

DIMMING CONTROLLER

F series



This guide covers the “F” series of the Dimming Controller, model numbers ERDRC-FDU-120/277 for input voltages of 120 or 277VAC and ERDRC-FDU-120/347 for input voltages of 120 or 347VAC. Both models are equipped with a 902 MHz radio.

The box contents includes the controller with lock nut and installation guide.

Product Overview

The ERDRC-FDU controller is intended for indoor use only.

The Dimming Controller uses wireless technology to monitor any room’s environment, eliminating much of the wiring normally required for distributed lighting control. This translates into quick installations with less disruption to occupants, allowing facilities to accelerate retrofit schedules and start saving money sooner. The controller has patented Smart Click and Simple Tap technology which allows installers and facility operators to manage configuration settings without any tools, reducing call-backs and installation expense.

Controller Operation

The controller can activate lighting loads with received input from a linked sensor or switch.

As a lighting controller, it operates lights based on:

- ambient light levels monitored by an wireless photo sensor
- occupancy state monitored by a wireless occupancy sensor
- switch action from a wireless wall switch
- gateway control implementing scheduled or other events

The controller will fade lights up or down using the dimming output for a switched ON or OFF event. The controller can also be configured to fade lights based on an occupancy sensor ON or OFF event.

The controller automatically detects when the dimming lines are connected to a current sourcing load. When the purple and gray dimming interface wires are un-connected, the dimming interface is disabled and fade timers are removed so the relay's action is immediate upon the ON/OFF event. The controller does support current sinking loads configurable using Garibaldi commissioning software. To determine if the load is current sinking or sourcing, refer to the fixture documentation under the ballast or driver specifications.

Changing the fade rates is possible using the Garibaldi configuration software.

Controller and Wall Switches

The controller works with the wireless single and dual rocker, wave and hand held switches. A switch ON action activates the relay closed (lights on) and the dimming output will increase to the last dim level. A quick double-press ON will fade up to maximum light output and accelerate the fade period to ½ second. A press OFF action will fade the lights down and then open the relay (lights off). A quick double-press OFF will accelerate the fade period to ½ second.

Echoflex switches can also be used as dimmer switches – press and hold the on or off side to modulate the dimming output up or down.

Controller and Timed Switches

The controller can be configured so the single and dual rocker switches become timed switches. An ON action closes the relay (lights on) and a timer is set to count down. Once the timer expires, the relay opens (lights off).

The time period is configurable and has 5 settings: no timer (default), 5 minutes, 15 minutes, 30 minutes and 1 hour. Additionally, if the user presses the wall switch ON multiple times (to a total of 5 presses), the timer interval is added for each ON press. If ON is pressed while the light's are on and the timer is counting down, an additional period of time is added to the timer total.

Example: if the timer setting is 1 hour and the user pressed the switch ON twice, the total timer period is 2 hours. If there is 30 minutes left on the timer and ON is pressed again, the timer is extended to 1 hour 30 minutes before the light's will turn off.

The controller will toggle the relay (flick-warn) 1 minute before the timer is due to expire to warn users of the pending OFF event.

To configure, the time period, refer to the section on "Configuring the Controller".

Occupancy Based Lighting Applications

The controller will turn the lights OFF when there is no motion detected in the room indicated by a linked motion sensor. If the application requires the lights to remain ON during vacant periods but at a dimmed level (i.e. warehouse or stairwell applications), a configuration property accessible using Garibaldi software can enable this feature.

Occupancy sensors only: When only occupancy sensors are linked to the controller, the sensor will automate the lights both ON and OFF.

Occupancy sensors with switches: When switches and sensors are linked, the controller will assume manual-ON, auto-OFF operation referred to as Vacancy Sensor Mode.

The controller can also be configured to turn the lights ON immediately (Auto-ON) with motion, see the section titled "Configuring the Controller".

