

WARNINGS :

Read and follow all safety instructions. Instructions must be shared and acknowledged by all persons providing installation services.

Service and installation to be provided by licensed and qualified electrical professionals.

Before performing service or installation shut off the power at the service panel.

Ground the fixture and power supply (if applicable).

Install only in accordance with National Electrical Code and local electrical codes.

Supplied power must be compliant with the voltage and frequency specified on the power supply.

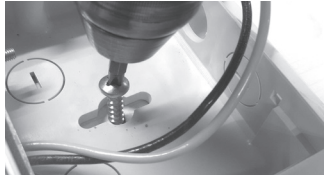
Supplied power must be delivered to the fixture using plenum rated wire.

If applicable, adhere to all safety precautions included in instructions for battery backup and sensor installation

MECHANICAL

STANDARD INSTALLATION

- 1 Remove Access Lid from each end cap
- 2 For recessed j-box see fig. 1; for surface mount see fig. 2
- 3 Remove convenient knock out from end-cap.
- 4 Mount Fixture Securely to surface using contractor supplied 1/4" screw (or equivalent)



PENDANT INSTALLATION (see Figure 4)

- A Splice wire at Junction box long enough to route to 4 with additional length to make connection in end-cap. Install swivel mount to Junction Box (pass wire through at each additional step)
- B Install contractor provided pipe into swivel mount
- C In order, thread the top nut, install adaptor plate, then thread the bottom nut into pipe. Knock out the bolt slots in the plate. Attach rail to plate with carriage bolts and nuts
- D Loop rail end into end-cap opening.
- E Route wires through end-cap and attach with carriage bolt & nut. Add second carriage bolt and nut at position D.

SUSPENSION MOUNT INSTALLATION (see Figure 5)

- F Attach cross ties on sides of channel. Secure with self-tapping screws.
- G At junction box, assemble braces and wire powercord
- G Thread stud into brace at junction box
- G Pass aircraft cable through coupler, for powercord add bushings
- G At junction box, install bezel over stud and thread coupler onto stud
- H Install cross tie gripper on cross tie and thread aircraft cable through gripper
- H Hang and adjust, trim excess cable.
- I Route powercord & bushing through channel and wire in fixture end cap

ELECTRICAL

- 1 Connect the conduit containing the branch circuit wires to the end-cap as required by local codes. Conduit and branch circuit wires are supplied by others (see Figure 2 for schematic)
- 2 Attach Ground Wire
- 3 For Battery Backup, refer to specific installation instructions for connection sequence in attached documentation.
- 4 For sensor, refer to specific install instructions for connections and diagram.
- 5 Make all other connections
- 6 When wiring is complete, replace the access door for each end-cap.

