



HYTRONIK HIM98 IP65 Dual Sense Sensor with Bluetooth 5.0 SIG Mesh Owner's Manual

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HYTRONIK®

Bluetooth® CE EMC RED CB IP65
DUALsense™ UK
CA

IP65 Dual Sense Sensor with Bluetooth® 5.0 SIG Mesh
HIM98 (High Bay)
HF & PIR, Tri-level control & Daylight harvest, 1-10V Dimmable



Ceiling mount

conduit



clamp











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
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Product Description








HIM98 is a Bluetooth 1-10V high-bay Dual-sense™ (Microwave + PIR) motion sensor, with capability of up to 15m installation height. It is designed with robust IP65 structure, and offers 3 different installation methods and 3 different lens options. 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
	Tri-level control
	Daylight harvest
	Circadian rhythm (Human centric lighting)
	Floorplan feature to simplify project planning
	Web app/platform for dedicated project management
	Koolmesh Pro iPad version for on-site conguration
	Grouping luminaires via mesh network
	Scenes
	Detailed motion sensor settings



	Dusk/Dawn photocell (Twilight function)
	Push switch configuration
	Schedule to run scenes based on time and date
	Astro timer (sunrise and sunset)
	Staircase function (primary & secondary)
	Internet-of-Things (IoT) featured
	Device firmware update over-the-air (OTA)
	Device social relations check
	Bulk commissioning (copy and paste settings)
	Dynamic daylight harvest auto-adaptation
	Power-on status (memory against power loss)
	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
	Compatible with EnOcean BLE switches
	Continuous development in progress...

Hardware Features

	1-10V dimming control method
	4 work modes: -IF only – PIR only -IF + PIR -IF / PIR
	3 installation methods
	3 lens options
	IP65 design
	High-bay (up to 15m height)
	5- year warranty

 **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

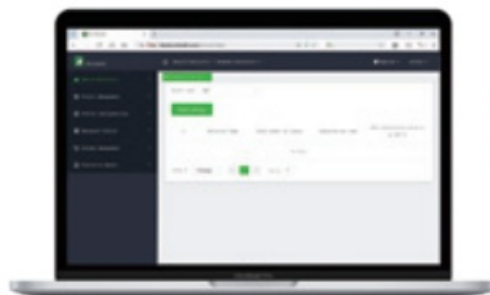
Smartphone app for both 105 & Ancra platform



for iPad

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

Koolmesh pro app for ipad



for Web

<http://www.iot.koolmesh.com>

Web opp/plaform: www.iot.koolmesh.com





Fully support EnOcean self-powered switch module PTM215B (HBESO1/W & HBESO1/B)

Technical Data

Input Characteristics

Model No.	HIM98
Mains voltage	220-240VAC 50/60Hz
Stand-by power	<1W
Load ratings	
Capacitive	800VA
Resistive	1000w
Warmingup	30s

Safety and EMC

EMC standard [EMC)	EN55015, EN61000-3-2/-3-3
Safety standard (LVD)	EN60669-1, EN60669-2-1
Radio Equipment RED)	EN300440, EN301489-1/-17/-3, ENG62479,EN300328
Certification	CB, CE, EMC, RED, RCM

