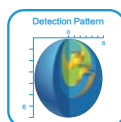
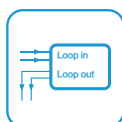
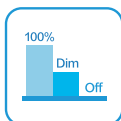
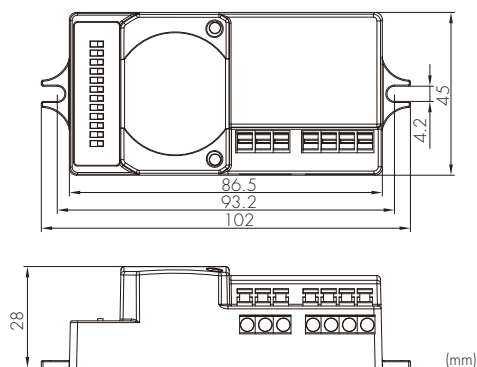
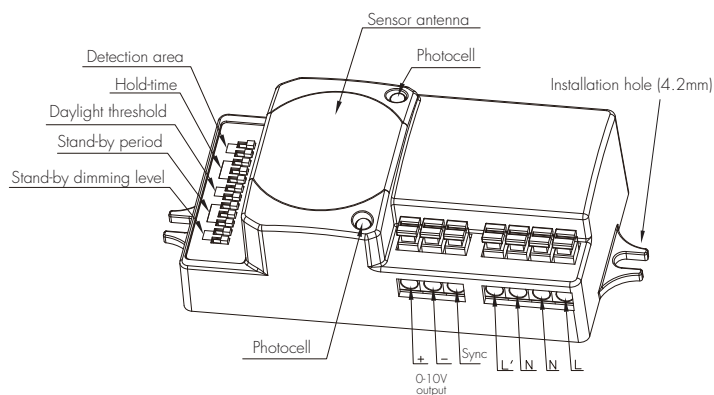


Fixture Built-in Sensor Photocell Advance Version

Model: HC419V /I



Functions and Features

This sensor allows luminaire design to be simplified as the luminaire body no longer needs to be drilled to accept a photocell for assessing the daylight condition. The light will be turned off completely when the ambient daylight exceeds the pre-set daylight threshold, even there is motion detected during hold-time.

Ideal for applications such as IP rated or sealed luminaires, this product is designed to be enclosed within the luminaire.

1 Tri-level Control (Corridor Function)

Hytronik builds this function inside the motion sensor to achieve tri-level control, for some areas require a light change notice before switch-off. It offers 3 levels of light: 100% -> dimmed light -> off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area.

2 Photocell Advance (Lux off Function)

The built-in smart daylight sensor can switch off the fixture automatically from behind the fixture cover whenever artificial light is not required. If the stand-by time is pre-set at "+∞", the fixture can automatically turn on at dim level when natural light is insufficient.

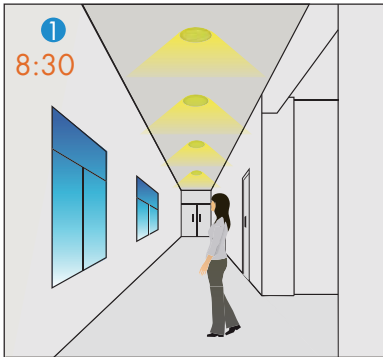
Settings on this demonstration:

Hold-time: 10min

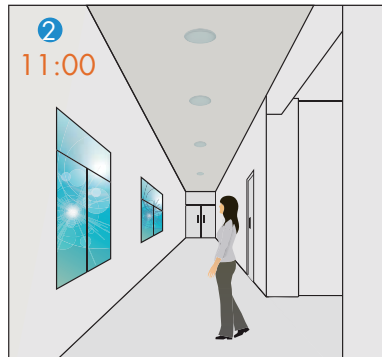
Daylight threshold: 50lux

Stand-by dimming level: 10%

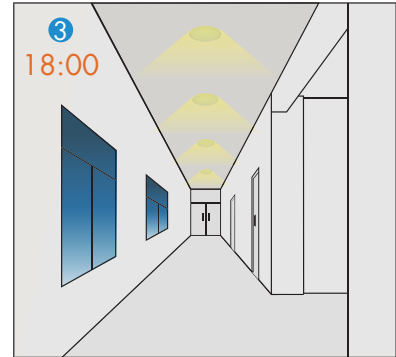
Stand-by period: +∞



With insufficient natural light, the light switches on at 100% when there is motion detected.



