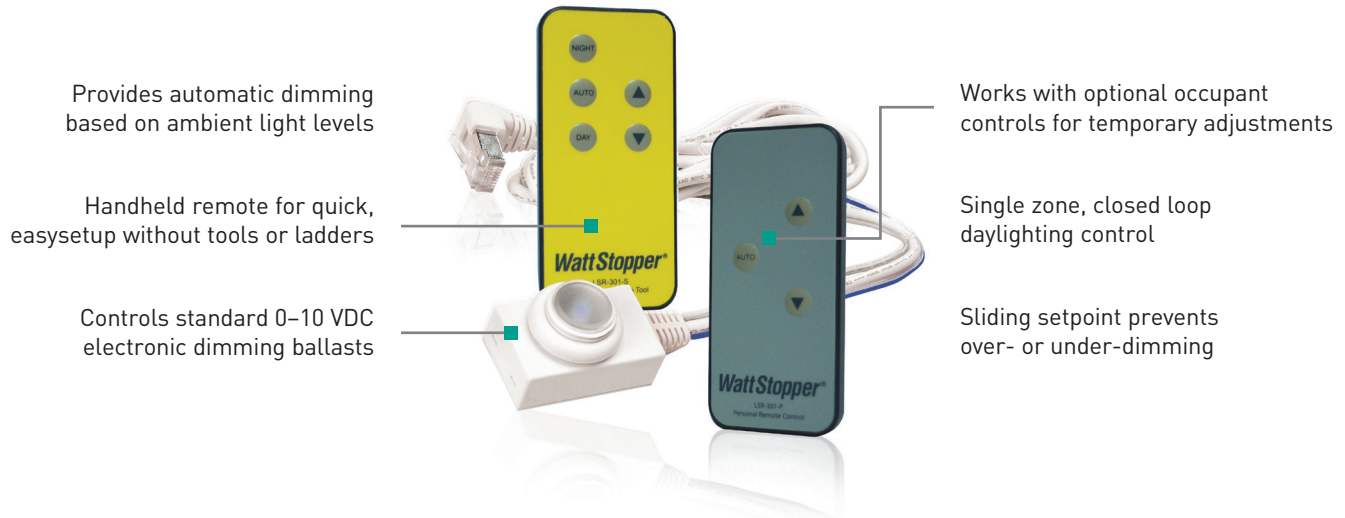


FIXTURE INTEGRATED DAYLIGHT DIMMING PHOTOSENSOR

| FD-301



Description

The FD-301 Fixture Integrated Daylight Dimming Photosensor is a low voltage controller that works with standard 0-10 VDC electronic dimming ballasts to control electric lighting in response to daylight.

Operation

A closed loop daylighting system, the FD-301 measures the total light level from daylight and electric light in the controlled area. The integral photocell measures only the narrow bandwidth of visible light to accurately report ambient light levels. Once commissioned, the FD-301 calculates the required light level for any given amount of daylight contribution based on two setpoints. One represents the target level when no daylight is present (night setpoint) and the other when significant daylight is present (day setpoint). Electric light output is automatically varied as the daylight level changes throughout the day to maintain the target light level. If specified, occupant controls may be used to temporarily adjust lighting levels without changing the setpoints. The FD-301 works with an FS-PP power pack.

Features

- Photocell uses photopic curve to accurately measure light as it is perceived by the human eye
- Provides precise control of lighting to maintain desired light level
- Separate handheld remote control for setup prevents tampering
- Boosts energy savings by reducing maximum lamp output, often resulting in a 20% reduction or more compared with lights at full output
- Optional occupant remote increases user satisfaction and often produces increased energy savings
- Achieves lumen maintenance by holding target light level as lamp output decreases over time

Adjustment Using Remote Controls

The FDR-301-S setup remote facilitates quick easy setup from ground level without tools. Raise and lower buttons are used to adjust target lighting levels for the day and night setpoints in the presence and absence of daylight. LEDs confirm setup operations.

An optional occupant remote control, LSR-301-P, includes raise and lower buttons to temporarily increase the target light level by up to 25% or reduce it to the lamp/ballast minimum level. An "Auto" button returns control to the programmed levels.

Applications

The FD-301 is designed for mounting in fluorescent lighting fixtures using 0-10 VDC electronic dimming ballasts. It is an ideal control choice for daylit locations that experience long periods of occupancy including private or open offices, classrooms and cafeterias. The FD-301 may be used with FS occupancy sensors for maximum energy savings.

