



# CONRAD 1006456 Dimmable LED Driver with DALI Control Input Instruction Manual

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Typen: 1006456, 1006194  
Instruction Manual

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## 1006456 Dimmable LED Driver with DALI Control Input

The secondary switching of the LEDs in operation is not allowed.

When the device has been switched off, there is some temporary voltage remaining on the secondary output, which decomposes within about 10 minutes. At this stage, no LEDs may be connected, as they will be damaged otherwise. In order to remove the residual voltage, short-circuit the contacts on the secondary output (LEDs may not be connected).

In principle, we recommend short-circuiting the contacts on the secondary output before connecting LEDs with the device switched off.

## Description and Mounting Instructions

Dimmable LED Driver with DALI control input and adjustable constant output current for the operation of LED  
Optional with connectable RF-module

(Electronic power supply unit)  
Types: 1006456, 1006194

1. Technical Data:

|                                       |                                    |              |  |          |
|---------------------------------------|------------------------------------|--------------|--|----------|
| Art-No.                               |                                    |              | 1006436  | 1006194  |
|                                       |                                    |              | LBDWC12W350NLR   |          |
| Rated voltage                         |                                    |              | 220-240 V- 50-60 Hz  |          |
| Rated current                         |                                    |              | 75 mA  |          |
| Power Factor                          |                                    |              | 0.5-0.9 C  |          |
| DC voltage range (operation)          |                                    |              | 186-280 V  |          |
| DC voltage (start)                    |                                    |              | 186 V  |          |
| Constant output current range         |                                    |              | 150-350 mA   |          |
| Output power range                    |                                    |              | 1.5-12 W   |          |
| Preset output current                 |                                    |              | 200 mA   | 250 mA   |
| Shared load operation                 |                                    |              | 2-8 W  | 2.5-10 W |
| Secondary voltage                     |                                    |              | 10-40 Vdc SELV   |          |
| Open circuit voltage                  |                                    |              | < 60 V   |          |
| Open circuit safety                   |                                    |              | guaranteed   |          |
| Dimming Range                         |                                    |              | 1-100 %  |          |
| Dimming technique                     |                                    |              | Amplitude (AM)   |          |
| Standby power                         |                                    |              | < 0.5 W  |          |
| Protection class                      |                                    |              | II   |          |
| Short circuit and overload protection |                                    |              | electronic disconnection with automatic restart  |          |
| Ambient temperature to                |                                    |              | -20 °C – +50 °C  |          |
| Case temperature tc-point             |                                    |              | max. 85 °C   |          |
| Standards                             |                                    |              | EN 61347. EN 62384. EN 62493<br>EN 55015, EN 61547, EN 61000-3-2. EN 61000-3-3<br>EN 62386-101. EN 62386-102. EN 62386-207 |          |
| Cable (Terminals)                     | Diameter of wires / Bared wire end | PRI SEC DALI | 0.5-1.5 mm <sup>2</sup> / 9 mm   |          |
| Max. Wire length                      |                                    | SEC          | max. 2 m   |          |

## 2. NFC / Current setting

The NFC interface provides a wireless communication with the LED driver. With the NFC Application software Android / iOS or Microsoft Windows and corresponding NFC interface, optional HEP NFC reader SANF-01 (Microsoft Windows), the output current can be configured according to the output current range given in the table. Correct communication between the LED driver and the NFC antenna can only be ensured if the NFC antenna is applied directly to the driver. The NFC complies with the ISO / IEC 15693 standard. The HEP Group assumes no liability for third-party products. Due to incorrect setup of output current, the LEDs and /or the driver may be destroyed. Thus no guarantee is given.

### 3. DALI

The DALI control input is basic-isolated to the mains input. In addition, it is protected against mains voltage and is reverse polarity protected for digital control signals. The input is tested in compliance with DALI-2 DT6 standard. The device does not contain a DALI bus voltage supply.

### 4. RF-Modul

The RF module is a wireless control unit that controls the LED driver. This module is connected to the secondary side of the LED driver by means of a plug connector. Metallic objects can impair the radio signal (e.g. the frame of a lamp). In this case, a cutout may be required below the antenna. The device should also be installed as far away as possible from other metal objects. The antenna is in the position shown on the last page.

About the RESET function of the Zigbee dongle, it depends on the maintenance time after the power is turned off. The following procedure ensures that the module enters pairing mode.

Repeat "ON for one second and OFF for 3 seconds" for five times, then the output will flash.

