WARNINGs and CautionS:

- To Avoid fire, shock, or death: Turn off power at circuit breaker or fuse and test that power is off before wiring.

For photocells installed to control emergency Lighting Equipment:
- This equipment is being used for Emergency Lighting and Power Equipment, please adhere to the following information. This equipment is rated for only 250 V. If used in a Lighting Equipment, apply the “Emergency Circuit” label (provided) to the front cover.

**Emergency Switch**

- Do not touch the surface of the area. Do not touch the surface with a damp cloth only.
- Use this device with copper or copper clad wire only.
- Operating Temperature: 32° to 104°F (-2° to 40°C)

**SavE These InstructionS**

- All servicing shall be performed by qualified service personnel. If any Emergency Circuits are fed or controlled from this panel, it must be located electrically where fed from a UPS, generator, or other guaranteed source of emergency and power outage situations.

**Tools Needed to Install Your Photocell**

- Slotted/Phillips Screwdriver
- Small Slotted Screwdriver
- Cutters
- Wire stripper

**Parts Included**

- Photocell (1)
- 4” x 4” Mounting Plate (1)
- #6-32 1-1/2” Screw (2)
- Low Voltage Connector (1) (if necessary)
- Terminal Wiring (1)
- Emergency Label (1) (not included with PCC2D)

**General Description**

The Leviton Line Voltage Photocell is a Self-Contained Daylight Harvesting System, ideal for spaces with windows like corridors, bathrooms, airport lobbies and conference rooms. This product integrates the functions of a power pack and a photocell. Features include Manual and Auto Dimming Control using 1-10V Ballasts and LED Drivers, Demand Response, Manual Switch and Emergency Inputs, adjustable Dimming Fade Rate, and Open and Closed Loop Daylight Harvesting.

This product is designed to meet the new Industry Standards of Energy Conservation, Dimming Fade Rate, and Open and Closed Loop Daylight Harvesting.

**Installing Your Photocell**

**Preparing and connecting wires:**

1. Insert wires into proper terminals. Use a screwdriver to turn terminal screws clockwise and secure wires.
2. Line wires to Line terminal.
3. Neutral wire to Neutral terminal.
4. Load wires to Load terminals.
5. Manual Switch. Emergency Switch. Interface Input and 1-10V DIM wires to their respective marked terminals.

**NOTE:** Use Class 2 wires for the Manual Switch, Emergency Interface Input and 1-10V DIM connections and cover the wires with the provided tubing for insulation inside the junction box.

**Installing your Photocell:**

Connect wires appropriate for WARNING diagram as follows:

1. Strip 1/4” (measure bare wire here).
2. Push in the two coasters that align with the two screws.
3. Align photocell so that it fits between the mounting holes of the electrical box and
4. Pull out the two coasters that align with the two screws.
5. Partially thread the two #6-32 screws provided into the mounting holes of the electrical box and
6. Using a #1 Phillips Screwdriver, tighten mounting screws firmly.

**Mounting your Photocell:**

To mount inside 4” octagon 2-1/4” deep ceiling electrical box, refer to Figure 1

- Dress line voltage wiring to provide enough clearance in electrical box when device is installed.
- Cover Class 2 wires with provided tubing barrier.
- Partially thread the two #6-32 screws provided into the mounting holes of the electrical box and
- Insert over mounting screws.
- Pull out the two coasters that align with the two screws.
- Align the photocell so that it fits between the mounting holes of the electrical box and
- Insert over mounting screws.
- Using a #1 Phillips Screwdriver, tighten mounting screws firmly.

**Adjusting your wiring:**

- Ensure that combustible entry clamp is located in corner of electrical box.
- Dress line voltage wiring to provide enough clearance in electrical box when device is installed.
- Cover Class 2 wires with provided tubing barrier.
- Install a two-gang mud ring (not included) on electrical box.
- Partially thread the two #6-32 screws provided into the mounting holes of the electrical box and
- Insert over mounting screws.
- Pull out the two coasters that align with the two screws.
- Align photocell so that it fits between the mounting holes of the electrical box and
- Insert over mounting screws.
- Using a #1 Phillips Screwdriver, tighten mounting screws firmly.

**Calibration**

After the photocell is installed, it must be configured correctly to maintain the desired light level (DOL) and to gain energy savings. To achieve this, the installer first needs to understand Closed and Open Loop daylight harvesting, and then decide which application best fits his customer's needs before configuring and calibrating the device.

- **Open Loop:** When a photocell (light pipe) is focused on an area which is primarily influenced by natural light from windows or skylights, in addition to the amount of artificial light from the lights it is controlling. NOTE: The angled light pipe is used for Open Loop applications only with manual dimming.

- **Closed Loop:** When the center photodetector is focused on an area which is primarily influenced by natural light from windows or skylights, in addition to the amount of artificial light from the lights it is controlling. NOTE: The flat lens is used for Closed Loop applications.