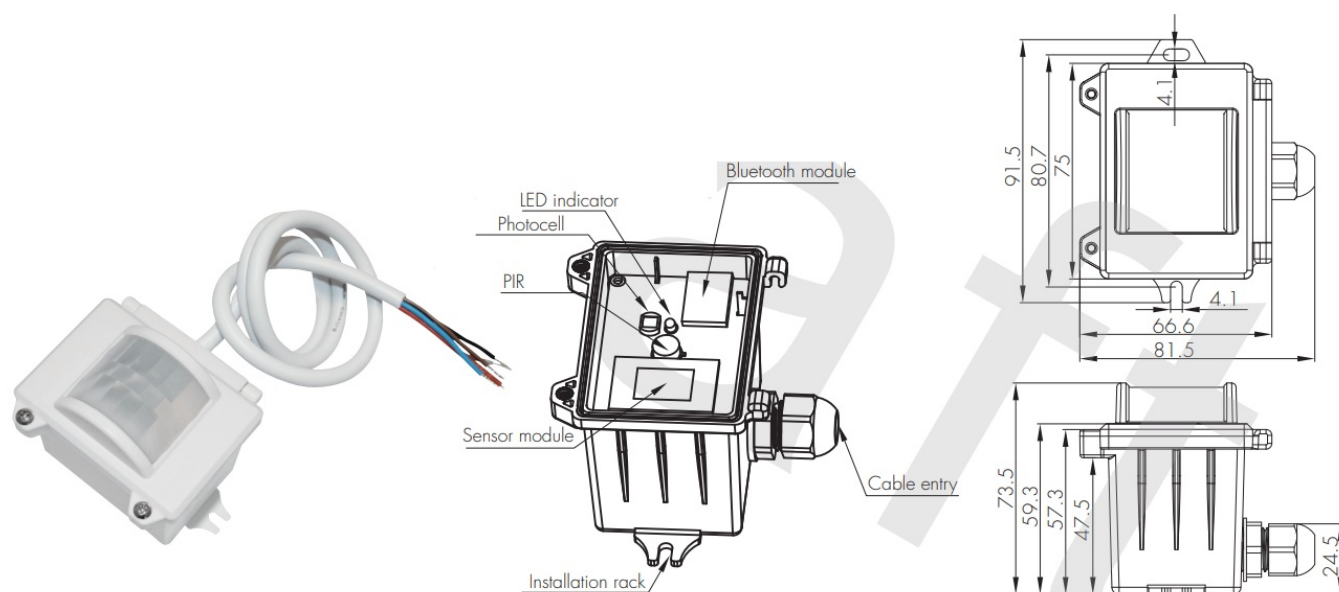
Sensor Data

Model No.	HIM98
Sensor principle	High Frequency (microwave), PIR
Operation frequency	5.8GHz +/-75MHz (HF)
Transmission power	<0.2mW [HF]
Sensor mode	4 modes: PR, HF, PIR+HF, PIR/HF
Defection range	Max installation height: 15m (forklift)/ 12m (human) Max detection range: HF: @ = 24m (forklift)/14m (human) PIR: @ = 24m (forklift)/20m (human)
Detection angle	360°
Environment	
Operation temperature	Ta: 20°C ~+50°C
IP rating	IP65

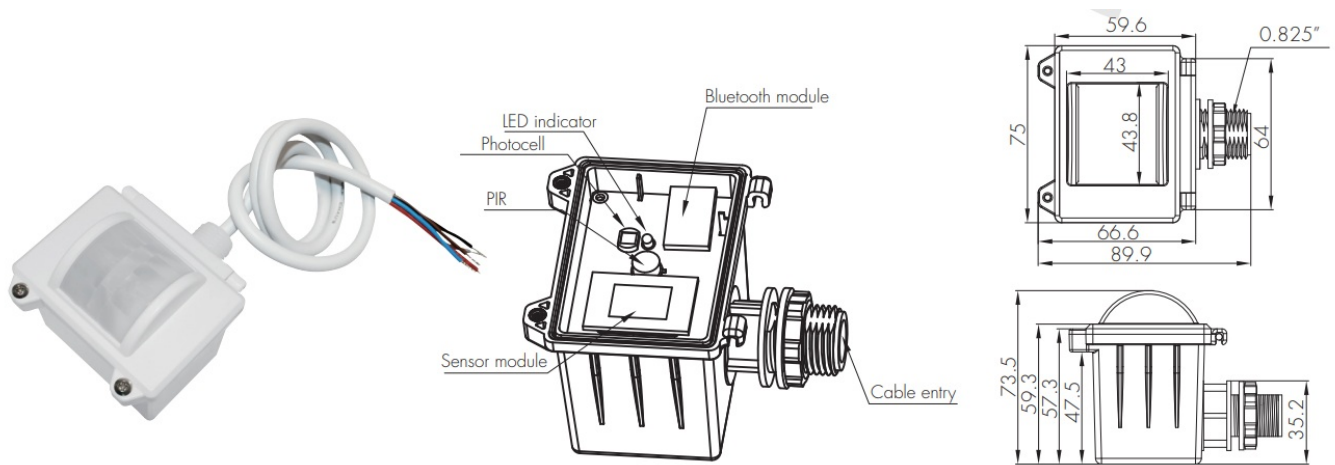
Mechanical Structures and Installations

For more details, please refer to user manual.