FIG. 1 RECESSED MOUNTED JUNCTION BOX

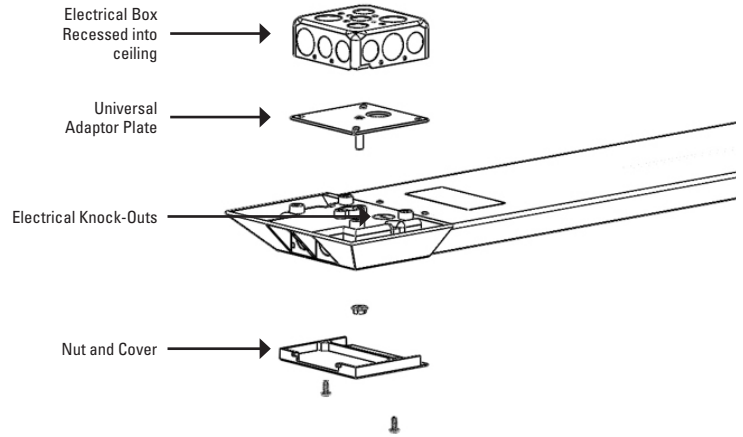


FIG. 2 SURFACE MOUNT J-BOX CONFIGURATION

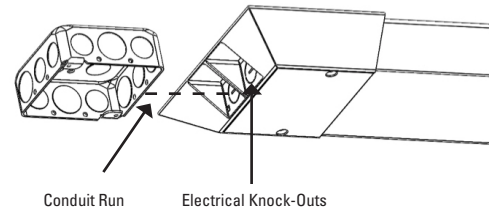
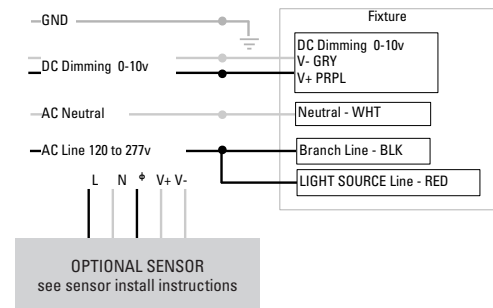
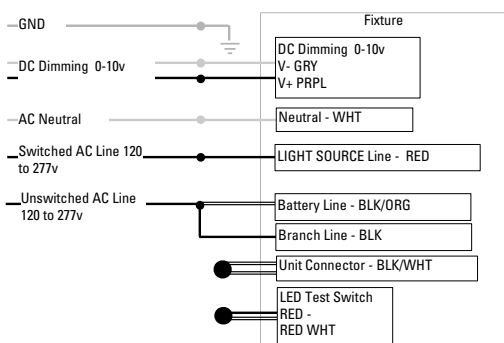


FIG. 3 ELECTRICAL CONNECTIONS

STANDARD WIRING



BATTERY BACKUP WIRING





P.O. BOX 11846 TUCSON, AZ 85734
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ILB-CP

TBTS
'A' MOUNTING DESIGN
EMERGENCY
LIGHTING EQUIPMENT
FOR LED

INSTRUCTION MANUAL

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. **CAUTION** – To prevent electrical shock, do not mate unit connector until installation is complete and A.C. power is supplied to the unit.
2. **CAUTION** – This fixture provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency sources by turning off the A.C. branch circuit and by disconnecting the unit connector.
3. **CAUTION** – This is a sealed unit. Components are not replaceable. Replace the entire unit when necessary.
4. **CAUTION** – Installation and servicing should be performed by **qualified personnel only**. De-energize before opening.
5. **DO NOT USE OUTDOORS.** The **ILB** is for use with grounded, UL Listed, damp location rated, indoor fixtures. Not for use in heated air outlets or hazardous locations.
6. The **ILB** requires an unswitched A.C. power source of 120 to 277 volts, 50/60 Hz.
7. The **ILB** and A.C. driver **must** be on the same branch circuit.
8. Do not mount near gas or electric heaters.
9. The **ILB** should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
10. The **ILB** will supply 18-48 VDC output at the individual rated specification for 90 minutes. See individual units for output specifications.
11. Suitable for use in damp locations.
12. For use in 0° C minimum, 50° C maximum ambient temperatures.
13. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
14. Do not use this equipment for other than intended use.
15. Install in accordance with the National Electrical Code and local regulations.
16. Lighting fixture manufacturers, electricians, and end-users need to ensure product system compatibility before final installation.

SAVE THESE INSTRUCTIONS



THIS UNIT CONTAINS A
RECHARGEABLE NICKEL-CADMIUM BATTERY.
PLEASE RECYCLE OR DISPOSE OF PROPERLY.

INSTALLATION INSTRUCTIONS

CAUTION: Before installing, make certain the A.C. power is off and the ILB unit connector is disconnected.

1. LED LIGHT

The **ILB** can be used with most LED loads that operate at 18-48 VDC. See **ILB Model Specification Chart** for output specifications of the unit being installed.

ILB MODEL SPECIFICATION CHART

MODEL #	VOLTAGE*	OUTPUT POWER (REGULATED)
ILB-CP05	18-48VDC	5 WATTS
ILB-CP07	18-48VDC	7 WATTS
ILB-CP10	18-48VDC	10 WATTS

*VOLTAGES ARE NOMINAL

2. MOUNTING THE ILB

The **ILB** should be mounted on or nearby the fixture above the ceiling. The flex conduit marked "A" should be wired into the driver/lamp compartment or to an electrical junction box on the fixture which allows access to the fixture connections. Refer to *Illustration 1* for typical mounting.

