

HC038V

Control unit | 1-10V | Attachable sensor heads



Benefits

Adaptable: Small control unit with strain relief

Versatile: Supports multiple sensor heads for different applications

Efficient: Loop-in and loop-out terminals for installation

Applications

Master luminaire with sensor

Classrooms

Offices

Check Out the Complete System Solution on the Website:
<https://www.hytronik.com/product/HC038V>

Product Description

HC038V is a modular 1-10V control unit designed for flexible smart luminaire integration. It works with a wide range of microwave and PIR sensor heads, allowing lighting manufacturers to select suitable sensing solutions for different applications. By placing the Bluetooth module inside the sensor head, it ensures reliable wireless communication even in metal luminaire designs where signal transmission can be challenging. This modular architecture simplifies luminaire development while providing greater flexibility for smart lighting upgrades.

Functions and Features

See additional details at the end of datasheet



1-10V Dimming



Loop-in/Loop-out



Push-Button
Input



Zero-Cross Relay
Operation

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Specifications

Main Capabilities

Dimming (Output) Interface	1-10V
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Electrical Data

Operating voltage range	220-240 VAC 50/60 Hz
Stand-by power (Psb)	<0.5W
Warming-up	20 s
Load capacitive	400.0 VA
Load resistive	800.0 W

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Specifications

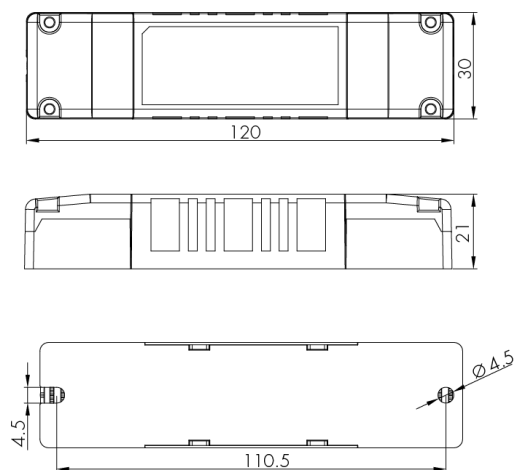
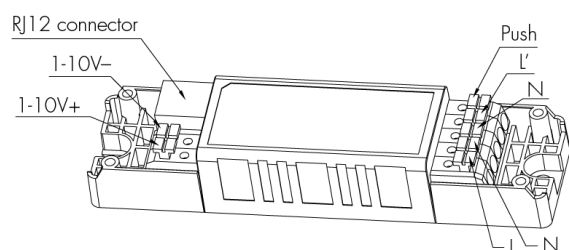
Technical	
Product weight	59.0 g
Product height	21.0 mm
Product length	120.0 mm
Product width	30.0 mm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
Case Temp.max	75.0 °C
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61000, EN 61547
LVD	AS/NZS 60669-1/-2-1, EN 60669-1, EN 60669-2-1

