

## Dimmer With Bluetooth® Wireless Technology

Socket mounting: HBTD8200D HBTD8200V HBTD8200T HBTD8200S  
 Fixture mounting: HBTD8200D/F HBTD8200V/F HBTD8200T/F HBTD8200S/F

### Applications

The freedom of wireless mesh networks configured by smartphone APP's considerably changes the approach to connected lighting controls. Hytronik has designed such lighting controls using Bluetooth® 4 wireless mesh technology to support the functional demands of most commercial and domestic applications:

- Office / Commercial Lighting
- Domestic Homes

#### HBTD8200D(/F) DALI Digital Wireless Dimmer

Using the DALI protocol in 'broadcast' mode provides support for modern LED lighting fixtures. The built-in DALI power supply can support up to 50 lighting points with flicker-free operation when used with quality DALI LED drivers, such as the Hytronik Premium DALI range.

#### HBTD8200V(/F) 1-10V Analogue Wireless Dimmer

This version is provided to support the use of 1-10V analogue dimmable lighting fixtures which are still widely used in LED lighting controls today. This model also features a relay capable of switching 300VA and can be used as a simple 'wireless switch' if dimming is not required.

#### HBTD8200T(/F) 150W Trailing Edge Wireless Dimmer


















The device adds intelligent control to most domestic lamps which are designed to be dimmed using traditional trailing edge triac dimmers, this version is suitable for retrofit or new-build / refurbishment projects.

#### HBTD8200S(/F) 300VA On/off Wireless Switch

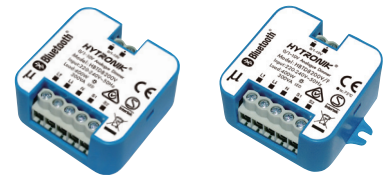
Designed for cost-effective intelligent control of fixed output luminaires, however this versatile device maybe used to add automation to any appliance which requires simple mains control.

All models support 2 manual retractive (non-latching) switch inputs to provide manual operation of the lighting. The free to download and use App provides the user with automated control functions as well as the ability to set up the points in logical groups to create scenes.

### Features

-  100mA broadcast DALI output (DT8) for up to 50 LED drivers per node.
-  1-10V output control option - also can be used for on/off relay control
-  150VA trailing edge output version.
-   Free smartphone (iOS and Android) App for set-up and commissioning:
  -  Scene control
  -  Holiday mode (not /F models)
  -  Scheduling
  -  Bio-alarm (not /F models)
  -  Push switch configuration: recall scene / external motion sensor compatible
  -  Astro timer
-   2-input Switch-Dim for simple manual control and scene recall
-  Short circuit protection
-  Over-load protection
-  Permanent settings memory, protected against loss of power
-  5 Year, 50,000hr warranty

