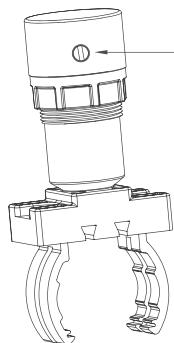
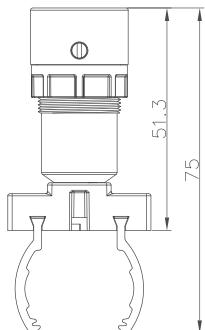


Daylight Sensor

Model: DS02



Potentiometer for
adjusting target light level



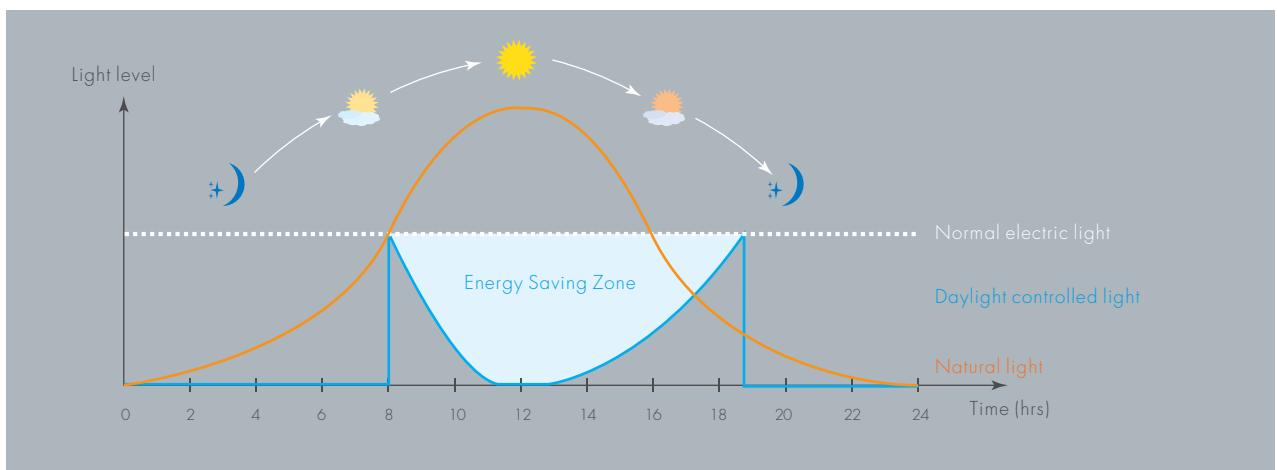
Model: DS02

Mechanical structure (mm)

This is a photocell daylight sensor, it can read and measure the surrounding light, and converts the amount of light to 1-10V electronic signal output.

Additionally, there is a potentiometer for endusers to set the brightness level, so that the daylight sensor can read, measure the available natural daylight against the target value, and calculate how much artificial light is needed. This demand is then converted to 1-10V signal, to be sent to the 1-10V dimmable ballast or LED driver, which will then pump up the right amount of light out of the fluorescent lamp or LED fixture.

This daylight harvest (or daylight interactive) application can be illustrated in below diagram;



Daylight / artificial light interactive diagram

Function Overview for Daylight Sensor DS02

| Daylight sensor | Types of motion sensor | Types of control gear | FUNCTION | | | | |
|-----------------|--|-----------------------------|---------------------------------------|------------------------------------|--|-------------------------------------|--------------------------------------|
| | | | Switch on automatically with presence | Dimming level against nature light | Dimming level at standby period | Daylight sensor is prior to motion | Switch off automatically |
| DS02 | No motion sensor | 1~10V dimmable control gear | NO | 10~100% | N/ A | N/ A | NO |
| |  HC109S | 1~10V dimmable control gear | YES | 10~100% | N/ A | NO ① | YES ② |
| |  HC419V | 1~10V dimmable control gear | YES | 10~100% | Between 10% to preselected dimming level on sensor | NO ① | YES ② |

Note:

- ① Only when the holdtime has elapsed, does the daylight sensor start checking up the natural daylight.
- ② Whether or not the lamp can be switched off depends on the control gear. DS02 has the lowest voltage output 1.1-1.2V, if control gear can switch lamp off at this voltage, then the lamp can be switched off. Hytronik also supplies a 1-10V dimmable 25W LED driver which can work with DS02 to switch off lamp if needed.

