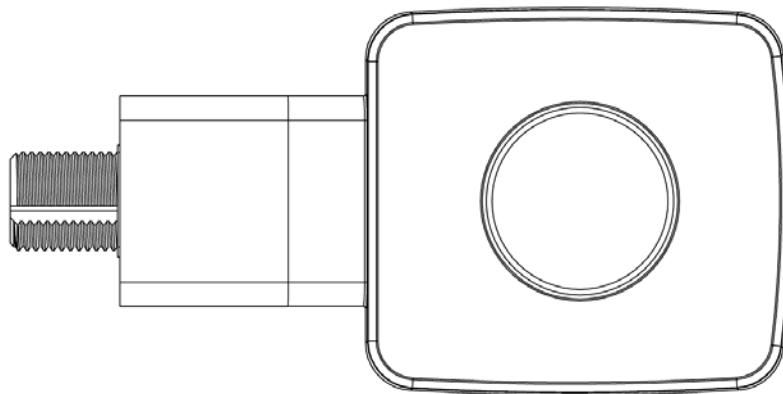


# Douglas Lighting Controls Bluetooth<sup>®</sup> Fixture Controller & Sensor

**BT-FMS-A**



## Installation Manual

**\*Patent Pending**

**This page intentionally blank.**

**WARNING!**

**SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES**

**For use in wet/damp locations.**

**Risk of Electric Shock.** All servicing should be performed by qualified service personnel. To reduce the risks of electric shock disconnect power supplies before servicing.

**SAVE THESE INSTRUCTIONS**

- READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- Be aware that Line Voltage Connections may be 120Vac or 277Vac or 347Vac
- Do not install near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use
  - Wireless devices are only for lighting control
  - Wireless controls cannot be used with portable heating appliances

---

# Table of Contents

<b>1. INTRODUCTION .....</b>	<b>5</b>
1.1. GENERAL DESCRIPTION .....	5
<b>2. DESIGN FEATURES.....</b>	<b>5</b>
<b>3. SPECIFICATIONS.....</b>	<b>6</b>
MOUNTING .....	6
POWER .....	6
LOAD RATINGS .....	6
WIRELESS RANGE.....	6
OPERATING ENVIRONMENT .....	6
APPROVALS:.....	6
WARRANTY.....	6
<b>4. DIMENSIONS .....</b>	<b>7</b>
<b>5. COVERAGE .....</b>	<b>8</b>
<b>6. INSTALLATION FEATURES .....</b>	<b>8</b>
<b>7. INSTALLATION / WIRING / COMMISSIONING .....</b>	<b>8</b>

---

## 1. INTRODUCTION

---

### 1.1. General Description

The Douglas Lighting Controls **Bluetooth**® Fixture Controller & Sensor provides automated individual and group control of light fixtures using onboard sensors and Bluetooth technology. It is easily installed for ON/OFF or bi-level light functionality. The daylight sensor provides additional energy savings by adjusting (0-10V dimming) the lights to work with the amount of natural daylight available in open-sided parking garages or from windows.

Configuration of the Douglas Lighting Controls Fixture Controller & Sensor is done conveniently at deck level with our Smartphone App using the Bluetooth protocol to communicate with the device. A wireless mesh network is created between devices for control over a group of Douglas Lighting Controls Bluetooth Fixture Controller & Sensors.

The Controller & Sensor has a maximum vertical range of 40 feet and is powered from the fixture. It is tested to applicable UL and CSA standards and enables users to meet ASHRAE 90.1 and Title 24 energy code requirements. Once the device(s) are configured, the system will automatically operate to control lighting based on occupancy in the area and the system settings.

Typical Applications: Parking Garages, Warehouses, Manufacturing Facilities.

---

## 2. DESIGN FEATURES

---

- Bluetooth Wireless Technology
- Occupancy sensor
- Daylight sensor
- Relay
- 360° coverage pattern
- Water-tight/waterproof design (IP65)
- 0-10V dimming, CLC, bi-level set-points, ON/OFF
- Deck level configuration using smartphone app

---

## 3. SPECIFICATIONS

---

### Mounting

- The device is designed to be mounted to a listed enclosure

### Power

- Line Voltage: 120/277/347VAC
- Frequency: 60Hz

### Load Ratings

- 800W @ 120VAC standard ballast
- 1200W @ 277VAC standard ballast
- 3300W @ 277VAC electronic ballast
- 1500W @ 347VAC standard ballast

### Wireless Range

- 150' Clear line of site. 50' through standard walls (distances may vary based on location and environment. Additional devices may be required at time of commissioning to ensure Bluetooth network integrity.)