# HYTRONIK®



Socket mounting      Fixture mounting

#### DALI / 1-10V Version



Socket mounting      Fixture mounting

#### Trailing Edge / On-off Version

Free smartphone App for set-up and commissioning



Compatible with iOS 9.0 or later

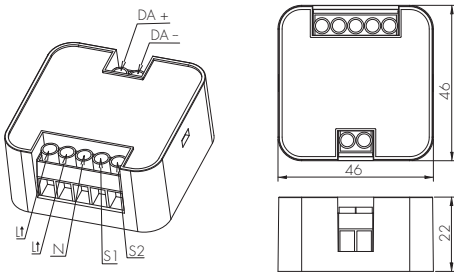


Compatible with Android 5.0 or later

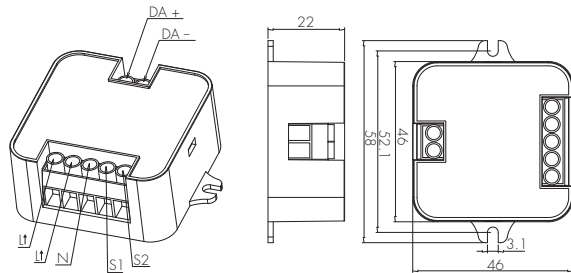
## Dimensions and Terminals

### DAI Version

Socket mounting HBTD8200D

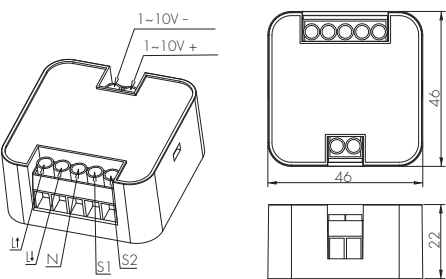


Fixture mounting HBTD8200D/F

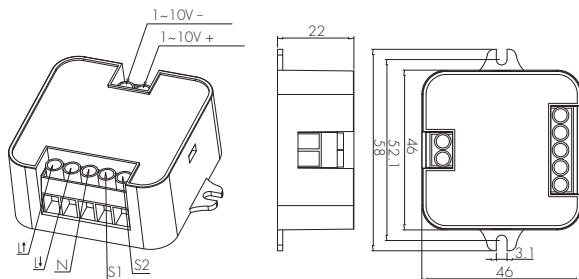


### 1-10V Version

Socket mounting HBTD8200V

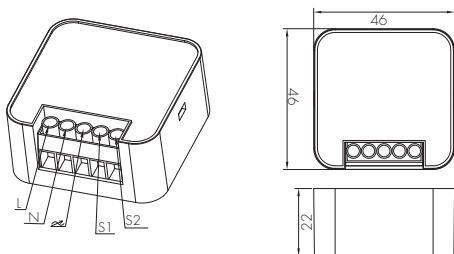


Fixture mounting HBTD8200V/F

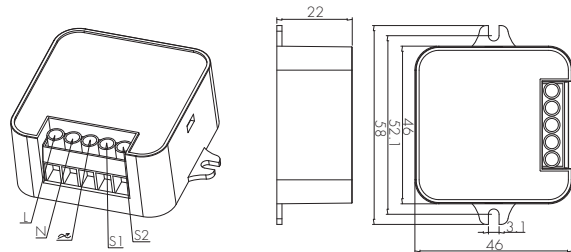


### Trailing Edge Version

Socket mounting HBTD8200T

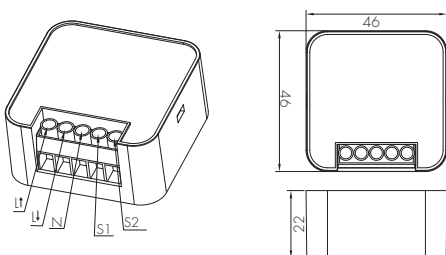


Fixture mounting HBTD8200T/F

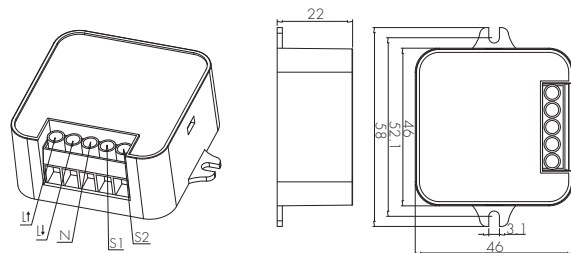


### On/off Version

Socket mounting HBTD8200S



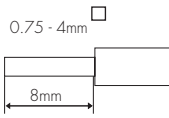