### 5. Installation Instructions

The installation may only be carried out by an electrical specialist in accordance with international and national standards.

When working on electrical systems, protection against electric shock is to be ensured by disconnecting the system.

Install primary and secondary mains intersection-free (RFI protection). Keep the wiring as short as possible.

The maximum output wire length of 2 m must not be exceeded.

Before switching on the supply voltage all LED must be completely wired and connected!

The driver are not "hot plug" capable (connecting the LED module during operation) and secondary switching of the LEDs in operation is not allowed.

The LED Driver is strictly suited for the use with LED that requires a constant current.

When connecting the LED, careful attention should be paid to connecting + and – to the right terminals on the LED Driver.

The LED control gear has no secondary reverse polarity protection. LED modules can be destroyed in reverse polarity.

If LED Drivers mounted outside of luminaires, careful attention is to be paid to the connecting cables and the lamp cables being fastened securely in the strain relief.

The  $t_a$  or  $t_c$  temperature may not be exceeded for any kind of mounting. The specified minimum distances are guidelines and dependent upon of the used luminaire or environment (see last page).

The devices do not contain any serviceable components and may not be opened. No warranty if device was opened!

The LED Driver cannot be regulated via a phase cut-on or cut-off dimmer!

### 6. DC voltage range

The device listed above can be operated in the DC voltage range specified above. The test is not a release in

the sense of the Emergency Lighting regulation (EL).

#### 7. Overvoltage

Our LED Drivers are surge-voltage-stable with values above those prescribed by the respective standards. As a protection against high voltage surges, as they occur e.g. when switching fluorescent lamps and discharge lamps with an inductive ballast, motors (fans, etc.) and other inductive charges, the load circuits for devices of this kind are to be clearly separated from each other.

#### 8. Short circuit / overload

In case of a short circuit or overload the LED Driver will automatically cut off. It does not have a fuse of the conventional kind. Thus the load circuit is not separated! As soon as the defect has been repaired, the LED Driver will automatically cut back in.

#### 9. Excess Temperature

In case of excess temperature through external heat sources or impermissible covers the function will be interrupted. The mains will not be disconnected. As soon as the LED Driver has cooled off, it will automatically cut back in.

#### 10. Heat Dissipation and Heat Transfer

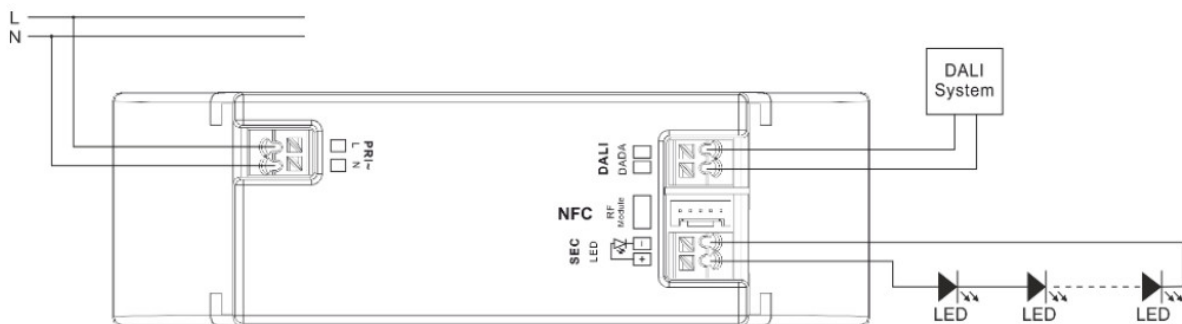
Operation in excess ambient temperature or through external heating will reduce the service life. During the installation process (particularly into luminaires), heat dissipation (heat transfer) is to be provided through suitable measures. The ambient temperature and/or tc temperature may not be exceeded at any time. We are not liable for damage resulting from improper use.

