



HYTRONIK HCD049/BT DALI PIR Motion Sensor with Bluetooth 5.0 SIG Mesh Owner's Manual

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HYTRONIK®



DALI PIR Motion Sensor with  Bluetooth® 5.0 SIG Mesh
HCD049/BT High-bay
DALI/DALI-2 Bolt-on/Batten-fit PIR Sensor













Contents




















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Product Description

HCD049/BT is a Bluetooth DALI/DALI-2 high-bay PIR motion sensor, with capability of up to 15m installation height. HCD049/BT has a daylight sensor built-in, and is specifically designed for mounting onto a batten style luminaire. It is also designed for professional lighting manufactures who would like to incorporate wireless control into their luminaires. HCD049/BT 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 **Koolmesh™** app.

App Features

	Quick setup mode & advanced setup mode
	Web app/platform for project deployment & data analysis
	Koolmesh Pro app on iPad for on-site conguration
	Floorplan feature to simplify project planning
	coming soon
	One-key device replacement
	Device social relations check
	Staircase function (primary & secondary)
	Remote control via gateway support HBGW01
	Heat map

	Dynamic daylight harvest auto-adaptation
	Grouping luminaires via mesh network
	Scenes
	Dusk/Dawn photocell (Twilight function)
	Tri-level control
	Daylight harvest
	Circadian rhythm (Human-centric lighting)
	Detailed motion sensor settings
	Schedule
	Astro timer (sunrise and sunset)
	Power-on status (memory against power loss)
	Offline commissioning
	Bulk commissioning (copy and paste settings)
	Different permission levels via authority management
	Network sharing via QR code or keycode
	Compatible with EnOcean BLE switches
	Interoperability with Hytronik Bluetooth product portfolio
	Internet-of-Things (IoT) featured
	Device firmware update over-the-air (OTA)




Continuous development in progress...

Hardware Features

	30mA DALI Broadcast output
	IP65
	Fixing washers accessory
	High-bay (up to 15m height)
	5-year warranty, designed for long lifetime up to 50,000 hours



 **Bluetooth 5.0 SIG mesh**





for iOS



for Android

<https://apps.apple.com/cn/app/koolmesh/id1483721878>

<https://play.google.com/store/apps/details?id=com.koolmesh.sig>

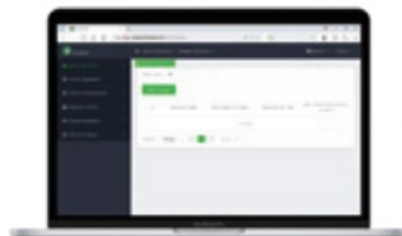
Smartphone app for both iOS & Android platform



for iPad

<https://apps.apple.com/cn/app/koolmesh/id1570378349>

Koolmesh Pro app for iPad



Web



for Web

Web app/platform: www.iot.koolmesh.com

Technical Specifications

Bluetooth Transceiver	
Operation frequency	2.4 GHz – 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	5.0 SIG Mesh
Input & Output Characteristics	
Stand-by power	220 ~ 240VAC 50/60Hz
Operating voltage	<1W
Output	30mA, 12VDC (max. 15 devices)
Warming-up	30s
Environment	
Operation temperature	Ta: -20° C ~ +50° C
IP rating	IP65

