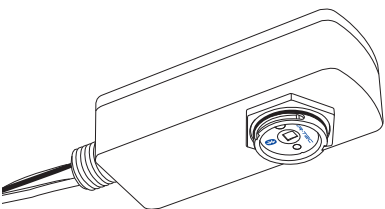


TRANS

LBD-309SP

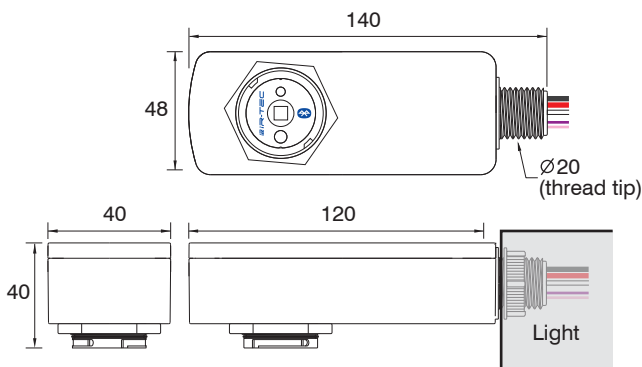
Line Voltage SmartDIM Occupancy Sensor

INSTALLATION INSTRUCTIONS



*This sensor requires lens. Please order separately. Refer to the Lens Datasheet for more details.

DIMENSIONS



Unit: mm

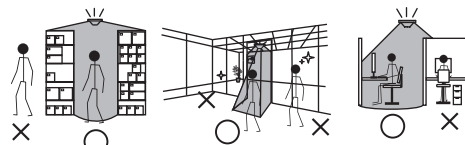
OVERVIEW

The LBD-309SP is a Bluetooth enabled line voltage occupancy sensor featuring multiple control schemes with 0-10V output for dimmable ballast or LED driver control. The sensor is capable of providing top-notch energy efficient lighting control with fully programmable multi-level high/low StepDIM or continuous SmartDIM control. All sensing control schemes and parameters can be set via IRTEC Sensor Config app capable of storing all sensor data and control profiles.

The sensor can be nipple mounted with an OEM luminaire through a 1/2" hole, turn on the connected lighting to high dim or SmartDIM level as programmed when it detects the presence of an occupant or vehicle, and automatically dim the light to the low level or shut off as programmed after the area is vacated for a period of time. An iOS® or Android® app allows you to configure sensor control settings, or download the existing settings of the installed sensor from the floor. In addition, an exclusive Hybrid Switching technology protects the relay contacts from the high inrush current generated while switching on the LED driver.

APPLICATION NOTES

1. The sensor is more sensitive to the movements “crossing” the detection zones than “toward” or “away” the sensor unit. To obtain better sensitivity, avoid placing the sensor in line with occupant path, if possible.
2. The closer the movement is to the sensor, the more sensitive the sensor is. The higher the sensor is installed, the larger movement is required for detection. The warmer the room is, the harder the sensor to detect the movement.
3. Ensure to place the sensor at least at 1.5m (5 ft.) away from air supply ducts as rapid air flow may cause false detections.
4. Avoid placing the sensor where obstructions may block the sensor's line of sight. PIR sensor cannot detect movements through glass.
5. IRTEC Sensor Config app should be available on the mobile device for sensor configuration. **If no configuration steps have been taken, the sensor will operate with factory default control and parameters.**
6. Typical Bluetooth radio range of mobile device is about 10 m (30 ft), the actual range may vary due to environmental characteristics.



SPECIFICATIONS

Power supply	100/120/277VAC, 50/60 Hz	
Maximum load	100-120VAC	277VAC
-Incandescent/Halogen	800/*500W(VA)	1200/*750W(VA)
-Fluorescent Ballast/CFL	800/*500W(VA)	1200/*750W(VA)
-Ballast Electronic (LED)	540/*500VA	1200/*750VA
Infrared sensor	Digital pyroelectric sensor	
Photo sensor	Digital ambient light sensor	
HIC protection	Max. 80A for 16.7msec.	
Dim control output	0-10V, ±5%, isolated, max. 25 mA	
Detectable speed	0.3 ~ 3 m/sec. (1~10 ft./sec.)	
Mounting height	Subject to the lens type applied	
Detection range	Subject to the lens type and mounting height	
Remote range	10m (33 ft.) indoor, no backlight	
Op. humidity	Max. 95% RH	
Op. temperature	-40°C~70°C (-40°F~158°F)	
Dimensions	140x48x40mm (5.51"x1.89"x1.50")	

*Max load for operating temperature at 55°C~70°C (131°F~158°F)

LENS OPTIONS

Different lenses can be applied to provide specific coverage at different mounting heights. Please refer to the lens datasheet attached for more details.

Federal Communication Commission Interference Statement FCC ID : SH6MDBT42Q

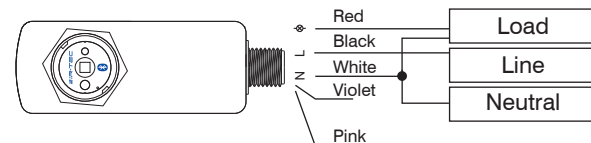
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 of the following measures:

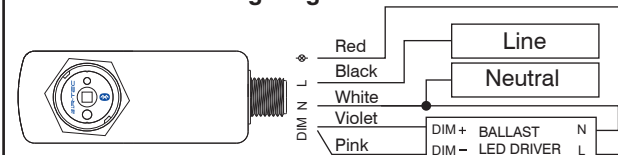
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

WIRING DIAGRAM

Non-dimmable Lighting (ON-OFF Switching only)



0-10V Dimmable Lighting



NOTE:

1. The driver/ballast **MUST** be 0-10V dimmable to achieve dimming control.
2. Ensure connection of LINE and NEUTRAL are not reversed to avoid damaging the sensor.
3. Ensure TOTAL isolation between DIM+ /DIM- and GROUND to avoid damaging the sensor.
4. Conduct test with GROUND connected.