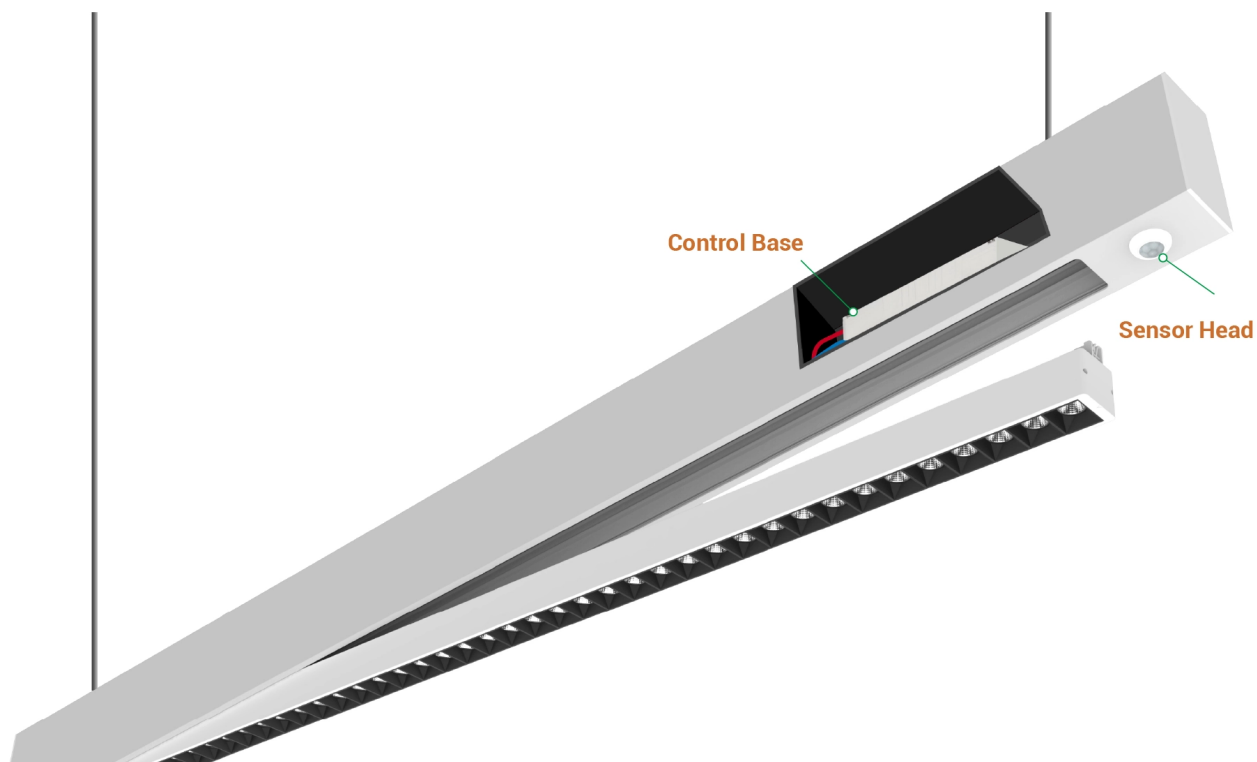
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Technical Drawing



Application Example



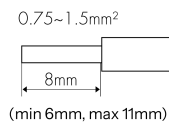
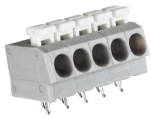
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⚠ Wiring Guidelines

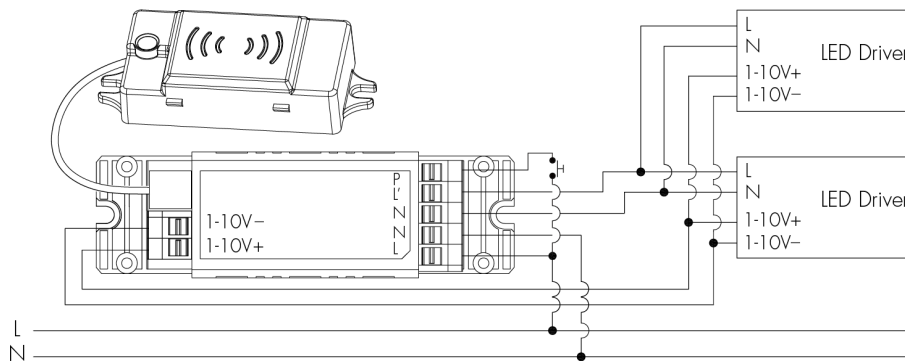
1. Installation by a qualified electrician only and in accordance with local electrical regulations.
2. Disconnect mains power before installation, wiring, maintenance or replacement.
3. Failure to follow the wiring diagram may result in product damage and malfunction.
4. Refer to the Wire Preparation section for recommended wire diameter and strip length.
5. Push inputs are mains-voltage inputs and must only be connected to mains-rated switches.

Wire Preparation



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

Wiring Diagram



Commissioning Instructions and Precautions

A. Installation Notes

1. To ensure better detection, keep the sensor lens part beyond the surface of the light fixture.
2. We recommend the mounting distance between sensor to sensor should be more than 2m to prevent sensors from false-triggering.

B. Sensor head Precautions

1. The control base can be used only after it is connected to the sensor head via RJ12 connection.
2. The push function and commission type are determined by the included sensor head.
3. This is a non-Bluetooth base. All Bluetooth functions (such as tri-level control, daylight harvest, and circadian rhythm) can only be realized when it is connected to a Bluetooth sensor head.

