

Daylight Sensor

DS05 DS06 DS07
 Photocell Advance™ Version with Remote Control

HYTRONIK®

Applications

Thanks to the Photocell Advance™ function, these daylight sensor can built inside the fixture completely. The fixture is effectively controlled by the daylight sensor, automatic on/off operation based upon daylight.

- No drill or hole is needed for accessing the daylight condition
- Works from behind the fixture cover/diffuser

Use for retrofit and new building installations

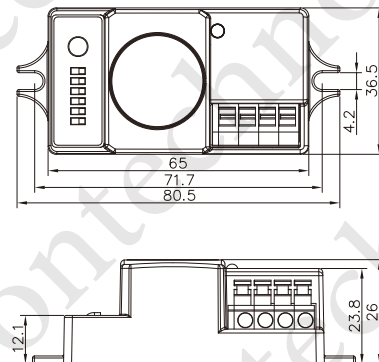
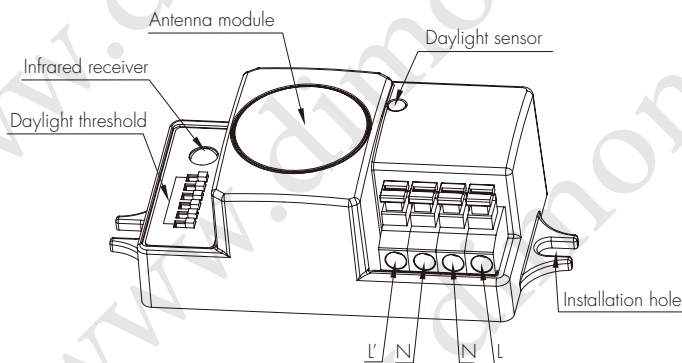


Technical Data

Model No.	DS05 DS06 DS07
Mains voltage	220~240VAC 50Hz
Stand-by power	< 1W
Switched power:	
Capacitive	400W
Resistive	800W
Switched power	80mA

Model No.	DS05 DS06 DS07
Daylight threshold	2 ~ 500 lux, disabled
Operation temperature	Ta: -20°C ~ +60°C
Case temperature (Max.)	Tc: +80°C
IP rating	IP20
Warming-up	20s

1 DS05 (On/off control)



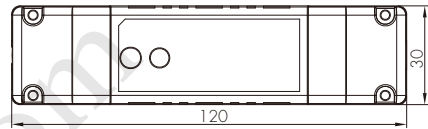
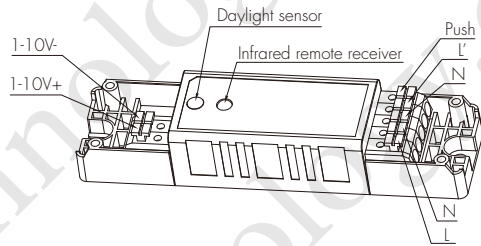
DIP switch setting (Daylight Threshold)

Set the lux level according to the real application environment. Light keeps off if ambient daylight is sufficient (above the threshold preset). With insufficient natural light, light will automatically turn on.

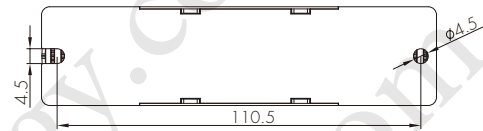
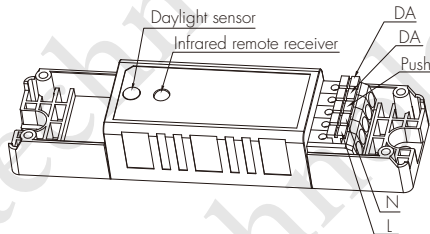
Light will never switch off when daylight threshold is set to disable.

I	●	●	●	●	●	Disable	V	○	○	○	○	○	○	50 Lux
II	●	○	○	○	○	2 Lux	VI	○	○	○	●	○	○	100 Lux
III	○	●	○	○	○	10 Lux	VII	○	○	○	○	○	●	300 Lux
IV	○	○	●	○	○	30 Lux	VIII	○	○	○	○	○	○	500 Lux

2 DS06 (Daylight harvest function, 1-10V output)



3 DS07 (Daylight harvest function, DALI output)



Functions and Features

1 Photocell Advance™ Function

It's well known that LED lights have a totally different spectrum to natural light. Hytronik uses this principle and comes up with special photocell and sophisticated software algorithm to measure and differentiate natural light from LED light from behind the fixture cover, so that this photocell can ignore internal LED light and only respond to the natural light outside. Our technology has no infringement to the existing patents in the market.