Photo Inhibit: This feature requires a linked photo sensor. When photo-inhibit is enabled, the Auto-ON feature will be ignored when the natural light level measured by the light sensor is above the day-lighting set point. The photo inhibit feature will not turn lights OFF if the lights are ON.

Photo Inhibit Examples:

- Light level is < day-lighting set point – The lights do turn ON automatically when you enter the room.
- Light level is > day-lighting set point – The lights do not turn ON automatically when you enter the room.
- Lights are ON and the light level increases past day-lighting set point – The lights stay ON.
- Lights are OFF and the light level decreases past day-lighting set point – The lights will turn ON upon the next motion detected by the occupancy sensor.

Daylight Harvesting Applications

The controller will modulate the light intensity from a dimming fixture based on the ambient light level in the room. A wireless photo sensor monitors light levels and must be linked to the controller to provide the light level in the room.

The daylight control application has several variables:

- Maximum dimming level - the highest level the dimming output will reach.
- Minimum dimming level - the lowest level the dimming output will reach.
- Lighting set point - the daylight control set point serves two purposes, closed loop control and open loop control.

Closed Loop Control - When the controller is configured for daylight harvesting and set to closed loop control, the set point becomes the absolute value in percent of light the controller will try to attain.

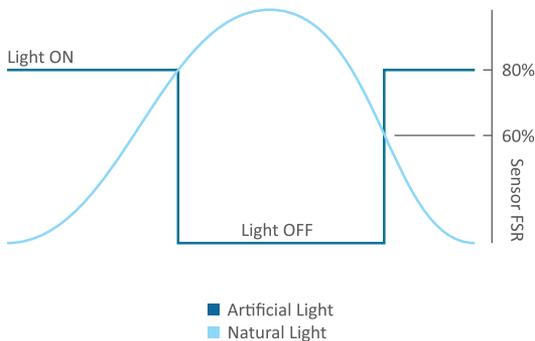
Closed Loop Daylight Control example: A project specification item details that a certain value of light must be measured on a desktop. The dimming light fixture providing light to the desktop is controlled. The light sensor is located over the desk facing downwards. Place a hand-held light sensor on the desktop and using a linked switch, dim the lights up or down until the sensor matches the specification value. Use Simple Tap to capture the light level as the daylight control set point.

NOTE: This process is best performed when there is no natural light; either close the blinds or complete this step at night.

Open Loop Control - When the controller is configured for daylight harvesting and set to open loop control, the set point is where the dimming output begins to dim the fixture as the natural light increases.

NOTE: The TAP light sensor is designed to be mounted indoors to monitor reflected (not direct) natural light levels.

Open Loop Daylight Control example: A project requirement item details that the open area office lights shall dim down when sufficient natural light is present. Mount the wireless light sensor so it is facing downwards and monitoring reflected natural light. The Echoflex light sensor has two ranges; 0-500 lux (0-50 foot-candles) and 0-1024 lux (0-100 foot-candles). The lighting



set point default value is 60% of the sensors Full Scale Range (FSR). If the range is set to 50FC (500 lux), the controller will begin dimming down when the sensor records 30FC (300 lux) and will reach the minimum dimming level at 100% or 50FC (500 lux).

Setting the set point is covered later in this document under “Configuring the Controller”.

The daylight harvesting application will override the Auto-ON feature of occupancy sensors if the light level is sufficient and calls for the lights to be off.

The daylight harvesting application can be overridden by a manual wall switch when the light is off by clicking on. If the light level remains above the Light-OFF-Set point, the controller will turn the light off again after 250 seconds.

The daylight harvesting application does not affect the operation of the wall switch or motion sensor when the light is on. If the light is on, either the switch or motion sensor can override the light off.

See the section on Occupancy Based Lighting Application - Photo-inhibit for alternative functionality.

Radio Range Confirmation

The “F series” controllers includes patent pending technology that works with all Echoflex sensors equipped with the range confirmation feature to provide visual feedback of a linked sensors signal strength for optimal sensor placement.