### Installation diagram

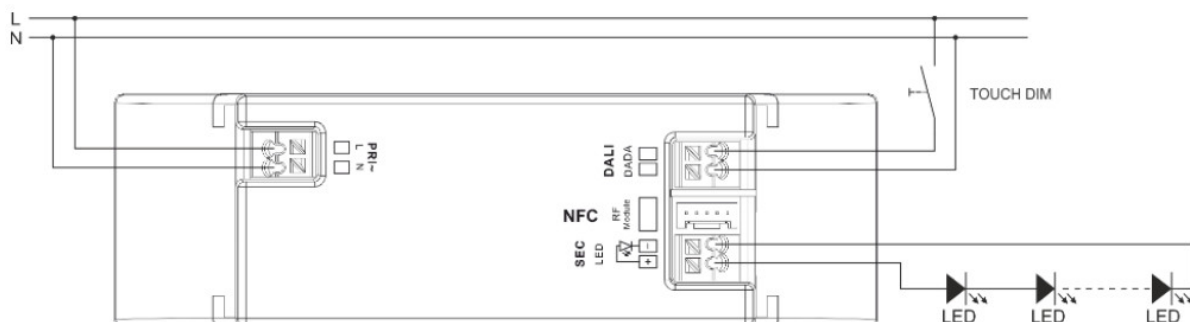
DALI is basic insulated to PRI and double insulated to SEC

The maximum output wire length of 2 m must not be exceeded.

#### DALI:



#### TouchDIM:

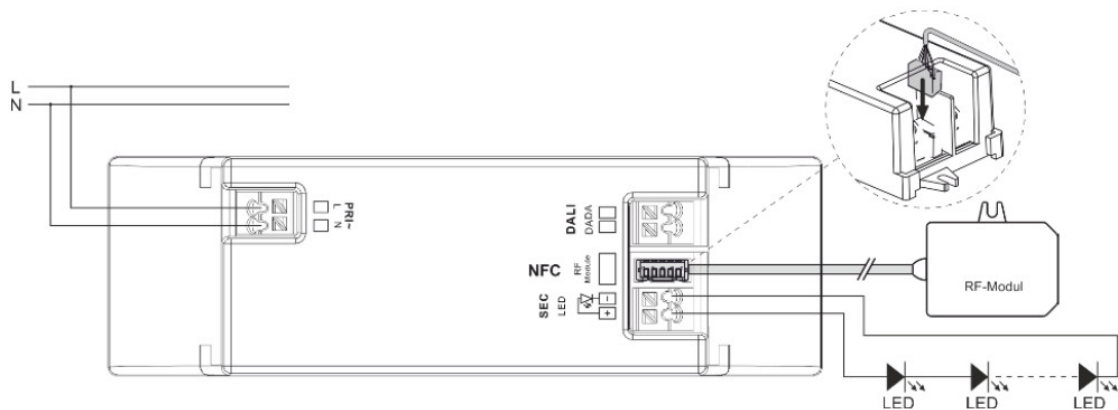


|   |   |  |                |
|---|---|--|----------------|
| Short push (< 0.6 s)<br>Long push (> 0.6 s) | Push to turn ON-OFF<br>Dimming up or down | Max. lead lenght TouchDIM<br>Max. parallel units | 20 m<br>15 pcs |
|---|---|--|----------------|

Synchronization of a large number of driver of TouchDIM

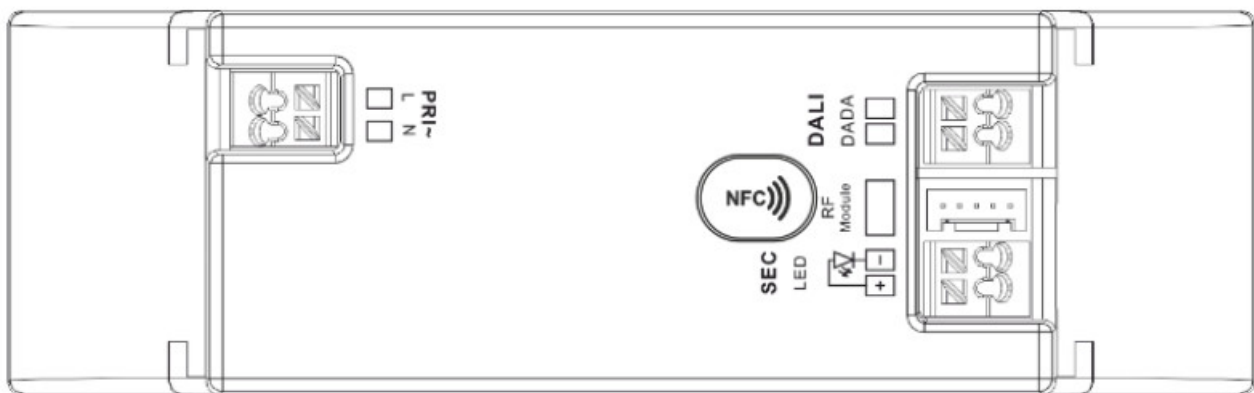
|                                  |                                      |   |
|----------------------------------|--------------------------------------|---|
| 1. Step:<br>2. Step:<br>3. Step: | Long push<br>Short push<br>Long push | All the lamps are switched on<br>All the lamps are switched off<br>All the lamps are switched on the minimum dimming setting of the drivers and c<br>ontinuously. Fade up to the desired dimming level, then release push button. |
|----------------------------------|--------------------------------------|---|

