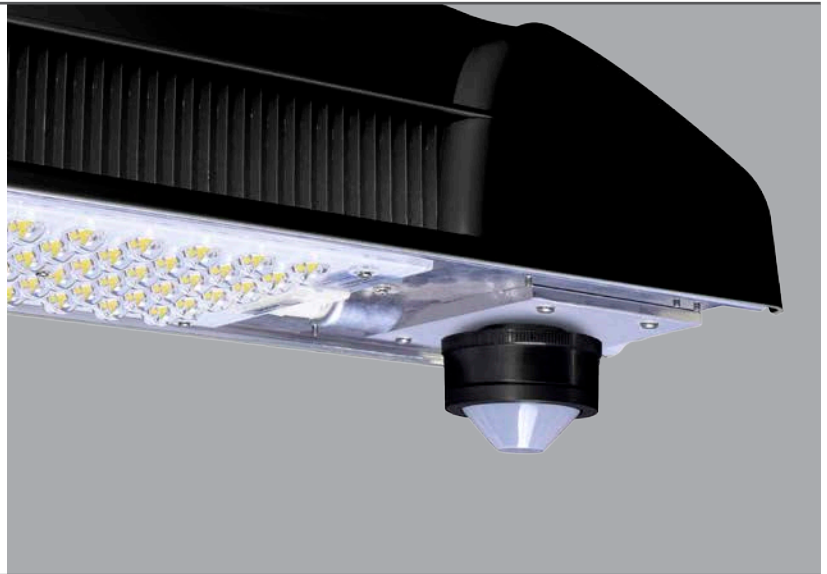


ON-BRD-734SZ



Low Voltage OS-NET Sensor

Flexibility ▪ Functionality ▪ Simplicity



OVERVIEW

The ON-BRD-734SZ is a Zhaga based, low voltage powered 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 connection with standard Zhaga Book 18 receptacle, the ON-BRD-734SZ 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 heights. By connecting the ON-BRD-734SZ to a 0-10V driver with 12-24V AUX control power, an IoT-based energy efficient smart lighting control can be effortlessly achieved with unequalled simplicity.

FEATURES

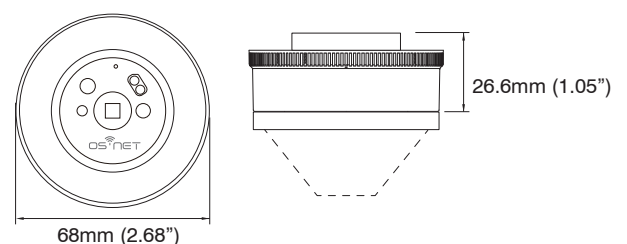
- Omni-directional pyroelectric infrared sensor
- OS-NET wireless mesh networking technology
- Supports 0-10V driver with integrated AUX power
- Supports 4-pin Zhaga Book 18 edition 2 receptacle
- Multiple sensing control schemes programmable
- SmartDIM or multi-level high/low StepDIM control
- Single device can be members of multiple groups
- 2-way IR remote programming tool for all settings
- Master/slave set for day/night sync group control
- Occupied status digital output for auxiliary control
- Multiple lens options selectable for different ranges
- IP66 and IK08 protections for outdoor applications

APPLICATION

☒ Networked Smart Lighting Control

The ON-BRD-734SZ 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-734SZ

Low Voltage OS-NET Sensor

CONTROL SCHEMES

The ON-BRD-734SZ 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

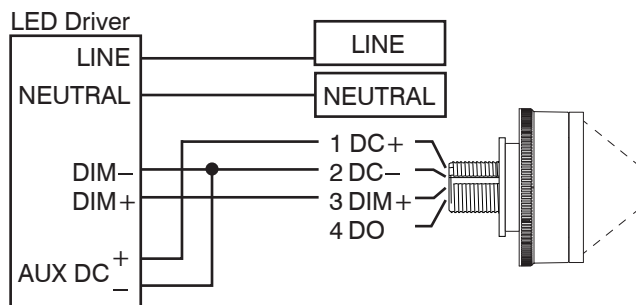
VSC: Vacancy Sensing Control

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

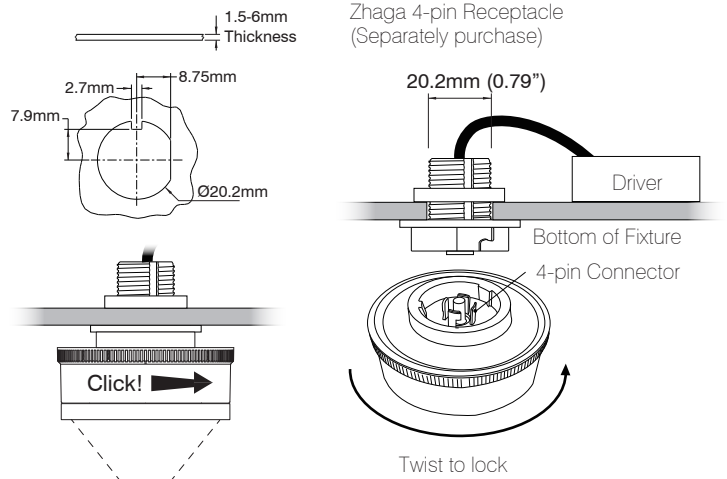
1	DC power (DC+)
2	0V (DC-)
3	DIM+
4	DO

LENS OPTIONS

The ON-BRD-734SZ 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	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

FIXTURE INTEGRATION



SPECIFICATIONS

Power supply	12~24VDC (AUX)
Power consumption	<60 mA @ DC 24V
Infrared sensor	Omni-directional pyroelectric
Analog output	0-10V±5%, isolated, sink <25 mA
Digital output	Active low @ occ. 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 type and mounting height
Remote range	10 m (33 ft) typical, indoor, 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")