

DALI-2 DT6 LED Drivers

HED6010

Constant Current

HYTRONIK®

Product Description

This series of LED drivers are DALI-2 DT6 dimmable with maximum power output ranging from 9W to 45W. They all come with Switch-Dim interface by using Push switch (retractive switch). Various form factor and different structure/ size provide flexibility which is ideal for direct projects or new luminaire design for lighting manufactures.



Features

-  DALI-2 with DALI feedback
-  Switch-Dim (Push switch)
-  Active PFC design
-  Logarithmic Dimming
-  Linear Dimming
-  Configurable constant current (CC) output via DIP switches
-  Permanent setting memory, protected against loss of power
-  Loop-in & loop-out terminal for efficient installation
-  Short-circuit Protection
-  Overload Protection
-  Open-circuit Protection
-  5-year warranty

Output Configuration

HED6010, 10W

500mA	●●●○
400mA	●○○○
350mA	●●○○
300mA	○●○○
250mA	●○○○
230mA	○○○●
195mA	○○○○
	1 2 3 4



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

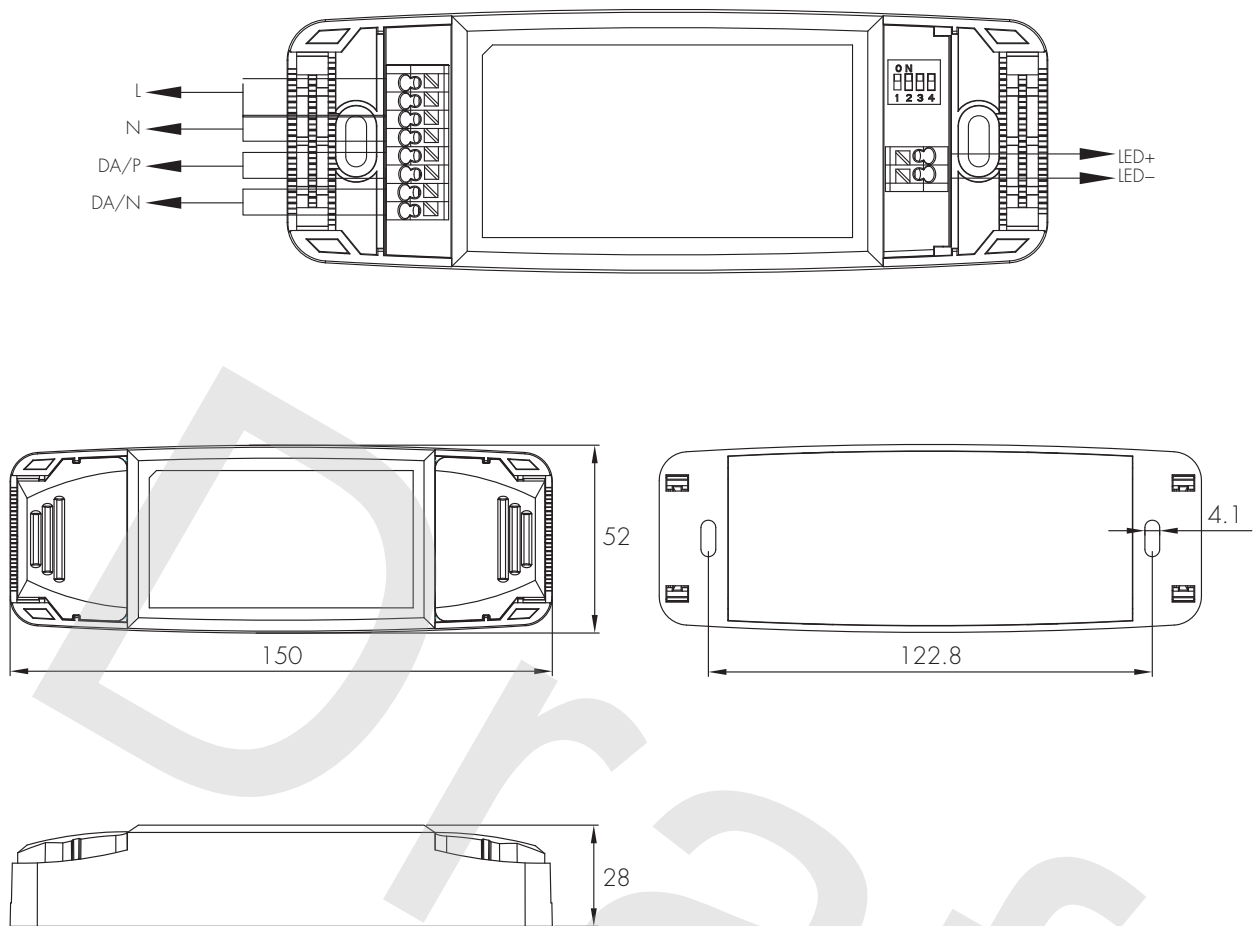
Technical Specifications

Model No.		HED6010
Input	Mains Voltage	220~240VAC 50/60Hz
	Mains Current	0.071~0.065A
	Power Factor	0.9
	Max. Efficiency	88%
	Leakage Current	<0.25mA
Output	Ripple Current	<3%
	Uout Max.	52V
	Turn-on Time	<0.5s
	Dimming Interface	Switch-Dim
Environment	Operation Temp.	-20~+50°C
	Case Temp. (Max.)	75°C
	IP Rating	IP20
Safety and EMC	EMC Standard	EN55015, EN61547, EN61000-3-2/-3-3
	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

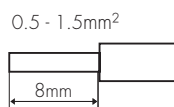
Model No.	Max. output power/current/voltage range			
HED6010	1.5-8W/ 195mA /6-41V	1.5-9W/ 230mA /6-41V	1.5-10W/ 250mA /6-41V	2-12W/ 300mA /6-41V
	2.5-12.8W/ 350mA /6-36V	2.5-12.8W/ 400mA /6-32V	3-12.5W/ 500mA /6-25V	

Mechanical Structure & Dimensions

Model: HED6010 10W



Wire Preparation



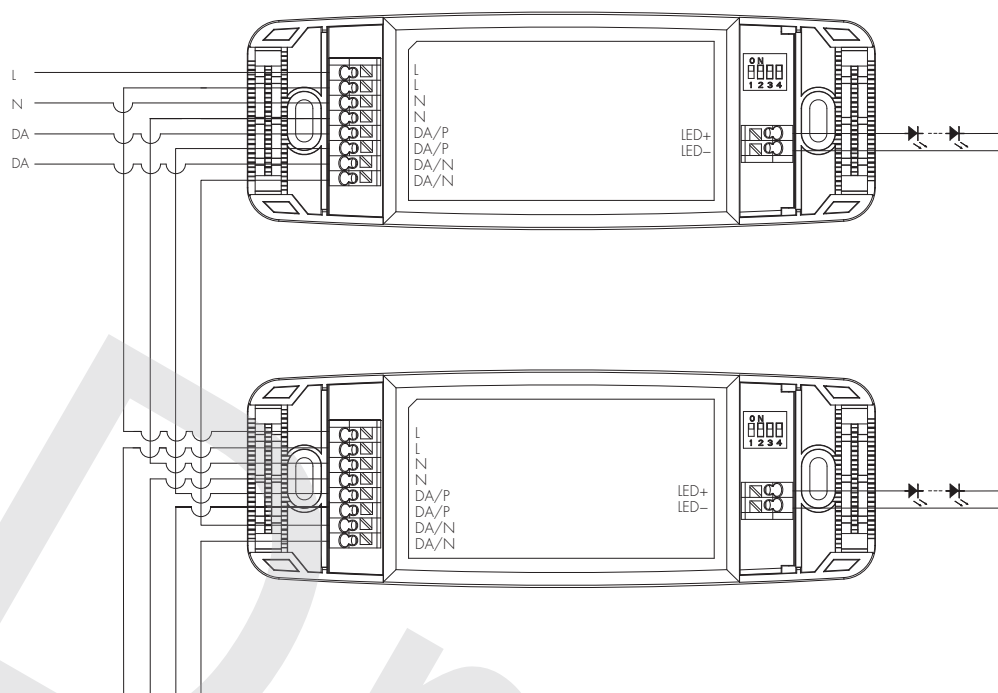
To make or release the wire from the terminal, use a screwdriver to push down the button.

