Wattstopper®

Sensor Configuration Mobile App

User Guide

No: 26569 – 10/23 rev. 5

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DESCRIPTION

The Sensor Configuration tool is a mobile app for changing defaults and testing of any Wattstopper Bluetooth® low energy technology enabled sensor. It provides wireless access to the Bluetooth low energy technology enabled sensors for parameter changes and testing. The app is available on both iOS® and Android® platforms. Current compatible sensors include the FSP-3x1, FSP-3x1B, and FDP product families.

The Sensor Configuration app display shows menus and prompts to lead you through the configuration process. The mobile app provides a simple way to navigate through the customization fields.

The Sensor Configuration app allows modification of the system without requiring ladders or tools.

The Sensor Configuration app allows bi-directional communication between the sensor and the mobile app. Simple menu screens let you see the current status of the sensor and make changes. It can change sensor parameters such as high/low mode, sensitivity, time delay, cut off, and more. With the Sensor Configuration app you can also establish and store sensor parameter profiles.

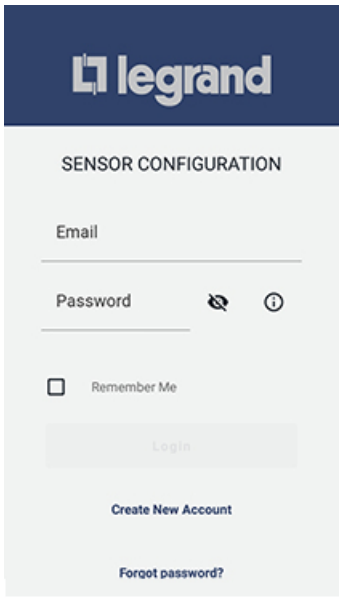
CREATING AN ACCOUNT AND LOGGING IN

After downloading and opening the app, the initial screen is the Login screen. If you do not already have an account with the Legrand cloud, tap **Create New Account**. You must be connected to the Internet to create an account. The account must be authorized before it can be used.

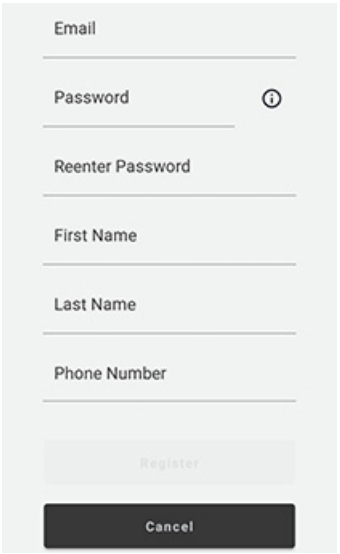
Enter your information in all the fields, then tap **Register**. Passwords must follow these rules: at least 8 characters long, containing at least one capital letter and one number.

Once an account has been created, you can login from the initial screen. If you select the **Remember Me** checkbox, you can skip this step in the future.

If you have forgotten your password, you can tap **Forgot password**. You will be directed to enter your email and a code will be sent t that email, allowing you to change your password.



Create New Account



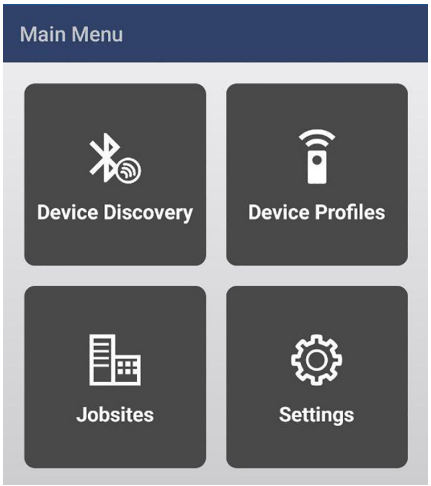
OVERVIEW OF THE SENSOR CONFIGURATION APP

When you first open the Sensor Configuration app, the display shows four options:

- **Device Discovery** – This function allows the app to establish communication between the app and the various sensors at the job site. The range of communication is up to 100 feet indoors, or up to 200 feet outdoors

  NOTE: Metal or concrete objects may lessen the effective range of communication. For maximum range, the sensor should be in line of sight.

