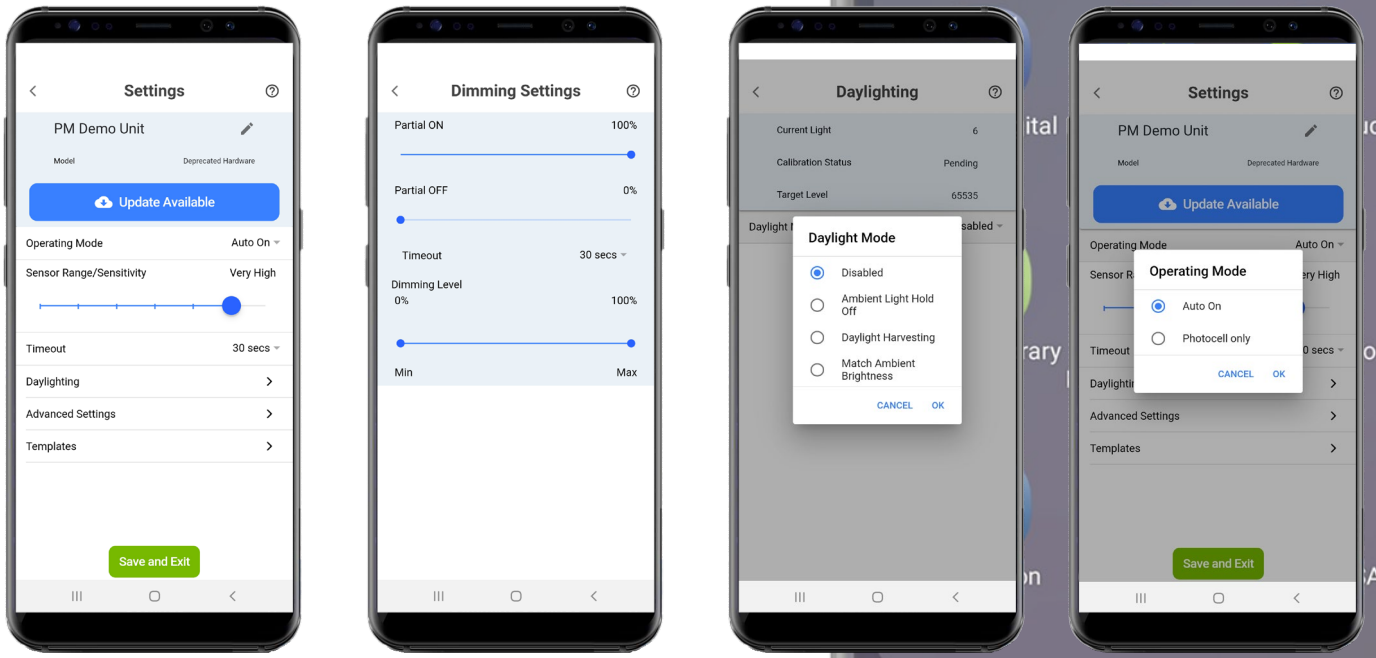
Smart Ceiling Mount Sensors (CMS)

Smart App Guide

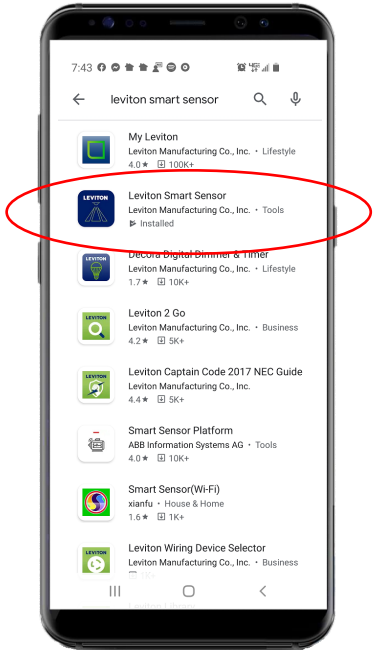
LEVITON

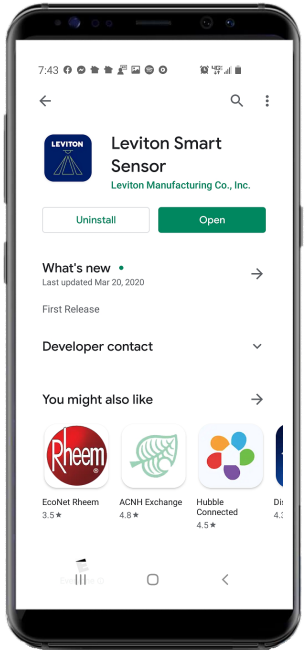
Smart Sensor App Overview

- Easy-to-use
- Intuitive
- Advanced Occupancy and Daylighting options
- Templates
- Options for Grouping & Scheduling
- OTA Updates allows for new features, easy updates



Download Smart Sensor App

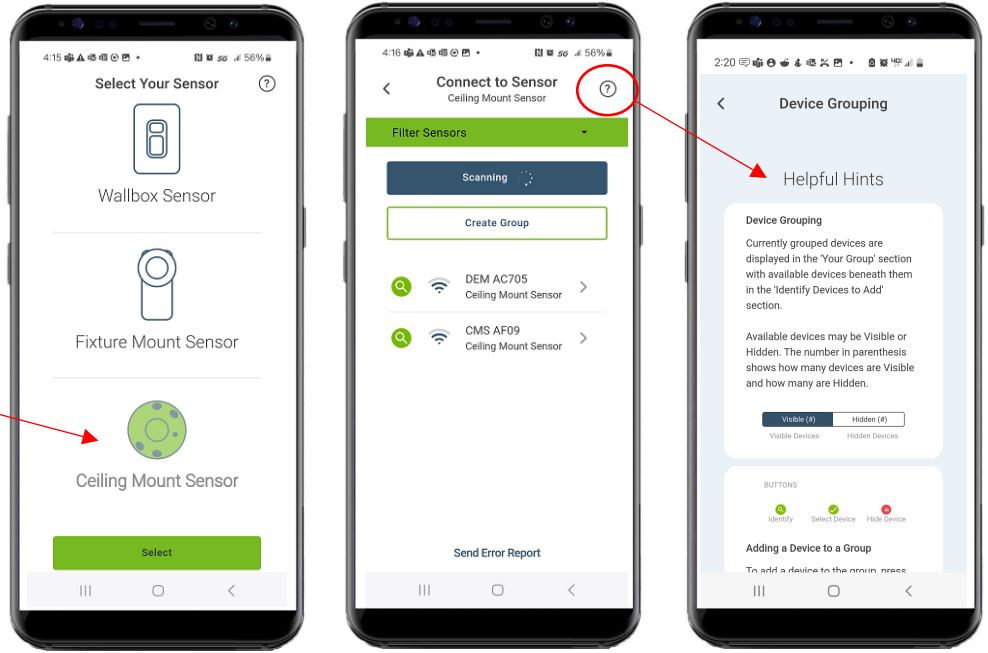




- Download ***Leviton Smart Sensor*** App from Google Play Store or Apple App Store
- Phone or tablet
- Connects to sensor via Bluetooth

Smart Sensor App Overview

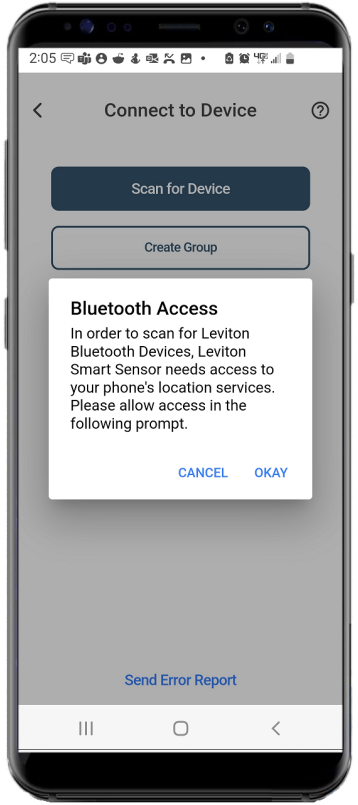
- Default settings:
  - Auto-ON, 20min Timeout, Daylight Harvesting disabled
  - *No configuration needed if using these settings*
- Smart Sensor App required for any changes to product configuration
- App is used for multiple Smart Sensor products
  - ➢ *Need to select **Ceiling Mount Sensor***
- **(?)** Provides contextual help
  - Helpful hints
  - Available on each page in app
- No need to put sensors in pairing mode; always available to connect using App

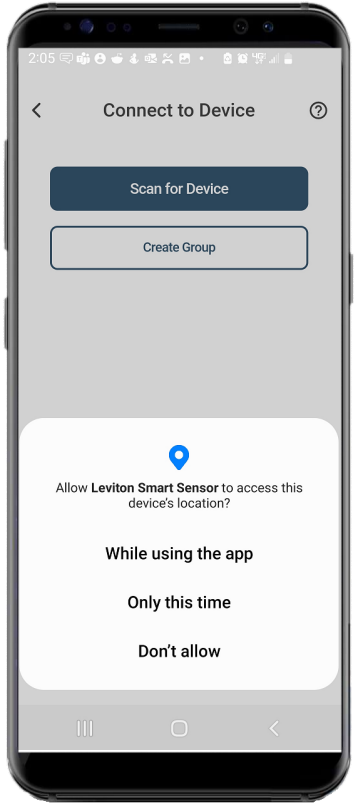


Product Configuration - Notes

For first time connections (if prompted):

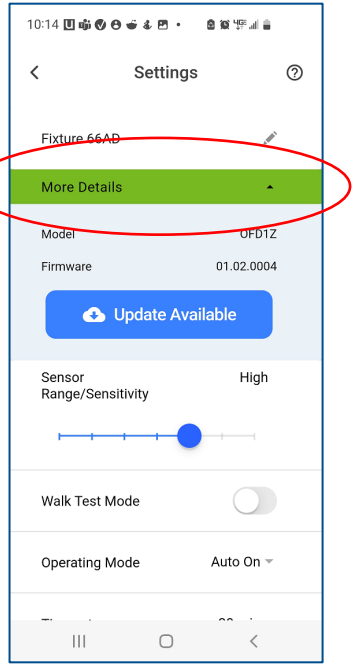
- Click “OKAY” for Bluetooth Access
- Allow Leviton Smart Sensor to access device location, either “while using the app” or “only this time”