### Operating Environment

- IP65, -40°C to +55°C (-40°F to +131°F)

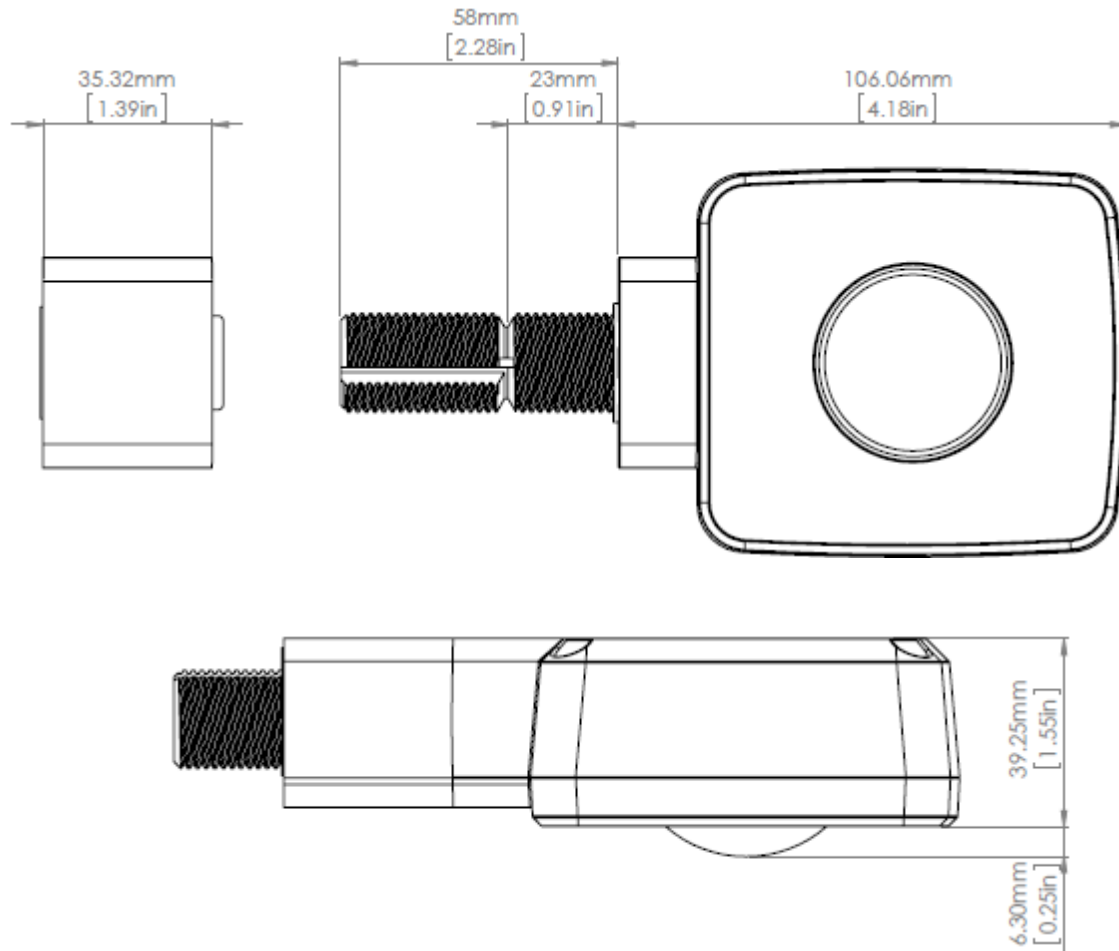
### Approvals:

- ETL Listed
- Certified to CAN/CSA Std. C22.2 No. 14
- Conforms to UL 508 Standard
- ASHRAE 90.1 Compliant
- CEC Title 24 Compliant
- Contains IC: 8254A-B1010SP0
- Contains FCC ID: W7Z-B1010SP0

