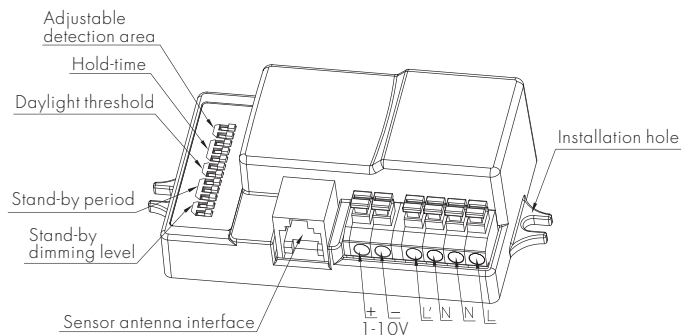# Detached Antenna Version with Extended Detection Range
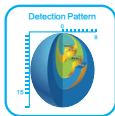
Model: HC403VRC-KD
with HRC-05

Model: HC403VRC-KD

- Adjustable detection area
- Hold-time
- Daylight threshold
- Stand-by period
- Stand-by dimming level
- Sensor antenna interface
- 1-10V
- + – L' N N L
- Installation hole
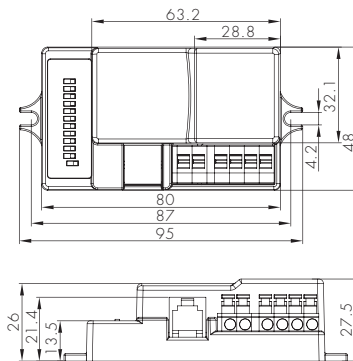
Mechanical structure (mm)

63.2
28.8
32.1
48
4.2
80
87
95
26
21.4
3.5
27.5

Icons:
- 24h Daylight Monitoring
- 100% Dim Off sensorDIM™
- 1~10V dimming
- zero-cross relay operation
- 8 hours manual on
- Ambient daylight threshold
- soft-on soft-off
- Detection Pattern
- Hold-time 5s~30min
- 2~50Lux

Detached sensor antenna module:

Model SAM6

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

- Infrared remote receiver
- Daylight sensor
- Slots for T5 tube
- Slots for T8 tube

45.2
32.2
33.5
2.5
15
12
50.2
26.5
2
9
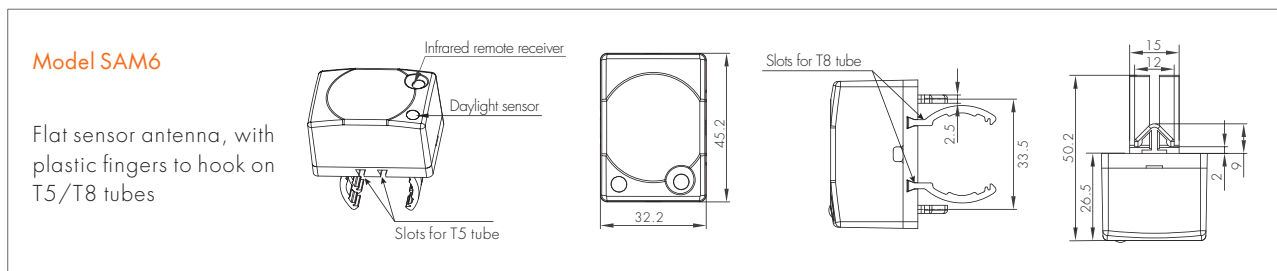
1. High bay, which is usually installed at a much higher place such as warehouse and need a much larger detection range.
2. Office light, most of which have aluminium lovres and is impossible for HF (microwave) sensors to go through.

For high bay

Thanks to SAM6 and the remote control, the sensor is enable to function well with high bay in much higher places, say up to 15m.

For linear T5, T8, TC-L lamps

Use the detached sensor antenna head grip on the T5 and T8 tube, and put the sensor mainbody behind the metal louvre, together with the ballast or driver.