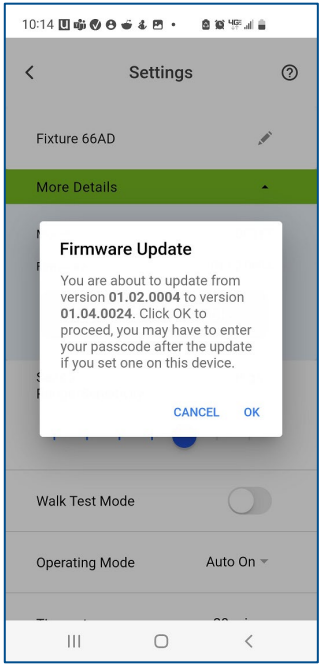


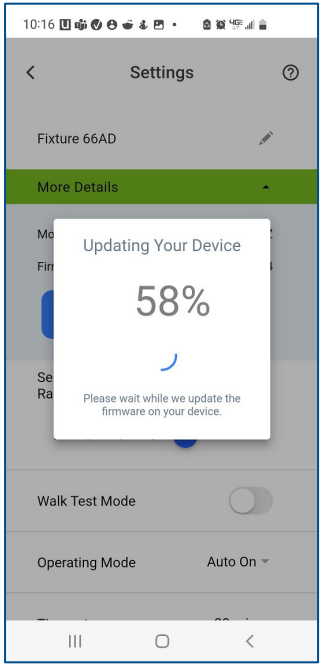


Firmware Updates

- Check “More Details” on main settings page to see current Model / Firmware details and whether any updates are available
- Clicking “Update Available” will update sensor to latest firmware level
- Updates take ~2-3 mins
- Note: updates not required unless needed for latest feature set





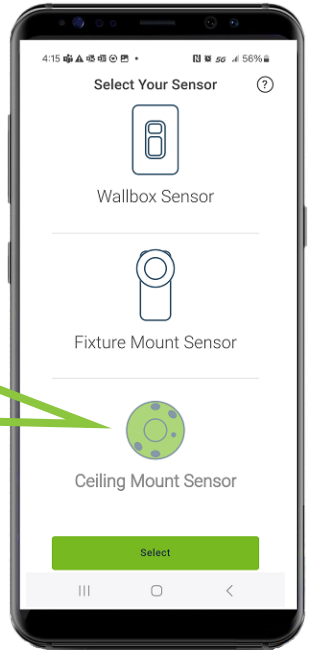


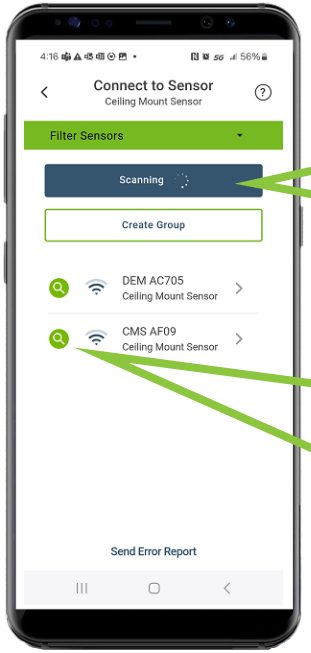
Product Programming

App Guide

Scanning: Helpful Hints

- Open Smart Sensor App
- Stand near sensor
- Select ***Ceiling Mount Sensor***



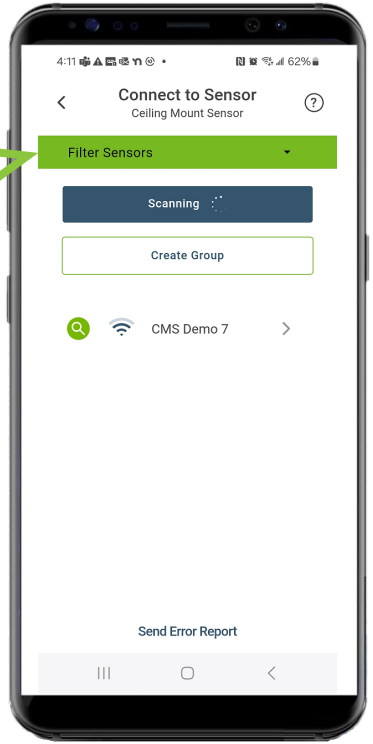


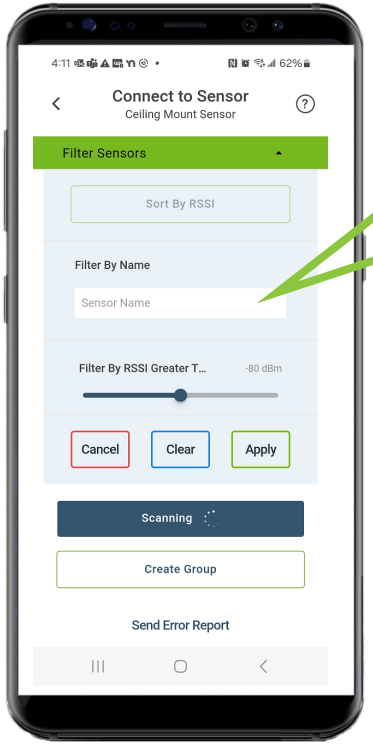
- Automatically starts scanning for available
- Closest devices should show first on list
- Click ***Scanning*** to refresh list

- Before connecting to sensor, “identify” sensor to confirm connected to right device
- Identified sensor’s LEDs will blink BLUE/GREEN/RED and lights will turn ON/OFF
- If right sensor/fixture, click name of sensor or “>”

Scanning: Helpful Hints

If there are many available sensors in a space to connect to, it might be helpful to “Filter” the sensors to help you connect to the right one

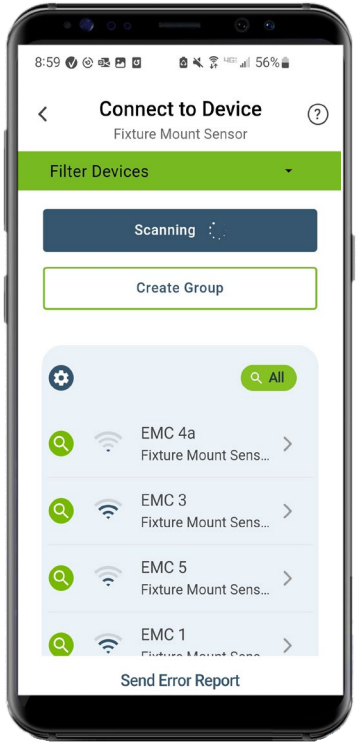


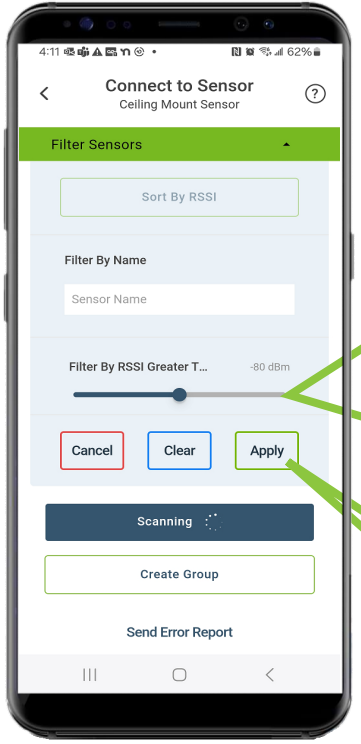


Enter sensor name to filter by name (works best if sensor name is known)

Scanning: Helpful Hints

You can also filter by RSSI (received signal strength indicator) strength; lowering the dBm value will reduce the list of sensors, only showing those in close proximity or those with the strongest BLE signal





Filter by RSSI (dBm):

- Move slider to left to increase range or move slider to right to decrease range
- It can be helpful to move slider all the way to left to see all sensors in a space (this can be helpful if you are trying to catch any sensors that have not been renamed, etc.)

Note: Below 60dBm may not show any devices

Click “Apply” to implement your filters

Sensor Configuration – Main Settings Page

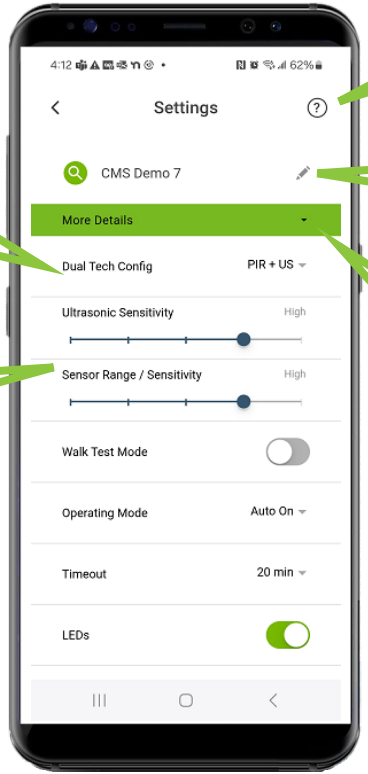
Select Sensing Configuration

- PIR only
- PIR + Ultrasonic*
- Ultrasonic only*

*NOTE: only available on multi-tech models

Adjust range/sensitivity

- Separate adjustments for both PIR and Ultrasonic



(?) Helpful Hints

Name device (optional)

- Makes easier to identify (ie: Sales Office)

More Details:

- Access sensor model number and firmware level
- Shows if firmware updates are available

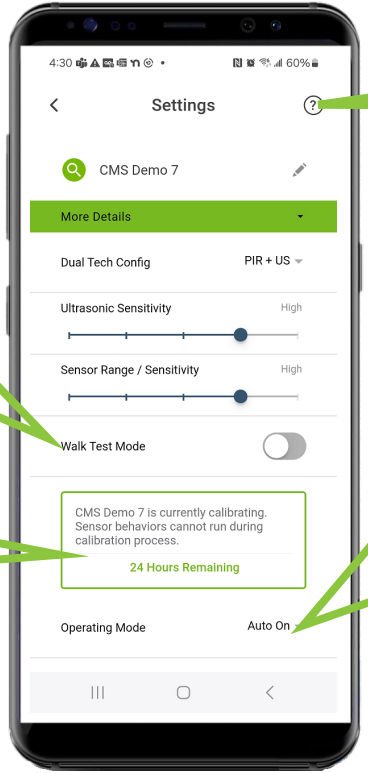
Sensor Configuration – Main Settings Page