To evaluate the radio signal strength, the sensor must be also support the test and be linked to the controller. Check the sensors documentation to find out if it supports radio range confirmation testing. Do not have any repeaters in the controllers vicinity enabled during the test.

The range confirmation test is invoked at the sensor and sends unique telegrams to the controller. The controller will evaluate the signal strength from the sensor and send back a unique telegram containing the strongest signal value received. This value is displayed at the sensor using color LEDs.

Consult the sensor installation guide for more details.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: ELECTRICAL SHOCK HAZARD - THE CONTROLLER USES HIGH VOLTAGE AND SHOULD ONLY BE INSTALLED BY A QUALIFIED INSTALLER OR ELECTRICIAN. FOLLOW ALL APPLICABLE ELECTRICAL CODES IN THE COUNTRY OF INSTALLATION. INDOOR USE ONLY.

Preparing to Install the Controller

The controller is mounted to an electrical junction box or panel with a ½” threaded nipple. The controller must be mounted on the outside of a junction box either directly at the electrical load or before the load in the circuit. The controller is for indoor use only. You will require hand tools to gain access to the junction box and remove any cover plates or other hardware.

NOTE: If the circuit will have an additional hard wired switch, wire the controller in series before the switch.

Installing the Controller

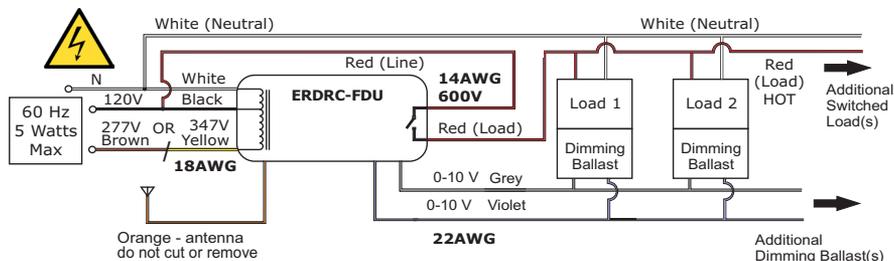
Review these instructions completely before installing the controller.

1. Locate the circuit breaker panel and turn off the power to the circuit.
2. Remove all face plates and other hardware from the junction box so you can access the high voltage wires.
3. The controller is mounted to the exterior of the junction box or panel with the ½” threaded nipple.
4. Refer to the wiring diagram to connect the controller to the line power, neutral and load wires. Use wire nuts on all connections and cap any bare wires.

5. Replace the junction box faceplate.
6. Restore power to the circuit.
7. Refer to the section in this guide titled LEARN Button to assign a switch to the controller. Alternatively, refer to the Smart Click instructions for assigning switches remotely.

Controller Wiring Diagram

Line Voltage choose either Black 120V line power or Commercial Voltage (Brown - 277V on model ERDRC-FDU-120/277) or (Yellow - 347V on model ERDRC-FDU-120/347)
 -Low voltage wiring is optional.



TIP: To link the first switch; triple click a wireless wall switch 3 times ON, followed by triple click OFF, then again triple click ON, all within 5 seconds. Use this switch to verify the controller relay is turning the lights on and off.

Wiring Instructions

Power to the controller is connected between the White (Neutral) and the Black (120V) Line power. Optionally, commercial voltages can be applied between the White (Neutral) and the models commercial voltage: Brown(277V) or Yellow(347V).

The controller has an orange external antenna. Do not cut, cap or connect this wire.

Use only approved wire. Cap off all unused wires except the antenna wire.

The violet and gray lines can be used to provide 0-10V control of a dimming ballast

Connection	Color	Specification
LOAD x 2	Red	14AWG, 600V
Neutral	White	18AWG
Line 120VAC	Black	18AWG
Line 277VAC	Brown	18AWG
Line 347VAC	Yellow	18AWG
Dimming 0-10V	Violet	22AWG
Dimming GND	Grey	22AWG

Diagnostic LED's and buttons

LEARN button

The LEARN button is used to link switches or sensors to the controller.