WARNING & CAUTION

- Risk of Electric Shock - Disconnect power supply before servicing.
- Do NOT touch the square window of infrared sensor under the lens assembly.
- Open Type Photoelectric Switches.
- Cycling the power to the sensors will cause failure over time.

AVERTISSEMENT & PRUDENCE

- Risque de choc électrique - Débranchez l'alimentation avant l'entretien.
- Ne PAS toucher la fenêtre carrée de capteur infrarouge sous l'ensemble de l'objectif.
- Ouvrir Type commutateurs optoélectroniques.



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LBD-309S SB

P/N: 058-30909-001

Printed in Taiwan

This product may be covered by one or more U.S. patents or patent applications.
Please visit www.irtec.com for more information.

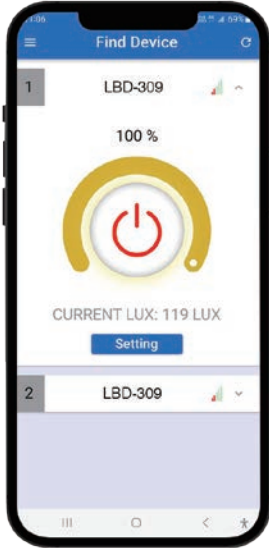


SETTING CONFIGURATION APP

The LBD-309SP can be configured via IR-TEC sensor configuration app to control the associated lighting as the scheme and parameters set. The app allows bi-directional communication between the sensor and the mobile device connected. All sensor settings can be configured via app with simple and intuitive operations.

NOTE: If necessary, multiple mobile devices can be used to configure “multiple sensors” simultaneously. However, categorizing the sensors in zone basis for different persons to conduct configuration respectively is recommended. Please note that a sensor can only be configured by the “connected” mobile device.

Sensor Config App
User Guide



SENSOR SETTINGS

Settings	Description	Options	Default
Control	The mode that the sensor will control.	ON/OFF, OSO, OSLA, OSLATO, OFF	OSLATO
Photocell	For measuring ambient light level.	Enabled/Disabled	Disabled
Ambient lux	The ambient light level that sensor will perform the control.	10~2000 LUX/CURRENT LUX	80 LUX
Delay time	The delay time that sensor is set to turn off or dim the light.	10 sec.~30 min.	10 min.
Time off	The delay time that sensor will keep the light at low dim level after the off delay time elapsed. Only available if OSLATO is selected.	10 sec.~30 min.	10 min.
SmartDIM	The sensor will automatically regulate the lighting to maintain overall lighting.	Enabled/Disabled	Disabled
High dim	The output level set to control the light during occupancy.	30~100%	100%
Low dim	The output level set to dim the light when space is vacant for bi-level control.	10~70%	30%
Ramp up	The speed of increasing the lighting output to High dim level.	Instant/Soft/Slow	Instant
Fade down	The speed of decreasing the lighting output to Low dim level or off.	Instant/Soft/Slow	Soft
Sensitivity	The sensitivity of occupancy sensor.	High/Normal/Low	High
LED indicator	Enable/disable the LED indicator of sensor.	Enabled/Disabled	Enabled
Minimum dim	The lowest dim level applicable on the sensor.	12%/15%/Disabled	Disabled
Daylight o’ride	Enable/disable daylight override control. Sensor will shut off the light when ambient lux exceeds the override level set below. Only available if Photocell is enabled.	Enabled/Disabled	Disabled
Override level	The ambient lux level to enable daylight override. Only available if Daylight o’ride is enabled.	High/Normal/Low	Normal

CONTROL SCHEME

The LBD-309SP offers multiple occupancy sensor control schemes and parameter settings for selection.

- ON/OFF : ON-OFF Switching
- OSO : Occupancy Sensing Only
- OSLA : Occupancy Sensing at Low Ambient
- OSLATO : Occupancy Sensing at Low Ambient with Time-Off
- OFF : Light OFF all the time

Scheme	Description
ON/OFF	1. While ambient lux is higher than the level set, light stays OFF . 2. While ambient lux is lower than the level set, and occupancy detected , switch the light to High dim . 3. Turn OFF the light after occupant leave and delay time elapses.
OSO	1. Ambient light sensor disabled. 2. Dim the light to Low dim at all time under vacancy. 3. Switch the light to High dim under occupancy. 4. Dim the light to Low dim after occupant leave and delay time elapses.
OSLA	1. While ambient lux is higher than the level set, light stays OFF . 2. While ambient lux is lower than the level set, dim the light to Low dim under vacancy. 3. While ambient lux is lower than the level set, and occupancy detected , switch the light to High dim . 4. Dim the light to Low dim after occupant leave and delay time elapses.
OSLATO	1. While ambient lux is higher than the level set, light stays OFF . 2. While ambient lux is lower than the level set, and occupancy detected , switch the light to High dim . 3. Dim the light to Low dim after occupant leave and delay time elapses. 4. Turn OFF the light when Time off delay elapses. 5. When occupancy detected during Time off , switch the light to High dim .
OFF	All light controlled by the sensor will stay OFF before other scheme is selected.

SETTING ACKNOWLEDGEMENT

The sensor will acknowledge setting success or failure with different indications by sensor LED or connected lighting.

Acknowledgement	Sensor LED	Lighting
Sensor setting upload complete	-	Flash
Sensor resume to factory default	-	Flash
SmartDIM level set completed	-	Flash
Motion detected	Slow flashing	High dim
Bluetooth connected	Blinking	-