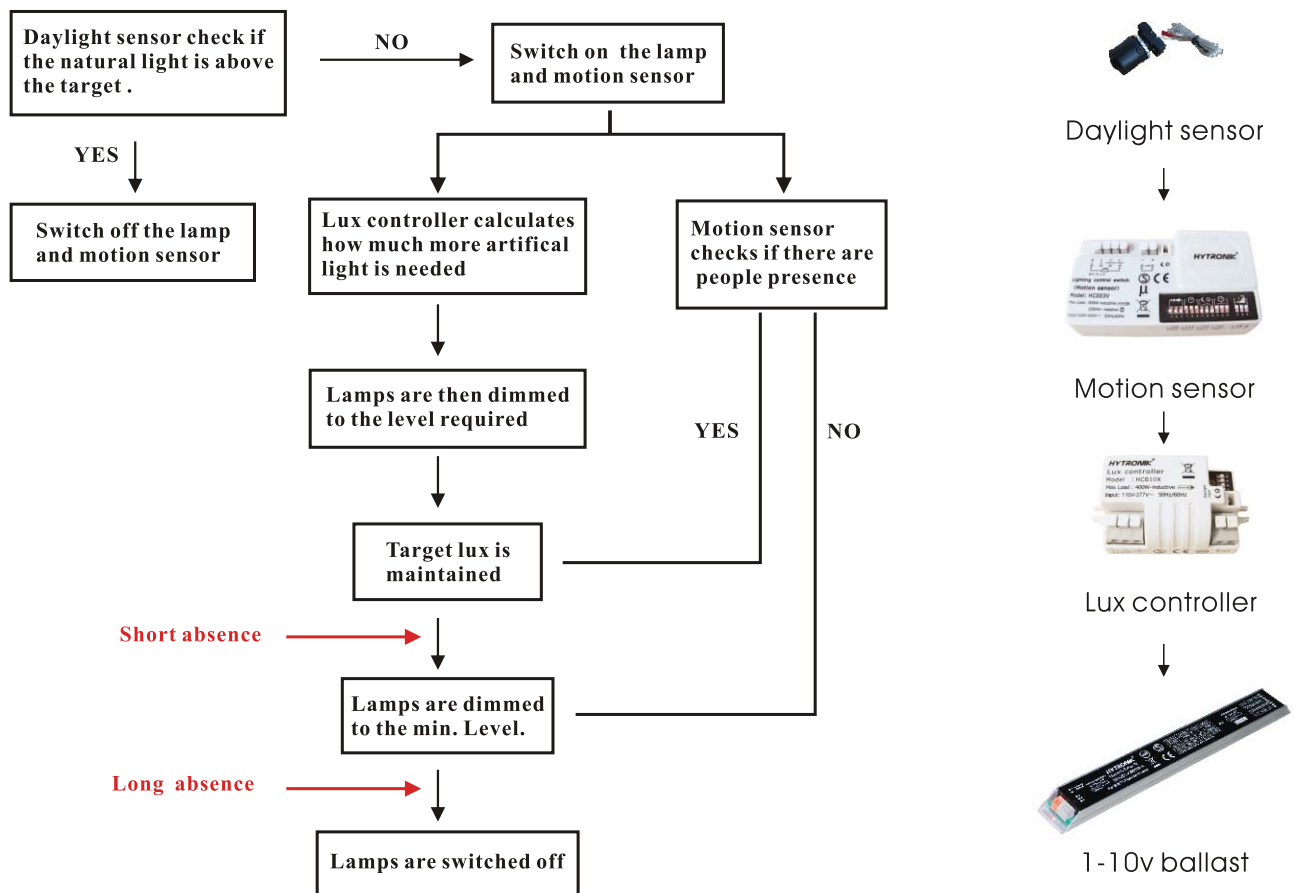


Constant lux control system (Daylight harvest system)

Right time, right place, and the right amount of light! This is what you get in this constant lux control system. The combination and calibration of microwave motion sensor, daylight sensor and lux control unit makes it the ultimate energy saving, dynamic automatic lighting control.

How does it work ?



This system consists of 4 components: daylight sensor, lux controller, motion sensor and 1-10v dimmable ballast--

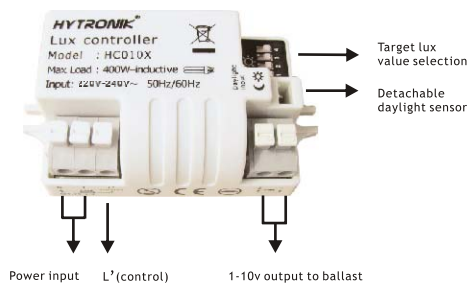
daylight sensor: measures and reports the lux on the target surface;

lux controller: set the target lux and keep the lux value maintained.