Walk-Test Mode option

- Used to test sensor field-of-view (FOV); temporarily sets timeout to 15sec
- After 15mins, sensor resumes normal operation with Walk-Test mode turned off
- Useful when testing sensor Field-of-view coverage

Daylight Calibration Status

- Shows time remaining if using auto-calibration (takes 24hrs)



(?) Helpful Hints

Operating Mode:

- Auto-ON (Occupancy)
- Manual-ON (Vacancy)
  - Requires switch or dimmer (PLVSW {wired} or SBK00 {wireless}) for manual control
- Photocell Only (disables Occ sensor, for daylighting applications only)

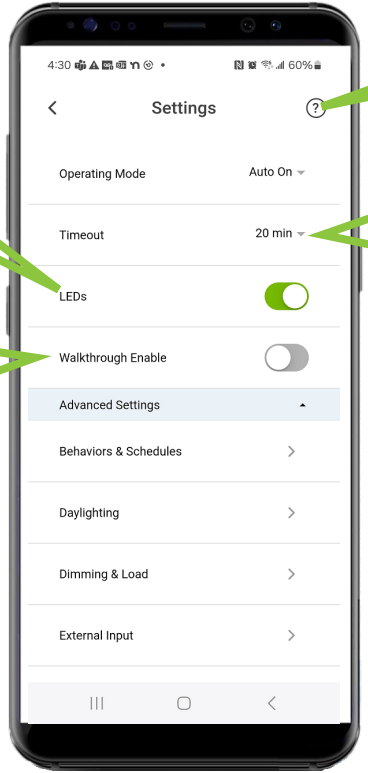
Sensor Configuration – Main Settings Page

LEDs

- The LED toggle turns ON or OFF the LED indicators during normal operation

Walkthrough Enable

- Walkthrough mode enabled allows the sensor to timeout within 2-4 minutes if occupancy is only detected for a short period; if extend occupancy is detected, the normal timeout apples



(?) Helpful Hints

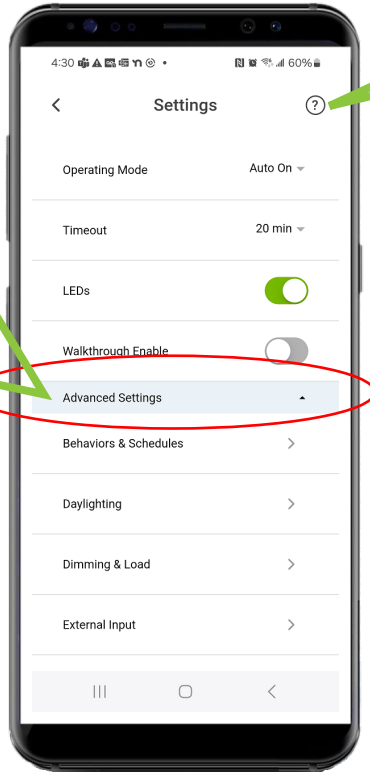
Timeout: amount of time that occurs after space becomes vacant before lights turn OFF

- Options from 30s to 60mins
- 20mins is default setting

Sensor Configuration – Advanced Settings

Click on “Advanced Settings” to access configuration options for:

- Daylighting
- Scheduling
- Dimming & Load details
- External Inputs
  - Switches, dimmers, etc.
- Pairing to a wireless companion device
- Creating templates



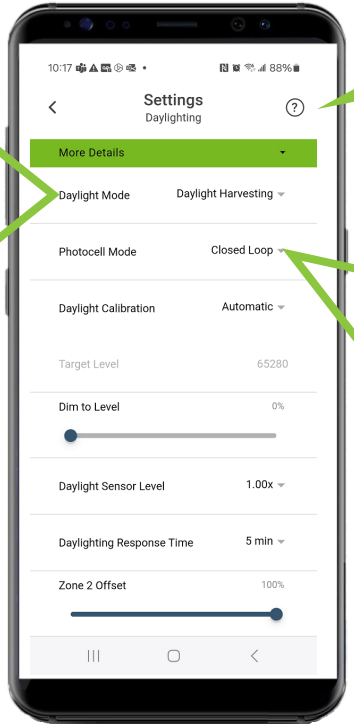
(?) Helpful Hints

NOTE: *Behaviors & Schedules* and *Wireless Companion* will be covered in separate sections

Advanced Settings – Daylighting Options

Daylighting Mode options:

- **Disabled:** (Off)
- **Ambient light hold-off:** holds lights OFF when sufficient ambient light is present to meet the target level; this mode does not dim, just turns lights ON or OFF (ideal for switching-only fixtures)
- **Daylight harvesting:** dims the light output in relation to natural ambient light contribution; more natural light = less artificial light (for 0-10V fixtures)
- **Daylight transition lighting:** reverse daylight harvesting; ideal for areas where light transitions from dark to light or light to dark; eases transition for eyes (safety). Ideal for parking garages, tunnels, etc.



(?) Helpful Hints

Photocell mode

- Set the Photocell mode as Open or Closed Loop based on the application*
- For more information on Open Loop and Closed Loop, visit:

www.LightingControlsAssociation.org

Closed Loop is most common

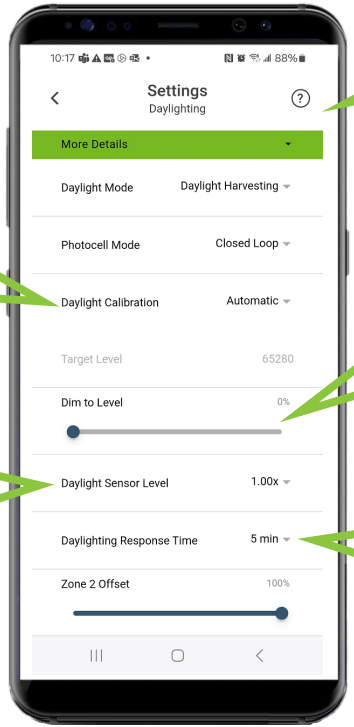
Advanced Settings – Daylighting Options

Daylighting Calibration

- **Automatic:** Leviton's AutoCal process takes over and automatically configures the daylight settings (calibration process takes 24-hrs with lights on at 100%).
- **Manual:** user will configure the daylight target level

Daylight Sensor Level

- Option to increase or decrease the amount of ambient light required for sensor to start daylighting
- Less than 1.00x reduces the fixture output level
- Greater than 1.00x increase the fixture output



(?) Helpful Hints

Dim to Level

- Allows you to set a minimum dim level while in Daylight Harvesting or Daylight Transition Lighting Modes (0-99%)

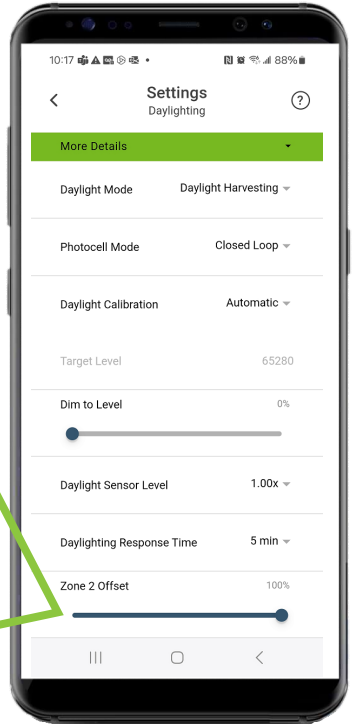
Daylighting Response Time

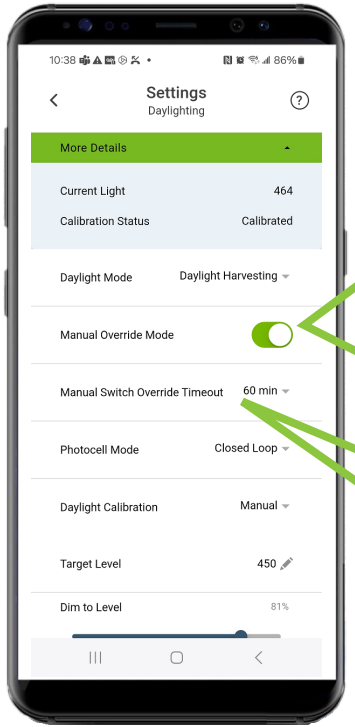
- Adjust how slowly the photocell should respond to changing light conditions (1min-20min)

Advanced Settings – Daylighting Options

Zone 2 Offset

- Ideal for daylighting response in multiple lighting zones
- Set the Zone 2 offset using the Zone Integrator value (1-100%); a setting of 70% would provide a 30% offset from zone 1
  - For secondary lightings zones, recommend offset at 100% (lighting for zone 2 becomes 50% of zone 1)
- For dual relay sensors only





Manual Override Mode

- If enabled, allows users to increase the light level above the current daylighting level (manually using a switch or dimmer)
- If disabled, prevents users from overriding above the current daylighting level
- NOTE: option only appears upon calibration completion

Manual Switch Override Timeout

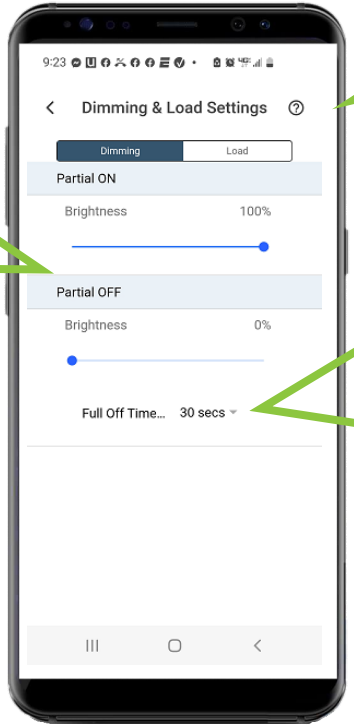
- Timeout for Manual Override Mode that can be set from 5mins to 1hr; after timeout expires, light level will return to the current Daylighting level

Advanced Settings – Dimming & Load

Dimming

- **Partial-ON:** set the target Auto ON level (1-100%; default is 100%)
- **Partial-OFF:** set the partial OFF level (0-99%; default is 0%)