The light turns off completely whenever natural light reaches above pre-set daylight threshold, even with presence.



The light turns on at dim level automatically when natural light lux level drops below pre-set daylight threshold (no motion).

3 Synchronization Control Function

By connecting the "SYNC" terminals in parallel (maximum 10pcs, see wiring diagram overleaf), no matter which sensor detects motion, all HC419V/1 connected will turn on the lights when surrounding natural light is insufficient. The sensor antennas are effectively 'shared' and the detection area is widely enlarged in this way.

Note: To avoid fixtures turning on unnecessarily, daylight sensing takes priority on a point-by-point basis. Occupancy sensing (SYNC) is disabled on those units in which the ambient light exceeds the daylight threshold.

4 Zero-cross relay operation

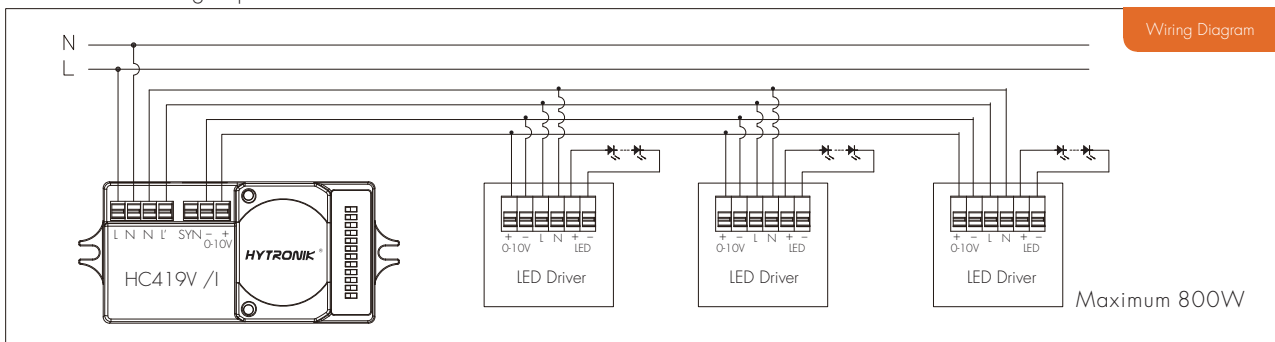
Designed into the software, the sensor switches on/off the load right at the zero-cross point to ensure the in-rush current is minimized, enabling the maximum lifetime of the relay.

5 Loop-in and loop-out terminal

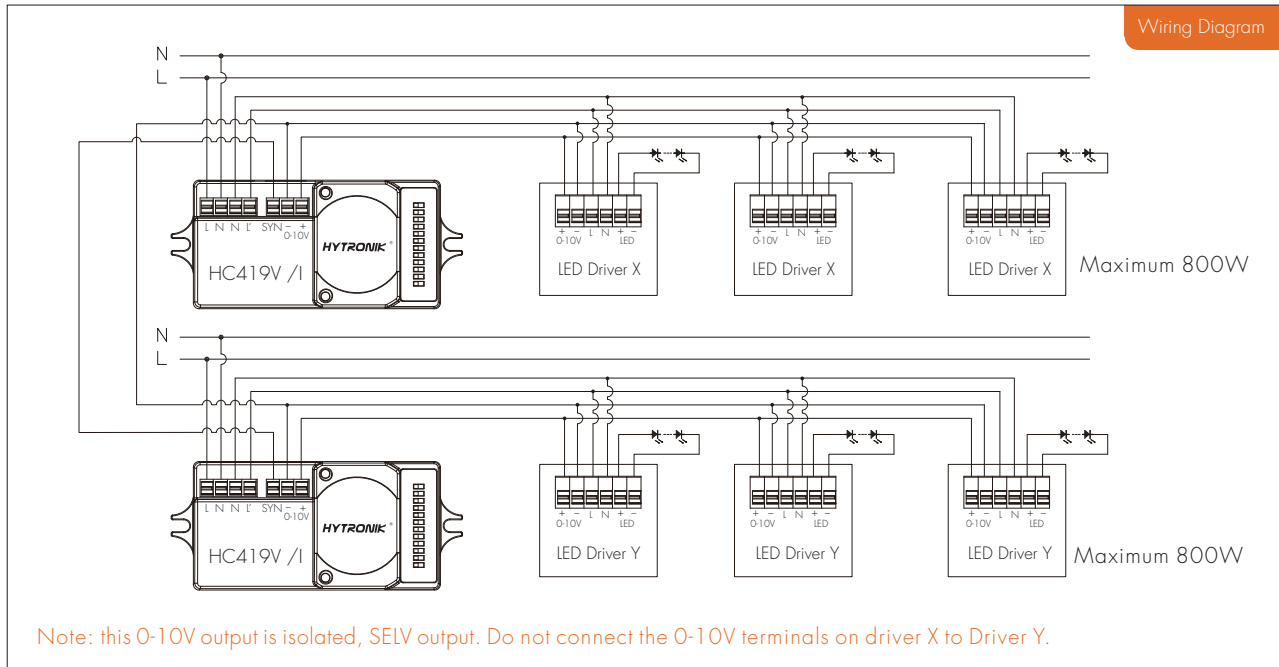
Double L N terminal makes it easy for wire loop-in and loop-out, and saves the cost of terminal block and assembly time.

