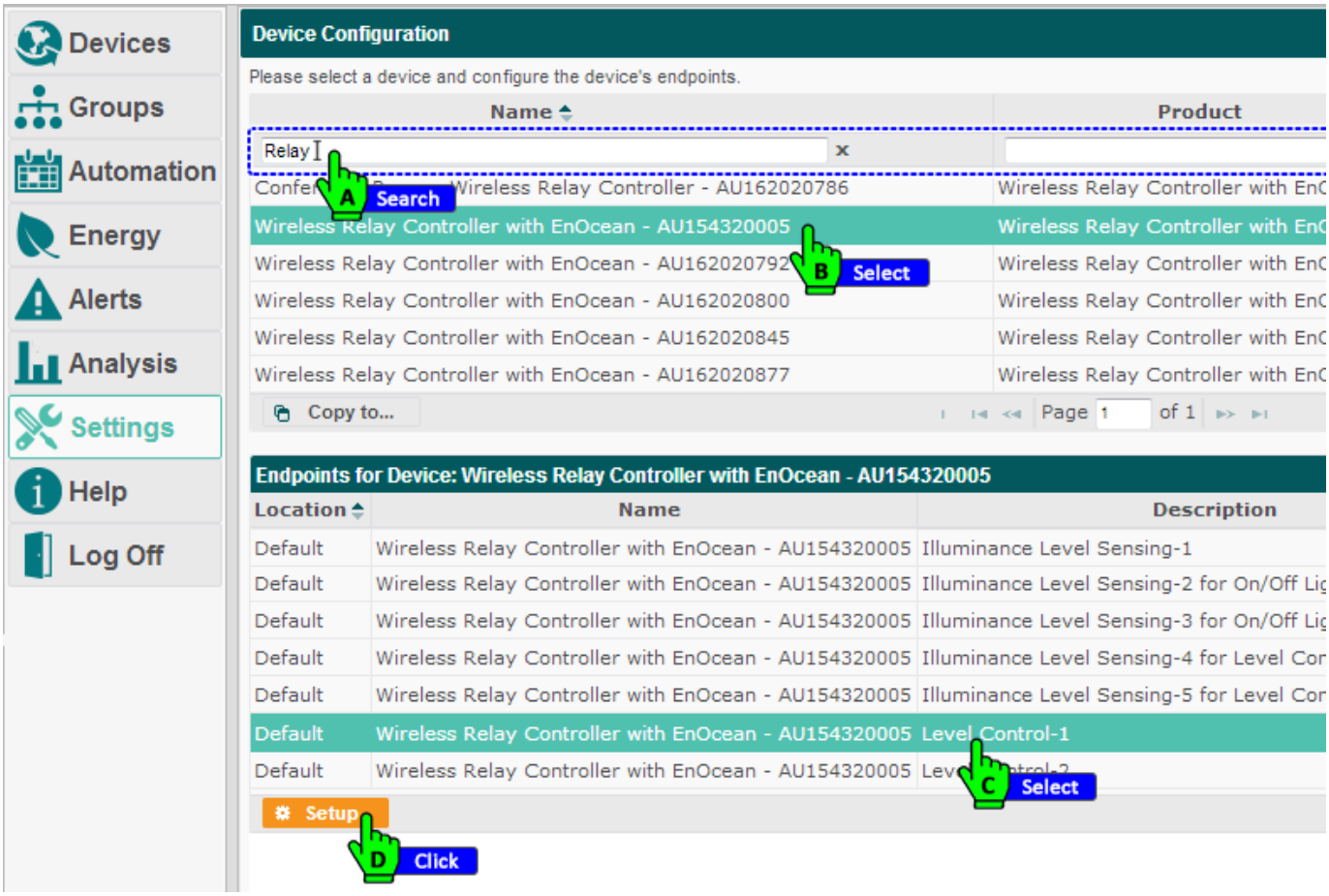


3. The **Setup Switch** window appears with the **EnOcean Switch** tab selected. Enter the EnOcean switch IDs into the fields provided. Up to five EnOcean switches can be configured. Click **Apply**.

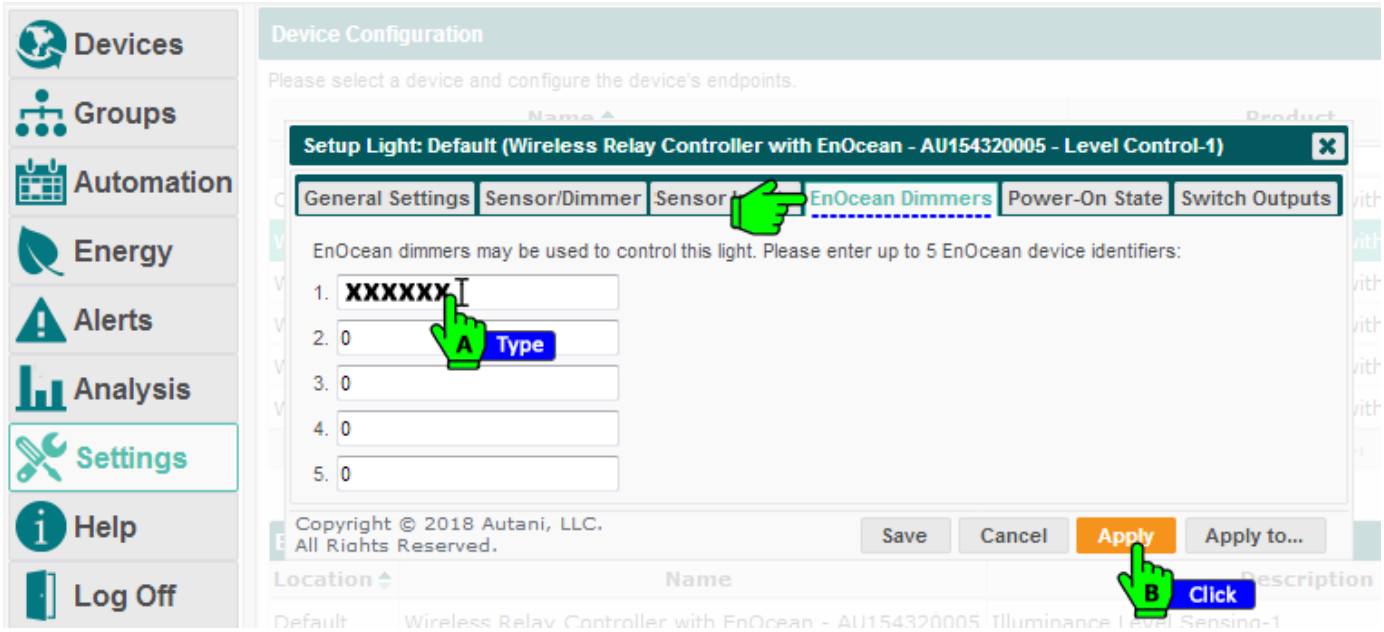


6.4. Mapping Wireless Switches for Level Control

1. After configuring the wireless switches in the previous section, they can now be mapped to Level Control. Search for the applicable **WRC** by name or serial number, and select it from the search result. Then select the endpoint **Level Control-1** in the lower section, and click **Setup**.



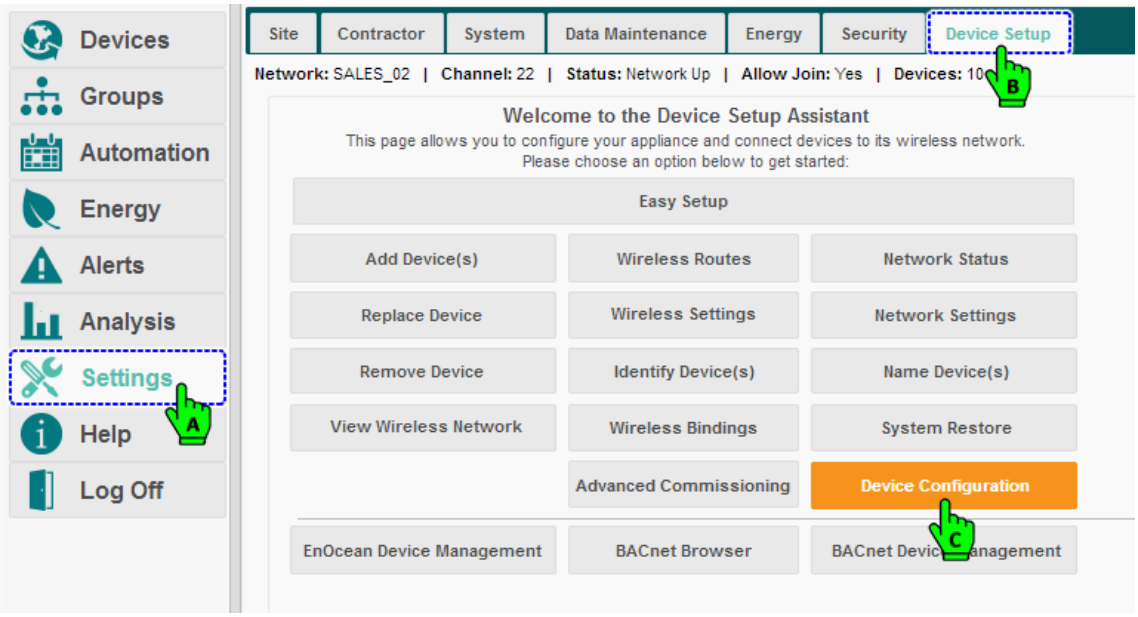
2. The **Setup Light** window appears. Select the **EnOcean Dimmers** tab and enter the EnOcean switch IDs into the fields provided. Click **Apply**. Up to five EnOcean switches can be configured.



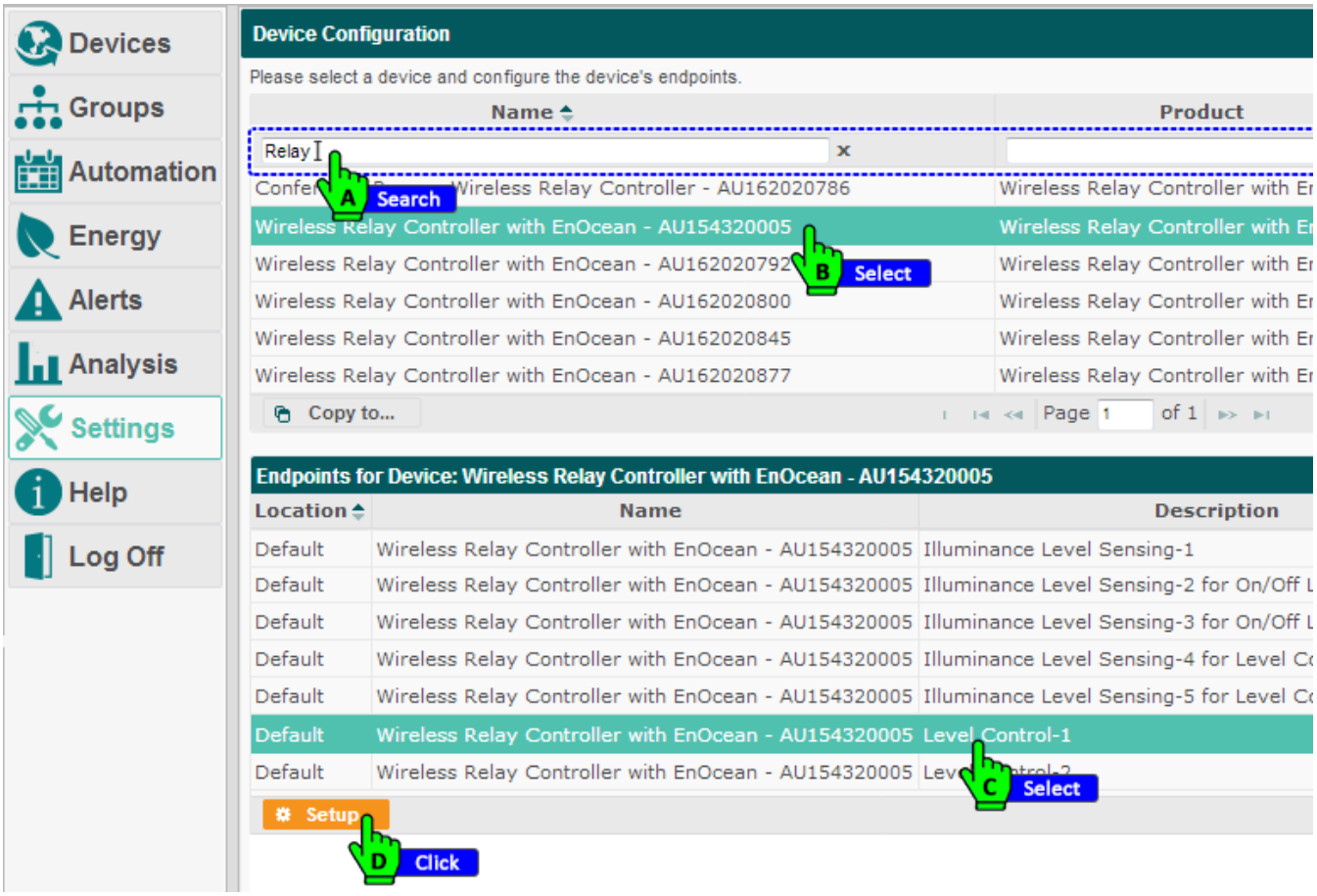
7. Configuring Wired Dimmers

7.1. Enable/Disable Wired Dimmers for Level Control

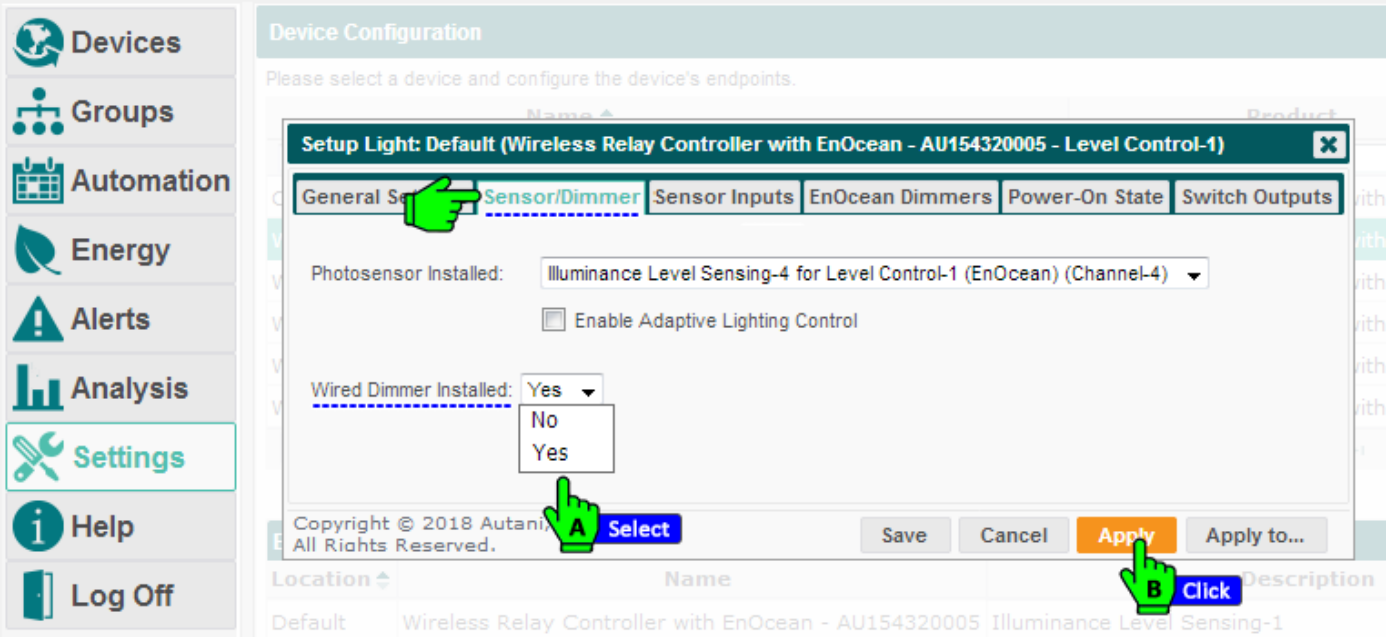
1. To configure wired dimmers, select **Settings** > **Device Setup** > **Device Configuration**.



2. Search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Level Control-1** from the list of endpoints in the lower section. Click **Setup**.



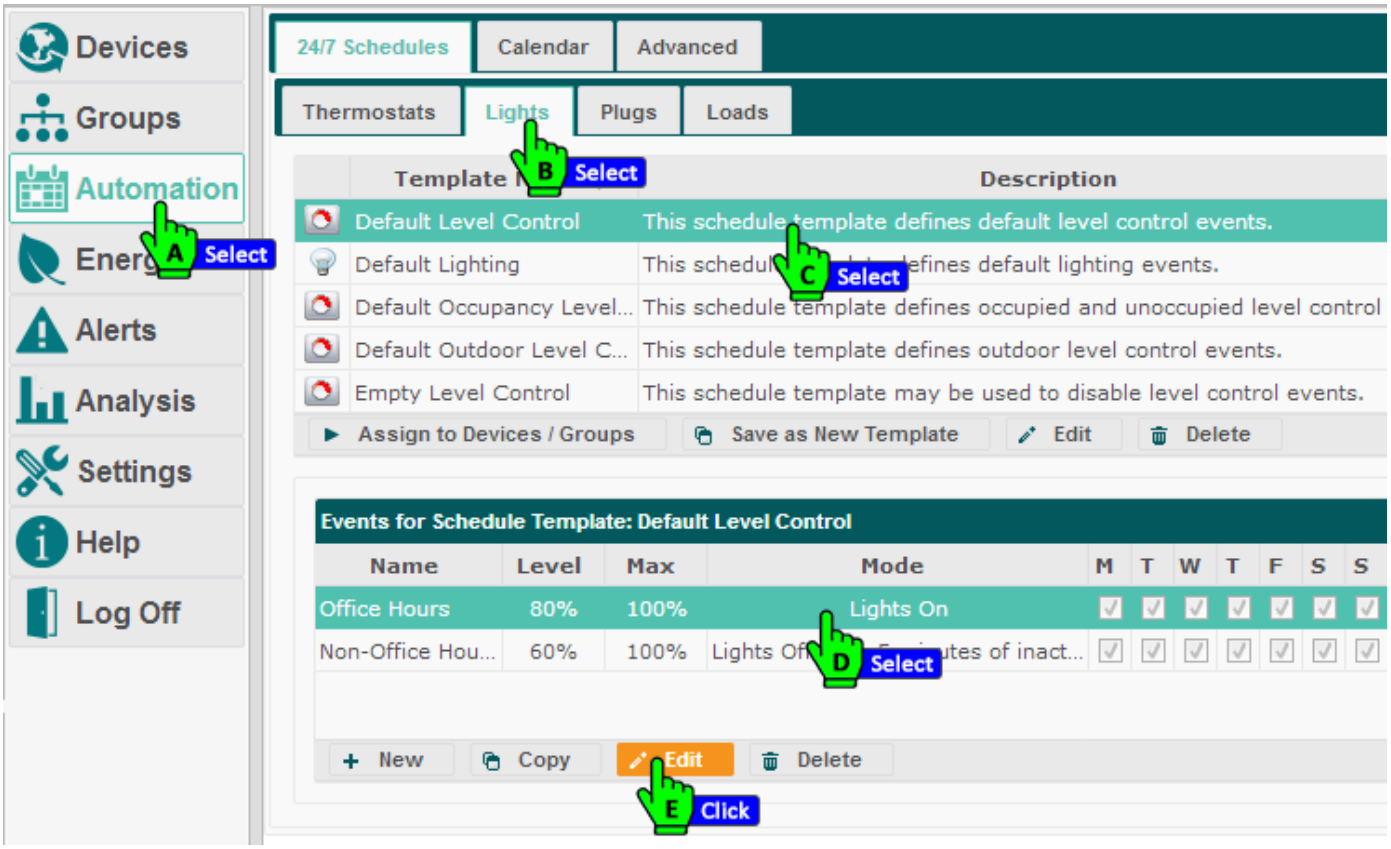
3. The **Setup Light** window appears with the **General Settings** tab selected by default. Click on the **Sensor/Dimmer** tab. From the **Wired Dimmer Installed** dropdown, select **Yes** to enable or **No** to disable the dimmer. Click **Apply**.



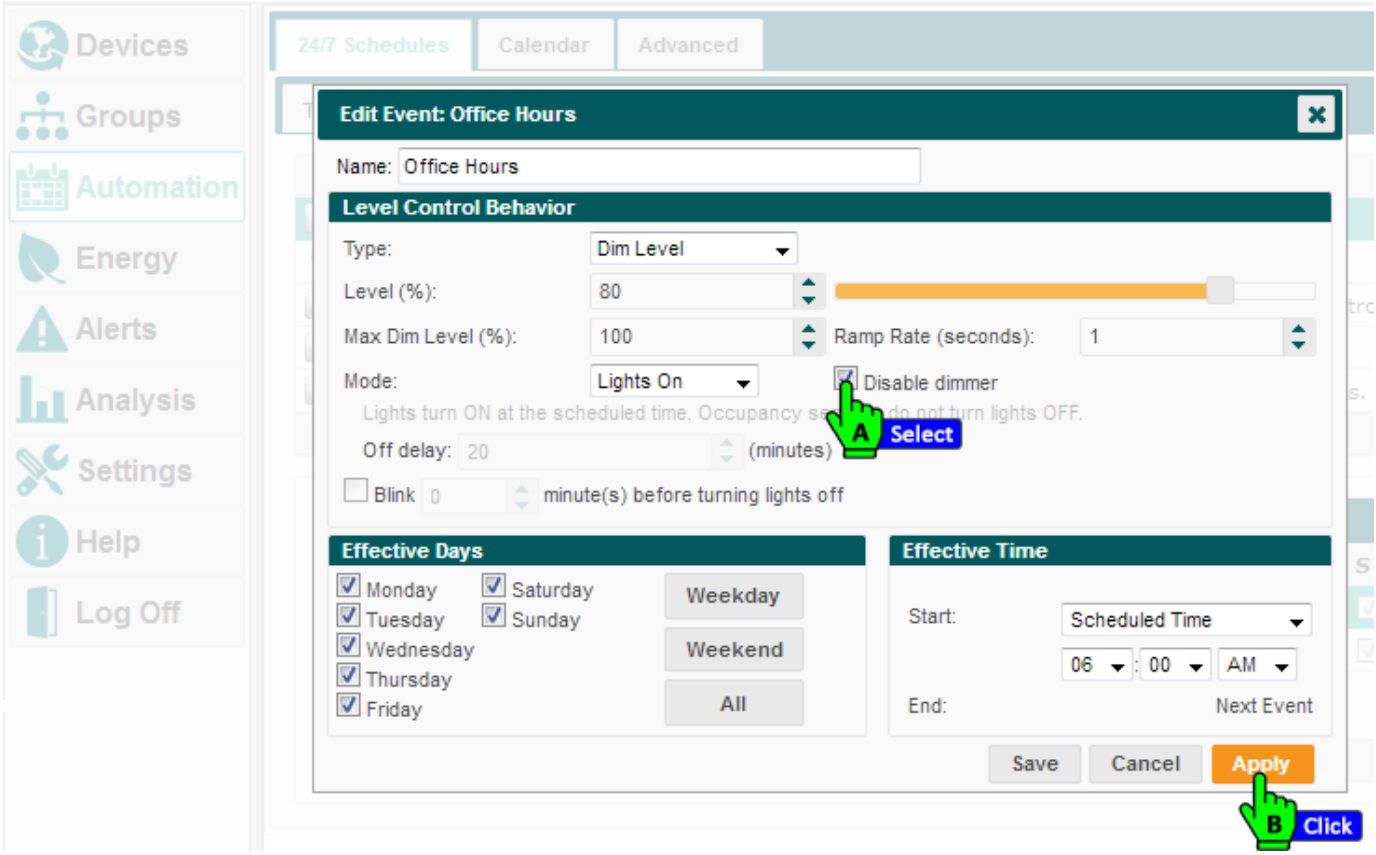
7.2. Enable/Disable Wired Dimmers in a Schedule

Wired dimmers can be disabled for a specific duration by modifying a schedule.

1. Select **Automation** > **Lights**, select a schedule template for level control, then select an Event of the Schedule and click **Edit**.



2. The **Edit Event** window appears. Select the **Disable dimmer** checkbox to disable the dimmer. Click **Apply**.



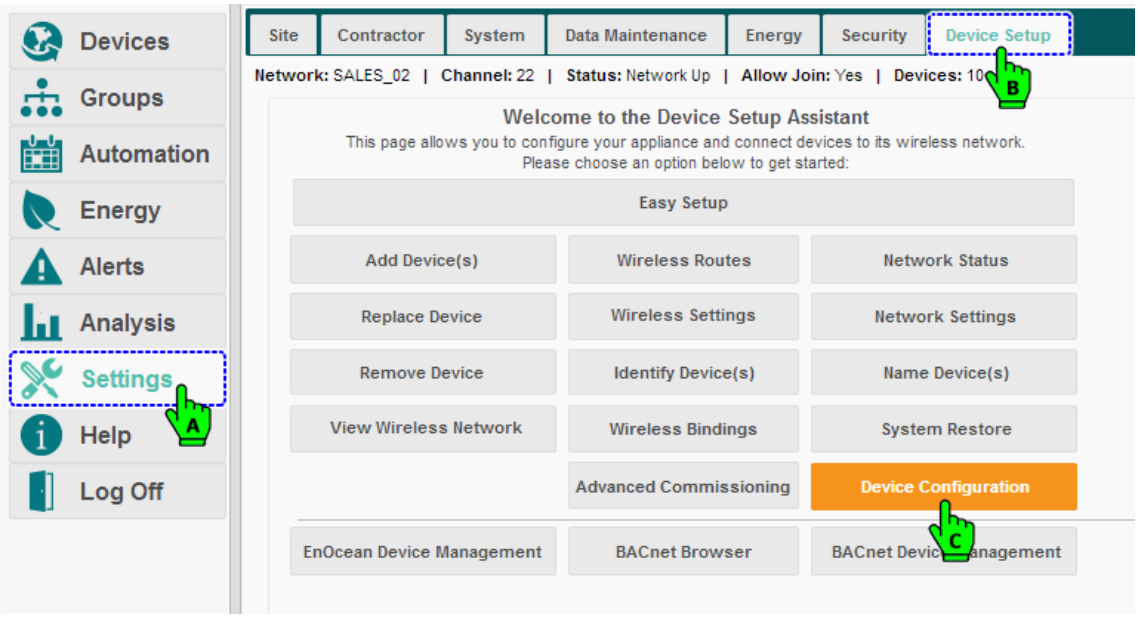
8. Configuring Motion Sensors

Both wired and wireless motion sensors can be configured for a WRC. The following is a list of occupancy sensor endpoints that are available.

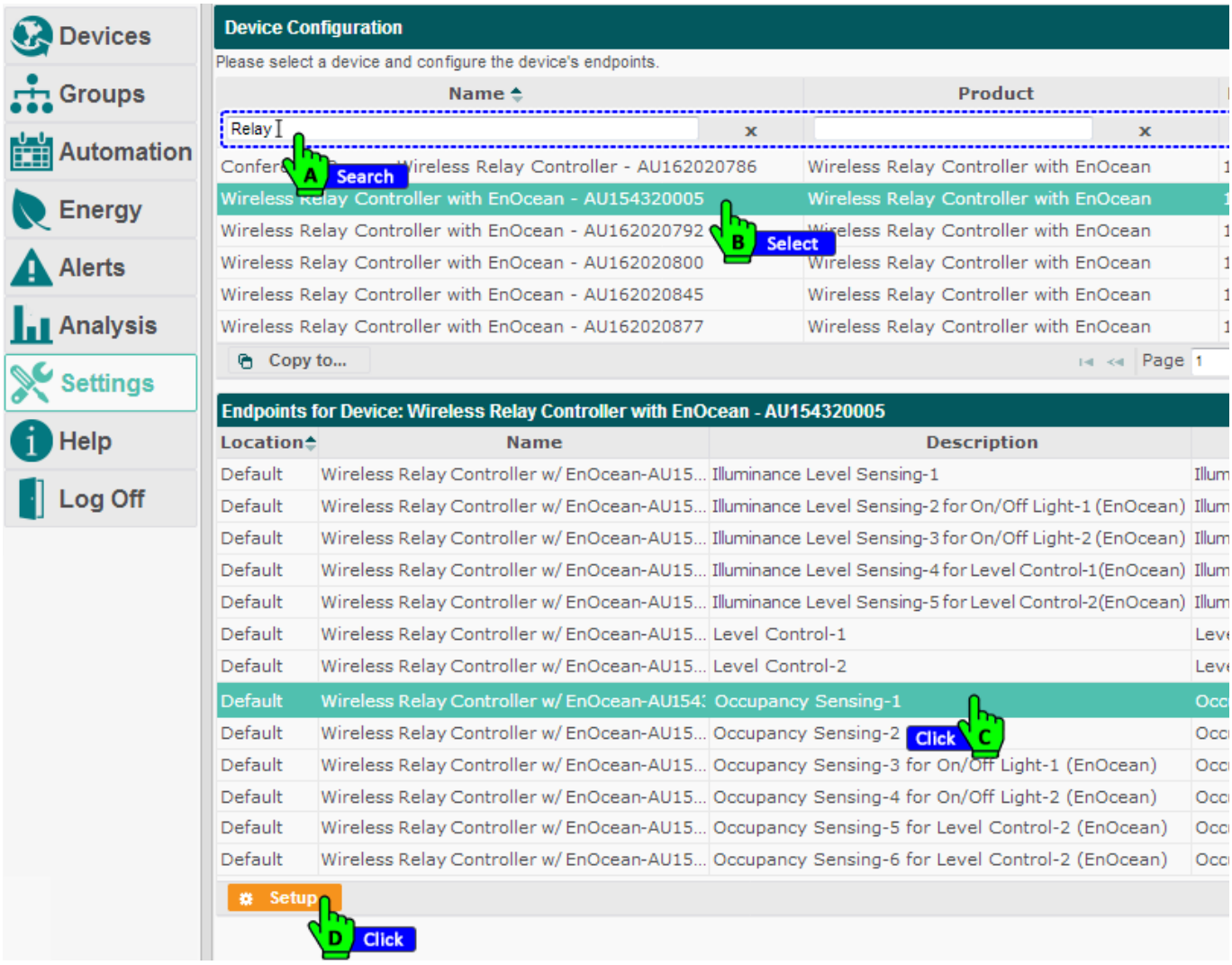
- Wired occupancy sensor channels
  - Occupancy Sensing-1
    used for Autani Mini Wired Sensor, low volts or 3 volts
  - Occupancy Sensing-2
    used for Third-Party Sensor, 24 volts
- Wireless occupancy sensor channels
  - Occupancy Sensing-3 for On/Off Light-1 (EnOcean)
  - Occupancy Sensing-4 for On/Off Light-2 (EnOcean)
  - Occupancy Sensing-5 for Level Control-1 (EnOcean)
  - Occupancy Sensing-6 for Level Control-2 (EnOcean)

8.1. Configuring Wired Motion Sensors

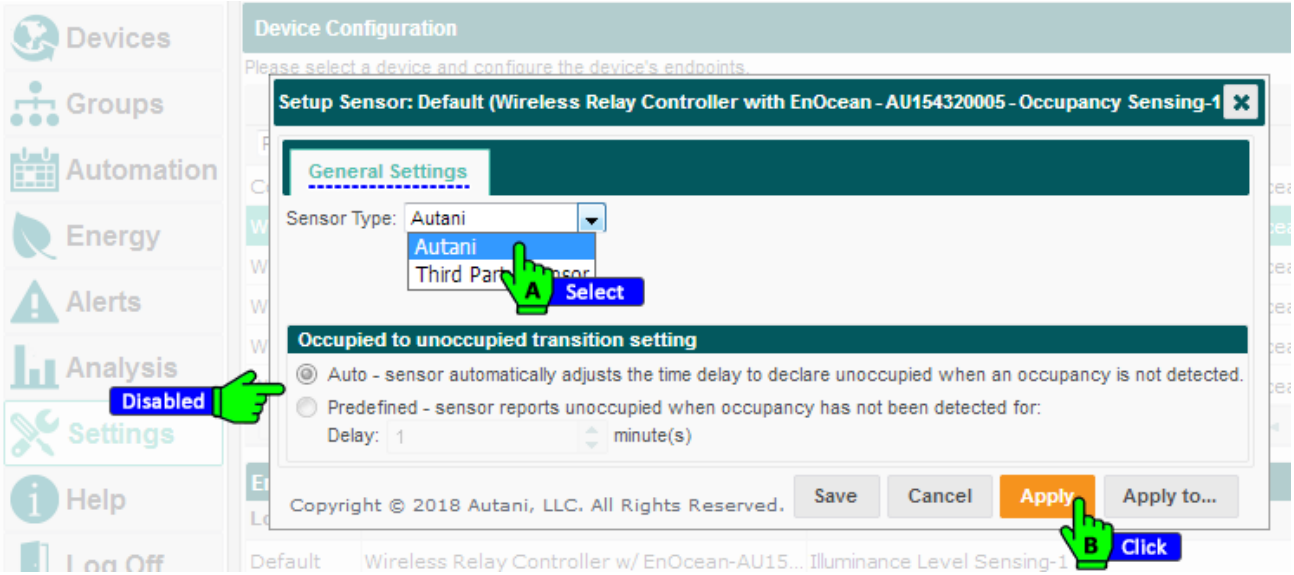
1. To configure wired motion sensors, select **Settings** > **Device Setup** > **Device Configuration**.



