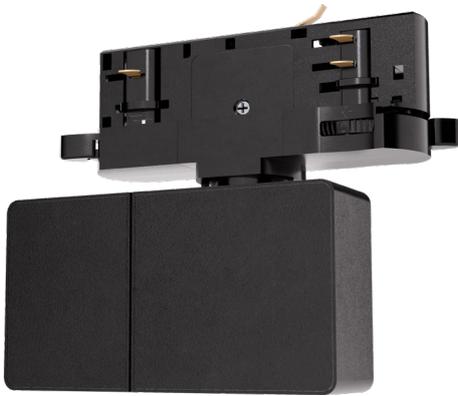


HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V



Benefits

Compact: Enabling plug-in Bluetooth dimming for track systems

Smart: Providing wireless 0/1–10V dimming for lighting upgrades

Flexible: Allowing wireless setup and parameter adjustment via app

Applications

Designed for Global, and Powergear track systems

Offices, Retail stores, Warehouse

Museums, Galleries

Check out the complete system solution on the website:

<https://www.hytronik.com>



Product Description

HBTD54V/N is a Bluetooth 0/1–10V dimmer for track lighting systems, enabling wireless dimming control and smart lighting upgrades. It is compatible with tracks system and supports independent or grouped control of three circuits, with simple plug-in installation and no additional wiring required. With Bluetooth Mesh technology, luminaires can communicate wirelessly, and all parameters can be easily configured via the Koolmesh app for fast and intuitive commissioning.

Functions and Features

See additional details at the end of datasheet



Koolmesh (See
bluetooth contol below)



0/1-10V dimming



Shortcircuit Protection

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Specifications

Main Capabilities

Dimming (Output) Interface	0/1-10V
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Electrical Data

Bluetooth frequency	2.4 GHz - 2.483 GHz
Bluetooth transmit power	4 dBm
Bluetooth range	10-30 m
Bluetooth system	Koolmesh
Operating voltage	220-240VAC 50/60Hz
0/1-10V Sink	50mA Max.
Source	1mA Max.
Stand-by power	<0.5W

Technical

Operation temperature	Ta: -20°C ~ 45°C
Storage temperature	-20°C ~ +60°C
Relative humidity	20 ~ 90%
Case temperature (Max.)	Tc: +75°C
IP rating	IP20

