

# RGBW Lighting Solutions



Full Sunlight Spectrum (Blackbody) & Chroma (DUV) Tuning



**HYTRONIK**®  
SENSORS & LIGHTING CONTROL

**Koolmesh**®  
— TAILOR MAKE YOUR SOLUTION

2026

Website: [www.hytronik.com](http://www.hytronik.com)

# Lighting Without Limits — Color, Precision, and Control.

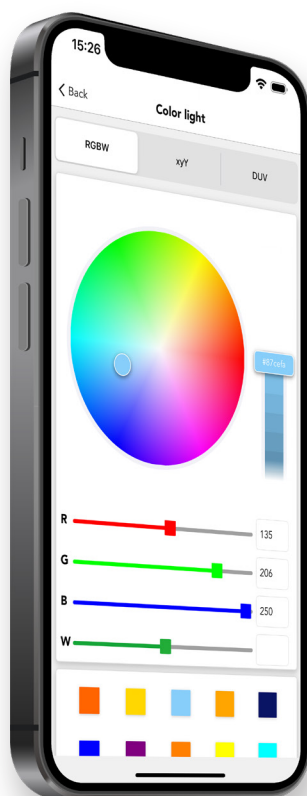


## Bring your spaces to life with Hytronik's Bluetooth RGBW series.

From architectural lighting to commercial environments and industrial applications, our professional RGBW platform enables precise control and consistent color performance across every project.

Unlike standard RGBW drivers, Hytronik offers three advanced color-tuning modes—RGBW, xyY, and DUV—giving designers, integrators, and installers the freedom to achieve exact color intent with repeatable accuracy.

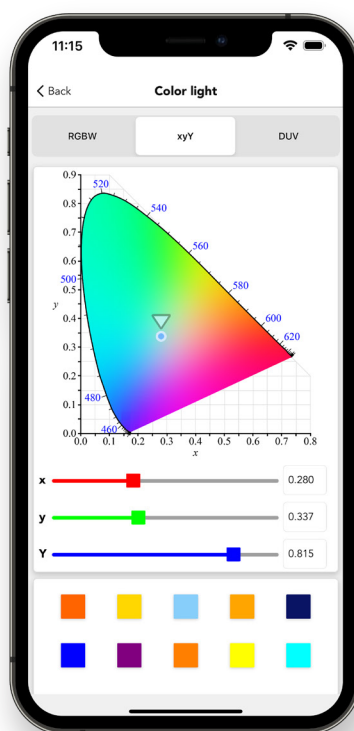
RGBW



### RGBW Preference

Standard color mixing for endless creative possibilities.

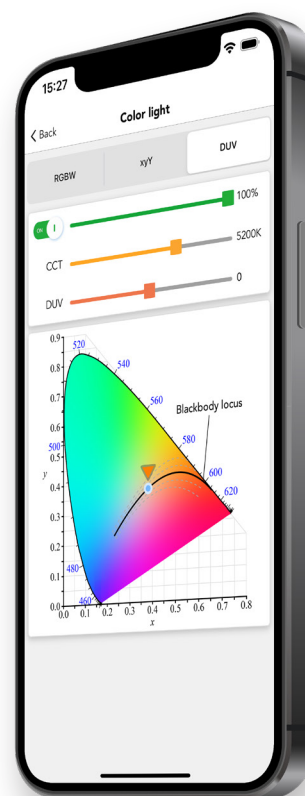
xyY



### xyY Coordinate Control

Precise hue and chromaticity control for professional-grade lighting.

DUV



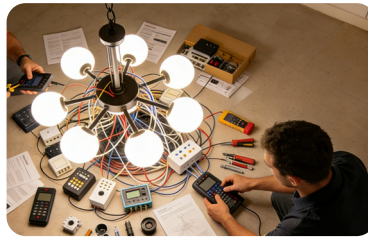
### Black Body Curve Tuning (DUV Adjustment)

Fine-tune white light spectrum to match mood, circadian rhythms, or brand aesthetics.

