



WIRELESS FLEX APPS QUICK-START COMMISSIONING GUIDE





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INTRODUCTION

This guide will help you:

- Before arriving on site:
 - Prepare a plan of the project that you want to commission in the Fluence Wireless Flex web app.
 - Set up and pre-commission each zone in your project.
- On site:
 - Add lighting devices to each zone and upload pre-commissioned configurations automatically using the Fluence Wireless Flex mobile app.
 - Test lighting control in the project.

FLUENCE WIRELESS FLEX APPS

The Fluence Wireless Flex Apps are a set of software tools that allows commissioning agents and installers to configure, control and manage horticulture lighting infrastructures. Fluence Wireless Flex utilizes qualified Bluetooth® mesh technology enabled by SILVAIR for wireless control of Fluence luminaires.

COMMISSIONING PROCESS

Fluence Wireless Flex divides the commissioning process into two stages: planning using the Fluence Wireless Flex web app¹ and implementation using the Fluence Wireless Flex mobile app (see Figure 1). The Fluence Wireless Flex mobile app requires an iOS device with iOS 12+ and Bluetooth enabled, as well as an internet connection (WiFi or cellular, minimum 3G). **Be sure to check in advance if an internet connection is available on site.**

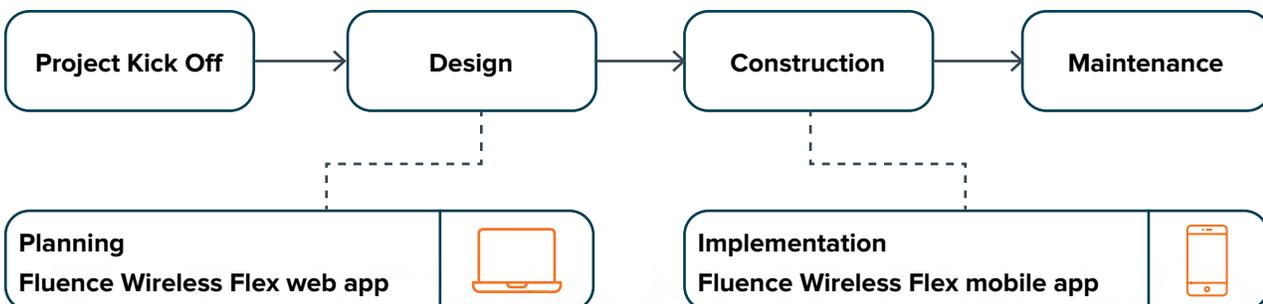


Figure 1: Project stages

1. To start using the Fluence Wireless Flex web app, create an account in our web app. The app requires Chrome v. 70 or higher and an internet connection.

To manage your lighting installations, Fluence Wireless Flex includes two applications:

Fluence Wireless Flex web app
[Planning stage](#)

Fluence Wireless Flex mobile app
[Implementation stage](#)



Prepare your commissioning plan off site, before anything is installed on site, by mapping the individual zones on a floorplan and defining lighting control profiles.

Once the installation is in place, add the installed devices to the zones you set up earlier and automatically upload the configuration, so they work in the way you defined during the planning stage.

NOTE: Once you have commissioned the site, if you adjust the settings in the project using the web app (e.g. any of the profile settings), you will have to use the mobile app to transfer these changes into the devices on site.

COMMISSIONING STEPS

1. PLANNING STAGE

Use the **Wireless Flex Dimming Commissioning web app** available at <https://fluencewirelessflex.com>

Before you start, please make sure you've got everything you need:

- A floor plan or a site plan, if desired (as a .jpg or .png image file only)
- The lighting control behavior for your space

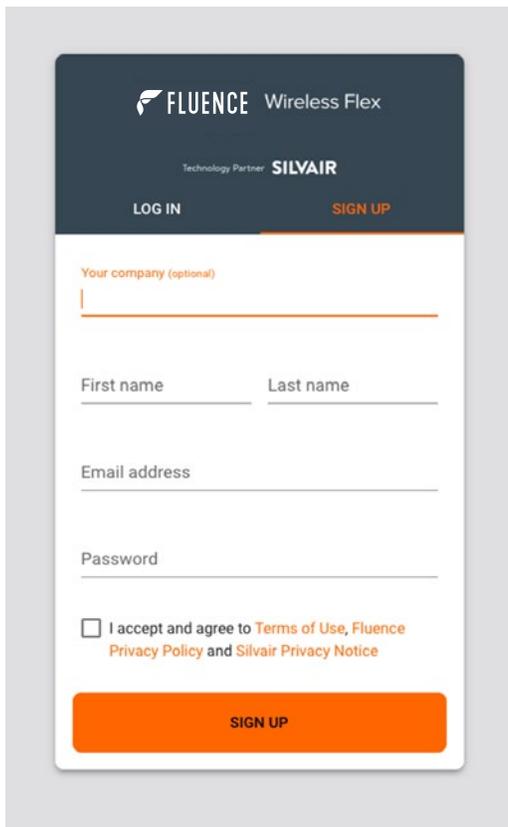
In order to complete the planning stage, you will need to determine how your installation will be defined within Fluence Wireless Flex.

Fluence Wireless Flex uses a three-tiered hierarchical structure for mapping devices to their physical location: **Project → Area → Zone**

- **Project:** The top-level grouping, a Project typically denotes an independent installation like a facility or building. It can also represent a single room or floor for smaller installations. Each project can have a maximum of 8,000 to 10,000 devices. Each user can create multiple projects as required.
- **Area:** The mid-level grouping, an Area typically denotes a floor of a building or a house or bay in a greenhouse. Each Project can have 40 – 50 areas. We recommend 200 devices maximum per area, although up to 300 are supported. All devices in an area can be controlled together if desired (through zone linking), but each individual zone can also be controlled separately.
- **Zone:** The lowest-level grouping; all devices in a Zone are controlled together. We recommend 20 – 30 devices per zone. Each project can have up to 2,000 zones.

