

HC005S

HF Lowbay | ON/OFF via Dip-Switch | Photodiode



Benefits

Compact: Super compact size - ON/OFF Sensor

Simple: Daylight, detection range and holdtime configuration via Dip-Switch

Robust: Zero crossing detection circuit for increased relay life

Applications

For round shape luminaire up to 6m height

Office / Meeting rooms

Schools / Classroom

Check Out the Complete System Solution on the Website:
<https://www.hytronik.com/product/HC005S>



Product Description

HC005S is a super-compact built-in HF sensor with On/Off control, featuring a DIP switch for adjusting detection range, hold time, and daylight threshold. It is equipped with loop-in and loop-out terminals for efficient installation and can work with Switch-dim control gear to achieve tri-level dimming.

Functions and Features

See additional details at the end of datasheet



Loop-in/Loop-out



ON/OFF Control



Sensor Dim



Zero-Cross Relay
Operation

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Specifications

Main Capabilities

Dimming (Output) Interface	Relay On/Off
Connector Type	Standard 2 cables

Sensor Data

Detection angle	30° - 150°
Max. Detection range (Diameter)	12.0 m
Maximum Mounting Height	6.0 m
Detection area	113 m ²
Sensitivity	10%/ 30% /50% /75%/ 100%

Electrical Data

Operating voltage range	220-240 VAC 50/60 Hz
Stand-by power (Psb)	<0.5W
Warming-up	10 s
Max withstandable in-rush current	80A@160µs
HF Transmission power	<0.2mW (HF)
Load capacitive	400.0 VA
Load resistive	800.0 W

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Specifications

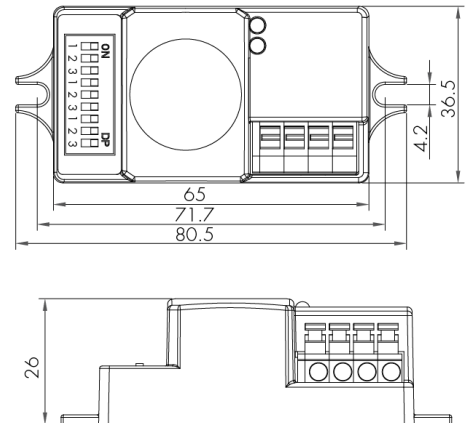
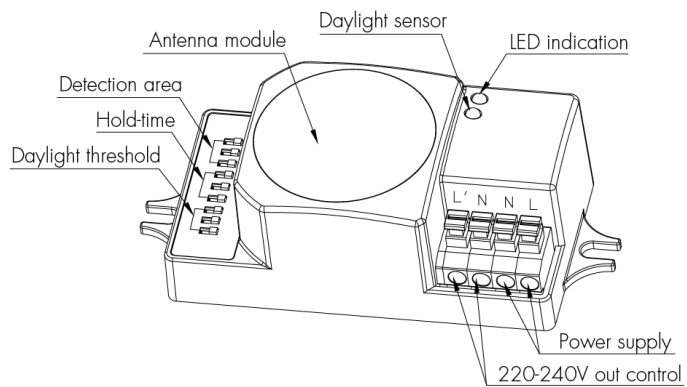
Technical	
Product weight	40.0 g
Product height	26.0 mm
Product length	80.5 mm
Product width	36.5 mm
Mounting hole	4.2 mm
Ambient temperature	-35 ~ +70 °C
Humidity max	10 ~ 90%
Case Temp.max	80.0 °C
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61000
LVD	AS/NZS 60669, EN60669
RED	EN 300440, EN301489, EN 62479

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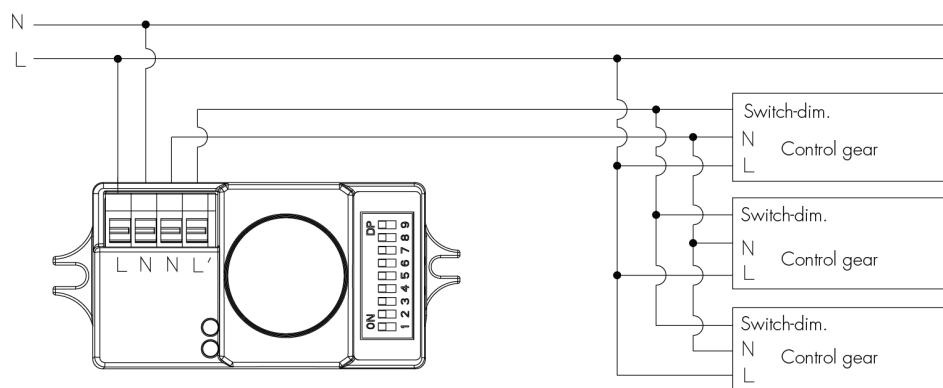
Technical Drawing



