



Product Description














HED8025/BT are Bluetooth dimming and tunable white LED drivers, with maximum power output ranging from 25W. They all come with Switch-Dim interface by using Push switch (retractive switch) and of course Bluetooth dimming interface. It is ideal for direct projects or new luminaires design for lighting manufacturers. With Bluetooth wireless mesh networking, it makes communication between luminaires much easier without time-consuming hardwiring, which eventually saves costs for projects. Meanwhile, simple device setup and commissioning can be done via **Koolmesh**® app.



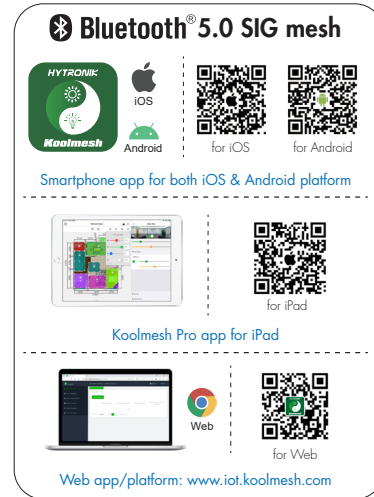
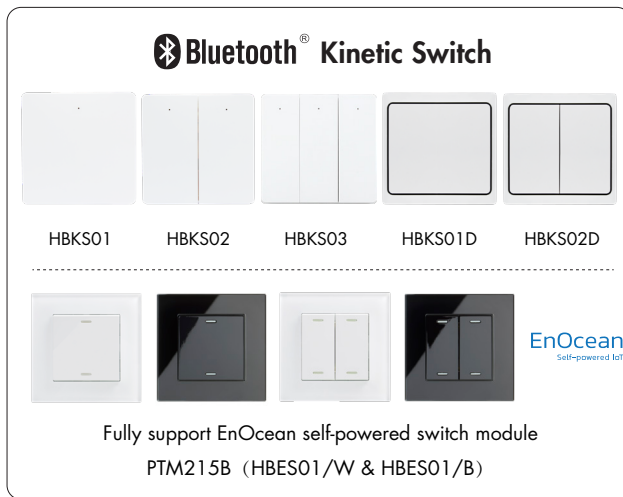
App Features

-  Quick setup mode & advanced setup mode
-  Floorplan feature to simplify project planning
-  Web app/platform for dedicated project management
-  Koolmesh Pro iPad version for on-site configuration
-  Grouping luminaires via mesh network
-  Scenes
-  Detailed motion sensor settings
-  Push switch configuration
-  Schedule to run scenes based on time and date
-  Astro timer (sunrise and sunset)
-  Staircase function (primary & secondary)
-  Internet-of-Things (IoT) featured
-  Device firmware update over-the-air (OTA)
-  Device social relations check
-  Bulk commissioning (copy and paste settings)
-  Power-on status (memory against power loss)
-  Offline commissioning
-  Different permission levels via authority management
-  Network sharing via QR code or keycode
-  Remote control via gateway support HBGW01
-  Interoperability with Hytronik Bluetooth product portfolio
-  Compatible with EnOcean switch EWSSB/EWSDB
-  Continuous development in progress...

Hardware Features

-  Switch-Dim with two Push inputs
-  PWM 1KHz (1-100%)
-  Tunable white
-  Insulated terminal cover with cord restraint
-  Active PFC design
-  Logarithmic Dimming
-  Linear Dimming
-  Configurable constant current (CC) output via DIP switch
-  Loop-in and loop-out terminals for efficient installation
-  Short-circuit Protection
-  Overload Protection
-  Open-circuit Protection
-  5-year warranty

* Certain scenes which require external photocell can be achieved by using together with Hytronik Bluetooth sensors, such as HBIR29, HCD038/BT + sensor head etc.