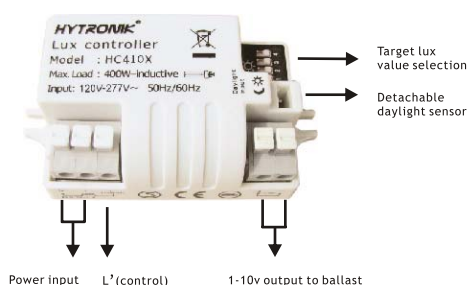
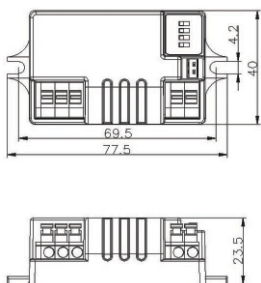
Motion sensor: constantly check the presence of people.

1-10v dimmable ballast: pump out the right amount of light according to the instruction from the lux controller.

Lux controller



HC010X (220-240v)



HC410X (120-277v)

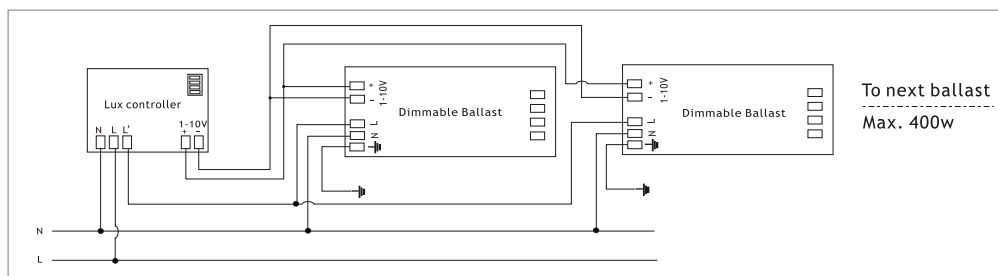
This constant lux controller measures and counts the illuminance at the target area through the detachable daylight sensor, and calculates the compensation needed against the total target lux. The amount of compensation is then translated into the level of 1-10v output to the dimmable ballast, who will accordingly produce the needed compensation of artificial light to keep the target area at target lux.

The target constant lux value can be precisely pre-defined by the DIP switches, with wide option of 5--1000lux. (Can be customized)

The detachable daylight sensor switches off the power supply automatically when the natural daylight is higher than the target lux value, and switches on again when the natural daylight is below the target lux value.

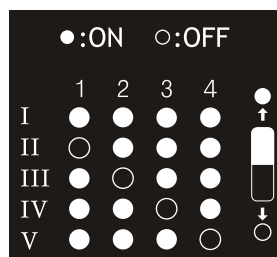
With above feature, the sensor is perfect for automatic lighting management system in office, studio, meeting room, and outdoor advertising lighting etc..

A. Wiring schematic--



B. Target lux value--

The recommended values are the most commonly used lighting illuminance requirement and legal demand on various applications throughout the world. It has covered most of the needs. However if your need is not on this list, we can tailor-make the values from 5-2000 lux to meet your particular needs.



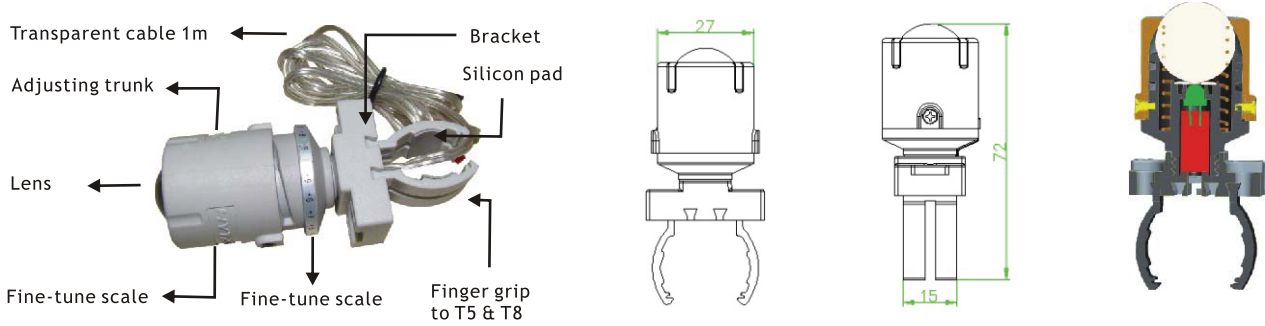
Recommendation

	1	2	3	4	
I	●	●	●	●	100Lux
II	○	●	●	●	200Lux
III	●	○	●	●	300Lux
IV	●	●	○	●	400Lux
V	●	●	●	○	500Lux

Technical spec.

