

Installation and Operating Instructions CellOptik Range

GENERAL INFORMATION

This is a “dusk to dawn sensor switch” that has been designed to switch on when it gets dark and switch off when it gets light (excluding the CellOptik OWL (which has a reverse action– on when light off when dark) and the CellOptik CO which has an additional output which offers both standard and reverse actions.

Installation

Please read and fully understand these instructions before installing this sensor switch to obtain the best results. All electrical work should be carried out by a qualified electrician or a supervised competent person.

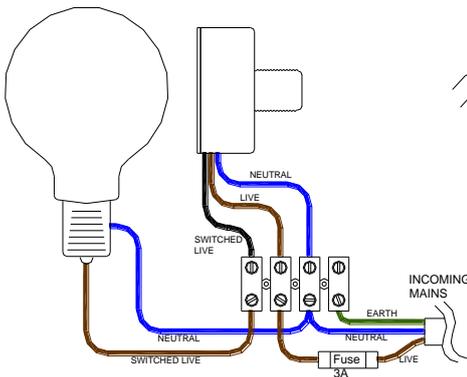
Position

In order to obtain the most accurate results it is important to position the sensor where the only influences are day light levels. Pointing the sensor at the ground or in a position where a tree may shelter the light at certain times of the year will effect the switching times. The best position is to face the sensor at the sky but not aimed towards the sun and it must not be influenced by the light it is controlling as this will effectively lengthen the daylight hours. The rear of this sensor must be protected from water ingress. A suitable enclosure must be used and can be obtained from Acetek.

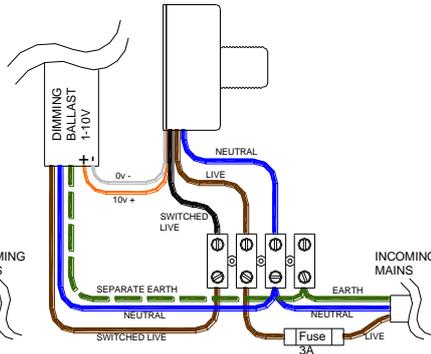
Electrical

Before carrying out the electrical installation ensure the power has been disconnected and can not be switch back on by accident. Follow the relevant wiring diagram below using the correct fuse for protection. This sensor does not require an earth connection although if the light being controlled requires one a separate earth must be run.

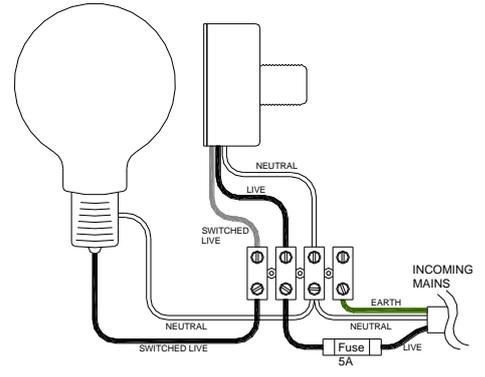
240v Standard Version



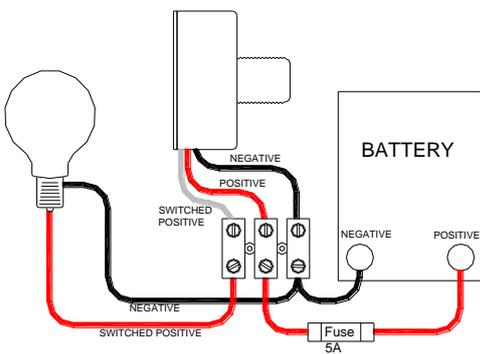
240v Dimmable Version



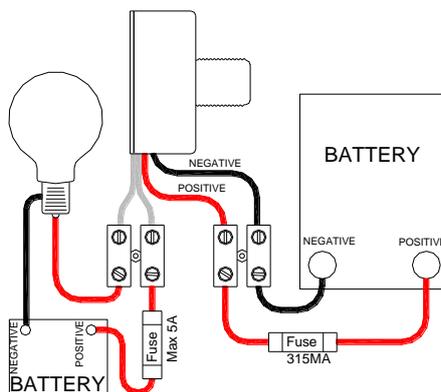
110v Standard Version



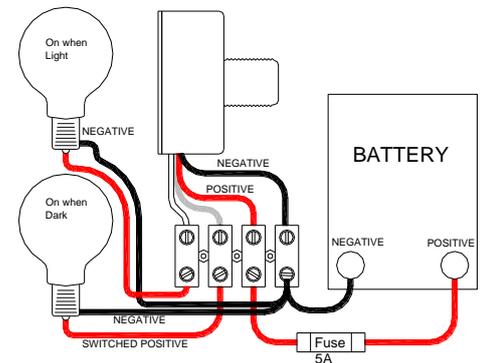
DC Versions 6v, 12v and 24volt



DC version with Volt-Free contacts



DC version changeover (CO)