Fixture mounting HBTD8200S/F



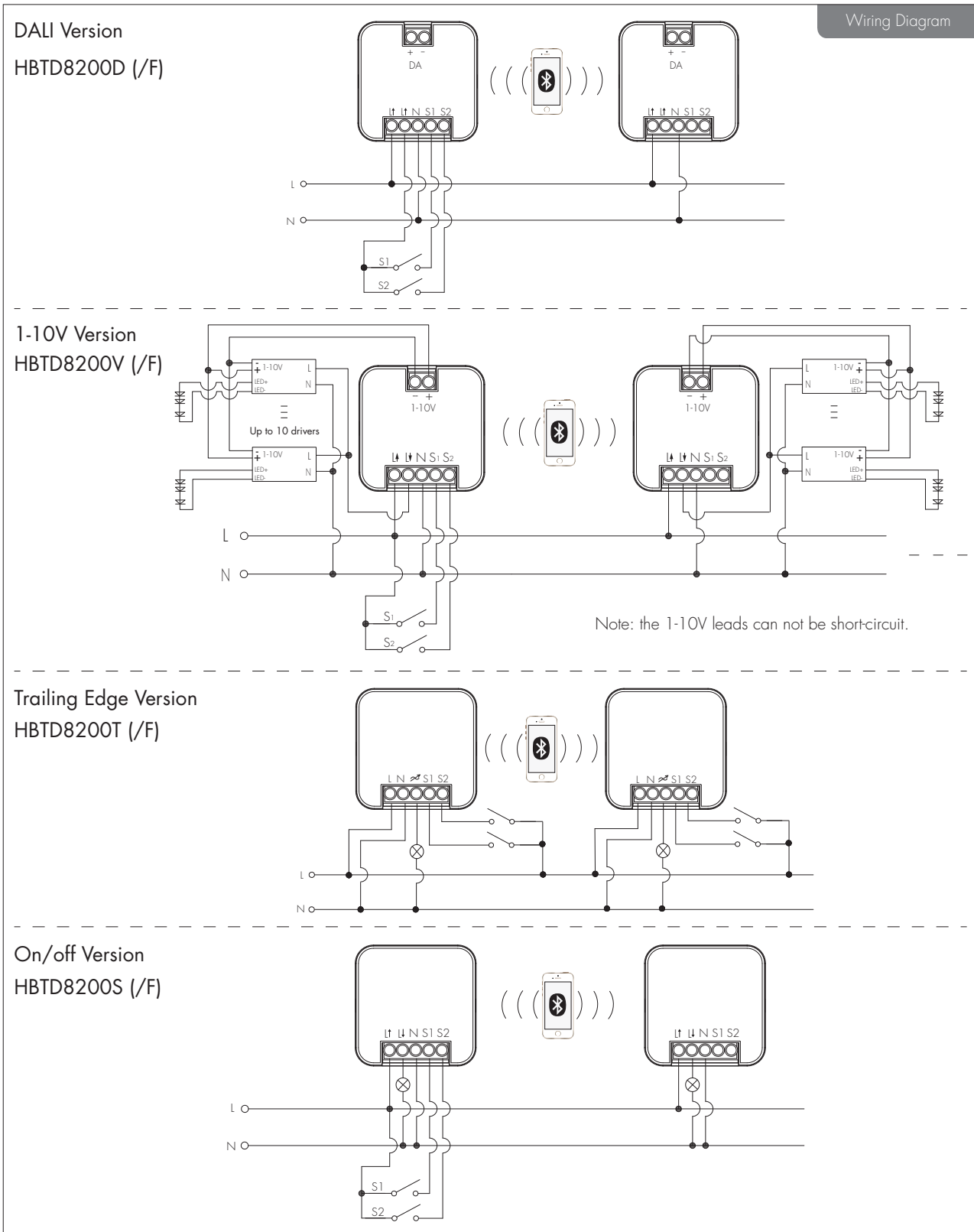
## Wire Preparation




Rising clamp terminal.



To make or release the wire from the terminal, use a screwdriver to push down the button.



## Technical Data For Transceiver Node (Common Data)

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	7 dBm
Range (Typical indoor)	15~30m
Protocol	 Bluetooth® 4 Wireless Mesh

Safety and EMC (Common Data)	
EMC standard (EMC)	EN55015, EN61547 EN62479, EN61000
Safety standard (LVD)	IEC/EN 61058, AS/NZS 61058
Radio Equipment (RED)	EN300 328, EN301 489, EN62479
Certification	Semko, CB, CE, EMC, RED, RCM

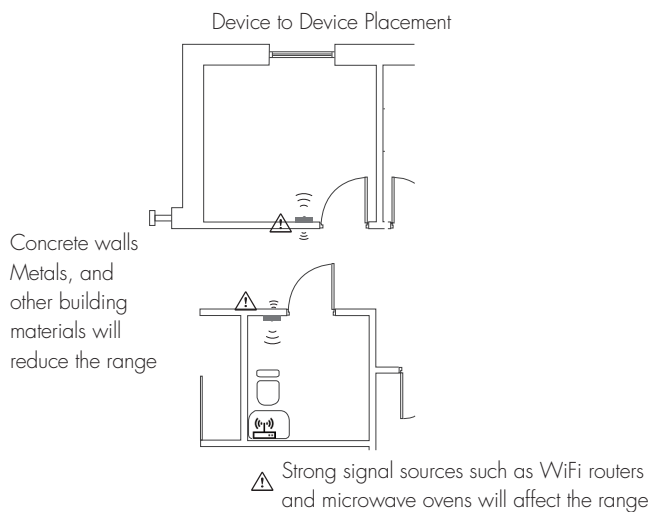
Input/Output Characteristics	
Mains voltage	220~240VAC 50/60Hz
Stand-by power	<0.5W
Load ratings:	
HBTD8200V (/F)	300VA (capacitive), 400W (resistive)
HBTD8200D (/F)	100mA, 16VDC (max. 50 devices)
HBTD8200T (/F)	1-1.50VA (Capacitive) / 1-1.50W (Resistive)
HBTD8200S (/F)	300VA (Capacitive) / 400W (Resistive)

