# PRODUCT SPECIFICATION

PRODUCT — DC input , Rod antenna

MODEL NO — HB001VCR-1A  HB001VCR-2A

DATE — 2023-04-20

PREPARED — 夏勇

CHECKED — 郭凯健

APPROVED —

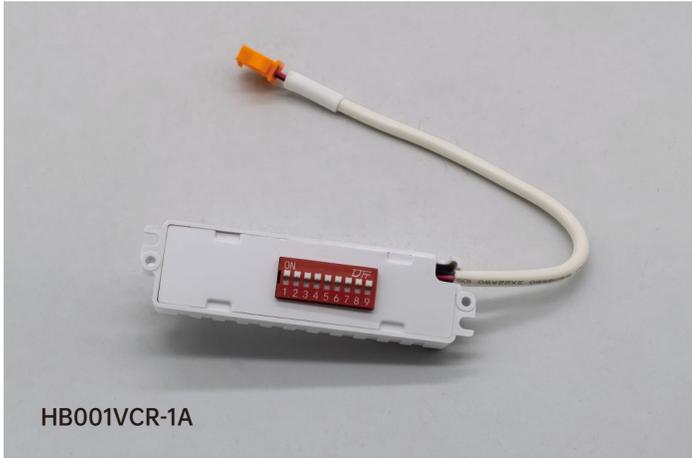## CUSTOMER RECEIVED

CHECKED —

APPROVED —

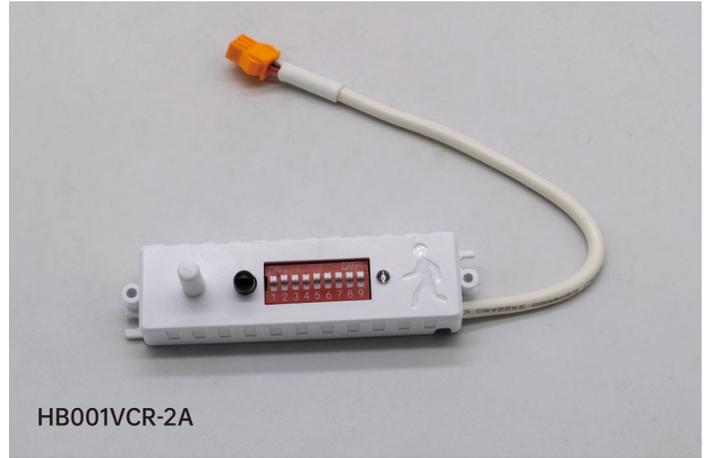DATE —

CUSTOMER —

# HAISEN®



HB001VCR-1A



HB001VCR-2A

## DC input , Rod antenna    HB001VCR-1A    HB001VCR-2A    CE  RoHS COMPLIANT

• Automatic On/off control with Daylight sensor.   DC input    •Compact sized particularly suitable for Tri-proof light   •5 year warranty.

| | | | |
|---|---|---|---|
| On/Off Control | Detection Area | Daylight Sensor | Hold Time |
| Warranty | Stand-by period | Stand-by dimming level | Remote Control |

## Technical Data

| | | |
|---|---|---|
| Operating Voltage<br>DC:10.5-15V | Microwave Power<br><0.3mW | Motion Detection<br>0.5-1m/s |
| Operating Current<br><30mA | Microwave Frequency<br>5.8GHz±75MHz | Operating Temperature<br>-20°C~+60°C |
| Stand-by power<br><0.5W | Mounting Height<br>Max.4m/13.12ft Ceiling Mounted | IP Rating<br>IP20 |
| Control Method<br>On/Off   0-10V Diming | Detection Range<br>Max. Diameter 10m/32.8ft Ceiling Mounted | Warranty<br>5 years |
| Detection Angle<br>150° Wall mounted   360° ceiling mounted | Connection Type<br>Quick Connector | Function Setting<br>DIP Switch/Remote Control |

Detection Angle
DIP switch : 50%/100%     Remote control : 25%/50%/75%/100%

Hold Time
DIP switch :5s/30s/1min/10min     Remote control : 5s/30s/1min/3min/5min10min/20min/30min

Daylight Threshold
DIP switch :2Lux/10Lux/50Lux/Disable     Remote control :2Lux/10Lux/30Lux/50Lux/80Lux/120Lux/Disable

Stand-by period
DIP switch :0s/30s/20min/+∞     Remote control :0s/10s/30s/1min/ 5min/10min/ 30min/ 60min/+∞