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

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

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Options

Compatible products (for full functionality)



HBT01

Bluetooth HF Lowbay | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/HBT01



HBT02

Bluetooth Receiver | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/HBT02



HIR01/AA

PIR Lowbay | Daylight Harvest | RJ12 connector to control body
www.hytronik.com/product/HIR01-AA



HIR01/FM

PIR Lowbay | Daylight Harvest | RJ12 connector to control body
www.hytronik.com/product/HIR01-FM



HIR02

PIR Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR02



HIR02/AA

PIR Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR02-AA



HIR02/FM

PIR Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR02-FM



HIR03

PIR Lowbay | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/HIR03



HIR04

PIR Lowbay | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/HIR04



HIR09/AA

PIR Highbay | Adjustable Angle | RJ12 connector to control body
www.hytronik.com/product/HIR09-AA



HIR09/F

PIR Highbay | Daylight harvest | RJ12 connector to control body
www.hytronik.com/product/HIR09-F



HIR09/S

PIR Lowbay | Daylight harvest | RJ12 connector to control body
www.hytronik.com/product/HIR09-S



HIR10

PIR Highbay | Daylight Harvest | RJ12 connector to control body
www.hytronik.com/product/HIR10



HIR13/AA

Bluetooth PIR Highbay | Adjustable Angle | RJ12 connector to control body
www.hytronik.com/product/HIR13-AA



HIR13/C

Bluetooth PIR Highbay | Circadian Rhythm | RJ12 connector to control body
www.hytronik.com/product/HIR13-C



HIR13/F

Bluetooth PIR Highbay | Circadian Rhythm | RJ12 connector to control body
www.hytronik.com/product/HIR13-F



HIR13/S

Bluetooth PIR Highbay | Circadian Rhythm | RJ12 connector to control body
www.hytronik.com/product/HIR13-S



HIR16

Bluetooth PIR Highbay | Circadian Rhythm | RJ12 connector to control body
www.hytronik.com/product/HIR16

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Options

Compatible products (for full functionality)



HIR16

Bluetooth PIR Highbay | Ciradian Rhythm | RJ12 connector to control body
www.hytronik.com/product/HIR16



HIR17

PIR Lowbay | Daylight harvest | RJ12 connector to control body
www.hytronik.com/product/HIR17



HIR17/R

PIR Midbay | Daylight harvest | RJ12 connector to control body
www.hytronik.com/product/HIR17-R



HIR19/AA

PIR Highbay | Adjustable Angle | RJ12 connector to control body
www.hytronik.com/product/HIR19-AA



HIR19/C

PIR Highbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR19-C



HIR19/F

PIR Highbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR19-F



HIR19/S

PIR Highbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/HIR19-S



HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws
www.hytronik.com/product/HIR62



HIR62/R

Bluetooth PIR Midbay Sensor Head | RJ12 connector | Conduit Screws
www.hytronik.com/product/HIR62-R



SAM11

HF Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/SAM11



SAM11/I

HF Lowbay | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/SAM11-I



SAM7

HF Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/SAM7



SAM7/AA

HF Lowbay | Tri-level & Adjustable Angle | RJ12 connector to control body
www.hytronik.com/product/SAM7-AA



SAM7/FM

HF Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/SAM7-FM



SAM7/I

HF Highbay | Photocell Advance | RJ12 connector to control body
www.hytronik.com/product/SAM7-I



SAM8

HF Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/SAM8



SAM8/RC11

HF Lowbay | Tri-level dimming | RJ12 connector to control body
www.hytronik.com/product/SAM8-RC11

Functions and Features



1-10V Dimming

The product provides a 1–10V analog dimming output, allowing luminaires to dim smoothly down to their minimum rated brightness. At 1V, the luminaire remains on at its lowest light level, as the 1–10V interface does not support switching off through the control signal. This standard analog interface ensures stable dimming performance across compatible LED drivers.



Loop-in / Loop-out

The product provides loop-in/loop-out terminals that allow mains wiring to pass through the device for quick and convenient daisy-chain installation. This simplifies on-site wiring, reduces junction box requirements, and enables efficient connection of multiple luminaires or drivers in a single circuit.



Push Button Input

This product integrates push-button (momentary switch) inputs, allowing external potential-free switches to trigger basic lighting control functions. Each input can be configured for actions such as on/off switching, dimming or scene recall, providing flexible manual control and user interaction within the lighting system. The push-button inputs operate independently of the sensor's automatic functions, enabling seamless coexistence of manual and sensor-based lighting control.



Zero-Cross Relay Operation

The product operates its relay at the AC zero-cross point, reducing inrush current through the relay contacts when switching the load. By minimising electrical stress during each switching event, this method supports higher load capability and extends the operational lifetime of the relay in practical lighting applications.

Check out for further explanation of features

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