# Solving the Real Challenges in RGBW Projects

## The Challenge

- Color inconsistency across fixtures
- Complex setup, long commissioning
- Hard to integrate with controls



## Hytronik Solution

- Consistent color output with precision dimming
- One app, quick setup, no rewiring
- Full Bluetooth mesh + sensor integration



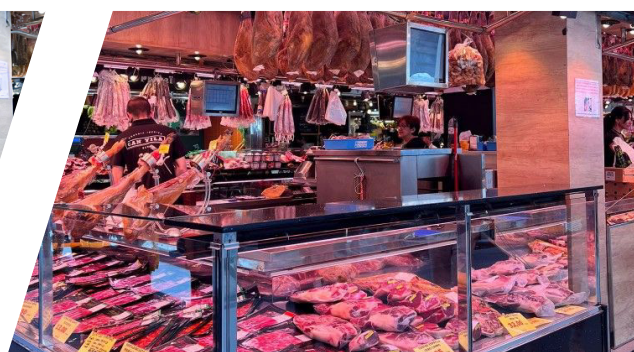


# Transform Any Space, Any Mood



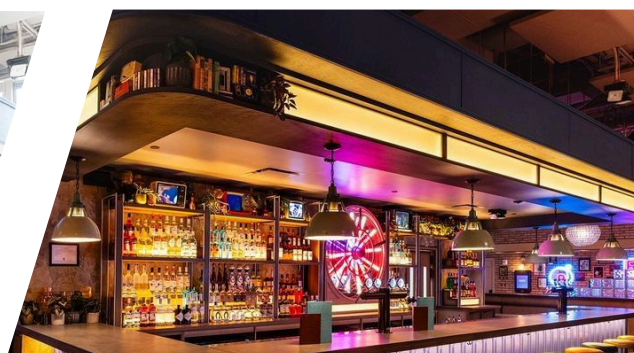
## Commercial

Create brand-defining atmosphere with precise color control.



## Supermarket / Retail

Highlight merchandise and adapt lighting scenes to promotions and seasonal themes.



## Entertainment

Deliver immersive visual experiences with dynamic color motion.



# Dynamic RGBW Corridor Lighting

**Motion-Triggered Ambient Color  
for Modern Buildings**

## What This Solution Does

Create a dynamic RGBW ambient lighting effect for corridors tunnels, and long passageways. When motion is detected, the luminaires begin a smooth color-cycling animation; when the area is unoccupied, lighting returns to the predefined idle state.

### Where It Fits



- Long industrial corridors
- Warehouses & logistics aisles
- Tunnels and back-of-house passages
- Retail or hospitality transition zones

### How It Works



- Motion detected → RGBW animation starts
- Motion continues → scene loops smoothly
- No motion (e.g., 20 minutes) → revert to idle scene or offstate  
(Controlled via Koolmesh App & Bluetooth meshautomation)

### What You Need



- Koolmesh network created
- RGBW luminaires paired
- Motion sensor paired
- Corridor luminaires grouped in a zone

# Ambient Lighting Animation Setup Guide

## STEP1: Create RGBW Base Scenes

Build the color foundation for the dynamic animation.

Using the Koolmesh App, create the individual color scenes that will form the animation sequence. Hytronik supports RGBW, xyY, and DUV/blackbody settings for precision tuning.

