TRANS

COS-516 series

Bi-Level LED Control Occupancy Sensor

OVERVIEW

The COS-516 series member of the TRANS family is an innovative occupancy sensor specially designed for bi-level control of LED luminaries powered by Constant Voltage (CV) driver.

This occupancy sensor employs a cutting edge quad element pyroelectric infrared sensor to provide omni-directional sensing capability of the occupants presence and movements. This sensor will provide full power output for LED module when it detects presence of an occupant, or vehicle, and switch back to the low dim level after the area is vacated for a period of time. The Accu-Set digital potentiometer makes the sensor setting work easier, faster and more accurate than conventional analog potentiometers.

The COS-516 series offers 8 different control modes set via a rotary DIP switch. Additionally the sensor has 7 delay times and low dim levels both pre-settable via Accu-Set digital potentiometers. The COS-516 is designed to provide complete occupancy sensing for automatic LED lighting control, ease of use, and the simplest installation.

Like all sensors in the TRANS family, the COS-516 series is available with various mounting options and interchangeable lenses. This provides a second-to-none design and complete installation flexibility. The sensor is designed to operate in the coldest of environments, down to -40°C/°F.

FEATURES

- Omni-directional quad element infrared sensor
- 12～48VDC directly powered by LED driver
- Pulse width modulation output control
- Maximum control up to 3A per sensor
- Walk test and sensor operation LED indicator
- Push-in wire locking terminals for easy wiring
- 8 rotary DIP switch selectable control modes
- 7 low dim levels available via Accu-Set trimmer
- Available with variety of mounting options
- Available with interchangeable lens options

APPLICATION

☑ LED Control

The COS-516 series occupancy sensor can be directly powered by CV LED driver and providing regulated current for LED lighting by sensing the presence and movements of the occupant. Various control modes can be achieved with rotary switch setting. Basic wiring diagrams are included. Consult with an IR-TEC team member if a more complex wiring diagram is required.

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IR-TEC Specializing in Building Sensors

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Control Modes

The COS-516 series can be set to control the lighting in one of the following modes. For more details of specific control modes, please visit www.irtec.com or contact a IR-TEC team member directly.

OSO : Occupancy Sensing Only

OSLA/OSMA/OSHA : Occupancy Sensing at Low/ Medium/High Ambient

OSLATO/OSMATO/ OSHATO : Occupancy Sensing at Low/ Medium/High Ambient with Time-Off

Mode		Day[1]	Night[2]	Remarks
A	TEST	Turns ON light for 5 sec. at every motion detected. DIM the light for 10 sec. and then turn OFF.		
B	OSO	Vac: DIM Occ: ON	Vac: DIM Occ: ON	
C D E	OSLA OSMA OSHA	Vac: OFF Occ: OFF	Vac: DIM Occ: ON	
F G H	OSLATO OSMATO OSHATO	Vac: OFF Occ: OFF	Vac: OFF Occ: ON -DIM	DIM during Time-Off delay

Vac : Vacant **Occ** : Occupied

[1] While ambient light level is higher than the threshold.
[2] While ambient light level is lower than the threshold.

Mounting Options

The COS-516S**X**x series can be mounted on the ceiling or attached to a fixture 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. Codes F and W allow the COS-516S**X**x to be directly integrated with OEM light fixtures in any environment.

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

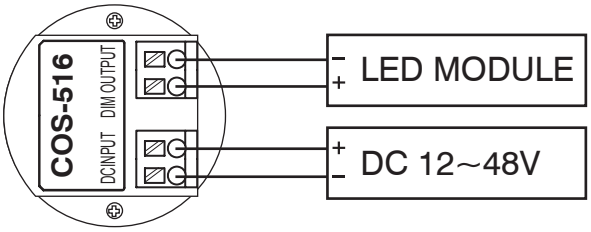
*Available for IP-66 fixture integration

Lens Options

The COS-516S**X** series is available with the following lens options which provide different coverage at different mounting heights (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



SPECIFICATIONS

Power supply	12~48VDC
Current drain	<2.5mA @ 48VDC, LED OFF
Infrared sensor	Omni-directional quad element pyroelectric
Maximum load	3A, 12~48VDC
Output control	1KHz pulse width modulation
Detectable speed	0.15~3m/sec. (0.5~10 ft./sec.)
Mounting height	Subject to the lens type applied
Detection range	Subject to the lens applied and height
Ambient light level	L:20~50 lux, M:80~130 lux, H:500~600 lux
Low dim level	0/5/10/20/25/33/50% selectable
Delay time setting	1'/3'/5'/10'/15'/20'/30' selectable
Time-off delay	10 min., **TO** modes only
Op. humidity	Max. 95% RH
Op. temperature	-40°C~55°C (-40°F~131°F)
Dimensions	Ø60 x H37mm (Ø2.36"x H1.45")

*10 lux equals to approximately 1 ft. candle