

HCD038/P

Control unit | DALI with PSU | Attachable sensor heads

HYTRONIK[®]
SENSORS & LIGHTING CONTROL



Benefits

Adaptable: Small control unit with strain relief

Versatile: Many sensor options for DALI control

Flexible: 2 Push inputs for flexible manual control

Applications

Master luminaire with sensor

Classrooms

Offices



Check Out the Complete System Solution on the Website:
<https://www.hytronik.com/product/HCD038-P>

Product Description

HCD038/P control unit features integrated DALI control with built-in DALI power supplies, compatible with various microwave and PIR sensor heads. Designed for metal luminaire applications, it optimizes Bluetooth signal transmission by housing the Bluetooth module inside sensor head. Setup and commissioning can be done via Koolmesh app.

Functions and Features

See additional details at the end of datasheet



Built-in DALI PSU



D4i Data Access
Via App



DALI BUS Power
Supply



Push-Button
Input

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Specifications

Main Capabilities

Dimming (Output) Interface	DALI
Connector Type	Standard 2 cables

Electrical Data

Operating voltage range	220-240 VAC 50/60 Hz
Stand-by power (Psb)	<0.5W
Warming-up	20 s
DALI bus maximum rated current (I _{n max})	80 mA
DALI bus nominal DC voltage range (U _n)	15 V
DALI bus nominal current (I guaranteed)	64 mA

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Specifications

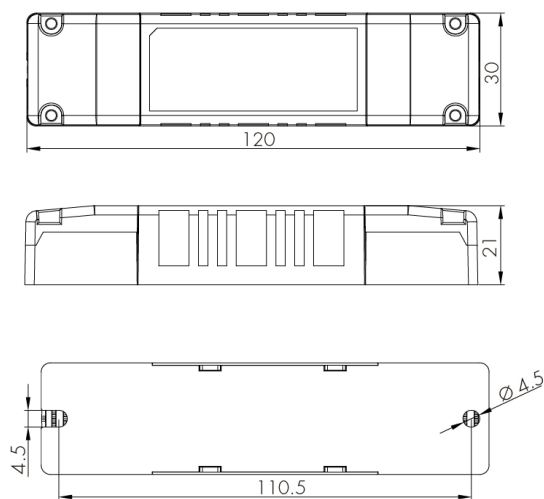
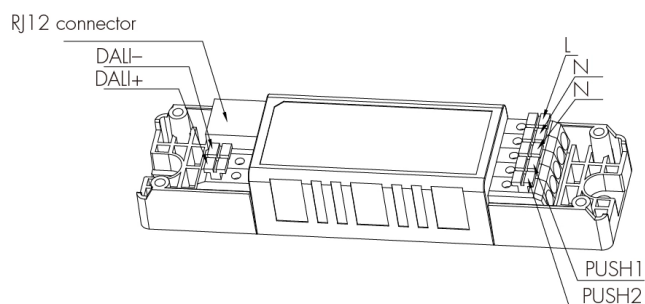
Technical	
Product weight	50.0 g
Product height	21.0 mm
Product length	120.0 mm
Product width	30.0 mm
Mounting hole	4.5 mm
Ambient temperature	-20 ~ +55 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
Case Temp.max	75.0 °C
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61000-3-2, EN 61547
LVD	AS/NZS 60669-1/-2-1, EN60669-1/-2-1

