

HBTD15/S

Bluetooth Dimmer | DALI Broadcast | Zhaga Book 18 Standard

HYTRONIK[®]
SENSORS & LIGHTING CONTROL



Benefits

Standardized: Zhaga Book 18 design for easy luminaire integration

Reliable: Ensuring stable wireless dimming and tunable white

Efficient: Enabling quick setup via Koolmesh app

Applications

DALI Application

Outdoor/Street lights

Warehouse/ Logistic

Check Out the Complete System Solution on the Website:

<https://www.hytronik.com/product/HBTD15-S>



Product Description

HBTD15S is a Zhaga Book 18 compliant Bluetooth DALI broadcast dimming controller designed for smart luminaires. It enables seamless wireless communication between drivers and luminaires, allowing precise dimming and color tuning without additional wiring, which simplifies installation and enhances the value of each fixture. The controller features an onboard FPC antenna for stable connectivity and supports pairing with standard DALI-2 or D4i drivers. All configuration and commissioning can be quickly completed via the Koolmesh app. With compact design, low power consumption, and robust performance.

Functions and Features

See additional details at the end of datasheet



DALI Broadcast
Output

IP65

IP65 Protection



Koolmesh - See
bluetooth control
below



Photocell
Advance



Tunable White
Control



Zhaga Book 18
Standard

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Specifications

Main Capabilities

Dimming (Output) Interface	DALI/DALI-2
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Electrical Data

Bluetooth frequency	2.4 GHz - 2.483 GHz
Bluetooth range (Phone to Device)	10-30m
Bluetooth transmit power	4 dBm
Bluetooth system	Koolmesh
Operating voltage range	12-36 VDC
Input Voltage	9.5-22.5V
Warming-up	20 s
Current Consumption	2mA

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Specifications

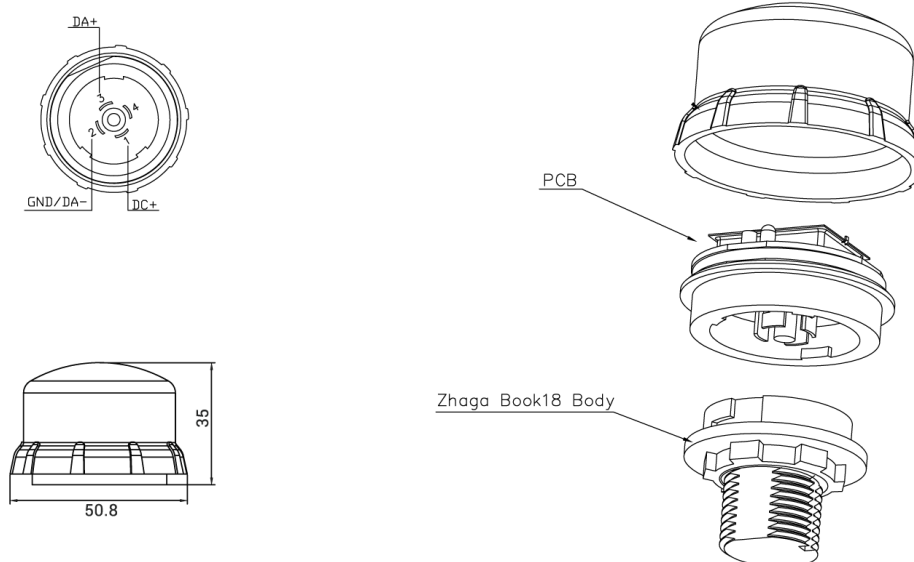
Technical	
Product weight	50.8 g
Product height	35.0 mm
Product length	31.0 mm
Product width	50.8 mm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-35 ~ +55 °C
Humidity max	20 ~ 90%
IP Rate	IP65

Standard	
EMC	EN 55015, EN 61547
LVD	EN 61347-1, EN 61347-2-11, EN 62493
RED	EN 300328, EN 301489-1/-17, EN 50663