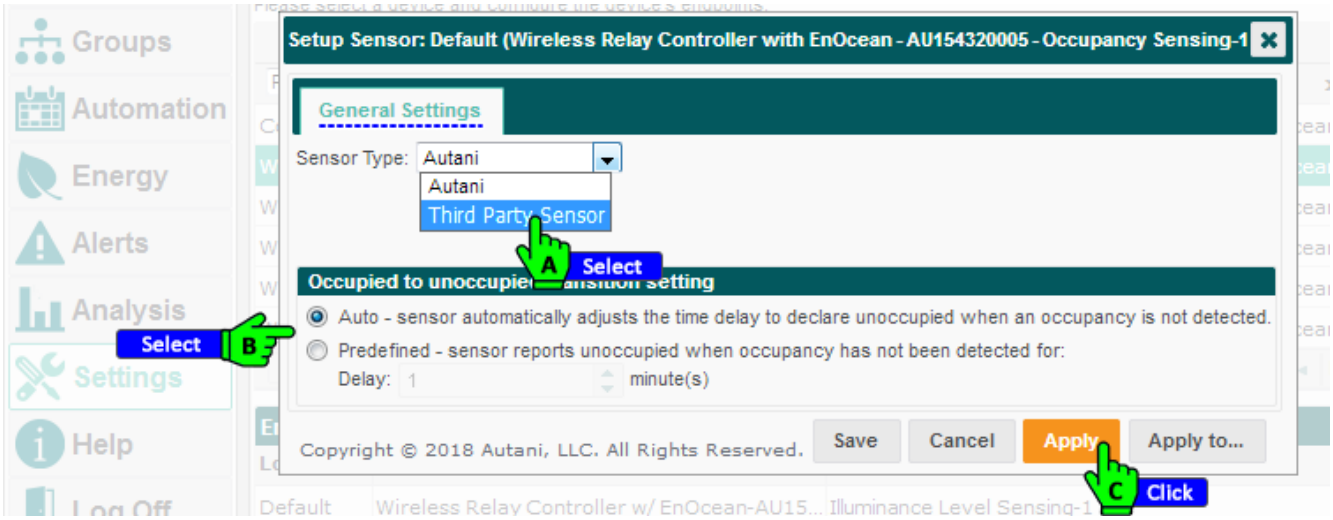
2. Search for the applicable **WRC** by name or serial number, and select it from the search result. Then select **Occupancy Sensor-1** from the list of endpoints. Click **Setup**.



3. The **Setup Sensor** window appears with the **General Settings** tab selected. From the "Sensor Type" dropdown, select **Autani** or **Third Party Sensor**.
   - Select **Autani** if an Autani sensor is being used. The "Occupied to unoccupied transition setting" will be disabled as Autani sensors have predefined reporting intervals.



- OR, select **Third Party Sensor** if a third party sensor is being used. The **Occupied to unoccupied transition setting** options will be enabled, allowing the user to choose either **Auto** or **Predefined** settings.
  - Choose **Auto** to receive a message immediately when the sensor detects no occupancy.
  - Choose **Predefined** to add a delay typically 30 minutes for third party sensors.
    NOTE: This delay is stacked on the schedule delay.

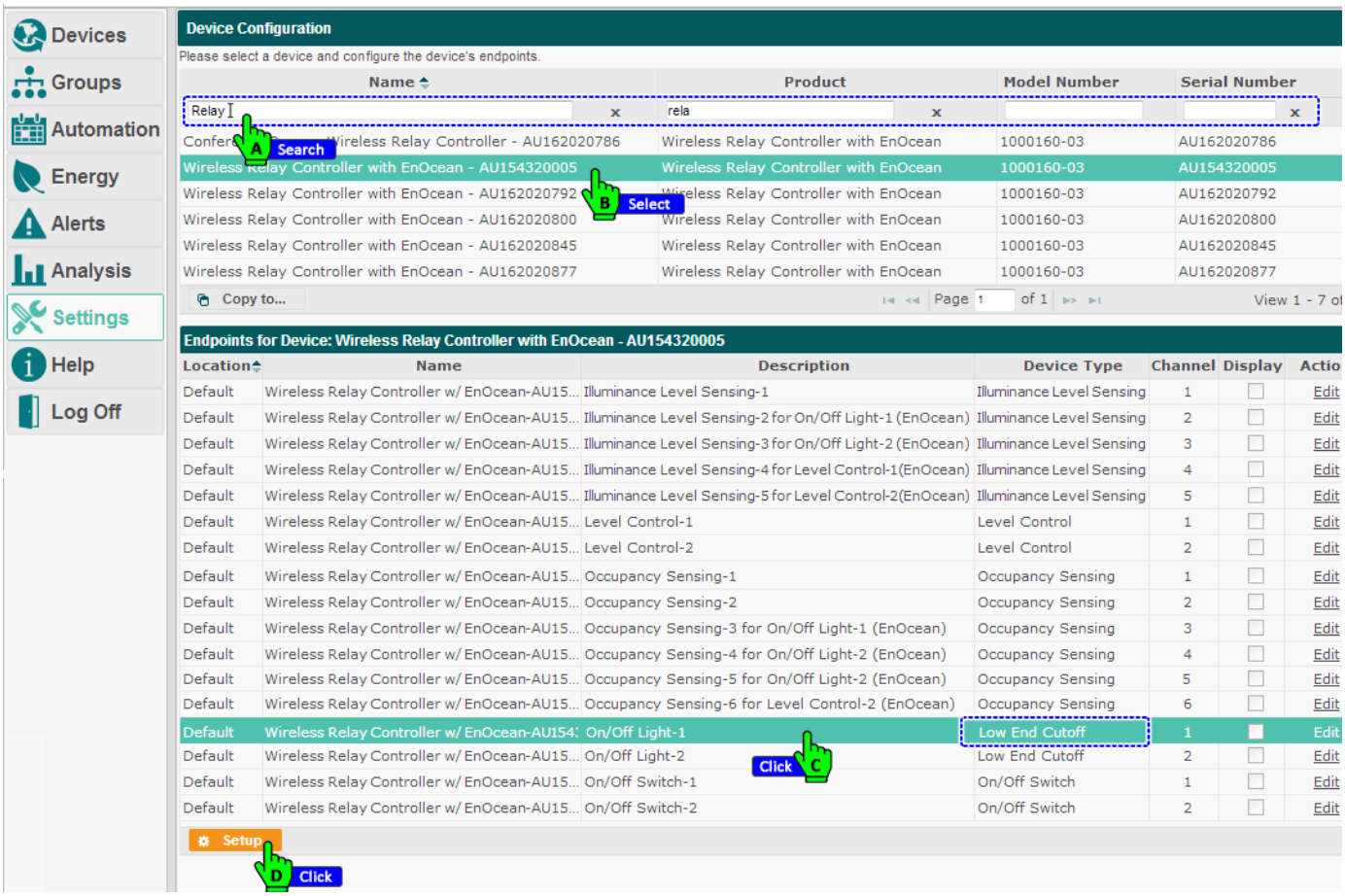


8.2. Mapping Wired Motion Sensors to other Endpoints

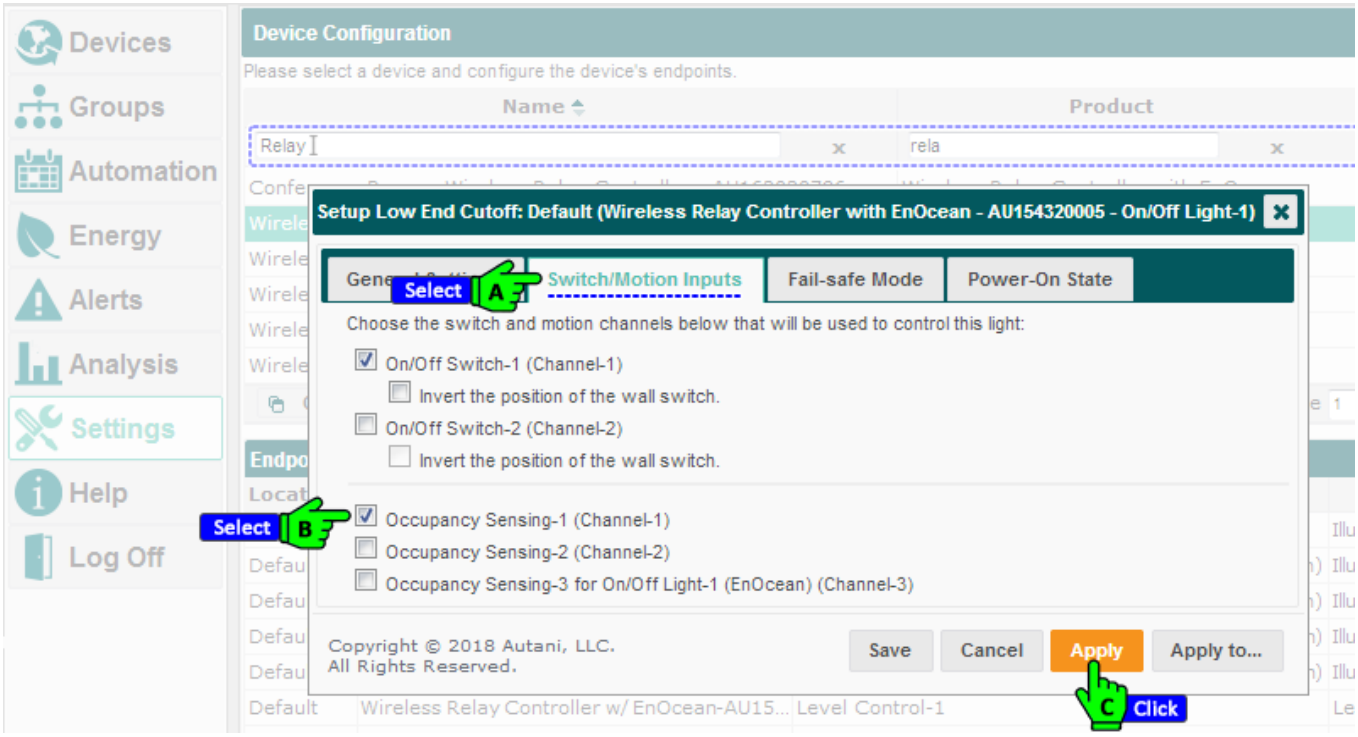
Once the wired motion sensors are configured as described in the above section, they are ready to be mapped to the **Low End Cutoff** or **Level Control** endpoints.

8.2.1. Mapping Wired Motion Sensors to "On/Off" Endpoint

4. In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Low End Cutoff** in the lower section and click **Setup**.

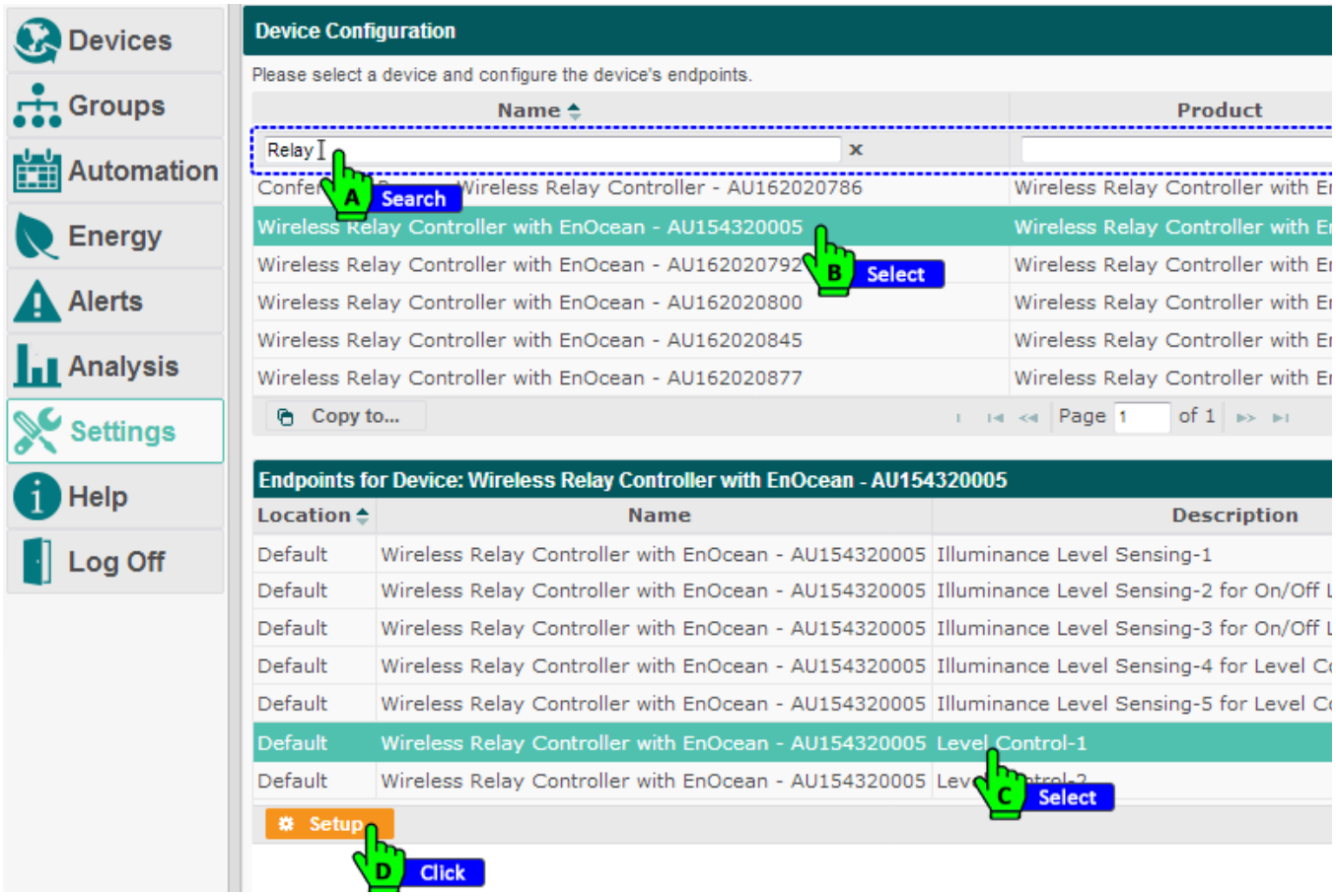


5. The **Setup** window appears for the **Low End Cutoff** endpoint, displaying the **General Settings** tab by default. Select the next tab **Switch/Motion Inputs** to configure the wired motion sensors.
    - From the lower section of the window select **Occupancy Sensing-1** and click **Apply**.

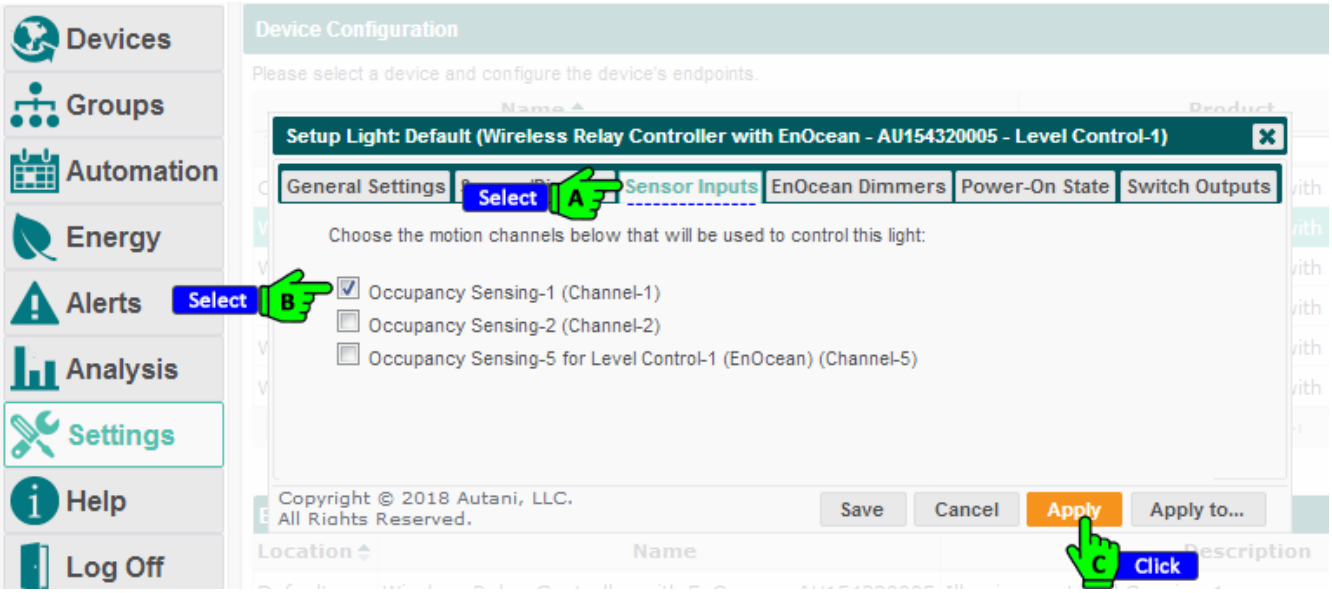


8.2.2. Mapping Wired Motion Sensors to "Level Control" Endpoint

1. In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Level Control-1** in the lower section and click **Setup**.

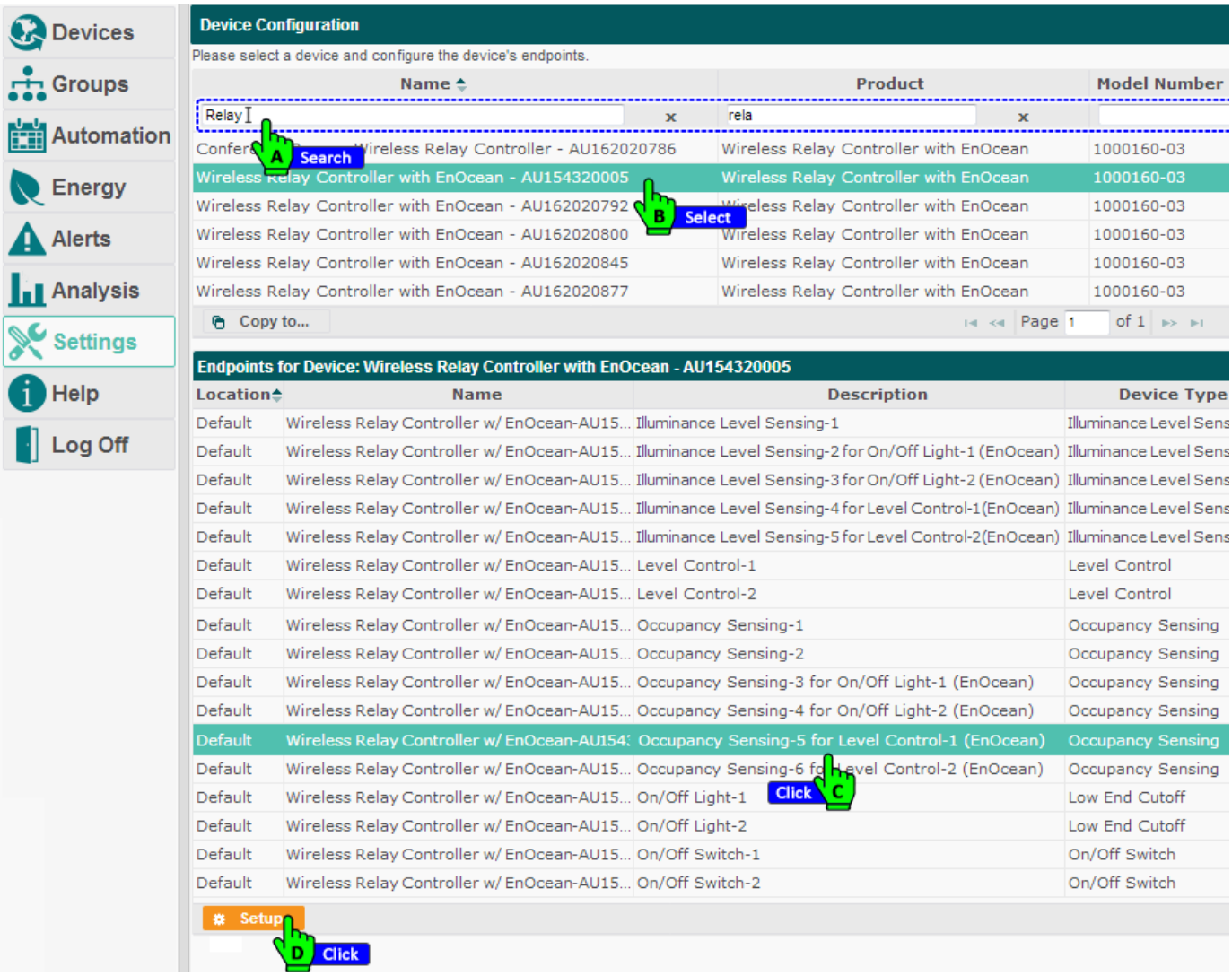


2. The **Setup Light** window appears with the **General Settings** tab selected by default. Select the tab **Sensor Inputs**, and then select the first option **Occupancy Sensing-1 (Channel-1)** and click **Apply**.

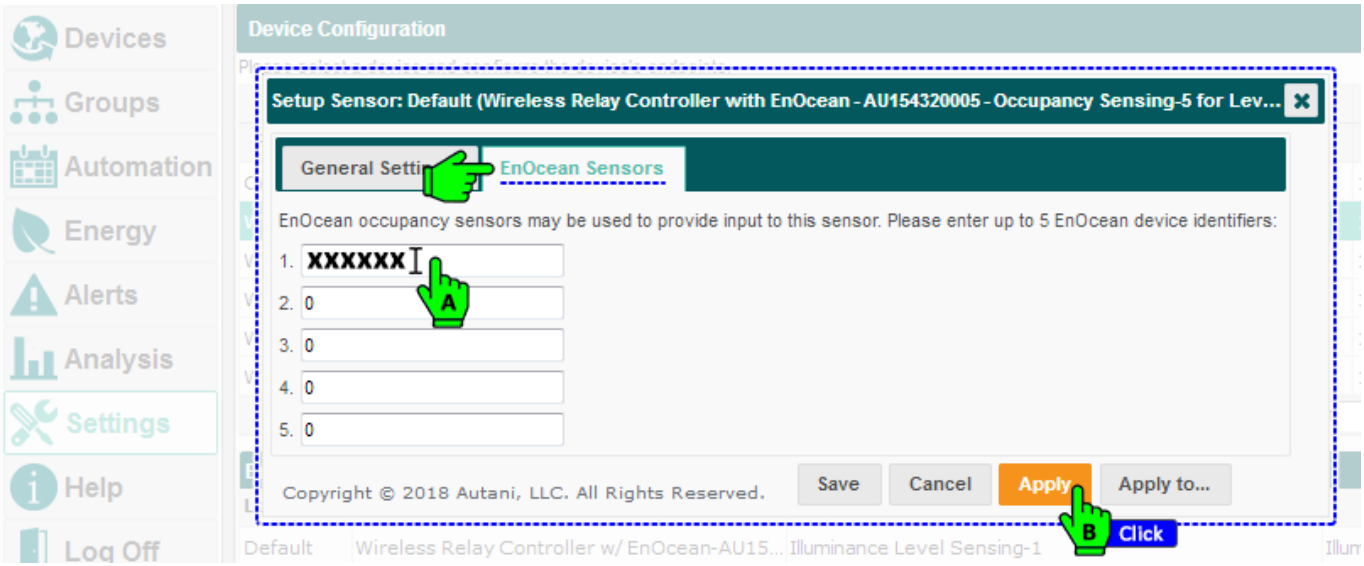


8.3. Configuring Wireless Motion Sensors

1. In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Occupancy Sensing-5 for Level Control-1** and click **Setup**.



2. The **Setup Sensor** window appears, with the **General Settings** tab selected by default. Select the **EnOcean Sensors** tab, enter the Sensor IDs in the fields provided, and then click **Save/Apply**. Up to five sensors can be mapped.

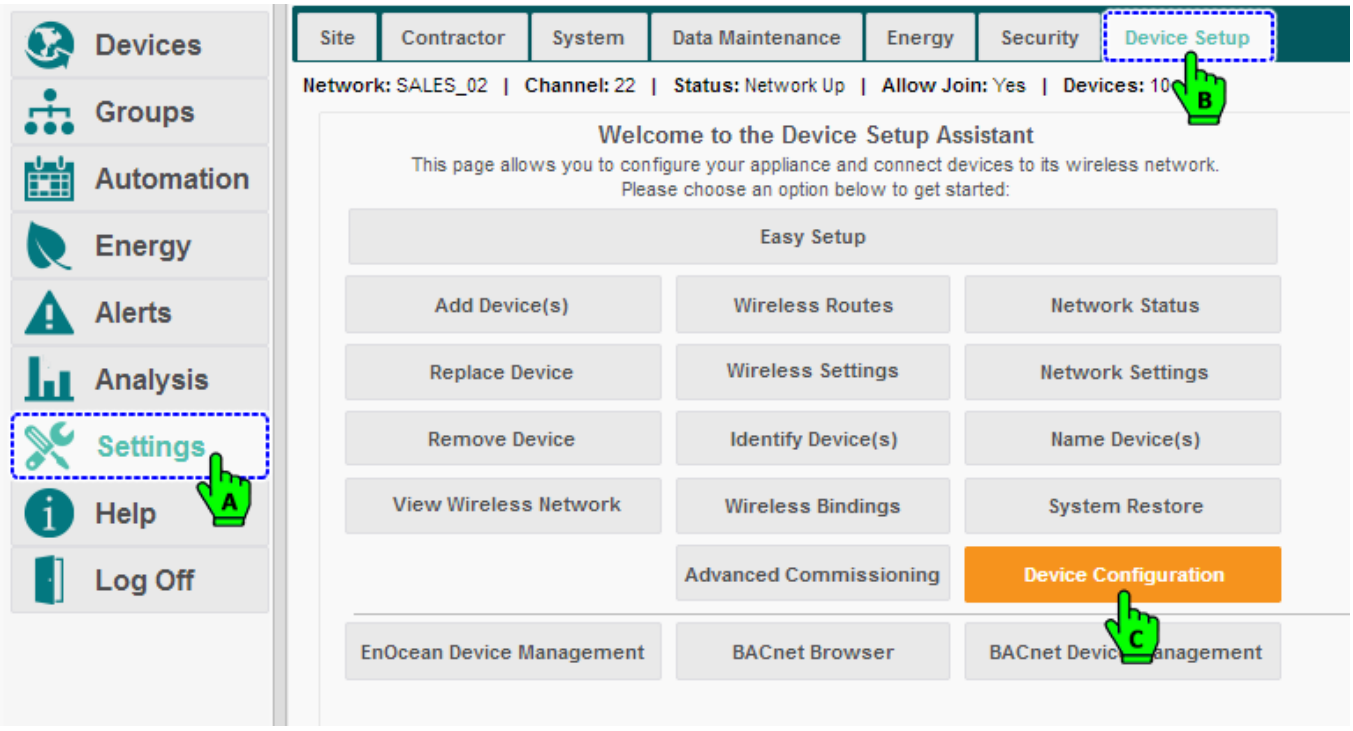


8.4. Mapping a Wireless Motion Sensors to Endpoints

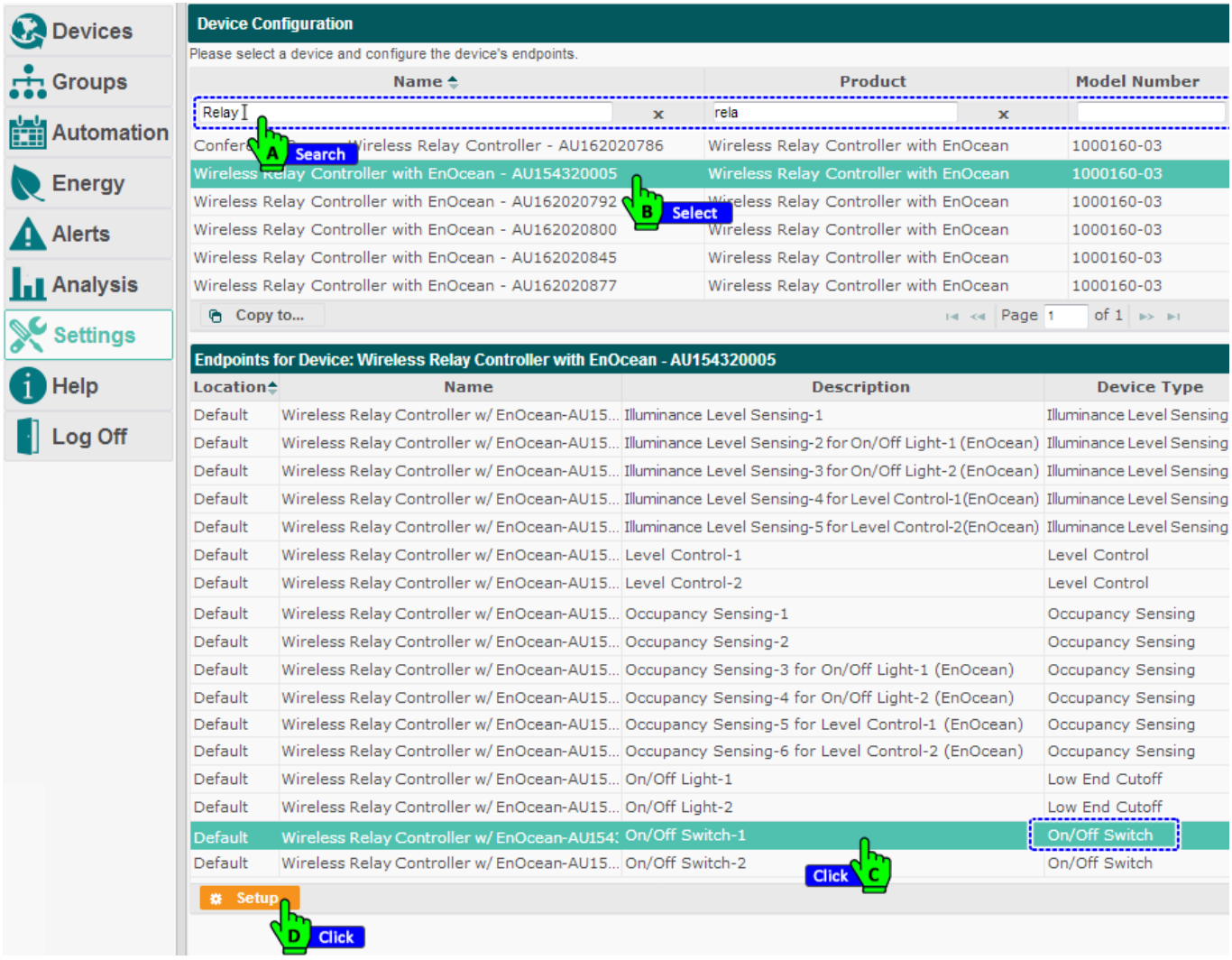
Once the wireless motion sensors are configured as described in the above section, they are ready to be mapped to the **On/Off Light** or **Level Control** endpoints.

