Advanced Version
Tri-level Dimming Control

Model: HC018V

Antenna module
LED indication
Detection area
Hold-time
Daylight threshold
Stand-by period
Stand-by diming level
Daylight sensor
Push
1-10V output
L' N N L

86.5
93.2
102
45
4.2
28

1-10V dimming
Ambient daylight threshold
Loop in Loop out
8 hours manual on
soft-on soft-off
zero-cross relay operation
100% Dim Off
sensorDIM™
Detection Pattern
Hold-time 5s~30min
2~50Lux
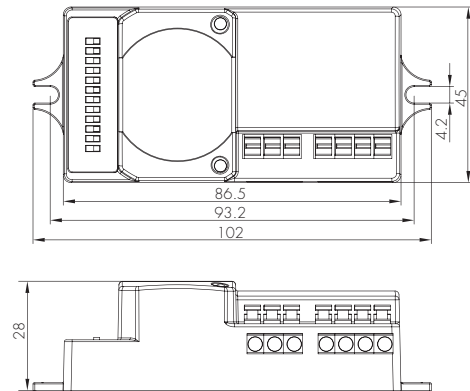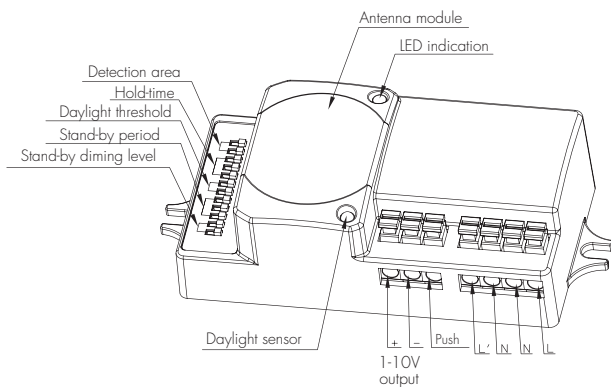
Function and Options

1 Tri-level Dimming Control (Corridor Function)

Same as Tridonic excel control gear, Hytronik builds this function inside the motion sensor to achieve tri-level dimming control, for some areas that require a light change notice before switch-off.
It offers 3 levels of light: 100%-->dimmed light (10%, 20%,30%,50% optional)-->off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; selectable daylight threshold and choice of detection area.
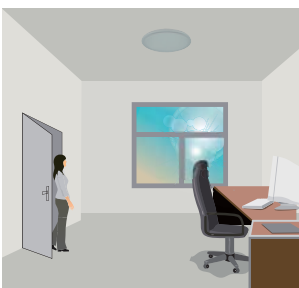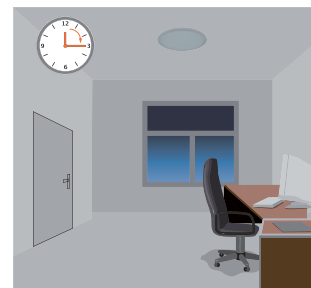

With sufficient natural light, the light does not switch on when presence detected.
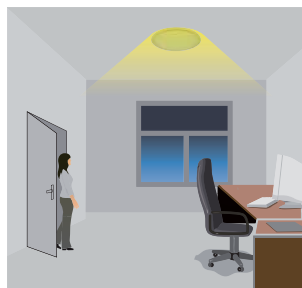
With insufficient natural light, the sensor switches on the light automatically when person enters the room.
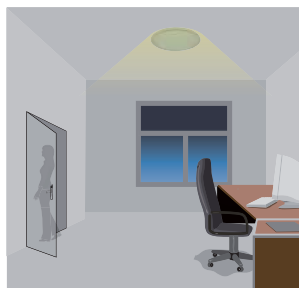
People left, light dims to stand-by level (10% /20% /30% /50%, optional) after the hold-time.

Light switches off automatically after the stand-by period elapsed.