#### Wireless:



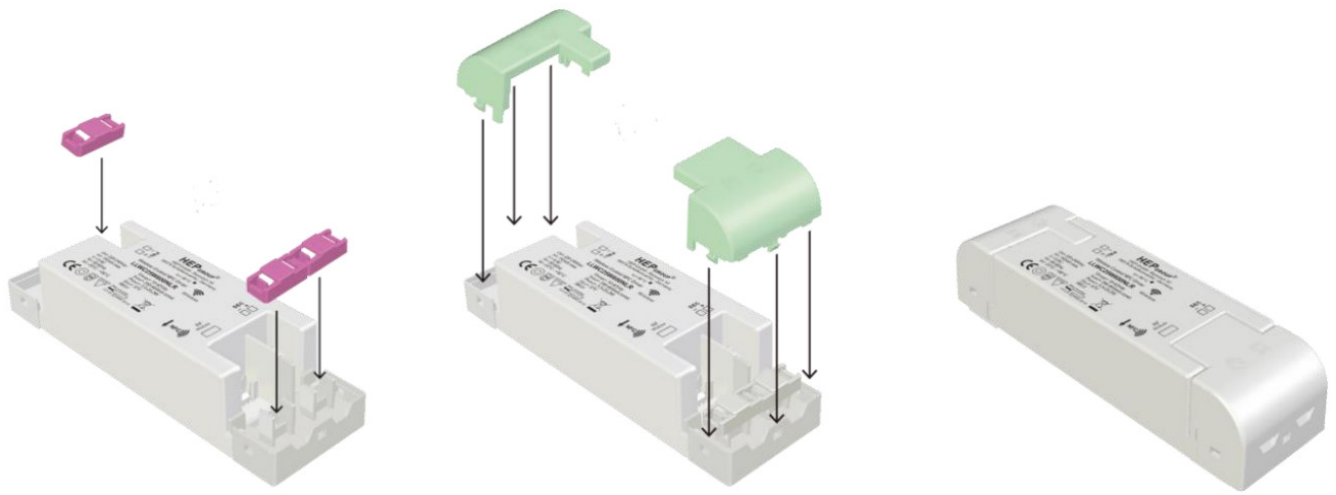
| Art.-no.        | Module  | Wireless protocol         | APP        | Available for |
|-----------------|---------|---------------------------|------------|---------------|
| 1006199 (WZS B) | SLV     | ZigBee 3.0                | SLV VALETO | Android / iOS |
| 1006454 (WBS D) | CASAMBI | Bluetooth Low Energy (LE) | CASAMBI    | Android / iOS |

#### NFC:



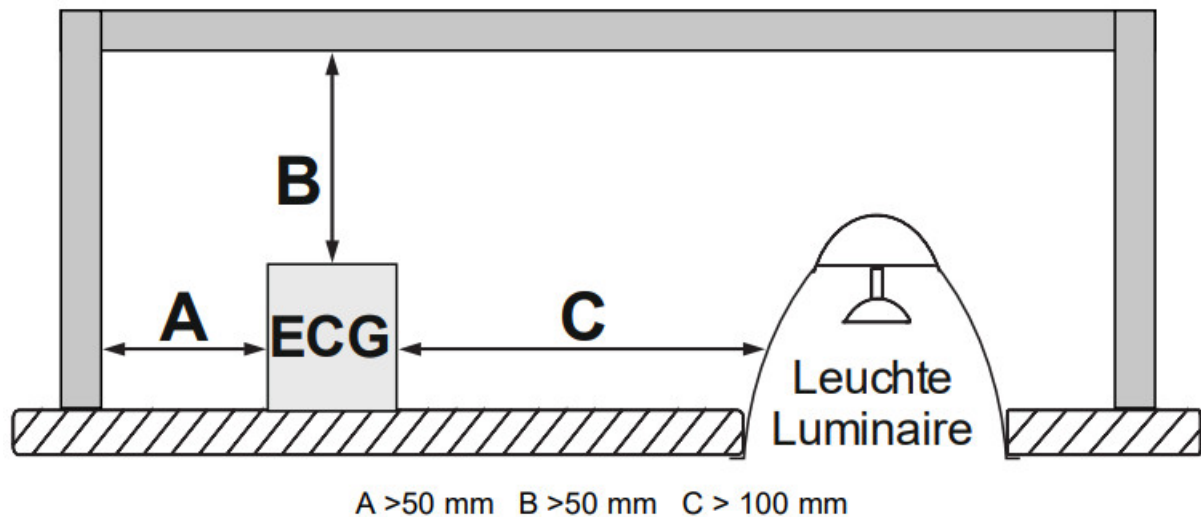
|                    |  |
|--------------------|--|
| Programmable with: | HEP NFC Reader SANF and HEP Software NFCApplication (Microsoft Windows) Android / iOS smartphone app HEPxNFC |
|--------------------|--|

