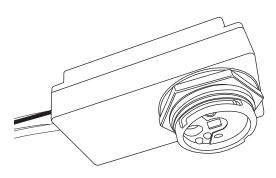
TRANS



LRD-309S

Line Voltage SmartDIM Occupancy Sensor

INSTALLATION INSTRUCTIONS



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

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.

A 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.

INTRODUCTION

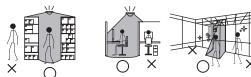
The LRD-309S is a low-profile, fixture integrated occupancy sensor designed to control 0-10V dimmable or non-dimmable ballasts and LED drivers. This 2-way, remote-programmable sensor is capable of providing four different occupancy sensing control schemes with fully adjustable multi-level high/low StepDIM or SmartDIM control to the integrated fixtures. SmartDIM is a state-of-the-art automatic dimming control technology developed by IR-TEC, which enables the sensor to maintain the overall ambient light level within the preset range through a smooth, flawless continuous dimming control to the connected lighting. The LRD-309S also employs an exclusive Hybrid Switching technology to allow switching the LED driver with high inrush current, up to 500,000 cycles.

The sensor will turn on the integrated lighting or ramp up to the programmed high dim or SmartDIM level when it detects the presence of an occupant or vehicle, and automatically dim the light down to the low level or shut off after the area is vacated for a period of time. The sensor can be operating even in the coldest of environments down to -40°C/°F. A two-way IR handheld remote programmer (SRP-280) allows you to easily configure sensor control schemes and settings, or download the existing settings of the sensor from the floor. Four EZ-SET profiles can be stored in the SRP-280 for quick setup and parameter adjustment of multiple sensors.

DIMENSIONS R2mm (0.08")42mm (1.65") 21mm (0.83") 21mm Ø33.2mm (0.83")(1.31")(thread tip) (0.6")8.5mm (0.33") (0.16") T 21mm 80mm (3.15") (0.83")23mm (0.91")28mm (1.1")

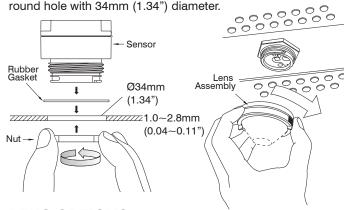
APPLICATION NOTES

- 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.
- 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.
- 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.
- Avoid placing the sensor where obstructions may block the sensor's line of sight. PIR sensor cannot detect movements through glass.



MOUNTING

The sensor can be integrated with lighting fixture through a round hole with 34mm (1.34") diameter.



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.











CONTROL MODE

The LRD-309S sensor can be programmed to control the lighting in one of the following modes via a SRP-280 remote programmer. For more details of specific control mode, please visit www.irtec.com or contact an IR-TEC team member directly.

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

Mode	Control		
ON/OFF	 While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, and occupancy detected, switch the light to HIGH DIM. Turn OFF the light after occupant leave and delay time elapses. 		
oso	 Ambient light sensor disabled. Dim the light to LOW DIM at all time under vacancy. Switch the light to HIGH DIM under occupancy. Dim the light to LOW DIM after occupant leave and delay time elapses. 		
OSLA	 While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, dim the light to LOW DIM under vacancy. While ambient lux is lower than the level set, and occupancy detected, switch the light to HIGH DIM Dim the light to LOW DIM after occupant leave and delay time elapses. 		
OSLATO	 While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, and occupancy detected, switch the light to HIGH DIM. Dim the light to LOW DIM after occupant leave and delay time elapses. Turn OFF the lights when TIME OFF delay elapses. When occupancy detected during TIME OFF, switch the light to HIGH DIM. 		
OFF	All lighting controlled by the sensor will remain OFF until another mode is selected.		

SENSOR ACKNOWLEDGMENT

Acknowledgement	Sensor LED	Beep	Lighting		
Full sensor setting upload completed	-	Long x 1 Short x 2	Flash x 2		
Sensor resume to factory default	-	-	Flash x 2		
SmartDIM level set completed	-	Short x 2	Flash x 2		
Single setting ok	-	Short x 2	-		
Occupancy detected	Flash x 1	-	-		

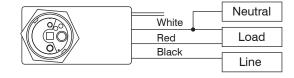
SENSOR SETTINGS

The followings are settings and options available with LRD-309S that can be configured via SRP-280 remote programmer. For more details of remote operation, please refer to the operation instruction of SRP-280.

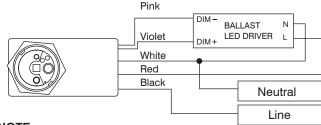
Settings	Description	Options	Default
CONTROL	The mode that the sensor will control.	ON/OFF, OSO, OSLA, OSLATO, OFF	OSLATO
AMBIENT LUX	The ambient light level that sensor will perform the control.	10/20/40/60/100/200/400 LUX/DISABLED	DISABLED
DELAY	The delay time that sensor is set to turn off or dim the light.	30 sec./1/3/5/10/15/20/30/60 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.	10/30 sec./3/5/10/15/20/30/45/60 min.	10 min.
HIGH DIM	The output level set to control the light during occupancy.	50/55/60/65/70/80/90/100%/SmartDIM	100%
LOW DIM/ SmartDIM	The output level set to dim the light when space is vacant for bi-level control. Low dim setting will become SmartDIM bar if SmartDIM control is selected.	0/5/10/15/20/25/30/40%	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
LED INDICATOR	Enable/disable the LED indicator of sensor.	ENABLED/DISABLED	ENABLED
SENSITIVITY	The sensitivity of occupancy sensor.	HIGH/NORMAL/LOW	HIGH
MIN. DIM	The lowest dim level applicable on the sensor.	12%/15%/DISABLED	DISABLED
DAY 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 AMBIENT LUX is enabled.	ENABLED/DISABLED	DISABLED
O'RIDE LEVEL	The ambient lux level to enable daylight override. Only available if DAY O'RIDE is enabled.	HIGH/NORMAL/LOW	NORMAL

WIRING DIAGRAM

Non-dimmable Lighting (ON-OFF Switching only)



0-10V Dimmable Lighting



NOTE:

- 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.

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. 25mA					
Detectable speed	0.3 ~ 3 m/sec. (1~10	ft./sec.)				
Mounting height	Subject to the lens typ	oe applied				
Detection range	Subject to the lens type and mounting height					
Remote range	10 m (33 ft.) indoor, no backlight					
Op. humidity	Max. 95% RH					
Op. temperature	-40°C~70°C (-40°F~158°F)					
Dimensions	80x42x37mm (3.15"x1.65"x1.46")					
*Max load for operating temperature at 55°C~70°C (131°F~158°F)						