Stand-by dimming level
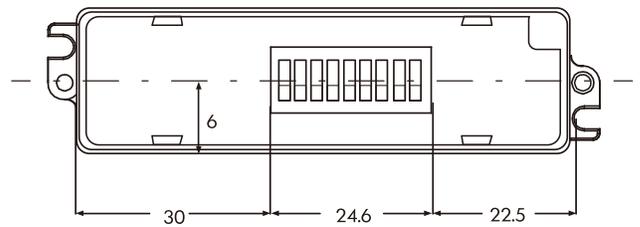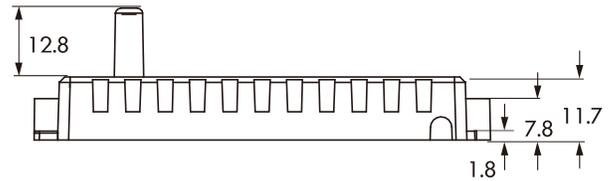DIP switch :10% 20% 30% 50%     Remote control :10% 20% 30% 50%

# HAISEN®

## Mechanical structure
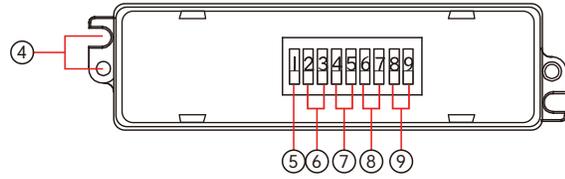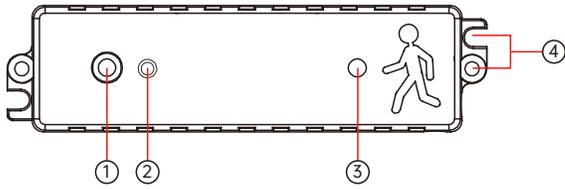
① Antenna module    ④ Installation Hole    ⑦ Stand-by dimming level

② IR Receiver    ⑤ Detection Angle    ⑧ Stand-by Period

③ Daylight Sensor    ⑥ Hold Time    ⑨ Daylight Threshold

## Dimensions

Unit:mm

85

75.94

10.49

18

Ø2.5   Ø5.5   Ø3.9

22.3

Ø2.5

2.5

11.3

Ø5.5

12.8

11.7

7.8

1.8

6

30    24.6    22.5

## Wiring Diagram

LED Driver

N

L

LED-

LED+

## Detection Patterns

0.5-1.0M/S

Mounting Height

Ceiling Mounted

1

2

3

4

5

6 5 4 3 2 1 0 1 2 3 4 5 6

Well Detected Area

Possibly Detected Area
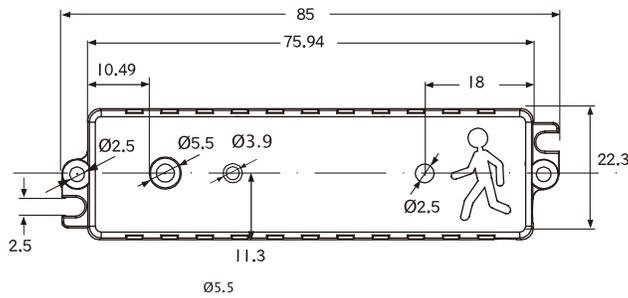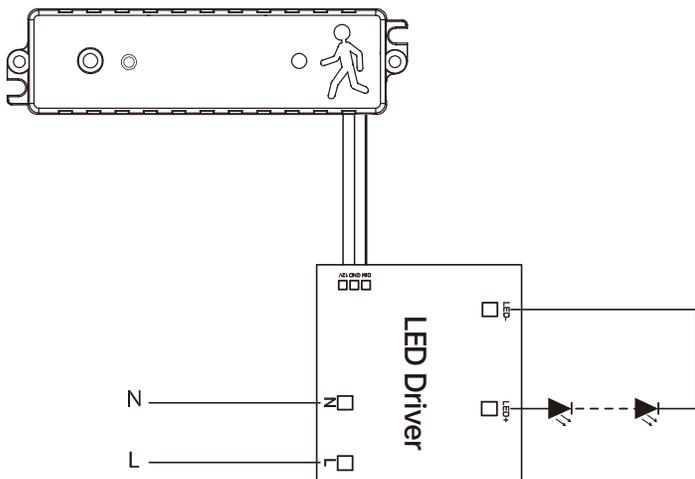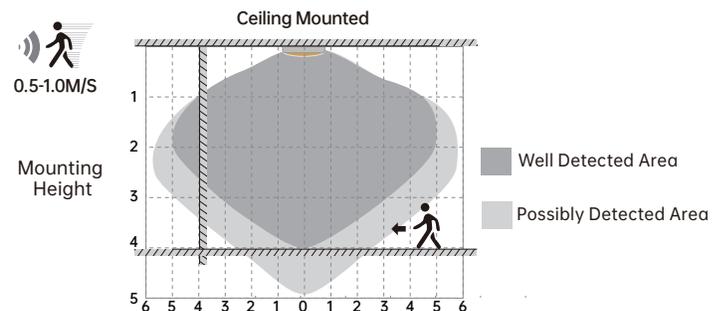
Highest mounting height is 4m

This figure indicates the maximum distance at the highest mounting height with 100% sensitivity.

