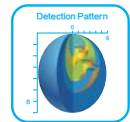
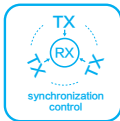
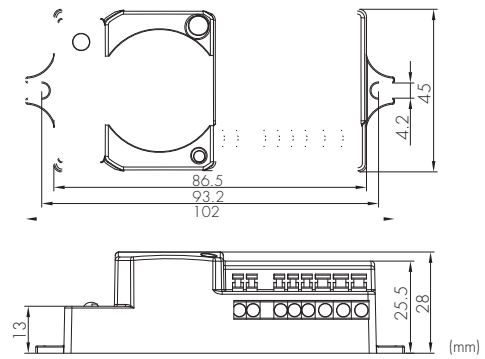
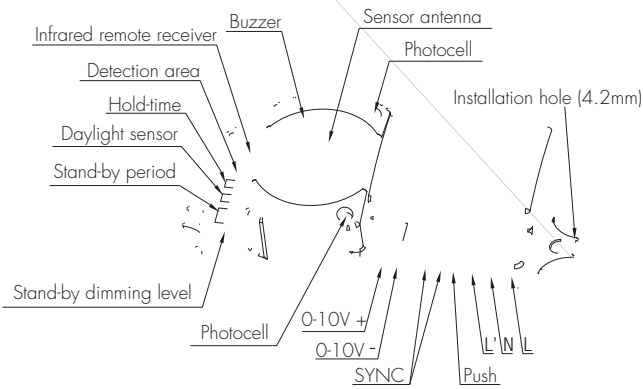


Fixture Built-in Sensor Daylight Harvest Version

Model: HC419VRC /DH



Functions and Features

This product 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. It will measure the ambient natural light behind the cover then calculate how much artificial light is needed to reach the target lux level. The required dimming level control is passed to the driver by the 0-10V signal for delivering the right amount of light.

The light will be dimmed to minimum level and switched off eventually if ambient daylight is sufficient, regardless of hold-time or stand-by time, with or without motion.

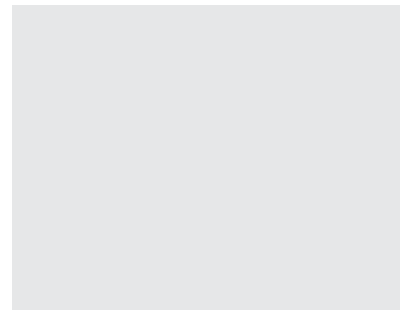
1 Photocell Advance (Lux off Function)

The built-in sensor can measure ambient natural light from behind the cover, dim and eventually switch off the fixture when artificial light is not required. What's more, if the stand-by time is pre-set at "+∞", the fixture can automatically turn on at dim level when natural light is insufficient.

2 Daylight Harvest (Daylight Regulating)



The light switches on with presence when natural light is insufficient.



3 Synchronization Control Function

By connecting the "SYNC" terminals in parallel (maximum 10pcs, see wiring diagram next page), no matter which sensor detects motion, all HC419VRC/DH connected will turn on the lights when surrounding natural light is below the daylight threshold which can be set by either DIP switch on the sensor unit or remote control HRC-11. 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

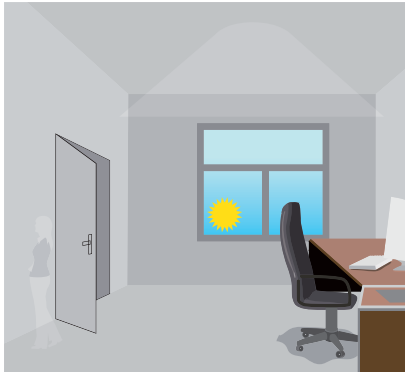
Designed into the software, sensor switches on/off the load right at the zero-cross point to ensure the in-rush current is minimized, enabling the maximum lifetime of the relay.

6 Semi-auto Function (absence detection)

It is easy to forget to switch off the light, in offices, corridors, or even at home. 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 manual press of the push switch. With presence, the light remains on and can interact with ambient natural light, then dims down in absence, eventually switching off automatically after the stand-by time has expired.



Light does not switch on when there is motion detected.