#### Strain relief



## Installation condition

The specified minimum distances are guidelines and dependent upon of the used luminaire or environment.



## Disposal

Do not dispose the product with the regular household waste! Products marked with this sign must be disposed according to the directive on electrical and electronic devices at local collection points for such devices!

Art.-No. 1006456, 1006194

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Daimlerstr. 21-23, 52531 Übach-Palenberg, Germany Tel. +49 (0)2451 4833-0

Technical properties subject to modification.

## Documents / Resources

|   |   |
|---|---|
| <p><b>D</b> <small>Bitte lesen Sie die Bedienungsanleitung sorgfältig durch, bevor Sie das Produkt in Betrieb nehmen. Die Bedienungsanleitung ist Bestandteil des Produkts. Bei Verlust der Bedienungsanleitung ist eine Kopie zu beschaffen. Die Bedienungsanleitung ist an einem geeigneten Ort aufzubewahren. Die Bedienungsanleitung ist in deutscher Sprache zu lesen. Die Bedienungsanleitung ist in deutscher Sprache zu lesen. Die Bedienungsanleitung ist in deutscher Sprache zu lesen.</small></p> <p><b>GB</b> <small>Please read the operating instructions carefully before using the product. The operating instructions are part of the product. In the event of loss of the operating instructions, a copy must be obtained. The operating instructions should be kept in a suitable place. The operating instructions should be read in German. The operating instructions should be read in German. The operating instructions should be read in German.</small></p> <p><b>F</b> <small>Lisez attentivement les instructions d'utilisation avant d'utiliser le produit. Les instructions d'utilisation font partie du produit. En cas de perte des instructions d'utilisation, une copie doit être obtenue. Les instructions d'utilisation doivent être conservées dans un endroit approprié. Les instructions d'utilisation doivent être lues en allemand. Les instructions d'utilisation doivent être lues en allemand. Les instructions d'utilisation doivent être lues en allemand.</small></p> <p><b>E</b> <small>Lees de gebruiksaanwijzing zorgvuldig door, voordat u het product in gebruik neemt. De gebruiksaanwijzing is onderdeel van het product. Bij verlies van de gebruiksaanwijzing, moet een kopie worden verkregen. De gebruiksaanwijzing moet op een geschikte plaats worden bewaard. De gebruiksaanwijzing moet in het Duits worden gelezen. De gebruiksaanwijzing moet in het Duits worden gelezen. De gebruiksaanwijzing moet in het Duits worden gelezen.</small></p> <p><b>NL</b> <small>Lees de gebruiksaanwijzing zorgvuldig door, voordat u het product in gebruik neemt. De gebruiksaanwijzing is onderdeel van het product. Bij verlies van de gebruiksaanwijzing, moet een kopie worden verkregen. De gebruiksaanwijzing moet op een geschikte plaats worden bewaard. De gebruiksaanwijzing moet in het Duits worden gelezen. De gebruiksaanwijzing moet in het Duits worden gelezen. De gebruiksaanwijzing moet in het Duits worden gelezen.</small></p> | <p><a href="#">CONRAD 1006456 Dimmable LED Driver with DALI Control Input</a> [pdf] Instruction Manual<br/> 1006456 Dimmable LED Driver with DALI Control Input, 1006456, Dimmable LED Driver with D<br/> ALI Control Input, LED Driver with DALI Control Input, Driver with DALI Control Input, DALI Cont<br/> rol Input, Control Input, Input</p> |
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