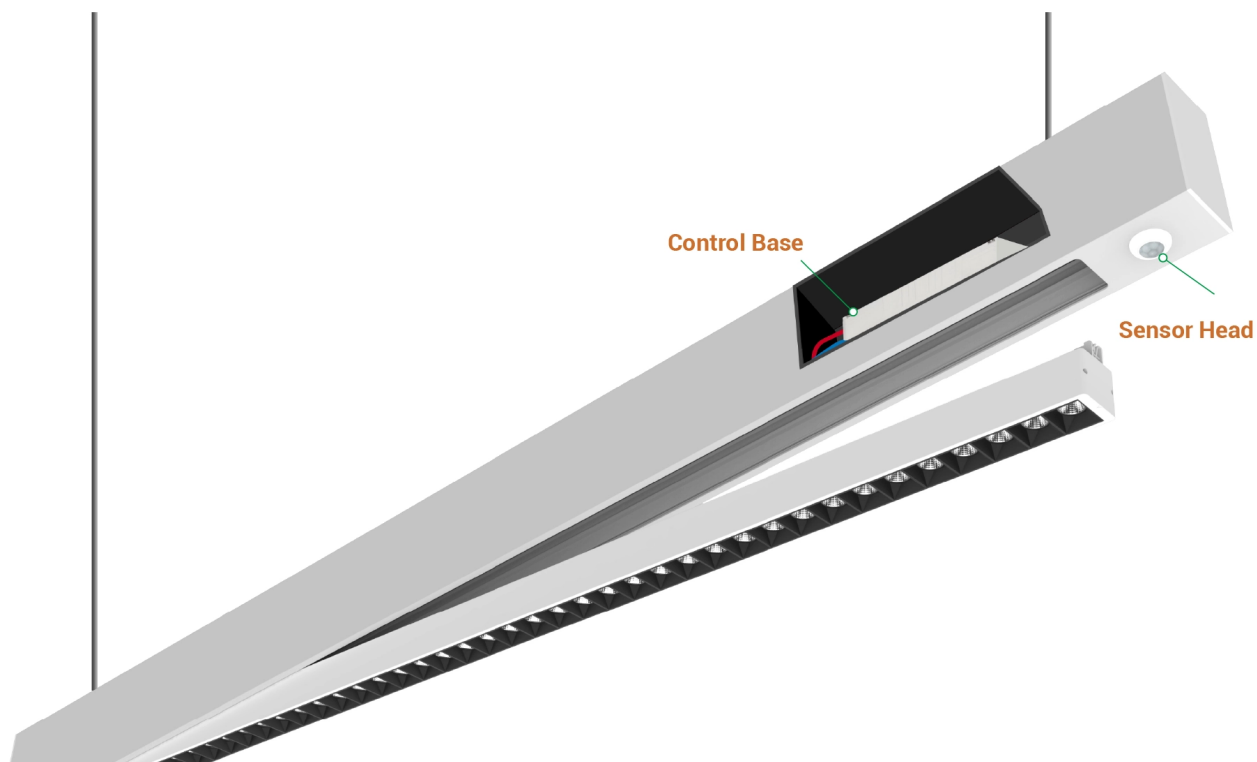
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Technical Drawing



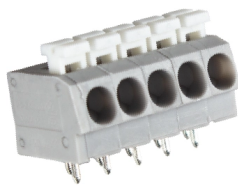
Application Example



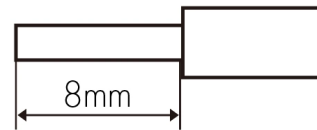
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Wire Preparation



