

SAM23

HF Highbay | Photocell Advance | RJ12 connector to control body



Benefits

Compact: Standard rectangular Plug&Play sensor design

Versatile: Tri-level dimming + Daylight harvest + Circadian Rhythm

Easy configuration: Wireless control with Bluetooth control base

Applications

Luminaire build-in integration, snap in slots

Classrooms

Offices

Check Out the Complete System Solution on the Website:
<https://www.hytronik.com/product/SAM23>

Product Description

SAM23 is a high bay HF sensor head and compatible with the daylight harvest, circadian rhythm and tri-level dimming. Plug-and-play with Bluetooth control bases such as HCD038/BT or HC038V/BT, etc., to achieve wireless configuration.

Functions and Features

See additional details at the end of datasheet



Daylight Harvest



Human Centric
Lighting (HCL)



Photocell
Advance



Robust HF
Antenna Design

Specifications

Main Capabilities

Connector Type	RJ12
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Sensor Data

Detection angle	30° - 150°
Max. Detection range (Diameter)	20.0 m
Maximum Mounting Height	15.0 m
Detection area	314 m ²

Electrical Data

Operating voltage range	5 VDC
Warming-up	20 s
HF Transmission power	<0.2mW (HF)

SAM23

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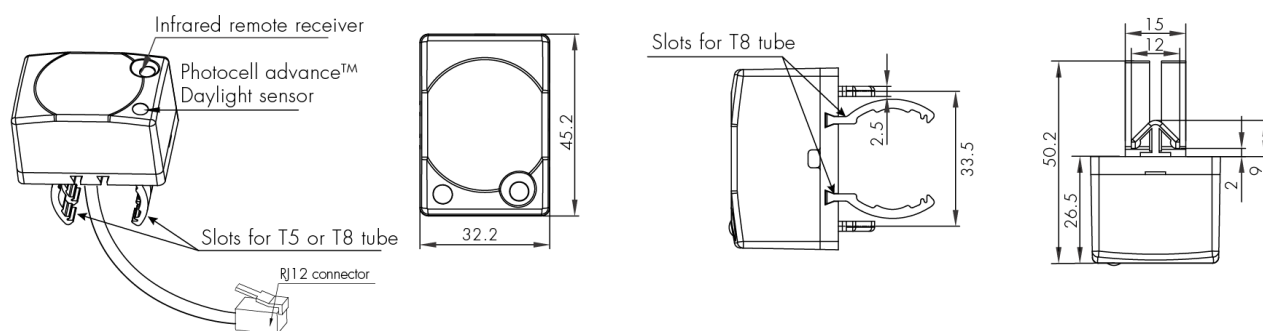
Specifications

Technical	
Product weight	36.0 g
Product height	26.5 mm
Product length	45.2 mm
Product width	32.5 mm
Ambient temperature	-20 ~ +55 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
Case Temp.max	75.0 °C
IP Rate	IP20

SAM23

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Technical Drawing

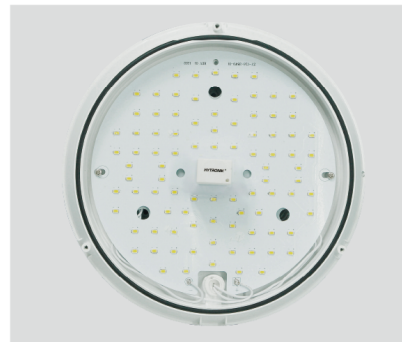


Installation Process

A.



B.



Detailed Installation Instructions

Ideal for office luminaires with aluminium louvers that block microwave signals, as well as LED bulkheads or low bays where limited space prevents conventional sensors from being integrated and may cause shadowing inside the fixture.

A. For linear T5, T8, TC-L lamps

Most of the linear office lights have metal louvre, where microwave cannot penetrate through. An easy alternative solution is to use this detached sensor antenna head, grip on the T5 and T8 tube, and put the sensor main body behind the metal louvre, together with the ballast or driver.

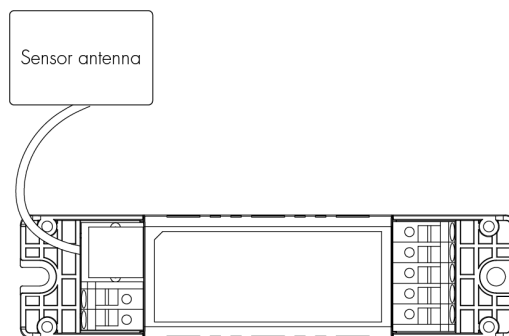
B. For LED bulkhead

In such applications, only the detached small antenna is needed on the outer surface, while the sensor body and the driver/ballast can be hidden behind the panel. No shadow is cast in the shade.