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Technical Drawing



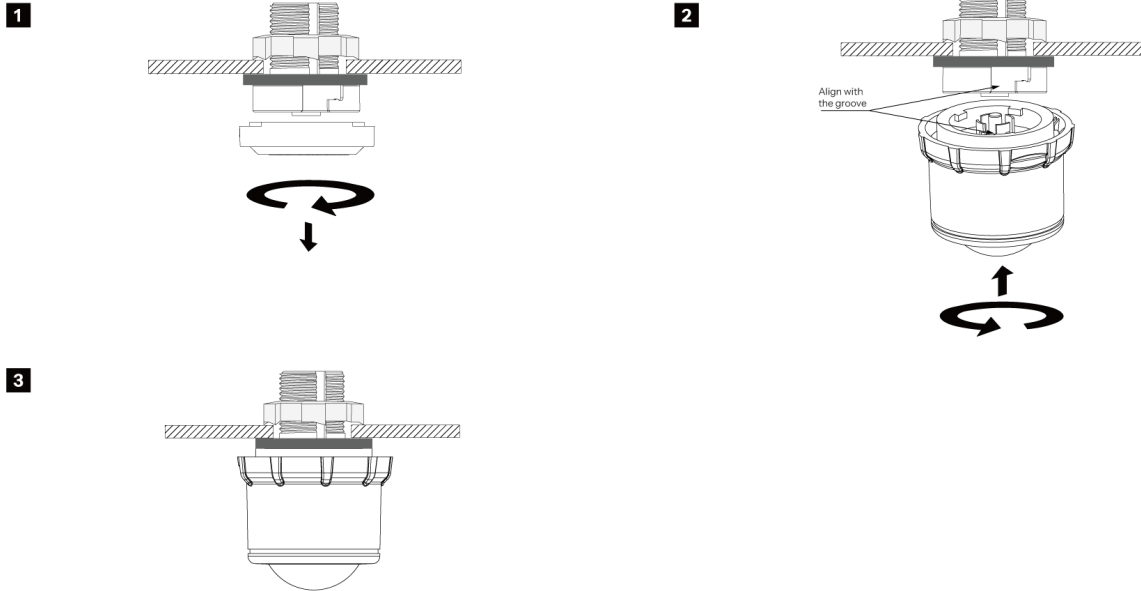
Application Example



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Installation Process



Detailed Installation Instructions

1. Remove the receptacle cap

Unscrew and remove the protective cap from the receptacle before installation.

2. Install the sensor

Align the large groove on the receptacle with the corresponding large protrusion on the sensor. Push the sensor upward firmly until fully seated, then rotate counterclockwise until a clear click is heard. Ensure the sensor cannot be pulled out to confirm it is securely locked.

3. Installation complete

Note:

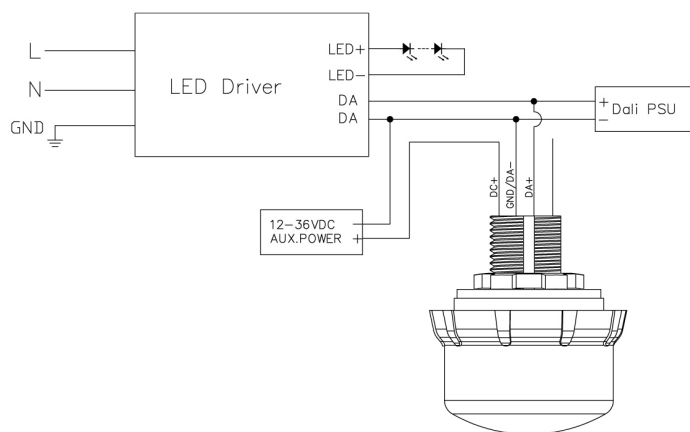
- Any luminaire that complies with the Zhaga Book 18 standard allows plug-and-play connection by simply mating the pins with the base.
- Socket not included, it must be supplied by the customer or purchased separately.