Output Configuration

HED8025/BT, 1x25W

750mA	● ● ● ●
700mA	○ ● ● ●
600mA	○ ○ ● ●
500mA	● ○ ○ ●
350mA	○ ○ ● ○
300mA	● ○ ○ ○
250mA	○ ○ ○ ○
	1 2 3 4

Warning: Please make sure the correct current is selected before starting the driver!

Technical Specifications

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth® 5.0 SIG Mesh

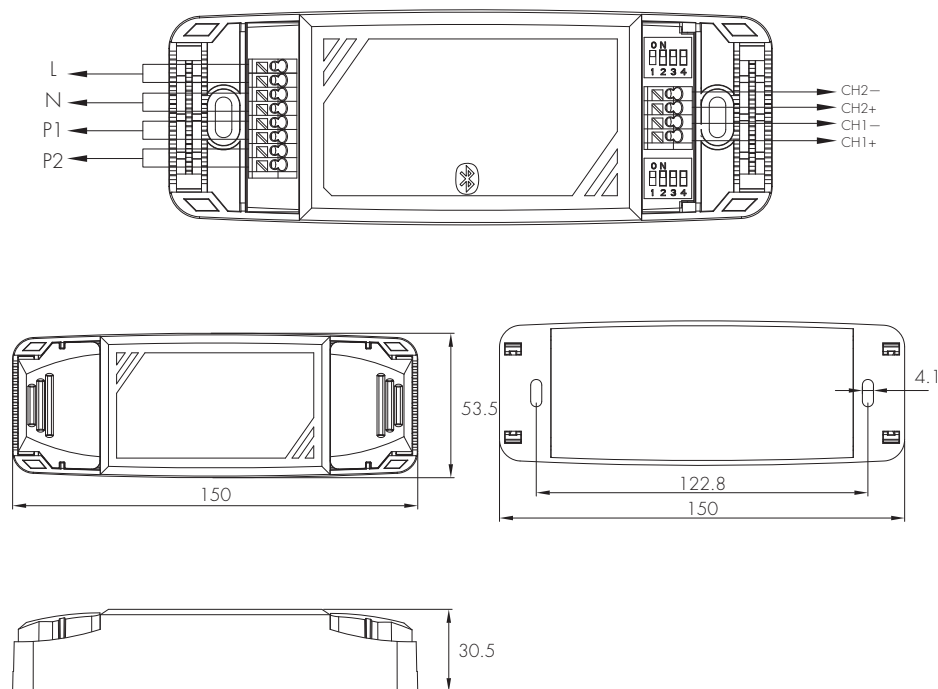
	Model No.	
Input	Mains Voltage	220~240VAC 50/60Hz
	Mains Current	0.135~0.12A
	Power Factor	0.9
	Max. Efficiency	88%
Output	Ripple Current	<3%
	Uout Max.	60V
	Turn-on Time	<0.5s
	Dimming Interface	Switch-Dim
Environment	Operation Temp.	-20 ~ +45°C
	Case Temp. (Max.)	80°C
	IP Rating	IP20

	Model No.	
Safety and EMC	EMC Standard	EN55015, EN61547, EN61000-3-2/-3-3, EN300328, EN301489-1/-17, EN62479
	Safety Standard	EN61347-1, EN61347-2-13
	Dielectric strength	Input→output: 3000VAC / 5mA / 1min
	Abnormal protection	Output short-circuit protection, Overload Protection, Open-circuit Protection

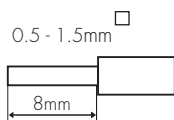
Model No.	Max. output power/current/voltage range			
HED8025/BT	2-13W/ 250mA / 10-52V	3-16W/ 300mA / 10-52V	4-18W/ 350mA / 10-52V	5-25W/ 500mA / 10-50V
	6-25W/ 600mA / 10-42V	7-25W/ 700mA / 10-35V	8-23W/ 750mA / 10-30V	