Note: when in group, Partial ON and Partial OFF settings are sync'd to all devices

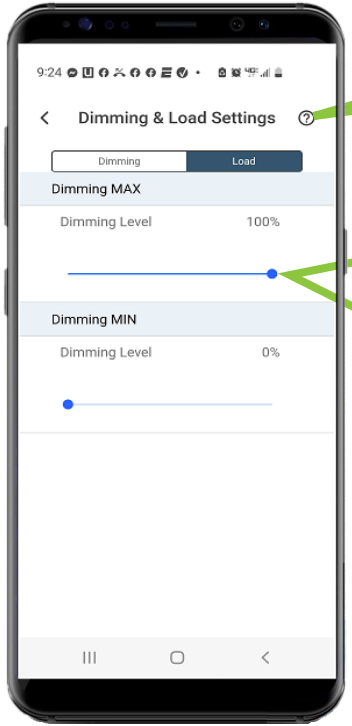


(?) Helpful Hints

Full Off Timeout (for Partial-OFF):

- Set secondary timeout to turn light(s) OFF completely
- Options for 30 seconds to Always ON

Advanced Settings – Dimming & Load



(?) Helpful Hints

Dimming Level allows you to trim the MIN and MAX lighting levels

- MAX setting is used to reduce the maximum output of the fixture
- MIN setting is used to increase the lowest level before the fixture switches off

Note: when in group, trim settings are sync'd to all devices

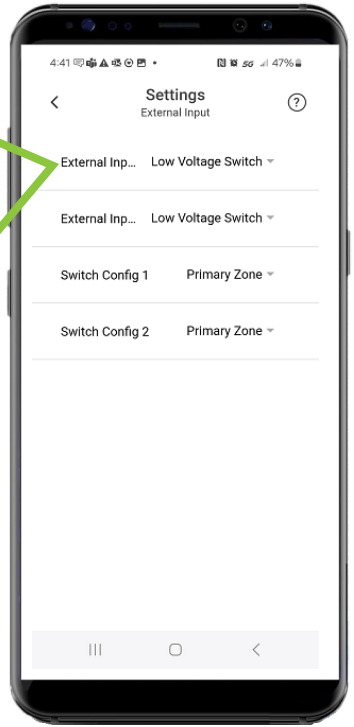
Advanced Settings – External Input(s)

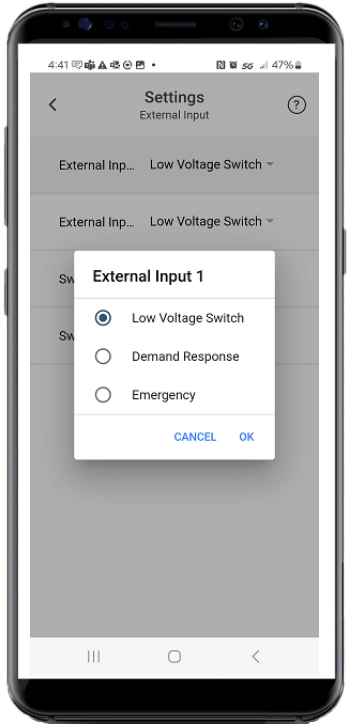
External Inputs:

- External inputs connect to the sensors through the low voltage inputs of the Phoenix connector
- Able to select multiple external input options (inputs 1 and 2)

Options include:

- **Low Voltage Switch**: select when connected to a PLVSW keypad wallstation. The PLVSW is used for manual control of lighting to turn ON or OFF or have the level raised / lowered (when connected to a 0-10V dimming sensor)
- **Demand Response**: this input is intended for use with BMS (Building Management System), ADR (Automated Demand Response) or any contact closure to force the 0-10V output to reduce the level by 15-50% (per configuration in app). Required for California Title 24 applications
- **Emergency**: For UL924 bypass lighting applications. Connected via a contact closure, when emergency lighting kicks in, will force lights ON or full-ON (if dimmed) regardless of occupancy, daylighting, or demand response status



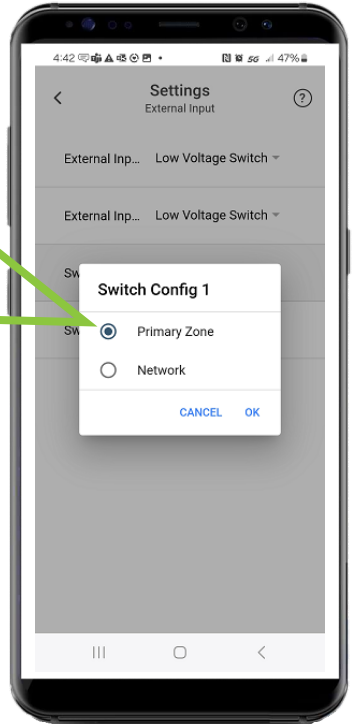


Advanced Settings – External Input(s)

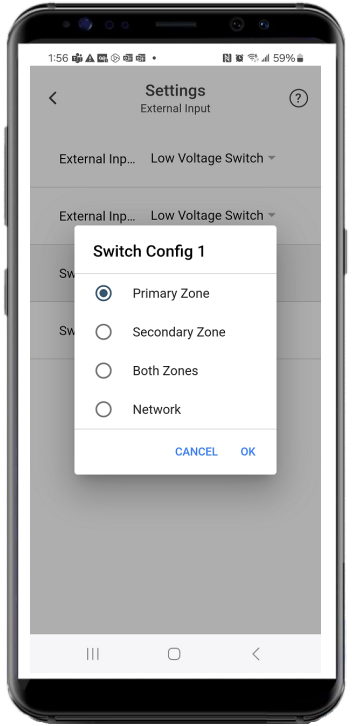
Switch Configurations:

If the external inputs are identified as “Low Voltage Switch”, there are multiple switch configurations that can be selected:

1. Primary Zone: switch only controls the lighting load in one relay or zone
2. Secondary Zone: switch only controls the lighting load in the 2nd relay or zone (only available on dual relay models)
3. Both Zones: controls both zones (3-way) together in unison (only available on dual relay models)
4. Network: switch controls all zones or relays for sensors connected as a group (3-way +)

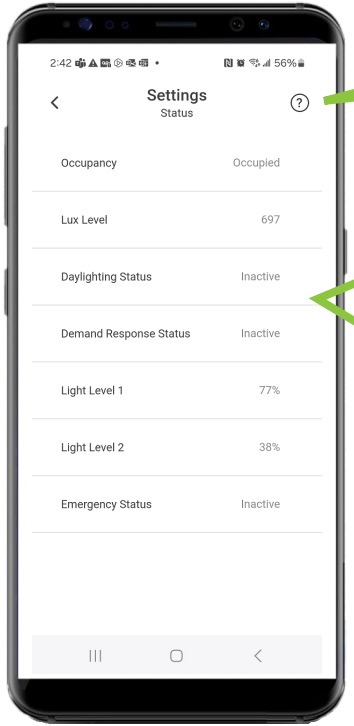


Single Relay



Dual Relay

Advanced Settings – Status



(?) Helpful Hints

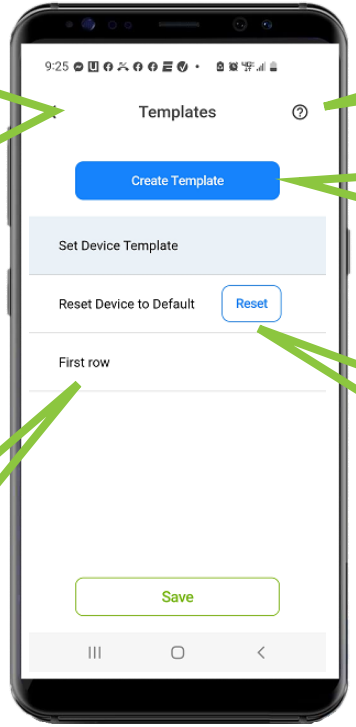
Status page displays current sensor status for following:

- Occupancy: Occupied or vacant
- Lux Level: displays current LUX level as measure by the photocell
- Daylighting Status: displays current status
- Demand Response Status: displays current status
- Light Level 1 or Dim Channel 1: current level of the primary relay / zone
- Light Level 2 or Dim Channel 2: current level of the secondary relay / zone
- Emergency: active or inactive

Advanced Settings – Templates

Templates allows user to save current device settings as a “template” for future use

Note: templates are stored on the Phone or Tablet they are created on



(?) Helpful Hints

To create a template, press the blue ‘Create Template’ button

- Name the template and select **‘Create’**
- Saves all current settings to named template

To load an existing template to a sensor, select template from list on Templates page and press ‘Save’

Clear Template:

- To clear a device from the template currently assigned to it, press the **‘Reset’** button; this will restore the device to default settings

Adding a Wireless Companion Switch/Dimmer/Keypads

App Guide

Wireless Companion Overview:

- The Leviton Wireless Companion Switch (SBK00-CSW), Dimmer (SBK00-CDW), and Keypads (SBK00-4DW and SBK00-4PW) pair wirelessly with the Smart Ceiling Mount Sensor (CMS) to provide manual lighting control
- These devices can be mounted in an existing wallbox or to flat wall surface near an entry point.
- These devices are battery powered and do not require any wiring
- These devices do not connect directly to the load or lights (control of the lights is through the Leviton CMS
- For best results, mount these devices within 50 ft of a CMS
- Do not install these devices in metal wall boxes or with metal wallplates, as this may result in poor RF performance
- Up to four wireless companions can be paired with a single CMS