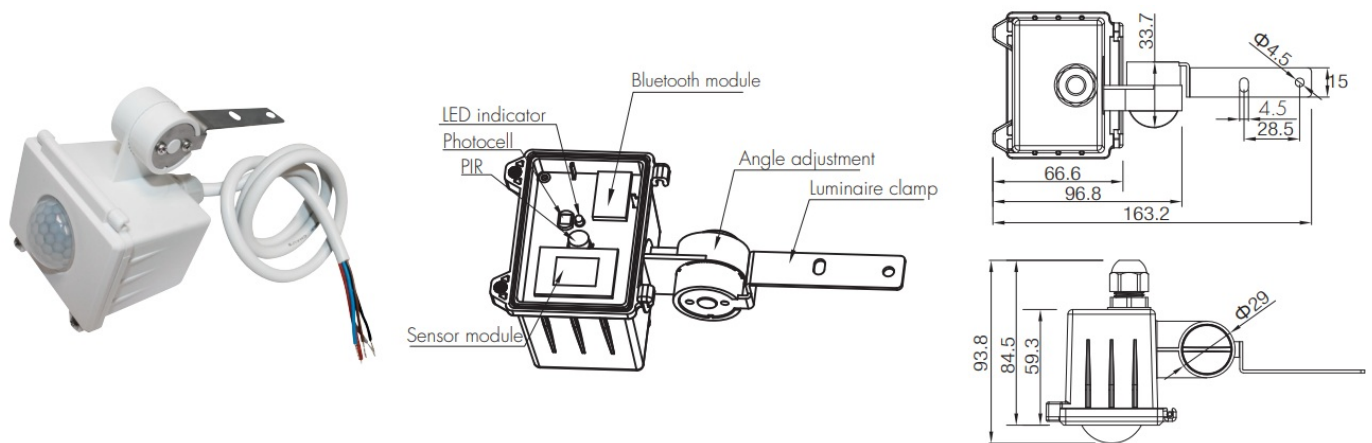
A Ceiling mount (All 3 lens options included in the package]



B. Screw to the Luminaire by conduit (All 3 lens options included in the package)



C. Attach to the shade by clamp (All 3 lens options included in the package)



Note: We recommend the mounting distance between sensor o sensor should be more than 2m to prevent sensors from falserriggering

Dual Sense Introduction

It's commonly known Microwave and Infrared are main detecting technologies in lighting controls. Both have the advantage and disadvantage for industrial applications.



Advantage

- sensitive fo minor motion
- sensitive to radial movement.
- can be reflected by objects hence covering big detection area
- resilient to heat source, smoke and and air conditioner.

Disadvantage

- penetrates walls, picks up motions outside of the office area;
- back wave detection, false trigger by motions at the back.

- can be false triggered by ventilation fans, water pipe, elevators etc. in industrial application



Advantage

- no penetration, confined detection area
- sensitive to tangential movement.
- resilient to motion object which has no heat radiation