Product Functions and Features

1	Tri-level control (corridor function)	2	8H manual on mode for LED lamp
3	Zero-cross relay operation	4	Wire loop-in and loop-out
5	Daylight monitoring function with threshold control	6	Ambient daylight threshold

Wiring Diagram

N
L

L N N L'   − +
         1~10V

+ − L N
1~10V

LED Driver

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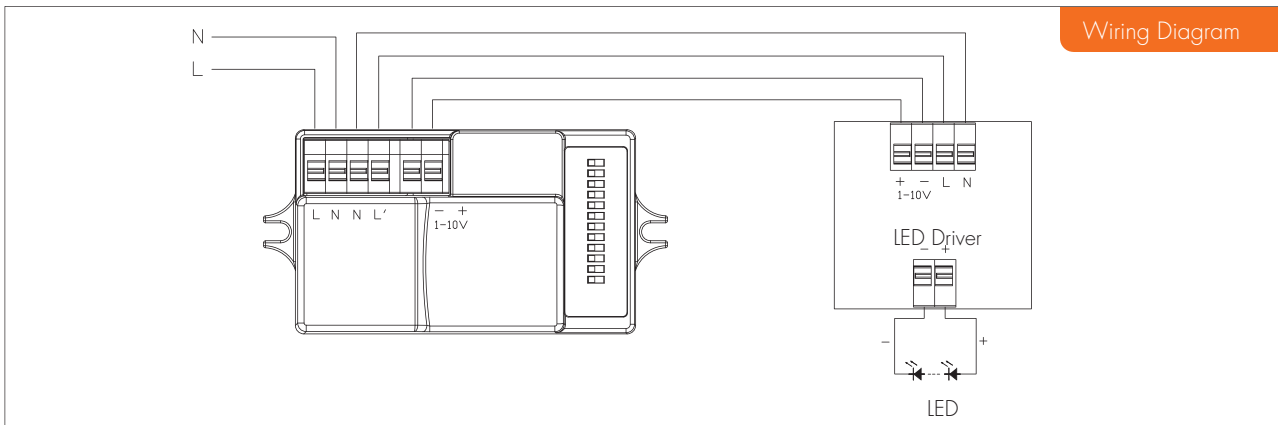
Note: this 1-10V is a isolated SELV control signal.

Settings (Remote Control HRC-05)

ON/OFF Permanent ON/OFF function

Press the "ON/OFF" button, the light goes to permanent on or permanent off mode, sensor is disabled.
* Press "Auto Mode", "RESET" or "Scene mode" buttons to quit from this mode.

Auto Mode Sensor mode

Press "Auto Mode" button, the sensor starts to work and all settings remain the same as the latest status before the light was switched on/off.

RESET Reset function

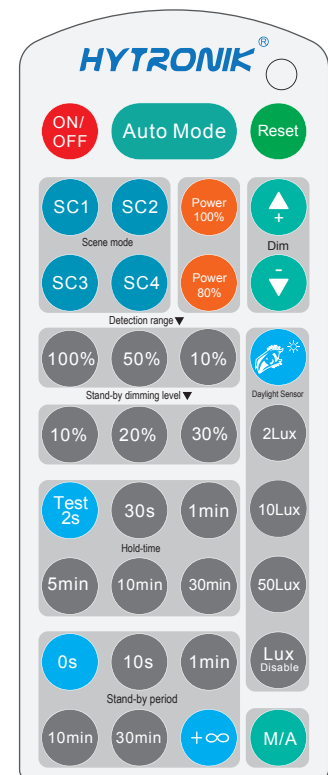Press "RESET" button, all settings go back to the value of DIP switch settings.

Dim +/-

Long press "Dim +" or "Dim −" to adjust the light brightness during hold-time. " + " means dimming up, "−" means dimming down.

TEST 2S Test mode

The button "Test 2s" is for testing purpose only. The sensor goes to test mode (hold-time is 2s) automatically after commissoning, meanwhile the stand-by period and daylight sensor are disabled.
* This mode can be ended by pressing "reset", or any button of "scene mode" and "hold time". The sensor setting is changed accordingly.

HYTRONIK®

ON/OFF   Auto Mode   Reset

SC1 SC2   Power 100%   ▲ + Dim
Scene mode
SC3 SC4   Power 80%   ▼ −
Detection range ▼

100% 50% 10%   Daylight Sensor
Stand-by dimming level ▼
10% 20% 30%   2Lux

Test 2s 30s 1min   10Lux
Hold-time
5min 10min 30min   50Lux

0s 10s 1min   Lux Disable
Stand-by period
10min 30min +∞   M/A

HRC-05

Note: the buzzer beeps one time when RC receives signal successfully.

Power output

Press these buttons to select full output level. 80% button allows for energy saving and reverse dimming to compensate for LED lumen depreciation over time. Supports fluorescent 10,000 hr initial burn-in.

Ambient daylight threshold

Press this button, the latest surrounding lux value overwrites previous lux value learned, and is set as the daylight threshold. This feature enables the fixture to function well in any real application circumstance.

Lux disable

Press this button to disable the daylight sensor for threshold control. When motion is detected, the fixture will always turn ON, regardless of ambient light level.