SBK00-CSW

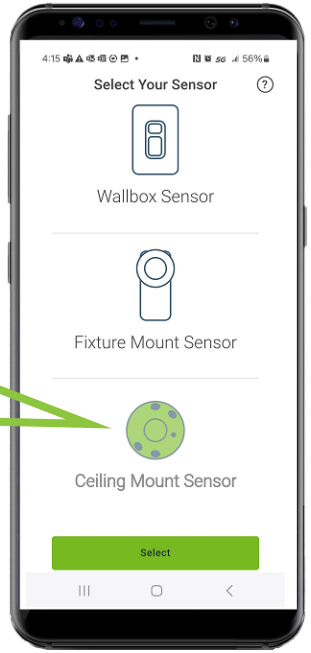
SBK00-CDW

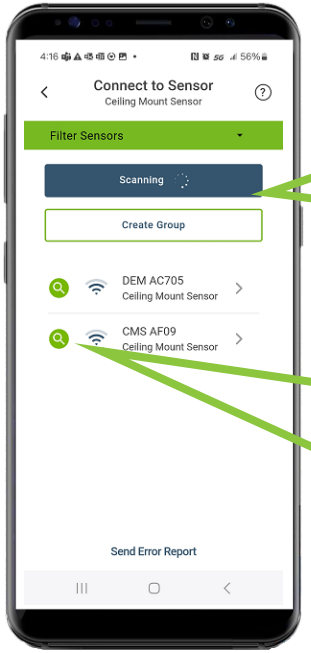
SBK00-4DW

SBK00-4PW

Connecting to Sensor

- Open Smart Sensor App
- Stand near sensor
- Select ***Ceiling Mount Sensor***



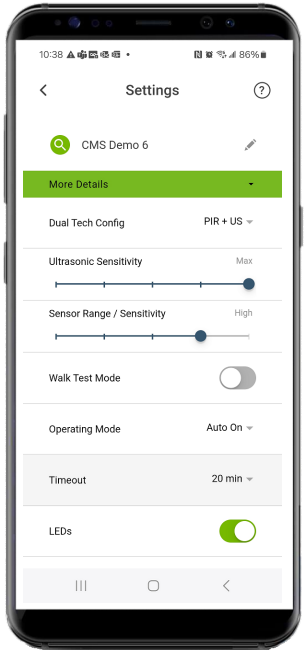


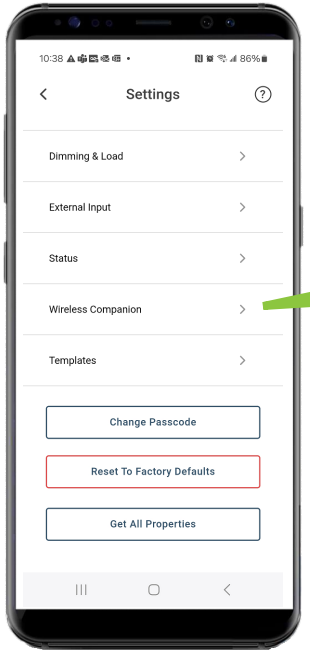
- Automatically starts scanning for available sensors
- Closest devices should show first on list
- Click ***Scanning*** to refresh list

- Before connecting to sensor, “identify” sensor to confirm connected to right device
- Identified sensor’s LEDs will blink BLUE/GREEN/RED and lights will turn ON/OFF
- If right sensor/fixture, click name of sensor or “>”

Pairing to Wireless Companion

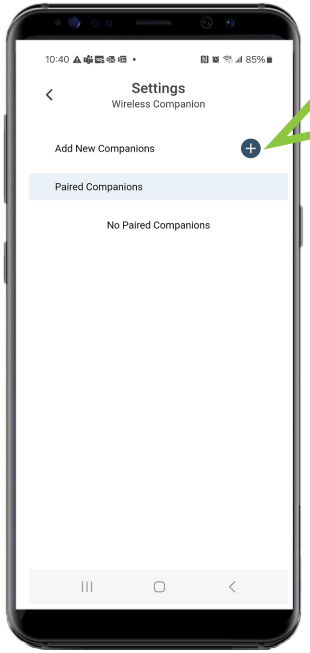
On main Settings page, scroll down to “Wireless Companion”



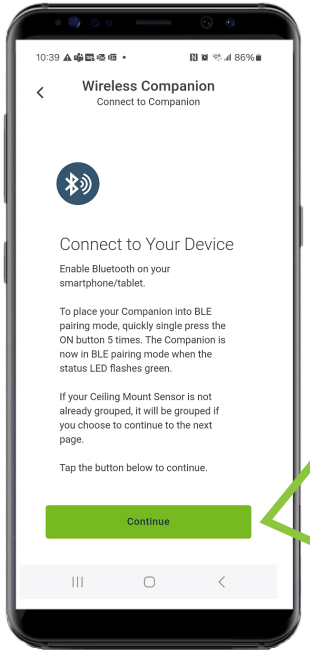


Click on Wireless Companion

Pairing to Wireless Companion



Click on “Add New Companions”



To put the SBK00 in “pairing” mode, press on the top paddle of rocker 5 TIMES (status LED will blink green; press Continue

NOTES:

- Activate and pair one device at a time
- If not paired in 10mins, the SBK00 goes into a standby state; to place back into pairing mode, press the top rocker 5 times

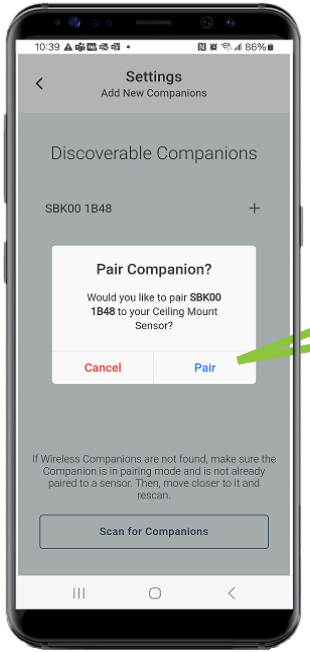
Press 5x

Status LED blinks green when in pairing mode

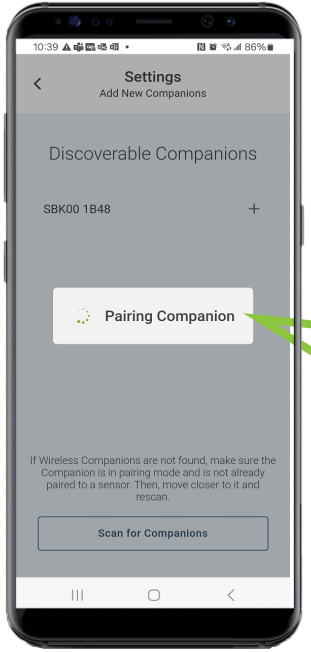
Pairing to Wireless Companion

SBK00 in pairing mode will show up on list of Discoverable Companions

Press the “+” to pair with Companion



Click on Pair

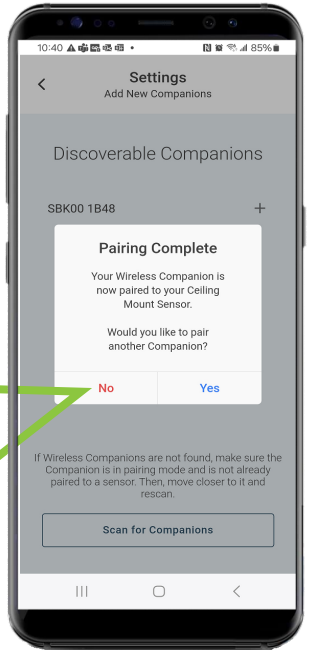


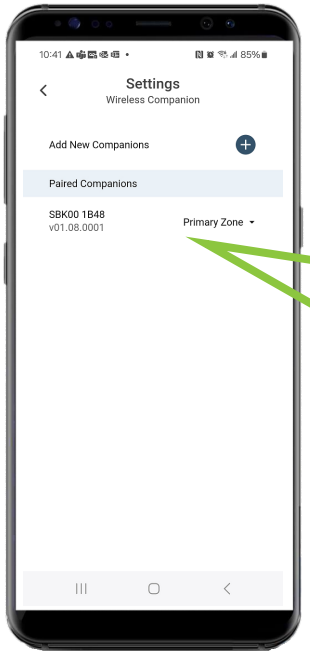
Pairing in process (takes ~10s)

Pairing to Wireless Companion

When pairing is complete, click “No” if finished or click “Yes” if you would like to add another companion.

NOTE: follow the same pairing process for additional companions; up to 4 companions can be paired to a sensor



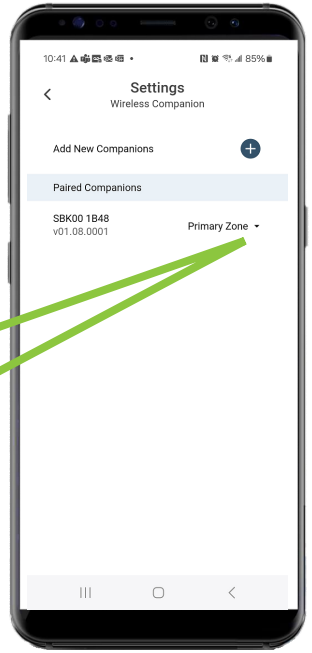


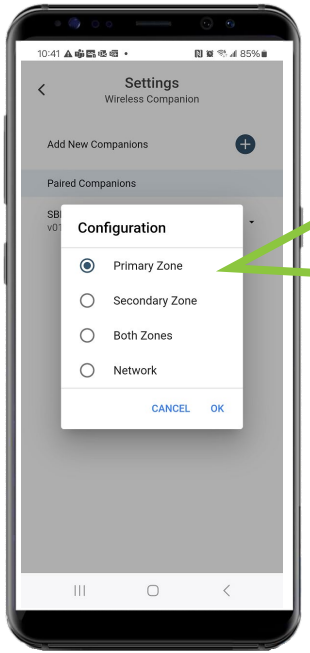
After pairing is complete, a list of the paired companions will show up on the wireless companion page

NOTE: it may take page up to 30 seconds to refresh and show the list of paired companions (may initially say “no paired companions”)

Pairing to Wireless Companion

To change the configuration of the companion, click on the down arrow next to configuration type