Important: Using these photocells without the appropriate fuse will invalidate our warranty. Please recheck your wiring before connecting the power

Fusing

When a fault occurs in the circuit the photocell is controlling and this includes lamps blowing as they fail to either open or short circuit, the photocell can be subject to an over current, if the correct fuse is not in place this over current can damage the photocell beyond repair.

Batteries

Lead acid batteries can supply there entire capacity over a short period of time. A 1 Amp hour battery can supply 2 Amps for 30 minutes, 4 amps for 15 minutes and 8 amps for 7.5 minutes. This example shows how even a 1 amp hour battery can over current the photocell if the correct fuse is not there to protect it in the event of a fault.

Reaction time & Sensing

The sensor can take up to 5 seconds to change status and has a lower on light level than off light level to reduce the possibility of cycling on and off.

Setting the dim level (Dimmable version only)

Switch the power to the photocell on and using the spindle situated at the rear of the housing rotate to adjust to the maximum brightness and leave at this level for 4 minutes. This will allow the lamps to reach their correct operating temperature. After this time adjust the spindle to the desired dim level within 1 minute before the unit switches off. (In light conditions) To check or readjust this level remove the power for 5 seconds and switch back on to change setting or confirm the correct level.

If you require any assistance please contact us:

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Acetek is a WEEE registered company Certificate Number: WEE/CE0102WU

Compliance

BS EN 50081-1
BS EN 6100-4-4
BS EN 6100-4-5
BS EN 6100-4-11

RoHS Compliant

Specifications:

Product code	CellOptik-300R	CellOptik-500R	CellOptik-24vdc	CellOptik-12vdc
Nominal Voltage	240Vac	240Vac	24V dc	12V dc
Voltage Range	200-250 Vac	200-250 Vac	28-20V dc	15-11V dc
Product Class	Class II (no earth required)	Class II (no earth required)	Safety Extra Low Voltage	Safety Extra Low Voltage
Maximum Load	300 Watt (1.25 amps)	500 Watt (2 amps)	120 Watt (5 amps)	60 Watt (5 amps)
Relay contact material	Silver-Tin-Oxide	Silver-Tin-Oxide	Silver-Tin-Oxide	Silver-Tin-Oxide
Temperature Range	-18 to + 60C (0 to 140F)			
Cable Material	PVC	PVC	PVC	PVC
Enclosure Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Colour	Black with frosted clear lens			
Flammability Rating	94V2	94V2	94V2	94V2
Ingress Rating	IP65 when installed	IP65 when installed	IP65 when installed	IP65 when installed
Clamping Thread mm	M20	M20	M20	M20
Clamping Range mm	0.5 to 13mm	0.5 to 13mm	0.5 to 13mm	0.5 to 13mm
Enclosure dimensions mm	W31xL58xD48	W31xL58xD48	W31xL58xD48	W31xL58xD48
Protect with fuse	3amp	3amp	5amp	5amp
Thread Length	20mn	20mn	20mn	20mn
Overall Depth	48mm	48mm	48mm	48mm
Front Width	31mm	31mm	31mm	31mm
Box Length	58mm	58mm	58mm	58mm
Weight	0.08kg	0.07kg	0.06kg	0.06kg

CellOptik Range Instructions

(Image is of the 24vdc)



Installation check list

1. The voltage is suitable for the supplied unit.
2. The wiring is correct to the above diagram.
3. The maximum load has not been exceeded.
4. The correct fuse has been fitted.
5. The optimum position has been chosen.
6. The water seal has been used.
7. The correct dim level has been set. (dim version)

Drill a 20mm hole in the mounting enclosure. Ensure that all burrs and chips have been removed and that the mounting surface is smooth. Thread the first nut onto the sensor with the flange facing out as in the photo. Place the water seal gasket on the thread with the flange nut and offer the unit through the mounting hole. Fit the second flange nut and secure to complete the water seal. Connect using the correct wiring diagram above.

Energy Saving Dusk to Dawn Photocell Switch