# HAISEN®

## Installation Method



## DIP Switch Setting



- ● Switch UP
- ○ Switch DOWN

### Stand-by dimming level

| | | |
|---|---|---|
| ● | ● | 10% |
| ○ | ● | 20% |
| ● | ○ | 30% |
| ○ | ○ | 50% |

The definition of low output in the standby period.

### Stand-by period

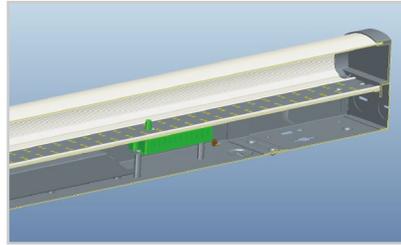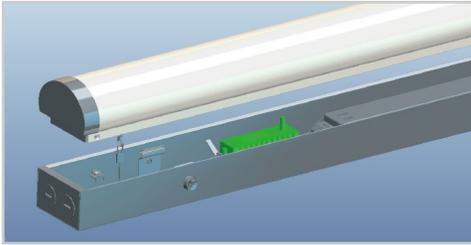| | | |
|---|---|---|
| ● | ● | 0s |
| ● | ○ | 30s |
| ○ | ● | 20min |
| ○ | ○ | +∞ |

The period of light keeping low output before it's completely switched off. When it's preset as "∞", the light always keep at low output if no movement in the detection area and doesn't turn off.

### Daylight Threshold

| | | |
|---|---|---|
| ● | ● | Disable |
| ● | ○ | 50lux |
| ○ | ● | 10lux |
| ○ | ○ | 2lux |

Definition of the ambient brightness; only when the ambient brightness is lower than the preset specific lux amount, the sensor will work; when it's preset as "disable",the sensor works everytime it detects motion regardless the ambient brightness.

### Hold-Time

| | | |
|---|---|---|
| ● | ● | 5s |
| ● | ○ | 30s |
| ○ | ● | 1min |
| ○ | ○ | 10min |

The period of light keeping 100% brightness after moving objects leave the detection area.

### Detection Area

| | |
|---|---|
| ● | 100% |
| ○ | 50% |

In this area, movement will be detected and able to trigger the sensor. 100% detection area is also known as the strong sensitvity.

# HAISEN®

## Performance

### 1.Automatically ON/OFF function



With sufficient daylight, even when motion detected, light remains OFF.



With insufficient daylight, the sensor turns light ON when motion gets detected.



The sensor turns OFF light automatically after the holdtime when there's no motion detected.

### 2.Daylight Disable

When daylight threshold is preset as "disable", the sensor turns light ON when motion gets detected, and OFF after holdtime.



The sensor turns light ON when motion gets detected.



The sensor keeps light ON for holdtime period after motion leaves.
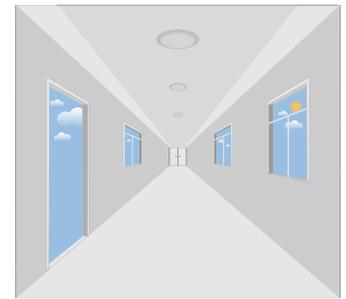


The sensor turns OFF light automatically after the holdtime.

### 3.Corridor Function, Bi-level Dimmable



With sufficient daylight, the sensor keeps light OFF even motion gets detected.



With insufficient daylight, the sensor turns light ON when motion gets detected.



After there's no motion detected, the sensor keeps light ON 100% for holdtime.



After holdtime, sensor dims light to standby dimming level for standby period.



The sensor turns OFF light automatically after the standby period when there's no motion detected.

# HAISEN®



## Attention

1. Please read the instructions carefully before using this product and keep it well for all users to read at any time.

2. The sensor should be installed by qualified electrician and ensure power is off before the installation.

3. We reserve the right to modify any incorrect text, image and necessary technical parameters.

4. Any unauthorized modification is forbidden, otherwise all guarantees will be immediately invalid.

## Installation precautions

1. Microwave sensor can be installed in any lamp except the one with full metal shell.

2. The detected surface cannot be shielded by metal objects.

3. Make sure the microwave module is completely exposed outside.

4. The detection surface of the sensor module shall be installed facing the detection area.

5. Should be kept away from the driver to avoid interference generation and lamp flashing.

6. Wiring must be strictly in accordance with the wiring diagram to avoid short circuit.

## Application Environment

1. Suitable for indoor installation to avoid false triggering due to external factors such as rain, wind or tree swing.

2. Shall not be installed in the place with all four metal shelters and small space (such as galvanized-iron roof ).

3. Shall note be mounted installation, so as to avoid false trigger caused by the lamp itself shaking.

4. Shall not be installed next to large operating machines such as ventilator/ceiling fan to avoid false triggering caused by machine vibration.

