SAM88

HF Low-bay | Tri-level dimming | RJ12 connector to control body



Benefits

Compact: Standard rectangular Plug&Play sensor design

Innovative: Robus HF antenna design against wireless interface

Compatible: Compatible with Bluetooth control bases and driversh

Applications

Built in luminarie, surface mount installation

Classrooms

Offices

Check Out the Complete System Solution on the Website:
https://www.hytronik.com/product/SAM88

Product Description

SAM88 is a HF sensor head and compatible with the Photocell Advance. It includes tri-level dimming, daylight harvesting, and supports Human Centric Lighting/Circadian Rhythm with DT8 drivers for tunable white control after connective with control base like HCD038/BT. It has a robust HF antenna design to minimize wireless interference. It offers powerful number of Plug'n'Play feature options to expand the flexibility of luminaires design.

Functions and Features

See additional details at the end of datasheet

Daylight Harvest

Human Centric Lighting (HCL)

Photocell Advance

RJ12 Connection

Robust HF Antenna Design

Tri-level Dimming

Specifications

Sensor Data	
Detection angle	30° - 150°
Max. Detection range (Diameter)	20.0 m
Maximum Mounting Height	12.0 m
Detection area	314 m²
HF operating frequency (Ghz)	5.8Ghz+/-75MHz
Detection Methods	Microwave (MW)

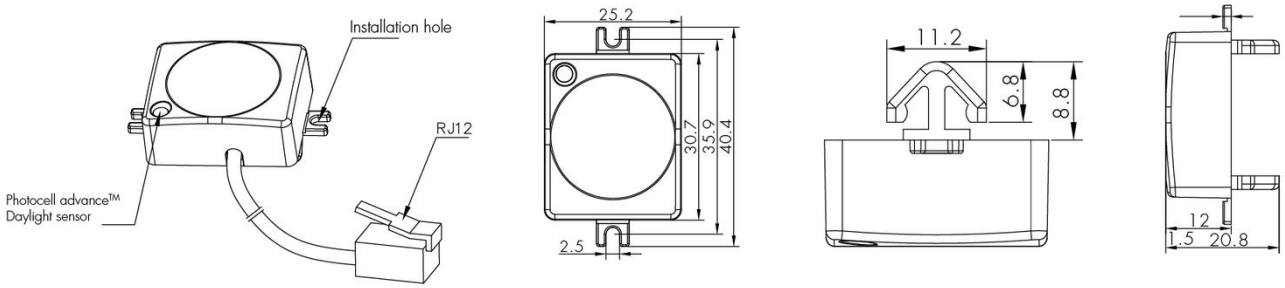
Electrical Data	
Operating voltage range	5 VDC
Auxiliary Supply Current Consumption	36.2 mA

Specifications

Technical	
Insulation class	Class II
Ambient temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
IP Rate	IP20

Standard	
EMC	EM61547, EN 55015, EN 61000-3-2, EN61000-3-3
LVD	EN 60669-1, EN 60669-2-1

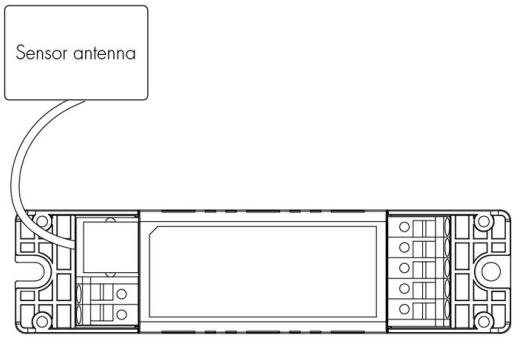
Technical Drawing



⚠ Wiring Guidelines

1. Installation by a qualified electrician only and in accordance with local electrical regulations.
2. Disconnect mains power before installation, wiring, maintenance or replacement.
3. Failure to follow the wiring diagram may result in product damage and malfunction.

Wiring Diagram

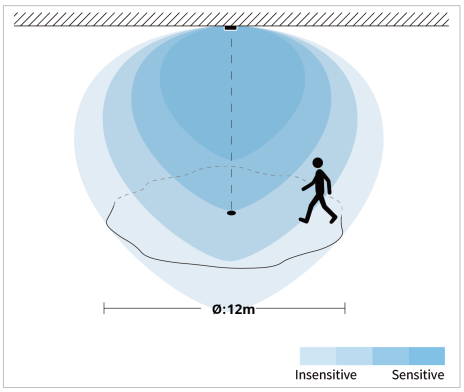


Detection Range

Single Person Walk (Ceiling mount)

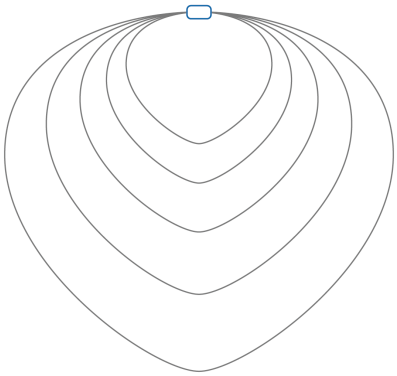
The data below is tested under following conditions:
• Single person walking
• Sensor not connected to any driver that may have soft-on period
• Testing temperature Ta = 20°C

Detection example 3m mounting height:



	Sensitivity
H[m]	100%
	Ø[m]
3	12

Detection schematic diagram



Commissioning Instructions and Precautions

A. Sensor Conbination

1. This model of sensor head is a non-BLE model. Only when the sensor is connect to the Bluetooth control base can it realize bluetooth function.

2. Tri-level dimming and daylight harvesting functions depend on the capabilities of the connected sensor body and driver. Please ensure that both the body and driver support these features. On/off control base do not provide these functions.

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)



HBEM038

DALI/Bluetooth Converter | 30mA DALI Broadcast Output | Attachable sensor heads

www.hytronik.com/product/HBEM038



HCD038/BT

Bluetooth DALI Control unit | Built-in PSU | Attachable sensor heads

www.hytronik.com/product/HCD038-BT



HBEM06

Maintained Emergency Exit Sign Driver | Max. 4 W Output | Attachable Sensor Heads

www.hytronik.com/product/HBEM06



HCD038/BT/RGBW

Bluetooth DALI RGBW Converter | Integrated 30 mA PSU | Attachable sensor heads

www.hytronik.com/product/HCD038-BT-RGBW

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 while minimising interference from the luminaire itself and distinguishing natural light from artificial light. It automatically switches lighting on or off and adjusts brightness according to the available daylight, providing reliable dusk-to-dawn control, improved visual comfort and greater energy efficiency.

RJ12 Sensor Connection

The product features an RJ12 plug-and-play connection interface, enabling quick, tool-free installation and easy maintenance. The standardized connector supports flexible integration between drivers, sensor bases and sensor heads, ensuring reliable communication and simplifying replacement or system expansion. This modular connection method enhances installation efficiency and reduces wiring complexity in both new and retrofit applications.

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.

Tri-level Dimming



Hytronik's tri-level dimming products offer 3 levels of light control: 100% dimmed light off, with settable time periods between each phase, as well dimming level and daylight threshold.
*All Hytronik's tri-level dimming products can also be configured as bi-level control (by setting the stand-by period to infinity), so that the light always remains in the dimmed mode in absence for areas where there are safety, security or enhanced comfort requirements.

Check out for further explanation of features

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