Manual override / absence detection

Note: this button is disabled.

Scene mode

There are four scene modes fixed programs built-into the remote control. Select as appropriate. Each scene can be modified using the remote. The sensor will remember updates even after power outage. The green "RESET" button on remote reverts to original defaults.

Scene options	Detection range	Hold-time	Stand-by period	Stand-by dimming level	Daylight sensor
SC1	100%	1min	10min	10%	2Lux
SC2	100%	5min	10min	10%	2Lux
SC3	100%	10min	30min	10%	10Lux
SC4	100%	10min	+∞	10%	50Lux

Note: end-user can adjust the settings by pressing buttons of detection range/hold-time/stand-by period/stand-by dimming level/daylight sensor. The lastest setting stays in validity.

Detection range

Select as appropriate to adjust/reduce sensor sensitivity, detection range from 100%.
Typical 100% sensor motion detection range is 9m. Please refer to detection pattern below.

Hold-time

Hold-time is time fixture remains at programmed full power level AFTER no motion is detected.

Daylight sensor

Select daylight sensor threshold level at MIN 2 LUX or MIN 20LUX. Ambient light must below this MIN LUX threshold for sensor to turn fixture ON. Press Blue button to sample ambient light. Press Lux Disable button for fixture to always turn On when motion is detected.
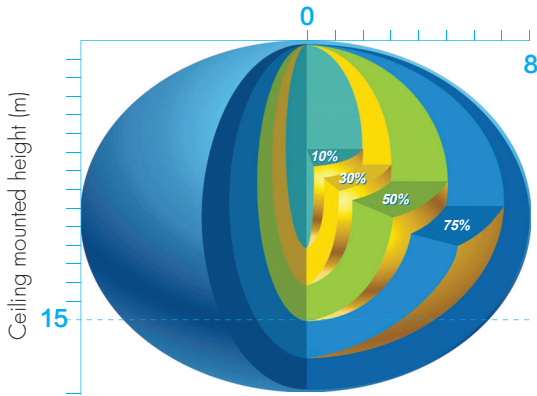
Stand-by period (tri-level control)

Press the buttons of "stand-by period" to set stand-by period at 0s / 10s / 1min / 10min / 30min / +∞.
Note: "0s" means on/off control; "+∞" means bi-level control, light never switches off when daylight sensor is disabled.
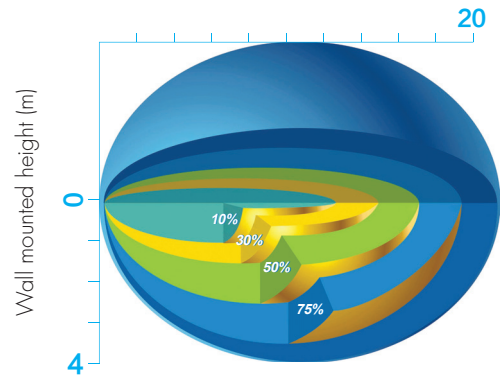
Stand-by dimming level

Press the buttons of "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30%.

Ceiling mounted detection pattern (m)

Wall mounted detection 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 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

❸ Daylight sensor

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

"Daylight" : The lamp works always, even during daylight.
"Twilight" : The lamp works only in twilight and in darkness.
"Darkness" : The lamp works only in darkness.

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

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

❹ Stand-by period (tri-level control)

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 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 – +∞

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%

Technical Data

Operating voltage	120~277Vac
Switched power (capacitive load)	400W@120Vac; 800W@230Vac; 1000W@277Vac
Stand-by power	<0.5W
Detection area	10%/50%/75%/100%　(100% /50% /10% on RC)
Hold-time	5s/30s/1min/5min/10min/20min/30min　(TEST 2s/30s/1min/5min/10min/30min on RC)
Stand-by period	0s/10s/1min/5min/10min/30min/1h/+∞　(0s /10s / 1min / 10min/ 30min /+∞ on RC)
Stand-by dimming level	10%/20%/30%/50%　(10%/20%/30% on RC)
Daylight threshold	2~50Lux/disable　(2Lux /10Lux / 50Lux /Lux disable on RC)
Sensor principle	High frequency (microwave)
HF (microwave) frequency	5.8GHz+/-75MHz
HF (microwave) power	<0.2mW
Detection range	Max. (ØxH): 8m x 15m
Detection angle	30°~150°
Mounting height	Max. 15m
Operating temperature	-20°C ~ +60°C
IP rating	IP20
Certificate	cULus listed