STEP 1. CREATE A FLUENCE WIRELESS FLEX ACCOUNT

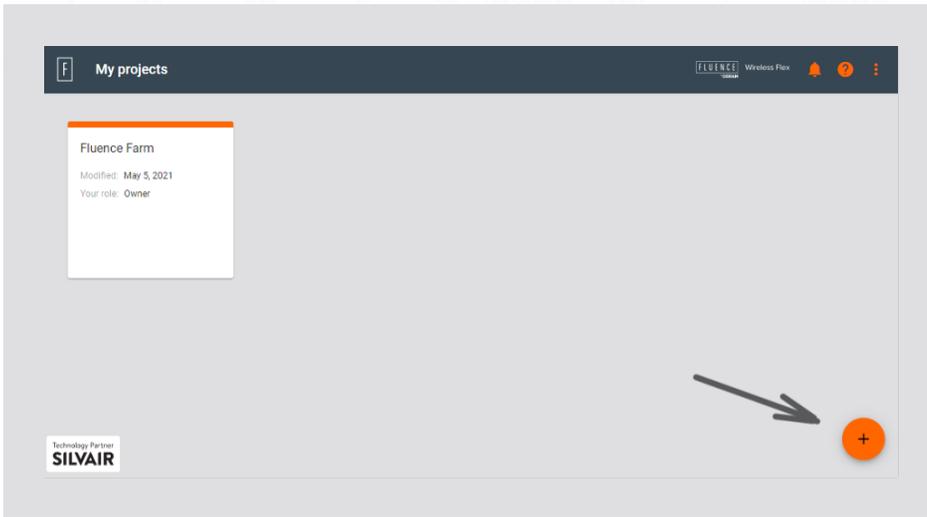
Register for free via the [Fluence Wireless Flex web app](#) or [Fluence Wireless Flex mobile app](#). After signing up, locate the confirmation email from Fluence Wireless Flex (subject: “Verify your email”). Follow the steps in the email to confirm your email address. Check your junk email if the confirmation email doesn’t arrive in five minutes.



The image shows a mobile application interface for creating a Fluence Wireless Flex account. The header is dark blue with the Fluence logo and 'Wireless Flex' text. Below the header, it says 'Technology Partner SILVAIR'. There are two buttons: 'LOG IN' and 'SIGN UP'. The main form area is white and contains the following fields: 'Your company (optional)' with a text input field, 'First name' and 'Last name' with separate text input fields, 'Email address' with a text input field, and 'Password' with a text input field. Below the password field, there is a checkbox and the text 'I accept and agree to Terms of Use, Fluence Privacy Policy and Silvair Privacy Notice'. At the bottom of the form is a large orange button labeled 'SIGN UP'.

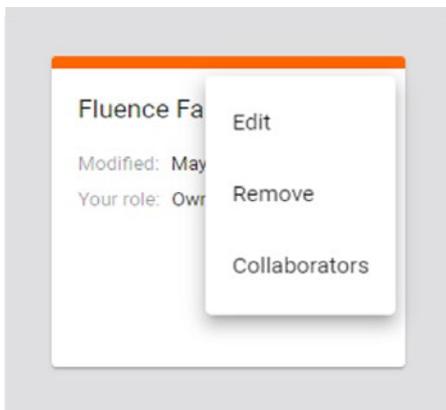
STEP 2. CREATE A PROJECT AND ADD COLLABORATORS

Create project: click the  button to add a new project.



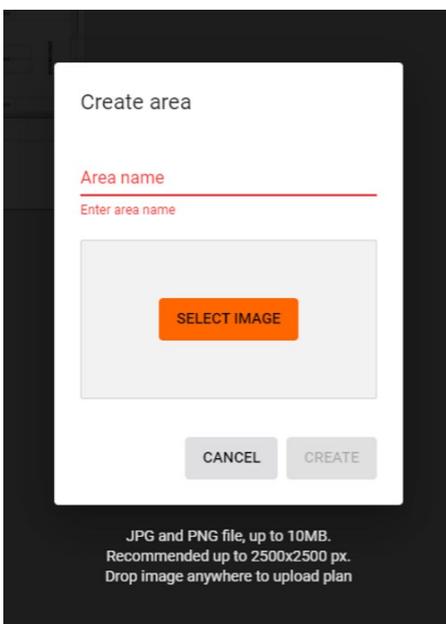
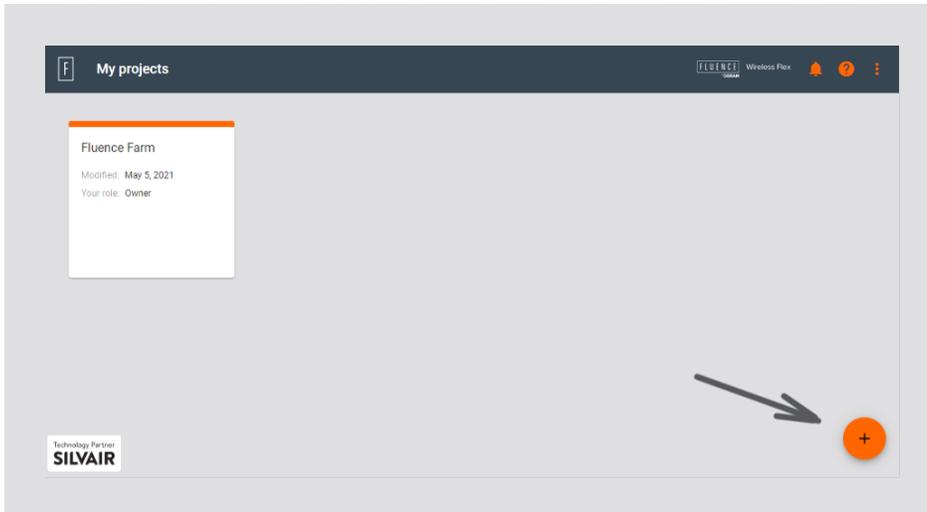
Projects: can represent a whole building, or single room or a floor for smaller installations. Each project is a single mesh network.

Collaborators: click the  button in the top-right corner of the project screen to edit or remove your project or to add collaborators. To accelerate commissioning, you can share your project with others and let them participate in the process. Click **Collaborators** to send invitations to all contributors who should be involved.



STEP 3. CREATE AREAS AND UPLOAD FLOOR PLANS

Create area: click the  button to create an area. During area creation, you can upload a floor plan (optional) by selecting an image. We recommend a maximum of 200 devices in an area, although 300 are supported.



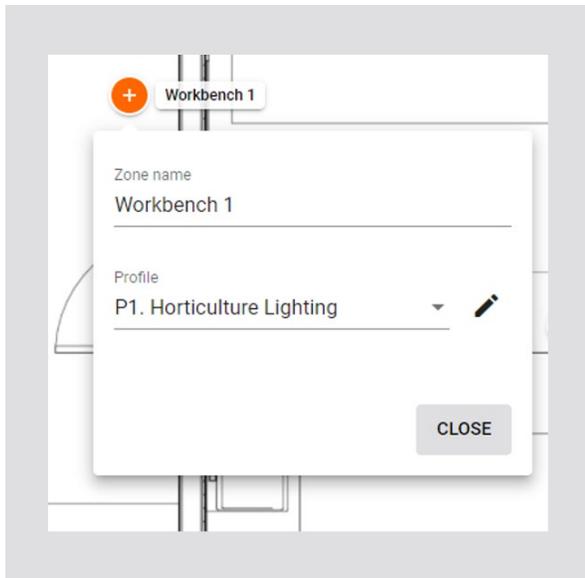
Add plans: plans are .jpg or .png visualizations of areas at your site. There can be more than one area in a project (e.g., each floor in a building is a separate area).