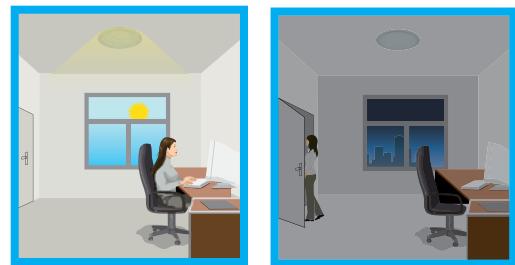
Function and Options

Daylight harvest is now a must. This system can respond to the varying levels of nature light to maintain lux level, there are some combinations for different application.

1 DS02 + 1~10V control gear, with no motion sensor



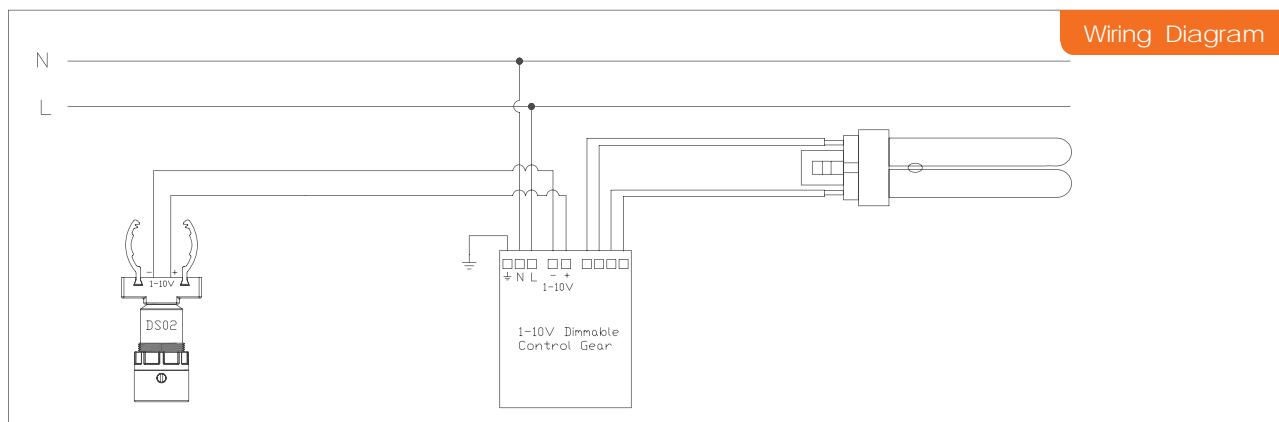
The lamp goes on at full or dims to maintain the lux level, light output regulates according to the level of natural light.



When nature light is sufficient, light dims to minimum but never switches off.

Switch off light manually while needed.

Wiring Diagram



2 DS02 + HC109S (or any ON-OFF sensors) + 1~10V control gear



Light will not switch on when the nature light is sufficient, even there is movement detected.



Light switches on automatically with presence when the natural light is insufficient.



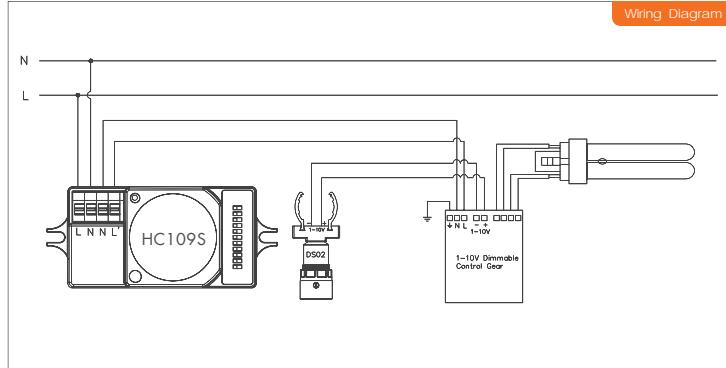
The lamp light on at full or dims to maintain the lux level, light output regulates according to the level of natural light.