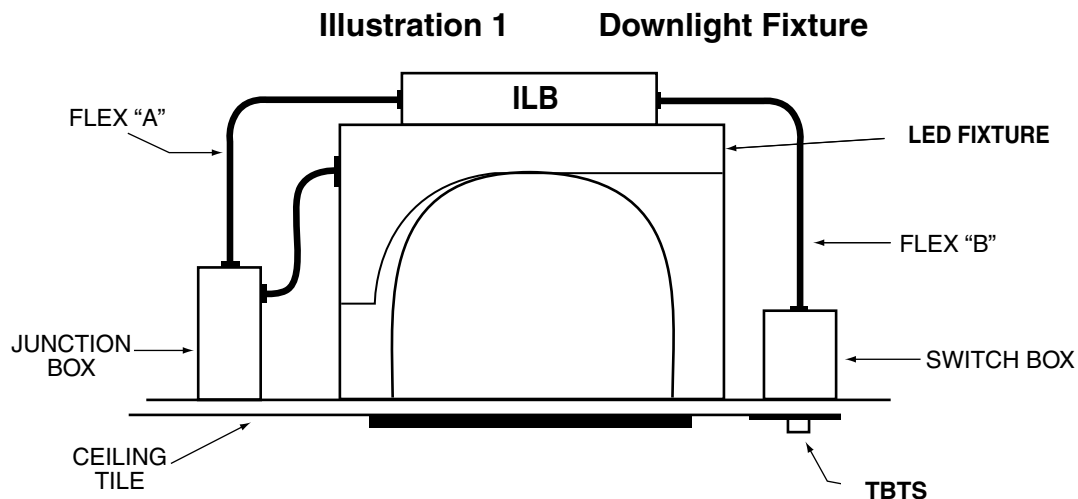
When battery packs are remote mounted, consult Customer Service for the maximum allowable distance between the battery pack and the load.

3. WIRING

Refer to the wiring diagram on the back page for the appropriate wiring of the LED load and driver. Install in accordance with the National Electrical Code and local regulations. For additional wiring diagrams consult Customer Service.

4. MOUNTING THE TBTS TEST ACCESSORY

Cut a single gang switch box into the ceiling tile adjacent to the fixture within reach of the **ILB** flex conduit marked "B". After mounting the switch box, connect flex to the box and route all leads inside the box. Refer to *Illustration 1* for typical mounting.



5. LABELS

Attach the appropriate labels adjacent to the **TBTS**. Annotate Replacement Label with identical manufacturer part number(s). The Caution and the Replacement labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.

6. WIRING THE A.C. INPUT

- A. The **ILB** and A.C. driver **MUST** be on the same branch circuit.
- B. The **ILB** requires an **unswitched** A.C. power source of 120 to 277 volts, 50/60Hz; therefore when used with switched fixtures, the ILB input must be wired ahead of the switch.
- C. Refer to the wiring diagrams on the back page for the proper wiring. For wiring diagrams not shown, consult our customer service.

7. COMPLETING INSTALLATION

When the installation is complete, switch the A.C. power on and join the **ILB** unit connector.

OPERATION

Normal Mode – A.C. power is present. The A.C. driver operates the LED load as intended. The **ILB** is in the standby charging mode. The **TBTS** will be lit providing a visual indication that the battery is being charged.

Emergency Mode – The A.C. power fails. The **ILB** senses the A.C. power failure and automatically switches to the *Emergency Mode*. One or multiple LEDs are illuminated, for a minimum of 90 minutes. When the A.C. power is restored, the **ILB** switches the system back to the *Normal Mode* and resumes battery charging. See page 1 of the Instruction Manual.

TESTING & MAINTENANCE

Pressing the **TBTS** turns off the light on the **TBTS** and forces the unit into emergency mode, interrupting power to the designated A.C. driver. The LED load is now being lit by the **ILB** unit. After releasing the **TBTS**, the fixture returns to normal operation after a momentary delay. To simulate a “BLACK OUT” use the circuit breaker to turn off A.C. power.

Initial Testing – Allow the unit to charge approximately 1 hour, then conduct a short discharge test. Allow a 24 hour charge before conducting a one hour test.

The **ILB** is a maintenance free unit, however, periodic inspection and testing is required. NFPA 101, Life Safety Code, outlines the following schedule:

Monthly – Insure that the **TBTS** light is illuminated. Conduct a 30 second discharge test by depressing the **TBTS**. At least one LED should operate at reduced output.