Edit: click the  button on the plan to edit or remove the plan.

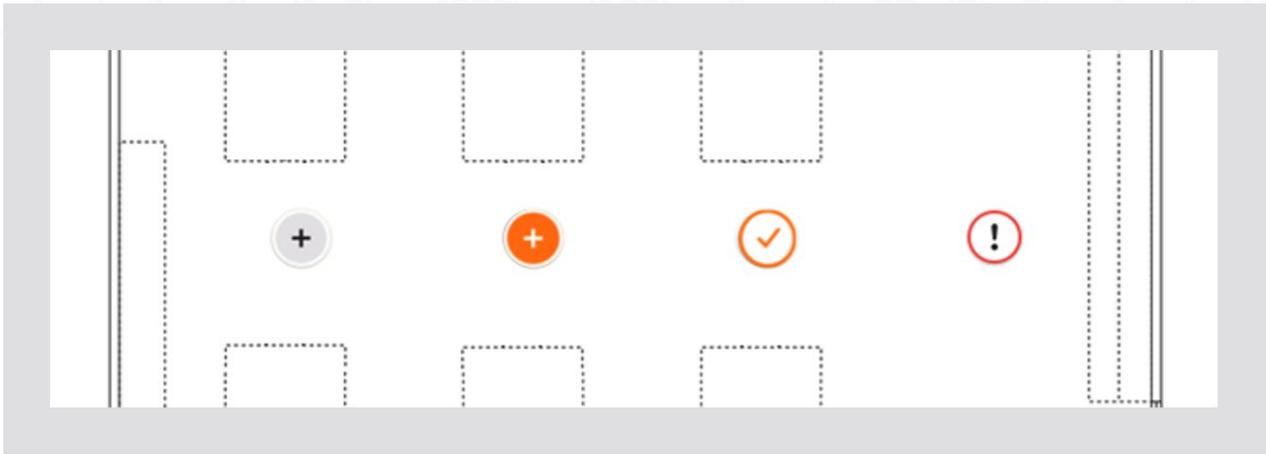
STEP 4. ADD LIGHTING ZONES AND DEFINE CONTROL PROFILES

Create the zone. Left-click on the floor plan where you want to add a new zone. If required, left-click again to add another zone. If you need to remove a zone, right-click the zone and select **Remove**. You can click and drag zones to the correct place on the plan anytime.



Add the zone name. A zone is a group of devices that are controlled together. Zones don't necessarily have to be a physical space (e.g., a room) as a room may contain one or more zones, e.g., multiple areas controlled separately. More than one zone can be added to the same plan.

Select a control profile. A control profile is a set of lighting behavior settings. In the example above, the profile **P1 Horticulture Lighting** is selected. You must select a profile for the zone to function.



When you create a zone, it is marked on the plan with a circle indicator. There are four zone indicators that reflect the status of the zone:

	<p>DRAFT—the zone is created, but it does not have an assigned profile. Select a profile for the zone in the Fluence Wireless Flex web app.</p>
	<p>READY TO BE COMMISSIONED—the zone has been assigned a profile, but no devices have been added yet. Send someone to the site to commission the zone.</p>
	<p>COMMISSIONED—devices in the zone have been successfully commissioned using the Fluence Wireless Flex mobile app.</p>
	<p>WARNING—this indicator appears when the zone has been commissioned but requires reconfiguration (e.g., settings were changed in the web or mobile app but have not yet been transferred to the devices). The indicator is visible only after devices have been commissioned using the Fluence Wireless Flex mobile app.</p>

STEP 5. CONFIGURE ZONE LINKING

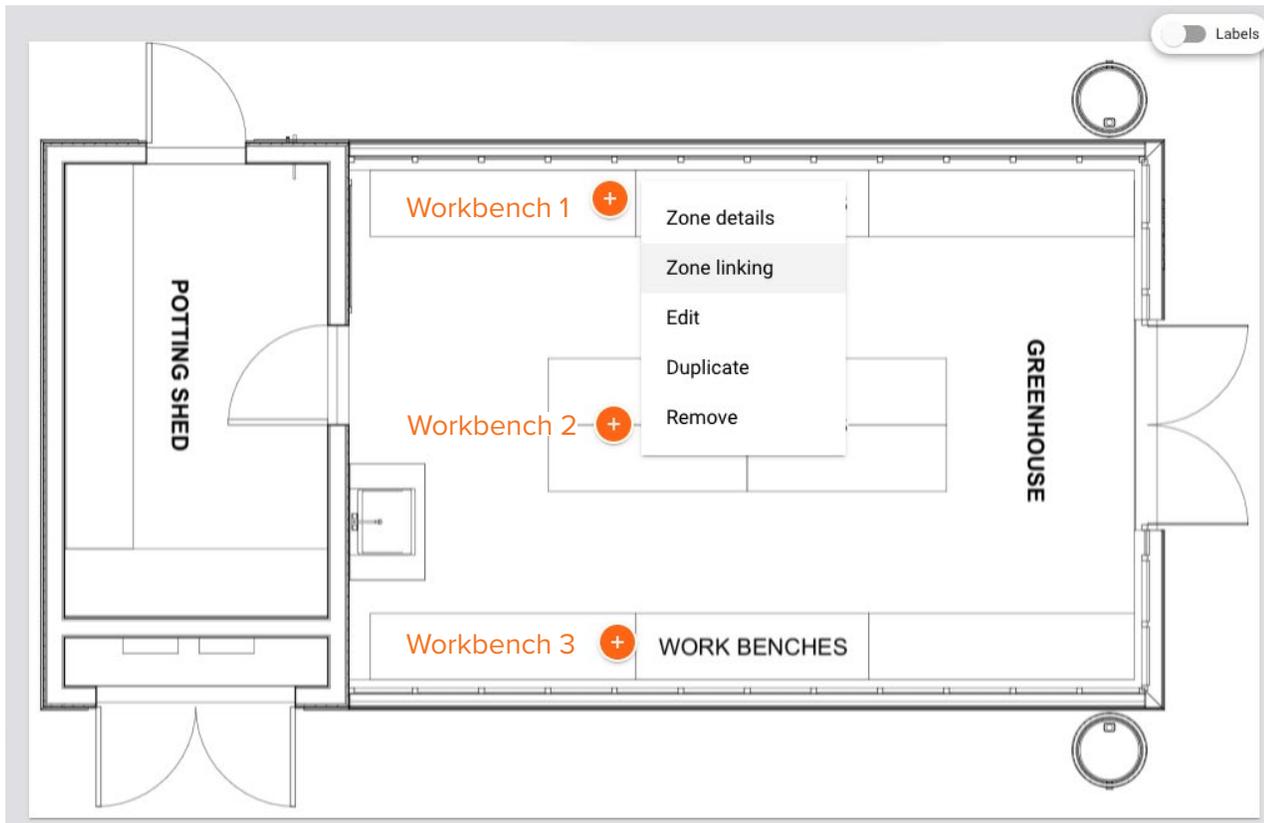
Zone linking allows multiple zones to be controlled by one Wireless Flex 0-10V Adapter. This feature is used to create control zones up to the size of an Area (we recommend 200 devices per Area, although up to 300 are supported). Without zone linking, each control zone is limited to the size of a Zone (typically containing 20-30 devices).

