OCCSensaBLE BASIC

Installation and User’ s Manual

Description and Operation

The OCCSensaBLE BASIC is a Bluetooth commercial LED lighting controller providing motion detection and daylight control. The controller is designed to mount on the bottom of the lighting fixture with a simply threaded nut installation process. It requires a DC supply voltage of 5 to 12 volts and generates a Pulse Width Modulation signal for controlling the LED power supply output. The PWM signal range is from 0 to 100%. This controller is designed to operate with an LED power supply that supplies an auxiliary low voltage power supply for controller power and has “dim to off” capability.

The controller utilizes a digital Passive InfraRed (PIR) detector for motion control and a digital ambient light sensor for daylight control. The PIR sensor is triggered by heat energy (infrared) emitted by a moving body or vehicle within the coverage area. Three Fresnel lenses are available for the PIR sensor to provide optimal detection coverage based on the height of installation.

The controller provides three daylight control modes of operation:

1. Dusk to dawn control turns the fixture on at dusk and off at dawn. During this period, motion detection can be configured to control the operation of the light. E.g. detected motion will turn the light to full brightness, after motion detection ceases for a period the light will be programmed to reduced brightness and may optionally be turned off after a period.
2. Part night lighting control will turn the light on at dusk and off at dawn. It will reduce the output of the light for a user specified period during the middle of the night.
3. Motion setpoint control allows the user to specify motion control based on the ambient light level. For the user specified ambient light setpoint, motion control will activate the light when the ambient light is below the setpoint.

The controller can operate any LED power supply that utilizes PWM dimming and provides the required DC power for the controller to operate.

The controller will operate a default “dusk to dawn” control profile unless reprogrammed using the Bluetooth mobile application provide for Android and iOS devices.

Specifications

Input voltage - 12VDC nominal, 5VDC min 15VDC max

Input current - 30mA max current

Output - Pulse Width Modulation dimming output 0 – 3.3 VDC, frequency 2kHz, 0 to 100% waveform

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Environmental

Operating Temperature: -40C to 80C
Operating Humidity: 20-90%
IP66 compliant

Control parameters:

Motion control sensitivity – low, medium, high
Max output hold time after motion – 1 minute to 4 hours
Min output hold time – off, 1 minute to 4 hours, always on
Motion setpoint – 100 lux to 2000 lux
Max output – 30% to 100%
Min output – 0% to 90%
Daylight Control modes – Dusk to Dawn, Part Night Lighting & Motion Setpoint
Dusk Level – 5 Lux to 550 Lux
Dawn Offset Level – 5 Lux to 250 Lux
Part Night Lighting
    Duration – 30 minutes to 12 hours
    Offset – -4 hours to +4 hours
    Time zone longitude error correction

PIR Lens

OCCSensaBLE-H – mounting height 28' to 40', detection range up to 50'
OCCSensaBLE-M – mounting height 15' to 32', detection range up to 35'
OCCSensaBLE-L – mounting height 10' to 15', detection range up to 25'

Weight: 98 grams

Dimensions:

Diameter: 82 mm
Height: 51 mm

ETL & CSA listed

Warranty - 5 years

Installation

1. The controller must be mounted to the bottom of the lighting fixture, with the PIR lens pointing down.
2. Choose a location in the lighting fixture that can accommodate the threaded portion of the controller and the retaining nut.
3. Drill a 1.375" hole in the housing, install the threaded portion of the controller through the hole and tighten the fastening nut. Make sure the rubber gasket used to seal the space between the controller housing and the bottom of the fixture remains located in the retention groove as the nut is tightened.
4. Ensure that power is OFF, connect the black, gray and purple wires to the corresponding wires on the LED power supply. Restore power.
5. If a different PIR lens is desired, the lens can be changed by turning one quarter turn in the CCW direction. Align the new lens on the retention pins on the controller body and turn one quarter turn CW until the retention pin clicks and locks into place.

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Lens Options

Three lens options are provided for fixture mounting heights from 10’ to 40’. The lenses recommended for taller mounting heights have a narrower field of view. The narrower field of view at taller heights maintains signal strength required for motion detection.

Wiring Connections

The controller is provided with three wires, two provide power for the controller and one is the PWM driver dimming control:

Black – DC power (+5v to +15v, 12v nominal)
Gray – Ground
Purple – PWM dimming

FCC Regulatory Statements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC Regulatory Statements

This device complies withIndustry Canada’ slicence-exemptRSSs. Operation is subject to the following two conditions:

1)This device may not cause interference; and

2)This device must accept any interference, including interference that may cause undesired operation of the device.

RADIO FREQUENCY (RF) EXPOSURE INFORMATION

The radiated output power of the Wireless Device is below the Innovation, Science and Economic Development Canada USED) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant With the ISED RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person’ s body).

AVIS DU CANADA, INNOVATION, SCIENCES ET DÉVELOPPEMENT ÉCONOMIQUE CANADA (ISED)

L’ émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d’ /nnovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L’ exploitation est autorisée aux deux conditions suivantes:

(1) L’ appareil ne doit pas produire de brouillage;

(2) L’ appareil doit accepter tout brouillage radioélectrique subi, mame si le brouillage est

susceptible d’ en compromettre le fonctionnement.

INFORMAFIONS CONCERNANT L’ EXPOSITION AUX FRÉQUENCES RADIO (RF)

La puissance de sortie rayonnée du dispositif sans fil est inférieure aux limites d’ exposition aux radiofréquences d’ lnnovation, Sciences et Développement économique Canada (ISED). Le dispositif sans fil doit étre utilisé de maniére á minimiser le potentiel de contact humain pendant le fonctionnement normal. Cet appareil a également été évalué et montré

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conforme aux limites d' exposition RF ISED dans des conditions d' exposition mobiles. (Les sont á plus de 20 cm du corps d' une personne).

OCCSensaBLE Mobile Application

The OCCSensaBLE™ mobile application is available for both iOS® and Android® devices. Search "OCCSensaBLE" in the app store to download.

The mobile app is a configuration tool used for modifying and testing the OCCSensaBLE™ Bluetooth enabled controller from a mobile device. It allows wireless access to see the current status and change the configuration of the OCCSensaBLE™ controller at a range of up to 100 feet. The controller will use the default system values if no configuration steps are performed.

The configuration tool steps the user through the configuration process using menus and prompts, providing a simple way to customize the controller based on the user requirements. It can discover multiple OCCSensaBLE™ controllers and display them based on signal strength and distance. When the configuration tool establishes a secure connection with the OCCSensaBLE™ controller, it will blink the associated luminaire providing a visual indication of the controller being configured. Once connected it can change the controller parameters such as motion control sensitivity, min/max output hold time, min/max output, daylight control mode, and more.

The configuration tool also allows for password protecting the OCCSensaBLE™ controller by locking it to a site location. When adding a new site location, a password is assigned to the site. When the controller is locked to the site, that password is stored in the controller. After locking a controller to the site, only someone with access to the site password can make changes to the controller. Multiple controllers can be locked to the same site, making it easy to password protect a large number of controllers.

With the configuration tool, a user has the ability save and upload a set of configuration parameters called Profiles. Profiles allow a user to easily or assign the same configuration parameters to multiple OCCSensaBLE™ controllers without having to manually configure each one. Profiles are stored in the app and can be assigned to any controller at any site.

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/ TV technician for help.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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