2 On/off Control (DS05)

Settings on this demonstration: Daylight threshold @ 50lux



With insufficient natural light, the light switches on at 100%.

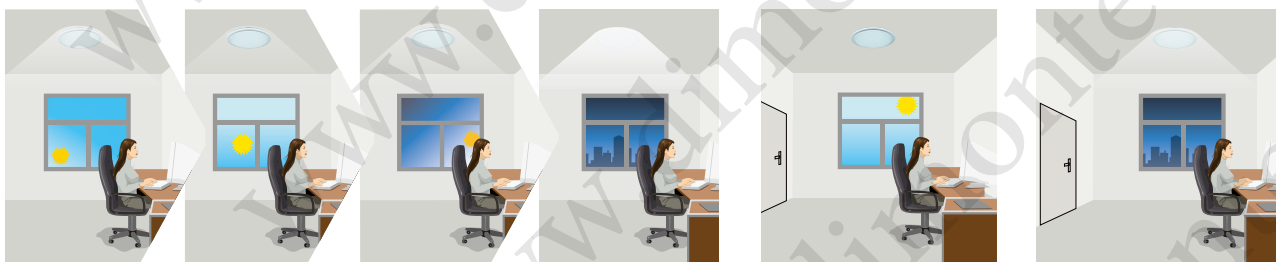


The light turns off completely whenever natural light reaches above pre-set daylight threshold.



The light automatically turns on at 100% when natural light lux level drops below pre-set daylight threshold.

3 Daylight Harvest (DS06, DS07)



The light turns on at full or dims to maintain the lux level!. The light output regulates according to the level of natural light available.

The light dims to minimum level then switches off when natural light is sufficient.

The light automatically switches on when natural light is insufficient.

4 Manual Override (DS06, DS07)

This sensor reserves the access of manual override function for end-user to switch on/off, or adjust the target lux level by push-switch, which makes the product more user-friendly and offers more options to fit some extra-ordinary demands:

* Short Push (< 1 s): on/off function;