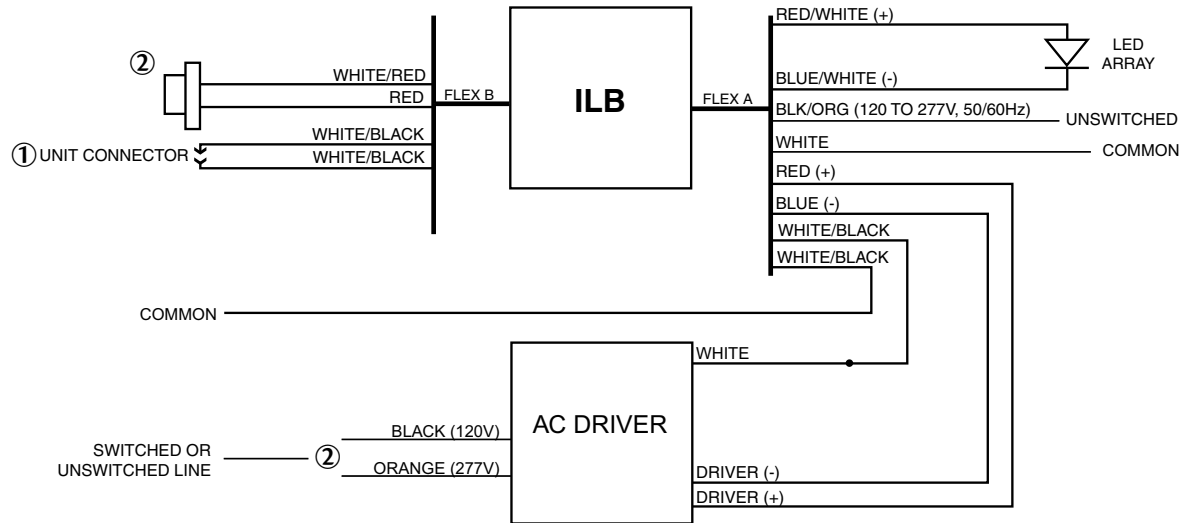
Annually – Insure that the **TBTS** is illuminated. Conduct a full 90 minute discharge test. The unit should operate as intended for the duration of the test.

“Written records of testing shall be kept by the owner for inspection by the authority having jurisdiction.”

SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.
Consult Customer Service or visit www.iotaengineering.com for current warranty information.

TYPICAL WIRING DIAGRAM

For other diagrams, consult our Customer Service.



- ① DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.
- ② TEST ACCESSORY LEADS-OBSERVE PROPER POLARITY WIRING.

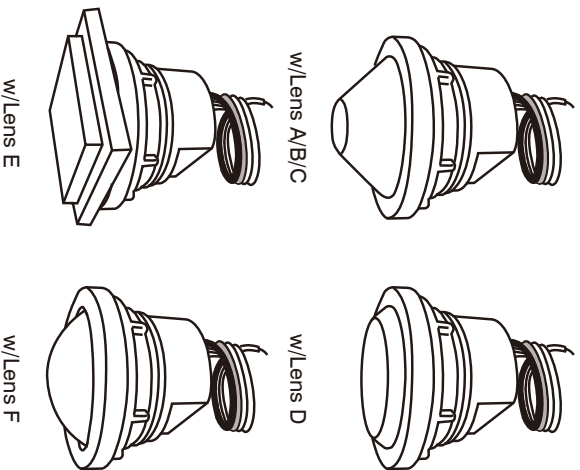
TRANS

Occupancy Sensor Family

LOD-500 series

Line Voltage Bi-Level Occupancy Sensor

INSTALLATION INSTRUCTIONS



OVERVIEW

The LOD-500 series member of the TRANS family is a line voltage switching occupancy sensor with 0-10V output for dimmable ballast or LED driver control. The sensor is capable of providing bi-level light control for energy efficient building management.

This sensor will provide full power output for dimmable ballast or an LED module when it detects the 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 LOD-500 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 LOD-500 is designed to provide complete occupancy sensing dimmable ballasts/LED lighting control, ease of use, and the simplest installation.

Like all sensors in the TRANS family, the LOD-500 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.

PRUDENCE

Risque de choc électrique - Débranchez l'alimentation avant l'entretien.

Ne PAS toucher la fenêtre carrée de capteur infrarouge sous l'ensemble de l'objectif.

Ouvrir Type commutateurs optoélectroniques

CAUTION

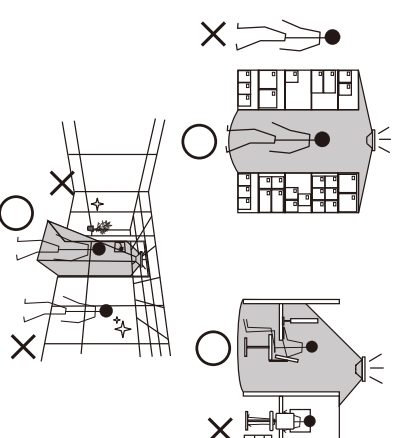
Risk of Electric Shock - Disconnect power supply before servicing.

Do NOT touch the square window of infrared sensor under the lens assembly.

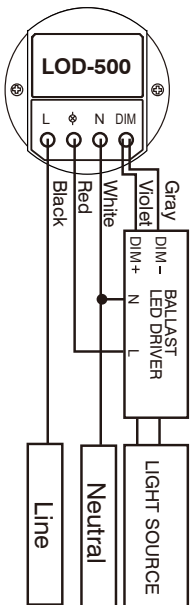
Open Type Photoelectric Switches.

