Installation and Instruction Manual

HYTRONIK®

Tunable White LED Driver

HHC2045

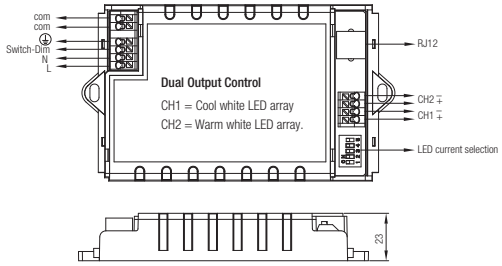
1. Technical Specifications

Technical Specifications

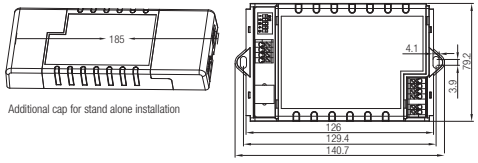
Input	Mains Voltage	220~240VAC 50/60Hz
	Mains Current	0.22~0.2A
	Power Factor	0.95
	Max. Efficiency	85%
	Dielectric Strength	Input→Output : 3000VAC
	Leakage Current	< 0.25mA
Output	Power/Current/ Voltage Range (HHC2045)	20W/350mA/10~56V 28W/500mA/10~56V 39W/700mA/10~56V 45W/900mA/10~50V 42W/1050mA/10~40V 41W/1200mA/10~34V
	Power/Current/ Voltage	50W/1.05A/12-48V
	Output power handling	Channel 1 (CH1) + Channel 2 (CH2) = 45W max.
	Output channel function	CH1 = Cool white CH2 = Warm White
	Ripple Current	<3%
	Uout Max.	75V
	Turn-on Time	< 0.5s
Environment	Operation Temp.	Ta: -20 ~ +45℃
	Case Temp. (Max.)	85℃
	IP Rating	IP20
Safety and EMC	EMC standard	EN55015, EN61547, EN61000-3-2, EN61000-3-3
	RED standard	EN300328, EN301489-1, EN301489-17
	Safety standard	EN61347-1,EN62493,EN61347-2-13
	Certifications	CB, CE , EMC, RCM

2. Installation

Mechanical Structure & Dimensions



Note: Connecting a sensor antenna will disable the com input on the driver.

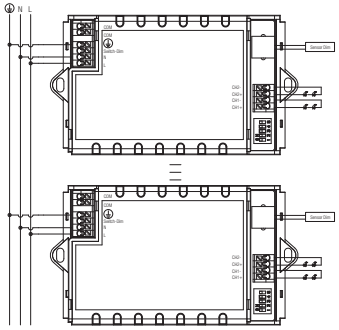


Additional cap for stand alone installation

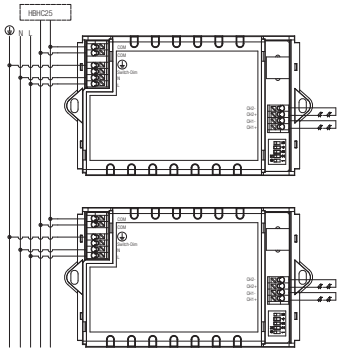
* COM inputs: HHC2045 is not standard DT8 tunable white driver, it is not DALI addressable but it can achieve colour tuning and dimming via DALI broadcast.

Wiring Diagram

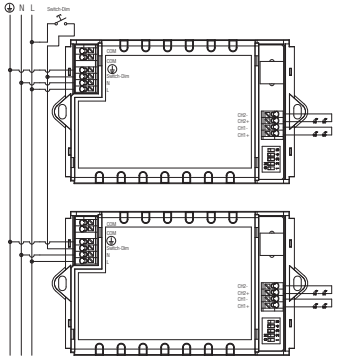
Antenna Connections (Sensor-Dim)



Com Connections (When used together with Hytronik DALI motion sensors)



Switch-Dim Connections



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Wire Preparation

Solid or Stranded wire type 0.75 - 1.5mm².
To make or release the wire from the terminal, use a screwdriver to push down the button.

Loading and In-rush Current

Inrush Current (Imax.)	53A
Pulse Time	36 µs

Circuit Breaker Information

Automatic circuit breaker type	B16A	B10A	B13A	B20A	B25A
HHC2045	43	27	35	54	67

The data above is calculated according to the formula: Maximum Amount = 16/(Pn/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/(Pn/230) x 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.

Load distribution

Each channel can supply the maximum load and white balance can be controlled as such:

Model	Colour Temperature	Cool White	Neutral White	Warm White
HHC2045	Power Distribution	CH1=45W, CH2=0W	CH1=22.5W, CH2=22.5W	CH1=0W, CH2=45W

3. 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. 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.	- Turn on/off - Recall a scene - Turn on only - Quit manual mode - Turn off only - Do nothing
	Double push	- Turn on only - Quit manual mode - Turn off only - Do nothing - Recall a scene
	Long press (≥1 second)	- Dimming - Colour tuning - Do nothing
Sensor-link (VFC signal only)	/	- 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.

4. Additional Information / Documents

1.To learn more about detailed product features/functions, please refer to
www.hytronik.com/download->knowledge ->Introduction of App Scenes and Product Functions

2. Regarding precautions for LED driver installation and operation, please kindly refer to
www.hytronik.com/download ->knowledge ->LED Drivers -Precautions for Product Installation and Operation

3. Regarding precautions for Bluetooth product installation and operation, please kindly refer to
www.hytronik.com/download ->knowledge ->Bluetooth Products - Precautions for Product Installation and Operation

4. Data sheet is subject to change without notice. Please always refer to the most recent release on
www.hytronik.com/products/bluetooth technology ->Bluetooth Drivers

5. Regarding Hytronik standard guarantee policy, please refer to
www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy

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