HBTD8200D

Bluetooth-to-DALI Converter | Integrated 80mA PSU| Wall Junction Box



Benefits

Compact: Enabling easy junction box installation

Smart: Converting Bluetooth control to DALI lighting

Flexible: Allowing push switch & app setup

Applications

DALI Application

Bluetooth receiver node

Offices, Classrooms

Check Out the Complete System Solution on the Website:
https://www.hytronik.com/product/HBTD8200D

Product Description

HBTD8200D is a compact Bluetooth-to-DALI control module that brings smart Bluetooth Mesh commissioning and control to DALI luminaires via the Koolmesh system. Designed to fit into a junction box or electrical back box, it allows a standard retractive push switch to interface with a DALI system, enabling functions such as dimming, colour tuning, and scene recall. Suitable for both new-build and retrofit projects, it adds intelligent control to conventional lighting installations without replacing luminaires.

Functions and Features

See additional details at the end of datasheet

D4i Data Access Via App

D4i Driver Compatibility

DT6/DT8 Lighting Control

Designed for Junction Box Installation

Koolmesh - See bluetooth contol below

Over load Protection

Push-Button Input

Short-circuit Protection

Specifications

Main Capabilities	
Dimming (Output) Interface	DALI/DALI-2

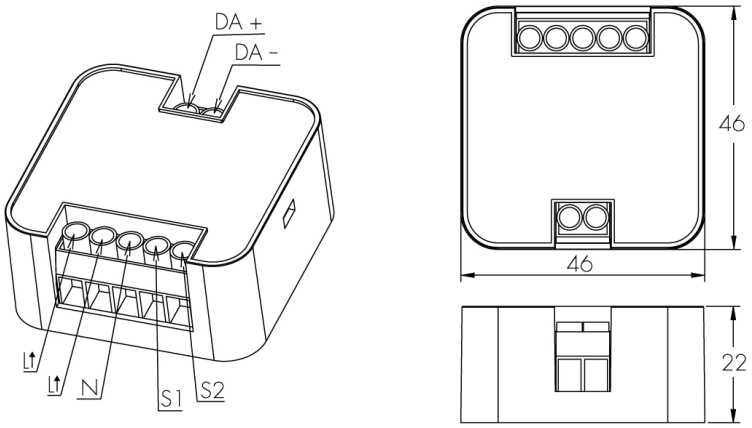
Electrical Data	
Bluetooth Platform	Nordic nRF52832
Bluetooth frequency	2.4 GHz - 2.483 GHz
Bluetooth range	10-30m
Bluetooth transmit power	4 dBm
Bluetooth system	Koolmesh
Operating Voltage	220-240 VAC 50/60 Hz
Stand-by power (Psb)	<0.5W
DALI bus maximum rated current (I_n max)	100 mA
DALI bus nominal DC voltage range (Un)	15 V
DALI bus nominal current (I guaranteed)	80 mA

Specifications

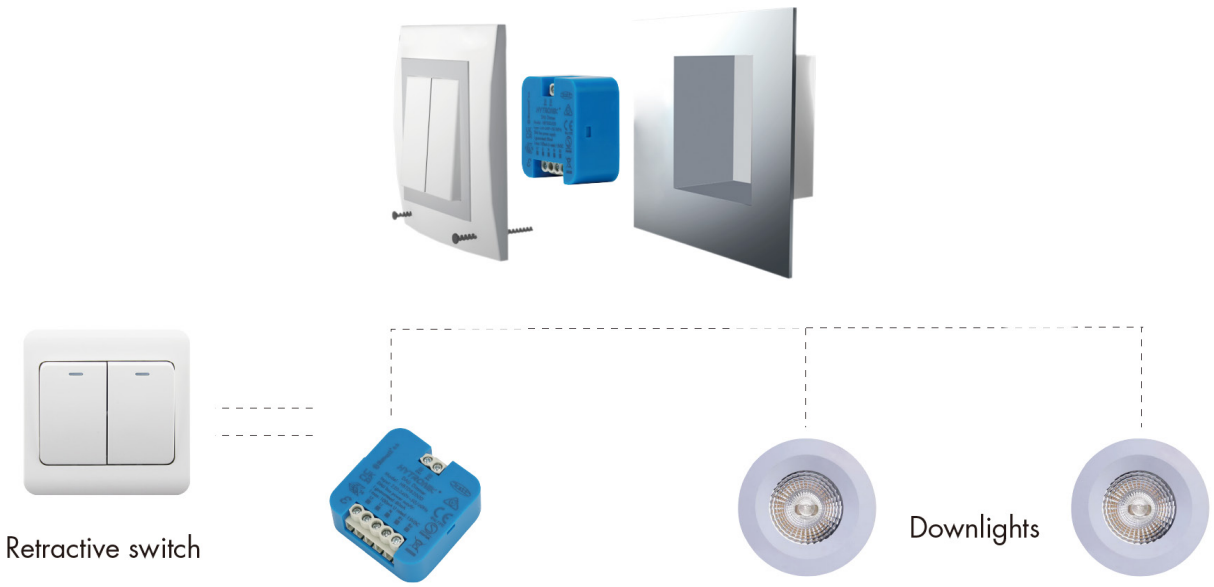
Technical	
Product weight	35.0 g
Product height	22.0 mm
Product length	46.0 mm
Product width	46.0 mm
Ambient temperature	-20 ~ +45℃
Storage temperature	-40 ~ +70℃
Humidity max	10 ~ 90%
Case Temp.max	75.0℃
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61000-3-2, EN61000-3-3, EN 61547
LVD	EN 61058-2-1
RED	EN 300328, EN 301489-1/-17, EN 50663