2 8H Manual on Mode for LED Lamp

Rapidly turn off/on the power supply three times within 3 seconds, the light will be 100% on for 8 hours, and then goes to sensor mode automatically after 8 hours. Useful when sensor function is not needed in special occasion.
Note: this 8H manual on mode can be cancelled by turning off/on the power supply one time within 1second.

3 Ambient Daylight Threshold

Switch the power supply to the sensor two times within 2 seconds, the sensor can set the ambient lux level as the new threshold.
Both the settings on DIP switch and the ambient lux threshold learned can overwrite each other.
This feature enables the daylight sensor to be commissioned to the environment in which it is installed. The latest action controls.
 (More details of the operation procedure please refer to user manual).

4 Zero-cross Relay Operation

Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure the minimum current passing through the relay contact point, and protect the relay for long life.

5 Loop-in and Loop-out Terminal

Double L N terminal makes it easy for wire loop-in and loop out, and saves the cost of terminal block and assembly time.

6 Manual Override

This sensor reserves the access of manual override function for end-user to switch on/off, or adjust the brightness by push-switch, which makes the product more user-friendly and offers more options to fit for some extra-ordinary demands:

* Short push (<1s): on/off function;
   On → off: the light turns off immediately and can not be lighten for a certain time (equals to hold-time preset) even movement is detected.
                After this period, the sensor goes to sensor mode.
   Off → on: the light turns on and goes to sensor mode, no matter if ambient Lux level exceeds the daylight threshold or not.
* Long push (>1s): dim up/down the hold-time brightness between 10% and 100%. Both the settings on DIP switch and manual override can
                overwrite each other, the latest action controls.
Note: if end-user do not want this manual override function, just leave the "push" terminal alone and don't connect it to any wire.


Wiring Diagram

HC018V   HYTRONIK®   LED Driver   LED Driver   Max.800W
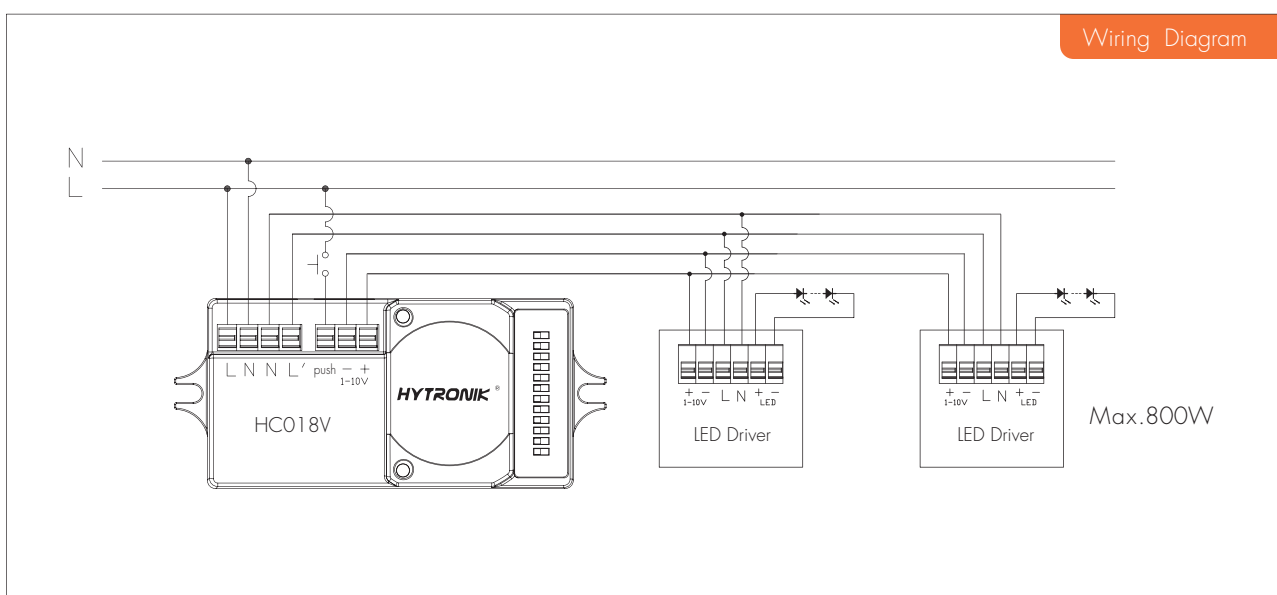
Note: this 1-10V output is non-isolated, please make sure the fixture is constructed according to relevant safety standard.