### Example RGBW Base Scenes *(Technical values retained for professional users)*

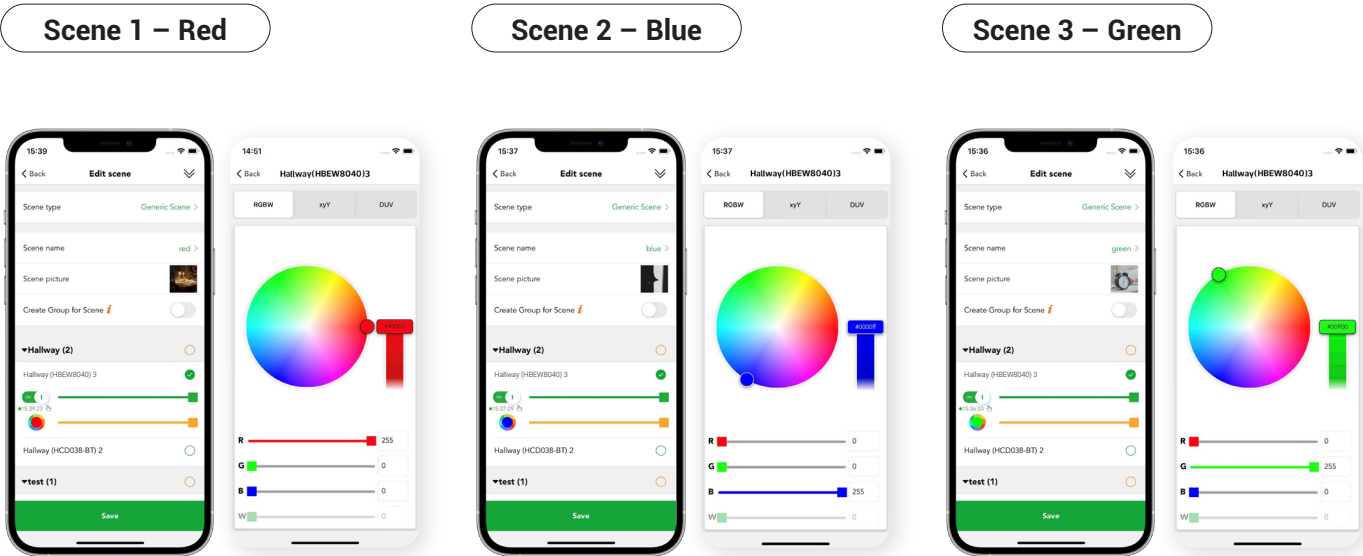
[ Go to Koolmesh App → Scenes → Create a new scene ]

Scene	R	G	B	W
Red	255%	0%	0%	0%
Green	0%	255%	0%	0%
Blue	0%	0%	255%	0%

These three scenes serve as the primary color anchors for dynamic corridor effects. Additional custom scenes can be added using xyY or DUV tuning for refined chromaticity control.

### Role of Base Scenes

- Provide stable color reference points
- Ensure consistent transitions
- Enable repeatable visual effects across luminaires



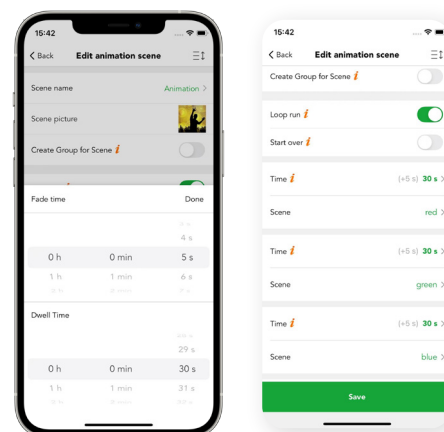
## STEP 2: Configure the Dynamic RGBW Animation

Combine scenes into a smooth color-cycling sequence.

Use the base scenes to create a looping animation:

### Animation Settings *(Technical Parameters)*

- **Scene duration:** 30 seconds per color
- **Fade time:** 5 seconds between scenes
- **Sequence order:** Red → Green → Blue
- **Loop run:** Enabled



When activated, the animation cycles through the scenes with smooth transitions, creating a continuous ambient effect along the corridor.

Advanced users may adjust timing and fade parameters to match the architectural or experiential intent.

## STEP 3: Set Motion-Triggered Activation

Ensure the animation operates only when presence is detected.

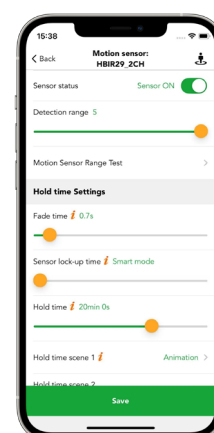
Configure a Koolmesh-compatible motion sensor to control animation playback.

### Sensor Configuration *(Technical Parameters)*

- **Sensor mode:** Presence
- **Hold time:** 20 minutes
- **Fade time:** 7 seconds
- **Hold Time Scene:** RGBW animation scene

### Logic Flow

- **Motion detected:** Animation starts
- **Presence maintained:** Sequence continues looping
- **No motion (20 min):** Animation stops → revert to idle scene or off state



All settings are applied via Bluetooth mesh automation within the Koolmesh App.



# Why Hytronik RGBW?

Precise color control. Seamless integration. Built for professional lighting.



## Multi-Dimensional Color Control

RGBW /xyY/ DUV tuning for accurate, repeatable color in commercial and industrial projects.