In this example, there are 3 Zones:

- Workbench 1
- Workbench 2
- Workbench 3

There is a Wireless Flex 0-10V Adapter located in the **Workbench 1** Zone which we would like to also control the devices located in **Workbench 2** and **Workbench 3**.

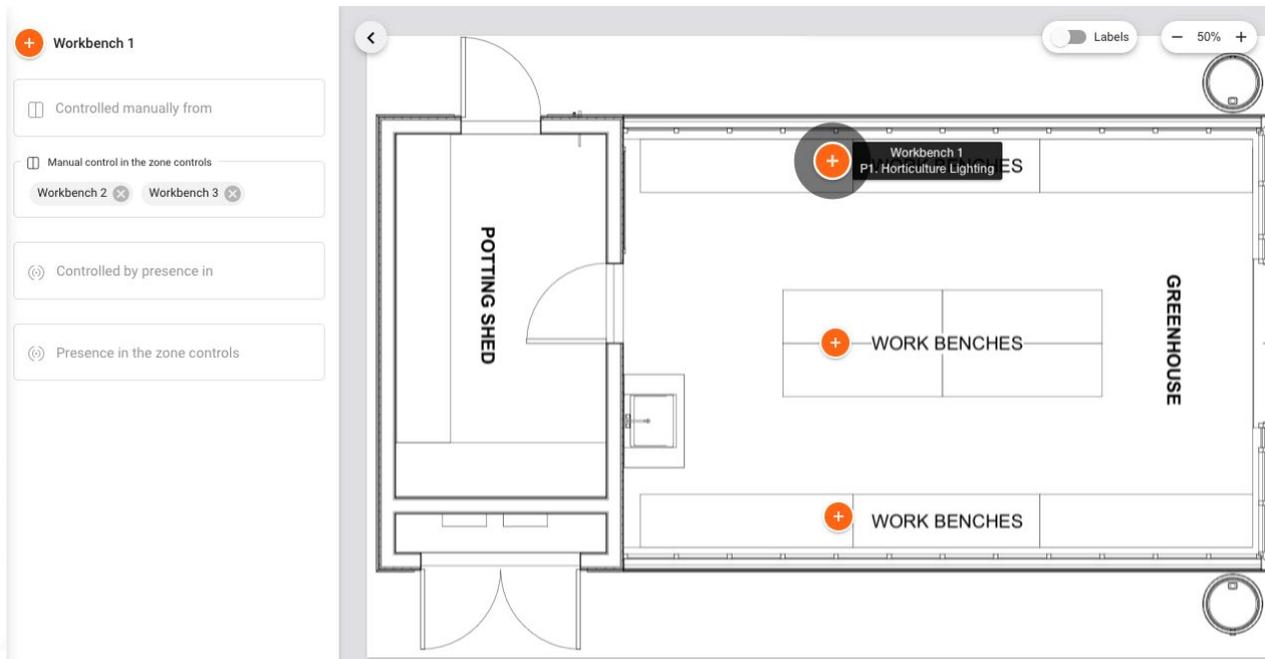
To configure zone linking, right-click on the **+** for **Workbench 1**, and select the “Zone linking” option:



Since we would like **Workbench 1** to control **Workbench 2** and **Workbench 3**, we click in the “Manual control in the zone controls” section on the left and place a check next to **Workbench 2** and **Workbench 3**:



To verify that our configuration is correct, we left-click on the **+** for **Workbench 1** and see that it now controls **Workbench 2** and **Workbench 3**:

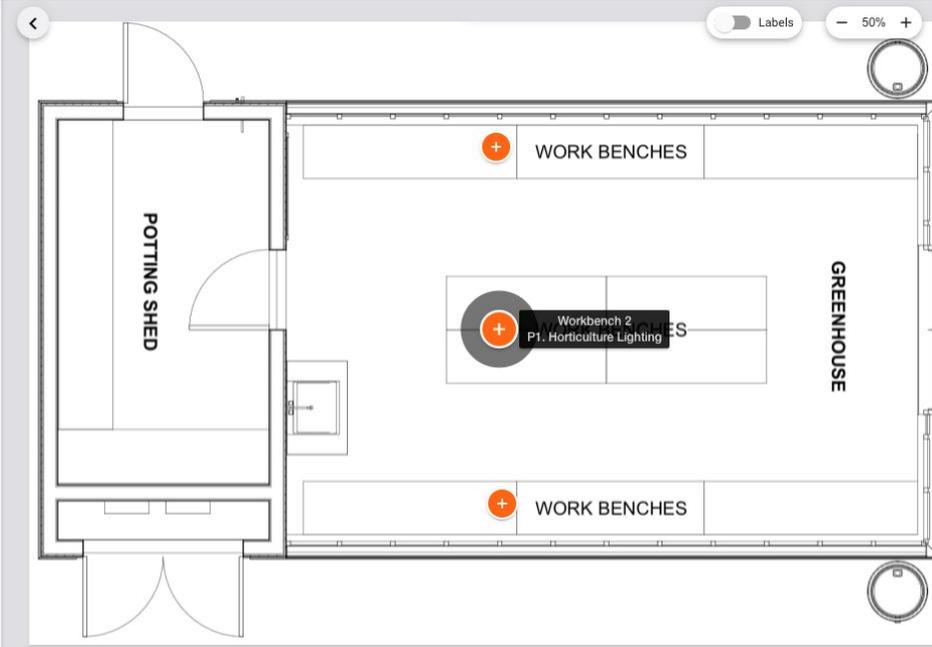


Left-clicking on **Workbench 2** and **Workbench 3** shows that they are controlled manually by **Workbench 1**.