It is easy to forget to switch off the light, in office, corridor, even at home. And in many other cases, people do not want to have a sensor to automatically switch on the light, for example, when people just quickly pass-by, there is no need to have the light on.

The solution is to apply this "absence detector": motion sensor is employed, but only activated on the maunal press of the push switch, light keeps on in the presence, and dimmed down in the absence, and eventually switch off in the long absence.
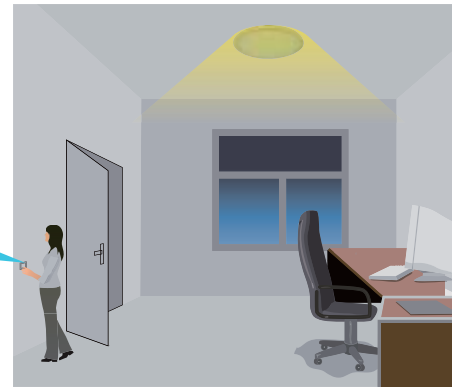
It is a good combination of sensor automation and maunal override control, to have the maximum energy saving, and at the same time, to keep efficient and comfortable lighting.
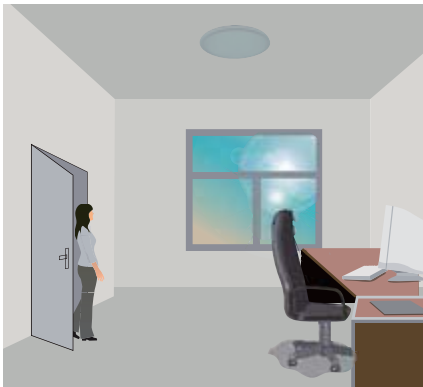
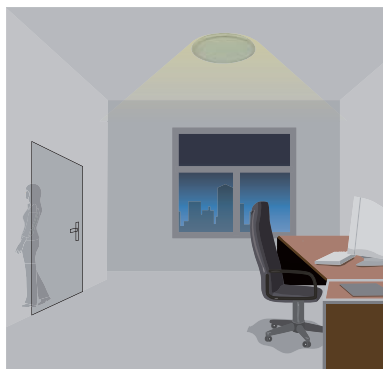Light does not switch on when presence detected.

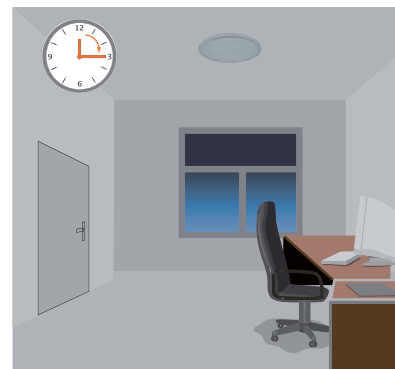Short push to activate the sensor and switch on the light

With the manual short press on the push-switch, the sensor is activated and switches on the light.
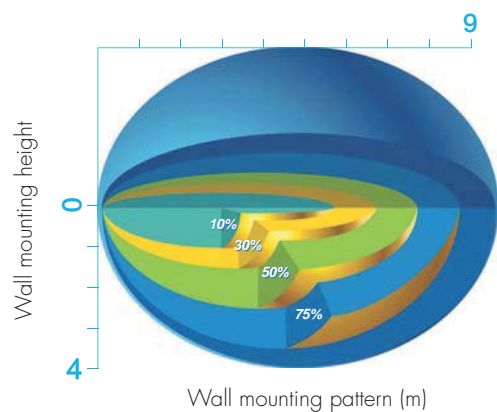

Light keeps on during the presence.