8.4.1. Mapping Wireless Motion Sensors to "On/Off Light" Endpoint

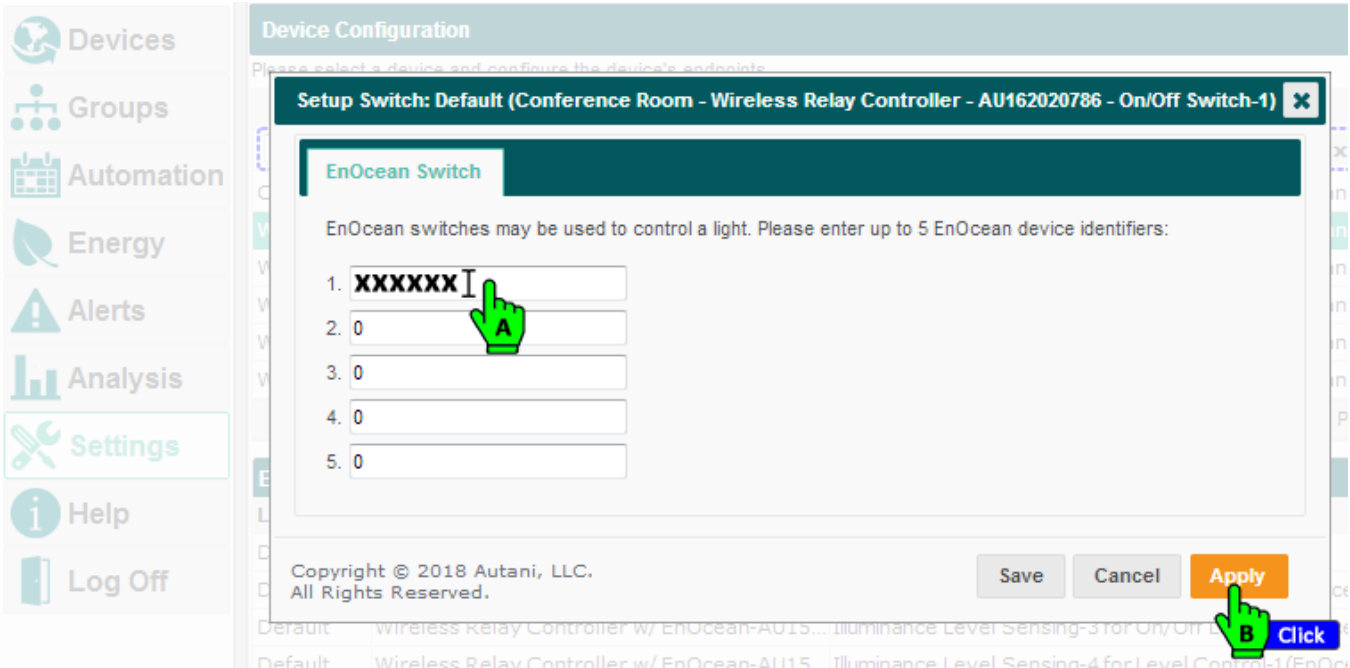
1. The wireless motion sensors are configured from the Device Configuration page. Select **Settings** > **Device Setup** > **Device Configuration**.



2. In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **On/Off Switch** in the lower section and click **Setup**.



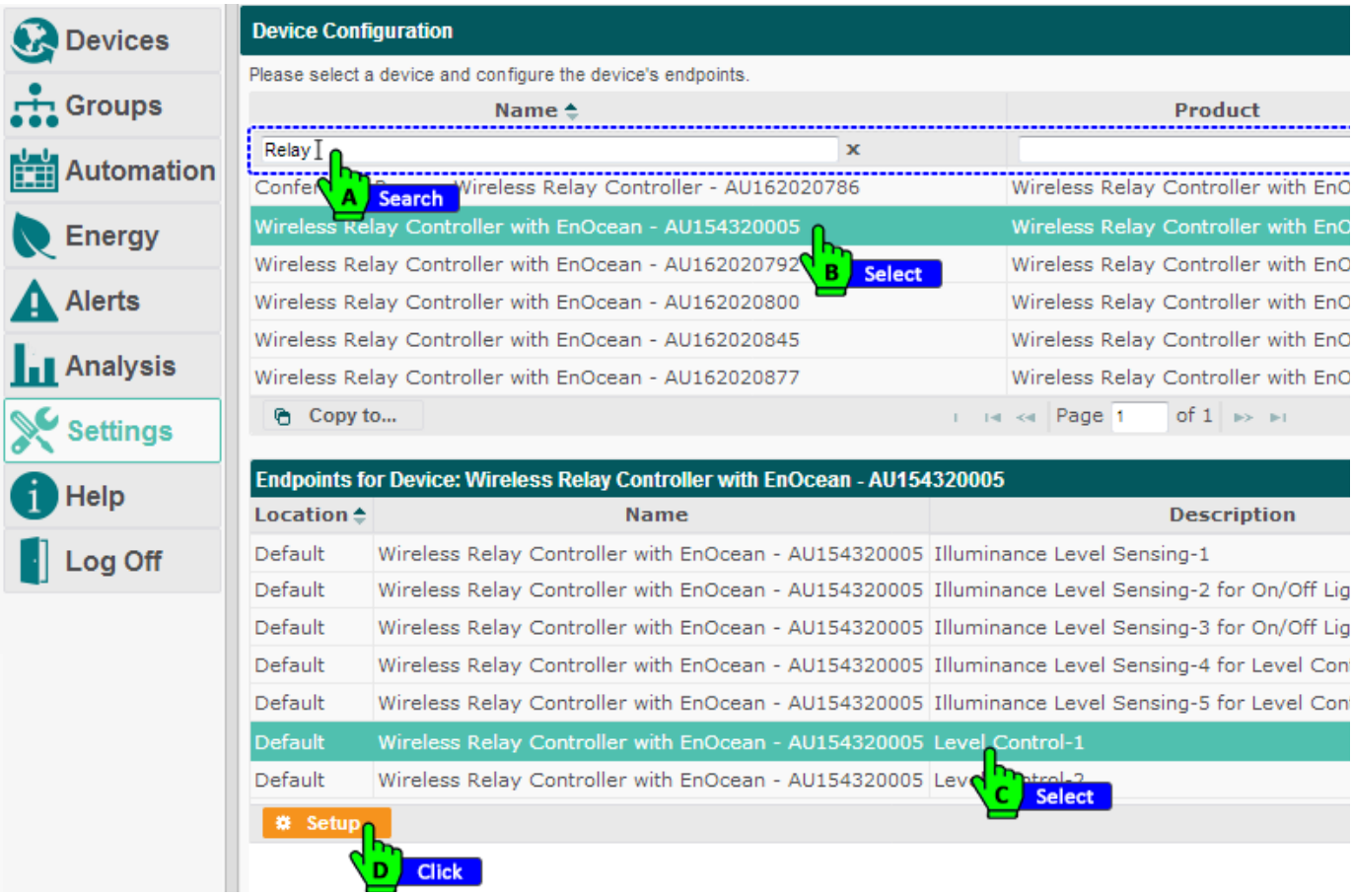
3. The **Setup Switch** window appears with the **EnOcean Switch** tab selected. Enter the EnOcean switch IDs into the fields provided. Up to five EnOcean switches may be configured.



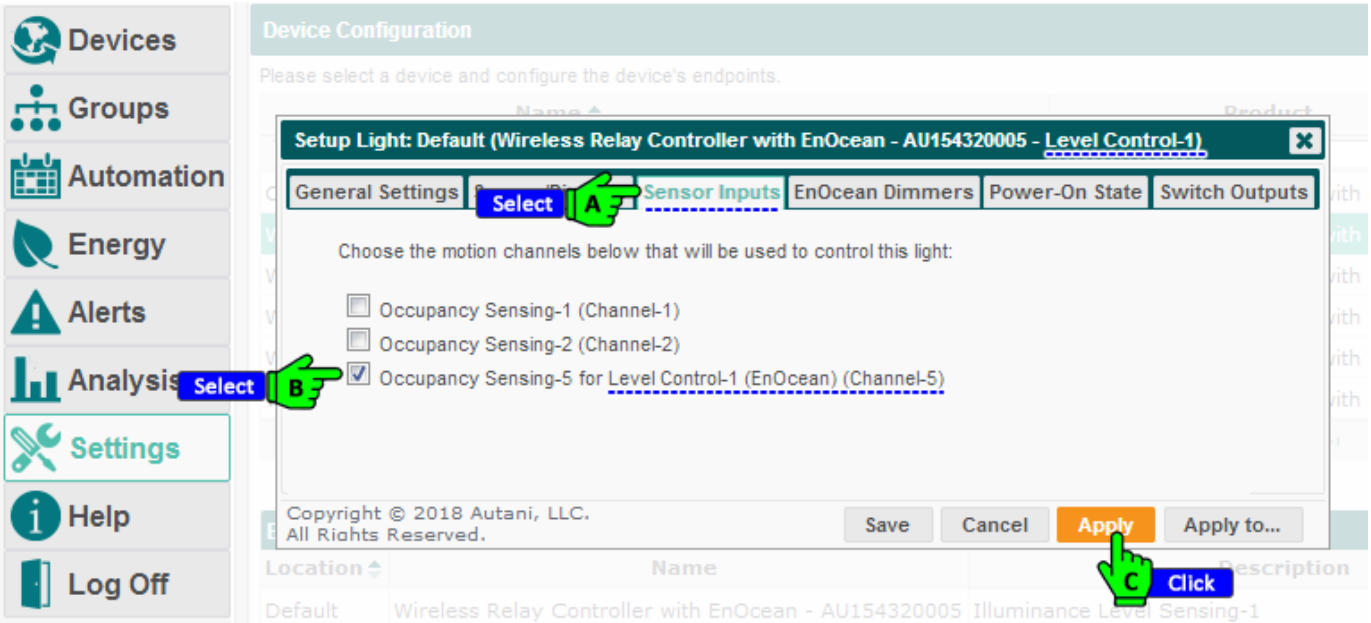
8.4.2. Mapping Wireless Motion Sensor to "Level Control" Endpoint

- There are two places to map wireless occupancy sensor for Level Control.

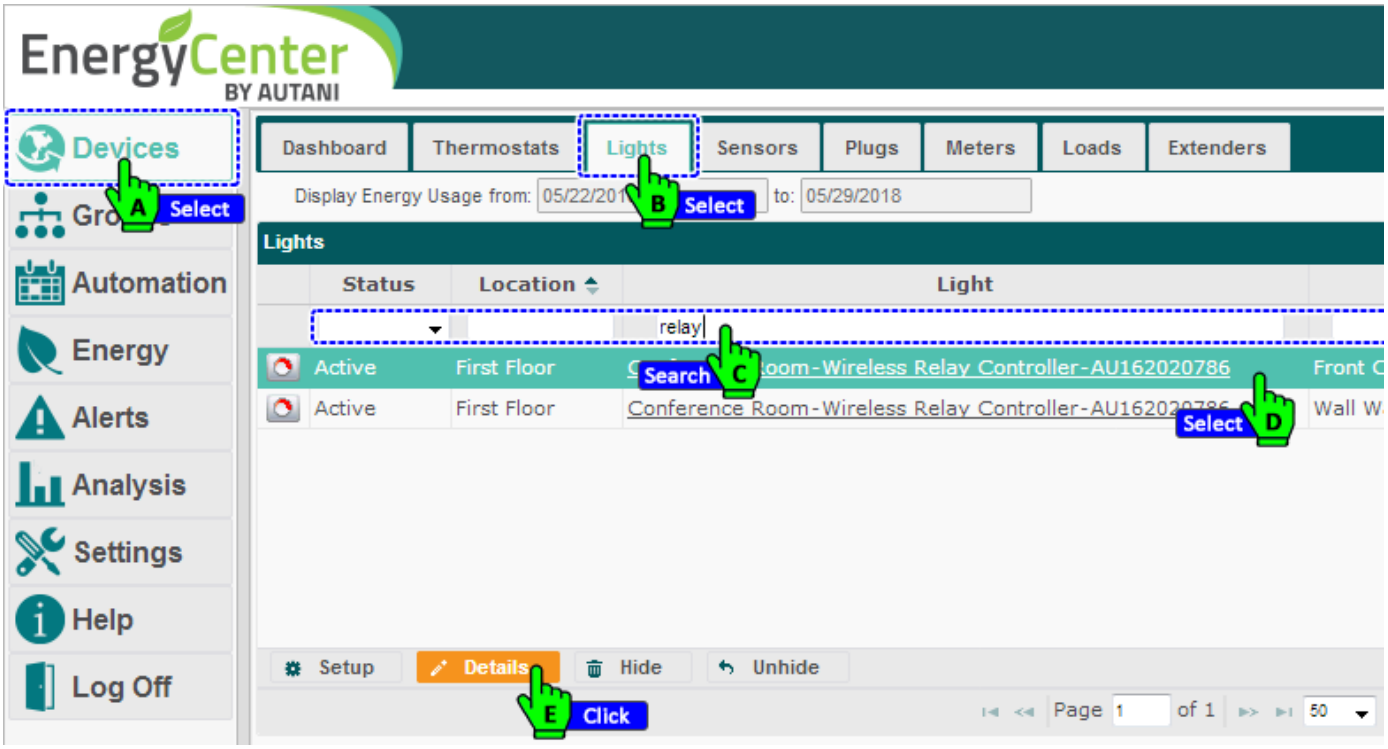
1. The first place to map the sensor is through the **Device Configuration** page.
   - In the Device Configuration page, search for the applicable **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Level Control-1** in the lower section and click **Setup**.



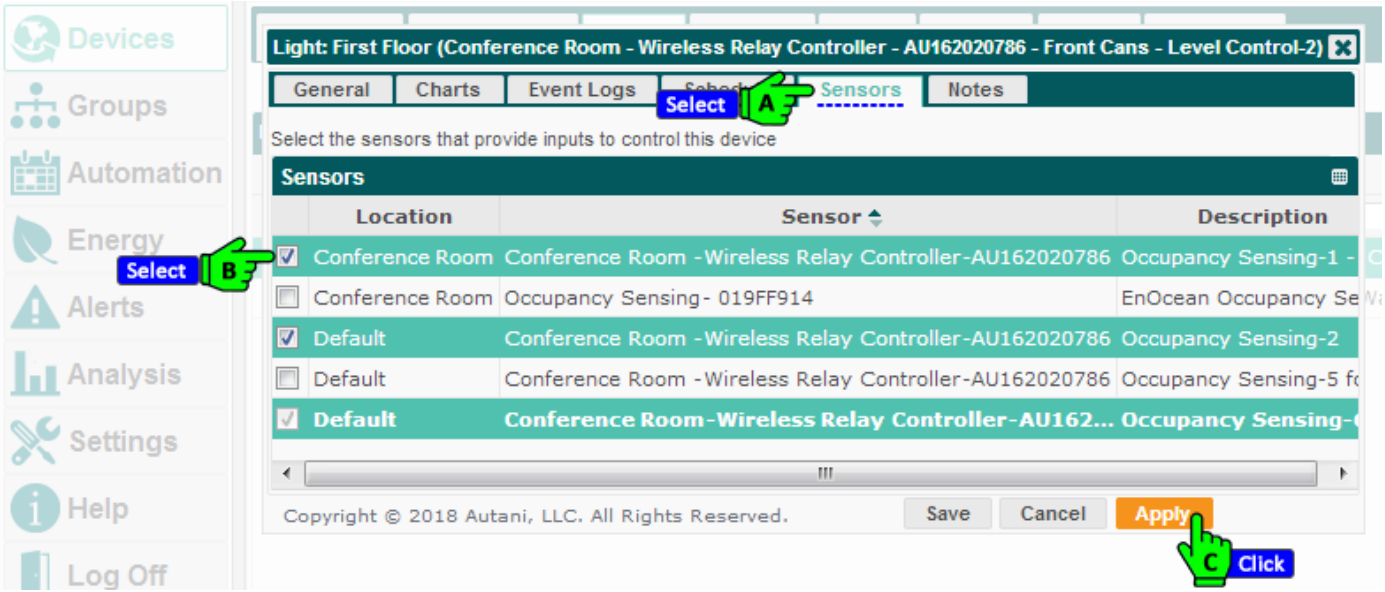
   - The **Setup Light** window appears with the **General Settings** tab selected by default. Select the tab **Sensor Inputs**, and then select the option **Occupancy Sensing-5 for Level Control-1 (EnOcean) (Channel-5)**. (**NOTE**: The **wireless occupancy sensing channel-5** is already listed matching the **Level Control-1** channel-1.) Click **Apply**.



2. The second way to map the sensor is through virtual association.
   - Select **Devices** > **Lights**. Search for the applicable **WRC** by name or serial number, and select it from the search results. Click **Details**.



   - The **General** tab is selected by default. Select the **Sensors** tab and then select the previously mapped sensor to virtually associate with the selected WRC. Click **Apply**.
   - **NOTE**: If the sensor is not visible here, go to the Device Configuration page to enable the sensor, and then return here to complete the virtual association.



9. Configuring Photocell Sensors

Wired and wireless photocell sensors can be configured for a WRC. The following are photocell sensor endpoints that are available.

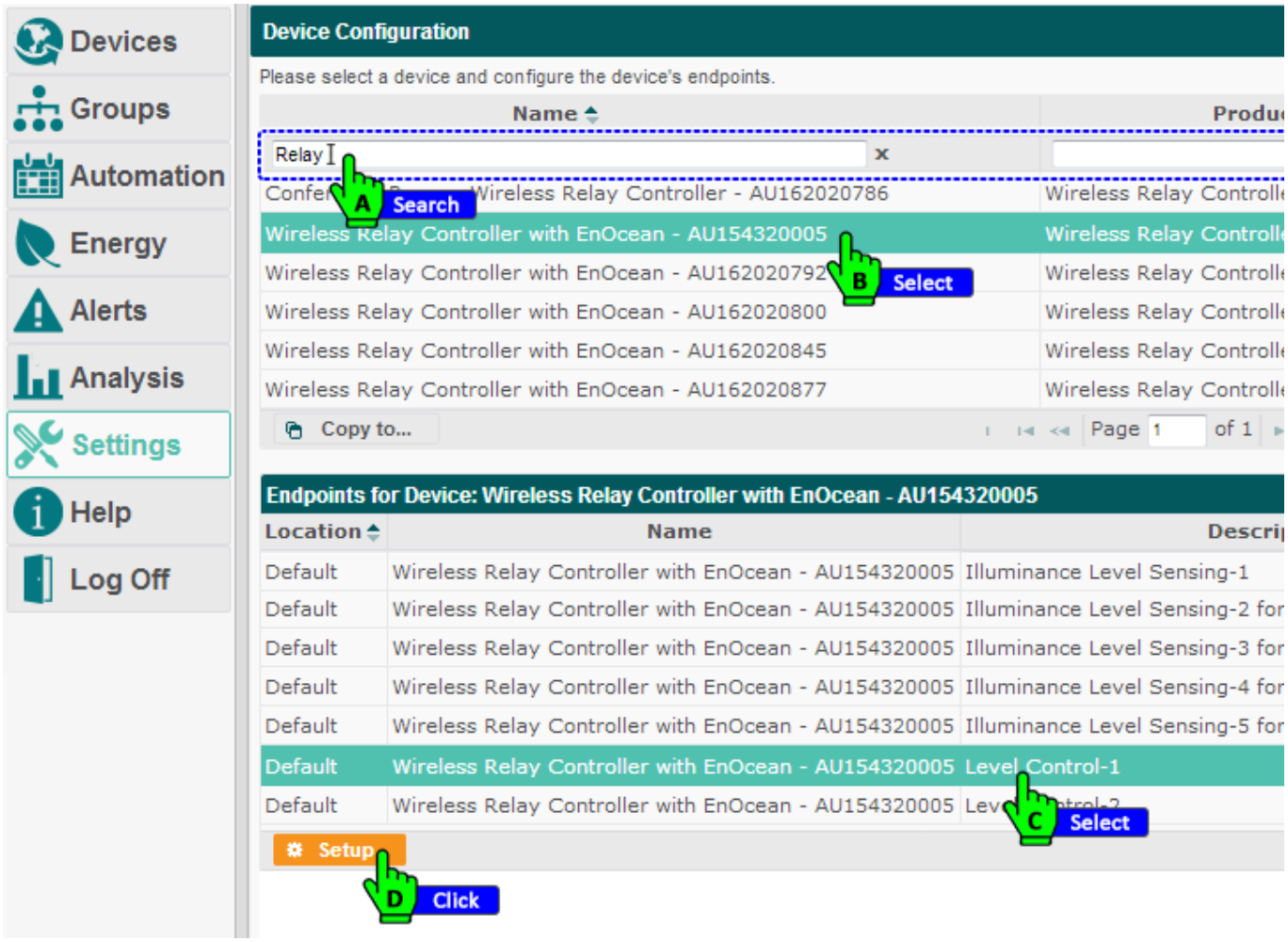
- Wired Photocell Sensor channel:
  - Illuminance Level Sensing-1
    used for Autani Mini Wired Sensor, low volts or 3 volts
- Wireless Photocell Sensor channels:
  - Illuminance Sensing-2 for On/Off Light-1 (EnOcean)
  - Illuminance Sensing-3 for On/Off Light-2 (EnOcean)
  - Illuminance Sensing-4 for Level Control-1 (EnOcean)
  - Illuminance Sensing-5 for Level Control-2 (EnOcean)

9.1. Configuring Wired Photocells

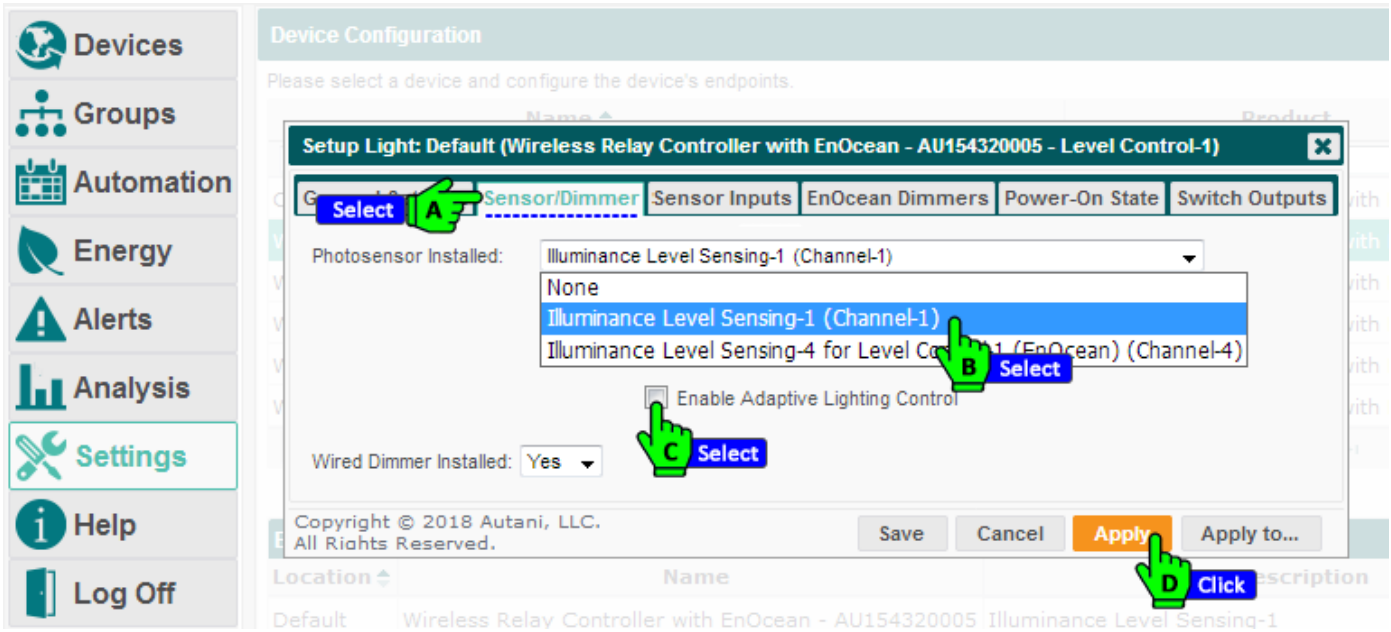
The wired photocell sensor does not have a configuration option available. Proceed to map the wired photocell sensors for **Level Control** and **On/Off Switch**.

9.2. Mapping Wired Photocells to Level Control

1. Select **Settings > Device Setup > Device Configuration**. Search for a **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Illuminance Level Sensing-1 for Level Control-1**, and click **Setup**.

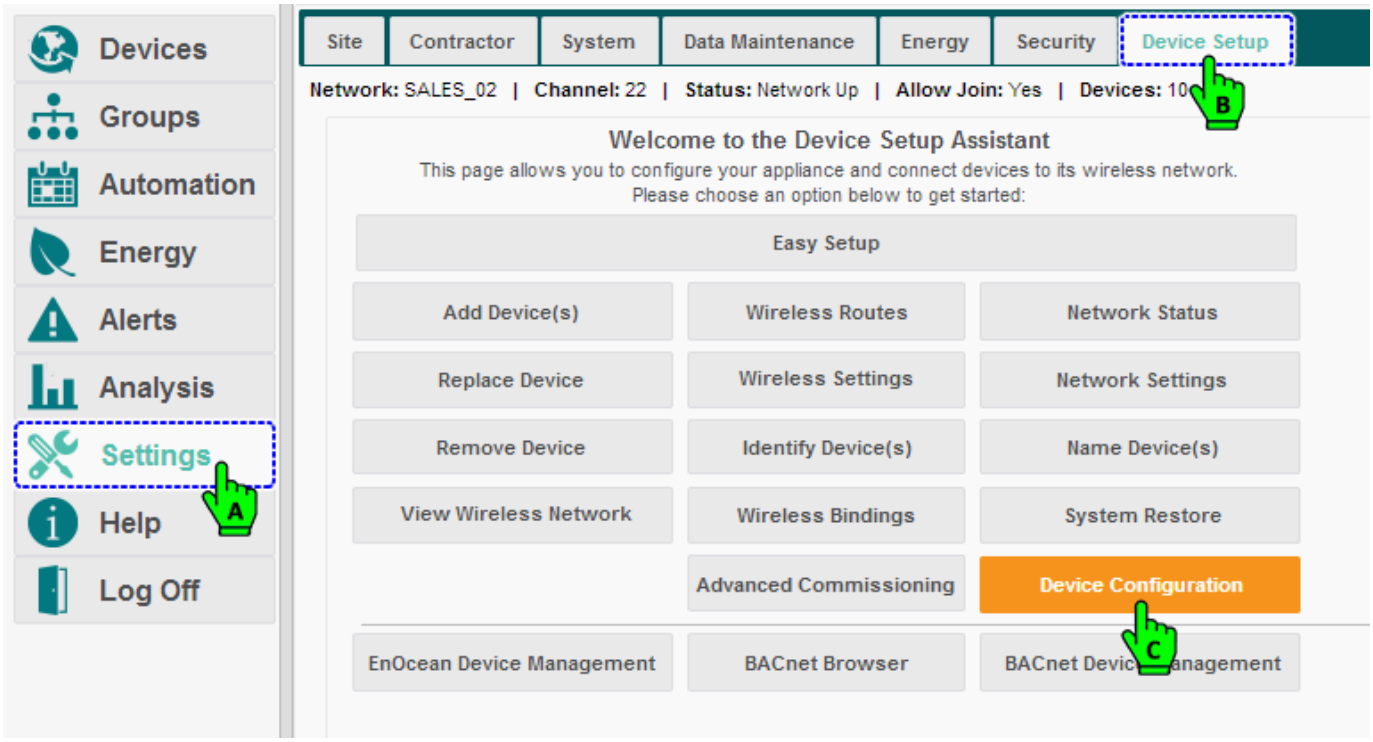


2. The **Setup Light** window appears with **General Settings** tab selected by default. Select the next tab **Sensor/Dimmer**.
   - From the **Photosensor Installed** dropdown select **Illuminance Level Sensing-1 (Channel-1)**.
   - Click the box to enable the **Adaptive Lighting Control**, and click **Apply**.