WORKBENCH 2

Workbench 2

- Controlled manually from
 - Workbench 1
- Manual control in the zone controls
- Controlled by presence in
- Presence in the zone controls

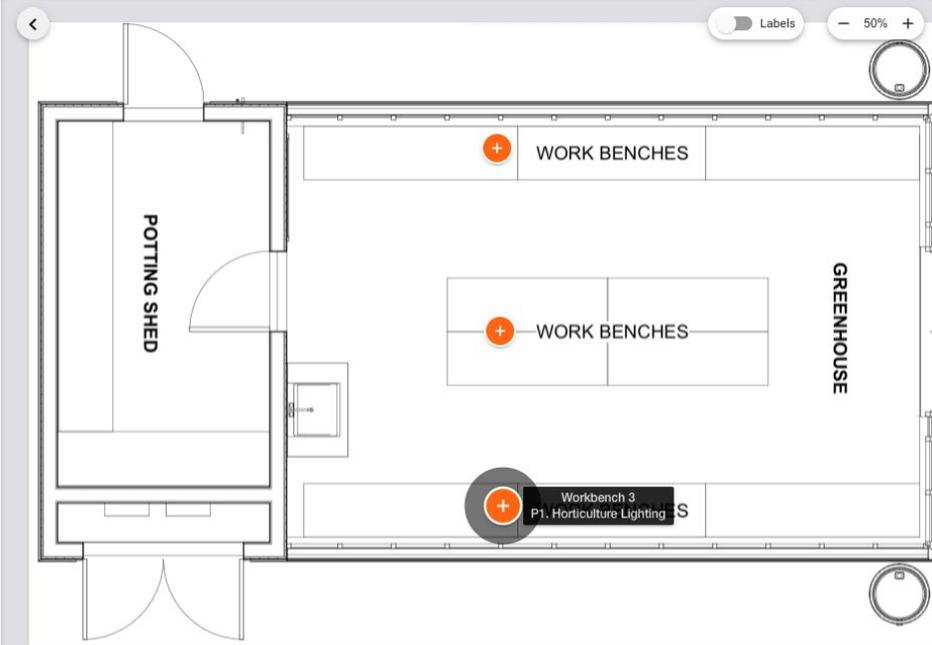


The floor plan shows a POTTING SHED on the left and a GREENHOUSE on the right. The greenhouse contains two rows of WORK BENCHES. A callout for Workbench 2, located in the top row, indicates it is controlled manually by Workbench 1. The interface includes a 'Labels' toggle and a 50% zoom level.

WORKBENCH 3

Workbench 3

- Controlled manually from
 - Workbench 1
- Manual control in the zone controls
- Controlled by presence in
- Presence in the zone controls



The floor plan is identical to the one above. A callout for Workbench 3, located in the bottom row, indicates it is controlled manually by Workbench 1. The interface includes a 'Labels' toggle and a 50% zoom level.

YOUR PLANNING IS COMPLETE, AND YOUR PROJECT IS READY FOR ON-SITE COMMISSIONING!

- You should now have a plan with defined zones and profiles.
 - Remember: you can always come back to your project and change the zone position, name or profile, add or delete zones or change the floor plan images.
- Now that you have completed the planning stage, you can progress to project **[implementation](#)**.

**HINT: For more detailed instructions, please refer to the
Fluence Wireless Flex Apps Commissioning Guide which can be downloaded at
fluence.science/products/wireless-flex-dimming/.**

2. IMPLEMENTATION STAGE

Use the [Fluence Wireless Flex mobile app](#)
(Free download from the Apple iOS App Store)

Before you start, make sure you've got everything you need:

- Your installation is ready for commissioning: all required devices are properly installed and ready to be powered on.
- You have installed the Fluence Wireless Flex mobile app on your iOS device (running iOS 12 or newer).
- You have a Fluence Wireless Flex account and access to the project in the Fluence Wireless Flex Apps.
- When you are on site, you have internet access (Wi-Fi or cellular [minimum 3G]) and Bluetooth enabled on your mobile device. **Internet access on the phone/tablet is required on-site during the entire commissioning process.**



<https://apps.apple.com/us/app/fluence-wireless-flex/id1558821999>

Recommended strategies for efficiently commissioning your Wireless Flex Dimming devices:

- **Identify by Blinking:** Turn all devices in the facility on, and visually confirm which device is blinking when it is selected from the device list. To reduce the size of the list, turn the slider at the bottom of the screen from **ALL** to **NEAR** until just a small number of devices are listed.



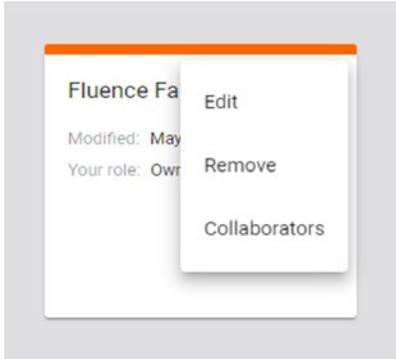
- **Circuit Breaker:** If all devices on one circuit breaker are desired to be commissioned into the same zone, shut off all of the circuit breakers except the desired one, and add all of the devices that are discovered by the mobile app into the zone. Up to five devices can be added in parallel.
- **Site Mapping:** Each Wireless Flex Dimming Receiver and 0-10V Adapter contains a tear-off barcode which can be placed on a site map to mark its location as the device is installed. The correct device can be selected by matching the 4-character identifier printed on the barcode to the same 4-character identifier shown in the mobile app.

Device barcode:



Device in mobile app:





HINT: Projects can be shared with other collaborators. Find this feature in the Wireless Flex Web App. Click My Projects, then the  button for the project, and select Collaborators. More information about adding collaborators is available in the Fluence Wireless Flex Apps Commissioning Guide which can be downloaded at fluence.science/products/wireless-flex-dimming/

STEP 1. GO TO THE PLACE WHERE YOUR DEVICES ARE PHYSICALLY INSTALLED

The project you created earlier in the Fluence Wireless Flex web app will be accessible on your Fluence Wireless Flex mobile app. Make sure that the devices in the zone you wish to commission are powered on.

You need to be within range (approximately 50 feet or 15 m line-of-sight) of a device to commission it.