Mechanical Structure & Dimensions

HED8025/BT, 1x25W

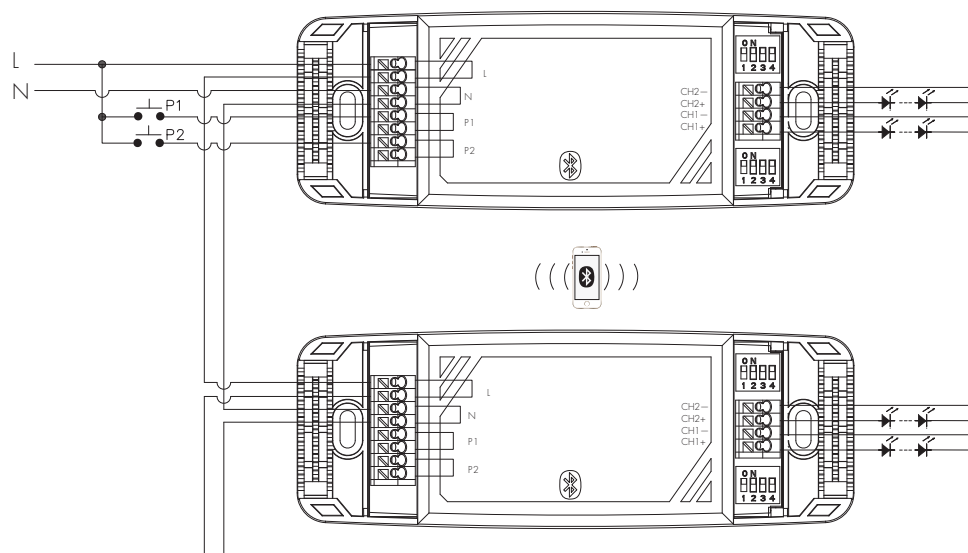


Wire Preparation



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

Wiring Diagram



Note: CH1 & CH2 are working independently, meaning that they cannot be used with luminaires that share "+".
There is no need for any hardwirings on "push" terminal between one driver to another. The installer only needs to connect the push switches to the nearest driver to save labor and cost. The push switches can be assigned to control any Bluetooth driver through the app commissioning.

Loading and In-rush Current

Model	HED8025/BT
In-rush Current (Imax.)	25.8A
Pulse Time	70 μs

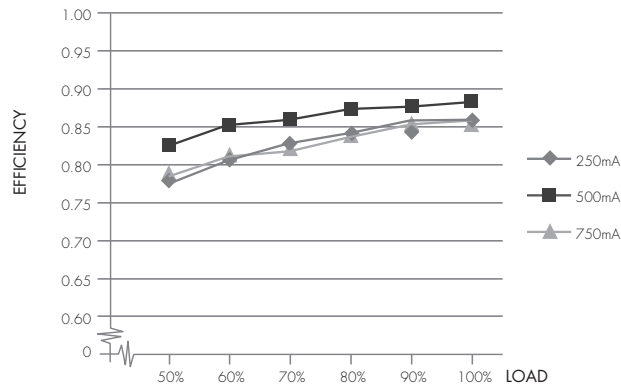
Circuit Breaker Information

Automatic circuit breaker type	B16A	B10A	B13A	B20A	B25A
HED8025/BT	73	46	59	92	115

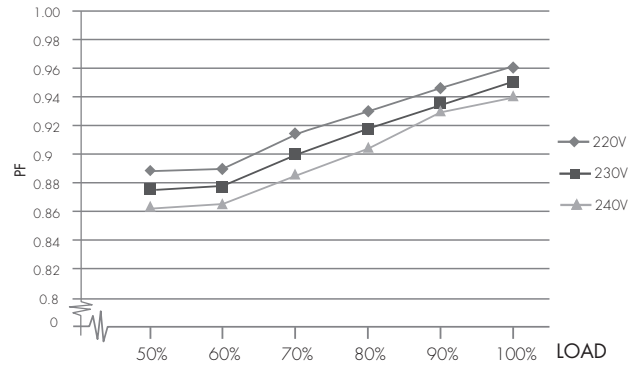
The data above is calculated according to the formula: Maximum Amount = $16 / (P_n / 230)$. In order to provide a more reliable reference in real application, the data have been revised to take 60% of the number calculated, i.e. $16 / (P_n / 230) \times 60\%$. Please kindly take note that the calculation is based on ABB circuit breaker series S200. Actual values may differ due to different types of circuit breaker used and installation environment.