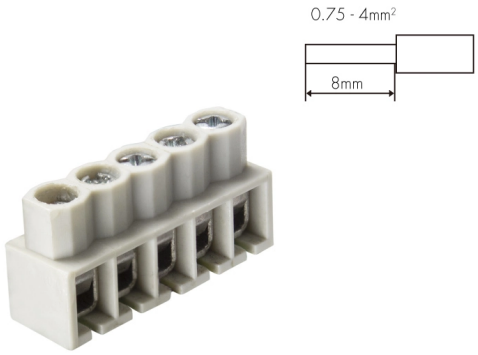
Technical Drawing



Application Example

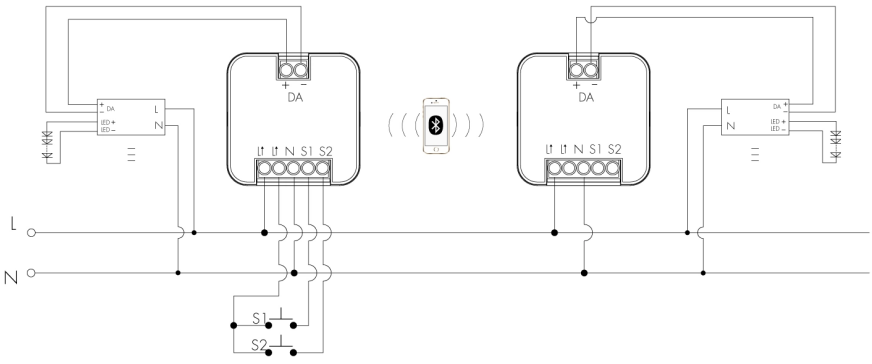


Wire Preparation



Use a Phillips screwdriver to loosen or secure the cable at the contact screw connections. 1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C) 2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

Wiring Diagram



Commissioning Instructions and Precautions

A. Installation Notes

1. This product should be installed by a qualifed electrician.

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 provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Detailed Push switch configurations can be set on Koolmesh app.

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
Fire Alarm Function	Refer to https://support.koolmesh.com/	• Able to connect the Fire Alarm system • Once the fire alarm system is triggered, all the luminaries controlled by the Push Switch will enter the preset scene (normally it's full on), after the fire alarm system gives the ending signal, all the luminaries controlled by this Push Switch will revert back to normal status.
ON OFF Switch (Latching Switch)	/	• Upgrade a standard on/off control to Bluetooth control, enabling one latching switch to control multiple luminaires or zones, reducing wiring and switch count.
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
Sensor-Link	/	• Hold time/scene • Stand-by time/scene • Upgrade a normal on/off motion sensor to a Bluetooth-controlled motion sensor

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/faq/en/index.html

Shared Koolmesh App Features

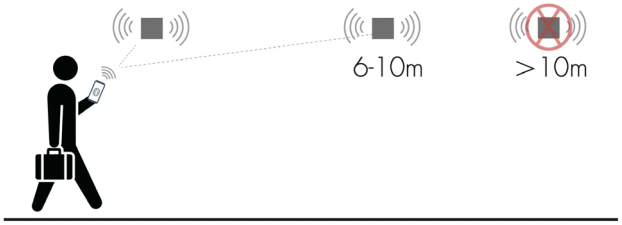
- Alert for excess lux / temperature / humidity via multi-meter HBLM01
- Astro timer (sunrise and sunset)
- Bulk commissioning (copy and paste settings)
- Compatible with Shelly energy metering
- Continuous development in progress...
- Device firmware update over-the-air (OTA)
- Device social relations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

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.

D4i Driver Compatibility

Designed to operate with D4i-certified drivers within D4i luminaires, supporting standard DT6 / DT8 control behaviour in D4i systems.

DT6 / DT8 Lighting Control

Supports DT6 (single-channel dimming) and/or DT8 (tunable white / colour) lighting control via DALI, enabling brightness and colour temperature adjustment based on control logic such as occupancy or daylight.

Designed for Junction Box Installation

This product is designed for installation inside a standard junction box, offering a clean and integrated mounting solution for lighting control applications. The compact design allows secure fitting and straightforward wiring within the junction box, simplifying on-site installation while ensuring reliable electrical connections for both new installations and retrofit projects.

Over load Protection

This product incorporates overload protection that limits or disables the output when the connected load exceeds the rated capacity. This protection helps prevent overheating, excessive component stress and unstable operation, ensuring safe and reliable system performance.

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.

Short-Circuit Protection

This product incorporates short-circuit protection that automatically disables the output in the event of a short circuit. Normal operation is restored automatically once the fault condition is removed, protecting the device and connected components from damage.

Check out for further explanation of features

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