

## Product Description

HCD405/BT is a Bluetooth built-in microwave sensor with 30mA DALI power supply built in. It is designed for professional lighting manufacturers who would like to incorporate wireless control into their luminaires. It is suitable for any typical indoor applications such as office, classroom, car park, warehouse and other commercial/industrial areas. With Bluetooth wireless mesh networking, it makes communication much easier without any hardwiring, which eventually adds values to luminaires and saves costs for projects. Meanwhile, simple device setup and commissioning can be done via Lena Lighting Clue app.



## App Features

- Quick setup mode & advanced setup mode
- Floorplan feature to simplify project planning
- Web app/platform for dedicated project management
- Koolmesh Pro iPad version for on-site configuration
- Grouping luminaires via mesh network
- Scenes
- Detailed motion sensor settings
- Dusk/Dawn photocell (Twilight function)
- Schedule to run scenes based on time and date
- Astro timer (sunrise and sunset)
- Staircase function (primary & secondary)
- Compatible with EnOcean BLE switches
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Device social relations check
- Bulk commissioning (copy and paste settings)
- Offline commissioning
- Different permission levels via authority management
- Network sharing via QR code or keycode
- Remote control via gateway support HBGW01
- Interoperability with Hytronik Bluetooth product portfolio
- Continuous development in progress...

## Hardware Features

- Photocell Advance
- DALI Dimmable with 30mA DALI broadcast output for up to 15 LED drivers
- Plug'n'Play for flexible installation and cost saving assemble
- Support to control DT8 LED drivers
- Zero crossing detection circuit reduces in-rush current and prolongs relay life
- 5-year warranty

LENA LIGHTING | Clue<sup>®</sup>

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Smartphone app for both  
iOS & Android platform

Web app/platform:  
[www.iot.koolmesh.com](http://www.iot.koolmesh.com)



Fully support EnOcean self-powered switch module PTM215B (HBES01/W & HBES01/B)

## Technical Specifications

### Bluetooth Transceiver

Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	 Bluetooth 5.0 SIG Mesh

### Sensor Data

Sensor principle	High Frequency (microwave)
Operation frequency	5.8GHz+/-75MHz
Transmission power	<0.2mW
Detection range(Max.)	Max installation height: 6m Max detection range: 10m (diameter)
Detection angle	30°~150°

### Input & Output Characteristics

Operating voltage	220~240VAC 50/60Hz
Stand-by power	<1W
Load ratings:	30mA (max. 15 devices)
Warming-up	20s

### Safety & EMC

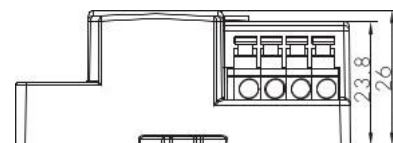
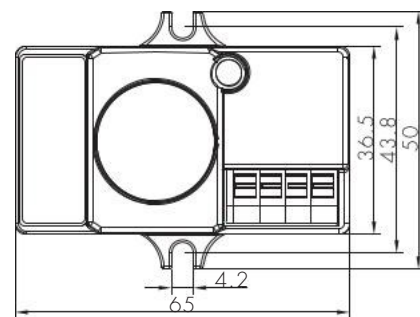
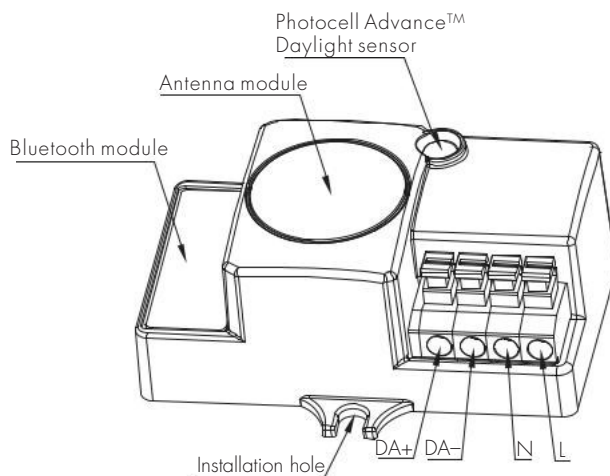
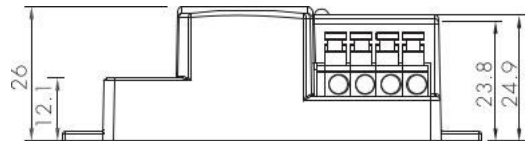
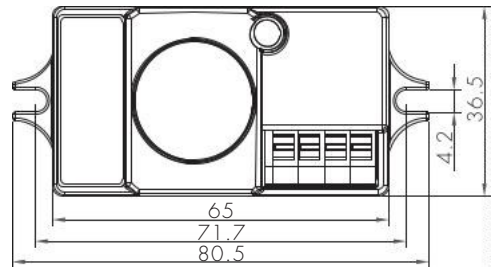
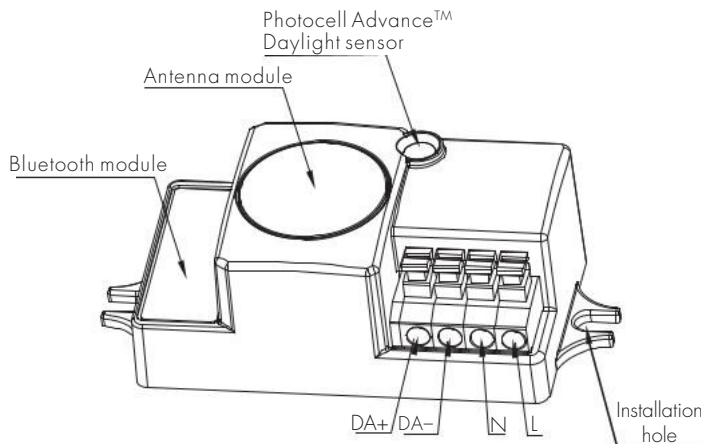
EMC standard (EMC)	EN55015, EN61000, EN61547
Safety standard (LVD)	EN60669-1, EN60669-2-1
RED	EN300328, EN301489-1/-17
Certification	Semko, CB, CE, EMC, RED, RCM

### Environment

Operation temperature	Ta: -20°C ~ +55°C
Case temperature (Max.)	Tc: +75°C
IP rating	IP20

\* The detection range is heavily influenced by sensor placement (angle) and different walking paces. It may be reduced under certain conditions.