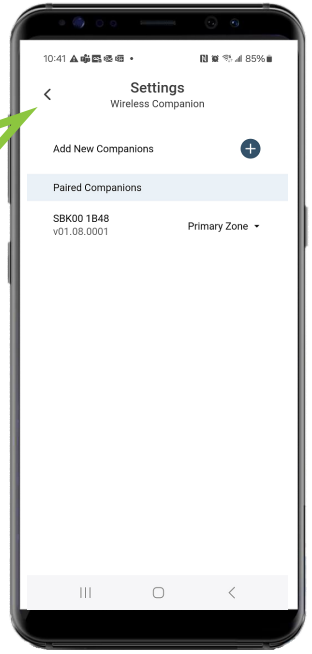


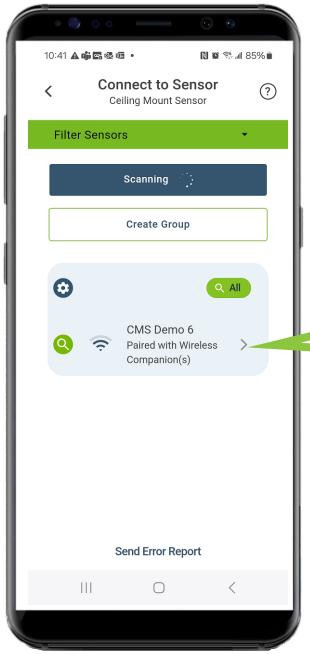
Configuration options include:

- *Primary Zone*
- *Secondary Zone (for dual relay sensors only)*
- *Both Zones (for dual relay sensors only)*
- *Network (applicable if multiple sensors are grouped together)*

Pairing to Wireless Companion

When finished, click the back arrow to return to the settings page, then exit the app. The companion will become “active” upon completing the pairing process and exiting the App





Upon next connection to the sensor, the scan page will show that the companion is paired

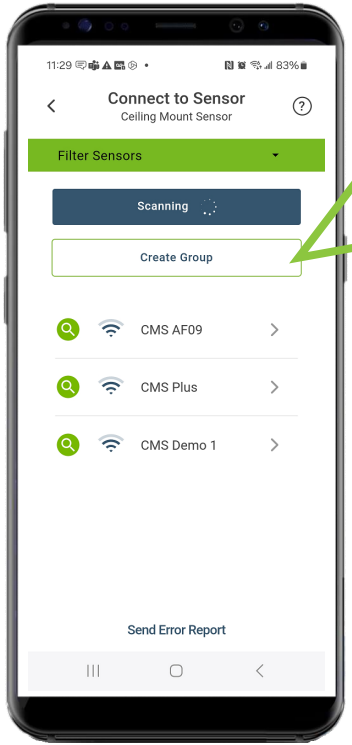
Sensor Grouping

App Guide

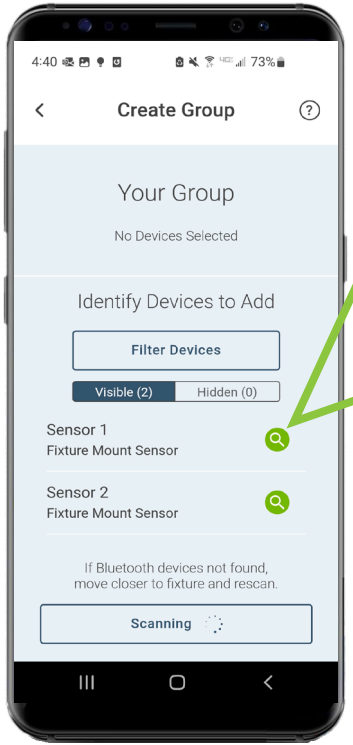
Grouping Overview:

- Sensors to be wired and installed per installation instructions
- Up to 5 sensors can be grouped together
  - Groups can be mixed (dimming sensors + switching sensors)
- Sensors are grouped together via BLE network
- Distance (end-to-end) is limited by Bluetooth signal range (recommend 50’ or less)
- For best results:
  - Determine how you want your sensors grouped
  - Grouping is done from the initial scan page
  - Select a sensor in middle of group as the “provisioner”, and start to add other sensors to the group from this sensor

Creating a Group

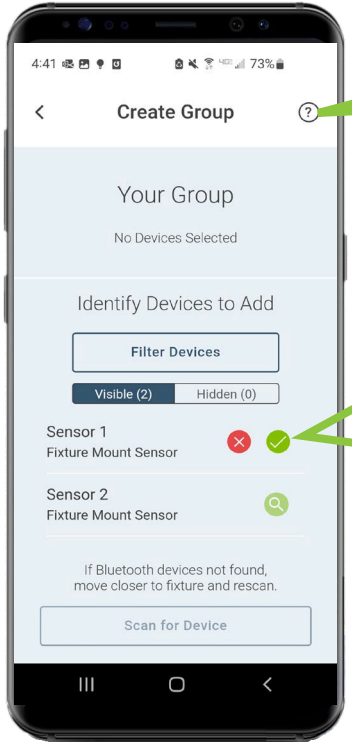


Select "Create Group“ from the Scan page



Select "magnifying glass" of sensor to be added to group

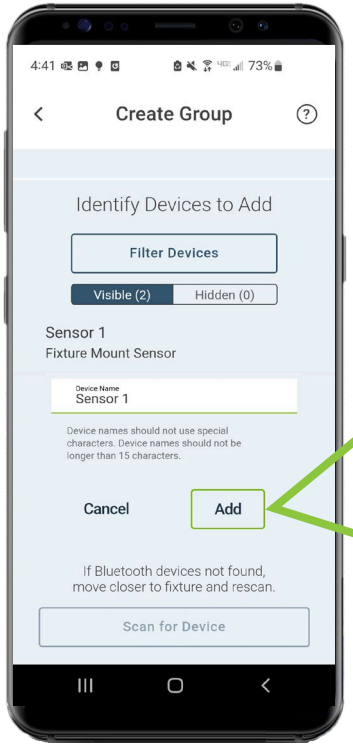
Note: start from Sensor in middle of group



Helpful Hints

Select “checkmark” to confirm sensor to be added

Creating a Group, Con’t

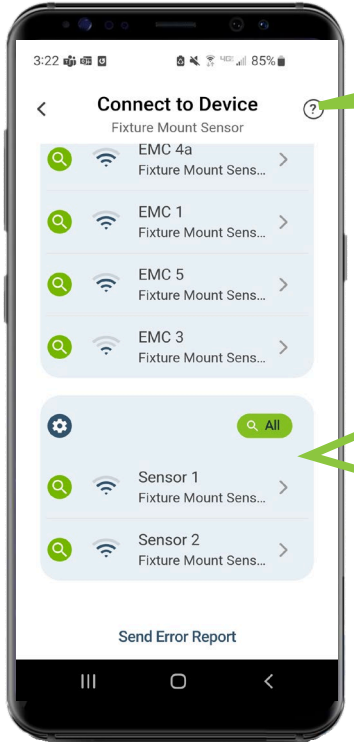


Scroll down and select "Add“

Note: sensor can be renamed if desired

*Repeat "Creating a Group" process for each sensor to be added to group.

Note: up to 5 sensors can be added to a group

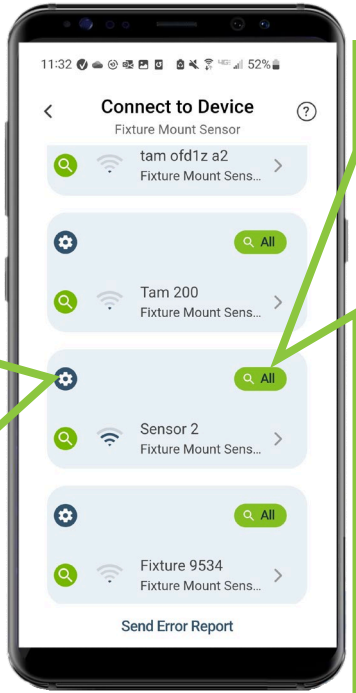


Helpful Hints

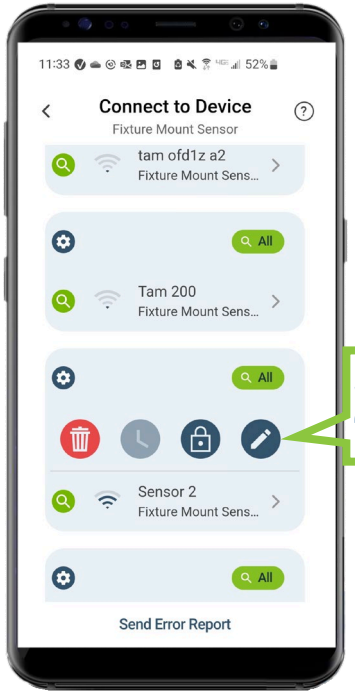
Grouped sensors will now appear in a light gray rectangle

Adding Additional Sensors to a Group that has Already Been Created

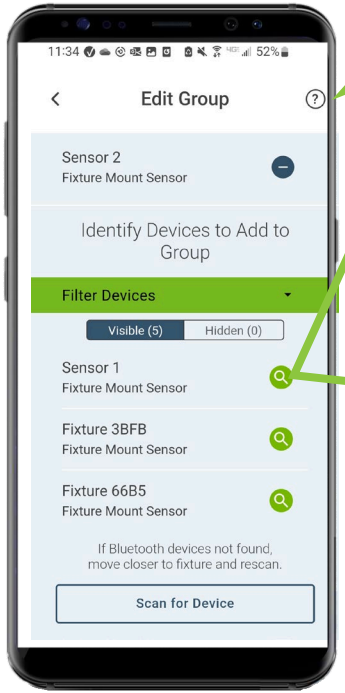
Select "Gear" on group you would like to add sensor to



Tip: Select "Identify All" to identify all sensors in a Group; RGB LED and fixture lights will blink ON/OFF for all sensors in the group



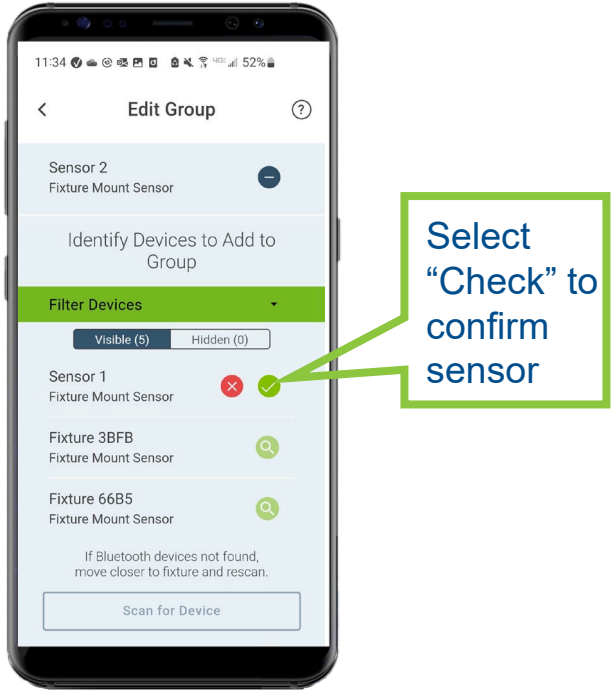
Select "Pencil"