PROJECT

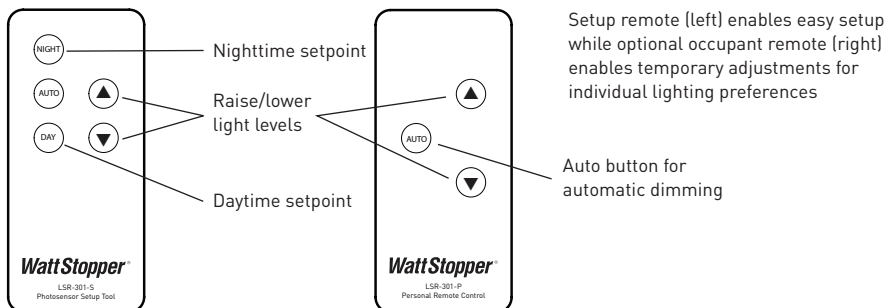
LOCATION/
TYPE

Specifications

- Operating voltage: 24 VDC
- Current consumption: 9mA typical, 30mA peak
- Max sink current: 50mA
- Dimensions: 1.57" x .98" x .84"
(40mm x 25mm x 21.4 mm) LxWxD
- Weight: 64.4 grams (2.27 ounces)
- Enclosure material: ABS
- Color: White
- Operating temperature: 0–40°C (32–104°F)
- Operating humidity: 5–95%, non-condensing
- Full range dimming: .2 VDC (minimum) to 10 VDC (100% lighting) output voltage
- Includes 6' (1.83m) lead with RJ45 connector and 1' (.3m) bare leads for 0–10 VDC signal
- Sliding setpoint control algorithm
- Five year warranty

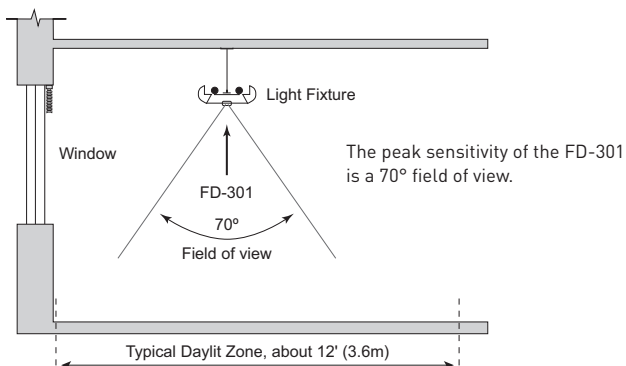
Product Controls

Handheld Remote Controls

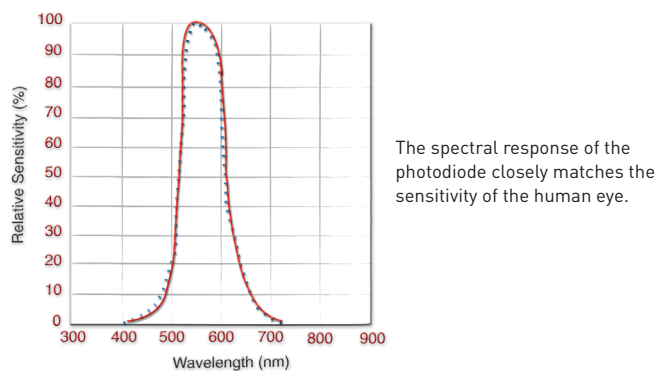


Sensitivity

Photosensor Spatial Response

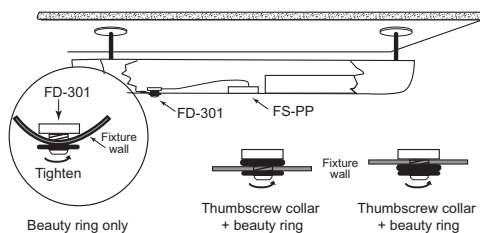


Photodiode Spectral Response



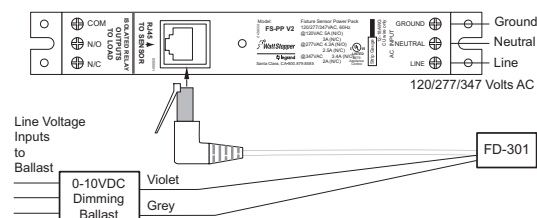
Installation & Wiring

Mounting and Installation



FD-301 photocell mounts in 3/4" diameter hole through the sheet metal in the bottom of the fixture.

Wiring



FD-301 lead connects to power pack, also mounted in fixture. For wiring diagram showing FD-301 and FS Occupancy Sensor, visit CAD Resources Center at www.legrand.us/wattstopper

Ordering Information

| Catalog # | Description | Input Voltage |
|------------------------------------|---|-------------------|
| <input type="checkbox"/> FD-301 | Fixture Integrated Daylight Dimming Photosensor | 24 VDC |
| <input type="checkbox"/> LSR-301-S | Setup Remote Control | |
| <input type="checkbox"/> LSR-301-P | Occupant Remote Control | |
| <input type="checkbox"/> FS-PPv2 | Power Pack | 120/277 VAC; 60Hz |