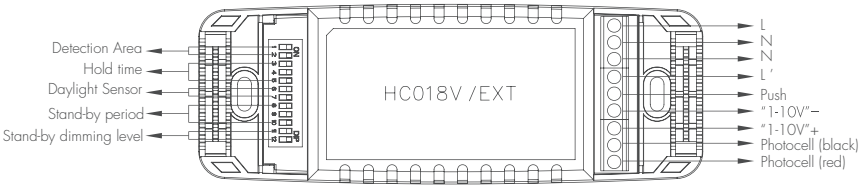
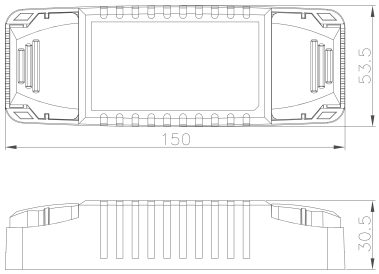
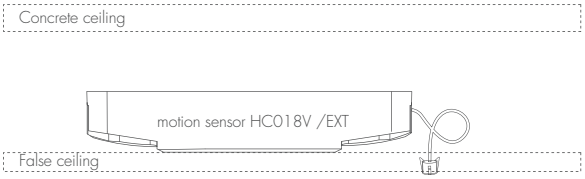
False Ceiling Version Dimming Control

Model: HC018V /EXT







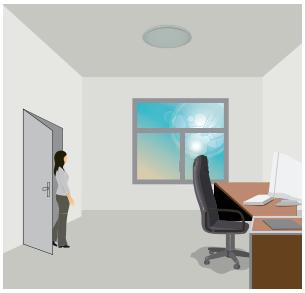
In retrofit project, we can completely hide this motion sensor. Only a tiny hole is needed on the false ceiling to fix the daylight sensor.

Thanks to the penetration property of microwave, motion sensor body is hiden behind the false ceiling, with the sensor antenna faces downwards.

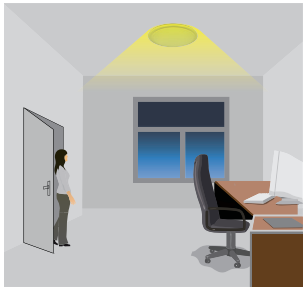
Function and Options

1 3 Steps Dimming Control (Corridor Function)

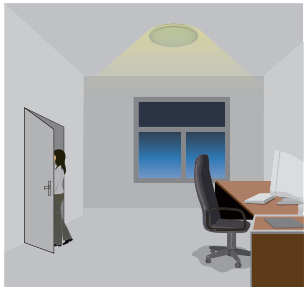
Same as Tridonic excel ballast, Hytronik builds this function inside the motion sensor to achieve 3 steps dimming control, for some areas require a light change notice before switch-off.
It offers 3 levels of light: 100%-->dimmed light (10%, 20%, 30%, 50% optional)-->off; and 2 periods of selectable waiting time: motion holdtime 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.



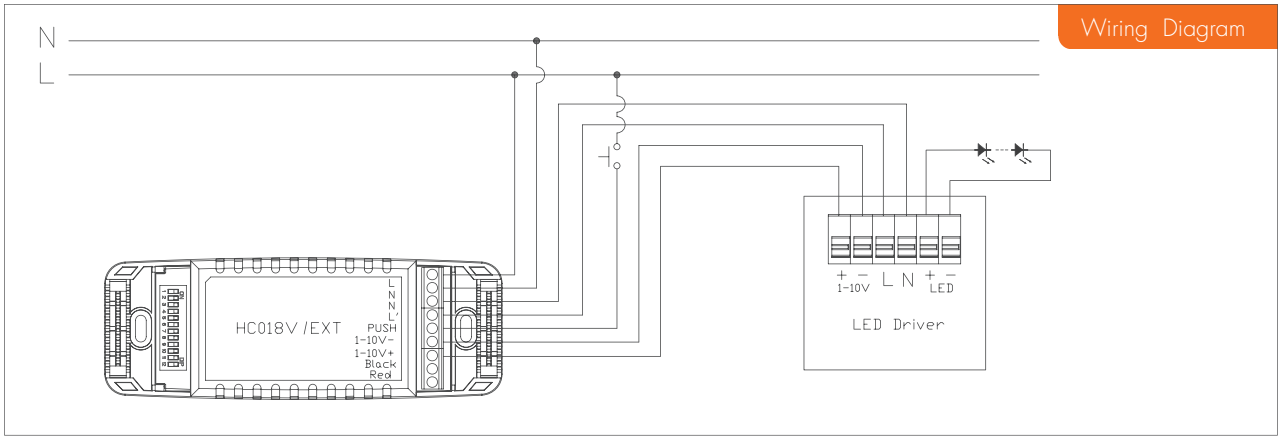
With insufficient natural light, the sensor switches on the light automatically when person enters the room.