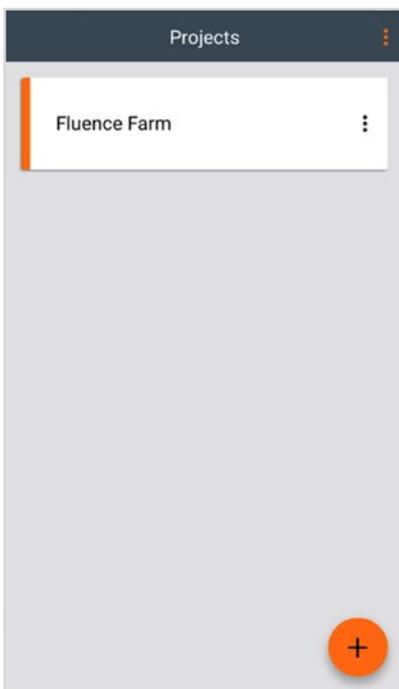
STEP 2. USE THE FLUENCE WIRELESS FLEX MOBILE APP

Open the Fluence Wireless Flex mobile app on your iOS device.

Tap Project → Area → and the zone that represents your current location.

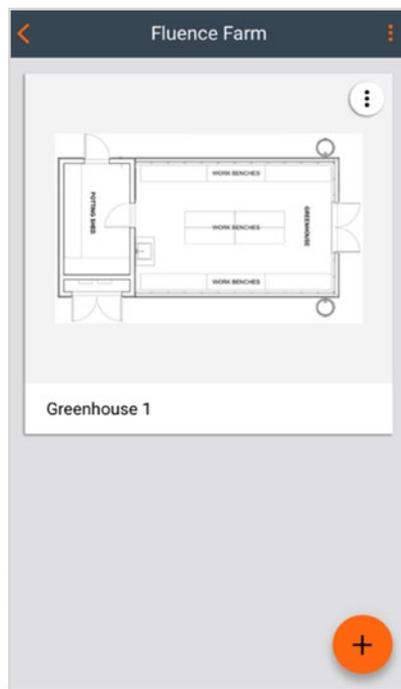
Select Project:

Example: *Fluence Farm*



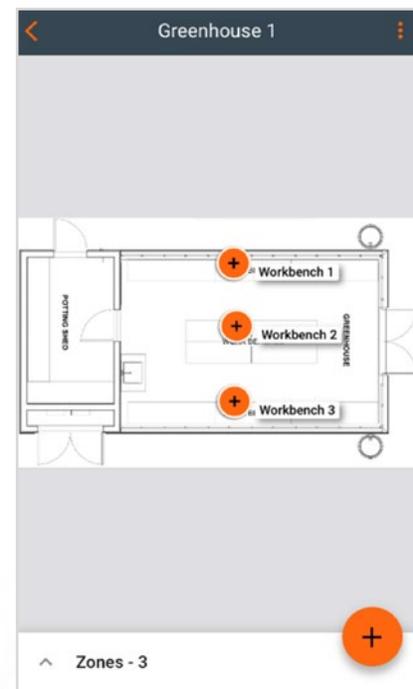
Select Area:

Example: *Greenhouse 1*

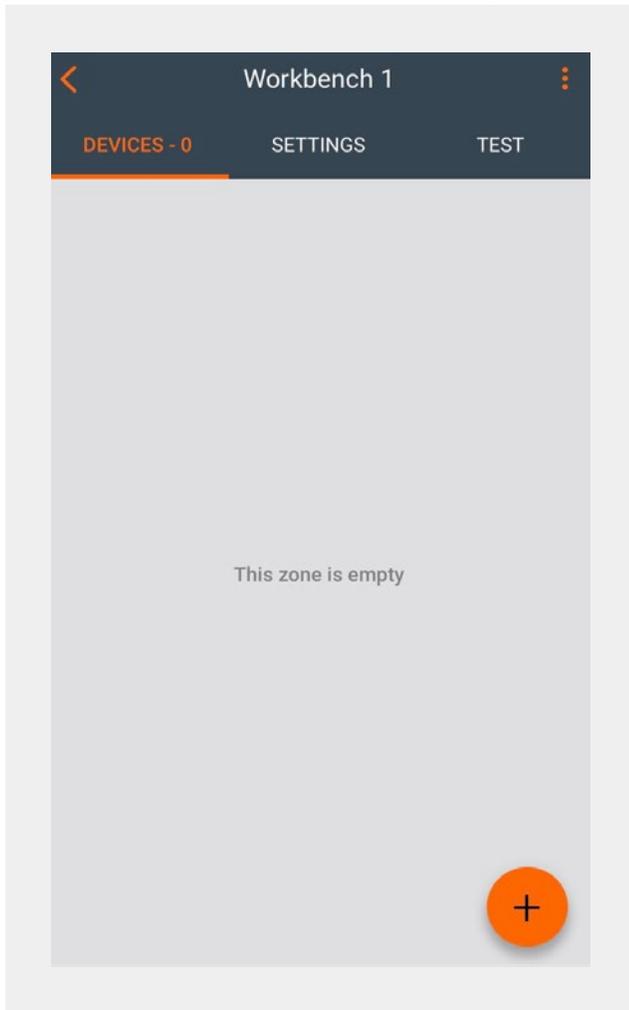


Select Zone:

Example: *Workbench 1*



STEP 3. ADD WIRELESS FLEX RECEIVERS TO THE NETWORK

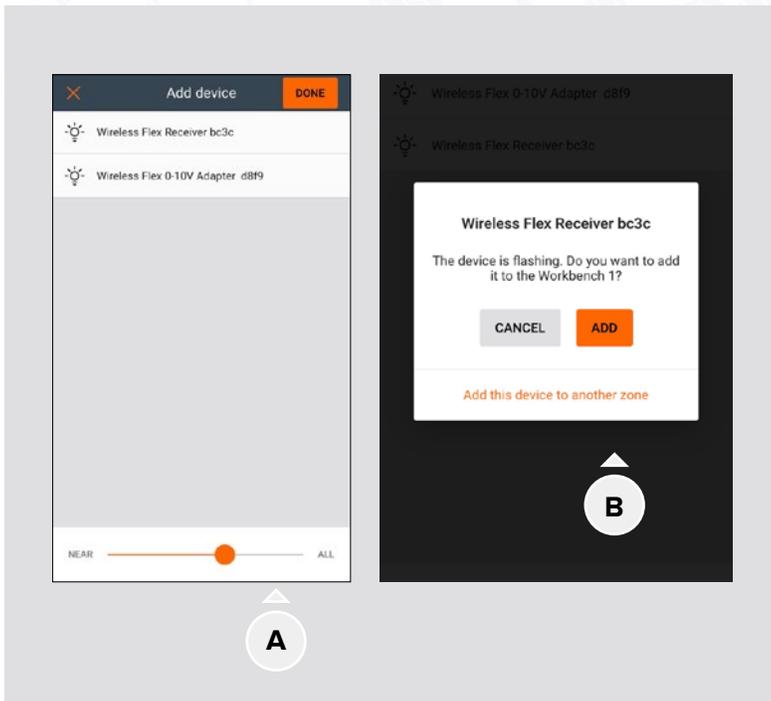


Tap  at the bottom of the screen to add Wireless Flex Receivers to the network.