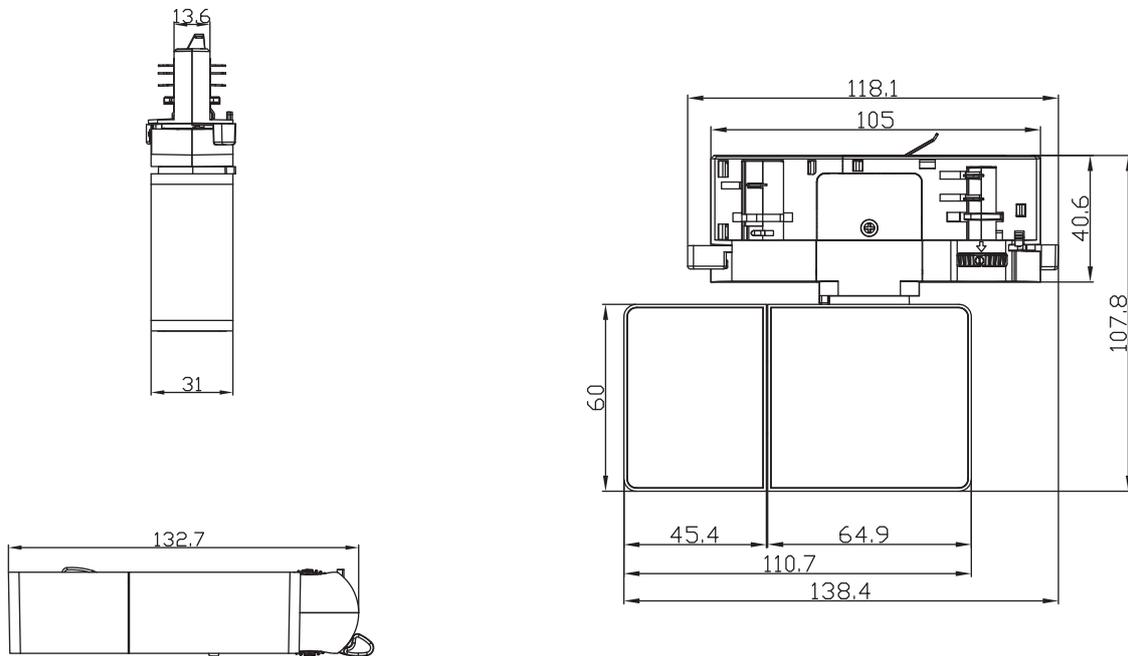
Standards

EMC	EN IEC 55015, EN IEC 61547, EN IEC 61000-3-3/-3-3
LVD	EN61347-1/-2-11, EN60570-1
RED	EN300 328, EN301489-1/-17, EN50663
Certification	CE , UKCA

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Technical Drawing



Picture Application Example



HBTD54V/N

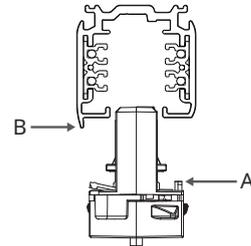
Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Installation Process

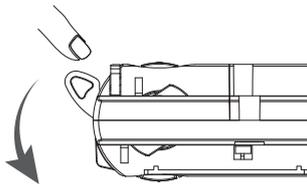
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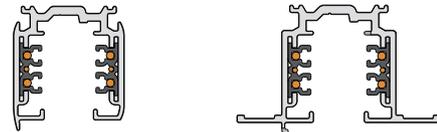
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3



4



GLOBAL

GLOBAL

Detailed Installation Instruction

A. Set Track Adapter Phase

1. Before inserting into the track, rotate the integrated 3-phase dial to set the phase to L1, L2, or L3 for single luminaire distribution in the track system.

B. Insert into Track

2. Align the track adapter with the track rail, ensuring A and B are correctly offset, then insert the device vertically into the track slot.

C. Lock the Device

3. Rotate the cam lever until it reaches the locking position and the device is firmly secured in the track.

D. 6 Wires Track System Compatibility

4. 6 Wires 3 circuits track adaptor is universal compatible.

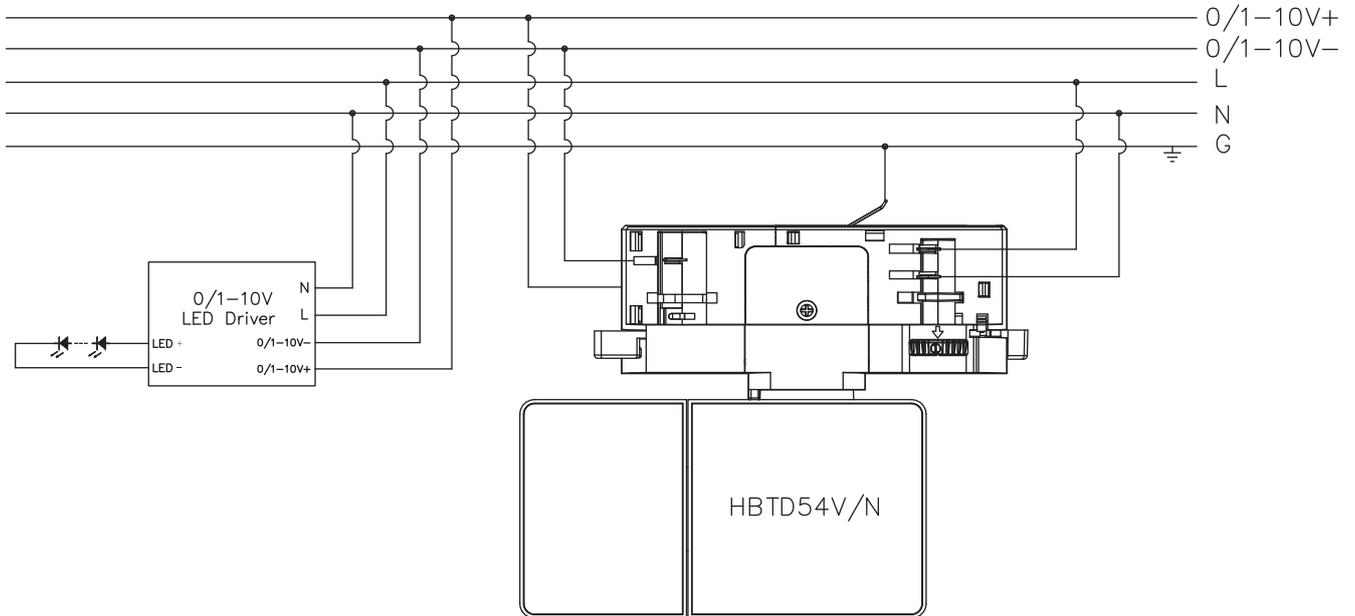
It works with the following brand tracks: GLOBAL

