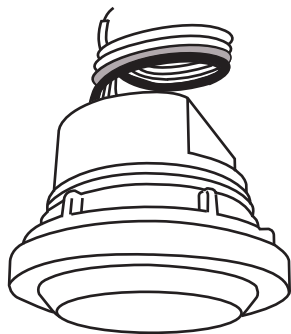


TRANS

LPS-509 series

Line Voltage Daylight Sensor

INSTALLATION INSTRUCTIONS



OVERVIEW

The LPS-509 series member of the TRANS family is a line voltage daylight sensor designed for automatic daylighting control. This sensor is able to continuously measure the ambient light level in the controlled area and respond with switched line voltage output to control the connected lighting accordingly.

This daylight sensor employs a cutting edge digital ambient light sensor (ALS) with an advanced algorithm to provide closed loop, dynamic ambient light level sensing capability. When the ambient light level is lower than the ON setpoint, the sensor will activate its relay contacts to turn the connected light on automatically. The sensor will turn the light off automatically if the ambient light level is higher than the OFF setpoint for a period of time. An exclusive Hybrid Switching technology makes LPS-509 series ideal to control the lighting with exceptionally high inrush current (HIC) while switching ON, such as multiple LED or CFL lightings connected in parallel.

The innovative Accu-Set digital potentiometer makes the on/off threshold and switch-off delay time settings easier, faster and more accurate than conventional potentiometer. Like all sensors in the TRANS family, the LPS-509 series can be mounted in various options. This feature offers a second-to-none design and installation flexibility for daylight harvesting control in sustainable buildings.

APPLICATION NOTES

1. Care must be taken when selecting the mounting location of sensor. The ambient light level may vary greatly at different measure points in the room, depending on the location of the windows, lighting fixtures, wall colors, floor material, desk top, etc.
2. It is recommended to mount the sensor directly above the work space, such as desk or conference table.
3. Note the path of shadows which may affect the sensor operation. Daylighting control may be problematic if part of controlled area is in shadows while other part has plentiful daylight.
4. The sensor is designed to measure ambient light level by looking down from ceiling height. Sensing performance will vary if sensor is mounted to look out from wall. Avoid installing the sensor to directly look into the skylight, the daylight level will exceed the maximum threshold of sensor.
5. The ambient light level on the ceiling can be much lower than that at the windows, corners of the room, or especially the workplace level. Therefore, it is important to measure the light level over the workplace.

⚠ WARNING & CAUTION

- Risk of Electric Shock - Disconnect power supply before servicing.
- Open Type Photoelectric Switches.
- Cycling the power to the sensors will cause failure over time.

⚠ AVERTISSEMENT & PRUDENCE

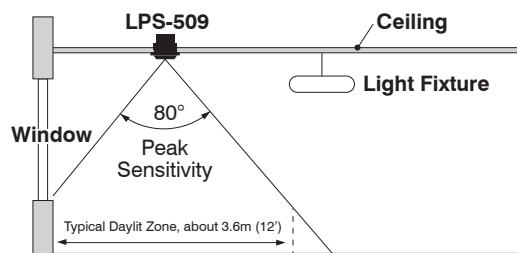
- Risque de choc électrique - Débranchez l'alimentation avant l'entretien.
- Open Type Photoelectric Switches.

SELECTING A LOCATION

The LPS-509 series daylight sensor can be applied to control the lights in areas that receive sufficient daylight, thus the electric lights can be reduced or switched OFF. It is important to select a location for the LPS-509 series where the representative daylight of the controlled area is available.

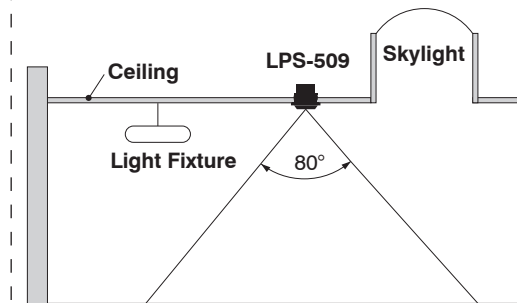
Side-lighting area

If the primary daylight source is a window, the daylight sensor is typically mounted between the window and the first row of fixtures.



Top-lighting area

If the primary daylight source is a skylight, the daylight sensor should be mounted on the ceiling between the skylight and fixtures, looking down at the floor.



