



OVERVIEW

The ON-BRD-735SZ is a Z10 connector based, low voltage OS-NET Sensor (ONS) packed with all functionalities, including occupancy/vacancy sensing, daylight harvesting, bi-level StepDIM or continuous SmartDIM control, and state-of-the-art wireless mesh networking capability required to achieve smart lighting control.

Through an easy twist and lock with standard Z10 connector, the ON-BRD-735SZ not only controls the integrated luminaire in the programmed scheme by sensing the motion of occupant/vehicle and ambient light level, but also operates as a network node to transmit/receive/broadcast the commands for group control wirelessly. Network linking, grouping and all control settings; including group assignment, control scheme, delay time, ambient light level threshold, day/night sync, ramp up/fade down speed, sensitivity, burn-in duration...etc. can be easily and intuitively done via a 2-way handheld remote programmer (SRP-281) from the ground.

IP66 and IK08 housing design allow the sensor to be used for high bay, parking lots, pedestrian areas, public parks, outdoor display and playgrounds. Multiple lens options are available to provide different detection coverage for different installation heights. By connecting the ON-BRD-735SZ to a 0-10V driver with 12-24V AUX control power, an energy efficient wireless smart lighting control can be effortlessly achieved with unequalled simplicity.

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

FEATURES

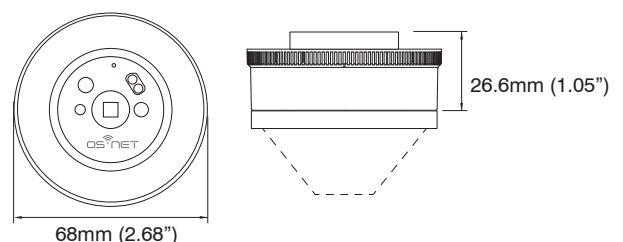
- Omni-directional digital pyroelectric infrared sensor
- OS-NET wireless mesh networking technology
- Supports 0-10V driver with integrated AUX power
- Multiple sensing control schemes programmable
- SmartDIM or multi-level high/low StepDIM control
- Single device can be members of multiple groups
- 2-way IR remote programming tool for all settings
- Primary/secondary daylight sensing programmable
- Occupied status digital output for auxiliary control
- IP66 and IK08 protections for outdoor applications
- Multiple lens options selectable for different ranges

APPLICATION

☒ Networked Smart Lighting Control

The ON-BRD-735SZ can be easily applied with indoor/outdoor luminaires for warehouses, commercial spaces, parking lots, pedestrian areas, public parks, outdoor display and playgrounds to provide occupancy/vacancy/daylight sensing based smart control.

DIMENSIONS



ON-BRD-735SZ

Z10 Low Voltage OS-NET Sensor

CONTROL SCHEMES

The ON-BRD-735SZ can be programmed to control the associated luminaire in one of the following schemes, while also transmits wireless command for group lighting 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 *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	OFF	HD-LD	
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

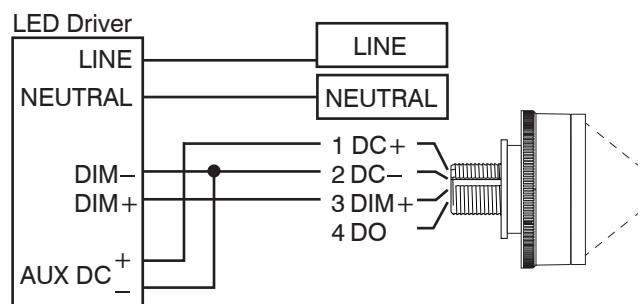
VSC: Vacancy Sensing Control

OSB: Occupancy Sensing with Background OFF: Light off all the time

¹ While ambient light level is higher than the threshold.

² While ambient light level is lower than the threshold.

WIRING DIAGRAM



Pin definition

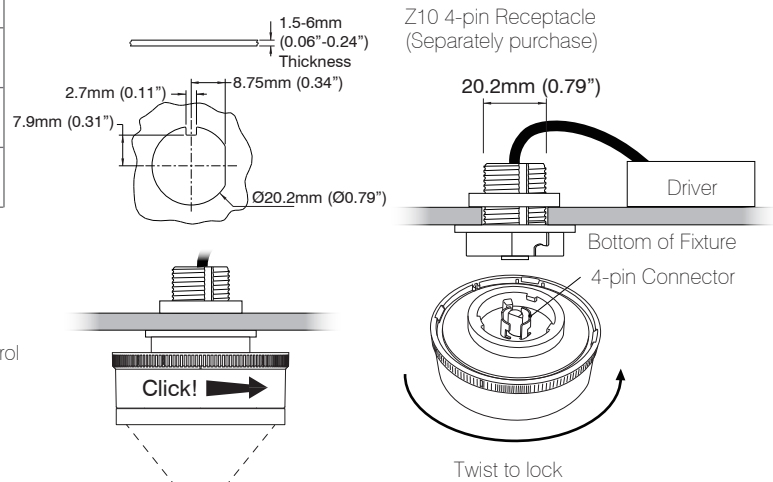
1	DC power (DC+)
2	0V (DC-)
3	DIM+
4	DO

LENS OPTIONS

The ON-BRD-735SZ is available with following lens options which provide different coverage at different mounting heights (H).

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

FIXTURE INTEGRATION



SPECIFICATIONS

Power supply	12~24VDC (AUX)
Power consumption	<60 mA @DC 24V
Infrared sensor	Omni-directional digital pyroelectric
Analog output	0-10V±5%, isolated, sink <25 mA
Digital output	Active low @ occupied, sink<10mA, 40V max
Wireless protocol	Modified Zigbee Light Link (ZLL)
Radio frequency	2,405~2,475 MHz
Radio range	*15/100 m @indoor/outdoor, open space
Detectable speed	0.15 ~ 3 m/sec. (0.5~10 ft./sec.)
Mounting height	Subject to the lens applied
Detection range	Subject to the lens applied and height
Remote range	Typ. 10 m (33 ft), no backlight
Op. humidity	Max. 95% RH
Op. temperature	-40°C~55°C (-40°F~131°F)
Dimensions	Ø68 x H29mm (Ø2.68" x H1.14")

*Actual radio range may differ depending on environmental conditions.