Light never switches off
with presence detected,
even daylight is sufficient.



Lights switches off automatically after hold time.



3 DSO2 + HC419V + 1~10V control gear



Light will not switch on when the nature light is sufficient, even there is movement detected.



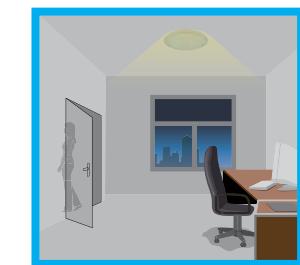
Light switches on automatically with presence when the nature light is insufficient.



The lamp goes on at full or dims to maintain the lux level, light output regulates according to the level of natural light.



Light will switch off automatically even with presence detected, if the nature light is sufficient.

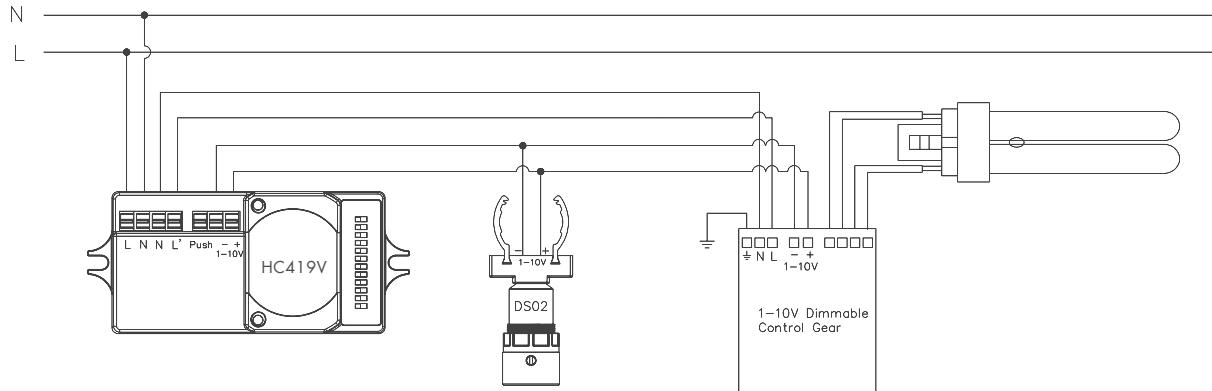


Light dims to standby brightness after hold time, in standby period, the light stays on the selected min. level.



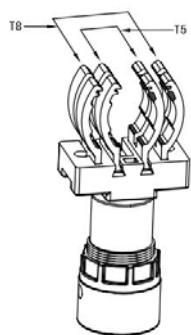
Light switches off automatically after the standby period passed.

Wiring Diagram

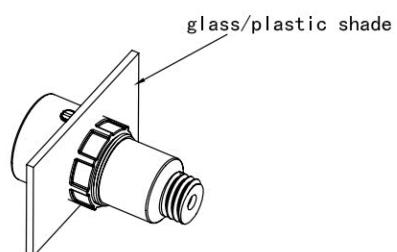


Installation

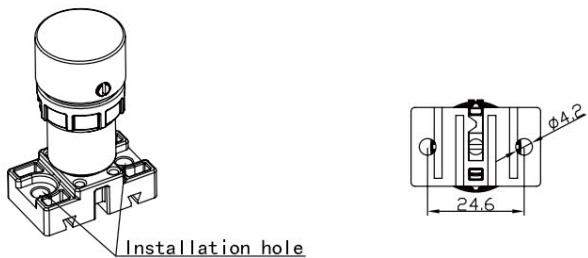
1. Mounting on linear tubes—



2. Mounting on glass/plastic shades—



3. Mounting on flat surface—



Technical Data

| | |
|------------------------------|---------------------------------|
| Product Type | Daylight Sensor, model No. DS02 |
| Mains Voltage | 1-10V |
| Operating temperature | -20°C~ +60°C |
| Control line | +red -black |
| Cable length | 80cm cable |
| Dimming range | 10%~100% |
| Sensor angle | 90° |
| Max. permitted cable length | 50m |
| IP rate | IP20 |
| Max.load of the control exit | 50mA |