On → Off: the light turns off immediately

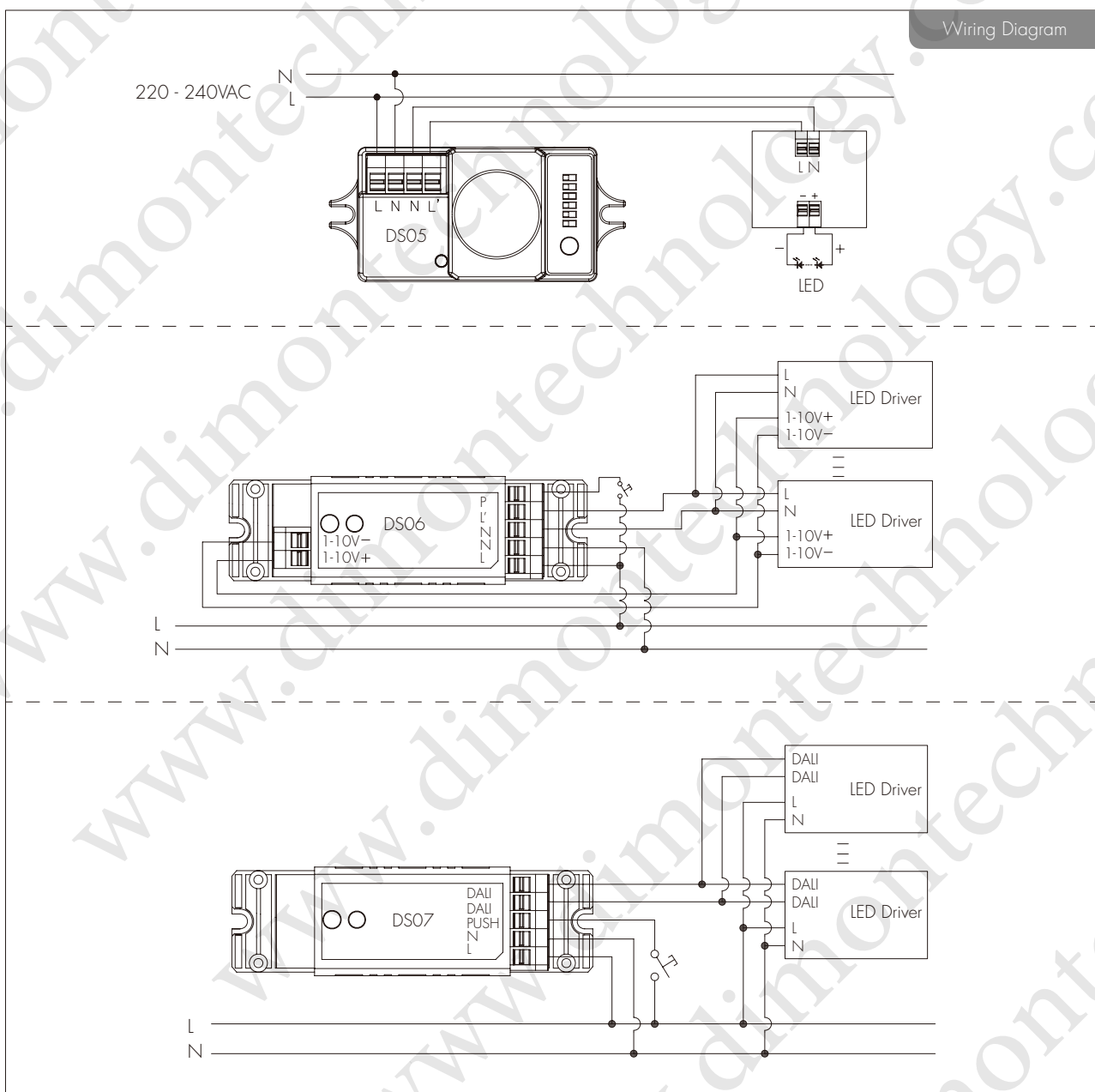
Off → On: the light turns on, regardless of the ambient natural light.

* Long Push (> 1 s): adjust the target lux level by turning the light up or down. Both the adjustment on RC and push switch can overwrite each other, the last adjustment remains in memory.

Note: if end-user do not want this manual override function, just leave the "push" terminal unconnected to any wire.

5 Loop-in and Loop-out Terminal (DS05, DS06)

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



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" to quit this mode.



AUTO/SEMI-AUTO mode

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

Note: the function of SEMI-AUTO is disabled.



Reset Settings

Press button "RESET", all settings go back to default settings.



Shift Button

Press button "Shift", the LED on the top left corner is on to indicate mode selection.

All values / settings in RED are valid for 20 seconds.

Daylight threshold

Press buttons in zone "Daylight threshold" to set daylight sensor / target lux level at 2Lux / 10Lux / 50Lux / 100Lux / 300Lux / 500Lux / Disable.

Note: 1. to set daylight sensor at 100Lux / 300Lux / 500Lux, press "Shift" button first.

2. the light never switch off when daylight threshold is preset to disable.

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.

Test 2s

This button is for test purpose only, light will switch on when natural light lux level is below daylight threshold preset; or switch off when natural light lux level exceeds daylight threshold preset for 10s.



Brightness +/- (for DS06, DS07)

Press these two buttons to adjust the light output brightness and set a new target lux level. The built-in daylight sensor can measure ambient daylight level from behind the diffuser and calculates how much artificial light is needed to maintain the target lux level.

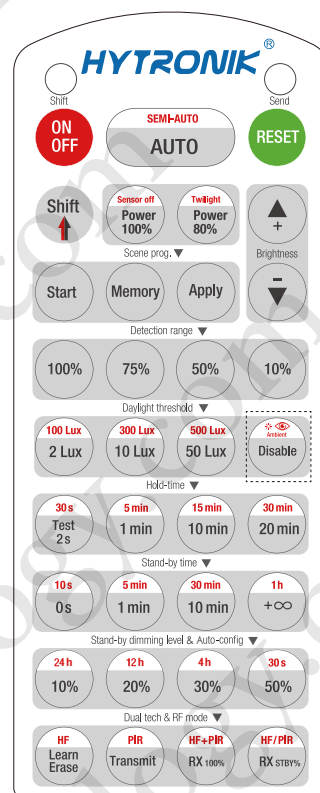
Auto-configuration function (for DS06, DS07)

1. Press button "Shift", the red LED is on for indication.
2. Select a time period and the sensor will do light level measurement and determine/save the lowest light level (commission line) with 100% light on, so as to set the target lux level automatically.