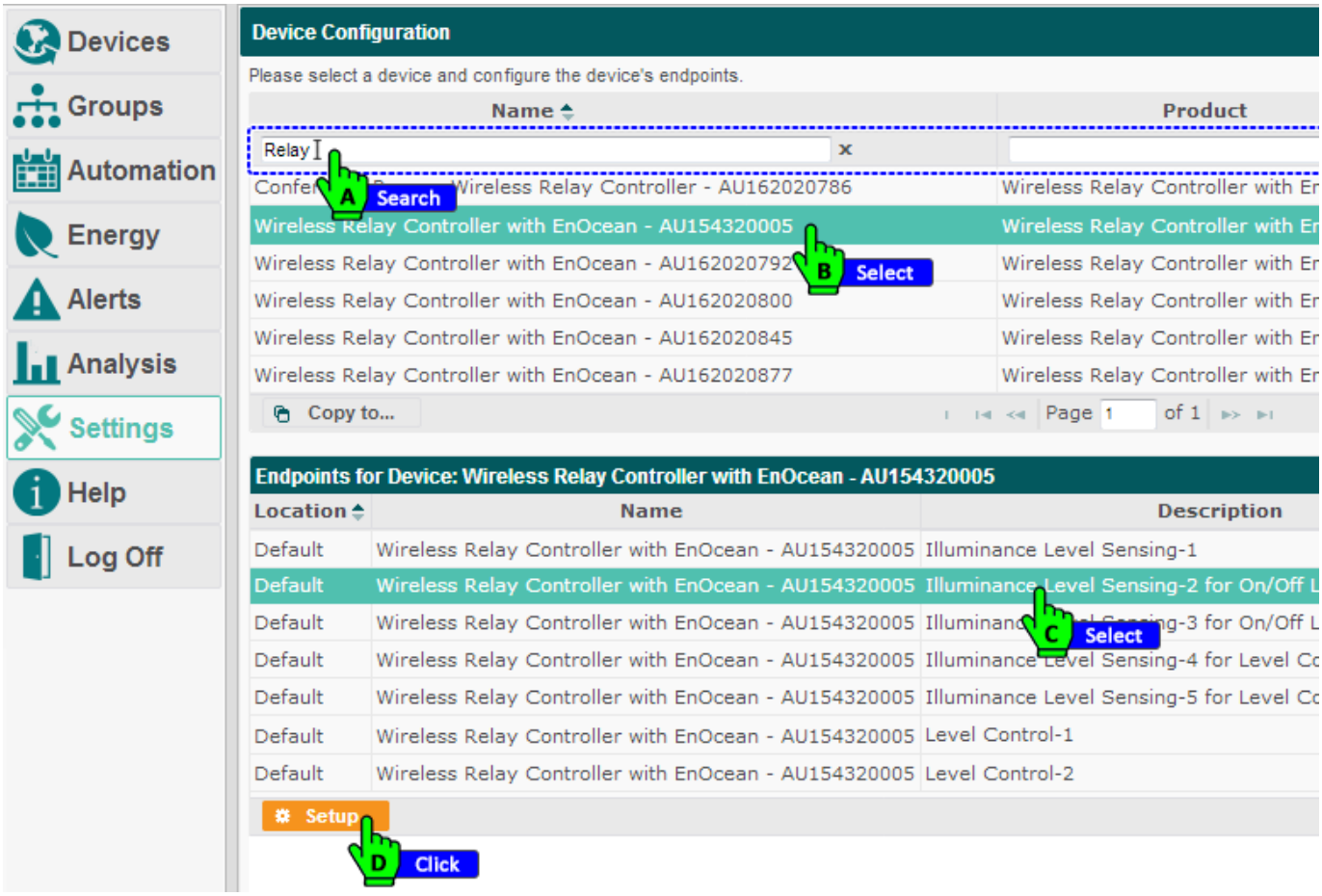


9.3. Configuring Wireless Photocells

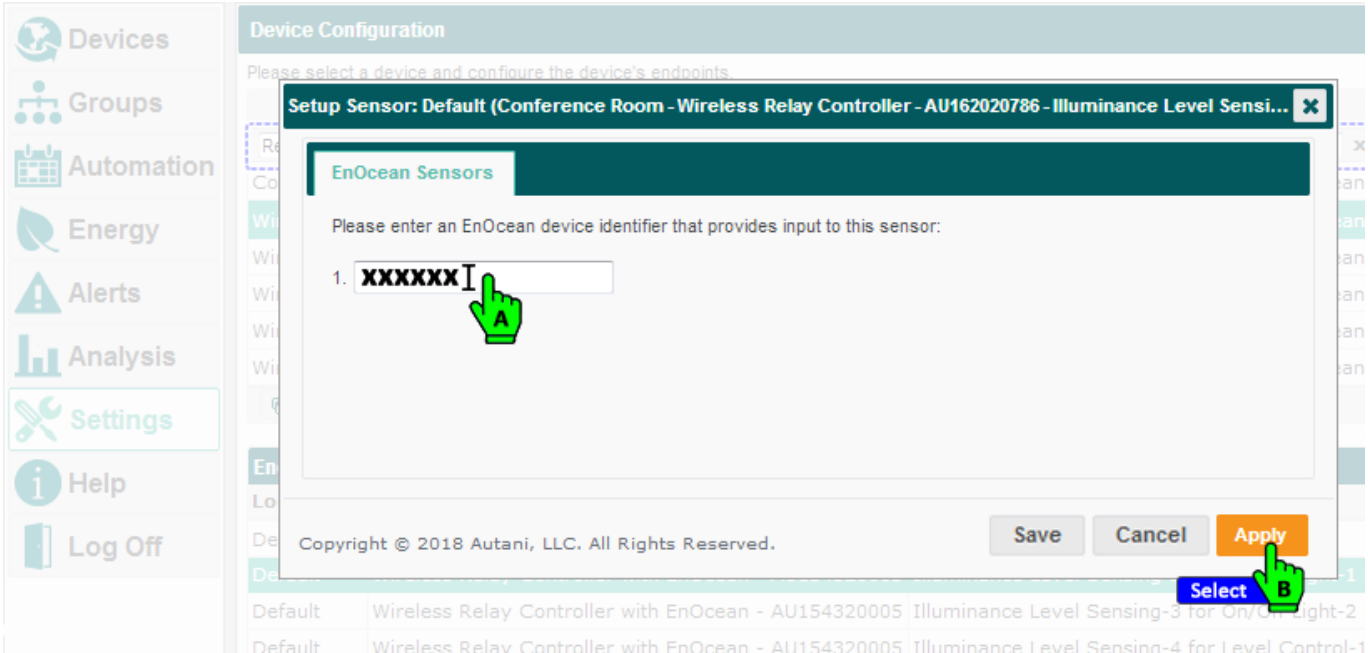
1. The wireless photocells sensors are configured through the Device Configuration page. Select **Settings** > **Device Setup** > **Device Configuration**. (**NOTE**: All four sensors are configured the same way, as detailed in this section.)



2. Search for the applicable device **WRC** by name or serial number, and select it from the search results. Then select the endpoint **Illuminance Level Sensing-2 for On/Off Light-1 (EnOcean)** from the list of endpoints. Click **Setup**.

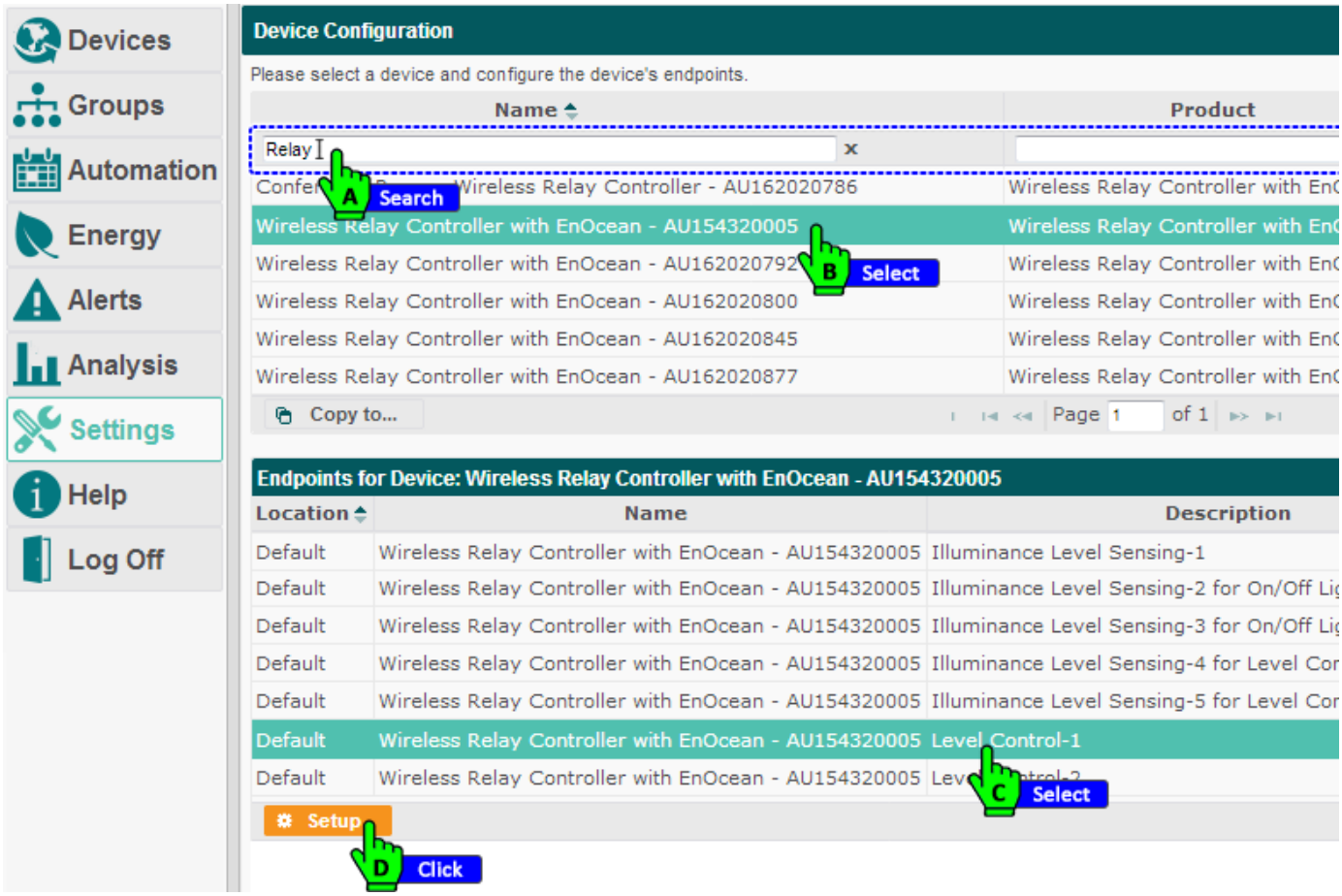


3. The **Setup Sensor** window appears with the **EnOcean Sensors** tab. Enter the EnOcean wireless photocell sensor ID in the field provided and click **Apply**.

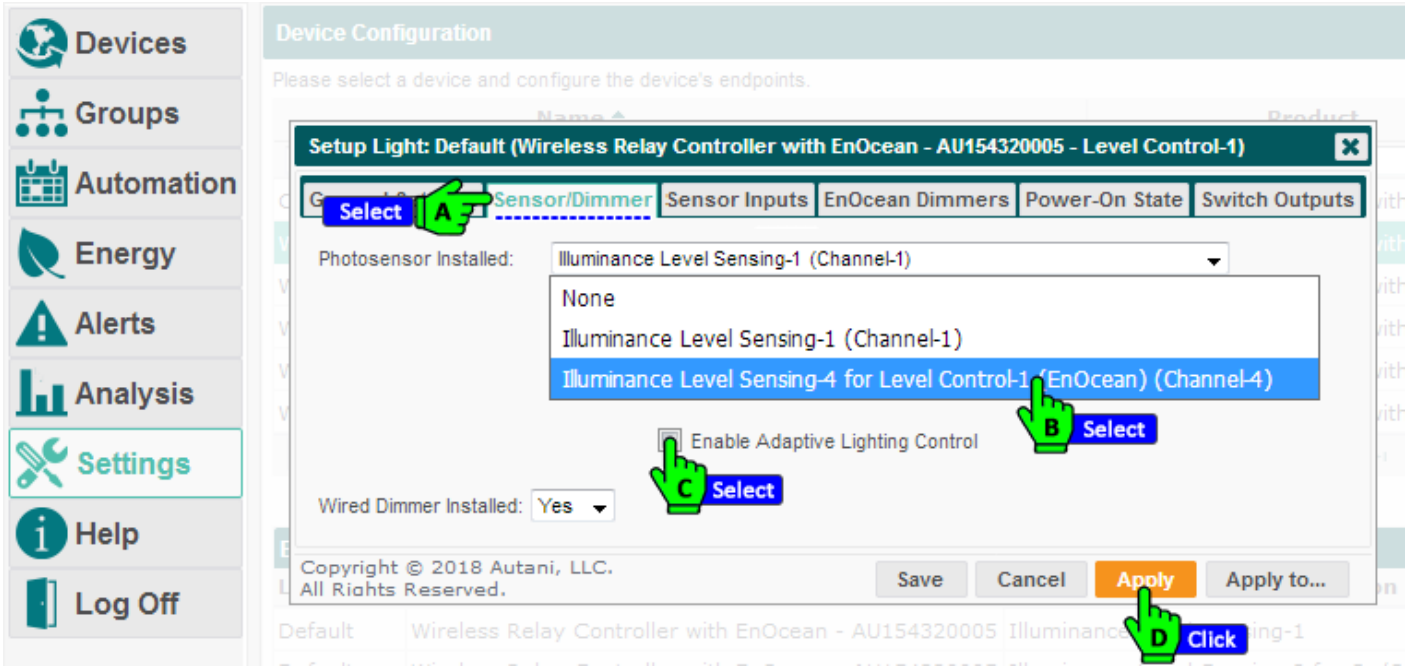


9.4. Mapping Wireless Photocells to Level Control

1. Select **Settings** > **Device Setup** > **Device Configuration**. Search for the applicable **WRC** by name or serial number, and select it from the search results. Select the Endpoint **Level Control-1**, and click **Setup**.

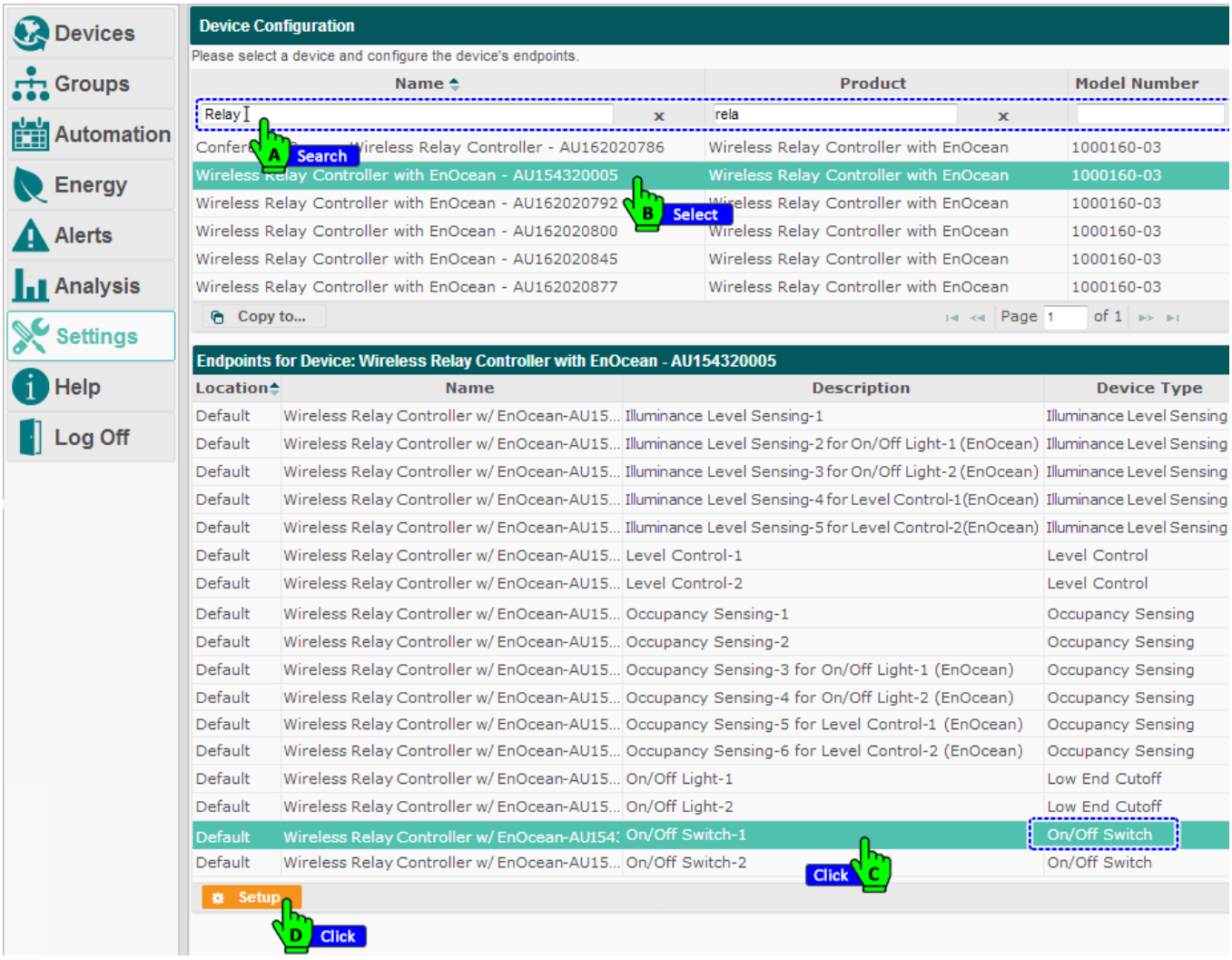


2. The **Setup Light** window appears with the **General Settings** tab selected by default. Select the tab **Sensor/Dimmer**.
   - From the **Photosensor Installed** dropdown, select **Illuminance Level Sensing-4 for Level Control -1 (EnOcean) (Channel-4)**.
   - Click the box to enable **Adaptive Lighting Control**, and click **Apply**.

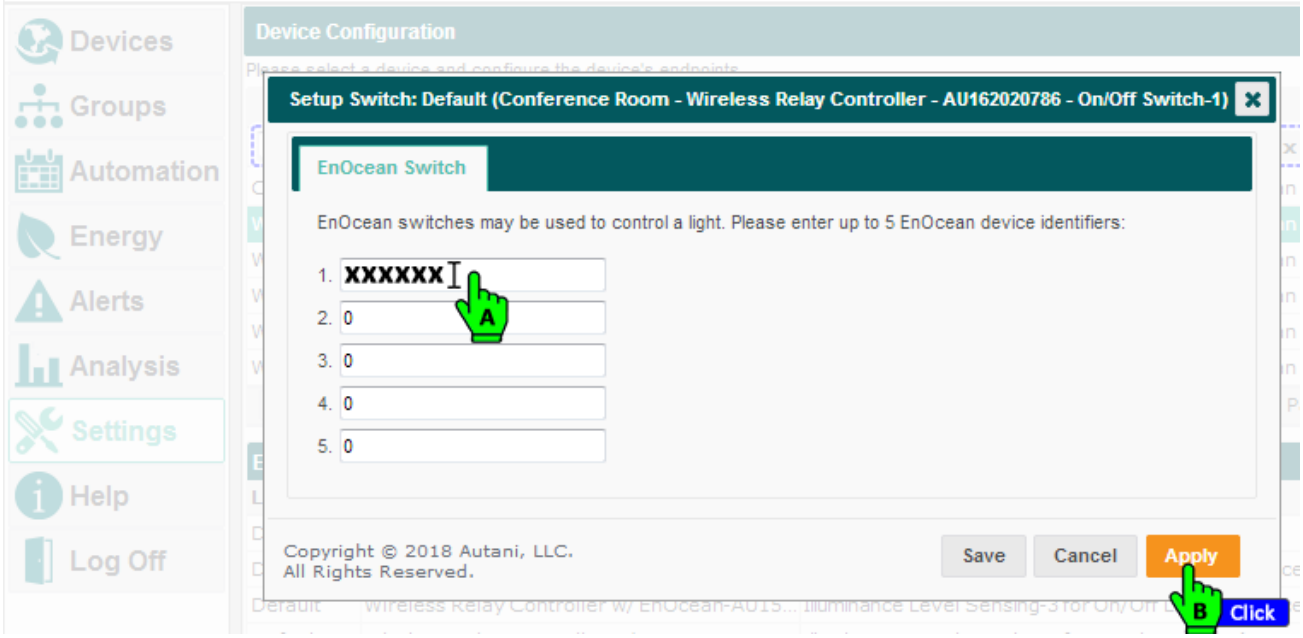


9.5. Mapping Wireless Photocells to On/Off Switch

1. Select **Settings** > **Device Setup** > **Device Configuration**. Search for the applicable **WRC** by name or serial number, and select it from the search results. Select the endpoint **On/Off Switch**, and click **Setup**.



2. The **Setup Switch** window appears with **EnOcean Switch** tab selected. Enter the EnOcean Switch IDs into the fields provided. Up to five EnOcean switches may be configured.



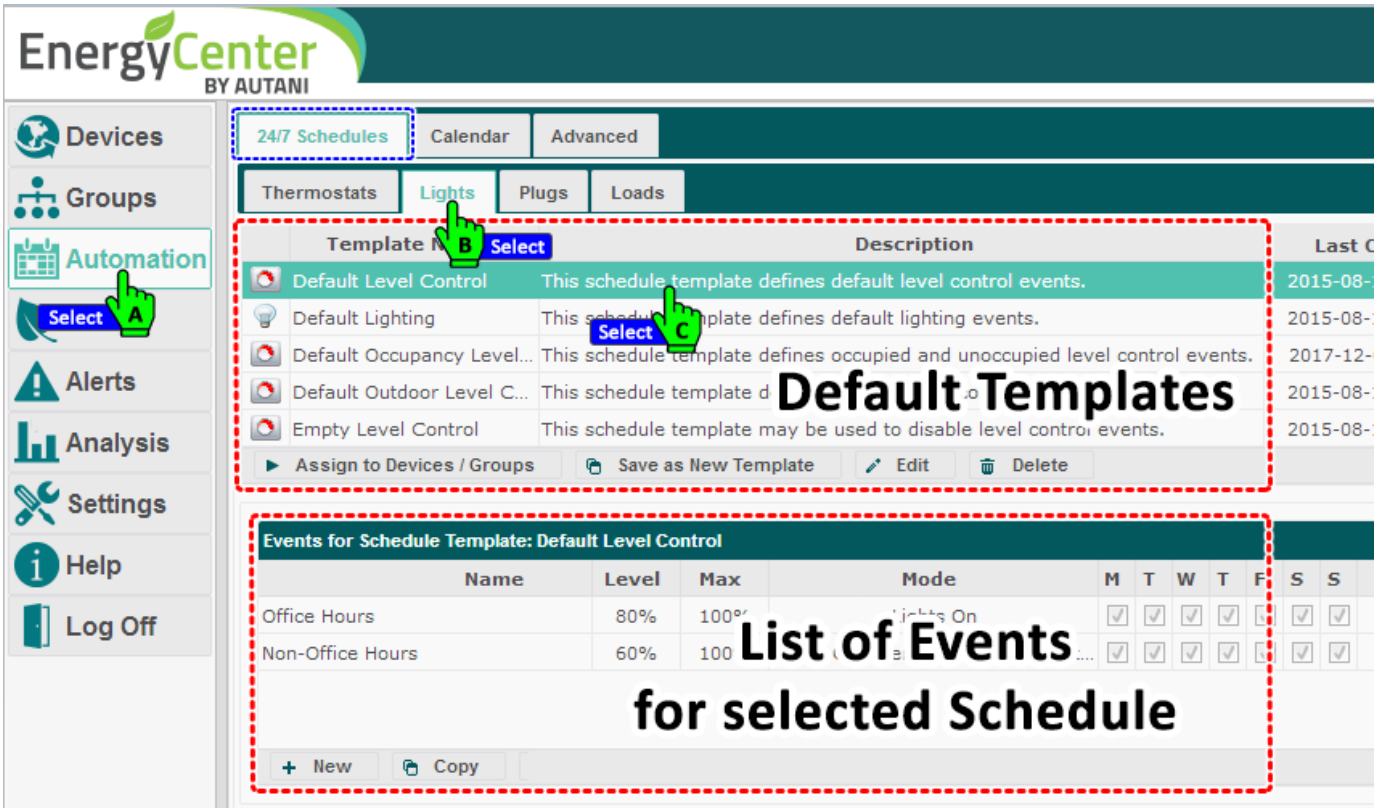
10. Configuring Schedules

The purpose of a schedule is to trigger the lighting devices to function on a time basis.

NOTE: It is always recommended to configure a schedule through the **Automation** section. Schedule modifications made through any other section will be overridden by changes made in the Automation section.

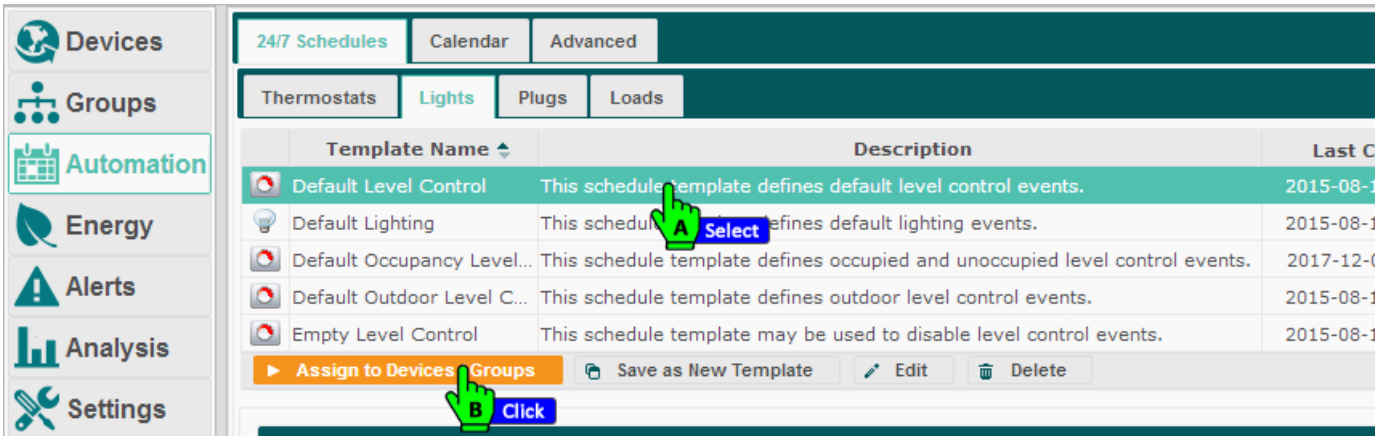
10.1. Configuring a Schedule

1. To configure a schedule, select **Automation** from the main menu. The **24/7 Schedules** tab is selected by default. It contains the sub-tabs for different categories of devices. Select the **Lights** tab to see the list of default templates. Select a template to see the list of events associated with it.

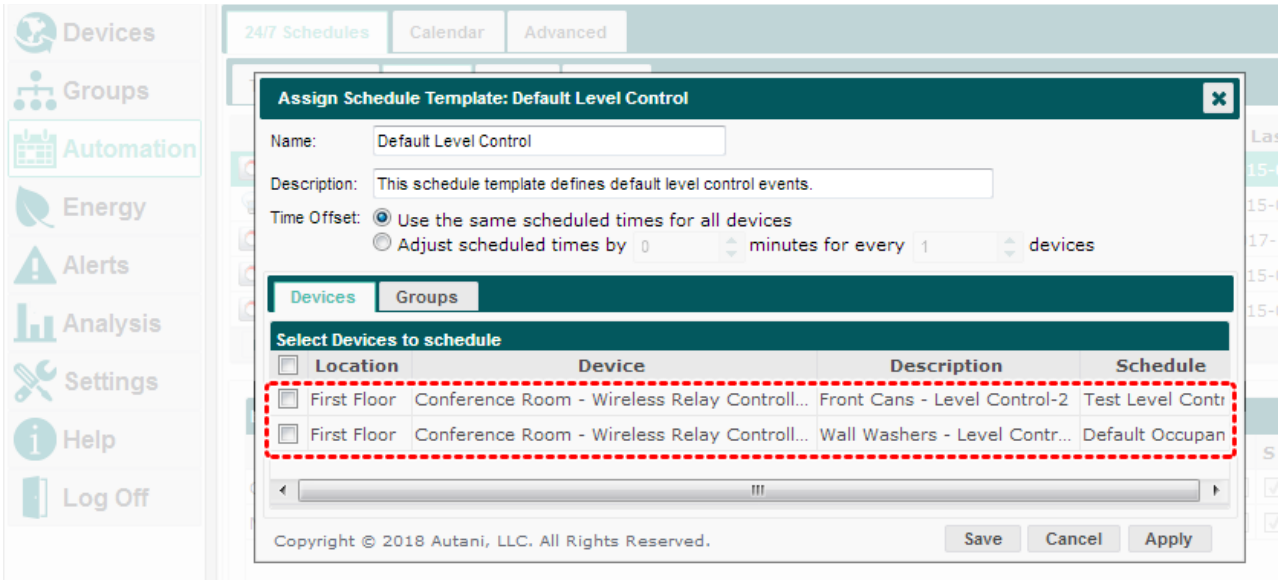


- **NOTE**: How the endpoints for a WRC are configured will determine which template is used. If the WRC is configured for On/Off endpoints, select a lighting template listed with the ICON light bulb. If the WRC is configured for Level Control endpoints, select a Level Control template with the ICON dial.
- Double click a schedule to change the **Template Name** and **Description**.

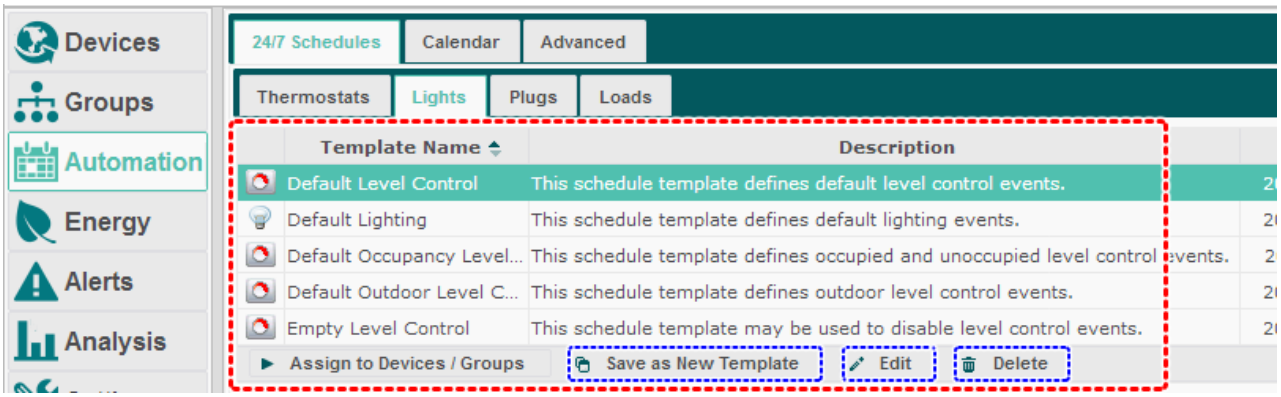
2. To ensure that you are using the right template, select a template and click **Assign to Device/Groups**.