People left, light dims to 10%/20%/ 30%/50% (optional) stand-by level after the hold-time.

Light switches off automatically after the stand-by period elapsed.

Note: end-user can choose either **6** or **7** for the push function. (software pre-defined in factory). Default function is manual override.

Detection Pattern

Ceiling mounting height(m)

0   6

10%
30%
50%
75%

6

Ceiling mounting pattern (m)

Wall mounting height

9

0

10%
30%
50%
75%

4

Wall mounting pattern (m)
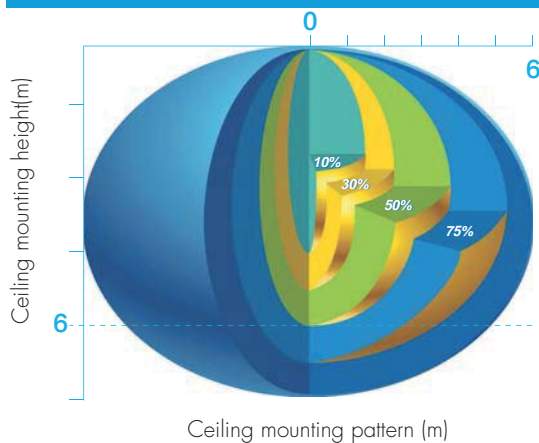
❶ Detection area

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely for each specific application.

	1	2	
I	●	●	100 %
II	●	○	75%
III	○	●	50 %
IV	○	○	10%

I – 100%
II – 75%
III – 50%
IV – 10%

❷ Hold-time

Hold-time means the time period you would like to keep the lamp on 100% after the person has left the detection area.

	1	2	3	
I	●	●	●	5s
II	●	●	○	30s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	20min
VII	○	○	○	30min

I – 5s
II – 30s
III – 1min
IV – 5min
V – 10min
VI – 20min
VII – 30min

❸ Daylight sensor

The daylight threshold can be set on DIP switches, to fit for particular application.

	1	2	
I	●	●	Disable
II	●	○	50Lux
III	○	●	10Lux
IV	○	○	2 Lux

I – Disable
II – 50Lux
III – 10Lux
IV – 2Lux

❹ Stand-by period (corridor function)

This is the time period you would like to keep at the low light output level before it is completely switched off in the long absence of people.

Note: "0s" means on/off control;
"+∞" means bi-level dimming control, fixture never switches off.

	1	2	3	
I	●	●	●	0s
II	●	●	○	10s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	30min
VII	○	○	●	1h
VIII	○	○	○	+∞

I – 0s
II – 10s
III – 1min
IV – 5min
V – 10min
VI – 30min
VII – 1h
VIII– +∞

❺ Stand-by dimming level

This is the dimmed low light output level you would like to have after the hold-time in the absence of people.

	1	2	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%

I – 10%
II – 20%
III – 30%
IV – 50%

Note: end-user can also scan the QR code on the housing for DIP switch settings.

Technical Data

Operating voltage	220-240VAC
Switched power	Max.800W (capacitive)
Stand-by power	Approx 0.5W
Warming-up time	20s
Detection area	10/50/75/100%, can be customized
Hold-time	5s/30s/1min/5min/10min/20min/30min, can be customized
Stand-by period	0s/10s/1min/5min/10min/30min/1H/+∞, can be customized
Stand-by dimming level	10%/20%/30%/50%, can be customized
Daylight threshold	2~50Lux, disable, can be customized
Microwave frequency	5.8GHz+/-75MHz
Microwave power	<0.2mW
Detection range	Max. (ØxH): 12m x 6m
Detection angle	30°~150°
Mounting height	Max. 6m
Tc	85°C
IP rating	IP20 IP65 (mounted in Hytronik special box)
Certificate	Semko, CB, EMC, CE, R&TTE, SAA