A list of devices will appear. Choosing one will force it to identify itself by blinking. If this is the right device for the zone, select **Add device**. If not, move on to the next device.

HINT: Turning off circuit breakers for zones not currently being commissioned will limit the number of visible devices.

NOTE: Devices come with a sticker identifier. Note these in the installed order and match them in the zones.

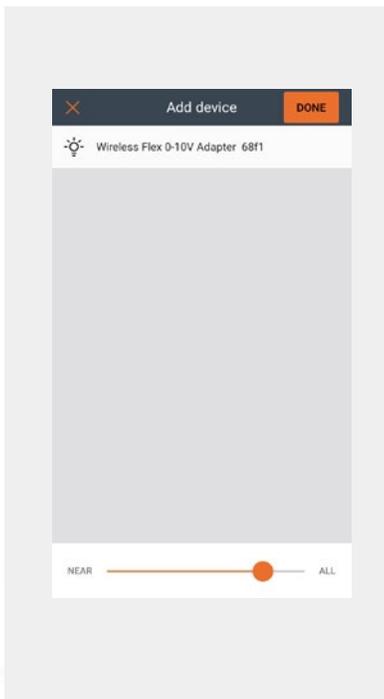


A – Slider: to reduce the number of available devices displayed, move the slider to the left. This filters them by signal strength and may be useful on large installations.

B – Other zones: you can add devices to zones other than the one you are currently commissioning. Select “Add this device to another zone” and then choose the desired zone from the floor plan.

NOTE: Each device can only be added to one zone.

STEP 4. ADD THE WIRELESS FLEX 0-10V ADAPTER(S) TO THE ZONE

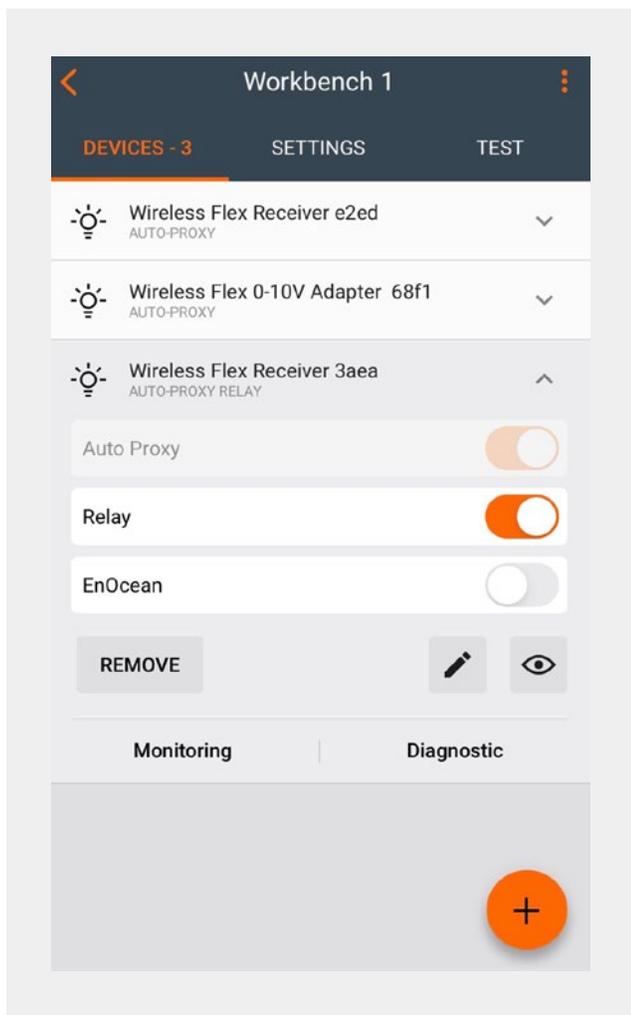


Similar to Step 3, press  at the bottom of the screen to add the Wireless Flex 0-10V Adapter(s) to the zone. A list of devices will appear. Choosing one will cause it to identify itself by flashing. If this is the right device for the zone, select **Add device**. If not, move on to the next device.

One 0-10V Adapter is required per zone unless the [Zone Linking](#) feature is being utilized. If desired, multiple 0-10V Adapters can be added to a zone to avoid a single point of failure.

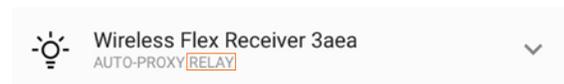
STEP 5. CONFIGURE RELAYS

If the distance from the Wireless Flex 0-10V Adapter to the farthest Wireless Flex Receiver is greater than the RF range of the Wireless Flex Dimming devices (50 feet line-of-sight, 10-30 feet with obstructions like walls or metal posts), some devices must be configured as relays to repeat the messages throughout the network. Please see the **Wireless Flex Dimming Hardware Installation Guide** for more details on relay placement.



To configure a device as a Relay, toggle **Relay** in the Devices tab of the Zone view.

If a device is configured as a Relay, it will be indicated under the device name:



Your zones are now commissioned!

- The implementation phase is now complete, and the lighting devices in your zones will behave according to the predefined profiles.
- To be sure that everything works correctly, perform the quick tests listed in the next section:

3. QUICK TESTS BEFORE YOU LEAVE A ZONE

ITEM

1. **Check the zone status.**
(you can do this in the Fluence Wireless Flex web and mobile apps)

TEST STEPS

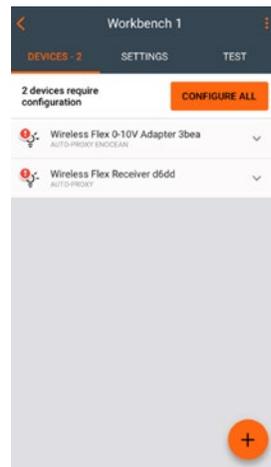
- Open the project view in the Fluence Wireless Flex mobile app.
- Ensure that all zones have an orange check icon next to their name 



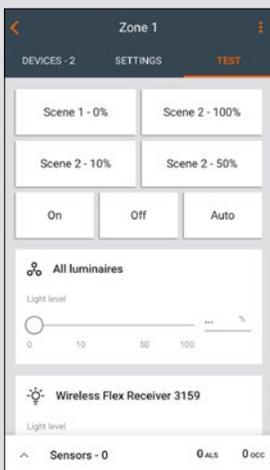
- The warning icon  indicates that there are configuration problems in the zone:



HINT: If the warning icon appears, tap that zone → open **DEVICES** tab → tap **CONFIGURE ALL**. The devices added to the zone should be automatically configured one by one.