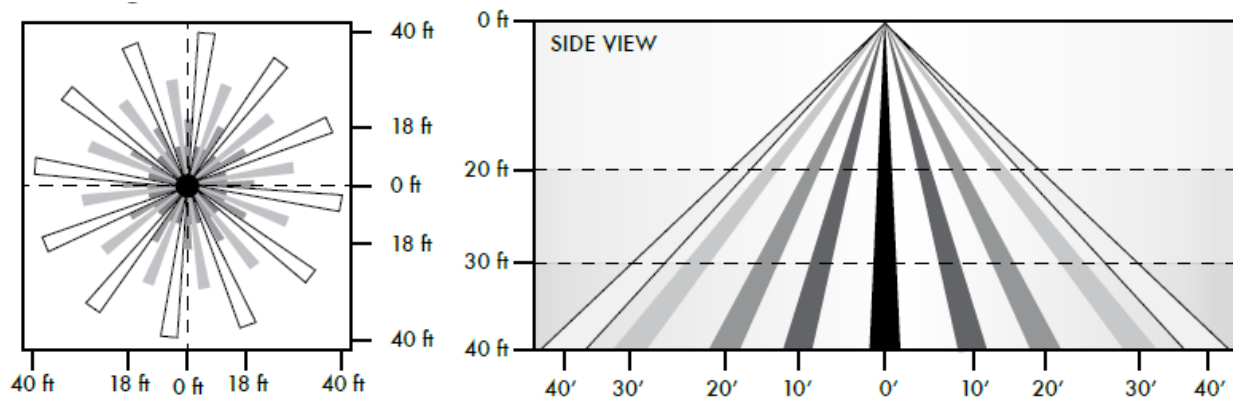
### Warranty

- Standard 1-year warranty – see Douglas Lighting Controls' warranty policy for complete details

## 4. DIMENSIONS



## 5. COVERAGE



## 6. INSTALLATION FEATURES

The device is designed to be mounted into a ½” knockout in a listed light fixture or electrical junction box or panel with an opening that can fit the threaded chase nipple.

- Thoughtful design to maximize sensor coverage range
- Bluetooth enabled for deck level configuration and wireless mesh networking

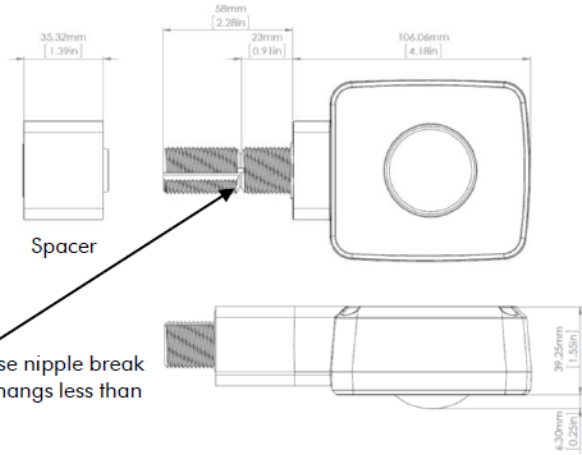
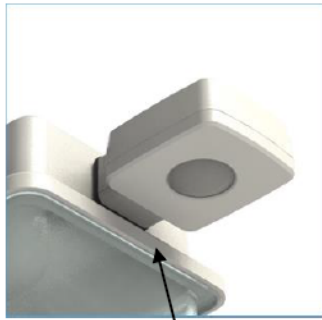
## 7. INSTALLATION / WIRING / COMMISSIONING

### **⚡ CAUTION ⚡**

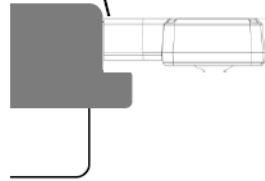
**Risk of Electric Shock.** All servicing should be performed by qualified service personnel. To reduce the risks of electric shock disconnect power connections before servicing.

- BT-FMS-A mounts directly into a standard 1/2” knockout
- If fixture overhang is greater than ½” then use full length chase nipple and spacer. For overhang less than ½” the chase nipple length can be reduced by using needle nose pliers to snap the extension at the break point (see diagram on next page).
- Install device into position (use spacer if fixture overhang is greater than ½”)
- For installation with field installed conductors of 60°C minimum rating.
- The following wire connections are provided:
  - 0-10V connection (violet / grey): #20AWG
  - Line Voltage/Relay connection (black / white / red): #14AWG
- Connect wires as shown on diagram
- Use appropriate sized wire-nuts to connect field installed conductors
- Download Smartphone Commissioning App
- Commission as required





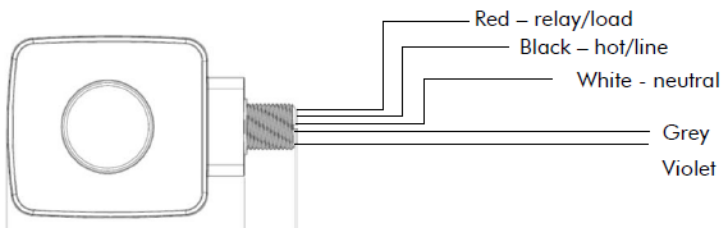
Threaded chase nipple break point for overhangs less than 1/2" (12mm).



**Mounting**

Use Spacer and full length threaded chase nipple for fixture rail overhang greater than 1/2" (12mm).

**Wiring**



Douglas Lighting Controls  
Burnaby, BC  
Canada

Direct: 604-873-2797  
Toll-Free: 877-873-2797  
Email: [lighting@douglaslightingcontrols.com](mailto:lighting@douglaslightingcontrols.com)  
Website: [www.douglaslightingcontrols.com](http://www.douglaslightingcontrols.com)

The *Bluetooth*<sup>®</sup> word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Douglas Lighting Controls is under license. Other trademarks and trade names are those of their respective owners.