1. Press the button marked LEARN for a half second. In link mode the LEARN LED will stay ON and the POWER LED will toggle every 2 second.
2. Using the switch that will be linked to the controller, press the wall switch ON three times. If linking a sensor, press the sensors TEACH or LINK button, refer to the sensor documentation. The POWER LED will remain lit for 4 seconds while it links the new device. It will resume toggling allowing you to link another device up to a total of 20 devices.

NOTE: Linking a switch or sensor that is already linked to a controller, will remove or unlink it from the controller.

3. To exit link mode, press the LEARN button on the controller again for a half second. Link mode will also time out after no activity in 30 seconds.

CLEAR button

The CLEAR button erases all devices linked to the controller and resets the controller to factory default settings.

1. Press the CLEAR button (approximately 5 seconds) until the green LEARN LED blinks on.

LED Blink Codes and Operation

The table below describes the LED activity & associated mode of the controller.

Description	Learn LED	Power LED	Relay
LINK mode	ON	Toggle 2 sec.	Toggle
Storing ID	ON	ON 4 sec.	ON 4 seconds
Clearing ID	ON	OFF 4 sec.	OFF 4 seconds
CLEAR mode	ON 1 sec.	N/A	ON 1 sec.

Normal Operating Mode - number of long blinks indicates the linked device type followed by short blinks counting the number of devices linked.

Description	Learn LED	Power LED
Factory Default	OFF	ON Solid
with linked switch(es)	OFF	1 long blink followed by short blinks counting switches repeatedly
with linked occupancy sensor(s)	OFF	2 long blinks followed by short blinks counting sensors repeatedly
with linked photo sensor(s)	OFF	3 long blinks followed by short blinks counting sensors repeatedly
with central command	OFF	4 long blinks followed by short blinks counting sensors repeatedly

Configuring the Controller

There are a few methods of configuring parameters in the controller. Simple Tap is a quick method of changing a parameters setting, one at a time. For accessing the complete set of configuration parameters, use the Smart Click process on the following pages.

There are three methods of configuring parameters in the controller.

1. Simple Tap
2. Smart Click
3. Garibaldi Commissioning Software (not covered in this guide)

Simple Tap Instructions

Simple Tap uses the switches and sensors that are linked to the controller to set the associated configuration parameters. You must be able to access the sensors teach button or the switches to perform the Simple Tap process.

If the sensor is linked to multiple controllers and you do not want to make changes to all, turn the controllers relay off (lights off) to ignore the Simple Tap changes.

Simple Tap allows you to:

- Enable or disable the motion sensor Auto-ON feature
- Set the motion sensor Auto-OFF timer
- Select Daylight Harvesting or Photo-Inhibit mode
- Set the Light ON/OFF dimming set points for closed loop or open loop

Disable/Enable the Auto-ON feature

1. With the light on, tap the occupancy sensors teach button followed by three quick consecutive clicks of a linked wall switch ON.
2. To enable Auto-ON, click once more ON; to disable click OFF. The light will blink once to confirm the change.

Set the Motion Sensor Auto-OFF timer

1. With the light on, tap the occupancy sensors teach button to reset the timer period. There are 6 possible settings and the number of taps on the button counts the number according to the time period, see the table below. Level 1 (time out 0 seconds - demo mode) is set by tapping 3 times, consecutive taps up to a maximum of 8 taps is Level 6 (time out 25 minutes). The relay/light will blink once on the third tap and then begin counting the level set after 3 seconds.