## Works Across All System Types

Compatible with CC drivers, CV dimmers, and DALI/ D4i/ DT8 via Bluetooth-DALI converters.



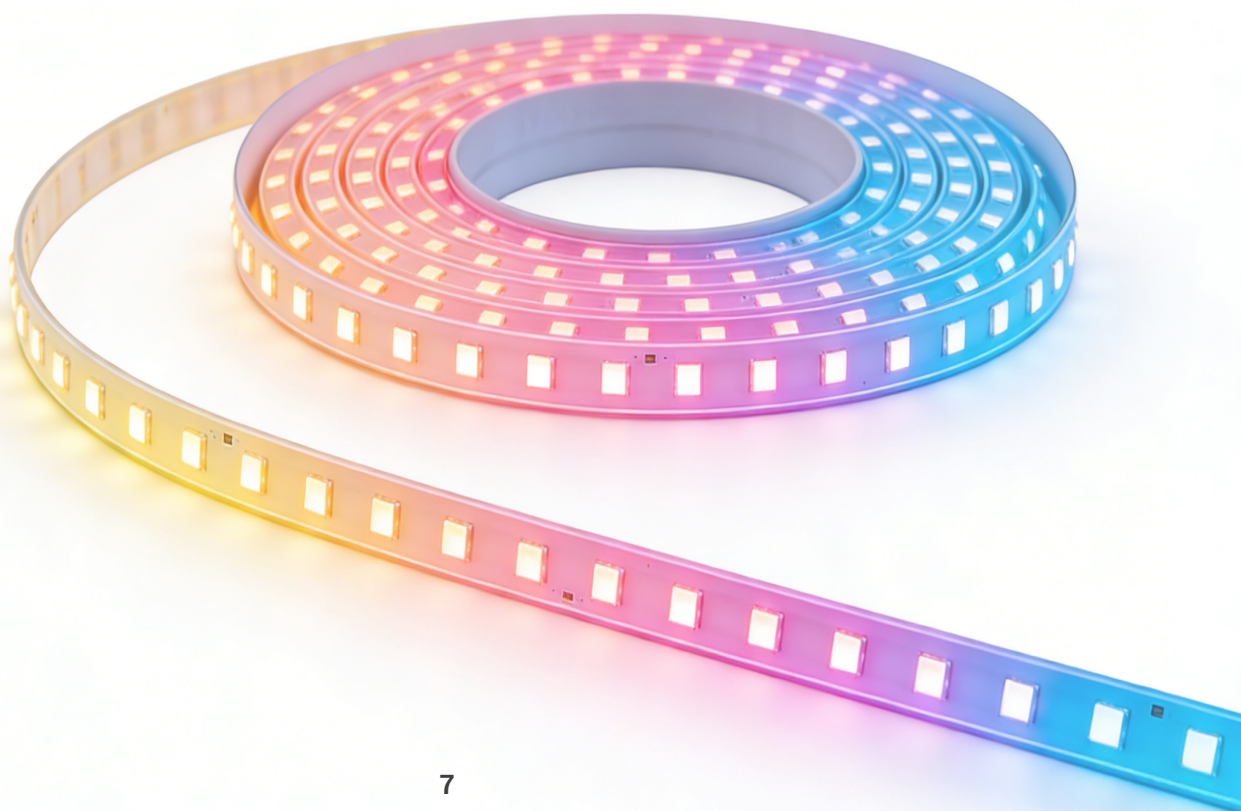
## Fast Wireless Commissioning

Bluetooth Mesh + Koolmesh App enables quicksetup, scene control, and automation-norewiring required.



## Reliable & Project-Ready

Smooth dimming, stable chromaticity, and protection features designed for long-term performance.