Sensor Data

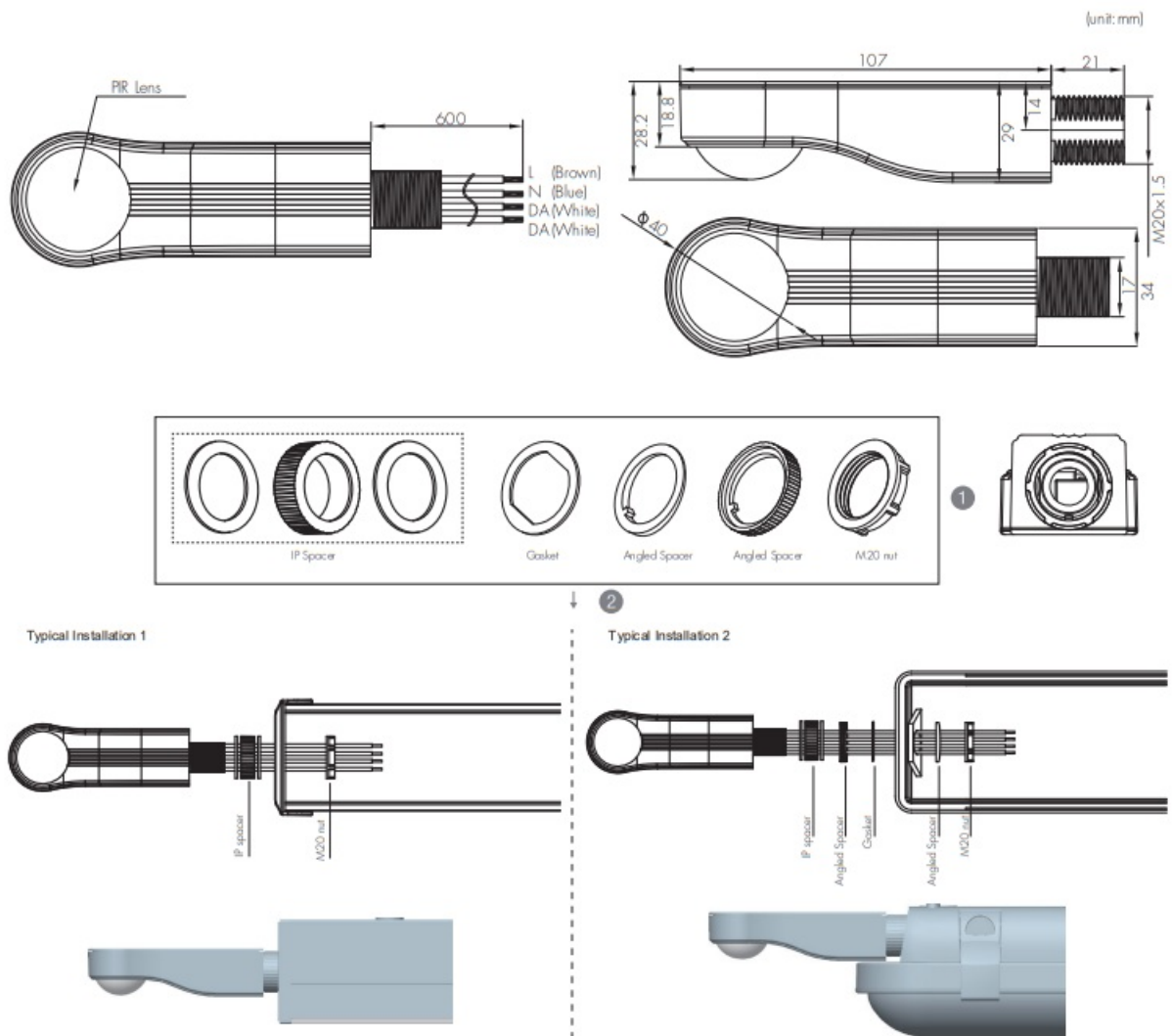
Sensor principle	PIR detection
Detection range*	Max installation height 15m (forklift) 12m (single person) Max detection range 16m (diameter)
Detection angle	360°

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

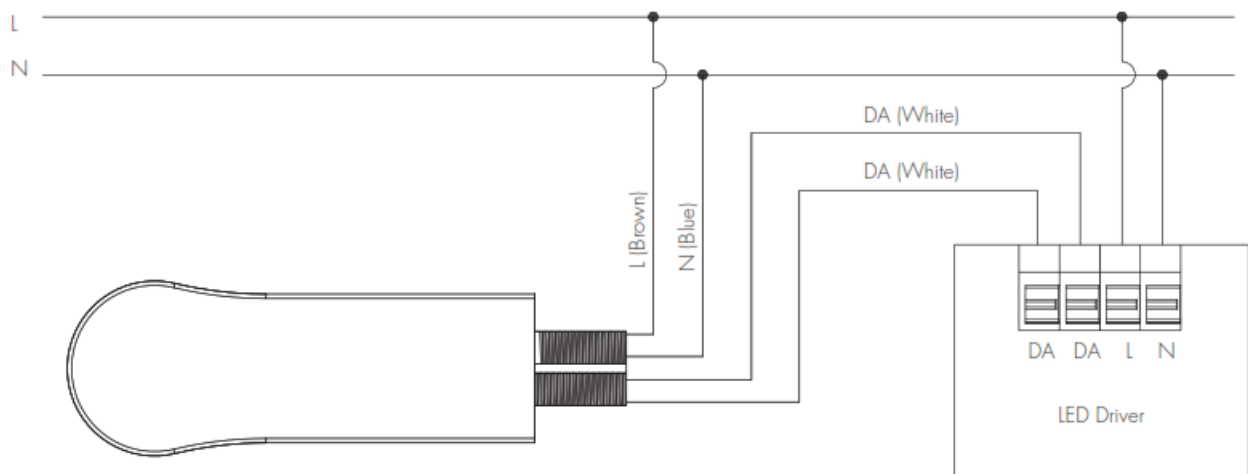
Safety & EMC

EMC standard (EMC)	EN55015, EN61547 EN61000-3-2/-3-3
Safety standard (LVD)	EN61347-1, EN61347-2-11
RED	EN300328, EN301489-1 EN301489-17
Certification	ENEC, CE , EMC, LVD, RCM