  Once a sensor is discovered, you can then assign parameter values to the sensor and perform other functions.
- **Device Profiles** – A profile consists of a set of parameter values. A profile can be assigned to one or more individual sensors. This allows you to easily assign the same parameter values to multiple sensors without having to program each one, and to assign a different profile to other sensors. There is no limit to the number of profiles that can be created. Profiles are stored in the app and can therefore be assigned to any sensor at any job site.
- **Jobsites** – This function is used to create password protected job sites. A job site can be an entire building, or even an area such as a floor in a building or a section of a parking lot, etc. Once a jobsite is assigned to a sensor, the password for that job site is stored in



the sensor, and only someone with access to that password can make changes to the sensor settings. This makes it easy to assign passwords to a large number of sensors and provides an easy way to keep track of the passwords.

NOTE: It is also possible to create a jobsite from within the Device Discovery option. However, if you are going to create multiple job sites, it may be easier to create them all first from this option, then assign the job site when discovering devices.

- **Settings** – This function allows you to set the language used for the app and also provide information about the current version of the app.

ORDER OF OPERATIONS

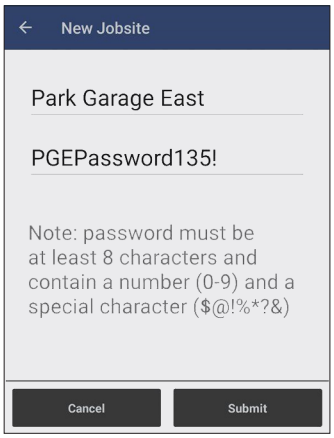
1. **Create Job Sites**. As mentioned above, it is possible to create job sites from within the **Device Discovery** option. But if you are going to have more than one job site, it is easiest to set them up first.
2. **Create Profiles**. If there is more than one sensor that will be using the same settings, it make sense to save the settings in a profile and then assign the profile to those sensors. Note that even after profiles are created, it is possible to edit the parameters for an individual sensors from within the **Device Discovery** option.
3. **Discover Devices**. Discover an individual sensor, then create or assign an existing job site. Finally assign a profile, or set the individual parameters for that sensor.

CREATING JOB SITES

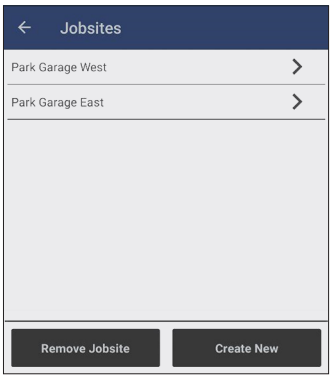
1. When you select this option **Jobsites** screen opens. If no jobsites have been created it will be blank, with **Remove Jobsite** and **Create New** buttons at the bottom.
2. Tap **Create New** to open the **Add New Job** screen. Enter a **Name** and **Password** and tap **Submit** to return to the **Jobsites** screen. The jobsite you created is displayed on the screen. If you create additional jobsites,they will be added to the list.

   NOTE: Once created, you cannot change the password for a jobsite. If you want to change the password, you must remove the jobsite and then create a new one. To delete a jobsite, tap **Remove Jobsite**. The arrow to the right of the jobsite turns into a trash can icon. Tap the icon for each jobsite you want to delete, then tap **Done**.
3. Once all jobsites are created, tap the arrow to the left of the screen name to return to the main menu.
4. If you need to view an existing password for a jobsite, tap the arrow to the right of the jobsite name. The password is initially hidden. Tap the icon of the eye to view the password.

NOTE: It is important to understand that the jobsite name is **not** stored within the sensor—it only exists within the app and is merely a label intended to make it easy to assign passwords to sensors.