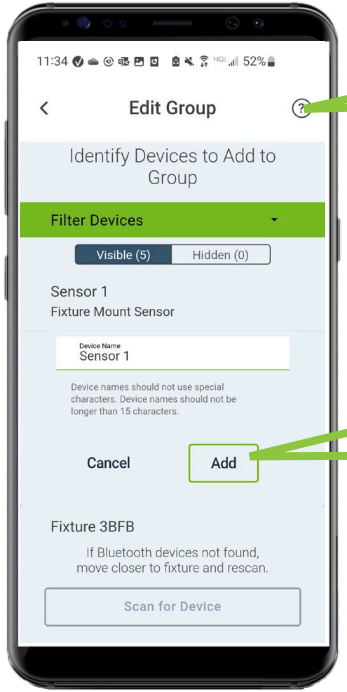
Helpful Hints

Select Magnifying Glass of Sensor you would like to add; light with sensor attached will blink to indicate the sensor you've selected

Adding Additional Sensors to a Group that has Already Been Created, Cont'd



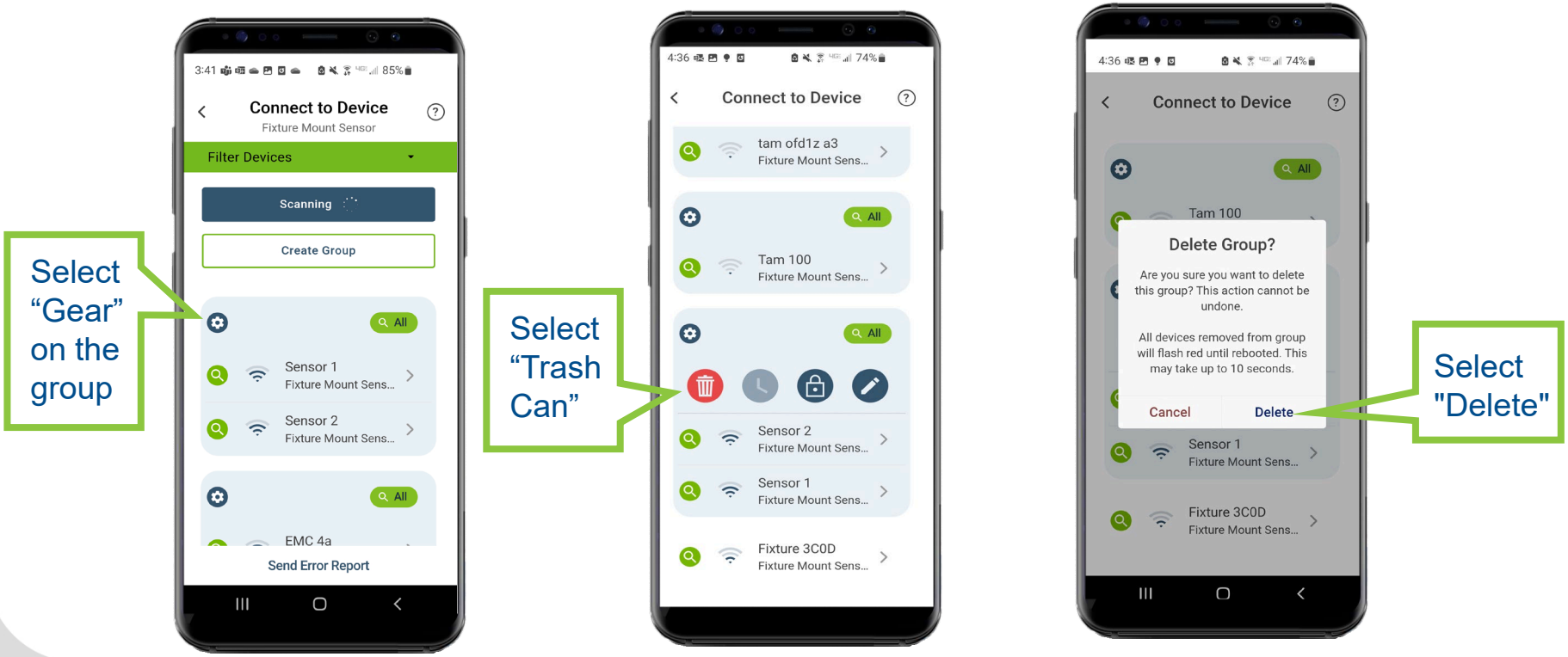
Select "Check" to confirm sensor



Helpful Hints

Select "Add"

Removing a Group



Scheduling

App Guide

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Scheduling Overview:

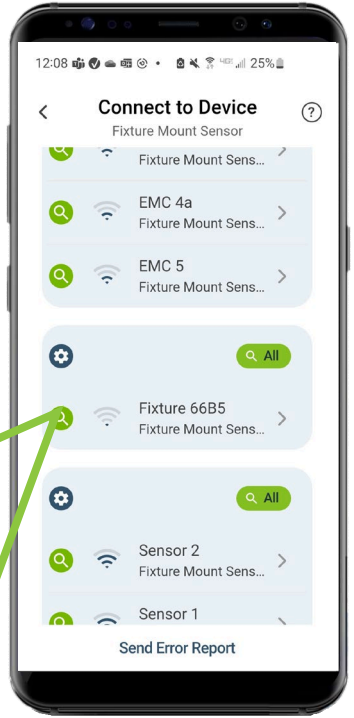
- The CMS 0-10V dimming models (AC705, ACY15, and ACY20) have a built-in time clock
- Schedules can be run on individual sensors or in a group of sensors
- A group must contain at least one of the 0-10V dimming models to run a schedule
- With scheduling, you can have sensors behave differently based on the time of day and/or day of the week to maximize energy savings or change lighting behaviors based on how the space is being used
    - Ability to change light level, operating mode, timeout, partial-ON & OFF, and daylight mode
- Scheduling can be done individually or shared across a group
- For best results sync date / time / location settings with you phone when creating schedules

Note: must be connected to a CMS via the Smart Sensor App to initiate the schedule feature.

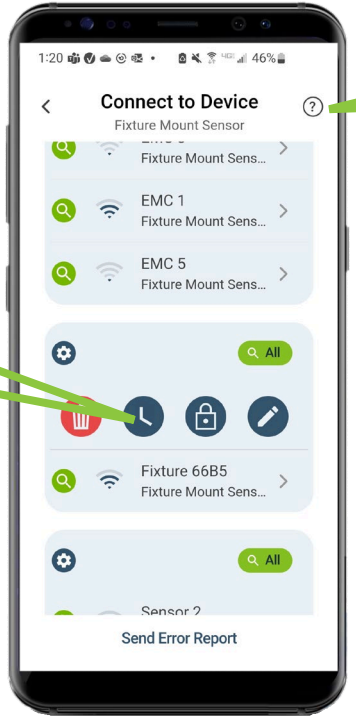
Creating Schedules and Behaviors for a Group of Sensors

Select “Magnifying Glass” on Sensor or Group of sensors you’d like to create a schedule for

NOTE: to create a schedule for an individual sensor (if not part of a group) go to “Behaviors & Schedules” in the Advanced Settings location



Select “Clock”



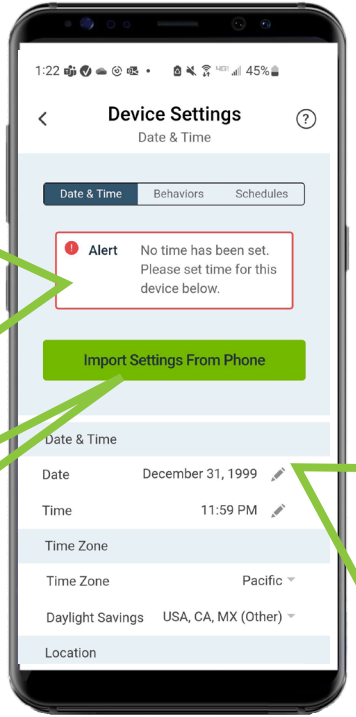
Helpful Hints

The “Schedules and Behaviors” part of the Leviton Smart Sensor App allows you to program certain lighting control behaviors to take effect during the schedules you choose.

Creating Schedules and Behaviors for a Group of Sensors

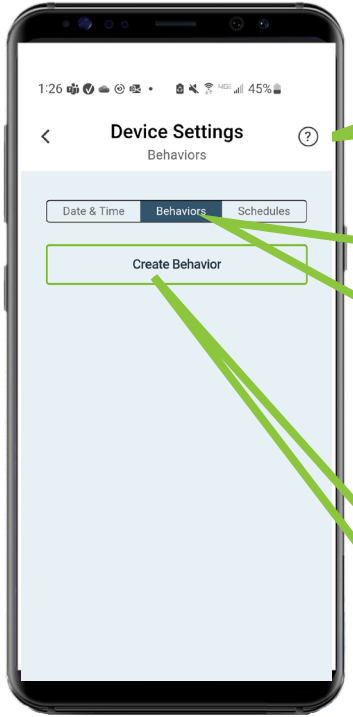
You will see an alert if you have not yet up the time settings in the Leviton Smart Sensor App. Having the correct time setting will allow you to correctly set schedules and behaviors for your sensors.