**NOTE:** Please allow a 15 second warm up period for applying power to the photocell. For initial calibration results, personnel should maintain at least a 6 foot distance from the device during daylight harvesting applications. If the light level falls below 10 lux during calibration, that calibration will fail and the LED will be solid BLUE. The device enters OFF mode when this occurs. NOTE: Changing the status of Closed Loop (Daylight Harvesting DIP switch) during or after calibration will put the device in OFF Mode with solid BLUE LED. The device will require calibration.

**OFF Mode:** The photocell is disabled in OFF Mode. This is the factory default setting. The device must be in OFF Mode before calibration can be started. To enter OFF Mode, turn the blue dial to SET/OFF for longer than 5 seconds. Entering OFF Mode will cancel calibration.

**Manual Mode:** Available for both Open and Closed Loop applications, quickly configure the Daylight Design Level (DDL). Calibration should always be done when ambient light is at user's desired level.

**Manual Calibration Procedure - Open/Close Loop:**

1. Move DIP switch 85 to ON for Open Loop or OFF for Closed Loop.
2. Turn the Blue dial fully clockwise to SET/OFF for 2 seconds (a solid RED LED will indicate that manual calibration has started). Then turn the dial to the desired multiplier value (preferably 1x).
3. Re-install photocell cover.
4. Lights are forced ON for ~3 minutes (with solid RED LED).
5. When ~3 minutes have elapsed, the LED blinks RED for an additional 3 minutes. The DOL can be adjusted by turning the blue dial.

**NOTE:** The LED blinks BLUE when the dial setting has changed.

6. When manual calibration is complete, the LED will return normal operation.

**Auto Mode:** Auto mode is available only for Closed Loop applications to configure the DOL in 24 hours. This option will not enter Auto Calibration Mode if Open Loop Daylight Harvesting is selected.

**Auto Calibration Procedure - Closed Loop Only:**

1. Move DIP switch 85 to OFF position.
2. Turn the Blue dial fully clockwise to AUTO (a solid GREEN LED will indicate that auto calibration has started).
3. Re-install photocell cover.
4. Auto calibration will complete in 24 hours and the LED will return normal operation. The device is now newly configured in Auto Mode.
**PHOTOCELL OPERATION**

**DIMMING**

The photocell controls a 1-10 VDC dimmable ballast or LED Driver to achieve maximum Energy savings while maintaining a minimum light level referred to as the "DDL". When no daylight is available, the photocell allows the load to operate at its full brightness level. As daylight increases in the room, the photocell dims the load. When the minimum dim level is reached (and if the Dim to Off setting is enabled), the device will switch off the lights when the light level is above the DOL for 30 seconds. The lights will then turn back on, with the light source set at its minimum dim level. The photocell will increase the light output until the DOL is reached. As the light levels change, the photocell will adjust the dim level in order to maintain the DOL. There is a time delay included in the Device to make the light transition unnoticeable to room occupants.

**FORCED-ZONE**

The dual zone option is ideal for installations, such as classrooms, with individually controlled parallel rows of lights. Daylighting contribution diminishes as the photocell's distance from the source (windows) increases. Therefore, lights at different distances from a window should not be controlled from the same photocell output.

**LED DISABLE**

Enabled – Switch Function

**FORCED-OFF**

Light Not ON

**LED ENABLING**

When enabled, the fade rate will be set to 30 seconds for 60 minutes. Test Mode: When enabled, the fade rate will be set to 30 seconds for 60 minutes.

**DIP SWITCHES**

- Bank Switch Function
  - OFF
  - ON
- Demand Response Level
  - Demand Response Level
- Zone 1 Offset (Green knob)
  - Green Zone 1 Offset
- Light Not ON

**DIALS**

- Photocontrol (Blue dial) – Used for photocell calibration

**LED INDICATORS**

- Solid – 3 min: Manual calibration starts
  - Blink 3 min: Manual calibration

**PRODUCT INFORMATION**

- For technical assistance, contact us at 1-800-624-3003
- Visit our website at www.leviton.com

**FCC COMPLIANCE STATEMENT**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**FOR CANADA ONLY**

For warranty information and product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

**LIMITED 5 YEAR WARRANTY AND EXCLUSIONS**

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal use for five years from the purchase date. Limiting only obligation is to correct such defects by repair or replacement of the product or any part thereof, at its option. Leviton reserves the right to inspect any and all returned goods. Leviton’s will be limited to repair or replacement of the product and any part thereof, at its option. Leviton shall not be liable for any direct, indirect or incidental damages caused by a defect in the product. This warranty does not apply in the following circumstances: (1) Improper installation, usage, or maintenance by the consumer purchaser; (2) Modification or alteration of any kind by anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal use for five years from the purchase date. Limiting only obligation is to correct such defects by repair or replacement of the product or any part thereof, at its option. Leviton reserves the right to inspect any and all returned goods. Leviton’s will be limited to repair or replacement of the product and any part thereof, at its option. Leviton shall not be liable for any direct, indirect or incidental damages caused by a defect in the product. This warranty does not apply in the following circumstances: (1) Improper installation, usage, or maintenance by the consumer purchaser; (2) Modification or alteration of any kind by anyone else.

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