1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C)
2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

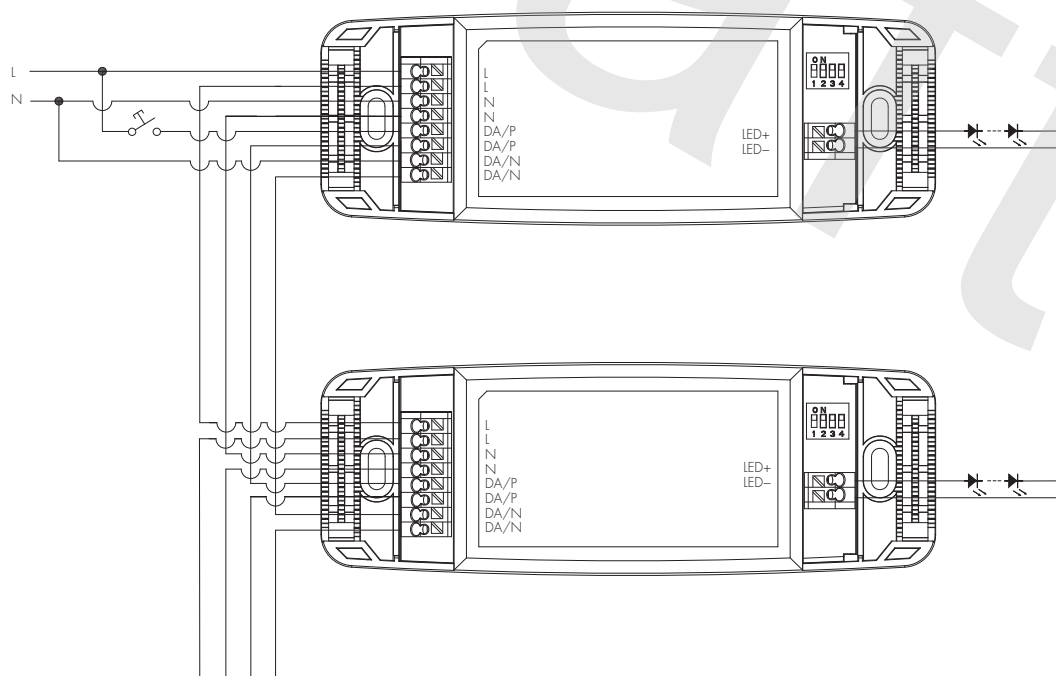
Wiring Diagram

Model: HED6010

Wiring Diagram For DALI



Wiring Diagram For Switch-Dim



Loading and In-rush Current

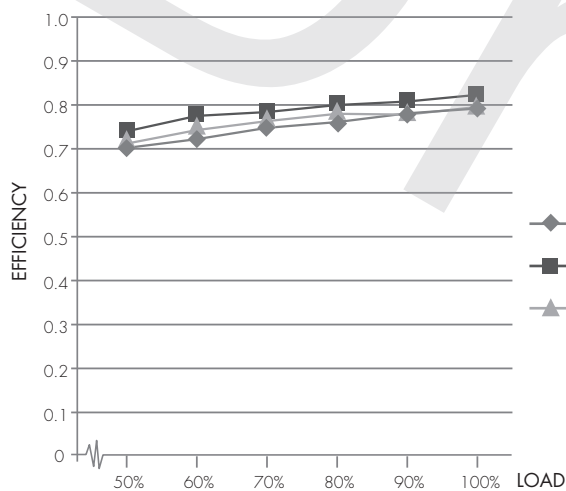
Model	HED6010
In-rush Current (I _{max.})	23A
Pulse Time	30 μs

Circuit Breaker Information

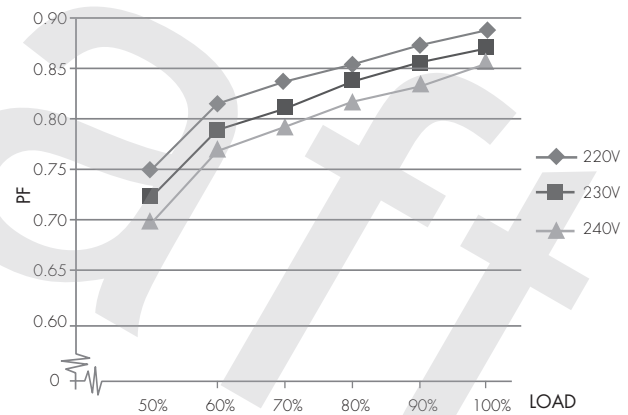
Automatic circuit breaker type	B16A	B10A	B13A	B20A	B25A
HED6010	142	89	115	178	222