Input: HC010X--220-240V, HC410X--120-277v, 50/60 Hz	Output: 1-10v control signal
Max. Load (inductive): HC010X-- 400w, HC410X--200W/120V; 500W/277V.	Empty load consumption: <0.6w
Working temp. -35°C ~ +50°C .	IP grade: IP 20.

Daylight sensor

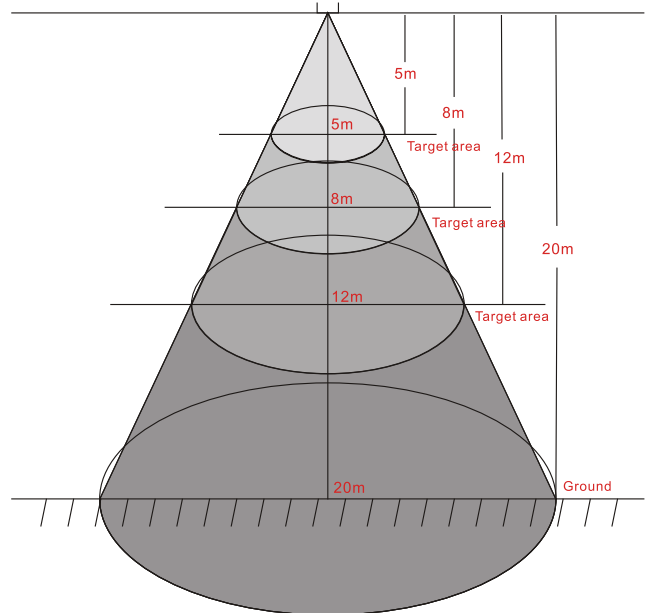
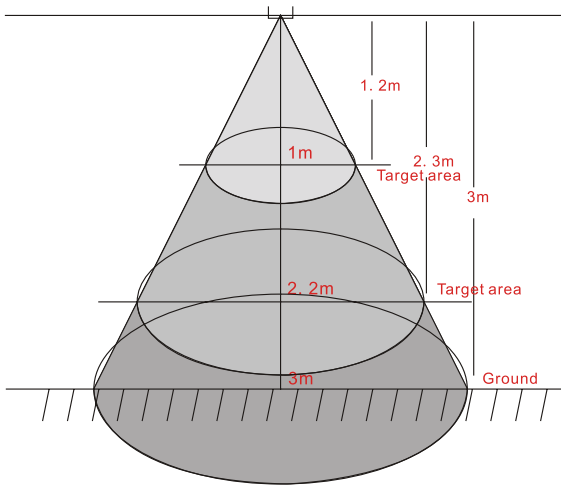


Worldwide patented!!!

Model: DS01

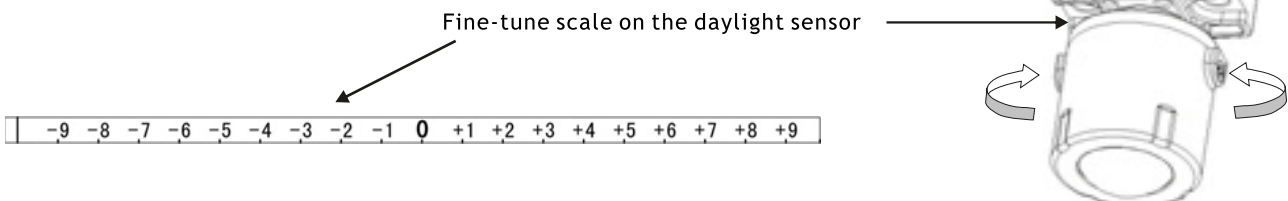
The common photo-cell in the market measures the lux of the surrounding air, not the true lux on the desk surface. This worldwide patented daylight sensor measures the real lux on the target surface and convert the lux value to 1-10v output signal thanks to the innovative design and years of reasearch and development!!!

This unique daylight sensor can read as far as 20 meters. This unique feature makes it perfectly suitable for office use as well as high ceiling like warehouse. The coverage area varies on different mounting height, office installation(1.2m ~ 3m mounting height); Parking/ Warehouse insatallation (5m ~ 20m mounting height)



Fine-tuning

A fine-tuning of $\pm 20\%$ is available by adjusting the scale on the daylight sensor head. (Note: the numbers +1, -1, +2, -2... means the degree of the adjustment, not the exact lux value).