# Product Portfolio

## Bluetooth RGBW Driver 42W (CC)

For constant-current luminaires



HBEW8040



- Multiple output current options (350-1050mA)
- Stable CC driving for architectural or commercial fixtures
- Built-in protection for professional-grade reliability



- 4-channel MOSFET PWM output for RGBW strip systems
- Ideal for linear lighting and retail feature lighting

## Bluetooth RGBW Dimmer (CV)

For 12/24V LED strips & CV modules



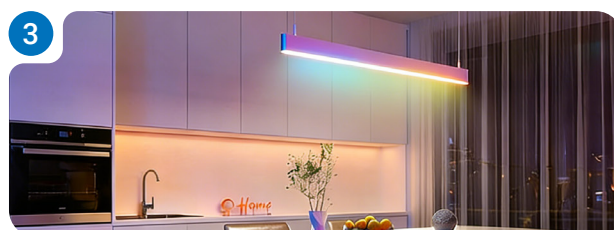
HBTD8200PWM

## DALI to Bluetooth RGBW Converter & Sensor

Compact in-luminaire integration



HCD038/BT/RGBW



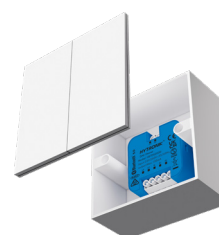
- Slim module with RJ12 sensor head (PIR/HF) options
- Enables luminaire-level sensing + RGBW control



- DALI broadcast output for DT6/DT8 drivers
- Fits into wall junction boxes for retrofit

## DALI to Bluetooth RGBW Converter



For upgrading existing DALI systems





HBTD8200D/RGBW

# Product Overview





## RGBW LED Driver

Designation	Type	Input	Dimensions (L x W x H mm)	Output Uout max.	Output Dimming Interface	Human Centric Lighting	Tunable White Control	Max. Output Power / Current / Voltage range
 <b>NEW</b>  <b>Max. 45W</b> <b>HBEW8040</b>	Constant Current	220~240VAC	185 x 79.2 x 23	60V	Bluetooth Switch-Dim		✓	5.25-14W / 350mA / 15-40V 7.5-20W / 500mA / 15-40V 9-24W / 600mA / 15-40V 10.5-28W / 700mA / 15-40V 12-32W / 800mA / 15-40V 13.5-36W / 900mA / 15-40V 15-40W / 1000mA / 15-40V 15.75-42W / 1050mA / 15-40V

## RGBW Bluetooth Dimmer

Designation	Input Voltage	Output	Bluetooth Sensor-link	Push Switch	Application Type
 <b>NEW</b>  <b>HBT8200PWM</b>	12-24 VDC	PWM 12/24V 72/144W	✓	✓	Bluetooth to RGBW Dimming

## Bluetooth ↔ DALI RGBW Converter

Designation	Input Voltage	Output	Bluetooth Sensor-link	Push Switch	Application Type
 <b>NEW</b>  <b>HBT8200D/RGBW</b>	220~240VAC	DALI 100mA, 16VDC	Bluetooth Sensor-link	✓	Bluetooth to DALI RGBW converter
 <b>NEW</b>  <b>HCD038/BT/RGBW</b>	220~240VAC	DALI BUS I max: 80mA	RJ12 Sensor Connection	✓	Bluetooth to DALI RGBW Converter

\*Please always check the latest datasheet for technical requirements-----<http://hytronik.com>



# RGBW LED Driver

42W(CC) Output

RGBW Full Color



HBEW8040

## Key Benefits

- Protective features (short-circuit, overload, open-circuit)
- Logarithmic dimming and linear dimming modes
- Customized rhythm light curve, suitable for hotel, supermarket applicataion
- Insulated terminal cover with cord restraint
- Wireless configuration via koolmesh app

## Main Functions



RGBW, xyY, and DUV color light settings

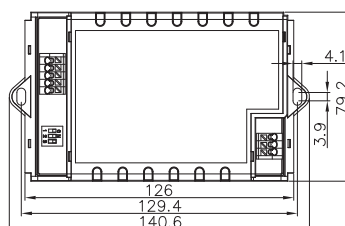
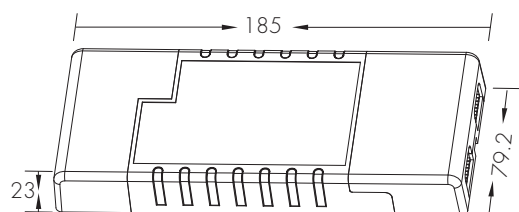


(CC) output via DIP switch



PWM 1KHz (1-100%)