Mechanical Structure & Dimensions

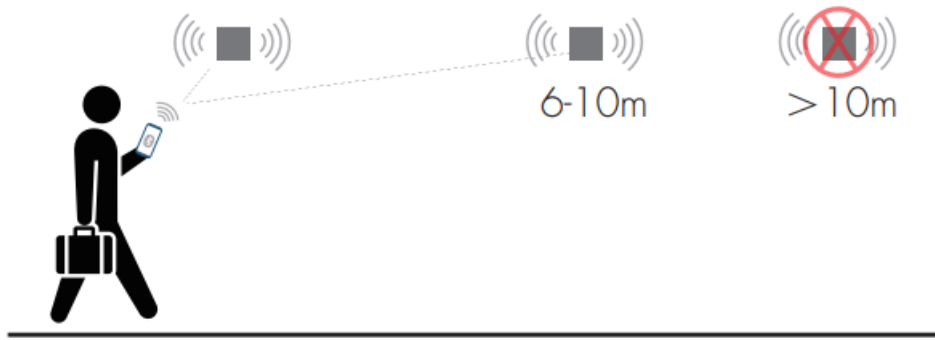


Wiring Diagram



Placement Guide and Typical Range

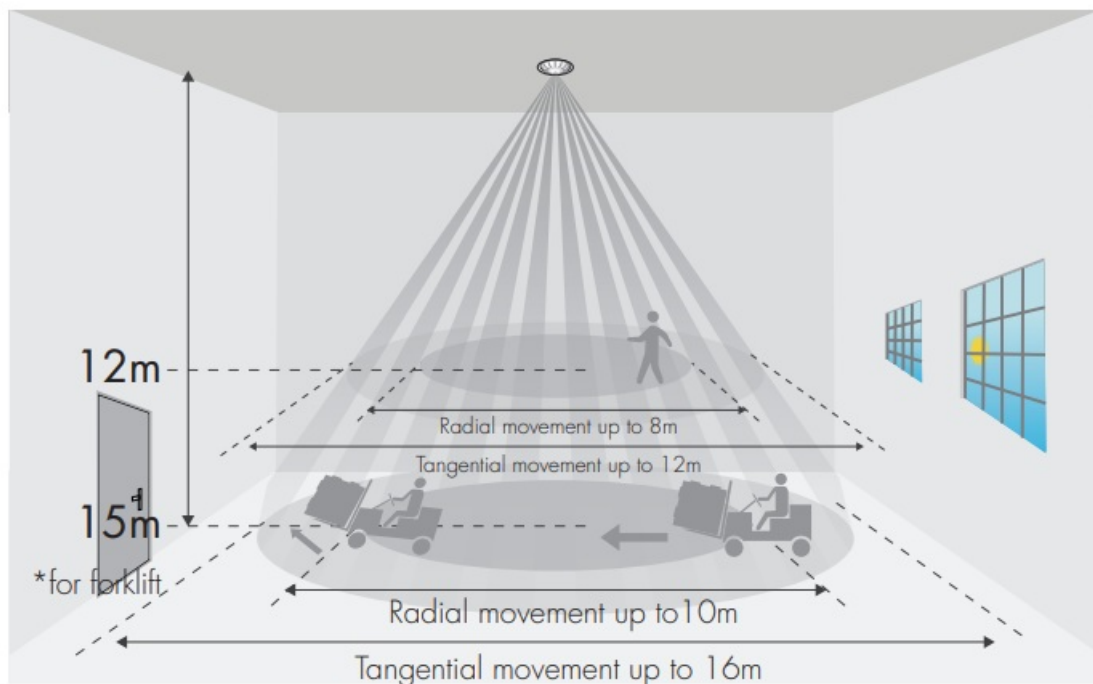
Smart Phone to Device Range



The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

Once the devices have been added to the network via the App, the devices will start communicating within the wireless mesh. This means that once the network is complete, all devices are accessible from the smart device when in a 20m range of a single point.

Detection Pattern



*The detection patterns are based upon 5km/h movement speed.


Additional Information / Documents

1. To learn more about detailed product features/functions, please refer to www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions
2. 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
3. Regarding precautions for PIR sensor installation and operation, please kindly refer to

www.hytronik.com/download ->knowledge ->PIR Sensors – Precautions for Product Installation and Operation
4. 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
5. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge -
>Hytronik Standard Guarantee Policy

Subject to change without notice.
Edition: 11 Jun. 2021 Ver. A0

Documents / Resources

	<p>HYTRONIK HCD049/BT DALI PIR Motion Sensor with Bluetooth 5.0 SIG Mesh [pdf] Owner's Manual</p> <p>HCD049-BT, HCD049 BT, DALI PIR Motion Sensor with Bluetooth 5.0 SIG Mesh, HCD049 BT DALI PIR Motion Sensor with Bluetooth 5.0 SIG Mesh, DALI PIR Motion Sensor, HCD049 BT DALI PIR Motion Sensor, PIR Motion Sensor, Motion Sensor, Sensor</p>
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References

- [Catalogue_Hytronik](#)
- iot.koolmesh.com

Manuals+.