Intellect™

Wireless Intelligent Fixture Sensor and Controller



1/2 in. KO, 0-10V and DALI

Cat. Nos. ZL07S, ZL0DS, ZL070, ZL0D0-N00

WARNINGS

- · READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!
- For indoor applications only. DO NOT use outdoors DO NOT use this equipment for other than intended use • DO NOT mount near gas or electric heaters.

· SAVE THESE INSTRUCTIONS.

- Equipment should be mounted in locations and at heights where it will not
- be subjected to tampering by unauthorized personnel. Use this device with COPPER OR COPPER CLAD WIRE ONLY.
- To be installed and/or used in accordance with appropriate electrical codes and regulations. Controller is intended to be installed by the fixture manufacturer, but in some cases may be installed in the field. Field installation must use approved electrical enclosures. **NOTE:** Suitable for use in air handling spaces (plenums).
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

Product Description

The Intellect[™] Wireless Intelligent Fixture Sensor and Controller are wireless devices that integrate wireless control technology directly into lighting fixtures. The wireless devices are designed to be installed into a 1/2 in. knock-out and interface to the driver via 0-10V or DALI, depending on the model. The wireless devices interface with Leviton's wireless systems using its built-in radio. The wireless devices are designed to be powered from the driver and in the case of 0-10V, requires a dim-to-off driver to be used. The wireless devices may be installed into your fixture by the fixture manufacturer or may be added in the field if all requirements are met. When the wireless devices are pre-installed on a fixture, refer to fixture documentation for installation methods, means, and requirements.

Installation Requirements

- · Installation and servicing should always be performed by qualified personnel.
- 1/2 in. diameter knock-out free of excess material. • Dim-to-OFF LED driver with 12-24V AUX power supply and 0-10V or DALI control.

Installation

WARNING: TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring!

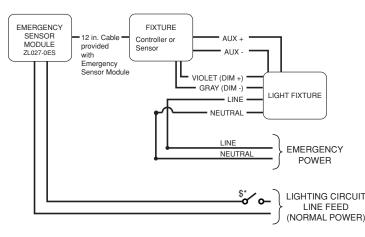
- Remove threaded lock nut.
- 2. Secure wireless devices in knock-out by inserting until tabs are holding head firmly against fixture.
- **3.** Use lock nut to further secure sensor, if needed.
- 4. Remove 4 to 5 mm of insulation from each circuit conductor.
- 5. Make sure ends of conductor are straight.
- 6. Push conductor firmly into appropriate wire connector.
- 7. If installing with Emergency Sense Module (ZL027-0ES): Connect the Emergency Sense Module to the Sensor using the cable included with the ZL027-0ES.
- 8. Connect the Emergency Sense Module to normal power.
- 9. Restore power at circuit breaker or fuse.
- **10.** Proceed to device enrollment per the included sheet and
- configuration per your system requirements. Installation is complete.

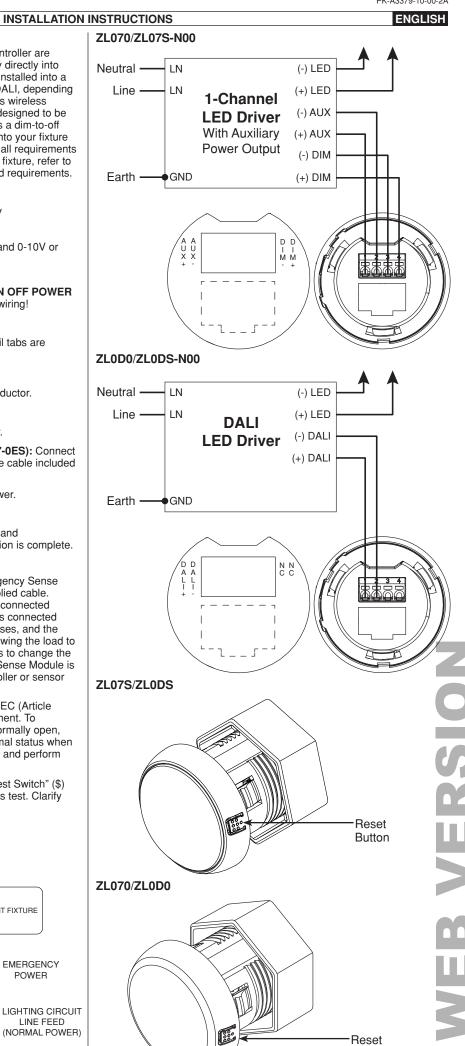
Emergency Wiring

When used for emergency lighting, the ZL027-0ES Emergency Sense Module is required and shall be connected using the supplied cable. The control input wires for the emergency light fixture are connected to emergency power, and the Emergency Sense Module is connected to normal power. Upon loss of normal power, the relay closes, and the controller or sensor 0-10V lines go to high impedance allowing the load to go to full output powered from the EM Source. Commands to change the device output from full are ignored when the Emergency Sense Module is in this mode. Upon restoration of normal power, the controller or sensor will automatically resume normal operation.

Emergency Self-Test: NFPA 101 Life Safety Code and NEC (Article 700.3(B)) requires regular testing of all emergency equipment. To perform a test of these products, a Test Switch that is a normally open, momentary-break type, that returns the equipment to normal status when released can be installed locally to interrupt normal power and perform emergency system test.