## Mechanical Structure (unit: mm)



## Technical Specifications

Designation	Operating Voltage	Input Current	Input Power	Efficiency	Uout Max.	Output Voltage	Output Power
HBEW8040	220~240VAC 50/60Hz	210~190mA	45W	88% (Max.)	60V	15~40V	5~42W
Output LED Power / Current / Voltage							
5.25-14W/350mA/15-40V 7.5-20W/ 500mA/15-40V		9-24W/ 600mA/15-40V 10.5-28W/ 700mA/15-40V		12-32W/ 800mA/15-40V 13.5-36W/ 900mA/15-40V		15-40W/ 1000mA /15-40V 15.75-42W/1050mA/15-40V	

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# Bluetooth ↔ DALI RGBW Converter

DALI Output



HBT8200D/RGBW

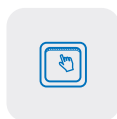
## Key Benefits

- Enable wireless functionality for DALI lighting solution
- DALI broadcast output, I max: 100mA
- Support 2 independent push - button inputs for free configuration
- Enables RGBW colors tuning and scenes via Koolmesh app
- Support D4i driver and collect energy, fault and diagnostics data
- Typical installation in a wall junction box

## Main Functions



DALI Broadcast Output



2 Push



Short-circuit protection



Overload protection

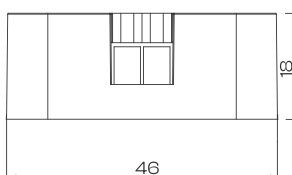
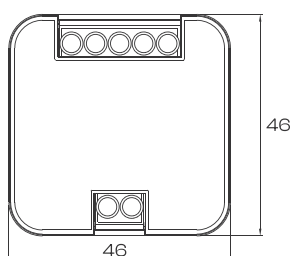


Supports D4i & DT8 LED Drivers



RGBW, xyY, and DUV color light settings

## Mechanical Structure (unit: mm)



## Technical Specifications

Designation	Operating Voltage	DALI Power Supply	Push Switch
HBT8200D/RGBW	220~240VAC 50/60Hz	I guaranteed: 80mA I max: 100mA U rated: 15VDC	2 Push inputs

\*Please always check the latest datasheet for technical requirements-----<http://hytronik.com>

# RGBW Bluetooth Dimmer

CV Dimmer

4 CH



CV NEW



HBT8200PWM

## Key Benefits

- Achieves independent output control for 12/24V lamps via 4-channel MOSFETs
- Up to four channels making it an ideal partner for RGBW and tunable white (TW) applications
- Design for constant voltage LED loads, such as LED strips and constant voltage LED modules
- Wireless configuration via Koolmesh app

## Main Functions

CV

Constant voltage

PWM

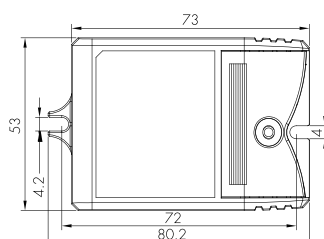
PWM 1KHz (1-100%)


RGBW, xyY, and DUV  
color light settings

Short-circuit  
protection

Open-circuit  
protection

## Mechanical Structure (unit: mm)



## Technical Specifications

Designation	Output	Operating Voltage	Output Current	Efficiency	Stand-by Power
HBT8200PWM	PWM 4CH 144 W @ 24 VDC	12-24 VDC	6A (Max.)	90% (Max.)	< 0.5W

\*Please always check the latest datasheet for technical requirements-----<http://hytronik.com>



# Bluetooth ↔ DALI RGBW Converter



Dimmer & Sensor Combo

DALI Output

 **NEW**



HCD038/BT/RGBW

## Key Benefits

- Upgrade DALI RGBW Driver to wireless Bluetooth control
- Support D4i Driver and collect energy, fault and diagnostics data
- Plug-and-play sensor head for motion & daylight detection
- Multiple sensor options: HF / PIR, low-bay to mid-bay
- Compact design for easy in-fixture integration
- Wireless commissioning via Koolmesh app

## Optional Accessories

FPC (Flexible Antenna)