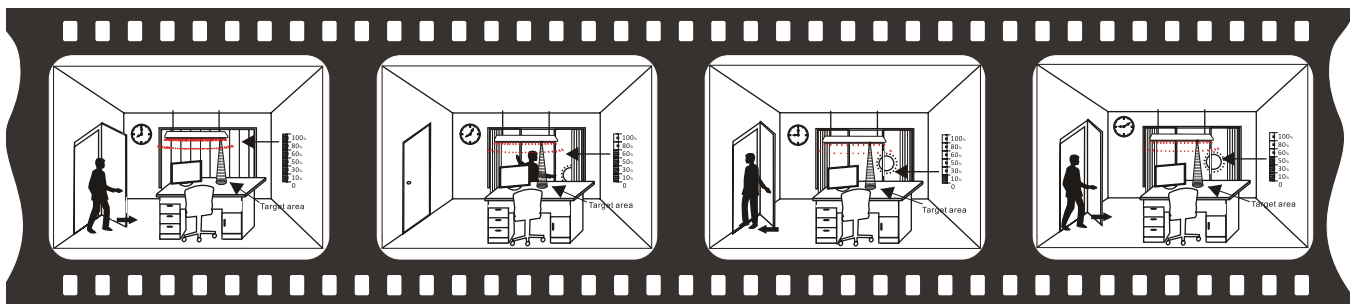


The ultimate solution

The ultimate energy saving solution is to combine daylight sensor, motion detector/presence detector and dimmable ballast to keep the target area at fixed lux value during the presence of people. In this system--

1. Natural daylight is measured and counted as the base of illuminance at the target area, while artificial light is a compensation when natural daylight is below the target lux value.
2. Motion/presence detector is employed, to switch on the artificial light when there is presence of human detected, and switch off, or dim the artificial light to a minimum standby brightness.
3. Corridor function is built-in the motion sensor, to switch the light off when there is no human presence for a specified period of time.
4. Target lux value can be precisely defined by the DIP switches on the lux controller.

A typical scenes of the application of this constant lux control system in office--



8:00AM, Tom to office,
lamp on 100%, table lux 300.

①

8:05AM, curtain opened,
natural light gets in, lamp
on 60%, table lux 300.

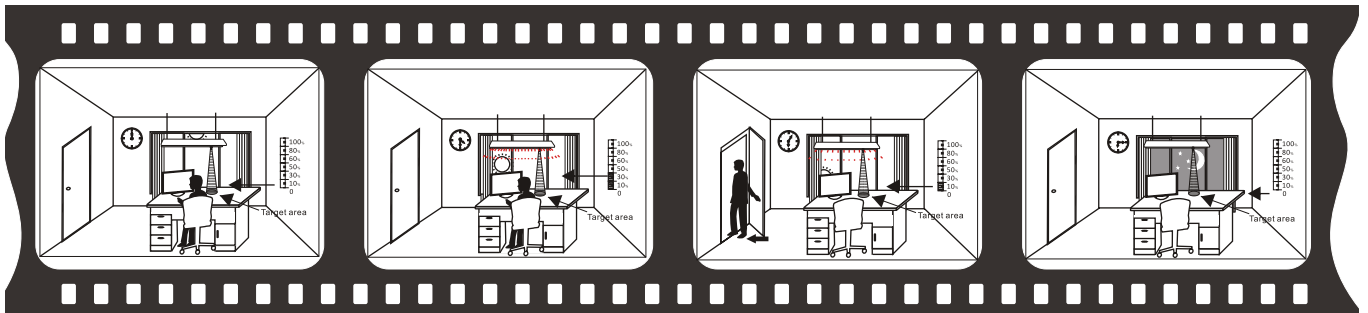
②

9:00AM, Tom out for coffee,
lamp on 10% during the
short absence.

③

9:10AM, Tom returns, lamp
on 50% (daylight is getting
stronger), table lux 300.

④



12:00 AM, daylight reaches
300 lux, system shuts down.
(bright out!!!)

⑤

4:30PM, sunset, daylight
below 300 lux, system
re-activated, lamp on 30%

⑥

6:00PM, Tom leaves office,
system in stand-by mode,
lamp on 10%.

⑦

6:15PM, stand-by time out,
system shuts down.
(Corridor function!!!)

⑧

Wiring schematic--

(Lux controller daylight sensor gives power supply to motion sensor, and motion sensor gives power supply to ballast to achieve corridor function)

Daylight sensor overrides the motion sensor, and motion sensor decides the hold-time, stand-by period and the stand-by brightness.