Option A: easily import Time settings from your phone



Option B: manually set your settings

Note: if schedules include actions based on sunrise or sunset, must include location details



Helpful Hints

Select the next “Behaviors” Tab to move on to creating Behaviors for the schedule you would like to set

Select “Create Behavior”

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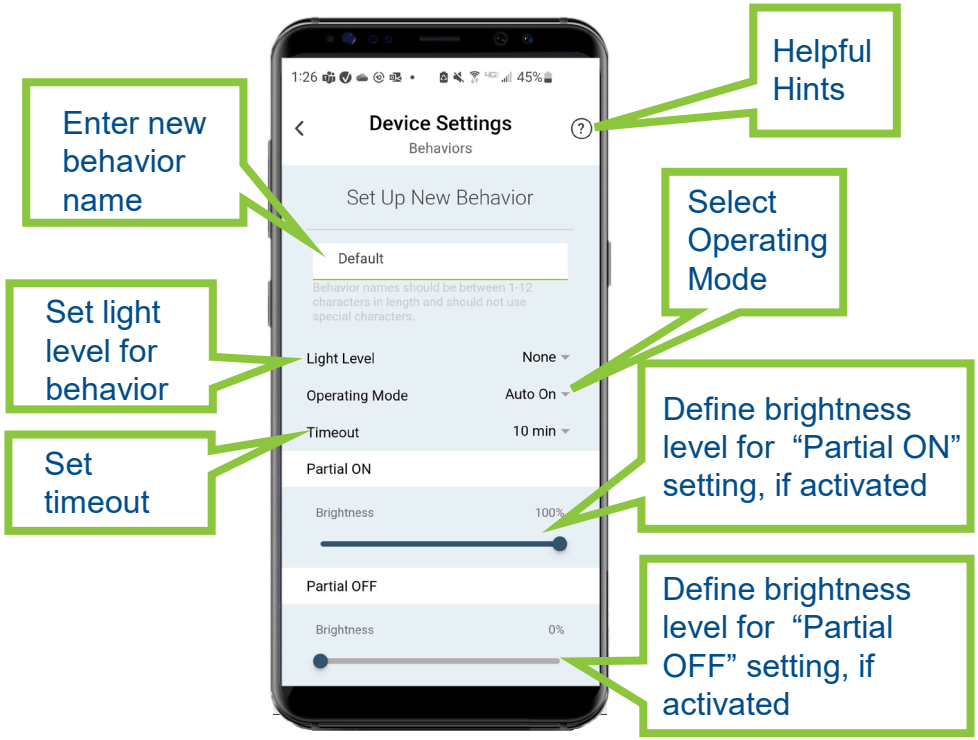
Creating Schedules and Behaviors for a Group of Sensors

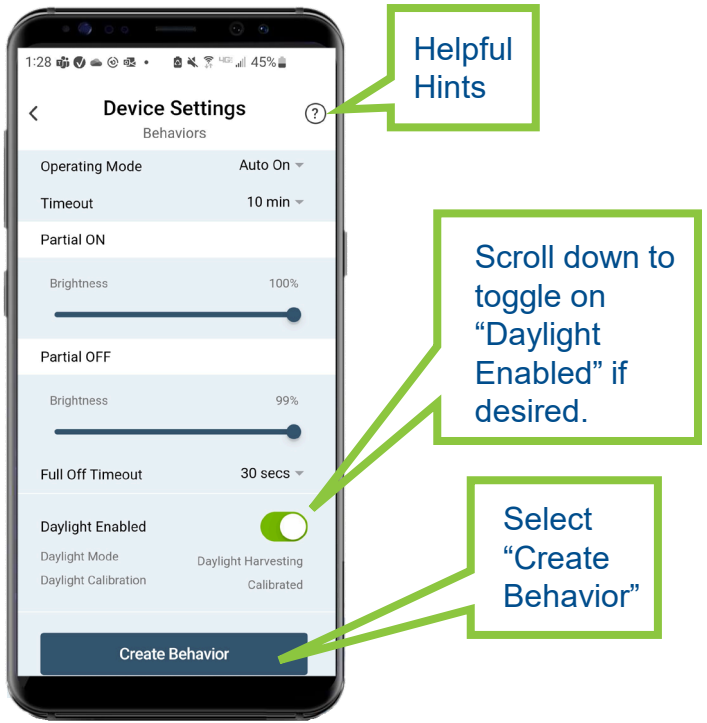


Operating mode options:

- Auto ON: Sensor automatically turns light ON with Occupancy, default is 100%; level can be adjusted.
- Auto OFF: Sensor automatically turns light Lights turn off and OFF with Vacancy, default is 0%; level can be adjusted.
- Photocell Only: Disables the occupancy sensor and lights ON and OFF and/or dims them UP or DOWN based on ambient lighting conditions only.

Level: Devices will be held at the specified brightness level for the duration of the schedule running this behavior.

Creating Schedules and Behaviors for a Group of Sensors



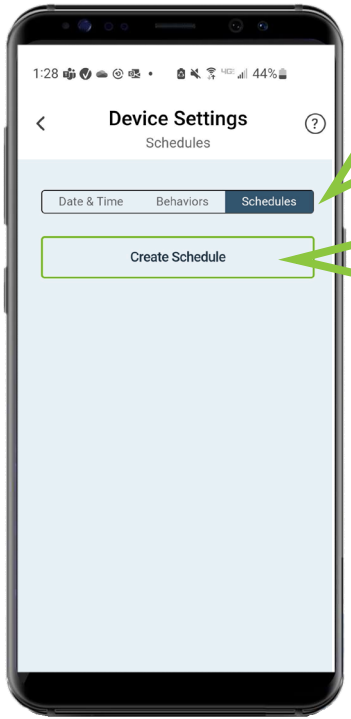
Timeout:

- Not available in "Photocell Only" mode.
- Turns lights off to desired Auto Off level at desired time between 20 seconds and 60 minutes.

Full Off Timeout:

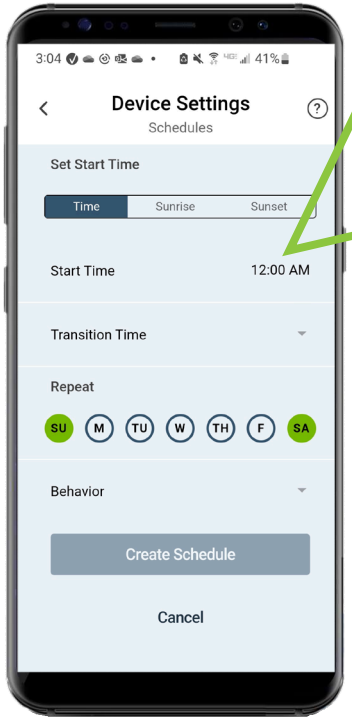
- Secondary Timeout feature; turn light off fully at desired time between 20 between 20 seconds and 60 minutes.

Creating Schedules and Behaviors for a Group of Sensors

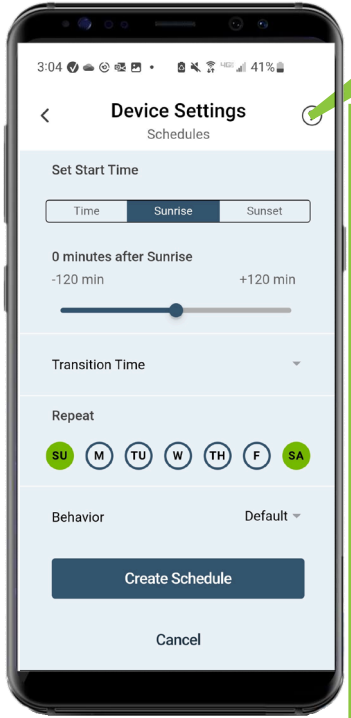


Select "Schedules" tab

Select "Create Schedule"



Select start time: choose between setting a manual time, or, schedule to start before or after sunrise or sunset



Helpful Hints

Note: A schedule can be set to begin at a certain time, or to begin 120 minutes before or after sunrise or sunset. Select the "Sunrise" or "Sunset" tab to go through the same process of creating a schedule with the exception of starting before or after sunset rather than at a specific time.

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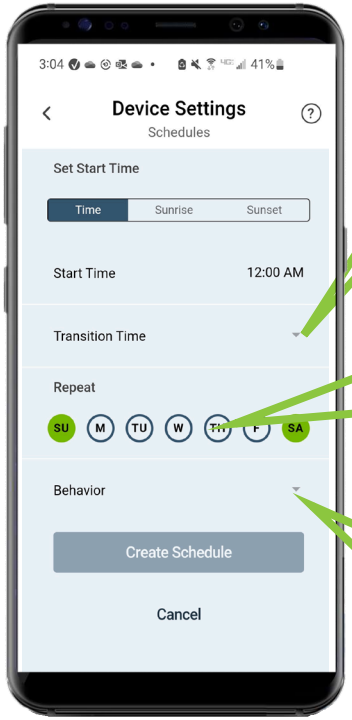
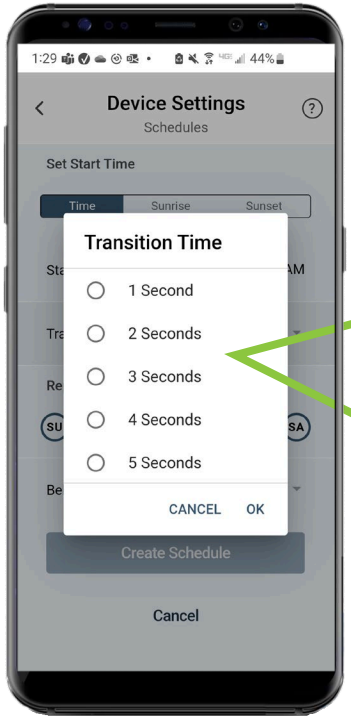
Creating Schedules and Behaviors for a Group of Sensors, Part 5



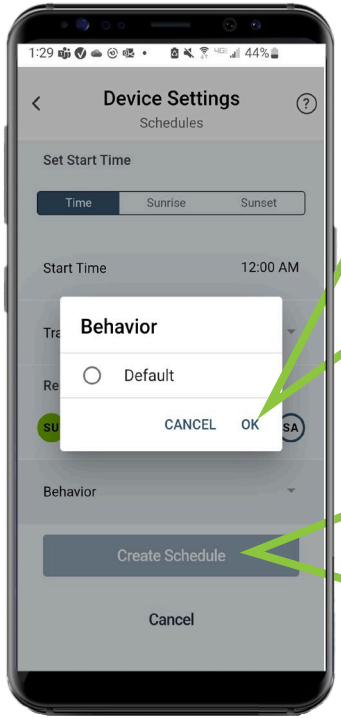
Select transition time

Select days to repeat schedule

Select behavior



Shown: Transition Time detail. Transition time sets how long the behavior will gradually transition from previous state. Select “OK”.



Shown: Behavior detail. Select previously created Behavior to apply to schedule. Select “OK”

Select “Create Schedule” once satisfied with the settings chosen

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Thank You

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