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

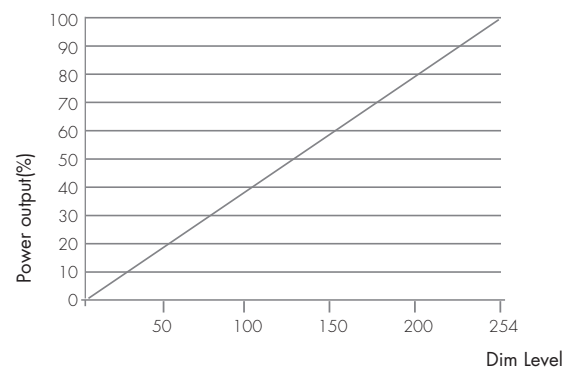
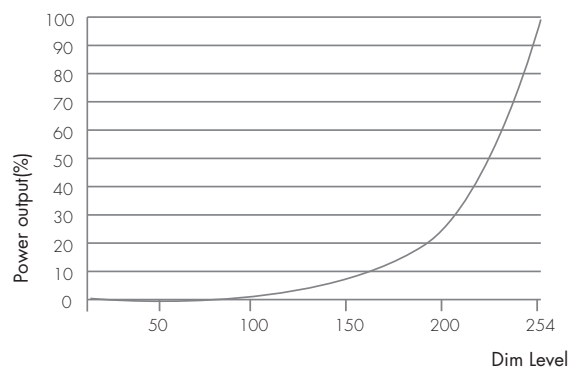


* Typical Efficiency vs Load

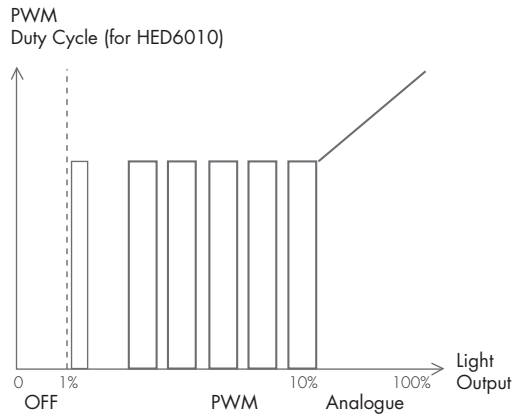


* Typical Power Factor vs Load

Dimming Characteristics



Dimming Profile



Dimming range	Dimming technique
0	OFF
1-10%	PWM
10-100%	Analogue

Dimming Interface Operation Notes

DALI

This series of products are supplied as 'plug n'play DALI' or 'independent DALI' system ready. These models are also fully DALI addressable and may be assigned to groups within the limits specified by the DALI protocol or supporting DALI controllers by using a DALI programming tool.

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.

Switch Action

Short press (<0.4 second)

Note: short press has to be longer than 0.1s, or it will be invalid.

Long press (>0.4 second)

Response

Toggle light on / off

Toggle dim light / increase brightness

Synchronization

Switch Action

Long press (>1.5 seconds)

Response

All lights will dim down to minimum then return to 50% brightness

* The maximum length of the wires from push to driver should be no more than 20 meters.

Commissioning Instructions and Precautions

A. Installation Preparations

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

B. DALI-2 Compliance

2. This product has been tested in accordance with IEC 62386 and complies with the relevant DALI-2 application parts. DALI-2 testing was performed using the official DALI test sequence software (version 2.0.6.0), covering the applicable IEC 62386 parts (e.g. Part 101, Part 102 Ed.2, Part 207 Ed.2). DALI-2 certification verifies compliance within the defined test scope.

However, certification does not eliminate the possibility of system-level compatibility issues arising from differences in device implementation or system design among manufacturers. Therefore, functional verification and on-site testing are required as part of the final system commissioning to ensure proper operation and compliance with project requirements.

Warning: For additional important documents, including installation precautions, product guidelines, and guarantee conditions, please refer to <https://hytronik.com/service/downloads>

Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to <https://hytronik.com/product/hed6010>
2. 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)
3. Data sheet is subject to change without notice. Please always refer to the most recent release on <https://hytronik.com/products/led-drivers>
4. Regarding Hytronik standard guarantee policy, please kindly refer to <https://hytronik.com/service/downloads> (Guarantee Conditions document)