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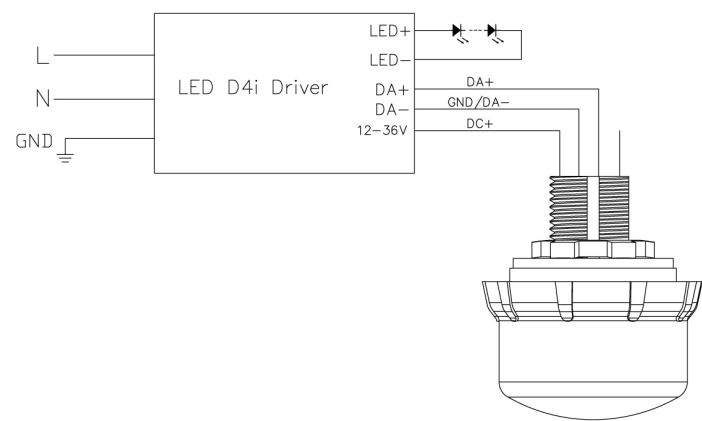
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Wiring Diagram

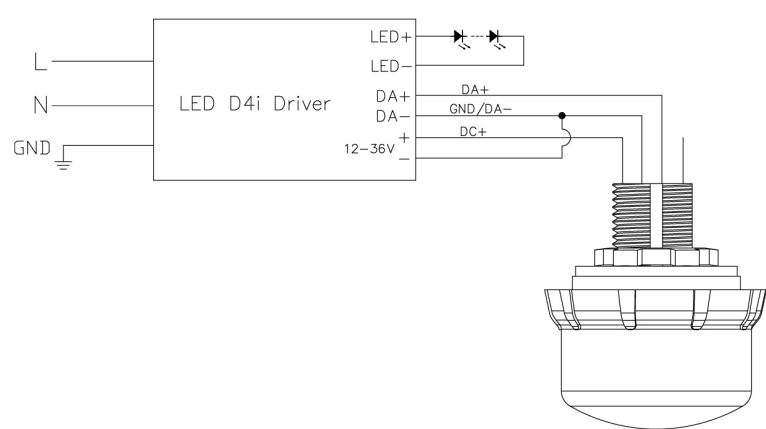
Standard Driver with External AUX & PSU



Standard Driver with Common Negative



Di Driver with Isolated Negative



Commissioning Instructions and Precautions

A. Installation Notes

1. This product should be installed by a qualified electrician.
2. Terminal block 4 is left unpopulated by default. No wiring required.
3. To ensure optimal performance and long-term stability, we recommend installing the product in a downward-facing orientation within the fixture. This setup minimizes direct exposure to sunlight and helps maintain ideal operating conditions for reliable and lasting use.

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

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

Dimming Interface Operation Notes

The Virtual Push interface provides a software-based dimming control method without the need for a physical wall switch. Push functions are simulated via the Koolmesh app, where detailed push behaviors and parameters can be flexibly configured.

Note: Single press, double press, and press-and-hold actions can each be independently assigned to one function via the app. Once configured, each action triggers only its assigned function. Multiple functions cannot be activated by a single press action.

Switch function	Action	Descriptions
Virtual- Emergency Self-Test Function	Single press (>0.1s) Double press	• Disable • Function test • Duration test • Erminated test
Virtual-Normal PUSH (Retractive Switch)	Single press (>0.1s) Double press Press and hold (>=1s)	• ON/OFF • OFF only • Recall this scene • Sensor take over • Not in use

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Options

Compatible products (for full functionality)



HA18SKT

Receptacle | Zhaga Book 18 Standard | Black Color

www.hytronik.com/product/HA18SKT

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Koolmesh - Operating guide

Bluetooth 5.0 SIG Mesh



Smartphone(ios)



Smartphone (Android)



iPad



Web

For additional information, including project and network, device, and scenes, please refer to: <http://faq.koolmesh.com/>