Performance Characteristics

HED8025/BT

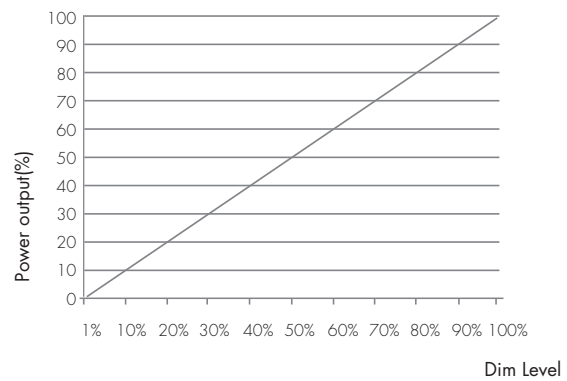
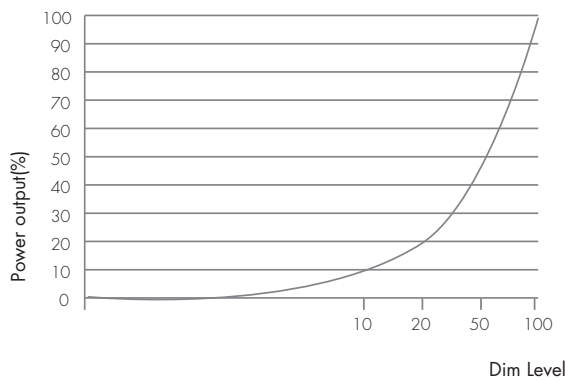


* Typical Efficiency vs Load



* Typical Power Factor vs Load

Dimming Characteristics



Dimming Interface Operation Notes

Switch-Dim

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Up to 64 LED drivers may be connected to one switch. Detailed Push switch configurations can be set on Koolmesh app.

Switch Function	Action	Descriptions
Push switch	Short press (<1 second) * Short press has to be longer than 0.1s, or it will be invalid.	<ul style="list-style-type: none"> - Turn on/off - Recall a scene - Turn on only - Exit manual mode - Turn off only - Do nothing
	Double push	<ul style="list-style-type: none"> - Turn on only - Exit manual mode - Turn off only - Do nothing - Recall a scene
	Long press (≥1 second)	<ul style="list-style-type: none"> - Dimming - Colour tuning - Do nothing
Simulate sensor	/	<ul style="list-style-type: none"> - Upgrade a normal on/off motion sensor to a Bluetooth controlled motion sensor

Emergency Self-Test Function	Short press (<1 second) * Short press has to be longer than 0.1s, or it will be invalid.	- Start Self test (Monthly) - Start Self test (Annually) - Stop Self test - Invalid
	Long press (≥1 second)	- Start Self test (Monthly) - Start Self test (Annually) - Stop Self test - Invalid
Fire Alarm (VFC signal only)	Refer to Koolmesh™ App User Manual V2.1	- 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.

Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to
<https://hytronik.com/product/hed8025-bt>
2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to
<https://hytronik.com/service/downloads> (Bluetooth Products Precautions for Product Installation and Operation)
3. Regarding precautions for LED Drivers installation and operation, please kindly refer to
<https://hytronik.com/service/downloads> (LED Drivers Precautions for Product Installation and Operation)
4. Data sheet is subject to change without notice. Please always refer to the most recent release on
<https://hytronik.com/products/led-drivers>
5. Regarding Hytronik standard guarantee policy, please kindly refer to
<https://hytronik.com/service/downloads> (Guarantee Conditions document)