- The **Assign Schedule Template** window appears with the list of devices. Check for WRC endpoints listed.

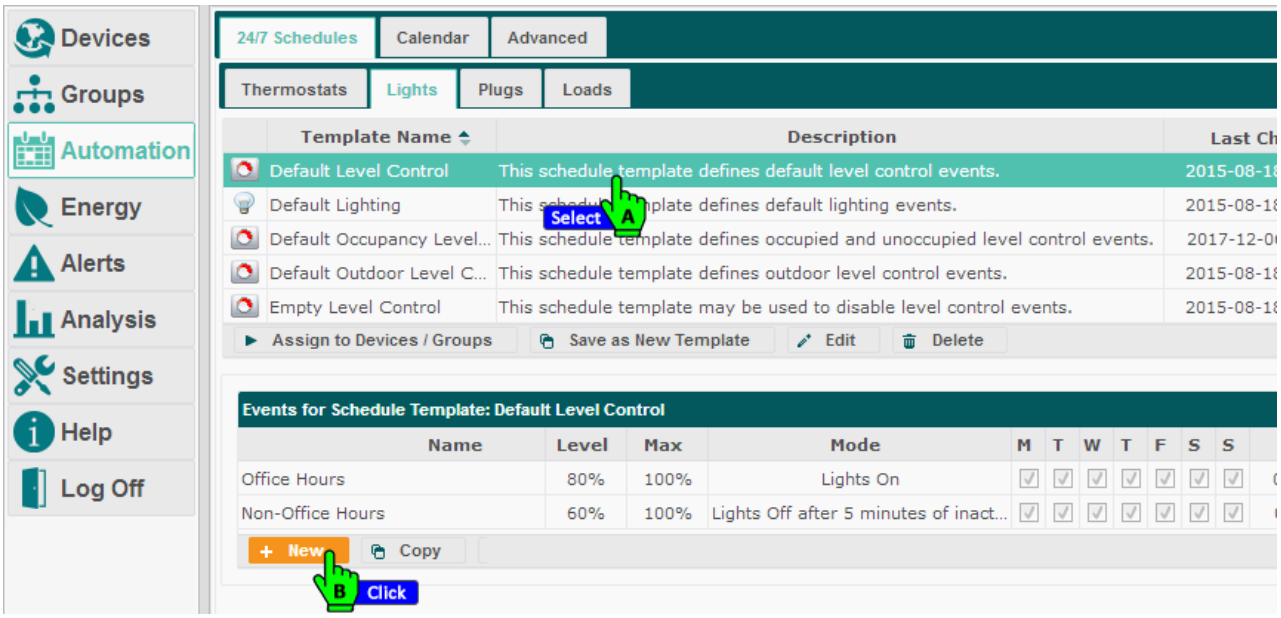


3. There are three more options in **24/7 Schedules > Lights** tab:
   - Select a template and click **Save as New Template** to create a new template based on the selection.
   - Select a template and click **Edit** to edit the template.
   - Select a template and click **Delete** to delete the template.

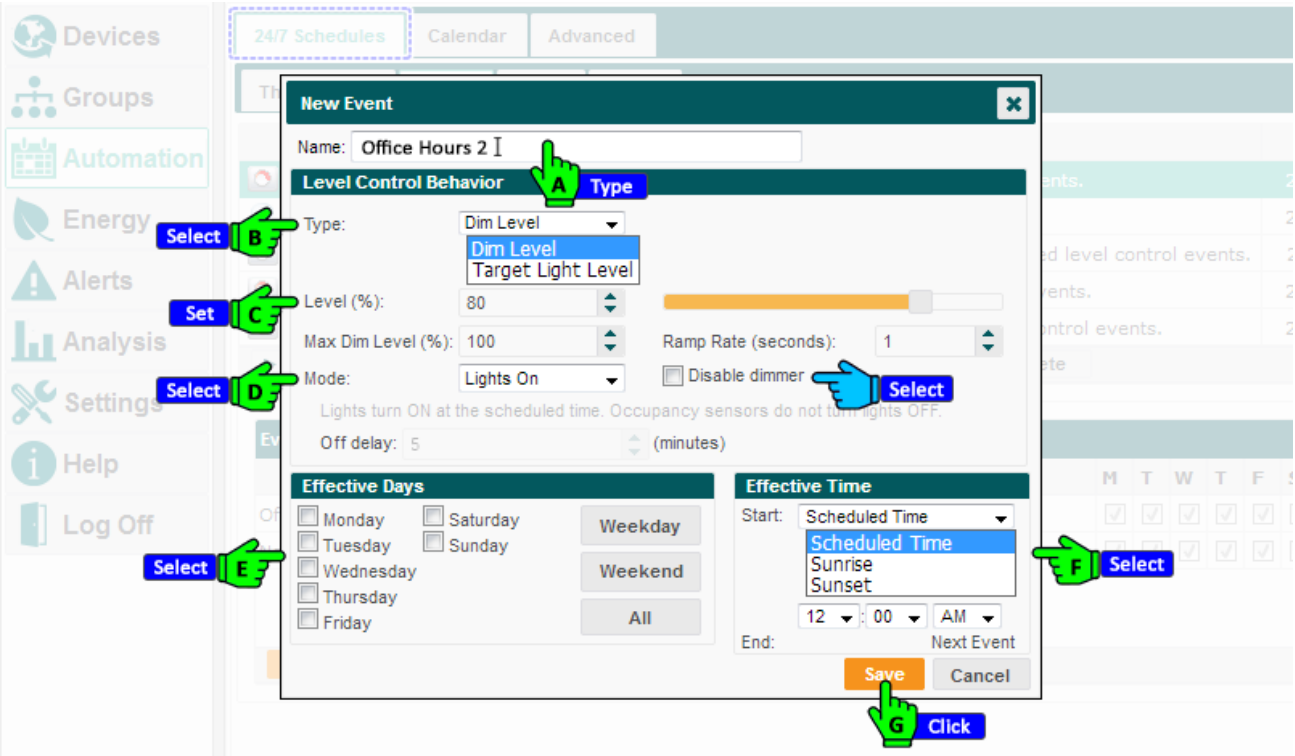


10.1.1. Configuring Events for a Schedule

4. To create a **New Event** for a schedule, select a schedule from the list of templates. Then click **New** in the **Events** section.

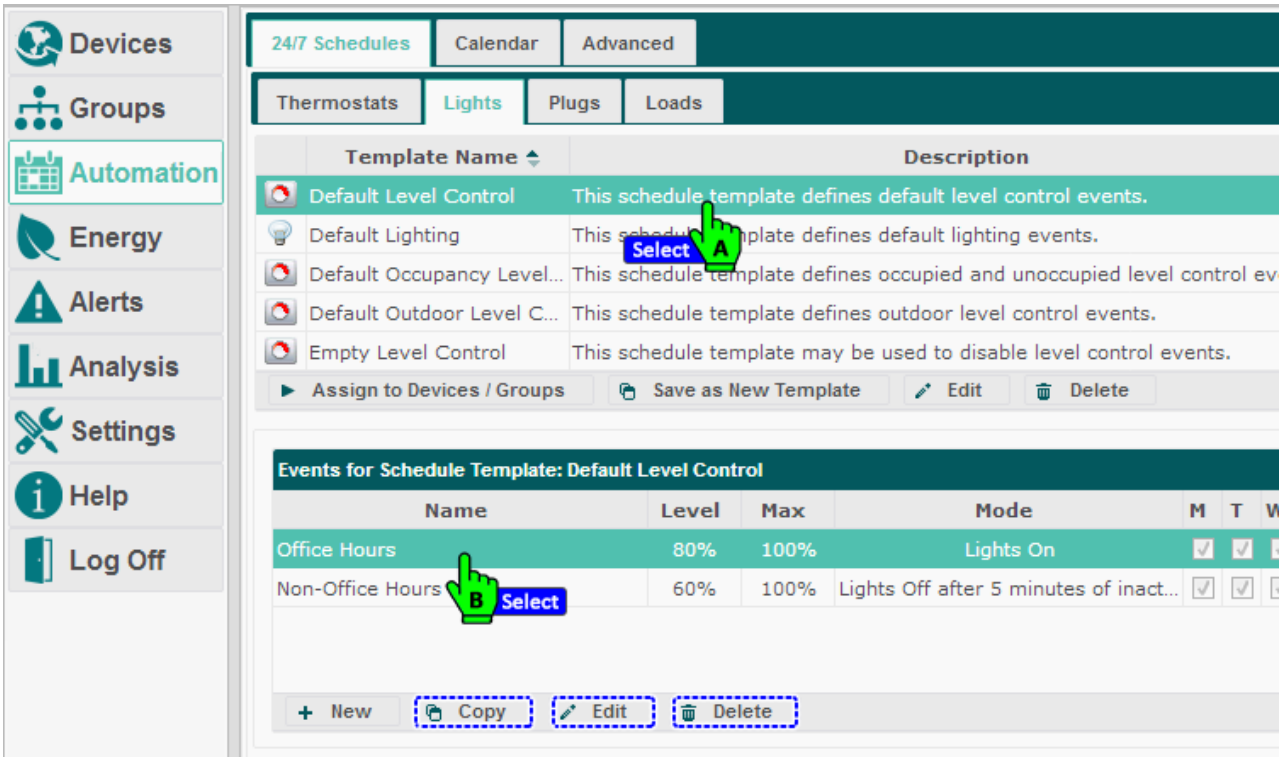


5. The **New Event** window appears. (**NOTE**: This window is for Level Control per the schedule template selected. It will be different if the schedule template selected is for Lights On/Off)
   - Enter a **Name** for the new event in the name field.
   - From the **Type** dropdown, select a level mode.
   - Set the **Level (%)** of the light.
   - From the **Mode** dropdown, select a light mode.
     NOTE: The Lights On/Off control is different for each mode. Read the conditions below each dropdown.
     NOTE: The OFF delay can used for all modes except the "Lights On" option.
   - Set the **Ramp Rate**. This is the amount of time takes to change the dim level.
   - If needed, click the box to disable the **Dimmer**.
     NOTE: This is specific to a physical dimmer, not the EnOcean Rocker Pad.
   - Under **Effective Days**, select the box for each day the schedule should be in effect.
   - Under **Effective Time**, select the time the schedule should begin and end. Schedules can be based on Sunrise or Sunset if the ZIP code is entered into the system.



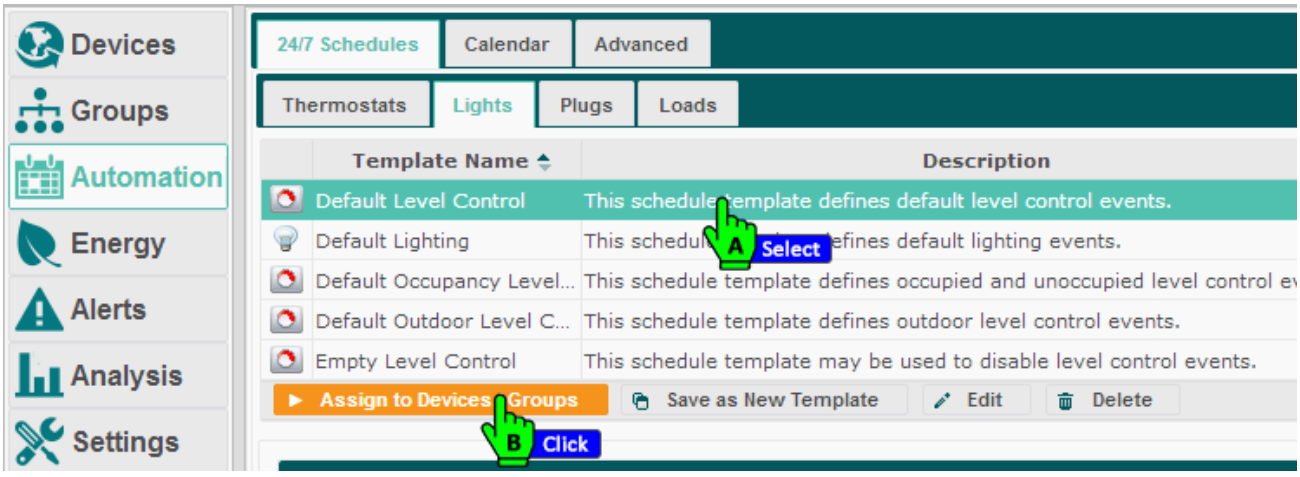
NOTE: After creating a new event for a schedule, the schedule needs to be assigned to a device. Refer to the section **Assigning an Event to a Schedule** for more information.

6. Additional **Event** configurations are below.
   - Select an event and click **Copy** to copy the settings to another event.
   - Select an event and click **Edit** to edit the event. (**NOTE**: After editing an event in a schedule, it is mandatory to reassign the schedule to a device or group for the changes to be applied. Refer to the section **Assigning an Event to a Schedule** for more information.
   - Select an event and click **Delete** to delete the event.

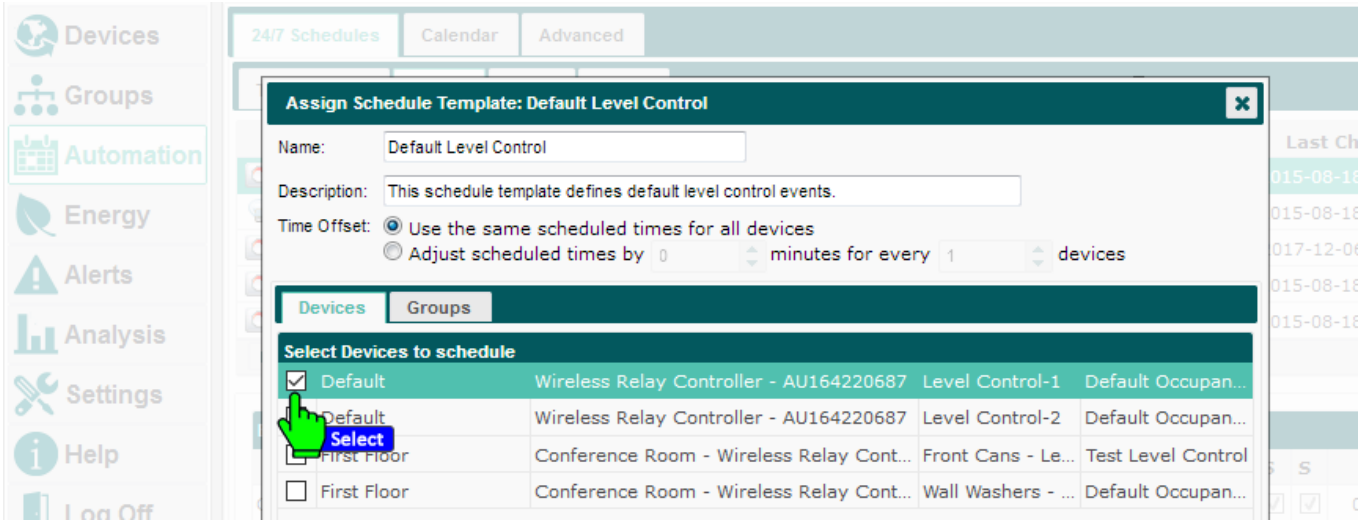


10.1.2. Assigning an Event to a Schedule

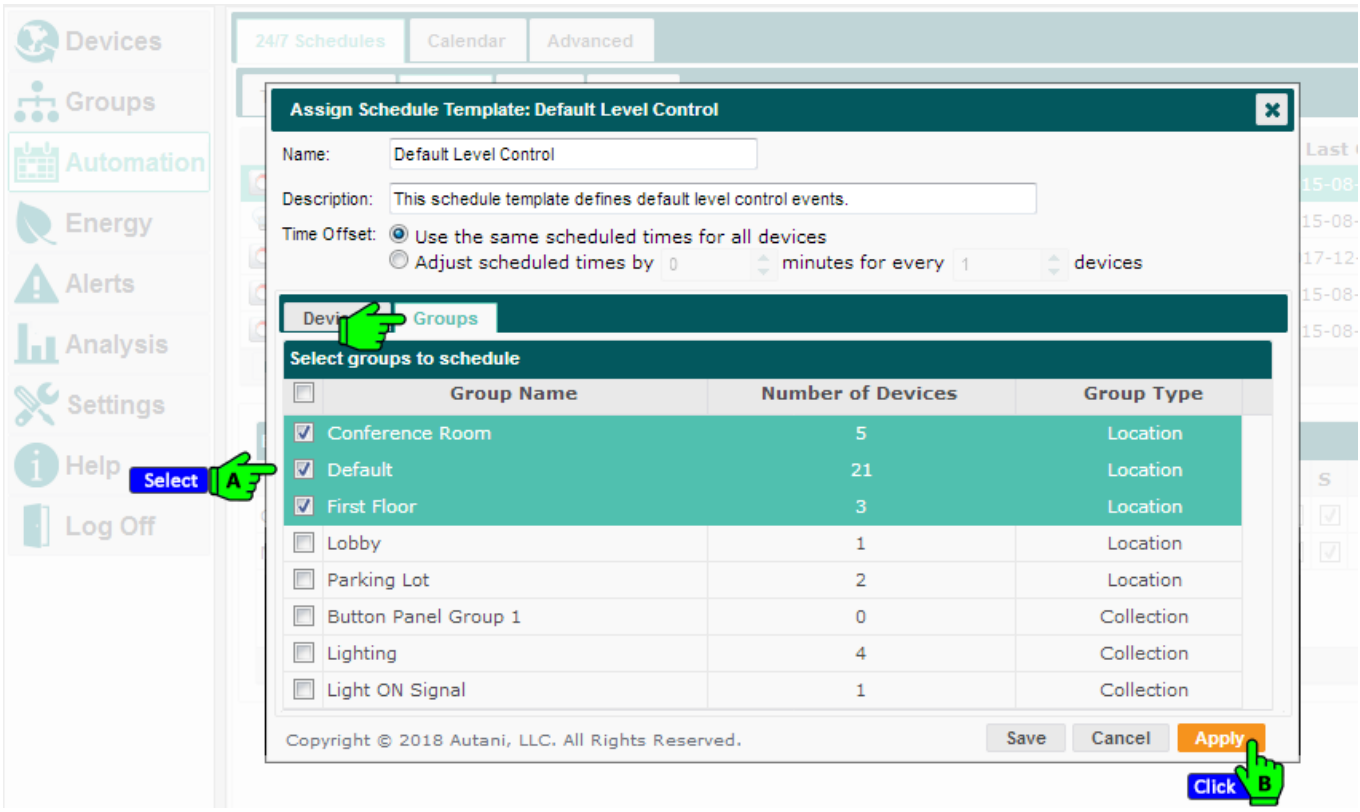
1. After **creating a new event** or after **editing an event**, the schedule needs to be assigned/reassigned to devices or groups. Select a schedule template and click **Assign to Device/Groups**.



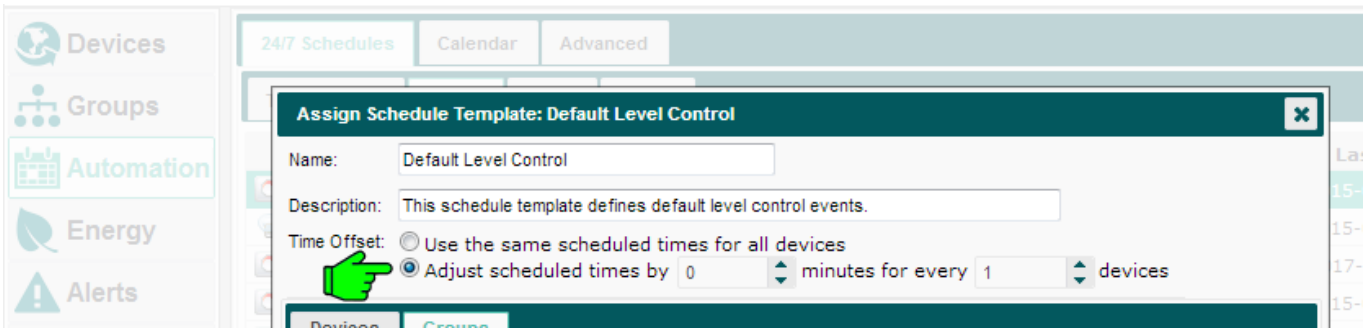
2. The **Assign Schedule Template** window appears with the **Devices** tab selected by default. Select one or more WRCs with relevant endpoints from the list of available devices.



- Select the next tab **Groups**. Choose the required group(s) from the list and click **Apply**.



- The **Time Offset** feature is typically used in HVAC applications. Device start times can be staggered to mitigate traffic on the system.



10.2. Configuring a Schedule Override

Schedule Overrides are used to make an on-demand change in the lighting system during certain events. The process to create a schedule override is explained below.

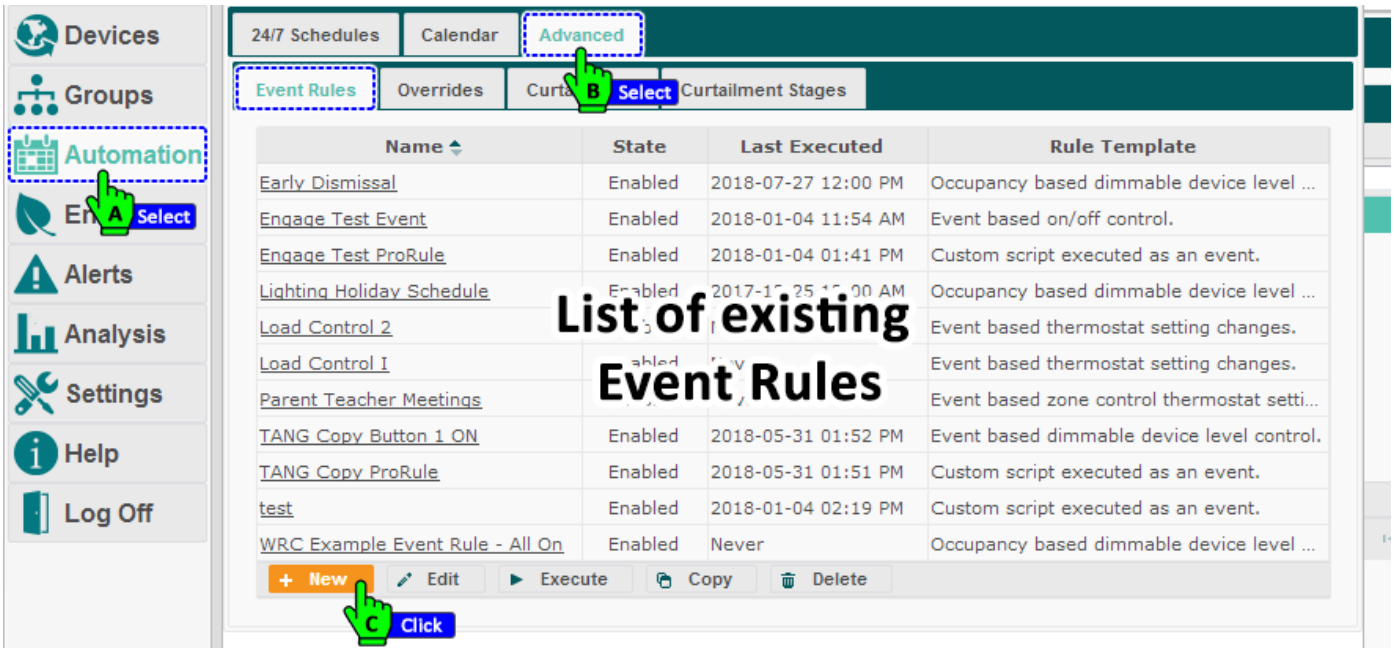
A. Create an Event Rule

B. Associate the Event Rule to an Override

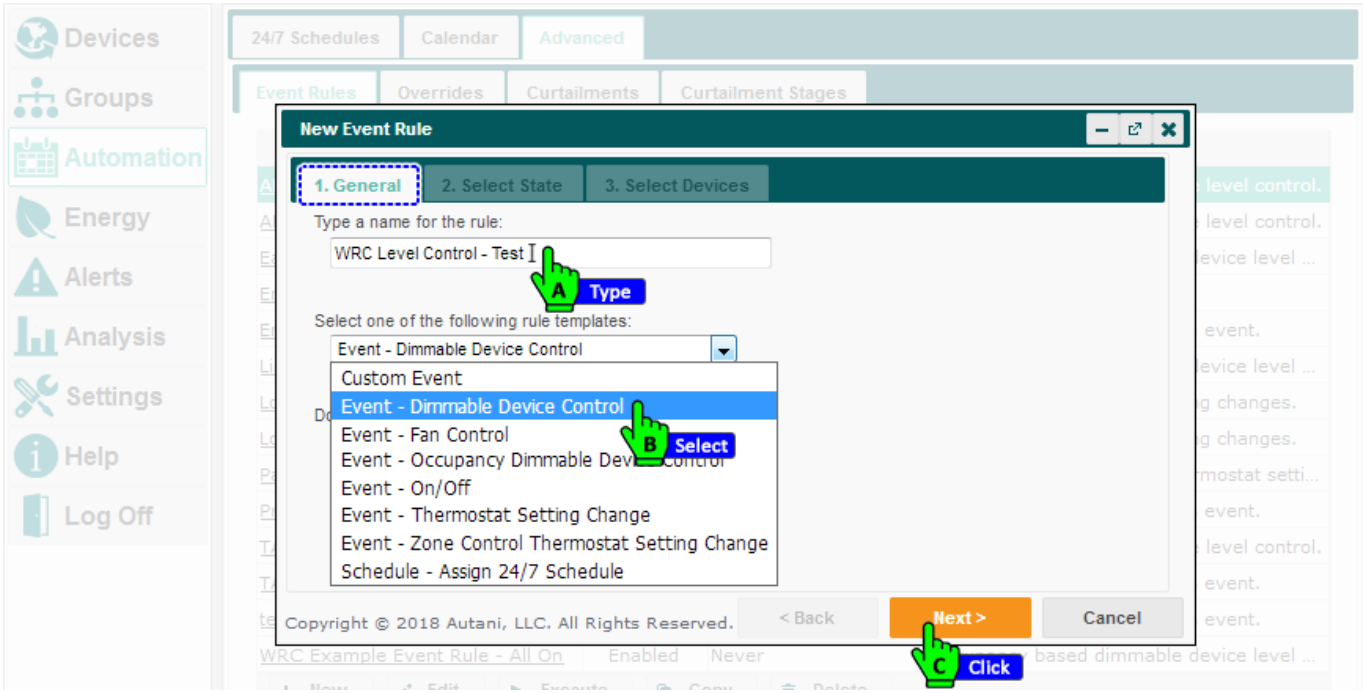
C. Schedule an Override in Calendar

10.2.1. Create an Event Rule

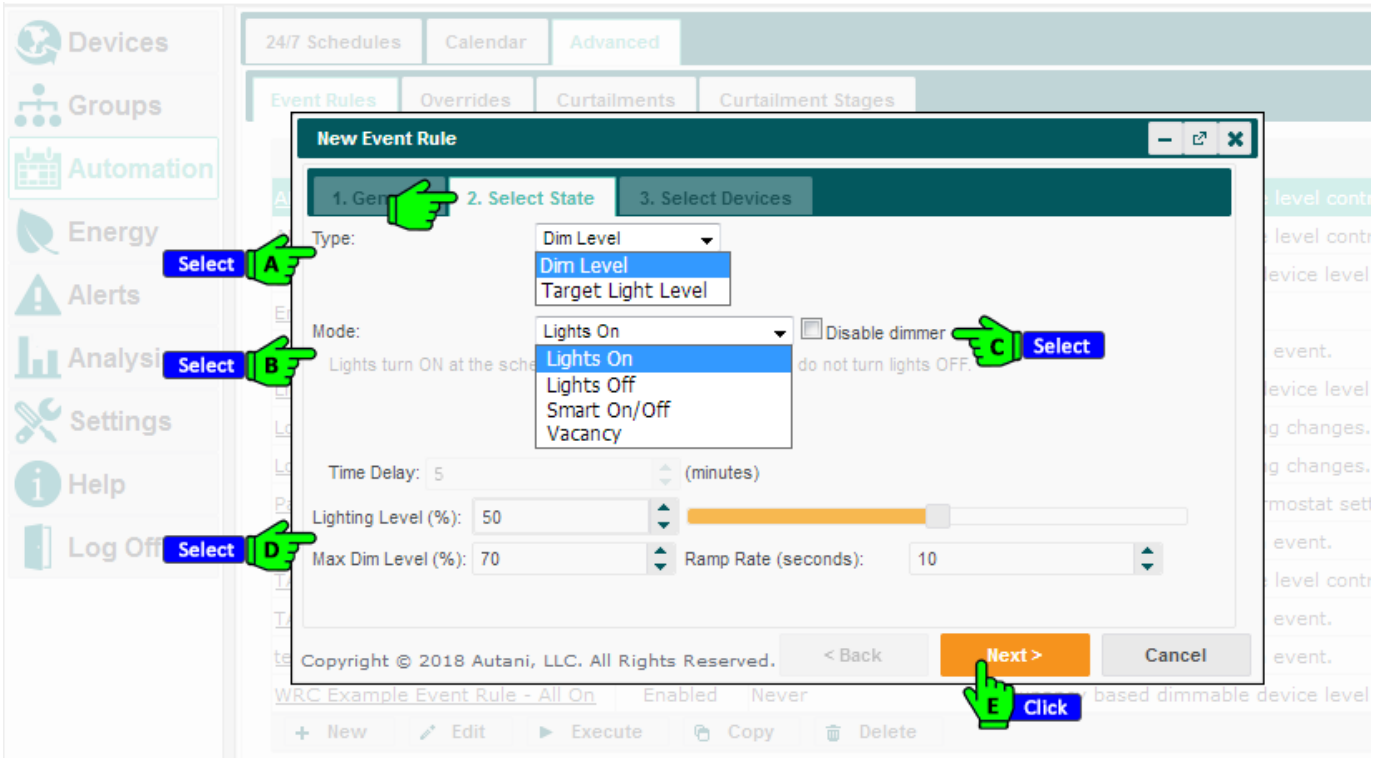
1. To create an event rule, select **Automation** > **Advanced**. The **Event Rules** tab is selected by default, displaying the list of existing event rules. Click **New** to create a new event rule.



