

CONFIGURATION

PHOTOCELL AUTO-SETPOINT

The minimum overall light level that is to be maintained in a space is referred to as the “setpoint”. The setpoint value is stored in the paired wireless controller (i.e. **PP-950** series power pack, and/or **OCS-851** wall switch) and is compared to the light level value being transmitted from the photocell every 15 seconds. The controller will then adjust the level of the connected lighting in order to maximize energy savings while maintaining desired minimum light level. The setpoint value initially is established by the running the Auto-Setpoint calibration procedure that is built into the wireless photocell. This procedure is run automatically whenever a photocell is linked to a controller. Once initially determined, the setpoint can be manually changed at the linked controller by selecting from a list of values.

RUNNING THE AUTO-SETPOINT CALIBRATION PROCEDURE

SETTING #	DESCRIPTION
1	Run Auto-Setpoint
2	Photocell Enabled (default)

Once a wireless photocell is wirelessly linked with a load controller, it will automatically run the auto-setpoint calibration procedure. However, manually running the auto-setpoint calibration is also possible by performing the following procedure. Note, it is recommended to test the pairing using the TESTING WIRELESS LINKING procedure on the next page before continuing to the below steps.

Step 1. Press and release the unit’s pushbutton **3 times**. By default the White LED will blink back twice indicating the photocell is enabled. This blink back will repeat 3x before exiting the function.

Step 2. Before the unit exits, interrupt the blink back by pressing the button **1 time** (corresponding to **SETTING #1 = Run Auto-Setpoint**).

The photocell will confirm this selection by flashing white once, pausing, then repeating. After the third confirmation sequence, the unit will begin flashing its LED White then Blue for 30 seconds. During this time the user should move away from the photocell. Lights will then be cycled in order for the photocell to take measurements with the controlled lighting both on and off. These readings allow the photocell to calculate the controlled (artificial) light level and select its optimum setpoint. When the photocell has completed its calibration procedure the LED will rapid flash White twice. Lighting will then be controlled according to the photocell operational mode (see below) and setpoint.

OPERATIONAL MODE DETAILS

There are four types of photocell operation supported; DAYLIGHT HARVESTING CONTROL, DAYLIGHT HARVESTING w/ ON/OFF CONTROL, ON/OFF PHOTOCELL CONTROL, and INHIBIT PHOTOCELL CONTROL (see descriptions below). These operational modes are selected at the linked wireless power pack (**WW-950 Series**) or wall switch controller (**KCS-851**). A photocell sensor can be the only device wirelessly linked to a load controller or can be wirelessly linked along with wireless occupancy sensors to the same load controller(s).

DAYLIGHT HARVESTING CONTROL

- Recommend for spaces where it is important to not distract occupants (e.g., offices, classrooms).
- Lights will gradually dim in order to maximize energy savings while maintaining desired overall lighting level.
- After dimming to low trim level by default the lights will stay at the low trim level.
- Optionally, lighting can be configured to turn off completely when sufficient daylight is present.
- Requires that the wireless photocell is linked to a wireless power pack load controller with dimming (i.e. **WW-950-D2**).

DAYLIGHT HARVESTING w/ ON/OFF CONTROL

- Same as Daylight Harvesting control except lights will turn off completely when sufficient daylight is present.

ON/OFF PHOTOCELL CONTROL

- Recommended for public spaces (hallways, entryways, etc) where fully switching of lighting off and on will not cause distraction of occupants.
- Lights are switched off if ambient light level surpasses threshold and back on if level drops.
- To prevent cycling of lights back on after lighting is turned off, a “deadband” level equal to the measured level of light being controlled is continuously maintained. For lighting to turn off the ambient light level must be higher than the sum of the setpoint and the deadband.

INHIBIT ONLY PHOTOCELL CONTROL

- Upon initial occupancy, lighting is inhibited (i.e. held off) if ambient light level surpasses setpoint threshold.
- Lighting will be turned on if light level drops below set-point.
- Lighting will never turn off from daylight.

ADDITIONAL OPERATION NOTES

- Every ~15 seconds the photocell transmits the light level it is measuring in the space.
- Dimming from high trim to low trim (or in reverse) due to daylight harvesting requires ~1.5 minutes.
- The wirelessly linked wall switch load controller and/or power pack controller compares the received light level to the setpoint and controls the connected lighting accordingly.
- Wireless load controllers will only listen to a single wireless photocell sensor. If more than one is wirelessly linked, the unit that last ran the auto-setpoint calibration procedure will be used.
- The photocell control algorithm compensates for the contribution of the controlled lighting to the overall light level of the space. This prevents lights from cycling back on shortly after they are switched off by the photocell operation.
- Refer to the instruction sheets of the wirelessly linked controllers for information on their respective LED blink out behavior when controlled lights are transitioning on or off from photocell operation.
- To accommodate multi-zone photocell applications, power pack load controllers can be configured to track according to the received daylight level, but control lights a fixed percentage brighter.

TESTING & TROUBLESHOOTING

TESTING WIRELESS LINKING (PAIRING)

1. Press and release the button one time.

Lighting controlled by any/all linked load controller(s) will toggle one time as confirmation.

RESTORING FACTORY DEFAULTS / UNPAIRING

To return a wireless sensor to its original factory default settings or to unpair from all linked wireless load controllers the following commands can be executed.

SETTING #	DESCRIPTION
3	Restore Factory Defaults
4	Send a "Forget Me" Message to all Paired Controllers

ENTERING A RESTORE FACTORY DEFAULTS OR FORGET ME COMMAND

1. Read through the above list and note the number of the desired command

2. Press and release the unit's pushbutton **8 times**, then wait 2 seconds. The White LED will blink back 2 times, pause and repeat.

3. Interrupt the blink back and press the pushbutton the number times equal to the desired command (e.g. 3 times to Restore Factory Defaults).

4. The LED will flash back the command number as confirmation and will be executed after three confirmations. Two sets of rapid White flashes indicates success. If the Blue LED rapid flashes twice, the command was unsuccessful and process should be started over.

FCC INFORMATION (FCC ID: 2AVRY-SWX0002)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

Changes and Modifications not expressly approved by BLP Technologies can void your authority to operate this equipment under Federal Communications Commission's rules.

In order to comply with FCC/ISED RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

ISED CANADA INFORMATION (IC: 26012-SWX0002)

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

In order to comply with FCC/ISED RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
3. Afin de se conformer aux exigences d'exposition RF FCC / ISED, cet appareil doit être installé pour fournir au moins 20 cm de séparation du corps humain en tout temps