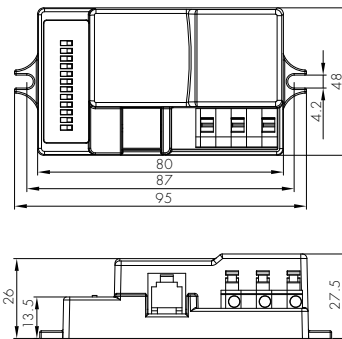
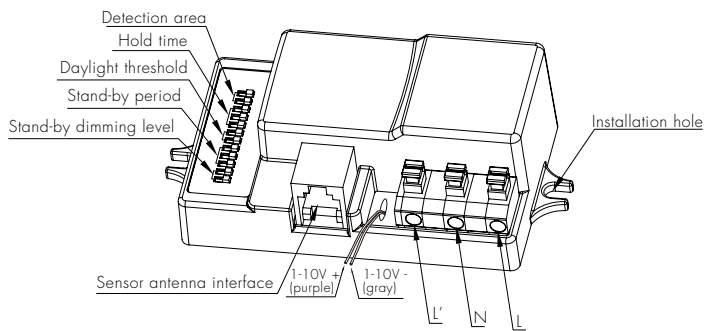


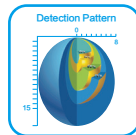
Detached Version Tri-level Control @ 347VAC

Model: HC603VRC-KD
with HRC-11



Model: HC603VRC-KD

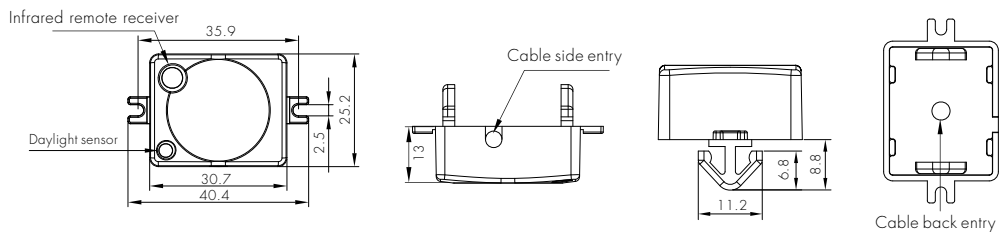
Mechanical structure (mm)



Detached sensor antenna module:

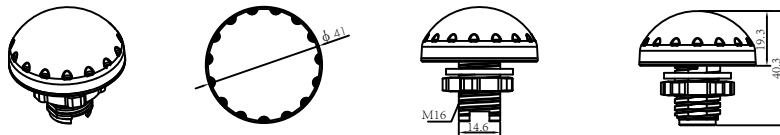
Model SAM5 (D x H: 12m x 6m)

Optional cable entry (side entry and back entry) and IR receiver to work with remote controller HRC-11.



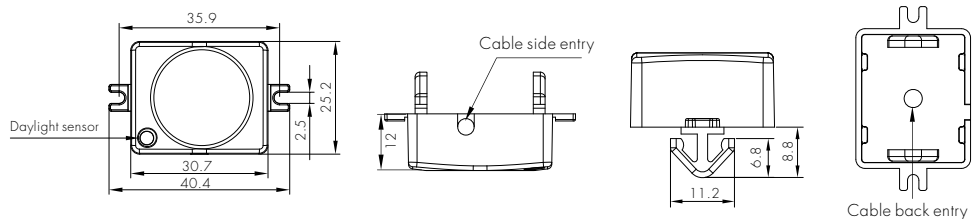
Model SAM5/IP65 (φ x H: 41m x 19.3m)

Super-compact sensor antenna.