2. Test basic lighting control per zone
(available in the Fluence Wireless Flex mobile app only)

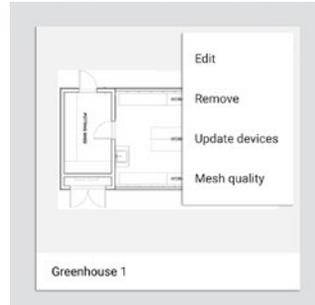


- Select the desired zone.
- **A - TEST:** Select the TEST tab and choose the test that you wish to run. All luminaires in the zone should react to the commands immediately.

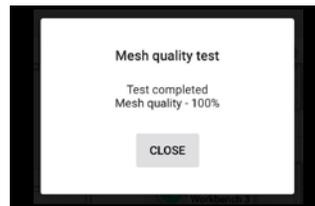
For more information on the TEST tab, see the **Test Your Zone** section in the ***Fluence Wireless Flex Apps Commissioning User Manual***.

3. Ensure good mesh network connection quality in the Area.
(test available in the Fluence Wireless Flex mobile app)

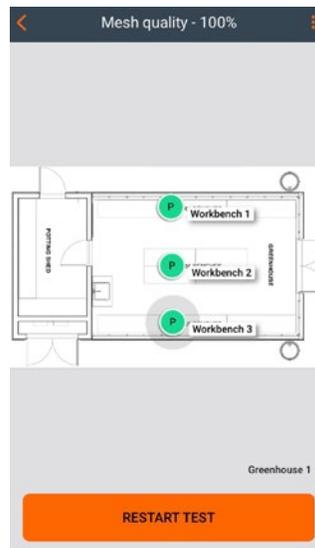
- In the Areas list, tap on  context menu and select **Mesh quality**.



- Tap **START TEST** button.
- The mesh quality should be 100%:



- Review the mesh configuration of any zone that doesn't have a :



Refer to Step 5 in the previous section ([Configure Relays](#)).

HINT: For more detailed instructions, please refer to the Fluence Wireless Flex Apps Commissioning Guide which can be downloaded at fluence.science/products/wireless-flex-dimming/

PRODUCT INFORMATION



WIRELESS FLEX DIMMING APPS:

Web App: <https://fluencewirelessflex.com>
First create an account, then download the mobile app.

Mobile App: iOS App Store (free download)
<https://apps.apple.com/us/app/fluence-wireless-flex/id1558821999>



Mobile App



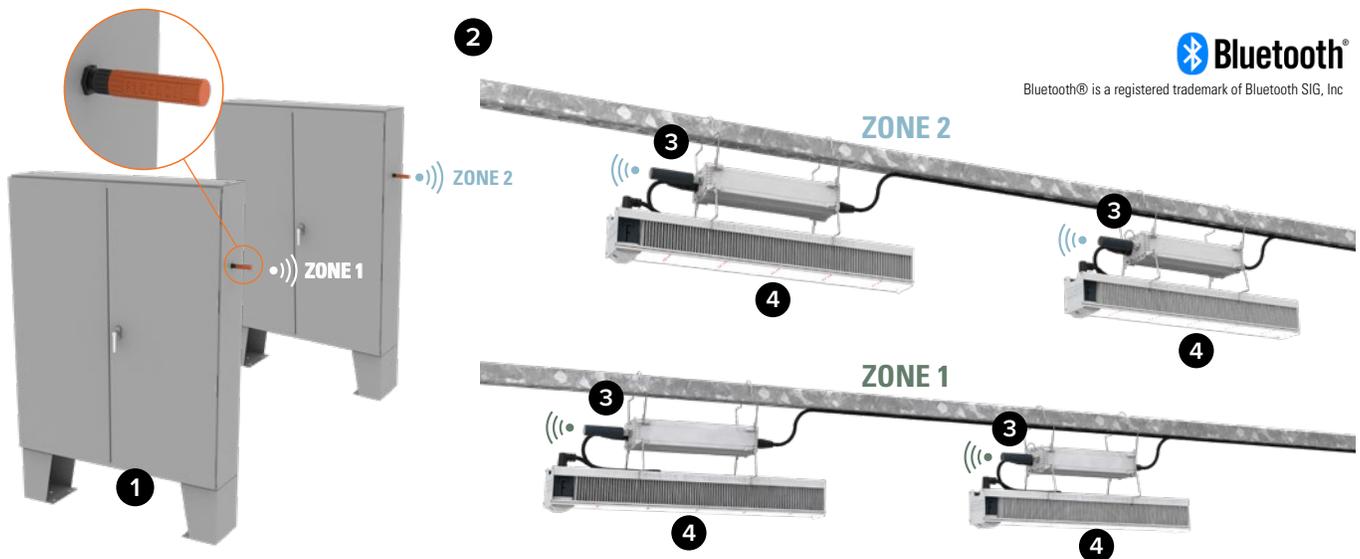
<https://apps.apple.com/us/app/fluence-wireless-flex/id1558821999>

Complete Product Information, Quick Start Guide, and Installation Videos:

fluence.science/products/wireless-flex-dimming/

Support and Application Assistance:
support@fluence.science

SYSTEM DIAGRAM (TWO ZONES)



COMPONENTS

- 1 Any Lighting Controller with an industry standard 0-10 V DC output and 12-24 V DC power source
- 2 Wireless Flex Dimming 0-10 V Adapters (1 required per zone)
- 3 Wireless Flex Dimming Receivers (1 per power supply/light fixture)
- 4 Fluence Light Fixture

0-10V ADAPTER AND RECEIVER STATUS LED:

- **No Blinking:** device is not powered
- **Fast Blinking:** not connected to the network
- **Slow Blinking:** connected to a network

ORDERING INFORMATION

	Descriptions	Ordering Code
A	Wireless Flex Dimming Receiver for Fixture with M12 dimming port	WFDM-10538-01
B	Wireless Flex Dimming Receiver for Fixture with M16 dimming port	WFDM-10537-01
C	Wireless Flex 0-10V Adapter (includes transceiver and panel mount connector with pigtails)	WFDM-10539-01
D	3.9 in (10 cm) Wireless Flex Dimming Receiver Mating Connector, Pigtail, Panel Mount M12 Connector (for use in external relay application)*	WFDM-M12RXPIGTAIL
E	3.9 in (10 cm) Wireless Flex Dimming Receiver Mating Connector, Pigtail, Panel Mount M16 Connector (for use in external relay application)*	WFDM-M16RXPIGTAIL

*For more details, please see the **Wireless Flex Dimming External Relay Implementation Guide** available at fluence.science/products/wireless-flex-dimming/.



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