INSTALLATION NOTES

1. The sensor is more sensitive to the movements "crossing" the detection zones than "toward" or "away" the sensor unit. To obtain better sensitivity, avoid placing the sensor in line with occupant path, if possible.
2. The closer the movement is to the sensor, the more sensitive the sensor is. The higher the sensor is installed, the larger movement is required to be detected.
3. Ensure to place the sensor at least at 1.5m (5 ft.) away from air supply ducts as rapid air flow may cause false activations.
4. The sensor cannot "see" the movements behind obstacles, such as furniture, shelf, glass or partition. As a general rule, each occupant should be able to clearly view the sensor unit.
5. For open office areas with partition which could block the sensor view to occupant movements, it is best to place the sensors over the intersection of multiple workstations. For large areas of open office or space, place multiple sensors so that there is overlap coverage with each adjacent sensor.



WIRING DIAGRAM

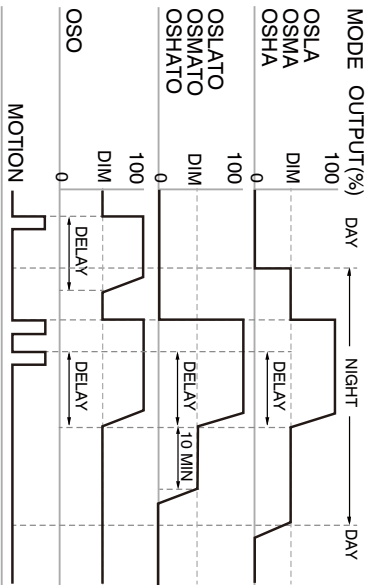


Control Mode

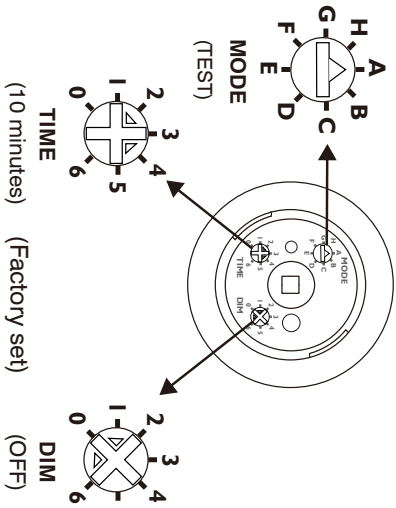
The LOD-500 series features 8 different control modes for selection via rotary DIP switch. Please refer to the following table and sensor operation charts to select the desired control mode.

SW.	A	B	C	D	E	F	G	H
MODE TEST	OSO	OSLA	OSMA	OSHA	OSLATO	OSMATO	OSHATO	

Sensor Operation



SENSOR SETTINGS



POS.	0	1	2	3	4	5	6
TIME	1'	3'	5'	10'	15'	20'	30'
DIM	OFF	5%	10%	20%	25%	33%	50%

Delay Time

The LOD-500 series offers 7 different delay time settings via Accu-Set potentiometer. The light will remain ON if sensor detects occupant's movement before the set delay time expires. The Accu-Set potentiometer will provide accurate delay time as the arrowhead pointed.

Dim Level

The LOD-500 series offers 7 different dim level settings via Accu-Set potentiometer. The LED light will be dimmed as the level set when condition of selected control mode applies. The Accu-Set potentiometer will provide accurate dim level as the arrowhead pointed.

TESTING

Sensor Range Test

1. Set the control mode switch pointing to position "A".
2. Walk within the desired range* at normal speed. Light should be switched ON for 5 seconds and dim for 10 seconds whenever sensor detects the movement.
3. The LED indicator behind lens assembly will blink to indicate sensor detection as well.

* Depending on the lens type ordered and mounting height, the sensor could have different sensing coverage as instructed on the LENS DATASHEET attached.

SPECIFICATIONS

Power supply	100/120/240/277VAC, 50/60Hz
Maximum load	800W
Infrared sensor	Omni-directional quad element pyroelectric
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
Zero crossing	Automatic frequency detection
Low dim control	0-10V
Dim output current	Max. 400µA @ 120VAC Max. 2.5mA @ 277VAC
Low dim level	0/5/10/20/25/33/50% selectable
Ambient light level	L:20~50 lux, M:80~130 lux, H:500~600 lux
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")

WARRANTY

IR-TEC International Ltd. warrants this product to be free of defects in materials or workmanship for a period of five years from date of shipment. There are no obligations or liabilities on the part of IR-TEC International Ltd. for consequential damages arising out or in connection with the use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstatement.

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