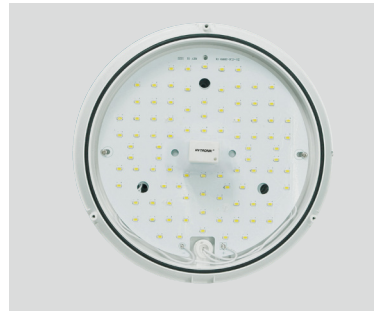
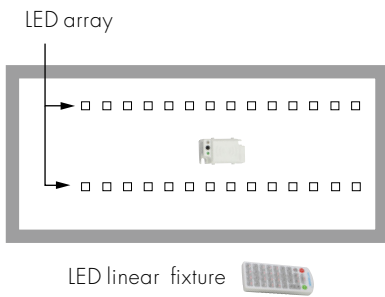
Model SAM9 (D x H: 12m x 6m)

Optional cable entry (side entry and back entry), without IR receiver.



The sensor heads are particularly designed for below applications:

1. LED panel light, where the space is limited and ordinary sensors are too big and too high, easily cast shadow in the shade.
2. Office light, most of which have narrow space in between the LED array or aluminium louvres.
3. 2D bulkhead, where the space between the tube is too narrow for the complete sensor.



For LED bulkhead



For 2D 28/38W lamps

tiny antenna is placed in between the LED array, while the main body is hidden beneath the metal tray.

This sensor is particularly designed for light fittings where the space is very limited for a big sensor, for instance, on the LED panel bulkhead, and 2D lamp. In such applications, only the detached small antenna is needed on the outer surface, while the sensor body and the driver/ballast can be hidden behind the panel.

Detached sensor antenna module (extended range detection):

Model SAM6
(D x H: 16m x 15m)

Flat sensor antenna, with plastic fingers to hook on highbay or T5/T8 tubes

Infrared remote receiver

Daylight sensor

Slots for T5 tube

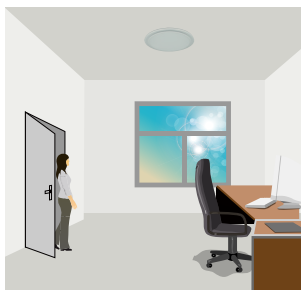
Slots for T8 tube

High bay, which is usually installed at a much higher place such as warehouse and need a much larger detection range. Thanks to SAM6 and the remote control, the sensor is enable to function well in much higher places, say up to 15m.

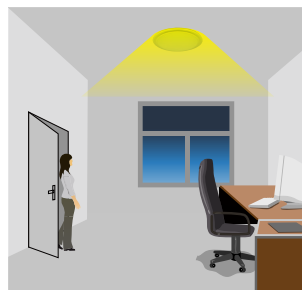
Functions and Options

1 Tri-level Control (Corridor Function)

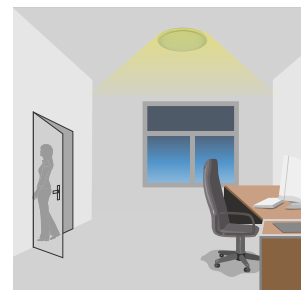
It offers 3 levels of light: 100%-->dimmed light-->off; And 2 periods of selectable waiting time: Motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area.



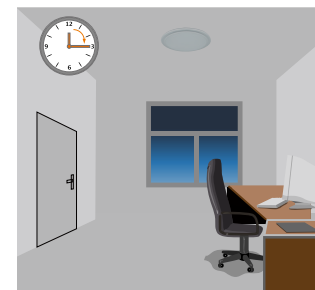
With sufficient natural light, the light does not switch on when presence detected.



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



After hold-time, the light dims to stand-by level or turns off completely if surrounding natural light is above the daylight threshold.



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

2 Zero-cross Relay Operation

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

3 24h Daylight Monitoring Function

Our innovative and patented software enables our antenna with built-in daylight sensor to provide a "smart photocell" function. This function is activated when the stand-by period is set to "+∞".