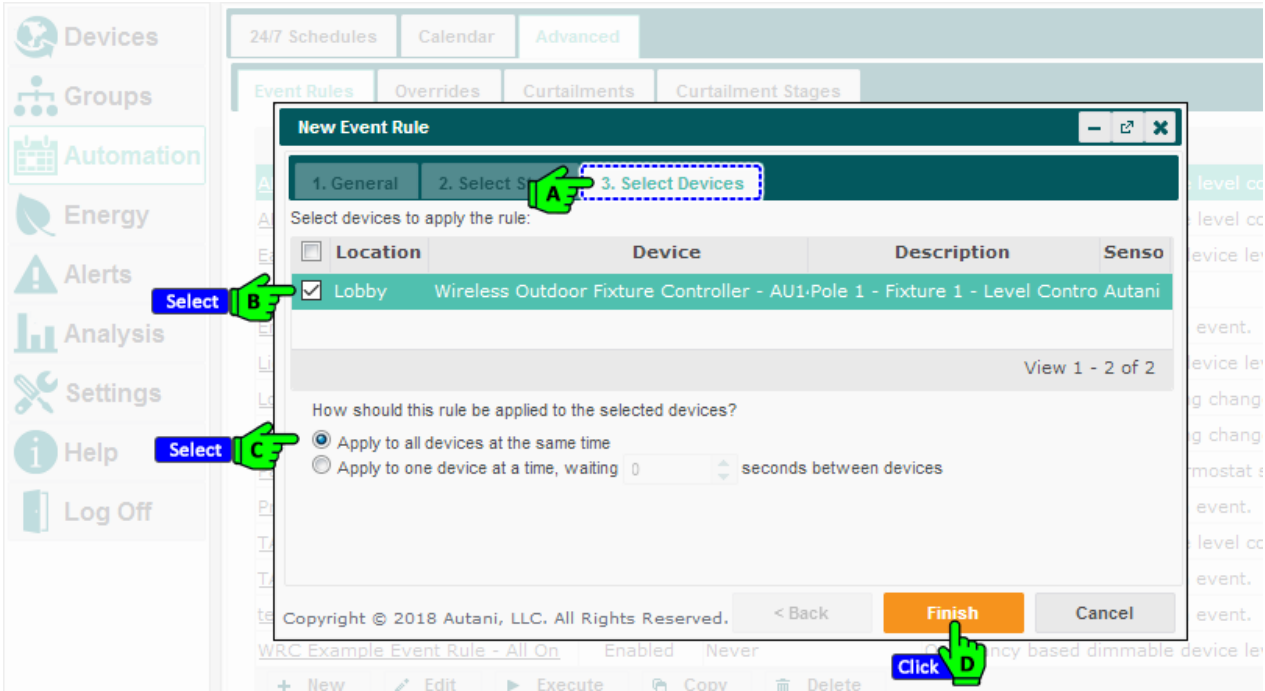
2. The **New Event Rule** window appears with the **General** tab selected by default. Type a **name** for the new event rule, and select a **rule template** from the dropdown, and click **Next**.



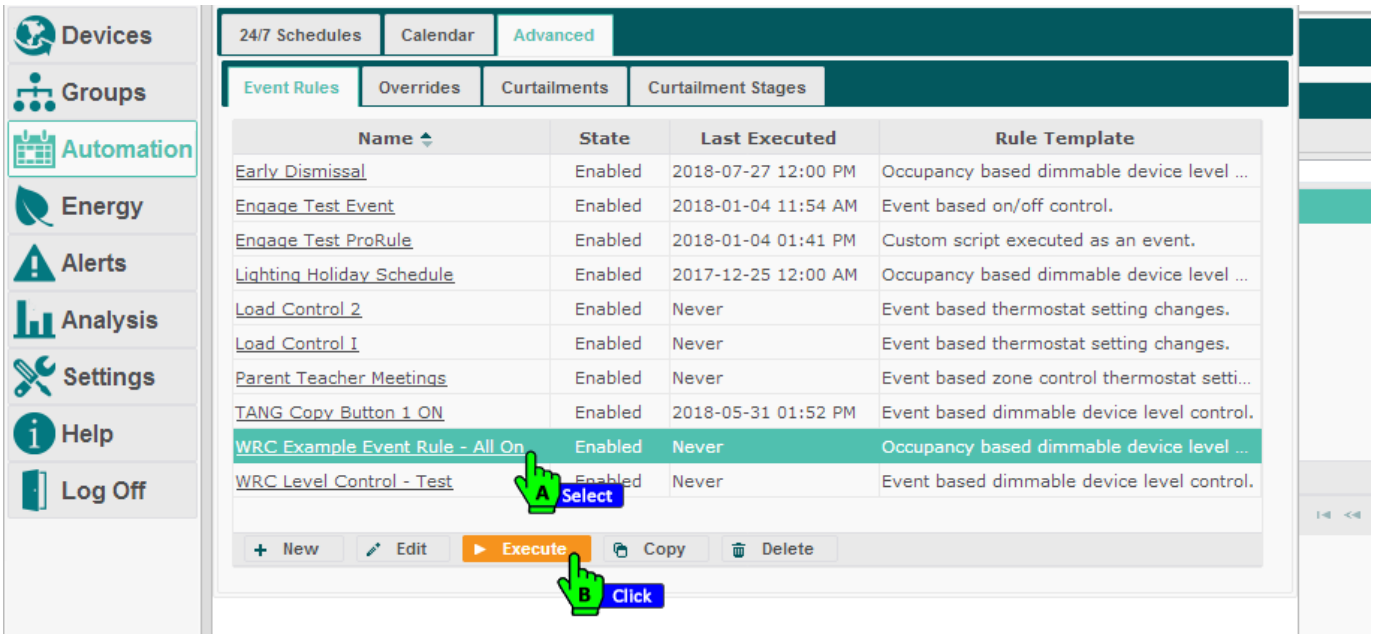
3. Select the next tab **Select State** which has the settings for the **rule template** that was selected in the General tab. (**NOTE**: The setting details will differ for each type of rule template selected in the General tab.)
   - From the **Type** dropdown, select a **Level Mode**.
   - From the **Mode** dropdown, select a **Light Mode**.
     NOTE: The Lights On/Off control is different for each mode. Read the conditions below each dropdown. The OFF delay can used for all modes except the **Lights On** option.
   - If needed, click the box to disable the **Dimmer**. **NOTE**: This is specific to a physical dimmer, not the EnOcean Rocker Pad.
   - Set the **Lighting Level %** and click **Next**.



4. Select next tab **Select Devices**. Select the devices for which the new event rule will be applied to. Click **Finish** to end the creation process.



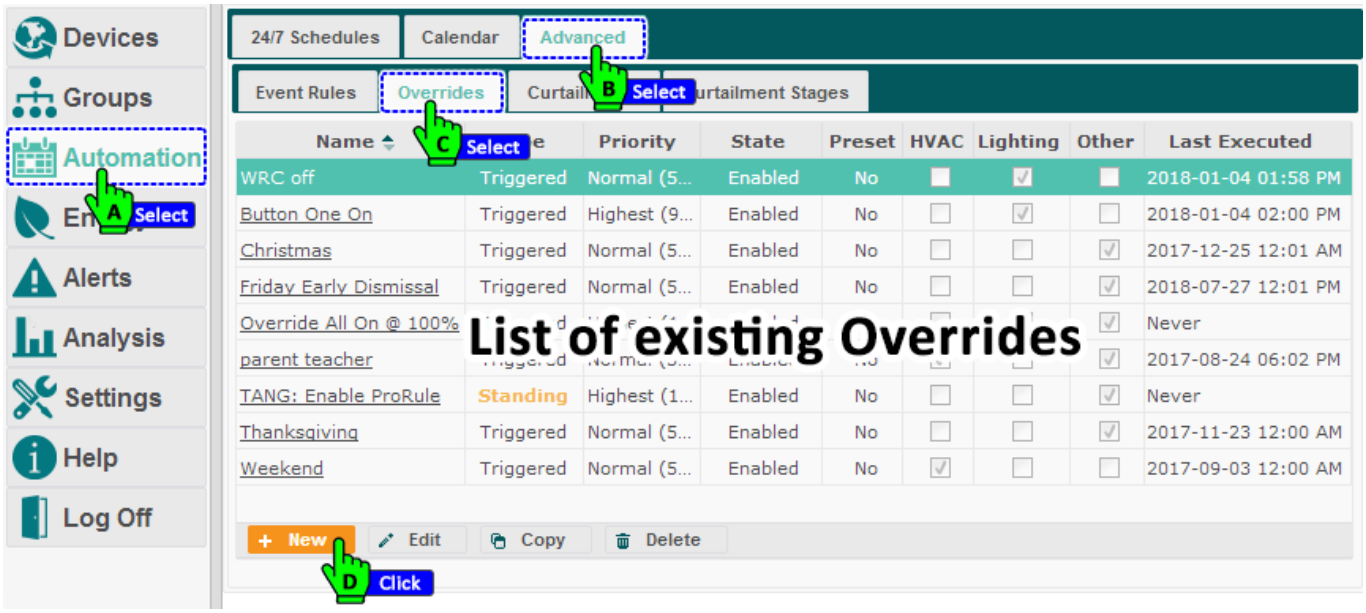
5. **NOTE**: The major advantage of an **event rule** is that they can be executed **on demand**. For example, if you have a facility with 100 WRCs and you want to turn ON all of them at the same time, you would build an event rule and then click **execute** to make an on-demand change.



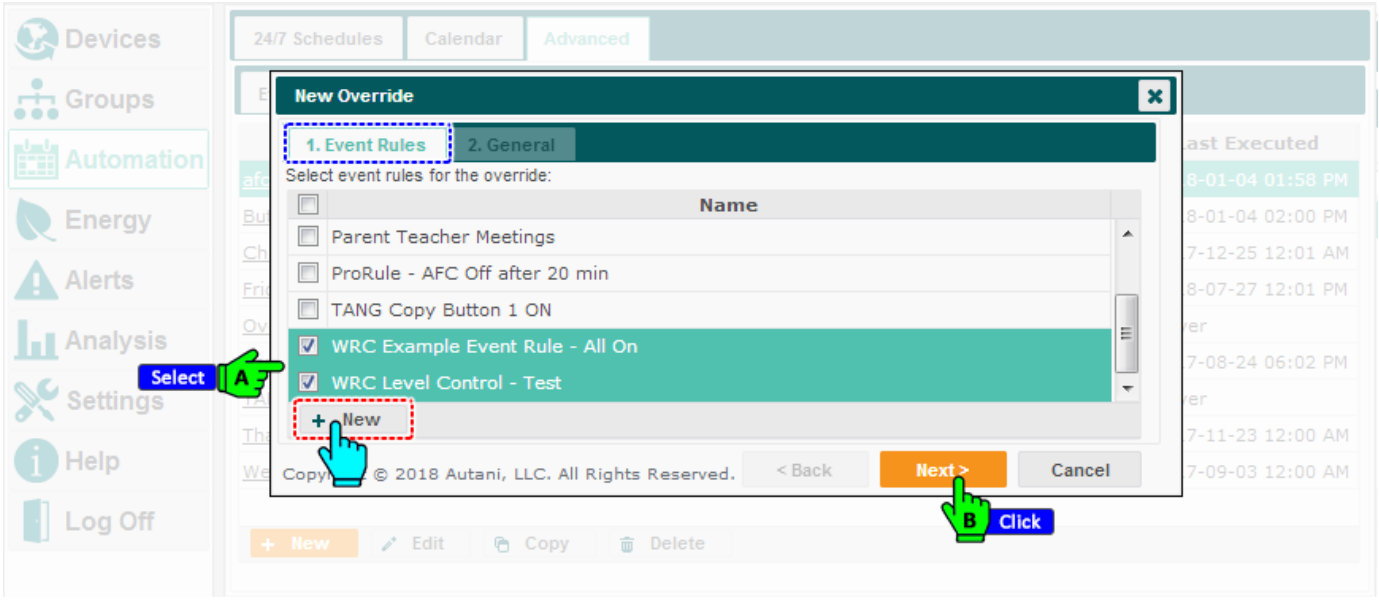
10.2.2. Create a New Override and Associate an Event Rule

A new override can be created from either the **Calendar** or **Advanced** tabs in the Automation section. The process will be the same for both.

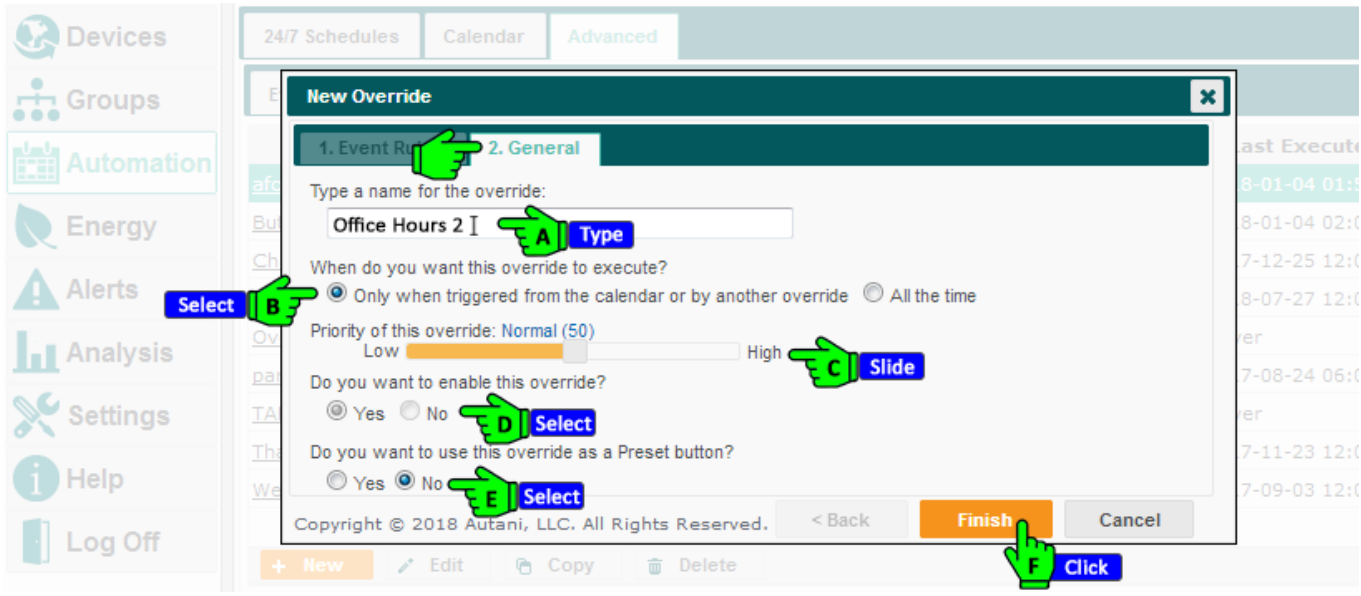
1. To create a new **override**, select **Automation** > **Advanced** > **Overrides**. The existing overrides are listed. Click **New**.



2. The **New Override** window appears with the **Event Rules** tab selected by default. The list of existing event rules is displayed. Select the event rule(s) to associate with the new override and click **Next**.
NOTE: There is an option to create a **New** event rule within this window if one was not created earlier.

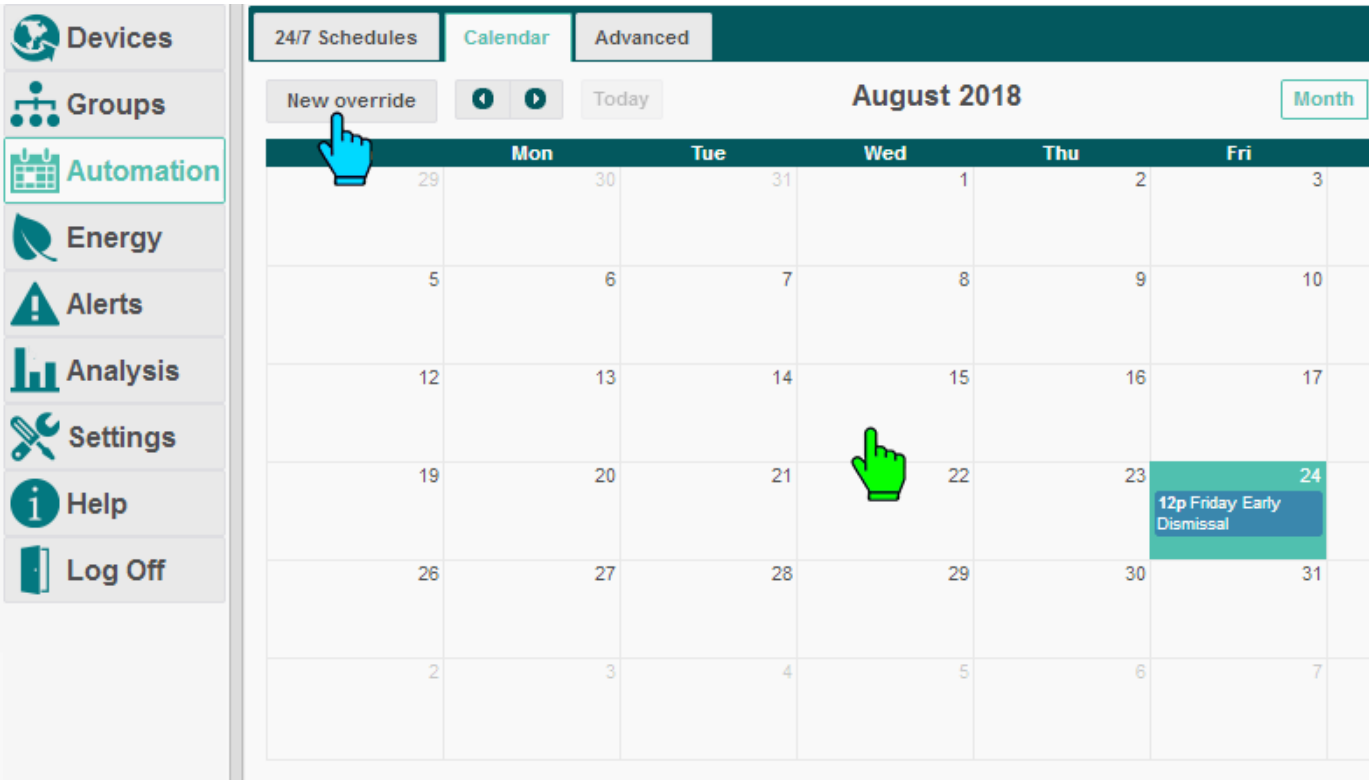


3. Select the next tab **General**, where the new override can be configured.
   - Enter a **name** for the new override.
   - Select the **condition** to execute the override (only when triggered, or all the time).
   - Set the **priority** for the override.
   - Choose whether to **enable or disenable** this override.
   - Choose whether to use this override as a **Preset** button. This preset button will be available inside **Settings** > **System** > **Presets**.
   - Click **Finish**.

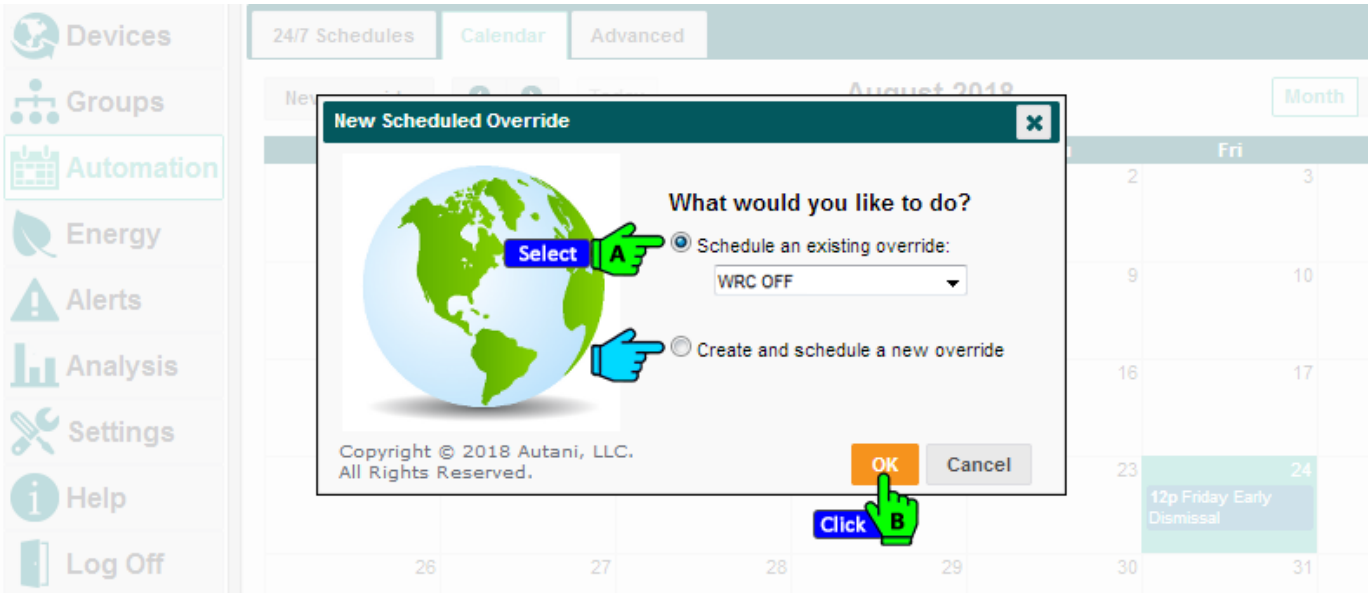


10.2.3. Schedule an Override in Calendar

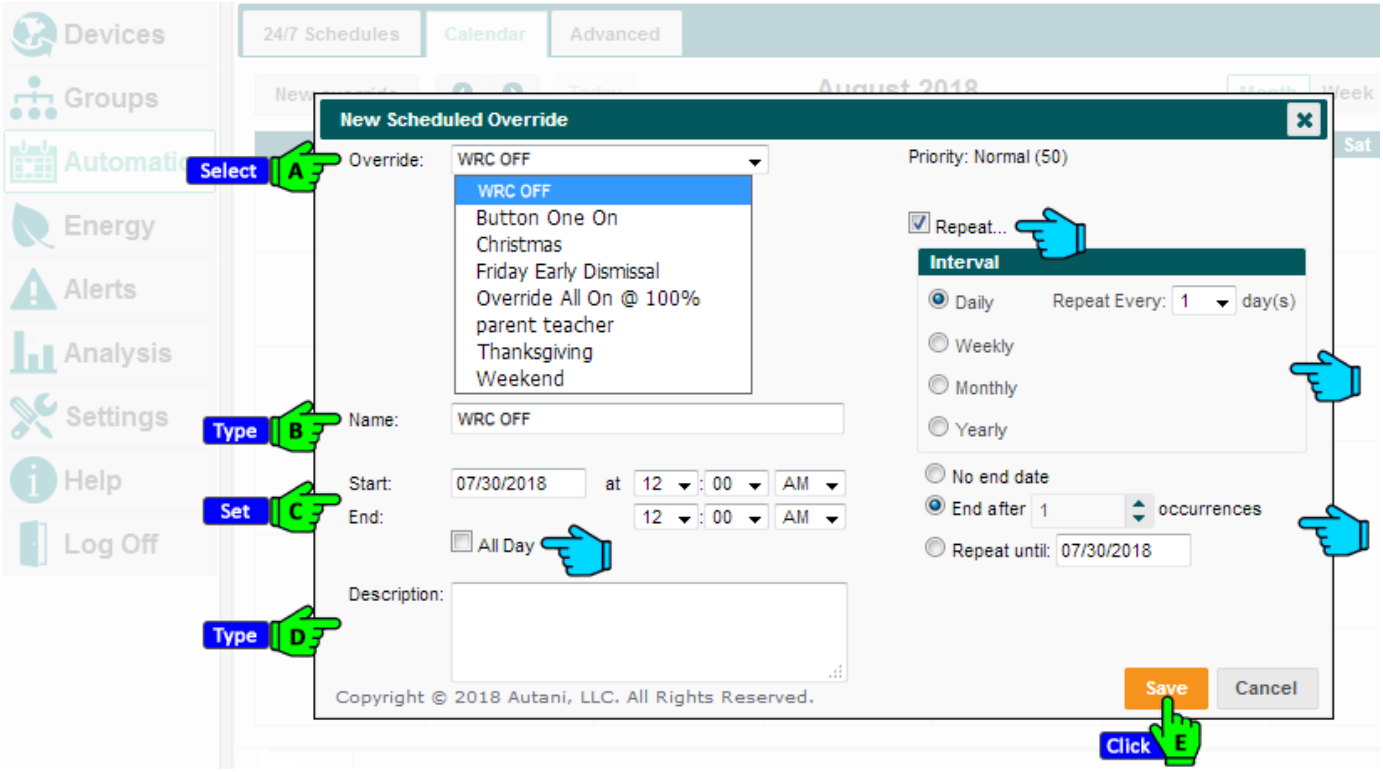
1. To schedule an override through the calendar, select **Automation** > **Calendar**. The calendar screen will load. Click on any **day** of the calendar or click the **New override** button above the calendar.



2. The **New Scheduled Override** window appears. Select **Schedule an existing override** and click **OK**.
NOTE: There is another option, **Create and schedule a new override**, where new override can be created scheduled.

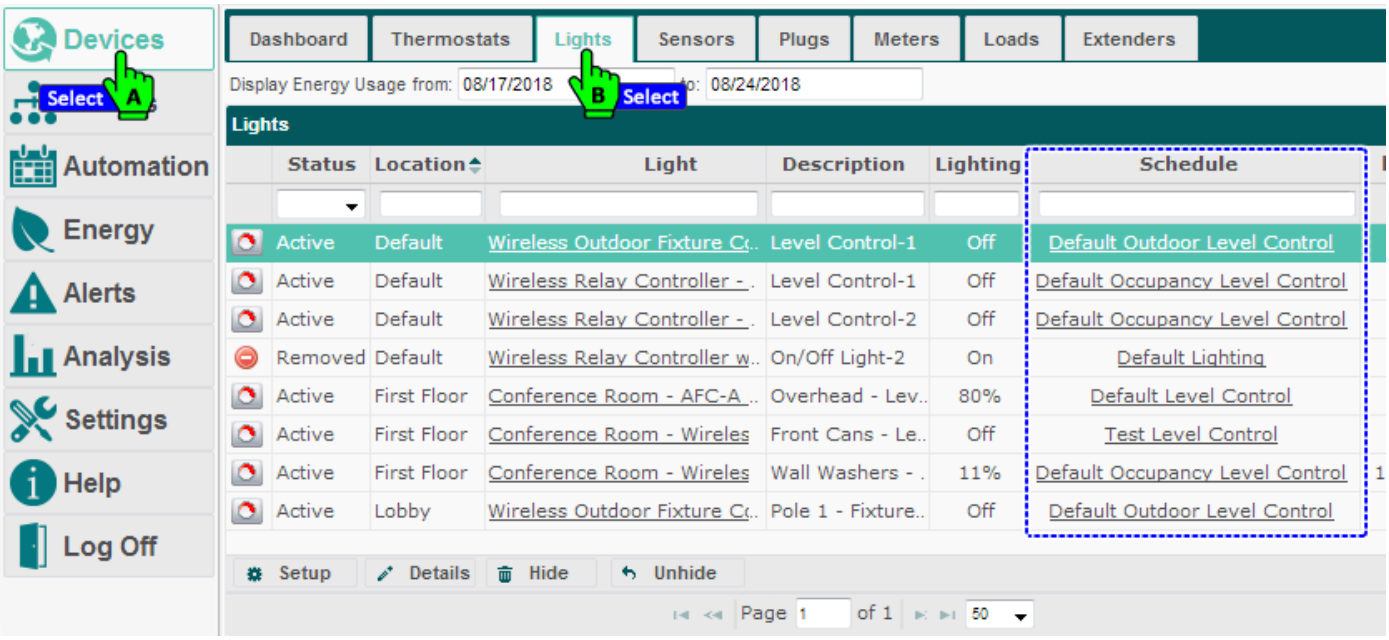


3. Another **New Scheduled Override** window appears.
   - Select an **Override** from the dropdown. (**NOTE**: The priority level set in the previous section is displayed here.)
   - Type a **Name** for the schedule override.
   - Set a **Start** and **End** time for a day or select **All Day**.
   - Type a **Description** of the scheduled override.
   - If required, select the **Repeat** option and the set the interval to repeat the schedule override. Overrides can also repeat for a set number of occurrences or until a specific date.



10.3. Verifying a Schedule (Viewing Schedule in Another Section)

The schedules assigned to a lighting system can be viewed/verified through the **Devices** > **Lights** section. From the **Schedule** column, click on any of the schedules to view and verify.



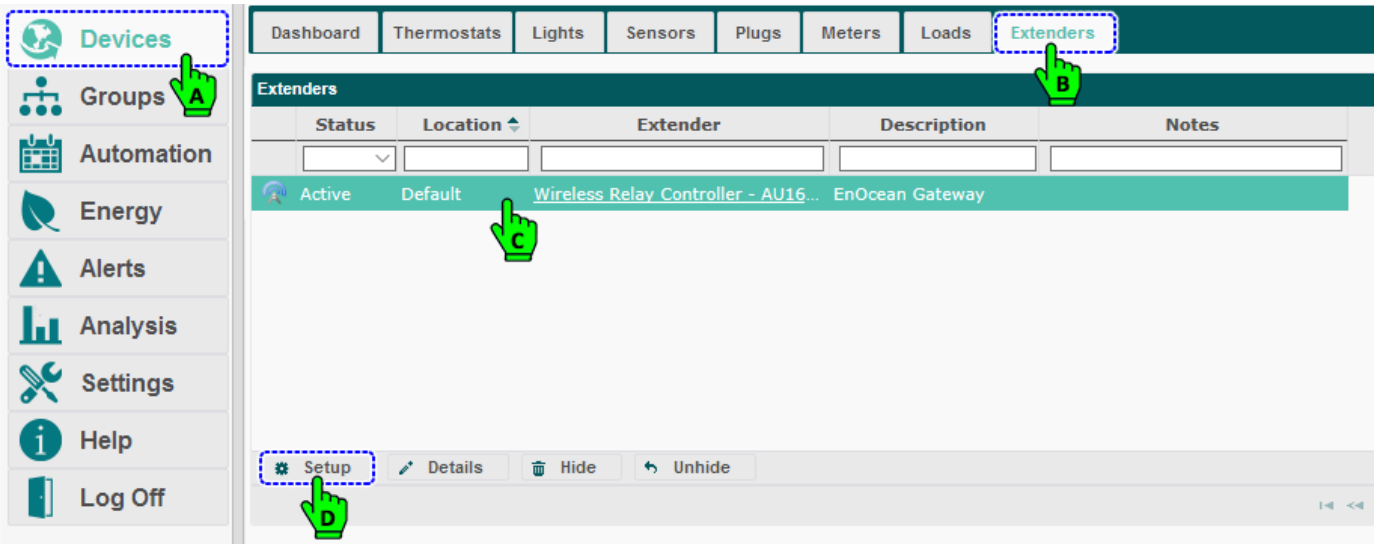
11. Configuring an EnOcean Gateway

The EnOcean Gateway can be configured in two places, detailed below. The process will be same in both places.