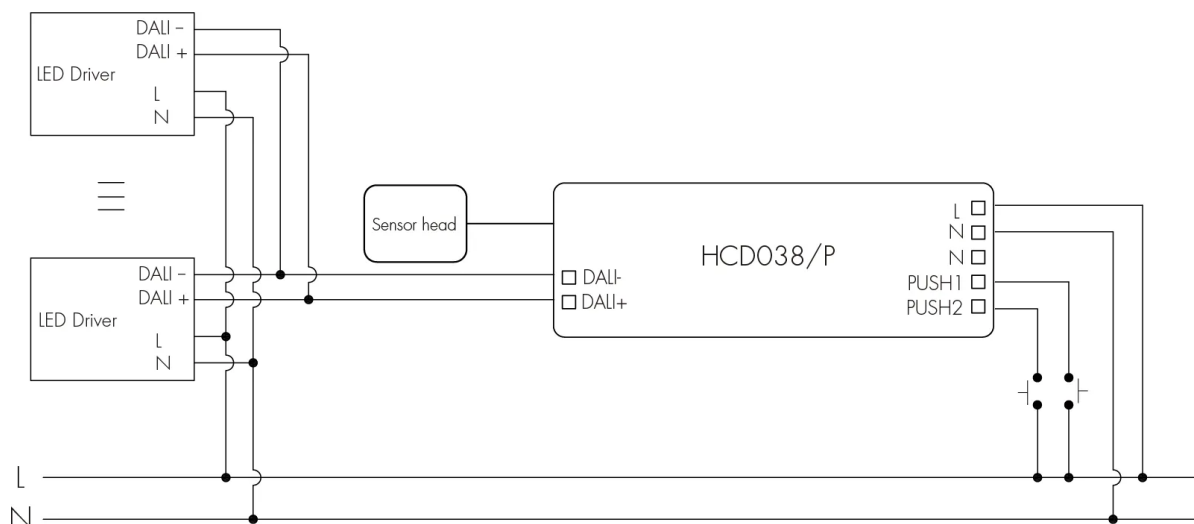
0.75~1.5mm²



To make or release the wire from the terminal, use a screwdriver to push down the button. 1. 100 metres (total) max. for 0.5mm² CSA (Ta = 50°C) 2. 150 metres (total) max. for 0.75mm² CSA (Ta = 50°C)