## User Notes

1.Microwave can penetrate walls or glass thinner than <20mm and attenuate if thicker than <20mm.

2. The driver voltage shall be stable and float within 10%.

3. Detection area will be affected by speed of motion, mounting height and movement volume.

4. Conduct test on sunny days without the lampshade which will affect the tested lux value.

# SCREEN DISPLAY, MEMORY & APPLY FUNCTION, OPTIONAL SCENES

### Model: HD05R

## Briefing of Button Functions

| Buttons | Function | Performance |
|---|---|---|
| ON/OFF | ON/OFF | Turn ON or OFF the sensor. |
| MW/PIR | MW/PIR | Exchange from Microwave detection to PIR detection, for future use. |
| Scene | Reset | Press it to start detection programming; before pressing any other buttons, the screen shows default programming (Detection Area 100%, Holdtime 5S, Daylight Disable, Standby Dimming 10%, Standby Period 0S) |
| Start | Start | Press it before you try to memorize program into the remote; After pressing it, S on the screen will blink and keeping blinking while making the program. |
| Memory | Memory | Press it after programming, the blinking S will become a solid M, that means the program has been well memorized. |
| Apply | Apply | Press it to deliver the preset program to the specific sensors; every press will make the whole screen blink gently. |
| | Detection area | Also known as "sensitivity", 100% means the highest sensitivity and longest distance. Press it, specific icon on the screen will blink and press the ＋ - buttons to adjust. |
| | Hold time | The period that light will stay illuminated 100% after no motion's detected; Press it, specific icon on the screen will blink and press the ＋ - buttons to adjust. |
| | Daylight Threshold | The preset lux level to compare with ambient brightness when motion gets detected; Press it, specific icon on the screen will blink and press the ＋ - buttons to adjust. |
| | Stand-by period | The period after holdtime, during which the light keeps standby dimming level; Press it, specific icon on the screen will blink and press the ＋ - buttons to adjust. |
| | Stand-by dimming level | After holdtime, the light will dim from 100% to optional standby dimming levels; Press it, specific icon on the screen will blink and press the + - buttons to adjust. |
| UP | UP | The main functional buttons to adjust the factors to wanted level. |
| DOWN | DOWN | |
| POWER % | POWER | Supports to manually change dimming output in detection mode; Press it, specific icon on the screen will blink and press the ＋ - buttons to adjust. |
| Test (2s) | Test mode | Supports to check if the sensor works correctly with a short 2S holdtime; Press it and the holdtime will change to 2S, and it can't be memorized. |

# HAISEN

# How to Use HD05R

## 1. Manually Dimming In Convention Mode

① Press ON/OFF button to turn ON the light

②Press + - buttons to adjust, every press will change the number on the screen

For some sensors that are not fully supporting HD05R:

①Press ON/OFF button to turn ON the light

②Please keep pressing - button until it shows 10% on the screen, keep the button again then it will start to dim down.

③Please keep pressing + button until it shows 100% on the screen, keep the button again then it will start to dim up.

## 2. Manually Dimming In Detection Mode

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press POWER% button, the PW icon will blink on the screen

④Press + - buttons to adjust dimming output

For some sensors that are not fully supporting HD05R:

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press POWER% button, the PW icon will blink on the screen

④Please keep pressing - button until it shows 10% on the screen, keep the button again then it will start to dim down.

⑤Please keep pressing + button until it shows 100% on the screen, keep the button again then it will start to dim up.

## 3. rogramming the Detection Mode

@ the 1st Sensor

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press START button, the S icon will blink on the screen

④While S is blinking, Press the functional buttons of Detection Area, Holdtime, Standby Dimming, Standby Period and Daylight Threshold, press + - buttons to adjust.

⑤Press MEMORY button to save the program in the remote

⑥Press APPLY button to deliver the program to the sensors.

@ the rest sensors

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press APPLY button to deliver the save program.

## 4. Recall The Program

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press APPLY button, the save program information will show

## 5. Test Mode

①Press ON/OFF button to turn ON the light

②Press SCENE button to enter into the detection mode

③Press TEST(2S) button, the holdtime will change to only 2S; after 2S, sensor will turn OFF the light.

＊ Please note this test mode won't be saved in the remote.

# HD05R



140mm

58 mm

21 mm

PIR

PW

100%

M

100 %

5 S

10 %

0 S

- - - Lux

Start

Memory

Apply

MW/PIR

Scene

Detection range

Stand-by dimming

Daylight sensor

Hold time

Stand-by period

Test
(2S)

POWER
%

HAISEN®