Pole Mounted Lighting Control

amerlux
A Delta Group Company

Overview

Available as a standalone daylight/occupancy sensor or networked with others to create advanced lighting management, the Amerlux pole mounted lighting controls are easy to install and deploy.

The standalone sensor (LRD-509) is packed with multiple sensing control functionalities including occupancy/vacancy sensing, daylight harvesting and bi-level dimming.

The OS-NET enabled control (OS-LRD-509) builds on the features of the standalone sensor by adding a wireless mesh networking capability for intelligent group 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.

PROJECT: **TYPE:**

Remote Programmer

OS NET

Powered by:

IR-TEC
Specializing in Building Sensors

Application:
Multiple sensing control with 0-10V Bi-level StepDIM.

Features:
- Omni-directional digital quad element PIR sensor
- Line voltage operation
- High/Low multi-level StepDIM control
- 2-way IR remote programming tool for all settings
- Exceptionally long range of remote programming
- Hybrid switching protects from high inrush current
- Multiple lens options to control occupancy sensing field

For OS version only:
- Wireless connectivity between sensors allows group control
- Single device can be members of multiple groups

Remote Programmer:
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 ground. Only (1) unit per project is required.

SRP-280 (for LRD-509)
SRP-281 (for OS-LRD-509)

CSA

5 year limited warranty
AMERLUX LED

POWDER COATED **TOUGH**™

DLC

Pole Mounted Lighting Control

PROJECT: **TYPE:**

Ordering Information for Sensor

_____._____._____._____
        1   **2**   **3**   **4**

1 Model
OS-LRD-509 - line voltage OS-NET sensor
LRD-509 - line voltage standalone occupancy sensor

2 Lens Type
A - standard, cone shape
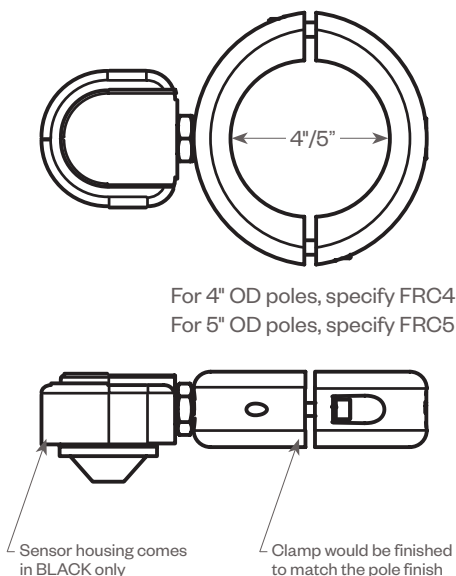B - extra wide, cone shape
F - extra wide, dome shape

3 Mounting
FRC4 - mounting clamp, fits 4" OD poles
FRC5 - mounting clamp, fits 5" OD poles

4 Finish (for mounting bracket)
BLK - black
TBK - textured black
GRN - green
CLB - classic bronze

Ordering Information for Remote Programmer

_____
        1

Model
SRP-280 (for LRD-509)
SRP-281 (for OS-LRD-509)

4"/5"

For 4" OD poles, specify FRC4
For 5" OD poles, specify FRC5

Sensor housing comes in BLACK only

Clamp would be finished to match the pole finish

Specifications:

Power supply	120/277VAC, 50/60Hz
Maximum load @ -40°F~131°F (-40°C~55°C)	Incandescent/Halogen – 800/1200W(VA)@120/277V Fluorescent Ballast/CFL – 800/1200W(VA)@120/277V Ballast Electronic (LED) – 540/1200VA@120/277V
Infrared sensor	Digital quad-element 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	50/300 ft. @indoor/outdoor, open space
Radio power output	6.98dBm
Detectable speed	0.5~10 ft./sec. (0.15 ~ 3 m/sec.)
Mounting height	Subject to the lens applied
Detection range	As per lens applied and mounting height
Remote range	Typ. 33 ft (10 m), indoor with no backlight
Op. humidity	Max. 95% RH
Op. temperature	-40°F~158°F (-40°C~70°C)
Dimensions	Ø2.36"x H1.45" (Ø60 x H37mm)

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PROJECT: **TYPE:**

Sensing Control Schemes

Both pole mounted devices use a 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 the OS version also transmits wireless command for lighting group activation control through the mesh network.

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

*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-509 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	2.4-4.5 m	2x height
B	Extra Wide	Cone	8-10 ft	2.4-3.0 m	6x height
F	Extra Wide	Dome	8-20 ft	2.4-6.0 m	4x height

Mounting Options

Available for 4" or 5" OD poles with a field adjustable clamp, allowing the sensor to be placed in the best orienation.