Defining A new Jobsite screen



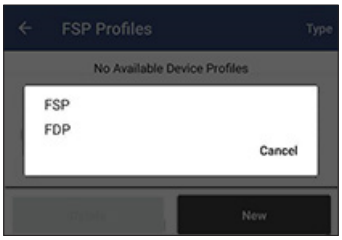
Jobsite screen after Jobsites have been entered

CREATING DEVICE PROFILES

1. When you select this option, the **Profiles** screen opens. If no profiles have been created it will be blank, with **Delete** and **New** buttons at the bottom.
2. By default the Profiles screen opens labeled **FSP Profiles**. Currently there are two families of sensors that are used the Sensor Configuration App—the FSP series and the FDP series. If you are creating a profile for an FSP sensor, skip to step 3. If you are creating a profile for an FDP sensor, tap on the menu icon in the upper right hand corner and select “FDP Profiles” from the menu.

   NOTE: The parameters and parameter values will vary depending on the sensor type you select. See the following section on Sensor Parameters for details.

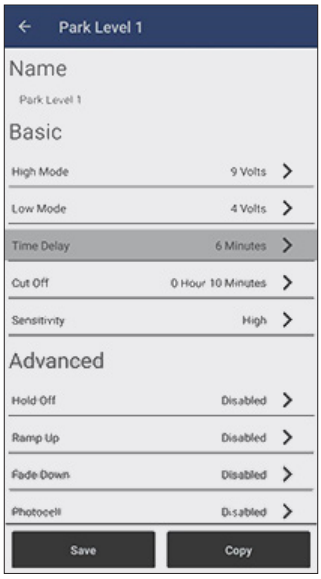
Initial Profiles screen when no profiles have been created



Select sensor type profile

3. Tap **New** to open the **New Profile** screen. Enter a **Name** and tap **Done**.
4. The Profile Parameters screen opens with the name of the profile at the top. Parameters are divided into two sections: **Basic** and **Advanced**. Scroll down to view all the parameters.
5. Tap on an individual parameter to open a screen for that parameter where you can adjust the value. Adjustments are made via sliders, switches and drop-down lists, depending on the parameter. Tap **Done** to return to the Profile Parameters screen. If you make a change to the default or previously saved value, the parameter is highlighted to indicate the change. Tap the question mark icon at the bottom of the screen to view a brief explanation of that parameter.
6. Once all parameters are edited, tap **Save** to return to the **Profiles** screen. If you do not want to save your changes, tap the arrow to the left of the profile name in the top of the screen. The app will ask for confirmation that you want to discard the changes.
7. If you want to make changes to an existing profile, tap on the arrow next to the profile name to return to the Profile Parameters screen, make the desired changes, and save them.
8. If you want to create a profile that is similar to an existing profile but has at least one different value, use the copy function to speed up the process of creating the new profile. Start by editing that profile, make any needed changes, then tap **Copy**. The **New Profile** screen opens. Enter the new name and tap **Done**.

New Profile Screen – may open with text entry keyboard displayed



Profile with Time Delay Edited

Profiles screen after profiles have been saved

SENSOR PARAMETERS

The FSP-3x1/3x1B and FDP-301/301SR can be set for **Fixed** mode or **Continuous Dimming** mode. By default, the Standard mode parameters are displayed when viewing sensor parameters. If you scroll down to the bottom of the list, you will see the **Continuous Dimming** enable/disable parameter. Once Continuous Dimming is enabled, the Standard parameters will be replaced by the Continuous Dimming parameters.