Shared Koolmesh App Features

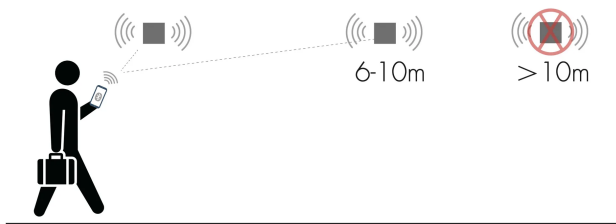
- | | |
|--|---|
|  Alert for excess lux / temperature / humidity via multi-meter HBLM01 |  Koolmesh Pro iPad for on-site configuration |
|  Astro timer (sunrise and sunset) |  Network sharing via QR code or keycode |
|  Bulk commissioning (copy and paste settings) |  Offline commissioning |
|  Compatible with Shelly energy metering |  One-key device replacement |
|  Continuous development in progress... |  Quick setup mode & advanced setup mode |
|  Device firmware update over-the-air (OTA) |  Remote control via Hytronik gateway & touch screen HPAD-TSJASE1 |
|  Device social relations check |  Scenes |
|  Different permission levels via authority management |  Schedule |
|  Floorplan feature to simplify project planning |  Staircase function for quick setup |
|  Grouping luminaires via mesh network |  Test mesh network connection quality |
|  Internet-of-Things (IoT) featured |  Web platform for project deployment & data analysis |

Device-specific Koolmesh App features

- | | |
|--|---|
|  Compatible with EnOcean kinetic switches |  Push switch configuration |
|--|---|

Smart Phone to Device Range

1. The smart device with the installed App typically has a range of 10m, which may vary between devices.
2. During the commissioning process, the installer must be within range of the devices while searching for them to add to the network.
3. Once the devices are added to the network via the App, they will begin communicating within the wireless mesh.
4. After the network is complete, all devices can be accessed from the smart device within a 20m range of a single point.



Bluetooth Network Components



HBGW02

Bluetooth Mesh Gateway | Ethernet or Wi-Fi 2.4GHz | wall/flat surface mounting
www.hytronik.com/product/HBGW02



HBGW02/D

Bluetooth Mesh Gateway | Dual-band Wi-Fi | wall/flat surface mounting
www.hytronik.com/product/HBGW02-D



HBGW03/R

BACnet Gateway | Dual-band Wi-Fi or Ethernet | DIN rail/wall/flat surface mounting
www.hytronik.com/product/HBGW03-R



HBKS01/W

Bluetooth Kinetic Switch | One-gang | Wireless Control
www.hytronik.com/product/HBKS01-W



HBKS01D/W

Bluetooth Kinetic Switch | Single Rocker | White Color
www.hytronik.com/product/HBKS01D-W



HBKS02/W

Bluetooth Kinetic Switch | Two-gang | White Color
www.hytronik.com/product/HBKS02-W



HBKS02D/W

Bluetooth Kinetic Switch | Double Rocker | White Color
www.hytronik.com/product/HBKS02D-W



HBKS03/W

Bluetooth Kinetic Switch | Three-gang | White Color
www.hytronik.com/product/HBKS03-W



HBLM01

Multi-meter | Bluetooth & NFC | Lux Measurements
www.hytronik.com/product/HBLM01



HPAD-TSJASE1

Bluetooth Touch Tablet | Gateway Integrated | Switch Boxes
www.hytronik.com/product/HPAD-TSJASE1

Functions and Features



DALI Broadcast Output

This product supports DALI broadcast output, allowing control commands to be sent simultaneously to all devices on the DALI bus without individual addressing.

This enables simple group control, synchronized operation, and fast commissioning within a DALI lighting system.

IP65

IP65 Protection

This product features an IP65-rated enclosure, providing complete protection against dust ingress and low-pressure water jets to ensure reliable operation in demanding indoor and outdoor environments. The robust environmental sealing supports long-term stability and consistent performance in applications such as warehouses, parking areas and industrial facilities.



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.



Tunable White Control

Tunable White Control allows smooth adjustment of light colour temperature to create comfortable and adaptable lighting environments. By enabling dynamic white light changes throughout the day, it supports visual comfort and user wellbeing while helping improve energy efficiency in artificially lit spaces. With a simple and decentralised control approach, it provides a flexible solution for applications such as offices, schools, and healthcare environments where adjustable white light is required.



Zhaga Book 18 Standard

This product complies with the Zhaga Book 18 standard, providing a standardised mechanical, electrical and digital interface for indoor and outdoor luminaires, including high-bay and exterior applications. It enables plug-and-play interchangeability of sensor and connectivity modules, ensuring interoperability, future-ready upgrades and reliable operation in demanding installation environments.

Check out for further explanation of features

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