6 Wiring diagram

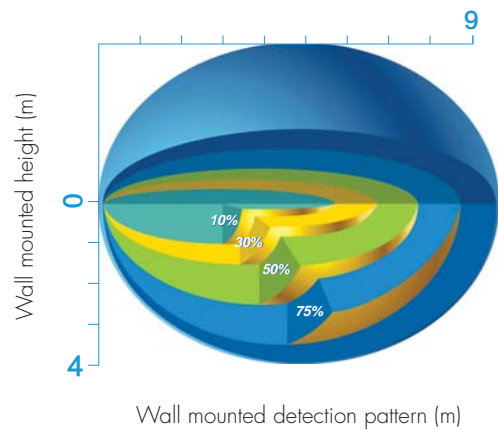
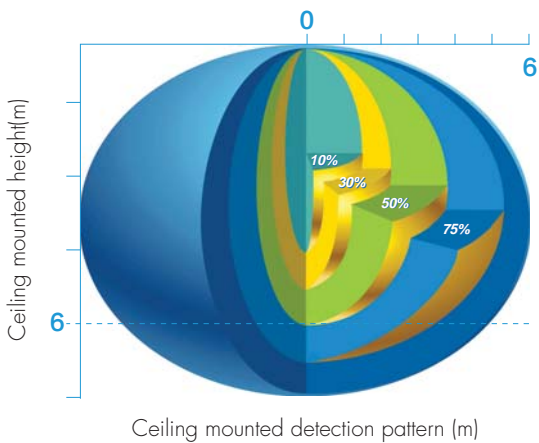
1 sensor controls a group of drivers



Multiple sensors control the same group of drivers



Detection Pattern



Settings

1 Detection area

Sensor sensitivity can be adjusted by selecting the combination on the DIP switches to fit precisely for each specific application.

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

2 Hold-time

Select the dip switch configuration for the full brightness on-time after presence detection. This function is disabled when natural light exceeds the daylight threshold setting for more than 5 minutes.

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

3 Daylight sensor

Set the level according to the fixture and environment. This level will determine at which point the fixture turns off and automatically turns back on again. Please note the level refers to internal light reaching the sensor.

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



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

4 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;

" $+\infty$ " means the stand-by period is infinite and the light is effectively controlled by the daylight sensor, off when natural light is sufficient and automatically on at dimming level when insufficient.

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



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

5 Stand-by dimming level

The setting is used to select the desired dimmed light level used in periods of absence for enhanced comfort and safety.

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



I – 10%
II – 20%
III – 30%
IV – 50%

Technical Data

Operating voltage	120-277VAC
Switched power (capacitive load)	Max. 400W@120VAC; 1000W@277VAC
Stand-by power	<1W
Warm-up time (Power-on self calibration)	20s
Detection area	10%/50%/75%/100%
Hold-time	5s/30s/1min/5min/10min/20min/30min
Stand-by period	0s/10s/1min/5min/10min/30min/1H/ $+\infty$
Stand-by dimming level	10%/20%/30%/50%
Daylight threshold	2~50lux, disable, can be customized
Sensor principle	Microwave motion detector
Microwave frequency	5.8GHz \pm 75MHz
Microwave power	<0.2mW
Detection range	Max. (\varnothing xH): 12m x 6m
Detection angle	30°~150°
Mounting height	Maximum 6m
Operating temperature	-35°C ~ +70°C
Max. case temperature (Tc)	80°C
IP rating	IP20