Model	Pole Size
FRC4	Fits on 4" OD poles
FRC5	Fits on 5" OD poles

The FRCx mounting clamps tighten securely around pole with (2) 3/8" socket cap screws. The sensor should be positioned at an appropriate height based the lens choice and oriented toward expected movement areas without blockage from the pole.
The installer will need to drill a 3/4" diameter at the proper height and orientation in order to feed input power and luminaire wires to/from the sensor.
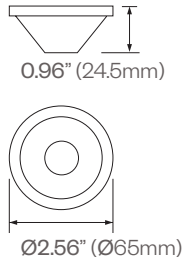
Wiring Diagram

Pole Mounted Lighting Control

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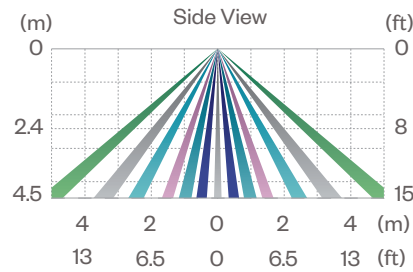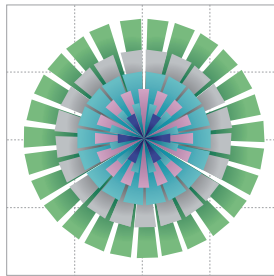A Delta Group Company
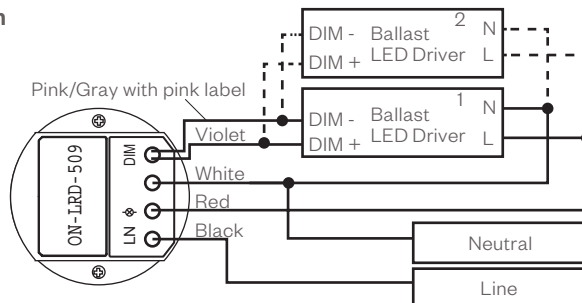
PROJECT: **TYPE:**

Lens Types / Recommended Sensor Mounting Height
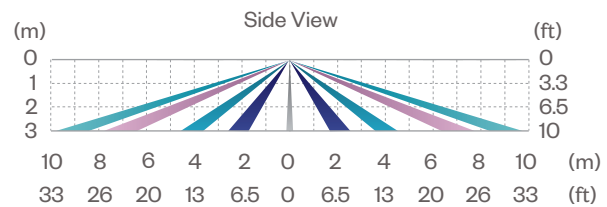
LENS A   2x Standard

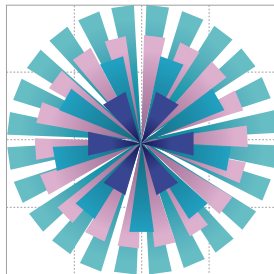| Mounting Height m (ft)	2.4 (8)	3.0 (10)	3.6 (12)	4.5 (15)
Max. Coverage Ø m (ft)	4.8 (16)	6.0 (20)	7.2 (24)	9.0 (30)
Minor Motion Ø m (ft)	3.0 (10)	1.8 (6)	1.8 (6)	--

0.96" (24.5mm)

Ø2.56" (Ø65mm)

Top View

Side View
(m) / (ft)
0 — 0
2.4 — 8
4.5 — 15
4 2 0 2 4 (m)
13 6.5 0 6.5 13 (ft)
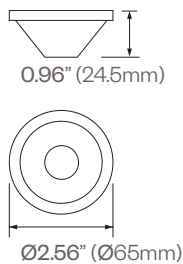
LENS B   6x Extra Wide

Mounting Height m (ft)	2.4 (8)	2.6 (8.5)	2.8 (9)	3.0 (10)
Max. Coverage Ø m (ft)	14.4 (48)	15.6 (51)	16.8 (54)	18.0 (60)

0.96" (24.5mm)

Ø2.56" (Ø65mm)

Top View

Side View
(m) / (ft)
0 — 0
1 — 3.3
2 — 6.5
3 — 10
10 8 6 4 2 0 2 4 6 8 10 (m)
33 26 20 13 6.5 0 6.5 13 20 26 33 (ft)

LENS F   4x Extra Wide
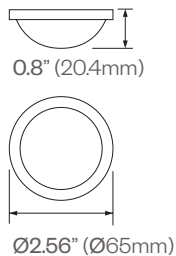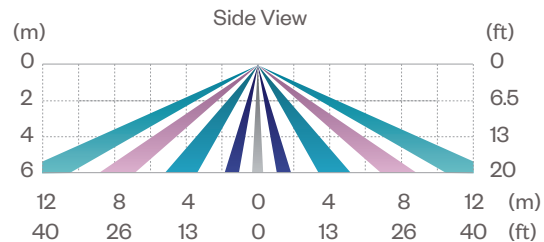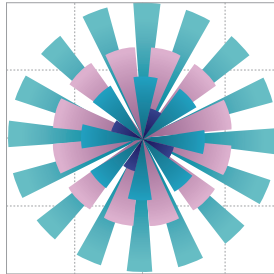
Mounting Height m (ft)	2.4 (8)	3.0 (10)	4.5 (15)	4.56.0 (20)
Max. Coverage Ø m (ft)	9.6 (32)	12.0 (40)	18.0 (60)	24.0 (80)
Minor Motion Ø m (ft)	1.8 (6)	4.0 (13)	--	--

0.8" (20.4mm)

Ø2.56" (Ø65mm)

Top View

Side View
(m) / (ft)
0 — 0
2 — 6.5
4 — 13
6 — 20
12 8 4 0 4 8 12 (m)
40 26 13 0 13 26 40 (ft)