Taps	Occ. Sensor Timer	Light Blinks
3 taps*	0 sec.	1 blink
4 taps	5 min.	2 blinks
5 taps	10 min.	3 blinks
6 taps	15 min.	4 blinks
7 taps	20 min.	5 blinks
8 taps	25 min.	6 blinks

* for demonstration purposes only

Daylight Harvesting or Photo Inhibit Mode

You can select daylight harvesting mode (default) or photo-inhibit mode. For more information on these operating modes, see the sections at the beginning

of this guide titled Occupancy Based Lighting Applications – Photo Inhibit and Daylight Harvesting Application.

A light sensor and wall switch must be linked to the controller before proceeding.

1. Press the photo sensors TEACH button once followed by clicking the switch ON three times within 5 seconds.
2. Either:
 - click the switch once more ON to activate Photo-Inhibit operating mode.
 - or click the switch once OFF to activate Daylight harvesting operating mode.

The set point values are a percentage of the full range of the linked photo sensor.

Set the Lighting Set Point

The controller will turn the light on and off or will modulate the dimming output (if enabled) based on the measured light level from the light sensor.

The lighting set point is used to adjust how the dimming and relay respond to the relative light levels.

There are two methods of setting the set-point.

1. Closed Loop

You can use the light sensor to function as a closed loop sensor. When set as a closed loop sensor, the controller will dim the lights until the light level recorded at the sensor meets the set point value. For more information on this operating mode, see the section at the beginning of this guide titled Daylight Harvesting Application. A light sensor must be linked to the controller before proceeding.

NOTE: This process is best performed when there is no natural light; either close the blinds or complete this step at night.

1. With the light on, adjust the light level from the fixture using the switch until it matches the desired light level.
2. Tap the light sensor's teach button 3 times to set the daylight harvesting parameters to a closed loop function. The light will blink once to acknowledge the change.

Open Loop

The lighting set-point can be set to an absolute value useful in open-loop sensor applications. If the dimming output is enabled, the absolute value selected becomes the maximum dimming set-point. If the output is disabled, the absolute value selected becomes the Light ON Set point, see the table below.

1. With the light on, tap the light sensors teach button 4 times to set the set point to 20%.
2. Tap the button additional times incrementing the set point value by 20%. Five (5) taps would equal 40%, seven (7) taps would be 80%.
3. The light will blink once at three taps and then begin blinking according to the level set to confirm the change after 3 seconds.

Dimming Output Enabled			
Taps	Max. Dim SP	Min. Dim SP	Blinks
4 taps	20%	100%	2 blinks
5 taps	40%	100%	3 blinks
6 taps	60%	100%	4 blinks
7 taps	80%	100%	5 blinks

Dimming Output Disabled			
Taps	Light ON	Light OFF	Blinks
4 taps	20%	40%	2 blinks
5 taps	40%	60%	3 blinks
6 taps	60%	80%	4 blinks
7 taps	80%	100%	5 blinks

Using Smart Click to Configure the Controller

Configuring the controller requires that at least one wireless wall or hand held switch is linked to the controller.

The Smart Click menu includes these parameters:

- Level 1 Learn Mode
- Level 2 Clear Switch/Clear All
- Level 3 Repeater Function
- Level 4 Status Telegram Function
- Level 5 Time out Periods
- Level 6 Auto-ON with Motion Function
- Level 7 Dimming Output Function
- Level 8 Daylight Harvesting Set-point
- Level 9 Maximum Dimming Output
- Level 10 Minimum Dimming Output

Linking the First Switch

Using this method of linking a switch will only work if the controller does not have any other linked devices. Use the learn button or Smart Click to link additional switches.

1. Press the CLEAR button until the green LEARN led blinks ON, about 6 seconds.
2. With the controller cleared or in the factory default state, click the wireless switch ON three times, OFF three times and ON three times quickly within 5 seconds. The red POWER led will begin a blinking pattern [one long followed by one short], see the section on LED blink codes.

Entering Smart Click Configuration Mode

It is important to have feedback (attached light) from the controller during configuration. Perform the configuration changes when the controller has been

installed on a lighting circuit. The switch used to configure a controller using Smart Click should only be linked to the controller you're configuring. Add an additional switch if necessary.

