

LIGHTSAVER® SWITCHING PHOTOSENSOR

LS-102

Single zone, on/off
switching photosensor

Automatic setpoint
selection

Easy-to-read LCD display and
LED status indicators



Automatic startup/
calibration

Digital multi-band
photosensor

Multiple user-adjustable
control parameters

DESCRIPTION

The LS-102 Daylighting Controller is a single zone, on/off switching device designed to be installed in a closed loop application. A self-contained 24 VDC device with an extended range of 1-1400 footcandles, the LS-102 requires a low voltage power pack to operate. The controller consists of an advanced digital multi-band photosensor, an on-board micro-controller, and an LCD display. This photosensor is positioned behind a 100° cone that cuts off unwanted light, preventing false triggers.

OPERATION

Setpoints can be selected either automatically or manually. When ambient light levels exceed the off setpoint, the controller turns lighting off. It will turn lighting systems back on when the on setpoint is triggered. Because of its automatic calibration feature, many applications require little or no adjustment of the settings. The LS-102 can be paired with a low voltage wall switch to enable manual override, or with an occupancy sensor to enable its 'Hold On While Occupied' feature.

FEATURES

- Easy-to-read LCD display prompts installer through set-up
- Four user-adjustable parameters: on setpoint, off setpoint, off setpoint time delay, and 'Hold On While Occupied' Mode (if wired with an occupancy sensor)
- Test mode overrides programmed time delay, enabling installer to verify accuracy of settings
- Control load status verification allows testing and confirmation that wiring is correct
- Form factor designed to eliminate misalignment
- LED status indicator identifies when device is in override or test mode, or if device has switched lights on or off
- Mounting options for top- or side-lit applications
- One-hour manual override capability (when wired with low voltage, pushbutton wall switch)
- Programmable in most daylight conditions

AUTOMATIC STARTUP/CALIBRATION

The LS-102 features automatic setpoint calculations. The device initiates a procedure to select an appropriate value for the on setpoint. As part of the process, the controlled load is first turned on for a brief interval to warm up the lamps, and then switched off. This process is repeated several times. At the completion of the calibration, a new value for the on setpoint will have been selected. Other adjustable settings include deadband and time delay settings. If desired, the deadband can be adjusted to a value of 25, 50, 75, or 100 percent above the setpoint. The time delay can be adjusted to 3, 10, 20 or 30 minutes.

APPLICATIONS

The LS-102 Daylighting Controller can be used to control any type of lighting: incandescent, fluorescent, compact fluorescent (CFL), HID, and LEDs. The devices work in peripheral offices, skylit areas, cafeterias, warehouses and any other indoor area with natural light contribution.

PROJECT

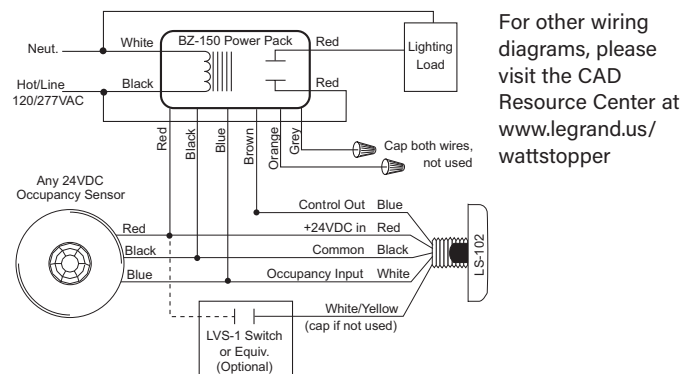
LOCATION/
TYPE

SPECIFICATIONS

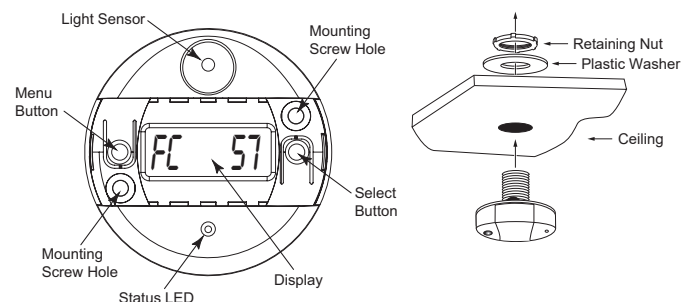
- Automatic setpoint calculation
- Digital Multi-Band Photosensor Range: 1-1400 footcandles
- ON Setpoint Range: 1-850 footcandles
- Status Indicator: Multi-function green LED
- Power Requirements: 12/24 VDC; 7 mA typical
- Output Signal: 24VDC; maximum 120 mA
- Location: Suitable for dry interior locations
- Environment: 32-120°F (0-49°C), less than 90% relative humidity
- Dimensions: 2.4" diameter x 0.7" deep (61mm x 17mm)
- Five year warranty
- UL listed

WIRING, INSTALLATION & LOCATION

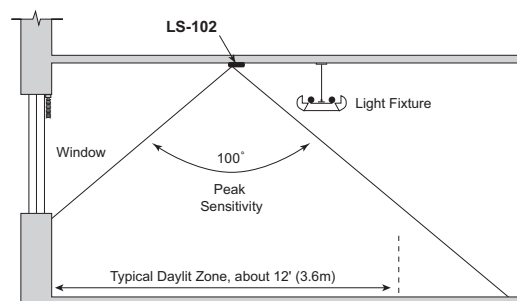
Wiring Diagram



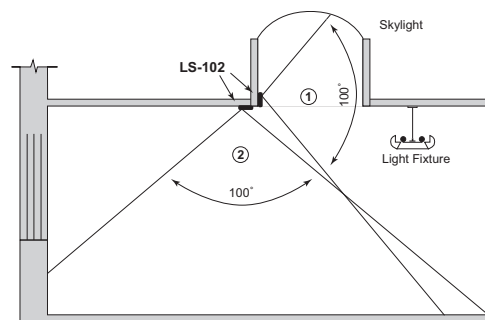
Mounting and LED Display



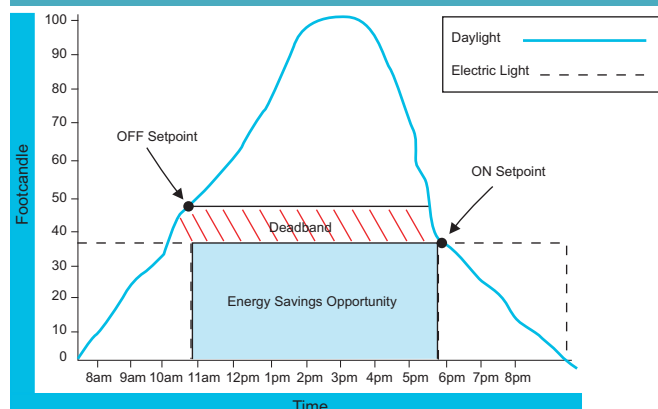
Side Lighting Application



Top Lighting Application



DEADBAND LEVEL CHART



If the LS-102's photosensor lighting level drops below the on setpoint, the lights will remain on. If the sensor's lighting level rises above the off setpoint, the LS-102 will automatically turn the lights off. If the sensor's lighting level remains in the predetermined deadband range (25%, 50%, 75% or 100%) the lighting will be passive until the sensor's level reaches the high or low setpoints.

ORDERING INFORMATION

Catalog #	Description	Footcandle Range	Deadband Adjustment Range
LS-102	On/Off Switching Photosensor	1-1400 fc	25%, 50%, 75% & 100% above on setpoint

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