Environment	
Operation temperature	Ta: -20°C ~ +50°C
Case temperature (Max.)	Tc: +75°C
Storage temperature	-20°C ~ 50°C
Relative humidity	20 ~ 90%
IP rating	IP20
Insulation	Class II

## Placement Guide and Typical Range

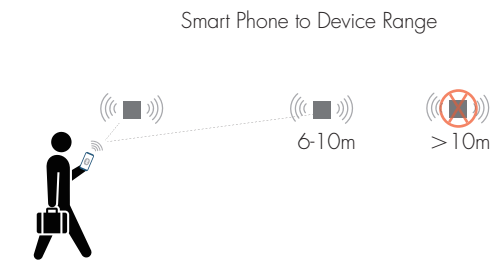
### Network Considerations:

The recommended maximum distance between dimmers is 15m - 30m. Please be aware that building materials such as concrete and sheet steel will effect the range achievable when installed. Other forms of interference which may affect the range include WiFi routers, microwave ovens and other such sources which emit strong signals should be taken into consideration when installing.



The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

Once the devices have been added to the network via the App, the devices will start communicating within the wireless mesh. This means that once the network is complete, all devices are accessible from the smart device when in a 10m range of a single point.



### Manual Override (S1 & S2 terminals)

The S1 & S2 terminals allow manual controls for the end-user to switch on/off, or adjust the light level (and colour appearance, where supported) by retractive push-switch. Furthermore, by using the binding option in the App, entire groups of fixtures may be wirelessly controlled by a single switch.

- \* Short Push (<1s): permanent on/off function; can also be configured to recall scene selection.
- \* Long Push (>1s): Brightness level adjustment or colour tuning (colour tuning for DALI version only).
- \* Long Push (>1s) for HBTD8200S (/F) only:
  1. Previous state: ON -> long push -> ON  
Previous state: OFF -> long push -> ON
  2. When binding with Hytronik other bluetooth devices, the lights bound will be dimmed and colour tuning.

Notes:

- 1) Both the adjustment on App and push switch can overwrite each other, the last adjustment remains in memory.
- 2) The switch functions are configured in the App.
- 3) The S1 & S2 terminals may be left unconnected if no manual control is required.

## App information

The set-up and functionality of the HBT8200x series is covered in the Interior app user guide.

The set-up and functionality of the HBTD200x /F series is covered in the Sensor app user guide.

Please ensure the correct app is downloaded and installed. The /F models are NOT supported in the Interior app and vice versa.

Further technical details beyond the scope of the user manuals are given below.

### Device settings - Base Settings

A common set-up screen is used for all models, although the base settings available for selection will vary according to the 'type of light' selected when adding the device to the network. The 'type of light' setting will determine which settings can be adjusted.

### Push switch configuration (S1 & S2 terminals)

Both app guides cover fully the push switch configuration.

A 'single click' (short push) is determined in software as depressing the switch for between 0.1 to 0.5 seconds.

When the 'type of light' is configured for both colour tuning and dimming, the double click option shows the availability for 'Circadian rhythm'. This option provides manual re-start of the circadian rhythm profile, should it be interrupted using manual settings. Selecting this option will prompt to set up the circadian rhythm mode if it is not already enabled.

### Simple Human Centric Lighting (HBTD8200D [/F] DALI models only).

This mode requires the connection of DALI DT8 LED drivers used with tunable white luminaires. A dynamic lighting scene can be created which will automatically change brightness and colour of the lamp according to the time of day. The circadian rhythm function can be considered as a 24 hour timer in which the lights may be set to operate at any level of brightness or colour temperature for each hour of the day.

The app guide covers fully the set-up of the circadian rhythm function.