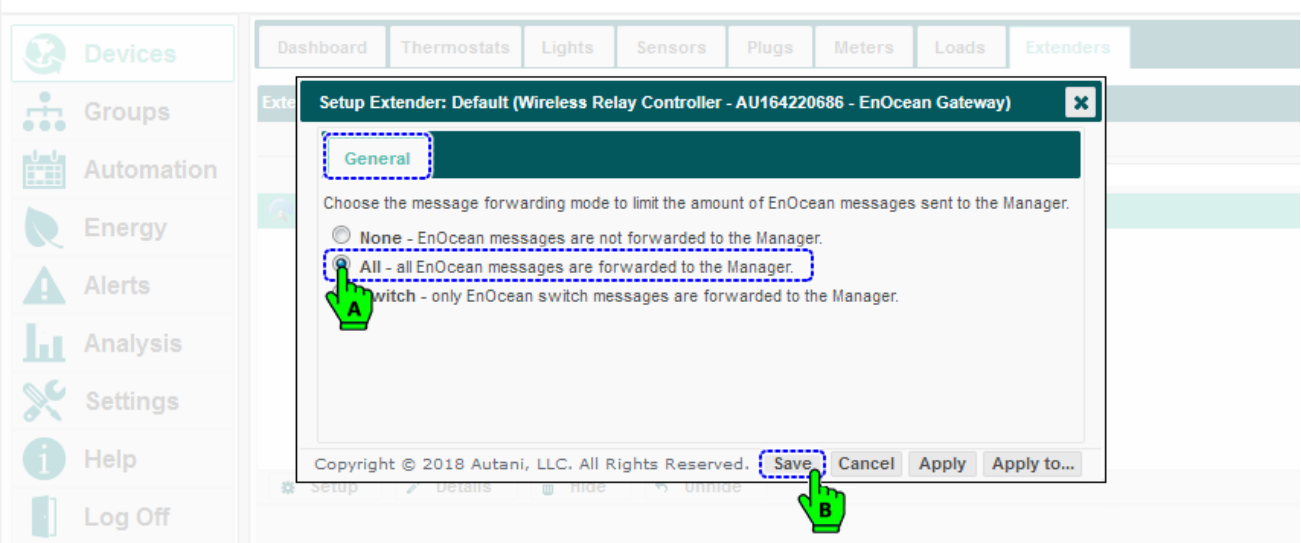
- Devices > Extender
- Settings > Device Setup > Device Configuration

11.1. Setup, EnOcean Gateway

1. Select **Devices** > **Extenders** tab. Select the **EnOcean Gateway** for the applicable WRC, and click **Setup**.

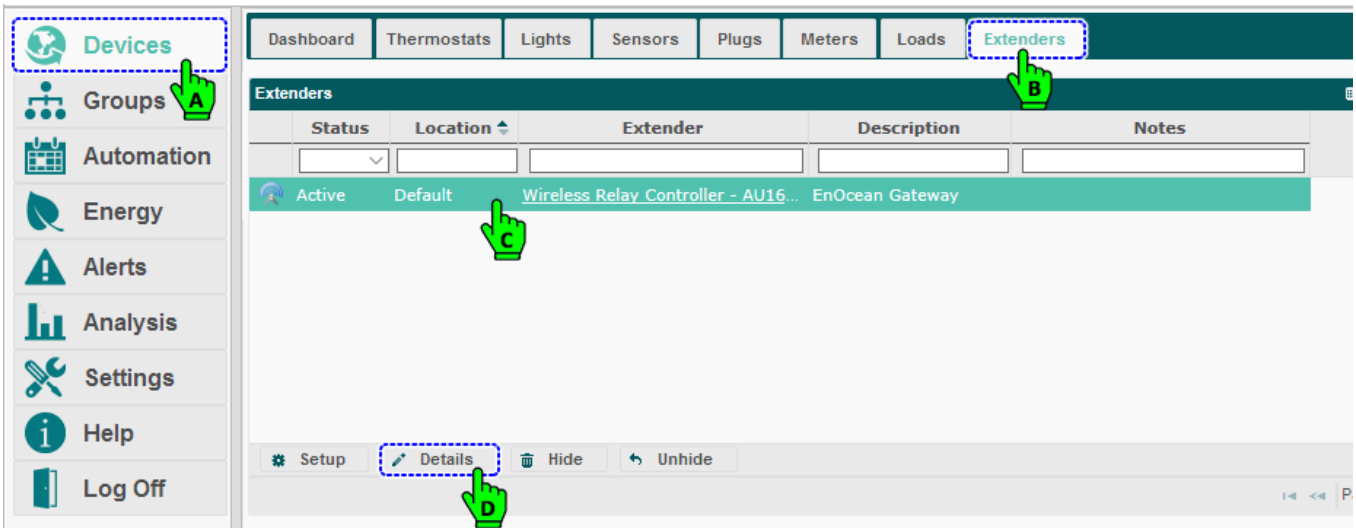


2. The **Setup Extender** window appears with the **General** tab selected. Three pass-through options for the **WRC** are listed. The user can choose which EnOcean messages are sent to the Autani Manager.
   - Select the option **All - all EnOcean messages are forwarded to the Manager** to forward all the messages. Click **Save/Apply.**

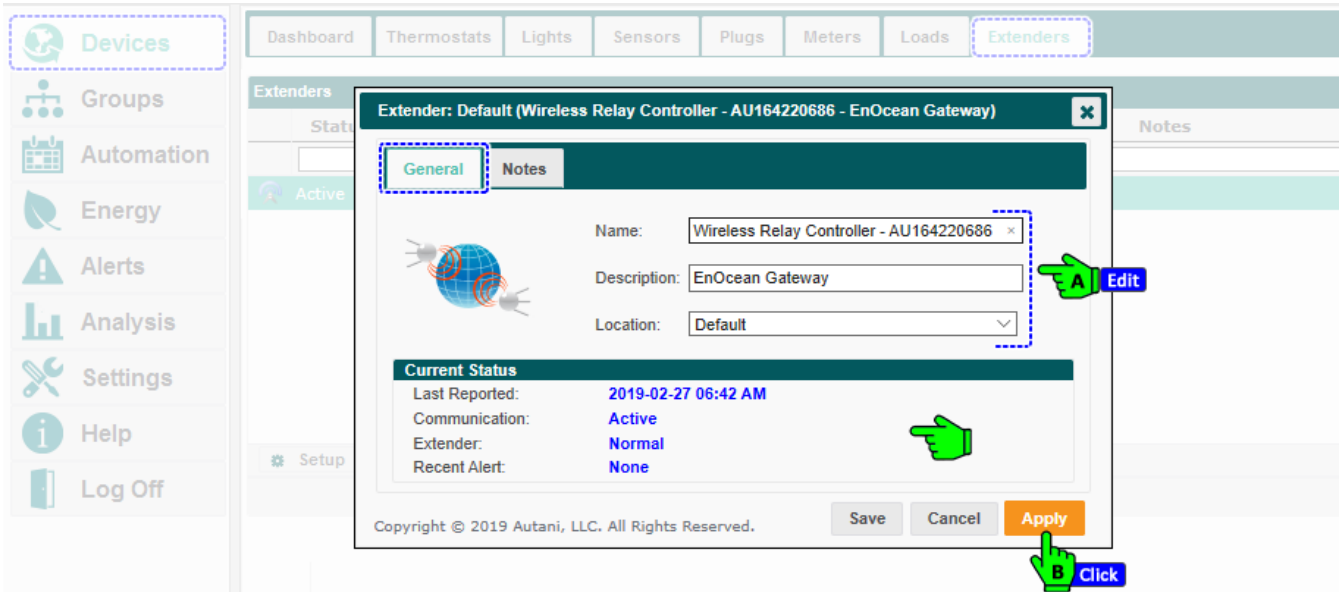


11.2. Details, EnOcean Gateway

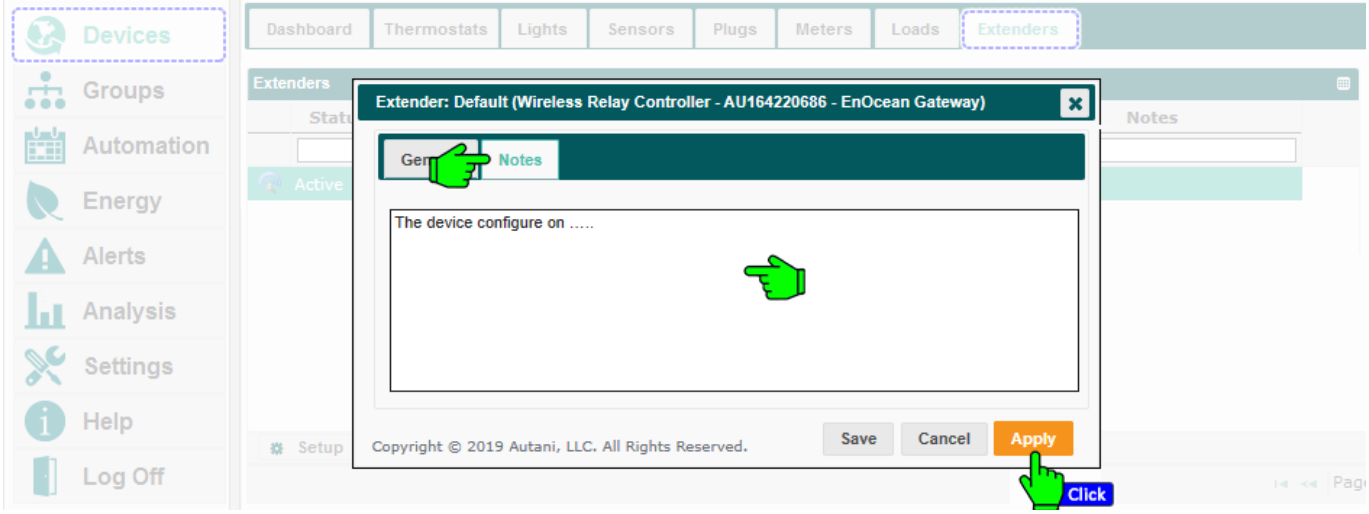
1. Select **Devices** > **Extenders** tab. Select the applicable **EnOcean Gateway** and click **Details**.



2. The **Extender** window appears with the **General** tab selected. The **name**, **description**, and **location** for the Gateway can be modified here. The current status of the Gateway can be viewed in the lower section. Click **Apply** after all changes are made.



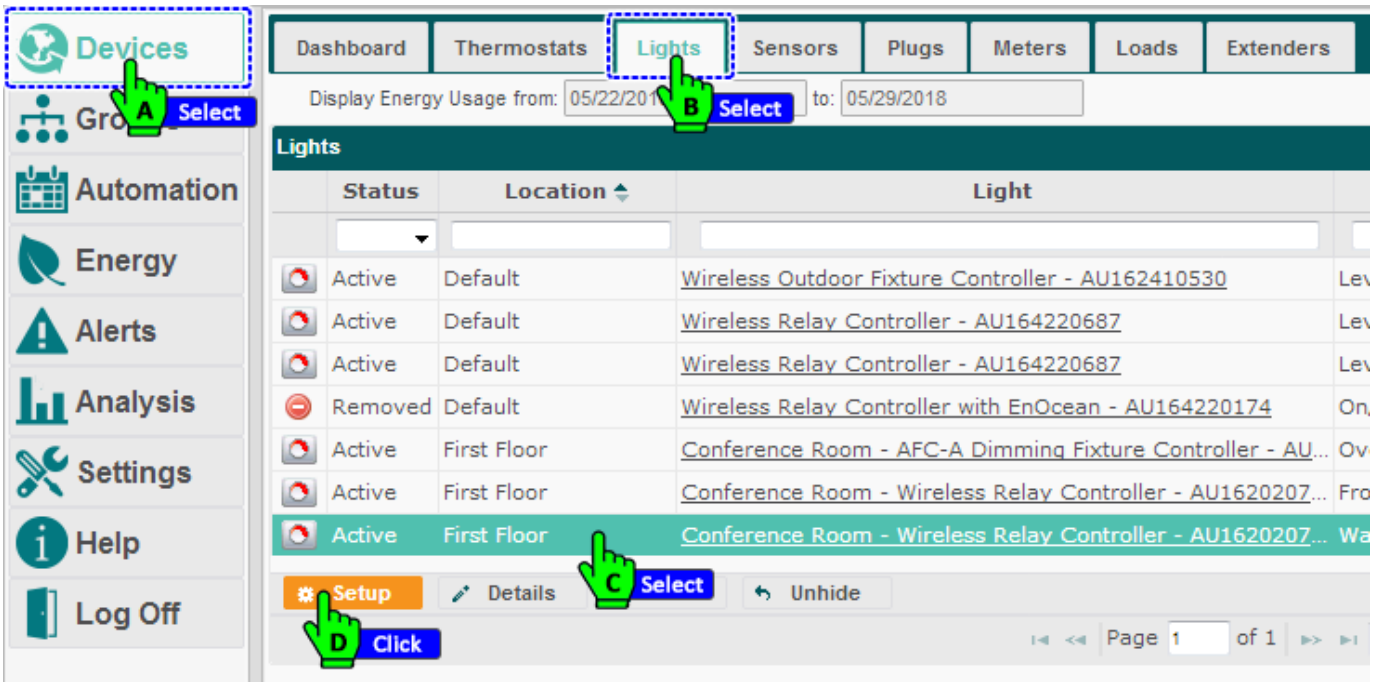
3. Select the next tab **Notes** to enter any notes for future reference. Click **Apply**.



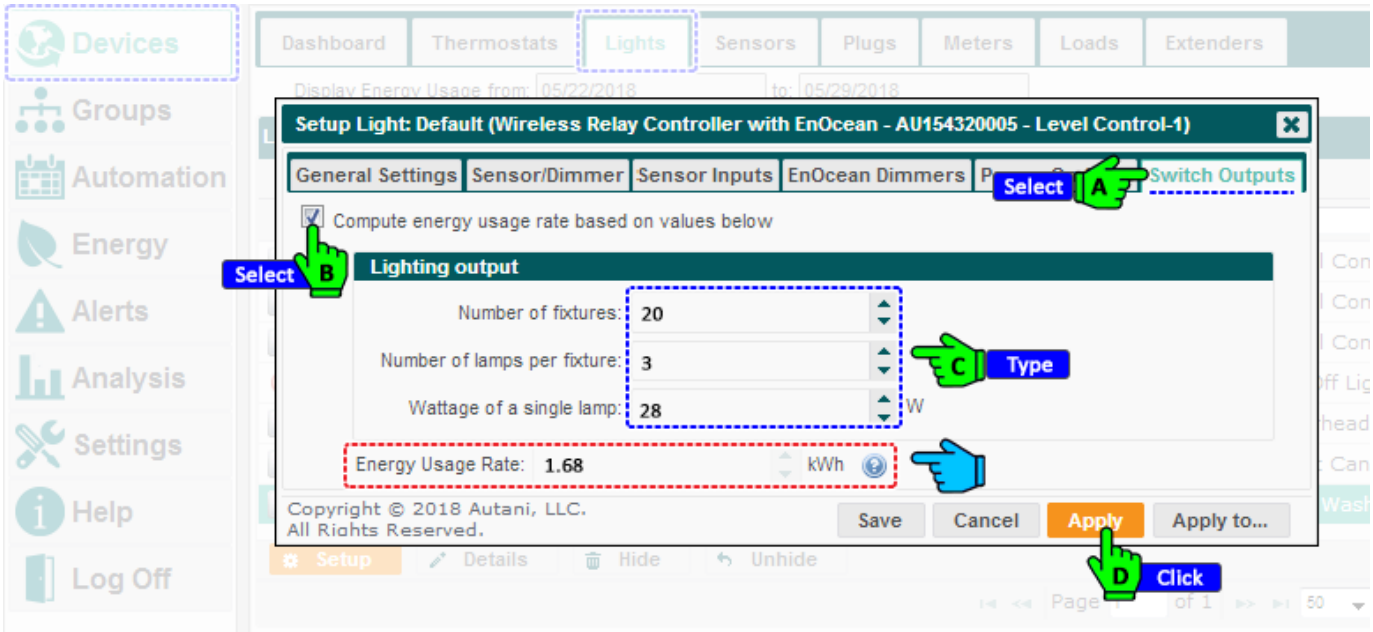
12. Energy Estimation

12.1. Configuring a WRC for Energy Estimation

1. To check the energy usage of a **WRC**, it must first be enabled to do the calculation. Select **Devices** > **Lights**. Select an endpoint for the **WRC** from the list of devices, and click **Setup**.

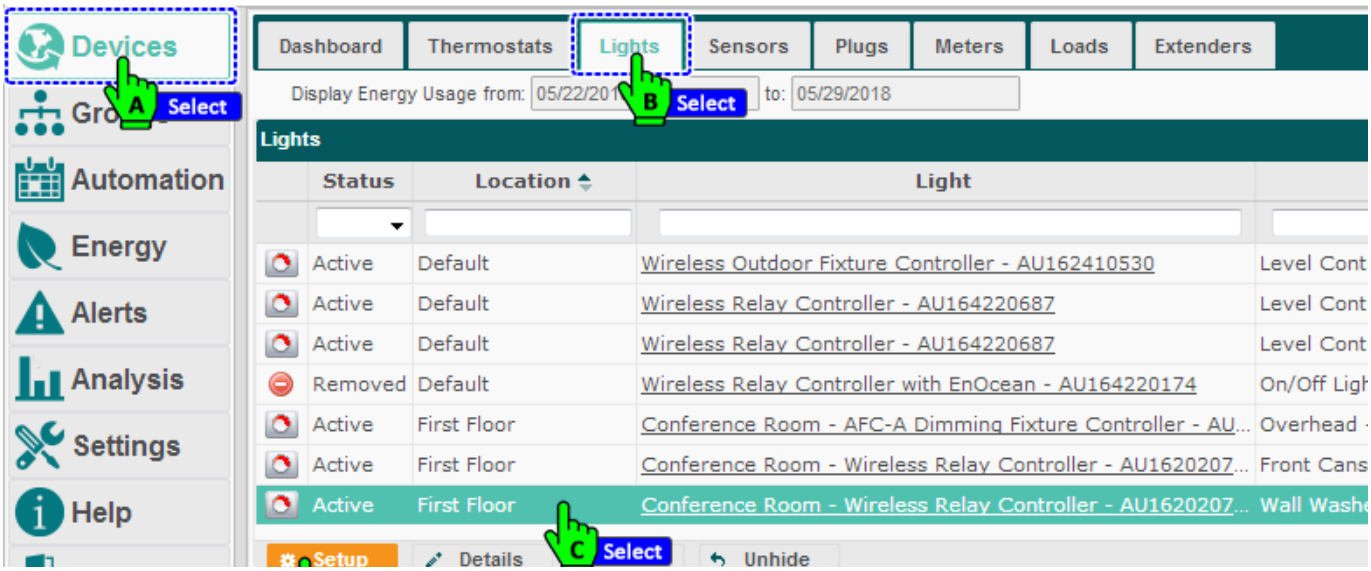


2. The **Setup Light** window appears. Select the **Switch Outputs** tab.
   - Click the box to enable **Computer energy usage**... and enter values in the **Lighting output** fields. The **Energy Usage Rate** will be displayed.
   - **OR**, if the Energy Usage Rate is already known, uncheck the **Compute energy usage…** box and enter the energy usage rate directly in the **Energy Usage Rate** field.
   - Click **Apply**.

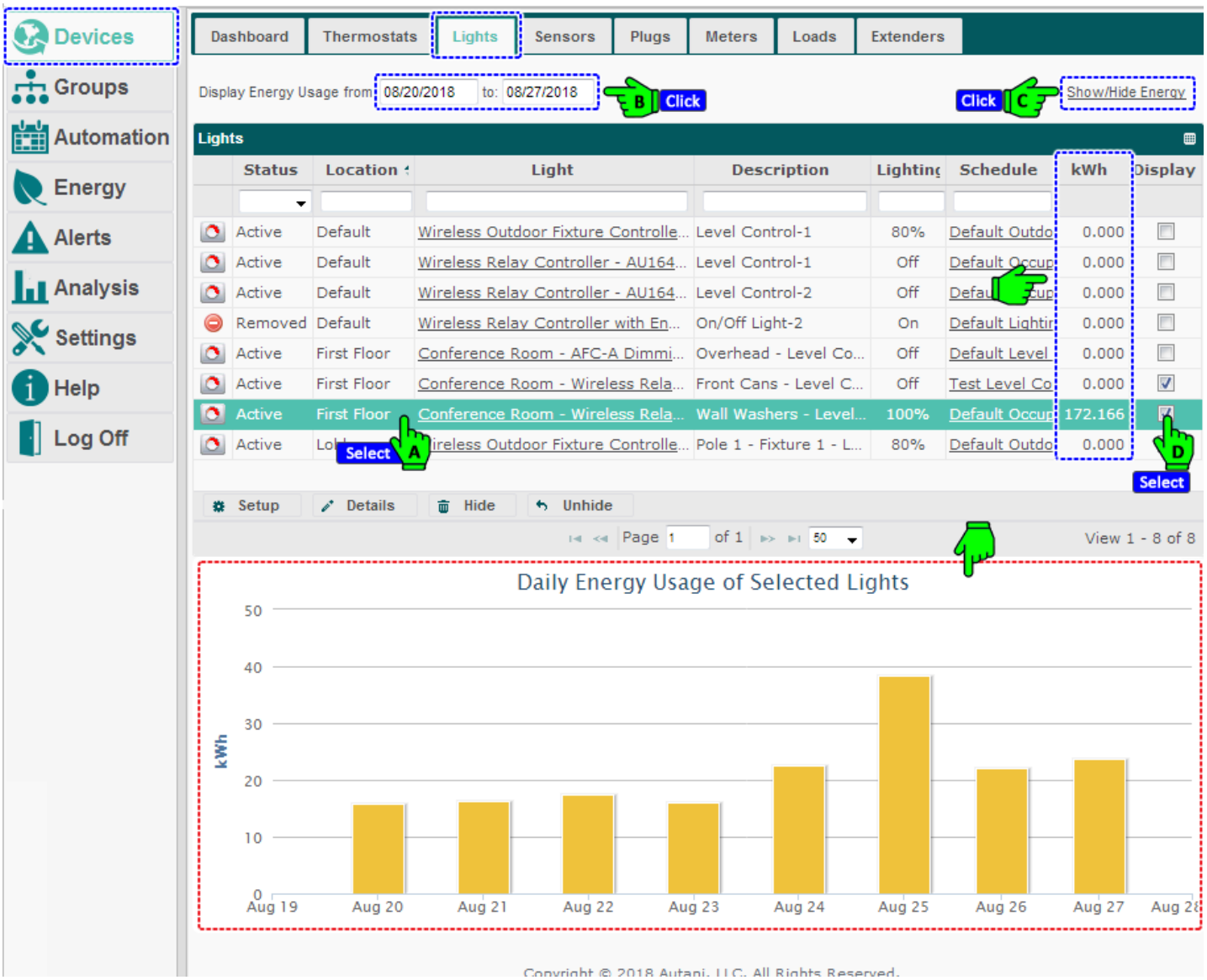


12.2. View Energy Consumption from Devices Section

1. Select **Devices > Lights**. Select the applicable light from the list.

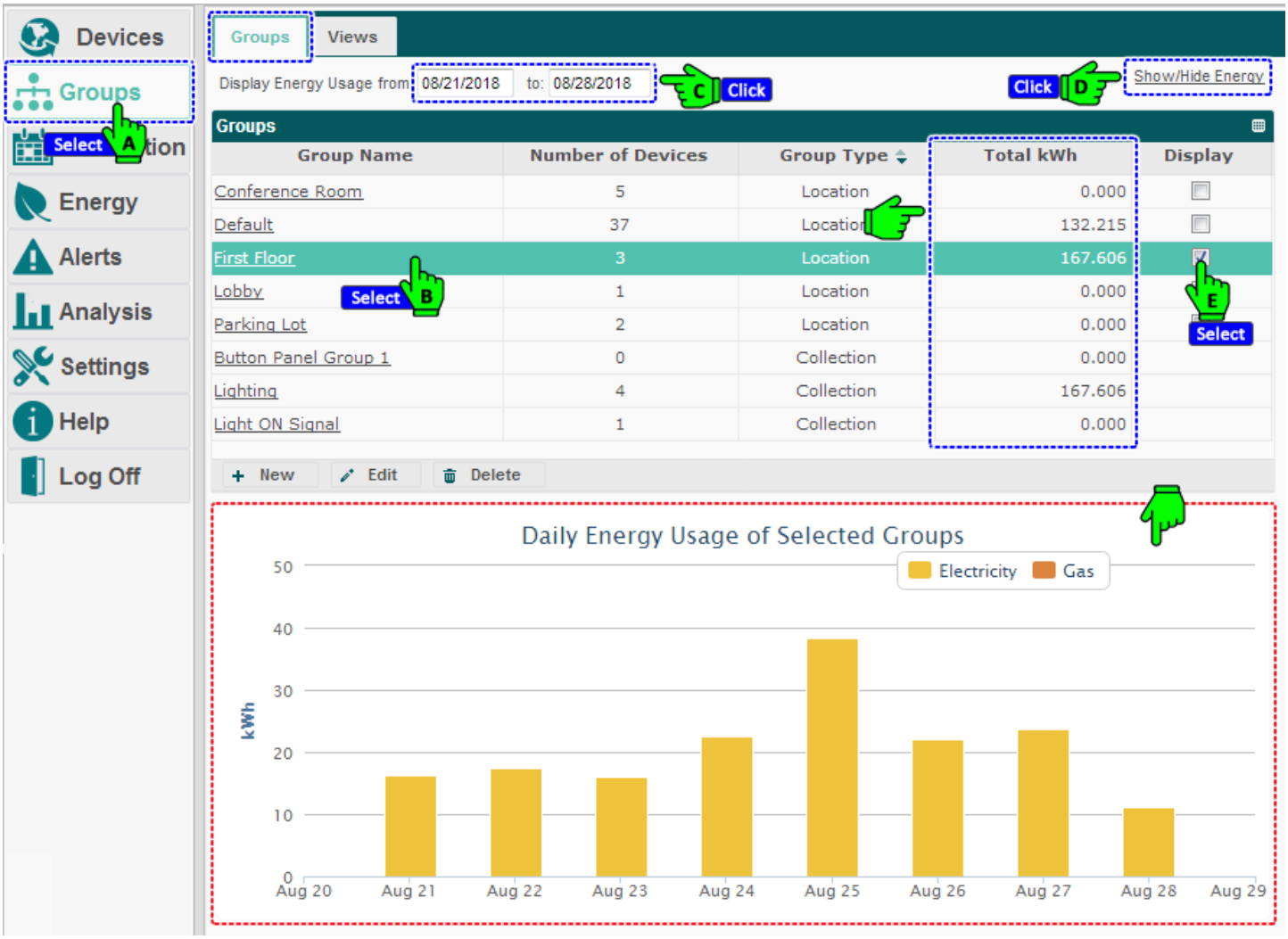


2. Enter in a **date range** and click on **Show/Hide Energy** on the top right corner. The energy usage chart will be displayed below the list of devices. Multiple endpoints can be selected and viewed in the chart.



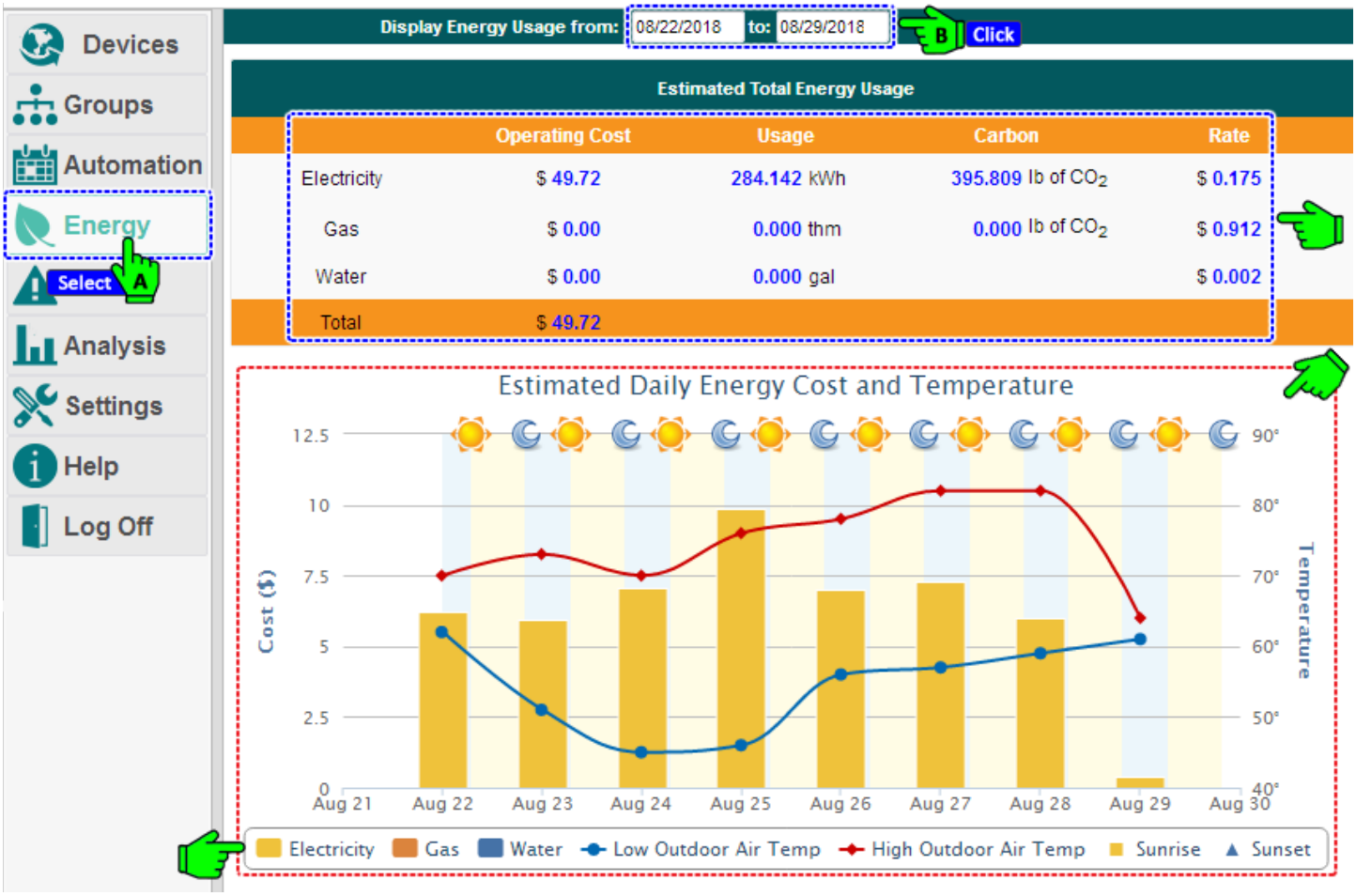
12.3. Viewing Energy Consumption from Groups Section

1. Select **Groups** from the main menu. Select a **group,** enter a **date range**, and then click on **Show/Hide Energy** on the top right corner. The energy usage chart will be displayed below the list of selected groups. Multiple groups can be selected and viewed in the chart.