1. Using a linked switch (see above), turn the light OFF.
2. Press the switch OFF, and hold until the light turns on, about 10 seconds.
3. Press ON until the light blinks, about 5 seconds. The light will repeatedly blink once every 5 seconds indicating it is at level 1 of Smart Click.

NOTE: You can exit Smart Click at any time by pressing OFF for 5 seconds.

Level 1 - Linking an additional switch or sensor

1. Enter **Smart Click configuration mode** and with the light blinking once, press ON for 3 seconds. The light will begin blinking ON/OFF faster, once every second.
2. Add additional wireless switches by clicking the new switch ON 3 times quickly. Add sensors by pressing the TEACH or LINK button on the sensor.
3. To exit Smart Click press OFF for 5 seconds.

Level 2 - Clear switches or sensors (restore factory defaults)

1. Enter **Smart Click configuration mode** and click the switch ON once so the light is blinking twice.
2. Press ON for three seconds.
3. Click the switch ON 5 times to clear the switch, click ON 5 times again to clear ALL switches and sensors and reset the controller to factory defaults.
4. Press OFF for 5 seconds to complete clearing and exit Smart Click.

Level 3 - Repeater Function - repeats any telegram within range.

The repeater function can be enabled/disabled by accessing the controller buttons.

1. Press the Clear button and hold, then quickly press the Learn button; once to disable, twice to enable single hop and three times to enable dual hop repeating. The learn LED will blink the corresponding value of the LEARN button presses.
2. Release the Clear button.

If there is no access to the controllers buttons, follow these Smart Click steps.

1. Enter **Smart Click configuration mode** and click the switch ON twice until the light is blinking three times.
2. Press ON for 3 seconds. If the repeater function is enabled the light will turn ON, if disabled the light will be OFF.
3. Click ON to activate the single hop repeating function , OFF to deactivate. There is no selection for enabling dual hop repeating with Smart Click.
4. Exit Smart Click by pressing OFF for 5 seconds.

Level 4 - Status Telegram - the controller can broadcast a status telegram per EEP: A5-11-01. The telegram will broadcast every 100 seconds.. If the controller has a wired occupancy sensor connected to the low voltage input, this sensor

status can be shared with other controllers. The controller must be first linked with the receiving controllers.

Enabling the status telegram activates the shared occupancy feature and also sends the learn command to the other controllers for linking. The status telegram can be enabled/disabled by accessing the controller buttons.

1. Press the Learn button and hold, press the Clear button once to disable, twice to enable (this sends the learn telegram).
2. Release the Learn button. The learn LED will blink once when disabling, twice when enabling this telegram.

If there is no access to the controllers buttons, follow these Smart Click steps.

1. Enter **Smart Click Configuration Mode** and click the switch three times until the light is blinking four times.
2. Click ON for 3 seconds. If the status telegram function is enabled the light will turn ON, if disabled the light will be OFF.
3. Click ON to activate this function, OFF to deactivate.
4. Exit Smart Click by pressing OFF for 5 seconds.

Level 5 - Timeouts - the controller can be configured to wait a period of time after an ON event from a wireless switch or occupancy sensor before turning the load OFF (auto off).

1. Enter **Smart Click Configuration Mode** and click the switch ON four times until the light is blinking five times.
2. Press ON for 3 seconds. The light will turn OFF and then ON per the table settings below.
3. Using the linked switch, click ON to increase the timeout or OFF to decrease the timeout, in 5 minute increments.
4. Exit Smart Click by pressing OFF for 5 seconds.

Light	Timed Switch	Occ. Sensor Timer
OFF	no auto-off	0 sec. (demo)
1 Blink	5 min.	5 min.
2 Blinks	15 min.	10 min.
3 Blinks	30 min.	15 min.
4 Blinks	60 min.	20 min.
5 Blinks	N/A	25 min.