SAM23

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Wiring Diagram

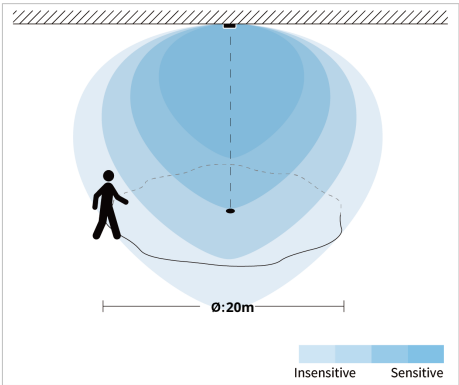


Detection Range

Single Person Walk (Ceiling mount)

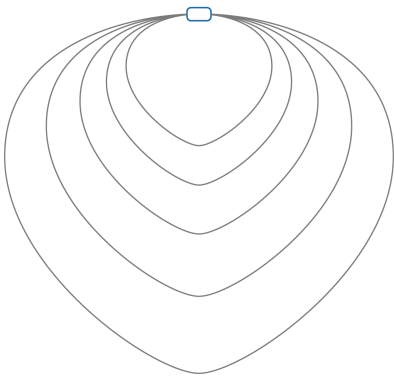
- The data below is tested under following conditions:
- Single person walking
 - Sensor not connected to any driver that may have soft-on period
 - Testing temperature Ta = 20°C

Detection example 15m mounting height:



Sensitivity	
H[m]	100%
	Ø[m]
15	20

Detection schematic diagram



Commissioning Instructions and Precautions

A. Installation Notes

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

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

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

Options

Compatible products (for full functionality)



HBEM01

Integrated Mains & Emergency Control | Max. (Main 25W / EM 3W) | Attachable sensor heads
www.hytronik.com/product/HBEM01



HBEM02

Emergency Inverter Max.4W | Bluetooth remote control | Attachable sensor heads
www.hytronik.com/product/HBEM02



HBEM03

Mains & EM Control | Max. EM 4W output | Attachable sensor heads
www.hytronik.com/product/HBEM03



HBEM038

DALI/Bluetooth Converter | 30mA DALI Broadcast Output | Attachable sensor heads
www.hytronik.com/product/HBEM038



HBEM04

Emergency Inverter Max.5W | DALI Dimmable | Attachable sensor heads
www.hytronik.com/product/HBEM04



HBEM05

Emergency Inverter Max.12W | DALI Dimmable | Attachable sensor heads
www.hytronik.com/product/HBEM05



HBEM06

Emergency Sign Maintained Max.4w | Bluetooth control | Attachable sensor heads
www.hytronik.com/product/HBEM06



HC038V/BT

Control body | Bluetooth with 0/1-10V | Attachable sensor heads
www.hytronik.com/product/HC038V-BT



HC438V/BT

Control body | Bluetooth & 0/1-10V | Attachable sensor heads | US Certified
www.hytronik.com/product/HC438V-BT



HCD038/BT

Control unit | Bluetooth DALI with PSU | Attachable sensor heads
www.hytronik.com/product/HCD038-BT



HCD438/BT

Control body | Bluetooth & DALI | Attachable sensor heads | US Certified
www.hytronik.com/product/HCD438-BT



HED6040/BT

Bluetooth LED Driver 40W (CC) Dimmable | Plug'n'Play | Built-in
www.hytronik.com/product/HED6040-BT



HED6045/BT

Bluetooth LED Driver 45W (CC) Dimmable | Plug'n'Play | Built-in/Stand-alone
www.hytronik.com/product/HED6045-BT



HED6060/BT

Bluetooth LED Driver 60W (CC) Dimmable | Plug'n'Play | Built-in
www.hytronik.com/product/HED6060-BT



HED7030/BT

Bluetooth LED Driver 30W (CC) Dimmable | Plug'n'Play | Built-in version
www.hytronik.com/product/HED7030-BT



HED8040/BT

Bluetooth LED Driver 40W (CC) Tunable white | Plug'n'Play | Built-in
www.hytronik.com/product/HED8040-BT



HED8045/BT

Bluetooth LED Driver 45W (CC) Tunable white | Plug'n'Play | Built-in/Stand alone
www.hytronik.com/product/HED8045-BT



HED8060/BT

Bluetooth LED Driver 60W (CC) | Tunable white | Built-in
www.hytronik.com/product/HED8060-BT

SAM23

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Options

Compatible products (for full functionality)



HED8080/BT

Bluetooth LED Driver 80W (CC) | Tunable white | Built-in

www.hytronik.com/product/HED8080-BT

Functions and Features



Daylight Harvest

Right time, right place and the right amount of light! Daylight harvest (Also known as daylight regulating or daylight interaction) is a must in the future lighting norms. It automatically measures available natural light and adjusts artificial lighting output to maintain the target illuminance level. Using daylight sensor feedback, control signals are transmitted to the LED drivers via DALI or 0–10V interfaces, ensuring the required light output is delivered only when needed, improving visual comfort and reducing energy consumption.



Human Centric Lighting (HCL)

Human Centric Lighting (HCL) helps reduce energy consumption while supporting human wellbeing and productivity in artificially lit environments. Through Hytronik's decentralised tunable white control with integrated time-based operation, HCL enables cost-effective circadian rhythm lighting without the complexity of centralised lighting systems. Designed as a simple and flexible solution, it is ideal for offices, schools, and healthcare applications requiring dynamic white light adjustment throughout the day.



Photocell Advance

This advanced daylight sensing function accurately measures ambient light levels while minimising interference from the luminaire itself, ensuring reliable dusk-to-dawn control and daylight priority over motion detection. It automatically switches lighting on and off and dynamically adjusts brightness in response to available natural light, delivering visual comfort and improved energy efficiency.



Robust HF Antenna Design

The touch panel supports both manual and automatic adjustment of the display brightness. In automatic mode, the screen adapts its brightness according to the surrounding ambient light to maintain optimal visibility and energy efficiency. In manual mode, users can set the preferred screen brightness level directly on the device, ensuring clear viewing under various installation conditions.

Check out for further explanation of features

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