* The diagram below depicts a "Momentary-Break Type Test Switch" (\$) on the normal power line to trigger the emergency systems test. Clarify requirements with all local authorities.





Button

PK-A3379-10-00-2A

Operation

Factory Default (Out-of-the-Box) Operation:

- At first power-up or after factory reset, the wireless device will bring the load to 100% in approximately 1 second and then dim down to 0% in approximately 1 second. This process will repeat once and then the load will return to 100%
- The wireless device will be in auto-join mode and attempting to connect to a network. Sensor model settings:
- First timeout (partial-OFF) set to 10 minutes, dim level to 50%. - Second timeout set to 10 minutes, dim level to 0%.
 - Daylight harvesting enabled

 - Target set to 200 lux Max dim level 50%

Test Mode:

- Press and hold the reset button for 1 to 3 seconds to initiate.
- The sensor will bring the load down to 0% in approximately 1 second and back up to 100% in approximately 1 second and then repeat. Sensor model settings
- First timeout (partial OFF) set to 5 seconds, dim level to 50%.
 Second timeout set to 5 seconds, dim level to 0%.
- Sensor will remain in test mode for 5 minutes and then return to normal operation.

- Factory Reset: Press and hold the reset button; LED will turn WHITE.
- Release reset button after at least 5 seconds, but no longer than 10 seconds
- · LED will blink WHITE 4 times per second until reset completes.

Changes to Default Operation:

• System must be configured. See "Configuration" section.

For Optimal Performance:

The sensor lens establishes dozens of zones of detection. The sensor is sensitive to the heat emitted by the human body. In order to trigger the sensor, the source of heat must move from one zone of detection to another. The device is most effective in sensing motion across its field-ofview, and less effective sensing motion towards or away from its field-ofview. Keep this in mind when selecting the installation location.

Note that occupancy sensors respond to rapid changes in temperature, so care should be taken NOT to mount the device near a climate control source (i.e., radiators, air exchanges, and air conditioners). Hot or cold drafts will look like body motion to the device and will trigger it if the unit is mounted too close. It is recommended to mount the occupancy sensor at least 6 ft. away from a climate control source.

In addition, it is also recommended NOT to mount the occupancy sensor directly under a large light source. Large wattage bulbs (greater than 100W incandescent) give off a lot of heat and switching the bulb causes a temperature change that can be detected by the device. Mount the occupancy sensor at least 6 ft. away from large bulbs. If it necessary to mount the device closer, lower the wattage of the bulb directly overhead.

INDICATOR LIGHT DESCRIPTIONS		
LED	Action / Definition	
No activity	Enrolled in network/ normal operation	
Slow blink GREEN	Searching for network	
Rapid blink BLUE 2X, pause, repeat	Bluetooth connection active	
Blink RED when motion detected	Enrolled in network/ normal operation	
Solid BLUE	Emergency sense input active	
Blink GREEN 4X per second	Software update in progress	
1X blink AMBER (Enrolled in Zigbee network)	Status (press reset less than 5 seconds)	
2X blink AMBER (Enrolled in Zigbee network, incorrectly commissioned)	Status (press reset less than 5 seconds)	
Blink WHITE 4X per second	Factory reset (press reset more than 5 seconds)	

Configuration

- 1. System Configuration may be refined using the Leviton GreenMAX DRC application, downloadable from Google Play™ or the Apple Store[®], using any Bluetooth[™] enabled Android[™] or iOS Device. Use the application to:
 - a. Manually add/remove fixtures from the room.
 - b. Add additional keypads to the room.
 - c. Change sensor parameters like sensitivity, timeout, and target light level.
 - d. Create user-defined groups of fixtures.
 - e. Define scenes (meeting, presentation, lunch, dinner, test, etc.).
- 2. For additional Information about Leviton's Intellect enabled products including information about installation, use case diagrams, solution sheets, and other related products, please visit www.Leviton.com/intellect.

SPECIFICATIONS			
Catalog Numbers	ZL07S/ZL070-N00	ZL0DS/ZL0D0-N00	
Input Rating	12-24VDC	DALI	
Control Output	0-10V, 5mA sinking	DALI	
Operating Temperature	ZL07S/ZL0DS-N00: 32°F to 140°F (0°C to 60°C)	ZL070/ZL0D0-N00: 32°F to 185°F (0°C to 85°C)	
Storage Temperature	-4°F to 185°F (-20°C to 85°C)		
Mounting	1/2 in. diameter knock-out		
Sensor Model Mounting Height	8 to 10 ft.		
IP Rating	IP20		
Purpose of Control	Energy Management Equipment		
Action Control Type	1		
Pollution Degree	2		
Impulse Voltage	800V		

FCC STATEMENT:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RF EXPOSURE AND CO-LOCATION:

To ensure compliance with FCC's and ISED Canada's RF exposure requirements, this device must be installed to provide a minimum of 20 cm. between the device and people. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

IC Statement:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licenseexempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

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

Any changes or modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equipment.

FCC SUPPLIERS DECLARATION OF CONFORMITY

Manufactured by Leviton Manufacturing, Inc., 201 N Service Road, Melville, NY, http://www.Leviton.com. 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.

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FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1 800 405-5320.

LIMITED 2 YEAR WARRANTY AND EXCLUSIONS

LIMITED 2 YEAR WARRANTY AND EXCLUSIONS Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.