Level 6 - Auto ON Function - use with a motion sensor to turn lights ON automatically when motion is detected. If a motion sensor is used with no switch then Auto-ON is enabled automatically. If a switch is linked later, Auto-ON is disabled.

1. Enter **Smart Click Configuration Mode** and click the switch ON five times until the light is blinking six times.
2. Press ON for 3 seconds. If the auto-on function is enabled the light will turn

ON, if disabled the light will be OFF.

3. Click ON to activate this function, OFF to deactivate.
4. Exit Smart Click by pressing OFF for 5 seconds.

Level 7 - Dimming Ballast Output -Enables or disables the dimming ballast output.

1. Enter **Smart Click Configuration Mode** and click the switch ON or OFF until the light is blinking seven times.
2. Press ON for 3 seconds. If the dimming output is enabled the light will turn ON, if disabled the light will be OFF
3. Click ON to activate this function, OFF to deactivate.
4. Exit Smart Click by pressing OFF for 5 seconds.

Level 8 - Lighting Set point - The set point is a single value that can affect how the controller manages the light output depending on if the controller is setup for daylight harvesting or photo inhibit applications.

When set for photo inhibit operation, the Auto-ON feature associated with a linked occupancy sensor will be ignored when the natural light level measured by the light sensor is above the lighting set point. The photo inhibit feature will not turn lights OFF if the lights are ON.

Photo Inhibit Examples:

- Light level is < day-lighting set point – The lights do turn ON automatically when you enter the room.
- Light level is > day-lighting set point – The lights do not turn ON automatically when you enter the room.
- Lights are ON and the light level increases past day-lighting set point – The lights stay ON.
- Lights are OFF and the light level decreases past day-lighting set point – The lights will turn ON upon the next motion detected by the occupancy sensor.

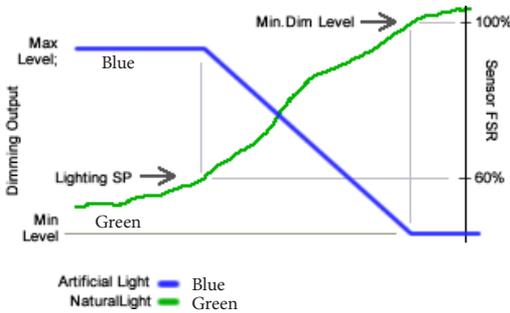
When set for daylight harvesting operation, the set-point is used with a photo sensor (light sensor) and will automatically turn lights on and off or modulate dimming fixtures depending on ambient light levels.

You can use the light sensor to function as a closed loop sensor. When set as a closed loop sensor, the controller will dim the lights until the light level recorded at the sensor meets the set-point value. For more information on this operating mode, see the section at the beginning of this guide titled Daylight Harvesting Application.

If the light from the fixture does not impact the light reading at the sensor then it is an open loop application. When the dimming output is enabled, the value selected becomes the maximum dimming set point. With the dimming output disabled, the value becomes the Light-ON-Set point.

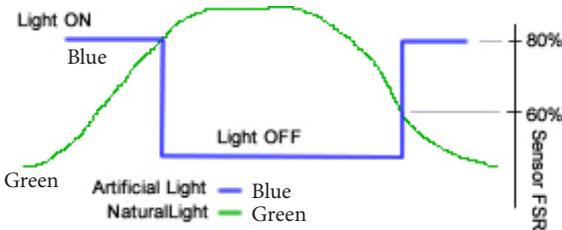
Control Response with Dimming Output Enabled

In the diagram below, the blue line indicates the dimming output. The output will begin lowering as the natural light level increases (green line). The point where the light output begins dimming down is the lighting set point (default 60% sensor FSR). The minimum dimming level is set to 100% sensor FSR.



Control Response with Dimming Output Disabled

In the diagram below, the blue line indicates the fixture light output. As the natural light increases (green line), the relay will open at a level 20% greater than the set point value (default 60% sensor FSR). As the natural light decreases, the relay will close once the light level decreases past the lighting set point.