Fixed Mode Parameters

IMPORTANT NOTE: The Sensor Configuration App currently supports two families of sensors—the FSP-3x1/FSP-3x1B series and the FDP series. The FDP series supports DALI drivers. The FDP-301SR is DALI only, but **the FDP-301 can be wired for either DALI drivers or 0-10V dimming drivers**. **DALI drivers and 0-10V drivers use different parameters.** If you create an FDP profile, both the DALI and 0-10V parameters will appear in the profile. However, once an FDP-301 sensor is wired and powered up, when the sensor is discovered, the app will know which version is being used. If you view the parameters for that sensor, the app will display only the parameters appropriate for that particular sensor.

The list of parameters below includes **all** parameters for both the FSP and FDP sensors. In cases where the parameters or parameter values differ between models, it is clearly indicated.

Basic

High Mode – When the sensor detects motion the dimming control output ramps up to the selected HIGH light level.

FSP – Default: 10 V; Range: 0 V to 10 V; Increments of 0.2 V

FDP – Default: 100%; Range: 0 to 100%; Increments of 1%

Low Mode – After the sensor stops detecting motion and the time delay expires the dimming control output fades down to the selected LOW light level.

FSP – Default: 1V; Range: Disabled, 0 V to 9 V; Increments of 0.2 V

FDP – Default: 40%; Range: 0 to 100%; Increments of 1%

Time Delay – The time period that must elapse after the last time the sensor detects motion for the lights to fade to LOW mode.

FSP – Default: 5 min; Range: 30 seconds, 1 minute to 30 minutes; Increments of 1 minute

FDP – **Time Delay (0-10V)** Default: 5 minutes; Range: 1 minute to 30 minutes; Increments of 1 minute

Time Delay (DALI) – Default:5 minutes; Range: 1 second to 42 minutes 20 seconds; Increments of 10 seconds

Cut Off – The time period that must elapse after the lights fade to Low Mode and the occupancy sensor detects no motion in order for the lights to turn OFF. A switch allows you to Enable or Disable this feature (If disabled, there is no cut off from the occupancy sensor—the lights will stay in low mode. Note that the photo sensor will still be able to turn off the lights, if configured.).

FSP – Default: 1 hour; Range: 1 minute to 59 minutes, 1 hour to 5 hours; Increments of 1 minute or 1 hour

FDP – Default: Disable; Range: 1 minute to 59 minutes, 1 hour to 5 hours; Increments of 1 minute or 1 hour

Sensitivity – The response of the PIR detector to motion within the sensor's coverage area.

Default: High; Available values: Off-Fix (relay open, lights off, occupancy detection disabled), Low, Medium, High, On-Fix (relay closed, lights on, occupancy detection disabled)

Advanced

Hold Off – The selectable ambient light level threshold that will hold the lights off or at LOW level when the sensor detects motion. A switch allows you to Enable or Disable this feature. If enabled, select Auto Format or Custom Value.

The Auto Format option invokes an automatic calibration procedure to establish an appropriate setpoint based upon the contribution of the electric light. As part of this procedure, the controlled load is turned on to warm up the lamp, and then it is switched off and on eight times, terminating in an off state. After this process, a new setpoint value is automatically calculated. During this time, communication with the sensor is disabled.

Default: Disabled; If Custom is selected, the Range is 1 fc to 250 fc; Increments of 1 fc

Ramp Up (applies to FSP and FDP-301 wired for 0-10V only) – Time period for light level to increase from LOW to HIGH. A switch allows you to Enable or Disable this feature.

Default: Disabled (the light/load switches instantly); If enabled, the Range is 1 sec to 60 seconds; Increments of 1 second

Fade Down (applies to FSP and FDP-301 wired for 0-10V only) – Time period for the light level to decrease from HIGH to LOW. A switch allows you to Enable or Disable this feature.

Default: Disabled (the light/load switches instantly); If enabled, the Range is 1 sec to 60 seconds, Increments: 1 second.

Photocell – When the light level exceeds this setting, the lights will turn off even when the space is occupied. Once the light level exceeds this setting, the sensor will wait and monitor for a short period of time in order to confirm the light level increase is not temporary before forcing the lights to go off. When light level goes below the settings, the light will turn on even without motion detection. A switch allows you to Enable or Disable this feature.