Note: 1. Make sure the light level measurement covers the night time.

2. The fixture will go into sensor mode after the measurement, all sensor settings remain unchanged.

Note: all other buttons are disabled.



HRC-11

Test Verification of Conformity

Verification Number: 190925152GZU-VOC001

On the basis of the referenced test report(s), sample(s) tested of the below product have been found to comply with the standards harmonized with the directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it <them>. This verification replaces previous verification dated: 16-08-2018: 140625045GZU-001

Once compliance with all product relevant **CE** mark directives are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).

Applicant Name & Address:	Hytronik Electronics Co., Ltd. 3rd Floor, block C, Complex building 155#, Bai'gang Road South Bai'gang Village, Xiao Jin Kou Town Huicheng District, Huizhou, Guangdong, China
Product Description:	Lighting control switch (Motion sensor)
Ratings & Principle Characteristics:	See appendix
Models/Type References:	See appendix
Brand Name:	HYTRONIK
Relevant Standards:	EN 60669-2-1: 2004 +A1: 2009+ A12: 2010; EN 60669-1: 2018; EN 62493: 2015
Verification Issuing Office Name & Address:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Date of Tests:	25 September 2019 to 31 October 2019
Test Report Number(s):	190925152GZU-001

Additional information in Appendix.

Signature 

Name: Shelley Ying
Position: Technical Manager
Date: 19 November 2019

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APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 190925152GZU-VOC001

Manufacturer:	Hytronik Electronics Co., Ltd. 3rd Floor, block C, Complex building, 155#, Bai'gang road south, Bai'gang village, Xiao Jin Kou town, Huicheng district, Huizhou, Guangdong, China
Ratings & Principle Characteristics:	220-240 VAC; 50/60 Hz; Micro-gap; IP20; Integral type; HC005S; DS05; HC005S/I: Max. 800 W for incandescent Lamp and Max. 400 W for fluorescent Lamp; HC017V; HC018V; HC019V; HC019V/I; HC019V/DH: Max. 800 W for fluorescent Lamp; HC018V /RF; HC023RF; HC024RF: Max. 1200 W for incandescent Lamp and Max. 400 W for fluorescent Lamp
Models/Type References:	HC005S; DS05; HC017V; HC018V; HC019V; HC018V /RF; HC023RF; HC024RF; HC005S/I; HC019V/I; HC019V/DH (total 11 models)


Signature

Name: Shelley Ying
Position: Technical Manager
Date: 19 November 2019

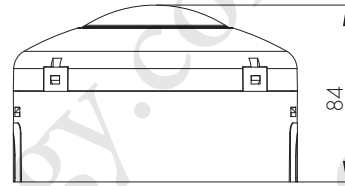
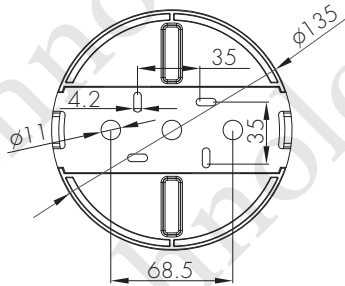
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IP65 Housing for HF Motion Sensor

HC-IP65

HYTRONIK®

Mechanical structure



Putting the sensors inside the IP65 box, they are then safe and ready for independent installation. They are 2 colors of the box: transparent PC for daylight, and white PC when the daylight sensor is not intended to use.