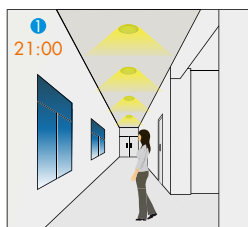
Settings on this demonstration:

Hold-time: 10min

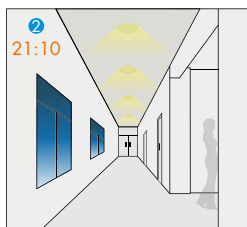
Daylight threshold: 50lux

Stand-by dimming level: 10%

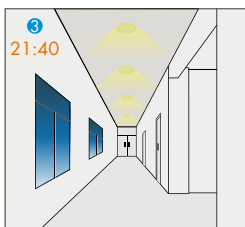
Stand-by period: +∞



The light switches on at 100% when there is movement detected.

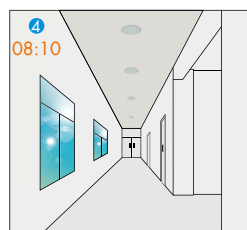


Light dims to stand-by level after the hold-time (no motion).

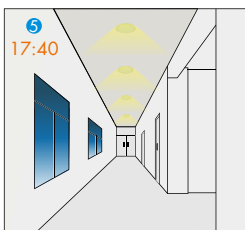


Light remains in dimming level during the night.

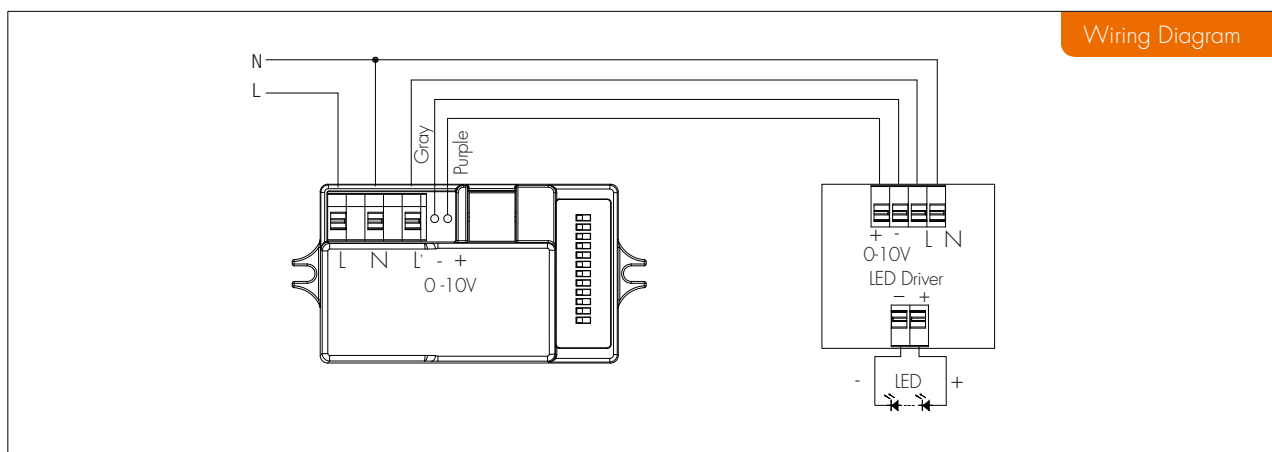
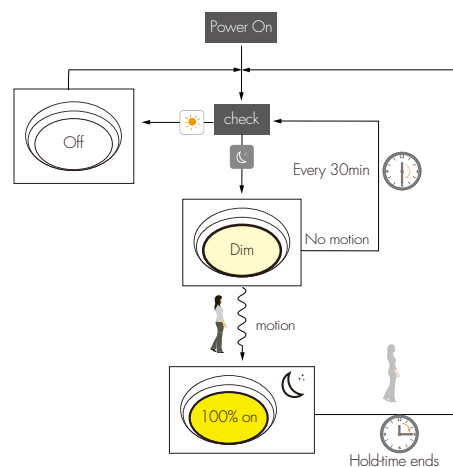
1 ↔ 3 goes in cycle during the night ...
100% on when movement detected, and dims to 10% in long absence.



At dawn, light turns off completely when natural light reaches above daylight threshold.



Light turns on 10% automatically when natural light is insufficient.



