

## BOA-517 series

### Low Voltage Bi-Level Occupancy Sensor

# TRANS



## OVERVIEW

The BOA-517 series member of the TRANS family is a low voltage passive infrared occupancy sensor designed to provide bi-level occupancy based lighting control. Depending on the ambient light level setting, this sensor will generate an output for bi-level control according to the occupancy status and ambient light level change.

This PIR occupancy sensor employs a cutting edge quad element pyroelectric infrared sensor to provide omni-directional sensing capability of occupant's presence and motion. An advanced digital ambient light sensor is integrated to provide smart ambient light level sensing for bi-level or daylight harvesting control. The Accu-Set digital potentiometer makes ambient light level and delay time settings easier, faster and more accurate than conventional analog potentiometers.

When ambient light level is lower than the set value, the sensor will provide a 3V control voltage for low dim lighting output. Once the sensor detects an occupant's presence, the sensor will activate the output and the control voltage will rise to 10V for full lighting output before the delay time elapsed.

Like all sensors in the TRANS family, the BOA-517 series is available with various mounting options and interchangeable lenses. This feature provides a second-to-none design and installation flexibility. The sensor is designed to operate in the coldest of environments, down to -40°F/°C.

## FEATURES

- Omni-directional quad element infrared sensor
- 12~24VDC low voltage power supply operation
- Bi-level output for 0-10V dimmable control
- Accu-Set adjustable TIME and LUX settings
- Motion sensing LED indicator for walk test
- Push-in locking terminals for easy connection
- Available with variety of mounting options
- Available with interchangeable lens options

## APPLICATION

- ☒ Lighting Control
- ☒ 0-10V Ballast Dimming
- ☒ LED Control

The BOA-517 series of occupancy sensor can be used to provide energy efficient bi-level or daylight harvesting for lighting control by sensing occupant's motion and ambient light levels. Basic wiring diagrams are included for reference. Consult with an IR-TEC team member if a more complex wiring diagram is required.

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### Mounting Options

The BOA-517Sxx series can be mounted into the ceiling, attached to a fixture or mounted into a junction box. The mounting options are available by combining a specific mounting bracket (if applicable) from the chart below. The bracket will be shipped with the sensor when ordered with the respective code. Mounting option code F and W allow the BOA-517Sxx to be directly integrated with OEM light fixture for indoor or wet location respectively.

Code	Mounting Option	Mounting Bracket
F	Fixture Integrated	---
W*	IP-66 Fixture Integrated	---
E	Fixture External	EMB-500
P*	IP-66 Fixture External	PMB-500
S	Ceiling Surface	SMB-500
C	Junction Box	CMB-500
R	Ceiling Recess	RMB-500

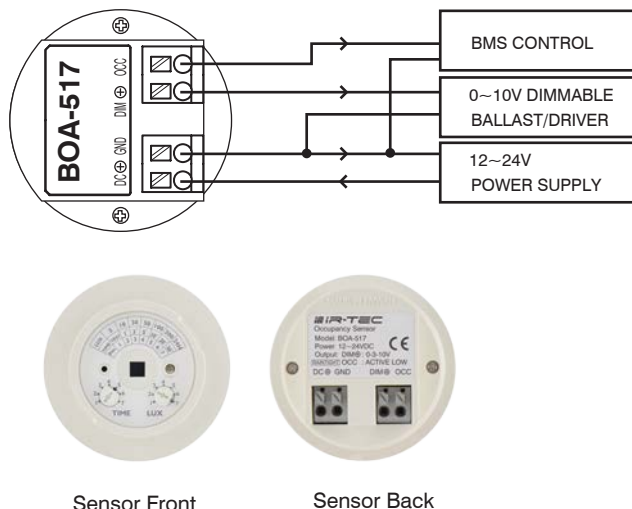
\*Available for IP-66 fixture integration

### Lens Options

The BOA-517Sxx 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

### Wiring Diagram



### Example: BOA-517SEF

This sensor would come with bi-level 0-10V analog output, EMB-500 fixture external mounting bracket and F lens with detection coverage up to 4X of specified mounting height. Specific mounting bracket or lens may be ordered separately if needed. For help selecting sensors with proper mounting and lens options, please visit [www.irtec.com](http://www.irtec.com), send your inquiry to [info@irtec.com](mailto:info@irtec.com) or contact an IR-TEC team member directly.

### SPECIFICATIONS

Power supply	12~24VDC
Current drain	8mA @24VDC, idle
Sensor output	DO: Open Collector, Active Low AO: 0-3-10VDC, max. 5mA
Infrared sensor	Omni-directional quad element pyroelectric
Detectable speed	0.5~10 ft./sec. (0.15~3m/sec.)
Mounting height	Subject to the lens type applied
Detection range	Subject to the lens applied and height
ALS sensor	Digital, color temperature compensation
Delay time	10"/1'/3'/5'/10'/20'/30' selectable
Op. humidity	Max. 95% RH
Op. temperature	-40°F~131°F (-40°C~55°C)
Dimensions	Ø2.36"x H1.45" (Ø60 x H37mm)