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

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

Wiring Diagram



2 100H burn-in mode for fluorescent lamp

With simple operation, rapidly turn off/on the fixture 3 cycles within 3 sec. (the green LED on the sensor flashes and the fixture blinks 3 times to indicate the success of setup), lamp will be 100% on for 100 hours, and then automatically goes to sensor mode after 100 hours. This is crucial to secure the lifetime of fluorescent lamp, when new fixture is installed, or old lamp is replaced.

This 100H burn-in feature can be cancelled by turning off/on the fixture 1 cycle within 1sec.

3 Ambient daylight threshold

With simple operation, rapidly turn off/on the fixture 2 cycles within 2 sec:

1. The green LED on the sensor flashes slowly for 5 seconds, meanwhile the fixture blinks twice.
2. The daylight sensor measures and remembers the surrounding lux for 1 sec.
3. The fixture and green LED is on for 10s to indicate the success of learning.

* This feature enables the fixture to function well in any real application circumstance, where the daylight penetrated into fixture may vary a lot.
* The latest surrounding lux value overwrites previous lux value learned.
* Both the settings on DIP switch and the learned ambient lux threshold can overwrite each other. The latest action stays in validity.

4 Zero-cross relay operation

Designed in the software, the sensor switches on/off the load right on the zero-cross point, to ensure the min. current passing through the relay contact point, and enable the maxi. Load and life-time of the relay.

5 Loop-in and loop-out

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

6 Manual override

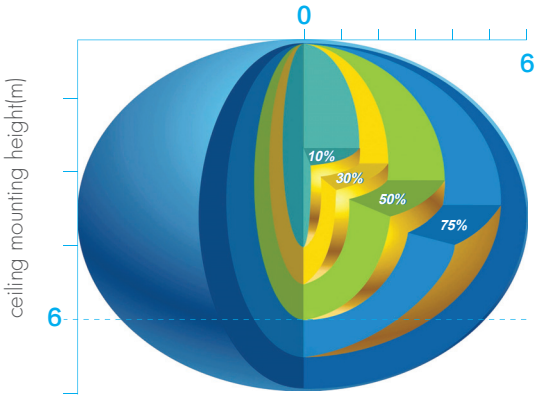
This sensor reserved the access of manual override function for end-users to switch on/off, or adjust the stand-by dimming level with the push-switch, which makes the product more user-friendly and more options to fit for some extra-ordinary demands.

* Short push (<1s): On/off;
  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 auto sensor mode.
  OFF → ON: The light turns on 100% and goes to sensor mode, even when ambient LUX level exceeds the daylight threshold.
* Long push (>1s): Dim up/down the stand-by dimming level between 10% and 50%. Both the settings on DIP switch and manual override can overwrite each other, the latest action stays in validity.

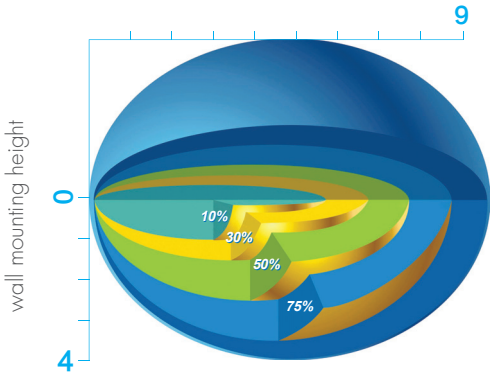
*If customers do not want to have this manual override function, we can just leave this "push" terminal alone, not connected to any wire.

Note: 1. Motion sensor overrides daylight sensor, meaning the daylight sensor starts to check the ambient natural light only when the lamp is switched off (motion hold-time elapsed).
2. This 1-10V output is isolated, SELV output.

Detection Pattern



ceiling mounting pattern (m)



wall mounting pattern (m)

Settings

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.

	3	4	5	
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.

	6	7	
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 2 steps dimming control, fixture never switches off.

	8	9	10	
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.

The dimming level can be overridden by the push-switch.

	11	12	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%

I – 10%
II – 20%
III – 30%
IV – 50%

Technical Data	
Operating voltage	220-240VAC
Switched power	Max.800W (capacitive)
Standby power	<1W
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 daylight/twilight/darkness, can be customized
Microwave frequency	5.8GHz+/-75MHz
Microwave power	<0.2mW
Detection range	Max. (ØxH): 12m x 3m
Detection angle	30°~150°
Mounting height	3m
Operating temperature	-20°C ~ +60°C
IP rating	IP20 IP65(mounting in Hytronik special box)
Certificate	Semko, EMC, CE, R&TTE, SAA