-  HC009S
-  HC005S
-  HC019V/I
-  HC018V
-  HC018V/RF
-  HC023RF
-  HC024RF
-  HCD405RC
-  HC019V/DH



IP65 box



Stand-alone version
microwave motion sensor

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Installation Instructions

step1

Put motion sensor into the IP housing and click the cover on

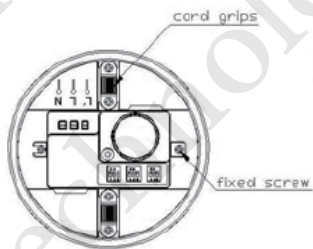


Fig 1.1

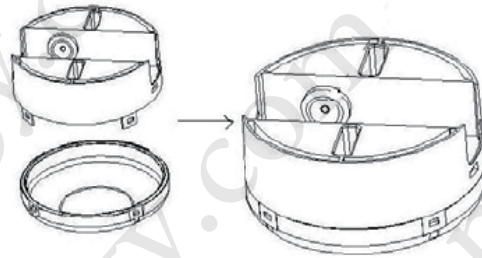


Fig 1.2

step2

Mounting bracket (three options):

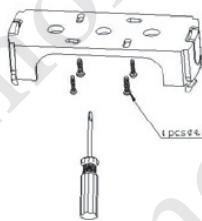


Fig 2.1

Option 1: Mount bracket to flat surface with screws



Fig 2.2

Option 2: Mount bracket to ceiling pole with nut

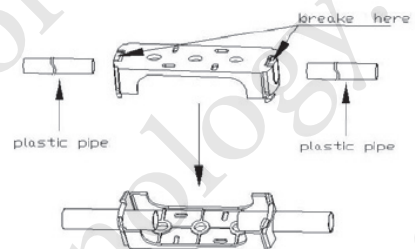


Fig 2.3

Option 3: Put pipe through the bracket hole

step3

Mount the bracket to the cover

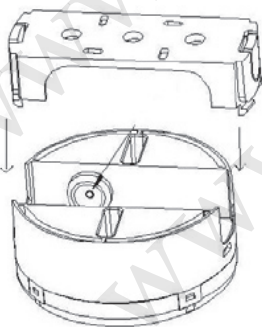


Fig 3.1

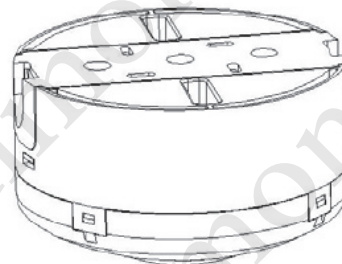


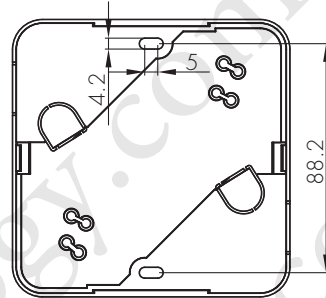
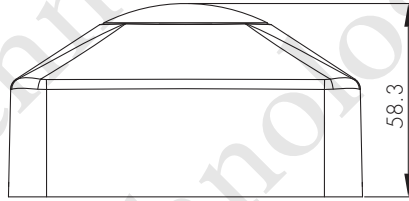
Fig 3.2

IP20 Housing for HF Motion Sensor

HC-IP20

HYTRONIK®

Mechanical structure

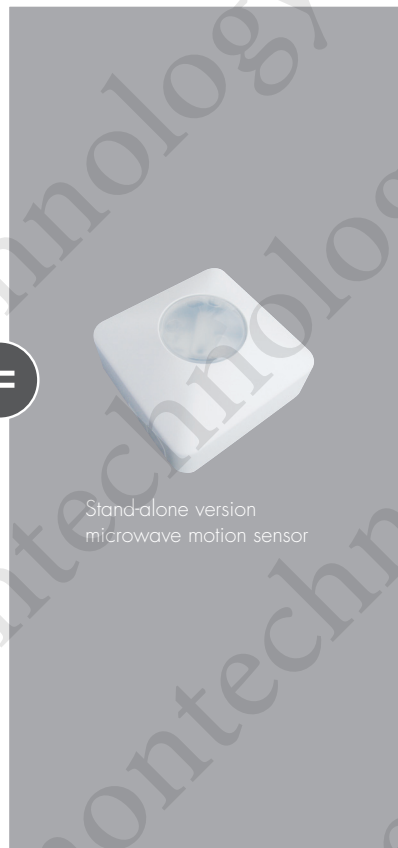


Below sensors can be mounted inside the IP20 box, for stand alone independent electrical installation.
(the milky lens allows natural light come through)

- HC009S
- HC005S
- HC019V
- HC018V
- HC018V/RF
- HC023RF
- HC024RF
- HCD405RC
- HC019V/DH



IP20 box



Stand-alone version microwave motion sensor

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