If using this setting in combination with the Hold Off setpoint, there must be at least 10fc of dead band between the two settings. The Photocell setpoint is automatically set to maintain at least 10fc of dead band above the Hold Off setpoint to help avoid load cycling.

Default: Disabled; If enabled, the Range is 1 fc to 250 fc; Increments of 1 fc

DALI Specific (FDP-301SR or FDP-301 wired for DALI)

Fade Time – Time period for the light level to decrease from the current level to the new level

Default: Extended; Range: Extended, 0.7 second to 90.5 seconds; The increments vary in value becoming larger as the values get larger.

NOTE: The Extended value is not currently implemented.

Fade Rate – The number of steps per second that are performed to manually adjust the light level

Default: 358 steps/second; Range 358 to 2.8 steps/second; Increments vary in value becoming smaller and values get smaller

NOTE: Drivers will ether implement Fade Time or Fade Rate. You may need to test the values of each parameter to determine which parameter the specific driver will respond to.

Continuous Dimming Mode Parameters

When in continuous dimming mode, there are two sets of identical parameters—one for day and one for night. The sensors collect data regarding different light levels over the course of a few days and then use that data to determine day/night cycles.

Occupied Target – During the day/night, and while the area is occupied, the sensor will attempt to maintain the light level specified.

Default: 30 fc. Range: 0 to 250 fc.

Occupied Time Delay – The time period that must elapse after the last time the sensor detects motions for the lights to fade to the specified 'Unoccupied Target' or 'Unoccupied Fixed Level'.

Default: 5 min. Range: 1 to 30 minutes.

Unoccupied Target – During the day/night, and while the area is unoccupied, the sensor will attempt to maintain the light level specified

Default: 1V Range: 0 to 10V . The value of the **Low Mode** parameter while in **Fixed** mode may be selected instead

Unoccupied Cut Off – The time period that must elapse after the last time the sensor detects motion for the lights to fade to Day/Night Unoccupied Target

Default: 5 min. Range: 1 to 30 minutes.

DISCOVERING DEVICES

1. When you select this option, the app scans for all Bluetooth enabled sensors within range. The **Devices** screen opens and displays a list of sensors along with their signal strength. The sensors are ordered by signal strength from strongest to weakest. The sensors will initially have default names (the model number is the default name), but if a sensor was previously commissioned and a name was entered for the sensor, that name will display.
2. Tap a sensor. The loads connected to that sensor will flash ON and OFF, to give a visual indication of which sensor you are communicating with. After a few seconds, the **Select Jobsite** screen opens.
3. Tap in the select box to open the Jobsite list. Select one of the previously created jobsites, or if none have been created yet, tap **Create New** to open the **Add New Job** screen as described previously, in the Creating Jobsites section.

   NOTE: It is possible to configure a sensor without assigning a job site (and therefore a password) by turning the **Select Jobsite** switch OFF. However, in this case, bluetooth will be disabled after 7 days. This prevents unauthorized access to configuration parameters.
4. If this is the first time you are accessing the sensor, select the **This is a new device** option. Then click **Submit**.

List of Sensors within range

Select a Sensor to open the Select Jobsite screen

5. The app then retrieves data from the sensor. If it is a new device, the app uses the default password to open communication and then immediately replaces the default password with the password of the selected Jobsite.

   If the **This is a new device** option is **not** selected, the app will send the password of the Jobsite. Finally, the **Sensor Options** screen opens.

   NOTE: If the sensor was previously commissioned and you choose a Jobsite with a different password, an error message will display saying there is no match.
6. On the **Sensor Options** screen, you can access various functions specific to the sensor. If you previously created profiles and want to assign one of them to this sensor, tap **Upload Profile**. The **Select Profile** screen opens. Tap the desired profile then tap **Upload**. The parameter values from that profile are sent to the sensor. Tap the arrow on the top line to return to the **Sensor Options** screen.