Disadvantage

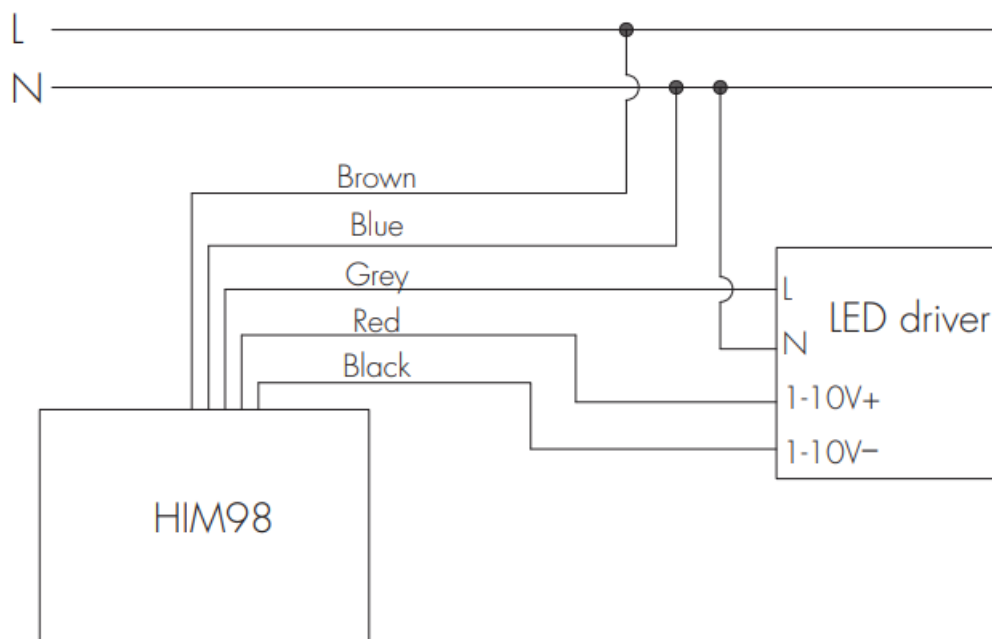
- can be false triggered by air conditioner, smoke and other heat sources.

The remedy is to create Dual Sense by combining both technologies to make use of the advantage and bypass the disadvantage

4 optional detection modes selectable:

- HF: Microwave only
- PIR: PIR mode only
- HF+PIR: both PIR and microwave mode, to decrease the detection capability and detection area. Only when both detections are activated, the motion is considered valid. This is to prevent the sensor from false trigger by heat source, air conditioner, ventilation fans, water pipe and elevators etc.
- HF/PIR: either PIR or microwave mode, to increase the detection capability and detection area;

Wiring Diagram



Detection pattern

End user can choose the suitable PIR lens in real application to fulfill various requirements. Three options are

offered for selection:



Lens option 1



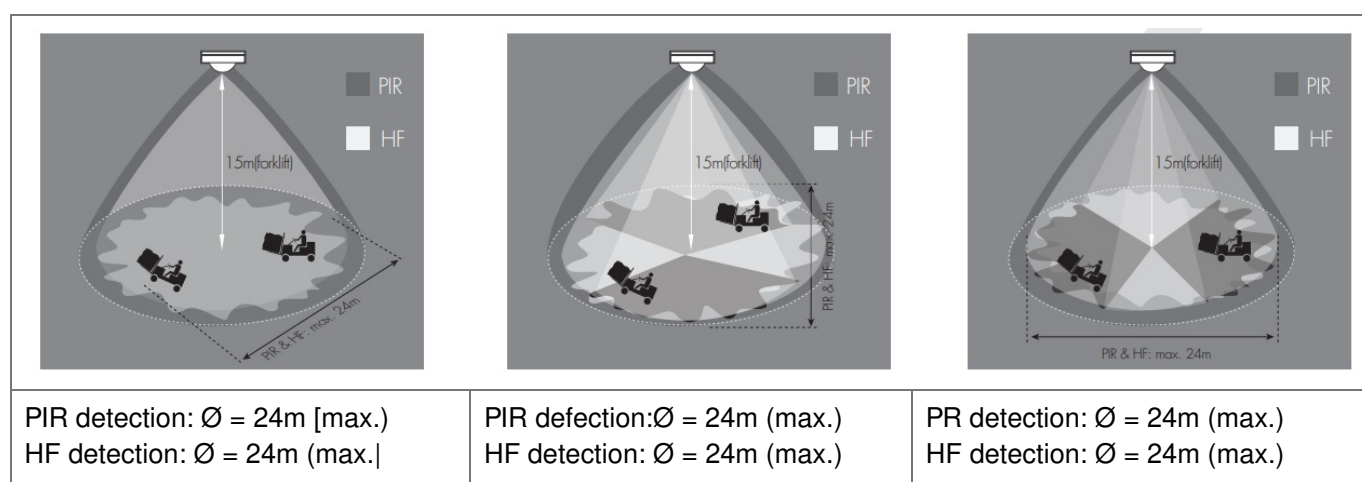
Lens option 2



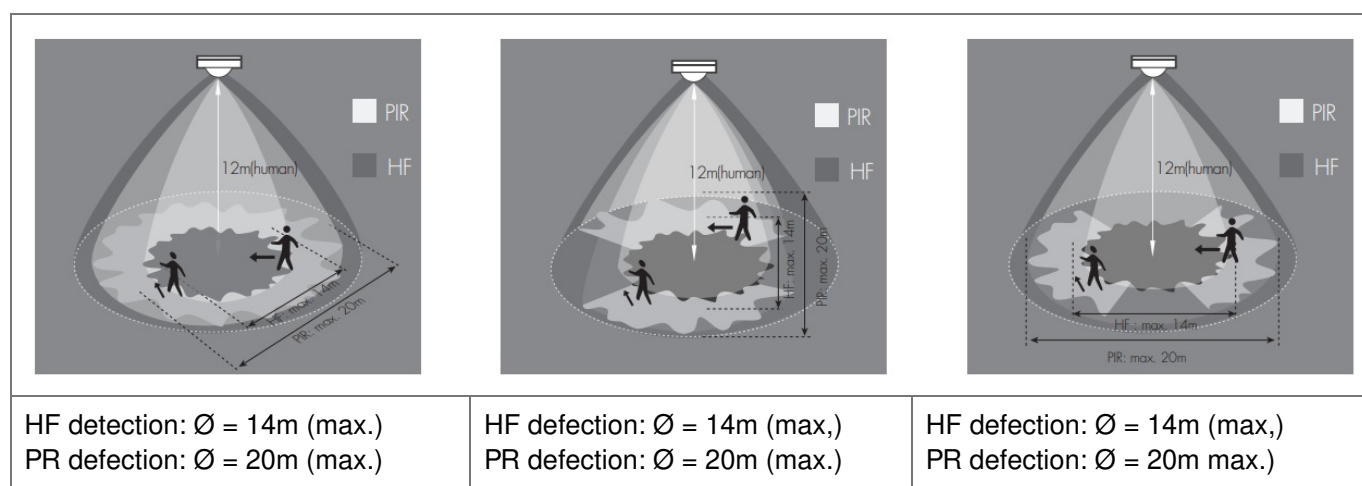
Lens option 3



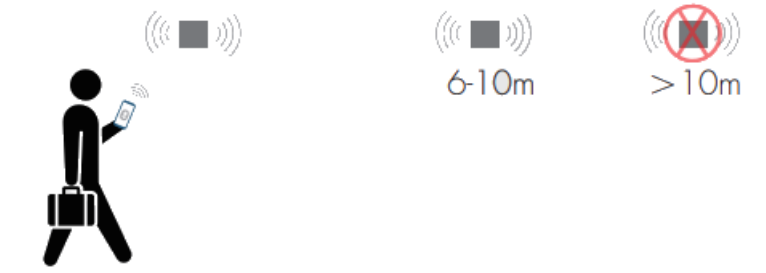
Detection pattern for forklift



Detection pattern for human



Placement guide and Typical 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 single point.

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 microwave sensor installation and operation, please kindly refer to www.hytronik.com/download ->knowledge ->Microwave Sensors – Precautions for Product Installation and Operation
4. 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
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
6. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download->knowledge ~Hytronik Standard Guarantee Policy

Subject to change without notice.
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Documents / Resources

	<p>HYTRONIK HIM98 IP65 Dual Sense Sensor with Bluetooth 5.0 SIG Mesh [pdf] Owner's Manual</p> <p>HIM98, HIM98 IP65 Dual Sense Sensor with Bluetooth 5.0 SIG Mesh, IP65 Dual Sense Sensor with Bluetooth 5.0 SIG Mesh, HIM98 IP65 Dual Sense Sensor, IP65 Dual Sense Sensor, Dual Sense Sensor, Sensor</p>
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References

- [!\[\]\(effbd7993c63c039a58fd3395789cf3f_img.jpg\) Catalogue_Hytronik](#)
- [!\[\]\(144980d038f2541d7b588a8a9132bd70_img.jpg\) iot.koolmesh.com](#)

Manuals+.