Wiring Diagram

Note: this 1-10V is a isolated SELV control signal.

Settings (Remote Control HRC-11)



Permanent ON/OFF function

Press button "ON/OFF" to select permanent ON or permanent OFF mode.

* Press button "AUTO", "RESET" or "Ambient" to quit from this mode.



AUTO/SEMI-AUTO mode

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

Note: The function of SEMI-AUTO is disabled.



Reset

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



Shift

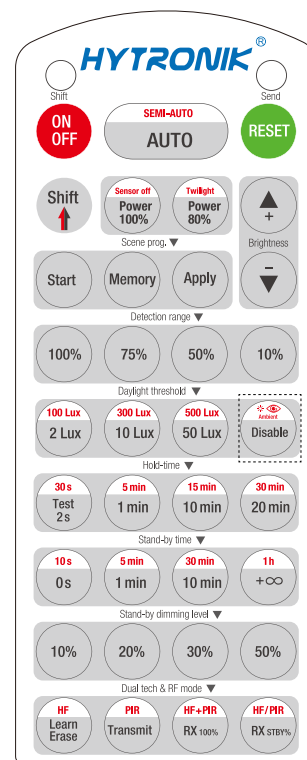
Press button "Shift", the LED on the top left corner is on for indication. All values / settings in RED are in valid for 20 seconds.



Power output

Press the buttons to shift light output between 80% and 100%.

Note: the function of "Sensor off" and "Twilight" are disabled.



HRC-11



Scene program

1. Press button "Start" to program.
2. Select the buttons in "Detection range", "Daylight threshold", "Hold time", "Stand-by time", "Stand-by dimming level" to set all parameters.
3. Press button "Memory" to save all the settings programmed in the remote control.
4. Press button "Apply" to set the settings to each sensor unit(s).

For example, to pre-set detection range 100%, daylight threshold Disable, hold-time 5min, stand-by time +∞, stand-by dimming level 30%, steps should be:

Press button "Start", button "100%", "Disable", "Shift", "5min", "Shift", "Disable", "+∞", "30%", "Memory". By pointing to the sensor unit(s) and pressing "Apply", all settings can be learned easily by the sensor(s).

Brightness +/-

Press the buttons to adjust light brightness between 10% ~ 100%.

Detection range

Press buttons in zone "Detection range" to set detection range at 100% / 75% / 50% / 10%.

Daylight threshold

Press buttons in zone "Daylight threshold" to set daylight sensor at 2Lux/ 10Lux / 50Lux / Disable.

Note: 100Lux / 300Lux / 500Lux are disabled.

Ambient daylight threshold

1. Press button "Shift", the red LED is on for indication.
2. Press button "Ambient", the surrounding lux level is sampled and set as the new daylight threshold.

Hold-time

Press buttons in zone "hold-time" to set the hold time at 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min.

Note: 1. To set hold-time at 30s / 5min / 15min / 30min, press button "Shift" at first.

2. 2s is for test purpose only, stand-by period and daylight sensor settings are disabled in this mode.

*To exit from Test mode, press button "RESET" or any button in "Hold-time".

Stand-by time (corridor function)

Press buttons in zone "stand-by time" to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞.

Note: "0s" means on/off control; "+∞" means bi-level control, 100% on when motion detected, and remains at the stand-by dimming level when no presence after hold-time.