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Wiring Diagram

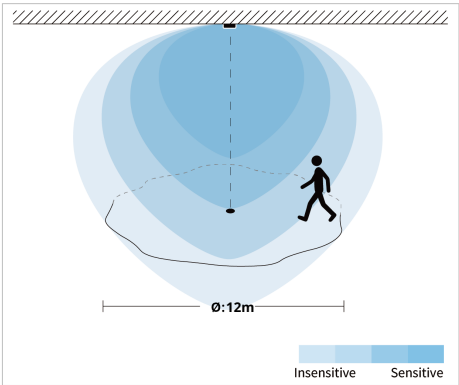


Detection Range

Single Person Walk (Ceiling mount)

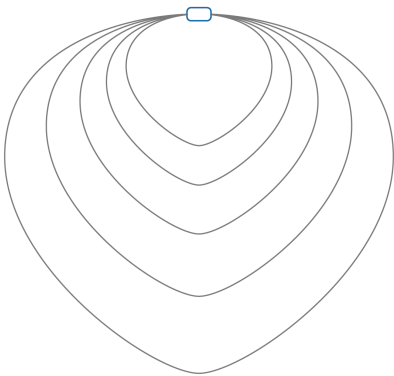
- The data below is tested under following conditions:
- Single person walking
 - Sensor not connected to any driver that may have soft-on period
 - Testing temperature Ta = 20°C

Detection example 6m mounting height:



Sensitivity	
H[m]	100%
	Ø[m]
6	12

Detection schematic diagram

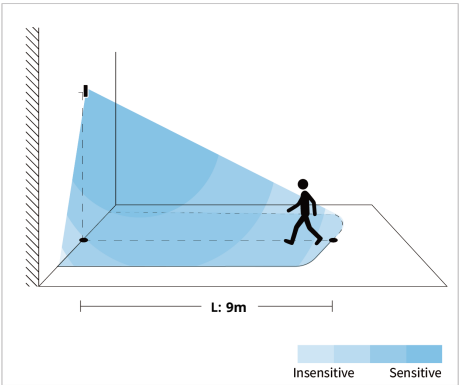


Detection Range

Single Person Walk (Wall mount)

- The data below is tested under following conditions:
- Single person walking
 - Sensor not connected to any driver that may have soft-on period
 - Testing temperature Ta = 20°C

Detection example 4m mounting height:



	Sensitivity
H[m]	100%
	L[m]
4	9

Commissioning Instructions and Precautions

A. Installation Note

1. This product should be installed by a qualified electrician.

B. Precautions & Installation Guides

For more microwave sensors precautions and installation guides, please refer to <https://hytronik.com/service/downloads>

Warning: For additional important documents, including installation precautions, product guidelines, and guarantee conditions, please refer to the official downloads.

<https://hytronik.com/service/downloads>

DIP Switch Settings

	1	2	3	
I	●	●	●	100%
II	○	●	●	75%
III	○	●	○	50%
IV	○	○	●	30%
V	○	○	○	10%



Detection Range

Sensor sensitivity can be adjusted by selecting the combination on the DIP switches to fit precisely for each specific application.

	1	2	3	
I	●	●	●	5s
II	●	○	●	30s
III	●	○	○	1min
IV	○	●	●	5min
V	○	●	○	10min
VI	○	○	●	20min
VII	○	○	○	30min



Hold Time

Select the DIP switch configuration for the light on-time after presence detection.

This function is disabled when natural light is sufficient.

	1	2	3	
I	●	●	●	Disable
II	○	●	●	50Lux
III	○	●	○	20Lux
IV	○	○	●	5Lux
V	○	○	○	2ux



Daylight Threshold

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 that the ambient lux level refers to internal light reaching the sensor.

Disabling the daylight sensor will put the sensor into occupancy detection only mode.

Functions and Features



Loop-in / Loop-out

The product provides loop-in/loop-out terminals that allow mains wiring to pass through the device for quick and convenient daisy-chain installation. This simplifies on-site wiring, reduces junction box requirements, and enables efficient connection of multiple luminaires or drivers in a single circuit.



ON/OFF Control

The product supports basic ON/OFF control of the connected luminaire, allowing the light to be switched fully on or off through the sensor's detection logic or an external control input. This provides straightforward lighting control for applications that do not require dimming functionality.



Sensor Dim

This feature enables the luminaire to be dimmed automatically based on sensor detection. Depending on occupancy status or measured ambient light levels, the sensor adjusts the output to predefined dimming levels instead of simply switching the light on or off. Sensor-based dimming improves visual comfort, reduces energy consumption and supports more refined lighting control in both commercial and industrial applications.



Zero-Cross Relay Operation

The product operates its relay at the AC zero-cross point, reducing inrush current through the relay contacts when switching the load. By minimising electrical stress during each switching event, this method supports higher load capability and extends the operational lifetime of the relay in practical lighting applications.

Check out for further explanation of features

<https://hytronik.com/solutions/lighting-control-features>