To adjust the light set-point:

1. Enter **Smart Click Configuration Mode** and click the switch ON seven times until the light is blinking eight times.
2. Press ON for 3 seconds. Default setting is 60% of the light sensors full scale range. There are 4 steps from 20% to 80%. The light will blink the step count. (see table below). Click on to increase the set-point, off to decrease the set-point.

Dimming Output Enabled			
Taps	Max. Dim SP	Min. Dim SP	Blinks
4 taps	20%	100%	2 blinks
5 taps	40%	100%	3 blinks
6 taps	60%	100%	4 blinks
7 taps	80%	100%	5 blinks

Dimming Output Disabled			
Taps	Light ON	Light OFF	Blinks
4 taps	20%	40%	2 blinks
5 taps	40%	60%	3 blinks
6 taps	60%	80%	4 blinks
7 taps	80%	100%	5 blinks

3. Exit Smart Click by pressing OFF for 5 seconds.

Level 9 - Maximum Dimming Output Level - sets the maximum level of the dimming output.

1. Enter Smart Click Configuration Mode and click the switch ON eight times until the light is blinking nine times.
2. Press ON for 3 seconds. Default setting is 100%. Adjust the maximum light level to the brightness level desired by clicking ON to increase and OFF to decrease in 2% increments.
3. Exit Smart Click by pressing OFF for 5 seconds.

Level 10 - Minimum Dimming Output Level - sets the minimum level of the dimming output.

1. Enter Smart Click Configuration Mode and click the switch ON nine times until the light is blinking ten times.
2. Press ON for 3 seconds. Default setting is 9%. Adjust the min. light level to the brightness level desired by clicking ON to increase and OFF to decrease in 2% increments.
3. Exit Smart Click by pressing OFF for 5 seconds.

This concludes the configuration directions for the controller.

Default Settings for Controller

Repeater	disabled
Status	disabled
Dimming Output	auto-detect for current sourcing loads
Motion sensor Time-out	15 minutes
Switch Time-out	no time out
Auto-ON	enabled with no linked switch, disabled with linked wall switch
Light-ON-Set point	60% of sensor FSR
Light-OFF-Set point	100% of sensor FSR with dimming enabled 80% of sensor FSR will dimming disabled
Maximum Dimming Level	100%
Minimum Dimming Level	9%
Grace Timer	30 seconds

Status Feedback Telegram

EEP:A5-11-01	
DB_3 Illumination	0 510lx, linear n=0...255
DB_2 illumination	Set Point Min. ... Max., linear n=0...255
DB_1: Dimming Output	Level Min. ... Max., linear n=0...255
DB_0.BIT_7: Repeater	0b0 disabled, 0b1 enabled
DB_0.BIT_6: Power Relay Timer	0b0 disabled 0b1 enabled
DB_0.BIT_5: Daylight Harvesting	0b0 disabled 0b1 enabled
DB_0.BIT_4: Dimming	0b0 switching load 0b1 dimming load
DB_0.BIT_3: Learn button	0b0 Teach-in telegram 0b1 Data telegram
DB_0.BIT_2: Magnet Contact	0b0 open 0b1 closed
DB_0.BIT_1: Occupancy	0b0 unoccupied 0b1 occupied
DB_0.BIT_0: Power Relay	0b0 off 0b1 on

Listings

CEC	Title 24 compliant
ETL	Listed Component
	Conforms to UL Standard 508
	Certified to CAN/CSA Std C22.2 No.14
	UL 2043 Plenum rated



Regulatory Statements

FCC Part 15.231
Contains FCC ID: SZV-TCM320U
The enclosed device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(i.) this device may not cause harmful interference and
(ii.) this device must accept any interference received, including interference that may cause undesired operation.

IC RSS-210
Contains IC:5713A-TCM320U

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