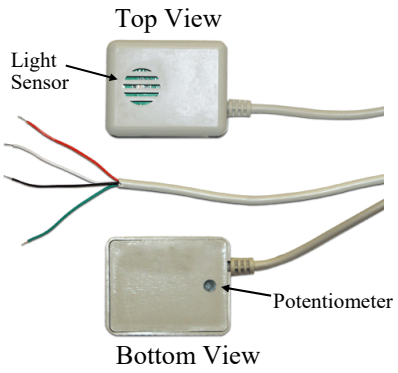
Product Guide

EZEye Ambient Light Sensor —Model #1011A

The EZEye is an advanced light sensor which matches the spectral sensitivity of the human eye. This is important when detecting or measuring lighting conditions in locations influenced by incandescent, fluorescent and natural light sources, where other types of sensors like photocells can give imprecise measurements.

Typical uses of the sensor include daytime/nighttime determination, automated closure of drapes, protection of light sensitive goods, optimization of plant growth based on illumination, home theater control, etc. The EZEye can be readily interfaced with an I/O controller of your choice including the EZIOxx line from Smartenit.



Installation

- The EZEye can be mounted using the provided double-sided tape, or by any other method or your choice. The slotted window must face the area to be monitored and must be clear of any obstructions blocking the light to be measured. The adjustment potentiometer only needs to be accessible if using the sensor in digital mode.
- Connect the sensor to the I/O module or alarm panel of your choice, ensuring the voltage output range is sufficient to operate the EZEye (8-20VDC). Be sure to observe the wire coloring when making your connections for power, analog and/or digital outputs.

  Note: intended for indoor use only

IMPORTANT: The EZEye has two types of outputs.

- The analog output is used when the illumination level needs to be measured (discrete values). This could be incorporated in an automation sequence where you might want the lights in your home to brighten up as the level of light outside goes down, rather than just having them turn on at a given time at one preset level.
- The digital output is used to determine if the illumination is above or below a certain threshold which is adjusted with the potentiometer on the back of the EZEye. The digital level will be on when the signal is above the set threshold. This could be integrated in an automation sequence where you may want your drapes to close when the ambient light in the room rises above a preset level.
- **The two outputs can be used concurrently and do not interact with each other.**

Connecting to EZIOxx Units

Connecting to a Smartenit EZIO8SA or EZIO6I:

- In analog mode, connect the red wire to the power supply(+12V), the black wire to ground (GND) and the green wire to an open analog input (ANI1 or AN1). The full scale is 1023 counts, corresponding to ~3 volts.
- In digital mode, connect the red wire to the power supply(+12V), the black wire to ground (GND) and the white wire to the negative terminal of an open opto-isolated input(I1-). Run a jumper wire from the power supply (+12) to the positive terminal of the selected opto-isolated input (I1+).

Connecting to a Smartenit EZIO2X4:

- The connections will be exactly the same as for the EZIO8SA or EZIO6I, except that the EZIO2X4 does not supply enough voltage on board to operate the EZEye. In this case you'll need to use an external power supply that is at least 8VDC.

(Connection Diagrams on the next page)

Rev 1 - November 14, 2009

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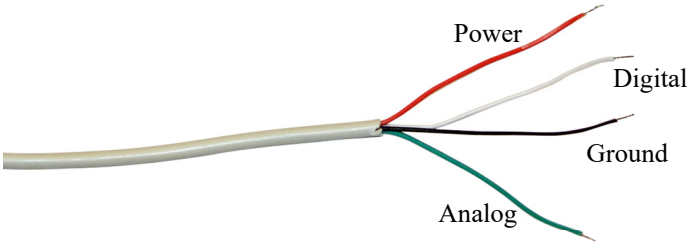
EZEye Connection Diagrams



SPECIFICATIONS:

Power Requirements:

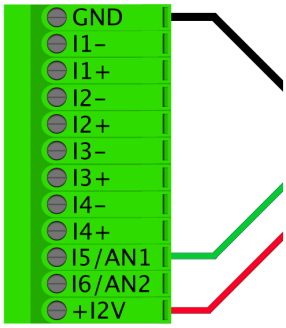
Operating Voltage: 8-20VDC
Operating Current: < 5 Milliamps

Wire Contacts:

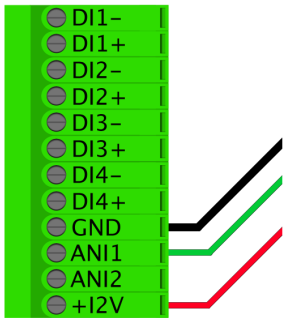
Red Wire: + 8-20VDC
Black Wire: - Ground
Green Wire Analog output
White Wire: Digital output
Output:
Range: 0-1000lx
Accuracy: +/- 0.5% (5-25°C)

Analog Connections

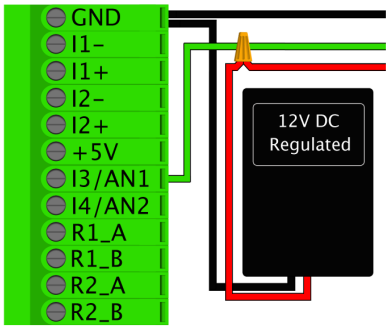
EZIO6I



EZIO8SA

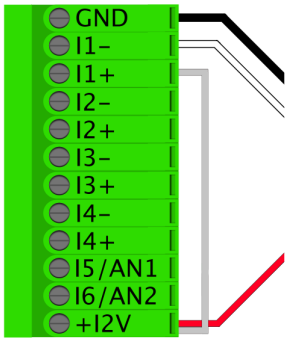


EZIO2X4

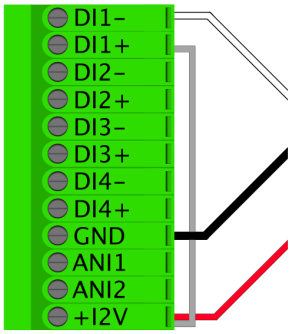


Digital Connections

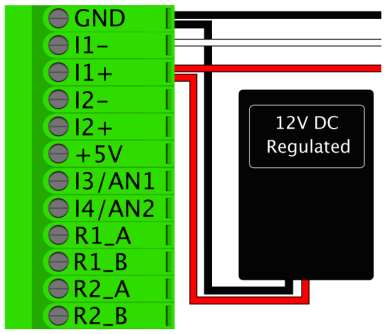
EZIO6I



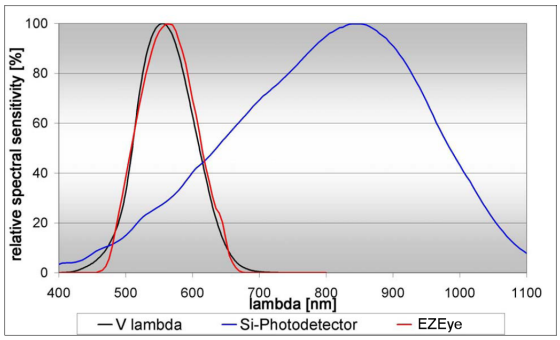
EZIO8SA



EZIO2X4



Spectral Response



This figure shows how the EZEye response is perfectly matched to that of the human eye (V lambda).

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Rev 0.2—November 14, 2009

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