OVERVIEW

The ON-LRD-609SA series is an OS-NET Sensor (ONS) packed with multiple sensing control functionalities including occupancy/vacancy sensing, daylight harvesting, bi-level StepDIM or continuous SmartDIM, and wireless mesh networking capability for top-notch intelligent lighting control.

The sensor not only controls the connected lighting in the programmed mode independently when it detects the presence of an occupant/vehicle or change of ambient light level, but also acts as a network node to broadcast the OS-NET command for group lighting activation wirelessly. All network setup, sensor grouping and setting; including sensing control scheme, delay times, ambient light level threshold, ramp up/fade down speed, sensitivity, burn-in duration…etc. can be configured via a 2-way handheld remote programmer from the floor.

The sensor comes with a universal mounting design which provides complete installation flexibility. Changeable lens options allow the sensor to be mounted at various heights with different detection patterns for all applications. With ON-LRD-609SA, you can effortlessly achieve energy efficient, code-compliant smart lighting control through a wireless sensor mesh network effortlessly deployed while installing the OS-NET enabled lighting.

FEATURES

- Omni-directional pyroelectric infrared sensor
- Line voltage operation with wireless connectivity
- All functionalities in one and one for all controls
- 2-way IR remote programming tool for all settings
- Single device can be members of multiple groups
- Hybrid switching protects from high inrush current
- SmartDIM or high/low multi-level StepDIM control
- Exceptionally long range of remote programming
- IP-66 rating universal mounting design
- Multiple lens options allow broadest applications

APPLICATION

☑ Multiple Sensing Controls with 0-10V SmartDIM or Bi-level StepDIM

The ON-LRD-609SA sensor can be flexibly integrated with OEM luminaire to provide multi-scheme occupancy/vacancy/daylight sensing, with continuous or multi-level dimming control to the connected lighting and the assigned groups via OS-NET wireless communication.

APPLICABLE REMOTE (order separately)

Model	Description	Remarks
SRP-281	OS-NET Remote Programmer	Full functionality
URP-100	User Remote	Manual ON/OFF/DIM TIME/LUX setting

IR-TEC
Specializing in Building Sensors

ON-LRD-609SA series
Line Voltage OS-NET Sensor

SENSING CONTROL SCHEMES

The ON-LRD-609SA employs a top-notch digital passive infrared (PIR) sensor to detect the occupancy status within its range and control the connected light in one of the following schemes, while also transmits wireless command for lighting group activation control through mesh network. For more details of specific control, please visit www.irtec.com or contact an IR-TEC team member directly.

Mode	Status	Day*	Night*	Remarks
ON/OFF	Vacant	OFF	OFF	For non-dimmable lighting
	Occupied	ON/OFF[1]	ON	[1]ALS enabled
OSO	Vacant	LD	LD	LD : Low Dim, HD : High Dim
	Occupied	SD/HD	SD/HD	SD : SmartDIM
OSLA	Vacant	OFF	LD	Automatic low dim during
	Occupied	SD/OFF	SD/HD	vacant nighttime
OSLATO	Vacant	OFF	LD-OFF	Low dim during Time Off (TO)
	Occupied	SD/OFF	SD/HD	delay
DSVM	Vacant	OFF	HD-LD	Dusk - Virtual midnight : High Dim
	Occupied	OFF	HD-LD	Virtual midnight - Dawn : Low Dim
DSC	Vacant	OFF	SD/HD	Occupancy sensing is disabled,
	Occupied	OFF	SD/HD	Daylight sensing control only
VSC	Vacant	OFF	OFF	Press OS-NET Button to turn on the
	Occupied	Manual	Manual	light, automatic shut-off
OSB	Vacant	OFF	OFF/LD[2]	[2]As background lighting before the
	Occupied	OFF	SD/HD	entire group area is vacant
OFF	Vacant	OFF	OFF	Occupancy sensing enabled, but
	Occupied	OFF	OFF	the light stays off all the time