   NOTE: The profile name is not sent to the sensor.
7. Tap the **Configuration** option. The Sensor Configuration screen is nearly identical to the **Profile Parameters** screen. The only difference is the **Name**, which is used to identify the individual sensor instead of the profile. The current values for the parameters will be the same as the profile you previously uploaded, or will be the default values if no profile was uploaded. Whether or not you uploaded a profile, you can edit any value to make a change for this specific sensor if desired. Tap **Upload** to send the **Name** and any changed values to the sensor. This name will now display on the sensor list screen when you discover devices. Tap the arrow on the top line to return to the **Sensor Options** screen.

Sensor Options

Select Profile to Upload to Sensor

8. Tap the **Controls** option. The parameters on this page are used for testing the sensor. Additionally you can find information about the current firmware version of the sensor.

   Test Mode – Test Mode shortens timeouts for High/Low and Cut Off, to allow quick verification of settings. You can set the length for test mode (default is 3 minutes). Range: 1 to 5 minutes. Tap **Start** to enter test mode.

   Dimmer Level – When you select this option the screen shows the current dimming level (from 0V to 10V). You can temporarily change the dimming level for testing purposes by dragging the slider or tapping the "+" or "–" buttons. The level will change to the specified amount for several seconds, then revert to the previous amount. The **Flash** feature will flash the load ON for three seconds and OFF for three seconds, for the number of times specified in the drop-down. This can be useful for identifying a specific load in an area with multiple loads.

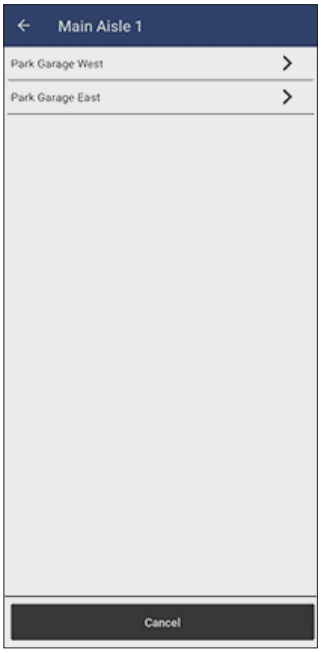
   Sensor Level – This displays the current amount of light registered by the light level sensor, in foot candles.

   Firmware version – Select this option to display information about the current firmware of the sensor.
9. Tap the **Change Jobsite** option. This option allows you to change the password stored in the sensor. The screen displays a list of all the jobsites previously created. Select a new Jobsite. The password associated with the new Jobsite is stored in the sensor.

Sensor Configuration with Sensor Name added

Sensor Controls Screen

Change Jobsite Screen



UPDATING SENSOR FIRMWARE

NOTE: When performing firmware updates, ensure your mobile device is not interrupted by other apps or processes. An interruption during an update could lead to an unrecoverable sensor failure. It is highly recommended to place your mobile device in airplane mode (with only Bluetooth enabled) to reduce risk of an interruption.

The Update Firmware option is also located within the Sensor Options screen. When you select this option, the screen displays the version of firmware within the specific sensor, and the version of firmware that is included with the app. If a newer version is available and you want to update the sensor, tap **Start Update**. A progress screen will show the progress of the update. Once complete, the display indicates completion and you can return to the **Sensor Options** screen.

NOTE: While the update is in progress, do **not** press the **Back** button. Doing so could result in an unrecoverable sensor failure.

NOTE: The app contains the latest versions of the firmware for each model sensor. If a new version of firmware is released, a new version of the app will be made available for download, containing the updated firmware.

SETTINGS

The **Settings** function contains four options

Account Settings – Select this feature to view and edit the information you entered when creating the account. There is also an option to change your password.

Language – Select this feature to switch the text in the screens between English, Spanish, and French.

About – Select this feature to view version information for the app.

Logout – Logs you out of the app.

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