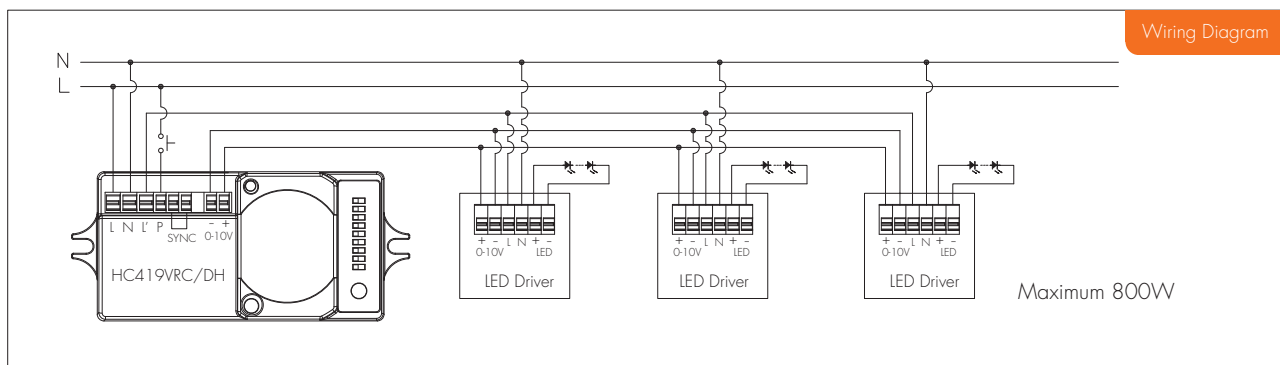


Short press on the push switch to activate the sensor and turn on the light.

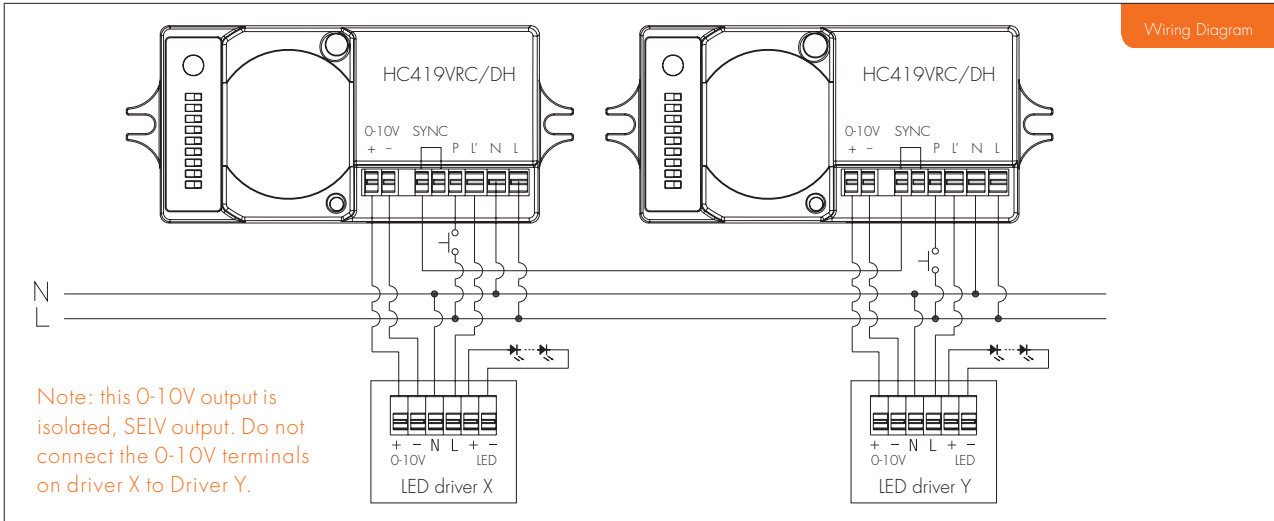
Note: The end-user may choose either function **5** or function **6** for application. Default function is manual override (push function).
Note2: The end-user may also switch off the light manually with a short press of the push switch

Wiring diagram

1 sensor controls a group of ballast /driver



Multiple sensors control the same group of ballast /driver



Settings (Remote Control HRC-11)



Permanent ON/OFF function

Press "ON/OFF" button, the light goes to permanent ON or permanent OFF mode.
* Press button "SEMI-AUTO/AUTO" or button "RESET" to resume automatic operation.



Reset function

Press "RESET" button, all settings go back to the DIP switch settings.