Stand-by dimming level

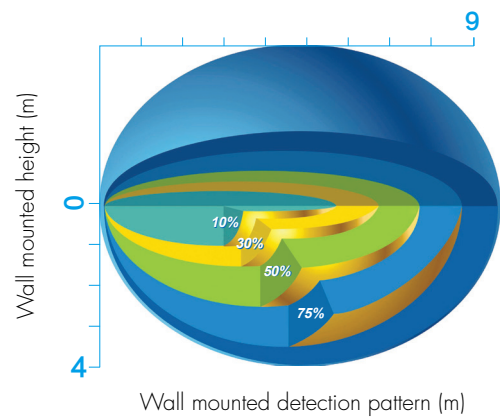
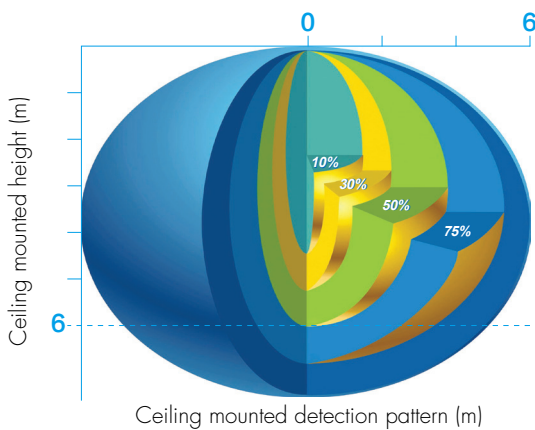
Press the button in zone "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30% / 50%.

Dual tech & RF mode

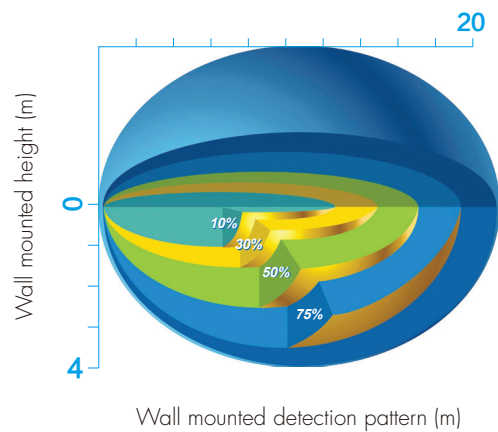
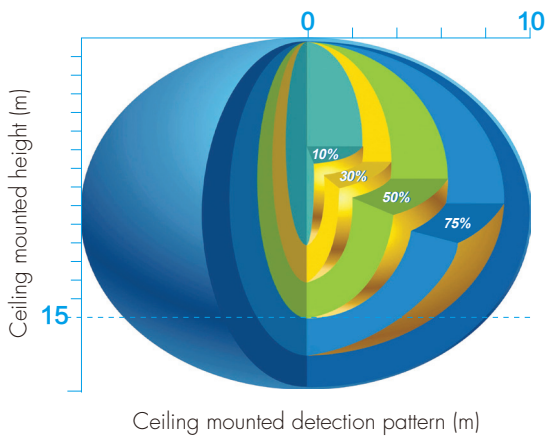
All buttons in zone "Dual tech & RF mode are disabled.

Detection Pattern

With SAM5 & SAM5/IP65 & SAM9:



With SAM6:



Settings

1 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%

2 Hold-time

Hold-time means the time period to keep the lamp on 100%, after all motion has ceased (detection area vacated).

	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

3 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	○	○	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 bi-level dimming control, fixture never switches off when daylight sensor is disabled.

	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 – +∞

5 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%

Technical Data

Operating voltage	347 VAC 60Hz
Switched power	2000W (resistive load); 1200W (capacitive load)
Stand-by power	<1.5W
Detection area	10%/50%/75%/100%
Hold-time	5s/30s/1min/5min/10min/20min/30min (TEST 2s ~ 30min on RC)
Stand-by period	0s/10s/1min/5min/10min/30min/1h/+∞
Stand-by dimming level	10%/20%/30%/50%
Daylight threshold	2~50Lux/disable (2Lux ~ 500Lux /Lux disable / Ambient on RC)
Sensor principle	High frequency (microwave)
Microwave frequency	5.8GHz+/-75MHz
Microwave power	<0.2mW
Detection range	Maximum (D x H): 12m x 6m (SAM5, SAM9); 16m x 15m (SAM6)
Detection angle	30°~150°
Mounting height	Maximum 6m (SAM5, SAM9); 15m (SAM6, for forklift)
Operating temperature	-20°C ~ +60°C
Max. case temp.	85°C
IP rating	IP20
Certificate	cULus, CB, EMC, R&TTE