Note: Compatibility means the track adaptor is designed to fit the current track specifications of these brands. However, compatibility cannot be guaranteed if the track manufacturers change their track dimensions or specifications in the future.

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Wiring Diagram



HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Commissioning Instructions and Precautions

A. Installation Preparations

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

B. Wiring Precautions

1. Ensure the track power is disconnected before installation or removal of the device

Warning: For additional important documents, including installation precautions, product guidelines, and guarantee conditions, please refer to <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
Normal push (retractive switch)	Single press (> 0.1s) Double press Press and hold (\geq 1s)	<ul style="list-style-type: none">• ON/OFF• OFF only• Recall this scene• Sensor take over• Not in use
Emergency self-test function	Single press (> 0.1s) Double press	<ul style="list-style-type: none">• Disable• Function test• Duration test• Terminated test

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

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

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

Device-specific Koolmesh App features

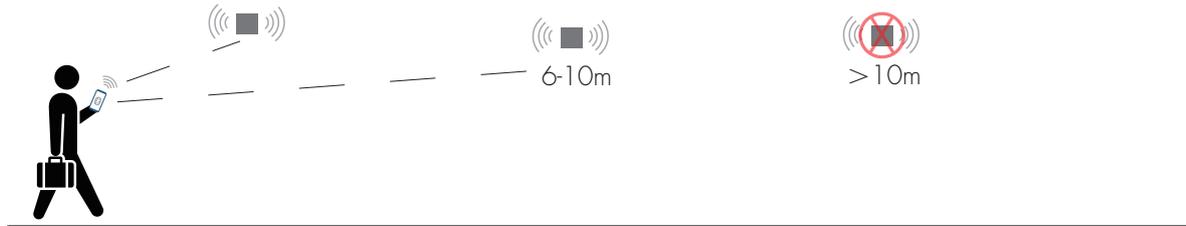
- Compatible with EnOcean kinetic switches

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

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 Dual-band Wi-Fi 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 DIN rail/wall/flat surface mounting Remote access/monitoring www.hytronik.com/product/HBGW02		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		HBKS01/W Bluetooth Kinetic Switch One-gang White Color 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
	Switch (EnOcean) - HBES01/B Bluetooth Kinetic Switch Single Rocker White Color www.hytronik.com/product/HBES01/B		Switch (EnOcean) - HBES01/W Bluetooth Kinetic Switch Three-gang White Color www.hytronik.com/product/HBES01/W

HBTD54V/N

Bluetooth Dimmer | 6 Wires 3 Circuits | 0/1-10V

Functions and Features

5-year Warranty



All Hytronik products are supplied with a 5-year warranty covering defects in materials and workmanship, applicable to electronic control gear manufactured and supplied by Hytronik and valid for the original purchaser only. The warranty is non-transferable, and compatibility with external components and system integration remain the responsibility of the luminaire or system manufacturer. A universal warranty policy is provided with support through Hytronik's regional offices or authorised partners worldwide, regardless of purchase location, with a 24-hour response policy for all warranty claims. The full warranty terms are available upon request or on our website.

0/1-10V Dimming Output



The product provides a 0/1-10V analog dimming output compatible with both 0-10V and 1-10V dimmable LED drivers. It delivers smooth, proportional dimming control across the full usable range of each driver type, ensuring stable performance and broad system compatibility in commercial and industrial lighting applications.

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>