Wiring Diagram

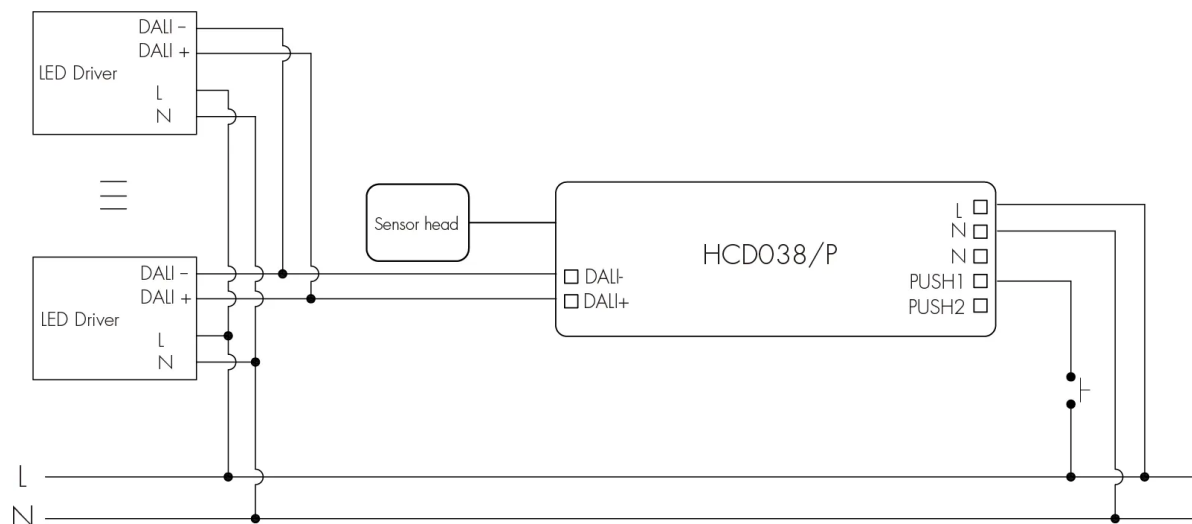
2 Push Installation



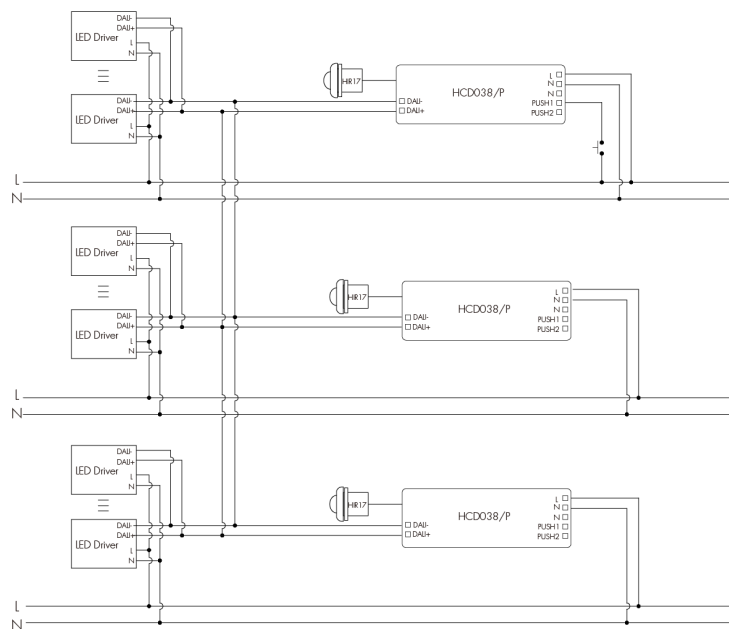
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1 Push Installation



Installation with synchronized HIR17 sensors up to 3 units (1 master sensor and 2 additional)



Commissioning Instructions and Precautions

A. Installation Preparations

1. This product should be installed by a qualified electrician.
2. To ensure better detection, keep the sensor lens part beyond the surface of the light fixture.
3. 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. When HIR13 series, HIR16, HBT01 and HBT02 are plugged into HCD038/P, 2 push terminals can be activated for configuration.
4. When HIR62, HIR62/R, SAM7, SAM7/FM, SAM7/AA, HIR04, HIR02 and HIR19 series plugged into HCD038/P, only push1 terminal can be activated for configuration.
5. When HIR17 or HIR17/R is connected to HCD038/P, only the PUSH1 terminal is active for configuration.

Up to 3 HIR17+HCD038/P sensors can be connected as a group. During configuration, one sensor must be manually set as the master. The master has control authority over the network — when its PUSH is triggered, it applies to all drivers in the group. The PUSH functions of the other sensors will not take effect; they only report sensing events. This prevents conflicts during daylight harvesting control.

C. DALI-2 Compliance

1. This product has been tested in accordance with IEC 62386 and complies with the relevant DALI-2 application parts. DALI-2 testing was performed using the official DALI test sequence software (version 2.3.2.0), covering the applicable IEC 62386 parts (e.g. Part 101, Part 103, Part 303, Part 304). DALI-2 certification verifies compliance within the defined test scope.

However, certification does not eliminate the possibility of system-level compatibility issues arising from differences in device implementation or system design among manufacturers. Therefore, functional verification and on-site testing are required as part of the final system commissioning to ensure proper operation and compliance with project requirements.

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



HIR02

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



HIR04

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



HIR13/AA

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



HIR13/C

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



HIR13/F

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



HIR13/S

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



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



SAM7/AA

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

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Options

Compatible products (for full functionality)



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

Functions and Features



Built-in DALI PSU

Built-in DALI PSU means the DALI bus power supply is integrated into the product, eliminating the need for an external DALI power unit.

This reduces wiring complexity, saves installation space, and simplifies commissioning, making the system more compact and efficient.



D4i Data Access Via App

When the system is used together with the Koolmesh app, it can access D4i driver data such as luminaire information, energy consumption, and diagnostic data via the Bluetooth network. Access to D4i data is enabled by the software platform and depends on the Bluetooth-to-DALI interface of the connected device, not on the standalone hardware functionality of the sensor or module.



DALI BUS Power Supply

The product is powered directly from the DALI bus, eliminating the need for an additional mains power supply. This simplifies installation and reduces wiring while ensuring stable operation and reliable communication with DALI control devices and luminaires, as it supplies standardized DALI voltage and current, supporting smooth commissioning and long-term system stability.



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.

Check out for further explanation of features

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