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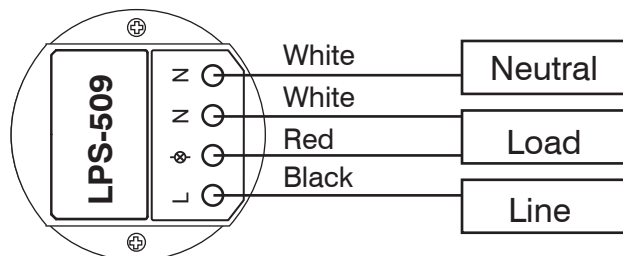
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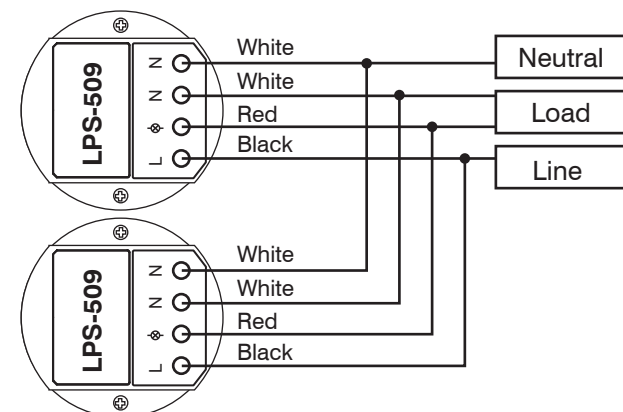


WIRING DIAGRAM

A. Single sensor control



B. Multiple sensors control



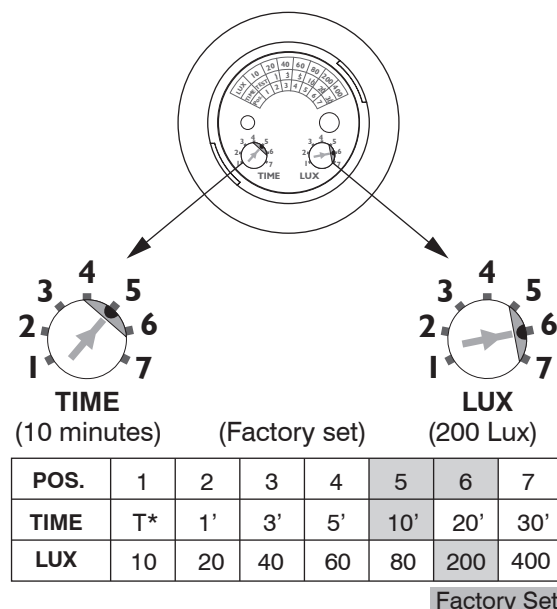
INSTALLATION

The LPS-509 series can be mounted into the ceiling, attached to a fixture or mounted into a junction box to control the connected lighting by combining with specific mounting bracket. For details of mounting options available, please refer to the mounting instructions separately attached.

OPERATION

The LPS-509 series is a line voltage daylight sensor that provides switched line voltage for automatic daylighting control. The sensor can be applied to control the lights in areas that receive sufficient daylight, thus the electric lights will be automatically switched off if the ambient light level is higher than the OFF setpoint for a period of time as set. The sensor will automatically turn on the connected lighting if the ambient light level is lower than the ON setpoint.

SENSOR SETTINGS



*The delay time will return to the factory default setting after 10 minutes if the TIME pot is set at T position permanently.

TIME - Delay Time

This sensor offers 7 different delay time selection via Accu-Set potentiometers. The sensor will turn OFF the connected lighting when the ambient light is higher than the set threshold. Point the arrowhead on the TIME potentiometer to the desired time.

LUX - Ambient Light Level

This sensor offers 7 different ambient light level selection via Accu-Set potentiometers. The sensor will turn ON the connected lighting when the ambient light level is lower than the set threshold. Point the arrowhead on the LUX potentiometer to the desired level.

SPECIFICATIONS

Power supply	100/120/240/277VAC, 50/60 Hz
Sensing device	Digital data control ambient light sensor
Sensor output	Switched line voltage
Maximum Load @ -40°C~55°C (-40°F~131°F)	Incandescent/Halogen – 800/1200W(VA)@120/277V
	Fluorescent Ballast/CFL – 800/1200W(VA)@120/277V
	Ballast Electronic (LED) – 540/1200VA@120/277V
Maximum Load @ 55°C~70°C (131°F~158°F)	Incandescent/Halogen – 500/750W(VA)@120/277V
	Fluorescent Ballast/CFL – 500/750W(VA)@120/277V
	Ballast Electronic (LED) – 500/750VA@120/277V
Load switching	Hybrid switching
Inrush current	Max. 80A for 16.7msec.
Sensing range	Approx. 2~2,000 lux (0.2~200 fc)
Mounting height	2.4~3.6 m (8~12 ft.)
Field of view	Approximate 80°
Switch-off delay	T/1'/3'/5'/10'/20'/30', T<30 sec. for testing
ON/OFF threshold	7-level Accu-Set digital potentiometer
Op. humidity	Max. 95% RH
Op. temperature	-40°C~70°C (-40°F~158°F)
Dimensions	Ø65 x H45mm (Ø2.56"x H1.77")

WARRANTY

IR-TEC International Ltd. warranties 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, profit, or cost of removal, installation or reinstallation.