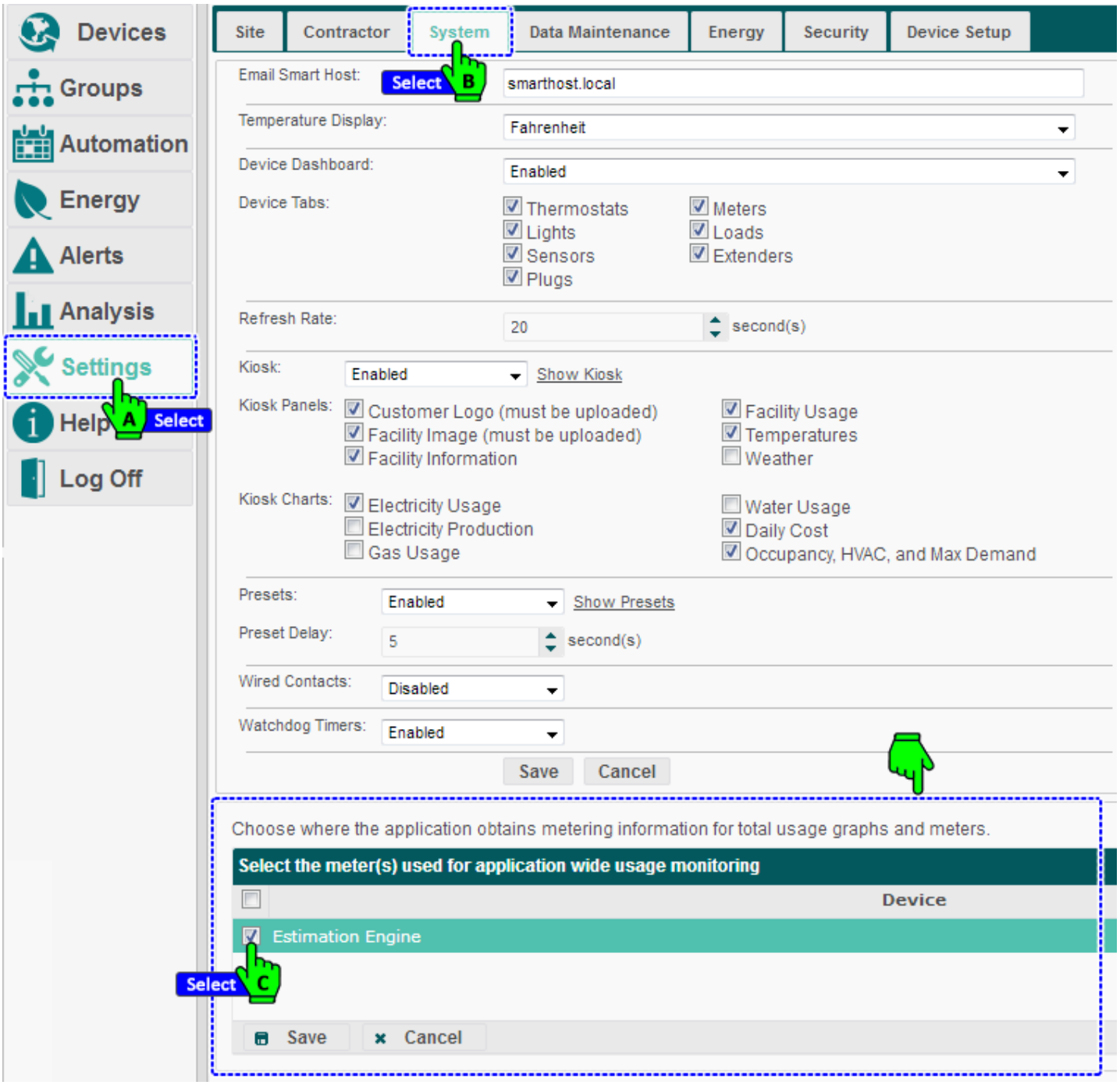
12.4. Viewing Energy Consumption from Energy Section

1. Select **Energy** from the main menu. Details on cost, usage, carbon and rate will be displayed based on the meter input (revenue or estimate engine). Select a date range to view the usage report. Click any attribute listed at the bottom of the chart to show/hide it in the chart.



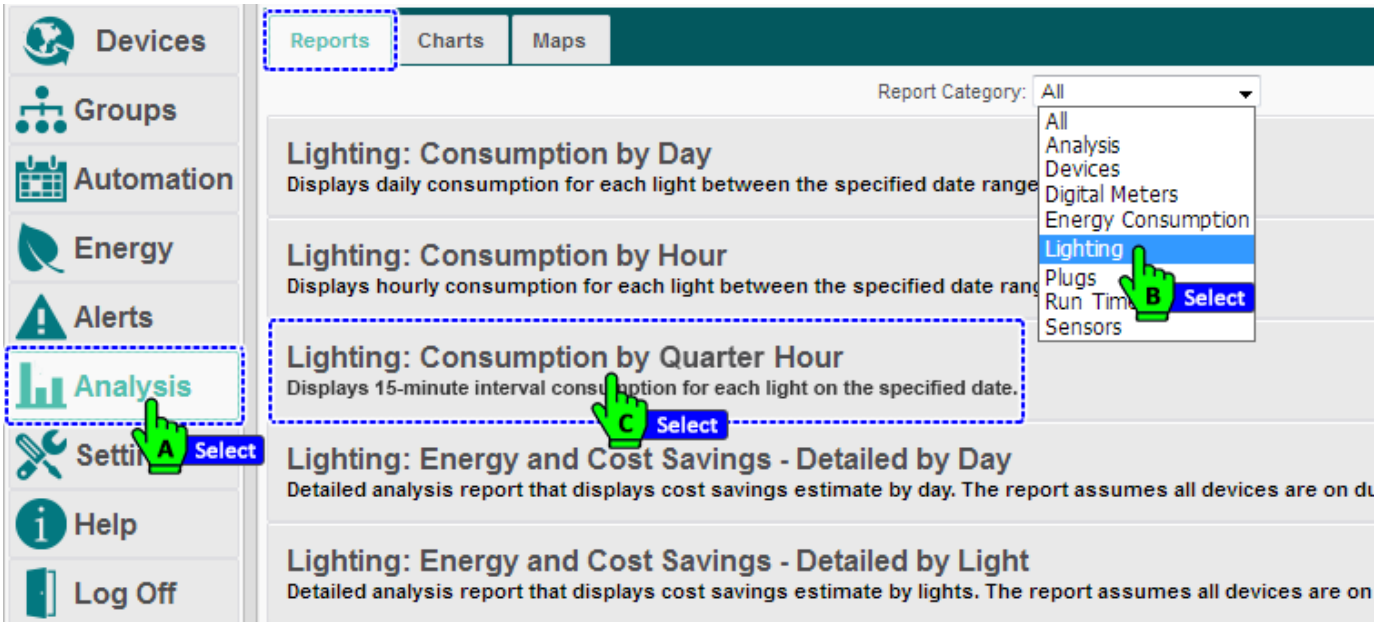
12.5. View Meters/Engines for Energy Consumption

1. Select **Settings** > **System** and scroll down to see the list of available meters/engines.

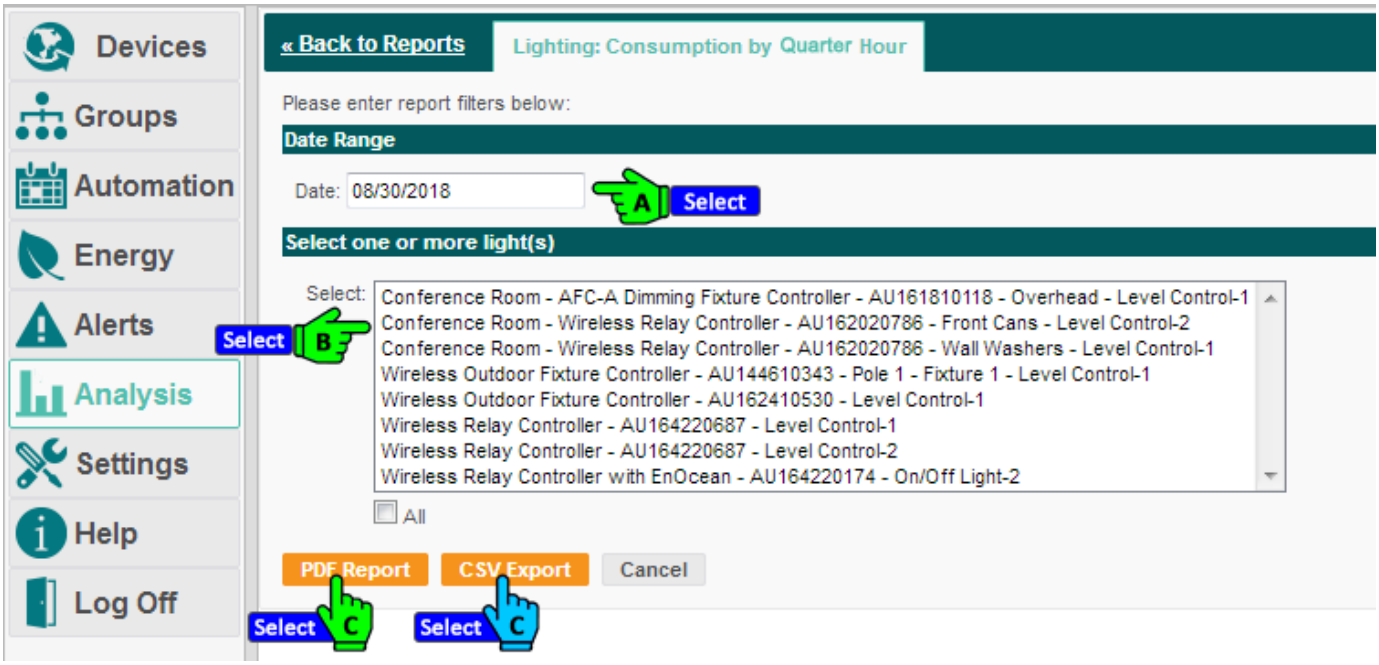


12.6. Energy Consumption Reports

1. Select **Analysis** from the main menu. The list of available reports is displayed. Select a report to run and export to **PDF** or **CSV** format.
   - Select Lighting from the **Report Category** dropdown, and click on a report (for example, **Lighting: Consumption by Quarter Hour**).



2. The **Lighting: Consumption by Quarter Hour** window appears. (**NOTE**: The report window differs for each kind of reports selected.) Select a **Date** and then select one or more **Lights**. Click on **PDF Report** or **CSV Export** to generate the report.

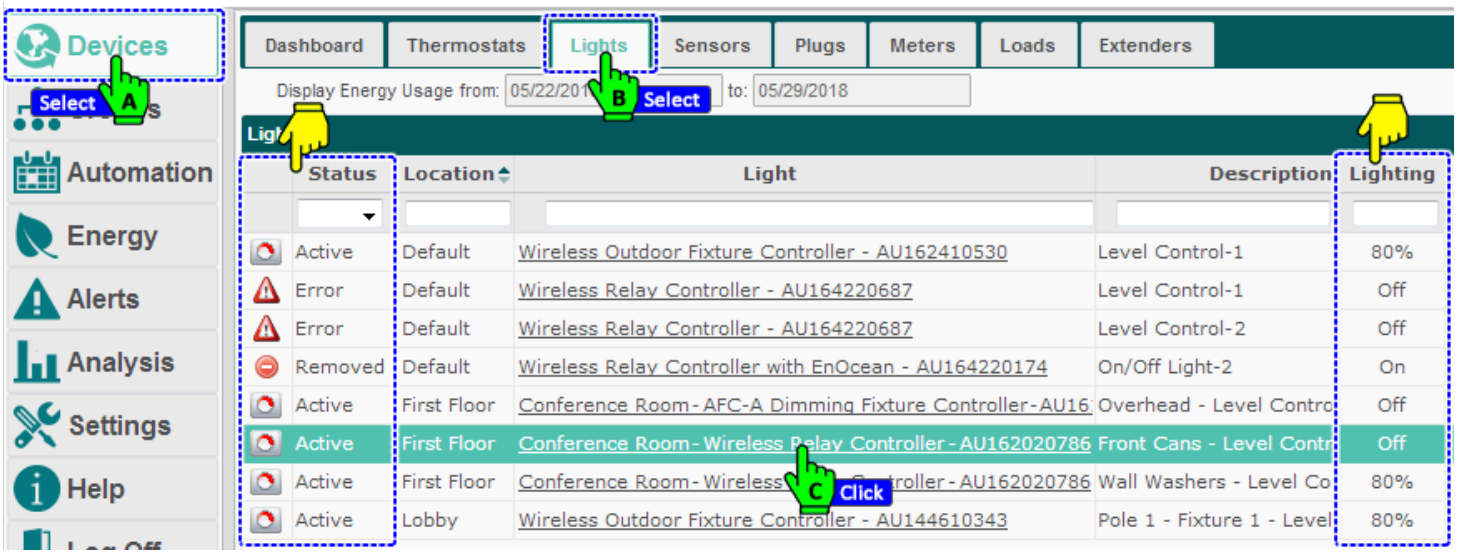


13. Checking the Status of Lighting Devices

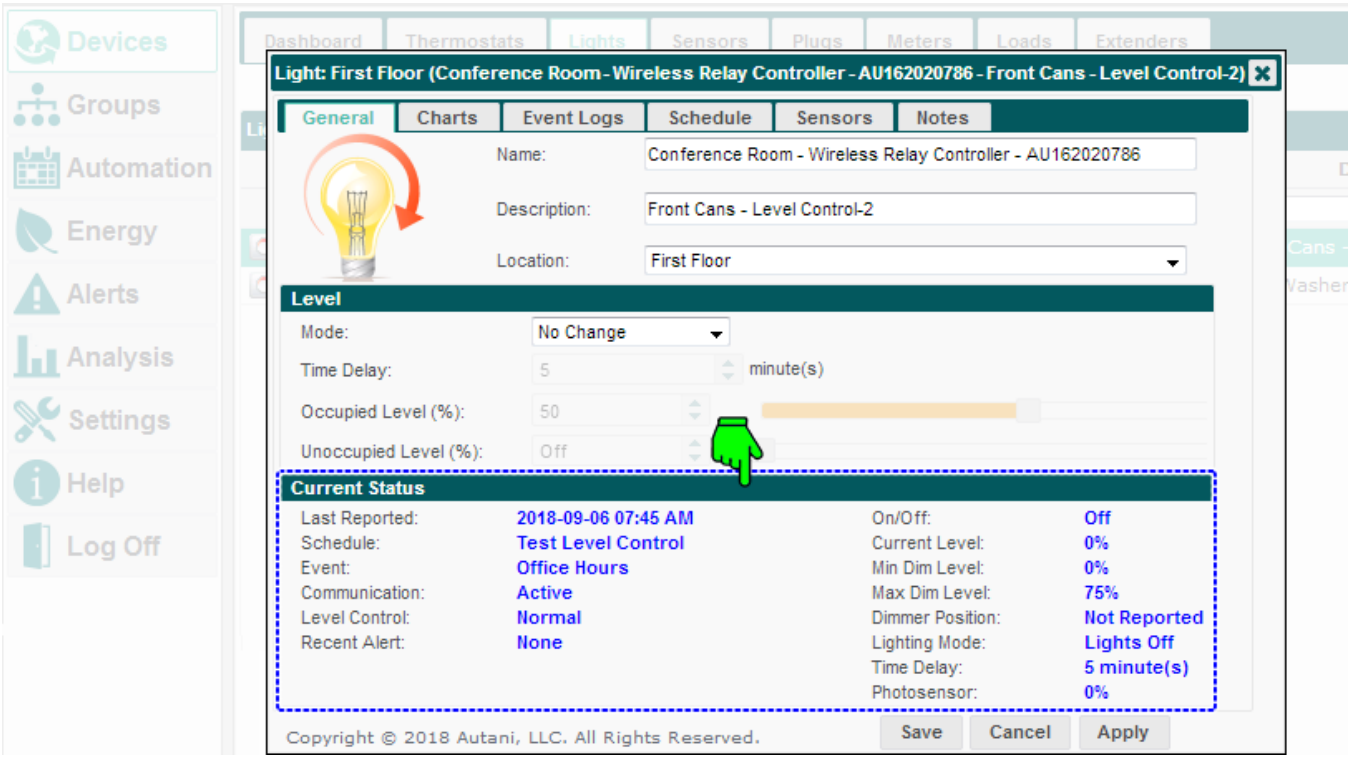
The current behavior and status of lighting devices can be checked in different sections of EnergyCenter®.

13.1. Check the Status through Device > Lights

1. Select **Devices** > **Lights**, The list of available lighting devices is displayed. Select a WRC.
    - The **Status** column displays the status of Light (active, error, removed).
    - The **Location** column gives information on location of the device.
    - The **Light** column provides the device information.
    - The **Description** column provides the device type information.
    - The **Lighting** column provides information on the status of lighting (off, level on).
    - The **Schedule** column provides information on the schedule of the devices.



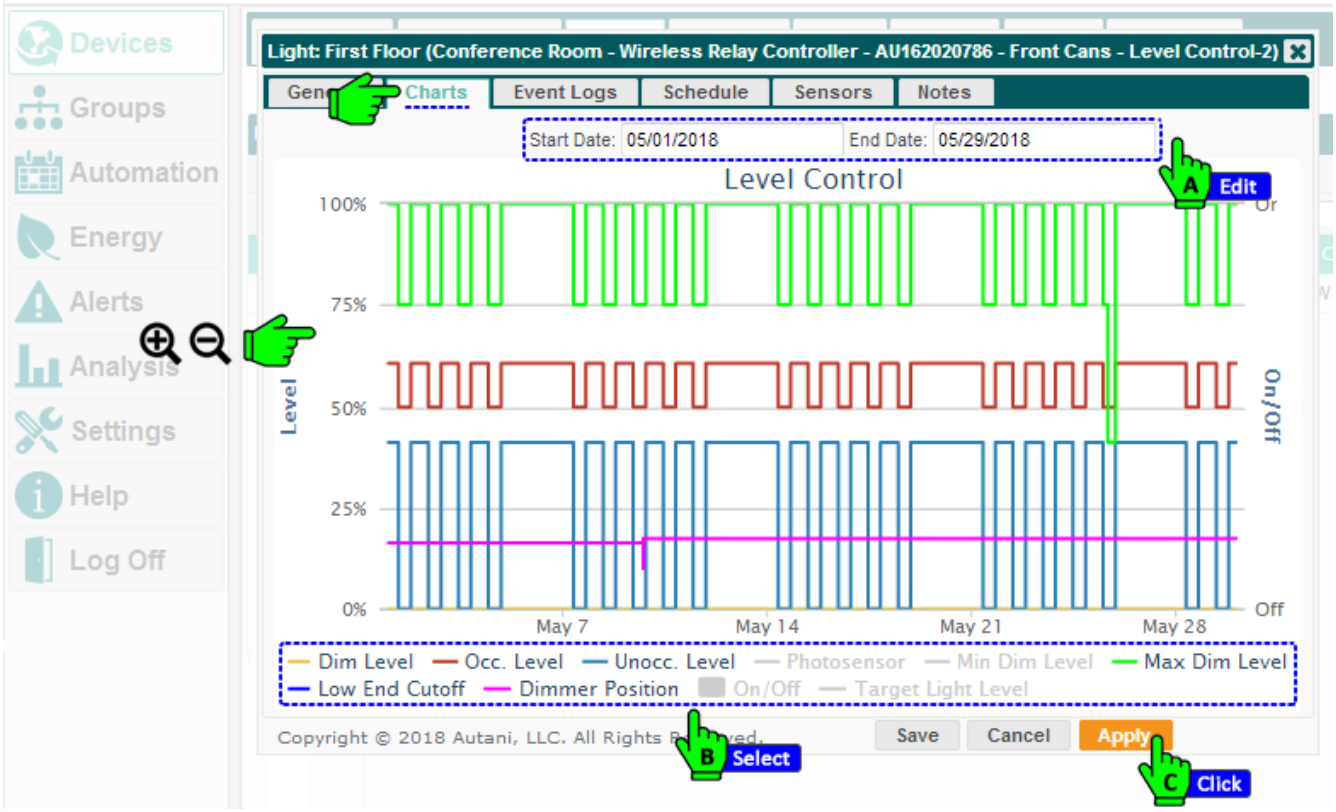
2. The **Light** window appears, displaying the **Current Status** of the light in the lower section.



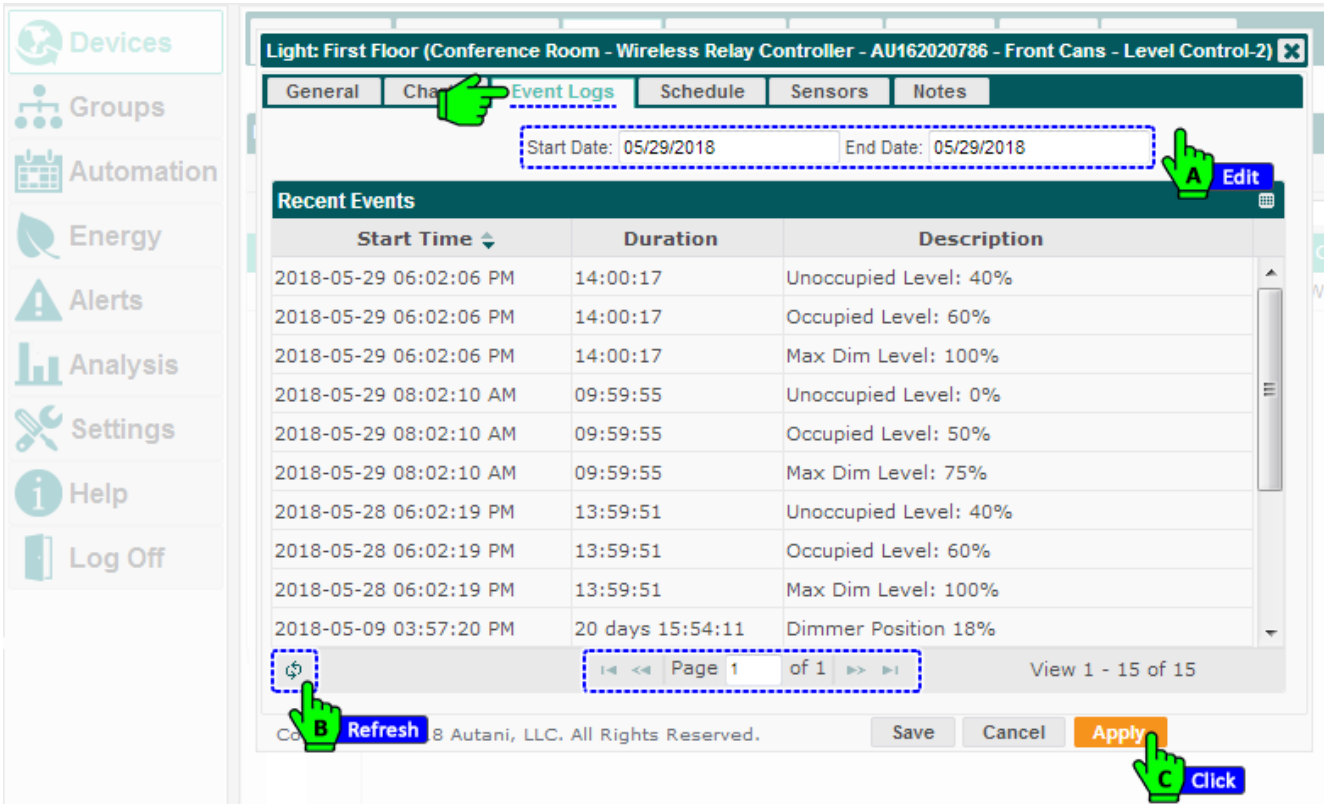
- Select the next tab **Charts** to see the Level Control performance of the light.

- Choose a date range and click on any attributes below the chart to see the performance chart of the light.

NOTE: You can select multiple attributes; each will be displayed in different colour. The chart also has a feature to zoom IN and OUT.

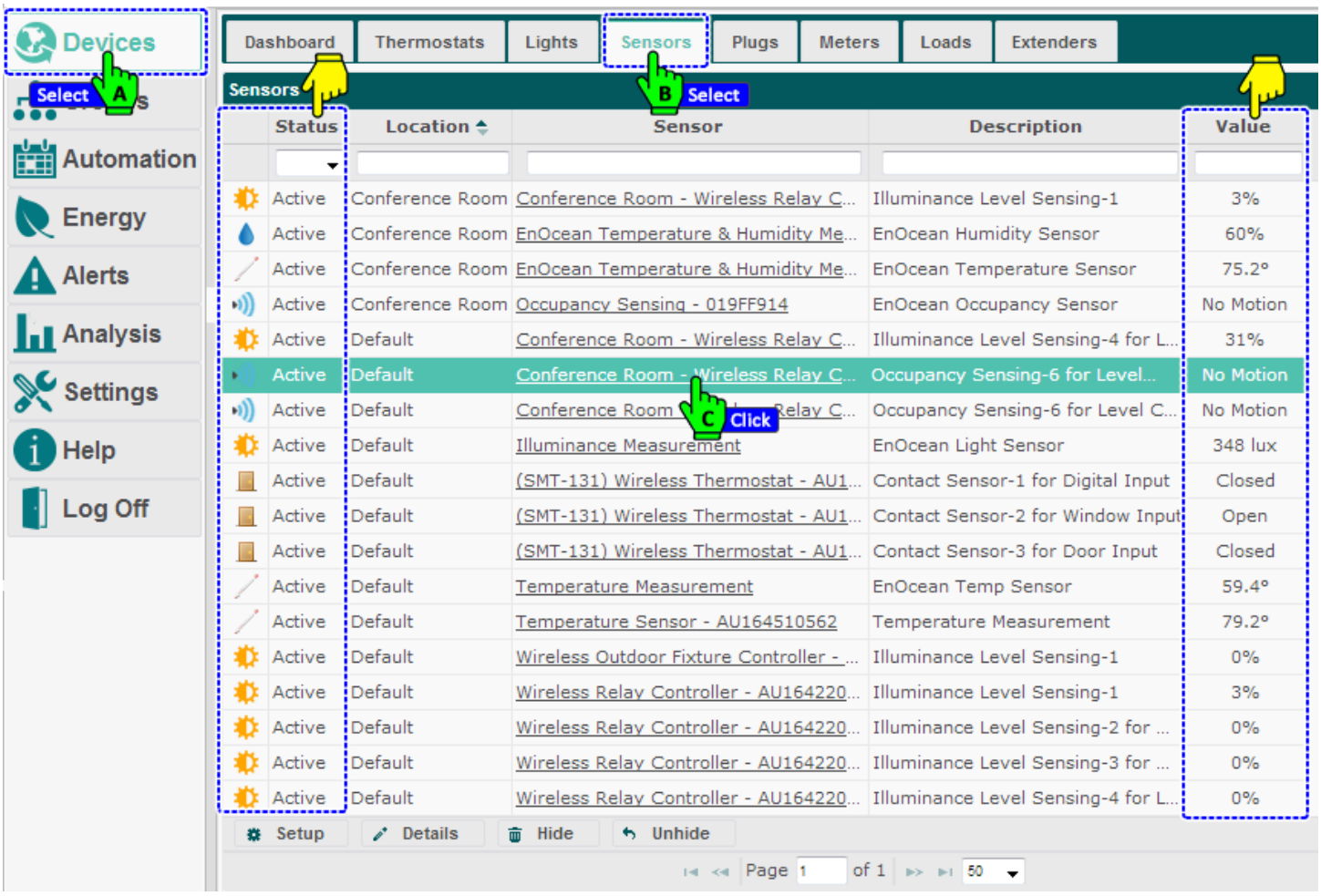


3. Select the next tab **Event Logs** to see all logged information about the attributes of an endpoint. The log information can be seen for a specific date range. The list can be refreshed, and users can navigate between pages as they needed.

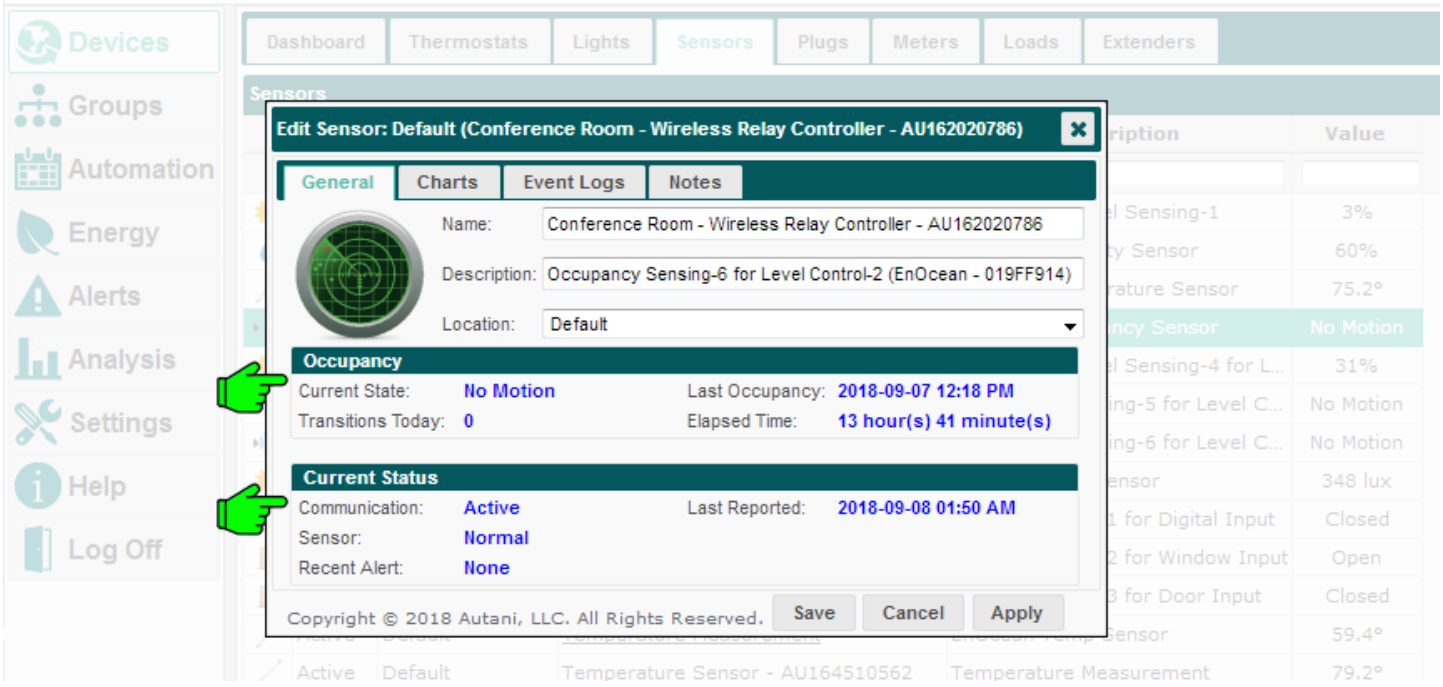


13.2. Check the Status through Devices > Sensors

1. To get information on the current behavior of lighting sensors, select **Devices** > **Sensors**, The list of available sensors will be displayed with their details. Click on any sensor to check the status, for example: a WRC for **Occupancy Sensing**.



2. The **Edit Sensor** window appears with information on the **State** and **Current Status** of the **Occupancy Sensor**.



13.3. Check the Light Status through the Analysis Section

1. The current behavior of **lights** can also be checked through the Analysis section. Select **Analysis** > **Charts**. The list of available devices will appear. One or more devices can be selected for analysis.
    - Select a device from the **Analysis Type** dropdown.
    - Set a date range in the date fields.
    - The header fields can be used to search for and select multiple devices.
    - Click **Analyze**.

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