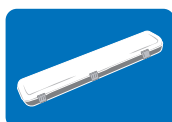
## Where it Fits



LED Panel



Bulkhead



Tri-proof



Pendant

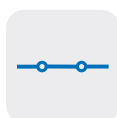


Linear

## Main Functions



DALI broadcast output



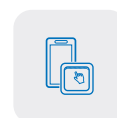
Short-circuit protection



Overload protection

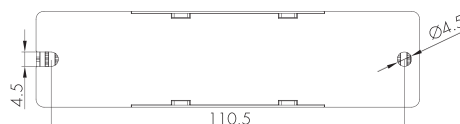
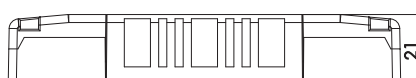
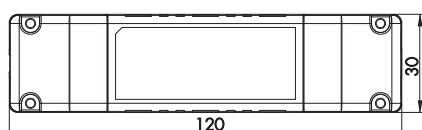


Supports DT6 & DT8 LED Drivers



Up to 4 Push function

## Mechanical Structure (unit: mm)








## Technical Specifications

Designation	Operating Voltage	DALI Power Supply	Stand-by Power	Push Switch
HCD038/BT/RGBW	220~240VAC 50/60Hz	DALI BUS I max: 80mA U rated: 16VDC I guaranteed: 30mA	<1W	2

## Non-Bluetooth Plug-and-Play Sensor Antenna

**+ Free Combination!**

Designation	Detection Technology	Key Features	Daylight Sensor	Dimensions (L x W x H mm)	Tunable White Control	Pro-active Lux Switching	Install Height	IP Rate
 HIR05	PIR	Tri-level Dimming Daylight Harvest Circadian Rhythm Surface mount	Photocell	39.5 x 30 x 26.2	✓	Active Lux Switching	Low-bay max. 3m	IP20
 HIR05/FM	PIR	Tri-level Dimming Daylight Harvest Circadian Rhythm Flush Mount	Photodiode	Ø 48 x 35.3	✓	Active Lux Switching	Low-bay max. 3m	IP20
 HIR63	PIR	Tri-level Dimming Daylight Harvest Circadian Rhythm Conduit Screws	Photocell	Ø 26 x 31.8	✓	Active Lux Switching	Low-bay max. 3m	IP20
 HIR63/R	PIR	Tri-level Dimming Daylight Harvest Circadian Rhythm Conduit Screws	Photocell	Ø 36 x 43.4	✓	Active Lux Switching	Mid-bay max. 12m	IP65 (lens/ facial part)
 SAM88	HF	Tri-level Dimming Surface mount	Photodiode	40.4 x 25.2 x 24.3	✓	Active Lux Switching	Height: 3m Range Ø: 12m	IP20

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# HYTRONIK INTERNATIONAL

## Hytronik UK:

Unit 3 Tallow Way, Fairhills Industrial Estate, Irlam,  
Manchester, M44 6RJ, United Kingdom  
E-mail: [info@hytronik.com](mailto:info@hytronik.com)

## Hytronik DACH:

Heinrich-Hertz-Straße 15 / 65582 Diez. Germany  
E-mail: [support\\_dach@hytronik.com](mailto:support_dach@hytronik.com)

## Hytronik Asia:

Pude Industrial Park, Dushi Village, Pingtan  
Town, Huiyang District, Huizhou City 516259  
E-mail: [info@hytronik.com](mailto:info@hytronik.com)

## Hytronik SVK & CZE:

Techlum s.r.o (Slovakia, Slovenia) Staré Grunty  
7A 841 04 Bratislava  
E-mail: [info@techlum.sk](mailto:info@techlum.sk)

## Hytronik Iberia & Latam:

Carrer del Moro Zeid, 11, Piso 3, Ciutat Vella,  
46001 Valencia  
E-mail: [support\\_es@hytronik.com](mailto:support_es@hytronik.com)

## Hytronik Finland:

Jaakonkatu 201620 Vantaa FINLAND

E-mail: [myynti@exaktor.fi](mailto:myynti@exaktor.fi)

## Hytronik Sweden:

Sven Källfelts Gata 210 426 71 Västra Frölunda

E-mail: [info@easyform.se](mailto:info@easyform.se)





# One solution that's precise, flexible, and built for tomorrow.



**Bring Any Color to Life – Anytime, Anywhere.**

**Hytronik Bluetooth RGBW Solutions give you precision,  
speed, and creativity in every project.**



**Learn More About RGBW:**

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