## Mechanical Structure & Dimensions



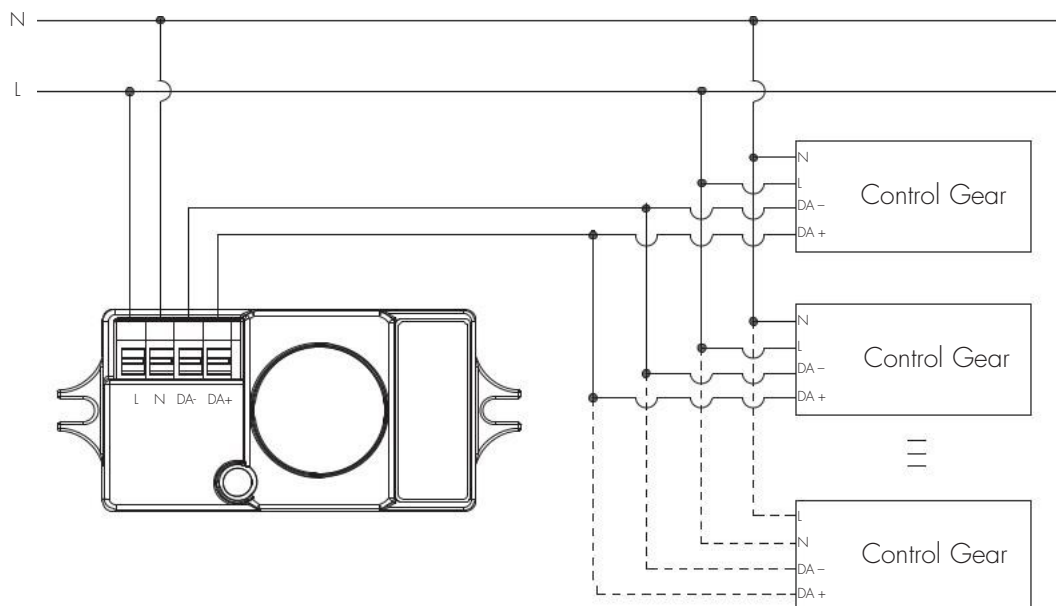
## Wire Preparation



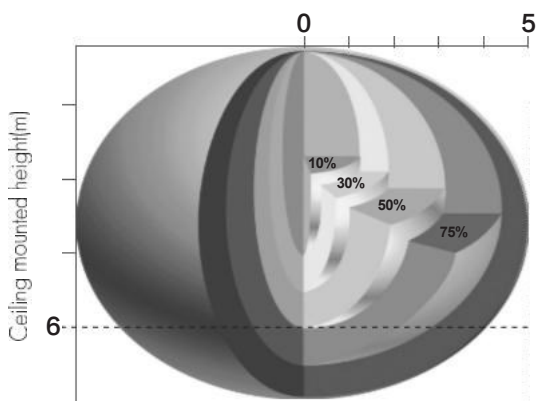
To make or release the wire from the terminal, use a screwdriver to push down the button.

1. 200 metres (total) max. for 1mm<sup>2</sup> CSA (Ta = 50°C)
2. 300 metres (total) max. for 1.5mm<sup>2</sup> CSA (Ta = 50°C)

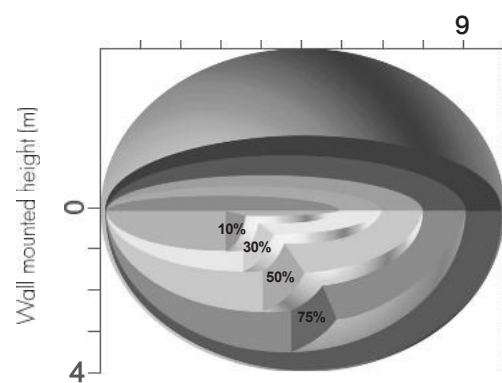
## Wiring Diagram



## Detection Pattern



Ceiling mounted detection pattern (m)



Wall mounted detection pattern (m)

## Additional Information / Documents

1. For full explanation of Hytronik Photocell Advance™ technology, please kindly refer to [www.hytronik.com/download ->knowledge ->Introduction of Photocell Advance](http://www.hytronik.com/download->knowledge->Introduction%20of%20Photocell%20Advance)
2. To learn more about detailed product features/functions, please refer to [www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions](http://www.hytronik.com/download->knowledge->Introduction%20of%20App%20Scenes%20and%20Product%20Functions)
3. Regarding precautions for Bluetooth product installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->Bluetooth Products - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->Bluetooth%20Products%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
4. Regarding precautions for microwave sensor installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->Microwave Sensors - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->Microwave%20Sensors%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
5. Data sheet is subject to change without notice. Please always refer to the most recent release on [www.hytronik.com/products/bluetooth technology ->Bluetooth Sensors](http://www.hytronik.com/products/bluetooth%20technology->Bluetooth%20Sensors)
6. Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy](http://www.hytronik.com/download->knowledge->Hytronik%20Standard%20Guarantee%20Policy)