Shift

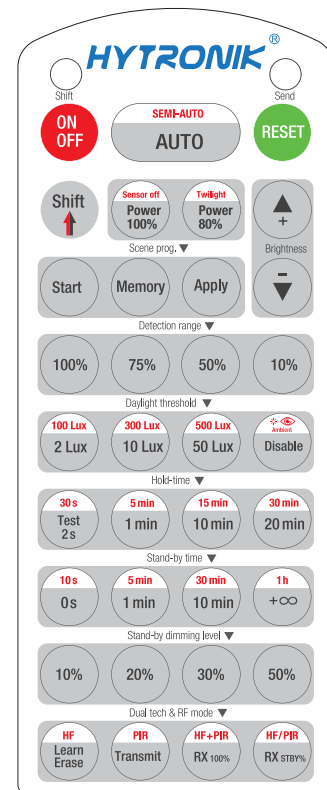
Press button "Shift", the LED on the top left corner flashes to indicate mode selection. All values / settings in RED are valid for 20 seconds.

SEMI-AUTO

AUTO

Automatic mode

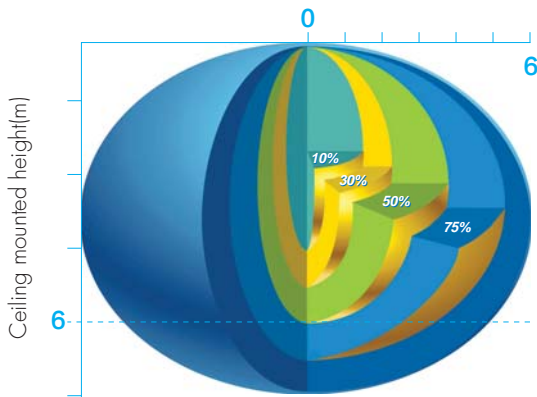
Press "SEMI-AUTO/AUTO" to initiate automatic mode. The sensor starts working and all settings remain as before the light was switched ON/OFF.



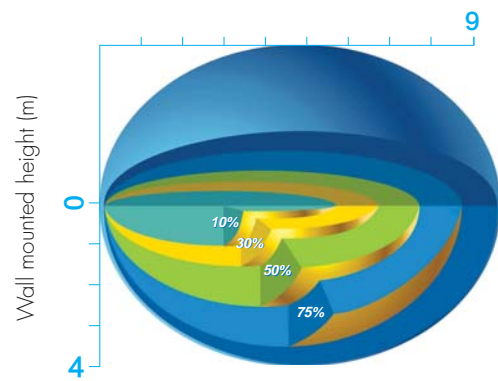
Power output



Detection Pattern



Ceiling mounted detection pattern (m)



Wall mounted detection pattern (m)

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	
I	●	100%
II	○	50%



I – 100%
II – 50%

2 Hold-time

Select the DIP switch configuration for the light on-time after presence detection. This function is disabled when natural light is sufficient.

	2	3	
I	●	●	5s
II	●	○	3min
III	○	●	10min
IV	○	○	30min



I – 5s
II – 3min
IV – 10min
V – 30min

3 Daylight sensor

Set the level according to the fixture and environment. The light will not turn on if ambient lux level exceeds the daylight threshold preset. Please note the ambient lux level refers to internal light reaching the sensor.

	4	5	
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;

"+∞" means the standby 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.

	6	7	8	
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 – +∞

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.

	9	
I	●	10%
II	○	30%



I – 10%
II – 30%

Technical Data

Operating voltage	120-277VAC
Switched power	Max. 400VA @ 120VAC, 1000VA @ 277VAC (capacitive) Max. 700W @ 120VAC, 1600W @ 277VAC (resistive)
Stand-by power	<0.8W
Warm time	20s
Detection area	50% / 100% (10% / 50% / 75% / 100% on RC)
Hold-time	5s / 3min / 10min / 30min (TEST 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min on RC)
Stand-by time	0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞
Stand-by dimming level	10% / 30% (10% / 20% / 30% / 50% on RC)
Daylight threshold	2~500Lux, disable, can be customized
Sensor principle	Microwave motion detector
Microwave frequency	5.8GHz+/-75MHz
Microwave power	<0.2mW
Detection range	Maximum (ØxH): 12m x 6m
Detection angle	30°~150°
Mounting height	Maximum 6m
Operating temp.	-20°C ~ +60°C
Max. case temperature (Tc)	80°C
IP rating	IP20