*Day/Night: While ambient light level is higher/lower than the threshold set

ON/OFF : On-Off Switching **OSO** : Occupancy Sensing Only
OSLA : Occupancy Sensing at Low Ambient
OSLATO : Occupancy Sensing at Low Ambient with Time-Off
DSVM: Daylight Sensing with Virtual Midnight **DSC** : Daylight Sensing Control
VSC: Vacancy Sensing Control
**OSB**: Occupancy Sensing with Background **OFF**: Light off all the time

LENS OPTIONS

The ON-LRD-609SA**X** series is available with following lens options which provide different coverage at different mounting height (H). When adding the lens code, the lens is then automatically shipped with the sensor.

|	Lens	Shape	Mounting Height		Coverage
A	Standard	Cone	8~15 ft.	2.4~4.5m	2X height
B	Extra wide	Cone	8~10 ft.	2.4~3.0m	6X height
C	High bay	Cone	15~30 ft.	4.5~9.0m	3X height
D	Standard	Round	8~20 ft.	2.4~6.0m	2X height
F	Extra wide	Dome	8~20 ft.	2.4~6.0m	4X height
G	Aisle way	Arch	8~40 ft.	2.4~12.0m	3X height
H	High bay	Dome	30~50 ft.	9.0~15.0m	1X height
L	Long aisle	Arch	8~10 ft.	2.4~3.0 m	6X height

WIRING DIAGRAM

Non-dimmable Lighting (ON/OFF Switching only)
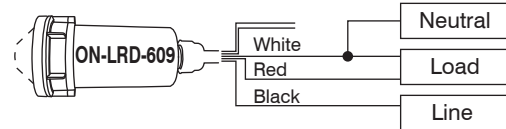
0-10V Dimmable Lighting
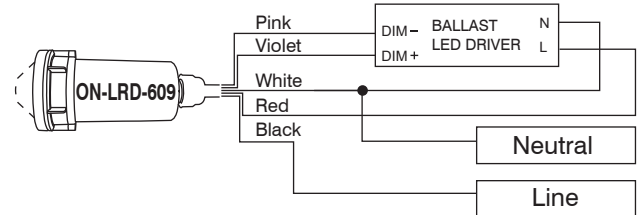
SENSOR MOUNTING
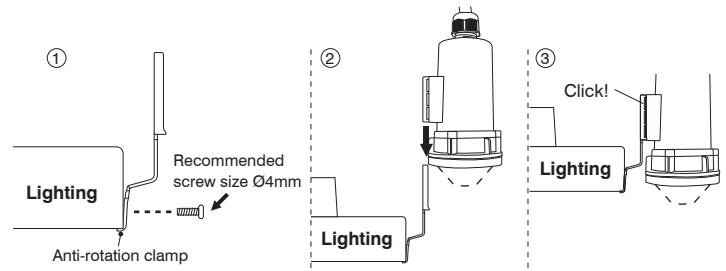
SPECIFICATIONS

Power supply	120/230/277VAC, 50/60Hz		
Maximum load	120VAC	230VAC	277VAC
-Fluorescent Ballast/CFL	800/*500W(VA)	5A	1200/*750W(VA)
-Incandescent/Halogen	800/*500W(VA)	5A	1200/*750W(VA)
-Ballast Electronic (LED)	540/*500VA	5A	1200/*750VA
Infrared sensor	Digital pyroelectric sensor		
Dim control	0-10V, ±5%, isolated, max 25mA		
HIC protection	Max. 80A for 16.7msec.		
Wireless protocol	Modified Zigbee Light Link (ZLL)		
Radio frequency	2405~2480MHz		
Number of channel	16ch		
Radio range	**15/90 m @indoor/outdoor, open space		
Radio power output	6.98dBm		
Detectable speed	0.15 ~ 3 m/sec. (0.5~10 ft./sec.)		
Mounting height	Subject to the lens applied		
Detection range	As per lens applied and mounting height		
Remote range	Typ. 10 m (33 ft), indoor with no backlight		
Op. humidity	Max. 95% RH		
Op. temperature	-40°C~60°C (-40°F~140°F)		
Dimensions	L65 x W73 x H131mm (L2.56" x W2.87" x H5.16")		

*Max load for operating temperature at 55°C~60°C(131°F~140°F)
**Actual radio range may differ depending on environmental conditions.

IR-TEC
Specializing in Building Sensors